



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

Wednesday, November 17, 2021
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for BRECKENRIDGE S-21HU
47-051-02400-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: BRECKENRIDGE S-21HU
Farm Name: CNX LAND LLC
U.S. WELL NUMBER: 47-051-02400-00-00
Horizontal 6A New Drill
Date Issued: 11/17/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

November 9, 2021

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

RE: Application for Deep Well Permit – API #47-051-02400

COMPANY: Tug Hill Operating, LLC

FARM: CNX Land, LLC Breckenridge S-21HU

COUNTY: Marshall DISTRICT: Cameron QUAD: Glen Easton

The deep well review of the application for the above company is Approved to drill to Trenton for Point Pleasant completion. Pooling Docket No. 302-306.

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. Docket No. 302-306.
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

**Hudson S-15HU 47-051-02328; Hudson S-16HU 47-051-02329; Breckenridge S-17HU 47-051-02396; Breckenridge S-18HU 47-051-02397; Breckenridge S-19HU 47-051-02398; Breckenridge S-20HU 47-051-02399; Breckenridge S-22HU 47-051-02401; Breckenridge S-23HU 47-051-02402

11/19/2021

PERMIT CONDITIONS

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

CONDITIONS

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

API Number: _____

PERMIT CONDITIONS

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

11/19/2021

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

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

2) Operator's Well Number: Breckenridge S-20HU Well Pad Name: Breckenridge

3) Farm Name/Surface Owner: CNX Land, LLC Public Road Access: CR 62

4) Elevation, current ground: 1380' Elevation, proposed post-construction: 1370.10'

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

(b) If Gas Shallow _____ Deep X
Horizontal X

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 11,869' - 11,991', thickness of 122' and anticipated pressure of approx. 7,500 psi.

8) Proposed Total Vertical Depth: 12,141' ✓

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 24,319' ✓

11) Proposed Horizontal Leg Length: 11,902.12' ✓

12) Approximate Fresh Water Strata Depths: 70; 1,048' ✓

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

14) Approximate Saltwater Depths: 1,515' ✓

15) Approximate Coal Seam Depths: Sewickley Coal - 952' and Pittsburgh Coal - 1042' ✓

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 X No _____

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(a) If Yes, provide Mine Info: Name: Marshall County Mine
Depth: Pittsburgh coal - 1042' and subsea level - 328'
Seam: Pittsburgh
Owner: Murray Energy Corporation

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	30"	NEW	BW	BW	120'	120' ✓	259ft^3(CTS)
Fresh Water/Coal	20"	NEW	J55	106.5#	1,150'	1,150' ✓	1839ft^3(CTS)
Intermediate 1	13 3/8"	NEW	J55	54.5#	3,001'	3,001' ✓	2114ft^3(CTS)
Intermediate 2	9 5/8"	NEW	HPP110	47#	10,869'	10,869'	3553ft^3(CTS)
Production	5 1/2"	NEW	P110	23#	23,154'	23,154' ✓	5489ft^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#	11,576'		
Liners							

B.S. 8-12-21

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

PACKERS

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

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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 (11,076'). 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 26,800,000 lb. proppant and 20,300,000 gallons of water. Max rate = 80bpm; max psi = 9,000#.

B.S. 8-12-21

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 45.40

22) Area to be disturbed for well pad only, less access road (acres): 8.21

23) Describe centralizer placement for each casing string:

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

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

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

25) Proposed borehole conditioning procedures:

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

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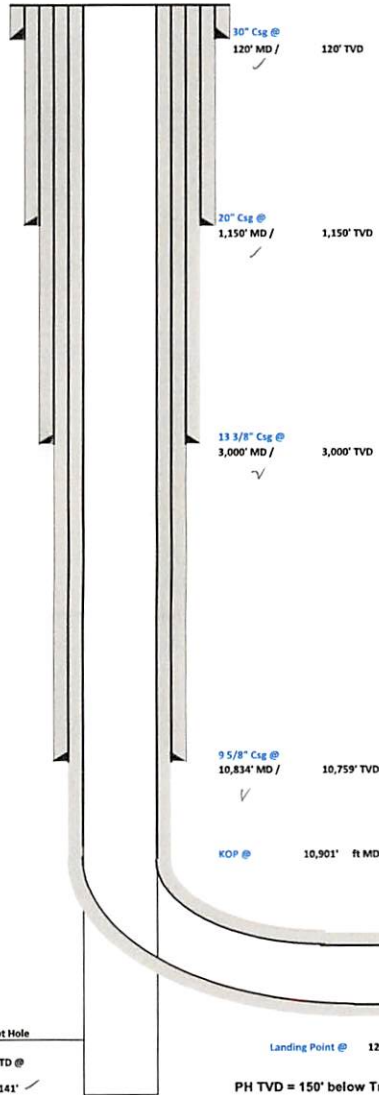
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*Note: Attach additional sheets as needed.

4705102400



WELL NAME: Breckenridge 5-20HU
STATE: WV **COUNTY:** Marshall
DISTRICT: Cameron
DF Elev: 1,370' **GL Elev:** 1,370'
TD: 24,319'
TH Latitude: 39.830254
TH Longitude: -80.626568
BH Latitude: 39.802016
BH Longitude: -80.605392



FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	1,048'
Sewickley Coal	952'
Pittsburgh Coal	1,042'
Big Lime	2,245'
Berea	2,863'
Tully	6,862'
Marcellus	6,982'
Onondaga	7,034'
Salina	7,781'
Lockport	8,753'
Utica	11,628'
Point Pleasant	11,869'
Landing Depth	11,919'
Trenton	11,991'
Pilot Hole TD	12,141'

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	1,150'	1,150'	106.5	J55	Surface
Intermediate 1	17 1/2	13 3/8	3,000'	3,000'	54.5	J55	Surface
Intermediate 2	12 1/4	9 5/8	10,834'	10,759'	47	HPP110	Surface
Production	8 1/2	5 1/2	24,319'	12,127'	23	HCP110	Surface

	CEMENT SUMMARY			DRILLING DETAILS	
	Sacks	Class	Density	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	1,984	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	2,290	A	15	Air	1 Centralizer every other jt
Intermediate 2	2,937	A	14.5	Air	1 Centralizer every other jt
Production	5,100	A	15	Air / SOBIM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to s/c

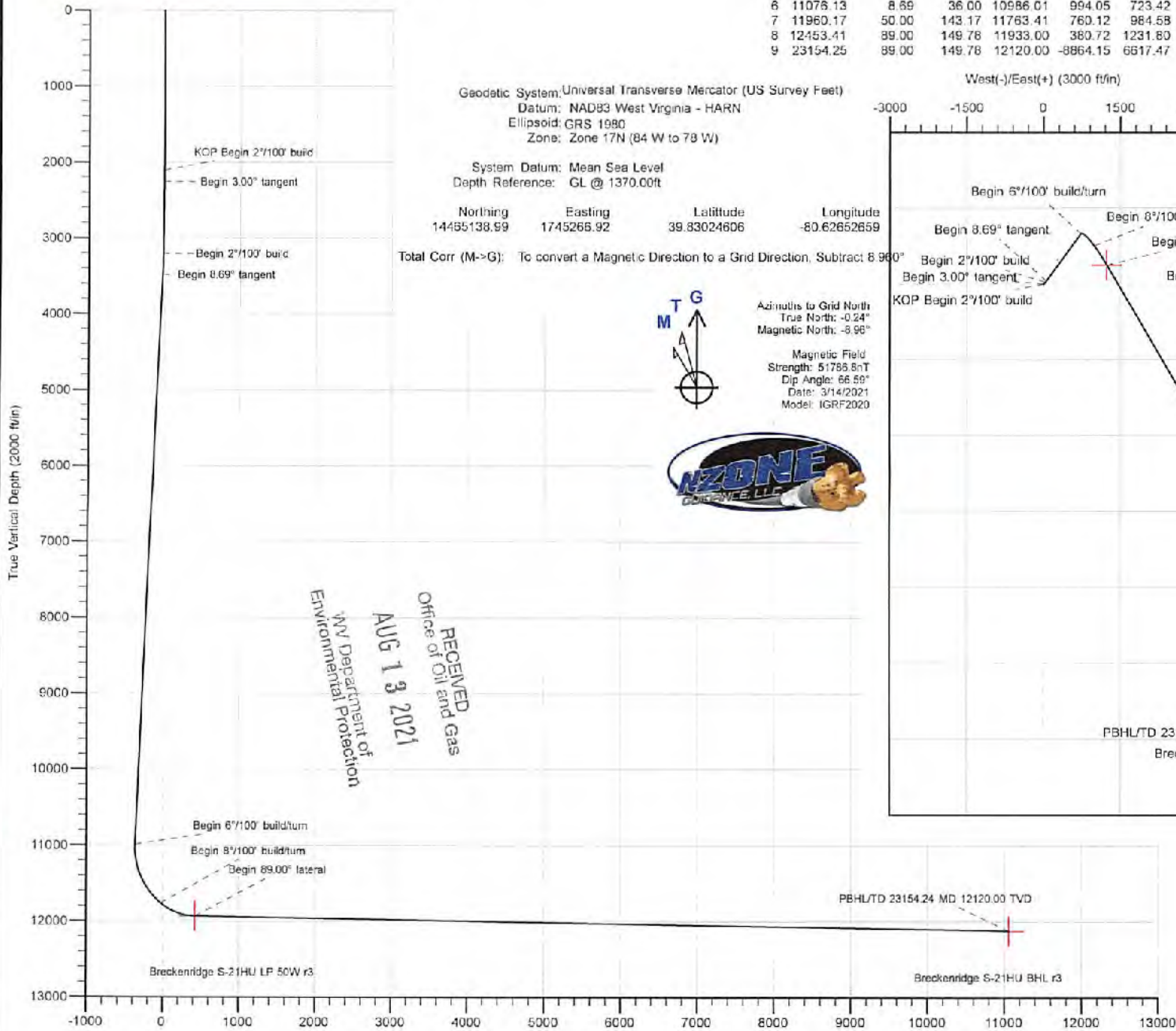
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Well: Breckenridge S-21 HU (slot U)
 Site: Breckenridge (1 row)
 Project: Marshall County, West Virginia
 Design: rev3
 Rig:

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
2	2102.00	0.00	0.00	2102.00	0.00	0.00	0.00	0.000	0.00	KOP Begin 2'100' build
3	2252.00	3.00	36.94	2251.93	3.14	2.35	2.00	36.940	-1.10	Begin 3.00° tangent
4	3203.37	3.00	36.94	3202.00	42.93	32.23	0.00	0.000	-15.09	Begin 2'100' build
5	3488.00	8.69	36.00	3485.03	66.31	49.41	2.00	-1.435	-23.57	Begin 8.69° tangent
6	11075.13	8.69	36.00	10986.01	994.05	723.42	0.00	0.000	-363.80	Begin 6'100' build/turn
7	11960.17	50.00	143.17	11763.41	760.12	984.58	6.00	113.662	-20.10	Begin 8'100' build/turn
8	12453.41	89.00	149.78	11933.00	380.72	1231.80	8.00	10.428	431.61	Begin 89.00° lateral
9	23154.25	89.00	149.78	12120.00	-8864.15	6617.47	0.00	0.000	11061.62	PBHL/TD 23154.24 MD 12120.00 TVD



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 @ 1370.00ft

Northing: 14465138.99
 Easting: 1745265.92
 Latitude: 39.83024606
 Longitude: -80.62652659

Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract: 8.96°

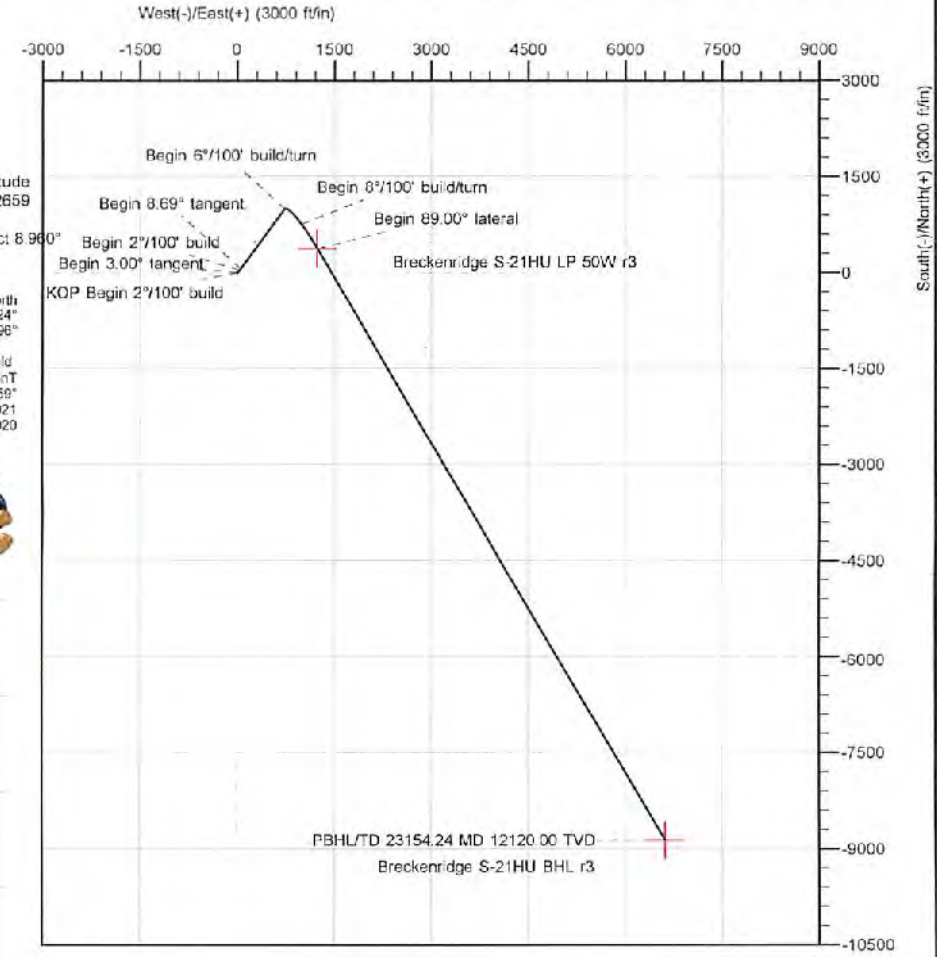


Azimuths to Grid North
 True North: -0.24°
 Magnetic North: -8.96°

Magnetic Field
 Strength: 51785.8nT
 Dip Angle: 66.59°
 Date: 3/14/2021
 Model: IGRF2020



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PBHL/TD 23154.24 MD 12120.00 TVD

Breckenridge S-21HU BHL r3



Tug Hill Operating, LLC Casing and Cement Program

Breckenridge S-21HU

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	20"	J55	26"	1,150'	CTS
Intermediate 1	13 3/8"	J55	17 1/2"	3,001'	CTS
Intermediate 2	9 5/8"	HPP110	12 1/4"	10,669'	CTS
Production	5 1/2"	HCP110	8 1/2"	23,154'	CTS

Cement

Surface: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Surface Cement mixed at 15.6 ppg, Y=1.2

Intermediate 1: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.2

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

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

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Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Breckenridge S-21 HU (slot U)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1370.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1370.00ft
Site:	Breckenridge (1 row)	North Reference:	Grid
Well:	Breckenridge S-21 HU (slot U)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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

Site	Breckenridge (1 row)				
Site Position:		Northing:	14,465,184.76 usft	Latitude:	39.83037401
From:	Lat/Long	Easting:	1,745,068.18 usft	Longitude:	-80.62723379
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Breckenridge S-21 HU (slot U)					
Well Position	+N/-S	0.00 ft	Northing:	14,465,139.00 usft	Latitude:	39.83024606
	+E/-W	0.00 ft	Easting:	1,745,266.92 usft	Longitude:	-80.62652659
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	1,370.00 ft
Grid Convergence:	0.239 °					

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	3/14/2021	-8.721	66.586	51,788.78720531

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	143.26

Plan Survey Tool Program	Date	3/14/2021		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	23,154.25 rev3 (Original Hole)	MWD	
			MWD - Standard	

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Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Breckenridge S-21 HU (slot U)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1370.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1370.00ft
Site:	Breckenridge (1 row)	North Reference:	Grid
Well:	Breckenridge S-21 HU (slot U)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,102.00	0.00	0.00	2,102.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,252.00	3.00	36.94	2,251.93	3.14	2.36	2.00	2.00	0.00	36.940	
3,203.37	3.00	36.94	3,202.00	42.93	32.28	0.00	0.00	0.00	0.000	
3,488.00	8.69	36.00	3,485.03	66.31	49.41	2.00	2.00	-0.33	-1.435	
11,076.13	8.69	36.00	10,986.01	994.05	723.42	0.00	0.00	0.00	0.000	
11,960.17	50.00	143.17	11,763.41	760.12	984.58	6.00	4.67	12.12	113.692	
12,453.41	89.00	149.78	11,933.00	380.72	1,231.80	8.00	7.91	1.34	10.428	
23,154.25	89.00	149.78	12,120.00	-8,864.15	6,617.47	0.00	0.00	0.00	0.000	Breckenridge S-21HU

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Planning Report - Geographic

Database: DB_Dec2220_v16
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Breckenridge (1 row)
 Well: Breckenridge S-21 HU (slot U)
 Wellbore: Original Hole
 Design: rev3

Local Co-ordinate Reference: Well Breckenridge S-21 HU (slot U)
 TVD Reference: GL @ 1370.00ft
 MD Reference: GL @ 1370.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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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	0.00	0.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
100.00	0.00	0.00	100.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
200.00	0.00	0.00	200.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
300.00	0.00	0.00	300.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
400.00	0.00	0.00	400.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
500.00	0.00	0.00	500.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
600.00	0.00	0.00	600.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
700.00	0.00	0.00	700.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
800.00	0.00	0.00	800.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
900.00	0.00	0.00	900.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
2,102.00	0.00	0.00	2,102.00	0.00	0.00	14,465,139.00	1,745,266.92	39.83024606	-80.62652659
KOP Begin 2°/100' build									
2,200.00	1.96	36.94	2,199.98	1.34	1.01	14,465,140.34	1,745,267.92	39.83024973	-80.62652298
2,252.00	3.00	36.94	2,251.93	3.14	2.36	14,465,142.14	1,745,269.28	39.83025465	-80.62651814
Begin 3.00° tangent									
2,300.00	3.00	36.94	2,299.87	5.16	3.87	14,465,144.14	1,745,270.79	39.83026015	-80.62651273
2,400.00	3.00	36.94	2,399.73	9.33	7.01	14,465,148.33	1,745,273.93	39.83027160	-80.62650147
2,500.00	3.00	36.94	2,499.59	13.51	10.16	14,465,152.51	1,745,277.08	39.83028305	-80.62649020
2,600.00	3.00	36.94	2,599.45	17.69	13.31	14,465,156.69	1,745,280.22	39.83029450	-80.62647894
2,700.00	3.00	36.94	2,699.32	21.88	16.45	14,465,160.88	1,745,283.37	39.83030595	-80.62646767
2,800.00	3.00	36.94	2,799.18	26.06	19.60	14,465,165.06	1,745,286.51	39.83031741	-80.62645640
2,900.00	3.00	36.94	2,899.04	30.24	22.74	14,465,169.24	1,745,289.66	39.83032886	-80.62644514
3,000.00	3.00	36.94	2,998.91	34.43	25.89	14,465,173.43	1,745,292.80	39.83034031	-80.62643387
3,100.00	3.00	36.94	3,098.77	38.61	29.03	14,465,177.61	1,745,295.95	39.83035176	-80.62642261
3,200.00	3.00	36.94	3,198.63	42.79	32.16	14,465,181.79	1,745,299.09	39.83036321	-80.62641134
3,203.37	3.00	36.94	3,202.00	42.93	32.28	14,465,181.93	1,745,299.20	39.83036360	-80.62641096
Begin 2°/100' build									
3,300.00	4.93	36.38	3,296.39	46.30	36.27	14,465,187.30	1,745,303.18	39.83037829	-80.62639669
3,400.00	6.93	36.12	3,397.85	56.64	42.37	14,465,195.63	1,745,309.29	39.83040111	-80.62637481
3,488.00	8.69	36.00	3,485.03	66.31	49.41	14,465,205.30	1,745,316.33	39.83042759	-80.62634960
Begin 8.69° tangent									
3,500.00	8.69	36.00	3,496.89	67.77	50.48	14,465,206.77	1,745,317.40	39.83043160	-80.62634578
3,600.00	8.69	36.00	3,595.74	80.00	59.36	14,465,219.00	1,745,326.28	39.83046508	-80.62631396
3,700.00	8.69	36.00	3,694.60	92.23	68.24	14,465,231.22	1,745,335.16	39.83049655	-80.62628214
3,800.00	8.69	36.00	3,793.45	104.45	77.13	14,465,243.45	1,745,344.04	39.83053203	-80.62625032
3,900.00	8.69	36.00	3,892.30	116.68	86.01	14,465,255.68	1,745,352.93	39.83056550	-80.62621850
4,000.00	8.69	36.00	3,991.15	128.90	94.89	14,465,267.90	1,745,361.81	39.83059897	-80.62618668
4,100.00	8.69	36.00	4,090.00	141.13	103.77	14,465,280.13	1,745,370.69	39.83063245	-80.62615486
4,200.00	8.69	36.00	4,188.85	153.36	112.65	14,465,292.36	1,745,379.57	39.83066592	-80.62612304
4,300.00	8.69	36.00	4,287.71	165.58	121.54	14,465,304.58	1,745,388.46	39.83069940	-80.62609122
4,400.00	8.69	36.00	4,386.56	177.81	130.42	14,465,316.81	1,745,397.34	39.83073287	-80.62605940
4,500.00	8.69	36.00	4,485.41	190.04	139.30	14,465,329.03	1,745,406.22	39.83076634	-80.62602758



Planning Report - Geographic

Database: DB_Dec2220_v16
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Breckenridge (1 row)
 Well: Breckenridge S-21 HU (slot U)
 Wellbore: Original Hole
 Design: rev3

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well Breckenridge S-21 HU (slot U)
 GL @ 1370.00ft
 GL @ 1370.00ft
 Grid
 Minimum Curvature

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 Office of Oil and Gas
 AUG 13 2021

WV Department of
 Environmental Protection

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,600.00	8.69	36.00	4,584.26	202.26	148.19	14,465,341.26	1,745,415.10	39.83079982	-80.62589576
4,700.00	8.69	36.00	4,683.11	214.49	157.07	14,465,353.49	1,745,423.99	39.83083329	-80.62586394
4,800.00	8.69	36.00	4,781.96	226.72	165.95	14,465,365.71	1,745,432.87	39.83086677	-80.62583212
4,900.00	8.69	36.00	4,880.81	238.94	174.83	14,465,377.94	1,745,441.75	39.83090024	-80.62580029
5,000.00	8.69	36.00	4,979.67	251.17	183.72	14,465,390.17	1,745,450.63	39.83093371	-80.62586847
5,100.00	8.69	36.00	5,078.52	263.39	192.60	14,465,402.39	1,745,459.51	39.83096719	-80.62583665
5,200.00	8.69	36.00	5,177.37	275.62	201.48	14,465,414.62	1,745,468.40	39.83100066	-80.62580483
5,300.00	8.69	36.00	5,276.22	287.85	210.36	14,465,426.84	1,745,477.28	39.83103414	-80.62577301
5,400.00	8.69	36.00	5,375.07	300.07	219.24	14,465,439.07	1,745,486.16	39.83106761	-80.62574119
5,500.00	8.69	36.00	5,473.92	312.30	228.13	14,465,451.30	1,745,495.04	39.83110108	-80.62570937
5,600.00	8.69	36.00	5,572.78	324.53	237.01	14,465,463.52	1,745,503.93	39.83113456	-80.62567755
5,700.00	8.69	36.00	5,671.63	336.75	245.89	14,465,475.75	1,745,512.81	39.83116803	-80.62564573
5,800.00	8.69	36.00	5,770.48	348.98	254.77	14,465,487.98	1,745,521.69	39.83120151	-80.62561391
5,900.00	8.69	36.00	5,869.33	361.20	263.66	14,465,500.20	1,745,530.57	39.83123498	-80.62558209
6,000.00	8.69	36.00	5,968.18	373.43	272.54	14,465,512.43	1,745,539.46	39.83126845	-80.62555027
6,100.00	8.69	36.00	6,067.03	385.66	281.42	14,465,524.65	1,745,548.34	39.83130193	-80.62551845
6,200.00	8.69	36.00	6,165.88	397.88	290.30	14,465,536.88	1,745,557.22	39.83133540	-80.62548663
6,300.00	8.69	36.00	6,264.74	410.11	299.19	14,465,549.11	1,745,566.10	39.83136887	-80.62545481
6,400.00	8.69	36.00	6,363.59	422.34	308.07	14,465,561.33	1,745,574.99	39.83140235	-80.62542299
6,500.00	8.69	36.00	6,462.44	434.56	316.95	14,465,573.56	1,745,583.87	39.83143582	-80.62539116
6,600.00	8.69	36.00	6,561.29	446.79	325.83	14,465,585.79	1,745,592.75	39.83146930	-80.62535934
6,700.00	8.69	36.00	6,660.14	459.02	334.72	14,465,598.01	1,745,601.63	39.83150277	-80.62532752
6,800.00	8.69	36.00	6,758.99	471.24	343.60	14,465,610.24	1,745,610.51	39.83153624	-80.62529570
6,900.00	8.69	36.00	6,857.84	483.47	352.48	14,465,622.47	1,745,619.40	39.83156972	-80.62526388
7,000.00	8.69	36.00	6,956.69	495.69	361.36	14,465,634.69	1,745,628.28	39.83160319	-80.62523206
7,100.00	8.69	36.00	7,055.55	507.92	370.25	14,465,646.92	1,745,637.16	39.83163667	-80.62520024
7,200.00	8.69	36.00	7,154.40	520.15	379.13	14,465,659.14	1,745,646.04	39.83167014	-80.62516842
7,300.00	8.69	36.00	7,253.25	532.37	388.01	14,465,671.37	1,745,654.93	39.83170361	-80.62513659
7,400.00	8.69	36.00	7,352.10	544.60	396.89	14,465,683.60	1,745,663.81	39.83173709	-80.62510477
7,500.00	8.69	36.00	7,450.95	556.83	405.77	14,465,695.82	1,745,672.69	39.83177056	-80.62507295
7,600.00	8.69	36.00	7,549.81	569.05	414.66	14,465,708.05	1,745,681.57	39.83180403	-80.62504113
7,700.00	8.69	36.00	7,648.66	581.28	423.54	14,465,720.28	1,745,690.46	39.83183751	-80.62500931
7,800.00	8.69	36.00	7,747.51	593.50	432.42	14,465,732.50	1,745,699.34	39.83187098	-80.62497749
7,900.00	8.69	36.00	7,846.36	605.73	441.30	14,465,744.73	1,745,708.22	39.83190446	-80.62494567
8,000.00	8.69	36.00	7,945.21	617.96	450.19	14,465,756.96	1,745,717.10	39.83193793	-80.62491385
8,100.00	8.69	36.00	8,044.06	630.18	459.07	14,465,769.18	1,745,725.99	39.83197140	-80.62488202
8,200.00	8.69	36.00	8,142.91	642.41	467.95	14,465,781.41	1,745,734.87	39.83200488	-80.62485020
8,300.00	8.69	36.00	8,241.77	654.64	476.83	14,465,793.63	1,745,743.75	39.83203835	-80.62481838
8,400.00	8.69	36.00	8,340.62	666.86	485.72	14,465,805.86	1,745,752.63	39.83207182	-80.62478656
8,500.00	8.69	36.00	8,439.47	679.09	494.60	14,465,818.09	1,745,761.51	39.83210530	-80.62475474
8,600.00	8.69	36.00	8,538.32	691.32	503.48	14,465,830.31	1,745,770.40	39.83213877	-80.62472292
8,700.00	8.69	36.00	8,637.17	703.54	512.36	14,465,842.54	1,745,779.28	39.83217224	-80.62469109
8,800.00	8.69	36.00	8,736.02	715.77	521.25	14,465,854.76	1,745,788.16	39.83220572	-80.62465927
8,900.00	8.69	36.00	8,834.87	727.99	530.13	14,465,866.99	1,745,797.04	39.83223919	-80.62462745
9,000.00	8.69	36.00	8,933.73	740.22	539.01	14,465,879.22	1,745,805.93	39.83227267	-80.62459563
9,100.00	8.69	36.00	9,032.58	752.45	547.89	14,465,891.44	1,745,814.81	39.83230614	-80.62456381
9,200.00	8.69	36.00	9,131.43	764.67	556.77	14,465,903.67	1,745,823.69	39.83233961	-80.62453199
9,300.00	8.69	36.00	9,230.28	776.90	565.66	14,465,915.90	1,745,832.57	39.83237309	-80.62450016
9,400.00	8.69	36.00	9,329.13	789.13	574.54	14,465,928.12	1,745,841.46	39.83240656	-80.62446834
9,500.00	8.69	36.00	9,427.98	801.35	583.42	14,465,940.35	1,745,850.34	39.83244003	-80.62443652
9,600.00	8.69	36.00	9,526.84	813.58	592.30	14,465,952.57	1,745,859.22	39.83247351	-80.62440470
9,700.00	8.69	36.00	9,625.69	825.80	601.19	14,465,964.80	1,745,868.10	39.83250698	-80.62437288
9,800.00	8.69	36.00	9,724.54	838.03	610.07	14,465,977.03	1,745,876.99	39.83254045	-80.62434105
9,900.00	8.69	36.00	9,823.39	850.26	618.95	14,465,989.25	1,745,885.87	39.83257393	-80.62430923
10,000.00	8.69	36.00	9,922.24	862.48	627.83	14,466,001.48	1,745,894.75	39.83260740	-80.62427741

Database: DB_Dec2220_v16
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Breckenridge (1 row)
 Well: Breckenridge S-21 HU (slot U)
 Wellbore: Original Hole
 Design: rev3

Local Co-ordinate Reference: Well Breckenridge S-21 HU (slot U)
 TVD Reference: CL @ 1370.00ft
 MD Reference: CL @ 1370.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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AUG 13 2021

West Virginia Department of Environmental Protection

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,100.00	8.69	36.00	10,021.09	874.71	836.72	14,466,013.71	1,745,903.63	39.83284087	-80.62424559
10,200.00	8.69	36.00	10,119.94	886.94	845.60	14,466,025.93	1,745,912.51	39.83267435	-80.62421377
10,300.00	8.69	36.00	10,218.80	899.16	854.48	14,466,038.15	1,745,921.40	39.83270782	-80.62418194
10,400.00	8.69	36.00	10,317.65	911.39	863.36	14,466,050.39	1,745,930.28	39.83274130	-80.62415012
10,500.00	8.69	36.00	10,416.50	923.61	872.25	14,466,062.61	1,745,939.16	39.83277477	-80.62411830
10,600.00	8.69	36.00	10,515.35	935.84	881.13	14,466,074.84	1,745,948.04	39.83280824	-80.62408648
10,700.00	8.69	36.00	10,614.20	948.07	890.01	14,466,087.06	1,745,956.93	39.83284172	-80.62405466
10,800.00	8.69	36.00	10,713.05	960.29	898.89	14,466,099.29	1,745,965.81	39.83287519	-80.62402283
10,900.00	8.69	36.00	10,811.91	972.52	907.78	14,466,111.52	1,745,974.69	39.83290865	-80.62399101
11,000.00	8.69	36.00	10,910.76	984.75	916.66	14,466,123.74	1,745,983.57	39.83294214	-80.62395919
11,076.13	8.69	36.00	10,986.01	994.05	923.42	14,466,133.05	1,745,990.34	39.83296762	-80.62393496
Begin 6°/100' build/turn									
11,100.00	8.22	45.21	11,009.62	996.72	925.69	14,466,135.71	1,745,992.61	39.83297490	-80.62392683
11,200.00	8.06	86.25	11,108.60	1,002.26	938.47	14,466,141.26	1,746,005.38	39.83298999	-80.62388125
11,300.00	12.69	111.55	11,206.87	998.73	956.39	14,466,137.73	1,746,023.30	39.83298008	-80.62381746
11,400.00	17.75	124.02	11,303.36	986.15	979.26	14,466,125.15	1,746,046.18	39.83294528	-80.62373617
11,500.00	23.25	130.92	11,397.00	964.67	1006.84	14,466,103.67	1,746,073.75	39.83288597	-80.62363826
11,600.00	28.94	135.27	11,486.78	934.53	1038.81	14,466,073.52	1,746,105.73	39.83280261	-80.62352482
11,700.00	34.73	138.27	11,571.70	896.04	1074.84	14,466,035.04	1,746,141.75	39.83269670	-80.62339708
11,800.00	40.58	140.51	11,650.84	849.64	1114.52	14,465,988.63	1,746,181.43	39.83256881	-80.62325844
11,900.00	46.45	142.27	11,723.33	795.82	1157.41	14,465,934.82	1,746,224.33	39.83242053	-80.62310445
11,960.17	50.00	143.17	11,763.41	760.12	1194.58	14,465,899.12	1,746,251.50	39.83232216	-80.62300821
Begin 8°/100' build/turn									
12,000.00	53.14	143.89	11,788.17	735.03	1,003.12	14,465,874.03	1,746,270.04	39.83225305	-80.62294255
12,100.00	61.03	145.47	11,842.47	666.56	1,051.57	14,465,805.55	1,746,318.48	39.83206447	-80.62277101
12,200.00	68.93	146.83	11,884.73	591.35	1,101.98	14,465,730.35	1,746,368.89	39.83185734	-80.62259259
12,300.00	76.85	148.04	11,914.13	510.86	1,153.36	14,465,649.86	1,746,420.28	39.83163569	-80.62241076
12,400.00	84.77	149.18	11,930.10	426.65	1,204.72	14,465,565.65	1,746,471.64	39.83140385	-80.62222908
12,453.41	89.00	149.78	11,933.00	380.72	1,231.80	14,465,519.72	1,746,498.72	39.83127740	-80.62213332
Begin 89.00° lateral									
12,500.00	89.00	149.78	11,933.82	340.47	1,255.25	14,465,479.47	1,746,522.16	39.83116659	-80.62205041
12,600.00	89.00	149.78	11,935.56	254.08	1,305.58	14,465,393.08	1,746,572.49	39.83092875	-80.62187244
12,700.00	89.00	149.78	11,937.31	167.68	1,355.91	14,465,306.68	1,746,622.82	39.83069091	-80.62169447
12,800.00	89.00	149.78	11,939.06	81.29	1,406.24	14,465,220.29	1,746,673.15	39.83045307	-80.62151650
12,900.00	89.00	149.78	11,940.81	-5.10	1,456.57	14,465,133.89	1,746,723.48	39.83021523	-80.62133854
13,000.00	89.00	149.78	11,942.55	-91.50	1,506.90	14,465,047.50	1,746,773.81	39.82997739	-80.62115057
13,100.00	89.00	149.78	11,944.30	-177.89	1,557.23	14,464,961.11	1,746,824.14	39.82973955	-80.62098261
13,200.00	89.00	149.78	11,946.05	-264.29	1,607.55	14,464,874.71	1,746,874.47	39.82950170	-80.62080465
13,300.00	89.00	149.78	11,947.80	-350.68	1,657.88	14,464,788.32	1,746,924.80	39.82926386	-80.62062669
13,400.00	89.00	149.78	11,949.54	-437.07	1,708.21	14,464,701.93	1,746,975.13	39.82902602	-80.62044873
13,500.00	89.00	149.78	11,951.29	-523.47	1,758.54	14,464,615.53	1,747,025.46	39.82878818	-80.62027077
13,600.00	89.00	149.78	11,953.04	-609.86	1,808.87	14,464,529.14	1,747,075.79	39.82855034	-80.62009281
13,700.00	89.00	149.78	11,954.79	-696.26	1,859.20	14,464,442.74	1,747,126.12	39.82831249	-80.61991486
13,800.00	89.00	149.78	11,956.53	-782.65	1,909.53	14,464,356.35	1,747,176.44	39.82807465	-80.61973690
13,900.00	89.00	149.78	11,958.28	-869.04	1,959.86	14,464,269.96	1,747,226.77	39.82783681	-80.61955895
14,000.00	89.00	149.78	11,960.03	-955.44	2,010.19	14,464,183.56	1,747,277.10	39.82759896	-80.61938100
14,100.00	89.00	149.78	11,961.78	-1,041.83	2,060.52	14,464,097.17	1,747,327.43	39.82736112	-80.61920305
14,200.00	89.00	149.78	11,963.52	-1,128.22	2,110.85	14,464,010.78	1,747,377.76	39.82712328	-80.61902510
14,300.00	89.00	149.78	11,965.27	-1,214.62	2,161.18	14,463,924.38	1,747,428.09	39.82688543	-80.61884715
14,400.00	89.00	149.78	11,967.02	-1,301.01	2,211.51	14,463,837.99	1,747,478.42	39.82664759	-80.61866920
14,500.00	89.00	149.78	11,968.77	-1,387.41	2,261.84	14,463,751.59	1,747,528.75	39.82640974	-80.61849125
14,600.00	89.00	149.78	11,970.51	-1,473.80	2,312.17	14,463,665.20	1,747,579.08	39.82617190	-80.61831331
14,700.00	89.00	149.78	11,972.26	-1,560.19	2,362.50	14,463,578.81	1,747,629.41	39.82593405	-80.61813537
14,800.00	89.00	149.78	11,974.01	-1,646.59	2,412.82	14,463,492.41	1,747,679.74	39.82569621	-80.61795742



Planning Report - Geographic

Database: DB_Dec2220_v16
Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Breckenridge (1 row)
Well: Breckenridge S-21 HU (slot U)
Wellbore: Original Hole
Design: rev3

Local Co-ordinate Reference: Wall Breckenridge S-21 HU (slot U)
TVD Reference: GL @ 1370.00ft
MD Reference: GL @ 1370.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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Planned Survey

Department of Environmental Protection

Table with 11 columns: Measured Depth (ft), Inclination (°), Azimuth (°), Vertical Depth (ft), +N/-S (ft), +E/-W (ft), Map Northing (usft), Map Easting (usft), Latitude, Longitude. It contains 30 rows of survey data points.



Planning Report - Geographic

Database: DB_Dec2220_v16
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Breckenridge (1 row)
 Well: Breckenridge S-21 HU (slot U)
 Wellbore: Original Hole
 Design: rev3

Local Co-ordinate Reference: Well Breckenridge S-21 HU (slot U)
 TVD Reference: GL @ 1370.00ft
 MD Reference: GL @ 1370.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,400.00	89.00	149.78	12,071.87	-6,484.64	5,231.27	14,458,654.37	1,750,498.18	39.81237640	-80.60799461
20,500.00	89.00	149.78	12,073.62	-6,571.04	5,281.60	14,458,567.97	1,750,548.51	39.81213854	-80.60781673
20,600.00	89.00	149.78	12,075.36	-6,657.43	5,331.93	14,458,481.58	1,750,598.84	39.81190068	-80.60763886
20,700.00	89.00	149.78	12,077.11	-6,743.83	5,382.26	14,458,395.19	1,750,649.16	39.81166281	-80.60746099
20,800.00	89.00	149.78	12,078.86	-6,830.22	5,432.59	14,458,308.79	1,750,699.49	39.81142495	-80.60728312
20,900.00	89.00	149.78	12,080.61	-6,916.61	5,482.92	14,458,222.40	1,750,749.82	39.81118709	-80.60710526
21,000.00	89.00	149.78	12,082.35	-7,003.01	5,533.25	14,458,136.00	1,750,800.15	39.81094923	-80.60692739
21,100.00	89.00	149.78	12,084.10	-7,089.40	5,583.58	14,458,049.61	1,750,850.48	39.81071136	-80.60674952
21,200.00	89.00	149.78	12,085.85	-7,175.80	5,633.90	14,457,963.22	1,750,900.81	39.81047350	-80.60657166
21,300.00	89.00	149.78	12,087.60	-7,262.19	5,684.23	14,457,876.82	1,750,951.14	39.81023564	-80.60639380
21,400.00	89.00	149.78	12,089.34	-7,348.58	5,734.56	14,457,790.43	1,751,001.47	39.80999777	-80.60621594
21,500.00	89.00	149.78	12,091.09	-7,434.98	5,784.89	14,457,704.04	1,751,051.80	39.80975991	-80.60603808
21,600.00	89.00	149.78	12,092.84	-7,521.37	5,835.22	14,457,617.64	1,751,102.13	39.80952204	-80.60586022
21,700.00	89.00	149.78	12,094.59	-7,607.76	5,885.55	14,457,531.25	1,751,152.46	39.80928418	-80.60568236
21,800.00	89.00	149.78	12,096.33	-7,694.16	5,935.88	14,457,444.85	1,751,202.79	39.80904631	-80.60550450
21,900.00	89.00	149.78	12,098.08	-7,780.55	5,986.21	14,457,358.46	1,751,253.12	39.80880845	-80.60532665
22,000.00	89.00	149.78	12,099.83	-7,866.95	6,036.54	14,457,272.07	1,751,303.45	39.80857058	-80.60514879
22,100.00	89.00	149.78	12,101.58	-7,953.34	6,086.87	14,457,185.67	1,751,353.77	39.80833272	-80.60497094
22,200.00	89.00	149.78	12,103.32	-8,039.73	6,137.20	14,457,099.28	1,751,404.10	39.80809485	-80.60479309
22,300.00	89.00	149.78	12,105.07	-8,126.13	6,187.53	14,457,012.89	1,751,454.43	39.80785698	-80.60461524
22,400.00	89.00	149.78	12,106.82	-8,212.52	6,237.86	14,456,926.49	1,751,504.76	39.80761912	-80.60443739
22,500.00	89.00	149.78	12,108.57	-8,298.92	6,288.19	14,456,840.10	1,751,555.09	39.80738125	-80.60425954
22,600.00	89.00	149.78	12,110.31	-8,385.31	6,338.52	14,456,753.71	1,751,605.42	39.80714338	-80.60408169
22,700.00	89.00	149.78	12,112.06	-8,471.70	6,388.85	14,456,667.31	1,751,655.75	39.80690551	-80.60390385
22,800.00	89.00	149.78	12,113.81	-8,558.10	6,439.17	14,456,580.92	1,751,706.08	39.80666765	-80.60372600
22,900.00	89.00	149.78	12,115.56	-8,644.49	6,489.50	14,456,494.52	1,751,756.41	39.80642978	-80.60354816
23,000.00	89.00	149.78	12,117.30	-8,730.89	6,539.83	14,456,408.13	1,751,806.74	39.80619191	-80.60337032
23,100.00	89.00	149.78	12,119.05	-8,817.28	6,590.16	14,456,321.74	1,751,857.07	39.80595404	-80.60319247
23,154.24	89.00	149.78	12,120.00	-8,864.14	6,617.46	14,456,274.88	1,751,884.37	39.80582502	-80.60309601
PBHL/TD 23154.24 MD 12120.00 TVD									
23,154.25	89.00	149.78	12,120.00	-8,864.15	6,617.47	14,456,274.87	1,751,884.37	39.80582500	-80.60309600

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Breckenridge S-21HU LI - hit/miss target - Shape	0.00	0.00	11,933.00	380.70	1,231.75	14,465,519.70	1,746,498.67	39.83127734	-80.62213349
- plan misses target center by 0.05ft at 12453.40ft MD (11933.00 TVD, 380.73 N, 1231.80 E)									
- Point									
Breckenridge S-21HU Bi - plan hits target center - Point	0.00	0.00	12,120.00	-8,864.15	6,617.47	14,456,274.87	1,751,884.37	39.80582500	-80.60309600

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
23,154.25	12,120.00	20" Casing	20	24

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Breckenridge S-21 HU (slot U)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1370.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1370.00ft
Site:	Breckenridge (1 row)	North Reference:	Grid
Well:	Breckenridge S-21 HU (slot U)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,102.00	2,102.00	0.00	0.00	KOP Begin 2°/100' build
2,252.00	2,251.93	3.14	2.36	Begin 3.00° tangent
3,203.37	3,202.00	42.93	32.28	Begin 2°/100' build
3,485.00	3,485.03	66.31	49.41	Begin 8.69° tangent
11,076.13	10,986.01	994.05	723.42	Begin 6°/100' build/turn
11,960.17	11,763.41	760.12	984.58	Begin 8°/100' build/turn
12,453.41	11,933.00	380.72	1,231.80	Begin 89.00° lateral
23,154.24	12,120.00	-8,864.14	6,617.46	PBHL/TD 23154.24 MD 12120.00 TVD

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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 (04/7/2021) 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 IHS All Wells Layer
2. Map with Farm lines overlain and any well spots identified on Farm Maps
3. More recent (1970s vintage) topos and older topos

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

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

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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
4705101082	Consolidation Coal Co.	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. Well is plugged.	Well was plugged 7/3/2008.
4705170164	Hope Natural Gas Company	2374' TVD	Big Injun	unknown	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation.	
4705102346	Tug Hill Operating, LLC	7115' TVD (proposed)	none	none	No, this is a proposed well in the Marcellus. Once completed the well will not be deep enough to be within the expected fracture propagation from a Point Pleasant stimulation.	A permitted well on the pad that is not drilled or perforated.
4705101073	Consolidation Coal Co.	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. Well is plugged.	Well was plugged 3/26/2008.

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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
4705170122	Manufacturers Light & Heat Co.	3109' TVD	Gordon Fifth	unknown	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation.	
4705170512	Manufacturers Light & Heat Co.	unknown	Gordon	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.	
4705100987	Consolidation Coal Co.	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. Well is plugged.	Well was plugged 2/15/2005.
4705100995	Consolidation Coal Co.	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. Well is plugged.	Well was plugged 6/29/2005.
4705170470	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.

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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
4705170471	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.
4705100625	CNX Gas Co. LLC (North)	3092' TVD	Gordon	unknown	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation.	
4705100627	CNX Gas Co. LLC (North)	3129 TVD	Gordon	unknown	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation. Well is plugged.	Well was plugged 9/13/2007.
4705101151	Consolidation Coal Co.	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. Well is plugged.	Well was plugged 10/15/2008.

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WV Geological & Economic Survey

Well: County = 51 Permit = 01082

Report Time: Tuesday, April 13, 2021 10:03:30 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101082	Marshall	1082	Cameron	Glen Easton	Cameron	39.829496	-80.627436	531880.9	4408899.7

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
4705101082	7/3/2008	Plugging	Completed	J Richard Wayt		M-1334				Consolidation Coal Co.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_J
4705101082	7/3/2008	6/18/2008	1262	Ground Level				unclassified	unclassified	not available	unknown	unknown						

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4705101082	Plugging	Pittsburgh coal	Well Record	946	Reasonable	5	Reasonable	1262	Ground Level

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705101082	7/3/2008	0

There is no Sample data for this well

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WV Geological & Economic Survey:

Well: County = 51 Permit = 70164

Report Time: Tuesday, April 13, 2021 10:04:50 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170164	Marshall	70164	Liberty	Glen Easton	Cameron	39.829496	-80.626308	531977.5	4408900.1

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_P
4705170164	-/-		Original Loc	Completed	Elijah Williams	1	547			Hope Natural Gas Company			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AI
4705170164	-/-	-/-	1420	Barometer	Big Injun (undiff)	Big Injun (undiff)	undiff	undiff	undiff	undiff	not available	unknown	unknown	2374		2374		

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

There is no Plugging data for this well

There is no Sample data for this well

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WV Geological & Economic Survey

Well: County = 51 Permit = 02346

Report Time: Tuesday, April 13, 2021 10:05:07 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102346	Marshall	2346	Cameron	Glen Easton	Cameron	39.830284	-80.626735	531940.6	4408987.3

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102346	1 As Proposed	532233.1	4408596.4	-80.623336	39.826751

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
4705102346	-/-	Dvtd Wrkd Ovr	Permitted	CNX Land LLC		S-10HM	Breckenridge		Hasans Ventures et al	Tug Hill Operating, LLC	7115	Marcellus Fm

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEI
4705102346	-/-	-/-	1380	Ground Level															

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

There is no Plugging data for this well

There is no Sample data for this well

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WV Geological & Economic Survey:

Well: County = 51 Permit = 01073

Report Time: Tuesday, April 13, 2021 11:57:26 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101073	Marshall	1073	Cameron	Cameron	Cameron	39.925147	-80.61943	532568.1	4408419.8

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_F
4705101073	3/26/2008	Plugging	Completed	Charles & Sonja Strobe		M-1313				Consolidation Coal Co.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF
4705101073	3/26/2008	3/12/2008	1228	Ground Level	Unnamed			unclassified	unclassified	not available	unknown	unknown					

Comment: 3/26/2008 River Operations. Pittsburgh Coal 941-947ft.

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705101073	3/26/2008	0

There is no Sample data for this well

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WV Geological & Economic Survey

Well: County = 51 Permit = 70122

Report Time: Tuesday, April 13, 2021 11:58:01 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_16	LAT_DD	LON_DD	UTME	UTMN
4705170122	Marshall	70122	Cameron	Cameron	Cameron	39.924357	-80.618866	532616.5	4408387.8

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_F
4705170122	5/25/1930	Original Loc	Completed	Rhoda A Parsons		1073				Manufacturers Light & Heat Co			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT
4705170122	5/25/1930	-/-			Fifth	Gordon (undiff)	unclassified	unclassified	not available	unknown	unknown	3109		3109			

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

There is no Plugging data for this well

There is no Sample data for this well

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 Environmental Protection

WV Geological & Economic Survey:

Well: County = 51 Permit = 70512

Report Time: Tuesday, April 13, 2021 11:58:18 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170512	Marshall	70512	Cameron	Cameron	Cameron	39.826591	-80.619047	532600.2	4408580.2

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4705170512	-/-/1899	unknown	Prpty Map	J G Crawford					unknown	Manufacturers Light & Heat Co.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEf	G_AFT
4705170512	-/-/1899	-/-/1898	1095	Ground Level	Cameron		Gordon	unclassified	unclassified	Gas	unknown	unknown						

Comment: -/-/1899 Some info is from historical records in black notebook, and is not yet scanned into database.

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4705170512	Original Loc	Pittsburgh coal	Well Record	728	Reasonable			1095	Ground Level
4705170512	Original Loc	Gordon	Well Record	2738	Reasonable			1095	Ground Level

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

There is no Plugging data for this well

There is no Sample data for this well

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WV Geological & Economic Survey:

Well: County = 51 Permit = 00987

Report Time: Tuesday, April 13, 2021 11:58:32 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705100987	Marshall	987	Liberty	Cameron	Cameron	39.811227	-80.608894	533476.5	4406878.7

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
4705100987	2/15/2005	Plugging	Completed	Bernard G Frye		M-438			Consolidation Coal Co	Consolidation Coal Co.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_
4705100987	2/15/2005	1/25/2005	1245	Ground Level				unclassified	unclassified	not available	unknown	unknown						

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705100987	2/15/2005	0

There is no Sample data for this well

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WV Geological & Economic Survey:

Well: County = 51 Permit = 00995

Report Time: Tuesday, April 13, 2021 11:58:47 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705100995	Marshall	995	Liberty	Cameron	Cameron	39.811227	-80.606074	533717.9	4406879.8

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
4705100995	6/29/2005	Plugging	Completed	Bernard G Frye		M-441				Consolidation Coal Co.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_
4705100995	6/29/2005	6/10/2005	1286	Ground Level				unclassified	unclassified	not available	unknown	unknown						

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4705100995	Plugging	Pittsburgh coal	Well Record	1050	Reasonable	6	Reasonable		unknown

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705100995	6/29/2005	0

There is no Sample data for this well

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WV Geological & Economic Survey:

Well: County = 51 Permit = 70470

Report Time: Tuesday, April 13, 2021 11:59:00 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170470	Marshall	70470	Liberty	Cameron	Cameron	39.610626	-80.607578	533589.5	4406812.5

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
4705170470	-/-	unknown	Prpty Map	Aaron A Porter	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
4705170470	-/-	-/-						unclassified	unclassified	not available	unknown	unknown						

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

There is no Plugging data for this well

There is no Sample data for this well

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WV Geological & Economic Survey:

Well: County = 51 Permit = 70471

Report Time: Tuesday, April 13, 2021 11:59:16 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170471	Marshall	70471	Liberty	Cameron	Cameron	39.810626	-80.604757	533830.9	4406813.6

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
4705170471	---	unknown	Prpty Map	Aaron A Porter	3					----- 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
4705170471	---	---						unclassified	unclassified	not available	unknown	unknown						

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

There is no Plugging data for this well

There is no Sample data for this well

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 WV Department of
 Environmental Protection

WV Geological & Economic Survey

Well: County = 61 Permit = 00625

Report Time Tuesday, April 13, 2021 11:59:30 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705100625	Marshall	625	Liberty	Cameron	Cameron	39.808907	-80.606449	533588.9	4406522.1

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
4705100625	9/3/1901	Original Loc	Completed	William Gray	3			32329		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
4705100625	9/3/1901	7/9/1901	1410	Topo Estimation	Cameron-Garner	Hampshire Grp	Gordon	unclassified	unclassified	Oil	unknown	Nat/Open H.	3092	3092

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEFL	G_AFT	O_BEFL	O_AFT	WATER_QNTY
4705100625	9/3/1901	Pay	Oil	Vertical			3080	Gordon	0	0			

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
4705100625	Pennzoil Company	1981	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Company	1982	6	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Company	1983	1	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Company	1984	8	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Products Company	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Products Company	1998	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Products Company	1999	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	East Resources, Inc.	2000	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	East Resources, Inc.	2001	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	East Resources, Inc.	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2003	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2004	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2005	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2006	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2007	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2008	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2009	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2010	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2011	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2012	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2016	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2017	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
4705100625	Pennzoil Company	1981	54	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Company	1982	63	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Company	1983	33	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Company	1984	19	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Products Company	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Products Company	1998	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	Pennzoil Products Company	1999	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	East Resources, Inc.	2000	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	East Resources, Inc.	2001	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	East Resources, Inc.	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2003	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2004	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2005	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2006	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2007	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2008	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2009	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2010	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2011	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2012	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2016	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2017	0	0	0	0	0	0	0	0	0	0	0	0	0

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

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705100625	CNX Gas Co. LLC (North)	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100625	CNX Gas Co. LLC (North)	2016	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705100625	CNX Gas Co. LLC (North)	2016	0	0	0	0	0	0	0	0	0	0	0	0	0

There is no Stratigraphy data for this well

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

There is no Plugging data for this well

There is no Sample data for this well

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AUG 13 2021

WV Department of
Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 00627

Report Time: Tuesday, April 13, 2021 12:00:13 PM

Well Reassignment Information: Reassigned From

OLD_COUNTY	OLD_PERMIT	NEW_COUNTY	NEW_PERMIT
51	70062	51	627

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705100627	Marshall	627	Liberty	Cameron	Cameron	39.806587	-80.6025	534026.1	4406366.1

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
4705100627	5/11/1906	Worked Over	unknown							Pennzoil Company		
4705100627	9/13/2007	Plugging	Completed	William & Jean Courtwright		M-377				Consolidation Coal Co		
4705100627	-/-	Original Loc	Completed	William Gray		5 M-69				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	K
4705100627	5/11/1906	1/15/1906	1300	Topo Estimation	Cameron-Garner			unclassified	unclassified	Gas	unknown	Fractured				0
4705100627	9/13/2007	7/20/2007	1359	Ground Level	Cameron-Garner					not available	unknown	unknown				
4705100627	-/-	-/-	1350	Barometer	Cameron-Garner	Gordon (undiff)	Gordon (undiff)	unclassified	unclassified	Oil	unknown	Shot	3129			3129

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEFO	G_AFT	O_BEFO	O_AFT	WATER_QNTY
4705100627	-/-	Pay	Oil	Vertical	3102	Gordon	3107	Gordon	0	0			

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
4705100627	Pennzoil Company	1981	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Company	1982	6	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Company	1983	1	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Company	1984	8	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Products Company	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Products Company	1998	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Products Company	1999	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	East Resources, Inc.	2000	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	East Resources, Inc.	2001	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	East Resources, Inc.	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2003	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2004	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2005	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2006	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2007	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2008	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2009	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2010	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2011	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
4705100627	Pennzoil Company	1981	54	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Company	1982	63	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Company	1983	33	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Company	1984	20	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Products Company	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Products Company	1998	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	Pennzoil Products Company	1999	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	East Resources, Inc.	2000	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	East Resources, Inc.	2001	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	East Resources, Inc.	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2003	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2004	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2005	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2006	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2007	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2008	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2009	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2010	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100627	CNX Gas Co. LLC (North)	2011	0	0	0	0	0	0	0	0	0	0	0	0	0

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705100627	9/13/2007	0

There is no Sample data for this well

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WV Geological & Economic Survey:

Well: County = 51 Permit = 01151

Report Time: Tuesday, April 13, 2021 12:00:40 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101151	Marshall	1151	Liberty	Cameron	Cameron	39.805103	-80.602701	534009.6	4406201.4

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
4705101151	10/15/2008	Plugging	Completed	Jean Jamison		M-381				Consolidation Coal Co.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G
4705101151	10/15/2008	10/8/2008	1217	Ground Level				unclassified	unclassified	not available	unknown	unknown						

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4705101151	Plugging	Pittsburgh coal	Well Record	951	Reasonable	5	Reasonable	1217	Ground Level

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705101151	10/15/2008	0

There is no Sample data for this well

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CAMERON

MARSHALL

MEADE

Legend

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

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Breckenridge S - 22HU Cameron District Marshall County, WV



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

Map Prepared by:

11/19/2021



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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Tug Hill Operating, LLC OP Code 494510851

Watershed (HUC 10) Grave Creek & Laurel Run Quadrangle Glen Easton 7.5'

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? Barite for weight

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

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

-Landfill or offsite name/permit number? Wetzel County Sanitary Landfill (SWF-1021 / WVD109185) and Westmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP EC#1385426)

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 Jim Pancake
Company Official (Typed Name) Jim Pancake
Company Official Title Vice President - Geosciences

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Subscribed and sworn before me this 8th day of April, 2021

Susanne Deliere Notary Public

My commission expires 1/15/2025

Commonwealth of Pennsylvania - Notary Seal
Susanne Deliere, Notary Public
Washington County
My commission expires January 15, 2025
Commission number 4382332
Member, Pennsylvania Association of Notaries

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 45.40 Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

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

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bary Stiles

Comments: _____

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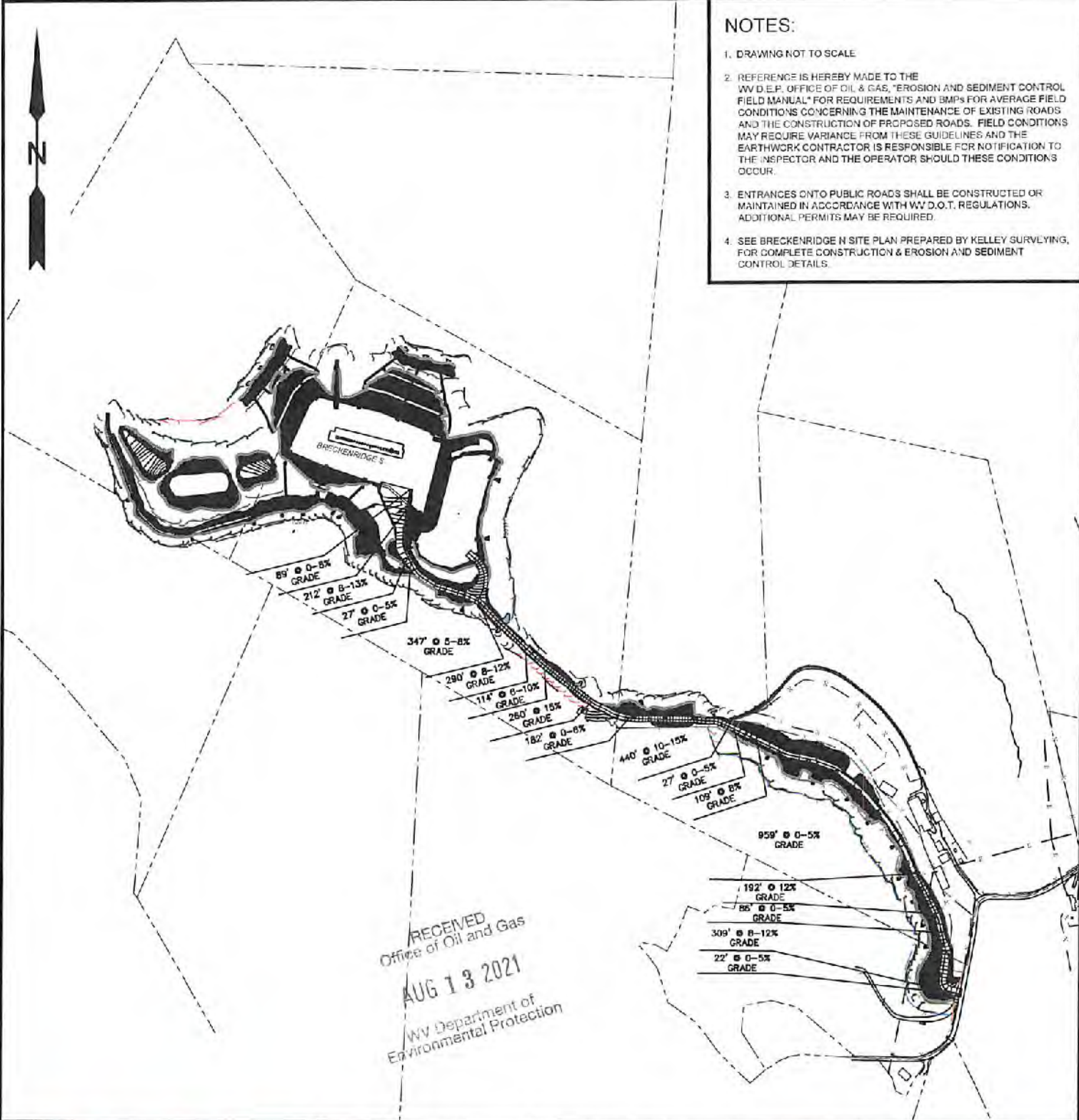
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WV Department of
Environmental Protection

Title: Oil and Gas Inspector Date: 6-17-21

Field Reviewed? Yes No

PROPOSED BRECKENRIDGE S - 21HU



NOTES:

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

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1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304-340-3952
254 East Beckley Bypass | Beckley, WV 26107 | 304-255-5290
slsw.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	CAMERON		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	9026	04-08-21	NONE



**TUG HILL
OPERATING**
11/19/2021

Breckenridge Coal Exhibit

4705102400



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TUG HILL
OPERATING

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

Well Name: Breckenridge S-21HU

Pad Name: Breckenridge

County: Marshall

UTM (meters), NAD83, Zone 17

Northing: 4,408,983.18

Easting: 531,958.42

B.S.
8-12-21

**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

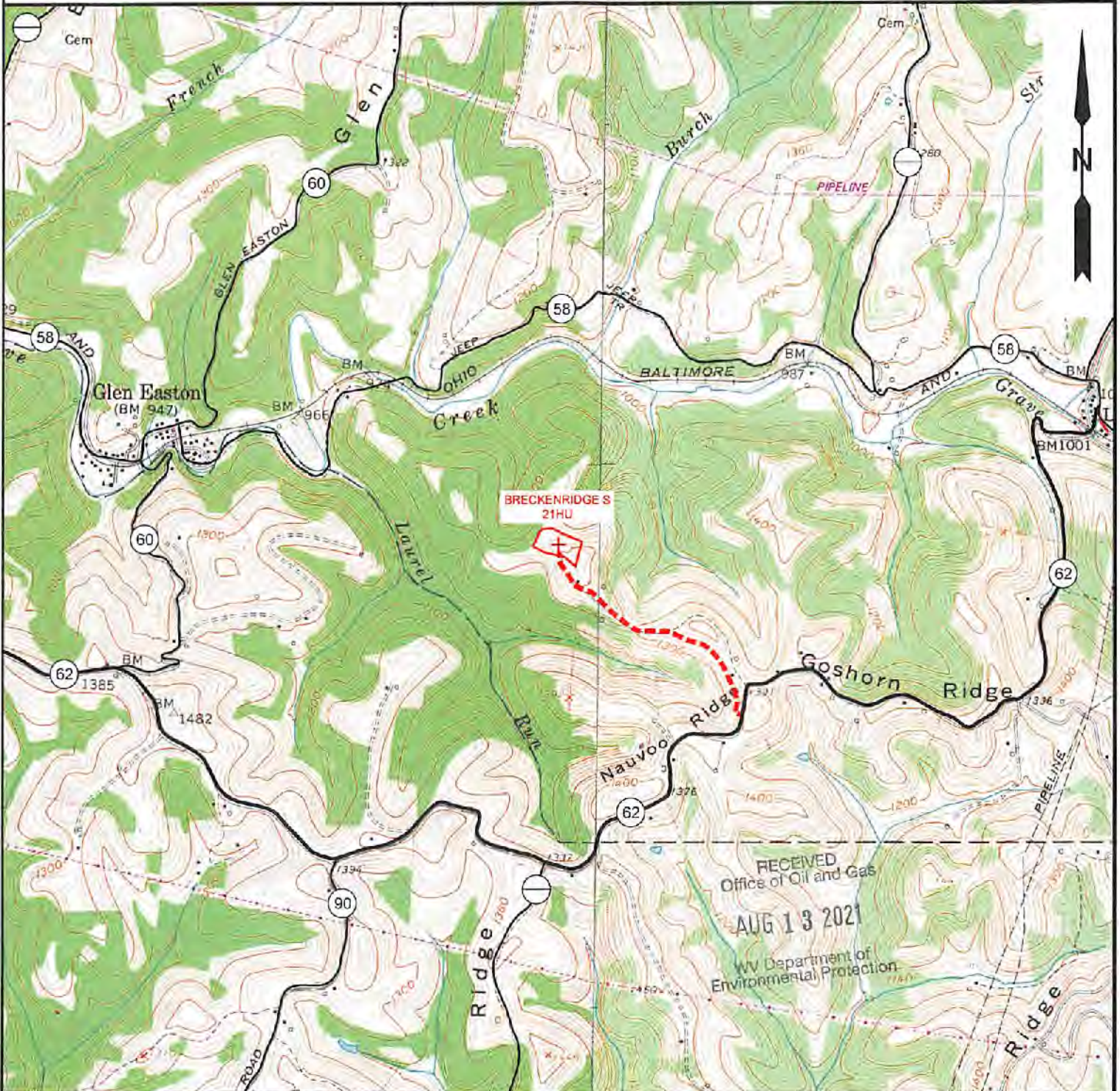
(800) 921-9745

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PROPOSED BRECKENRIDGE S - 21HU



NOTE: CLOSEST WATER PURVEYOR
CITY OF CAMERON - FRANK WALKER RESERVOIR
CAMDEN, WV

LAT: 39.829865
LON: -80.573724
LOCATED: S 88°42'19" E AT 14,928.72' FROM THE CENTER OF BRECKENRIDGE N WELL PAD LOCATION.

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12 Vanborn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
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254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
sbswv.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	CAMERON		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	9026	04/08/2021	1" = 2000'

**TUG HILL
OPERATING**
11/19/2021

**BRECKENRIDGE S LEASE
UTICA UNIT - 341.79 AC±
WELL 21HU
TUG HILL OPERATING**

T.H. LATITUDE 39°50'00"
B.H. LATITUDE 39°50'00"

T.H.

T.H. LONGITUDE 80°37'30"
B.H. LONGITUDE 80°35'00"

TAG	SURFACE OWNER	PARCEL	ACRES
A	CNX LAND, LLC	3-19-76	53.25
B	CNX LAND, LLC	3-19-75	47.40
C	CNX LAND, LLC	3-18-1	30.00
D	KEVIN R. EVANS	3-14-18	101.8
E	KEVIN R. EVANS	3-18-2	63.89
F	KEVIN R. & SHELLY JO EVANS	3-18-7	3.134
G	KEVIN R. EVANS	3-18-8	45.579
H	KEVIN R. & SHELLY JO EVANS	3-18-8.2	2.302
I	DAVID L. & ARIANNE R. ROBINSON	3-18-3.3	16.894
J	OLIVIA SUZANNE HUBBS	3-18-38	0.433
K	AEP WEST VIRGINIA TRANSMISSION COMPANY INC.	3-18-6.1	10.175
L	MARY L. BURGE	3-18-6	36.33
M	MOLLY KAY HUBBS COLLINS, ET AL	3-18-5	25.372
N	MOLLY KAY HUBBS COLLINS, ET AL	3-18-13	18.014
O	MOLLY KAY HUBBS COLLINS, ET AL	3-18-14	21.52
P	OLIVIA SUZANNE HUBBS	7-1-13	120.937
Q	MOLLY KAY HUBBS COLLINS, ET AL	7-2-1	65.70
R	MOLLY KAY HUBBS COLLINS, ET AL	7-1-14	53.67
S	WILLIAM E. & NANCY L. PARSONS	7-2-2	56.08
T	RICKIE GENE FRYE	7-2-3.1	37.8578
U	RICKIE GENE FRYE, ET UX	7-2-3.2	0.9922
V	BARBARA & RICKIE FRYE	7-2-3	11.24
W	BEVERLY MAE DAVIS	7-2-4	58.08
X	BEVERLY MAE DAVIS	7-2-4.1	1.00
Y	CNX LAND, LLC	7-2-8	3.82
Z	DAVID L. FRYE	7-2-4.2	1.25
AA	CNX LAND, LLC	7-2-7	12.825
BB	DAVID L. FRYE & MICHAEL G. SCHLIEPER	7-2-7.1	2.665
CC	DAVID L. FRYE & MICHAEL G. SCHLIEPER	7-2-6	0.54
DD	DAVID L. FRYE & MICHAEL G. SCHLIEPER	7-2-5.1	2.335
EE	ANTHONY SKRYPEK	7-2-5	20.915
FF	JEAN JAMISON	7-7-9.1	97.896

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

NAD'83 S.P.C.(FT)	N. 486,501.62	E. 1,652,133.81
NAD'83 GEO.	LAT-(N) 39.830246	LONG-(W) 80.626527
NAD'83 UTM (M)	N. 4,408,089.19	E. 531,958.42

LANDING POINT

NAD'83 S.P.C.(FT)	N. 486,861.8	E. 1,653,372.2
NAD'83 GEO.	LAT-(N) 39.831277	LONG-(W) 80.622133
NAD'83 UTM (M)	N. 4,408,089.2	E. 532,333.9

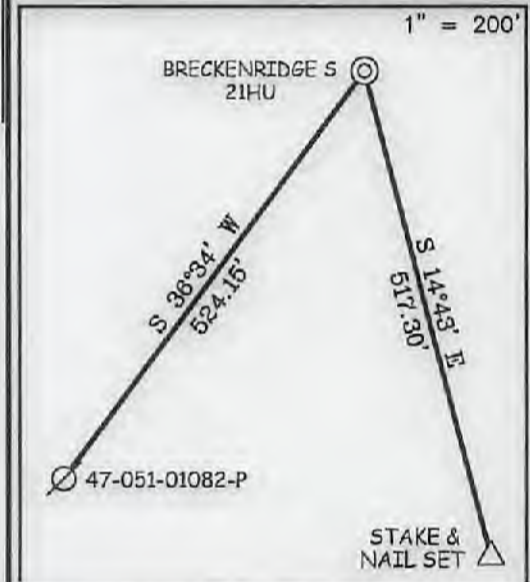
BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 477,525.1	E. 1,658,604.3
NAD'83 GEO.	LAT-(N) 39.805825	LONG-(W) 80.603096
NAD'83 UTM (M)	N. 4,406,281.4	E. 533,975.4

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
3-18-8.1	DANIEL LILLEY, ET UX	1.039
3-18-12	CHARLES N. MATTHEWS JR, ET UX	1.831
3-18-20	JESSE PARSONS EST.	2.02
3-19-78	CNX LAND, LLC	30.927
7-2-9	BARBARA & RICKIE FRYE	73' x 200'
7-2-10.1	BRENNAN L. & CARRIE A. PAITH	8.391
7-2-11	WILLIAM E. PARTONS, ET UX	19.83
7-7-9	WILLARD JUNIOR EVANS & ROSE MARY EVANS - LIFE	2.214

B.H.

REFERENCES



NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
 - WELL SPOT CIRCLE & TOP MARK SCALE ARE 1"=2000'
 - PROPOSED LATERAL OR TOP HOLE OF PROPOSED BRECKENRIDGE S-21HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF PROPOSED OR EXISTING WELLS:
- PROPOSED BRECKENRIDGE S-17HU,
PROPOSED BRECKENRIDGE S-18HU,
PROPOSED BRECKENRIDGE S-19HU,
PROPOSED BRECKENRIDGE S-20HU,
PROPOSED BRECKENRIDGE S-22HU,
PROPOSED BRECKENRIDGE S-23HU.



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1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
284 East Deckley Bypass | Beckley, WV 25801 | 304.255.5296
slsw.com

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

P.S. 677 *Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE JULY 15, 20 21
REVISED AUGUST 25, NOVEMBER 8, 20 21
OPERATORS WELL NO. BRECKENRIDGE S-21HU
API WELL NO. 47-051-02400
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9026P21HUR2.dwg
BRECKENRIDGE S-21HU-REV3
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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

WELL TYPE: OIL GAS INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: GROUND = 1,390.70' ELEVATION PROPOSED = 1,370.10' WATERSHED GRAVE CREEK (HUC 10) & LAUREL RUN
DISTRICT CAMERON COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CNX LAND LLC ACREAGE 53.25±
ROYALTY OWNER HASAN'S VENTURES, ET AL ACREAGE 53.25±

PROPOSED WORK:
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION POINT PLEASANT
ESTIMATED DEPTH TVD: 12,109' / TMD: 23,154'

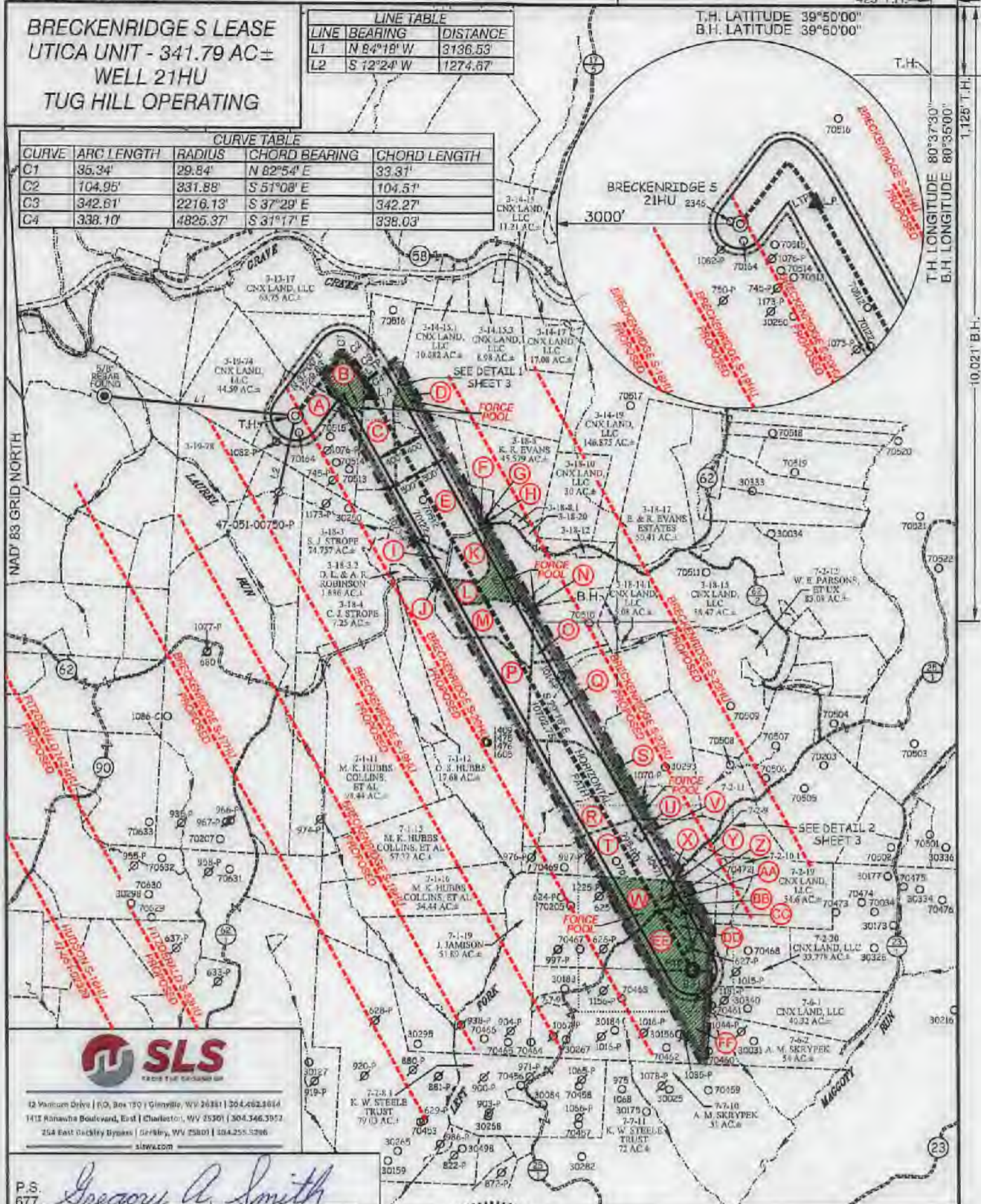
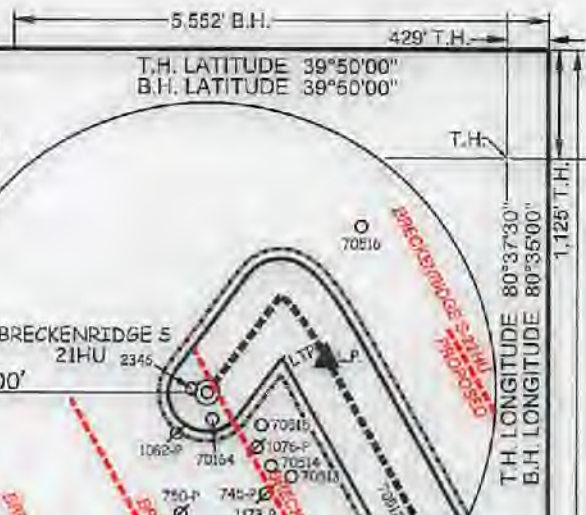
WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DARREN BROWN
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5098 WASHINGTON ST. W, STE 407
FORT WORTH, TX 76107 CHARLESTON, WV 25313-1561

COUNTY NAME PERMIT

**BRECKENRIDGE S LEASE
UTICA UNIT - 341.79 AC±
WELL 21HU
TUG HILL OPERATING**

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 84°18' W	3136.53
L2	S 12°24' W	1274.67

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	35.34'	29.84'	N 82°54' E	33.31'
C2	104.95'	331.88'	S 51°08' E	104.51'
C3	342.61'	2216.13'	S 37°29' E	342.27'
C4	338.10'	4825.37'	S 31°17' E	338.03'



12 Mainum Drive | P.O. Box 130 | Glenville, WV 26031 | 304.462.8644
1413 Rhinawa Boulevard, East | Charleston, WV 25301 | 304.346.3957
254 East Oakley Bypass | Berkeley, WV 25801 | 304.255.5286
sllwv.com

P.S. 677 *Gregory A. Smith*



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

LEGEND

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

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD83 S.P.C.(FT)	N. 466,501.62	E. 1,652,133.01	
NAD83 GEO.	LAT-(N) 39.030246	LONG-(W) 80.026527	
NAD83 UTM (M)	N. 4,409,883.19	E. 531,958.42	
LANDING POINT			
NAD83 S.P.C.(FT)	N. 469,881.8	E. 1,653,372.2	
NAD83 GEO.	LAT-(N) 39.031277	LONG-(W) 80.022133	
NAD83 UTM (M)	N. 4,409,099.2	E. 532,399.9	
BOTTOM HOLE			
NAD83 S.P.C.(FT)	N. 477,525.1	E. 1,658,004.3	
NAD83 GEO.	LAT-(N) 39.005825	LONG-(W) 80.003096	
NAD83 UTM (M)	N. 4,409,281.4	E. 533,975.4	

SCALE	1" = 2000'	FILE NO.	9028P21HUR2.dwg
			BRECKENRIDGE S-21HU-REV3
DATE	JULY 15		20 21
REVISED	AUGUST 25, NOVEMBER 8		20 21
OPERATORS WELL NO.	BRECKENRIDGE S-21HU		
API WELL NO.	47	051	02400
NO.	STATE	COUNTY	PERMIT

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



WELL OPERATOR	TUG HILL OPERATING, LLC	DESIGNATED AGENT	DARREN BROWN
ADDRESS	1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107	ADDRESS	5098 WASHINGTON ST. W. STE 407 CHARLESTON, WV 25313-1561

COUNTY NAME
PERMIT

11/19/2021

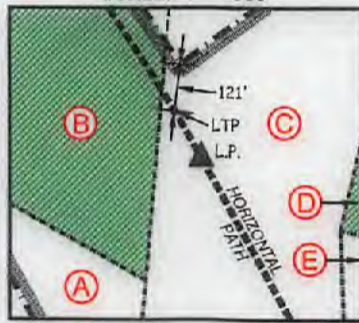
**BRECKENRIDGE S LEASE
UTICA UNIT - 341.79 AC±
WELL 21HU
TUG HILL OPERATING**



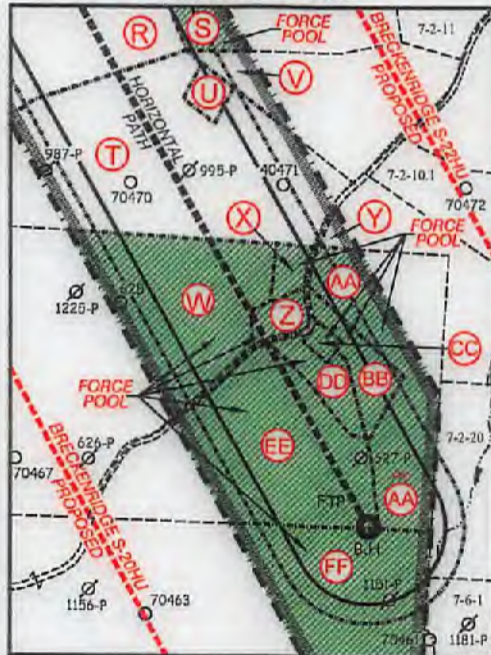
12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsw.com

NO.	Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Book/Page
1	10*31241	3-19-76	A	JAMES R WAYT, ET AL	729 40
2	*FORCE POOL*	3-19-75	B	KATHERINE ZOGG OLIVER	663 449
3	10*17925	3-18-1	C	BOUNTY MINERALS LLC	928 393
4	*FORCE POOL*	3-14-18	D	KEVIN R. EVANS	1008 561
5	10*17925	3-18-2	E	BOUNTY MINERALS LLC	928 393
6	10*17925	3-18-7	F	BOUNTY MINERALS LLC	928 393
7	10*17925	3-18-8	G	BOUNTY MINERALS LLC	928 393
8	10*17925	3-18-8.2	H	BOUNTY MINERALS LLC	928 393
9	10*17925	3-18-3.3	I	BOUNTY MINERALS LLC	928 393
10	10*17925	3-18-38	J	BOUNTY MINERALS LLC	928 393
11	10*17925	3-18-6.1	K	BOUNTY MINERALS LLC	928 393
12	10*17925	3-18-5	L	BOUNTY MINERALS LLC	928 393
13	10*17925	3-18-5	M	BOUNTY MINERALS LLC	928 393
14	*FORCE POOL*	3-18-13	N	EQT PRODUCTION CO	1065 540
15	10*19995	3-18-14	O	JEFFREY L CUMPSTON AND TAMMY S CUMPSTON, ET AL	953 280
16	10*17925	7-1-13	P	BOUNTY MINERALS LLC	928 393
17	10*29980	7-2-1	Q	OLIVIA S ALLEN, ET AL	1103 537
18	10*29980	7-1-14	R	OLIVIA S ALLEN, ET AL	1103 537
19	*FORCE POOL*	7-2-2	S	NOBLE MARCELLUS LP, C/D FALCON MINERALS CORPORATION, ET AL	N/A N/A
20	10*25503	7-2-3.1	T	BEVERLY MAE DAVIS, ET AL	910 270
21	10*25503	7-2-3.2	U	BEVERLY MAE DAVIS, ET AL	910 270
22	10*25503	7-2-3	V	BEVERLY MAE DAVIS, ET AL	910 270
23	*FORCE POOL*	7-2-4	W	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS, ET AL	N/A N/A
24	*FORCE POOL*	7-2-4.1	X	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS, ET AL	N/A N/A
25	10*26711	7-2-8	Y	CNX GAS COMPANY LLC	1074 593
26	*FORCE POOL*	7-2-4.2	Z	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS, ET AL	N/A N/A
27	*FORCE POOL*	7-2-7	AA	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS, ET AL	N/A N/A
28	*FORCE POOL*	7-2-7.1	BB	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS, ET AL	N/A N/A
29	*FORCE POOL*	7-2-6	CC	UNKNOWN HEIRS AND ASSIGNS OF LINDA STRAUB, ET AL	N/A N/A
30	*FORCE POOL*	7-2-5.1	DD	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS, ET AL	N/A N/A
31	*FORCE POOL*	7-2-5	EE	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS, ET AL	N/A N/A
32	*FORCE POOL*	7-7-9.1	FF	CURTIS W. UNT, ET AL	N/A N/A

DETAIL 1
SCALE: 1" = 500'



DETAIL 2
SCALE: 1" = 1000'



FILE NO. 9026P21HUR2.dwg
BRECKENRIDGE S-21HU-REV3

DATE JULY 15, 20 21

REVISED AUGUST 25, NOVEMBER 8, 20 21

OPERATORS WELL NO. BRECKENRIDGE S-21HU

API WELL NO. 47 — 051 — 02400
STATE COUNTY PERMIT



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



P.S. 677

Gregory A. Smith

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

DESIGNATED AGENT DARREN BROWN
ADDRESS CT CORPORATION
5098 WASHINGTON ST. W, STE 407
CHARLESTON, WV 25313-1561

COUNTY NAME
PERMIT

11/19/2021

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

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

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

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

RECEIVED
Office of Oil and Gas

AUG 13 2021

WV Department of
Environmental Protection

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

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

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

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

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

Lease ID	TMP	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*31241	3-19-76	A	JAMES R WAYT	TRANS ENERGY INC	1/8+	729 40	N/A	N/A	N/A	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 24/260	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21
10*31242	3-19-76	A	EVELYN L BUTLER	TRANS ENERGY INC	1/8+	729 49	N/A	N/A	N/A	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 24/260	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21
FORCE POOL	3-19-75	B	KATHERINE ZOGG OLIVER	GREAT LAKES ENERGY PARTNERS, LLC	1/8+	663 449	Name change to Range Resources - Appalachia LLC: CB 19/443	Range Resources - Appalachia LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc: 663/449	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 24/363	Chesapeake Appalachia LLC to SWN Production Company LLC: 33/110	Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC: 33/424	Cert of Merger - SWN Exchange Titleholder LLC merged with and into SWN Production Company LLC: CB 19/624	**FORCE POOL**
10*17925	3-18-1	C	BOUNTY MINERALS LLC	TH EXPLORATION LLC	1/8+	928 393	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17925	3-18-2	E	BOUNTY MINERALS LLC	TH EXPLORATION LLC	1/8+	928 393	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17925	3-18-6.1	K	BOUNTY MINERALS LLC	TH EXPLORATION LLC	1/8+	928 393	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17925	3-18-6	L	BOUNTY MINERALS LLC	TH EXPLORATION LLC	1/8+	928 393	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17925	3-18-5	M	BOUNTY MINERALS LLC	TH EXPLORATION LLC	1/8+	928 393	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17925	7-1-13	P	BOUNTY MINERALS LLC	TH EXPLORATION LLC	1/8+	928 393	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29980	7-2-1	Q	OLIVIA S ALLEN	TH EXPLORATION LLC	1/8+	1103 537	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30003	7-2-1	Q	MOLLY KAY & CHAD J COLLINS	TH EXPLORATION LLC	1/8+	1103 541	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29980	7-1-14	R	OLIVIA S ALLEN	TH EXPLORATION LLC	1/8+	1103 537	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30003	7-1-14	R	MOLLY KAY & CHAD J COLLINS	TH EXPLORATION LLC	1/8+	1103 541	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*25503	7-2-3.1	T	BEVERLY MAE DAVIS	AMERICAN PETROLEUM PARTNERS LLC	1/8+	910 270	N/A	N/A	N/A	N/A	N/A	N/A	American Petroleum Partners Operating LLC to TH Exploration LLC: 43/503
10*25507	7-2-3.1	T	DAVID LEE DAVIS AND A JANE DAVIS	AMERICAN PETROLEUM PARTNERS LLC	1/8+	910 265	N/A	N/A	N/A	N/A	N/A	N/A	American Petroleum Partners Operating LLC to TH Exploration LLC: 43/503
10*25529	7-2-3.1	T	KAREN S HOLT	AMERICAN PETROLEUM PARTNERS LLC	1/8+	930 261	N/A	N/A	N/A	N/A	N/A	N/A	American Petroleum Partners Operating LLC to TH Exploration LLC: 43/503
10*25531	7-2-3.1	T	KATHY L YOUNG AND RODNEY A YOUNG	AMERICAN PETROLEUM PARTNERS LLC	1/8+	932 142	N/A	N/A	N/A	N/A	N/A	N/A	American Petroleum Partners Operating LLC to TH Exploration LLC: 43/503
10*25535	7-2-3.1	T	RICKY J CAIN	AMERICAN PETROLEUM PARTNERS LLC	1/8+	930 295	N/A	N/A	N/A	N/A	N/A	N/A	American Petroleum Partners Operating LLC to TH Exploration LLC: 43/503
10*25537	7-2-3.1	T	SUSAN E WRIGHT	AMERICAN PETROLEUM PARTNERS LLC	1/8+	932 207	N/A	N/A	N/A	N/A	N/A	N/A	American Petroleum Partners Operating LLC to TH Exploration LLC: 43/503
10*30483	7-2-4	W	DAVID W MITCHELL	TH EXPLORATION, LLC	1/8+	1105 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30154	7-2-4	W	MICHELLE ABRAMS AND DONALD A ABRAMS	TH EXPLORATION, LLC	1/8+	1104 641	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30605	7-2-4	W	CAMMIE WILSON AND CLINT A WILSON	TH EXPLORATION, LLC	1/8+	1110 529	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30606	7-2-4	W	NEIL EDWARD WILSON	TH EXPLORATION, LLC	1/8+	1110 526	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30157	7-2-4	W	EDISON K MITCHELL AND MARILEE J MITCHELL	TH EXPLORATION, LLC	1/8+	1104 645	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30156	7-2-4	W	RAYMOND L MITCHELL AND JANET L MITCHELL	TH EXPLORATION, LLC	1/8+	1104 637	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*38535	7-2-4	W	CAROLYN A POSTLETHWAITE	TH EXPLORATION, LLC	1/8+	1083 548	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FORCE POOL	7-2-4	W	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS	UNLEASED	N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-4	W	DONALD WAYNE ANDREWS	UNLEASED	N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-4	W	JANET LORRAINE ANDREWS PUSKARICH	UNLEASED	N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**

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 Environmental Protection

Lease ID	TMP	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page		Assignment	Assignment	Assignment	Assignment	Assignment	Assignment		
FORCE POOL	7-2-4	W	KRISTINA OWENS KOLLER F/K/A KRISTINA OWENS WRIGHT	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	787	131	N/A	N/A	N/A	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**	
FORCE POOL	7-2-4	W	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-4	W	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-4	W	KYLE OWENS	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	789	296	N/A	N/A	N/A	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**	
FORCE POOL	7-2-4	W	SUSAN L CLENDENNING	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	761	290	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**	
FORCE POOL	7-2-4	W	CAROLE SIMMONS	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	759	596	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**	
FORCE POOL	7-2-4	W	JACK OWENS JR.	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	575	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**	
FORCE POOL	7-2-4	W	ALLEN W. OWENS	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	576	N/A	N/A	Trans Energy Inc to American Shale Development Inc: 27/172	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**	
10*30483	7-2-4.2	Z	DAVID W MITCHELL	TH EXPLORATION, LLC	1/8+	1105	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30154	7-2-4.2	Z	MICHELLE ABRAMS AND DONALD A ABRAMS	TH EXPLORATION, LLC	1/8+	1104	641	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30605	7-2-4.2	Z	CAMMIE WILSON AND CLINT A WILSON	TH EXPLORATION, LLC	1/8+	1110	529	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30606	7-2-4.2	Z	NEIL EDWARD WILSON	TH EXPLORATION, LLC	1/8+	1110	526	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30157	7-2-4.2	Z	EDISON K MITCHELL AND MARILEE J MITCHELL	TH EXPLORATION, LLC	1/8+	1104	645	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30156	7-2-4.2	Z	RAYMOND L MITCHELL AND JANET L MITCHELL	TH EXPLORATION, LLC	1/8+	1104	637	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*38535	7-2-4.2	Z	CAROLYN A POSTLETHWAITE	TH EXPLORATION, LLC	1/8+	1083	548	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FORCE POOL	7-2-4.2	Z	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-4.2	Z	DONALD WAYNE ANDREWS	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-4.2	Z	JANET LORRAINE ANDREWS PUSKARICH	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-4.2	Z	KRISTINA OWENS KOLLER F/K/A KRISTINA OWENS WRIGHT	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	787	131	N/A	N/A	N/A	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**	
FORCE POOL	7-2-4.2	Z	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-4.2	Z	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**

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Lease ID	TMP	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page		Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
FORCE POOL	7-2-4.2	Z	KYLE OWENS	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	789	296	N/A	N/A	N/A	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**
FORCE POOL	7-2-4.2	Z	SUSAN L CLENDENNING	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	761	290	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**
FORCE POOL	7-2-4.2	Z	CAROLE SIMMONS	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	759	596	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**
FORCE POOL	7-2-4.2	Z	JACK OWENS JR.	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	575	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**
FORCE POOL	7-2-4.2	Z	ALLEN W. OWENS	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	576	N/A	Trans Energy Inc to American Shale Development Inc: 27/172	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**	
10*30483	7-2-5	EE	DAVID W MITCHELL	TH EXPLORATION, LLC	1/8+	1105	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30154	7-2-5	EE	MICHELLE ABRAMS AND DONALD A ABRAMS	TH EXPLORATION, LLC	1/8+	1104	641	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30605	7-2-5	EE	CAMMIE WILSON AND CLINT A WILSON	TH EXPLORATION, LLC	1/8+	1110	529	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30606	7-2-5	EE	NEIL EDWARD WILSON	TH EXPLORATION, LLC	1/8+	1110	526	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30157	7-2-5	EE	EDISON K MITCHELL AND MARILEE J MITCHELL	TH EXPLORATION, LLC	1/8+	1104	645	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30156	7-2-5	EE	RAYMOND L MITCHELL AND JANET L MITCHELL	TH EXPLORATION, LLC	1/8+	1104	637	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*38535	7-2-5	EE	CAROLYN A POSTLETHWAITE	TH EXPLORATION, LLC	1/8+	1083	548	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FORCE POOL	7-2-5	EE	ROBERT EDISON ANDREWS A/K/A EDISON ANDREWS	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-5	EE	DONALD WAYNE ANDREWS	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-5	EE	JANET LORRAINE ANDREWS PUSKARICH	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-5	EE	KRISTINA OWENS KOLLER F/K/A KRISTINA OWENS WRIGHT	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	787	131	N/A	N/A	N/A	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**
FORCE POOL	7-2-5	EE	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-5	EE	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	UNLEASED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**FORCE POOL**
FORCE POOL	7-2-5	EE	KYLE OWENS	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	789	296	N/A	N/A	N/A	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**

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Lease ID	TMP	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
FORCE POOL	7-2-5	EE	SUSAN L CLENDENNING	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	761 290	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**
FORCE POOL	7-2-5	EE	CAROLE SIMMONS	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	759 596	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**
10*38640	7-2-5	EE	JACK OWENS JR.	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750 575	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	Republic Energy Ventures LLC to American Shale Development Inc: 28/227	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**
10*38643	7-2-5	EE	ALLEN W. OWENS	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750 576	N/A	N/A	Trans Energy Inc to American Shale Development Inc: 27/172	American Shale Devel. Inc to Republic Partners VIII LLC: 31/482	Republic Energy Ventures LLC, Republic Partners VI, LP, Republic Partners VII & VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	**FORCE POOL**

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ASSIGNMENT AND BILL OF SALE

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

RECITALS

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

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

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

ARTICLE I
DEFINED TERMS

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

ARTICLE II
ASSIGNMENT OF ASSETS

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

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

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

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COPY

STATE OF WEST VIRGINIA §
 §
COUNTY OF MARSHALL §

Marshall County
Jan Pest, Clerk
Instrument 1453305
04/24/2019 @ 11:51:22 AM
ASSIGNMENTS
Book 43 @ Page 505
Pages Recorded 10
Recording Cost \$ 17.00

ASSIGNMENT AND CONVEYANCE

THIS ASSIGNMENT AND CONVEYANCE (the "Assignment") is made and entered into this 23rd day of April, 2019 (the "Effective Date"), by and between AMERICAN PETROLEUM PARTNERS OPERATING, LLC, (hereinafter "Assignor") and TTI EXPLORATION, LLC (hereinafter "Assignee") pursuant to the terms of that certain Acreage Trade Agreement between the Assignor and the Assignee dated November 15, 2018 (the "Acreage Trade Agreement"). Capitalized terms used but not defined herein and defined in the Acreage Trade Agreement shall have the meanings given to such terms in the Acreage Trade Agreement.

WITNESSETH:

WHEREAS, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to those certain Oil and Gas Leases situated in Marshall County, West Virginia, as described in Exhibit A-2, attached hereto and made a part hereof (hereinafter the "Leases"); and

WHEREAS, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to the Leases as described below.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and subject to the limited warranties, restrictions and conditions hereinafter mentioned, the parties hereto, intending to be legally bound, do covenant and agree as follows:

1. Assignment. Assignor does hereby grant, bargain, sell, convey, deliver, assign, set over and transfer, as of the Effective Date, to Assignee, its respective successors and assigns, forever, all of Assignor's right, title and interest in and to the Leases, and the lands covered thereby, together with all rights incident thereto and appurtenances thereon.

TO HAVE AND TO HOLD such right, title and interest in and to the Leases unto Assignee or its designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

2. Special Warranty. Assignor represents and warrants that Assignor has not conveyed or otherwise encumbered (other than Permitted Encumbrances) its interest in the Leases since the time that Assignor obtained its interests in the Leases. Assignor does covenant, promise and agree, to and with the Assignee, its respective successors and assigns, to forever specially warrant and defend the title to the Leases or portions thereof included under this Assignment, unto the Assignee and its respective successors and assigns, against the lawful claims of Assignor, and all persons claiming, or to claim, the same or any part thereof, by, through or under Assignor.

Assignor represents and warrants that Assignor has paid any and all bonuses, rentals, royalties, overriding royalties, and other payments required by the Leases which were due for the period in which Assignor held its interests in the Leases, and that Assignor has fully performed all conditions necessary to maintain the Leases in full force and effect during such period, free and clear of all Encumbrances, except for and subject only to Permitted Encumbrances.

3. Successors and Assigns. The terms of this Assignment shall be binding upon and inure to the benefit of the parties hereto and each of their respective successors

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ASSIGNMENT AND CONVEYANCE

This Assignment and Conveyance (this "*Assignment*") is from SWN PRODUCTION COMPANY, LLC, a Texas limited liability company ("*Assignor*"), to TH Exploration, LLC, a Texas limited liability company ("*Assignee*"), and is executed on June 30, 2021 (the "*Effective Date*"). Assignor and Assignee may be referred to herein collectively as the "*Parties*," or individually as a "*Party*." Capitalized terms used herein but not otherwise defined herein (including in Section 3.7) shall have the meanings given such terms in that certain Acreage Trade Agreement between the Assignor and the Assignee dated June 22, 2021 (the "*Acreage Trade Agreement*").

ARTICLE 1
ASSIGNMENT OF ASSETS

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

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

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

ARTICLE 2
SPECIAL WARRANTY OF TITLE AND DISCLAIMERS

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

Section 2.2 Disclaimers of Warranties and Representations.

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August 11, 2021

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

RE: Breckenridge S-21HU

Subject: Proposed Voluntary Pooling and Unitization

Dear Susan:

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

- | | | |
|-----------|-----------|-----------|
| 3-19-75 ✓ | 3-14-18 ✓ | 3-18-13 |
| 7-2-2 ✓ | 7-2-4 ✓ | 7-2-4.1 ✓ |
| 7-2-4.2 ✓ | 7-2-7 ✓ | 7-2-7.1 ✓ |
| 7-2-6 ✓ | 7-2-5.1 ✓ | 7-2-5 ✓ |
| 7-7-9.1 ✓ | | |

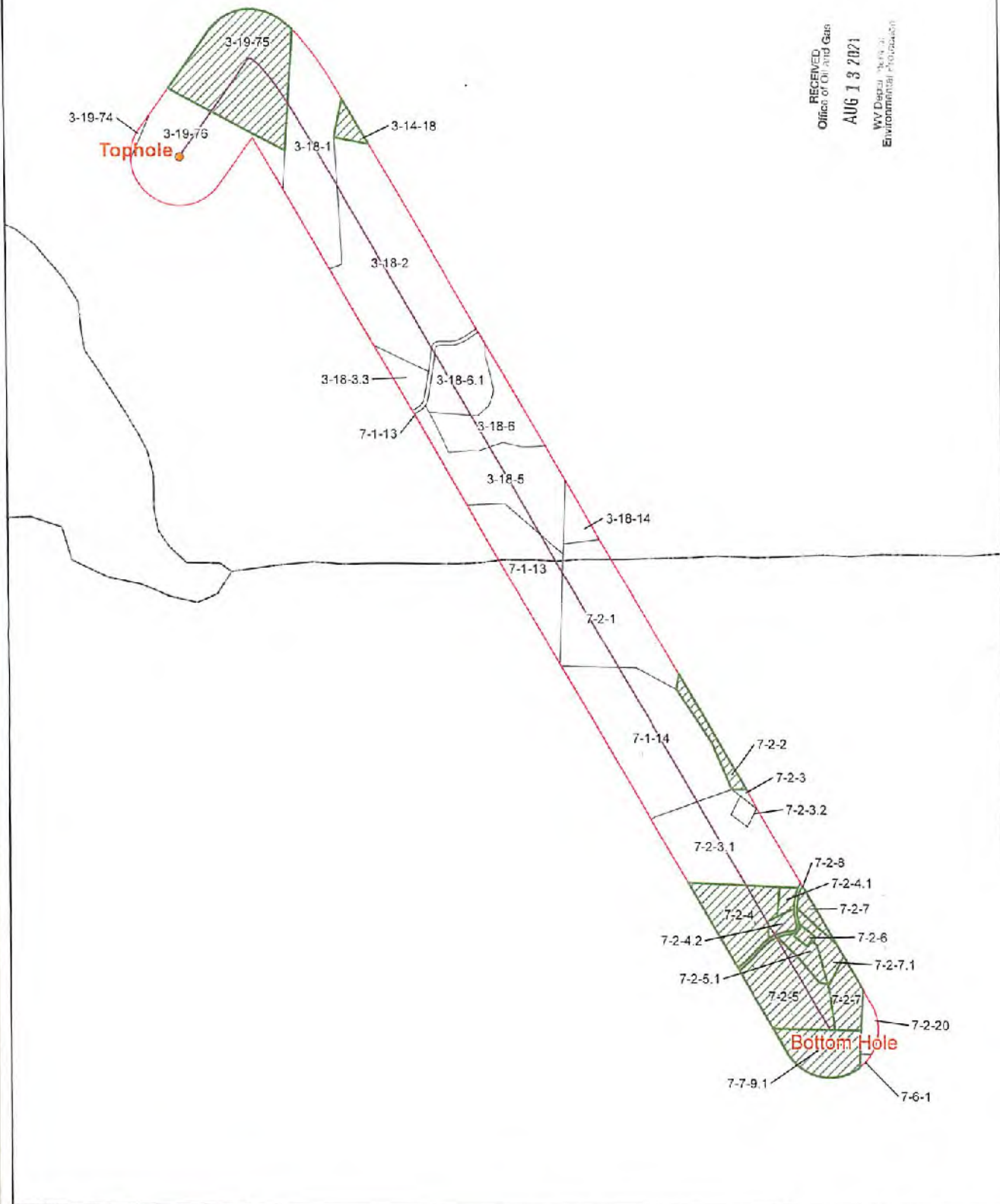
If your office has any questions or concerns regarding the contents of this letter, please do not hesitate to contact me directly at 724-749-8388, or by email at amorris@tug-hillop.com.

Sincerely,

Amy L. Morris
Permitting Specialist – Appalachia Region
Tug Hill Operatin I

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Unpublished Survey: 1421180179.Dwg.rvt
Project: Unconformity Storage
Project Number: 1421180179
Plan: 500' Buffer - 11/19/2021
Scale: 1" = 1000'
Date: 11/19/2021
Author: J. J. [unreadable]
Checked: [unreadable]
Date: [unreadable]

CONFIDENTIAL



- Utica Well
- Force Pool
- 500' Buffer

Breckenridge S-21HU
Operators within 500 Feet of Well Borehole



11/19/2021

CERTIFICATE OF CONSENT AND EASEMENT

The undersigned, for valuable consideration, the receipt and sufficiency of which is hereby acknowledged, being the owner of the surface of that certain lots, tracts or parcels of land located in Cameron District, Marshall County, State of West Virginia, shown on the attached plat or survey, hereby consents and grants an easement (subject to the terms of a separate Surface Use Agreement between the undersigned and TH Exploration, LLC (the "SUA")), pursuant to West Virginia Code, Section 22C-9-7(b)(4) and Operating Rule 4.4 of the Rules and Regulations of the West Virginia Oil and Gas Conservation Commission, to TH Exploration, LLC, its successors or permitted assigns subject to the SUA, for the drilling and operation of a deep well for the production of oil or gas at the location shown on the attached plat or survey.

[Signatures on the Following Page]

Marshall County
Jan Pest, Clerk
Instrument 1472063
11/04/2020 @ 01:07:07 PM
RIGHT OF WAY W/O CONSIDERATION
Book 1098 @ Page 555
Pages Recorded 3
Recording Cost \$ 11.00

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Office of Oil and Gas
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WV Department of
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11/19/2021

Executed the date set forth in the notary but effective as of November 2, 2020.

CNX LAND, LLC

By: [Signature]
Name: Peter J. Binotto
Title: Assistant Vice President

COMMONWEALTH OF PENNSYLVANIA

SS:

COUNTY OF WASHINGTON

On this, the 30 day of Oct, 2020, before me, a notary public, the undersigned officer, personally appeared Peter J. Binotto who acknowledged himself/herself to be the Assistant Vice President of CNX Land LLC and that he/she as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the company by himself/herself as Assistant Vice President.

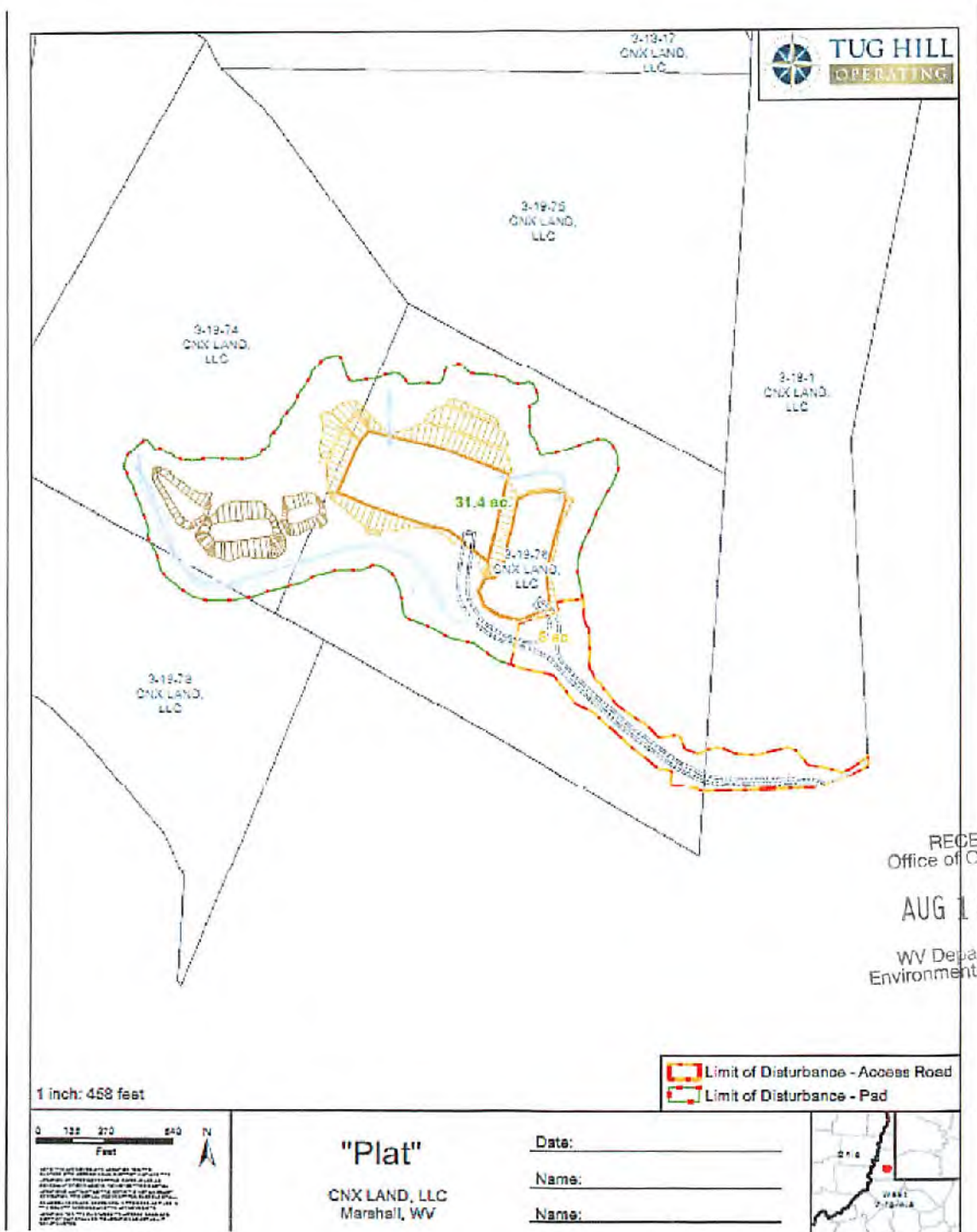
IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: _____
Signature of Notary Public: [Signature]
Name/Notary Public (print): _____

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

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Douglas E. Smith, Notary Public
Cecil Twp., Washington County
My Commission Expires Dec. 6, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

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AUG 13 2021
WV Department of
Environmental Protection



STATE OF WEST VIRGINIA, MARSHALL COUNTY, SCT.:

I, JAN PEST, Clerk of the County Commission of said County, do hereby certify that the annexed writing, bearing date on the 2nd day of November, 2020, was presented for and by me, admitted to record in my office upon the above certificate as to the parties therein named this 4th day of November, 2020 at 1:07 11/19/2021 P.M.

(Handwritten signature)



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

August 27, 2021

Phylis Bushaw
3800 West Wilson St #284
Banning CA 92220

9489 0090 0027 6349 8921 42

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir or Ma'am:

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

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

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

Sincerely,

Susan Rose
Administrator

encl:

11/19/2021



in transit

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

August 27, 2021

Ernest Graham Lott
1331 1st St N Apt 503
Jacksonville Beach FL 32250

9489 0090 0027 6349 8921 35

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir:

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



in transit

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

August 27, 2021

EQT Production Company
625 Liberty Ave Ste 1700
Pittsburgh PA 15222

9489 0090 0027 6201 3319 94

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir or Ma'am:

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 22, 2021

Dear Customer,

The following is the proof-of-delivery for tracking number: 283967525791

Delivery Information:

Status:	Delivered	Delivered To:	
Signed for by:	Signature release on file	Delivery Location:	400 WOODCLIFF DR
Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday		CANONSBURG, PA, 15317
		Delivery date:	Sep 22, 2021 10:33

Shipping Information:

Tracking number:	283967525791	Ship Date:	Sep 21, 2021
		Weight:	0.5 LB/0.23 KG

Recipient:
Corey Peck, EQT Production Company
400 Woodcliff Drive
CANONSBURG, PA, US, 15317

Shipper:
AMY MORRIS, TUH HILL OPERATING, LLC
380 SOUTHPOINTE BLVD
PLAZA II, SUITE 200
CANONSBURG, PA, US, 15317

Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment because a signature was not required.

11/19/2021



in trans 11

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

August 27, 2021

Equinor USA Onshore Properties, Inc.
6300 Bridge Point Pkwy Bldg 2 Ste 100
Austin TX 78730

9489 0090 0027 6201 3319 70

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir or Ma'am:

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

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

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

Sincerely,

A handwritten signature in cursive script that reads "Susan Rose".

Susan Rose
Administrator

encl:

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

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

9489 0090 0027 6201 331987

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir or Ma'am:

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

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

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

Sincerely,

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

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6201 3319 87.


Item Details

Status:	Delivered, Front Desk/Reception/Mail Room
Status Date / Time:	September 2, 2021, 1:35 pm
Location:	FORT WORTH, TX 76107
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	20lb, 3.9oz
----------------	-------------

Recipient Signature

Signature of Recipient:	
Address of Recipient:	JB Attn Covid-19 1320 S University 76107 #500

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Southwestern Energy
10000 Energy Dr
Spring TX 77389

9489 0090 0027 6349 8920 12

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir or Ma'am:

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

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

Sincerely,

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8920 12.

Item Details

Status:	Delivered, Front Desk/Reception/Mail Room
Status Date / Time:	September 1, 2021, 11:55 am
Location:	MORGANTOWN, WV 26508
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	20lb, 3.3oz
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Recipient Signature

Signature of Recipient:	CO-19 MARVIN
Address of Recipient:	1300 Fort Pierpont #201

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Robert Edison Andrews
3107 Broomsedge Way
Durham NC 27712

9489 0090 0027 6349 8920 29

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir:

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

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8920 29.


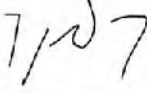
Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 2, 2021, 3:03 pm
Location:	DURHAM, NC 27712
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	12lb, 14.4oz
----------------	--------------

Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Donald Wayne Andrews
141 Youngs Lane
Wellsburg WV 26070

9489 0090 0027 6349 8920 36

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir:

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

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

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

Sincerely,

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8920 36.


Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 1, 2021, 1:22 pm
Location:	WELLSBURG, WV 26070
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	12lb, 15.1oz
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Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Janet Lorraine Andrews Puskarich
54 Bluegrass Ave
Middleburg FL 32068

9489 0090 0027 6349 8920 43

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Ma'am:

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

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8920 43.

Item Details

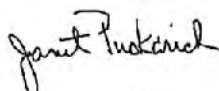
Status:	Delivered
Status Date / Time:	September 8, 2021, 2:08 pm
Location:	MIDDLEBURG, FL 32068
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	12lb, 15.1oz
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Recipient Signature

Signature of Recipient:



Address of Recipient:

54 BLUEGRASS AVE
MIDDLEBURG, FL 32068 4711

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Curtis W. Lint
123 Northwest Bowdoin Place
Seattle WA 98107

9489 0090 0027 6349 8920 50

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir:

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

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

Sincerely,

A handwritten signature in cursive script that reads "Susan Rose".
Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8920 50.

Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 3, 2021, 3:14 pm
Location:	SEATTLE, WA 98107
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	10lb, 1.6oz
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Recipient Signature

Signature of Recipient:	EL C19 C LINT
Address of Recipient:	123 6th St N

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

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Penny Tedrow Ambrose
5475 Columbus Sandusky Rd N SR98
Marion OH 43302

9489 0090 0027 6349 8920 67

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Ma'am:

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

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

Sincerely,

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8920 67.

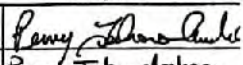
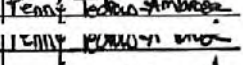
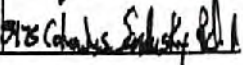
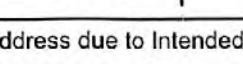
Item Details

Status: Delivered, Left with Individual
Status Date / Time: September 13, 2021, 2:23 pm
Location: MARION, OH 43302
Postal Product: First-Class Mail®
Extra Services: Certified Mail™
Return Receipt Electronic

Shipment Details

Weight: 10lb, 1.4oz

Recipient Signature

Signature of Recipient:	Delivery Section	
	Signature	
Address of Recipient:	Address	
	City	
	PS	

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

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



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

August 27, 2021

Dorothy D. Dille
1516 5th Street
New Brighton PA 15066

9489 0090 0027 6349 8920 74

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Ma'am:

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

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

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8920 74.


Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 1, 2021, 9:58 am
Location:	NEW BRIGHTON, PA 15066
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	10lb, 1.0oz
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Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Darlene Marie Dille Waddingham
157 6th Ave
Pittsburgh PA 15229

9489 0090 0027 6349 8920 81

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Ma'am:

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

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number: **9489 0090 0027 6349 8920 81**.

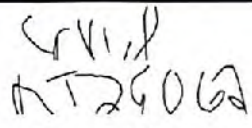
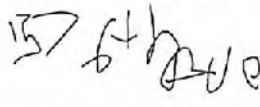
Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 1, 2021, 9:24 am
Location:	PITTSBURGH, PA 15229
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	10lb, 1.6oz
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Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

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

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Howard A. Shanor, Jr.
750 Corder Rd Apt 12
Warner Robins GA 31088

9489 0090 0027 6349892098

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir or Ma'am:

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

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8920 98.

Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 3, 2021, 2:53 pm
Location:	WARNER ROBINS, GA 31088
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	10lb, 0.9oz
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Recipient Signature

Signature of Recipient:	C19
Address of Recipient:	010 A.D. 750 Cordier Rd. Apt. 12

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

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

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Goldie I. Hinkle
14839 East Pike Rd Lot 34
Cambridge OH 43725

9489 0090 0027 6349 8921 04

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

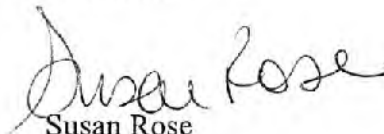
Dear Sir or Ma'am:

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

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

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

Sincerely,


Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8921 04.

Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 3, 2021, 12:42 pm
Location:	CAMBRIDGE, OH 43725
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	10lb, 4.4oz
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Recipient Signature

Signature of Recipient:	
Address of Recipient:	M 11100 14835 E Pine

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

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

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Victoria Petree
143 Pine St
Salinas CA 93901

9489 0090 0027 6349 8921 11

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Ma'am:

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

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

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

Sincerely,

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

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8921 11.



Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 7, 2021, 3:27 pm
Location:	SALINAS, CA 93901
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	10lb, 1.3oz
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Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Lynette Kragness
136 Century Lane
Arroyo Grande, CA 32250

9489 0090 0027 6349 892128

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Ma'am:

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

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

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8921 28.



Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	September 7, 2021, 12:12 pm
Location:	ARROYO GRANDE, CA 93420
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	9lb, 15.5oz
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Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Peggy J. Behm
1565 Jefferson Rd
Jefferson PA 15344

9489 0090 0027 6349 8921 59

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir or Ma'am:

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

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

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6349 8921 59.

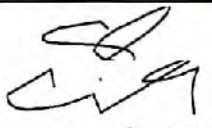
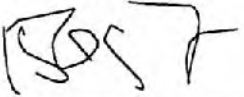
Item Details

Status:	Delivered to Agent for Final Delivery
Status Date / Time:	September 1, 2021, 9:58 am
Location:	JEFFERSON, PA 15344
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	5lb, 1.3oz
----------------	------------

Recipient Signature

Signature of Recipient: (Authorized Agent)	
Address of Recipient:	

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

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

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

11/19/2021



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

August 27, 2021

Noble Marcellus LP, % Falcon Minerals Corp
609 Main St Ste 3950
Houston TX 77002

9489 0090 0027 6201 3220 07

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Breckenridge S-21HU

Dear Sir or Ma'am:

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

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

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

Sincerely,

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

Susan Rose
Administrator

encl:

11/19/2021



September 14, 2021

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6201 3320 07.

Item Details

Status:	Delivered, Front Desk/Reception/Mail Room
Status Date / Time:	September 2, 2021, 11:07 am
Location:	HOUSTON, TX 77002
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	10lb, 1.3oz
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Recipient Signature

Signature of Recipient:	VA 251 C-19
Address of Recipient:	605 Main 7950

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

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

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

11/19/2021

**Offset Operators within 500'
Breckenridge S - 21HU**

COUNTY	DISTRICT	TMP	OWNER	ADDRESS
Marshall	Cameron	3-18-1	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Cameron	3-18-14	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Cameron	3-18-2	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Cameron	3-18-3.3	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Cameron	3-18-5	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Cameron	3-18-6	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Cameron	3-18-6.1	TH EXPLORATION LLC	1321 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Cameron	3-19-74	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Cameron	3-19-74	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Cameron	3-19-75	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Cameron	3-19-75	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Cameron	3-19-76	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Cameron	3-14-18	EQT PRODUCTION COMPANY	625 Liberty Avenue Ste 1700 Pittsburgh, PA 15222
Marshall	Liberty	7-1-13	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-1-14	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107

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WV Department of
Environmental Protection

**Offset Operators within 500'
Breckenridge S - 21HU**

COUNTY	DISTRICT	TMP	OWNER	ADDRESS
Marshall	Liberty	7-2-1	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-2	EQT PRODUCTION COMPANY	625 Liberty Avenue Ste 1700 Pittsburgh, PA 15222
Marshall	Liberty	7-2-2	NOBLE MARCELLUS LP, C/O FALCON MINERALS CORPORATION	609 Main Street Suite 3950 Houston, Texas 77002
Marshall	Liberty	7-2-2	TH EXPLORATION LLC	1319 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-3	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-3.1	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-3.2	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-4	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-2-4	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-2-4	ROBERT EDISON ANDREWS	3107 Broomsedge Way Durham, NC 27712
Marshall	Liberty	7-2-4	DONALD WAYNE ANDREWS	141 Youngs Lane Wellsburg, WV 26070
Marshall	Liberty	7-2-4	JANET LORRAINE ANDREWS PUSKARICH	54 Bluegrass Avenue Middleburg, FL 32068
Marshall	Liberty	7-2-4	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	ADDRESS UNKNOWN
Marshall	Liberty	7-2-4	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	ADDRESS UNKNOWN
Marshall	Liberty	7-2-4.1	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-2-4.1	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-2-4.1	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107

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**Offset Operators within 500'
Breckenridge S - 21HU**

COUNTY	DISTRICT	TMP	OWNER	ADDRESS
Marshall	Liberty	7-2-4.1	ROBERT EDISON ANDREWS	3107 Broomsedge Way Durham, NC 27712
Marshall	Liberty	7-2-4.1	DONALD WAYNE ANDREWS	141 Youngs Lane Wellsburg, WV 26070
Marshall	Liberty	7-2-4.1	JANET LORRAINE ANDREWS PUSKARICH	54 Bluegrass Avenue Middleburg, FL 32068
Marshall	Liberty	7-2-4.1	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	ADDRESS UNKNOWN
Marshall	Liberty	7-2-4.1	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	ADDRESS UNKNOWN
Marshall	Liberty	7-2-4.2	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-2-4.2	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-2-4.2	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-4.2	ROBERT EDISON ANDREWS	3107 Broomsedge Way Durham, NC 27712
Marshall	Liberty	7-2-4.2	DONALD WAYNE ANDREWS	141 Youngs Lane Wellsburg, WV 26070
Marshall	Liberty	7-2-4.2	JANET LORRAINE ANDREWS PUSKARICH	54 Bluegrass Avenue Middleburg, FL 32068
Marshall	Liberty	7-2-4.2	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	ADDRESS UNKNOWN
Marshall	Liberty	7-2-4.2	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	ADDRESS UNKNOWN
Marshall	Liberty	7-2-5	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-2-5	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-2-5	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-5	ROBERT EDISON ANDREWS	3107 Broomsedge Way Durham, NC 27712
Marshall	Liberty	7-2-5	DONALD WAYNE ANDREWS	141 Youngs Lane Wellsburg, WV 26070

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WV Department of
Environmental Protection 11/19/2021

**Offset Operators within 500'
Breckenridge S - 21HU**

COUNTY	DISTRICT	TMP	OWNER	ADDRESS
Marshall	Liberty	7-2-5	JANET LORRAINE ANDREWS PUSKARICH	54 Bluegrass Avenue Middleburg, FL 32068
Marshall	Liberty	7-2-5	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	ADDRESS UNKNOWN
Marshall	Liberty	7-2-5	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	ADDRESS UNKNOWN
Marshall	Liberty	7-2-5.1	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-2-5.1	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-2-5.1	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-5.1	ROBERT EDISON ANDREWS	3107 Broomsedge Way Durham, NC 27712
Marshall	Liberty	7-2-5.1	DONALD WAYNE ANDREWS	141 Youngs Lane Wellsburg, WV 26070
Marshall	Liberty	7-2-5.1	JANET LORRAINE ANDREWS PUSKARICH	54 Bluegrass Avenue Middleburg, FL 32068
Marshall	Liberty	7-2-5.1	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	ADDRESS UNKNOWN
Marshall	Liberty	7-2-5.1	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	ADDRESS UNKNOWN
Marshall	Liberty	7-2-6	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-6	UNKNOWN HEIRS AND ASSIGNS OF LINDA STRAUB	ADDRESS UNKNOWN
Marshall	Liberty	7-2-6	PHYLIS BUSHAW	3800 West Wilson Street #284 Banning, CA 92220
Marshall	Liberty	7-2-6	PEGGY J. BEHM	1565 Jefferson Road Jefferson, PA 15344
Marshall	Liberty	7-2-6	UNKNOWN HEIRS AND ASSIGNS OF MICHAEL O. MCCARTNEY	ADDRESS UNKNOWN
Marshall	Liberty	7-2-7	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-2-7	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730

WV Department of
Environmental Protection

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**Offset Operators within 500'
Breckenridge S - 21HU**

COUNTY	DISTRICT	TMP	OWNER	ADDRESS
Marshall	Liberty	7-2-7	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-7	ROBERT EDISON ANDREWS	3107 Broomsedge Way Durham, NC 27712
Marshall	Liberty	7-2-7	DONALD WAYNE ANDREWS	141 Youngs Lane Wellsburg, WV 26070
Marshall	Liberty	7-2-7	JANET LORRAINE ANDREWS PUSKARICH	54 Bluegrass Avenue Middleburg, FL 32068
Marshall	Liberty	7-2-7	UNKNOWN HEIRS OF RONDA OWENS SPRINGER	ADDRESS UNKNOWN
Marshall	Liberty	7-2-7	UNKNOWN HEIRS OF ROBIN OWENS	ADDRESS UNKNOWN
Marshall	Liberty	7-2-7.1	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-2-7.1	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-2-7.1	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-2-7.1	ROBERT EDISON ANDREWS	3107 Broomsedge Way Durham, NC 27712
Marshall	Liberty	7-2-7.1	DONALD WAYNE ANDREWS	141 Youngs Lane Wellsburg, WV 26070
Marshall	Liberty	7-2-7.1	JANET LORRAINE ANDREWS PUSKARICH	54 Bluegrass Avenue Middleburg, FL 32068
Marshall	Liberty	7-2-7.1	UNKNOWN HEIRS OF RONDA OWENS SPRINGER	ADDRESS UNKNOWN
Marshall	Liberty	7-2-7.1	UNKNOWN HEIRS OF ROBIN OWENS	ADDRESS UNKNOWN
Marshall	Liberty	7-2-8	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-6-1	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-6-1	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-6-1	UNKNOWN HEIRS AND ASSIGNS OF BALZER THIEL	ADDRESS UNKNOWN
Marshall	Liberty	7-6-1	UNKNOWN HEIRS AND ASSIGNS OF BALZER THIEL	ADDRESS UNKNOWN
Marshall	Liberty	7-2-20	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389

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 AUG 13 2021
 WV Department of
 Environmental Protection

11/19/2021

**Offset Operators within 500'
Breckenridge S - 21HU**

COUNTY	DISTRICT	TMP	OWNER	ADDRESS
Marshall	Liberty	7-2-20	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-7-9.1	SOUTHWESTERN ENERGY	10000 Energy Drive Spring, TX 77389
Marshall	Liberty	7-7-9.1	EQUINOR USA ONSHORE PROPERTIES INC	6300 Bridge Point Pkwy Bldg 2, Suite 100 Austin, TX 78730
Marshall	Liberty	7-7-9.1	TH EXPLORATION LLC	1320 S. University Blvd. Suite 500 Fort Worth, TX 76107
Marshall	Liberty	7-7-9.1	CURTIS W. LINT	123 Northwest Bowdoin Place Seattle, WA 98107
Marshall	Liberty	7-7-9.1	PENNY TEDROW AMBROSE	5475 Columbus Sandusky Road N SR98 Marion, OH 43302
Marshall	Liberty	7-7-9.1	DOROTHY D. DILLE	1516 5th Street New Brighton, PA 15066
Marshall	Liberty	7-7-9.1	DARLENE MARIE DILLE WADDINGHAM	157 6th Avenue Pittsburgh, PA 15229
Marshall	Liberty	7-7-9.1	HOWARD A. SHANOR, JR.	750 Corder Road, Apt. 12 Warner Robins, GA 31088
Marshall	Liberty	7-7-9.1	ROBERT EDISON ANDREWS	3107 Broomsedge Way Durham, NC 27712
Marshall	Liberty	7-7-9.1	DONALD WAYNE ANDREWS	141 Youngs Lane Wellsburg, WV 26070
Marshall	Liberty	7-7-9.1	JANET LORRAINE ANDREWS PUSKARICH	54 Bluegrass Avenue Middleburg, FL 32068
Marshall	Liberty	7-7-9.1	UNKNOWN HEIRS AND ASSIGNS OF RONDA OWENS SPRINGER	ADDRESS UNKNOWN
Marshall	Liberty	7-7-9.1	UNKNOWN HEIRS AND ASSIGNS OF ROBIN OWENS	ADDRESS UNKNOWN
Marshall	Liberty	7-7-9.1	UNKNOWN HEIRS AND ASSIGNS OF MARY ELLEN SAYRE	ADDRESS UNKNOWN
Marshall	Liberty	7-7-9.1	GOLDIE I. HINKLE	14839 East Pike Road Lot 34 Cambridge, OH 43725
Marshall	Liberty	7-7-9.1	VICTORIA PETREE	143 Pine Street Salinas, CA 93901
Marshall	Liberty	7-7-9.1	LYNETTE KRAGNESS	136 Century LN Arroyo Grande, CA 32250
Marshall	Liberty	7-7-9.1	ERNEST GRAHAM LOTT	1331 1st ST. N Apt. 503 Jacksonville Beach, FL 32250

WV Department of
 Environmental Protection
 AUG 13 2021

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 Office of Oil and Gas

**Offset Operators within 500'
Breckenridge S - 21HU**

COUNTY	DISTRICT	TMP	OWNER	ADDRESS
Marshall	Liberty	7-7-9.1	UNKNOWN HEIRS AND ASSIGNS OF MARJORIE JEAN FITZGERALD	ADDRESS UNKNOWN
Marshall	Liberty	7-7-9.1	UNKNOWN HEIRS AND ASSIGNS OF LULILY KLEMME AKA LOU LILY KLEMME	ADDRESS UNKNOWN
Marshall	Liberty	7-7-9.1	UNKNOWN HEIRS AND ASSIGNS OF HARRY ZINK AKA HARRISON YOUNG ZINK	ADDRESS UNKNOWN

"For those parties identified as Missing or Address Unknown, the following actions were performed in pursuit of locating these individuals : A reasonable review of the records of the clerk of the county commission, the sheriff, the assessor, and the clerk of the circuit court in the county in which the interest is located, and includes unknown heirs, successors and assigns known to be alive; A reasonable inquiry in the vicinity of the owner's last known place of residence; A diligent inquiry into known interest owners in the same tract; and A reasonable review of available Internet resources commonly utilized by the industry."

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11/19/2021



August 4, 2021

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

RE: Breckenridge S-21HU

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 Marshall County Route 62 and 25/1 in the area reflected on the Breckenridge S-21HU 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-hilop.com.

Sincerely,

Amy L. Morris
Permitting Specialist – Appalachia Region

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

Date of Notice Certification: 08/05/2021

API No. 47- 051 -

Operator's Well No. Breckenridge S-21HU

Well Pad Name: Breckenridge

Notice has been given:

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

State: West Virginia
 County: Marshall
 District: Cameron
 Quadrangle: Glen Easton 7.5'
 Watershed: Grave Creek (HUC 10) & Laurel Run

UTM NAD 83 Easting: 531,958.42
 Northing: 4,408,983.18
 Public Road Access: County Route 62
 Generally used farm name: CNX Land, LLC

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY		OOG OFFICE USE ONLY
<input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED		<input type="checkbox"/> RECEIVED
<input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION		<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 5. PUBLIC NOTICE	RECEIVED Office of Oil and Gas AUG 13 2021	<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION	WV Department of Environmental Protection	<input type="checkbox"/> RECEIVED

Required Attachments:

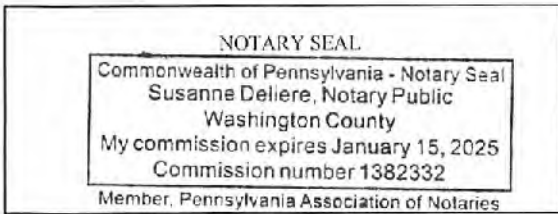
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

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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-hilop.com</u>



Subscribed and sworn before me this 5th day of August 2021
Susanne Deliere Notary Public
 My Commission Expires 1/15/2025

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.

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**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: 8/11/2021 **Date Permit Application Filed:** 8/12/2021

Notice of:

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

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

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

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

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

SURFACE OWNER(s)

Name: CNX Land, LLC (Well Pad and Access Road)
 Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
 Name: _____
 Address: _____

COAL OWNER OR LESSEE

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

COAL OPERATOR

Name: Marshall County Coal Resources, Inc. Attn: Steve Blair
 Address: 46226 National Road
St. Clairsville, OH 43950

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

Name: Kevin R. & Shelly Jo Evans
 Address: 3820 New Bethel Road
Cameron, WV 26033
 Name: David L. & Arianne R. Robinson
 Address: 3518 New Bethel Road
Cameron, WV 26033

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

Name: *see attached
 Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
 Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
 Address: _____

*Please attach additional forms if necessary

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

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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

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

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Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WW-6A
(8-13)

API NO. 47- 051 -
OPERATOR WELL NO. Breckenridge S-21HU
Well Pad Name: Breckenridge

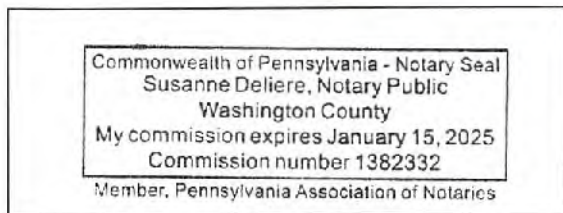
Notice is hereby given by:

Well Operator: Tug Hill Operating, LLC
Telephone: 724-749-8388
Email: amorris@tug-hilop.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 5th day of August 2021
Susanne Deliere Notary Public
My Commission Expires 1/15/2025

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Exhibit WW-6A

Supplement Pg. 1A

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

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

Well: Breckenridge S – 21HU
District: Cameron
State: WV

There is one (1) residence, no business or commercial sites, no churches, no schools or no emergency facilities within two-thousand feet (2,000') of the above referenced well location.

Residence (#1)
TM 3-19-78
CNX Land, LLC
Phone: 724-485-4000
Physical Address:
Unknown – Possible Unoccupied Home
or Hunting Cabin
Tax Address:
1000 Consol Energy DR
Canonsburg, PA 15317-6506

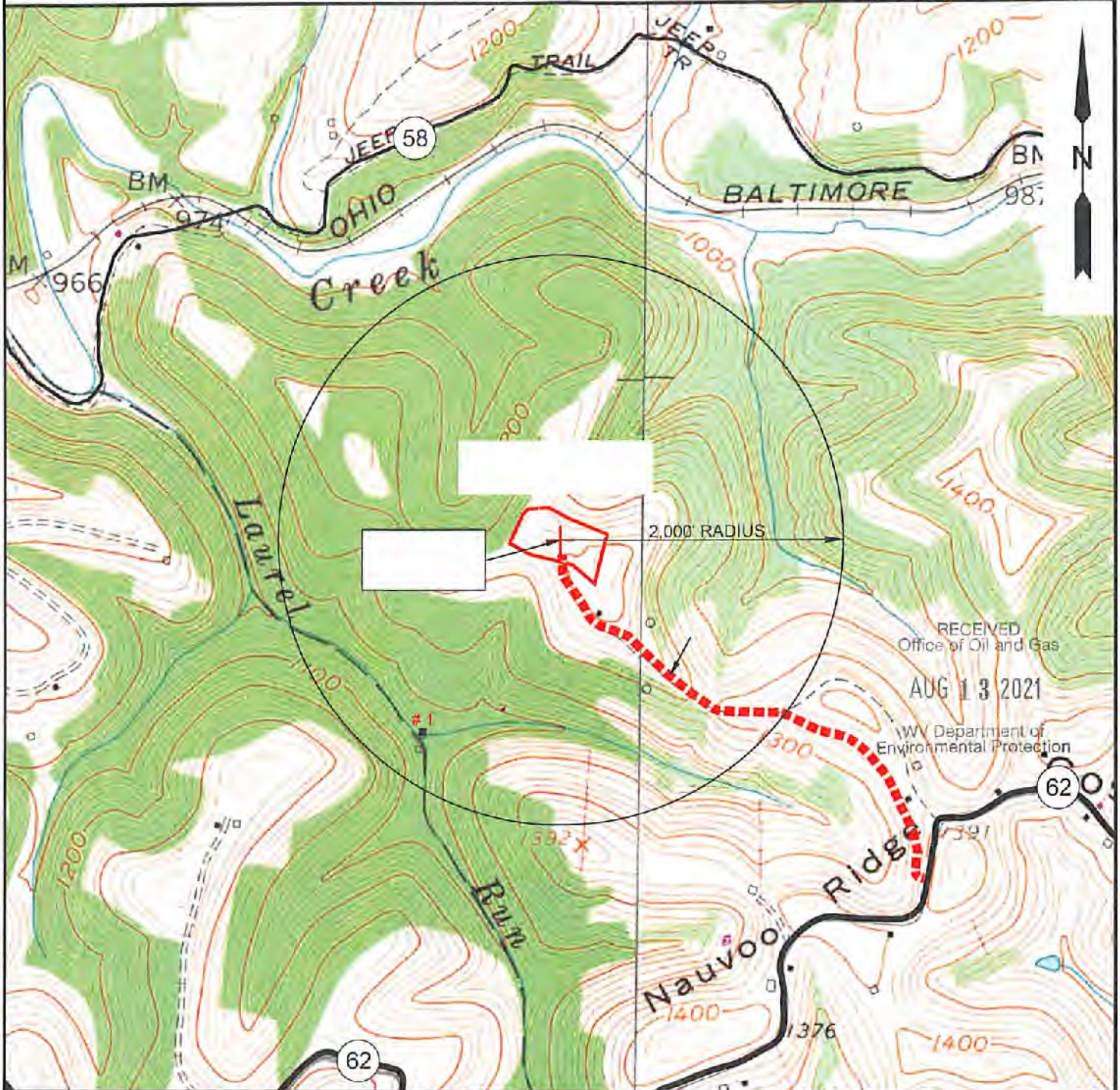
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PROPOSED BRECKENRIDGE S - 21HU



NOTE: THERE APPEARS TO BE ONE (1) POSSIBLE WATER SOURCE WITHIN 2,000'.



12 Van Horn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5634
 1412 Kanawitz Boulevard, East | Charleston, WV 25301 | 304.346.3932
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5295
 slsvv.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	CAMERON		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	9026	04/08/2021	1" = 1000'



TUG HILL
OPERATING

11/19/2021

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

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

Date of Notice: 12/1/2020 **Date of Planned Entry:** 12/7/2020

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: CNX Land, LLC (Well Pad and Access Road)
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

Name: Kevin R & Shelly Jo Evans (Access Road)
Address: 3820 New Bethel Road
Cameron, WV 26033

Name: David L. & Arianna R. Robinson
Address: 3518 New Bethel Road
Cameron, WV 26033

COAL OWNER OR LESSEE

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

MINERAL OWNER(s)

Name: Onward E. Burge
Address: RD 3 Box 33
Cameron, WV 26033 **See attached list
*please attach additional forms if necessary

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WV 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>39.83027651; -80.62635846</u>
County: <u>Marshall</u>	Public Road Access: <u>County Route 62</u>
District: <u>Cameron</u>	Watershed: <u>Grave Creek (HUC 10) and Laurel Run</u>
Quadrangle: <u>Glen Easton 7.5'</u>	Generally used farm name: <u>CNX Land, LLC</u>

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

Notice is hereby given by:

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

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

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.

11/19/2021

WW-6A3 Attachment
Breckenridge Well Pad

Jan Marie Crego 2110 Plum Street Parkersburg, WV 26101	Nina K. Fletcher 45 Briarwood Drive Wheeling, WV 26003
Leon McCard 25 Honour Cir NW Atlanta, GA 30305	Gary Briggs 1508 26th Street Cody, WY 82414
Jeff and Connie Briggs 803 Meadow Lane Ave Apt 5 Cody, WY 42414	Roger L. Briggs 908 Amble Court Harrington, DE 19952
Thomas A. Briggs 996 Tunnel Hill Road Cameron, WV 26033	Julia A. Briggs 8154 W. Ohio State Lane NW Lancaster, OH 43130
Deena J. Palomo 20 Maxwell Street, Apartment 4 Hebron, IN 46341	Jerrilyn Litts 5582 Fairview Street Stevensville, MI 49127
Douglas Briggs PO Box 1416 Gillette, WY 82717	Gerri A Bannister 508 Richards Ave Gillette, WY 82717
John Briggs PO Box 2008 Richland, WA 99352	Noble Marcellus LP 15601 North Dallas Parkway, Suite 900 Addison, TX 75001
Meridius Ventures LLC PO Box 1099 Ripley, WV 25271	Hasan's Ventures LLC PO Box 1099 Ripley, WV 25271
Bounty Minerals LLC 777 Main Street, Suite 3400 Fort Worth, TX 76102	Goshorn Ridge, LLC 112 Algonquin Trace Wheeling, WV 26003

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Environmental Protection

11/19/2021

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

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

Date of Notice: 08/11/2021 **Date Permit Application Filed:** 08/12/2021

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

- CERTIFIED MAIL
RETURN RECEIPT REQUESTED
- HAND
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: CNX Land, LLC
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

Name: Kevin R. and Shelly Jo Evans *See Attached
Address: 3820 New Bathel Road
Cameron, WV 26033

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>531,958.42</u>
County:	<u>Marshall</u>		Northing:	<u>4,408,983.18</u>
District:	<u>Cameron</u>	Public Road Access:		<u>CR 62</u>
Quadrangle:	<u>Glen Easton 7.5'</u>	Generally used farm name:		<u>CNX Land, LLC</u>
Watershed:	<u>Grace Creek (Huc 10) & Laurel Run</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 Scuthpointe Boulevard, Plaza II, Suite 200
Canonsburg, PA 15317
Facsimile: 724-338-2030

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

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WV Dept. of Environmental Protection

4705102400

**Additional Notice for WW-6A5
Breckenridge Pad**

David L. & Arianne R. Robinson
3518 New Bethel Road
Cameron, WV 26033

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4705102400

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

Byrd E. White, III
Secretary of Transportation

January 8, 2021

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

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

Subject: DOH Permit for the Breckenridge Pad, Marshall County
Breckenridge S-21HU Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2020-0398 issued to Tug Hill Operating for access to the State Road for a well site located off Marshall County Route 62 SLS MP 3.81.

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

Very Truly Yours,

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

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

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TUG HILL

4705102400

PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Breckenridge 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

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Breckenridge Well Site

Site Design, Construction Plan, & Erosion and Sediment Control Plans
Tug Hill Operating
Marshall County
Cameron District
Latitude 39.83027651°
Longitude -80.62685846°
Middle Grave Creek Watershed

Pertinent Site Information
Breckenridge Site
Emergency Number 304-845-1920
Cameron District, Marshall County, WV
Watershed: Middle Grave Creek Watershed
Site 911 Address:

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

Exhibit A: Final Design: Issue for Permitting

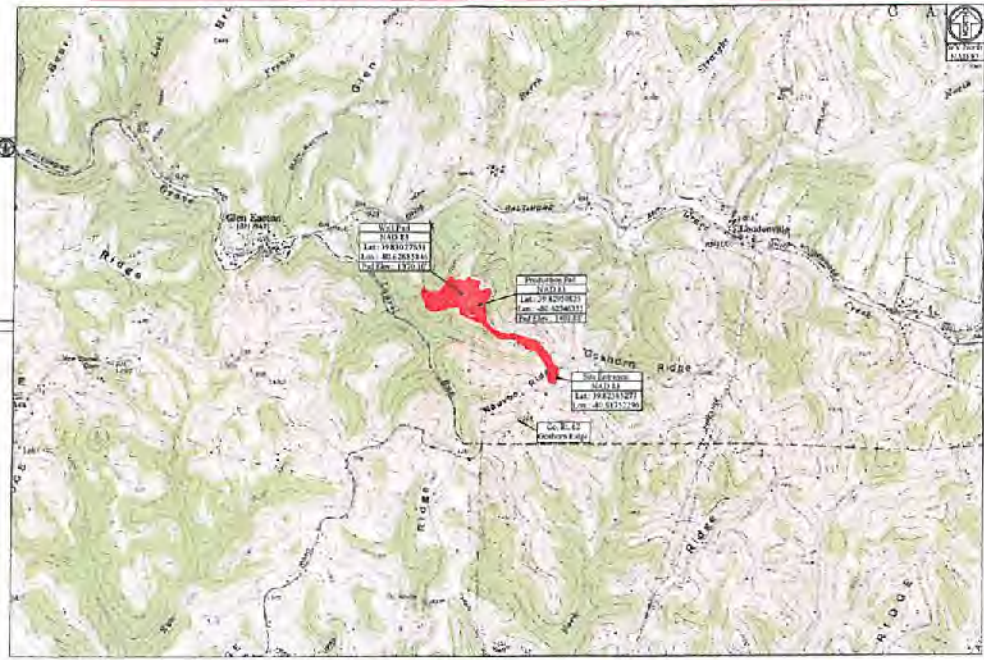


Property Owner Information - Breckenridge Well Site

Owner	Acres	County	Assessed Value	Year Assessed	Year Purchased
David & Arlene Johnson	18.73	0.00	2,941	2,020	2018
Barry Tramm	15.2	0.00	2,128	2,020	2018
DOV Land LLC	15.71	0.00	2,095	2,020	2018
DOV Land LLC	15.76	9.50	2,123	2,020	2018
DOV Land LLC	15.74	0.00	2,119	2,020	2018
DOV Land LLC	15.74	0.00	2,121	2,020	2018

Site Entrance

Point	Easting	Northing	Point	Easting	Northing	Point	Easting	Northing
WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42

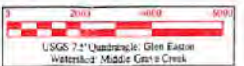


Breckenridge Well Site Quantities

Item	Quantity	Unit	Notes
Well Pad	0.21	Ac	
Production Pad	2.00	Ac	
Access Road	8.81	Ac	
Utility Easement	2.74	Ac	
Additional Clearing	2.24	Ac	
Total	13.99	Ac	

Well Table

Well Name	Well ID	Well Type	Well Depth	Well Status
WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42	WV NAD 83 12 318441.42



Project Contacts

Site Owner Tug Hill Operating, LLC 1200 Huntington Drive Bechtelspring, PA 22217	Prepared by K&S Surveying PO Box 640 Bechtelspring, PA 22217
--	--

Approach Routes:
From the intersection of WV Rt 2 and OH Rt 7 in New Martinsville, WV, Travel North on WV Rt 2 for 2.1 mi. Turn Right onto WV Rt 2 (Round Bottom Hill), Follow WV Rt 2 for 1.3 mi. Turn Right onto Co R-849 (Lindsay Lane), Follow Co R-849 for 1.6 mi. Turn Right onto Co R-21 (Roberts Ridge), Follow Co R-21 for 2.1 mi. Turn Left onto Co R-62 (New Licks), Follow Co R-62 for 3.7 mi. The site entrance will be on the Left (West) side of the road.



Well Location Restrictions
All Well construction complies with the following restrictions:
*25' from an existing, well or developed spring used for human or domestic animals
*25' from an occupied dwelling or other structure, unless the property is a dairy, measured from the corner of the pad.
*100' from the edge of disturbance to wetlands, perennial streams, natural or artificial lake, pond or reservoir.
*100' from the edge of disturbance to a waterway representing a wet stream.
*200' of a surface or ground water intake to a public water supply.

(Well Location Restrictions of WV Code 20-2A-4.1)

APPROVED WVDEP OOG
1/25/2021

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MISS UTILITY OF WEST VIRGINIA
1-800-248-3848
www.missutility.com
IT'S THE LAW. Call before you dig.



Plow/Plow Conditions

The site preparation activities were performed to the best of the contractor's ability.	NOI
Plow/Plow work was performed to the best of the contractor's ability.	NOI
NOI-RAS fields contained.	N/A
Plow/Plow work was performed to the best of the contractor's ability.	NOI
Plow/Plow work was performed to the best of the contractor's ability.	NOI

TUG HILL OPERATING

THIS DOCUMENT PREPARED FOR TUG HILL OPERATING

K&S Surveying
1200 Huntington Drive
Bechtelspring, PA 22217

Breckenridge Well Site
Cameron District
Marshall County, WV

Sheet: 1 of 36

Table of Contents

Sheet	Description
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2	Site Construction Site Conditions
3	Site Soil Map
4	Clearing Exhibit
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10	Site Key Exhibit
11-14	Plan View
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21-24	Cross Sections - Access Road
25-26	Cross Sections - Landowner Access Road
GI-G4	Geotechnical Exhibit
L1	Landowner Disturbed Area Exhibit
S1	Site Resolution
M1-M3	Foundation Exhibit
D1-D3	Fence and Sediment Control Details
P1	Access Road Details
F1	Pad Details
F1-F2	Fence Layout

