



west virginia department of environmental protection

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

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

Friday, January 21, 2022
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for BRECKENRIDGE S-25HM
47-051-02432-00-00

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

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

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

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

James A. Martin
Chief

Operator's Well Number: BRECKENRIDGE S-25HM
Farm Name: CNX LAND LLC
U.S. WELL NUMBER: 47-051-02432-00-00
Horizontal 6A New Drill
Date Issued: 1/21/2022

PERMIT CONDITIONS

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

CONDITIONS

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

API Number:

PERMIT CONDITIONS

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

01/28/2022

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

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

2) Operator's Well Number: Breckenridge S-25HM Well Pad Name: Breckenridge

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

4) Elevation, current ground: 1,380' Elevation, proposed post-construction: 1,370.10'

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

(b) If Gas Shallow X Deep _____
Horizontal X

6) Existing Pad: Yes or No No *MDK 12/1/2021*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcelus is the target formation at a depth of 6,961' - 7,012', thickness of 51' and anticipated pressure of approx. 3800 psi.

8) Proposed Total Vertical Depth: 7,112'

9) Formation at Total Vertical Depth: Onondaga

10) Proposed Total Measured Depth: 18,782'

11) Proposed Horizontal Leg Length: 11,177.08'

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

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

14) Approximate Saltwater Depths: 1,515'

15) Approximate Coal Seam Depths: Sewickley Coal - 952' and Pittsburgh Coal - 1,042'

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 _____

(a) If Yes, provide Mine Info: Name: Marshall County Mine
Depth: Pittsburgh coal - 1,042'; subsea level - 328'
Seam: Pittsburgh
Owner: Marshall County Coal Resources, Inc.

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120'	259ft ³ (CTS)
Fresh Water/Coal	13 3/8"	NEW	J55	54.5#	1,150'	1,150' ✓	1149ft ³ (CTS)
Intermediate	9 5/8"	NEW	J55	36#	3,062'	3,062'	1016ft ³ (CTS)
Production	5 1/2"	NEW	P110	20#	18,782'	18,782' ✓	4788ft ³ (CTS)
Tubing	2 3/8"	NEW	N80	4.7#	7,069'		
Liners							

MJK 12/1/2021

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water/ Coal	13 3/8"	17 1/2"	.38	2,740	2,192	SEE #24	1.2
Intermediate	9 5/8"	12 1/4"	.352	3,520	2,816	SEE #24	1.19
Production	5 1/2"	8 7/8" _ 8 3/4"	.361	12,640	10,112	SEE #24	1.17/1.19
Tubing	2 3/8"		.19	11,200	8,960		
Liners							

PACKERS

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

RECEIVED
Office of Oil and Gas
DEC 14 2021

WV Department of
Environmental Protection

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

Drill through the Marcellus and TD Pilot Hole 100' into the Onondaga. Log vertical section and run a solid cement plug back to proposed KOP. Drill curve and lateral per proposed well plan, run and cement production casing. Perform 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 28,000,000 lb proppant and 505,000 bbl of water. Max rate = 80 bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 45.50 acres

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

23) Describe centralizer placement for each casing string:

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

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

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

25) Proposed borehole conditioning procedures:

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

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

*Note: Attach additional sheets as needed.

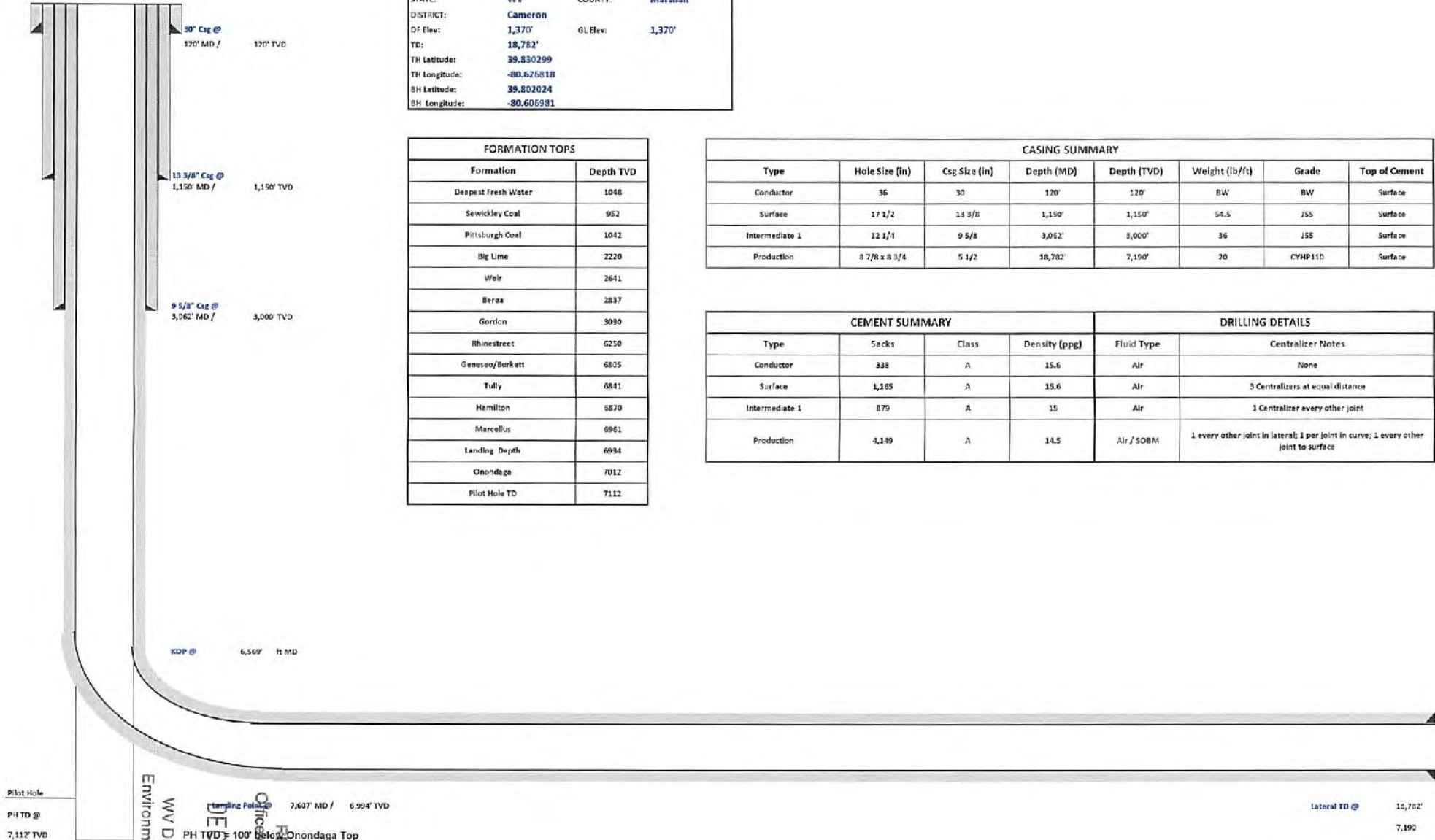


WELL NAME:	Breckenridge S-25HM		
STATE:	WV	COUNTY:	Marshall
DISTRICT:	Cameron		
DF Elev:	1,370'	6L Elev:	1,370'
TD:	18,782'		
TH Latitude:	39.830299		
TH Longitude:	-80.626818		
BH Latitude:	39.802024		
BH Longitude:	-80.606381		

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	1048
Sewickley Coal	952
Pittsburgh Coal	1042
Big Lime	2220
Weir	2641
Berea	2837
Gordon	3090
Rhinestreet	6250
Gessco/Berkett	6805
Tully	6841
Hamilton	6870
Marcellus	6961
Landing Depth	6994
Onondaga	7012
Pilot Hole TD	7112

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	17 1/2	13 3/8	1,150'	1,150'	54.5	J55	Surface
Intermediate 1	12 1/4	9 5/8	3,062'	3,000'	36	J55	Surface
Production	8 7/8 x 8 3/4	5 1/2	18,782'	7,190'	20	CYHP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
Type	Sacks	Class	Density (ppg)	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	1,165	A	15.6	Air	5 Centralizers at equal distance
Intermediate 1	879	A	15	Air	1 Centralizer every other joint
Production	4,149	A	14.5	Air / SOBMs	1 every other joint in lateral; 1 per joint in curve; 1 every other joint to surface



Pilot Hole
PH TD @ 7,112' TVD

Sampling Point @ 7,607' MD / 6,994' TVD

PH TD @ 100' below Onondaga Top

Onondaga Top

Lateral TD @ 18,782' ft MD
7,190' ft TVD

RECEIVED
 Office of Oil and Gas
 DECEMBER 14 2021
 WV Department of
 Environmental Protection

4705102432



Tug Hill Operating, LLC Casing and Cement Program

Breckenridge S-25HM

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	13 3/8"	J55	17 1/2"	1,150'	CTS
Intermediate	9 5/8"	J55	12 1/4"	3,062'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4	18,782'	CTS

Cement

- Conductor: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Conductor Cement mixed at 15.6 ppg, Y=1.2
- Surface: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Surface Cement mixed at 15.8 ppg, Y=1.2
- Intermediate: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15 ppg, Y=1.38
- Kick Off Plug: Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L - KOP Plug
- Production: 50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L – Production Cement mixed at 14.5 ppg, Y = 1.3

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

01/28/2022



TUG HILL
OPERATING

Well: Breckenridge S-25 HM (slot N)
Site: Breckenridge (1 row)
Project: Marshall County, West Virginia
Design: rev0
Rin:

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	1250.00	0.00	0.00	1250.00	0.00	0.00	0.00	0.000	0.00	KOP Begin 2 ¹ /100' build
3	1400.00	3.00	45.00	1399.93	2.78	2.78	2.00	45.000	-1.10	Begin 2 ¹ /100' build/turn
4	2188.80	18.61	62.50	2172.45	75.95	129.83	2.00	20.677	-4.37	Begin 18.61° tangent
5	6569.14	18.61	62.50	8323.70	721.38	1369.95	0.00	0.000	24.04	Begin 8 ¹ /100' build/turn
6	7188.15	50.00	143.09	6849.09	567.72	1515.45	8.00	96.522	275.62	Begin 10 ¹ /100' build/turn
7	7607.32	89.00	159.99	6994.01	227.11	1791.49	10.00	25.795	659.93	Begin 89.00° lateral
8	16782.43	89.00	159.99	7190.00-10271.96	5614.36	0.00	0.000	11706.15		PBHL/TD 16782.43 MD 7190.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	-E/-W	Northing	Easting	Latitude	Longitude
Breckenridge S-25HM LP	6994.00	227.11	1791.34	14465385.04	1746976.35	39.83090200	-80.62043400
- plan misses target center by 0.14ft at 7607.27ft MD (6994.01 TVD, 227.16 N, 1791.47 E)							
Breckenridge S-25HM PBHL	7190.00	-10271.96	5614.36	14454896.00	1750799.37	39.80202400	-80.60698100
- plan hits target center							

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

System Datum: Mean Sea Level
Depth Reference: GL @ 1370.00ft

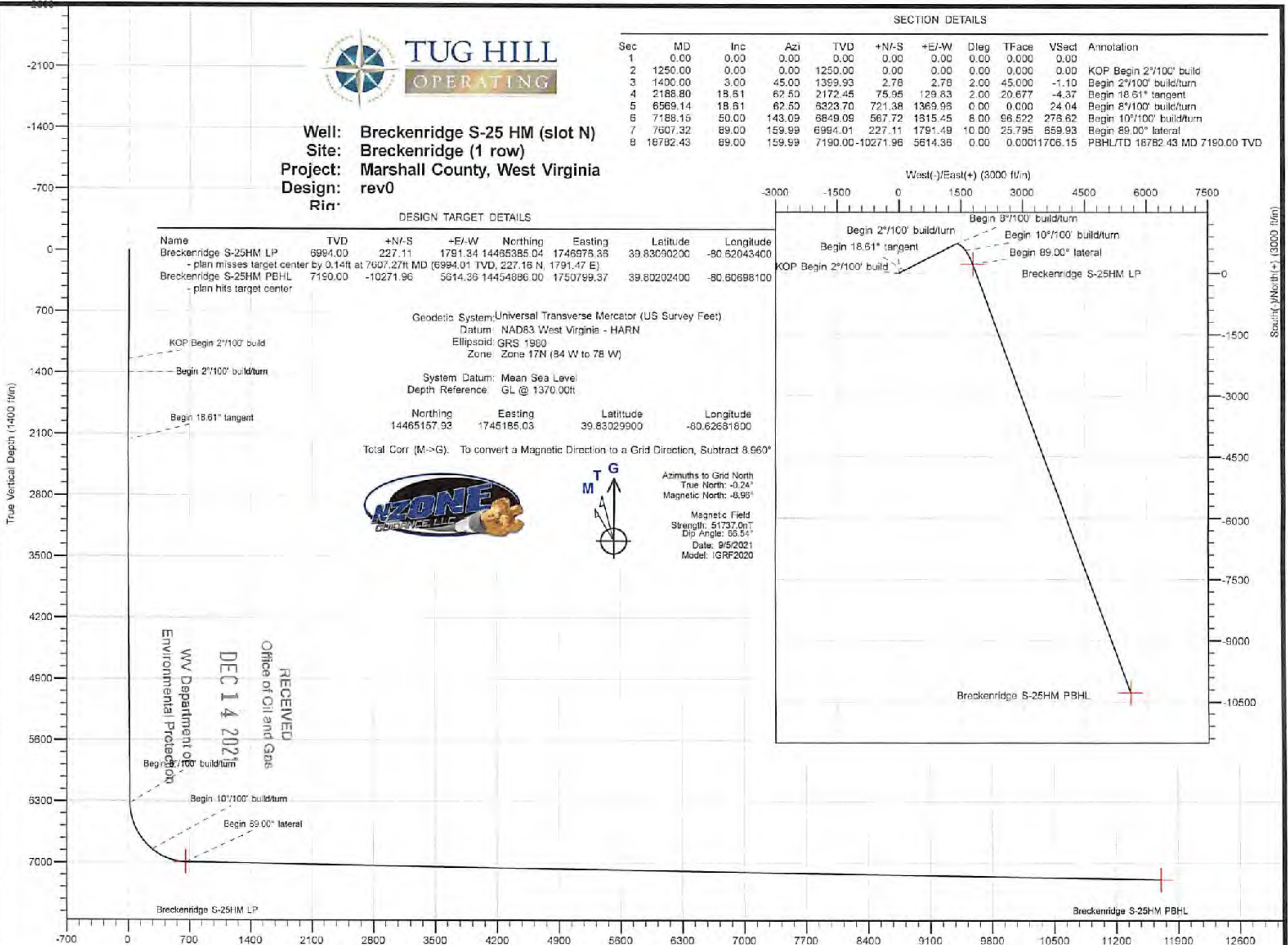
Northing	Easting	Latitude	Longitude
14465157.93	1745185.03	39.83029900	-80.62681600

Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.960°



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

Magnetic Field
Strength: 51737.0nT
Dip Angle: 59.54°
Date: 9/5/2021
Model: IGRF2020



True Vertical Depth (1400 ft/in)

South (+)North (-) (3000 ft/in)

Vertical Section at 151.34° (1400 ft/in)

RECEIVED
Office of Oil and Gas
DEC 14 2022
WV Department of
Environmental Protection

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Breckenridge S-25 HM (slot N)
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-25 HM (slot N)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

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-25 HM (slot N)					
Well Position	+N/-S	0.00 ft	Northing:	14,465,157.93 usft	Latitude:	39.83029900
	+E/-W	0.00 ft	Easting:	1,745,185.03 usft	Longitude:	-80.62681800
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	1,370.00 ft
Grid Convergence:						

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	9/5/2021	-8.721	66.539	51,737.02337338

Design	rev0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	151.34

Plan Survey Tool Program	Date			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,782.08 rev0 (Original Hole)		

Plan Sections										RECEIVED Office of Oil and Gas
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFB (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,250.00	0.00	0.00	1,250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,400.00	3.00	45.00	1,399.93	2.78	2.78	2.00	2.00	0.00	45.000	20.677
2,188.80	18.61	62.50	2,172.45	75.95	129.83	2.00	1.98	2.22	20.677	0.000
6,569.14	18.61	62.50	6,323.70	721.38	1,369.96	0.00	0.00	0.00	0.000	0.000
7,188.15	50.00	143.09	6,849.09	567.72	1,615.45	8.00	5.07	13.02	96.522	25.795
7,607.32	89.00	159.99	6,994.01	227.11	1,791.49	10.00	9.30	4.03	25.795	0.000
18,782.44	89.00	159.99	7,190.00	-10,271.96	5,814.36	0.00	0.00	0.00	0.000	Breckenridge S-25HM

RECEIVED
Office of Oil and Gas
DEC 14 2021
TFB
WV Department of Environmental Protection
Target



Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Breckenridge S-25 HM (slot N)
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-25 HM (slot N)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

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	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
100.00	0.00	0.00	100.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
200.00	0.00	0.00	200.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
300.00	0.00	0.00	300.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
400.00	0.00	0.00	400.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
500.00	0.00	0.00	500.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
600.00	0.00	0.00	600.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
700.00	0.00	0.00	700.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
800.00	0.00	0.00	800.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
900.00	0.00	0.00	900.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
1,250.00	0.00	0.00	1,250.00	0.00	0.00	14,465,157.93	1,745,185.03	39.83029900	-80.62681800
KOP Begin 2°/100' build									
1,300.00	1.00	45.00	1,300.00	0.31	0.31	14,465,158.24	1,745,185.33	39.83029985	-80.62681690
1,400.00	3.00	45.00	1,399.93	2.78	2.78	14,465,160.71	1,745,187.80	39.83030659	-80.62680807
Begin 2°/100' build/turn									
1,500.00	4.92	53.26	1,499.69	7.19	8.06	14,465,165.13	1,745,193.09	39.83031866	-80.62678917
1,600.00	6.89	56.85	1,699.15	13.04	16.52	14,465,170.97	1,745,201.55	39.83033462	-80.62675895
1,700.00	8.87	58.85	1,698.20	20.31	28.14	14,465,178.24	1,745,213.17	39.83035445	-80.62671745
1,800.00	10.86	60.12	1,796.72	28.99	42.91	14,465,186.92	1,745,227.94	39.83037812	-80.62666472
1,900.00	12.85	61.00	1,894.58	39.07	60.81	14,465,197.01	1,745,245.83	39.83040561	-80.62660083
2,000.00	14.84	61.65	1,991.67	50.55	81.81	14,465,208.48	1,745,266.83	39.83043688	-80.62652586
2,100.00	16.84	62.15	2,087.87	63.40	105.89	14,465,221.33	1,745,290.92	39.83047189	-80.62643989
2,188.80	18.61	62.50	2,172.45	75.95	129.83	14,465,233.88	1,745,314.86	39.83050608	-80.62635441
Begin 18.61° tangent									
2,200.00	18.61	62.50	2,183.07	77.60	133.01	14,465,235.53	1,745,318.03	39.83051058	-80.62634309
2,300.00	18.61	62.50	2,277.84	92.33	161.32	14,465,250.27	1,745,346.34	39.83055072	-80.62624203
2,400.00	18.61	62.50	2,372.61	107.07	189.63	14,465,265.00	1,745,374.65	39.83059086	-80.62614097
2,500.00	18.61	62.50	2,467.38	121.80	217.94	14,465,279.74	1,745,402.96	39.83063100	-80.62603991
2,600.00	18.61	62.50	2,562.15	136.54	246.25	14,465,294.47	1,745,431.27	39.83067114	-80.62593885
2,700.00	18.61	62.50	2,656.92	151.27	274.56	14,465,309.21	1,745,459.59	39.83071128	-80.62583779
2,800.00	18.61	62.50	2,751.69	166.01	302.87	14,465,323.94	1,745,487.90	39.83075142	-80.62573673
2,900.00	18.61	62.50	2,846.46	180.74	331.18	14,465,338.68	1,745,516.21	39.83079156	-80.62563567
3,000.00	18.61	62.50	2,941.23	195.48	359.49	14,465,353.41	1,745,544.52	39.83083170	-80.62553460
3,100.00	18.61	62.50	3,036.00	210.21	387.81	14,465,368.14	1,745,572.83	39.83087184	-80.62543354
3,200.00	18.61	62.50	3,130.77	224.95	416.12	14,465,382.88	1,745,601.14	39.83091197	-80.62533248
3,300.00	18.61	62.50	3,225.54	239.68	444.43	14,465,397.61	1,745,629.45	39.83095211	-80.62523142
3,400.00	18.61	62.50	3,320.31	254.42	472.74	14,465,412.35	1,745,657.76	39.83099225	-80.62513036
3,500.00	18.61	62.50	3,415.08	269.15	501.05	14,465,427.08	1,745,686.07	39.83103239	-80.62502929
3,600.00	18.61	62.50	3,509.85	283.89	529.36	14,465,441.82	1,745,714.39	39.83107253	-80.62492823
3,700.00	18.61	62.50	3,604.62	298.62	557.67	14,465,456.55	1,745,742.70	39.83111267	-80.62482717
3,800.00	18.61	62.50	3,699.39	313.35	585.98	14,465,471.29	1,745,771.01	39.83115281	-80.62472611
3,900.00	18.61	62.50	3,794.16	328.09	614.29	14,465,486.02	1,745,799.32	39.83119295	-80.62462504
4,000.00	18.61	62.50	3,888.93	342.82	642.61	14,465,500.76	1,745,827.63	39.83123308	-80.62452398
4,100.00	18.61	62.50	3,983.70	357.56	670.92	14,465,515.49	1,745,855.94	39.83127322	-80.62442292
4,200.00	18.61	62.50	4,078.47	372.29	699.23	14,465,530.23	1,745,884.25	39.83131336	-80.62432185
4,300.00	18.61	62.50	4,173.24	387.03	727.54	14,465,544.96	1,745,912.56	39.83135350	-80.62422079
4,400.00	18.61	62.50	4,268.01	401.76	755.85	14,465,559.70	1,745,940.87	39.83139364	-80.62411973
4,500.00	18.61	62.50	4,362.78	416.50	784.16	14,465,574.43	1,745,969.19	39.83143377	-80.62401866
4,600.00	18.61	62.50	4,457.55	431.23	812.47	14,465,589.17	1,745,997.50	39.83147391	-80.62391760
4,700.00	18.61	62.50	4,552.32	445.97	840.78	14,465,603.90	1,746,025.81	39.83151405	-80.62381654
4,800.00	18.61	62.50	4,647.09	460.70	869.09	14,465,618.64	1,746,054.12	39.83155419	-80.62371547

RECEIVED
Office of Oil and Gas
DEC 14 2021
West Virginia Department of Environmental Protection

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Breckenridge S-25 HM (slot N)
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-25 HM (slot N)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,900.00	18.61	62.50	4,741.86	475.44	897.41	14,465,633.37	1,746,082.43	39.83159433	-80.62361441
5,000.00	18.61	62.50	4,836.63	490.17	925.72	14,465,648.10	1,746,110.74	39.83163446	-80.62351335
5,100.00	18.61	62.50	4,931.40	504.91	954.03	14,465,662.84	1,746,139.05	39.83167460	-80.62341228
5,200.00	18.61	62.50	5,026.17	519.64	982.34	14,465,677.57	1,746,167.36	39.83171474	-80.62331122
5,300.00	18.61	62.50	5,120.94	534.38	1,010.65	14,465,692.31	1,746,195.67	39.83175487	-80.62321015
5,400.00	18.61	62.50	5,215.71	549.11	1,038.96	14,465,707.04	1,746,223.99	39.83179501	-80.62310909
5,500.00	18.61	62.50	5,310.48	563.85	1,067.27	14,465,721.78	1,746,252.30	39.83183515	-80.62300802
5,600.00	18.61	62.50	5,405.25	578.58	1,095.58	14,465,736.51	1,746,280.61	39.83187529	-80.62290695
5,700.00	18.61	62.50	5,500.02	593.31	1,123.89	14,465,751.25	1,746,308.92	39.83191542	-80.62280589
5,800.00	18.61	62.50	5,594.79	608.05	1,152.21	14,465,765.98	1,746,337.23	39.83195556	-80.62270483
5,900.00	18.61	62.50	5,689.56	622.78	1,180.52	14,465,780.72	1,746,365.54	39.83199570	-80.62260376
6,000.00	18.61	62.50	5,784.33	637.52	1,208.83	14,465,795.45	1,746,393.85	39.83203583	-80.62250270
6,100.00	18.61	62.50	5,879.10	652.25	1,237.14	14,465,810.19	1,746,422.16	39.83207597	-80.62240163
6,200.00	18.61	62.50	5,973.87	666.99	1,265.45	14,465,824.92	1,746,450.47	39.83211611	-80.62230057
6,300.00	18.61	62.50	6,068.64	681.72	1,293.78	14,465,839.66	1,746,478.78	39.83215624	-80.62219950
6,400.00	18.61	62.50	6,163.41	696.46	1,322.07	14,465,854.39	1,746,507.10	39.83219638	-80.62209844
6,500.00	18.61	62.50	6,258.18	711.19	1,350.38	14,465,869.13	1,746,535.41	39.83223651	-80.62199737
6,569.14	18.61	62.50	6,323.70	721.38	1,369.96	14,465,879.31	1,746,554.98	39.83228426	-80.62192750
Begin 8°/100' build/turn									
6,600.00	18.49	70.26	6,352.96	725.31	1,378.93	14,465,883.24	1,746,563.96	39.83227494	-80.62189546
6,650.00	18.96	82.66	6,400.34	729.02	1,394.46	14,465,886.96	1,746,579.48	39.83228497	-80.62184011
6,700.00	20.20	94.03	6,447.46	726.46	1,411.13	14,465,887.39	1,746,596.15	39.83228596	-80.62178072
6,750.00	22.07	103.85	6,494.11	726.60	1,428.87	14,465,884.53	1,746,613.89	39.83227791	-80.62171757
6,800.00	24.44	112.03	6,540.06	720.47	1,447.59	14,465,878.40	1,746,632.61	39.83228086	-80.62165099
6,850.00	27.18	118.75	6,585.07	711.09	1,467.20	14,465,869.03	1,746,652.22	39.83223489	-80.62158128
6,900.00	30.17	124.28	6,628.95	698.52	1,487.60	14,465,856.45	1,746,672.62	39.83220012	-80.62150880
6,950.00	33.36	128.87	6,671.46	682.81	1,508.70	14,465,840.74	1,746,693.72	39.83215673	-80.62143389
7,000.00	36.69	132.73	6,712.40	664.04	1,530.38	14,465,821.97	1,746,715.41	39.83210493	-80.62135693
7,050.00	40.13	136.02	6,751.57	642.30	1,552.56	14,465,800.23	1,746,737.56	39.83204497	-80.62127827
7,100.00	43.65	138.87	6,788.79	617.70	1,575.11	14,465,775.63	1,746,760.13	39.83197714	-80.62119832
7,150.00	47.23	141.37	6,823.87	590.35	1,597.93	14,465,748.28	1,746,782.95	39.83190178	-80.62111745
7,188.15	50.00	143.09	6,849.09	567.72	1,615.45	14,465,725.65	1,746,800.47	39.83183943	-80.62105537
Begin 10°/100' build/turn									
7,200.00	51.07	143.75	6,856.62	560.38	1,620.90	14,465,718.31	1,746,805.92	39.83181920	-80.62103607
7,250.00	55.62	146.35	6,886.47	527.50	1,643.85	14,465,685.43	1,746,828.87	39.83172864	-80.62095483
7,300.00	60.21	148.67	6,913.02	491.77	1,666.58	14,465,649.70	1,746,851.60	39.83163025	-80.62087441
7,350.00	64.85	150.79	6,936.08	453.46	1,688.91	14,465,611.39	1,746,873.94	39.83152478	-80.62079542
7,400.00	69.51	152.75	6,955.48	412.86	1,710.69	14,465,570.79	1,746,895.71	39.83141304	-80.62071847
7,450.00	74.19	154.60	6,971.05	370.28	1,731.74	14,465,526.22	1,746,916.76	39.83129588	-80.62064413
7,500.00	78.89	156.37	6,982.89	326.05	1,751.91	14,465,483.99	1,746,936.93	39.83117418	-80.62057297
7,550.00	83.59	158.07	6,990.30	280.51	1,771.03	14,465,438.44	1,746,956.05	39.83104887	-80.62050554
7,600.00	88.30	159.75	6,993.83	233.98	1,788.97	14,465,391.92	1,746,973.99	39.83092090	-80.62044234
7,607.32	89.00	159.99	6,994.01	227.11	1,791.49	14,465,365.04	1,746,976.51	39.83090169	-80.62043347
Begin 89.00° lateral									
7,700.00	89.00	159.99	6,995.63	140.04	1,823.19	14,465,297.97	1,747,008.22	39.83066251	-80.62032186
7,800.00	89.00	159.99	6,997.39	46.09	1,857.40	14,465,204.02	1,747,042.42	39.83040411	-80.62020144
7,900.00	89.00	159.99	6,999.14	-47.86	1,891.61	14,465,110.07	1,747,078.63	39.83014570	-80.62008101
8,000.00	89.00	159.99	7,000.89	-141.81	1,925.82	14,465,016.12	1,747,110.84	39.82988729	-80.61996058
8,100.00	89.00	159.99	7,002.65	-235.76	1,960.03	14,464,922.17	1,747,145.05	39.82962889	-80.61984016
8,200.00	89.00	159.99	7,004.40	-329.71	1,994.24	14,464,828.22	1,747,179.26	39.82937048	-80.61971973
8,300.00	89.00	159.99	7,006.16	-423.66	2,028.45	14,464,734.27	1,747,213.47	39.82911207	-80.61959931
8,400.00	89.00	159.99	7,007.91	-517.61	2,062.65	14,464,640.32	1,747,247.68	39.82885357	-80.61947889
8,500.00	89.00	159.99	7,009.66	-611.56	2,096.86	14,464,546.37	1,747,281.88	39.82859526	-80.61935847
8,600.00	89.00	159.99	7,011.42	-705.51	2,131.07	14,464,452.42	1,747,316.09	39.82833685	-80.61923805

 RECEIVED
 Office of Oil and Gas
 DEC 14 2021



Planning Report - Geographic

Database: DB_Dec2220_v16
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia
 Site: Breckanridge (1 row)
 Well: Breckanridge S-25 HM (slot N)
 Wellbore: Original Hole
 Design: rev0

Local Co-ordinate Reference: Well Breckanridge S-25 HM (slot N)
 TVD Reference: GL @ 1370.00ft
 MD Reference: GL @ 1370.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
8,700.00	89.00	159.99	7,013.17	-799.46	2,165.28	14,464,358.47	1,747,350.30	39.82807844	-80.61911783	
8,800.00	89.00	159.99	7,014.92	-893.41	2,199.49	14,464,264.52	1,747,384.51	39.82782004	-80.61899721	
8,900.00	89.00	159.99	7,016.60	-987.36	2,233.70	14,464,170.57	1,747,418.72	39.82758163	-80.61887679	
9,000.00	89.00	159.99	7,018.43	-1,081.31	2,267.91	14,464,076.62	1,747,452.93	39.82730322	-80.61875637	
9,100.00	89.00	159.99	7,020.19	-1,175.27	2,302.12	14,463,982.67	1,747,487.14	39.82704481	-80.61863596	
9,200.00	89.00	159.99	7,021.94	-1,269.22	2,336.32	14,463,888.72	1,747,521.35	39.82678641	-80.61851554	
9,300.00	89.00	159.99	7,023.69	-1,363.17	2,370.53	14,463,794.77	1,747,555.55	39.82652800	-80.61839513	
9,400.00	89.00	159.99	7,025.45	-1,457.12	2,404.74	14,463,700.82	1,747,589.76	39.82626959	-80.61827472	
9,500.00	89.00	159.99	7,027.20	-1,551.07	2,438.95	14,463,606.87	1,747,623.97	39.82601118	-80.61815430	
9,600.00	89.00	159.99	7,028.96	-1,645.02	2,473.15	14,463,512.92	1,747,658.18	39.82575277	-80.61803389	
9,700.00	89.00	159.99	7,030.71	-1,738.97	2,507.37	14,463,418.97	1,747,692.39	39.82549436	-80.61791348	
9,800.00	89.00	159.99	7,032.46	-1,832.92	2,541.58	14,463,325.02	1,747,726.60	39.82523595	-80.61779307	
9,900.00	89.00	159.99	7,034.22	-1,926.87	2,575.79	14,463,231.07	1,747,760.81	39.82497754	-80.61767266	
10,000.00	89.00	159.99	7,035.97	-2,020.82	2,609.99	14,463,137.12	1,747,795.01	39.82471914	-80.61755226	
10,100.00	89.00	159.99	7,037.72	-2,114.77	2,644.20	14,463,043.17	1,747,829.22	39.82446073	-80.61743185	
10,200.00	89.00	159.99	7,039.48	-2,208.72	2,678.41	14,462,949.22	1,747,863.43	39.82420232	-80.61731144	
10,300.00	89.00	159.99	7,041.23	-2,302.67	2,712.62	14,462,855.27	1,747,897.64	39.82394391	-80.61719104	
10,400.00	89.00	159.99	7,042.99	-2,396.62	2,746.83	14,462,761.32	1,747,931.85	39.82368550	-80.61707063	
10,500.00	89.00	159.99	7,044.74	-2,490.57	2,781.04	14,462,667.37	1,747,966.06	39.82342709	-80.61695023	
10,600.00	89.00	159.99	7,046.49	-2,584.52	2,815.25	14,462,573.42	1,748,000.27	39.82316868	-80.61682983	
10,700.00	89.00	159.99	7,048.25	-2,678.47	2,849.46	14,462,479.47	1,748,034.48	39.82291027	-80.61670943	
10,800.00	89.00	159.99	7,050.00	-2,772.42	2,883.66	14,462,385.52	1,748,068.68	39.82265186	-80.61658902	
10,900.00	89.00	159.99	7,051.76	-2,866.37	2,917.87	14,462,291.57	1,748,102.89	39.82239345	-80.61646862	
11,000.00	89.00	159.99	7,053.51	-2,960.32	2,952.08	14,462,197.62	1,748,137.10	39.82213504	-80.61634823	
11,100.00	89.00	159.99	7,055.26	-3,054.27	2,986.29	14,462,103.67	1,748,171.31	39.82187663	-80.61622783	
11,200.00	89.00	159.99	7,057.02	-3,148.22	3,020.50	14,462,009.72	1,748,205.52	39.82161821	-80.61610743	
11,300.00	89.00	159.99	7,058.77	-3,242.18	3,054.71	14,461,915.77	1,748,239.73	39.82135980	-80.61598703	
11,400.00	89.00	159.99	7,060.52	-3,336.13	3,088.92	14,461,821.81	1,748,273.94	39.82110139	-80.61586664	
11,500.00	89.00	159.99	7,062.28	-3,430.08	3,123.13	14,461,727.86	1,748,308.15	39.82084298	-80.61574624	
11,600.00	89.00	159.99	7,064.03	-3,524.03	3,157.33	14,461,633.91	1,748,342.36	39.82058457	-80.61562585	
11,700.00	89.00	159.99	7,065.79	-3,617.98	3,191.54	14,461,539.96	1,748,376.56	39.82032616	-80.61550546	
11,800.00	89.00	159.99	7,067.54	-3,711.93	3,225.75	14,461,446.01	1,748,410.77	39.82006775	-80.61538507	
11,900.00	89.00	159.99	7,069.29	-3,805.88	3,259.96	14,461,352.06	1,748,444.98	39.81980934	-80.61526468	
12,000.00	89.00	159.99	7,071.05	-3,899.83	3,294.17	14,461,258.11	1,748,479.19	39.81955092	-80.61514429	
12,100.00	89.00	159.99	7,072.80	-3,993.78	3,328.38	14,461,164.16	1,748,513.40	39.81929251	-80.61502390	
12,200.00	89.00	159.99	7,074.56	-4,087.73	3,362.59	14,461,070.21	1,748,547.61	39.81903410	-80.61490351	
12,300.00	89.00	159.99	7,076.31	-4,181.68	3,396.80	14,460,976.26	1,748,581.81	39.81877569	-80.61478312	
12,400.00	89.00	159.99	7,078.06	-4,275.63	3,431.00	14,460,882.31	1,748,616.02	39.81851728	-80.61466273	
12,500.00	89.00	159.99	7,079.82	-4,369.58	3,465.21	14,460,788.36	1,748,650.23	39.81825888	-80.61454235	
12,600.00	89.00	159.99	7,081.57	-4,463.53	3,499.42	14,460,694.41	1,748,684.44	39.81800045	-80.61442196	
12,700.00	89.00	159.99	7,083.32	-4,557.48	3,533.63	14,460,600.46	1,748,718.65	39.81774204	-80.61430158	
12,800.00	89.00	159.99	7,085.08	-4,651.43	3,567.84	14,460,506.51	1,748,752.86	39.81748362	-80.61418120	
12,900.00	89.00	159.99	7,086.83	-4,745.38	3,602.05	14,460,412.56	1,748,787.07	39.81722521	-80.61406082	
13,000.00	89.00	159.99	7,088.59	-4,839.33	3,636.26	14,460,318.61	1,748,821.28	39.81696180	-80.61394043	
13,100.00	89.00	159.99	7,090.34	-4,933.28	3,670.47	14,460,224.66	1,748,855.48	39.81670339	-80.61382005	
13,200.00	89.00	159.99	7,092.09	-5,027.23	3,704.67	14,460,130.71	1,748,889.69	39.81644497	-80.61369966	
13,300.00	89.00	159.99	7,093.85	-5,121.18	3,738.88	14,460,036.76	1,748,923.90	39.81618655	-80.61357930	
13,400.00	89.00	159.99	7,095.60	-5,215.13	3,773.09	14,459,942.81	1,748,958.11	39.81592813	-80.61345892	
13,500.00	89.00	159.99	7,097.35	-5,309.09	3,807.30	14,459,848.86	1,748,992.32	39.81566973	-80.61333854	
13,600.00	89.00	159.99	7,099.11	-5,403.04	3,841.51	14,459,754.91	1,749,026.53	39.81541132	-80.61321817	
13,700.00	89.00	159.99	7,100.86	-5,496.99	3,875.72	14,459,660.96	1,749,060.74	39.81515290	-80.61309779	
13,800.00	89.00	159.99	7,102.62	-5,590.94	3,909.93	14,459,567.01	1,749,094.95	39.81489449	-80.61297742	
13,900.00	89.00	159.99	7,104.37	-5,684.89	3,944.14	14,459,473.05	1,749,129.15	39.81463607	-80.61285705	
14,000.00	89.00	159.99	7,106.12	-5,778.84	3,978.34	14,459,379.11	1,749,163.36	39.81437766	-80.61273667	
14,100.00	89.00	159.99	7,107.88	-5,872.79	4,012.55	14,459,285.16	1,749,197.57	39.81411925	-80.61261630	



Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Breckenridge S-25 HM (slot N)
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-25 HM (slot N)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
14,200.00	89.00	159.99	7,109.63	-5,966.74	4,046.76	14,459,191.21	1,749,231.78	39.81386583	-80.61249593	
14,300.00	89.00	159.99	7,111.39	-6,060.69	4,060.97	14,459,097.26	1,749,265.99	39.81360742	-80.61237556	
14,400.00	89.00	159.99	7,113.14	-6,154.64	4,115.18	14,459,003.31	1,749,300.20	39.81334900	-80.61225519	
14,500.00	89.00	159.99	7,114.89	-6,248.59	4,149.39	14,458,909.36	1,749,334.41	39.81309059	-80.61213483	
14,600.00	89.00	159.99	7,116.65	-6,342.54	4,183.60	14,458,815.41	1,749,368.61	39.81283217	-80.61201446	
14,700.00	89.00	159.99	7,118.40	-6,436.49	4,217.81	14,458,721.46	1,749,402.82	39.81257375	-80.61189409	
14,800.00	89.00	159.99	7,120.15	-6,530.44	4,252.01	14,458,627.51	1,749,437.03	39.81231534	-80.61177373	
14,900.00	89.00	159.99	7,121.91	-6,624.39	4,286.22	14,458,533.56	1,749,471.24	39.81205892	-80.61165336	
15,000.00	89.00	159.99	7,123.66	-6,718.34	4,320.43	14,458,439.61	1,749,505.45	39.81179851	-80.61153300	
15,100.00	89.00	159.99	7,125.42	-6,812.29	4,354.64	14,458,345.66	1,749,539.66	39.81154009	-80.61141264	
15,200.00	89.00	159.99	7,127.17	-6,906.24	4,388.85	14,458,251.71	1,749,573.87	39.81128168	-80.61129228	
15,300.00	89.00	159.99	7,128.92	-7,000.19	4,423.06	14,458,157.75	1,749,608.07	39.81102326	-80.61117192	
15,400.00	89.00	159.99	7,130.68	-7,094.14	4,457.27	14,458,063.80	1,749,642.28	39.81076484	-80.61105156	
15,500.00	89.00	159.99	7,132.43	-7,188.09	4,491.48	14,457,969.85	1,749,676.49	39.81050643	-80.61093120	
15,600.00	89.00	159.99	7,134.19	-7,282.04	4,525.68	14,457,875.90	1,749,710.70	39.81024801	-80.61081084	
15,700.00	89.00	159.99	7,135.94	-7,375.99	4,559.89	14,457,781.95	1,749,744.91	39.80998959	-80.61069048	
15,800.00	89.00	159.99	7,137.69	-7,469.95	4,594.10	14,457,688.00	1,749,779.12	39.80973118	-80.61057013	
15,900.00	89.00	159.99	7,139.45	-7,563.90	4,628.31	14,457,594.05	1,749,813.33	39.80947276	-80.61044977	
16,000.00	89.00	159.99	7,141.20	-7,657.85	4,662.52	14,457,500.10	1,749,847.54	39.80921434	-80.61032942	
16,100.00	89.00	159.99	7,142.95	-7,751.80	4,696.73	14,457,406.15	1,749,881.74	39.80895593	-80.61020907	
16,200.00	89.00	159.99	7,144.71	-7,845.75	4,730.94	14,457,312.20	1,749,915.95	39.80869751	-80.61008871	
16,300.00	89.00	159.99	7,146.46	-7,939.70	4,765.15	14,457,218.25	1,749,950.16	39.80843909	-80.60996836	
16,400.00	89.00	159.99	7,148.22	-8,033.65	4,799.35	14,457,124.30	1,749,984.37	39.80818067	-80.60984801	
16,500.00	89.00	159.99	7,149.97	-8,127.60	4,833.56	14,457,030.35	1,750,018.58	39.80792226	-80.60972766	
16,600.00	89.00	159.99	7,151.72	-8,221.55	4,867.77	14,456,936.40	1,750,052.79	39.80766384	-80.60960731	
16,700.00	89.00	159.99	7,153.48	-8,315.50	4,901.98	14,456,842.45	1,750,087.00	39.80740542	-80.60948696	
16,800.00	89.00	159.99	7,155.23	-8,409.45	4,936.19	14,456,748.50	1,750,121.20	39.80714700	-80.60936662	
16,900.00	89.00	159.99	7,156.99	-8,503.40	4,970.40	14,456,654.55	1,750,155.41	39.80688858	-80.60924627	
17,000.00	89.00	159.99	7,158.74	-8,597.35	5,004.61	14,456,560.60	1,750,189.62	39.80663016	-80.60912593	
17,100.00	89.00	159.99	7,160.49	-8,691.30	5,038.82	14,456,466.65	1,750,223.83	39.80637175	-80.60900558	
17,200.00	89.00	159.99	7,162.25	-8,785.25	5,073.02	14,456,372.70	1,750,258.04	39.80611333	-80.60888524	
17,300.00	89.00	159.99	7,164.00	-8,879.20	5,107.23	14,456,278.75	1,750,292.25	39.80585491	-80.60876490	
17,400.00	89.00	159.99	7,165.75	-8,973.15	5,141.44	14,456,184.80	1,750,326.46	39.80559649	-80.60864455	
17,500.00	89.00	159.99	7,167.51	-9,067.10	5,175.65	14,456,090.85	1,750,360.67	39.80533807	-80.60852421	
17,600.00	89.00	159.99	7,169.26	-9,161.05	5,209.86	14,455,996.90	1,750,394.87	39.80507965	-80.60840387	
17,700.00	89.00	159.99	7,171.02	-9,255.00	5,244.07	14,455,902.95	1,750,429.08	39.80482123	-80.60828353	
17,800.00	89.00	159.99	7,172.77	-9,348.95	5,278.28	14,455,809.00	1,750,463.29	39.80456281	-80.60816320	
17,900.00	89.00	159.99	7,174.52	-9,442.90	5,312.49	14,455,715.05	1,750,497.50	39.80430439	-80.60804286	
18,000.00	89.00	159.99	7,176.28	-9,536.86	5,346.69	14,455,621.10	1,750,531.71	39.80404597	-80.60792252	
18,100.00	89.00	159.99	7,178.03	-9,630.81	5,380.90	14,455,527.15	1,750,565.92	39.80378755	-80.60780219	
18,200.00	89.00	159.99	7,179.79	-9,724.76	5,415.11	14,455,433.20	1,750,600.13	39.80352913	-80.60768185	
18,300.00	89.00	159.99	7,181.54	-9,818.71	5,449.32	14,455,339.25	1,750,634.33	39.80327071	-80.60756152	
18,400.00	89.00	159.99	7,183.29	-9,912.66	5,483.53	14,455,245.30	1,750,668.54	39.80301229	-80.60744119	
18,500.00	89.00	159.99	7,185.05	-10,006.61	5,517.74	14,455,151.35	1,750,702.75	39.80275387	-80.60732085	
18,600.00	89.00	159.99	7,186.80	-10,100.56	5,551.95	14,455,057.40	1,750,736.96	39.80249545	-80.60720052	
18,700.00	89.00	159.99	7,188.55	-10,194.51	5,586.16	14,454,963.45	1,750,771.17	39.80223703	-80.60708019	
18,782.44	89.00	159.99	7,190.00	-10,271.96	5,614.36	14,454,868.00	1,750,799.37	39.80202400	-80.60698100	

RECEIVED
Office of Oil and Gas
Dec 14 2021

WV Department of Environmental Protection



Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Breckenridge S-25 HM (slot N)
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-25 HM (slot N)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Breckenridge S-25HM LI	0.00	0.00	6,994.00	227.11	1,791.34	14,465,385.05	1,746,976.36	39.83090200	-80.62043400
- plan misses target center by 0.14ft at 7607.27ft MD (6994.01 TVD, 227.18 N, 1791.47 E)									
- Point									
Breckenridge S-25HM P	0.00	0.00	7,190.00	-10,271.96	5,614.36	14,454,886.00	1,750,799.37	39.80202400	-80.60698100
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(ft)	(ft)		(")	(")	
1,150.00	1,150.00	Csg 13 3/8	13-3/8	17-1/2	
3,062.02	3,000.00	Csg 9 5/8	9-5/8	12-1/4	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)		
1,250.00	1,250.00	0.00	0.00	KOP Begin 2°/100' build	
1,400.00	1,399.93	2.78	2.78	Begin 2°/100' build/turn	
2,188.80	2,172.45	75.95	129.83	Begin 18.61° tangent	
6,569.14	6,323.70	721.38	1,369.96	Begin 8°/100' build/turn	
7,188.15	6,849.09	567.72	1,615.45	Begin 10°/100' build/turn	
7,607.32	6,994.01	227.11	1,791.49	Begin 89.00° lateral	
18,782.44	7,190.00	-10,271.96	5,614.36	PBHL/TD 18782.43 MD 7190.00 TVD	

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

WW-9
(4/16)

API Number 47 - 051 - 02432
Operator's Well No. Breckenridge S-25HM

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 (HUC 10) & 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 and produced water for frac

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 Drilling

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

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

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. All drill cuttings to be disposed of in 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 / WW0109125) and Westmoreland Sanitary Landfill, LLC (SAN405 / PA DEP ED4136426), Chestnut Valley Landfill (100419)

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

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

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

Company Official Signature James A Pancake

Company Official (Typed Name) Jim Pancake

Company Official Title Vice President - Geosciences

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

Subscribed and sworn before me this 2nd day of December, 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 # 20190125332
01/28/2022
Member, Pennsylvania Association of Notaries

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 8.59 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: [Signature]

Comments: _____

RECEIVED
Office of Oil and Gas

DEC 14 2021

Title: Oil and Gas Inspector

Date: 12/1/2021

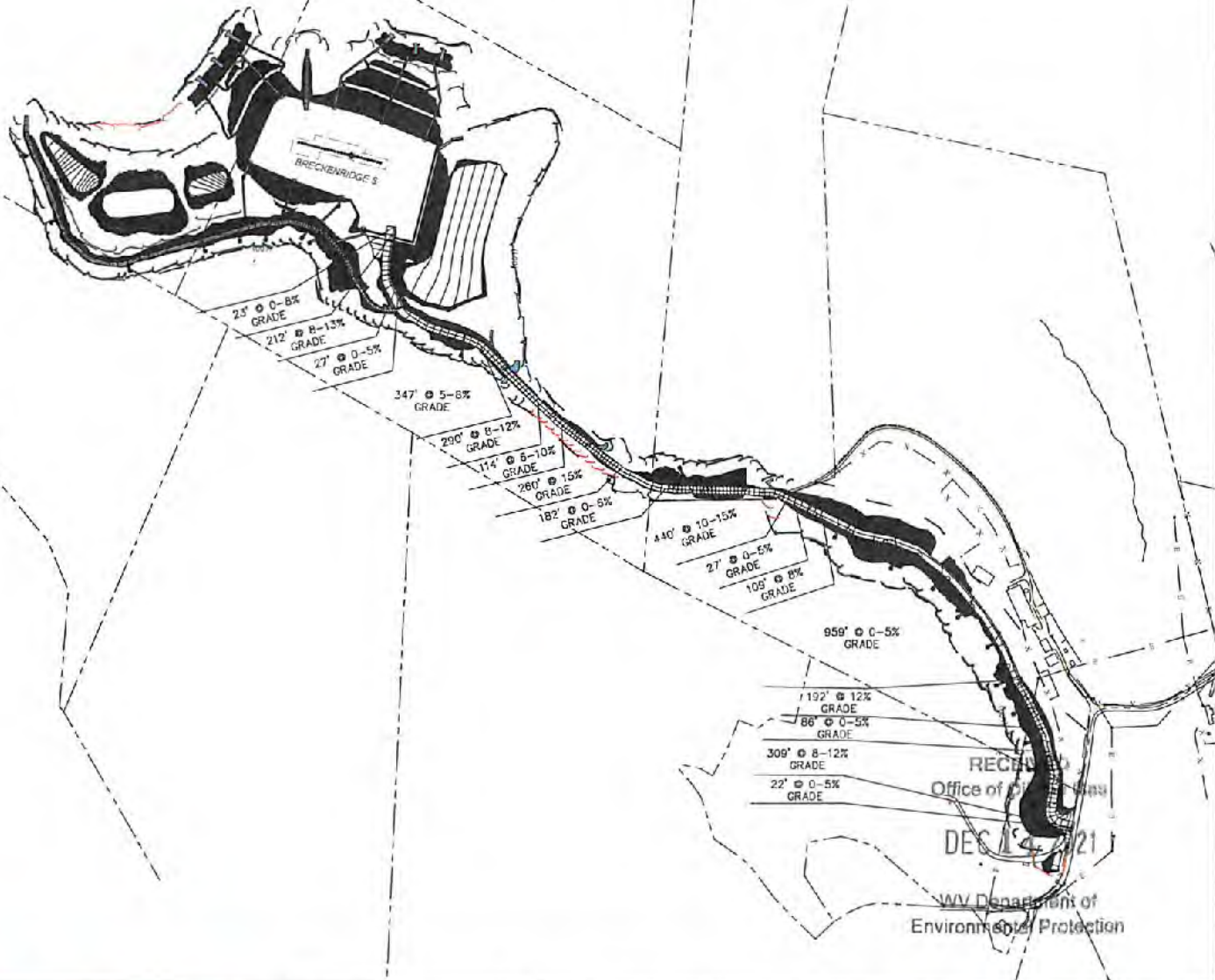
WV Department of
Environmental Protection

Field Reviewed? Yes No

PROPOSED BRECKENRIDGE S - 25HM



CNX Land, Inc.



- 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.

12 Walker Drive | P.O. Box 150 | Glenville, WV 26031 | 304-823-5114
442 Kanawha Boulevard, East | Charleston, WV 25301 | 304-246-5952
254 East Estley Bypass | Beckley, WV 26801 | 304-253-6290
slsrv.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	CAMERON	380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	9026	09-23-21	NONE

**TUG HILL
OPERATING**
01/28/2022



TUG HILL
OPERATING

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

Well Name: Breckenridge S-25HM

Pad Name: Breckenridge

County: Marshall

UTM (meters), NAD83, Zone 17

Northing: 4,408,988.93

Easting: 531,933.48

*David Kw
12/1/2021*

**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)

RECEIVED
Office of Oil and Gas

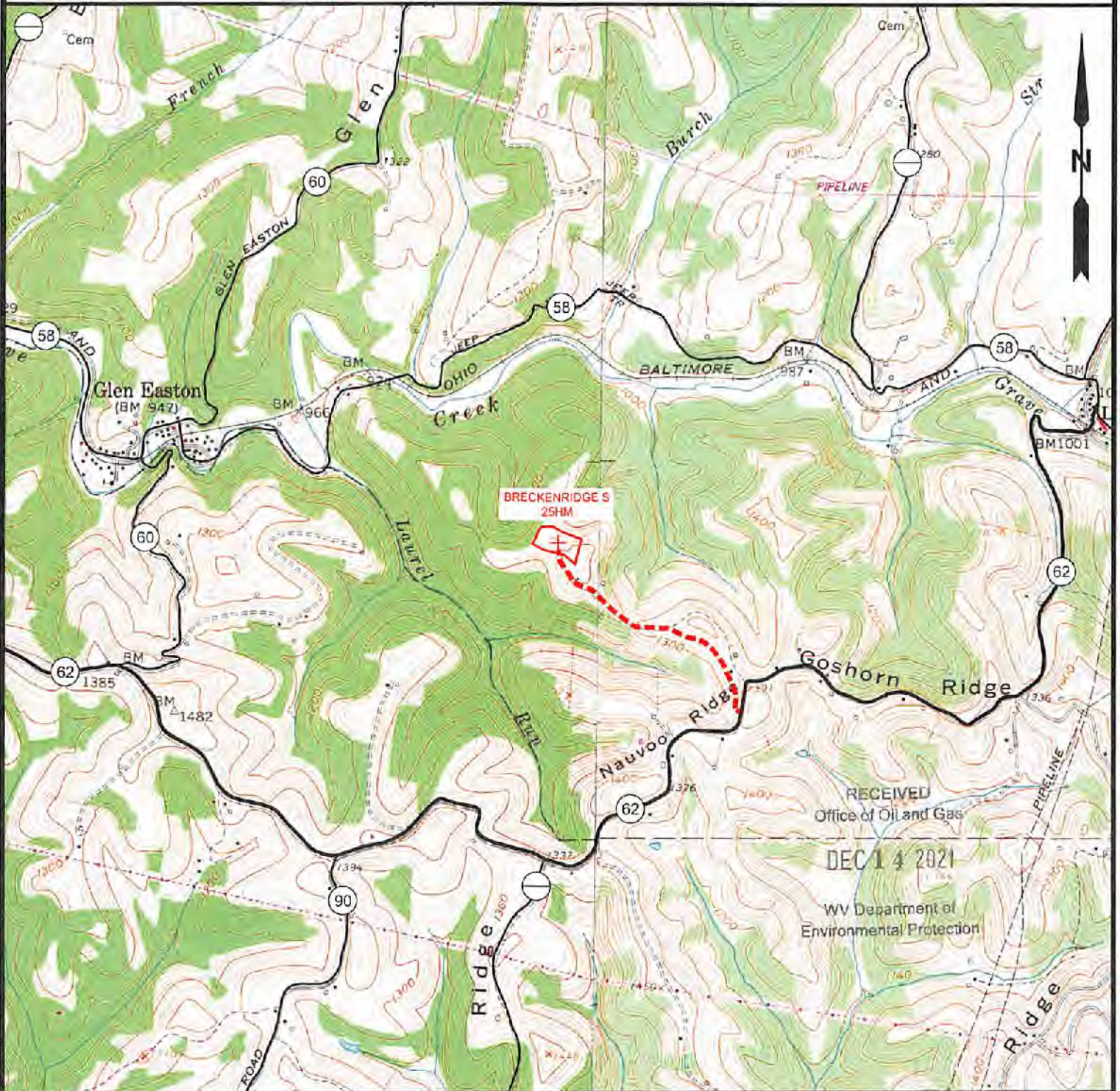
DEC 14 2021

24-HOUR EMERGENCY PHONE NUMBER WV Department of
Environmental Protection

(800) 921-9745

01/28/2022


PROPOSED BRECKENRIDGE S - 25HM



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 S WELL PAD LOCATION.

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.348.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.8295
sivw.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	CAMERON	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	9026	09/23/2021	1" = 2000'



**TUG HILL
OPERATING**

01/28/2022

Area of Review**Sources of information to Support 35CSR8 - 5.11: 9.3 et seq.**

Description of process to identify potential pathways for well communication during hydraulic fracturing activities.

Data Sources Reviewed:

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

Contacted Adam Picard 724-485-9331, apicard@dpslandservices.com, DPS GIS (09/27/2021) 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 Enverus All Wells Layer
2. Map with Farm lines overlain and any well spots identified on Farm Maps
3. More recent (1970s vintage) topos and older topos

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

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

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

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 Marcellus 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 Marcellus stimulation.	
4705102346	Tug Hill Operating, LLC	7115' TVD (proposed)	none	none	Yes, this is a proposed well in the Marcellus. Once completed the well will be within the expected fracture propagation from a Marcellus stimulation. Proper casing and cement should prevent migration of fluids between wellbores.	A Tug Hill Operating, LLC 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 Marcellus well. Well is plugged.	Well was plugged 3/26/2008

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

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	unknown	No, the well is not deep enough to be within the expected fracture propagation from a Marcellus 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 Marcellus well.	
4705101409	Tug Hill Operating, LLC	6962' TVD / 11672' MD	Marcellus	unknown	Yes, this is a producing well in the Marcellus. This well is within the expected fracture propagation from a Marcellus stimulation. Proper casing and cement should prevent migration of fluids between wellbores.	A Tug Hill Operating, LLC producing well on adjacent pad.
4705101475	Tug Hill Operating, LLC	7068' TVD / 11820' MD	Marcellus	unknown	Yes, this is a producing well in the Marcellus. This well is within the expected fracture propagation from a Marcellus stimulation. Proper casing and cement should prevent migration of fluids between wellbores.	A Tug Hill Operating, LLC producing well on adjacent pad.
4705101476	Tug Hill Operating, LLC	6944' TVD / 12985' MD	Marcellus	unknown	Yes, this is a producing well in the Marcellus. This well is within the expected fracture propagation from a Marcellus stimulation. Proper casing and cement should prevent migration of fluids between wellbores.	A Tug Hill Operating, LLC producing well on adjacent pad.

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 DEC 14 2021

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
4705101605	Tug Hill Operating, LLC	6953' TVD / 12624' MD	Marcellus	unknown	Yes, this is a producing well in the Marcellus. This well is within the expected fracture propagation from a Marcellus stimulation. Proper casing and cement should prevent migration of fluids between wellbores.	A Tug Hill Operating, LLC producing well on adjacent pad.
4705100624	CNX Gas Co. LLC (North)	3009' TVD	Gordon	unknown	No, the well is not deep enough to be within the expected fracture propagation from a Marcellus stimulation. Well is plugged.	Well was plugged 10/31/2019.
4705100976	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 Marcellus well. Well is plugged.	Well was plugged 12/31/2004.
4705100997	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 Marcellus well. Well is plugged.	Well was plugged 5/29/2015.
4705170205	South Penn Oil (S. Penn Nat. Gas)	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing in the planned Marcellus well.	State records are incomplete.

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 DEC 14 2021

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
4705170467	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 Marcellus well.	State records are incomplete.
4705170469	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 Marcellus well.	State records are incomplete.
4705100626	Consolidation Coal Co.	3088' TVD	Gordon	unknown	No, the well is not deep enough to be within the expected fracture propagation from a Marcellus stimulation. Well is plugged.	Well was plugged 10/26/2007.
4705100975	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 Marcellus well.	
4705101048	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 Marcellus well. Well is plugged.	Well was plugged 12/15/2006.

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 DEC 14 2021

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
4705101068	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 Marcellus well. Well is plugged.	Well was plugged 5/19/2008.
4705101156	Leatherwood, Inc.	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing in the planned Marcellus well. Well is plugged.	Well was plugged 10/14/2008.
4705130184	South Penn Oil (S. Penn Nat. Gas)	3144' TVD	Gordon	unknown	No, the well is not deep enough to be within the expected fracture propagation from a Marcellus stimulation. Well is plugged.	Well was plugged in 1942.
4705170463	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 Marcellus well.	State records are incomplete.

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 DEC 14 2021

WV Geological & Economic Survey:

Well: County = 51 Permit = 01082

Report Time: Friday, August 27, 2021 4:10:01 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_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_AF
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

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 70164

Report Time: Friday, August 27, 2021 4:11:58 PM

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_PR
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_AFT
4705170164	-/-	-/-	1420	Barometer	Big Injun (undiff)	Big Injun (undiff)		unclassified	unclassified	not available	unknown	unknown	2374					2374

WV Geological & Economic Survey

Well: County = 51 Permit = 02346

Report Time: Friday, August 27, 2021 4:12:17 PM

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	TFM_EST_PR
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_BEF
4705102346	-/-	-/-	1380	Ground Level															

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey.

Well: County = 51 Permit = 01073

Report Time: Wednesday, September 29, 2021 12:12:04 PM

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	39.825147	-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_PR
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	G_AFT	O_
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

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 70122

Report Time: Wednesday, September 29, 2021 12:12:40 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170122	Marshall	70122	Cameron	Cameron	Cameron	39.824857	-80.618866	532616.5	4408367.8

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
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	O_BEF	O_AFT
4705170122	5/25/1930	--			Fifth		Gordon (undiff)	unclassified	unclassified	not available	unknown	unknown	3109		3109					

WV Geological & Economic Survey

Well: County = 51 Permit = 70512

Report Time: Wednesday, September 29, 2021 12:14:53 PM

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	O_BEF	O_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

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

Operator's Well No. Breckenridge S-25HM

WV Geological & Economic Survey

Well: County = 51 Permit = 01409

Report Time: Wednesday, September 29, 2021 12:15:12 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705101409	Marshall	1409	Liberty	Cameron	Cameron	39.615655	-80.615272	532928.4	4407390.1

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101409	1	As Proposed	532921.4	4409170.9	-80.615284

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
4705101409	2/8/2012	Dvtd Orign Loc	Completed	Goshorn		1H	Goshorn Ridge LLC		Goshorn Ridge LLC	Trans Energy, Inc.		7200	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
4705101409	2/8/2012	10/10/2011	1308	Ground Level	Cameron-Garner	Onondaga Ls	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	unknown	6962	11672	11672		6100

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4705101409	2/8/2012	Water	Fresh Water	Vertical			60	Pennsylvanian System					
4705101409	2/8/2012	Water	Salt Water	Vertical			1500						
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	7290	Marcellus Fm	7530	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	7615	Marcellus Fm	7755	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	7620	Marcellus Fm	8040	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	8120	Marcellus Fm	8365	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	2465	Marcellus Fm	6875	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	6740	Marcellus Fm	6925	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	8585	Marcellus Fm	9182	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	9320	Marcellus Fm	9495	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	9540	Marcellus Fm	9735	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	9808	Marcellus Fm	9995	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	10060	Marcellus Fm	10245	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	10317	Marcellus Fm	10520	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	10600	Marcellus Fm	10824	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	10885	Marcellus Fm	11077	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	11150	Marcellus Fm	11336	Marcellus Fm					
4705101409	2/8/2012	Pay	Oil & Gas	Deviated	11418	Marcellus Fm	11618	Marcellus Fm					

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
4705101409	Trans Energy, Inc	2012	492,268	0	0	0	0	66,545	65,820	71,055	63,022	56,892	6,044	56,828	83,064
4705101409	Trans Energy, Inc	2013	377,492	82,583	80,233	51,292	0	0	0	0	0	0	19,151	84,297	59,926
4705101409	Trans Energy, Inc	2014	540,273	106,593	49,051	46,045	40,729	39,419	36,457	39,366	36,923	39,075	38,729	37,614	31,242
4705101409	Trans Energy, Inc	2015	448,969	43,395	13,546	0	63,619	39,139	33,007	31,623	32,660	113,917	30,642	18,390	28,628
4705101409	EQT Production Company	2016	384,379	50,505	27,304	33,383	32,453	32,503	28,510	30,675	30,311	28,800	27,730	30,472	31,726
4705101409	EQT Production Company	2017	326,643	32,920	24,114	26,142	24,449	25,457	27,389	27,405	26,942	25,445	26,509	25,514	34,377
4705101409	EQT Production Company	2018	322,200	4,436	20,773	28,808	35,560	29,180	29,578	29,256	29,987	26,661	30,818	25,582	30,583
4705101409	EQT Production Company	2019	273,070	16,129	29,621	26,699	24,844	1,093	49,831	25,960	23,506	22,940	16,562	3,087	32,799
4705101409	Tug Hill Operating, LLC	2020	30,060	0	0	0	0	0	0	0	0	0	0	0	30,060

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
4705101409	Trans Energy, Inc.	2012	1,976	0	0	252	277	255	196	278	175	180	186	177	
4705101409	Trans Energy, Inc.	2013	941	92	93	98	0	0	0	0	0	109	342	207	
4705101409	Trans Energy, Inc.	2014	1,314	235	218	241	206	132	104	31	74	22	8	17	26
4705101409	Trans Energy, Inc.	2015	455	36	19	0	66	52	51	57	40	40	33	29	30
4705101409	EQT Production Company	2016	0												
4705101409	EQT Production Company	2017	0												
4705101409	EQT Production Company	2018	327	30	0	62	78	0	100	57	0	0	0	0	0
4705101409	EQT Production Company	2019	35	0	0	0	0	0	0	0	0	35	0	0	0
4705101409	Tug Hill Operating, LLC	2020	0	0	0	0	0	0	0	0	0	0	0	0	0

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 01475

Report Time: Wednesday, September 29, 2021 12:16:11 PM

Location Information [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_16	LAT_DD	LON_DD	UTME	UTMN
4705101475	Marshall	1475	Liberty	Cameron	Cameron	39.015856	-80.615219	532932.9	4407350.1

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101475	1	As Proposed	533057	4405876.2	-80.613945

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
4705101475	4/6/2012	Dvtd Origl Loc	Completed	Goshorn	2H		Goshorn		Goshorn Ridge LLC	Trans Energy, Inc.	7200	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_REF
4705101475	4/6/2012	11/21/2011	1368	Ground Level	Cameron-Garner	Onondaga Lqs	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	unknown	7053	11820	11820		6800

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_ONTY
4705101475	4/6/2012	Water	Fresh Water	Vertical			60	Pennsylvanian System					
4705101475	4/6/2012	Water	Salt Water	Vertical			1500						
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	7450	Marcellus Fm	7653	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	7706	Marcellus Fm	7960	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	8035	Marcellus Fm	8212	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	8285	Marcellus Fm	8490	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	8562	Marcellus Fm	8705	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	8777	Marcellus Fm	8938	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	9011	Marcellus Fm	9145	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	9215	Marcellus Fm	9411	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	9490	Marcellus Fm	9642	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	9711	Marcellus Fm	9880	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	9967	Marcellus Fm	10120	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	10180	Marcellus Fm	10360	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	10432	Marcellus Fm	10585	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	10665	Marcellus Fm	10822	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	10850	Marcellus Fm	11017	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	11050	Marcellus Fm	11235	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	11317	Marcellus Fm	11503	Marcellus Fm					
4705101475	4/6/2012	Pay	Oil & Gas	Deviated	11586	Marcellus Fm	11765	Marcellus Fm					

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
4705101475	Trans Energy, Inc	2012	555,849	0	0	0	0	0	38,804	136,940	98,374	77,355	65,618	79,085	66,669
4705101475	Trans Energy, Inc	2013	279,811	74,717	53,054	30,568	0	0	0	0	0	0	19,181	50,237	52,044
4705101475	Trans Energy, Inc	2014	752,110	92,573	93,493	59,997	63,969	61,911	57,307	57,264	54,015	53,059	57,015	52,261	49,238
4705101475	Trans Energy, Inc	2015	532,905	49,265	20,507	0	83,045	49,822	42,147	30,571	46,448	129,601	35,718	15,101	28,880
4705101475	EQT Production Company	2016	435,245	47,438	28,525	38,556	40,262	39,960	36,926	37,712	36,646	35,199	33,625	33,472	32,732
4705101475	EQT Production Company	2017	354,543	29,286	31,405	30,059	30,460	32,269	31,869	32,043	31,690	28,987	30,366	25,216	20,755
4705101475	EQT Production Company	2018	257,918	19,950	16,945	39,660	25,576	23,911	24,854	21,543	24,493	24,436	24,508	15,759	5,283
4705101475	EQT Production Company	2019	220,897	14,683	15,365	1	0	0	0	1	5	67,762	59,473	13,235	50,346
4705101475	Tug Hill Operating, LLC	2020	23,757	0	0	0	0	0	0	0	0	0	0	0	23,757

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
4705101475	Trans Energy, Inc	2012	1,227	0	0	0	0	85	339	190	173	180	76	184	
4705101475	Trans Energy, Inc	2013	710	63	85	94	0	0	0	0	0	42	247	179	
4705101475	Trans Energy, Inc	2014	1,650	188	267	290	350	170	84	50	04	34	31	44	
4705101475	Trans Energy, Inc	2015	306	70	31	0	45	14	21	39	19	23	13	15	
4705101475	EQT Production Company	2016	0	0	0	0	0	0	0	0	0	0	0	0	
4705101475	EQT Production Company	2017	0	0	0	0	0	0	0	0	0	0	0	0	
4705101475	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	
4705101475	EQT Production Company	2019	100	0	0	0	0	0	0	0	0	100	0	0	
4705101475	Tug Hill Operating, LLC	2020	0	0	0	0	0	0	0	0	0	0	0	0	

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

WV Geological & Economic Survey:

Well: County = 51 Permit = 01476

Report Time: Wednesday, September 29, 2021 12:16:49 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101476	Marshall	1476	Liberty	Cameron	Cameron	39.815837	-80.615187	532937.3	4407388.1

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101476	1	As Drilled	532183.8	4409071.8	-80.623889
4705101476	1	As Proposed	532200.6	4409080.6	-80.623682

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
4705101476	6/20/2013	Divd Origr Loc	Completed	Timothy James Hubbs Trust	3H		Goshorn		Goshorn Ridge LLC	Trans Energy, Inc	7200	Marcellus Fm	

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FTM	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF
4705101476	6/20/2013	4/2/2013	1310	Ground Level	Cameron-Garner	Marcellus Fm	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	Fractured	12977	12977	6554		

Comment: 6/20/2013 KOD 6554

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4705101476	6/20/2013	Water	Fresh Water	Vertical			80						
4705101476	6/20/2013	Water	Fresh Water	Vertical			150						
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	7515	Marcellus Fm	7831	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	7915	Marcellus Fm	8226	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	8310	Marcellus Fm	8551	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	8643	Marcellus Fm	8831	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	8905	Marcellus Fm	9081	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	9150	Marcellus Fm	9351	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	9420	Marcellus Fm	9615	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	9685	Marcellus Fm	9875	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	9960	Marcellus Fm	10120	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	10181	Marcellus Fm	10366	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	10437	Marcellus Fm	10605	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	10660	Marcellus Fm	10830	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	10925	Marcellus Fm	11465	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	11585	Marcellus Fm	11850	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	11920	Marcellus Fm	12175	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	12245	Marcellus Fm	12470	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	12528	Marcellus Fm	12700	Marcellus Fm					
4705101476	6/20/2013	Pay	Oil & Gas	Deviated	12770	Marcellus Fm	12925	Marcellus Fm					

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
4705101476	Trans Energy, Inc.	2013	25,450	0	0	0	0	0	0	0	0	0	0	0	25,450
4705101476	Trans Energy, Inc.	2014	303,133	45,269	30,560	34,182	25,781	24,952	23,096	23,476	21,778	21,373	17,221	15,385	20,060
4705101476	Trans Energy, Inc.	2015	217,919	20,021	5,239	0	35,183	17,851	15,938	18,703	14,290	42,379	19,019	9,622	19,674
4705101476	EGT Production Company	2016	130,282	14,741	8,839	13,032	11,433	11,938	10,785	11,116	10,900	10,413	9,211	9,009	8,865
4705101476	EGT Production Company	2017	97,538	10,010	6,047	8,974	8,529	9,138	10,150	9,449	9,123	7,355	7,250	6,649	4,864
4705101476	EGT Production Company	2018	106,799	12,652	6,861	16,020	4,577	5,512	6,509	6,361	5,709	6,712	11,625	11,178	13,083
4705101476	EGT Production Company	2019	103,666	8,515	11,507	11,060	8,924	605	8,163	4,782	13,652	17,177	7,860	5,350	6,071
4705101476	Tug Hill Operating, LLC	2020	12,138	0	0	0	0	0	0	0	0	0	0	0	12,138

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
4705101476	Trans Energy, Inc.	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101476	Trans Energy, Inc.	2014	593	0	99	56	37	52	69	80	40	59	31	32	38
4705101476	Trans Energy, Inc.	2015	619	62	19	0	93	52	56	82	57	49	48	38	63
4705101476	EGT Production Company	2016	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101476	EGT Production Company	2017	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101476	EGT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101476	EGT Production Company	2019	29	0	0	0	0	0	0	0	0	29	0	0	0
4705101476	Tug Hill Operating, LLC	2020	0	0	0	0	0	0	0	0	0	0	0	0	0

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

WV Geological & Economic Survey:

Well: County = 51 Permit = 01605

Report Time: Wednesday, September 29, 2021 12:17:30 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX	DISTRICT	QUAD_76	QUAD_15	LAT_DD	LOM_DD	UTME	UTMN
4705101605	Marshall	1605	Liberty	Cameron	Cameron		39.815827	-80.615124	532941	4407387

Bottom Hole Location Information:

API	EP	FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101605	1	As Drilled	532830	4405923	-80.616495	39.802641
4705101605	1	As Proposed	532830	4405923	-80.616495	39.802641

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_E
4705101605	6/30/2013	Divd Orgnl Loc	Completed	Timothy James Hubbs Trust	4H		Gosham		Goshorn Ridge LLC	Trans Energy, Inc		7200	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
4705101605	6/30/2013	5/4/2013	1308	Ground Level	Cameron-Garner	Marcellus Fm	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	Fractured	7041	12653		12653	6560

Comment: 6/30/2013 KOP 6560'

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4705101605	6/30/2013	Water	Fresh Water	Vertical			60	Pennsylvanian System					
4705101605	6/30/2013	Water	Fresh Water	Vertical			150	Pennsylvanian System					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	7640	Marcellus Fm	7951	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	8020	Marcellus Fm	8331	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	8385	Marcellus Fm	8676	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	8760	Marcellus Fm	8956	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	9077	Marcellus Fm	9276	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	9340	Marcellus Fm	9526	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	9595	Marcellus Fm	9780	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	9840	Marcellus Fm	10025	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	10095	Marcellus Fm	10280	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	10350	Marcellus Fm	10520	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	10610	Marcellus Fm	10825	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	10900	Marcellus Fm	11070	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	11150	Marcellus Fm	11347	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	11400	Marcellus Fm	11585	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	11657	Marcellus Fm	11830	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	11900	Marcellus Fm	12085	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	12160	Marcellus Fm	12355	Marcellus Fm					
4705101605	6/30/2013	Pay	Oil & Gas	Deviated	12415	Marcellus Fm	12567	Marcellus Fm					

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
4705101605	Trans Energy, Inc	2013	35,828	0	0	0	0	0	0	0	0	0	0	0	35,828
4705101605	Trans Energy, Inc	2014	962,178	83,729	93,778	97,711	99,029	95,843	88,715	82,306	76,575	74,431	65,646	63,664	60,751
4705101605	Trans Energy, Inc	2015	535,305	58,412	16,531	0	78,664	51,532	42,226	29,412	42,240	132,370	35,537	16,920	31,461
4705101605	EQT Production Company	2016	453,031	41,613	34,332	40,244	40,369	41,850	38,637	39,179	38,531	38,630	34,480	36,657	28,529
4705101605	EQT Production Company	2017	344,968	25,854	30,794	37,566	34,785	35,056	27,367	27,435	26,372	24,904	26,479	24,149	24,205
4705101605	EQT Production Company	2018	254,817	771	28,880	29,519	23,718	29,362	25,901	27,534	35,533	17,210	10,425	11,940	14,014
4705101605	EQT Production Company	2019	194,253	5,628	16,480	12,699	17,967	759	17,640	30,627	19,818	14,389	28,133	5,805	24,498
4705101605	Tug Hill Operating, LLC	2020	3,567	0	0	0	0	0	0	0	0	0	0	0	3,567
4705101605	EQT Production Company	2020	147,956	30,232	26,131	19,122	1,530	1,784	18,492	14,982	11,625	24,058	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
4705101605	Trans Energy, Inc	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101605	Trans Energy, Inc	2014	1,193	86	90	93	100	96	127	143	120	91	55	68	124
4705101605	Trans Energy, Inc	2015	1,175	124	37	0	97	130	126	123	147	115	94	78	104
4705101605	EQT Production Company	2016	0												
4705101605	EQT Production Company	2017	0												
4705101605	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101605	EQT Production Company	2019	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101605	Tug Hill Operating, LLC	2020	25	0	0	0	0	0	0	0	0	0	0	0	25
4705101605	EQT Production Company	2020	44	0	0	0	0	0	44	0	0	0	0	0	0

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 00976

Report Time: Wednesday, September 29, 2021 12:18:38 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705100976	Marshall	976	Liberty	Cameron	Cameron	39.811226	-80.612279	533186.8	4406877.4

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
4705100976	12/31/2004	Plugging	Completed	Bernard G Frye		M-434			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_AFT	O_B
4705100976	12/31/2004	12/9/2004	1084	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
4705100976	12/31/2004	0

RECEIVED
 Office of Oil and Gas
DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey;

Well: County = 51 Permit = 00997

Report Time: Wednesday, September 29, 2021 12:19:01 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705100997	Marshall	997	Liberty	Cameron	Cameron	39.806664	-80.610902	533306.8	4406371.6

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
4705100997	5/29/2015	Plugging	Completed	John & Beverly David			M-378			Consolidation Coal Co.			
4705100997	-/-	Plugging	Cancelled	John & Beverly Davis			M-378			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_AFT	O_BEF	O_AFT
4705100997	5/29/2015	5/13/2015	1195	Ground Level																
4705100997	-/-	-/-	1195	Ground Level																

Comment: -/- Did not receive cancelled plugging plat, but have received another plugging plat in 2015

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
4705100997	5/29/2015	0

RECEIVED
 Office of Oil and Gas
DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 70205

Report Time: Wednesday, September 29, 2021 12:19:17 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170205	Marshall	70205	Liberty	Cameron	Cameron	39.808816	-80.610209	533365.2	4406588.5

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
4705170205	--		Original Loc	Completed	V P Gorby	1				South Penn Oil (S. Penn Nat. Gas)			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT
4705170205	--	--						unclassified	unclassified	not available	unknown	unknown								

WV Geological & Economic Survey

Well: County = 51 Permit = 70467

Report Time: Wednesday, September 29, 2021 12:19:38 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170467	Marshall	70467	Liberty	Cameron	Cameron	39.806707	-80.609647	533414.2	4406376.8

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
4705170467	--		unknown	Prpty Map	Gump & Garby	2				unknown			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT
4705170467	--	--						unclassified	unclassified	not available	unknown	unknown								

WV Geological & Economic Survey

Well: County = 51 Permit = 70469

Report Time: Wednesday, September 29, 2021 12:19:59 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170469	Marshall	70469	Liberty	Cameron	Cameron	39.810336	-80.610586	533332.1	4406779.2

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
4705170469	--		unknown	Prpty Map	Aaron A Porter					unknown			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT
4705170469	--	--						unclassified	unclassified	not available	unknown	unknown								

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

Operator's Well No. Breckenridge S-25HM

WV Geological & Economic Survey

Well: County = 51 Permit = 00626

Report Time: Wednesday, September 29, 2021 12:20:23 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705100626	Marshall	626	Liberty	Cameron	Cameron	39.906878	-89.608517	533510.9	4406398

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
4705100626	1/27/1902	Original Loc	Completed	William Gray	4			32329		South Penn Oil (S. Penn Nat. Gas)			
4705100626	10/26/2007	Plugging	Completed	John K & Beverly M Davis	M-376					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_
4705100626	1/27/1902	11/7/1901	1350	Topo Estimation	Cameron-Garner	Hampshire Grp	Gordon	Development Well	Development Well	Oil	unknown	Shot	3688		3038	
4705100626	10/26/2007	9/19/2007	1329	Ground Level	Cameron-Garner			unclassified	unclassified	not available	unknown	unknown				

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_ONTY
4705100626	1/27/1902	Pay	Oil	Vertical			3058	Gordon	0	10			

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
4705100626	Pennzoil Company	1981	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Company	1982	6	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Company	1983	1	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Company	1984	8	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Products Company	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Products Company	1991	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Products Company	1992	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Products Company	1993	2064	0	0	202	507	317	248	0	0	0	306	226	258
4705100626	Pennzoil Products Company	1994	2035	290	297	124	29	202	256	173	146	154	122	184	148
4705100626	Pennzoil Products Company	1995	1633	127	139	135	79	133	187	117	166	138	137	143	155
4705100626	Pennzoil Products Company	1996	677	115	88	0	20	50	120	60	75	0	0	28	113
4705100626	Pennzoil Products Company	1997	253	11	0	0	61	24	65	20	63	9	0	0	0
4705100626	Pennzoil Products Company	1998	127	0	0	28	12	0	14	0	25	0	0	0	49
4705100626	Pennzoil Products Company	1999	188	66	59	16	0	0	0	0	0	0	0	47	0
4705100626	East Resources Inc.	2000	332	3	0	46	81	64	46	45	0	0	0	0	47
4705100626	East Resources Inc.	2001	227	87	0	0	0	0	0	68	0	34	6	32	0
4705100626	CNX Gas Co. LLC (North)	2002	590	0	0	0	0	0	0	0	0	155	153	163	118
4705100626	East Resources Inc.	2002	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	CNX Gas Co. LLC (North)	2003	1752	220	152	122	136	130	130	138	140	127	157	117	164
4705100626	CNX Gas Co. LLC (North)	2004	1955	309	126	166	156	151	156	162	143	146	148	133	159
4705100626	CNX Gas Co. LLC (North)	2005	1670	131	128	148	145	139	144	145	169	128	128	139	129
4705100626	CNX Gas Co. LLC (North)	2006	1662	150	148	149	132	144	134	148	123	124	139	146	125
4705100626	CNX Gas Co. LLC (North)	2007	735	125	125	119	145	123	52	46	0	0	0	0	0
4705100626	CNX Gas Co. LLC (North)	2008	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	CNX Gas Co. LLC (North)	2009	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	CNX Gas Co. LLC (North)	2010	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	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
4705100626	Pennzoil Company	1981	54	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Company	1982	63	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Company	1983	33	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Company	1984	19	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Products Company	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Products Company	1991	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Products Company	1992	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	Pennzoil Products Company	1993	276	23	60	25	22	0	0	0	27	24	32	24	19
4705100626	Pennzoil Products Company	1994	160	14	4	24	14	15	16	12	11	15	13	14	16
4705100626	Pennzoil Products Company	1995	170	15	7	17	14	14	16	11	16	14	16	15	13
4705100626	Pennzoil Products Company	1996	174	13	11	15	16	14	19	15	15	13	17	23	10
4705100626	Pennzoil Products Company	1997	153	6	11	18	17	16	14	1	14	14	16	13	13
4705100626	Pennzoil Products Company	1998	170	12	13	12	10	13	12	13	13	19	16	16	19
4705100626	Pennzoil Products Company	1999	125	15	10	3	0	0	0	25	31	12	8	8	13
4705100626	East Resources Inc.	2000	101	11	10	15	9	10	19	11	15	1	0	0	0
4705100626	East Resources Inc.	2001	131	9	23	9	10	11	9	13	9	11	9	10	8
4705100626	CNX Gas Co. LLC (North)	2002	37	0	0	0	0	0	0	0	0	9	10	9	8
4705100626	East Resources Inc.	2002	74	10	8	11	8	7	11	9	10	0	0	0	0
4705100626	CNX Gas Co. LLC (North)	2003	112	10	9	9	10	10	9	10	9	8	7	10	10
4705100626	CNX Gas Co. LLC (North)	2004	111	11	4	10	10	10	9	11	11	2	10	16	7
4705100626	CNX Gas Co. LLC (North)	2005	100	5	17	0	6	4	12	7	6	16	3	8	16
4705100626	CNX Gas Co. LLC (North)	2006	109	10	10	4	10	2	10	11	8	9	9	13	12
4705100626	CNX Gas Co. LLC (North)	2007	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	CNX Gas Co. LLC (North)	2008	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	CNX Gas Co. LLC (North)	2009	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	CNX Gas Co. LLC (North)	2010	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100626	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
4705100626	10/26/2007	0

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

WV Geological & Economic Survey:

Well: County = 51 Permit = 00975

Report Time: Wednesday, September 29, 2021 12:21:42 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705100975	Marshall	975	Liberty	Cameron	Cameron	39.600931	-90.606823	533658.8	4405736.9

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
4705100975	-/-		Plugging	Cancelled	Kenneth W Steele		M-423			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_AFT	O_BEF
4705100975	-/-	-/-	1246	Ground Level				unclassified	unclassified	not available	unknown	unknown							

WV Geological & Economic Survey:

Well: County = 51 Permit = 01048

Report Time: Wednesday, September 29, 2021 12:22:13 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101048	Marshall	1048	Liberty	Cameron	Cameron	39.603251	-90.608139	533545	4405993.9

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
4705101048	12/15/2006		Plugging	Completed	Jean Jamison		M-384		Unknown	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_AFT	O_BEF
4705101048	12/15/2006	11/29/2006	1374	Ground Level	Cameron-Garner			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
4705101048	12/15/2006	0

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 01068

Report Time: Wednesday, September 29, 2021 12:22:40 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101068	Marshall	1068	Liberty	Cameron	Cameron	39.800931	-80.606823	533658.8	4405736.9

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
4705101068	5/19/2008	Plugging	Completed	Kenneth W Steele		M-423				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_A
4705101068	5/19/2008	4/30/2008	1246	Ground Level	Cameron-Gamer			unclassified	unclassified	not available	unknown	unknown						

Comment: 5/19/2008 River Operations Pittsburgh Coal 989-994ft

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
4705101068	5/19/2008	0

RECEIVED
 Office of Oil and Gas
DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey:

Well: County = 51 Permit = 01156

Report Time: Wednesday, September 29, 2021 12:23:03 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101156	Marshall	1156	Liberty	Cameron	Cameron	39.805317	-80.608039	533552.6	4406223.2

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
4705101156	10/14/2008	Plugging	Completed	Jean Jamison		M-330				Leatherwood, Inc.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_B
4705101156	10/14/2008	10/3/2008	1423	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
4705101156	Plugging	Pittsburgh coal	Well Record	1176	Reasonable	6	Reasonable	1423	Ground Level

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705101156	10/14/2008	0

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 30184

Report Time: Wednesday, September 29, 2021 12:23:22 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705130184	Marshall	30184	Liberty	Cameron	Cameron	39.803106	-80.607575	533593.3	4405978

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
4705130184	6/18/1902	Original Loc	Completed	A H Dobbs	4		V P Gorby	32339	J E Gorby et al	South Penn Oil (S. Penn Nat. Gas)			
4705130184	7/9/1904	Worked Over	unknown							----- 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_FTC	KOD	G_BEF
4705130184	6/18/1902	4/23/1902	1387	Ground Level	Cameron-Gamer	UDev undf Ber/LoHURN	Gordon	Development Well	unclassified	Oil	Cable Tool	Shot	3144		3144		C
4705130184	7/9/1904	-/-	1387	Ground Level	Cameron-Gamer	UDev undf Ber/LoHURN	Gordon	unclassified	unclassified	Oil	Cable Tool	Shot	3144		0		C

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
4705130184	Original Loc	unidentified coal	Well Record	650	Reasonable	2	Reasonable	1387	Ground Level
4705130184	Original Loc	Sewickley coal	Well Record	1020	Reasonable	3	Reasonable	1387	Ground Level
4705130184	Original Loc	Pittsburgh coal	Well Record	1104	Reasonable	4	Reasonable	1387	Ground Level
4705130184	Original Loc	Bufflo Ss/1st Cow Rn	Well Record	1450	Reasonable	25	Reasonable	1387	Ground Level
4705130184	Original Loc	Mahonig Ss/Big Dunk	Well Record	1600	Reasonable	30	Reasonable	1387	Ground Level
4705130184	Original Loc	Salt Sands (undiff)	Well Record	1650	Reasonable	380	Reasonable	1387	Ground Level
4705130184	Original Loc	Big Lime	Well Record	2195	Reasonable	45	Reasonable	1387	Ground Level
4705130184	Original Loc	Big Injun (undiff)	Well Record	2240	Reasonable	260	Reasonable	1387	Ground Level
4705130184	Original Loc	Gordon Stray	Well Record	3072	Reasonable	4	Reasonable	1387	Ground Level
4705130184	Original Loc	Gordon	Well Record	3112	Reasonable	28	Reasonable	1387	Ground Level

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

Plugging Information:

API	PLG_DT	DEPTH_PBT
4705130184	-/-1942	0

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

WV Geological & Economic Survey

Well: County = 51 Permit = 70463

Report Time: Wednesday, September 29, 2021 12:23:44 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705170463	Marshall	70463	Liberty	Cameron	Cameron	39.80453	-80.607202	533624.5	4406136.1

There is no Bottom Hole Location data for this well

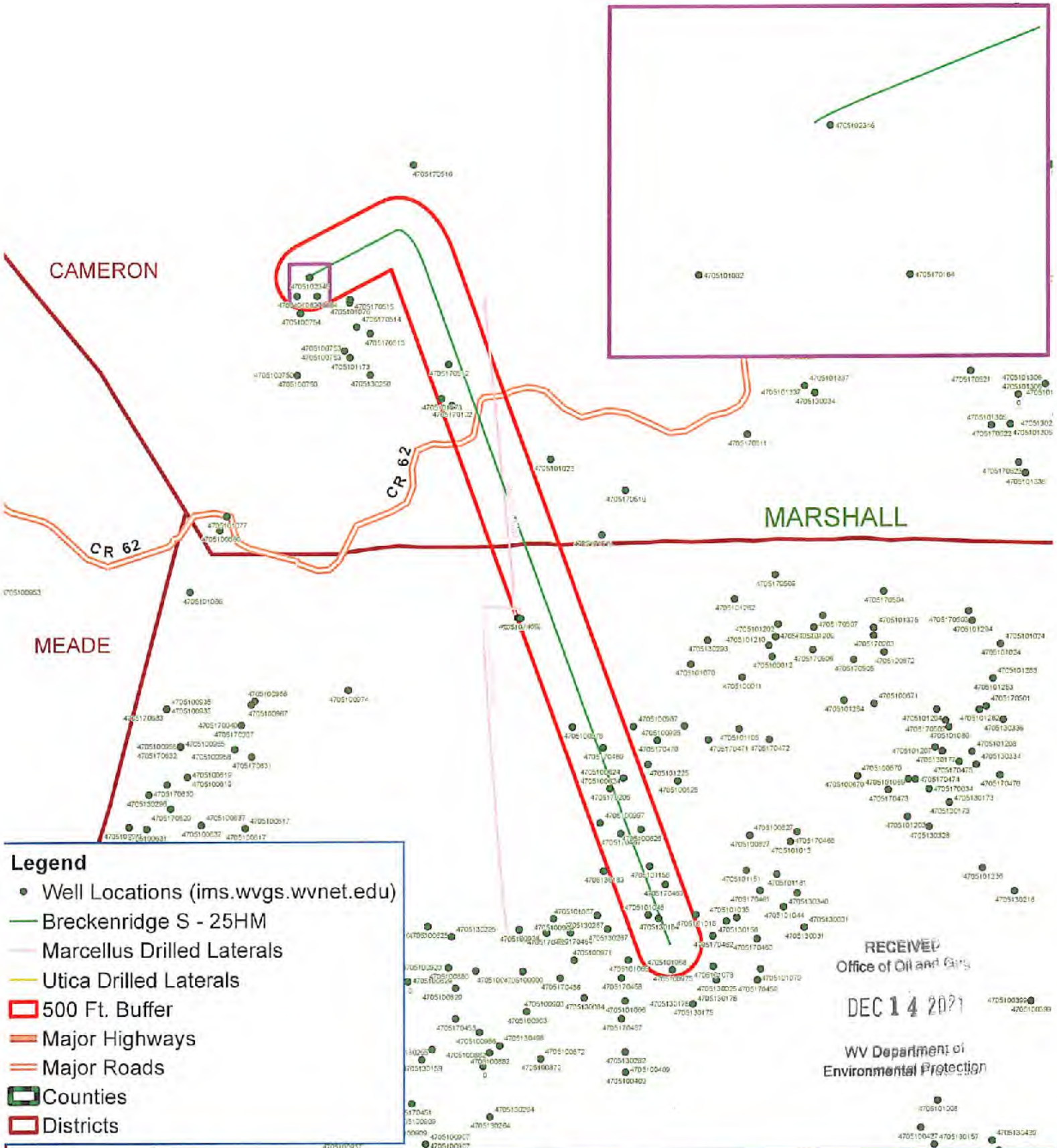
Owner Information:

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_PR
4705170463	-/-	unknown	Prpty Map	Vincent Gerby	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_BEFO	G_AFT	O_BEFO	O_AFT
4705170463	-/-	-/-						unclassified	unclassified	not available	unknown	unknown								

RECEIVED
 Office of Oil and Gas
DEC 14 2021
 WV Department of
 Environmental Protection

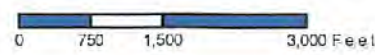


- Legend**
- Well Locations (ims.wvgs.wvnet.edu)
 - Breckenridge S - 25HM
 - Marcellus Drilled Laterals
 - Utica Drilled Laterals
 - 500 Ft. Buffer
 - Major Highways
 - Major Roads
 - ▭ Counties
 - ▭ Districts

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection



Breckenridge S - 25HM Cameron District Marshall County, WV



Map Prepared by:
DPS
LAND SERVICES
01/28/2022

**BRECKENRIDGE S LEASE
WELL 25HM
TUG HILL OPERATING**

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

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

NAD'83 S.P.C.(FT)	N. 486,521.92	E. 1,652,052.22
NAD'83 GEO.	LAT-(N) 39.830299	LONG-(W) 80.626818
NAD'83 UTM (M)	N. 4,408,988.96	E. 531,933.46

LANDING POINT

NAD'83 S.P.C.(FT)	N. 486,719.1	E. 1,653,847.9
NAD'83 GEO.	LAT-(N) 39.830902	LONG-(W) 80.620433
NAD'83 UTM (M)	N. 4,409,058.2	E. 532,479.5

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 476,154.1	E. 1,657,495.9
NAD'83 GEO.	LAT-(N) 39.802024	LONG-(W) 80.606981
NAD'83 UTM (M)	N. 4,405,858.1	E. 533,644.7

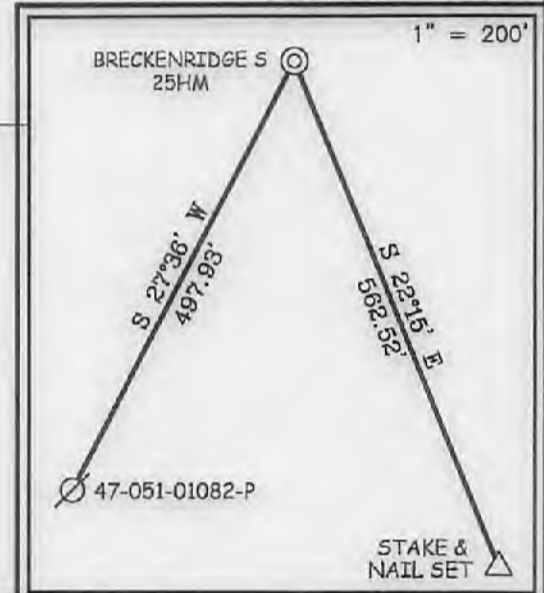
T.H. LONGITUDE 80°37'30"
B.H. LONGITUDE 80°35'00"

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	AEP WEST VIRGINIA TRANSMISSION COMPANY INC.	3-18-6.1	10.175
G	MARY L. BURGE	3-18-6	36.33
H	MOLLY KAY HUBBS COLLINS, ET AL	3-18-5	25.372
I	OLIVIA SUZANNE HUBBS	7-1-13	120.937
J	MOLLY KAY HUBBS COLLINS, ET AL	7-1-14	53.67
K	RICKIE GENE FRYE	7-2-3.1	37.8578
L	BEVERLY MAE DAVIS	7-2-4	58.08
M	JEAN JAMISON	7-7-9.1	97.896

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
3-18-8.1	DANIEL LILLEY, ET UX	1.039
3-18-8.2	KEVIN R. & SHELLY JO EVANS	2.302
3-18-12	CHARLES N. MATTHEWS JR, ET UX	1.831
3-18-13	MOLLY KAY HUBBS COLLINS & OLIVIA SUZANNE HUBBS	18.014
3-18-14	MOLLY KAY HUBBS COLLINS & OLIVIA SUZANNE HUBBS	21.52
3-18-20	JESSE PARSONS EST.	2.02
3-18-38	OLIVIA SUZANNE HUBBS	0.433
7-2-3	BARBARA & RICKIE FRYE	11.24
7-2-3.2	RICKIE GENE FRYE, ET UX	0.9922
7-2-4.1	BEVERLY MAE DAVIS	1.00
7-2-4.2	DAVID L. FRYE	1.25
7-2-7	CNX LAND, LLC	12.825
7-2-8	CNX LAND, LLC	3.82
7-7-9	WILLARD JUNIOR EVANS & ROSE MARY EVANS - LIFE	2.214

11,405' B.H.

REFERENCES



NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 825' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'



12 Vanborn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.452.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.2952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5299
slsvv.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. *Gregory A. Smith*
677



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
DATE OCTOBER 13, 20 21
REVISED _____, 20 _____
OPERATORS WELL NO. BRECKENRIDGE S-25HM
API WELL NO. 47 - 051 - 02432
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9026P25HM.dwg
BRECKENRIDGE S-25HM REV0
HORIZONTAL & VERTICAL SCALE 1" = 2000'
CONTROL DETERMINED BY: DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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



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

LOCATION: ELEVATION GROUND = 1,383.40' 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 56.72
PROPOSED WORK: LEASE NO. SEE WW-6A1

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 MARCELLUS
ESTIMATED DEPTH TVD: 7,112' / TMD: 16,782'

COUNTY NAME PERMIT

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

**BRECKENRIDGE S LEASE
WELL 25HM
TUG HILL OPERATING**

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 08°39' W	1279.73'

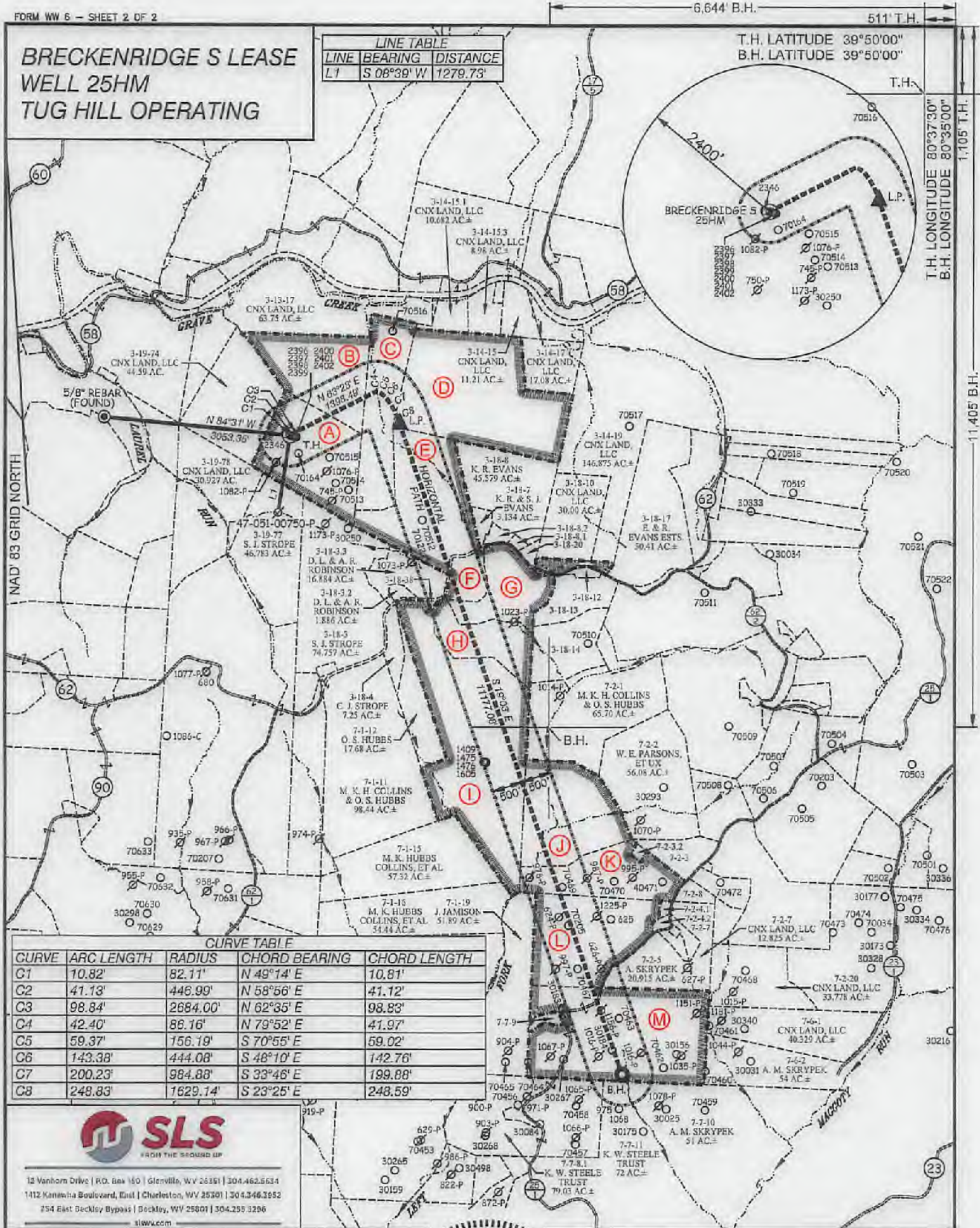
T.H. LATITUDE 39°50'00"
B.H. LATITUDE 39°50'00"

NAD'83 GRID NORTH

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

1,105' T.H.

1,1405' B.H.



CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
G1	10.82'	82.11'	N 49°14' E	10.81'
G2	41.13'	446.99'	N 58°56' E	41.12'
G3	98.84'	2684.00'	N 62°35' E	98.83'
G4	42.40'	86.16'	N 79°52' E	41.97'
G5	59.37'	156.19'	S 70°55' E	59.02'
G6	143.38'	444.08'	S 48°10' E	142.76'
G7	200.23'	984.88'	S 33°46' E	199.88'
G8	248.83'	1629.14'	S 23°25' E	248.59'



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
754 East Beckley Bypass | Beckley, WV 25801 | 304.255.3286
slsw.com

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

NAD'83 S.P.C.(FT) N. 486,521.92 E. 1,652,052.22
NAD'83 GEO. LAT-(N) 39.830299 LONG-(W) 80.626818
NAD'83 UTM (M) N. 4,408,988.96 E. 531,933.46

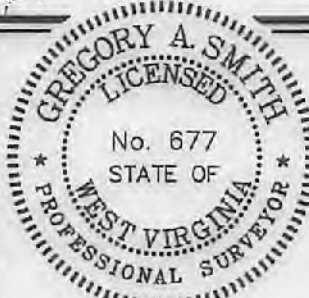
LANDING POINT

NAD'83 S.P.C.(FT) N. 496,719.1 E. 1,653,847.9
NAD'83 GEO. LAT-(N) 39.800902 LONG-(W) 80.620433
NAD'83 UTM (M) N. 4,409,058.2 E. 532,479.5

BOTTOM HOLE

NAD'83 S.P.C.(FT) N. 476,154.1 E. 1,657,495.9
NAD'83 GEO. LAT-(N) 39.802024 LONG-(W) 80.606981
NAD'83 UTM (M) N. 4,405,858.1 E. 533,644.7

SCALE 1" = 2000' FILE NO. 9026P25HM.dwg
BRECKENRIDGE S-25HM REV0
DATE OCTOBER 13, 20 21
REVISED _____, 20 _____
OPERATORS WELL NO. BRECKENRIDGE S-25HM
API WELL NO. 47-051-02432
STATE COUNTY PERMIT



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



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

P.S. 677 Gregory A. Smith

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- TAX MAP-PARCEL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE WW-6A1)

COUNTY NAME

PERMIT

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

01/28/2022

WW-6A1
(5/13)

Operator's Well No. Breckenridge S-25HM

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

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

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

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

*See attached pages

RECEIVED
Office of Oil and Gas

DEC 14 2021

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

WV Department of
Environmental Protection

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

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

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

Well Operator: Tug Hill Operating, LLC

By: Amy L. Morris *Amy L. Morris*

Its: Permitting Specialist - Appalachia Region

Lease ID	TMP	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page		Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
10*31241	3-19-76	A	JAMES R. WAYT, CONVEYED ON 12/3/2013 TO MERIDIUS VENTURES, LLC AND HASAN'S VENTURES, LLC IN DB 811/494	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	729	40	N/A	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, LLC, Republic Partners 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, CONVEYED ON 12/3/2013 TO MERIDIUS VENTURES, LLC AND HASAN'S VENTURES, LLC IN DB 811/494	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	729	49	N/A	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, LLC, Republic Partners VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21
10*38613	3-19-75	B	KATHERINE ZOGG OLIVER	GREAT LAKES ENERGY PARTNERS LLC	1/8+	663	449	Name Change - Great Lakes Energy Partners LLC to Range Resources - Appalachia, LLC: CB 19/443	Range Resources - Appalachia LLC to Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc: 23/368	Chesapeake Appalachia LLC to SWN Production Company LLC: 39/110	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	Merger - SWN Exchange Titleholder LLC into SWN Production Company LLC: CB 19/624	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/604	
10*31251	3-18-1	C	GOSHORN RIDGE LLC	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	723	192	N/A	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, LLC, Republic Partners VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21
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	N/A
10*39563	3-14-18	D	KEVIN R EVANS	CHEVRON USA INC	1/8+	1008	561	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to EQT Aurora LLC: 47/1	EQT Production Company to TH Exploration LLC: 50/1
10*31251	3-18-2	E	GOSHORN RIDGE LLC	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	723	192	N/A	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, LLC, Republic Partners VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21
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	N/A
10*31251	3-18-6.1	F	GOSHORN RIDGE LLC	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	723	192	N/A	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, LLC, Republic Partners VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21
10*31251	3-18-6	G	GOSHORN RIDGE LLC	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	723	192	N/A	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, LLC, Republic Partners VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21
10*38572	3-18-6	G	EQT PRODUCTION COMPANY	SWN ENERGY COMPANY LLC & EQUINOR USA ONSHORE PROPERTIES INC	1/8+	1065	540	N/A	N/A	N/A	N/A	N/A	N/A	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*31251	3-18-5	H	GOSHORN RIDGE LLC	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	723	192	N/A	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, LLC, Republic Partners VIII, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of Environmental Protection

10*17925	7-1-13	I	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*31251	7-1-13	I	GOSHORN RIDGE LLC	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	723	192	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, LLC, and Republic Energy Operating LLC to EQT Production Company: 37/25	EQT Production Company to TH Exploration LLC: 48/21
10*31230	7-1-14	J	JAMES TIMOTHY HUBBS TESTAMENTARY TRUST OF MOLLY KAY HOBBS y JAMES TIMOTHY HOBBS TRUST	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	848	6	N/A	N/A	N/A	N/A	American Shale Devel. Inc to Republic Partners VIII LLC: 33/255	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*25503	7-2-3.1	K	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	K	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	K	KAREN S HOLT	AMERICAN PETROLEUM PARTNERS LLC	1/8+	930	291	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	K	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	K	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	K	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*29069	7-2-4	L	CAROLYN A POSTLETHWAITE	TH EXPLORATION LLC	1/8+	1083	548	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30154	7-2-4	L	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*30156	7-2-4	L	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*30157	7-2-4	L	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*30483	7-2-4	L	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*30605	7-2-4	L	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	L	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*38636	7-2-4	L	KRISTINA KOLLER	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	787	131	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38658	7-2-4	L	KYLE OWENS	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	789	296	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38602	7-2-4	L	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	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604

DEC 14 2021

WV Department of Environmental Protection

10*28335	7-7-9.1	M	DENNIS H TEDROW AND LINDA S TEDROW	TH EXPLORATION LLC	1/8+	1070	442	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28336	7-7-9.1	M	DUSTIN K TEDROW AND JENNIFER M TEDROW	TH EXPLORATION LLC	1/8+	1070	440	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29038	7-7-9.1	M	CONSTANCE L LINT TRUST CONSTANCE LINT TRUSTEE	TH EXPLORATION LLC	1/8+	1083	369	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29069	7-7-9.1	M	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
10*29114	7-7-9.1	M	TERRY WITHEROW AND JAY WITHEROW	TH EXPLORATION LLC	1/8+	1084	396	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29138	7-7-9.1	M	DEBORAH ANN GORBY	TH EXPLORATION LLC	1/8+	1085	180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29513	7-7-9.1	M	TRACY J WEGENDT	TH EXPLORATION LLC	1/8+	1096	292	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29766	7-7-9.1	M	STEWART TEDROW	TH EXPLORATION LLC	1/8+	1100	260	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29939	7-7-9.1	M	DONALD E SHANOR AND BETSY SHANOR	TH EXPLORATION LLC	1/8+	1103	547	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30154	7-7-9.1	M	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*30155	7-7-9.1	M	CHARLES WAYNE GORBY, BY ATTORNEY IN FACT, CHARLES C GORBY	TH EXPLORATION LLC	1/8+	1104	633	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30156	7-7-9.1	M	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*30157	7-7-9.1	M	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*30483	7-7-9.1	M	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*30604	7-7-9.1	M	JANICE CAROLYN HETRICK AND RICHARD HETRICK	TH EXPLORATION LLC	1/8+	1107	108	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*30605	7-7-9.1	M	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	7-7-9.1	M	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*38536	7-7-9.1	M	JOHN SAMUEL TEDROW	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	757	276	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	SWN Production Company LLC to TH Exploration LLC: 49/121	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/105	
10*38537	7-7-9.1	M	JAMES W RAYMOND	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	789	299	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/604	
10*30157	7-7-9.1	M	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*38542	7-7-9.1	M	MARILYN D HOGAN	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	490	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/104	
10*38543	7-7-9.1	M	CHARLES ROBERT TEDROW	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	757	277	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/104	
10*30156	7-7-9.1	M	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*38549	7-7-9.1	M	ROBERT TEDROW	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	491	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/104	
10*38551	7-7-9.1	M	BONNIE LOU SELLERS MURPHY	EQT PRODUCTION COMPANY	1/8+	961	572	N/A	N/A	N/A	N/A	EQT Production Company to SWN Production Company & Equinor USA Onshore Properties Inc: 44/489	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/604	
10*38553	7-7-9.1	M	THOMAS E MITCHELL	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	747	91	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinore USA Onshore Properties Inc to TH Exploration LLC: 49/104	

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

10*38554	7-7-9.1	M	JACK E DILLE AND MELISSA DILLE	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	757	267	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/104
10*38557	7-7-9.1	M	DEBBIE DEGROFF	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	508	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/104
10*38571	7-7-9.1	M	EQT PRODUCTION COMPANY	SWN ENERGY COMPANY LLC & EQUINOR USA ONSHORE PROPERTIES INC	1/8+	1065	545	N/A	N/A	N/A	N/A	N/A	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38574	7-7-9.1	M	JANET L BURA AND MARK BURA	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	757	266	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/104
10*38578	7-7-9.1	M	LLOYD TEDROW	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	754	18	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/104
10*38581	7-7-9.1	M	GUY DILLE AND DOROTHY DILLE	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	758	613	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38587	7-7-9.1	M	CAROLE A 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	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38599	7-7-9.1	M	MARY LOU HARRISON	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	759	598	N/A	Trans Energy Inc to Republic Energy Ventures LLC: 26/632	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38601	7-7-9.1	M	KIMBERLY J DURENDA AND LARRY K DURENDA	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	754	10	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/104
10*38602	7-7-9.1	M	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	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38612	7-7-9.1	M	CHARLES F MARTIN JR	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	777	592	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604

RECEIVED

Office of Oil and Gas

DEC 14 2021

WV Department of Environmental Protection

10*38617	7-7-9.1	M	GARY L TEDROW, JR.	TH EXPLORATION LLC	1/8+	1120	160	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*38621	7-7-9.1	M	BEVERLY L DILLE ET AL.	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	777	593	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38630	7-7-9.1	M	MARJORIE HARTMAN	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	493	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/104
10*38632	7-7-9.1	M	RHEA M TEDROW	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	784	189	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38636	7-7-9.1	M	KRISTINA KOLLER	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	787	131	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38648	7-7-9.1	M	BONNIE S MORRIS AND RONALD E MORRIS	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	750	577	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/104
10*38649	7-7-9.1	M	B PAUL DILLE AND SHERRY DILLE	TRANS ENERGY INC AND REPUBLIC PARTNERS VI LP	1/8+	753	648	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	SWN Production Company LLC to TH Exploration LLC: 49/120	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/104
10*38653	7-7-9.1	M	SANDRA LINT	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	787	130	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38658	7-7-9.1	M	KYLE OWENS	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	789	296	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*38689	7-7-9.1	M	ROBERT J RAYMOND	AMERICAN SHALE DEVELOPMENT INC AND REPUBLIC ENERGY VENTURES LLC	1/8+	789	295	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	SWN Production Company LLC to TH Exploration LLC: 49/635	Equinor USA Onshore Properties Inc to TH Exploration LLC: 49/604
10*39020	7-7-9.1	M	MARCIE WITHEROW	TH EXPLORATION LLC	1/8+	1110	515	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*39051	7-7-9.1	M	SUZANNE TAYLOR	TH EXPLORATION LLC	1/8+	1104	635	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*39054	7-7-9.1	M	CANDY SUE DELANEY AND LESLIE R DELANEY	TH EXPLORATION LLC	1/8+	1110	533	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*39057	7-7-9.1	M	CHARLES WAYNE VARNER	TH EXPLORATION LLC	1/8+	1110	536	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*39255	7-7-9.1	M	TRUDY D FERNANDEZ AND MICHAEL FERNANDEZ	TH EXPLORATION LLC	1/8+	1111	580	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*39283	7-7-9.1	M	ALICE FAYE VARNER	TH EXPLORATION LLC	1/8+	1114	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*39337	7-7-9.1	M	FAMILY TREE CORPORATION	TH EXPLORATION LLC	1/8+	1117	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*39338	7-7-9.1	M	FAMILY TREE CORPORATION	TH EXPLORATION LLC	1/8+	1117	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

10*39384	7-7-9.1	M	JOYCE LYNNE LOWRY AND STEVE LOWRY	TH EXPLORATION LLC	1/8+	1114	314	N/A	N/A	N/A	N/A	N/A	N/A
10*39403	7-7-9.1	M	JEFFREY LINN DILLE	TH EXPLORATION LLC	1/8+	1114	512	N/A	N/A	N/A	N/A	N/A	N/A
10*39408	7-7-9.1	M	WILLIAM GUY DILLE	TH EXPLORATION LLC	1/8+	1118	263	N/A	N/A	N/A	N/A	N/A	N/A

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

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

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

ASSIGNMENT AND CONVEYANCE

This Assignment and Conveyance (this "*Assignment*") is from EQUINOR USA ONSHORE PROPERTIES, INC., a Delaware corporation ("*Assignor*"), to TH Exploration, LLC, a Texas limited liability company ("*Assignee*"), and is executed on October 18, 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 15, 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 and Exhibit A-1 (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.

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

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 503
Pages Recorded 10
Recording Cost \$ 11.00

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 TH 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

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection



December 13, 2021

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

RE: Breckenridge S-25HM

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-25HM well plat. THO has conducted a full title search in the relevant Court House to confirm its ownership under said County Route and is not currently aware of any recorded document that would suggest an ownership other than THO.

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

Sincerely,

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

Amy L. Morris
Permitting Specialist – Appalachia Region

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

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

Date of Notice Certification: 12/03/2021

API No. 47- 051 -
Operator's Well No. Breckenridge S-25HM
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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>531,933.48</u>
County:	<u>Marshall</u>		Northing:	<u>4,408,988.93</u>
District:	<u>Cameron</u>	Public Road Access:	<u>County Route 62</u>	
Quadrangle:	<u>Glen Easton 7.5'</u>	Generally used farm name:	<u>CNX Land, LLC</u>	
Watershed:	<u>Grave Creek (HUC 10) & Laurel Run</u>			

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

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

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 Classified 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.

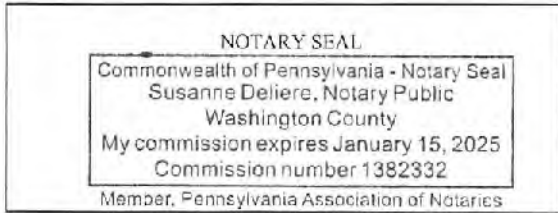
DEC 14 2021

01/28/2022

Certification of Notice is hereby given:

THEREFORE, I Amy L. Morris, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

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



Subscribed and sworn before me this 2nd day of December 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.

RECEIVED
 Office of Oil and Gas
 DEC 14 2021
 WV Department of
 Environmental Protection

WW-6A
(9-13)

API NO. 47- 051 -
OPERATOR WELL NO. Breckenridge S-25HM
Well Pad Name: Breckenridge

**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: 12/3/2021 **Date Permit Application Filed:** 12/6/2021

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

RECEIVED
Office of Oil and Gas

DEC 14 2021

Department of
Environmental Protection

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

RECEIVED
Office of Oil and Gas
DEC 14 2021

Well Location Restrictions

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

WV Department of
Environmental Protection

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

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

01/28/2022

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

01/28/2022

WW-6A
(8-13)

API NO. 47-051 - 02432
OPERATOR WELL NO. Breckenridge S-25HM
Well Pad Name: Breckenridge

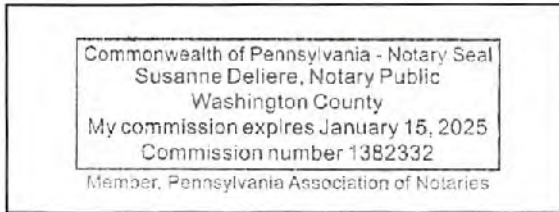
Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 2nd day of December, 2021
Susanne Deliere Notary Public
My Commission Expires 1/15/2025

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

01/28/2022

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 – 25HM
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.

<p>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</p>

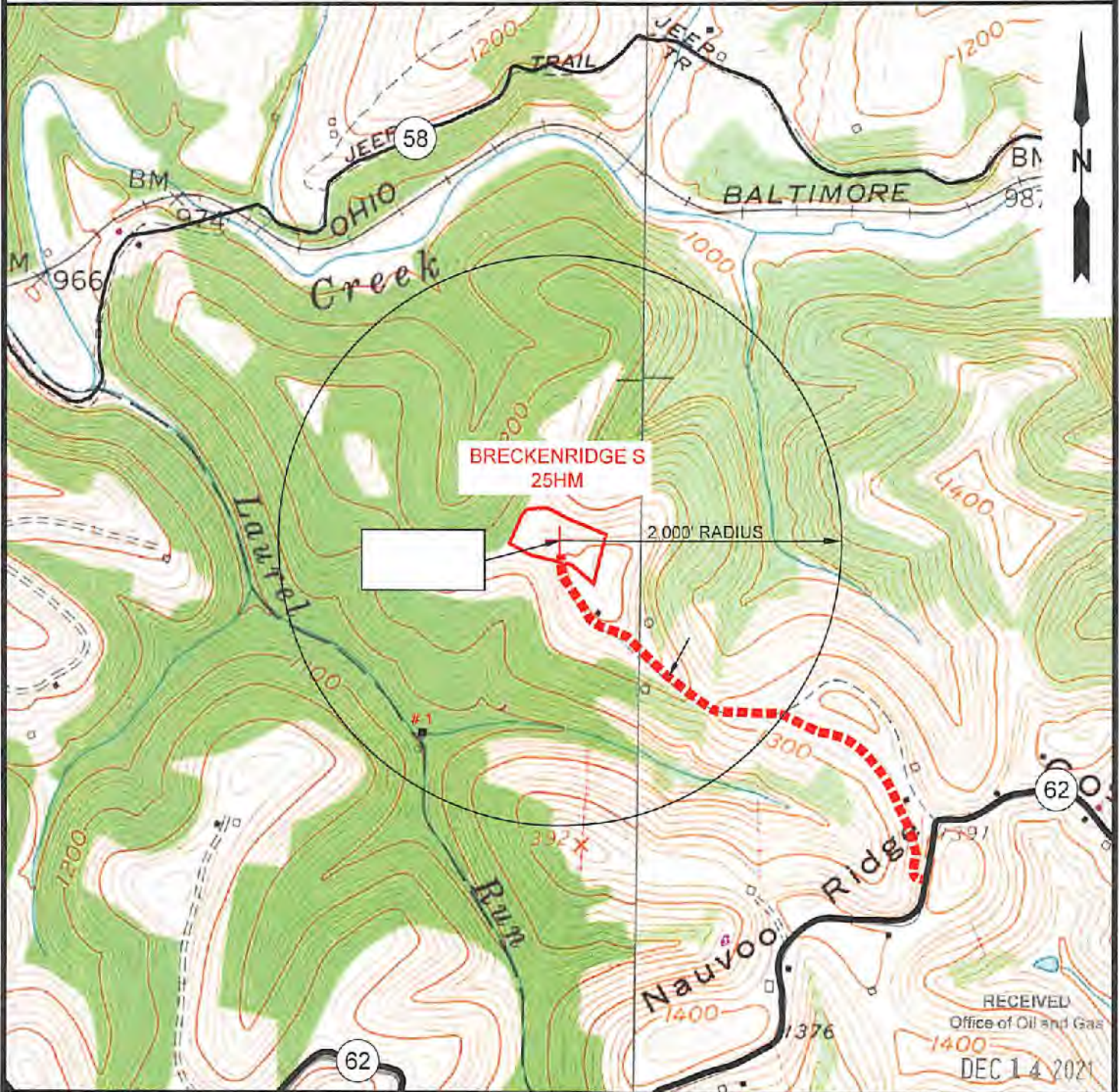
RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

01/28/2022

PROPOSED BRECKENRIDGE S - 25HM



**BRECKENRIDGE S
25HM**

2,000' RADIUS

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

WV Department of
Environmental Protection



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.246.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
sllw.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	CAMERON	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	9026	09/23/2021	1" = 1000'



**TUG HILL
OPERATING**

01/28/2022

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

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

Date of Notice: 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. & Annette R. Robinson

Address: 3516 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**

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; -80.62685846</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

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

Oil and Gas Privacy Notice:

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

01/28/2022

4705102482

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	✓

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

01/28/2022

WW-6A5
(1/12)

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: 12/03/2021 **Date Permit Application Filed:** 12/06/2021

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

CERTIFIED MAIL **HAND**
RETURN RECEIPT REQUESTED **DELIVERY**

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

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

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

Name: Kevin R. and Shelly Jo Evans *See Attached*
Address: 3820 New Bethel 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>531,933.48</u>
County: <u>Marshall</u>		Northing: <u>4,408,888.93</u>
District: <u>Cameron</u>	Public Road Access:	<u>CR 82</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 Southpointe Boulevard, Plaza II, Suite 200
Canonsburg, PA 15317
Facsimile: 724-338-2030

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

Oil and Gas Privacy Notice:

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

01/28/2022

4705102432

Additional Notice for WW-6A5

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

RECEIVED
Office of Oil and Gas
DEC 14 2021
WV Department of
Environmental Protection

01/28/2022



4705102482

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

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

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

November 17, 2021

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

Subject: DOH Permit for the Breckenridge Pad, Marshall County
Breckenridge S-25HM Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2020-0398 which has been issued to Tug Hill Operating LLC 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 STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

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

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

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

01/28/2022



TUG HILL

4705102432

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

RECEIVED
Office of Oil and Gas

DEC 14 2021

WV Department of
Environmental Protection

01/28/2022

Breckenridge Coal Exhibit

4705102432



RECEIVED
Office of Oil and Gas
DEC 14 2021
Department of
Environmental Protection

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: 304-845-1020
Cameron District, Marshall County, WV
Watershed: Middle Grave Creek Watershed
Site 911 Address:

Tug Hill Contact Number: 1-817-032-2400

WEST VIRGINIA
COUNTY MAP



PROJECT LOCATION

Exhibit A: Final Design: Issue for Permitting

Property Owner Information - Breckenridge Well Site

Owner	Acres	Value	Assessment	County	City	Map
West Virginia	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100
USDA Land LLC	10.7	2,300	2,300	Marshall	Marshall	100

WV Site Plan Question Form
Issued June 2023
Questions Based on WVDEP
Construction by Owner (CBO) 2023
and 2024 Site Plan

Access Road

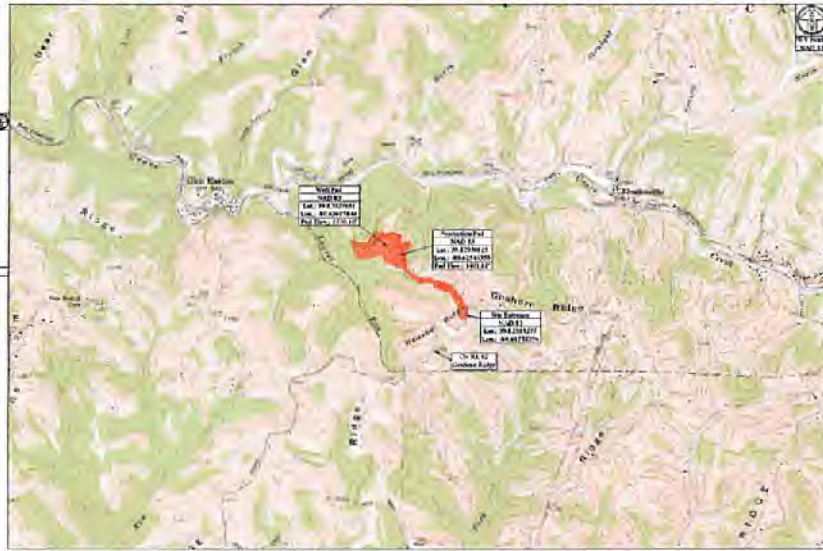
Access Road	Width	Length	Material	Notes
Access Road 1	10.0	100.0	Gravel	See Notes
Access Road 2	10.0	100.0	Gravel	See Notes
Access Road 3	10.0	100.0	Gravel	See Notes
Access Road 4	10.0	100.0	Gravel	See Notes
Access Road 5	10.0	100.0	Gravel	See Notes
Access Road 6	10.0	100.0	Gravel	See Notes
Access Road 7	10.0	100.0	Gravel	See Notes
Access Road 8	10.0	100.0	Gravel	See Notes
Access Road 9	10.0	100.0	Gravel	See Notes
Access Road 10	10.0	100.0	Gravel	See Notes

Disturbed Area

Disturbed Area	Area (Acres)	Notes
Disturbed Area 1	1.0	See Notes
Disturbed Area 2	1.0	See Notes
Disturbed Area 3	1.0	See Notes
Disturbed Area 4	1.0	See Notes
Disturbed Area 5	1.0	See Notes
Disturbed Area 6	1.0	See Notes
Disturbed Area 7	1.0	See Notes
Disturbed Area 8	1.0	See Notes
Disturbed Area 9	1.0	See Notes
Disturbed Area 10	1.0	See Notes

Breckenridge Well Site Quantities

Description	Quantity	Unit	Notes
Excavation	10,000	cu yd	See Notes
Gravel	10,000	cu yd	See Notes
Concrete	10,000	cu yd	See Notes
Rebar	10,000	lb	See Notes
Formwork	10,000	sq ft	See Notes
Other	10,000	various	See Notes



Site Location	Coordinates	Notes
Site 1	39.83027651, -80.62685846	See Notes
Site 2	39.83027651, -80.62685846	See Notes
Site 3	39.83027651, -80.62685846	See Notes
Site 4	39.83027651, -80.62685846	See Notes
Site 5	39.83027651, -80.62685846	See Notes
Site 6	39.83027651, -80.62685846	See Notes
Site 7	39.83027651, -80.62685846	See Notes
Site 8	39.83027651, -80.62685846	See Notes
Site 9	39.83027651, -80.62685846	See Notes
Site 10	39.83027651, -80.62685846	See Notes

Project Contacts

Tug Hill Operating
Executive Director: 304-845-1020
Operations Manager: 304-845-1020
Safety Manager: 304-845-1020
Environmental Manager: 304-845-1020
Construction Manager: 304-845-1020

WVDEP
Construction Division: 304-845-1020
Permitting Division: 304-845-1020
Regulatory Division: 304-845-1020

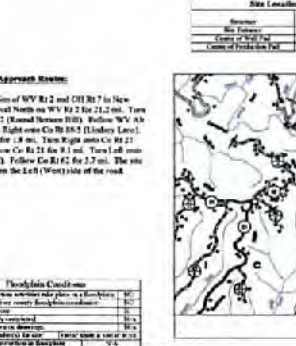
MISS UTILITY OF WEST VIRGINIA
1-800-245-4888
www.missutility.com

Approach Routes

From the intersection of WV Rt 2 and OH 70 to Tug Hill Operating, N.V. Special Needs on WV Rt 2 to 2.2 mi. Turn Right onto WV Rt 2 (Round Normal Drive) Follow WV Rt 2 for 2.2 mi. Turn Right onto Co Rd 85 (Lindsay Lane) Follow Co Rd 85 for 0.8 mi. Turn Right onto Co Rd 21 (Robson Edge) Follow Co Rd 21 for 0.1 mi. Turn Left onto Co Rd 82 (Stone Bottom) Follow Co Rd 82 for 2.7 mi. The site entrance will be on the left (west) side of the road.

Theodolite Conditions

Point	Coordinates	Notes
Point 1	39.83027651, -80.62685846	See Notes
Point 2	39.83027651, -80.62685846	See Notes
Point 3	39.83027651, -80.62685846	See Notes
Point 4	39.83027651, -80.62685846	See Notes
Point 5	39.83027651, -80.62685846	See Notes
Point 6	39.83027651, -80.62685846	See Notes
Point 7	39.83027651, -80.62685846	See Notes
Point 8	39.83027651, -80.62685846	See Notes
Point 9	39.83027651, -80.62685846	See Notes
Point 10	39.83027651, -80.62685846	See Notes



Well Location Identification

All well locations are shown with the following information:

- Well ID
- Well Depth
- Well Diameter
- Well Material
- Well Status
- Well Coordinates

APPROVED WVDEP OOG
1/25/2021

Sheet	Description
1	Cover Sheet
1-1	Submittal of Quantities
1-1A	Site Notes
2	Pre-Construction Site Conditions
3	Site Soil Map
4	Clearing Exhibit
5	Overall Site Views
6-9	EAS Plan View
10	Top Key Exhibit
11-14	Plan View
15-20	Cross Sections - Well Pad
21-24	Cross Sections - Access Road
25-26	Cross Sections - Landowner Access Road
27-28	Construction Exhibit
29	Landowner Disturbed Area Exhibit
30	Site Restoration
31-33	Construction Exhibit
34-35	Erosion and Sediment Control Details
36	Access Road Details
37	Well Details
38-39	Final Layout

TUG HILL OPERATING

THIS DOCUMENT PREPARED FOR TUG HILL OPERATING

KeyS

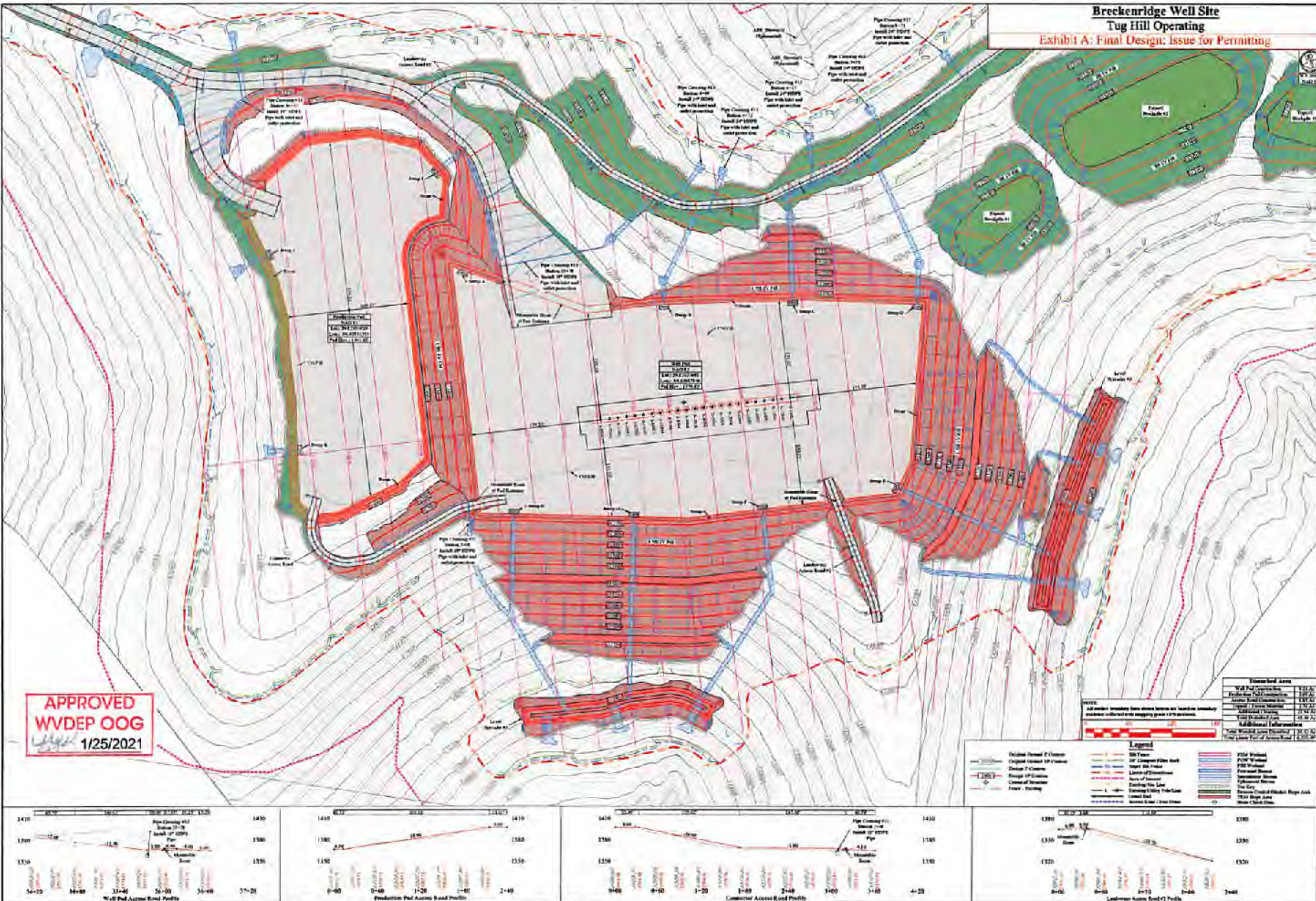
Breckenridge Well Site
Cameron District
Marshall County, WV

Date: 1/25/2021
Scale: As Shown
Designed by: J.S.
Drawn by: J.S.
Sheet 1 of 39

Breckenridge Well Site

Tug Hill Operating

Exhibit A: Final Design: Issue for Permitting



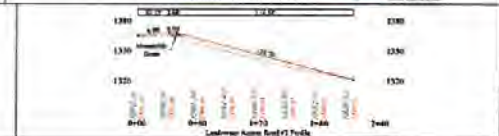
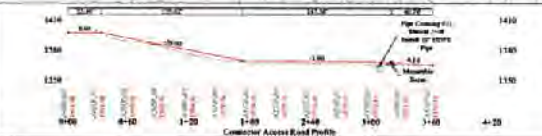
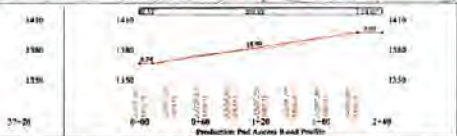
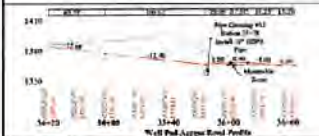
APPROVED WVDEP OOG
1/25/2021

Estimated Area	Area (Acres)
Well Pad Footprint	114.2
Production Pad Footprint	248.2
Access Road Footprint	153.5
Original Well Pad Footprint	274.2
Well Pad Footprint	129.2
Production Pad Footprint	278.2
Access Road Footprint	153.5
Original Well Pad Footprint	274.2
Well Pad Footprint	129.2
Production Pad Footprint	248.2
Access Road Footprint	153.5
Original Well Pad Footprint	274.2

NOTE: All border boundary lines shown herein are based on boundary information collected from mapping prior to this revision.



- Legend**
- Original Bound of Closure
 - Original Access IP Closure
 - Design IP Closure
 - Access of Closure
 - Final Footprint
 - IP Closure
 - Design of Closure
 - Access of Closure
 - Final Footprint
 - IP Closure
 - Design of Closure
 - Access of Closure
 - Final Footprint
 - IP Closure
 - Design of Closure
 - Access of Closure



TUG HILL OPERATING

THIS DOCUMENT IS PREPARED FOR TUG HILL OPERATING

CS

Breckenridge Well Site
Canaan District
Marshall County, WV

Scale: As Shown
Date: 01/25/2021
Sheet 1 of 26