



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

Thursday, May 12, 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 ANGELS ENVY N-13HU
47-051-02442-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: ANGELS ENVY N-13HU
Farm Name: CNX GAS COMPANY, LLC
U.S. WELL NUMBER: 47-051-02442-00-00
Horizontal 6A New Drill
Date Issued: 5/12/2022

Promoting a healthy environment.

05/13/2022



west virginia department of environmental protection

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

Randall M. Albert, Chairman
dep.wv.gov

April 26, 2022

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

RE: Application for Deep Well Permit – API #47-051-02442

COMPANY: Tug Hill Operating, LLC

FARM: CONSOL RCPC, LLC

Angels Envy N-13HU

COUNTY: Marshall

DISTRICT: Franklin

QUAD: Powhatan Point

The deep well review of the application for the above company is Approved to drill to Trenton for Point Pleasant completion.

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Comments to Notice of Deviation filed? No.
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners? Yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells: **yes
4. Provided a plat showing that the productive interval of the well meets the requirements of the Rules of the Commission W. Va. C.S.R. § 39-1-4.2.

Sincerely,

Susan Rose
Administrator

**Burch Ridge S-7HU 47-051-02194; Burch Ridge S-6HU 47-051-02193; Blake U-7H 47-051-01766; McMasters N-11HU 47-051-02317; McMasters S-16HU 47-051-02337; Greer 1N-12HU 47-051-01896; Greer 1N-11HU 47-051-01895; Greer 1N-10HU 47-051-01894; Greer 1N-5HU 47-051-01893; Hansen N-2HU 47-051-02174; Angels Envy N-15HU 47-051-02444; Angels Envy N-14HU 47-051-02443

05/13/2022

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.

05/13/2022

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

1) Well Operator: Tug Hill Operating, LLC 494510851 Marshall Franklin Powhatan Point 7
Operator ID County District Quadrangle

2) Operator's Well Number: Angels Envy N-13HU Well Pad Name: Armstrong

3) Farm Name/Surface Owner: CONSOL RCPC, LLC Public Road Access: Co. Rt. 29

4) Elevation, current ground: 1,279.12' Elevation, proposed post-construction: 1,279.12'

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

(b) If Gas Shallow _____ Deep
Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Point Pleasant is the target formation at a depth of 11,088' - 11,207', thickness of 119' and anticipated pressure of approx. 7,500 psi.

8) Proposed Total Vertical Depth: 11,357'

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 25,917'

11) Proposed Horizontal Leg Length: 14,164.46'

12) Approximate Fresh Water Strata Depths: 70; 876', 55 - 47-051-01621 (WR-35)

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

14) Approximate Saltwater Depths: 1,429', 1664 - 47-051-01621 (WR-35)

15) Approximate Coal Seam Depths: Sewickley Coal - 781' and Pittsburgh Coal - 870', 1160 < 1170 - 47-051-01621 (WR-35)

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

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

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

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120' ✓	259FT^3(CTS)
Fresh Water/Coal	20"	NEW	J55	106.5#	1,000'	1,000' ✓	1,613FT^3(CTS)
Intermediate 1	13 3/8"	NEW	J55	54.5#	2,752'	2,752' ✓	1,941FT^3(CTS)
Intermediate 2	9 5/8"	NEW	HPP110	47#	10,165'	10,165' ✓	3,320FT^3(CTS)
Production	5 1/2"	NEW	P110	23#	25,917'	25,917' ✓	6,110FT^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#		10,840' ✓	
Liners							

MDK 1/19/2022

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

PACKERS

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

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WW-6B
(10/14)

API NO. 47- 051 - _____
OPERATOR WELL NO. Angels Envy N-13HU
Well Pad Name: Armstrong

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

Drill through the Point Pleasant and TD Pilot Hole 150' into the Trenton. Log vertical section and run a solid cement plug back to proposed KOP (10,340'). 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 35,450,000 lb. proppant and 640,000 bbl of water. Max rate = 80bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 12.64 acres

22) Area to be disturbed for well pad only, less access road (acres): 3.27 acres

23) Describe centralizer placement for each casing string:

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

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

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

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

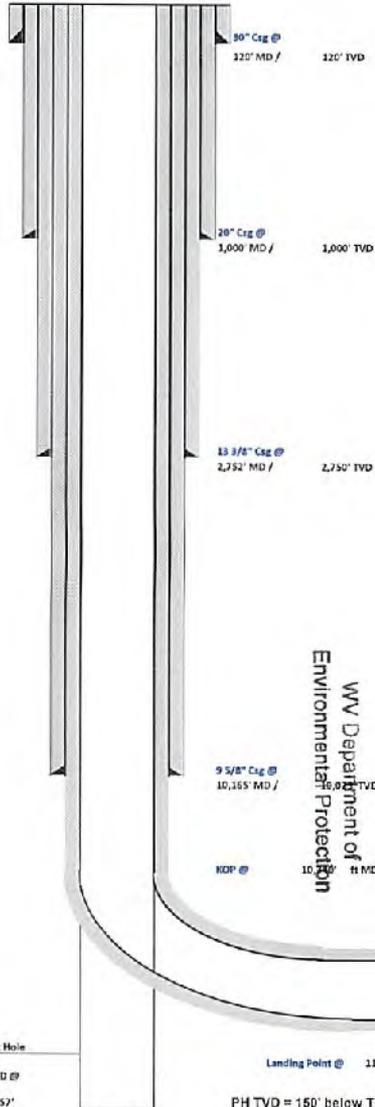


WELL NAME: Angels Envy N-13HU
 STATE: WV COUNTY: Marshall
 DISTRICT: Franklin
 DF Elev: 1,279' GL Elev: 1,279'
 TD: 25,917'
 TH Latitude: 39.75374748
 TH Longitude: -80.8083956
 BH Latitude: 39.751744
 BH Longitude: -80.845122

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	87.0'
Sewickley Coal	78.1'
Pittsburgh Coal	87.0'
Big Lime	2,041'
Berea	2,583'
Tully	6,383'
Marcellus	6,442'
Onondaga	6,492'
Salina	7,205'
Lockport	8,197'
Utica	10,833'
Point Pleasant	11,003'
Landing Depth	11,138'
Trenton	11,207'
Pilot Hole TD	11,357'

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'	0W	BW	Surface
Surface	26	20	3,000'	1,000'	105.5	J95	Surface
Intermediate 1	17 1/2	13 3/8	2,792'	2,750'	54.5	J95	Surface
Intermediate 2	12 1/4	9 5/8	10,165'	10,923'	47	HPP110	Surface
Production	8 1/2	5 1/2	25,917'	10,890'	23	HCP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
Type	Sacks	Class	Density (ppg)	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	1,740	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	2,103	A	15.6	Air	1 Centralizer every other joint
Intermediate 2	3,023	A	14.5	Air	1 Centralizer every other joint
Production	6,287	A	16.5	Air / SCRM	1 every other joint in lateral; 1 per joint in curve; 1 every other joint to surface



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Pilot Hole
PH TD @
11,357'

Landing Point @ 11,255' MD / 11,138' TVD
PH TVD = 150' below Trenton Top

Lateral TD @ 25,917' ft MD
10,890' ft TVD



Tug Hill Operating, LLC Casing and Cement Program

Angels Envy N-13HU

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	20"	J55	26"	1,000'	CTS
Intermediate 1	13 3/8"	J55	17 1/2"	2,752'	CTS
Intermediate 2	9 5/8"	HPP110	12 1/4"	10,165'	CTS
Production	5 1/2"	HCP110	8 1/2"	25,917'	CTS

Cement

- Conductor: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Conductor Cement mixed at 15.6 ppg, Y=1.2
- Surface: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Surface Cement mixed at 15.6 ppg, Y=1.2
- Intermediate 1: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.2
- Intermediate 2: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 14.5 ppg, Y=1.35
- Kick Off Plug: Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L - KOP Plug
- Production: 50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L – Production Cement mixed at 16.5 ppg, Y = 1.03

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Well: Angels Envy N-13 HU (slot J)
 Site: Armstrong /Angels Envy Pad
 Project: Marshall County, West Virginia NAD83 UTM 17N
 Design: rev6

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	V Sect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
3	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.000	0.00	KOP Begin 1 1/100' build
4	500.00	2.00	180.00	499.98	-3.49	0.00	1.00	180.000	-2.45	Begin 2.00° tangent
5	4802.66	2.00	180.00	4800.00	-153.65	0.00	0.00	0.000	-107.77	Begin 2 1/100' build/turn
6	5368.33	13.56	210.95	5369.28	-224.29	-36.12	2.00	35.826	-131.57	Begin 13.56° tangent
7	10340.16	13.56	210.95	10192.85	-1219.66	-633.28	0.00	0.000	-404.05	Begin 6 1/100' build/turn
8	11226.64	50.00	309.15	10954.86	-1084.73	-975.06	6.00	108.727	-65.80	Begin 8 1/100' build/turn
9	11755.06	91.00	320.41	11138.00	-737.46	-1315.99	8.00	16.872	420.78	Begin 91.00° lateral
9	25916.90	91.00	320.41	10890.00	10174.32	-10339.77	0.00	0.00014506.13		PBHLTD 25916.90 MD 10890.00 TVD

DESIGN TARGET DETAILS

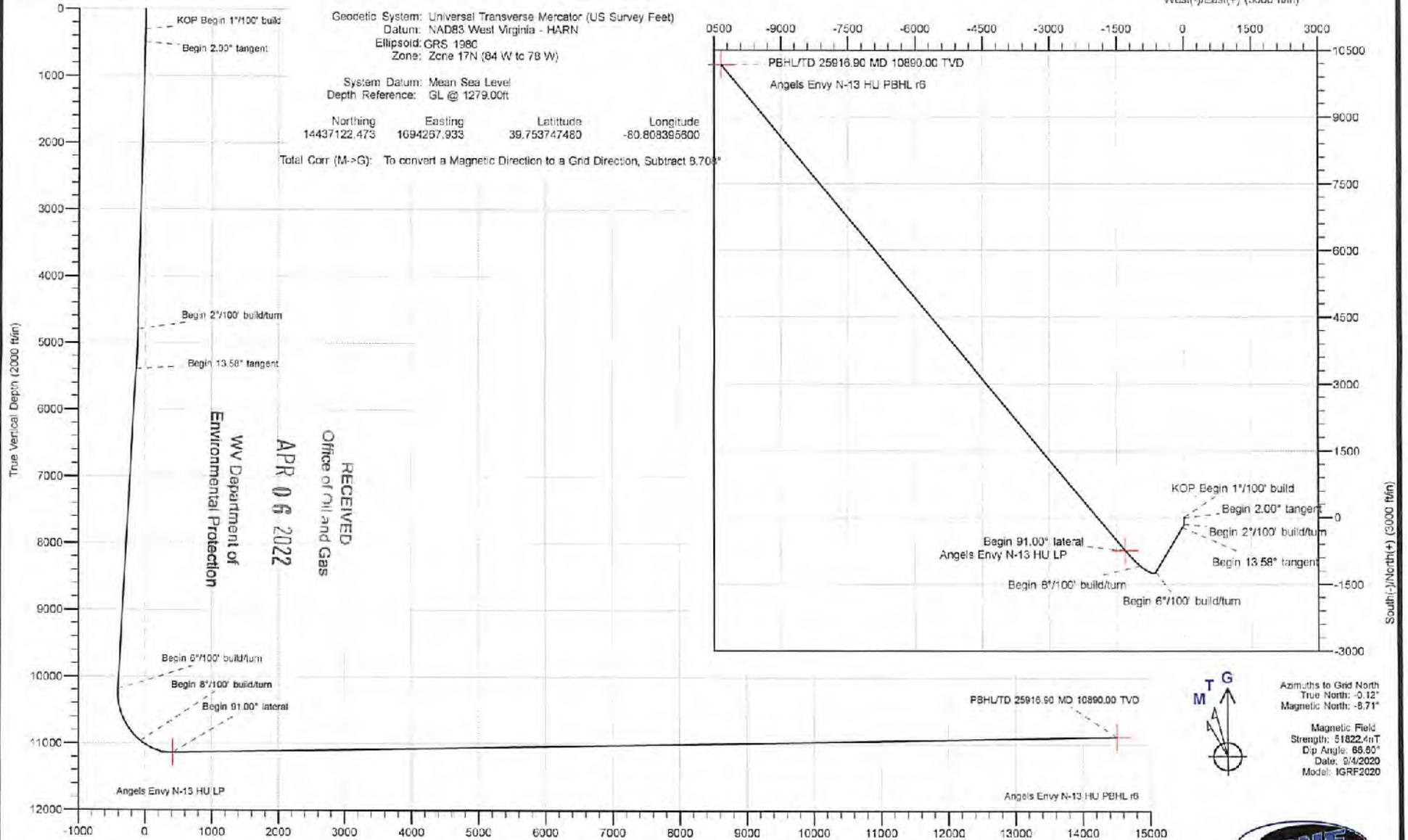
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
Angels Envy N-13 HU PBHL r6	10890.00	10174.32	-10339.77	14447296.776	1683928.183	39.781744000	-80.845122000
Angels Envy N-13 HU LP	11138.00	-737.46	-1315.99	14436395.016	1692951.949	39.751729840	-80.813083360

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 @ 1279.00ft

Northing	Easting	Latitude	Longitude
14437122.473	1694267.933	39.753747480	-80.809365600

Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.70°



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Azimuths to Grid North
 True North: -0.12°
 Magnetic North: -8.71°

Magnetic Field
 Strength: 51822.4nT
 Dip Angle: 85.60°
 Date: 8/4/2020
 Model: IGRF2020





Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Angels Envy N-13 HU (slot J)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1279.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1279.00ft
Site:	Armstrong /Angels Envy Pad	North Reference:	Grid
Well:	Angels Envy N-13 HU (slot J)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev6		

Project	Marshall County, West Virginia NAD83 UTM 17N		
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	Armstrong /Angels Envy Pad				
Site Position:		Northing:	14,437,151.336 usft	Latitude:	39.753826620
From:	Lat/Long	Easting:	1,694,289.428 usft	Longitude:	-80.808318900
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Angels Envy N-13 HU (slot J)					
Well Position	+N/-S	0.00 ft	Northing:	14,437,122.473 usft	Latitude:	39.753747480
	+E/-W	0.00 ft	Easting:	1,694,267.932 usft	Longitude:	-80.808395600
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	1,279.00 ft
Grid Convergence:						

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	9/4/2020	-8.586	66.603	51,822.41896536

Design	rev6			
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	314.54

Plan Survey Tool Program		Date		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	25,916.90	rev6 (Original Hole)	

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Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Angels Envy N-13 HU (slot J)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1279.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1279.00ft
Site:	Armstrong /Angels Envy Pad	North Reference:	Grid
Well:	Angels Envy N-13 HU (slot J)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev6		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (")	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.000	
500.00	2.00	180.00	499.96	-3.49	0.00	1.00	1.00	0.00	180.000	
4 802.66	2.00	180.00	4,800.00	-153.85	0.00	0.00	0.00	0.00	0.000	
5,396.33	13.58	210.96	5,389.28	-224.29	-36.12	2.00	1.94	5.20	35.828	
10,340.16	13.58	210.96	10,192.85	-1,219.66	-633.28	0.00	0.00	0.00	0.000	
11,226.64	50.00	309.15	10,964.86	-1,084.73	-975.06	6.00	4.11	11.08	108.727	
11,755.08	91.00	320.41	11,138.00	-737.46	-1,315.99	8.00	7.76	2.13	16.872	
25,916.60	91.00	320.41	10,890.00	10,174.32	-10,339.77	0.00	0.00	0.00	0.000	Angels Envy N-13 HU

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Planning Report - Geographic

Database: DB_Dec2220_v16
 Company: Tug Hill Operating LLC
 Project: Marshall County, West Virginia NAD83 UTM 17N
 Site: Armstrong /Angels Envy Pad
 Well: Angels Envy N-13 HU (slot J)
 Wellbore: Original Hole
 Design: rev5

Local Co-ordinate Reference: Well Angels Envy N-13 HU (slot J)
 TVD Reference: GL @ 1279.00ft
 MD Reference: GL @ 1279.00ft
 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	
0.00	0.00	0.00	0.00	0.00	0.00	14,437,122.473	1,694,267.932	39.753747480	-80.808395600	
100.00	0.00	0.00	100.00	0.00	0.00	14,437,122.473	1,694,267.932	39.753747480	-80.808395600	
200.00	0.00	0.00	200.00	0.00	0.00	14,437,122.473	1,694,267.932	39.753747480	-80.808395600	
300.00	0.00	0.00	300.00	0.00	0.00	14,437,122.473	1,694,267.932	39.753747480	-80.808395600	
KOP Begin 1°/100' build										
400.00	1.00	180.00	399.99	-0.87	0.00	14,437,121.600	1,694,267.932	39.753745084	-80.808395607	
500.00	2.00	180.00	499.98	-3.49	0.00	14,437,118.983	1,694,267.932	39.753737895	-80.808395627	
Begin 2.00° tangent										
600.00	2.00	180.00	599.90	-6.98	0.00	14,437,115.493	1,694,267.932	39.753728311	-80.808395654	
700.00	2.00	180.00	699.84	-10.47	0.00	14,437,112.003	1,694,267.932	39.753718726	-80.808395680	
800.00	2.00	180.00	799.78	-13.96	0.00	14,437,108.513	1,694,267.932	39.753709142	-80.808395707	
900.00	2.00	180.00	899.72	-17.45	0.00	14,437,105.023	1,694,267.932	39.753699557	-80.808395733	
1,000.00	2.00	180.00	999.65	-20.94	0.00	14,437,101.533	1,694,267.932	39.753689973	-80.808395760	
1,100.00	2.00	180.00	1,099.59	-24.43	0.00	14,437,098.043	1,694,267.932	39.753680388	-80.808395786	
1,200.00	2.00	180.00	1,199.53	-27.92	0.00	14,437,094.553	1,694,267.932	39.753670804	-80.808395813	
1,300.00	2.00	180.00	1,299.47	-31.41	0.00	14,437,091.063	1,694,267.932	39.753661220	-80.808395839	
1,400.00	2.00	180.00	1,399.41	-34.90	0.00	14,437,087.573	1,694,267.932	39.753651635	-80.808395866	
1,500.00	2.00	180.00	1,499.35	-38.39	0.00	14,437,084.083	1,694,267.932	39.753642051	-80.808395893	
1,600.00	2.00	180.00	1,599.29	-41.88	0.00	14,437,080.593	1,694,267.932	39.753632466	-80.808395919	
1,700.00	2.00	180.00	1,699.23	-45.37	0.00	14,437,077.103	1,694,267.932	39.753622882	-80.808395946	
1,800.00	2.00	180.00	1,799.17	-48.86	0.00	14,437,073.613	1,694,267.932	39.753613298	-80.808395972	
1,900.00	2.00	180.00	1,899.11	-52.35	0.00	14,437,070.123	1,694,267.932	39.753603713	-80.808396000	
2,000.00	2.00	180.00	1,999.05	-55.84	0.00	14,437,066.633	1,694,267.932	39.753594129	-80.808396025	
2,100.00	2.00	180.00	2,098.98	-59.33	0.00	14,437,063.144	1,694,267.932	39.753584544	-80.808396052	
2,200.00	2.00	180.00	2,198.92	-62.82	0.00	14,437,059.654	1,694,267.932	39.753574960	-80.808396078	
2,300.00	2.00	180.00	2,298.86	-66.31	0.00	14,437,056.164	1,694,267.932	39.753565376	-80.808396105	
2,400.00	2.00	180.00	2,398.80	-69.80	0.00	14,437,052.674	1,694,267.932	39.753555791	-80.808396132	
2,500.00	2.00	180.00	2,498.74	-73.29	0.00	14,437,049.184	1,694,267.932	39.753546207	-80.808396158	
2,600.00	2.00	180.00	2,598.68	-76.78	0.00	14,437,045.694	1,694,267.932	39.753536622	-80.808396185	
2,700.00	2.00	180.00	2,698.62	-80.27	0.00	14,437,042.204	1,694,267.932	39.753527038	-80.808396211	
2,800.00	2.00	180.00	2,798.56	-83.76	0.00	14,437,038.714	1,694,267.932	39.753517453	-80.808396238	
2,900.00	2.00	180.00	2,898.50	-87.25	0.00	14,437,035.224	1,694,267.932	39.753507869	-80.808396264	
3,000.00	2.00	180.00	2,998.44	-90.74	0.00	14,437,031.734	1,694,267.932	39.753498285	-80.808396291	
3,100.00	2.00	180.00	3,098.38	-94.23	0.00	14,437,028.244	1,694,267.932	39.753488700	-80.808396317	
3,200.00	2.00	180.00	3,198.31	-97.72	0.00	14,437,024.754	1,694,267.932	39.753479116	-80.808396344	
3,300.00	2.00	180.00	3,298.25	-101.21	0.00	14,437,021.264	1,694,267.932	39.753469531	-80.808396371	
3,400.00	2.00	180.00	3,398.19	-104.70	0.00	14,437,017.774	1,694,267.932	39.753459947	-80.808396397	
3,500.00	2.00	180.00	3,498.13	-108.19	0.00	14,437,014.284	1,694,267.932	39.753450363	-80.808396424	
3,600.00	2.00	180.00	3,598.07	-111.68	0.00	14,437,010.794	1,694,267.932	39.753440778	-80.808396450	
3,700.00	2.00	180.00	3,698.01	-115.17	0.00	14,437,007.304	1,694,267.932	39.753431194	-80.808396477	
3,800.00	2.00	180.00	3,797.95	-118.66	0.00	14,437,003.814	1,694,267.932	39.753421609	-80.808396503	
3,900.00	2.00	180.00	3,897.89	-122.15	0.00	14,437,000.324	1,694,267.932	39.753412025	-80.808396530	
4,000.00	2.00	180.00	3,997.83	-125.64	0.00	14,436,996.834	1,694,267.932	39.753402440	-80.808396556	
4,100.00	2.00	180.00	4,097.77	-129.13	0.00	14,436,993.344	1,694,267.932	39.753392856	-80.808396583	
4,200.00	2.00	180.00	4,197.71	-132.62	0.00	14,436,989.854	1,694,267.932	39.753383272	-80.808396609	
4,300.00	2.00	180.00	4,297.64	-136.11	0.00	14,436,986.364	1,694,267.932	39.753373687	-80.808396636	
4,400.00	2.00	180.00	4,397.58	-139.60	0.00	14,436,982.874	1,694,267.932	39.753364103	-80.808396663	
4,500.00	2.00	180.00	4,497.52	-143.09	0.00	14,436,979.384	1,694,267.932	39.753354518	-80.808396689	
4,600.00	2.00	180.00	4,597.46	-146.58	0.00	14,436,975.894	1,694,267.932	39.753344934	-80.808396716	
4,700.00	2.00	180.00	4,697.40	-150.07	0.00	14,436,972.404	1,694,267.932	39.753335350	-80.808396742	
4,802.66	2.00	180.00	4,800.00	-153.65	0.00	14,436,968.822	1,694,267.932	39.753325766	-80.808396770	
RECEIVED										
Office of the State Auditor and Gas										
4,900.00	3.76	197.67	4,897.21	-158.39	-0.97	14,436,964.086	1,694,267.932	39.753312509	-80.808400249	



Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Angels Envoy N-13 HU (slot J)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1279.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1279.00ft
Site:	Armstrong /Angels Envoy Pad	North Reference:	Grid
Well:	Angels Envoy N-13 HU (slot J)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev6		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,000.00	5.69	203.98	4,996.87	-166.04	-3.98	14,436,956.436	1,694,263.956	39.753291516	-80.808411014	
5,100.00	7.66	207.07	5,096.19	-176.50	-9.02	14,436,945.972	1,694,258.908	39.753282810	-80.808429052	
5,200.00	9.64	208.90	5,195.05	-189.76	-16.10	14,436,932.708	1,694,251.829	39.753226425	-80.808454341	
5,300.00	11.63	210.11	5,293.32	-205.61	-25.21	14,436,916.661	1,694,242.726	39.753182407	-80.808486850	
5,398.33	13.56	210.96	5,389.28	-224.29	-36.12	14,436,898.184	1,694,231.812	39.753131729	-80.808525821	
Begin 13.58° tangent										
5,400.00	13.58	210.96	5,390.90	-224.62	-36.32	14,436,897.849	1,694,231.611	39.753130609	-80.808526540	
5,500.00	13.58	210.96	5,488.10	-244.77	-46.41	14,436,877.707	1,694,219.527	39.753075584	-80.808568687	
5,600.00	13.58	210.96	5,585.31	-264.91	-60.49	14,436,857.565	1,694,207.444	39.753020320	-80.808612834	
5,700.00	13.58	210.96	5,682.51	-285.05	-72.57	14,436,837.424	1,694,195.360	39.752955076	-80.808655981	
5,800.00	13.58	210.96	5,779.71	-305.19	-84.66	14,436,817.282	1,694,183.276	39.752909832	-80.808699127	
5,900.00	13.58	210.96	5,876.91	-325.33	-96.74	14,436,797.140	1,694,171.192	39.752854588	-80.808742274	
6,000.00	13.58	210.96	5,974.12	-345.46	-106.82	14,436,776.999	1,694,159.108	39.752799344	-80.808785421	
6,100.00	13.58	210.96	6,071.32	-365.62	-120.91	14,436,756.857	1,694,147.025	39.752744100	-80.808828567	
6,200.00	13.58	210.96	6,168.52	-385.76	-132.99	14,436,736.715	1,694,134.941	39.752688856	-80.808871714	
6,300.00	13.58	210.96	6,265.72	-405.90	-145.08	14,436,716.574	1,694,122.857	39.752633611	-80.808914860	
6,400.00	13.58	210.96	6,362.93	-426.04	-157.16	14,436,696.432	1,694,110.773	39.752578367	-80.808958006	
6,500.00	13.58	210.96	6,460.13	-446.18	-169.24	14,436,676.290	1,694,098.690	39.752523123	-80.809001152	
6,600.00	13.58	210.96	6,557.33	-466.33	-181.33	14,436,656.149	1,694,086.606	39.752467879	-80.809044299	
6,700.00	13.58	210.96	6,654.53	-486.47	-193.41	14,436,636.007	1,694,074.522	39.752412635	-80.809087445	
6,800.00	13.58	210.96	6,751.74	-506.61	-205.49	14,436,615.865	1,694,062.438	39.752357390	-80.809130591	
6,900.00	13.58	210.96	6,848.94	-526.75	-217.58	14,436,595.724	1,694,050.355	39.752302146	-80.809173737	
7,000.00	13.58	210.96	6,946.14	-546.89	-229.66	14,436,575.582	1,694,038.271	39.752246902	-80.809216882	
7,100.00	13.58	210.96	7,043.34	-567.03	-241.75	14,436,555.440	1,694,026.187	39.752191657	-80.809260028	
7,200.00	13.58	210.96	7,140.54	-587.18	-253.83	14,436,535.299	1,694,014.103	39.752136413	-80.809303174	
7,300.00	13.58	210.96	7,237.75	-607.32	-265.91	14,436,515.157	1,694,002.020	39.752081169	-80.809346320	
7,400.00	13.58	210.96	7,334.95	-627.46	-278.00	14,436,495.015	1,693,989.936	39.752025924	-80.809389465	
7,500.00	13.58	210.96	7,432.15	-647.60	-290.08	14,436,474.874	1,693,977.852	39.751970680	-80.809432611	
7,600.00	13.58	210.96	7,529.35	-667.74	-302.16	14,436,454.732	1,693,965.768	39.751915436	-80.809475756	
7,700.00	13.58	210.96	7,626.56	-687.88	-314.25	14,436,434.590	1,693,953.684	39.751860191	-80.809518902	
7,800.00	13.58	210.96	7,723.76	-708.03	-326.33	14,436,414.449	1,693,941.601	39.751804947	-80.809562047	
7,900.00	13.58	210.96	7,820.96	-728.17	-338.42	14,436,394.307	1,693,929.517	39.751749702	-80.809605192	
8,000.00	13.58	210.96	7,918.16	-748.31	-350.50	14,436,374.165	1,693,917.433	39.751694458	-80.809648337	
8,100.00	13.58	210.96	8,015.37	-768.45	-362.58	14,436,354.024	1,693,905.349	39.751639213	-80.809691482	
8,200.00	13.58	210.96	8,112.57	-788.59	-374.67	14,436,333.882	1,693,893.266	39.751583969	-80.809734628	
8,300.00	13.58	210.96	8,209.77	-808.73	-386.75	14,436,313.740	1,693,881.182	39.751528724	-80.809777772	
8,400.00	13.58	210.96	8,306.97	-828.88	-398.84	14,436,293.599	1,693,869.098	39.751473480	-80.809820917	
8,500.00	13.58	210.96	8,404.17	-849.02	-410.92	14,436,273.457	1,693,857.014	39.751418235	-80.809864062	
8,600.00	13.58	210.96	8,501.38	-869.16	-423.00	14,436,253.315	1,693,844.931	39.751362991	-80.809907207	
8,700.00	13.58	210.96	8,598.58	-889.30	-435.09	14,436,233.174	1,693,832.847	39.751307746	-80.809950352	
8,800.00	13.58	210.96	8,695.78	-909.44	-447.17	14,436,213.032	1,693,820.763	39.751252501	-80.809993498	
8,900.00	13.58	210.96	8,792.98	-929.58	-459.25	14,436,192.890	1,693,808.679	39.751197257	-80.810036641	
9,000.00	13.58	210.96	8,890.19	-949.73	-471.34	14,436,172.749	1,693,796.596	39.751142012	-80.810079785	
9,100.00	13.58	210.96	8,987.39	-969.87	-483.42	14,436,152.607	1,693,784.512	39.751086767	-80.810122930	
9,200.00	13.58	210.96	9,084.59	-990.01	-495.51	14,436,132.465	1,693,772.428	39.751031523	-80.810166074	
9,300.00	13.58	210.96	9,181.79	-1,010.15	-507.59	14,436,112.324	1,693,760.344	39.750976278	-80.810209218	
9,400.00	13.58	210.96	9,279.00	-1,030.29	-519.67	14,436,092.182	1,693,748.260	39.750921033	-80.810252363	
9,500.00	13.58	210.96	9,376.20	-1,050.43	-531.76	14,436,072.040	1,693,736.177	39.750865789	-80.810295507	
9,600.00	13.58	210.96	9,473.40	-1,070.58	-543.84	14,436,051.899	1,693,724.093	39.750810544	-80.810338651	
9,700.00	13.58	210.96	9,570.60	-1,090.72	-555.92	14,436,031.757	1,693,712.009	39.750755299	-80.810381795	
9,800.00	13.58	210.96	9,667.81	-1,110.86	-568.01	14,436,011.615	1,693,699.925	39.750700054	-80.810424939	
9,900.00	13.58	210.96	9,765.01	-1,131.00	-580.09	14,435,991.474	1,693,687.841	39.750644810	-80.810468083	
10,000.00	13.58	210.96	9,862.21	-1,151.14	-592.18	14,435,971.332	1,693,675.757	39.750589565	-80.810511226	
10,100.00	13.58	210.96	9,959.41	-1,171.29	-604.26	14,435,951.190	1,693,663.674	39.750534320	-80.810554370	

RESERVED
Office of West Virginia Gas



Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Angels Envry N-13 HU (slot J)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1279.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1279.00ft
Site:	Armstrong /Angels Envry Pad	North Reference:	Grid
Well:	Angels Envry N-13 HU (slot J)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev8		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,200.00	13.58	210.96	10,056.61	-1,191.43	-616.34	14,435,931.049	1,693,651.590	39.750479075	-80.810597514
10,300.00	13.58	210.96	10,153.82	-1,211.57	-628.43	14,435,910.907	1,693,639.507	39.750423830	-80.810640657
10,340.16	13.58	210.96	10,192.65	-1,219.66	-633.28	14,435,902.818	1,693,634.654	39.750401645	-80.810657983
Begin 6°/100' build/turn									
10,350.00	13.41	213.37	10,202.42	-1,221.60	-634.50	14,435,900.874	1,693,633.432	39.750396313	-80.810662346
10,400.00	12.88	226.39	10,251.12	-1,230.29	-641.73	14,435,892.188	1,693,626.206	39.750372500	-80.810688119
10,450.00	13.03	239.79	10,299.66	-1,236.97	-650.84	14,435,885.506	1,693,617.299	39.750354202	-80.810719881
10,500.00	13.83	252.26	10,348.50	-1,241.63	-661.20	14,435,880.848	1,693,608.733	39.750341489	-80.810757467
10,550.00	15.18	282.97	10,396.92	-1,244.25	-673.40	14,435,878.225	1,693,594.539	39.750334338	-80.810800892
10,600.00	16.96	271.74	10,444.97	-1,244.83	-667.19	14,435,877.646	1,693,580.749	39.750332826	-80.810849959
10,650.00	19.03	278.77	10,492.53	-1,243.36	-702.53	14,435,879.111	1,693,565.401	39.750336939	-80.810904552
10,700.00	21.32	284.41	10,539.46	-1,239.86	-719.40	14,435,882.617	1,693,548.538	39.750346665	-80.810984522
10,750.00	23.76	288.97	10,585.64	-1,234.32	-737.73	14,435,888.154	1,693,530.205	39.750361977	-80.811029705
10,800.00	26.31	292.71	10,630.94	-1,226.77	-757.48	14,435,895.707	1,693,510.454	39.750382834	-80.811099922
10,850.00	28.94	295.82	10,675.24	-1,217.22	-778.80	14,435,905.255	1,693,489.337	39.750409178	-80.811174980
10,900.00	31.63	298.45	10,718.41	-1,205.70	-801.02	14,435,916.772	1,693,466.913	39.750440936	-80.811254674
10,950.00	34.37	300.70	10,760.34	-1,192.25	-824.89	14,435,930.226	1,693,443.244	39.750478023	-80.811338784
11,000.00	37.14	302.66	10,800.92	-1,176.89	-849.54	14,435,945.581	1,693,418.393	39.750520336	-80.811427083
11,050.00	39.95	304.38	10,840.02	-1,159.68	-875.50	14,435,962.794	1,693,392.430	39.750567759	-80.811519326
11,100.00	42.77	305.91	10,877.55	-1,140.66	-902.51	14,435,981.819	1,693,365.426	39.750620162	-80.811615261
11,150.00	45.61	307.28	10,913.39	-1,119.87	-930.48	14,436,002.603	1,693,337.454	39.750677403	-80.811714628
11,200.00	48.47	308.53	10,947.46	-1,097.39	-959.34	14,436,025.089	1,693,308.591	39.750739322	-80.811817147
11,226.64	50.00	309.15	10,964.86	-1,064.73	-975.06	14,436,037.745	1,693,292.874	39.750774171	-80.811872971
Begin 8°/100' build/turn									
11,250.00	51.79	309.84	10,979.59	-1,073.20	-989.04	14,436,049.273	1,693,278.890	39.750805910	-80.811922640
11,300.00	55.83	311.21	11,009.18	-1,047.01	-1,019.66	14,436,075.484	1,693,248.270	39.750878015	-80.812031387
11,350.00	59.49	312.46	11,035.99	-1,018.86	-1,051.09	14,436,103.612	1,693,216.842	39.750955498	-80.812142994
11,400.00	63.36	313.61	11,059.90	-988.90	-1,083.18	14,436,133.579	1,693,184.759	39.751037982	-80.812256917
11,450.00	67.24	314.69	11,080.79	-957.26	-1,115.76	14,436,165.220	1,693,152.178	39.751125064	-80.812372600
11,500.00	71.13	315.71	11,098.55	-924.10	-1,148.68	14,436,198.390	1,693,119.257	39.751216320	-80.812489481
11,550.00	75.02	316.68	11,113.11	-889.58	-1,181.76	14,436,232.897	1,693,086.157	39.751311307	-80.812606990
11,600.00	78.91	317.62	11,124.39	-853.87	-1,214.90	14,436,268.605	1,693,053.039	39.751409560	-80.812724555
11,650.00	82.81	318.53	11,132.33	-817.15	-1,247.87	14,436,305.328	1,693,020.064	39.751510602	-80.812841602
11,700.00	86.71	319.43	11,135.90	-779.59	-1,280.54	14,436,342.886	1,692,987.394	39.751613940	-80.812957561
11,750.00	90.61	320.32	11,138.07	-741.37	-1,312.75	14,436,381.102	1,692,955.188	39.751719071	-80.813071869
11,755.08	91.00	320.41	11,138.00	-737.46	-1,315.99	14,436,365.012	1,692,951.947	39.751729329	-80.813083364
Begin 91.00° lateral									
11,800.00	91.00	320.41	11,137.21	-702.85	-1,344.61	14,436,419.625	1,692,923.324	39.751825049	-80.813184947
11,900.00	91.00	320.41	11,135.46	-625.80	-1,408.33	14,436,498.875	1,692,859.605	39.752037017	-80.813411083
12,000.00	91.00	320.41	11,133.71	-548.75	-1,472.05	14,436,573.726	1,692,795.686	39.752248965	-80.813637220
12,100.00	91.00	320.41	11,131.96	-471.70	-1,535.77	14,436,650.776	1,692,732.167	39.752460952	-80.813863358
12,200.00	91.00	320.41	11,130.20	-394.65	-1,599.49	14,436,727.827	1,692,668.448	39.752672919	-80.814089498
12,300.00	91.00	320.41	11,128.45	-317.60	-1,663.21	14,436,804.877	1,692,604.729	39.752884866	-80.814315636
12,400.00	91.00	320.41	11,126.70	-240.55	-1,726.93	14,436,881.928	1,692,541.010	39.753096852	-80.814541782
12,500.00	91.00	320.41	11,124.95	-163.49	-1,790.65	14,436,958.979	1,692,477.291	39.753308818	-80.814767926
12,600.00	91.00	320.41	11,123.20	-86.44	-1,854.36	14,437,036.029	1,692,413.572	39.753520783	-80.814994071
12,700.00	91.00	320.41	11,121.45	-9.39	-1,918.08	14,437,113.080	1,692,349.853	39.753732748	-80.815220218
12,800.00	91.00	320.41	11,119.70	67.66	-1,981.80	14,437,190.130	1,692,286.134	39.753944712	-80.815446366
12,900.00	91.00	320.41	11,117.95	144.71	-2,045.52	14,437,267.181	1,692,222.415	39.754156676	-80.815672515
13,000.00	91.00	320.41	11,116.20	221.76	-2,109.24	14,437,344.231	1,692,158.696	39.754368639	-80.815898665
13,100.00	91.00	320.41	11,114.44	298.81	-2,172.96	14,437,421.282	1,692,094.977	39.754580602	-80.816124818
13,200.00	91.00	320.41	11,112.69	375.86	-2,236.68	14,437,498.332	1,692,031.258	39.754792565	-80.816350972
13,300.00	91.00	320.41	11,110.94	452.91	-2,300.40	14,437,575.383	1,691,967.539	39.755004527	-80.816577127



Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Angels Envoy N-13 HU (slot J)
Company:	Tug Hill Operating LLC	TVD Reference:	CL @ 1279.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	CL @ 1279.00ft
Site:	Armstrong /Angels Envoy Pad	North Reference:	Grid
Well:	Angels Envoy N-13 HU (slot J)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev6		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,400.00	91.00	320.41	11,109.15	529.96	+2,364.12	14,437,652.434	1,691,903.621	39.755216489	-80.816803283
13,500.00	91.00	320.41	11,107.44	607.01	-2,427.84	14,437,729.484	1,691,840.102	39.755428450	-80.817029441
13,600.00	91.00	320.41	11,105.69	684.06	-2,491.55	14,437,806.535	1,691,776.393	39.755640411	-80.817255500
13,700.00	91.00	320.41	11,103.94	761.11	-2,555.27	14,437,883.585	1,691,712.654	39.755852371	-80.817481761
13,800.00	91.00	320.41	11,102.19	838.16	-2,618.99	14,437,960.636	1,691,648.945	39.756064331	-80.817707923
13,900.00	91.00	320.41	11,100.43	915.22	-2,682.71	14,438,037.686	1,691,585.226	39.756276290	-80.817934086
14,000.00	91.00	320.41	11,098.68	992.27	-2,746.43	14,438,114.737	1,691,521.507	39.756488249	-80.818160251
14,100.00	91.00	320.41	11,096.93	1,069.32	-2,810.15	14,438,191.787	1,691,457.788	39.756702208	-80.818386417
14,200.00	91.00	320.41	11,095.18	1,146.37	-2,873.87	14,438,268.838	1,691,394.069	39.756916166	-80.818612584
14,300.00	91.00	320.41	11,093.43	1,223.42	-2,937.59	14,438,345.889	1,691,330.350	39.757124124	-80.818838753
14,400.00	91.00	320.41	11,091.68	1,300.47	-3,001.31	14,438,422.939	1,691,266.631	39.757336081	-80.819064923
14,500.00	91.00	320.41	11,089.93	1,377.52	-3,065.03	14,438,499.990	1,691,202.912	39.757548038	-80.819291095
14,600.00	91.00	320.41	11,088.18	1,454.57	-3,128.75	14,438,577.040	1,691,139.193	39.757759994	-80.819517268
14,700.00	91.00	320.41	11,086.43	1,531.62	-3,192.46	14,438,654.091	1,691,075.474	39.757971950	-80.819743442
14,800.00	91.00	320.41	11,084.67	1,608.67	-3,256.18	14,438,731.141	1,691,011.755	39.758183905	-80.819969618
14,900.00	91.00	320.41	11,082.92	1,685.72	-3,319.90	14,438,808.192	1,690,948.036	39.758395860	-80.820195795
15,000.00	91.00	320.41	11,081.17	1,762.77	-3,383.62	14,438,885.242	1,690,884.317	39.758607815	-80.820421974
15,100.00	91.00	320.41	11,079.42	1,839.82	-3,447.34	14,438,962.293	1,690,820.598	39.758819779	-80.820648154
15,200.00	91.00	320.41	11,077.67	1,916.87	-3,511.06	14,439,039.344	1,690,756.879	39.759031722	-80.820874335
15,300.00	91.00	320.41	11,075.92	1,993.93	-3,574.78	14,439,116.394	1,690,693.161	39.759243676	-80.821100518
15,400.00	91.00	320.41	11,074.17	2,070.98	-3,638.50	14,439,193.445	1,690,629.442	39.759455628	-80.821326702
15,500.00	91.00	320.41	11,072.42	2,148.03	-3,702.22	14,439,270.495	1,690,565.723	39.759667581	-80.821552887
15,600.00	91.00	320.41	11,070.67	2,225.08	-3,765.94	14,439,347.546	1,690,502.004	39.759879533	-80.821779074
15,700.00	91.00	320.41	11,068.91	2,302.13	-3,829.66	14,439,424.596	1,690,438.285	39.760091484	-80.822005263
15,800.00	91.00	320.41	11,067.16	2,379.18	-3,893.37	14,439,501.647	1,690,374.566	39.760303435	-80.822231452
15,900.00	91.00	320.41	11,065.41	2,456.23	-3,957.09	14,439,578.697	1,690,310.847	39.760515385	-80.822457643
16,000.00	91.00	320.41	11,063.66	2,533.28	-4,020.81	14,439,655.748	1,690,247.128	39.760727336	-80.822683836
16,100.00	91.00	320.41	11,061.91	2,610.33	-4,084.53	14,439,732.799	1,690,183.409	39.760939284	-80.822910029
16,200.00	91.00	320.41	11,060.16	2,687.38	-4,148.25	14,439,809.849	1,690,119.690	39.761151235	-80.823136221
16,300.00	91.00	320.41	11,058.41	2,764.43	-4,211.97	14,439,886.900	1,690,055.971	39.761363182	-80.823362421
16,400.00	91.00	320.41	11,056.66	2,841.48	-4,275.69	14,439,963.950	1,689,992.252	39.761575130	-80.823588619
16,500.00	91.00	320.41	11,054.90	2,918.53	-4,339.41	14,440,041.001	1,689,928.533	39.761787078	-80.823814818
16,600.00	91.00	320.41	11,053.15	2,995.58	-4,403.13	14,440,118.051	1,689,864.814	39.761999026	-80.824041019
16,700.00	91.00	320.41	11,051.40	3,072.64	-4,466.85	14,440,195.102	1,689,801.095	39.762210973	-80.824267221
16,800.00	91.00	320.41	11,049.65	3,149.69	-4,530.57	14,440,272.152	1,689,737.376	39.762422919	-80.824493425
16,900.00	91.00	320.41	11,047.90	3,226.74	-4,594.28	14,440,349.203	1,689,673.657	39.762634865	-80.824719630
17,000.00	91.00	320.41	11,046.15	3,303.79	-4,658.00	14,440,426.254	1,689,609.938	39.762846811	-80.824945836
17,100.00	91.00	320.41	11,044.40	3,380.84	-4,721.72	14,440,503.304	1,689,546.219	39.763058756	-80.825172044
17,200.00	91.00	320.41	11,042.65	3,457.89	-4,785.44	14,440,580.355	1,689,482.501	39.763270701	-80.825398253
17,300.00	91.00	320.41	11,040.90	3,534.94	-4,849.16	14,440,657.405	1,689,418.782	39.763482645	-80.825624463
17,400.00	91.00	320.41	11,039.14	3,611.99	-4,912.88	14,440,734.456	1,689,355.063	39.763694589	-80.825850675
17,500.00	91.00	320.41	11,037.39	3,689.04	-4,976.60	14,440,811.506	1,689,291.344	39.763906532	-80.826076888
17,600.00	91.00	320.41	11,035.64	3,766.09	-5,040.32	14,440,888.557	1,689,227.625	39.764118475	-80.826303103
17,700.00	91.00	320.41	11,033.89	3,843.14	-5,104.04	14,440,965.607	1,689,163.906	39.764330418	-80.826529319
17,800.00	91.00	320.41	11,032.14	3,920.19	-5,167.76	14,441,042.658	1,689,100.187	39.764542360	-80.826755536
17,900.00	91.00	320.41	11,030.39	3,997.24	-5,231.48	14,441,119.709	1,689,036.468	39.764754301	-80.826981755
18,000.00	91.00	320.41	11,028.64	4,074.29	-5,295.19	14,441,196.759	1,688,972.749	39.764966243	-80.827207975
18,100.00	91.00	320.41	11,026.89	4,151.35	-5,358.91	14,441,273.810	1,688,909.030	39.765178183	-80.827434196
18,200.00	91.00	320.41	11,025.14	4,228.40	-5,422.63	14,441,350.860	1,688,845.311	39.765390124	-80.827660419
18,300.00	91.00	320.41	11,023.38	4,305.45	-5,486.35	14,441,427.911	1,688,781.592	39.765602063	-80.827886644
18,400.00	91.00	320.41	11,021.63	4,382.50	-5,550.07	14,441,504.961	1,688,717.873	39.765814003	-80.828112869
18,500.00	91.00	320.41	11,019.88	4,459.55	-5,613.79	14,441,582.012	1,688,654.154	39.766025942	-80.828339096
18,600.00	91.00	320.41	11,018.13	4,536.60	-5,677.51	14,441,659.062	1,688,590.435	39.766237880	-80.828565325
18,700.00	91.00	320.41	11,016.38	4,613.65	-5,741.23	14,441,736.113	1,688,526.716	39.766449818	-80.828791555

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APR 16 2022



Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Angels Envy N-13 HU (slot J)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1278.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1279.00ft
Site:	Armstrong (Angels Envy Pad)	North Reference:	Grid
Well:	Angels Envy N-13 HU (slot J)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev8		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
18,800.00	91.00	320.41	11,014.53	4,690.70	-5,804.95	14,441,813.164	1,588,462.997	39.765861756	-80.829017796
18,900.00	91.00	320.41	11,012.88	4,767.75	-5,888.67	14,441,890.214	1,588,399.278	39.765873693	-80.829244019
19,000.00	91.00	320.41	11,011.73	4,844.80	-5,932.39	14,441,967.265	1,588,335.559	39.767085630	-80.829470253
19,100.00	91.00	320.41	11,009.37	4,921.85	-5,996.10	14,442,044.315	1,588,271.841	39.767297566	-80.829696486
19,200.00	91.00	320.41	11,007.62	4,989.90	-6,059.02	14,442,121.366	1,588,208.122	39.767509502	-80.829922725
19,300.00	91.00	320.41	11,005.87	5,075.95	-6,123.54	14,442,198.416	1,588,144.403	39.767721457	-80.830146963
19,400.00	91.00	320.41	11,004.12	5,153.00	-6,187.26	14,442,275.467	1,588,080.684	39.767933372	-80.830375202
19,500.00	91.00	320.41	11,002.37	5,230.06	-6,250.98	14,442,352.517	1,588,016.965	39.768145307	-80.830501443
19,600.00	91.00	320.41	11,000.62	5,307.11	-6,314.70	14,442,429.568	1,587,953.246	39.768357241	-80.830827586
19,700.00	91.00	320.41	10,998.87	5,384.16	-6,378.42	14,442,506.619	1,587,889.527	39.768569174	-80.831053829
19,800.00	91.00	320.41	10,997.12	5,461.21	-6,442.14	14,442,583.669	1,587,825.808	39.768781107	-80.831280175
19,900.00	91.00	320.41	10,995.37	5,538.26	-6,505.86	14,442,660.720	1,587,762.089	39.768993040	-80.831506421
20,000.00	91.00	320.41	10,993.61	5,615.31	-6,569.58	14,442,737.770	1,587,698.370	39.769204972	-80.831732669
20,100.00	91.00	320.41	10,991.86	5,692.36	-6,633.30	14,442,814.821	1,587,634.651	39.769416904	-80.831958918
20,200.00	91.00	320.41	10,990.11	5,769.41	-6,697.01	14,442,891.871	1,587,570.932	39.769628836	-80.832185169
20,300.00	91.00	320.41	10,988.36	5,846.46	-6,760.73	14,442,968.922	1,587,507.213	39.769840766	-80.832411421
20,400.00	91.00	320.41	10,986.61	5,923.51	-6,824.45	14,443,045.972	1,587,443.494	39.770052697	-80.832637674
20,500.00	91.00	320.41	10,984.86	6,000.56	-6,888.17	14,443,123.023	1,587,379.775	39.770264627	-80.832863929
20,600.00	91.00	320.41	10,983.11	6,077.61	-6,951.89	14,443,200.074	1,587,316.056	39.770476557	-80.833090185
20,700.00	91.00	320.41	10,981.36	6,154.66	-7,015.61	14,443,277.124	1,587,252.337	39.770688486	-80.833316443
20,800.00	91.00	320.41	10,979.61	6,231.71	-7,079.33	14,443,354.175	1,587,188.618	39.770900414	-80.833542702
20,900.00	91.00	320.41	10,977.85	6,308.77	-7,143.05	14,443,431.225	1,587,124.899	39.771112343	-80.833768962
21,000.00	91.00	320.41	10,976.10	6,385.82	-7,206.77	14,443,508.276	1,587,061.181	39.771324270	-80.833995224
21,100.00	91.00	320.41	10,974.35	6,462.87	-7,270.49	14,443,585.326	1,586,997.462	39.771536198	-80.834221487
21,200.00	91.00	320.41	10,972.60	6,539.92	-7,334.21	14,443,662.377	1,586,933.743	39.771748125	-80.834447751
21,300.00	91.00	320.41	10,970.85	6,616.97	-7,397.92	14,443,739.427	1,586,870.024	39.771960051	-80.834674017
21,400.00	91.00	320.41	10,969.10	6,694.02	-7,461.64	14,443,816.478	1,586,806.305	39.772171977	-80.834900285
21,500.00	91.00	320.41	10,967.35	6,771.07	-7,525.36	14,443,893.529	1,586,742.586	39.772383903	-80.835126553
21,600.00	91.00	320.41	10,965.60	6,848.12	-7,589.08	14,443,970.579	1,586,678.867	39.772595828	-80.835352823
21,700.00	91.00	320.41	10,963.84	6,925.17	-7,652.80	14,444,047.630	1,586,615.148	39.772807752	-80.835579095
21,800.00	91.00	320.41	10,962.09	7,002.22	-7,716.52	14,444,124.680	1,586,551.429	39.773019677	-80.835805366
21,900.00	91.00	320.41	10,960.34	7,079.27	-7,780.24	14,444,201.731	1,586,487.710	39.773231601	-80.836031642
22,000.00	91.00	320.41	10,958.59	7,156.32	-7,843.96	14,444,278.781	1,586,423.991	39.773443524	-80.836257917
22,100.00	91.00	320.41	10,956.84	7,233.37	-7,907.69	14,444,355.832	1,586,360.272	39.773655447	-80.836484194
22,200.00	91.00	320.41	10,955.09	7,310.42	-7,971.40	14,444,432.882	1,586,296.553	39.773867389	-80.836710473
22,300.00	91.00	320.41	10,953.34	7,387.48	-8,035.11	14,444,509.933	1,586,232.834	39.774079311	-80.836936753
22,400.00	91.00	320.41	10,951.59	7,464.53	-8,098.83	14,444,586.984	1,586,169.115	39.774291233	-80.837163034
22,500.00	91.00	320.41	10,949.84	7,541.58	-8,162.55	14,444,664.034	1,586,105.396	39.774503154	-80.837389315
22,600.00	91.00	320.41	10,948.08	7,618.63	-8,226.27	14,444,741.085	1,586,041.677	39.774715075	-80.837615596
22,700.00	91.00	320.41	10,946.33	7,695.68	-8,289.99	14,444,818.135	1,585,977.958	39.774926996	-80.837841875
22,800.00	91.00	320.41	10,944.58	7,772.73	-8,353.71	14,444,895.185	1,585,914.239	39.775138917	-80.838068152
22,900.00	91.00	320.41	10,942.83	7,849.78	-8,417.43	14,444,972.236	1,585,850.521	39.775350838	-80.838294430
23,000.00	91.00	320.41	10,941.08	7,926.83	-8,481.15	14,445,049.287	1,585,786.802	39.775562759	-80.838520708
23,100.00	91.00	320.41	10,939.33	8,003.88	-8,544.87	14,445,126.337	1,585,723.083	39.775774681	-80.838747041
23,200.00	91.00	320.41	10,937.58	8,080.93	-8,608.59	14,445,203.388	1,585,659.364	39.775986602	-80.838973323
23,300.00	91.00	320.41	10,935.83	8,157.98	-8,672.31	14,445,280.439	1,585,595.645	39.776198523	-80.839199602
23,400.00	91.00	320.41	10,934.08	8,235.03	-8,736.02	14,445,357.489	1,585,531.926	39.776410444	-80.839425882
23,500.00	91.00	320.41	10,932.32	8,312.08	-8,799.74	14,445,434.540	1,585,468.207	39.776622365	-80.839652162
23,600.00	91.00	320.41	10,930.57	8,389.13	-8,863.46	14,445,511.590	1,585,404.488	39.776834286	-80.839878441
23,700.00	91.00	320.41	10,928.82	8,466.19	-8,927.18	14,445,588.641	1,585,340.769	39.777046207	-80.840104721
23,800.00	91.00	320.41	10,927.07	8,543.24	-8,990.90	14,445,665.691	1,585,277.050	39.777258128	-80.840331001
23,900.00	91.00	320.41	10,925.32	8,620.29	-9,054.62	14,445,742.742	1,585,213.331	39.777469999	-80.840557281
24,000.00	91.00	320.41	10,923.57	8,697.34	-9,118.34	14,445,819.793	1,585,149.612	39.777681870	-80.840783561
24,100.00	91.00	320.41	10,921.82	8,774.39	-9,182.06	14,445,896.843	1,585,085.893	39.777893741	-80.841010001

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Planning Report - Geographic

Database:	DB_Dec2220_v16	Local Co-ordinate Reference:	Well Angels Envy N-13 HU (slot J)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1279.00ft
Project:	Marshall County, West Virginia NAD83 UTM 17N	MD Reference:	GL @ 1279.00ft
Site:	Armstrong /Angels Envy Pad	North Reference:	Grid
Well:	Angels Envy N-13 HU (slot J)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev6		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
24,200.00	91.00	320.41	10,920.07	8,851.44	-9,245.78	14,445,973.884	1,685,022.174	39.778105724	-80.841236332
24,300.00	91.00	320.41	10,916.31	8,926.49	-9,309.50	14,446,050.944	1,684,958.455	39.778317837	-80.841482639
24,400.00	91.00	320.41	10,916.56	9,005.54	-9,373.22	14,446,127.995	1,684,894.736	39.778529550	-80.841688948
24,500.00	91.00	320.41	10,914.81	9,082.59	-9,436.93	14,446,205.045	1,684,831.017	39.778741462	-80.841915258
24,600.00	91.00	320.41	10,913.06	9,156.64	-9,500.65	14,446,282.096	1,684,767.298	39.778953374	-80.842141570
24,700.00	91.00	320.41	10,911.31	9,236.69	-9,564.37	14,446,359.146	1,684,703.579	39.779165285	-80.842367883
24,800.00	91.00	320.41	10,909.56	9,313.74	-9,628.09	14,446,436.197	1,684,639.861	39.779377196	-80.842594188
24,900.00	91.00	320.41	10,907.81	9,390.79	-9,691.81	14,446,513.248	1,684,576.142	39.779589106	-80.842820514
25,000.00	91.00	320.41	10,906.06	9,467.84	-9,755.53	14,446,590.298	1,684,512.423	39.779801016	-80.843046831
25,100.00	91.00	320.41	10,904.31	9,544.90	-9,819.25	14,446,667.349	1,684,448.704	39.780012926	-80.843273149
25,200.00	91.00	320.41	10,902.55	9,621.95	-9,882.97	14,446,744.399	1,684,384.985	39.780224835	-80.843499489
25,300.00	91.00	320.41	10,900.80	9,699.00	-9,946.69	14,446,821.450	1,684,321.266	39.780436744	-80.843725791
25,400.00	91.00	320.41	10,899.05	9,776.05	-10,010.41	14,446,898.500	1,684,257.547	39.780648652	-80.843952114
25,500.00	91.00	320.41	10,897.30	9,853.10	-10,074.13	14,446,975.551	1,684,193.828	39.780860559	-80.844178438
25,600.00	91.00	320.41	10,895.55	9,930.15	-10,137.84	14,447,052.601	1,684,130.109	39.781072467	-80.844404763
25,700.00	91.00	320.41	10,893.80	10,007.20	-10,201.56	14,447,129.652	1,684,066.390	39.781284374	-80.844631080
25,800.00	91.00	320.41	10,892.05	10,084.25	-10,265.28	14,447,206.703	1,684,002.671	39.781496280	-80.844857419
25,900.00	91.00	320.41	10,890.30	10,161.30	-10,329.00	14,447,283.753	1,683,938.952	39.781708186	-80.845083748
25,916.90	91.00	320.41	10,890.00	10,174.32	-10,339.77	14,447,296.775	1,683,928.183	39.781744000	-80.845122000
PBHL/TD 25916.90 MD 10890.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Angels Envy N-13 HU P: - hit/miss target - Shape - Point	0.00	0.00	10,890.00	10,174.32	-10,339.77	14,447,296.775	1,683,928.183	39.781744000	-80.845122000
Angels Envy N-13 HU LI - plan misses target center by 0.01ft at 11755.08ft MD (11138.00 TVD, -737.46 N, -1315.99 E) - Point	0.00	0.00	11,138.00	-737.46	-1,315.99	14,436,365.016	1,692,951.949	39.751729840	-80.813083360

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	KOP Begin 1"/100' build	
500.00	499.96	-3.49	0.00	Begin 2.00" tangent	
4,802.66	4,800.00	-153.66	0.00	Begin 2"/100' build/turn	
5,398.33	5,389.28	-224.29	-38.12	Begin 13.58" tangent	
10,340.16	10,192.85	-1,219.66	-633.28	Begin 6"/100' build/turn	
11,226.64	10,964.86	-1,084.73	-975.06	Begin 8"/100' build/turn	
11,755.08	11,138.00	-737.46	-1,315.99	Begin 91.00" lateral	
25,916.90	10,890.00	10,174.32	-10,339.77	PBHL/TD 25916.90 MD 10890.00 TVD	

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COMPASS 5000.16 Build 96

05/13/2022

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 (1/04/2022) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it is the best publicly available. See attached map he provided.

Request maps for:

1. Wellbore with Enverus All Wells Layer
2. Map with Farm lines overlain and any well spots identified on Farm Maps
3. More recent (1970s vintage) topos and older topos

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

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

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Wells within 500' Buffer

Note: Well spots depicted on Area of Review map are derived from State held coordinates. The spots may differ from those depicted on the Well Plat because the Plat locations represent actual field surveyed locations. Please refer to the Plat for surveyed well spots.

API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705101613	Tug Hill Operating, LLC	12572' MD / 6463' TVD	Marcellus	none	No, this producing Marcellus well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation.	Producing Marcellus well, operated by Tug Hill Operating, LLC., located on same well pad as proposed Angels Envy N-13HU.
4705101614	Tug Hill Operating, LLC	5652' MD / 5542' TVD	none	none	No, this well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation. Well is not completed.	Uncompleted well drilled into the Alexander. Well located on same well pad as proposed Angels Envy N-13HU.
4705101615	Tug Hill Operating, LLC	12868' MD / 6464' TVD	Marcellus	none	No, this producing Marcellus well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation.	Producing Marcellus well, operated by Tug Hill Operating, LLC., located on same well pad as proposed Angels Envy N-13HU.
4705101616	Tug Hill Operating, LLC	5721' MD / 5703' TVD	none	none	No, this well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation. Well is not completed.	Uncompleted well drilled into the Alexander. Well located on same well pad as proposed Angels Envy N-13HU.

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API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705101617	Tug Hill Operating, LLC	12485' MD / 6462' TVD	Marcellus	none	No, this producing Marcellus well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation.	Producing Marcellus well, operated by Tug Hill Operating, LLC., located on same well pad as proposed Angels Envy N-13HU.
4705101618	Tug Hill Operating, LLC	12459' MD / 6459' TVD	Marcellus	none	No, this producing Marcellus well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation.	Producing Marcellus well, operated by Tug Hill Operating, LLC., located on same well pad as proposed Angels Envy N-13HU.
4705101619	Tug Hill Operating, LLC	12420' MD / 6461' TVD	Marcellus	none	No, this producing Marcellus well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation.	Producing Marcellus well, operated by Tug Hill Operating, LLC., located on same well pad as proposed Angels Envy N-13HU.
4705101620	Tug Hill Operating, LLC	12282' MD / 6462' TVD	Marcellus	none	No, this producing Marcellus well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation.	Producing Marcellus well, operated by Tug Hill Operating, LLC., located on same well pad as proposed Angels Envy N-13HU.
4705101621	Tug Hill Operating, LLC	12512' MD / 6461' TVD	Marcellus	none	No, this producing Marcellus well is not deep enough to be within the expected fracture propagation from the proposed Point Pleasant stimulation.	Producing Marcellus well, operated by Tug Hill Operating, LLC., located on same well pad as proposed Angels Envy N-13HU.

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
4705102256	Tug Hill Operating, LLC	11354' TVD (proposed)	none	none	No, this well will not be drilled to the proposed depth or perforated. This is a canceled permit.	Permit canceled by Tug Hill Operating, LLC.
4705102257	Tug Hill Operating, LLC	11371' TVD (proposed)	none	none	No, this well will not be drilled to the proposed depth or perforated. This is a canceled permit.	Permit canceled by Tug Hill Operating, LLC.
4705102258	Tug Hill Operating, LLC	11417' TVD (proposed)	none	none	No, this well will not be drilled to the proposed depth or perforated. This is a canceled permit.	Permit canceled by Tug Hill Operating, LLC.
4705102259	Tug Hill Operating, LLC	11357' TVD (proposed)	none	none	No, this well will not be drilled to the proposed depth or perforated. This is a canceled permit.	Permit canceled by Tug Hill Operating, LLC.
4705102260	Tug Hill Operating, LLC	11409' TVD (proposed)	none	none	No, this well will not be drilled to the proposed depth or perforated. This is a canceled permit.	Permit canceled by Tug Hill Operating, LLC.

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API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705170801	unknown	unknown	unknown	unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be affected by fracturing of the proposed Point Pleasant well.	State records are incomplete.

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WV Geological & Economic Survey

Well: County = 51 Permit = 01613

Report Time: Monday, January 10, 2022 10:30:04 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_16	LAT_DD	LON_DD	UTME	UTMN
4705101613	Marshall	1613	Franklin	Powhatan Point	Clarrington	39.753694	-80.608539	516401.6	4400437.8

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101613	1 As Drilled	514488.7	4400761.8	-80.830862	39.756648
4705101613	1 As Proposed	514490.5	4400766.2	-80.830541	39.756688

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
4705101613	4/21/2015	Dvtd Orgnl Loc	Completed	CNX Gas Company LLC	1H		Arm Trong	WV16-0102-001/WV16-0010-001/WV15-0075-001	CNX Gas Company LLC	Gastar Exploration USA, Inc.	6158	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	O_AFT	NGL_BEF	NGL_AFT	P_BEF	
4705101613	4/21/2015	8/26/2013	1278	Ground Level	Unnamed	Marcellus Fm	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	Fractured	12572	12572	6279		2611			194			

Comment: 4/21/2015 Additional Lease Numbers:WV16-0084-000, KOP 6279'

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
4705101613	4/21/2015	Water	Fresh Water	Vertical			55	Perinsylvanian System					
4705101613	4/21/2015	Water	Salt Water	Vertical			1664	3rd Salt Sand					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	7069	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	7299	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	7517	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	7737	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	7957	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	8177	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	8397	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	8517	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	8837	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	9057	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	9277	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	9497	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	9717	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	9929	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	10149	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	10377	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	10589	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	10817	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	11037	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	11257	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	11477	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	11697	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	11917	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	12137	Marcellus Fm		Marcellus Fm					
4705101613	4/21/2015	Pay	Oil & Gas	Deviated	12359	Marcellus Fm		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
4705101613	Gastar Exploration USA, Inc.	2014	27,340	0	0	0	0	0	0	0	0	0	0	0	27,340
4705101613	Gastar Exploration Inc.	2015	362,133	52,283	35,886	34,063	19,304	38,343	32,403	13,685	12,237	32,391	33,380	30,221	27,737
4705101613	Tug Hill Operating, LLC	2016	332,777	31,984	27,774	30,462	29,661	30,137	29,091	27,230	27,044	26,310	25,631	24,306	24,142
4705101613	Tug Hill Operating, LLC	2017	234,516	21,561	19,687	20,956	22,258	22,699	21,461	21,688	21,707	20,691	20,631	20,204	566
4705101613	Tug Hill Operating, LLC	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101613	Tug Hill Operating, LLC	2019	271,452	17,633	30,768	21,702	22,249	23,424	20,748	20,059	27,897	20,611	22,584	20,715	23,060
4705101613	Tug Hill Operating, LLC	2020	224,417	21,199	21,343	18,152	18,461	16,793	17,999	14,239	19,448	19,363	20,433	19,333	17,654

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WV Geological & Economic Survey:

Well: County = 51 Permit = 01614

Report Time: Monday, January 10, 2022 10:36:25 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101614	Marshall	1614	Franklin	Powhatan Point	Clarington	39.753738	-80.809497	516405.2	4400442.7

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101614	1 As Drilled	516346.4	4400234	-80.809189	39.751859
4705101614	1 As Proposed	514536	4400879.3	-80.830307	39.757706

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
4705101614	--		Dvld Orgnl Loc	Completed	CNX Gas Company LLC	2H	Armstrong	WV16-0102-001/WV16-0010-001/WV16-0076-001	CNX Gas Company LLC	Gastar Exploration USA, Inc.	6458	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	O_AFT	NGL_BEF	NGL_A	
4705101614	--	8/26/2013	1279	Ground Level	Cameron-Garner	Greenland Gap Fm	Alexander	Development Well	Development Well	not available	Rotary	NotCmplt	5543		5543								

Comment: -- Additional Lease Numbers:WV16-0084-000

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
4705101614	--	Water	Fresh Water	Vertical			55	Pennsylvanian System					
4705101614	--	Water	Salt Water	Vertical			1664	Salt Sands (undiff)					

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
4705101614	Tug Hill Operating, LLC	2017	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101614	Tug Hill Operating, LLC	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101614	Tug Hill Operating, LLC	2019	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101614	Tug Hill Operating, LLC	2020	0	0	0	0	0	0	0	0	0	0	0	0	0

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WV Geological & Economic Survey:

Well: County = 61 Permit = 01616

Report Time: Monday, January 10, 2022 10:33:17 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_76	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101615	Marshall	1615	Franklin	Powhatan Point	Clarington	39.753762	-80.808455	516408.0	4400447.6

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101615	1 As Drilled	514582.2	4400994	-80.829765	39.758739
4705101615	1 As Proposed	514581.4	4400992.4	-80.829775	39.758724

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
4705101615	4/21/2015	Dvld Orign Loc	Completed	CNX Gas Company LLC	3H		Armstrong	WV16-0102-001/WV16-0010-001/WV15-0075-001	CNX Gas Company LLC	Gastar Exploration USA, Inc.	6458	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	O_AFT	NGL_BEF	NGL_AFT	P_BE
4705101615	4/21/2015	10/29/2013	1278	Ground Level	Unnamed	Marcellus Fm	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	Fractured	12868	12858	6096		3013			194		

Comment: 4/21/2015 Additional Lease Numbers WV16-0084-000, KOP 6096

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
4705101615	4/21/2015	Water	Fresh Water	Vertical			55						
4705101615	4/21/2015	Water	Salt Water	Vertical			1664	3rd Salt Sand					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	6914	Marcellus Fm	7099	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	7137	Marcellus Fm	7319	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	7357	Marcellus Fm	7539	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	7577	Marcellus Fm	7759	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	7797	Marcellus Fm	7979	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	8017	Marcellus Fm	8199	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	8237	Marcellus Fm	8414	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	8457	Marcellus Fm	8639	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	8677	Marcellus Fm	8859	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	8897	Marcellus Fm	9079	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	9117	Marcellus Fm	9299	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	9337	Marcellus Fm	9519	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	9557	Marcellus Fm	9739	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	9777	Marcellus Fm	9959	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	9997	Marcellus Fm	10179	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	10217	Marcellus Fm	10399	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	10437	Marcellus Fm	10619	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	10655	Marcellus Fm	10832	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	10895	Marcellus Fm	11052	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	11105	Marcellus Fm	11272	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	11325	Marcellus Fm	11492	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	11545	Marcellus Fm	11712	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	11765	Marcellus Fm	11932	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	11985	Marcellus Fm	12152	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	12205	Marcellus Fm	12372	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	12425	Marcellus Fm	12592	Marcellus Fm					
4705101615	4/21/2015	Pay	Oil & Gas	Deviated	12647	Marcellus Fm	12739	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
4705101615	Gastar Exploration USA, Inc.	2014	24,769	0	0	0	0	0	0	0	0	0	0	0	24,769
4705101615	Gastar Exploration Inc.	2015	294,635	54,021	23,259	18,595	15,549	22,016	17,962	7,895	22,796	25,614	32,615	28,491	25,642
4705101615	Tug Hill Operating, LLC	2016	339,309	32,442	28,709	30,270	29,666	30,122	28,401	28,804	28,011	26,462	28,565	24,897	25,153
4705101615	Tug Hill Operating, LLC	2017	259,720	23,181	21,865	23,021	23,744	21,582	21,645	24,043	23,503	22,510	22,873	21,199	10,549
4705101615	Tug Hill Operating, LLC	2018	244,599	20,710	21,005	22,613	19,746	19,699	20,054	18,958	20,741	20,671	20,236	19,877	20,283
4705101615	Tug Hill Operating, LLC	2019	231,219	24,874	20,358	16,089	18,771	21,338	20,491	17,731	20,603	16,864	18,478	16,949	18,669
4705101615	Tug Hill Operating, LLC	2020	182,496	17,345	17,483	14,852	15,105	13,740	14,727	11,632	15,912	15,738	16,718	15,818	13,446

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Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX	DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705101616	Marshall	1616		Franklin	Powhatan Point	Clarington	39.753827	-80.808412	516412.5	4400452.6

Bottom Hole Location Information:

API	EP	FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705101616	1	As Drilled	516449.2	4400391.4	-80.807994	39.753275
4705101616	1	As Proposed	514626.9	4401105.4	-80.829241	39.759742

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
4705101616	-/-		Dvtd Orgnl Loc	Completed	CNX Gas Company LLC	4H	Armstrong	WV16-0102-001/WV16-0010-001/WV16-0076-001	CNX Gas Company LLC	Gastar Exploration USA, Inc.	5458	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	O_AFT	NGL_BEF	NGL_A	
4705101616	-/-	8/28/2013	1279	Ground Level	Cameron-Gamer	Greenland Gap Fm	Alexander	Development Well	Development Well	not available	Rotary	NotCmpltd	5703			5703							

Comment: -/- Additional Lease Numbers:WV16-0084-000

There is no Pay data for this well

Production Gas Information: (Volumes in Mcf)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101616	Tug Hill Operating, LLC	2017	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101616	Tug Hill Operating, LLC	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101616	Tug Hill Operating, LLC	2019	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101616	Tug Hill Operating, LLC	2020	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
4705101616	Tug Hill Operating, LLC	2017	0												
4705101616	Tug Hill Operating, LLC	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101616	Tug Hill Operating, LLC	2019	0	0	0	0	0	0	0	0	0	0	0	0	0
4705101616	Tug Hill Operating, LLC	2020	0	0	0	0	0	0	0	0	0	0	0	0	0

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Well: County = 51 Permit = 01617

Report Time: Monday, January 10, 2022 10:33:53 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101617	Marshall	1617	Franklin	Powhatan Point	Clarington	39.753915	-80.808327	516419.7	4400462.3

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101617	1 As Drilled	514718.1	4401331	-80.828171	39.761773
4705101617	1 As Proposed	514717.9	4401331.6	-80.828174	39.761778

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
4705101617	4/20/2015	Dvld Orign Loc	Completed	CNX Gas Company LLC	6H		Amstrong	WV16-0098-000/WV16-0010-001/WV16-0076-001	CNX Gas Company LLC	Gastar Exploration USA, Inc.	6458	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	O_AFT	NGL_BEF	NGL_AFT	P_BEI	
4705101617	4/20/2015	12/12/2013	1278	Ground Level	Unnamed	Marcellus Fm	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	Fractured	12484	12484	6190		2911			266			

Comment: 4/20/2015 Additional Lease Numbers:WV16-0126-005, KOP 6190'

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
4705101617	4/20/2015	Water	Fresh Water	Vertical			55	Pennsylvanian System					
4705101617	4/20/2015	Water	Salt Water	Vertical			1664	3rd Salt Sand					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	6911	Marcellus Fm	7074	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	7135	Marcellus Fm	7317	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	7386	Marcellus Fm	7542	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	7590	Marcellus Fm	7738	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	7783	Marcellus Fm	8009	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	8091	Marcellus Fm	8239	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	8342	Marcellus Fm	8500	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	8555	Marcellus Fm	8718	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	8833	Marcellus Fm	8951	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	9001	Marcellus Fm	9140	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	9201	Marcellus Fm	9341	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	9398	Marcellus Fm	9551	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	9601	Marcellus Fm	9773	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	9806	Marcellus Fm	9986	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	10027	Marcellus Fm	10165	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	10202	Marcellus Fm	10359	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	10409	Marcellus Fm	10537	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	10584	Marcellus Fm	10742	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	10762	Marcellus Fm	10953	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	10998	Marcellus Fm	11106	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	11160	Marcellus Fm	11338	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	11369	Marcellus Fm	11558	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	11606	Marcellus Fm	11751	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	11864	Marcellus Fm	12046	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	12091	Marcellus Fm	12219	Marcellus Fm					
4705101617	4/20/2015	Pay	Oil & Gas	Deviated	12291	Marcellus Fm	12373	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
4705101617	Gastar Exploration USA, Inc.	2014	23,930	0	0	0	0	0	0	0	0	0	0	0	23,930
4705101617	Gastar Exploration Inc.	2015	348,025	54,509	35,915	40,977	7,224	31,376	32,815	15,352	13,691	30,067	35,026	29,281	21,803
4705101617	Tug Hill Operating, LLC	2016	293,505	31,515	26,121	29,127	27,388	27,720	25,302	22,905	21,766	21,123	20,828	19,964	20,342
4705101617	Tug Hill Operating, LLC	2017	210,455	19,135	17,152	18,645	17,593	17,105	16,452	15,868	15,918	15,434	18,227	19,809	19,063
4705101617	Tug Hill Operating, LLC	2018	256,269	15,500	21,742	25,297	21,285	23,535	19,419	22,335	13,932	24,366	23,361	22,740	22,857
4705101617	Tug Hill Operating, LLC	2019	250,047	26,913	21,082	16,321	19,243	21,767	21,292	16,352	35,239	17,660	17,964	16,402	18,811
4705101617	Tug Hill Operating, LLC	2020	207,909	18,460	16,693	18,917	16,504	16,831	17,751	13,932	19,514	18,061	17,124	15,975	15,094

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Report Time: Monday, January 10, 2022 10:34:21 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101618	Marshall	1618	Franklin	Powhatan Point	Clarington	39.753959	-80.808284	516423.4	4400467.2

Bottom Hole Location Information:

API	EP FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101618	1 As Drilled	514763.1	4401443.8	-80.827643	39.762788
4705101618	1 As Proposed	514763.4	4401444.7	-80.82764	39.762797

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
4705101618	4/20/2015	Dvld Orign Loc	Completed	CNX Gas Company LLC	7H		Armstrong	WV16-0086-000/WV15-0103-001/WV16-0022-001	CNX Gas Company LLC	Gastar Exploration USA, Inc.		6458	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	O_AFT	NGL_BEF	NGL_AFT	P_BEF	
4705101618	4/20/2015	1/3/2014	1278	Ground Level	Unnamed	Marcellus Fm	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rolary	Fractured	12459		12459	5998		2443		160			

Comment: 4/20/2015 Additional Lease Numbers: WV16-0010-001/WV16-0076-001/WV16-0126-000. KOP 5998'

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
4705101618	4/20/2015	Water	Fresh Water	Vertical			55	Pennsylvanian System					
4705101618	4/20/2015	Water	Salt Water	Vertical			1664	3rd Salt Sand					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	7034	Marcellus Fm	7214	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	7263	Marcellus Fm	7364	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	7414	Marcellus Fm	7615	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	7667	Marcellus Fm	7850	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	7911	Marcellus Fm	8106	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	8145	Marcellus Fm	8400	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	8456	Marcellus Fm	8590	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	8686	Marcellus Fm	8853	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	8901	Marcellus Fm	9071	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	9126	Marcellus Fm	9293	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	9346	Marcellus Fm	9513	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	9566	Marcellus Fm	9733	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	9783	Marcellus Fm	9953	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	10066	Marcellus Fm	10175	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	10226	Marcellus Fm	10393	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	10446	Marcellus Fm	10613	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	10666	Marcellus Fm	10833	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	10887	Marcellus Fm	11057	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	11166	Marcellus Fm	11273	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	11326	Marcellus Fm	11493	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	11546	Marcellus Fm	11713	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	11769	Marcellus Fm	11925	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	11986	Marcellus Fm	12153	Marcellus Fm					
4705101618	4/20/2015	Pay	Oil & Gas	Deviated	12222	Marcellus Fm	12314	Marcellus Fm					

Production Gas Information: (Volumes in Mcf)

API	PRODUCING_OPERATOR	PRO_YEAR	ANN GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705101618	Gastar Exploration USA, Inc.	2014	18,789	0	0	0	0	0	0	0	0	0	0	0	18,789
4705101618	Gastar Exploration Inc.	2015	354,942	45,791	38,938	31,022	26,549	42,627	28,818	11,268	35,197	27,973	25,497	21,838	21,804
4705101618	Tug Hill Operating, LLC	2016	241,800	24,900	23,530	23,557	21,689	21,540	19,926	19,874	18,896	17,362	17,462	16,221	16,838
4705101618	Tug Hill Operating, LLC	2017	184,261	15,163	16,217	16,819	15,317	15,191	15,135	15,469	15,480	15,351	15,628	14,488	13,968
4705101618	Tug Hill Operating, LLC	2018	249,512	12,722	18,758	20,107	19,298	23,175	24,390	25,041	18,031	23,857	22,211	20,497	20,513
4705101618	Tug Hill Operating, LLC	2019	9,353	9,353	0	0	0	0	0	0	0	0	0	0	0
4705101618	Tug Hill Operating, LLC	2020	22,130	0	0	0	0	0	0	0	0	0	0	501	21,629

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Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_16	LAT_DD	LON_DD	UTME	UTMN
4705101619	Marshall	1619	Franklin	Povhatan Point	Clarrington	39.754993	-80.803242	516427	4400472.1

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101619	1 As Drilled	514509.1	4401553	-80.827104	39.763817
4705101619	1 As Proposed	514008.9	4401557.7	-80.827106	39.763814

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
4705101619	4/18/2015	Dvld Orign Loc	Completed	CNX Gas Company LLC	5H		Armstrong	WV16-0095-000/WV16-0124-001/WV16-0010-001	CNX Gas Company LLC	Gasfar Exploration USA, Inc	6458	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	O_AFT	NGL_DEF	NGL_AFT	P_BEF
4705101619	4/18/2015	1/13/2014	1278	Ground Level	Unnamed	Marcellus Fm	Marcellus Fm	Development Well	Oil and Gas	Rotary	Fractured	12420	12420	6097		3875			359			

Comment: 4/19/2015 Additional Lease Numbers:WV16-0022-001/WV16-0126-005. KOP 6097

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
4705101619	4/19/2015	Water	Fresh Water	Vertical			55	Pennsylvanian System					
4705101619	4/19/2015	Water	Fresh Water	Vertical			1664	3rd Salt Sand					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	7185	Marcellus Fm	7288	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	7332	Marcellus Fm	7553	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	7631	Marcellus Fm	7789	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	7834	Marcellus Fm	7981	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	7999	Marcellus Fm	8109	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	8160	Marcellus Fm	8333	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	8373	Marcellus Fm	8542	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	8588	Marcellus Fm	8766	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	8799	Marcellus Fm	8898	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	8863	Marcellus Fm	9089	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	9150	Marcellus Fm	9311	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	9365	Marcellus Fm	9483	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	9530	Marcellus Fm	9675	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	9718	Marcellus Fm	9854	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	9912	Marcellus Fm	10112	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	10177	Marcellus Fm	10370	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	10441	Marcellus Fm	10649	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	10719	Marcellus Fm	10929	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	10958	Marcellus Fm	11119	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	11200	Marcellus Fm	11367	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	11420	Marcellus Fm	11587	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	11635	Marcellus Fm	11804	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	11860	Marcellus Fm	12027	Marcellus Fm					
4705101619	4/19/2015	Pay	Oil & Gas	Deviated	12160	Marcellus Fm	12252	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
4705101619	Gasfar Exploration USA, Inc.	2014	32,334	0	0	0	0	0	0	0	0	0	0	0	32,334
4705101619	Gasfar Exploration Inc.	2015	356,066	57,368	35,912	37,572	19,956	37,822	31,423	13,299	15,939	29,860	27,654	26,125	23,138
4705101619	Tug Hill Operating, LLC	2016	271,126	27,494	23,623	24,987	24,437	23,695	21,370	22,559	22,144	20,883	20,705	19,773	19,452
4705101619	Tug Hill Operating, LLC	2017	109,252	16,467	14,358	15,648	17,376	17,984	16,246	16,250	16,166	14,580	14,673	14,159	15,341
4705101619	Tug Hill Operating, LLC	2018	31,348	12,537	9,452	9,159	200	0	0	0	0	0	0	0	0
4705101619	Tug Hill Operating, LLC	2019	234,569	4,561	28,141	16,265	19,572	24,713	23,842	18,833	21,534	19,328	19,470	18,907	19,400
4705101619	Tug Hill Operating, LLC	2020	213,413	19,652	18,887	18,079	17,498	16,607	17,962	14,165	19,160	18,432	18,770	17,745	16,436

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Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101620	Marshall	1620	Franklin	Powhatan Point	Clatinton	39.754047	-80.808199	516430.7	4400477

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101620	1 As Drilled	514853.9	4401670	-80.826578	39.764825
4705101620	1 As Proposed	514854.4	4401670.8	-80.826572	39.764832

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
4705101620	4/19/2015	Dvld Crgrt Loc	Completed	CNX Gas Company LLC	9H		Armstrong	WV16-0086-000/WV16-0124-001/WV16-0010-001	CNX Gas Company LLC	Gastar Exploration USA, Inc.	6458	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	O_AFT	NGL_BEF	NGL_AFT	P_BEF
4705101620	4/19/2015	1/23/2014	1278	Ground Level	Unnamed	Marcellus Fm	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	Fractured	12282		12282	6477		3072			107		

Comment: 4/19/2015 Additional Lease Numbers: WV16-0022-001/WV16-0126-005. KOP 6477'

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
4705101620	4/19/2015	Water	Fresh Water	Vertical			55	Pennsylvanian System					
4705101620	4/19/2015	Water	Fresh Water	Vertical			1664	3rd Salt Sand					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	7393	Marcellus Fm	7566	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	7637	Marcellus Fm	7928	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	7977	Marcellus Fm	8138	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	8266	Marcellus Fm	8515	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	8574	Marcellus Fm	8790	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	8868	Marcellus Fm	9029	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	9101	Marcellus Fm	9207	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	9349	Marcellus Fm	9514	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	9566	Marcellus Fm	9808	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	9899	Marcellus Fm	10057	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	10113	Marcellus Fm	10328	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	10391	Marcellus Fm	10614	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	10690	Marcellus Fm	10875	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	10945	Marcellus Fm	11104	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	11169	Marcellus Fm	11335	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	11399	Marcellus Fm	11549	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	11603	Marcellus Fm	11831	Marcellus Fm					
4705101620	4/19/2015	Pay	Oil & Gas	Deviated	12009	Marcellus Fm	12101	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
4705101620	Gastar Exploration USA, Inc.	2014	30,494	0	0	0	0	0	0	0	0	0	0	0	30,494
4705101620	Gastar Exploration Inc.	2015	292,937	38,050	26,586	26,928	19,406	32,690	26,043	10,217	17,375	25,896	27,651	21,694	20,401
4705101620	Tug Hill Operating, LLC	2016	235,136	26,160	22,266	23,114	19,915	19,706	18,326	19,362	17,907	17,118	17,411	15,191	18,654
4705101620	Tug Hill Operating, LLC	2017	174,391	16,015	14,907	17,359	16,212	15,463	13,952	14,414	13,377	13,608	12,922	13,237	12,729
4705101620	Tug Hill Operating, LLC	2018	173,643	12,101	15,697	17,592	16,273	16,134	16,439	15,193	11,962	13,446	12,050	13,084	13,432
4705101620	Tug Hill Operating, LLC	2019	155,091	12,683	15,778	10,987	11,668	14,280	13,428	11,106	14,358	12,885	12,980	12,605	12,934
4705101620	Tug Hill Operating, LLC	2020	142,324	13,101	12,592	12,052	11,665	11,071	11,975	9,507	12,773	12,268	12,513	11,830	10,957

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Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705101621	Marshall	1621	Franklin	Powhatan Point	Cranington	39.753871	-80.80837	516416.1	4400457.4

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705101621	1 As Drilled	514671.4	4401216.2	-80.828719	39.760739
4705101621	1 As Proposed	514672.4	4401216.5	-80.828707	39.76076

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
4705101621	4/21/2015	Dvld Orign Loc	Completed	CNX Gas Company LLC	5H		Armstrong	WV16-0010-001/WV16-0076-001/WV16-0126-005	CNX Gas Company LLC	Gastar Exploration USA, Inc.	6458	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	O_AFT	NGL_BEF	NGL_AFT	P_BEF
4705101621	4/21/2015	12/1/2013	1278	Ground Level	Unnamed	Marcellus Fm	Marcellus Fm	Development Well	Development Well	Oil and Gas	Rotary	Fractured	12512	12512	5736		2701				272	

Comment: 4/21/2015 KOP 5736

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
4705101621	4/21/2015	Water	Fresh Water	Vertical			55	Parinsylvanian System					
4705101621	4/21/2015	Water	Salt Water	Vertical			1664	3rd Salt Sand					
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	6812	Marcellus Fm		6910	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	7004	Marcellus Fm		7138	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	7173	Marcellus Fm		7320	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	7393	Marcellus Fm		7550	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	7611	Marcellus Fm		7800	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	7852	Marcellus Fm		8037	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	8093	Marcellus Fm		8237	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	8284	Marcellus Fm		8524	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	8564	Marcellus Fm		8729	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	8820	Marcellus Fm		8992	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	9055	Marcellus Fm		9207	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	9263	Marcellus Fm		9437	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	9496	Marcellus Fm		9639	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	9742	Marcellus Fm		9899	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	9971	Marcellus Fm		10048	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	10097	Marcellus Fm		10280	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	10357	Marcellus Fm		10601	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	10544	Marcellus Fm		10774	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	10820	Marcellus Fm		10955	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	11020	Marcellus Fm		11187	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	11256	Marcellus Fm		11395	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	11445	Marcellus Fm		11527	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	11604	Marcellus Fm		11758	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	11835	Marcellus Fm		12069	Marcellus Fm				
4705101621	4/21/2015	Pay	Oil & Gas	Deviated	12249	Marcellus Fm		12331	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
4705101621	Gastar Exploration USA, Inc.	2014	20,683	0	0	0	0	0	0	0	0	0	0	0	20,683
4705101621	Gastar Exploration Inc.	2015	216,577	12,270	27,585	5,567	0	27,205	24,201	13,627	24,896	22,001	24,184	20,031	15,010
4705101621	Tug Hill Operating, LLC	2016	217,482	20,412	18,805	18,713	18,729	19,561	18,289	18,417	18,058	16,825	17,157	16,157	16,554
4705101621	Tug Hill Operating, LLC	2017	172,058	16,937	15,956	15,757	14,239	14,428	14,655	14,901	14,870	14,416	14,302	6,027	15,565
4705101621	Tug Hill Operating, LLC	2018	10,755	10,735	15	0	0	5	0	0	0	0	0	0	0
4705101621	Tug Hill Operating, LLC	2019	206,682	10,472	28,448	15,932	17,058	18,829	16,539	12,674	27,902	14,449	14,693	13,420	16,209
4705101621	Tug Hill Operating, LLC	2020	165,964	15,120	15,295	15,477	13,594	13,771	14,548	11,399	15,966	14,778	13,942	13,103	8,971

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API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102256	Marshall	2256	Franklin	Powhatan Point	Clarington	39.7538	-80.808344	516418.3	4400449.6

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102256	1 As Proposed	517409.6	4397212.7	-80.796555	39.724615

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
4705102256	+/+		Cancelled	Consol RCPC LLC		1S-10HU	Armstrong		Consol RCPC LLC	Tug Hill Operating, LLC		11354	PI Pleasant Fm

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TI_BEF	P_A
4705102256	+/+	+/+	1279	Ground Level																					

WV Geological & Economic Survey:

Well: County = 51 Permit = 02257

Report Time: Monday, January 10, 2022 10:38:19 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102257	Marshall	2257	Franklin	Powhatan Point	Clarington	39.753827	-80.808319	516420.5	4400452.5

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102257	1 As Proposed	517755	4397621.6	-80.792817	39.726293

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
4705102257	+/+		Cancelled	Consol RCPC LLC		1S-11HU	Armstrong		Consol RCPC LLC	Tug Hill Operating, LLC		11371	PI Pleasant Fm

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TI_BEF	P_A
4705102257	+/+	+/+	1279	Ground Level																					

WV Geological & Economic Survey:

Well: County = 51 Permit = 02258

Report Time: Monday, January 10, 2022 10:38:32 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102258	Marshall	2258	Franklin	Powhatan Point	Clarington	39.753853	-80.808293	516422.6	4400455.5

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102258	1 As Proposed	518064.9	4397812.1	-80.788962	39.730002

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
4705102258	+/+		Cancelled	Consol RCPC LLC		1S-12HU	Armstrong		Consol RCPC LLC	Tug Hill Operating, LLC		11417	PI Pleasant Fm

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TI_BEF	P_A
4705102258	+/+	+/+	1279	Ground Level																					

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WV Geological & Economic Survey

Well: County = 51 Permit = 02259

Report Time: Monday, January 10, 2022 10:35:47 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705102259	Marshall	2259	Franklin	Powhatan Point	Clarrington	39.753748	-80.808396	516413.9	4400443.7

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705102259	1 As Proposed	513346.1	4403443	-80.844146	39.780825

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
4705102259	-/-		Cancelled	Consol RCPC LLC			1N-13HU Armstrong		Consol RCPC LLC	Tug Hill Operating, LLC		11357 Pleasant Fm	

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TL_BEF	P_A
4705102259	-/-	-/-	1279	Ground Level																					

WV Geological & Economic Survey

Well: County = 51 Permit = 02260

Report Time: Monday, January 10, 2022 10:39:00 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705102260	Marshall	2260	Franklin	Powhatan Point	Clarrington	39.753774	-80.80837	516418.1	4400446.7

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4705102260	1 As Proposed	515490.2	4401711.4	-80.819148	39.765187

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
4705102260	-/-		Cancelled	Consol RCPC LLC			1N-14HU Armstrong		Consol RCPC LLC	Tug Hill Operating, LLC		11409 Pleasant Fm	

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TL_BEF	P_A
4705102260	-/-	-/-	1279	Ground Level																					

WV Geological & Economic Survey

Well: County = 51 Permit = 70801

Report Time: Monday, January 10, 2022 11:23:42 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705170801	Marshall	70801	Franklin	Powhatan Point	Clarrington	39.761554	-80.821751	515288.1	4401307.8

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
4705170801	-/-		unknown	Prpty Map T Hill						unknown			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TL_BEF	P_A
4705170801	-/-	-/-						unclassified	unclassified	not available	unknown	unknown													

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WW-9
(4/16)

API Number 47 - 051 - _____
Operator's Well No. Angels Envy N-13HU

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) French Creek - Ohio River Quadrangle Powhatan Point 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 containment

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. All drill cuttings to be disposed of in 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? Waste County Sanitary Landfill (SWF-1021 / WV-0101155) and Westmoreland Sanitary Landfill, LLC (SWF-1405 / PA DEP ECH 1385426), Chestnut Valley Landfill (102419)

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

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Subscribed and sworn before me this 30 day of March, 2022

Notary Public

My commission expires 11/21/2024

Commonwealth of Pennsylvania - Notary Seal
SEAN COTTER - Notary Public
Washington County
My Commission Expires 11/21/2024
Commission Number 1264582

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 3.27 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: *Wayne J. K... D*

Comments: _____

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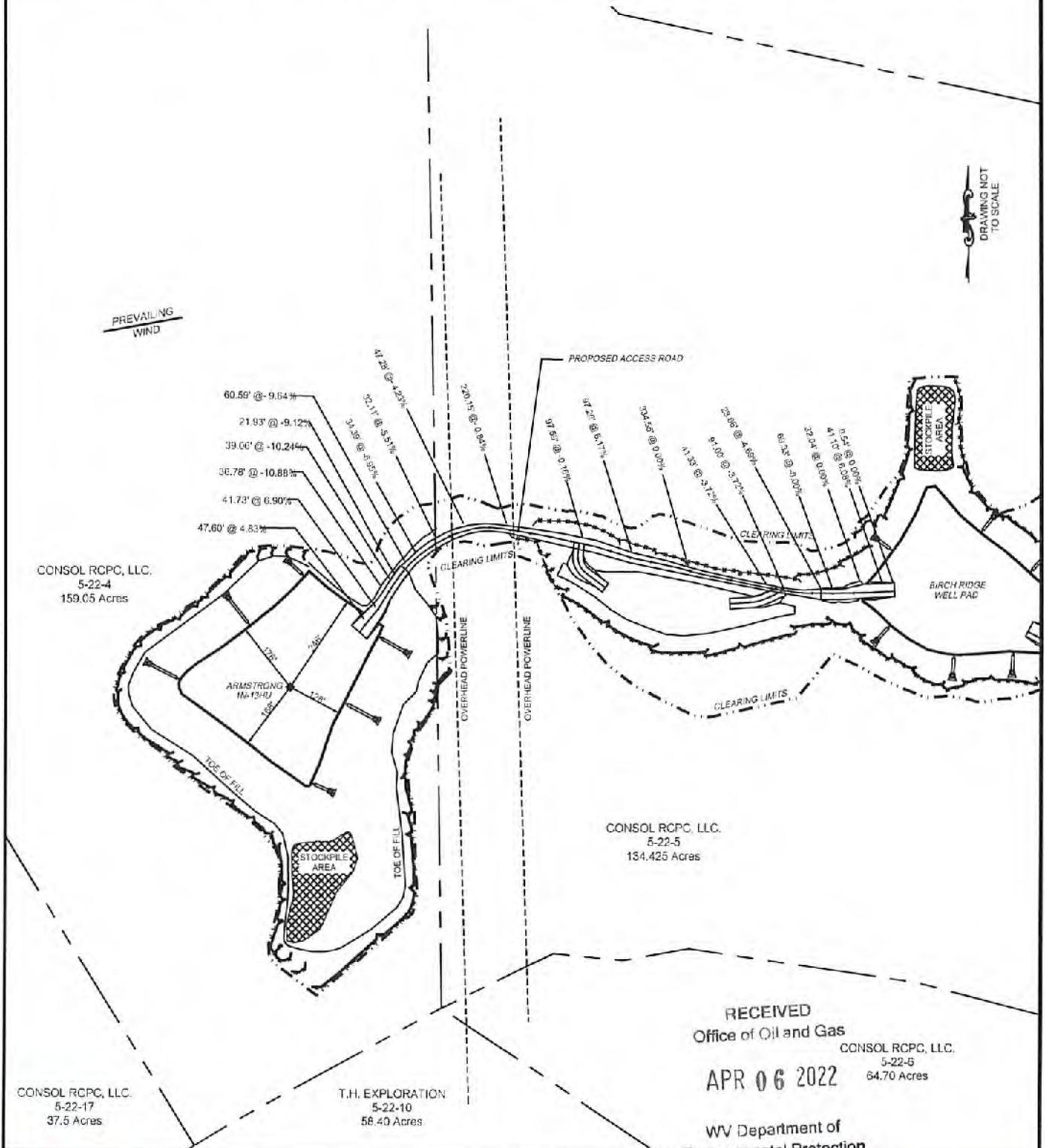
APR 06 2022

Title: Oil and Gas Inspector

Date: 1/19/2022

WV Department of
Environmental Protection

Field Reviewed? () Yes () No



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CONSOL RCPC, LLC.
5-22-6
64.70 Acres



Jackson Surveying Inc.
8413 E. Pike St.
Clarksville, WV 26007
Phone: 304-822-5807

TOPO SECTION:		OPERATOR:	
POWHATAN POINT 7.5'		TUG HILL OPERATING, LLC	
COUNTY	DISTRICT	580 SOUTHPOINTE BLVD	
MARSHALL	FRANKLIN	S. 111 200	
CRAWN BY	JOB NO.	DATE	SCALE
JAH	494510651	07-15-2019	NONE

WW-9

PROPOSED ANGELS ENVY WELLS

SUPPLEMENT PG 2

DRAWING NOT TO SCALE

MARK E. YOHO, ET UX
5-19-18.1
55,948 Acres

PAUL V. & CAROL NEELY,
5-19-18.2
32,672 Acres

MARK E. YOHO, ET UX
5-19-18
55,948 Acres

CONSOL RCPC, LLC.
5-22-5
134,425 Acres

PREVAILING WIND

WILLIAMS OHIO VALLEY
MIDSTREAM, LLC
5-22-5.1
12,875 Acres

CONSOL RCPC, LLC.
5-22-6
64.70 Acres

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Environmental Protection



Jackson Surveying Inc.
418 E. Main St.
Clarksburg, WV 26301
Phone: 304-523-6801

TOPO SECTION:

POWHATAN POINT 75'

COUNTY: MARSHALL DISTRICT: FRANKLIN

DRAWN BY: JAH JOB NO: 494510951

DATE: 07-16-2019

OPERATOR:

PREPARED FOR:
TUG HILL OPERATING, LLC
380 SOUTHPOINTE BLVD
SUITE 200
CANONSBURG PA 15317

SCALE: NONE



TUG HILL
OPERATING

05/13/2022



TUG HILL
OPERATING

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

Well Name: Angels Envy N-13HU

Pad Name: Armstrong

County: Marshall

UTM (meters), NAD83, Zone 17

Northing: 4,400,443.73

Easting: 516,413.90

*Approved by
4/19/2022*

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

Jerry V. DeRosa, Director EH&S Affairs

(724) 338-2029 (office)

(412) 736-5767 (cellular)

24-HOUR EMERGENCY PHONE NUMBER

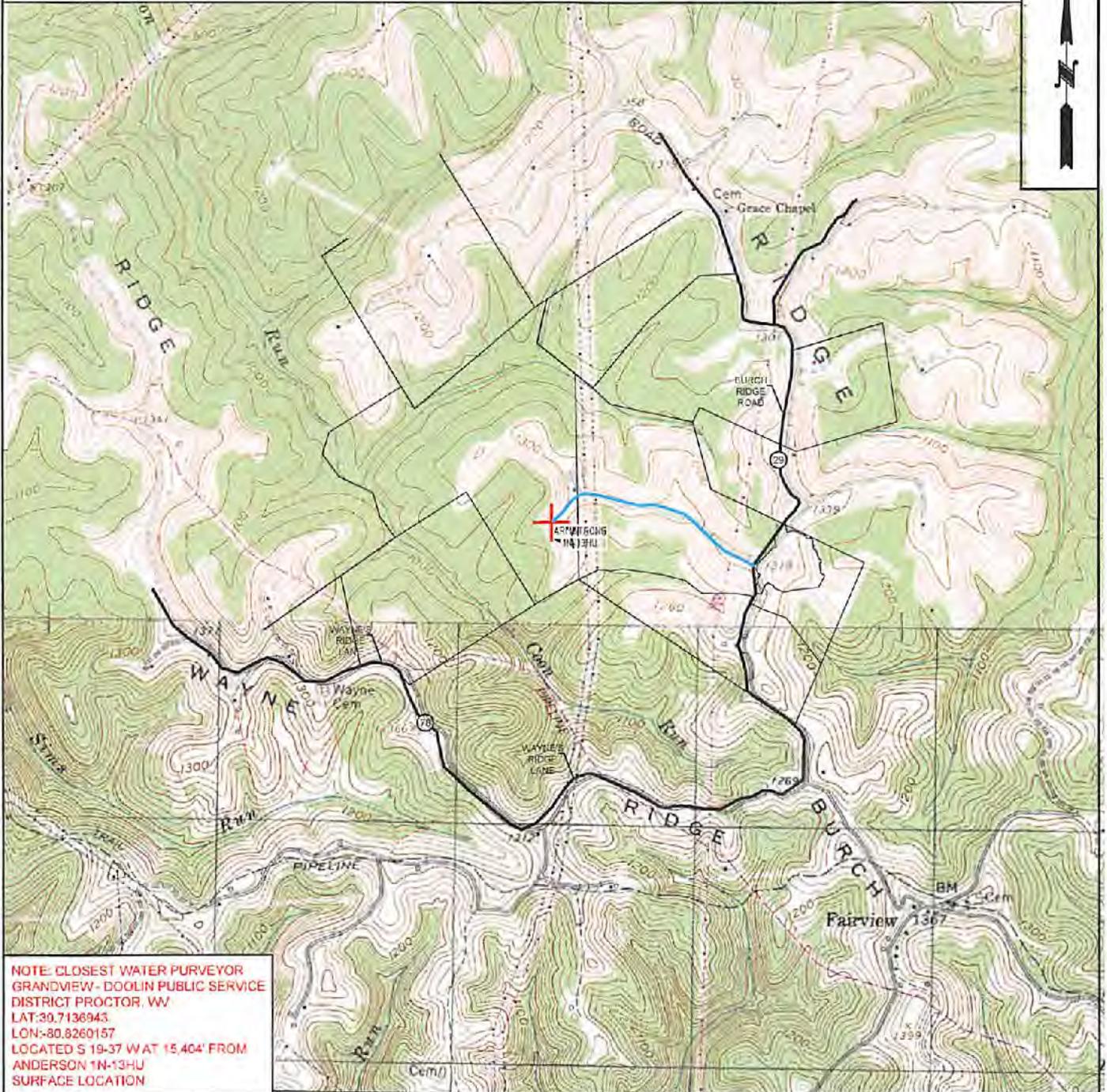
(800) 921-9745

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APR 06 2022

WV Department of
Environmental Protection

05/13/2022



NOTE: CLOSEST WATER PURVEYOR
 GRANDVIEW - DOOLIN PUBLIC SERVICE
 DISTRICT PROCTOR, WV
 LAT: 39.7136943
 LON: -80.8260157
 LOCATED S 19-37 W AT 15,404' FROM
 ANDERSON 1N-13HU
 SURFACE LOCATION

 TUG HILL OPERATING	OPERATOR 494510851 TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	TOPO SECTION NEW MARTINSVILLE 7.5' SCALE: 1" = 2000'	LEASE NAME ARMSTRONG DATE: DATE: 07-15-2019

**Operators within 500' of Well Bores
Angel's Envy N - 13HU**

COUNTY	DISTRICT	TMP	MINER OWNER OR LESSEE	ADDRESS
Marshall	Franklin	5-13-23	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-25	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-25	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-26.1	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-26.1	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-27	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-33	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-33	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-34	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-39	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-40	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-41	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-41A	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-41A	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-41B	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-41B	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-13-42	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-19-1	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-19-2	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107

05/13/2022

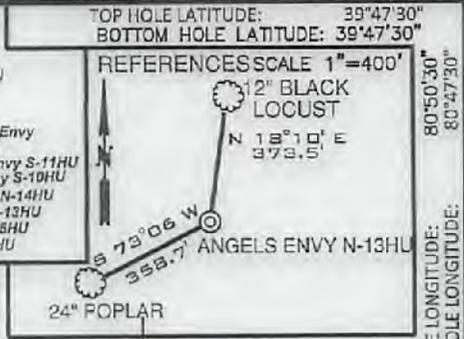
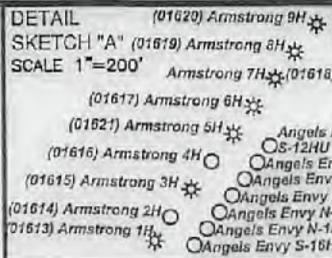
Marshall	Franklin	5-19-22	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-19-23	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-20-25	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-20-26	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-20-27	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-1	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-10	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-12	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-16	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-17	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-17	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-18	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-2	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-3	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-4	TH EXPLORATION II, LLC*	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	5-22-5	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	Ohio River	TH EXPLORATION, LLC	1320 S University Drive Suite 500 Fort Worth, TX 76107
Marshall	Franklin	DOT-RAILROAD	CSX TRANSPORTATION INC	500 Water Street J-180 Jacksonville, FL 32202
<p>* TH Exploration II, LLC is a wholly owned subsidiary of THQ Appalachia I, LLC. Tug Hill Operating, LLC provides oil and gas operations services to THQ Appalachia I, LLC under that certain Operating Services Agreement dated July 23, 2014. For further information please see the recorded affidavit submitted as part of the permit pack.</p>				

05/13/2022

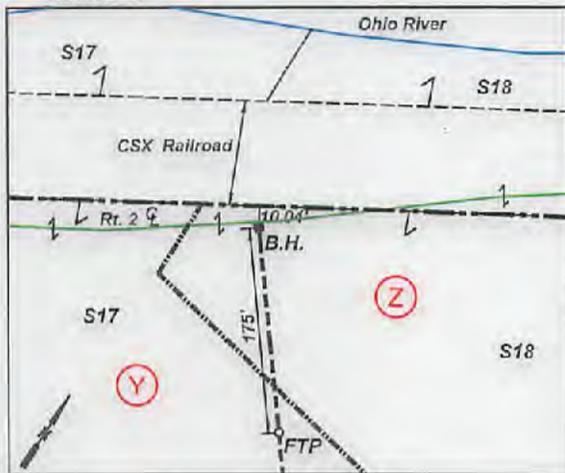
form wwf6

ANGELS ENVY LEASE WELL N-13HU 481.2258± ACRES

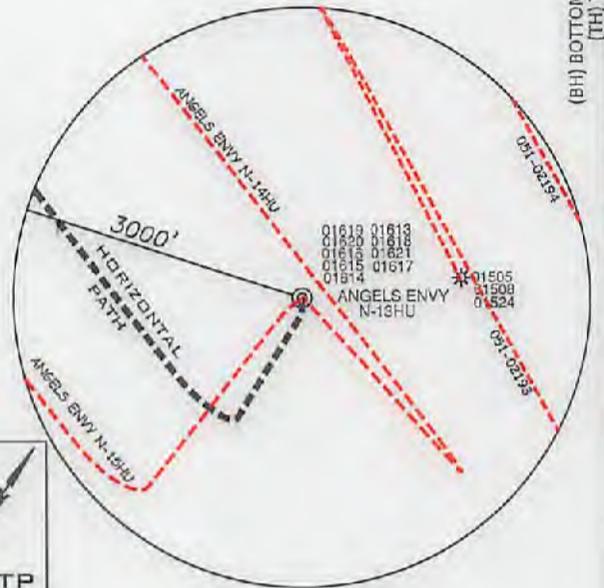
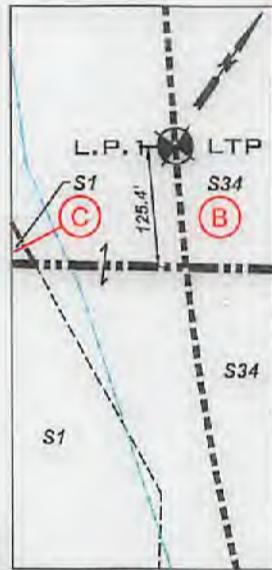
(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS



Detail "A"



Detail "B"



1. BORE PATH BASED ON GRID NORTH.
2. NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
3. OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2022. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
4. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
5. ALL DEEP WELLS SHOWN ON THIS PLAT.
6. BOUNDARIES ALONG ROADWAYS ARE BASED UPON MEMORANDUM BY DICKIE, MCGAMEY & CHILCOTE, P.C. FILE 0058304-0401147

SURFACE HOLE UTM. NAD83, ZONE 17 IN METERS
N) 4,400,443.73 E) 516,413.90
LANDING POINT 1 UTM. NAD83, ZONE 17 IN METERS
N) 4,400,218.95 E) 516,012.79
BOTTOM HOLE UTM. NAD83, ZONE 17 IN METERS
N) 4,403,544.87 E) 513,262.34

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	S 22°30' W	24.58'	88.23'	24.66'
C2	S 30°31' W	55.34'	949.74'	55.35'
C3	S 48°26' W	44.49'	55.52'	45.77'
C4	S 88°33' W	41.38'	95.92'	41.71'
C5	N 70°05' W	80.48'	278.72'	80.74'
C6	N 57°20' W	145.71'	821.50'	145.90'
C7	N 48°21' W	281.36'	1784.18'	281.66'
C8	N 41°23' W	297.42'	2974.18'	297.55'

LINE	BEARING	DISTANCE
L1	N 50°16' W	2438.41'
L2	N 52°35' E	2556.99'
L3	S 00°57' W	153.70'
L4	S 31°55' W	1151.32'

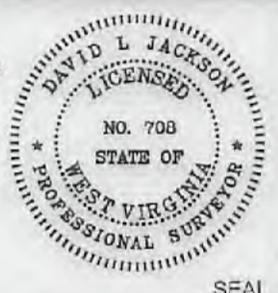
LEGEND

- LEASE TRACTS
- SURFACE TRACTS
- WELL LATERAL
- POINT PLEASANT LEGS
- UNIT BOUNDARY
- RL. 2 R/W
- (A) LEASE # (SEE 6A1 FORM)
- 400' BORE PATH OFFSET
- 500' WELL BORE OFFSET

FILE NUMBER _____
DRAWING NUMBER: **ANGELS ENVY N-13HU REV 6**
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: **SUBMETER MAPPING**
GRADE GPS

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

P.S. 708 *David L Jackson*



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

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

DATE: APRIL 12, 2022

OPERATORS WELL NO. ANGELS ENVY N-13HU

API WELL NO. 47-051-02442
STATE COUNTY PERMIT

LOCATION ELEVATION 1278.62' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 Form

SURFACE OWNER CONSOL RCPC, LLC. ACREAGE 136.32

OIL & GAS ROYALTY OWNER CONSOL RCPC, LLC. LEASE ACREAGE 136.32

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY) _____

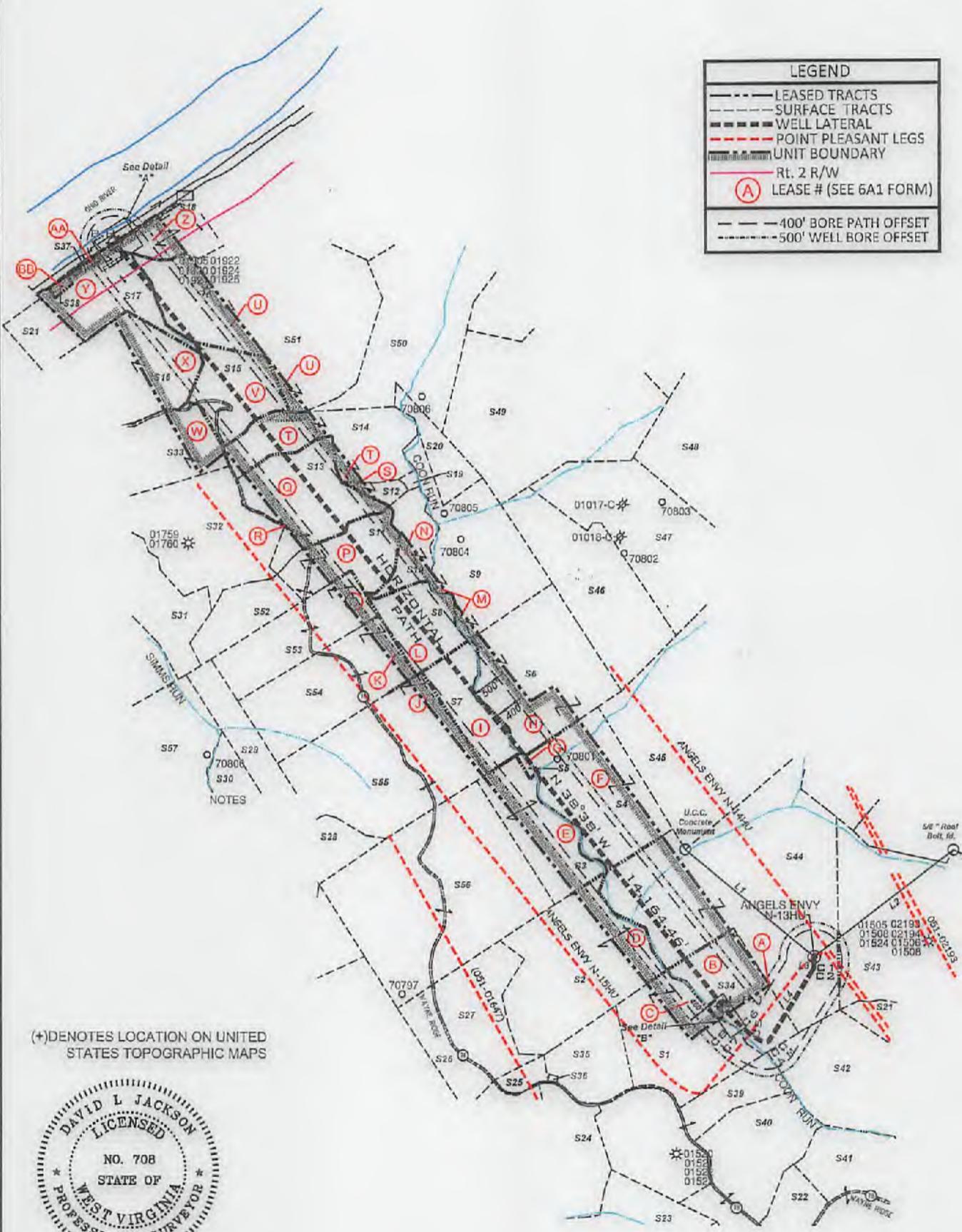
TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TVD: 11,357' TMD: 25,917'

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

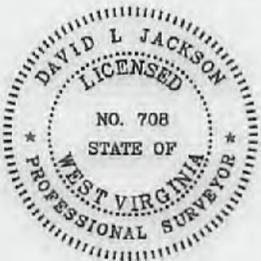
05/13/2022

COPY NAME PERMIT

**ANGELS ENVY LEASE
WELL N-13HU
481.2258± ACRES**



(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS



P.S. 708

David L Jackson

05/13/2022

47-051-02442



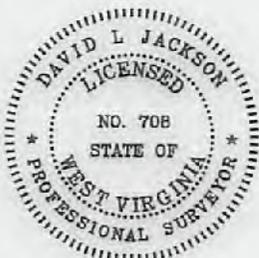
**TUG HILL
OPERATING**

OPERATOR'S
WELL #1: Angels Envy N-13HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API: 047-051-02442

WELL PLAT
PAGE 2 OF 4
DATE: 04/12/2022

**ANGELS ENVY LEASE
WELL N-13HU
481.2258± ACRES**

Tags	Number	Tax Map -Parcel	Surface Owner	Acres
C	S1	05-22-16	EDWARD R. YOHO, JR	57.0
D	S2	05-22-18	EDWARD R. YOHO, JR	77.13
E	S3	05-22-02	T.H. EXPLORATION III, LLC	30.0
F	S4	05-22-03	CONSOL RCPC, LLC	79.74
G	S5	05-22-01	MARY P. MASON, EST	2.0
H	S6	05-19-22	GEORGE A. KNUTH & KELLY A. KNUTH	71.0
I	S7	05-19-23	WDS PROPERTIES, LLC	28.4
L	S8	05-19-01	ROBERT RINE	30.8
M	S9	05-19-02	MILTON R. NEAL & LINDA L. NEAL	63.1
N	S10	05-13-41A	RODNEY JACKSON & RHONDA JACKSON	17.05
P	S11	05-13-40	ROBERT RINE	29.76
S	S12	05-13-41B	LARRY DARRAH & JUDY DARRAH	2.5
Q	S13	05-13-39	THOMAS BOWMAN & VICTORIA BOWMAN	46.0
T	S14	05-13-42	THOMAS BOWMAN & VICTORIA BOWMAN	45.0
V	S15	05-13-34	DAVID J. MAST	40.0
X	S16	05-13-23	DAVID J. MAST	69.59
Y	S17	05-13-25	AARON PAUL HOLDREN, ET UX	30.0
Z	S18	05-13-27	AARON PAUL HOLDREN, ET UX	25.0
	S19	05-13-41C	HRS. OF BENTON DARRAH, LILLIE MAY DUGAN, ALMA BITZER, ALBERTA PALMER & AUDREY HOWARD	1.0
	S20	05-14-02	JOHN B WILLIAMS, ET AL	20.17
	S21	05-13-24	ROSE & JAMES DAUGHERTY	12.725
	S22	05-28-04	T.H. EXPLORATION III, LLC	48.44
	S23	05-28-03	T.H. EXPLORATION III, LLC	53.44
	S24	05-22-13	JOHN M MOORE, TERESA R MOORE, & ANDREA S MOORE	40.57
	S25	05-21-21	CONSOL RCPC, LLC	4.0
	S26	05-21-22	PEGGY LEE BOWEN BROWN, ET AL	18.29
	S27	05-21-23	PEGGY LEE BOWEN BROWN, ET AL	42.67
	S28	05-20-28	T.H. EXPLORATION III, LLC	15.34
	S29	05-20-29	T.H. EXPLORATION III, LLC	30.08
	S30	05-20-32	T.H. EXPLORATION III, LLC	28.8
	S31	05-13-37	T.H. EXPLORATION III, LLC	51.21
R	S32	05-13-38	THOMAS BOWMAN & VICTORIA BOWMAN	61
W	S33	05-13-35	DAVID J. MAST	24.9
B	S34	05-22-17	CONSOL RCPC, LLC	37.5
	S35	05-22-15	EDWARD R. YOHO, JR	25.5
	S36	05-22-14	CONSOL RCPC, LLC	0.3
AA	S37	05-13-26.1	WV DIVISION OF HIGHWAYS	0.615
BB	S38	05-13-26	AARON PAUL HOLDREN, ET UX	0.16
	S39	05-22-12	T.H. EXPLORATION III, LLC	61.49
	S40	05-22-11	T.H. EXPLORATION III, LLC	55.65
	S41	05-22-09	T.H. EXPLORATION III, LLC	63.44
	S42	05-22-10	T.H. EXPLORATION III, LLC	58.40
	S43	05-22-05	CONSOL RCPC, LLC	134.425
A	S44	05-22-04	CONSOL RCPC, LLC	136.32
	S45	05-19-21	SAMMY E. WHITLATCH, ET AL	116.45
	S46	05-19-03	MILTON R. NEAL & LINDA L. NEAL	72.01
	S47	05-19-04	JUSTINE E RINE	82.75
	S48	05-19-05	MARGIRENE KEEFE	126.03
	S49	05-14-03	LEROY & DONNA K. ANDERSON	130
	S50	05-12-23	CONSOL RCPC, LLC	236.10
U	S51	05-13-33	NATHAN D. YODER	142.03
	S52	05-20-24	ROBERT RINE	24.30
O	S53	05-20-25	ROBERT RINE	43.82
K	S54	05-20-26	ROBERT RINE	60.53
J	S55	05-20-27	T.H. EXPLORATION III, LLC	119.83
	S56	05-21-24	T.H. EXPLORATION III, LLC	132.5
	S57	05-20-30	T.H. EXPLORATION III, LLC	105



P.S. 708 *David L Jackson*

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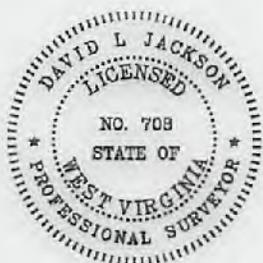
**TUG HILL
OPERATING**

OPERATOR'S
WELL #: Angels Envy N-13HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API: 047-051-01442

WELL PLAT
PAGE 3 OF 4
DATE: 04/12/2022

**ANGELS ENVY LEASE
WELL N-13HU
481.2258± ACRES**

Lease ID	TMP	Tag	Grantor, Lessor, Etc,	Deed Book/Page		
10*14033	5-22-4	A	LAMOYNE BAKER, ET AL	665	554	✓
10*14507	5-22-17	B	MARY THERESA SOLEAU AND THOMAS SOLEAU, ET AL	749	524	✓
10*14457	5-22-16	C	HARRY LEE GOUDY	731	140	
10*14457	5-22-18	D	HARRY LEE GOUDY	731	140	
10*39015	5-22-2	E	TH EXPLORATION III LLC	1117	129	
10*14608	5-22-3	F	CHESTNUT HOLDINGS INC, ET AL	827	560	✓
10*14520	5-22-1	G	BONNIE GRISELL, ET AL	756	81	✓
10*14581	5-19-22	H	CAROL BORDNER, ET AL	693	609	✓
10*14459	5-19-23	I	HELEN CROSKEY & WILLIAM DENOON CO-TTEES, JANIE L DENOON TRUST	731	145	✓
10*14307	5-20-27	J	SALLY CYNTHIA HOPKINS, ET AL	777	572	
10*14616	5-20-26	K	ROBERT E RINE & DONNA M RINE	708	250	
10*14614	5-19-1	L	ROBERT RINE	708	252	✓
10*14040	5-19-2	M	MILTON R NEAL AND LINDA L NEAL	665	498	
10*14041	5-19-2	M	SHIBEN ESTATES INC	718	496	
10*27959	5-13-41A	N	STONE HILL MINERALS HOLDINGS LLC	1063	594	✓
10*14685	5-20-25	O	ROBERT E RINE & DONNA M RINE	708	253	
10*14502	5-13-40	P	ROBERT E RINE & DONNA M RINE, ET AL	752	206	✓
10*14526	5-13-39	Q	THOMAS WILLIAM BOWMAN, ET AL	761	432	✓
10*14526	5-13-38	R	THOMAS WILLIAM BOWMAN, ET AL	761	432	
10*14461	5-13-41B	S	RODNEY & RHONDA JACKSON	739	411	✓
10*14526	5-13-42	T	THOMAS WILLIAM BOWMAN, ET AL	761	432	✓
10*14701	5-13-33	U	ROSEITA M THORNTON, ET AL	885	600	✓
10*18191	5-13-34	V	DAVID J MAST AND MIRIAM MAST	952	183	✓
10*14618	5-13-35	W	DAVID J MAST AND MIRIAM MAST, ET AL	707	645	
10*14700	5-13-23	X	DAVID J MAST AND MIRIAM MAST, ET AL	708	239	
10*14549	5-13-25	Y	REBECCA PAUKNER, ET AL	829	603	✓
10*16538	5-13-27	Z	AMP FUND III LP	915	187	✓
10*14549	5-13-26.1	AA	REBECCA PAUKNER, ET AL	829	603	
10*14549	5-13-26	BB	REBECCA PAUKNER, ET AL	829	603	



P.S. *David L Jackson*
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05/13/2022



TUG HILL
OPERATING

OPERATOR'S
WELL #: Angels Envy N-13HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API: 047-051-02442

WELL PLAT
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DATE: 04/12/2022

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

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

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

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

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

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

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

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

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

✓ 10*14033	5-22-4	A	LAMOYNE BAKER	GASTAR EXPLORATION USA INC	1/8+	665	554	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 23/353	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14034	5-22-4	A	LAWRENCE C AND LORRAINE J MCWHORTER	GASTAR EXPLORATION USA INC	1/8+	665	391	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 23/353	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14035	5-22-4	A	PEGGY MAE WHITE	GASTAR EXPLORATION USA INC	1/8+	695	446	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 23/353	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14036	5-22-4	A	WILDA WINTERS	GASTAR EXPLORATION USA INC	1/8+	701	579	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 23/353	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14037	5-22-4	A	JUDITH L CHAMBERS	GASTAR EXPLORATION USA INC	1/8+	701	577	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 23/353	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14039	5-22-4	A	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	554	N/A	N/A	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
✓ 10*14507	5-22-17	B	MARY THERESA SOLEAU AND THOMAS SOLEAU	GASTAR EXPLORATION USA INC	1/8+	749	524	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14508	5-22-17	B	JEAN W FOSTER	GASTAR EXPLORATION USA INC	1/8+	752	200	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14509	5-22-17	B	JAMES ROBERT WELLS	GASTAR EXPLORATION USA INC	1/8+	752	202	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14510	5-22-17	B	MARY AGNES CARROLL	GASTAR EXPLORATION USA INC	1/8+	749	528	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14511	5-22-17	B	ELIZABETH JANE KELLER	GASTAR EXPLORATION USA INC	1/8+	754	242	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14513	5-22-17	B	CAROLYN LYNN PORTER	GASTAR EXPLORATION USA INC	1/8+	767	256	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 27/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14514	5-22-17	B	CHARLES ARTHUR WELLS	GASTAR EXPLORATION USA INC	1/8+	768	494	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 27/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14515	5-22-17	B	JERRY TODD WELLS	GASTAR EXPLORATION USA INC	1/8+	773	572	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 28/499	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14516	5-22-17	B	JAMES NESBITT WELLS BY JOANIE WELLS AIF	GASTAR EXPLORATION USA INC	1/8+	773	570	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 28/499	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67

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WV Department of
Environmental Protection

10*14517	5-22-17	B	CARL W BACH JR	GASTAR EXPLORATION INC	1/8+	852	250	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 35/119	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14518	5-22-17	B	RAE ELLEN FLOYD AND KENNETH FLOYD	GASTAR EXPLORATION INC	1/8+	854	599	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 35/119	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14519	5-22-17	B	DOUGLAS M BACH	GASTAR EXPLORATION INC	1/8+	854	597	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 35/119	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*16471	5-22-17	B	CNX GAS COMPANY LLC	TH EXPLORATION LLC	1/8+	905	155	N/A	N/A	N/A	N/A	N/A
10*16652	5-22-17	B	MARY JUDITH BRANSON AND MICHAEL L BRANSON	TH EXPLORATION LLC	1/8+	942	35	N/A	N/A	N/A	N/A	N/A
10*16674	5-22-17	B	CHARLOTTE A KASTELIC	TH EXPLORATION LLC	1/8+	942	37	N/A	N/A	N/A	N/A	N/A
10*26910	5-22-17	B	BRIDGET S GATES AND DARRELL T GATES	TH EXPLORATION LLC	1/8+	1045	419	N/A	N/A	N/A	N/A	N/A
10*26940	5-22-17	B	PATRICK N WELLS	TH EXPLORATION LLC	1/8+	1045	413	N/A	N/A	N/A	N/A	N/A
10*14608	5-22-3	F	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	560	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14608	5-22-3	F	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	560	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14520	5-22-1	G	BONNIE GRISELL	GASTAR EXPLORATION USA INC	1/8+	756	81	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14521	5-22-1	G	ANITA MAE MASON	GASTAR EXPLORATION USA INC	1/8+	752	218	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14581	5-19-22	H	CAROL BORDNER	CHESAPEAKE APPALACHIA LLC	1/8+	693	609	N/A	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14582	5-19-22	H	DALE F MCINTIRE	CHESAPEAKE APPALACHIA LLC	1/8+	694	104	N/A	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14583	5-19-22	H	BRADLEY DEMENT AKA BRADLEY F DEMENT	CHESAPEAKE APPALACHIA LLC	1/8+	694	79	N/A	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14584	5-19-22	H	RAY F MCINTIRE AKA FRANCIS RAY MCINTIRE	CHESAPEAKE APPALACHIA LLC	1/8+	693	620	N/A	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67

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10*14585	5-19-22	H	WILBUR L BLAND	CHESAPEAKE APPALACHIA LLC	1/8+	694	543	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/479	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14586	5-19-22	H	CAROLYN MCINTIRE HICKERSON	CHESAPEAKE APPALACHIA LLC	1/8+	694	546	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/479	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14587	5-19-22	H	CHERYL FIDLER	CHESAPEAKE APPALACHIA LLC	1/8+	694	550	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/479	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14588	5-19-22	H	LLOYD E MCINTYRE II	CHESAPEAKE APPALACHIA LLC	1/8+	694	565	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/479	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14589	5-19-22	H	BETTY JEAN HARBOUR	CHESAPEAKE APPALACHIA LLC	1/8+	694	569	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/479	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14590	5-19-22	H	CHARLES HARBOUR CAROL J HARBOUR	CHESAPEAKE APPALACHIA LLC	1/8+	694	540	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/479	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14591	5-19-22	H	JUDY L MCINTIRE	CHESAPEAKE APPALACHIA LLC	1/8+	694	553	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/479	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14592	5-19-22	H	NORA JEAN TRUEX	CHESAPEAKE APPALACHIA LLC	1/8+	696	639	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/512	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14593	5-19-22	H	KEITH MCINTYRE	CHESAPEAKE APPALACHIA LLC	1/8+	696	17	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc : 23/479	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67

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10*14594	5-19-22	H	KAREN M ECKELBERRY	CHESAPEAKE APPALACHIA LLC	1/8+	696	13	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/512	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14595	5-19-22	H	JUDY A ADAMS	CHESAPEAKE APPALACHIA LLC	1/8+	696	643	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/512	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14596	5-19-22	H	MARY LEE LOWE	CHESAPEAKE APPALACHIA LLC	1/8+	696	9	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/512	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14597	5-19-22	H	JACKIE MCINTIRE STEPHANIE A CRISS, POA	CHESAPEAKE APPALACHIA LLC	1/8+	702	218	N/A	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14598	5-19-22	H	GEORGE A KNUTH	GASTAR EXPLORATION USA INC	1/8+	741	523	N/A	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14599	5-19-22	H	ESTATE OF KATHRYN G NOFFSINGER MICHAEL E MCINTIRE, GUARDIAN	GASTAR EXPLORATION INC	1/8+	839	522	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 33/308	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14600	5-19-22	H	PAMELA HARTZLER	GASTAR EXPLORATION INC	1/8+	839	525	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 33/308	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14601	5-19-22	H	TERRY MCINTIRE	GASTAR EXPLORATION INC	1/8+	840	158	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 33/308	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
✓ 10*14459	5-19-23	I	HELEN CROSKEY & WILLIAM DENOON CO-TTEES, JANIE L DENOON TRUST	GASTAR EXPLORATION USA INC	1/8+	731	145	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 735/263	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
✓ 10*14614	5-19-1	L	ROBERT RINE	CHESAPEAKE APPALACHIA LLC	1/8+	708	252	N/A	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
✓ 10*27959	5-13-41A	N	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	594	N/A	N/A	N/A	N/A	N/A
✓ 10*14502	5-13-40	P	ROBERT E RINE & DONNA M RINE	GASTAR EXPLORATION USA INC	1/8+	752	206	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14549	5-13-40	P	REBECCA PAUKNER	GASTAR EXPLORATION INC	1/8+	829	603	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67

10*14878	5-13-40	P	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 33/308	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14526	5-13-39	Q	THOMAS WILLIAM BOWMAN	GASTAR EXPLORATION USA INC	1/8+	761	432	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 27/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14527	5-13-39	Q	VICTORIA BOWMAN	GASTAR EXPLORATION USA INC	1/8+	761	434	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 27/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14549	5-13-39	Q	REBECCA PAUKNER	GASTAR EXPLORATION INC	1/8+	829	603	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14878	5-13-39	Q	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 33/308	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14461	5-13-41B	S	RODNEY & RHONDA JACKSON	GASTAR EXPLORATION USA INC	1/8+	739	411	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 26/183	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14527	5-13-42	T	VICTORIA BOWMAN	GASTAR EXPLORATION USA INC	1/8+	761	434	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 27/639	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14701	5-13-33	U	ROSEITA M THORNTON	GASTAR EXPLORATION INC	1/8+	885	600	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 35/575	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14702	5-13-33	U	NATHAN D YODER	CHESAPEAKE APPALACHIA LLC	1/8+	708	71	N/A	Chesapeake Appalachia LLC & Statoil USA Onshore Properties Inc to Gastar Exploration USA Inc & Atinum Marcellus I LLC: 27/321	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*17627	5-13-33	U	NATHAN D YODER	TH EXPLORATION LLC	1/8+	917	62	N/A	N/A	N/A	N/A	N/A
10*18191	5-13-34	V	DAVID J MAST AND MIRIAM MAST	TH EXPLORATION LLC	1/8+	952	183	N/A	N/A	N/A	N/A	N/A
10*14549	5-13-25	Y	REBECCA PAUKNER	GASTAR EXPLORATION INC	1/8+	829	603	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14748	5-13-25	Y	MARJORIE NIGHTENGALE	GASTAR EXPLORATION USA INC	1/8+	790	541	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 29/157	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14749	5-13-25	Y	JANICE E FUTEY	GASTAR EXPLORATION USA INC	1/8+	792	116	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 29/157	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14750	5-13-25	Y	MARY SUE ANTHONY	GASTAR EXPLORATION USA INC	1/8+	792	114	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 29/157	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14751	5-13-25	Y	GRACE E LUIKART	GASTAR EXPLORATION USA INC	1/8+	792	642	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 30/136	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67

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10*14752	5-13-25	Y	CHARLES BOWEN	GASTAR EXPLORATION USA INC	1/8+	792	648	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 30/136	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14753	5-13-25	Y	JERRY SMOYER	GASTAR EXPLORATION USA INC	1/8+	794	474	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 30/136	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14754	5-13-25	Y	BERNARD KNOLLINGER	GASTAR EXPLORATION USA INC	1/8+	794	472	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 30/136	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14755	5-13-25	Y	JUDITH A MCGRAIL	GASTAR EXPLORATION USA INC	1/8+	794	517	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 30/136	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14756	5-13-25	Y	WOODROW J. KNOLLINGER	GASTAR EXPLORATION USA INC	1/8+	794	515	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 30/136	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14757	5-13-25	Y	DOUGLAS W KNOLLINGER	GASTAR EXPLORATION USA INC	1/8+	794	487	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 30/136	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14758	5-13-25	Y	GARY R KNOLLINGER	GASTAR EXPLORATION USA INC	1/8+	795	154	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 30/136	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14759	5-13-25	Y	GLORIA J. LUIKART DECEASED BY MARK LUIKART AIF	GASTAR EXPLORATION USA INC	1/8+	804	245	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 31/184	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14760	5-13-25	Y	JEFFREY M BROWN	GASTAR EXPLORATION USA INC	1/8+	809	535	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 31/184	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14761	5-13-25	Y	RONALD E CLARK	GASTAR EXPLORATION USA INC	1/8+	809	571	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 31/184	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14762	5-13-25	Y	WILLIAM CARL KNOLLINGER	GASTAR EXPLORATION USA INC	1/8+	815	238	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 31/184	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14763	5-13-25	Y	BETTY J MCKINLEY	GASTAR EXPLORATION USA INC	1/8+	815	240	N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 31/184	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14764	5-13-25	Y	MARY B KNOLLINGER	GASTAR EXPLORATION INC	1/8+	821	40	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14765	5-13-25	Y	RUTH A KINNEY	GASTAR EXPLORATION USA INC	1/8+	821	42	N/A	Gastar Exploration Inc fka Gastar Exploration USA Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration USA Inc merged with and into Gastar Exploration Inc: 21/41	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14766	5-13-25	Y	JANICE M SANDERS	GASTAR EXPLORATION INC	1/8+	827	527	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67

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10*14767	5-13-25	Y	WILLIAM J SMOYER	GASTAR EXPLORATION INC	1/8+	829	332	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 32/428	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14768	5-13-25	Y	BONNIE DGINTO	GASTAR EXPLORATION INC	1/8+	844	77	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 33/308	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14769	5-13-25	Y	JAYNE S KISSEL	GASTAR EXPLORATION INC	1/8+	844	79	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 33/308	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14770	5-13-25	Y	MARY M HALL	GASTAR EXPLORATION INC	1/8+	846	413	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 34/302	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14771	5-13-25	Y	ERIC W THORNGATE	GASTAR EXPLORATION INC	1/8+	846	434	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 34/302	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14772	5-13-25	Y	GREG E THORNGATE	GASTAR EXPLORATION INC	1/8+	846	436	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 34/302	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14773	5-13-25	Y	JUSTIN J ANTHONY	GASTAR EXPLORATION INC	1/8+	846	438	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 34/302	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14774	5-13-25	Y	THOMAS R KNOLLINGER	GASTAR EXPLORATION INC	1/8+	846	406	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 34/302	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14775	5-13-25	Y	TODD HANNIG	GASTAR EXPLORATION INC	1/8+	849	522	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 34/302	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*14776	5-13-25	Y	KAREN M SMOYER	GASTAR EXPLORATION INC	1/8+	876	457	N/A	N/A	Gastar Exploration Inc to Atinum Marcellus I LLC: 35/144	Gastar Exploration Inc to TH Exploration II LLC: 36/9	Atinum Marcellus I LLC to TH Exploration II LLC: 48/67
10*17590	5-13-25	Y	ROBIN L KNOLLINGER	TH EXPLORATION LLC	1/8+	951	557	N/A	N/A	N/A	N/A	N/A
10*17591	5-13-25	Y	SHARON M MAIMONE AND ROBERT A MAIMONE	TH EXPLORATION LLC	1/8+	951	554	N/A	N/A	N/A	N/A	N/A
10*19847	5-13-25	Y	WILLIAM JOHN WAGNER UNKNOWN HEIRS MARY WAGNER MANN UNKNOWN HEIRS	TH EXPLORATION LLC	1/8+	943	450	N/A	N/A	N/A	N/A	N/A
10*26814	5-13-25	Y	ELIZABETH S STANFORD	TH EXPLORATION LLC	1/8+	1045	422	N/A	N/A	N/A	N/A	N/A
10*26936	5-13-25	Y	WILLIAM S HANNIG AND BARBARA S HANNIG	TH EXPLORATION LLC	1/8+	1046	468	N/A	N/A	N/A	N/A	N/A
10*27060	5-13-25	Y	SCOTT A HANNIG AND STACI C HANNIG	TH EXPLORATION LLC	1/8+	1049	488	N/A	N/A	N/A	N/A	N/A
10*27959	5-13-25	Y	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	594	N/A	N/A	N/A	N/A	N/A
10*16538	5-13-27	Z	AMP FUND III LP	TH EXPLORATION LLC	1/8+	915	187	N/A	N/A	N/A	N/A	N/A



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March 31, 2022

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

RE: Angels Envy N-13HU

Subject: Proposed Voluntary Pooling and Unitization

Dear Susan:

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

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

Sincerely,

Amy L. Morris
Permitting Specialist
Tug Hill Operating

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WV Department of
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CERTIFICATE OF CONSENT AND EASEMENT

We, the undersigned, for valuable consideration, the receipt and sufficiency of which is hereby acknowledged, being all the owners of the surface of that certain lot, tract or parcel of land located in Franklin District, Marshall County, State of West Virginia, shown on the attached plat or survey, hereby consents and grants an easement, pursuant to West Virginia Code, Section 22C-9-7(b)(4) and Operating Rule 4.4 of the Rules and Regulations of the West Virginia Oil and Gas Conservation Commission, to TH Exploration, LLC, its successors or assigns, for the drilling and operation of a deep well for the production of oil or gas at the location shown on the attached plat or survey.

Executed this 30th day of January, 2019.

CONSOL RCPC LLC

[Signature]
BY: Anthony M. Deason
ITS: Assistant Vice President

Marshall County
Jan Pest, Clerk
Instrument 1450431
02/08/2019 @ 12:48:36 PM
RIGHT OF WAY W/O CONSIDERATION
Book 1029 @ Page 478
Pages Recorded 2
Recording Cost \$ 11.00

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF WASHINGTON

SS:

On this the 30th day of January, ^{2019 ETZ} 2018, before me, a notary public, the undersigned authority, personally appeared Anthony M. Deason who acknowledged his self to be the Assistant Vice President of CONSOL RCPC LLC, a limited liability company, and that he as such Assistant Vice President being authorized to do so, executed the foregoing instrument for the purposed therein contained by signing the name of the limited liability company by his self as Assistant Vice President.

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

My Commission Expires: Feb 18, 2020
Signature/Notary Public: Eugene T. Capp Jr.
Name/Notary Public (print): Eugene T. Capp Jr.

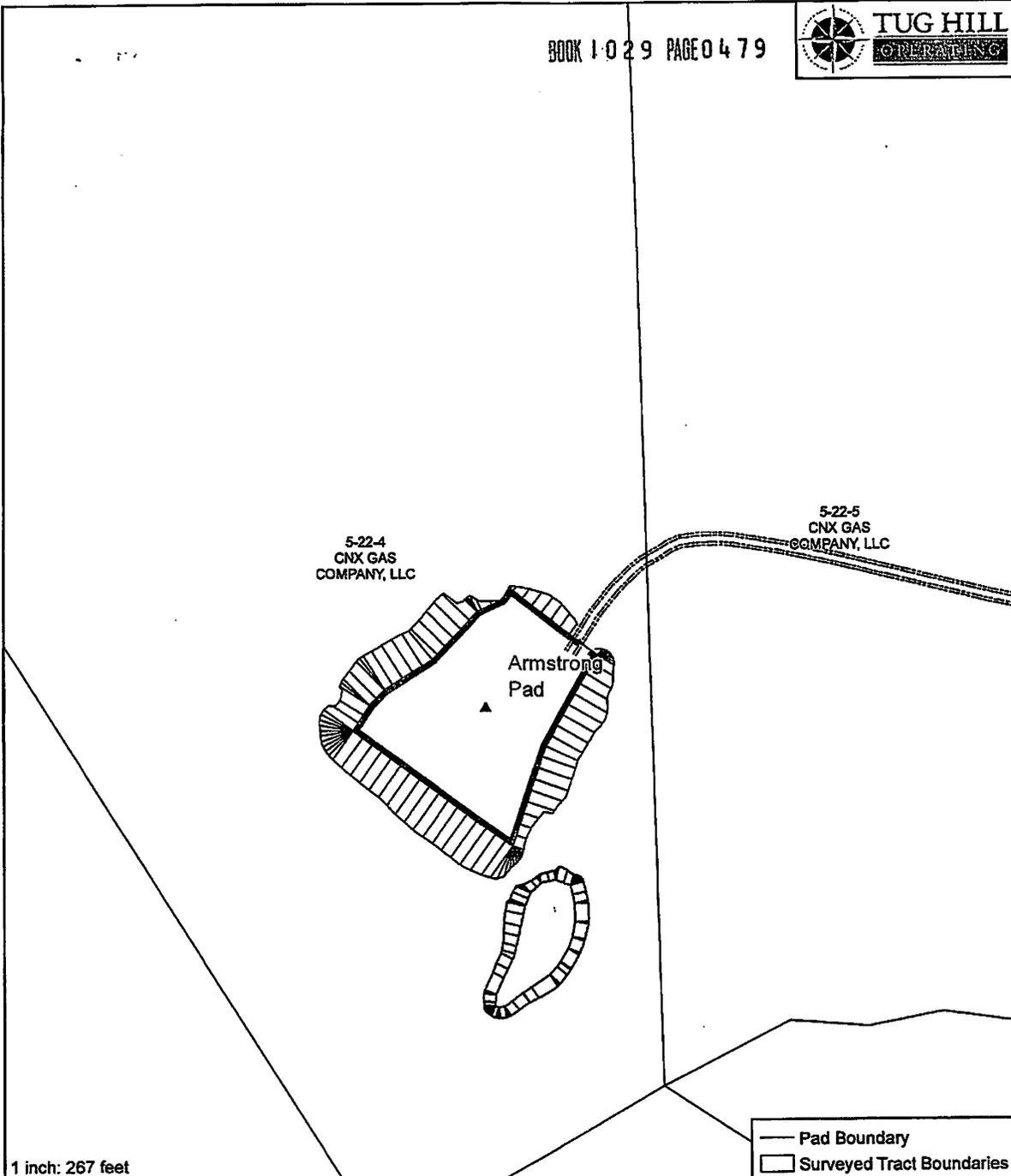
This instrument prepared by:
WV Oil and Gas Conservation Commission
601 57th Street
Charleston, WV 25304

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Eugene T. Capp Jr., Notary Public
Moon Twp., Allegheny County
My Commission Expires Feb. 18, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

4838-2618-8605v2

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05/13/2022



1 inch: 267 feet

0 75 150 300 Feet

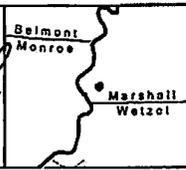


NOTE: THE APPROVED SITE LOCATION FOR THE SURFACE SITE ACCESS ROAD, RIGHT OF WAY AND THE LOCATION OF THE PROPERTY INTERESTS ARE AS SHOWN ON THESE PLATS. SURVEYED TRACT BOUNDARIES AND PAD BOUNDARIES SHOWN ON THIS PLAN ARE NOT TO BE CONSIDERED AS A GUARANTEE OF THE LOCATION OF THE SURFACE SITE ACCESS ROAD AND PAD BOUNDARIES. THE LOCATION OF THE SURFACE SITE ACCESS ROAD AND PAD BOUNDARIES SHALL BE DETERMINED BY THE SURFACE SITE ACCESS ROAD AND PAD BOUNDARIES AS SHOWN ON THESE PLATS. THE LOCATION OF THE SURFACE SITE ACCESS ROAD AND PAD BOUNDARIES SHALL BE DETERMINED BY THE SURFACE SITE ACCESS ROAD AND PAD BOUNDARIES AS SHOWN ON THESE PLATS.

"Plat"

CNX GAS COMPANY, LLC
Marshall County, WV

Date: 2/1/19
Name: [Signature]
Name: [Signature]



STATE OF WEST VIRGINIA, MARSHALL COUNTY, SCT.:

I, JAN PEST, Clerk of the County Commission of said County, do hereby certify that the annexed writing, bearing date on the 30th day of January, 2019, was presented for and by me, admitted to record in my office upon the above certificate as to the parties therein named this 9th day of February, 2019 at 12:48 o'clock P. M.

TESTE: [Signature: Jan Pest]

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Environmental Protection



4705102442

March 30, 2022

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

RE: Angels Envy N-13HU

Subject: Road Crossing Letter

Dear Laura:

Tug Hill Operating, LLC will not be drilling, extracting or producing any minerals under any WV County or State Routes in the area reflected on the Angels Envy N-13HU well plat.

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

Sincerely,

Amy L. Morris
Permitting Specialist – Appalachia Region

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WV Department of
Environmental Protection

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

Date of Notice Certification: 03/30/2022

API No. 47- 051 - _____
Operator's Well No. Angels Envy N-13HU
Well Pad Name: Armstrong

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>4,400,443.73</u>
County:	<u>Marshall</u>		Northing:	<u>516,413.90</u>
District:	<u>Franklin</u>	Public Road Access:		<u>Co. Rt. 29</u>
Quadrangle:	<u>Powhatan Point 7.5'</u>	Generally used farm name:		<u>CONSOL RCPC, LLC</u>
Watershed:	<u>French Creek - Ohio River</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		OOG OFFICE USE ONLY
<input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED		<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION	RECEIVED Office of Oil and Gas	<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 5. PUBLIC NOTICE	APR 06 2022	<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION	WV Department of Environmental Protection	<input type="checkbox"/> RECEIVED

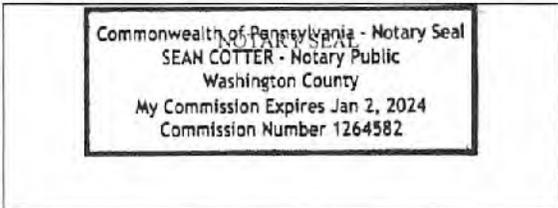
Required Attachments:

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

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></u>
Telephone:	<u>724-749-8388</u>	Email:	<u>amorris@tug-hilop.com</u>



Subscribed and sworn before me this 31 day of March,
[Signature] Notary Public
 My Commission Expires 1/2/2024

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 3/30/2022 Date Permit Application Filed: 3/31/2022

Notice of:

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

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

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

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

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

SURFACE OWNER(s)
Name: Consol RCPC, LLC
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Consol Energy
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

COAL OPERATOR
Name: n/a
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: n/a
Address: _____
Name: _____
Address: _____

SURFACE OWNER OF WATER AND/OR WATER PURVEYOR(s)
Name: none within 2,000'
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: n/a
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: n/a
Address: _____

*Please attach additional forms if necessary

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and 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.dcp.wv.gov/oil-and-gas/pages/default.aspx.

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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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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05/13/2022

WW-6A
(8-13)

API NO. 47- 051 -
OPERATOR WELL NO. Angels Envy N-13HU
Well Pad Name: Armstrong

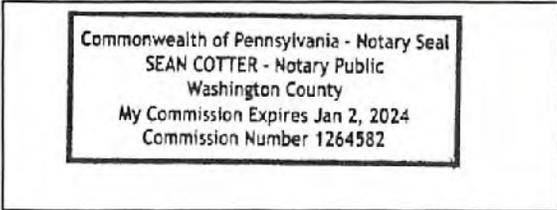
Notice is hereby given by:

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

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

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 30 day of March, 2022.

[Signature] _____ Notary Public

My Commission Expires 1/2/2024

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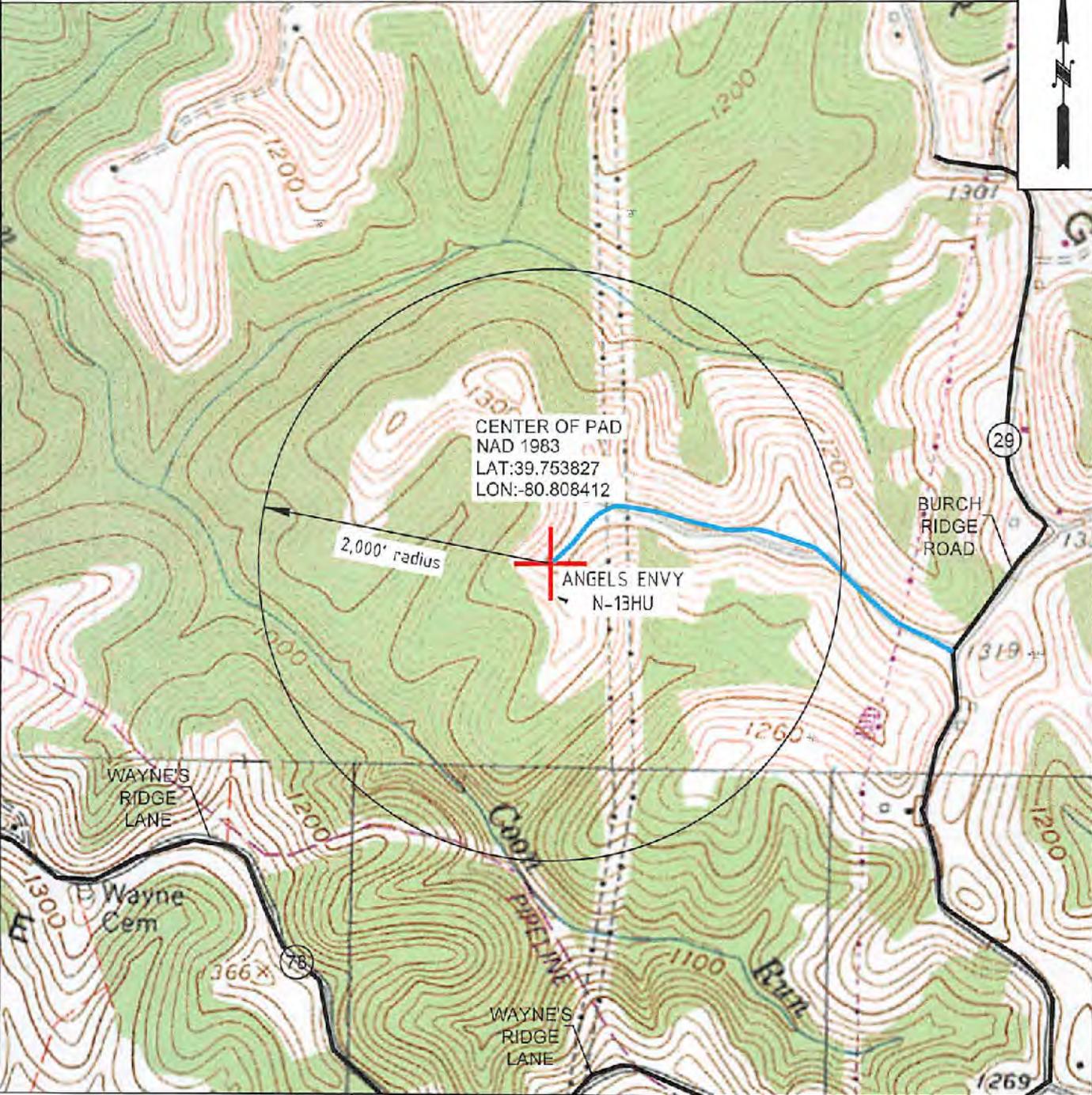
05/13/2022

WW-6A

PROPOSED ANGELS ENVY N-13HU

SUPPLEMENT PG 1

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



 TUG HILL OPERATING	OPERATOR	494510851	TOPO SECTION	LEASE NAME
	TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		POWHEROIL AND GAS	ANGELS ENVY
			SCALE: 1" = 1000'	DATE: APR 06 2022
				DATE: 03-18-2022

WV Department of
Environmental Protection

05/13/2022

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.
Date of Notice: 02/07/2022 **Date Permit Application Filed:** 02/17/2022

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

HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

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

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon 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>516,413.90</u>
County: <u>Marshall</u>	Northing: <u>4,400,443.73</u>
District: <u>Franklin</u>	Public Road Access: <u>CONSOL RCPC, LLC</u>
Quadrangle: <u>Powhatan Point 7.5</u>	Generally used farm name: <u>Co. Rt. 29</u>
Watershed: <u>French Creek - Ohio River</u>	

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. 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
APR 06 2022

Notice is hereby given by:

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

Authorized Representative: Darren Brown
Address: 5098 Washington Street West, Suite 407
Charleston, WV 25313-1561
Telephone: 877-467-3525
Email: ct-statecommunications@wolterskluwer.com
Facsimile: _____

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.



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

January 21, 2022

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 Armstrong Pad, Marshall County
 Angels Envy N-13HU Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2019-0438 which has been issued to Tug Hill Operating LLC for access to the State Road for a well site located off Marshall County Route 29 SLS MP 4.49.

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

Very Truly Yours,

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

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

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



PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Angels Envy Wells

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

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



**WVDEP ODG
ACCEPTED AS-BUILT**
5/11/2022

Armstrong Well Site

Site Design, Construction Plan, &
Erosion and Sediment Control Plans
Tug Hill Operating
Marshall County
Franklin District
Latitude 39.75382673°
Longitude -80.80841198°
Stillhouse Run - Ohio River Watershed

Pertinent Site Information
Armstrong Well Site
Emergency Number: 304-445-1920
Franklin District, Marshall County, WV
Watershed: Stillhouse Run - Ohio River Watershed
Tug Hill Contact Number: 1-817-632-3400

Property Owner Information - Armstrong Well Site

Owner	PA	APR	VAL	AREA	REMARKS	DATE	STATUS	PAID
CONRAD, BRYAN LLC	20.4	1.00	239	1.00		7/16		11.0
CONRAD, BRYAN LLC	20.4	1.00	239	1.00		7/16		11.0

Exhibit A: As-Built



As-Built

Structure	PA	APR	VAL	AREA	REMARKS	DATE	STATUS	PAID
STANDARD BOND	20.4	1.00	239	1.00		7/16		11.0
CONRAD, BRYAN LLC	20.4	1.00	239	1.00		7/16		11.0

Armstrong Well Site Summary

Item	Quantity	Unit	Value
Excavation	11.0	CY	11.0
Backfill	11.0	CY	11.0
Gravel	11.0	CY	11.0
Concrete	11.0	CY	11.0

Without Impact Dispersal PWD

Material	Quantity	Unit	Value
Excavation	11.0	CY	11.0
Backfill	11.0	CY	11.0
Gravel	11.0	CY	11.0
Concrete	11.0	CY	11.0

Project Details

Item	Description	Quantity	Unit	Value
Excavation	Excavation	11.0	CY	11.0
Backfill	Backfill	11.0	CY	11.0
Gravel	Gravel	11.0	CY	11.0
Concrete	Concrete	11.0	CY	11.0

Project Contacts

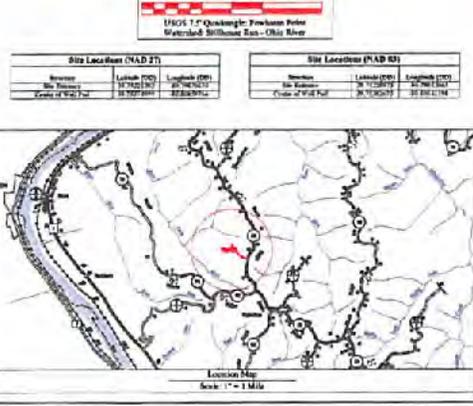
Client: Tug Hill Operating, LLC
Address: 1000 West Virginia Ave, Charleston, WV 25302
Phone: 304-775-1000
Website: www.tughill.com

Design: K&S Services, Inc.
Address: 1000 West Virginia Ave, Charleston, WV 25302
Phone: 304-775-1000
Website: www.kands.com

Construction: [Name Redacted]
Address: [Address Redacted]
Phone: [Phone Redacted]

Approach Route:

From the intersection of OH 817 and WV 812 use New Market-86, WV, Turn North on WV 812 for 0.3 mi. Turn Right onto Co. 812 (Rt. 22) (0.3 mi. 812 Rd.). Follow Co. 812 for 2.1 mi. Turn Right onto Co. 817 (Warner Ridge). Follow Co. 817 for 0.3 mi. Turn Left onto Co. 812 (Black Ridge). Follow Co. 812 for 0.4 mi. The site entrance will be on the left (West) side of the road.



Well Location Restrictions:

All Well locations shall be in accordance with the following restrictions:

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TUG HILL

OPERATING

ARMSTRONG WELL SITE

Franklin District
Marshall County, WV

811

Call before you dig

811

Call before you dig

