



west virginia department of environmental protection

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

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

Friday, July 22, 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 ELMER N -14HU
47-103-03502-00-00

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

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

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

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over a blue circular stamp.

James A. Martin
Chief

Operator's Well Number: ELMER N -14HU
Farm Name: ELNORA TUTTLE
U.S. WELL NUMBER: 47-103-03502-00-00
Horizontal 6A New Drill
Date Issued: 7/22/2022



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

July 21, 2022

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

RE: Application for Deep Well Permit – API #47-103-03502

COMPANY: Tug Hill Operating, LLC

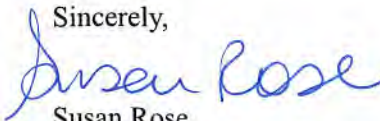
FARM: Elnora Tuttle Elmer N-14HU

COUNTY: Wetzel DISTRICT: Proctor QUAD: Wileyville

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? Yes, but withdrawn.
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

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.

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

1) Well Operator: Tug Hill Operating, LLC

<u>494510851</u>	<u>Wetzel</u>	<u>Proctor</u>	<u>Wileyville 7.5'</u>
------------------	---------------	----------------	------------------------

Operator ID County District Quadrangle

2) Operator's Well Number: Elmer N-14HU Well Pad Name: Elmer

3) Farm Name/Surface Owner: Elnora Tuttle Public Road Access: Proctor Creek Road

4) Elevation, current ground: 1,306.96 Elevation, proposed post-construction: 1,276.50'

5) Well Type (a) Gas Oil _____ Underground Storage _____
Other _____

(b) If Gas Shallow _____ Deep _____
Horizontal _____

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Point Pleasant is the target formation at a depth of 11,598' - 11,717', thickness of 119' and anticipated pressure of approx. 7,500 psi.

8) Proposed Total Vertical Depth: 11,867'

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 13,560'

11) Proposed Horizontal Leg Length: 234.36'

12) Approximate Fresh Water Strata Depths: 70; 1,009' ✓

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

14) Approximate Saltwater Depths: 1,645' ✓

15) Approximate Coal Seam Depths: Sewickley Coal - 909' and Pittsburgh Coal - 1,003'

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

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

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

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS	
Conductor	30"	NEW	BW	BW	120'	120'	259ft ³ (CTS)	✓
Fresh Water/Coal	20"	NEW	J55	106.5#	1,125'	1,125'	1,802ft ³ (CTS)	✓
Intermediate 1	13 3/8"	NEW	J55	54.5#	2,950'	2,950'	2,079ft ³ (CTS)	✓
Intermediate 2	9 5/8"	NEW	HPP110	47#	10,874'	10,874'	3,552ft ³ (CTS)	✓
Production	5 1/2"	NEW	P110	23#	13,560'	13,560'	3,291ft ³ (CTS)	✓
Tubing	2 7/8"	NEW	P110	6.5#		11,499'		
Liners								

Ernest L. Reynolds
7-21-22

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

PACKERS

Kind:	N/A			
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(11,000'). 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 590,000 lbs. proppant and 11,000 bbl of water. Max rate = 80bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 26.11 acres

22) Area to be disturbed for well pad only, less access road (acres): 7.63 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.

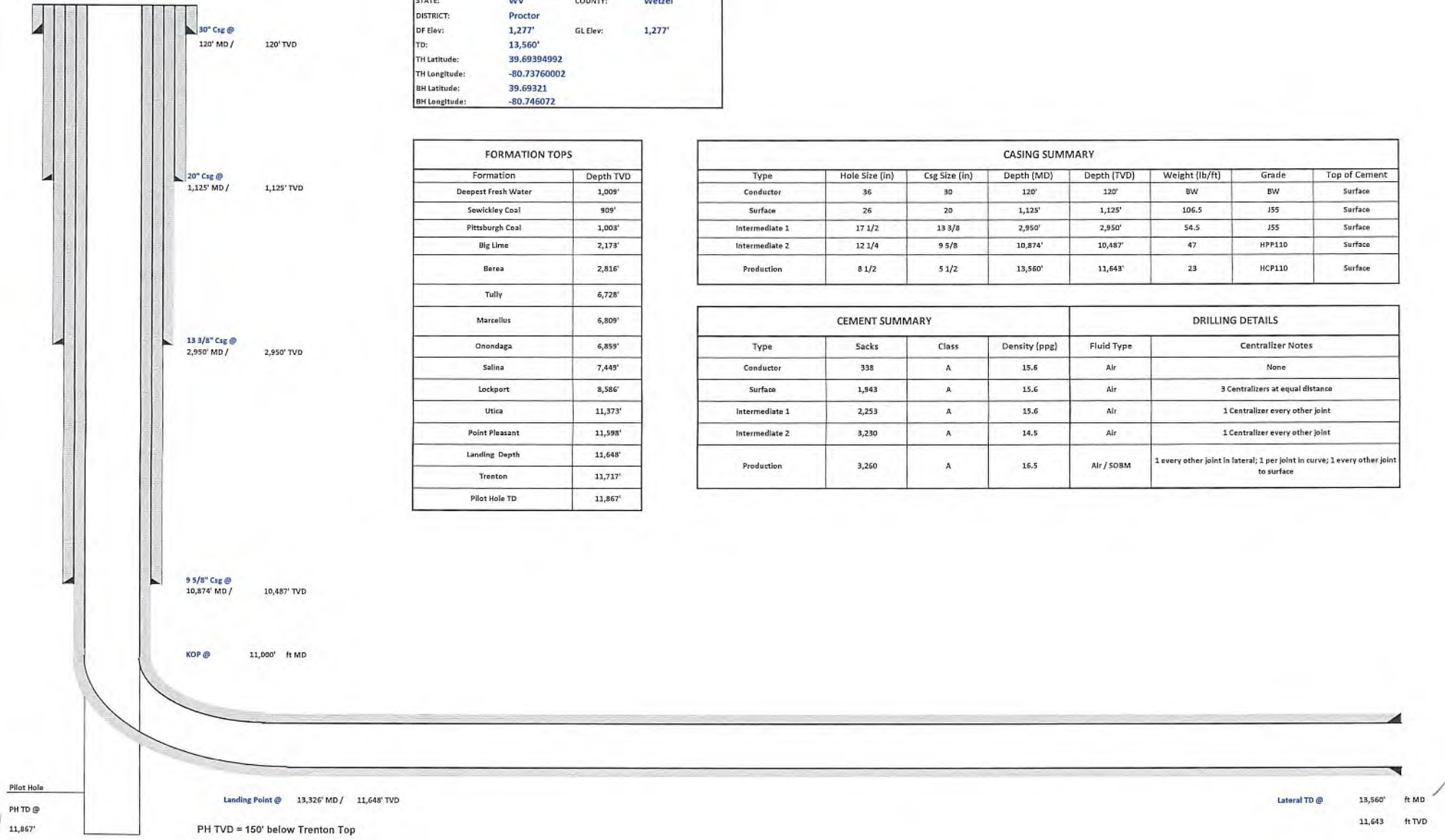


WELL NAME:	Elmer N-14HU	COUNTY:	Wetzel
STATE:	WV		
DISTRICT:	Proctor		
DF Elev:	1,277'	GL Elev:	1,277'
TD:	13,560'		
TH Latitude:	39.69394992		
TH Longitude:	-80.73760002		
BH Latitude:	39.69321		
BH Longitude:	-80.746072		

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	1,009'
Sewickley Coal	909'
Pittsburgh Coal	1,003'
Blg Lime	2,173'
Berea	2,816'
Tully	6,728'
Marcellus	6,809'
Onondaga	6,859'
Salina	7,449'
Lockport	8,586'
Utica	11,373'
Point Pleasant	11,598'
Landing Depth	11,648'
Trenton	11,717'
Pilot Hole TD	11,867'

CASING SUMMARY							
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement
Conductor	36	30	120'	120'	BW	BW	Surface
Surface	26	20	1,125'	1,125'	106.5	J55	Surface
Intermediate 1	17 1/2	13 3/8	2,950'	2,950'	54.5	J55	Surface
Intermediate 2	12 1/4	9 5/8	10,874'	10,487'	47	HPP110	Surface
Production	8 1/2	5 1/2	13,560'	11,643'	23	HCP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
Type	Sacks	Class	Density (ppg)	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	1,943	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	2,253	A	15.6	Air	1 Centralizer every other joint
Intermediate 2	3,230	A	14.5	Air	1 Centralizer every other joint
Production	3,260	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 @
11,867'

Landing Point @ 13,326' MD / 11,648' TVD
PH TVD = 150' below Trenton Top

Lateral TD @ 13,560' ft MD
11,643 ft TVD



Tug Hill Operating, LLC Casing and Cement Program

Elmer N-14HU

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	20"	J55	26"	1,125'	CTS
Intermediate 1	13 3/8"	J55	17 1/2"	2,950'	CTS
Intermediate 2	9 5/8"	HPP110	12 1/4"	10,874'	CTS
Production	5 1/2"	HCP110	8 1/2"	13,560'	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



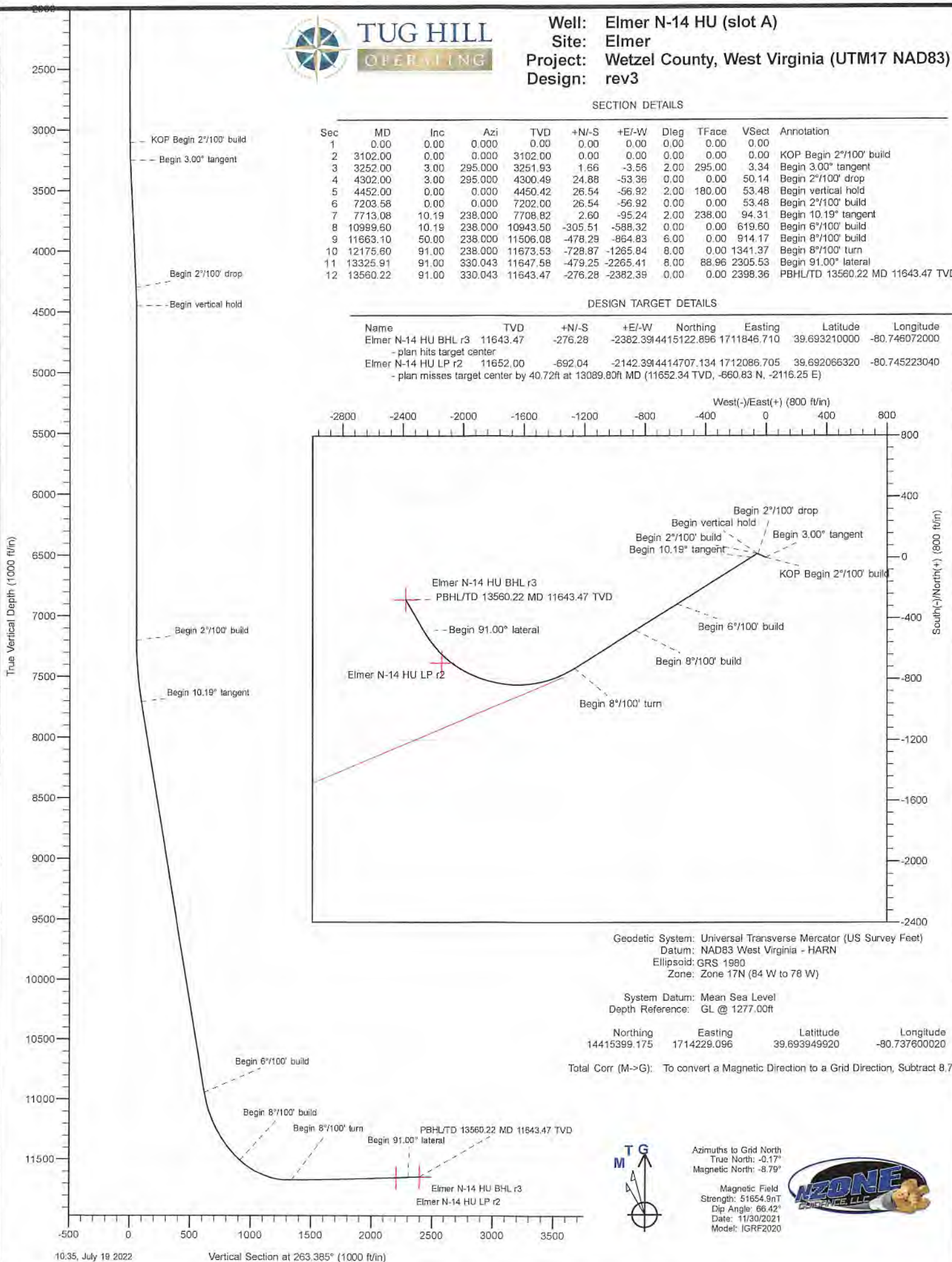
Well: Elmer N-14 HU (slot A)
 Site: Elmer
 Project: Wetzel County, West Virginia (UTM17 NAD83)
 Design: rev3

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	3102.00	0.00	0.000	3102.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
3	3252.00	3.00	295.000	3251.93	1.66	-3.56	2.00	295.00	3.34	Begin 3.00° tangent
4	4302.00	3.00	295.000	4300.49	24.88	-53.36	0.00	0.00	50.14	Begin 2°/100' drop
5	4452.00	0.00	0.000	4450.42	26.54	-56.92	2.00	180.00	53.48	Begin vertical hold
6	7203.58	0.00	0.000	7202.00	26.54	-56.92	0.00	0.00	53.48	Begin 2°/100' build
7	7713.06	10.19	238.000	7708.82	2.60	-95.24	2.00	238.00	94.31	Begin 10.19° tangent
8	10999.60	10.19	238.000	10943.50	-305.51	-588.32	0.00	0.00	619.60	Begin 6°/100' build
9	11663.10	50.00	238.000	11506.08	-478.29	-864.83	6.00	0.00	914.17	Begin 8°/100' build
10	12175.60	91.00	238.000	11673.53	-728.87	-1265.84	8.00	0.00	1341.37	Begin 8°/100' turn
11	13325.91	91.00	330.043	11647.58	-479.25	-2265.41	8.00	88.96	2305.53	Begin 91.00° lateral
12	13560.22	91.00	330.043	11643.47	-276.28	-2382.39	0.00	0.00	2398.36	PBHL/TD 13560.22 MD 11643.47 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Elmer N-14 HU BHL r3	11643.47	-276.28	-2382.3914415122.896	1711846.710	39.693210000	-80.746072000	
- plan hits target center							
Elmer N-14 HU LP r2	11652.00	-692.04	-2142.3914414707.134	1712086.705	39.692066320	-80.745223040	
- plan misses target center by 40.72ft at 13089.80ft MD (11652.34 TVD, -660.83 N, -2116.25 E)							



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 @ 1277.00ft

Northing	Easting	Latitude	Longitude
14415399.175	1714229.096	39.693949920	-80.737600020

Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.75



Azimuths to Grid North
 True North: -0.17°
 Magnetic North: -8.79°

Magnetic Field
 Strength: 51654.9nT
 Dip Angle: 66.42°
 Date: 11/30/2021
 Model: IGRF2020





Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Elmer N-14 HU (slot A)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1277.00ft
Project:	Wetzel County, West Virginia (UTM17 NAD83)	MD Reference:	GL @ 1277.00ft
Site:	Elmer	North Reference:	Grid
Well:	Elmer N-14 HU (slot A)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Project	Wetzel County, West Virginia (UTM17 NAD83)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 West Virginia - HARN		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Elmer				
Site Position:		Northing:	14,415,313.835 usft	Latitude:	39.693715720
From:	Lat/Long	Easting:	1,714,207.744 usft	Longitude:	-80.737676810
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Elmer N-14 HU (slot A)					
Well Position	+N/-S	0.00 ft	Northing:	14,415,399.175 usft	Latitude:	39.693949920
	+E/-W	0.00 ft	Easting:	1,714,229.095 usft	Longitude:	-80.737600020
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	1,277.00 ft
Grid Convergence:						

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/30/2021	-8.63	66.42	51,654.87644461

Design	rev3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	263.385

Plan Survey Tool Program	Date				
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	13,560.22	rev3 (Original Hole)		



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Elmer N-14 HU (slot A)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1277.00ft
Project:	Wetzel County, West Virginia (UTM17 NAD83)	MD Reference:	GL @ 1277.00ft
Site:	Elmer	North Reference:	Grid
Well:	Elmer N-14 HU (slot A)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,102.00	0.00	0.000	3,102.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,252.00	3.00	295.000	3,251.93	1.66	-3.56	2.00	2.00	0.00	295.00	
4,302.00	3.00	295.000	4,300.49	24.88	-53.36	0.00	0.00	0.00	0.00	
4,452.00	0.00	0.000	4,450.42	26.54	-56.92	2.00	-2.00	0.00	180.00	
7,203.58	0.00	0.000	7,202.00	26.54	-56.92	0.00	0.00	0.00	0.00	
7,713.08	10.19	238.000	7,708.82	2.60	-95.24	2.00	2.00	0.00	238.00	
10,999.60	10.19	238.000	10,943.50	-305.51	-588.32	0.00	0.00	0.00	0.00	
11,663.10	50.00	238.000	11,506.08	-478.29	-864.83	6.00	6.00	0.00	0.00	
12,175.60	91.00	238.000	11,673.53	-728.87	-1,265.84	8.00	8.00	0.00	0.00	
13,325.91	91.00	330.043	11,647.58	-479.25	-2,265.41	8.00	0.00	8.00	88.96	
13,560.22	91.00	330.043	11,643.47	-276.28	-2,382.39	0.00	0.00	0.00	0.00	Elmer N-14 HU BHL r



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Elmer N-14 HU (slot A)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1277.00ft
Project:	Wetzel County, West Virginia (UTM17 NAD83)	MD Reference:	GL @ 1277.00ft
Site:	Elmer	North Reference:	Grid
Well:	Elmer N-14 HU (slot A)	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	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
100.00	0.00	0.000	100.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
200.00	0.00	0.000	200.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
300.00	0.00	0.000	300.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
400.00	0.00	0.000	400.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
500.00	0.00	0.000	500.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
600.00	0.00	0.000	600.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
700.00	0.00	0.000	700.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
800.00	0.00	0.000	800.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
900.00	0.00	0.000	900.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,200.00	0.00	0.000	1,200.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,300.00	0.00	0.000	1,300.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,400.00	0.00	0.000	1,400.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,500.00	0.00	0.000	1,500.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,600.00	0.00	0.000	1,600.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,700.00	0.00	0.000	1,700.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,800.00	0.00	0.000	1,800.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
1,900.00	0.00	0.000	1,900.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,000.00	0.00	0.000	2,000.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,100.00	0.00	0.000	2,100.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,200.00	0.00	0.000	2,200.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,300.00	0.00	0.000	2,300.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,400.00	0.00	0.000	2,400.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,500.00	0.00	0.000	2,500.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,600.00	0.00	0.000	2,600.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,700.00	0.00	0.000	2,700.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,800.00	0.00	0.000	2,800.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
2,900.00	0.00	0.000	2,900.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
3,000.00	0.00	0.000	3,000.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
3,102.00	0.00	0.000	3,102.00	0.00	0.00	14,415,399.175	1,714,229.095	39.693949920	-80.737600020	
KOP Begin 2°/100' build										
3,200.00	1.96	295.000	3,199.98	0.71	-1.52	14,415,399.884	1,714,227.576	39.693951877	-80.737605413	
3,252.00	3.00	295.000	3,251.93	1.66	-3.56	14,415,400.834	1,714,225.537	39.693954505	-80.737612652	
Begin 3.00° tangent										
3,300.00	3.00	295.000	3,299.87	2.72	-5.84	14,415,401.896	1,714,223.260	39.693957439	-80.737620735	
3,400.00	3.00	295.000	3,399.73	4.93	-10.58	14,415,404.108	1,714,218.517	39.693963551	-80.737637574	
3,500.00	3.00	295.000	3,499.59	7.14	-15.32	14,415,406.320	1,714,213.774	39.693969664	-80.737654413	
3,600.00	3.00	295.000	3,599.45	9.36	-20.06	14,415,408.532	1,714,209.031	39.693975776	-80.737671252	
3,700.00	3.00	295.000	3,699.32	11.57	-24.81	14,415,410.743	1,714,204.288	39.693981889	-80.737688090	
3,800.00	3.00	295.000	3,799.18	13.78	-29.55	14,415,412.955	1,714,199.544	39.693988001	-80.737704929	
3,900.00	3.00	295.000	3,899.04	15.99	-34.29	14,415,415.167	1,714,194.801	39.693994113	-80.737721768	
4,000.00	3.00	295.000	3,998.91	18.20	-39.04	14,415,417.379	1,714,190.058	39.694000226	-80.737738607	
4,100.00	3.00	295.000	4,098.77	20.42	-43.78	14,415,419.591	1,714,185.315	39.694006338	-80.737755446	
4,200.00	3.00	295.000	4,198.63	22.63	-48.52	14,415,421.802	1,714,180.571	39.694012451	-80.737772285	
4,302.00	3.00	295.000	4,300.49	24.88	-53.36	14,415,424.058	1,714,175.733	39.694018685	-80.737789460	
Begin 2°/100' drop										
4,400.00	1.04	295.000	4,398.43	26.34	-56.49	14,415,425.518	1,714,172.603	39.694022719	-80.737800574	
4,452.00	0.00	0.000	4,450.42	26.54	-56.92	14,415,425.718	1,714,172.175	39.694023271	-80.737802093	
Begin vertical hold										
4,500.00	0.00	0.000	4,498.42	26.54	-56.92	14,415,425.718	1,714,172.175	39.694023271	-80.737802093	
4,600.00	0.00	0.000	4,598.42	26.54	-56.92	14,415,425.718	1,714,172.175	39.694023271	-80.737802093	
4,700.00	0.00	0.000	4,698.42	26.54	-56.92	14,415,425.718	1,714,172.175	39.694023271	-80.737802093	

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Elmer N-14 HU (slot A)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1277.00ft
Project:	Wetzel County, West Virginia (UTM17 NAD83)	MD Reference:	GL @ 1277.00ft
Site:	Elmer	North Reference:	Grid
Well:	Elmer N-14 HU (slot A)	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	
12,900.00	91.41	295.965	11,656.83	-765.42	-1,958.59	14,414,633.757	1,712,270.511	39.691863367	-80.744570385	
12,950.00	91.39	299.966	11,655.61	-741.98	-2,002.73	14,414,657.192	1,712,226.372	39.691928072	-80.744727055	
13,000.00	91.36	303.967	11,654.41	-715.53	-2,045.13	14,414,683.650	1,712,183.975	39.692001066	-80.744877501	
13,050.00	91.32	307.968	11,653.24	-686.17	-2,085.57	14,414,713.003	1,712,143.526	39.692081992	-80.745020990	
13,100.00	91.28	311.969	11,652.11	-654.07	-2,123.88	14,414,745.106	1,712,105.224	39.692170457	-80.745156824	
13,150.00	91.23	315.969	11,651.02	-619.37	-2,159.85	14,414,779.804	1,712,069.254	39.692266030	-80.745284340	
13,200.00	91.17	319.970	11,649.97	-582.25	-2,193.31	14,414,816.928	1,712,035.792	39.692368244	-80.745402918	
13,250.00	91.11	323.970	11,648.98	-542.88	-2,224.10	14,414,856.296	1,712,005.001	39.692476602	-80.745511979	
13,300.00	91.04	327.970	11,648.04	-501.46	-2,252.07	14,414,897.718	1,711,977.031	39.692590577	-80.745610992	
13,325.91	91.00	330.043	11,647.58	-479.25	-2,265.41	14,414,919.924	1,711,963.692	39.692651665	-80.745658186	
Begin 91.00° lateral										
13,400.00	91.00	330.043	11,646.28	-415.07	-2,302.40	14,414,984.106	1,711,926.701	39.692828216	-80.745789038	
13,500.00	91.00	330.043	11,644.53	-328.44	-2,352.33	14,415,070.732	1,711,876.774	39.693066508	-80.745965650	
13,560.22	91.00	330.043	11,643.47	-276.28	-2,382.39	14,415,122.896	1,711,846.709	39.693210000	-80.746072000	
PBHL/TD 13560.22 MD 11643.47 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Elmer N-14 HU BHL r3 - hit/miss target - Shape - Point	0.00	0.000	11,643.47	-276.28	-2,382.39	14,415,122.896	1,711,846.709	39.693210000	-80.746072000	
Elmer N-14 HU LP r2 - plan misses target center by 40.72ft at 13089.80ft MD (11652.34 TVD, -660.83 N, -2116.25 E) - Point	0.00	0.000	11,652.00	-692.04	-2,142.39	14,414,707.134	1,712,086.705	39.692066320	-80.745223040	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
3,102.00	3,102.00	0.00	0.00	KOP Begin 2°/100' build	
3,252.00	3,251.93	1.66	-3.56	Begin 3.00° tangent	
4,302.00	4,300.49	24.88	-53.36	Begin 2°/100' drop	
4,452.00	4,450.42	26.54	-56.92	Begin vertical hold	
7,203.58	7,202.00	26.54	-56.92	Begin 2°/100' build	
7,713.08	7,708.82	2.60	-95.24	Begin 10.19° tangent	
10,999.60	10,943.50	-305.51	-588.32	Begin 6°/100' build	
11,663.10	11,506.08	-478.29	-864.83	Begin 8°/100' build	
12,175.60	11,673.53	-728.87	-1,265.84	Begin 8°/100' turn	
13,325.91	11,647.58	-479.25	-2,265.41	Begin 91.00° lateral	
13,560.22	11,643.47	-276.28	-2,382.39	PBHL/TD 13560.22 MD 11643.47 TVD	

WW-9
(4/16)

API Number 47 - 103 - _____
Operator's Well No. Elmer N-14HU

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

RECEIVED
Office of Oil and Gas
APR 28 2022

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Department of
Environmental Protection

Operator Name Tug Hill Operating, LLC OP Code 494510851

Watershed (HUC 10) French Creek - Ohio River Quadrangle Wileyville 7.5'

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

Will closed loop system be used? If so, describe: Yes - For Vertical and Horizontal Drilling

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

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

Additives to be used in drilling medium? Barite for weight

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

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

-Landfill or offsite name/permit number? Wetzel County Sanitary Landfill (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP EC#1386426)

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

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

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

Company Official Signature James A. Pancake

Company Official (Typed Name) Jim Pancake

Company Official Title Vice President Geoscience

Subscribed and sworn before me this 21 day of APRIL, 20 22

[Signature]

My commission expires 2/16/24

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

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 26.11 Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 1/3 ton lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre
Annual Ryegrass	40

Seed Type	lbs/acre
Fox Tail / Grassy	40
Perennial Rye	30
Crown Vetch	20

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: *Raymond J. Hart*

Comments: _____

RECEIVED
Office of Oil and Gas
APR 28 2022
WV Department of
Environmental Protection

Title: Oil and Gas Inspector

Date: 1/19/2022

Field Reviewed? () Yes () No

PROPOSED ELMER PAD

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.

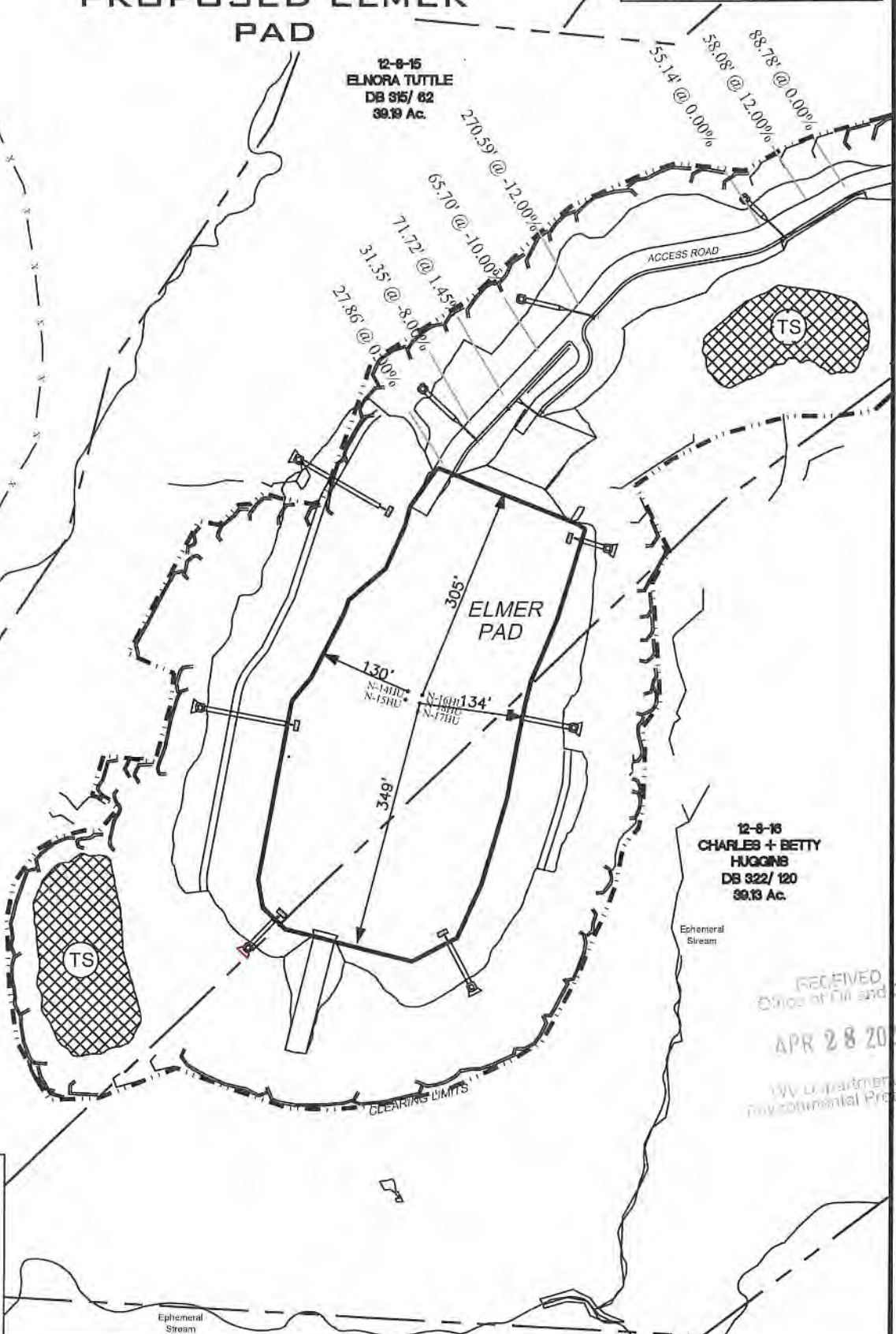
TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

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.

DRAWING NOT TO SCALE

PREVAILING WIND



LEGEND

- Note:
 (C) — Denotes existing culvert with appropriate sediment outlet control (Rip Rap splash pad).
- Silt Fence and or Sediment and Erosion Control Measure.
 - Surface Boundary
 - LOD
 - Fenceline

TOPO SECTION:

WILEYVILLE 75'

OPERATOR:

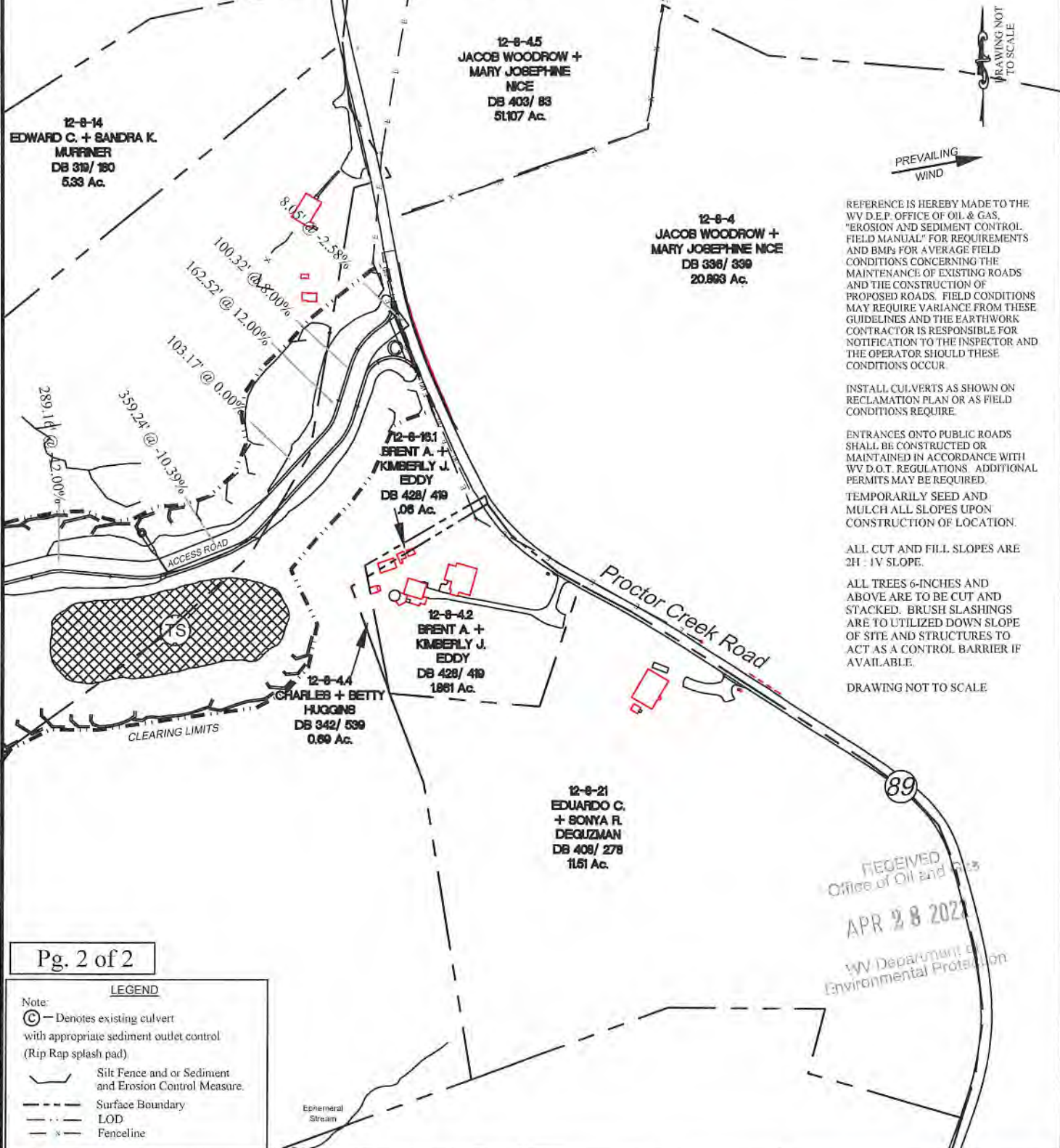
PREPARED FOR:

COUNTY	DISTRICT	TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
WETZEL	PROCTOR	DATE	SCALE
DRAWN BY	OPERATOR NO.	11-30-2021	NONE
J.D.C.	494510951		

Jackson Surveying Inc.
 2419 E. Pike St. #112
 Clarkburg, WV 25901
 Phone: 304-623-6861



PROPOSED ELMER PAD



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.

DRAWING NOT TO SCALE

LEGEND

- Note:
- Ⓢ - Denotes existing culvert with appropriate sediment outlet control (Rip Rap splash pad)
 - Silt Fence and/or Sediment and Erosion Control Measure.
 - - - Surface Boundary
 - · - · - LOD
 - x - Fenceline

RECEIVED
Office of Oil and Gas
APR 28 2021
WV Department of Environmental Protection



Jackson Surveying Inc.
2415 E. Plaza St. #118
Charlottesville, VA 22901
Phone: 804-623-6851

TOPO SECTION:		OPERATOR:	
WILEYVILLE 75'		TUG HILL OPERATING, LLC	
COUNTY	DISTRICT	380 SOUTHPOINTE BLVD	
WETZEL	PROCTOR	SUITE 200	
DRAWN BY	OPERATOR NO.	DATE	SCALE
J.D.C.	494510851	11-30-2021	NONE



MEMORANDUM OF SURFACE USE AGREEMENT

This Memorandum of Surface Use Agreement ("Memorandum") made this 25 day of May, 2021 by and between Charles Lee & Betty Jean Huggins, husband and wife, whose address is 5352 Palmer Ridge Road, Proctor, WV 26055, (hereinafter collectively called "Surface Owner"), and TH EXPLORATION, LLC, a Texas limited liability company, with an address of 1320 S. University Drive, Suite 500, Fort Worth, TX 76107, (hereinafter called "Company").

WITNESSETH

For and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound, Surface Owner did make and execute in favor of Company a Surface Use Agreement (the "Agreement") dated May 25, 2021 and made effective May 25, 2021 which provides for a five (5) year term ("Agreement Term") covering Surface Owner's interest in the following described lands (the "Lands"):

The Lands are located, all or part, in Proctor District, Wetzel County, State of West Virginia, and including lands identified as: 12-8-16, and described for the purposes of this Memorandum as containing 39.19 acres, and Lands located, all or part, in Proctor District, Wetzel County, State of West Virginia, and including all contiguous or appurtenant lands owned by Surface Owner, as described in that certain deed dated July 1, 1987 and recorded in the office of the County Clerk of the aforesaid County in Deed Book, 322-120.

The Company desires to use the portion of Land labeled as "Limit of Disturbance - Pad" and "Limit of Disturbance - Access Road" on the attached Exhibit A for the construction and installation of access roads, drilling pads, tanks, fences, pits and any other facilities or equipment necessary or convenient for the drilling, completion, production, operation, and maintenance of the Company's operations on or off the Land as well as to lay, maintain, excavate, construct, survey, re-construct, operate, tie into, inspect, enlarge, repair, replace, alter, clear trees and other obstructions, and remove, one or more above and/or below ground pipelines, whether permanent or temporary, with fittings and appliances, for the transportation of potable and non-potable fresh water, produced water, completion backflow water, oil, gas and other liquid or gaseous products/substances to and from wells drilled, or to be drilled, on or off the Lands and the Surface Owner is agreeable to the same on the terms and conditions set out in the Agreement.

The Agreement also grants unto Company, Surface Owner's consent to and an easement for the drilling, production, and operation of shallow and deep horizontal or vertical oil and gas wells at any legal location(s) upon the surface of the Lands pursuant to W. Va. Code §§ 22-6A and 22C-9-7(b)(4) and applicable regulations.

The Agreement, with all of its terms, covenants and other provisions, is referred to and incorporated into this Memorandum for all purposes. This Memorandum is placed of record for the purpose of giving notice of the Agreement. Nothing contained in this Memorandum will alter or amend any of the terms and provisions of the Agreement. In the event of any conflict between this Memorandum and the Agreement, the terms and conditions of the Agreement shall control.

IN WITNESS WHEREOF this Memorandum of Surface Use Agreement is executed as of the date first above written.

Surface Owner: Charles Lee Huggins Betty Jean Huggins
Charles Lee Huggins Betty Jean Huggins

Company: TH EXPLORATION, LLC

By: [Signature]
Name: Benjamin J. Irwin
Title: Attorney-in-Fact

ACKNOWLEDGEMENT

STATE OF WEST VIRGINIA)
) SS:
COUNTY OF WETZEL)

On this the 25 day of May, 2021, before me, a notary public, the undersigned authority, personally appeared Charles Lee Huggins, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he/she executed the same for the purposes therein contained.

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

My Commission Expires: August 8, 2021 Signature: [Signature]
Notary Public

Name/Notary Public (print): Mich Feather



ACKNOWLEDGEMENT

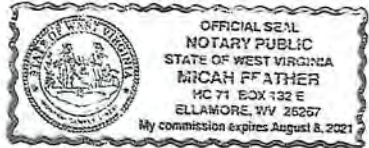
STATE OF WEST VIRGINIA)
) SS:
COUNTY OF WETZEL)

On this the 25 day of May, 2021, before me, a notary public, the undersigned authority, personally appeared Betty Jean Huggins, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he/she executed the same for the purposes therein contained.

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

My Commission Expires: August 8, 2021 Signature: [Signature]
Notary Public

Name/Notary Public (print): Mich Feather



ACKNOWLEDGEMENT

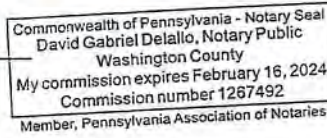
COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF WASHINGTON)

On this, the 25 day of May, 2021, before me a notary public, the undersigned authority, personally appeared Benjamin J. Irwin, who acknowledged himself to be the Attorney-In-Fact of TH EXPLORATION, LLC, a Texas limited liability company, and that he as such Attorney-In-Fact being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the limited liability company by himself as Attorney-In-Fact.

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

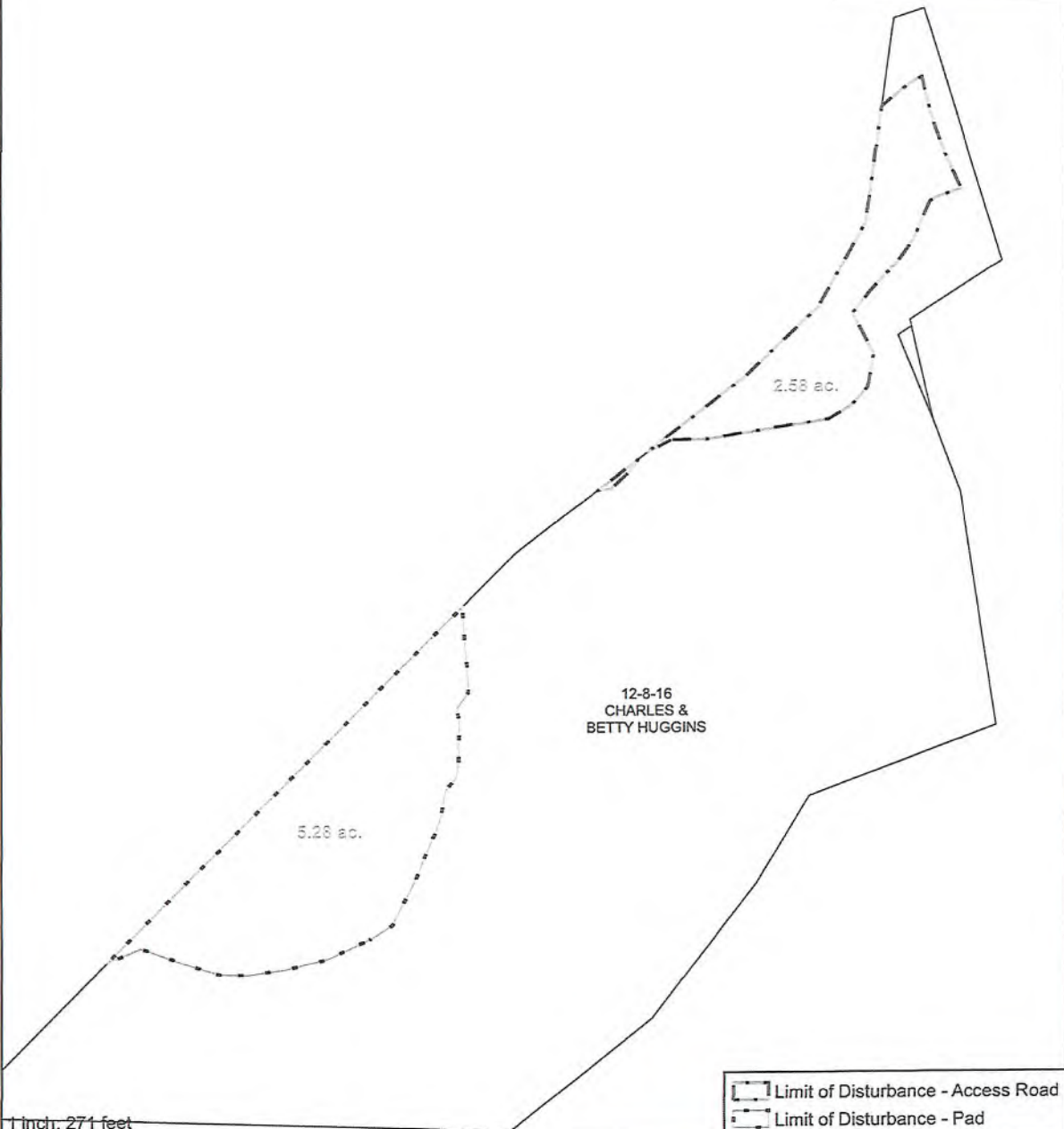
My Commission Expires: 2/16/24 Signature: [Signature]
Notary Public

Name/Notary Public (print): David G. Delallo



Prepared by and please return to:
TH Exploration, LLC
1320 S. University Drive, Suite 500
Fort Worth, TX 76107

RECEIVED
Office of Oil and Gas
APR 28 2022
WV Department of
Environmental Protection



0 80 160 320 Feet

NOTE: THE APPROVED SITE LOCATION ON THE SURFACE USE ACCESS ROAD RIGHT OF WAY AND THE LOCATION OF THE PROPERTY IN THIS PARCEL AS SHOWN ON THIS MAP ARE APPROXIMATE. THE ACTUAL BOUNDARIES AND LOCATIONS MAY VARY AS THIS EXHIBIT IS NOT AN EXACT REPRODUCTION OF THE RECORDS OF THE COUNTY RECORDS. THE ACTUAL PROPERTY BOUNDARIES SHALL BE AS BOUND AND DESCRIBED IN THE SURFACE USE AGREEMENT RECORDING THE APPROVED SITE LOCATION FOR THE SURFACE USE ACCESS ROAD AND RIGHT OF WAY SHALL BE THE LOCATION AS ACTUALLY CONSTRUCTED.

Exhibit "A"
CHARLES & BETTY HUGGINS
Wetzel County, WV

Date: 5-25-21
Name: CLH
Name: Betty Jean Huggins



Date: 4/14/2021
PCS: NAD 1983 UTM Zone 17N Foot US

RECEIVED
Office of Oil and Gas
APR 28 2022
WV Department of
Environmental Protection

Wetzel County
Carol S. Haught, Clerk
Instrument: 308767
06/11/2021 @ 03:59:54 PM
AGREEMENT
Book 138 @ Page 714
Pages Recorded 3
Recording Cost \$
11.00

MEMORANDUM OF SURFACE USE AGREEMENT

This Memorandum of Surface Use Agreement ("Memorandum") made this 14 day of MAY 2021 by and between Elnora Tuttle, by her Power-of-Attorney whose address is 6768 Proctor Creek Road, Proctor, WV 26055, (hereinafter collectively called "Surface Owner"), and TH EXPLORATION, LLC, a Texas limited liability company, with an address of 1320 S. University Drive, Suite 500, Fort Worth, TX 76107, (hereinafter called "Company").

WITNESSETH

For and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound, Surface Owner did make and execute in favor of Company a Surface Use Agreement (the "Agreement") dated MAY 14, 2021 and made effective MAY 24, 2021 which provides for a ten (10) year term ("Agreement Term") covering Surface Owner's interest in the following described lands (the "Lands"):

The Lands are located, all or part, in Proctor District, Wetzel County, State of West Virginia, and including lands identified as: 12-8-15, and described for the purposes of this Memorandum as containing 39.2 acres, and Lands located, all or part, in Proctor District, Wetzel County, State of West Virginia, and including all contiguous or appurtenant lands owned by Surface Owner, as described in that certain deed dated July 25, 1985 and recorded in the office of the County Clerk of the aforesaid County in Deed Book, 315-62.

The Company desires to use the portion of Land labeled as "Limit of Disturbance - Pad" and "Limit of Disturbance - Access Road" on the attached Exhibit A for the construction and installation of access roads, drilling pads, tanks, fences, pits and any other facilities or equipment necessary or convenient for the drilling, completion, production, operation, and maintenance of the Company's operations on or off the Land as well as to lay, maintain, excavate, construct, survey, re-construct, operate, tie into, inspect, enlarge, repair, replace, alter, clear trees and other obstructions, and remove, one or more above and/or below ground pipelines, whether permanent or temporary, with fittings and appliances, for the transportation of potable and non-potable fresh water, produced water, completion backflow water, oil, gas and other liquid or gaseous products/substances to and from wells drilled, or to be drilled, on or off the Lands and the Surface Owner is agreeable to the same on the terms and conditions set out in the Agreement.

The Agreement also grants unto Company, Surface Owner's consent to and an easement for the drilling, production, and operation of shallow and deep horizontal or vertical oil and gas wells at any legal location(s) upon the surface of the Lands pursuant to W. Va. Code §§ 22-6A and 22C-9-7(b)(4) and applicable regulations.

The Agreement, with all of its terms, covenants and other provisions, is referred to and incorporated into this Memorandum for all purposes. This Memorandum is placed of record for the purpose of giving notice of the Agreement. Nothing contained in this Memorandum will alter or amend any of the terms and provisions of the Agreement. In the event of any conflict between this Memorandum and the Agreement, the terms and conditions of the Agreement shall control.

IN WITNESS WHEREOF this Memorandum of Surface Use Agreement is executed as of the date first above written.

Surface Owner: Sandra Murriner
Sandra Murriner
Power-of-Attorney

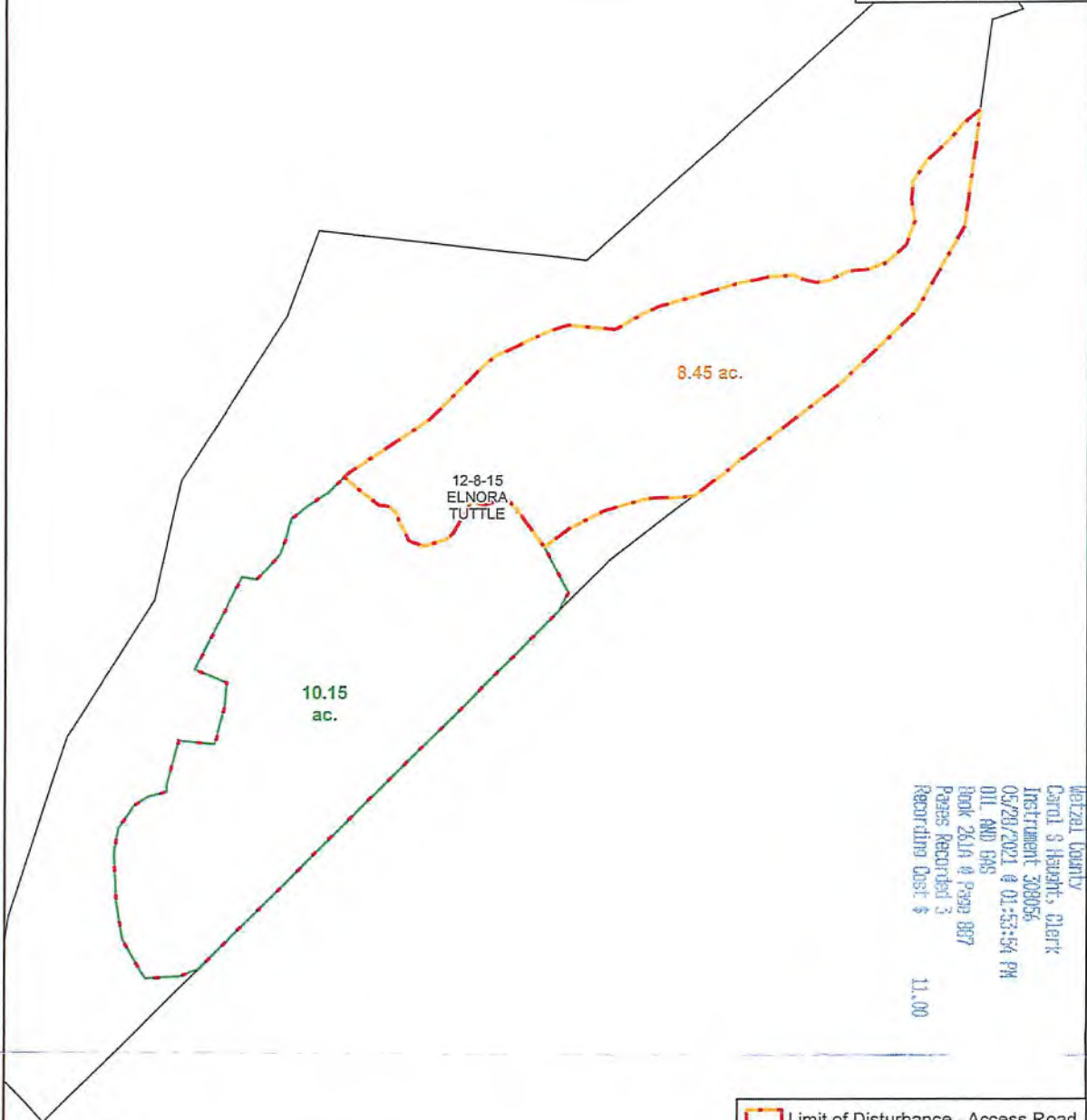
Company: TH EXPLORATION, LLC

By: Benjamin J. Irwin
Name: Benjamin J. Irwin
Title: Attorney-in-Fact

RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection



Wetzel County
 Carol S. Heavitt, Clerk
 Instrument 309056
 05/28/2021 @ 01:53:54 PM
 OIL AND GAS
 Book 261A @ Page 887
 Pages Recorded 3
 Recording Cost \$ 11.00

1 inch: 273 feet

Limit of Disturbance - Access Road
 Limit of Disturbance - Pad

0 80 160 320
 Feet

NOTE: THE APPROXIMATE LOCATION FOR THE SURFACE SITE, ACCESS ROAD, RIGHT OF WAY AND THE LOCATION OF THE PROPERTY TAX PARCELS AS WELL AS CERTAIN SHOWN AREAS, SUBJECT TO THE ACTUAL RECORDS AND RECORDS IN THE DEEDS FILED IN THE COUNTY RECORDS AND THE APPROXIMATE LOCATION FOR THE SURFACE SITE, ACCESS ROAD AND RIGHT OF WAY SHALL BE THE LOCATION AS ACTUALLY CONSTRUCTED.

Exhibit "A"
 ELNORA TUTTLE
 Wetzel County, WV

Date: _____
 Name: Sandra D. Purpus
 Name: _____



Date: 4/14/2021
 PCS: NAD 1983 UTM Zone 17N Foot US

RECEIVED
 Office of Oil and Gas
 APR 28 2022
 WV Department of
 Environmental Protection

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, DPS GIS (7/18/2022) 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 (7/19/2016)

- 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
4710303467	Tug Hill Operating, LLC	12004' TVD (proposed)	Point Pleasant (proposed)	none	Yes, this is a permitted well in the Point Pleasant Formation. Once completed, this well will be within the expected fracture propagation from the proposed Point Pleasant stimulation. Proper casing and cement should prevent migration of fluids between wellbores.	Permitted Point Pleasant well by Tug Hill Operating, LLC., located on same well pad as the proposed well.
4710373098	unknown	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing in the planned Point Pleasant well.	State records are incomplete.
4710373096	unknown	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing in the planned Point Pleasant well.	State records are incomplete.
4710373097	unknown	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing in the planned Point Pleasant well.	State records are incomplete.

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
4710301490	Perkins Oil and Gas, Inc.	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing in the planned Point Pleasant well.	State records are incomplete.
4710370080	South Penn Oil (S. Penn Nat. Gas)	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing in the planned Point Pleasant well.	State records are incomplete.
4710300886	Perkins Oil and Gas, Inc.	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing in the planned Point Pleasant well.	State records are incomplete.



WV Geological & Economic Survey:

Well: County = 103 Permit = 03467

Report Time: Tuesday, July 19, 2022 11:40:14 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4710303467	Wetzel	3467	Proctor	Wileyville	Littleton	39.693904	-80.737538	522503.4	4393817.4

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4710303467	1 As Proposed	521799.7	4396712	-80.74565	39.720003

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
4710303467	-/-	Dvtd Orgnl Loc	Permitted	Elnora Tuttle		N-18HU	Elmer		Elnora Tuttle	Tug Hill Operating, LLC	12004	Pl 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	NGL_BEI	
4710303467	-/-	-/-	1275	Ground Level																		

WV Geological & Economic Survey:

Well: County = 103 Permit = 73098

Report Time: Tuesday, October 19, 2021 2:07:15 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4710373098	Wetzel	73098	Proctor	Wileyville	Littleton	39.691866	-80.742304	522095.4	4393590

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
4710373098	-/-	unknown	Prpty Map	Nancy J Garner		17				unknown			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL	
4710373098	-/-	-/-						unclassified	unclassified	not available	unknown	unknown										

WV Geological & Economic Survey:

Well: County = 103 Permit = 73096

Report Time: Tuesday, October 19, 2021 2:06:38 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4710373096	Wetzel	73096	Proctor	Wileyville	Littleton	39.690996	-80.746058	521773.8	4393492.5

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4710373096	-/-	unknown	Prpty Map	Henry Garner		5				unknown			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL	
4710373096	-/-	-/-						unclassified	unclassified	not available	unknown	unknown										

WV Geological & Economic Survey:

Well: County = 103 Permit = 73097

Report Time: Tuesday, October 19, 2021 2:06:23 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4710373097	Wetzel	73097	Proctor	Wileyville	Littleton	39.692302	-80.74512	521853.8	4393637.7

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
4710373097	-/-	unknown	Prpty Map	Henry Garner	2					----- unknown -----			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL	
4710373097	-/-	-/-						unclassified	unclassified	not available	unknown	unknown										

WV Geological & Economic Survey:

Well: County = 103 Permit = 01490

Report Time: Tuesday, October 19, 2021 2:07:02 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4710301490	Wetzel	1490	Proctor	Wileyville	Littleton	39.693041	-80.74625	521756.7	4393719.4

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
4710301490	-/-	Original Loc	Completed	J R Huggins Hrs	1					Perkins Oil and Gas, Inc.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL	
4710301490	-/-	-/-						unclassified	unclassified	not available	unknown	unknown										

There is no Pay data for this well

Production Gas Information: (Volumes in Mcf)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4710301490	Aries Petroleum	1996	0	0	0	0	0	0	0	0	0	0	0	0	0

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

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4710301490	Aries Petroleum	1996	0	0	0	0	0	0	0	0	0	0	0	0	0

WV Geological & Economic Survey:

Well: County = 103 Permit = 70080

Report Time: Tuesday, October 19, 2021 2:06:50 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4710370080	Wetzel	70080	Proctor	Wileyville	Littleton	39.694201	-80.745875	521788.5	4393848.3

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
4710370080	-/-	Original Loc	Completed	Henry Garner		3				South Penn Oil (S. Penn Nat. Gas)			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL
4710370080	-/-	-/-			Gordon			unclassified	unclassified	not available	unknown	unknown	2980		2980						

WV Geological & Economic Survey:

Well: County = 103 Permit = 73097

Report Time: Tuesday, October 19, 2021 2:06:23 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4710373097	Wetzel	73097	Proctor	Wileyville	Littleton	39.692302	-80.74512	521853.8	4393637.7

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
4710373097	-/-	unknown	Prpty Map	Henry Garner		2				----- unknown -----			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL
4710373097	-/-	-/-						unclassified	unclassified	not available	unknown	unknown									

WV Geological & Economic Survey

Well: County = 103 Permit = 00886

Report Time: Tuesday, October 19, 2021 2:05:54 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4710300886	Wetzel	886	unknown	unknown	unknown				

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
4710300886	-/-	Original Loc	Completed	J Huggins	1					Perkins Oil and Gas, Inc.			

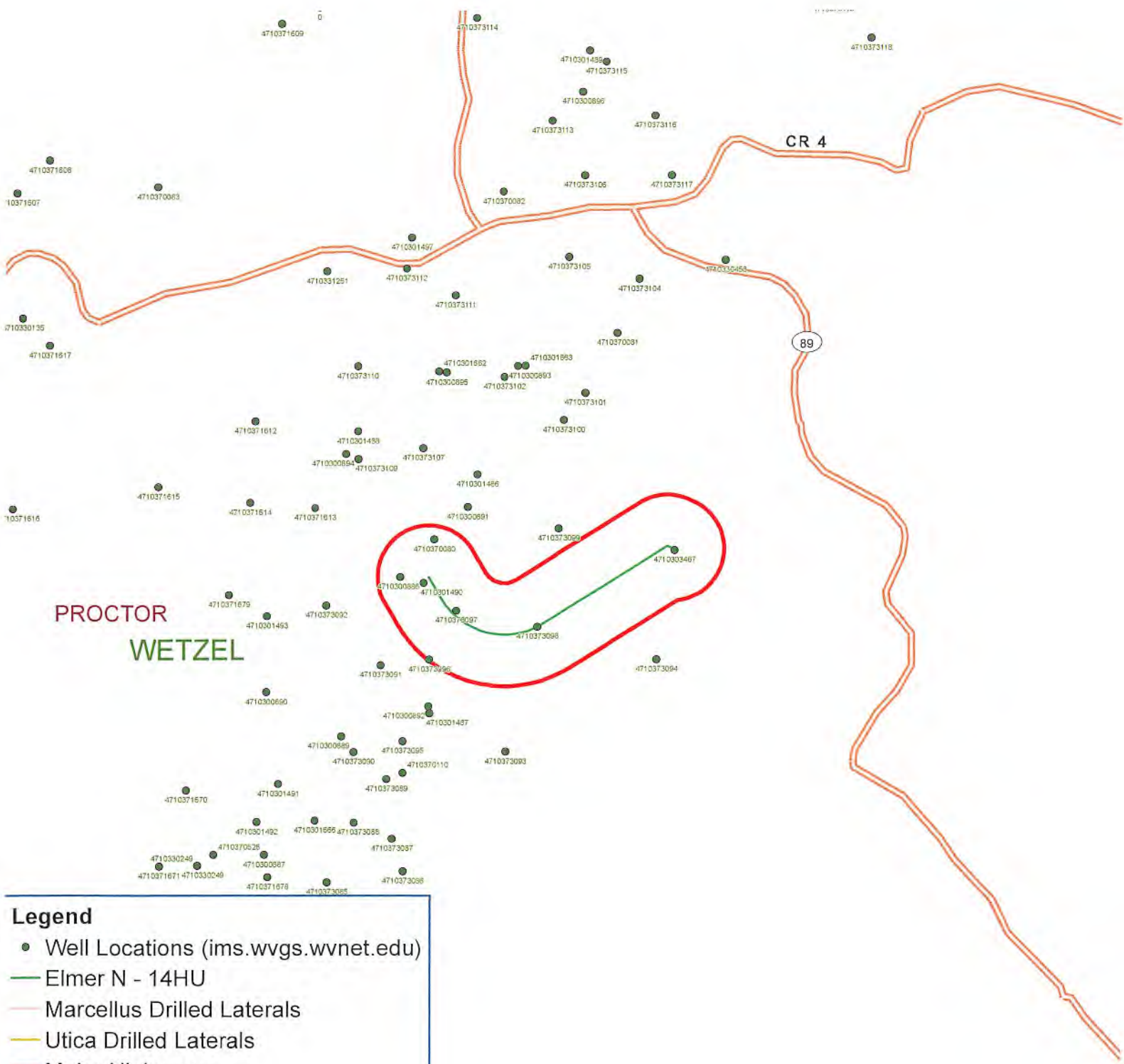
Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEFO	G_AFT	O_BEFO	O_AFT
4710300886	-/-	-/-			Unnamed			unclassified	unclassified	not available	unknown	unknown			0		0	0	0	0

There is no Pay data for this well

Production Gas Information: (Volumes in Mcf)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4710300886	Perkins Oil and Gas, Inc.	1985													
4710300886	Perkins Oil and Gas, Inc.	1988	0	0	0	0	0	0	0	0	0	0	0	0	0
4710300886	Perkins Oil and Gas, Inc.	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4710300886	Perkins Oil and Gas, Inc.	1990	0	0	0	0	0	0	0	0	0	0	0	0	0
4710300886	Perkins Oil and Gas, Inc.	1991													
4710300886	Perkins Oil and Gas, Inc.	1992	0	0	0	0	0	0	0	0	0	0	0	0	0
4710300886	Perkins Oil and Gas, Inc.	1994													
4710300886	Perkins Oil and Gas, Inc.	1995													
4710300886	Perkins Oil and Gas, Inc.	1996	186	0	0	0	0	0	0	0	0	0	0	0	186
4710300886	Perkins Oil and Gas, Inc.	1997	978	178	259	0	0	251	50	0	0	0	59	181	0
4710300886	Perkins Oil and Gas, Inc.	1998	1,436	0	0	0	0	27	205	112	220	222	220	204	226
4710300886	Perkins Oil and Gas, Inc.	1999	2,382	319	188	280	200	187	47	123	215	219	186	220	198
4710300886	Perkins Oil and Gas, Inc.	2001	2,200	189	160	199	178	194	153	203	204	182	169	226	143
4710300886	Perkins Oil and Gas, Inc.	2002	1,819	155	119	201	159	143	158	184	162	132	159	84	163
4710300886	Perkins Oil and Gas, Inc.	2003	1,651	122	109	163	162	159	155	175	166	177	159	2	102
4710300886	Perkins Oil and Gas, Inc.	2004	1,827	149	142	169	170	142	154	171	131	150	154	156	139
4710300886	Perkins Oil and Gas, Inc.	2005	1,589	141	118	107	137	140	139	83	147	143	135	159	140
4710300886	Perkins Oil and Gas, Inc.	2006	1,538	123	90	141	113	136	133	141	143	135	138	125	120
4710300886	Perkins Oil and Gas, Inc.	2007	1,535	128	98	122	126	137	133	117	140	136	143	132	123
4710300886	Perkins Oil and Gas, Inc.	2008	1,441	124	111	113	87	95	135	140	140	105	139	129	123
4710300886	Perkins Oil and Gas, Inc.	2009	1,366	107	107	117	107	127	129	128	136	4	133	146	125
4710300886	Perkins Oil and Gas, Inc.	2010	340	34	31	37	39	38	32	34	34	21	6	19	15
4710300886	Perkins Oil and Gas, Inc.	2011	263	14	18	28	37	37	29	35	29	36	0	0	0
4710300886	Perkins Oil and Gas, Inc.	2012	196	21	18	22	15	18	19	19	22	21	21	0	0
4710300886	Perkins Oil and Gas, Inc.	2013	210	2	8	9	21	21	20	24	24	24	22	18	17
4710300886	Perkins Oil and Gas, Inc.	2014	246	17	17	10	25	14	16	25	25	23	23	29	22
4710300886	Perkins Oil and Gas, Inc.	2015	260	27	25	16	15	19	17	23	32	17	29	25	15
4710300886	Perkins Oil and Gas, Inc.	2016	205	11	8	15	16	19	18	18	21	22	14	16	26
4710300886	Perkins Oil and Gas, Inc.	2017	528	220	0	24	36	22	30	26	26	0	42	40	62
4710300886	Perkins Oil and Gas, Inc.	2018	110	8	0	8	12	8	8	9	5	8	8	13	23
4710300886	Perkins Oil and Gas, Inc.	2019	50	14	0	1	2	0	3	4	3	1	6	6	10
4710300886	Perkins Oil and Gas, Inc.	2020	1,295	98	92	113	108	111	114	119	122	112	112	95	99



PROCTOR
WETZEL

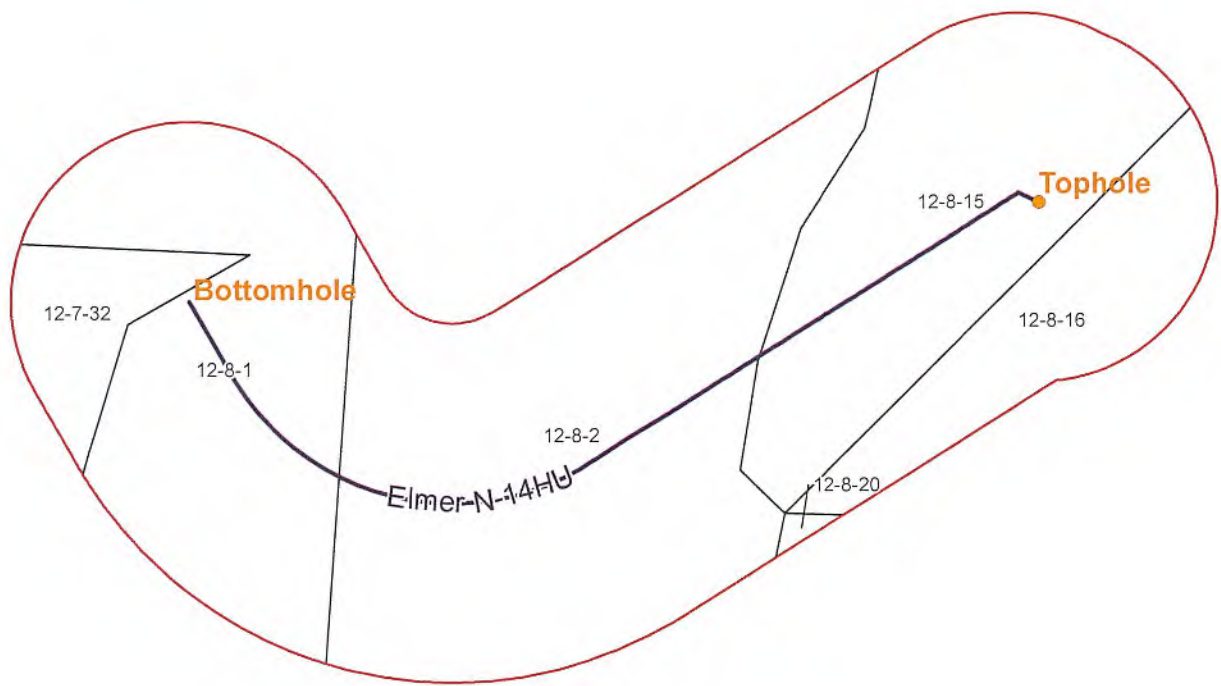
- Legend**
- Well Locations (ims.wvgs.wvnet.edu)
 - Elmer N - 14HU
 - Marcellus Drilled Laterals
 - Utica Drilled Laterals
 - Major Highways
 - Major Roads
 - 500 Ft. Buffer
 - Counties
 - Districts



Elmer N - 14HU Proctor District Wetzel County, WV



Elmer N-14HU



Coordinate System: NAD 1983 UTM Zone 17h
 Projection: Transverse Mercator
 Datum: North American 1983
 False Easting: 100000.000000
 False Northing: 0.000000
 Central Meridian: -81.000000
 Scale Factor: 0.999600
 Datum Offset East: 0.000000
 Units: Foot US

CONFIDENTIAL



— Well of Interest

□ 500' Buffer

Elmer N-14HU
 Operators within 500 Feet of Well Borehole



Operators within 500' of Well Borehole
Elmer N - 14HU

COUNTY	DISTRICT	TMP	MINERAL OWNER OR LESSEE	ADDRESS
WETZEL	PROCTOR	12-8-2	TH EXPLORATION LLC	1320 S. University Blvd Suite 500 Fort Worth, TX 76107
WETZEL	PROCTOR	12-8-15	TH EXPLORATION LLC	1320 S. University Blvd Suite 500 Fort Worth, TX 76107
WETZEL	PROCTOR	12-8-16	TH EXPLORATION LLC	1320 S. University Blvd Suite 500 Fort Worth, TX 76107
WETZEL	PROCTOR	12-8-20	SWN PRODUCTION COMPANY LLC	10000 Energy Drive Spring, TX 77389
WETZEL	PROCTOR	12-8-20	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Building 2, Ste 100 Austin, TX 78730



TUG HILL
OPERATING

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

Well Name: Elmer N-14HU

Pad Name: Elmer

County: Marshall

UTM (meters), NAD83, Zone 17

Northing: 4,393,822.46

Easting: 520,498.07

Maynard K. W.
1/19/2022

**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)

24-HOUR EMERGENCY PHONE NUMBER

(800) 921-9745

RECEIVED
Office of Oil and Gas
APR 28 2022
WV Department of
Environmental Protection

WW-9

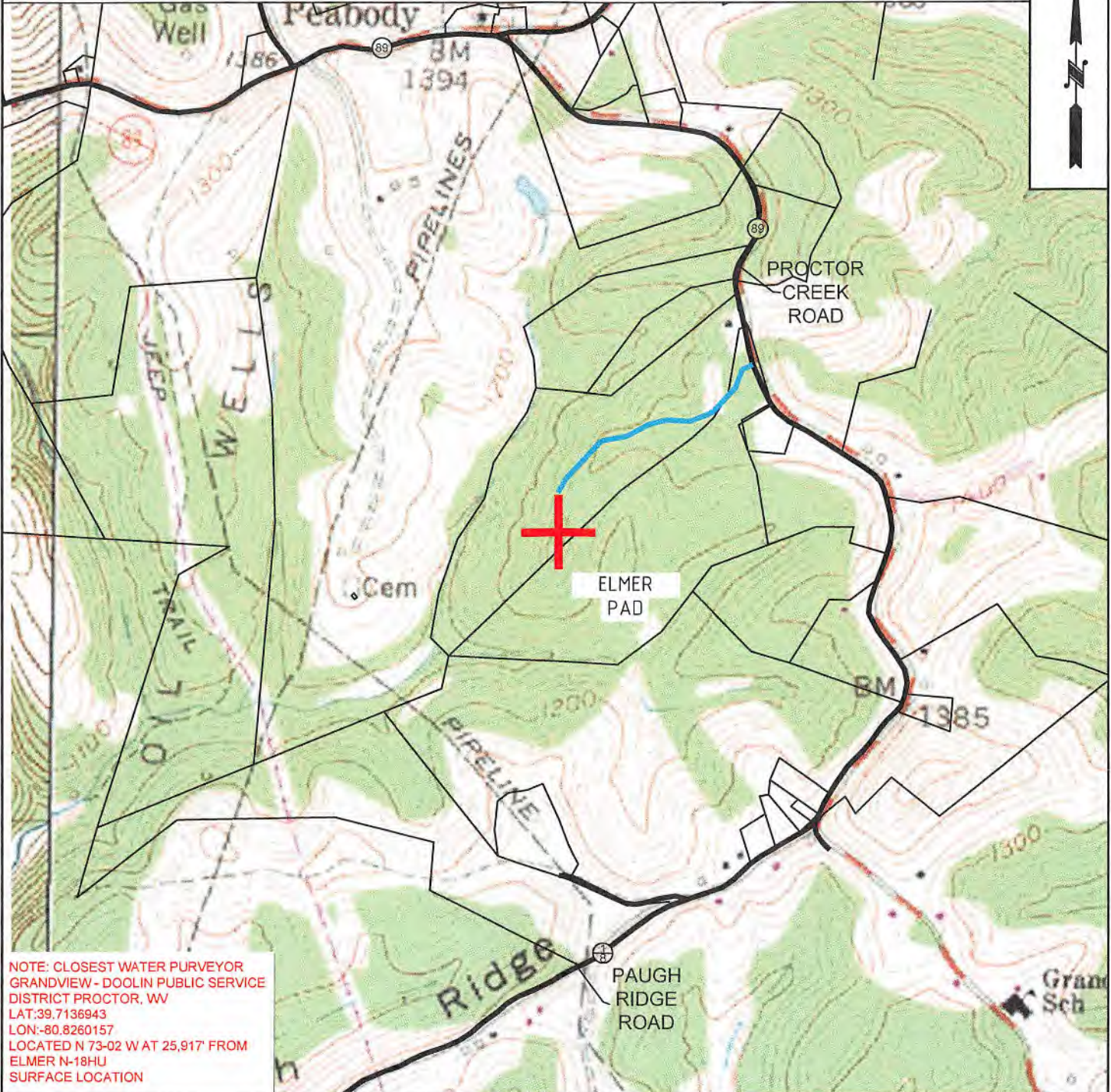
PROPOSED ELMER PAD

SUPPLEMENT PG 2

RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection



NOTE: CLOSEST WATER PURVEYOR
GRANDVIEW - DOOLIN PUBLIC SERVICE
DISTRICT PROCTOR, WV
LAT:39.7136943
LON:-80.8260157
LOCATED N 73-02 W AT 25,917' FROM
ELMER N-18HU
SURFACE LOCATION



TUG HILL
OPERATING

OPERATOR	494510851	TOPO SECTION	LEASE NAME
TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		WILEYVILLE 7.5'	ELMER
		SCALE:	DATE:
		1" = 1000'	DATE: 10-30-2021



July 20, 2022

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

RE: Elmer N-14HU

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-hilop.com.

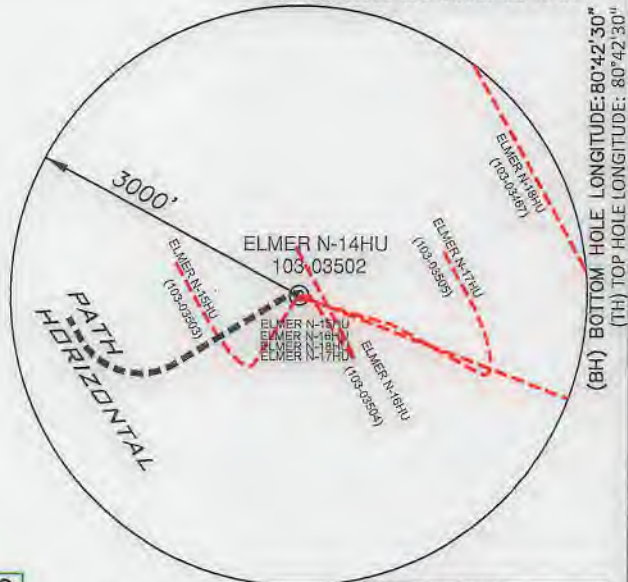
Sincerely,

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

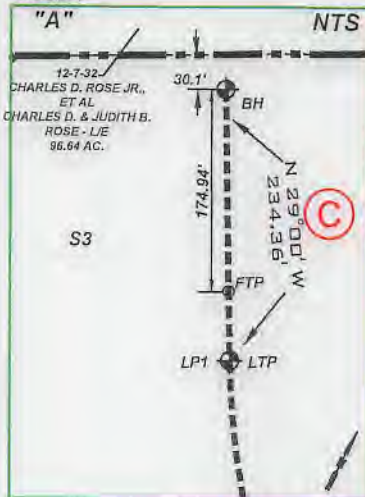
Amy L. Morris
Permitting Specialist – Appalachia Region
Tug Hill Operating

**ELMER LEASE
WELL N-14HU
26.1585± ACRES**

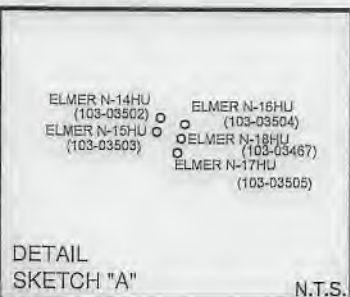
TOP HOLE LATITUDE: 39°42'30"
BOTTOM HOLE LATITUDE: 39°42'30"



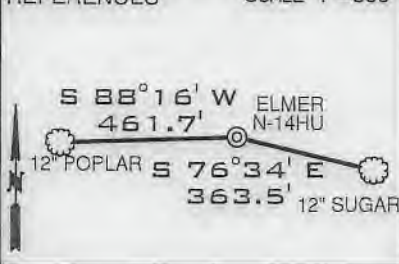
INSET



(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS



REFERENCES SCALE 1"=500'



- 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 WETZEL COUNTY, WV IN APRIL 2022. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
 - WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
 - ALL DEEP WELLS WITHIN 1,000' ARE SHOWN ON THIS PLAT.
 - BOUNDARIES ALONG ROADWAYS ARE BASED UPON MEMORANDUM BY DICKIE, MCCAMEY & CHILCOTE, P.C. FILE 0056804.0401147

LEGEND

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

SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,393,822.46
E) 522,498.07

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,393,676.38
E) 521,807.58

BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,393,738.25
E) 521,771.92

DEEP WELLS WITHIN 2400' OF PROPOSED WELL'S SURFACE LOCATION AND/OR WITHIN 500' OF WELL

API	OPERATOR
47-103-03467	Tug Hill Operating, LLC
47-103-03505	Tug Hill Operating, LLC
47-103-03504	Tug Hill Operating, LLC
47-103-03503	Tug Hill Operating, LLC

LINE	BEARING	DISTANCE
L1	N 42°32' E	1843.03'
L2	N 67°54' E	1408.38'
L3	N 64°02' W	62.83'
L4	S 58°58' W	1,450.41'

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	S 70°55' W	248.76'	716.17'	250.03'
C2	N 87°05' W	297.82'	716.45'	300.01'
C3	N 63°05' W	297.82'	716.28'	300.01'
C4	N 40°02' W	274.24'	716.10'	275.95'

FILE NUMBER _____

DRAWING NUMBER ELMER_N-14HU_REV3

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

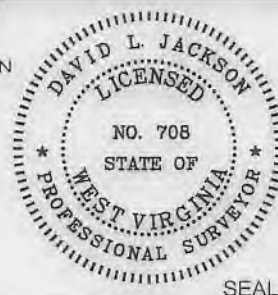
PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

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

P.S. 708

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

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

LOCATION ELEVATION 1276.50' WATERSHED (HUC 10) PROCTOR CREEK OF FRENCH CREEK - OHIO RIVER (HUC-10)

DISTRICT PROCTOR COUNTY WETZEL

QUADRANGLE WILEYVILLE 7.5' LEASE NUMBER SEE WW-6A1 FORM

SURFACE OWNER ELNORA TUTTLE ACREAGE 39.19

OIL & GAS ROYALTY OWNER ELNORA TUTTLE - SEE WW-6A1 LEASE ACREAGE 39.19

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: 11,867' TMD: 13,560'

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

COUNTY NAME
PERMIT

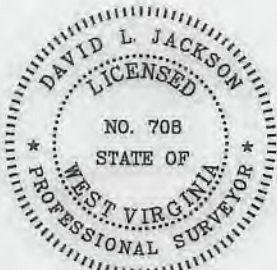
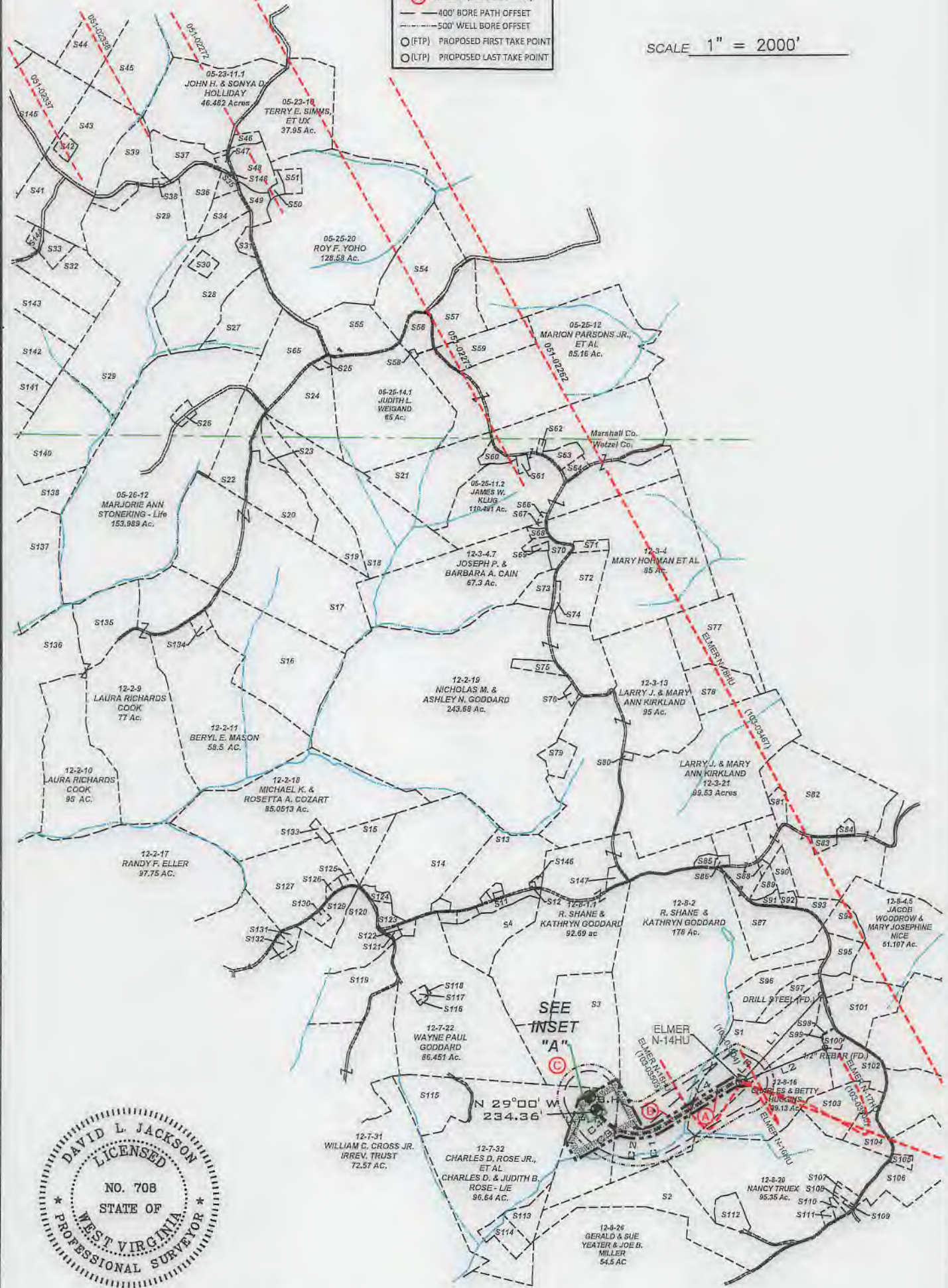
form wwg

**ELMER LEASE
WELL N-14HU
26.1585± ACRES**

LEGEND

- LEASED TRACTS
- - - SURFACE TRACTS
- - - WELL LATERAL
- - - POINT PLEASANT LEGS
- - - UNIT BOUNDARY
- (A) LEASE # (SEE GA1 FORM)
- 400' BORE PATH OFFSET
- - - 500' WELL BORE OFFSET
- (FTP) PROPOSED FIRST TAKE POINT
- (LTP) PROPOSED LAST TAKE POINT

SCALE 1" = 2000'



P.S. 708 *David L Jackson*

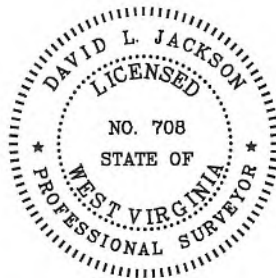
OPERATOR'S	
WELL #:	ELMER N-14HU
DISTRICT:	Proctor
COUNTY:	Wetzel
STATE:	WV
API #:	47-103-03502

WELL PLAT
PAGE 2 OF 4
DATE: 07/20/2022

**ELMER LEASE
WELL N-14HU
26.1585± ACRES**

6A1 Information

Lease ID	TMP	Tag	Grantor, Lessor, Etc.	Deed Book/Page	
10*31435	12-8-15	A	HENRY AND NANCY GARNER	55	394
10*31435	12-8-2	B	HENRY AND NANCY GARNER	55	394
10*31435	12-8-1	C	HENRY AND NANCY GARNER	55	394



P.S. 708 *David L Jackson*



**TUG HILL
OPERATING**

OPERATOR'S
WELL #: ELMER N-14HU
DISTRICT: Proctor
COUNTY: Wetzel
STATE: WV
API #: 47-103-03502

*WELL PLAT
PAGE 4 OF 4
DATE: 7/20/2022*

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
-------------------------	-----------------------	-----------------------	---------	-----------

*See attached pages

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

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

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

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

Well Operator: Tug Hill Operating, LLC
 By: Amy L. Morris *Amy L. 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	Assignment	Assignment	Assignment	Assignment	
10*31435	12-8-15	A	HENRY AND NANCY GARNER	J A PHILLIPS	1/8+	55 394	N/A	N/A	N/A	J A Phillips to South Penn Oil Company: 56/284	South Penn Oil Company to South Penn Natural Gas Company: 33A/455	South Penn Natural Gas Company to Dallis Snyder & Sam Beren dba Snyder & Beren: 39A/33	Dallis Snyder & Muriel C Snyder, Sam Beren & Sarah Beren, dba Snyder and Beren to John H Robinson & George F Eagon: 39A/38	John H Robinson, Blanche Eagon, Est of George F Eagon, decd, Mildred M Lartigue, Carl L Eagon, Elva Robinson, Est of John H Robinson, decd, & Mary Ellen Davis to Elva Robinson & Mary Ellen Davis: 43A/440	Elva Robinson & Mary Ellen Davis to Andrew L Henry, Charles E Reed & Harry R Cronin: 44A/92	Katherine A & Harry R Cronin Jr to Charles E & Kathryn C Reed: 51A/241	Kathryn C Reed to Carl Perkins: 55A/54	Carl & Dorothy Louise Perkins to Perkins Oil and Gas Inc: 84A/9	Perkins Oil & Gas Inc to TH Exploration LLC: 251A/463
10*31435	12-8-2	B	HENRY AND NANCY GARNER	J A PHILLIPS	1/8+	55 394	N/A	N/A	N/A	J A Phillips to South Penn Oil Company: 56/284	South Penn Oil Company to South Penn Natural Gas Company: 33A/455	South Penn Natural Gas Company to Dallis Snyder & Sam Beren dba Snyder & Beren: 39A/33	Dallis Snyder & Muriel C Snyder, Sam Beren & Sarah Beren, dba Snyder and Beren to John H Robinson & George F Eagon: 39A/38	John H Robinson, Blanche Eagon, Est of George F Eagon, decd, Mildred M Lartigue, Carl L Eagon, Elva Robinson, Est of John H Robinson, decd, & Mary Ellen Davis to Elva Robinson & Mary Ellen Davis: 43A/440	Elva Robinson & Mary Ellen Davis to Andrew L Henry, Charles E Reed & Harry R Cronin: 44A/92	Katherine A & Harry R Cronin Jr to Charles E & Kathryn C Reed: 51A/241	Kathryn C Reed to Carl Perkins: 55A/54	Carl & Dorothy Louise Perkins to Perkins Oil and Gas Inc: 84A/9	Perkins Oil & Gas Inc to TH Exploration LLC: 251A/463
10*31435	12-8-1	C	HENRY AND NANCY GARNER	J A PHILLIPS	1/8+	55 394	N/A	N/A	N/A	J A Phillips to South Penn Oil Company: 56/284	South Penn Oil Company to South Penn Natural Gas Company: 33A/455	South Penn Natural Gas Company to Dallis Snyder & Sam Beren dba Snyder & Beren: 39A/33	Dallis Snyder & Muriel C Snyder, Sam Beren & Sarah Beren, dba Snyder and Beren to John H Robinson & George F Eagon: 39A/38	John H Robinson, Blanche Eagon, Est of George F Eagon, decd, Mildred M Lartigue, Carl L Eagon, Elva Robinson, Est of John H Robinson, decd, & Mary Ellen Davis to Elva Robinson & Mary Ellen Davis: 43A/440	Elva Robinson & Mary Ellen Davis to Andrew L Henry, Charles E Reed & Harry R Cronin: 44A/92	Katherine A & Harry R Cronin Jr to Charles E & Kathryn C Reed: 51A/241	Kathryn C Reed to Carl Perkins: 55A/54	Carl & Dorothy Louise Perkins to Perkins Oil and Gas Inc: 84A/9	Perkins Oil & Gas Inc to TH Exploration LLC: 251A/463



April 26, 2022

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

RE: Elmer N-14HU

Subject: Road Crossing Letter

Dear Taylor:

Tug Hill Operating, LLC (THO) hereby submits this letter as confirmation that THO has obtained the right to drill, extract and produce the minerals under Wetzel County Route 89, CR 82 and CR 29 in the area reflected on the Elmer N-14HU well plat. THO has conducted a full title search in the relevant Court House to confirm its ownership under said County Route and is not currently aware of any recorded document that would suggest an ownership other than THO.

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

Sincerely,

Amy L. Morris
Permitting Specialist – Appalachia Region

RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection

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

Date of Notice Certification: 04/21/2022

API No. 47- 103 - _____

Operator's Well No. Elmer N-14HU

Well Pad Name: Elmer

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>522,498.07</u>
County:	<u>Wetzel</u>		Northing:	<u>4,393,822.46</u>
District:	<u>Proctor</u>	Public Road Access:	<u>Proctor Creek Road</u>	
Quadrangle:	<u>Wileyville 7.5'</u>	Generally used farm name:	<u>Elmora Tuttle</u>	
Watershed:	<u>Proctor Creek of French Creek - HUC 10</u>			

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
---	---

Required Attachments:

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

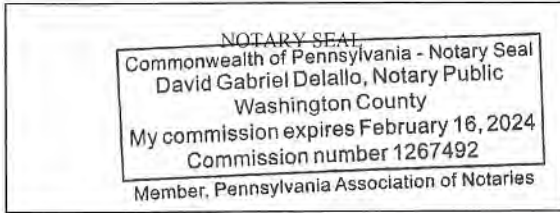
RECEIVED
Office of Oil and Gas

APR 28 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>Amy L. Morris</i></u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Permitting Specialist - Appalachia Region</u>	Facsimile:	<u>724-338-2030</u>
Telephone:	<u>724-749-8388</u>	Email:	<u>amorris@tug-hillop.com</u>



Subscribed and sworn before me this 21 day of APRIL, 2022.

David Gabriel Delallo Notary Public

My Commission Expires 2/16/24

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection

**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: 4/25/2022 **Date Permit Application Filed:** 4/26/2022

Notice of:

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

RECEIVED
Office of Oil and Gas
APR 28 2022
WV Department of
Environmental Protection

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: Elnora Tuttle (Pad & Access Road)
 - Address: 6768 Proctor Creek Road
Proctor, WV 26055
 - Name: Charles Lee & Betty Jean Huggins (Pad & Access Road)
 - Address: 5352 Palmer Ridge Road
Proctor, WV 26055
- SURFACE OWNER(s) (Road and/or Other Disturbance)
 - Name: _____
 - Address: _____
 - Name: _____
 - Address: _____
- SURFACE OWNER(s) (Impoundments or Pits)
 - Name: _____
 - Address: _____

- COAL OWNER OR LESSEE
 - Name: Consol Energy, Inc. Attn: Casey Saunders
 - Address: 275 Technology Drive, Suite 101
Canonsburg, PA 15317-9565
- COAL OPERATOR
 - Name: Consol Energy, Inc. Attn: Casey Saunders
 - Address: 275 Technology Drive, Suite 101
Canonsburg, PA 15317-9565
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
 - Name: *see attached list
 - Address: _____
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 - Name: _____
 - Address: _____

*Please attach additional forms if necessary

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

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

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

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

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

RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47- 103 -
OPERATOR WELL NO. Elmer N-14HU
Well Pad Name: Elmer

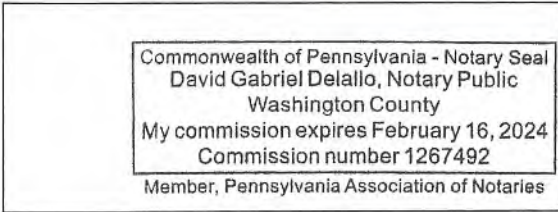
Notice is hereby given by:

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 depprivacyofficer@wv.gov.



Subscribed and sworn before me this 21 day of April 2022.

David Delallo

Notary Public

My Commission Expires 2/16/24

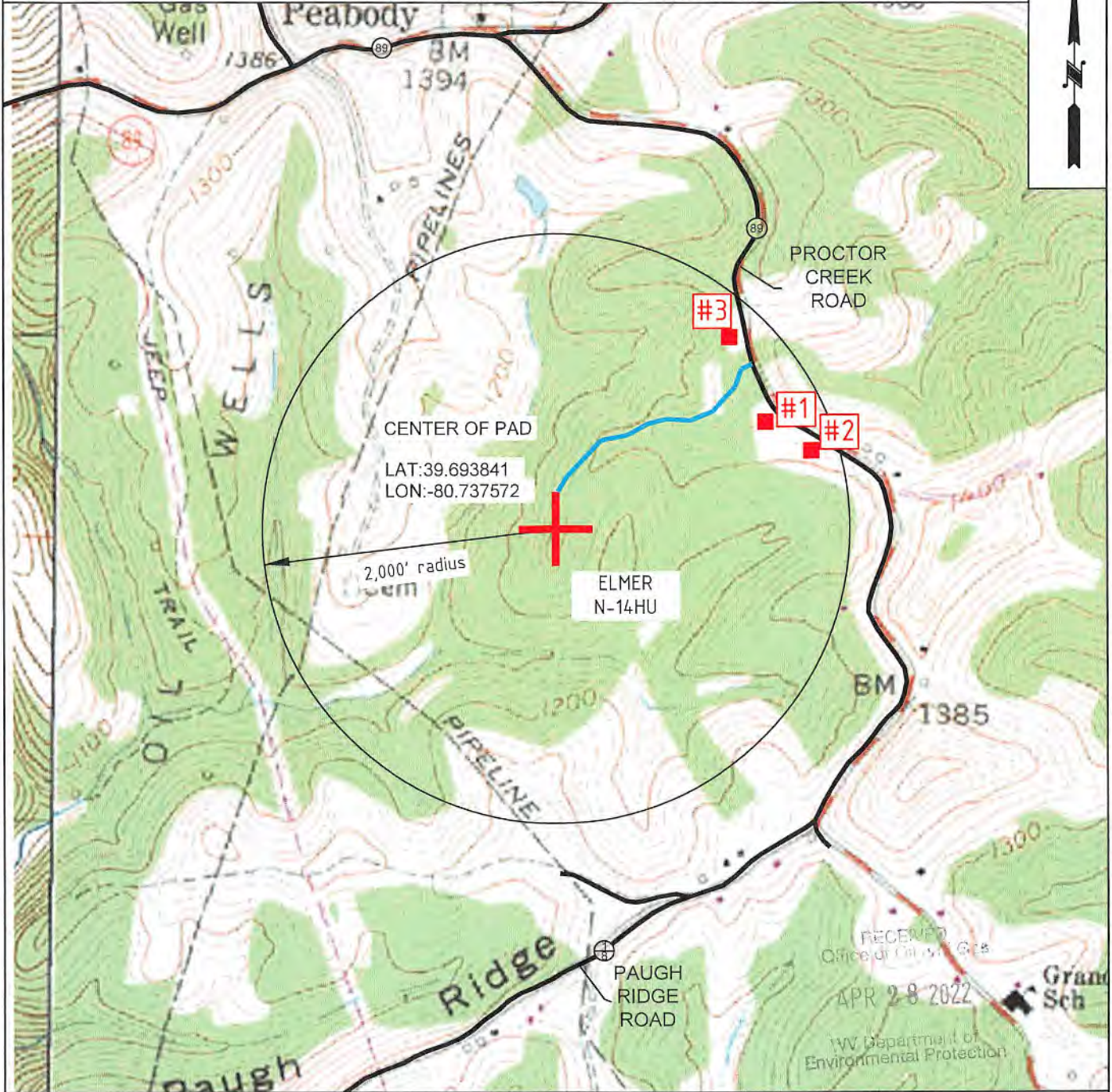
RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection

PROPOSED ELMER

THERE APPEAR TO BE THREE (3) RESIDENCES, AND NO (0) BUSINESSES,
CHURCHES, SCHOOLS, OR EMERGENCY FACILITIES WITHIN 2000'.



TUG HILL
OPERATING

OPERATOR	494510851	TOPO SECTION	LEASE NAME
TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		WILEYVILLE 7.5'	ELMER
		SCALE:	DATE:
		1" = 2000'	DATE: 12-08-2021

Exhibit 3A

Tug Hill Oil & Gas Inc.
380 Southpointe Blvd, Suite 200
Canonsburg, PA 15137

RESIDENCES WITHIN 2000' OF ELMER WELL PAD

Well: Elmer
District: Proctor
County: Wetzel
State: WV

There appears to be Three (3) Residences, No Businesses, No Schools and No Emergency Facilities within 2000' of the center of well pad for the above referenced well location. ✓

Topo Spot # 1 (House/Cabin) TM 12-8-4.2 Brent A. & Kimberly J. Eddy 6882 Proctor Creek Rd. Proctor, WV 26055 304-455-1510 (h)	Topo Spot # 2 (House/Cabin) TM 12-8-21 Eduardo C. & Sonya R. Deguzman PO Box 1102 Solomons, MD 20688 410-326-0190 (h)	Topo Spot # 3 (House/Cabin) TM 12-8-15 Elnora Tuttle 6768 Proctor Creek Rd. Proctor, WV 26055 304-455-4575 (h)
---	---	--

RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection

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: 4/12/2022 **Date of Planned Entry:** 4/19/2022

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: Elnora Tuttle (Pad & Access Road) ✓
 Address: 6768 Proctor Creek Road
Proctor, WV 26055

Name: Charles Lee & Betty Jean Huggins (Pad & Access Road) ✓
 Address: 5352 Palmer Ridge Road
Proctor, WV 26055

Name: _____
 Address: _____

COAL OWNER OR LESSEE

Name: Consol Energy, Inc. Attn: Casey Saunders ✓
 Address: 275 Technology Drive, Suite 101
Canonsburg, PA 15317-9565

MINERAL OWNER(s)

Name: *See attached list
 Address: _____

*please attach additional forms if necessary

RECEIVED
Office of Oil and Gas
APR 28 2022
Department of
Environmental Protection

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>39.69384130; -80.73757155</u>
County: <u>Wetzel</u>	Public Road Access: <u>Proctor Creek Road</u>
District: <u>Proctor</u>	Watershed: <u>French Creek - Ohio River (HUC 10)</u>
Quadrangle: <u>Wileyville 7.5'</u>	Generally used farm name: <u>Elnora Tuttle</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 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

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

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.

Additional Parties to Notice

Elmer Pad

QA3
LIST

Anita Louise Croghan
46 Fox Lane
Winnetka, IL 60093

Barbara K. Eddy
P.O. Box 483
Centre Hall, PA 16828

Charles W. Kolish, Jr.
4353 Rudy Lane
Louisville, KY 40207

Charles W. Kolish, Sr.
307 Bramton Road
Louisville, KY 40207

Christopher Palmer
37 Eton Rd.
Montgomery, AL 36109

Daria F. Palmer Brooks
5500 Prytania St., PMB #601
New Orleans, LA 70115

David M. Eddy
60090 Kiowa Ln.
Montrose, CO 81403

Debra K. Eddy
60090 Kiowa Ln.
Montrose, CO 81403

Ellen Kay Shook
1706 Virginia St.
Moundsville, WV 26041

James Arman
2048 Bridal Rd.
Fernandina Beach, FL 32757

John Richard Nuzum
2728 Cypress Street
Columbia, SC 29205

Larry D. Garner
5130 Hampton Court
Zanesville, OH 43701

Linda L. Simmons Nuzum
98 Michigan Ave.
Asheville, NC 28806

Lisa Marian Palmer Beers
2832 Woodley Rd.
Montgomery, AL 36111

Mary Margaret Sterling
372 Ruddles Mill Rd.
Paris, KY 40361

Michelle Sherwood
4725 Milford Rd.
Wilmington, NC 28405

Perkins Oil & Gas Inc.
2966 Northwest Turnpike
Pennsboro, WV 26415

R. Shane Goddard and Kathryn Goddard
5904 Proctor Creek Road
Proctor, WV 26055

Richard H. Arman
724 Mitchell Point Rd.
Mineral, VA 23117

Ridgetop Royalties, LLC
Attn: Chris Coonfare
380 Southpointe Blvd, Ste. 405
Canonsburg, PA 15317

Roger E. Woodington
11 North Point Drive
Portsmouth, VA 23703

Sharon Burton
314 N. 1st Ave.
Paden City, WV 26159

Susain Rosier
665 W. Maryland Ave.
Sebring, OH 44672

Tamela P. Wood and James G. Wood
215 McBride Ridge Rd.
Wileyville, WV 26581

Thelma N. Palmer
P.O. Box 188
Pine Grove, WV 26419

Thomas Arman
840 Blue Bird Lane
Wake Forest, NC 27587

Thomas E. Garner
413 Tomlinson Ave.
Glen Dale, WV 26038

Vanita and Cordova Holding Company, LLC
356 Nicholson Loop Rd.
Morgantown, WV 26508

Vicki S. Voorhis and Norman K. Voorhis
802 Highland Ave.
New Martinsville, WV 26155

RECEIVED
Office of Oil and Gas
APR 28 2022
WV Department of
Environmental Protection

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: 04/25/2022 **Date Permit Application Filed:** 04/26/2022

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: Elnora Tuttle (Pad & Access Road)
Address: 6768 Proctor Creek Road
Proctor, WV 26055

Name: Charles Lee & Betty Jean Huggins (Pad & Access Road)
Address: 5352 Palmer Ridge Road
Proctor, WV 26055

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>522,498.07</u>
County:	<u>Wetzel</u>		Northing:	<u>4,393,822.46</u>
District:	<u>Proctor</u>	Public Road Access:	<u>Proctor Creek Road</u>	
Quadrangle:	<u>Wileyville 7.5'</u>	Generally used farm name:	<u>Elnora Tuttle</u>	
Watershed:	<u>French Creek - Ohio River</u>			

This Notice Shall Include:

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

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

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

Oil and Gas Privacy Notice:

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

APR 28 2022
WV Department of
Environmental Protection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

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

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

October 29, 2021 ✓

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

Subject: DOH Permit for the Elmer Pad, Wetzel County
Elmer N-14HU Well Site ✓

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2021-0381 which has been issued to Tug Hill Operating LLC for access to the State Road for a well site located off Wetzel County Route 89 SLS MP 6.84.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a STATEWIDE 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,

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

RECEIVED
Office of Oil and Gas

APR 28 2022

WV Department of
Environmental Protection



PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Elmer Wells

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

RECEIVED
Office of Oil and Gas
APR 28 2022
U.S. Department of
Environmental Protection

WEST VIRGINIA COUNTY MAP



PROJECT LOCATION

Elmer Well Site

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

Tug Hill Operating
Wetzel County
Proctor District

Latitude 39.69384130°
Longitude -80.73757155°
Proctor Creek Watershed

APPROVED
WVDEP OOG
2/11/2022

Pertinent Site Information
Elmer Well Site
Emergency Number: 304-455-6960
Proctor District, Wetzel County, WV
Watershed: Proctor Watershed
Site 911 Address:

Tug Hill Contact Numbers: 1-817-632-3400

Property Owner Information - Elmer Well Site	
Owner	Proctor District - Wetzel County
County & State Highways	WV 206 / WV 207
Access Point	WV 206 / WV 207

Additional Information	
Site Name	Elmer Well Site
Site Address	WV 206 / WV 207
Site Contact	Proctor District

Exhibit A: Final Design: Issue for Construction



Access Road		
Width	12.00	Feet
Grade	2.5%	Side Slope

Disburbed Area	
Area	7.00 AC
Disburbed Area	7.00 AC

Elmer Well Site Quantities				
Item	Quantity	Unit	Notes	Remarks
Well Pad	1	Sq. Ft.	1000	
Well Pad	1	Sq. Ft.	1000	
Well Pad	1	Sq. Ft.	1000	
Well Pad	1	Sq. Ft.	1000	

County	Parcel ID	Owner
WV	WV 206 / WV 207	Proctor District
WV	WV 206 / WV 207	Proctor District
WV	WV 206 / WV 207	Proctor District

Project Contacts
The HR Consulting, LLC
3801 Independence Blvd.
Sandy Springs, GA 30328
Phone: 404.255.1311

Engineer
Kearney Kelly
600 South 4th St.
Martinsburg, WV 26156
Phone: 304.892.8228

Surveyor
James B. Rouse
1000 1st St.
Martinsburg, WV 26156
Phone: 304.892.8228

Site Location (NAD 83)		
Station	1000	1000
Coordinates	39.69384130	-80.73757155



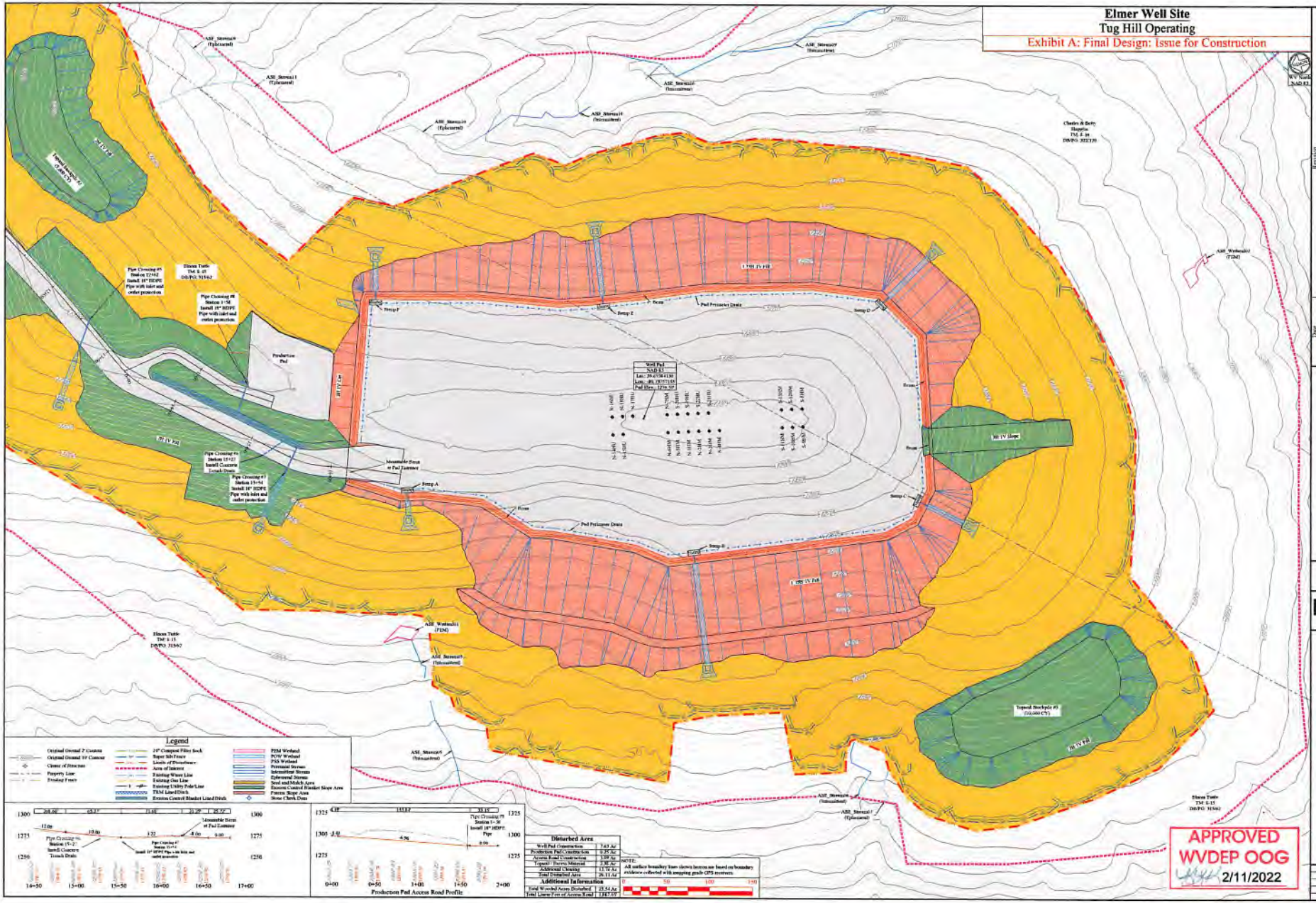
Approach Route:
From the intersection of WV Rt. 2 and OH Rt. 7 over New Mountain, WV, travel North on WV Rt. 2 for 0.6 mile. Turn Right onto Co. Rd. 22 (Wetzel Hill Rd.). Follow Co. Rd. 22 for 2.3 miles. Turn Right onto Co. Rd. 28 (Wagon Ridge). Follow Co. Rd. 28 for 0.8 mile. Turn Right onto Co. Rd. 29 (Hersch Ridge). Follow Co. Rd. 29 for 2.1 miles. Turn Right onto Co. Rd. 29 (Coffield Rd.). Follow Co. Rd. 29 for 1.3 mile. Continue straight onto Co. Rd. 17 (Coffield Rd.). Follow Co. Rd. 17 for 1.7 mile. Turn Left onto Co. Rd. 89 (Proctor Creek Rd.). Follow Co. Rd. 89 for 0.5 mile. The site entrance will be on the Right (West) side of the road.

Sheet	Description
1	Cover Sheet
1-1	Schedule of Quantities
1-1-N4	Site Notes
2	Pre-Construction Site Conditions
3	Site Soil Map
4	Clearing Exhibit
5	Overall Plan View
6-7	EAS Plan View
8	The Key Exhibit
9-10	Plan View
11-12	Cross Sections - Well Pad
13	Cross Sections - Access Road
14	Geotechnical Exhibit
15	Landowner Disburbed Area Exhibit
16	Site Reclamation
17	Production Exhibit
18-22	Erosion and Sediment Control Details
R1	Access Road Details
P1	Pad Details

Vertical text on the right edge of the page, including 'TUG HILL OPERATING' and 'Elmer Well Site Proctor District Wetzel County, WV'. It also includes a north arrow and a scale bar.

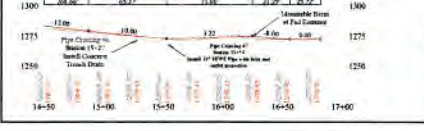
Elmer Well Site
Tug Hill Operating
Exhibit A: Final Design: Issue for Construction

Chart & Data
 Title: 20
 DWG#: 222120



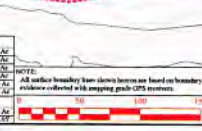
Legend

Original Contour Lines	2" Composite Filter Bank	25M Wetland
Original Contour 1/2 Contour	Super 80 Filter	PCW Wetland
Change of Elevation	Leach of Production	PAW Wetland
Property Line	Area of Disturbance	Perennial Stream
Flowing Fault	Existing Water Line	Intermittent Stream
	Existing Gas Line	Epithermal Stream
	Existing Utility Pad Line	Rock and Ash & Ash
	TM4 Lead/Trail	Active Channel Former Slope Area
	Existing Contour Marker Lead/Trail	Passive Slope Area
		Show Check Data



Disturbed Area

Well Pad Construction	743 AC
Production Pad Construction	1235 AC
Access Road Construction	139 AC
Topsoil Storage Material	236 AC
Additional Disturbance	1174 AC
Total Disturbed Area	2611 AC
Total Wetland Area Disturbed	1854 AC
Total Loss of Wetland	1787 AC



APPROVED
WVDEP OOG
 2/11/2022

TUG HILL OPERATING
 THIS DOCUMENT PREPARED FOR TUG HILL OPERATING
 K+S Separation
 Elmer Well Site
 Precinct District
 West Coal County, WV
 Date: 02/23/2021
 Scale: As Shown
 Designed by: ZS
 File No:
 Sheet 1 of 13