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west virginia department of environmental protection

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

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

Thursday, July 28, 2022  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

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

Re: Permit Modification Approval for VAN WINKLE N-3HM  
47-051-02366-00-00

**Extended Lateral Length**

TUG HILL OPERATING, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before 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: VAN WINKLE N-3HM  
Farm Name: XCL MIDSTREAM OPERATING, LLC  
U.S. WELL NUMBER: 47-051-02366-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 7/28/2022

Promoting a healthy environment.

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 Meade Glen Easton 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: Van Winkle N-3HM Well Pad Name: Hunter Pethel

3) Farm Name/Surface Owner: TH Exploration, LLC Public Road Access: County Route 74

4) Elevation, current ground: 753' Elevation, proposed post-construction: 753'

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):**

Marcellus is the target formation at a depth of 6,103' - 6,153', thickness of 50' and anticipated pressure of approx. 3800 psi.

8) **Proposed Total Vertical Depth:** 6,253'

9) Formation at Total Vertical Depth: Onondaga

10) **Proposed Total Measured Depth:** 21,423'

11) **Proposed Horizontal Leg Length:** 14,375.03'

12) **Approximate Fresh Water Strata Depths:** 70; 414'

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

14) **Approximate Saltwater Depths:** 869'

15) **Approximate Coal Seam Depths:** Sewickley Coal - 313' and Pittsburgh Coal - 408'

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: \_\_\_\_\_

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18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	30"	NEW	BW	BW	120'	120'	259ft <sup>3</sup> (CTS)
Fresh Water/Coal	13 3/8"	NEW	J55	54.5#	515'	515'	708ft <sup>3</sup> (CTS)
Intermediate	9 5/8"	NEW	J55	36#	2,242'	2,242'	728ft <sup>3</sup> (CTS)
<b>Production</b>	5 1/2"	NEW	P110	20#	21,423'	21,423'	5,458ft <sup>3</sup> (CTS)
Tubing	2 3/8"	NEW	P110	4.7#		6,512'	
Liners							

*MSK 3/29/2022*

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

**PACKERS**

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

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

Drill through the Marcellus and TD Pilot Hole 100' into the Onondaga. Log vertical section and run a solid cement plug back to proposed KOP (6,012'). 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 36,000,000 lb proppant and 650,000 bbl of water. Max rate = 80 bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 16.63 acres

22) Area to be disturbed for well pad only, less access road (acres): 4.87 acres

23) Describe centralizer placement for each casing string:

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

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

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

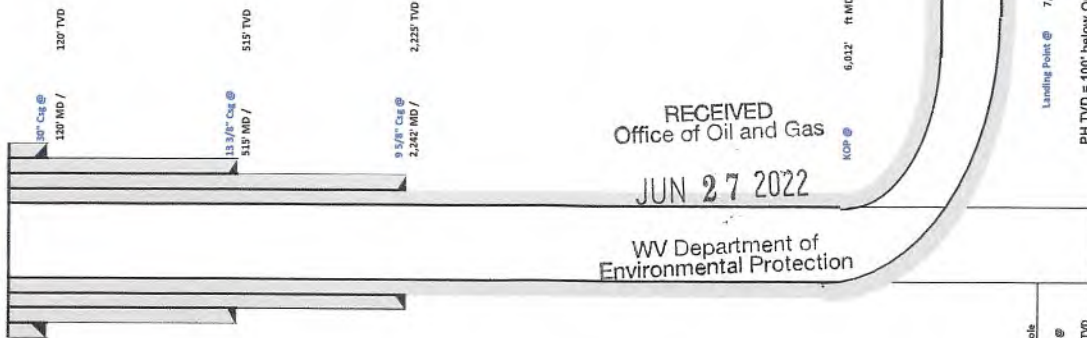
25) Proposed borehole conditioning procedures:

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

\*Note: Attach additional sheets as needed.



**WELL NAME:** Van Winkle N-3HM  
**STATE:** WV **COUNTY:** Marshall  
**DISTRICT:** Meade  
**DF Elev:** 75.3' **GL Elev:** 75.3'  
**TD:** 21,423'  
**TH Latitude:** 39.7831961  
**TH Longitude:** -80.726274  
**BH Latitude:** 39.811383  
**BH Longitude:** -80.7299



FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	416
Sewickley Coal	313
Pittsburgh Coal	408
Big Lime	1590
Weir	1882
Berea	2081
Gordon	2351
Rhinestreet	5468
Genesee/Burlak	5973
Tully	6000
Hamilton	6095
Marcellus	6103
Landing Depth	6138
Onondaga	6153
Pilot Hole Depth	6253

CASING SUMMARY							
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement
Conductor	36	30	120'	120'	BW	BW	Surface
Surface	17.5	13 3/8	515'	515'	54.5	J55	Surface
Intermediate 1	12.1/4	9 5/8	2,242'	2,225'	36	J55	Surface
Production	8.7/8 x 8.3/4	5.1/2	21,423'	5,888'	20	CYP 110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
Sacks	Class	Density	Fluid Type	Centralizer	Notes
338	A	15.6	Air	None	
687	A	15.6	Air	3 Centralizers at equal distance	
762	A	15	Air	1 Centralizer every other ft	
5,026	A	14.5	Air / SOBMM	1 every other joint in lateral; 1 per joint in curve; 1 every other ft to SIC	

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Pilot Hole  
 PH TD @ 6,253' TVD  
 Landing Point @ 7,051' MD / 6,138' TVD  
 PH TVD = 100' below Onondaga Top  
 Lateral TD @ 21,423' ft MD  
 5,888 ft TVD





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

**Van Winkle N-3HM**

**Casing**

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	13 3/8"	J55	17 1/2"	515'	CTS
Intermediate	9 5/8"	J55	12 1/4"	2,242'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4	21,423'	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: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.19
- 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 15.2ppg, Y = 1.19

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**TUG HILL**  
**OPERATING**

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

**Well Name: Van Winkle N-3HM**

**Pad Name: Hunter Pethtel Pad**

**County: Marshall**

UTM (meters), NAD83, Zone 17

Northing: 4,403,593.34

Easting: 523,439.30

*Wayne J. Smith*  
*3/28/2022*

**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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**HUNTER PETHTEL LEASE  
VAN WINKLE N 3HM WELL  
TUG HILL OPERATING**

PARCEL	SURFACE ADJOINER	ACRES
5-9-24	DENNIS P. CADMUS	21 AC. 49 P.
5-10-6	WILLIAM F. RULONG, ET AL	P/O 1.00
5-10-8.1	SAMUEL D. & BECKY ROBINSON	1.511
9-10-1.1	CONNIE S. CUNNINGHAM	0.482
9-10-1.2	JOSHUA A. & SHANNON N. HOYT	2.436
9-10-2.2	WALTER J. FECAT, JR., ET UX	5.00
9-10-12	JOSEPH LEE CROW	11.279
9-10-13	JOSEPH LEE CROW	12.18
9-10-21	JAMES & VICKIE J. MASON	2.00
9-10-22	JAMES & VICKIE J. MASON	1.169
9-13-4.1	H & L EQUIPMENT, LLC	0.449

TAG	SURFACE OWNER	PARCEL	ACRES
A	TH EXPLORATION	9-13-5.3	16.10
B	XCL MIDSTREAM OPERATING, LLC	9-13-5	168.73
C	XCL MIDSTREAM OPERATING, LLC	9-10-19.1	10
D	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
E	ALAN KELLEY ET AL	9-10-19	113.08
F	CAROL VAN SCYOC EST	9-10-2	206.988
G	SHERRY VAN SCYOC YOCUM & BLAINE VAN SCYOC	9-10-2.1	5.00
H	CAROL VAN SCYOC EST	9-10-1	118.087
I	JOSHUA A. & SHANNON N. HOYT	9-10-20	9.942
J	FINLEY D. MONTGOMERY ET UX	9-10-1.3	20.294
K	WILLIAM F. RULONG, ET AL	5-10-8	70.6672
L	WILLIAM F. RULONG, ET AL	5-10-7	22.872
M	ROBERT GREGORY MCQUIRE, ET UX	5-9-10	139.60
N	ROBERT GREGORY MCQUIRE, ET UX	5-9-12	78.28
O	ROBERT GREGORY MCQUIRE, ET UX	5-9-9	49
P	PATRICIA McCLINTOCK	5-9-7	110.02
Q	PATRICIA McCLINTOCK	5-9-6	101
R	PATRICIA McCLINTOCK	5-9-5	22.5

**NOTES ON SURVEY**

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.
- BASED ON WV DOT COUNTY ROUTE 74 IS A 40' STRIP OF LAND ACQUIRED IN NUMEROUS DEEDS.



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

5,042' T.H.      2,528' B.H.

T.H. LATITUDE 39°47'30"  
 B.H. LATITUDE 39°50'00"

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

NAD'83 S.P.C.(FT) N. 469,282.04 E. 1,623,883.01  
 NAD'83 GEO. LAT-(N) 39.781961 LONG-(W) 80.728274  
 NAD'83 UTM (M) N. 4,403,593.30 E. 523,439.33

**LANDING POINT**

NAD'83 S.P.C.(FT) N. 468,438.7 E. 1,621,809.3  
 NAD'83 GEO. LAT-(N) 39.779568 LONG-(W) 80.733611  
 NAD'83 UTM (M) N. 4,403,325.8 E. 522,811.8

**BOTTOM HOLE**

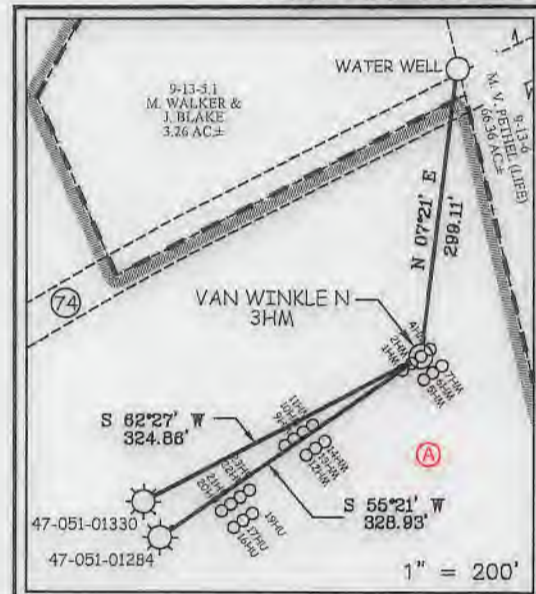
NAD'83 S.P.C.(FT) N. 481,016.5 E. 1,614,849.4  
 NAD'83 GEO. LAT-(N) 39.813830 LONG-(W) 80.759000  
 NAD'83 UTM (M) N. 4,407,122.3 E. 520,627.5

T.H. LONGITUDE 80°42'30"  
 B.H. LONGITUDE 80°45'00"

7,105' B.H.

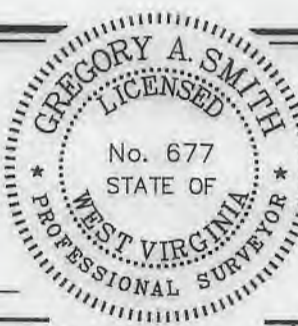


**REFERENCES**



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

P.S. 677 *Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE JANUARY 21, 20 21  
 REVISED JUNE 1, 2022  
 OPERATORS WELL NO. VAN WINKLE N 3HM  
 API WELL NO. 47-051-02366  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8952P3HMR.dwg  
 VAN WINKLE N 3HM-REV3  
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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

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

LOCATION: ELEVATION 753.50' WATERSHED FISH CREEK (HUC 10)

DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER TH EXPLORATION, LLC ACREAGE 16.10 ±

ROYALTY OWNER DENNIS HUNTER, ET AL - SEE WW-6A1 ACREAGE 190.12 ±

PROPOSED WORK: LEASE NO. SEE WW-6A1

DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_ OTHER \_\_\_

PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD: 6,253' / TMD: 21,423'

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

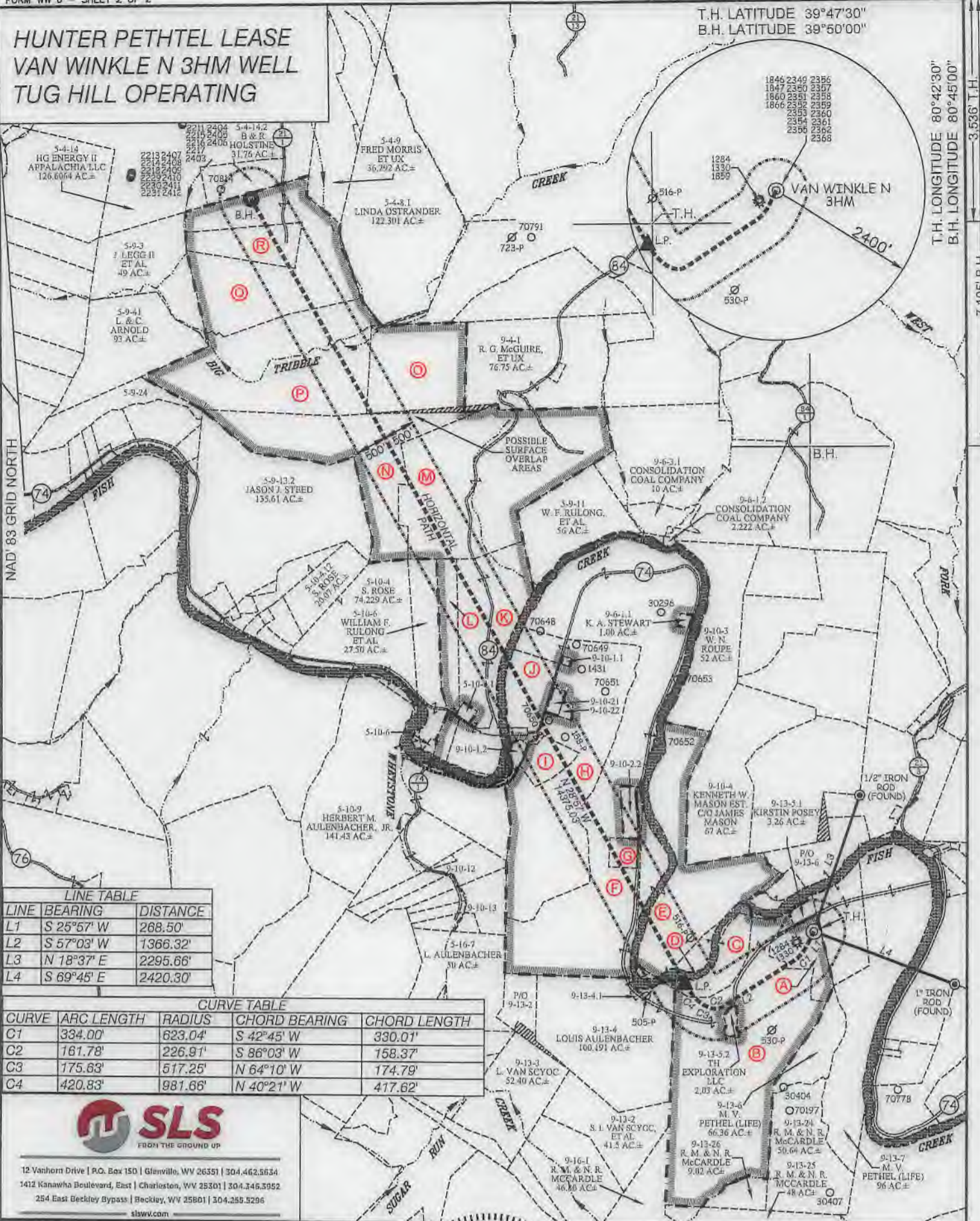
COUNTY NAME PERMIT



# HUNTER PETHEL LEASE VAN WINKLE N 3HM WELL TUG HILL OPERATING

T.H. LATITUDE 39°47'30"  
B.H. LATITUDE 39°50'00"

T.H. LONGITUDE 80°42'30"  
B.H. LONGITUDE 80°45'00"



**LINE TABLE**

LINE	BEARING	DISTANCE
L1	S 25°57' W	268.50'
L2	S 57°03' W	1366.32'
L3	N 18°37' E	2295.66'
L4	S 69°45' E	2420.30'

**CURVE TABLE**

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	334.00'	623.04'	S 42°45' W	330.01'
C2	161.78'	226.91'	S 86°03' W	158.37'
C3	175.63'	517.25'	N 64°10' W	174.79'
C4	420.83'	981.66'	N 40°21' W	417.62'



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 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.345.3952  
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296  
 slsvw.com

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

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NAD'83 UTM (M)	N. 4,403,589.30	E. 523,439.33
<b>LANDING POINT</b>		
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NAD'83 GEO.	LAT-(N) 39.779566	LONG-(W) 80.733611
NAD'83 UTM (M)	N. 4,403,325.8	E. 522,811.8
<b>BOTTOM HOLE</b>		
NAD'83 S.P.C.(FT)	N. 481,016.5	E. 1,614,849.4
NAD'83 GEO.	LAT-(N) 39.813830	LONG-(W) 80.759000
NAD'83 UTM (M)	N. 4,407,122.3	E. 520,627.5



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

P.S. 677 *Gregory A. Smith*

SCALE 1" = 2000' FILE NO. 8952P3HMR.dwg  
 VAN WINKLE N 3HM-REV3  
 DATE JANUARY 21, 20 21  
 REVISED JUNE 1, 2022  
 OPERATORS WELL NO. VAN WINKLE N 1HM  
 API WELL NO. 47 — 051 — 02364 MOD  
 NO. STATE COUNTY PERMIT

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

**LEGEND**

LEASE LINE	
SURFACE LINE	
WELL LATERAL	
OFFSET LINE	
TIE LINE	
CREEK	
ROAD	
COUNTY ROUTE	
PROPOSED WELL	
EXISTING WELL	
PERMITTED WELL	
TAX MAP-PARCEL	00-00
SURFACE OWNER (SEE TABLE)	
LEASE # (SEE WW-6A1)	

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



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

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

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

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

\*See attached pages

*\*Co-tenancy utilization – At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act.*

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



Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment
10*31312	9-13-5.3	A	DENNIS W HUNTER AND KATHY A HUNTER	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	668	155	N/A	N/A	Central Michigan Exploraiton LLC to Stone Energy Corporation: 21/288 & 21/356	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31312	9-13-5	B	DENNIS W HUNTER AND KATHY A HUNTER	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	668	155	N/A	N/A	Central Michigan Exploraiton LLC to Stone Energy Corporation: 21/288 & 21/356	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31352	9-10-19.1	C	DENNIS W HUNTER AND KATHY A HUNTER	CENTRAL MICHIGAN EXPLORATION LLC	1/8+	690	60	N/A	N/A	Central Michigan Exploration LLC to Stone Energy Corp.: AB 21/288 & 21/497	Stone Energy Corp. to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*23458	FISH CREEK	D	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	TH EXPLORATION LLC	1/8+	1019	373	N/A	N/A	N/A	N/A	N/A
10*31384	9-10-19	E	JOHN E KELLEY AND JANET E KELLEY	STONE ENERGY CORPORATION	1/8+	693	6	N/A	N/A	N/A	Stone Energy Corp. to EQT Production Company: AB 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*19894	9-10-2	F	CAROL L VANSYOC	TH EXPLORATION LLC	1/8+	941	392	N/A	N/A	N/A	N/A	N/A
10*18398	9-10-2.1	G	BLAINE A VANSYOC	TH EXPLORATION LLC	1/8+	932	470	N/A	N/A	N/A	N/A	N/A
10*18399	9-10-2.1	G	SHERRY CARROLL	TH EXPLORATION LLC	1/8+	932	473	N/A	N/A	N/A	N/A	N/A
10*19894	9-10-1	H	CAROL L VANSYOC	TH EXPLORATION LLC	1/8+	941	392	N/A	N/A	N/A	N/A	N/A
10*29359	9-10-20	I	JOSHUA A HOYT AND SHANNON N HOYT	TH EXPLORATION LLC	1/8+	1096	535	N/A	N/A	N/A	N/A	N/A
10*31374	9-10-1.3	J	FINLEY D MONTGOMERY AND KARLA R MONTGOMERY	TRIENERGY HOLDINGS LLC	1/8+	734	177	TriEnergy Holdings LLC to NPAR LLC: 25/449	NPAR LLC to Chevron USA Inc: 756/332	Chevron USA Inc to Stone Energy Corporation: 33/325	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*18726	5-10-8	K	EMILY K RULONG AND WILLIAM F RULONG SR	TH EXPLORATION LLC	1/8+	941	441	N/A	N/A	N/A	N/A	N/A
10*18837	5-10-8	K	THE RODGERS FAMILY TRUST	TH EXPLORATION LLC	1/8+	935	122	N/A	N/A	N/A	N/A	N/A
10*18943	5-10-8	K	BRANDY SUE MOORE AND DELMAS L MOORE	TH EXPLORATION LLC	1/8+	940	124	N/A	N/A	N/A	N/A	N/A
10*19607	5-10-8	K	DAVA HARTLEY SMITH	TH EXPLORATION LLC	1/8+	944	186	N/A	N/A	N/A	N/A	N/A
10*19666	5-10-8	K	RALPH TERRY AND MONICA TERRY	TH EXPLORATION LLC	1/8+	944	182	N/A	N/A	N/A	N/A	N/A
10*22324	5-10-8	K	RHONDA RISDEN	TH EXPLORATION LLC	1/8+	965	600	N/A	N/A	N/A	N/A	N/A
10*22542	5-10-8	K	VINCE E OSER AND KAY J OSER	TH EXPLORATION LLC	1/8+	966	198	N/A	N/A	N/A	N/A	N/A
10*23487	5-10-8	K	ELMER RICHARDSON ET AL CAROLYN FLANNERY SP COMM	TH EXPLORATION LLC	1/8+	1009	255	N/A	N/A	N/A	N/A	N/A
10*23491	5-10-8	K	GENERAL RECEIVER OF MARSHALL COUNTY	TH EXPLORATION LLC	1/8+	1014	498	N/A	N/A	N/A	N/A	N/A
10*26513	5-10-8	K	CLIFFORD C HARTLEY AND BARBARA T HARTLEY	TH EXPLORATION LLC	1/8+	1034	226	N/A	N/A	N/A	N/A	N/A
10*27959	5-10-8	K	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	594	N/A	N/A	N/A	N/A	N/A
10*28119	5-10-8	K	WILMA JEAN OSER	TH EXPLORATION LLC	1/8+	1057	328	N/A	N/A	N/A	N/A	N/A
10*28563	5-10-8	K	MARGARET TOLER	TH EXPLORATION LLC	1/8+	1074	630	N/A	N/A	N/A	N/A	N/A
10*28616	5-10-8	K	SILVIA J NEEHOUSE	TH EXPLORATION LLC	1/8+	1075	37	N/A	N/A	N/A	N/A	N/A
10*28617	5-10-8	K	RICKY E DAVIS AIF ALISA M DAVIS	TH EXPLORATION LLC	1/8+	1075	35	N/A	N/A	N/A	N/A	N/A
10*28812	5-10-8	K	ROBERT N BAKER AND THERESA L BAKER	TH EXPLORATION LLC	1/8+	1077	33	N/A	N/A	N/A	N/A	N/A
10*28855	5-10-8	K	PAMELA J WHORTON AND ROBERT D WHORTON	TH EXPLORATION LLC	1/8+	1077	264	N/A	N/A	N/A	N/A	N/A
10*28926	5-10-8	K	DAVID M AND SHERRY L TOLER	TH EXPLORATION LLC	1/8+	1078	13	N/A	N/A	N/A	N/A	N/A
10*28950	5-10-8	K	ANTHONY C BENEDETTA AND MARY A BENEDETTA	TH EXPLORATION LLC	1/8+	1078	188	N/A	N/A	N/A	N/A	N/A
10*28969	5-10-8	K	HARRY MCCrackEN AND BETH ANN MCCrackEN	TH EXPLORATION LLC	1/8+	1078	436	N/A	N/A	N/A	N/A	N/A
10*28988	5-10-8	K	HAROLD L GOUDY AND DONNA D GOUDY	TH EXPLORATION LLC	1/8+	1080	536	N/A	N/A	N/A	N/A	N/A
10*28989	5-10-8	K	SANDRA K LYTTON AND CHARLES E LYTTON	TH EXPLORATION LLC	1/8+	1080	538	N/A	N/A	N/A	N/A	N/A

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Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment
10*28993	5-10-8	K	CALVIN MCGUIRE	TH EXPLORATION LLC	1/8+	1080	541	N/A	N/A	N/A	N/A	N/A
10*28994	5-10-8	K	JENNIFER T PUMPA AND RICHARD PUMPA	TH EXPLORATION LLC	1/8+	1080	543	N/A	N/A	N/A	N/A	N/A
10*28995	5-10-8	K	ELLEN SCHMIDT	TH EXPLORATION LLC	1/8+	1080	545	N/A	N/A	N/A	N/A	N/A
10*28996	5-10-8	K	SHAWN MARIE SEWGARD AND JERRY SWEGARD	TH EXPLORATION LLC	1/8+	1083	124	N/A	N/A	N/A	N/A	N/A
10*29043	5-10-8	K	DONALD LESTER GOUDY JR AND BILLIE GOUDY	TH EXPLORATION LLC	1/8+	1083	121	N/A	N/A	N/A	N/A	N/A
10*29044	5-10-8	K	GARREN RAY GOUDY AND HOLLEE J GOUDY	TH EXPLORATION LLC	1/8+	1083	377	N/A	N/A	N/A	N/A	N/A
10*29073	5-10-8	K	JOEL B MATHIS II AND DEBORAH MATHIS	TH EXPLORATION LLC	1/8+	1083	563	N/A	N/A	N/A	N/A	N/A
10*29206	5-10-8	K	PAMELA R BENEDETTA	TH EXPLORATION LLC	1/8+	1085	598	N/A	N/A	N/A	N/A	N/A
10*29245	5-10-8	K	AMFLO ENTERPRISES LLC CO BARRY STIFFLER	TH EXPLORATION LLC	1/8+	1086	508	N/A	N/A	N/A	N/A	N/A
10*29267	5-10-8	K	ELNORA M BARANICH	TH EXPLORATION LLC	1/8+	1090	141	N/A	N/A	N/A	N/A	N/A
10*29394	5-10-8	K	WILLIAM ELLIOTT AND MARY MARCIA ELLIOTT	TH EXPLORATION LLC	1/8+	1096	303	N/A	N/A	N/A	N/A	N/A
10*29512	5-10-8	K	KERRY R AND BARBARA MOORE	TH EXPLORATION LLC	1/8+	1096	305	N/A	N/A	N/A	N/A	N/A
10*29643	5-10-8	K	JAMES AND DEBRA LEE MATHIS	TH EXPLORATION LLC	1/8+	1100	83	N/A	N/A	N/A	N/A	N/A
10*29664	5-10-8	K	DALE BRUCE MOORE	TH EXPLORATION LLC	1/8+	1100	89	N/A	N/A	N/A	N/A	N/A
10*29669	5-10-8	K	JEFFREY & MELISSA M MOORE	TH EXPLORATION LLC	1/8+	1100	91	N/A	N/A	N/A	N/A	N/A
10*29721	5-10-8	K	CHARLES MICHAEL & TRACEY L BAKER	TH EXPLORATION LLC	1/8+	1100	250	N/A	N/A	N/A	N/A	N/A
10*29795	5-10-8	K	LOUIS M BENEDETTA	TH EXPLORATION LLC	1/8+	1101	25	N/A	N/A	N/A	N/A	N/A
10*29801	5-10-8	K	KIRCHGESSNER CONSULTING GROUP*	TH EXPLORATION LLC	1/8+	1100	300	N/A	N/A	N/A	N/A	N/A
10*29807	5-10-8	K	DANIEL J NABUDA*	TH EXPLORATION LLC	1/8+	1101	294	N/A	N/A	N/A	N/A	N/A
10*29809	5-10-8	K	RICHARD D & JULIA M REPASKY*	TH EXPLORATION LLC	1/8+	1101	288	N/A	N/A	N/A	N/A	N/A
10*29813	5-10-8	K	HELEN E ROBINSON	TH EXPLORATION LLC	1/8+	1101	23	N/A	N/A	N/A	N/A	N/A
10*29833	5-10-8	K	SKYPOINT RESOURCES LLC	TH EXPLORATION LLC	1/8+	1103	556	N/A	N/A	N/A	N/A	N/A
10*29857	5-10-8	K	DEAN A BENEDETTA*	TH EXPLORATION LLC	1/8+	1102	298	N/A	N/A	N/A	N/A	N/A
10*29858	5-10-8	K	H3 LLC	TH EXPLORATION LLC	1/8+	1103	567	N/A	N/A	N/A	N/A	N/A
10*30033	5-10-8	K	DANNY MOORE*	TH EXPLORATION LLC	1/8+	1103	579	N/A	N/A	N/A	N/A	N/A
10*30036	5-10-8	K	RUSSELL ALBERT WHITE*	TH EXPLORATION LLC	1/8+	1103	585	N/A	N/A	N/A	N/A	N/A
10*30039	5-10-8	K	MARY RENEE WHITE*	TH EXPLORATION LLC	1/8+	1103	597	N/A	N/A	N/A	N/A	N/A
10*30041	5-10-8	K	RICHARD NEWMAN WHITE*	TH EXPLORATION LLC	1/8+	1103	591	N/A	N/A	N/A	N/A	N/A
10*30045	5-10-8	K	ROBERT LEE WHITE JR*	TH EXPLORATION LLC	1/8+	1103	609	N/A	N/A	N/A	N/A	N/A
10*30075	5-10-8	K	RHONDA SUE DEPAUL*	TH EXPLORATION LLC	1/8+	1103	603	N/A	N/A	N/A	N/A	N/A
10*31356	5-10-8	K	AMY M TOLER FKN AMY M PARKER	STONE ENERGY CORPORATION	1/8+	874	502	N/A	N/A	N/A	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31357	5-10-8	K	LORI E KESTNER	STONE ENERGY CORPORATION	1/8+	886	251	N/A	N/A	N/A	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31360	5-10-8	K	AVA SMITH	CHEVRON USA INC	1/8+	801	572	N/A	N/A	Chevron USA Inc to Stone Energy Corporation: 34/143	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31361	5-10-8	K	JAMES W HARTLEY	CHEVRON USA INC	1/8+	801	563	N/A	N/A	Chevron USA Inc to Stone Energy Corporation: 34/143	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*18726	5-10-7	L	EMILY K RULONG AND WILLIAM F RULONG SR	TH EXPLORATION LLC	1/8+	941	441	N/A	N/A	N/A	N/A	N/A
10*18837	5-10-7	L	THE RODGERS FAMILY TRUST	TH EXPLORATION LLC	1/8+	935	122	N/A	N/A	N/A	N/A	N/A
10*18943	5-10-7	L	BRANDY SUE MOORE AND DELMAS L MOORE	TH EXPLORATION LLC	1/8+	940	124	N/A	N/A	N/A	N/A	N/A
10*19607	5-10-7	L	DAVA HARTLEY SMITH	TH EXPLORATION LLC	1/8+	944	186	N/A	N/A	N/A	N/A	N/A



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10*19666	5-10-7	L	RALPH TERRY AND MONICA TERRY	TH EXPLORATION LLC	1/8+	944	182	N/A	N/A	N/A	N/A	N/A
10*22324	5-10-7	L	RHONDA RISDEN	TH EXPLORATION LLC	1/8+	965	600	N/A	N/A	N/A	N/A	N/A
10*22542	5-10-7	L	VINCE E OSER AND KAY J OSER	TH EXPLORATION LLC	1/8+	966	198	N/A	N/A	N/A	N/A	N/A
10*23487	5-10-7	L	ELMER RICHARDSON ET AL CAROLYN FLANNERY AS SP COMM	TH EXPLORATION LLC	1/8+	1009	255	N/A	N/A	N/A	N/A	N/A
10*23491	5-10-7	L	GENERAL RECEIVER OF MARSHALL COUNTY	TH EXPLORATION LLC	1/8+	1014	498	N/A	N/A	N/A	N/A	N/A
10*26513	5-10-7	L	CLIFFORD C HARTLEY AND BARBARA T HARTLEY	TH EXPLORATION LLC	1/8+	1034	226	N/A	N/A	N/A	N/A	N/A
10*27959	5-10-7	L	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063	594	N/A	N/A	N/A	N/A	N/A
10*28119	5-10-7	L	WILMA JEAN OSER	TH EXPLORATION LLC	1/8+	1057	328	N/A	N/A	N/A	N/A	N/A
10*28563	5-10-7	L	MARGARET TOLER	TH EXPLORATION LLC	1/8+	1074	630	N/A	N/A	N/A	N/A	N/A
10*28616	5-10-7	L	SILVIA J NEEHOUSE	TH EXPLORATION LLC	1/8+	1075	37	N/A	N/A	N/A	N/A	N/A
10*28617	5-10-7	L	RICKY E DAVIS AIF ALISA M DAVIS	TH EXPLORATION LLC	1/8+	1075	35	N/A	N/A	N/A	N/A	N/A
10*28812	5-10-7	L	ROBERT N BAKER AND THERESA L BAKER	TH EXPLORATION LLC	1/8+	1077	33	N/A	N/A	N/A	N/A	N/A
10*28855	5-10-7	L	PAMELA J WHORTON AND ROBERT D WHORTON	TH EXPLORATION LLC	1/8+	1077	264	N/A	N/A	N/A	N/A	N/A
10*28926	5-10-7	L	DAVID M AND SHERRY L TOLER	TH EXPLORATION LLC	1/8+	1078	13	N/A	N/A	N/A	N/A	N/A
10*28950	5-10-7	L	ANTHONY C BENEDETTA AND MARY A BENEDETTA	TH EXPLORATION LLC	1/8+	1078	188	N/A	N/A	N/A	N/A	N/A
10*28969	5-10-7	L	HARRY MCCrackEN AND BETH ANN MCCrackEN	TH EXPLORATION LLC	1/8+	1078	436	N/A	N/A	N/A	N/A	N/A
10*28988	5-10-7	L	HAROLD L GOUDY AND DONNA D GOUDY	TH EXPLORATION LLC	1/8+	1080	536	N/A	N/A	N/A	N/A	N/A
10*28989	5-10-7	L	SANDRA K LYTTON AND CHARLES E LYTTON	TH EXPLORATION LLC	1/8+	1080	538	N/A	N/A	N/A	N/A	N/A
10*28993	5-10-7	L	CALVIN MCGUIRE	TH EXPLORATION LLC	1/8+	1080	541	N/A	N/A	N/A	N/A	N/A
10*28994	5-10-7	L	JENNIFER T PUMPA AND RICHARD PUMPA	TH EXPLORATION LLC	1/8+	1080	543	N/A	N/A	N/A	N/A	N/A
10*28995	5-10-7	L	ELLEN SCHMIDT	TH EXPLORATION LLC	1/8+	1080	545	N/A	N/A	N/A	N/A	N/A
10*28996	5-10-7	L	SHAWN MARIE SEWgard AND JERRY SWEGARD	TH EXPLORATION LLC	1/8+	1083	124	N/A	N/A	N/A	N/A	N/A
10*29043	5-10-7	L	DONALD LESTER GOUDY JR AND BILLIE GOUDY	TH EXPLORATION LLC	1/8+	1083	121	N/A	N/A	N/A	N/A	N/A
10*29044	5-10-7	L	GARREN RAY GOUDY AND HOLLEE J GOUDY	TH EXPLORATION LLC	1/8+	1083	377	N/A	N/A	N/A	N/A	N/A
10*29073	5-10-7	L	JOEL B MATHIS II AND DEBORAH MATHIS	TH EXPLORATION LLC	1/8+	1083	563	N/A	N/A	N/A	N/A	N/A
10*29206	5-10-7	L	PAMELA R BENEDETTA	TH EXPLORATION LLC	1/8+	1085	598	N/A	N/A	N/A	N/A	N/A
10*29245	5-10-7	L	AMFLO ENTERPRISES LLC CO BARRY STIFFLER	TH EXPLORATION LLC	1/8+	1086	508	N/A	N/A	N/A	N/A	N/A
10*29267	5-10-7	L	ELNORA M BARANICH	TH EXPLORATION LLC	1/8+	1090	141	N/A	N/A	N/A	N/A	N/A
10*29394	5-10-7	L	WILLIAM ELLIOTT AND MARY MARCIA ELLIOTT	TH EXPLORATION LLC	1/8+	1096	303	N/A	N/A	N/A	N/A	N/A
10*29512	5-10-7	L	KERRY R AND BARBARA MOORE	TH EXPLORATION LLC	1/8+	1096	305	N/A	N/A	N/A	N/A	N/A
10*29643	5-10-7	L	JAMES AND DEBRA LEE MATHIS	TH EXPLORATION LLC	1/8+	1100	83	N/A	N/A	N/A	N/A	N/A
10*29664	5-10-7	L	DALE BRUCE MOORE	TH EXPLORATION LLC	1/8+	1100	89	N/A	N/A	N/A	N/A	N/A
10*29669	5-10-7	L	JEFFREY & MELISSA M MOORE	TH EXPLORATION LLC	1/8+	1100	91	N/A	N/A	N/A	N/A	N/A
10*29721	5-10-7	L	CHARLES MICHAEL & TRACEY L BAKER	TH EXPLORATION LLC	1/8+	1100	250	N/A	N/A	N/A	N/A	N/A
10*29795	5-10-7	L	LOUIS M BENEDETTA	TH EXPLORATION LLC	1/8+	1101	25	N/A	N/A	N/A	N/A	N/A
10*29801	5-10-7	L	KIRCHGESSNER CONSULTING GROUP*	TH EXPLORATION LLC	1/8+	1100	300	N/A	N/A	N/A	N/A	N/A
10*29807	5-10-7	L	DANIEL J NABUIDA*	TH EXPLORATION LLC	1/8+	1101	294	N/A	N/A	N/A	N/A	N/A
10*29809	5-10-7	L	RICHARD D & JULIA M REPASKY*	TH EXPLORATION LLC	1/8+	1101	288	N/A	N/A	N/A	N/A	N/A
10*29813	5-10-7	L	HELEN E ROBINSON	TH EXPLORATION LLC	1/8+	1101	23	N/A	N/A	N/A	N/A	N/A
10*29833	5-10-7	L	SKYPOINT RESOURCES LLC	TH EXPLORATION LLC	1/8+	1103	556	N/A	N/A	N/A	N/A	N/A
10*29857	5-10-7	L	DEAN A BENEDETTA*	TH EXPLORATION LLC	1/8+	1102	298	N/A	N/A	N/A	N/A	N/A
10*29858	5-10-7	L	H3 LLC	TH EXPLORATION LLC	1/8+	1103	567	N/A	N/A	N/A	N/A	N/A
10*30033	5-10-7	L	DANNY MOORE*	TH EXPLORATION LLC	1/8+	1103	579	N/A	N/A	N/A	N/A	N/A
10*30036	5-10-7	L	RUSSELL ALBERT WHITE*	TH EXPLORATION LLC	1/8+	1103	585	N/A	N/A	N/A	N/A	N/A
10*30039	5-10-7	L	MARY RENEE WHITE*	TH EXPLORATION LLC	1/8+	1103	597	N/A	N/A	N/A	N/A	N/A
10*30041	5-10-7	L	RICHARD NEWMAN WHITE*	TH EXPLORATION LLC	1/8+	1103	591	N/A	N/A	N/A	N/A	N/A
10*30045	5-10-7	L	ROBERT LEE WHITE JR*	TH EXPLORATION LLC	1/8+	1103	609	N/A	N/A	N/A	N/A	N/A
10*30075	5-10-7	L	RHONDA SUE DEPAUL*	TH EXPLORATION LLC	1/8+	1103	603	N/A	N/A	N/A	N/A	N/A



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10*29813	5-10-7	L	HELEN E ROBINSON	TH EXPLORATION LLC	1/8+	1101	23	N/A	N/A	N/A	N/A	N/A
10*29833	5-10-7	L	SKYPOINT RESOURCES LLC	TH EXPLORATION LLC	1/8+	1103	556	N/A	N/A	N/A	N/A	N/A
10*29857	5-10-7	L	DEAN A BENEDETTA*	TH EXPLORATION LLC	1/8+	1102	298	N/A	N/A	N/A	N/A	N/A
10*29858	5-10-7	L	H3 LLC	TH EXPLORATION LLC	1/8+	1103	567	N/A	N/A	N/A	N/A	N/A
10*30033	5-10-7	L	DANNY MOORE*	TH EXPLORATION LLC	1/8+	1103	579	N/A	N/A	N/A	N/A	N/A
10*30036	5-10-7	L	RUSSELL ALBERT WHITE*	TH EXPLORATION LLC	1/8+	1103	585	N/A	N/A	N/A	N/A	N/A
10*30039	5-10-7	L	MARY RENEE WHITE*	TH EXPLORATION LLC	1/8+	1103	597	N/A	N/A	N/A	N/A	N/A
10*30041	5-10-7	L	RICHARD NEWMAN WHITE*	TH EXPLORATION LLC	1/8+	1103	591	N/A	N/A	N/A	N/A	N/A
10*30045	5-10-7	L	ROBERT LEE WHITE JR*	TH EXPLORATION LLC	1/8+	1103	609	N/A	N/A	N/A	N/A	N/A
10*30075	5-10-7	L	RHONDA SUE DEPAUL*	TH EXPLORATION LLC	1/8+	1103	603	N/A	N/A	N/A	N/A	N/A
10*31356	5-10-7	L	AMY M TOLER FKN AMY M PARKER	STONE ENERGY CORPORATION	1/8+	874	502	N/A	N/A	N/A	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31357	5-10-7	L	LORI E KESTNER	STONE ENERGY CORPORATION	1/8+	886	251	N/A	N/A	N/A	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31360	5-10-7	L	AVA SMITH	CHEVRON USA INC	1/8+	801	572	N/A	N/A	Chevron USA Inc to Stone Energy Corporation: 34/143	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31361	5-10-7	L	JAMES W HARTLEY	CHEVRON USA INC	1/8+	801	563	N/A	N/A	Chevron USA Inc to Stone Energy Corporation: 34/143	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*47051.305.0	5-9-10	M	ROBERT G & TERRI L MCGUIRE	TH EXPLORATION LLC	1/8+	895	45	N/A	N/A	N/A	N/A	N/A
10*47051.305.0	5-9-12	N	ROBERT G & TERRI L MCGUIRE	TH EXPLORATION LLC	1/8+	895	45	N/A	N/A	N/A	N/A	N/A
10*29855	5-9-9	O	ROBERT G & TERRI L MCGUIRE	TH EXPLORATION LLC	1/8+	1101	307	N/A	N/A	N/A	N/A	N/A
10*29860	5-9-7	P	P & D REALTY	TH EXPLORATION LLC	1/8+	1101	305	N/A	N/A	N/A	N/A	N/A
10*29860	5-9-6	Q	P & D REALTY	TH EXPLORATION LLC	1/8+	1101	305	N/A	N/A	N/A	N/A	N/A
10*29860	5-9-5	R	P & D REALTY	TH EXPLORATION LLC	1/8+	1101	305	N/A	N/A	N/A	N/A	N/A

\*Co-tenancy utilization — At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act.



ASSIGNMENT AND BILL OF SALE

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

RECITALS

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

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

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

ARTICLE I  
DEFINED TERMS

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

ARTICLE II  
ASSIGNMENT OF ASSETS

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

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

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

RECEIVED  
Office of Oil and Gas  
JUN 27 2022  
WV Department of  
Environmental Protection





TUG HILL

June 20, 2022

WADE STANSBERRY  
WV DEP OFFICE OF OIL & GAS  
601 57<sup>TH</sup> STREET SE  
CHARLESTON, WV 25304-2345

VIA USPS

RE: **Van Winkle N-3HM API # 47-051-02366 (H6A Permit Modification)**  
**Meade District, Marshall County, WV**

Dear Wade:

Tug Hill Operating, LLC is submitting a permit modification for its permitted well, Van Winkle N-3HM to add 4068.74' to the lateral length. Therefore, enclosed please find the following:

- Modified WW-6B with changes highlighted in yellow
- Updated well plat
- Updated WW-6A1 information
- Updated Site Safety Plan

RECEIVED  
Office of Oil and Gas

JUN 27 2022

WV Department of  
Environmental Protection

If you have any questions or need any additional information, please do not hesitate to call me on (304) 376-0111. Thank you for attention to this matter, it is greatly appreciated.

Sincerely,

AMY MORRIS  
PERMIT SPECIALIST-APPALACHIA REGION  
TUG HILL OPERATING, LLC

Enclosures

CK# 057501  
Amt \$2500  
Date 6/16/22



## Permit Modification

Received date: 6/27/22

Well Name: Van Winkle N-3HM

Operator: Tug Hill

API: 51-023166

Pad Name: Hunter Pachtel

	MODIFIED PERMIT	ORIGINAL PERMIT
TVD	6253 ✓	6254
TMD	21423	17357
HL	14375.03	10,306.29
FW	✓	70,415
SW	✓	870
COAL	313,408	409
CONDUCTOR	✓	120
FRESHWATER	✓	515
INTERMEDIATE 1	✓	2242
INTERMEDIATE 2	—	—
PRODUCTION	21423	17357

Notes:

✓ A TH	✓ J Montgomery	A XCL	J Rulovs
B XCL	✓ K Rulovs	B XCL	K "
C XCL	L "	C WV	L McGuire
D WV	M McGuire	D Kelley	M "
E Kelley	K "	E Sayer	
F Sayer	D "	F Yacim/Sayer	
G Yacim/Sayer	P McClintock	G Sayer	
H Sayer	Q	H Hoyt	
L Hoyt	✓ R	I Montgomery	





Stansberry, Wade A &lt;wade.a.stansberry@wv.gov&gt;

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**Modification Horizontal H6A Well Work Permits API: (47-051-02363, 47-051-02365, 47-051-02366)**

1 message

**Stansberry, Wade A** <wade.a.stansberry@wv.gov>

Fri, Jul 29, 2022 at 9:31 AM

To: Amy Morris &lt;amorris@tug-hillop.com&gt;, Eric Buzzard &lt;ebuzzard@marshallcountywv.org&gt;, Strader C Gower &lt;strader.c.gower@wv.gov&gt;, "Gayne J. Knitowski" &lt;gayne.j.knitowski@wv.gov&gt;

I have attached a copy of the newly issued well [permit](#) numbers:

**47-051-02363 - VAN WINKLE N-1HM**  
**47-091-02365 - VAN WINKLE N-2HM**  
**47-051-02366 - VAN WINKLE N-3HM**

These will serve as your copy.

Thank you,

**Wade A. Stansberry**

**Environmental Resource Specialist 3**

**West Virginia Department of Environmental Protection**

**Office of Oil & Gas**

**601 57th St. SE**

**Charleston, WV 25304**


**(304) 926-0499 ext. 41115**


**(304) 926-0452 fax**


**[Wade.A.Stansberry@wv.gov](mailto:Wade.A.Stansberry@wv.gov)**

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**4 attachments**

 **47-051-02366 - mod.pdf**  
1693K

 **47-051-02363 - mod.pdf**  
2439K

 **47-051-02365 - mod.pdf**  
2205K

 **IR-26 Blank.pdf**  
169K