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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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, July 19, 2018  
WELL WORK PERMIT  
Horizontal 6A / New Drill

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

Re: Permit approval for TEN HIGH 1S-14HU  
47-051-01966-00-00

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: TEN HIGH 1S-14HU  
Farm Name: LAWRENCE & SHIRLEY CON.  
U.S. WELL NUMBER: 47-051-01966-00-00  
Horizontal 6A New Drill  
Date Issued: 7/19/2018

# 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

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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.

## 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](mailto:DEPOOGNotify@wv.gov).



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west virginia department of environmental protection

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Oil and Gas Conservation Commission  
601 57<sup>th</sup> Street SE, Charleston, WV 25304  
304-926-0499 Ext 1274

Barry K. Lay, Chairman  
dep.wv.gov

June 21, 2018

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

RE: Application for Deep Well Permit – API #47-051-01966

COMPANY: Tug Hill Operating, LLC

FARM: Tug Hill Operating, LLC Ten High 1S-14HU

COUNTY: Marshall DISTRICT: Meade QUAD: Glen Easton 7.5'

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: Heaven Hill 3-7HU 47-051-01969; Heaven Hill 3-8HU 47-051-01967; Ten High 1N-11HU 47-051-01960; Ten High 1N-12HU 47-051-01961; Ten High 1N-13HU 47-051-01965
4. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

A handwritten signature in blue ink that reads 'Susan Rose'.

Susan Rose  
Administrator

WW-6B  
(04/15)

API NO. 47-051 - 01966  
OPERATOR WELL NO. Ten High 1S-14HU  
Well Pad Name: Ten High

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: Ten High 1S-14HU      Well Pad Name: Ten High

3) Farm Name/Surface Owner: Lawrence & Shirley Conkle, ests      Public Road Access: Shepherd Ridge Lane CR 21/9

4) Elevation, current ground: 1310'      Elevation, proposed post-construction: 1310'

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

(b) If Gas Shallow      Deep   
Horizontal

6) Existing Pad: Yes or No Yes

*Jan 5/25/18*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Point Pleasant is the target formation at a depth of 11,589' - 11,728' thickness of 139' and anticipated pressure of approx. 9500 psi

8) Proposed Total Vertical Depth: 11,878'

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 21,759'

11) Proposed Horizontal Leg Length: 9,650'

12) Approximate Fresh Water Strata Depths: 70', 1026'

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

14) Approximate Saltwater Depths: 2,167'

15) Approximate Coal Seam Depths: Sewickly Coal - 935' and Pittsburgh Coal - 1020'

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: Marshall County Coal Co. / Marshall County Mine  
Depth: 1020' TVD and 290' subsea level  
Seam: Pittsburgh #8  
Owner: Murray Energy / Consolidated Coal Co.



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	125'	125'	270FT^3(CTS)
Fresh Water	20"	NEW	J55	106.5#	1,086'	1,086'	1,747ft^3(CTS)
Coal	13 3/8"	NEW	J55	54.5#	2,801'	2,801'	1,976ft^3(CTS)
Intermediate	9 5/8"	NEW	HPP110	47#	10,562'	10,562'	3,447ft^3(CTS)
Production	5 1/2"	NEW	P110	23#	21,759'	21,759'	5,164ft^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#		11,668'	
Liners							

*5/25/18*

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	1.99
Production	5 1/2"	8 1/2"	.415	16,510	10,864	SEE#24	1.18
Tubing	2 7/8"			14,530	11,624		
Liners							

**PACKERS**

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

*ju*  
*5/25/18*

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. 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 24,125,000 lb proppant and 372,990 bbl of water. Max rate = 100 bpm; max psi = 12,500#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 16.2

22) Area to be disturbed for well pad only, less access road (acres): 5.92

23) Describe centralizer placement for each casing string:

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

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

\*See Attachment

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.

## WW6B Attachment to #24

**Conductor and Fresh Water Casing Cement:***Premium NE-1 + 2% CaCl*

- Premium NE-1 – Class A Portland API Spec
- CaCl – Calcium Chloride

**Coal Casing Cement:***Premium NE-1 + 1.5% CaCl + Flake*

- Premium NE-1 – Class A Portland API spec
- CaCl – Calcium Chloride
- CelloFlake

**Intermediate Casing Cement:***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*

- Premium NE-1 – Class A Portland API spec
- BA-90 – Gas Migration Mitigator
- R-3 – Cement Retarder
- KCl – Potassium Chloride
- FP-13L – Anti-Foaming Agent
- MPA-170 – Gelling Agent
- CD-32 – Dispersant
- FL-52 – Fluid Loss Agent
- ASA-301 – Free Water Control Agent
- Sodium Metasilicate – Extending Agent

**Kick Off Plug:***Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L*

- CD-32 – Dispersant
- Sodium Metasilicate – Extending Agent
- R-3 – Cement Retarder
- FP-13L – Anti-Foaming Agent

**Production Casing Cement:***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*

- R-3 – Cement Retarder
- MPA-250 – Gelling Agent
- FP-13L – Anti-Foaming Agent

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SI-01966

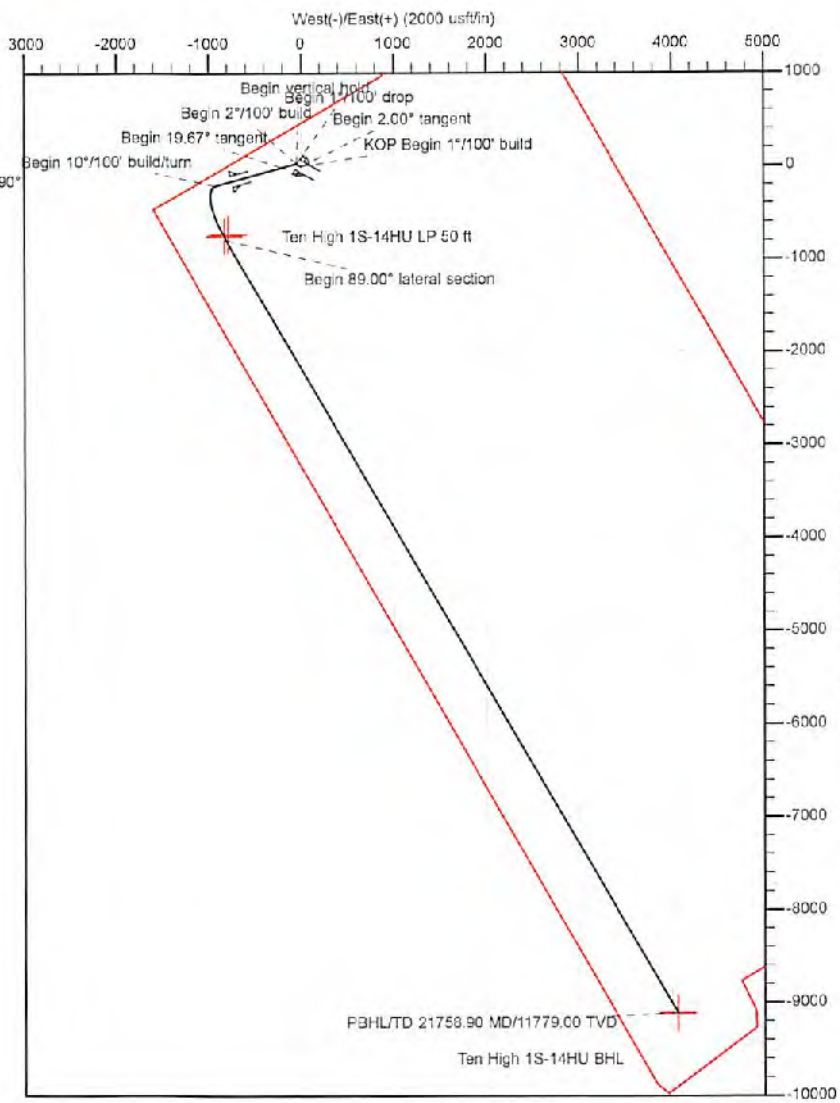


Well: Ten High 1S-14HU (B)  
 Site: Ten High  
 Project: Marshall County, West Virginia  
 Design: rev2

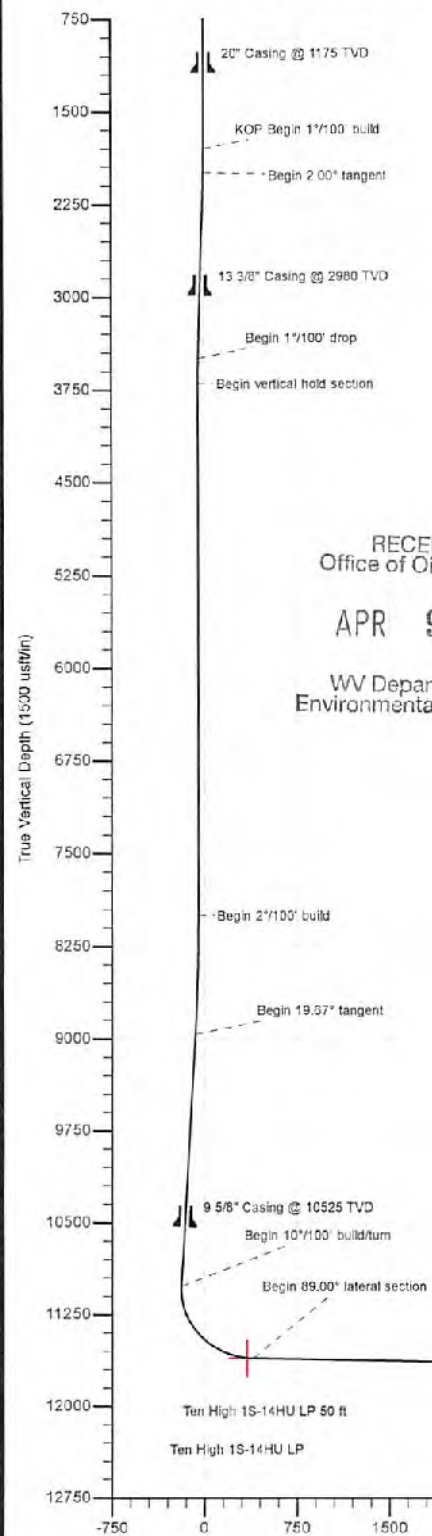
Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD83 West Virginia - HARN  
 Ellipsoid: GRS 1980  
 Zone: Zone 17N (84 W to 78 W)

System Datum: Mean Sea Level  
 Depth Reference: CL=1310 @ 1310.00usft

Northing 1445542.83 Easting 1730013.60 Latitude 39.80680113 Longitude -80.8806676



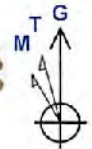
Total Corr. (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.90°



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SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1800.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 11/100' build
3	2000.00	2.00	300.00	1999.96	1.75	-3.02	1.00	300.00	-2.82	Begin 2.00' tangent
4	3500.00	2.00	300.00	3499.05	27.92	-49.35	0.00	0.00	-45.19	Begin 11/100' drop
5	3700.00	0.00	300.00	3699.01	29.66	-51.38	1.00	180.00	-48.01	Begin vertical hold section
6	8000.99	0.00	300.00	8000.00	29.66	-51.38	0.00	300.00	-48.01	Begin 21/100' build
7	8994.65	19.67	254.89	8964.45	-13.94	-212.82	2.00	254.89	-73.92	Begin 19.67' tangent
8	11167.59	19.67	254.89	11019.96	-205.55	-522.30	0.00	0.00	-187.75	Begin 10/100' build/turn
9	12108.90	89.00	148.55	11610.58	-790.95	-811.33	10.00	-104.71	392.12	Begin 89.00' lateral section
10	21758.90	89.00	148.55	11779.00	-9117.20	4063.88	0.00	0.00	9981.91	PBHLTD 21758.90 MD/11779.00 TVD



Azimuths to Grid North  
 True North: -0.20°  
 Magnetic North: -8.90°  
 Magnetic Field:  
 Strength: 52211.5nT  
 Dip Angle: 66.99°  
 Date: 3/11/2017  
 Model: IGRF2015

Permit well - Ten High 15-14HU

Wells within 500' Buffer

Note: Well spots depicted on Area of Review map (page 3) 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
4705101934	Tug Hill	6737' TVD planned	None	None	No, Permitted Marcellus well	Permitted Marcellus well. Not yet drilled
4705101247	CNX Gas Co	Unknown	Unknown	Unknown	No, Well status is listed as cancelled	Well records show well as cancelled

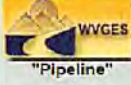


Table Descriptions  
[County Code Translations](#)  
[Permit Numbering Series](#)  
[Lease Types](#)  
[Contact Information](#)  
[Locations](#)  
[WVDES Main](#)  
[PipelineApp1.htm](#)

Select County: (051) Marshall    Select datatypes:  (Check All)

Enter Permit #: 01247

Location     Production     Plugging  
 Owner/Completion     Stratigraphy     Sample  
 Pay/Show/Water     Logs     Btm Hole Log

Get Data    Reset

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WV Geological & Economic Survey: Well: County = 51 Permit = 01247

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705101247	Marshall	1247	Meade	Queen Easton	Cameron	39.750335	-80.672135	620085.7	4400764.7

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION
4705101247	---	---	Original Log Cancelled	Paul Bobek		MCS2				CNX Gas Co, LLC (North)

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FTM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD
4705101247	---	---	1465	Ground Level										

There is no Pay data for this well

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

There is no Stratigraphy data for this well

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

There is no Plugging data for this well

There is no Sample data for this well

5.11. Area of Review— The permittee shall review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation, a report of which the permittee shall provide to the Office with the application for well work. All existing active, plugged, abandoned, and undocumented wells within a five hundred feet (500') radius of the surface location of the well that is the subject of the new application and within a five hundred feet (500') radius of the lateral section of the wellbore shall be considered for the potential of unintended fracture propagation. The report shall detail those wells that are known or reasonably expected to penetrate a depth that could be within the range of the fracture propagation. The detail shall include at a minimum the API number, operator name, total depth, perforated formation(s) and producing zones not perforated.

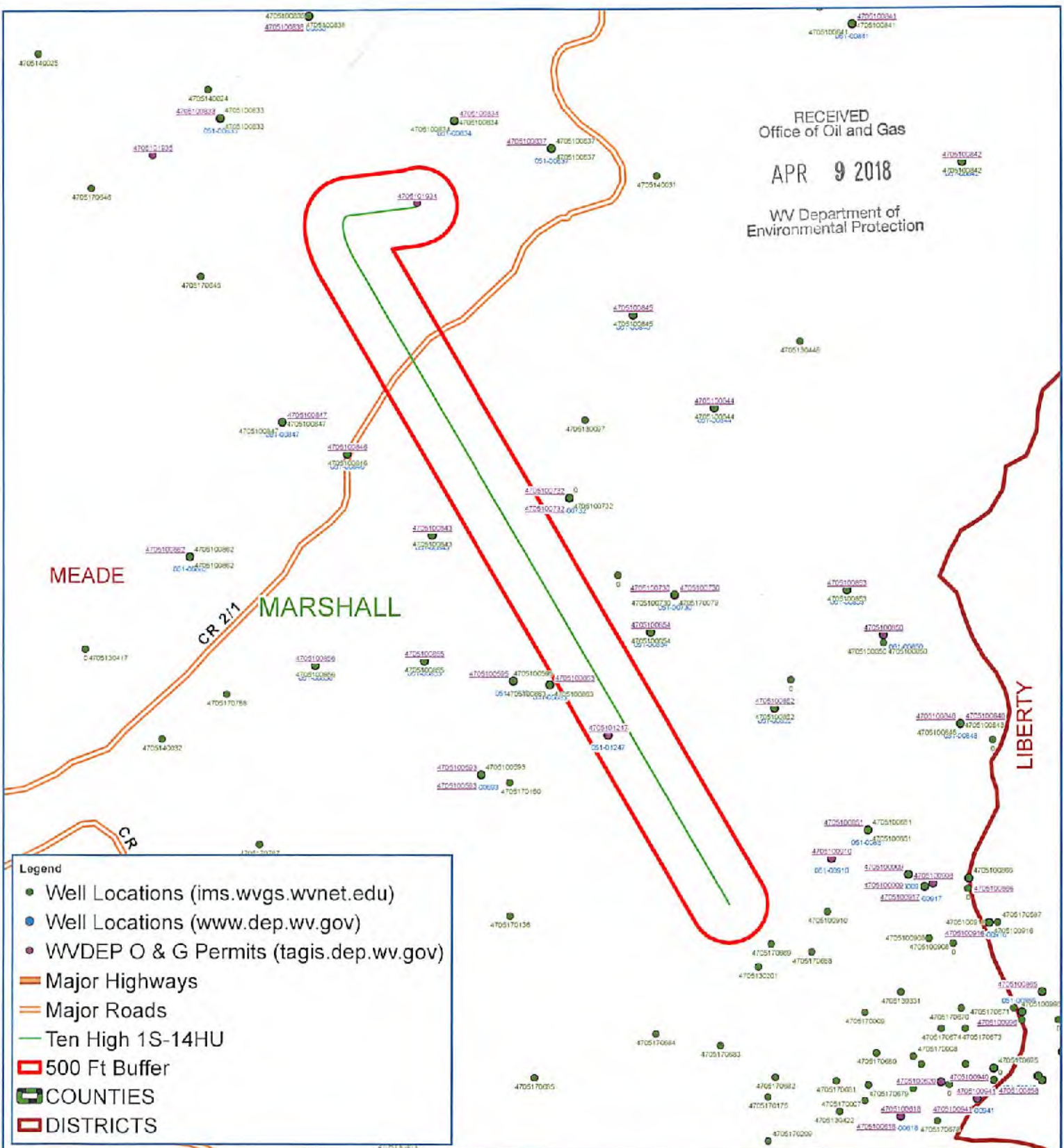
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# Ten High 1S-14HU Meade District Marshall County, WV



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



Map Created: July 7, 2017  
Map Current As Of: July 7, 2017



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Ten High 1S-14HU (B)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL=1310 @ 1310.00usft
<b>Project:</b>	Marshall County, West Virginia	<b>MD Reference:</b>	GL=1310 @ 1310.00usft
<b>Site:</b>	Ten High	<b>North Reference:</b>	Grid
<b>Well:</b>	Ten High 1S-14HU (B)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev2		

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

<b>Site</b>	Ten High				
<b>Site Position:</b>		<b>Northing:</b>	14,456,545.60 usft	<b>Latitude:</b>	39.80680885
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,730,001.41 usft	<b>Longitude:</b>	-80.68101011
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.20 °

<b>Well</b>	Ten High 1S-14HU (B)					
<b>Well Position</b>	<b>+N-S</b>	0.00 usft	<b>Northing:</b>	14,456,542.83 usft	<b>Latitude:</b>	39.80680113
	<b>+E-W</b>	0.00 usft	<b>Easting:</b>	1,730,013.60 usft	<b>Longitude:</b>	-80.68096676
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	1,310.00 usft

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	3/11/2017	-8.70	66.99	52,211.52604513

<b>Design</b>	rev2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	155.98

<b>Plan Survey Tool Program</b>	Date 11/26/2017			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	21,758.90 rev2 (Original Hole)	MWD MWD - Standard	

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Planning Report - Geographic



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Ten High 1S-14HU (B)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL=1310 @ 1310.00usft
<b>Project:</b>	Marshall County, West Virginia	<b>MD Reference:</b>	GL=1310 @ 1310.00usft
<b>Site:</b>	Ten High	<b>North Reference:</b>	Grid
<b>Well:</b>	Ten High 1S-14HU (B)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev2		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	2.00	300.00	1,999.96	1.75	-3.02	1.00	1.00	0.00	300.00	
3,500.00	2.00	300.00	3,499.05	27.92	-48.36	0.00	0.00	0.00	0.00	
3,700.00	0.00	300.00	3,699.01	29.66	-51.38	1.00	-1.00	0.00	180.00	
8,001.00	0.00	300.00	8,000.00	29.66	-51.38	0.00	0.00	0.00	300.00	
8,984.66	19.67	254.89	8,964.45	-13.94	-212.82	2.00	2.00	-4.59	254.89	
11,167.59	19.67	254.89	11,019.96	-205.55	-922.30	0.00	0.00	0.00	0.00	
12,108.90	89.00	149.65	11,610.58	-790.95	-811.33	10.00	7.36	-11.18	-104.71	
21,758.90	89.00	149.65	11,779.00	-9,117.20	4,063.88	0.00	0.00	0.00	0.00	Ten High 1S-14HU B1

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WV Department of  
Environmental Protection

Well Ten High 1S-14HU (B)

GL=1310 @ 1310.00usft

GL=1310 @ 1310.00usft

Grid

Minimum Curvature



Planning Report - Geographic

Database: DB\_Jul2216dt\_v14  
Company: Tug Hill Operating LLC  
Project: Marshall County, West Virginia  
Site: Ten High  
Well: Ten High 1S-14HU (B)  
Wellbore: Original Hole  
Design: rev2

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

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
100.00	0.00	0.00	100.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
200.00	0.00	0.00	200.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
300.00	0.00	0.00	300.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
400.00	0.00	0.00	400.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
500.00	0.00	0.00	500.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
600.00	0.00	0.00	600.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
700.00	0.00	0.00	700.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
800.00	0.00	0.00	800.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
900.00	0.00	0.00	900.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,456,542.83	1,730,013.60	39.80680113	-80.68096676
<b>KOP Begin 1°/100' build</b>									
1,900.00	1.00	300.00	1,899.99	0.44	-0.76	14,456,543.27	1,730,012.84	39.80680234	-80.68096945
2,000.00	2.00	300.00	1,999.96	1.75	-3.02	14,456,544.58	1,730,010.58	39.80680595	-80.68097750
<b>Begin 2.00° tangent</b>									
2,100.00	2.00	300.00	2,099.90	3.49	-6.05	14,456,546.32	1,730,007.55	39.80681078	-80.68098324
2,200.00	2.00	300.00	2,199.84	5.24	-9.07	14,456,548.07	1,730,004.53	39.80681560	-80.68098998
2,300.00	2.00	300.00	2,299.78	6.98	-12.09	14,456,549.81	1,730,001.51	39.80682042	-80.68100972
2,400.00	2.00	300.00	2,399.72	8.73	-15.11	14,456,551.56	1,729,998.49	39.80682524	-80.68102046
2,500.00	2.00	300.00	2,499.65	10.47	-18.13	14,456,553.30	1,729,995.46	39.80683006	-80.68103120
2,600.00	2.00	300.00	2,599.59	12.22	-21.16	14,456,555.05	1,729,992.44	39.80683488	-80.68104194
2,700.00	2.00	300.00	2,699.53	13.96	-24.18	14,456,556.79	1,729,989.42	39.80683971	-80.68105268
2,800.00	2.00	300.00	2,799.47	15.70	-27.20	14,456,558.54	1,729,986.40	39.80684453	-80.68106342
2,900.00	2.00	300.00	2,899.41	17.45	-30.22	14,456,560.28	1,729,983.38	39.80684935	-80.68107416
3,000.00	2.00	300.00	2,999.35	19.19	-33.25	14,456,562.03	1,729,980.35	39.80685417	-80.68108490
3,100.00	2.00	300.00	3,099.29	20.94	-36.27	14,456,563.77	1,729,977.33	39.80685899	-80.68109564
3,200.00	2.00	300.00	3,199.23	22.68	-39.29	14,456,565.52	1,729,974.31	39.80686381	-80.68110638
3,300.00	2.00	300.00	3,299.17	24.43	-42.31	14,456,567.26	1,729,971.29	39.80686864	-80.68111712
3,400.00	2.00	300.00	3,399.11	26.17	-45.34	14,456,569.01	1,729,968.26	39.80687346	-80.68112786
3,500.00	2.00	300.00	3,499.05	27.92	-48.36	14,456,570.75	1,729,965.24	39.80687828	-80.68113860
<b>Begin 1°/100' drop</b>									
3,600.00	1.00	300.00	3,599.01	29.23	-50.63	14,456,572.06	1,729,962.97	39.80688310	-80.68114665
3,700.00	0.00	300.00	3,699.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
<b>Begin vertical hold section</b>									
3,800.00	0.00	300.00	3,799.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
3,900.00	0.00	0.00	3,899.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,000.00	0.00	300.00	3,999.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,100.00	0.00	0.00	4,099.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,200.00	0.00	300.00	4,199.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,300.00	0.00	300.00	4,299.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,400.00	0.00	300.00	4,399.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,500.00	0.00	300.00	4,499.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,600.00	0.00	300.00	4,599.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,700.00	0.00	300.00	4,699.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,800.00	0.00	300.00	4,799.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
4,900.00	0.00	300.00	4,899.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934



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## Planning Report - Geographic

WV Department of  
Environmental Protection

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ten High 1S-14HU (B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL=1310 @ 1310.00usft
Project:	Marshall County, West Virginia	MD Reference:	GL=1310 @ 1310.00usft
Site:	Ten High	North Reference:	Grid
Well:	Ten High 1S-14HU (B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,000.00	0.00	300.00	4,999.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,100.00	0.00	0.00	5,099.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,200.00	0.00	300.00	5,199.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,300.00	0.00	0.00	5,299.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,400.00	0.00	300.00	5,399.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,500.00	0.00	300.00	5,499.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,600.00	0.00	300.00	5,599.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,700.00	0.00	300.00	5,699.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,800.00	0.00	300.00	5,799.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
5,900.00	0.00	300.00	5,899.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,000.00	0.00	300.00	5,999.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,100.00	0.00	300.00	6,099.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,200.00	0.00	300.00	6,199.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,300.00	0.00	0.00	6,299.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,400.00	0.00	300.00	6,399.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,500.00	0.00	0.00	6,499.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,600.00	0.00	300.00	6,599.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,700.00	0.00	300.00	6,699.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,800.00	0.00	300.00	6,799.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
6,900.00	0.00	300.00	6,899.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,000.00	0.00	300.00	6,999.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,100.00	0.00	300.00	7,099.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,200.00	0.00	300.00	7,199.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,300.00	0.00	0.00	7,299.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,400.00	0.00	300.00	7,399.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,500.00	0.00	0.00	7,499.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,600.00	0.00	300.00	7,599.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,700.00	0.00	0.00	7,699.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,800.00	0.00	300.00	7,799.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
7,900.00	0.00	300.00	7,899.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
8,000.00	0.00	300.00	7,999.01	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
8,001.00	0.00	300.00	8,000.00	29.66	-51.38	14,456,572.50	1,729,962.22	39.80688310	-80.68114934
<b>Begin 2"/100' build</b>									
8,100.00	1.98	254.89	8,098.99	29.22	-53.03	14,456,572.05	1,729,960.57	39.80688189	-80.68115522
8,200.00	3.98	254.89	8,198.85	27.86	-58.05	14,456,570.70	1,729,955.55	39.80687822	-80.68117311
8,300.00	5.98	254.89	8,298.46	25.60	-66.43	14,456,568.43	1,729,947.17	39.80687209	-80.68120298
8,400.00	7.98	254.89	8,397.72	22.43	-78.16	14,456,565.27	1,729,935.44	39.80686350	-80.68124479
8,500.00	9.98	254.89	8,496.49	18.36	-93.23	14,456,561.20	1,729,920.37	39.80685247	-80.68129850
8,600.00	11.98	254.89	8,594.65	13.40	-111.62	14,456,555.23	1,729,901.98	39.80683901	-80.68136403
8,700.00	13.98	254.89	8,692.09	7.54	-133.30	14,456,550.37	1,729,880.30	39.80682314	-80.68144131
8,800.00	15.98	254.89	8,788.69	0.80	-158.26	14,456,543.64	1,729,855.34	39.80680488	-80.68153025
8,900.00	17.98	254.89	8,884.32	-6.81	-186.45	14,456,535.02	1,729,827.15	39.80678425	-80.68163073
8,984.66	19.67	254.89	8,964.45	-13.94	-212.82	14,456,528.90	1,729,800.78	39.80676494	-80.68172473
<b>Begin 19.67° tangent</b>									
9,000.00	19.67	254.89	8,978.89	-15.28	-217.81	14,456,527.55	1,729,795.79	39.80676129	-80.68174250
9,100.00	19.67	254.89	9,073.05	-24.06	-250.31	14,456,518.77	1,729,763.29	39.80673751	-80.68185834
9,200.00	19.67	254.89	9,167.22	-32.84	-282.81	14,456,510.00	1,729,730.79	39.80671372	-80.68197418
9,300.00	19.67	254.89	9,261.38	-41.62	-315.31	14,456,501.22	1,729,698.29	39.80668993	-80.68209002
9,400.00	19.67	254.89	9,355.55	-50.39	-347.81	14,456,492.44	1,729,665.79	39.80666614	-80.68220586
9,500.00	19.67	254.89	9,449.71	-59.17	-380.31	14,456,483.66	1,729,633.29	39.80664235	-80.68232170
9,600.00	19.67	254.89	9,543.87	-67.95	-412.82	14,456,474.89	1,729,600.78	39.80661856	-80.68243753
9,700.00	19.67	254.89	9,638.03	-76.73	-445.32	14,456,466.11	1,729,568.28	39.80659477	-80.68255337
9,800.00	19.67	254.89	9,732.20	-85.50	-477.82	14,456,457.33	1,729,535.78	39.80657098	-80.68266921
9,900.00	19.67	254.89	9,826.36	-94.28	-510.32	14,456,448.55	1,729,503.28	39.80654720	-80.68278505



APR 9 2018



Planning Report - Geographic

WV Department of  
Environmental Protection

Database: DB\_Jul2216dt\_v14  
Company: Tug Hill Operating LLC  
Project: Marshall County, West Virginia  
Site: Ten High  
Well: Ten High 1S-14HU (B)  
Wellbore: Original Hole  
Design: rev2

Local Co-ordinate Reference: Well Ten High 1S-14HU (B)  
TVD Reference: GL=1310 @ 1310.00usft  
MD Reference: GL=1310 @ 1310.00usft  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,000.00	19.67	254.89	9,920.52	-103.06	-542.62	14,456,439.78	1,729,470.78	39.80652341	-80.68290088
10,100.00	19.67	254.89	10,014.68	-111.84	-575.32	14,456,431.00	1,729,438.28	39.80649962	-80.68301672
10,200.00	19.67	254.89	10,108.85	-120.61	-607.62	14,456,422.22	1,729,405.78	39.80647583	-80.68313256
10,300.00	19.67	254.89	10,203.01	-129.39	-640.32	14,456,413.44	1,729,373.28	39.80645204	-80.68324840
10,400.00	19.67	254.89	10,297.17	-138.17	-672.62	14,456,404.67	1,729,340.77	39.80642825	-80.68336424
10,500.00	19.67	254.89	10,391.34	-146.95	-705.33	14,456,395.89	1,729,308.27	39.80640446	-80.68348007
10,600.00	19.67	254.89	10,485.50	-155.72	-737.83	14,456,387.11	1,729,275.77	39.80638067	-80.68359591
10,700.00	19.67	254.89	10,579.66	-164.50	-770.33	14,456,378.33	1,729,243.27	39.80635688	-80.68371175
10,800.00	19.67	254.89	10,673.82	-173.28	-802.83	14,456,369.55	1,729,210.77	39.80633309	-80.68382758
10,900.00	19.67	254.89	10,767.99	-182.06	-835.33	14,456,360.78	1,729,178.27	39.80630930	-80.68394342
11,000.00	19.67	254.89	10,862.15	-190.84	-867.83	14,456,352.00	1,729,145.77	39.80628551	-80.68405926
11,100.00	19.67	254.89	10,956.31	-199.61	-900.33	14,456,343.22	1,729,113.27	39.80626172	-80.68417510
11,167.59	19.67	254.89	11,019.96	-205.55	-922.30	14,456,337.29	1,729,091.30	39.80624564	-80.68425339
<b>Begin 10°/100' build/turn</b>									
11,200.00	19.10	245.27	11,050.54	-209.19	-932.39	14,456,333.65	1,729,081.21	39.80623573	-80.68426935
11,300.00	20.58	215.82	11,144.83	-230.34	-957.60	14,456,312.50	1,729,056.00	39.80617789	-80.68437938
11,400.00	25.98	194.28	11,236.82	-265.91	-973.32	14,456,276.93	1,729,040.27	39.80608037	-80.68443582
11,500.00	33.44	180.73	11,323.71	-314.81	-979.09	14,456,228.02	1,729,034.51	39.80594612	-80.68445698
11,600.00	41.68	171.89	11,402.85	-375.56	-974.73	14,456,167.27	1,729,038.87	39.80577923	-80.68444219
11,700.00	50.80	165.62	11,471.66	-446.32	-960.36	14,456,086.51	1,729,053.24	39.80558477	-80.68439192
11,800.00	59.98	160.78	11,528.62	-524.94	-936.42	14,456,017.90	1,729,077.18	39.80536865	-80.68430768
11,900.00	69.31	156.78	11,571.42	-609.02	-903.65	14,455,933.82	1,729,109.95	39.80513743	-80.68419204
12,000.00	78.71	153.25	11,596.94	-696.01	-863.03	14,455,846.93	1,729,150.57	39.80489814	-80.68404852
12,100.00	88.16	149.94	11,610.36	-783.26	-815.81	14,455,759.57	1,729,197.79	39.80465805	-80.68398147
12,108.90	89.00	149.65	11,610.58	-790.95	-811.33	14,455,751.88	1,729,202.26	39.80463690	-80.68386564
<b>Begin 89.00° lateral section</b>									
12,200.00	89.00	149.65	11,612.17	-869.56	-765.31	14,455,673.28	1,729,248.29	39.80442058	-80.68370274
12,300.00	89.00	149.65	11,613.92	-955.84	-714.79	14,455,588.99	1,729,298.81	39.80418313	-80.68352395
12,400.00	89.00	149.65	11,615.67	-1,042.12	-664.27	14,455,500.71	1,729,349.33	39.80394569	-80.68334515
12,500.00	89.00	149.65	11,617.41	-1,128.40	-613.75	14,455,414.43	1,729,399.85	39.80370825	-80.68316636
12,600.00	89.00	149.65	11,619.15	-1,214.69	-563.23	14,455,328.15	1,729,450.37	39.80347080	-80.68298757
12,700.00	89.00	149.65	11,620.90	-1,300.97	-512.71	14,455,241.87	1,729,500.89	39.80323336	-80.68280878
12,800.00	89.00	149.65	11,622.65	-1,387.25	-462.19	14,455,155.58	1,729,551.41	39.80299591	-80.68262999
12,900.00	89.00	149.65	11,624.39	-1,473.53	-411.67	14,455,069.30	1,729,601.93	39.80275847	-80.68245120
13,000.00	89.00	149.65	11,626.14	-1,559.82	-361.15	14,454,983.02	1,729,652.45	39.80252103	-80.68227241
13,100.00	89.00	149.65	11,627.88	-1,646.10	-310.63	14,454,896.74	1,729,702.97	39.80228358	-80.68209383
13,200.00	89.00	149.65	11,629.63	-1,732.38	-260.10	14,454,810.45	1,729,753.49	39.80204613	-80.68191484
13,300.00	89.00	149.65	11,631.37	-1,818.66	-209.58	14,454,724.17	1,729,804.02	39.80180869	-80.68173606
13,400.00	89.00	149.65	11,633.12	-1,904.95	-159.06	14,454,637.89	1,729,854.54	39.80157124	-80.68155727
13,500.00	89.00	149.65	11,634.86	-1,991.23	-108.54	14,454,551.61	1,729,905.06	39.80133380	-80.68137849
13,600.00	89.00	149.65	11,636.61	-2,077.51	-58.02	14,454,465.32	1,729,955.58	39.80109635	-80.68119971
13,700.00	89.00	149.65	11,638.35	-2,163.79	-7.50	14,454,379.04	1,730,006.10	39.80085890	-80.68102093
13,800.00	89.00	149.65	11,640.10	-2,250.07	43.02	14,454,292.76	1,730,056.62	39.80062146	-80.68084216
13,900.00	89.00	149.65	11,641.84	-2,336.36	93.54	14,454,206.48	1,730,107.14	39.80038401	-80.68066338
14,000.00	89.00	149.65	11,643.59	-2,422.64	144.06	14,454,120.19	1,730,157.66	39.80014656	-80.68048461
14,100.00	89.00	149.65	11,645.33	-2,508.92	194.58	14,454,033.91	1,730,208.18	39.79990911	-80.68030583
14,200.00	89.00	149.65	11,647.08	-2,595.20	245.10	14,453,947.63	1,730,258.70	39.79967167	-80.68012706
14,300.00	89.00	149.65	11,648.82	-2,681.48	295.62	14,453,861.35	1,730,309.22	39.79943422	-80.67994829
14,400.00	89.00	149.65	11,650.57	-2,767.77	346.14	14,453,775.07	1,730,359.74	39.79919677	-80.67976952
14,500.00	89.00	149.65	11,652.32	-2,854.05	396.66	14,453,688.78	1,730,410.26	39.79895932	-80.67959075
14,600.00	89.00	149.65	11,654.06	-2,940.33	447.18	14,453,602.50	1,730,460.78	39.79872187	-80.67941198
14,700.00	89.00	149.65	11,655.81	-3,026.62	497.70	14,453,516.22	1,730,511.30	39.79848442	-80.67923321
14,800.00	89.00	149.65	11,657.55	-3,112.90	548.22	14,453,429.94	1,730,561.82	39.79824697	-80.67905445
14,900.00	89.00	149.65	11,659.30	-3,199.18	598.74	14,453,343.65	1,730,612.34	39.79800952	-80.67887569



APR 9 2018



WV Department of Planning Report - Geographic  
Environmental Protection



Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ten High 1S-14HU (B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL=1310 @ 1310.00usft
Project:	Marshall County, West Virginia	MD Reference:	GL=1310 @ 1310.00usft
Site:	Ten High	North Reference:	Grid
Well:	Ten High 1S-14HU (B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,000.00	89.00	149.65	11,661.04	-3,265.46	649.26	14,453,257.37	1,730,662.86	39.79777207	-80.67869992
15,100.00	89.00	149.65	11,662.79	-3,371.75	689.78	14,453,171.09	1,730,713.38	39.79753462	-80.67851816
15,200.00	89.00	149.65	11,664.53	-3,458.03	750.30	14,453,084.81	1,730,763.90	39.79729717	-80.67833940
15,300.00	89.00	149.65	11,666.28	-3,544.31	800.82	14,452,998.52	1,730,814.42	39.79705972	-80.67816064
15,400.00	89.00	149.65	11,668.02	-3,630.59	851.34	14,452,912.24	1,730,864.94	39.79682227	-80.67798188
15,500.00	89.00	149.65	11,669.77	-3,716.87	901.86	14,452,825.96	1,730,915.46	39.79658481	-80.67780313
15,600.00	89.00	149.65	11,671.51	-3,803.16	952.38	14,452,739.68	1,730,965.98	39.79634736	-80.67762437
15,700.00	89.00	149.65	11,673.26	-3,889.44	1,002.91	14,452,653.39	1,731,016.50	39.79610991	-80.67744562
15,800.00	89.00	149.65	11,675.00	-3,975.72	1,053.43	14,452,567.11	1,731,067.02	39.79587246	-80.67726886
15,900.00	89.00	149.65	11,676.75	-4,062.00	1,103.95	14,452,480.83	1,731,117.55	39.79563500	-80.67709811
16,000.00	89.00	149.65	11,678.49	-4,148.29	1,154.47	14,452,394.55	1,731,168.07	39.79539755	-80.67690936
16,100.00	89.00	149.65	11,680.24	-4,234.57	1,204.99	14,452,308.27	1,731,218.59	39.79516010	-80.67673061
16,200.00	89.00	149.65	11,681.98	-4,320.85	1,255.51	14,452,221.98	1,731,269.11	39.79492264	-80.67655186
16,300.00	89.00	149.65	11,683.73	-4,407.13	1,306.03	14,452,135.70	1,731,319.63	39.79468519	-80.67637312
16,400.00	89.00	149.65	11,685.47	-4,493.42	1,356.55	14,452,049.42	1,731,370.15	39.79444773	-80.67619437
16,500.00	89.00	149.65	11,687.22	-4,579.70	1,407.07	14,451,963.14	1,731,420.67	39.79421028	-80.67601563
16,600.00	89.00	149.65	11,688.97	-4,665.98	1,457.59	14,451,876.85	1,731,471.19	39.79397282	-80.67583688
16,700.00	89.00	149.65	11,690.71	-4,752.26	1,508.11	14,451,790.57	1,731,521.71	39.79373537	-80.67565814
16,800.00	89.00	149.65	11,692.46	-4,838.55	1,558.63	14,451,704.29	1,731,572.23	39.79349791	-80.67547940
16,900.00	89.00	149.65	11,694.20	-4,924.83	1,609.15	14,451,618.01	1,731,622.75	39.79326046	-80.67530066
17,000.00	89.00	149.65	11,695.95	-5,011.11	1,659.67	14,451,531.72	1,731,673.27	39.79302300	-80.67512192
17,100.00	89.00	149.65	11,697.69	-5,097.39	1,710.19	14,451,445.44	1,731,723.79	39.79278555	-80.67494319
17,200.00	89.00	149.65	11,699.44	-5,183.67	1,760.71	14,451,359.16	1,731,774.31	39.79254809	-80.67476445
17,300.00	89.00	149.65	11,701.18	-5,269.95	1,811.23	14,451,272.88	1,731,824.83	39.79231063	-80.67458572
17,400.00	89.00	149.65	11,702.93	-5,356.24	1,861.75	14,451,186.59	1,731,875.35	39.79207317	-80.67440698
17,500.00	89.00	149.65	11,704.67	-5,442.52	1,912.27	14,451,100.31	1,731,925.87	39.79183572	-80.67422825
17,600.00	89.00	149.65	11,706.42	-5,528.80	1,962.79	14,451,014.03	1,731,976.39	39.79159826	-80.67404952
17,700.00	89.00	149.65	11,708.16	-5,615.09	2,013.31	14,450,927.75	1,732,026.91	39.79136080	-80.67387079
17,800.00	89.00	149.65	11,709.91	-5,701.37	2,063.83	14,450,841.47	1,732,077.43	39.79112334	-80.67369206
17,900.00	89.00	149.65	11,711.65	-5,787.65	2,114.35	14,450,755.18	1,732,127.95	39.79088588	-80.67351333
18,000.00	89.00	149.65	11,713.40	-5,873.93	2,164.87	14,450,668.90	1,732,178.47	39.79064843	-80.67333461
18,100.00	89.00	149.65	11,715.14	-5,960.22	2,215.39	14,450,582.62	1,732,228.99	39.79041097	-80.67315588
18,200.00	89.00	149.65	11,716.89	-6,046.50	2,265.91	14,450,496.34	1,732,279.51	39.79017351	-80.67297716
18,300.00	89.00	149.65	11,718.63	-6,132.78	2,316.44	14,450,410.05	1,732,330.03	39.78993605	-80.67279844
18,400.00	89.00	149.65	11,720.38	-6,219.06	2,366.96	14,450,323.77	1,732,380.56	39.78969859	-80.67261972
18,500.00	89.00	149.65	11,722.12	-6,305.35	2,417.48	14,450,237.49	1,732,431.08	39.78946113	-80.67244100
18,600.00	89.00	149.65	11,723.87	-6,391.63	2,468.00	14,450,151.21	1,732,481.60	39.78922367	-80.67226228
18,700.00	89.00	149.65	11,725.62	-6,477.91	2,518.52	14,450,064.92	1,732,532.12	39.78898621	-80.67208356
18,800.00	89.00	149.65	11,727.36	-6,564.19	2,569.04	14,449,978.64	1,732,582.64	39.78874875	-80.67190484
18,900.00	89.00	149.65	11,729.11	-6,650.47	2,619.56	14,449,892.36	1,732,633.16	39.78851128	-80.67172613
19,000.00	89.00	149.65	11,730.85	-6,736.76	2,670.08	14,449,806.08	1,732,683.68	39.78827382	-80.67154741
19,100.00	89.00	149.65	11,732.60	-6,823.04	2,720.60	14,449,719.79	1,732,734.20	39.78803636	-80.67136870
19,200.00	89.00	149.65	11,734.34	-6,909.32	2,771.12	14,449,633.51	1,732,784.72	39.78779890	-80.67119000
19,300.00	89.00	149.65	11,736.09	-6,995.60	2,821.64	14,449,547.23	1,732,835.24	39.78756144	-80.67101128
19,400.00	89.00	149.65	11,737.83	-7,081.89	2,872.16	14,449,460.95	1,732,885.76	39.78732397	-80.67083257
19,500.00	89.00	149.65	11,739.58	-7,168.17	2,922.68	14,449,374.67	1,732,936.28	39.78708651	-80.67065386
19,600.00	89.00	149.65	11,741.32	-7,254.45	2,973.20	14,449,288.38	1,732,986.80	39.78684905	-80.67047516
19,700.00	89.00	149.65	11,743.07	-7,340.73	3,023.72	14,449,202.10	1,733,037.32	39.78661158	-80.67029645
19,800.00	89.00	149.65	11,744.81	-7,427.02	3,074.24	14,449,115.82	1,733,087.84	39.78637412	-80.67011775
19,900.00	89.00	149.65	11,746.56	-7,513.30	3,124.76	14,449,029.54	1,733,138.36	39.78613666	-80.66993905
20,000.00	89.00	149.65	11,748.30	-7,599.58	3,175.28	14,448,943.25	1,733,188.88	39.78589919	-80.66976034
20,100.00	89.00	149.65	11,750.05	-7,685.86	3,225.80	14,448,856.97	1,733,239.40	39.78566173	-80.66958164
20,200.00	89.00	149.65	11,751.79	-7,772.15	3,276.32	14,448,770.69	1,733,289.92	39.78542426	-80.66940294
20,300.00	89.00	149.65	11,753.54	-7,858.43	3,326.84	14,448,684.41	1,733,340.44	39.78518680	-80.66922425
20,400.00	89.00	149.65	11,755.28	-7,944.71	3,377.36	14,448,598.12	1,733,390.96	39.78494933	-80.66904555





Planning Report - Geographic



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Ten High 1S-14HU (B)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL=1310 @ 1310.00usft
<b>Project:</b>	Marshall County, West Virginia	<b>MD Reference:</b>	GL=1310 @ 1310.00usft
<b>Site:</b>	Ten High	<b>North Reference:</b>	Grid
<b>Well:</b>	Ten High 1S-14HU (B)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,500.00	89.00	149.65	11,757.03	-8,030.99	3,427.88	14,448,511.84	1,733,441.48	39.78471166	-80.66866855
20,600.00	89.00	149.65	11,758.77	-8,117.27	3,478.40	14,448,425.56	1,733,492.00	39.78447440	-80.66866816
20,700.00	89.00	149.65	11,760.52	-8,203.56	3,528.92	14,448,339.28	1,733,542.52	39.78423693	-80.66850947
20,800.00	89.00	149.65	11,762.27	-8,289.84	3,579.45	14,448,252.99	1,733,593.04	39.78399946	-80.66833078
20,900.00	89.00	149.65	11,764.01	-8,376.12	3,629.97	14,448,166.71	1,733,643.56	39.78376200	-80.66815209
21,000.00	89.00	149.65	11,765.76	-8,462.40	3,680.49	14,448,080.43	1,733,694.09	39.78352453	-80.66797340
21,100.00	89.00	149.65	11,767.50	-8,548.69	3,731.01	14,447,994.15	1,733,744.61	39.78328706	-80.66779471
21,200.00	89.00	149.65	11,769.25	-8,634.97	3,781.53	14,447,907.87	1,733,795.13	39.78304959	-80.66761602
21,300.00	89.00	149.65	11,770.99	-8,721.25	3,832.05	14,447,821.58	1,733,845.65	39.78281213	-80.66743734
21,400.00	89.00	149.65	11,772.74	-8,807.53	3,882.57	14,447,735.30	1,733,896.17	39.78257466	-80.66725865
21,500.00	89.00	149.65	11,774.48	-8,893.82	3,933.09	14,447,649.02	1,733,946.69	39.78233719	-80.66707997
21,600.00	89.00	149.65	11,776.23	-8,980.10	3,983.61	14,447,562.74	1,733,997.21	39.78209972	-80.66690129
21,700.00	89.00	149.65	11,777.97	-9,066.38	4,034.13	14,447,476.45	1,734,047.73	39.78186225	-80.66672261
21,758.90	89.00	149.65	11,779.00	-9,117.20	4,063.88	14,447,425.64	1,734,077.48	39.78172239	-80.66661737

PBHL/TD 21758.90 MD/11779.00 TVD

Design Targets

Target Name	- hit/miss target	- Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Ten High 1S-14HU LP 5'	- plan misses target center by 9.55usft at 12064.55usft MD (11608.19 TVD, -752.47 N, -833.22 E)	- Point	0.00	0.00	11,609.00	-747.84	-824.90	14,455,794.99	1,729,188.70	39.80475542	-80.68391340
Ten High 1S-14HU LP	- plan misses target center by 58.68usft at 12064.71usft MD (11608.20 TVD, -752.61 N, -833.14 E)	- Point	0.00	0.00	11,609.00	-724.59	-781.59	14,455,818.25	1,729,232.01	39.80481885	-80.68375890
Ten High 1S-14HU BHL	- plan hits target center	- Point	0.00	0.00	11,779.00	-9,117.20	4,063.88	14,447,425.64	1,734,077.48	39.78172239	-80.66661737

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,175.00	1,175.00	20" Casing @ 1175 TVD	20	24
2,980.64	2,980.00	13 3/8" Casing @ 2980 TVD	13-3/8	17-1/2
10,641.95	10,525.00	9 5/8" Casing @ 10525 TVD	9-5/8	12-1/4

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WV Department of  
Environmental Protection



Database:	DB_Jul2216d_v14	Local Co-ordinate Reference:	Well Ten High 1S-14HU (B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL=1310 @ 1310.00usft
Project:	Marshall County, West Virginia	MD Reference:	GL=1310 @ 1310.00usft
Site:	Ten High	North Reference:	Grid
Well:	Ten High 1S-14HU (B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,800.00	1,800.00	0.00	0.00	KOP Begin 1°/100' build
2,000.00	1,999.96	1.75	-3.02	Begin 2.00° tangent
3,500.00	3,499.05	27.92	-48.36	Begin 1°/100' drop
3,700.00	3,699.01	29.66	-51.36	Begin vertical hold section
8,001.00	8,000.00	29.66	-51.36	Begin 2°/100' build
8,984.66	8,964.45	-13.94	-212.82	Begin 19.67° tangent
11,167.59	11,019.96	-205.55	-922.30	Begin 10°/100' build/turn
12,108.90	11,610.58	-790.95	-811.33	Begin 89.00° lateral section
21,758.90	11,779.00	-9,117.20	4,063.86	PBHL/TD 21758.90 MD/11779.00 TVD

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WW-9  
(4/16)

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Environmental Protection

API Number 47 - 051 - 01966  
Operator's Well No. Ten High 1N-141H

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 494510351

Watershed (HUC 10) Fish Creek Quadrangle Glen Easton 7.5'

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

Will a pit be used? Yes  No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? Barite for weight

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

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

-Landfill or offsite name/permit number? Wetzel County Sanitary Landfill (SWF-1021 / WV0109105) and Westmoreland Sanitary Landfill, LLC (SAHH05 / PA DEP EC#1306/20)

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 \_\_\_\_\_

Company Official (Typed Name) Sean Gasser

Company Official Title Engineer

Subscribed and sworn before me this 14<sup>th</sup> day of August, 2017

Kaitlin McCawley Kaitlin McCawley Notary Public

My commission expires 05/08/2021



Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 16.20 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: *Jim Nielsen*

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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Title: Oil + Gas Inspector Date: 8/12/17

Field Reviewed?  Yes  No



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WW-9

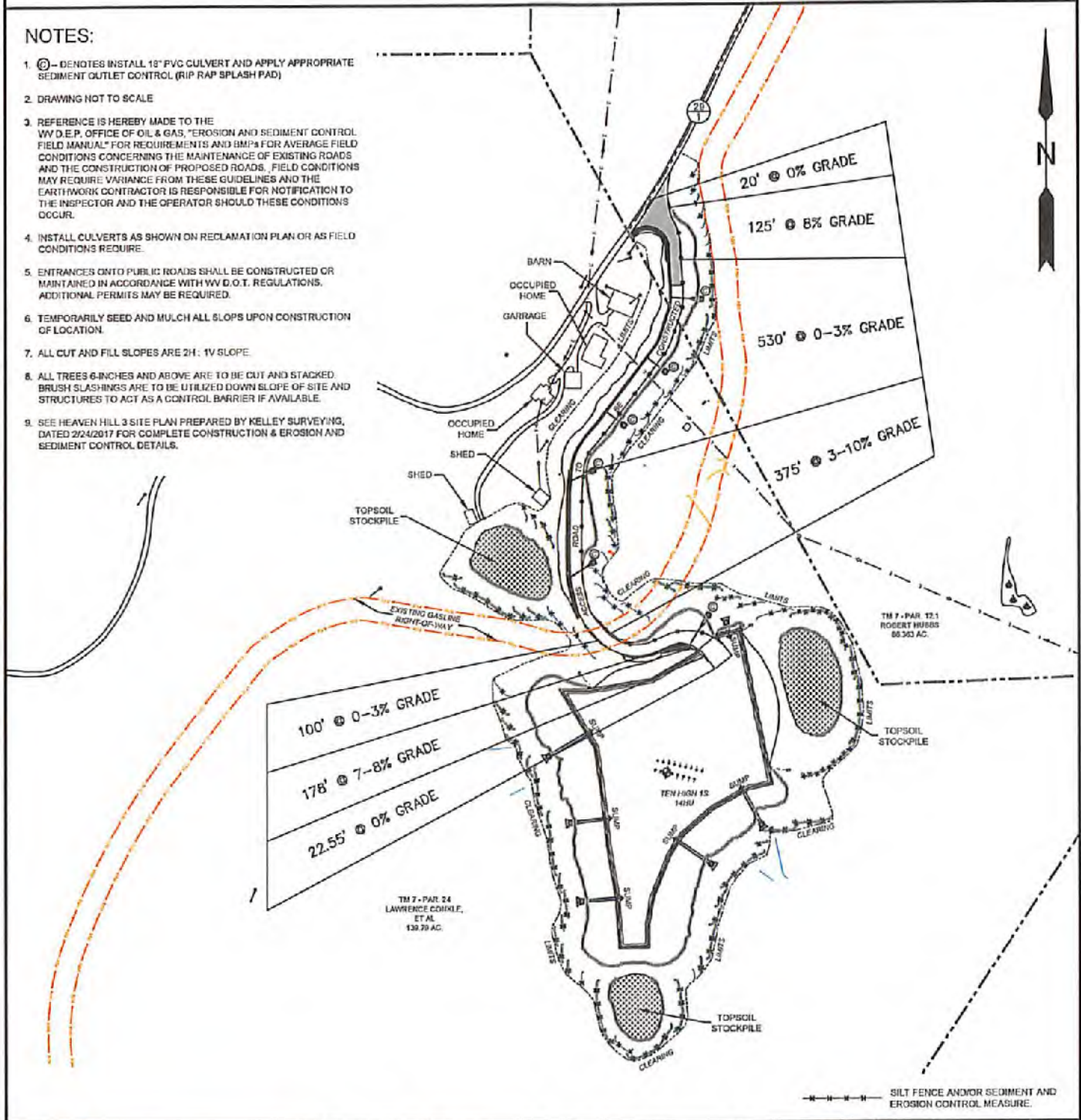
WV Department of  
Environmental Protection

# PROPOSED TEN HIGH 1S - 14HU

SUPPLEMENT PG. 1

**NOTES:**

1. Ⓞ - DENOTES INSTALL 18" PVC CULVERT AND APPLY APPROPRIATE SEDIMENT OUTLET CONTROL (RIP RAP SPLASH PAD)
2. DRAWING NOT TO SCALE
3. REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.
4. INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.
5. ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.
6. TEMPORARILY SEED AND MULCH ALL SLOPS UPON CONSTRUCTION OF LOCATION.
7. ALL CUT AND FILL SLOPES ARE 2H: 1V SLOPE.
8. ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASINGS ARE TO BE UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.
9. SEE HEAVEN HILL 3 SITE PLAN PREPARED BY KELLEY SURVEYING, DATED 2/24/2017 FOR COMPLETE CONSTRUCTION & EROSION AND SEDIMENT CONTROL DETAILS.



**SLS**  
Land & Energy Development  
Solutions from the ground up.  
P.O. Box 150 112 Washburn Drive # Glenville, WV 26351 # (304) 462-5634  
www.slsurveys.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	MEADE		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8655	08-14-17	NONE

**TUG HILL**  
OPERATING



*ju*  
*3/28/18*

# **Well Site Safety Plan**

## **Tug Hill Operating, LLC**

Well Name: Ten High 1S-14HU

Pad Location: Ten High  
Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

NORTHING -4,406,363.07

EASTING -527,309.20

March 2018



SI-01966

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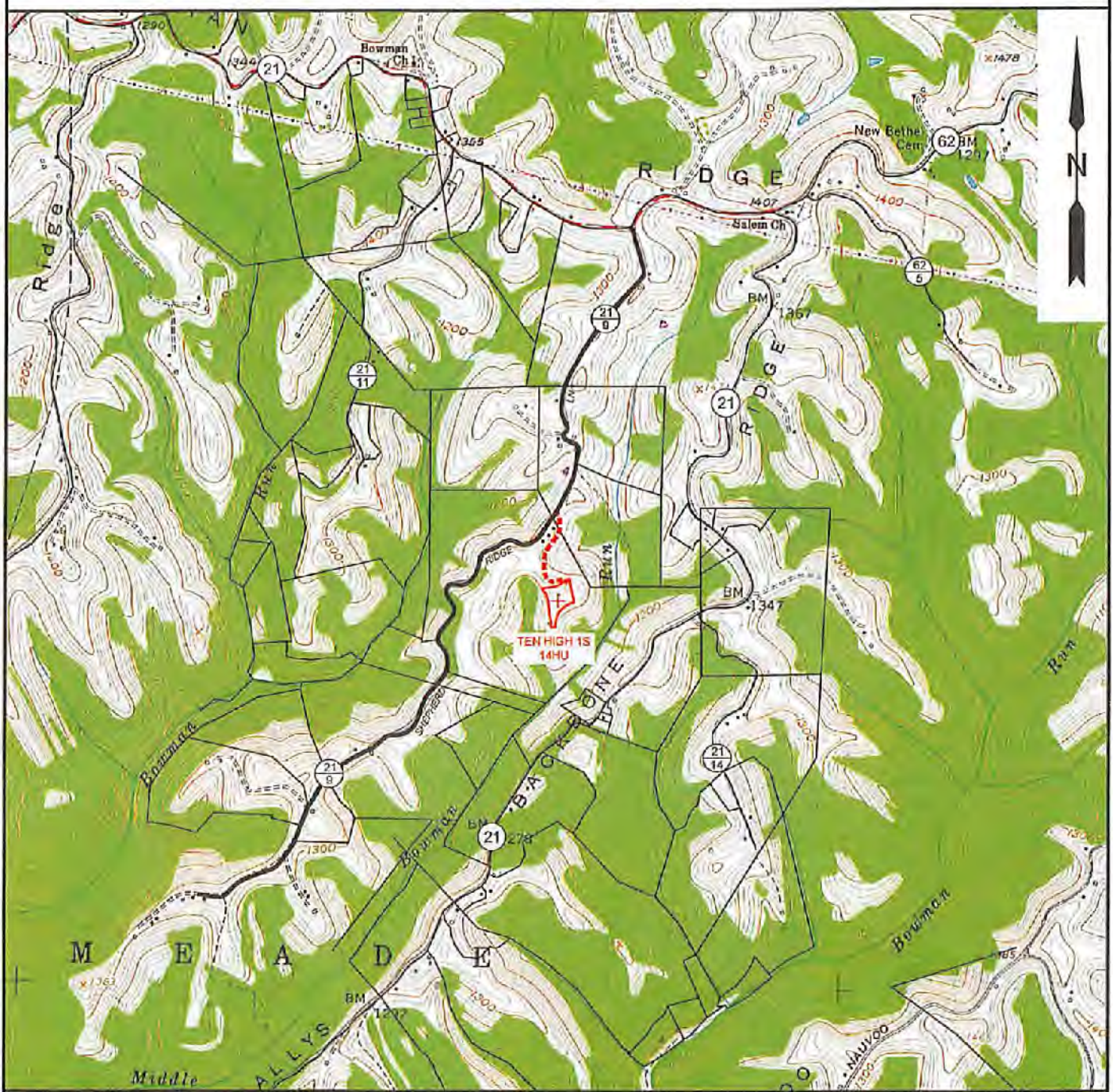
APR 9 2018

WW-9

WV Department of  
Environmental Protection

# PROPOSED TEN HIGH 1S - 14HU

SUPPLEMENT PG. 2



NOTE: CLOSEST WATER PURVEYOR  
 GRANDVIEW - DOOLIN PUBLIC SERVICE DISTRICT  
 PROCTOR, WV

LAT: 39.7137712  
 LON: -80.8258327  
 LOCATED: S 51°03'40" W AT 52,970' FROM TEN HIGH 1S - 14HU SURFACE LOCATION

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 www.slsurveys.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	MEADE	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8655	08-14-17	1" = 2000'



**TUG HILL**  
 OPERATING



WW-6A1  
(5/13)

Operator's Well No. Ten High 1S-14HU

**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

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

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

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

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

Well Operator: Tug Hill Operating, LLC

By: Amy L. Miller *Amy L. Miller*

Its: Permitting Specialist - Appalachia Region

Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*15662	A	9-7-24	LARRY LEE CONKLE	CHEVRON USA INC	1/8+	863 354	N/A	N/A	Chevron to Tug Hill: 36/148
10*15663	A	9-7-24	ROY A CONKLE SR	CHEVRON USA INC	1/8+	863 311	N/A	N/A	Chevron to Tug Hill: 36/148
10*15664	A	9-7-24	THERESA ANNE HUGHES	CHEVRON USA INC	1/8+	863 343	N/A	N/A	Chevron to Tug Hill: 36/148
10*15666	A	9-7-24	BRENDA J WHETZEL	CHEVRON USA INC	1/8+	863 635	N/A	N/A	Chevron to Tug Hill: 36/148
10*16049	A	9-7-24	DANNY SHAWN KERNS AND AMY LYNN KERNS	TH EXPLORATION LLC	1/8+	905 518	N/A	N/A	N/A
10*16138	A	9-7-24	LARRY W KUHN AND VICKIE B KUHN, HUSBAND AND WIFE	TH EXPLORATION LLC	1/8+	905 522	N/A	N/A	N/A
10*16139	A	9-7-24	HUBERT DEAN KUHN AND ANDREA KUHN	TH EXPLORATION LLC	1/8+	905 524	N/A	N/A	N/A
10*16140	A	9-7-24	ANDY PAUL & JACKIE KUHN	TH EXPLORATION LLC	1/8+	905 526	N/A	N/A	N/A
10*16141	A	9-7-24	HOWARD L KUHN AND MARY L KUHN	TH EXPLORATION LLC	1/8+	905 528	N/A	N/A	N/A
10*16820	A	9-7-24	ROBERTA ANN AND DAVID S GIBB	TH EXPLORATION LLC	1/8+	919 237	N/A	N/A	N/A
10*17365	A	9-7-24	MYSTI JOANNE GOODMAN	TH EXPLORATION LLC	1/8+	927 468	N/A	N/A	N/A
10*17370	A	9-7-24	KELLY JUNE GOODMAN	TH EXPLORATION LLC	1/8+	927 470	N/A	N/A	N/A
10*18256	A	9-7-24	JEFFREY STEPHEN GOODMAN	TH EXPLORATION LLC	1/8+	929 1	N/A	N/A	N/A
10*47051.295.10	A	9-7-24	DEENA J PALOMO	TH EXPLORATION LLC	1/8+	905 470	N/A	N/A	N/A
10*47051.295.11	A	9-7-24	REGINA D FIGUEROA AND DAVID FIGUEROA	TH EXPLORATION LLC	1/8+	905 435	N/A	N/A	N/A
10*47051.295.12	A	9-7-24	EARL D WELLMAN	TH EXPLORATION LLC	1/8+	905 432	N/A	N/A	N/A
10*47051.295.13	A	9-7-24	THE DOLLYE F WOOD REVOCABLE TRUST BY NICHOLAS CHARLES WOOD AS TRUSTEE	TH EXPLORATION LLC	1/8+	904 641	N/A	N/A	N/A
10*47051.295.3	A	9-7-24	HAZEL ARIZONA MOORE REYNOLDS	TH EXPLORATION LLC	1/8+	904 632	N/A	N/A	N/A
10*47051.295.4	A	9-7-24	LLOYD D MOORE	TH EXPLORATION LLC	1/8+	904 459	N/A	N/A	N/A
10*47051.295.5	A	9-7-24	DALE R MOORE	TH EXPLORATION LLC	1/8+	904 635	N/A	N/A	N/A
10*47051.295.6	A	9-7-24	MARY I BURKHART	TH EXPLORATION LLC	1/8+	904 638	N/A	N/A	N/A
10*47051.295.7	A	9-7-24	JEANNE V MELCHIORI	TH EXPLORATION LLC	1/8+	904 462	N/A	N/A	N/A
10*47051.295.9	A	9-7-24	JAMES E HIMELRICK JR AND KAREN HIMELRICK	TH EXPLORATION LLC	1/8+	904 465	N/A	N/A	N/A
10*15746	B	9-7-23	BRUCE D SCHURR	TH EXPLORATION LLC	1/8+	921 478	N/A	N/A	N/A
10*16021	B	9-7-23	TOMMY BONAR AND TANYA S BONAR	TH EXPLORATION LLC	1/8+	925 325	N/A	N/A	N/A
10*16115	B	9-7-23	EARL W HARRIS	TH EXPLORATION LLC	1/8+	925 329	N/A	N/A	N/A
10*16247	B	9-7-23	CAROL RIGGLE PARSLEY AND JAMES DENNIS PARSLEY	TH EXPLORATION LLC	1/8+	925 327	N/A	N/A	N/A
10*17415	B	9-7-23	DILLON PITSENBARGER	TH EXPLORATION LLC	1/8+	919 241	N/A	N/A	N/A
10*17506	B	9-7-23	CHASKIA F HARRIS AND JAMES M HARRIS	TH EXPLORATION LLC	1/8+	919 239	N/A	N/A	N/A
10*17507	B	9-7-23	DEZRAY METCALF	TH EXPLORATION LLC	1/8+	919 235	N/A	N/A	N/A
10*47051.256.1	B	9-7-23	BRENDA J WHETZEL	TH EXPLORATION LLC	1/8+	881 145	N/A	N/A	N/A
10*47051.256.10	B	9-7-23	GRACE LAURA BONAR	TH EXPLORATION LLC	1/8+	905 35	N/A	N/A	N/A
10*47051.256.11	B	9-7-23	JOHN L MASON	TH EXPLORATION LLC	1/8+	905 37	N/A	N/A	N/A
10*47051.256.12	B	9-7-23	STEVEN A BOHRER	TH EXPLORATION LLC	1/8+	905 39	N/A	N/A	N/A
10*47051.256.13	B	9-7-23	WILLIAM W CRAIG AND GLENDA L CRAIG	TH EXPLORATION LLC	1/8+	905 41	N/A	N/A	N/A
10*47051.256.14	B	9-7-23	HUGH R BUZZARD	TH EXPLORATION LLC	1/8+	905 43	N/A	N/A	N/A
10*47051.256.15	B	9-7-23	CHARLOTTE J BONAR YOHO	TH EXPLORATION LLC	1/8+	904 455	N/A	N/A	N/A
10*47051.256.16	B	9-7-23	CHARLOTTE B HUMMELL	TH EXPLORATION LLC	1/8+	905 45	N/A	N/A	N/A
10*47051.256.17	B	9-7-23	MAXINE G JOHNSON	TH EXPLORATION LLC	1/8+	904 457	N/A	N/A	N/A
10*47051.256.18	B	9-7-23	JOHN WILLIAM BONAR AND SHIRLEY BONAR	TH EXPLORATION LLC	1/8+	913 522	N/A	N/A	N/A
10*47051.256.19	B	9-7-23	MICHAEL DAVID PYLES AND CYNTHIA A PYLES	TH EXPLORATION LLC	1/8+	907 207	N/A	N/A	N/A

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WV Department of  
Environmental Protection

51-019664

**WW-6A1 Supplement**

**Operator's Well No. Ten High 1S 14HU**

Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*47051.256.20	B	9-7-23	JEFFREY THOMAS PYLES AND TERESA A PYLES	TH EXPLORATION LLC	1/8+	907 209	N/A	N/A	N/A
10*47051.256.21	B	9-7-23	JACK L MASON AND JEAN M MASON	TH EXPLORATION LLC	1/8+	904 626	N/A	N/A	N/A
10*47051.256.22	B	9-7-23	BEVERLY J HOPSON	TH EXPLORATION LLC	1/8+	913 581	N/A	N/A	N/A
10*47051.256.23	B	9-7-23	ROBERT L BONAR	TH EXPLORATION LLC	1/8+	913 556	N/A	N/A	N/A
10*47051.256.24	B	9-7-23	CATHERINE BONAR PETTIT BILLIE	TH EXPLORATION LLC	1/8+	904 628	N/A	N/A	N/A
10*47051.256.7	B	9-7-23	MARILYN SUE BUMER	TH EXPLORATION LLC	1/8+	905 29	N/A	N/A	N/A
10*47051.256.8	B	9-7-23	PAMELA ANN MASON	TH EXPLORATION LLC	1/8+	905 31	N/A	N/A	N/A
10*47051.256.9	B	9-7-23	WANDA MASON SUNSHINE	TH EXPLORATION LLC	1/8+	905 33	N/A	N/A	N/A
10*15746	C	9-11-7	BRUCE D SCHURR	TH EXPLORATION LLC	1/8+	921 478	N/A	N/A	N/A
10*16021	C	9-11-7	TOMMY BONAR AND TANYA S BONAR	TH EXPLORATION LLC	1/8+	925 325	N/A	N/A	N/A
10*16115	C	9-11-7	EARL W HARRIS	TH EXPLORATION LLC	1/8+	925 329	N/A	N/A	N/A
10*16247	C	9-11-7	CAROL RIGGLE PARSLEY AND JAMES DENNIS PARSLEY	TH EXPLORATION LLC	1/8+	925 327	N/A	N/A	N/A
10*17415	C	9-11-7	DILLON PITSENBARGER	TH EXPLORATION LLC	1/8+	919 241	N/A	N/A	N/A
10*17506	C	9-11-7	CHASKIA F HARRIS AND JAMES M HARRIS	TH EXPLORATION LLC	1/8+	919 239	N/A	N/A	N/A
10*17507	C	9-11-7	DEZRAY METCALF	TH EXPLORATION LLC	1/8+	919 235	N/A	N/A	N/A
10*47051.256.1	C	9-11-7	BRENDA J WHETZEL	TH EXPLORATION LLC	1/8+	881 145	N/A	N/A	N/A
10*47051.256.10	C	9-11-7	GRACE LAURA BONAR	TH EXPLORATION LLC	1/8+	905 35	N/A	N/A	N/A
10*47051.256.11	C	9-11-7	JOHN L MASON	TH EXPLORATION LLC	1/8+	905 37	N/A	N/A	N/A
10*47051.256.12	C	9-11-7	STEVEN A BOHRER	TH EXPLORATION LLC	1/8+	905 39	N/A	N/A	N/A
10*47051.256.13	C	9-11-7	WILLIAM W CRAIG AND GLENDA L CRAIG	TH EXPLORATION LLC	1/8+	905 41	N/A	N/A	N/A
10*47051.256.14	C	9-11-7	HUGH R BUZZARD	TH EXPLORATION LLC	1/8+	905 43	N/A	N/A	N/A
10*47051.256.15	C	9-11-7	CHARLOTTE J BONAR YOHO	TH EXPLORATION LLC	1/8+	904 455	N/A	N/A	N/A
10*47051.256.16	C	9-11-7	CHARLOTTE B HUMMELL	TH EXPLORATION LLC	1/8+	905 45	N/A	N/A	N/A
10*47051.256.17	C	9-11-7	MAXINE G JOHNSON	TH EXPLORATION LLC	1/8+	904 457	N/A	N/A	N/A
10*47051.256.18	C	9-11-7	JOHN WILLIAM BONAR AND SHIRLEY BONAR	TH EXPLORATION LLC	1/8+	913 522	N/A	N/A	N/A
10*47051.256.19	C	9-11-7	MICHAEL DAVID PYLES AND CYNTHIA A PYLES	TH EXPLORATION LLC	1/8+	907 207	N/A	N/A	N/A
10*47051.256.20	C	9-11-7	JEFFREY THOMAS PYLES AND TERESA A PYLES	TH EXPLORATION LLC	1/8+	907 209	N/A	N/A	N/A
10*47051.256.21	C	9-11-7	JACK L MASON AND JEAN M MASON	TH EXPLORATION LLC	1/8+	904 626	N/A	N/A	N/A
10*47051.256.22	C	9-11-7	BEVERLY J HOPSON	TH EXPLORATION LLC	1/8+	913 581	N/A	N/A	N/A
10*47051.256.23	C	9-11-7	ROBERT L BONAR	TH EXPLORATION LLC	1/8+	913 556	N/A	N/A	N/A
10*47051.256.24	C	9-11-7	CATHERINE BONAR PETTIT BILLIE	TH EXPLORATION LLC	1/8+	904 628	N/A	N/A	N/A
10*47051.256.7	C	9-11-7	MARILYN SUE BUMER	TH EXPLORATION LLC	1/8+	905 29	N/A	N/A	N/A
10*47051.256.8	C	9-11-7	PAMELA ANN MASON	TH EXPLORATION LLC	1/8+	905 31	N/A	N/A	N/A
10*47051.256.9	C	9-11-7	WANDA MASON SUNSHINE	TH EXPLORATION LLC	1/8+	905 33	N/A	N/A	N/A
10*15746	D	9-11-7.1	BRUCE D SCHURR	TH EXPLORATION LLC	1/8+	921 478	N/A	N/A	N/A
10*16021	D	9-11-7.1	TOMMY BONAR AND TANYA S BONAR	TH EXPLORATION LLC	1/8+	925 325	N/A	N/A	N/A
10*16115	D	9-11-7.1	EARL W HARRIS	TH EXPLORATION LLC	1/8+	925 329	N/A	N/A	N/A
10*16247	D	9-11-7.1	CAROL RIGGLE PARSLEY AND JAMES DENNIS PARSLEY	TH EXPLORATION LLC	1/8+	925 327	N/A	N/A	N/A
10*17415	D	9-11-7.1	DILLON PITSENBARGER	TH EXPLORATION LLC	1/8+	919 241	N/A	N/A	N/A
10*17506	D	9-11-7.1	CHASKIA F HARRIS AND JAMES M HARRIS	TH EXPLORATION LLC	1/8+	919 239	N/A	N/A	N/A
10*17507	D	9-11-7.1	DEZRAY METCALF	TH EXPLORATION LLC	1/8+	919 235	N/A	N/A	N/A

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Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*47051.256.1	D	9-11-7.1	BRENDA J WHETZEL	TH EXPLORATION LLC	1/8+	881 145	N/A	N/A	N/A
10*47051.256.10	D	9-11-7.1	GRACE LAURA BONAR	TH EXPLORATION LLC	1/8+	905 35	N/A	N/A	N/A
10*47051.256.11	D	9-11-7.1	JOHN L MASON	TH EXPLORATION LLC	1/8+	905 37	N/A	N/A	N/A
10*47051.256.12	D	9-11-7.1	STEVEN A BOHRER	TH EXPLORATION LLC	1/8+	905 39	N/A	N/A	N/A
10*47051.256.13	D	9-11-7.1	WILLIAM W CRAIG AND GLENDA L CRAIG	TH EXPLORATION LLC	1/8+	905 41	N/A	N/A	N/A
10*47051.256.14	D	9-11-7.1	HUGH R BUZZARD	TH EXPLORATION LLC	1/8+	905 43	N/A	N/A	N/A
10*47051.256.15	D	9-11-7.1	CHARLOTTE J BONAR YOHO	TH EXPLORATION LLC	1/8+	904 455	N/A	N/A	N/A
10*47051.256.16	D	9-11-7.1	CHARLOTTE B HUMMELL	TH EXPLORATION LLC	1/8+	905 45	N/A	N/A	N/A
10*47051.256.17	D	9-11-7.1	MAXINE G JOHNSON	TH EXPLORATION LLC	1/8+	904 457	N/A	N/A	N/A
10*47051.256.18	D	9-11-7.1	JOHN WILLIAM BONAR AND SHIRLEY BONAR	TH EXPLORATION LLC	1/8+	913 522	N/A	N/A	N/A
10*47051.256.19	D	9-11-7.1	MICHAEL DAVID PYLES AND CYNTHIA A PYLES	TH EXPLORATION LLC	1/8+	907 207	N/A	N/A	N/A
10*47051.256.20	D	9-11-7.1	JEFFREY THOMAS PYLES AND TERESA A PYLES	TH EXPLORATION LLC	1/8+	907 209	N/A	N/A	N/A
10*47051.256.21	D	9-11-7.1	JACK L MASON AND JEAN M MASON	TH EXPLORATION LLC	1/8+	904 626	N/A	N/A	N/A
10*47051.256.22	D	9-11-7.1	BEVERLY J HOPSON	TH EXPLORATION LLC	1/8+	913 581	N/A	N/A	N/A
10*47051.256.23	D	9-11-7.1	ROBERT L BONAR	TH EXPLORATION LLC	1/8+	913 556	N/A	N/A	N/A
10*47051.256.24	D	9-11-7.1	CATHERINE BONAR PETTIT BILLIE	TH EXPLORATION LLC	1/8+	904 628	N/A	N/A	N/A
10*47051.256.7	D	9-11-7.1	MARILYN SUE BUMER	TH EXPLORATION LLC	1/8+	905 29	N/A	N/A	N/A
10*47051.256.8	D	9-11-7.1	PAMELA ANN MASON	TH EXPLORATION LLC	1/8+	905 31	N/A	N/A	N/A
10*47051.256.9	D	9-11-7.1	WANDA MASON SUNSHINE	TH EXPLORATION LLC	1/8+	905 33	N/A	N/A	N/A
10*15481	E	9-7-25.2	DEAN P RIGBY AND SUSAN RIGBY	TH EXPLORATION LLC	1/8+	908 197	N/A	N/A	N/A
10*15482	E	9-7-25.2	SUSAN NELSON	TH EXPLORATION LLC	1/8+	908 203	N/A	N/A	N/A
10*15686	E	9-7-25.2	JOHN OMER BOLTZ	TH EXPLORATION LLC	1/8+	908 160	N/A	N/A	N/A
10*15750	E	9-7-25.2	SANDRA K TRULL	TH EXPLORATION LLC	1/8+	908 229	N/A	N/A	N/A
10*16058	E	9-7-25.2	MATTIE RUTH JACKSON PRESCOTT	TH EXPLORATION LLC	1/8+	908 231	N/A	N/A	N/A
10*16118	E	9-7-25.2	RUBY RIDDLE JACKSON	TH EXPLORATION LLC	1/8+	908 233	N/A	N/A	N/A
10*16297	E	9-7-25.2	ROBERT A LEADBETTER AND M REBECCA LEADBETTER	TH EXPLORATION LLC	1/8+	908 235	N/A	N/A	N/A
10*16298	E	9-7-25.2	GEOFFREY A SHIEFER AND STEPHANIE L SCHIEFER	TH EXPLORATION LLC	1/8+	908 238	N/A	N/A	N/A
10*16383	E	9-7-25.2	ROBERT STEPHEN DRIGGERS	TH EXPLORATION LLC	1/8+	908 224	N/A	N/A	N/A
10*16414	E	9-7-25.2	MARY ELIZABETH DRIGGERS	TH EXPLORATION LLC	1/8+	908 208	N/A	N/A	N/A
10*16415	E	9-7-25.2	TERENCE J ANDERSON AND NANCY J ANDERSON	TH EXPLORATION LLC	1/8+	908 213	N/A	N/A	N/A
10*16416	E	9-7-25.2	CYNTHIA HUDSON	TH EXPLORATION LLC	1/8+	908 319	N/A	N/A	N/A
10*16424	E	9-7-25.2	ROBERT J RIGBY	TH EXPLORATION LLC	1/8+	908 241	N/A	N/A	N/A
10*16448	E	9-7-25.2	RALPH L AND JUANITA L CRIM	TH EXPLORATION LLC	1/8+	908 584	N/A	N/A	N/A
10*16478	E	9-7-25.2	MARION L AND EMILY CAMPBELL	TH EXPLORATION LLC	1/8+	908 245	N/A	N/A	N/A
10*16514	E	9-7-25.2	ALEX RUSSELL AND JOYCE A CAMPBELL	TH EXPLORATION LLC	1/8+	908 248	N/A	N/A	N/A
10*16515	E	9-7-25.2	ANNA MARIE JACKSON	TH EXPLORATION LLC	1/8+	908 251	N/A	N/A	N/A
10*16516	E	9-7-25.2	WILSON ANDREW JACKSON	TH EXPLORATION LLC	1/8+	908 253	N/A	N/A	N/A
10*16545	E	9-7-25.2	ROBERT G & ELLEN FOUNDS	TH EXPLORATION LLC	1/8+	908 260	N/A	N/A	N/A
10*16662	E	9-7-25.2	RICHARD THOMAS AND VICKI J MIMS	TH EXPLORATION LLC	1/8+	908 863	N/A	N/A	N/A
10*16666	E	9-7-25.2	MICHAEL P PYLE	TH EXPLORATION LLC	1/8+	908 255	N/A	N/A	N/A
10*16667	E	9-7-25.2	CHARLES F AND GAIL ANN PYLE	TH EXPLORATION LLC	1/8+	908 266	N/A	N/A	N/A



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10*16668	E	9-7-25.2	JACK I AND MERRILEE PYLE	TH EXPLORATION LLC	1/8+	908 257	N/A	N/A	N/A
10*16669	E	9-7-25.2	JOHN S AND PATRICIA S DADO	TH EXPLORATION LLC	1/8+	908 269	N/A	N/A	N/A
10*16686	E	9-7-25.2	CHERYLE M TRACEY	TH EXPLORATION LLC	1/8+	908 269	N/A	N/A	N/A
10*16688	E	9-7-25.2	SHERRYL PYLE BAIR	TH EXPLORATION LLC	1/8+	927 475	N/A	N/A	N/A
10*16689	E	9-7-25.2	JOHN C FOUNDS	TH EXPLORATION LLC	1/8+	927 481	N/A	N/A	N/A
10*16690	E	9-7-25.2	RICARDO ORTIZ	TH EXPLORATION LLC	1/8+	927 478	N/A	N/A	N/A
10*16720	E	9-7-25.2	DONNA ELAINE BRASKETT	TH EXPLORATION LLC	1/8+	921 352	N/A	N/A	N/A
10*16738	E	9-7-25.2	CHARLES A RINE AND RUTH K RINE	TH EXPLORATION LLC	1/8+	921 152	N/A	N/A	N/A
10*16742	E	9-7-25.2	PAUL C WILSON	TH EXPLORATION LLC	1/8+	927 490	N/A	N/A	N/A
10*16747	E	9-7-25.2	WILLIAM DALE BRASKETT	TH EXPLORATION LLC	1/8+	921 96	N/A	N/A	N/A
10*16787	E	9-7-25.2	HERBERT BRIAN AND DONNA DRU CAMPBELL	TH EXPLORATION LLC	1/8+	921 364	N/A	N/A	N/A
10*16798	E	9-7-25.2	PATRICK A RANKIN AND ROBIN A RANKIN	TH EXPLORATION LLC	1/8+	921 364	N/A	N/A	N/A
10*16800	E	9-7-25.2	JAMES KENNETH JACKSON AND JULIE JACKSON	TH EXPLORATION LLC	1/8+	921 93	N/A	N/A	N/A
10*16802	E	9-7-25.2	CHRISTOPHER AND TAMMY RICHARDSON	TH EXPLORATION LLC	1/8+	921 495	N/A	N/A	N/A
10*16804	E	9-7-25.2	WILLIAM N AND SHERRY D TAYLOR	TH EXPLORATION LLC	1/8+	921 510	N/A	N/A	N/A
10*16806	E	9-7-25.2	VIRGINIA I WHITMAN	TH EXPLORATION LLC	1/8+	921 528	N/A	N/A	N/A
10*16807	E	9-7-25.2	DAVID TULLER AND SUSAN STORTS TULLER	TH EXPLORATION LLC	1/8+	921 513	N/A	N/A	N/A
10*16808	E	9-7-25.2	MICHAEL L ORTIZ	TH EXPLORATION LLC	1/8+	921 349	N/A	N/A	N/A
10*16815	E	9-7-25.2	HAROLD W PYLE	TH EXPLORATION LLC	1/8+	921 357	N/A	N/A	N/A
10*16819	E	9-7-25.2	TERESA ORTIZ BIGGS	TH EXPLORATION LLC	1/8+	921 147	N/A	N/A	N/A
10*16821	E	9-7-25.2	SHEILA BRASKETT WEICHEY	TH EXPLORATION LLC	1/8+	921 516	N/A	N/A	N/A
10*16836	E	9-7-25.2	RICK A AND LENORE A STORTS	TH EXPLORATION LLC	1/8+	921 507	N/A	N/A	N/A
10*16837	E	9-7-25.2	TERRY L AND THELMA A POFF	TH EXPLORATION LLC	1/8+	927 472	N/A	N/A	N/A
10*16838	E	9-7-25.2	ROBERT G FUNARI	TH EXPLORATION LLC	1/8+	921 82	N/A	N/A	N/A
10*16839	E	9-7-25.2	JAMES B FOUNDS AND LYNN M MOWERY	TH EXPLORATION LLC	1/8+	921 73	N/A	N/A	N/A
10*16863	E	9-7-25.2	TINA MOORE	TH EXPLORATION LLC	1/8+	921 334	N/A	N/A	N/A
10*16868	E	9-7-25.2	MICHAEL W STORTS AND JESSICA M STORTS	TH EXPLORATION LLC	1/8+	921 504	N/A	N/A	N/A
10*16879	E	9-7-25.2	MARK E AND LESLEY A STORTS	TH EXPLORATION LLC	1/8+	921 501	N/A	N/A	N/A
10*16880	E	9-7-25.2	BEVERLY ANN STORTS	TH EXPLORATION LLC	1/8+	921 498	N/A	N/A	N/A
10*16902	E	9-7-25.2	MARY BARCAW DUKE	TH EXPLORATION LLC	1/8+	921 105	N/A	N/A	N/A
10*16962	E	9-7-25.2	DENNIS P AND BARBARA EZELL FLORY	TH EXPLORATION LLC	1/8+	921 70	N/A	N/A	N/A
10*16976	E	9-7-25.2	LESTER G AND CONSTANCE B NICKOLSON	TH EXPLORATION LLC	1/8+	921 343	N/A	N/A	N/A
10*16977	E	9-7-25.2	JEREMY COCHENOUR	TH EXPLORATION LLC	1/8+	921 102	N/A	N/A	N/A
10*16987	E	9-7-25.2	LAURIE EZELL PERRY	TH EXPLORATION LLC	1/8+	921 355	N/A	N/A	N/A
10*16989	E	9-7-25.2	BRITTANY RICHARDSON	TH EXPLORATION LLC	1/8+	921 376	N/A	N/A	N/A
10*16991	E	9-7-25.2	MARYELLEN FOUNDS AND LAUREN FOUNDS	TH EXPLORATION LLC	1/8+	921 79	N/A	N/A	N/A
10*16996	E	9-7-25.2	THOMAS RANKIN	TH EXPLORATION LLC	1/8+	917 75	N/A	N/A	N/A
10*17130	E	9-7-25.2	CINDY L BARGER	TH EXPLORATION LLC	1/8+	921 137	N/A	N/A	N/A
10*17155	E	9-7-25.2	JESSE LEON JR AND TERESA GAIL EZELLE	TH EXPLORATION LLC	1/8+	921 118	N/A	N/A	N/A
10*17156	E	9-7-25.2	HENRI NELL JACKSON KENT BARNES	TH EXPLORATION LLC	1/8+	921 139	N/A	N/A	N/A
10*17157	E	9-7-25.2	JAMES N REEVES JR AND RITA M REEVES	TH EXPLORATION LLC	1/8+	921 367	N/A	N/A	N/A

Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*17198	E	9-7-25.2	THOMAS G AND DIANE W BAYLESS	TH EXPLORATION LLC	1/8+	921 141	N/A	N/A	N/A
10*17205	E	9-7-25.2	SANDRA JEAN WILSON	TH EXPLORATION LLC	1/8+	921 524	N/A	N/A	N/A
10*17208	E	9-7-25.2	PATRICK S GALLAGHER AND JOYCE ANN FOUNDS	TH EXPLORATION LLC	1/8+	921 86	N/A	N/A	N/A
10*17274	E	9-7-25.2	DAVID H WILSON	TH EXPLORATION LLC	1/8+	921 474	N/A	N/A	N/A
10*17275	E	9-7-25.2	JOHN R REEVES AND MONA G REEVES	TH EXPLORATION LLC	1/8+	921 373	N/A	N/A	N/A
10*17276	E	9-7-25.2	BERTHA EZELL WYATT	TH EXPLORATION LLC	1/8+	921 526	N/A	N/A	N/A
10*17278	E	9-7-25.2	MICHAEL L EZELLE	TH EXPLORATION LLC	1/8+	921 121	N/A	N/A	N/A
10*17339	E	9-7-25.2	JOSEPH W FOUNDS	TH EXPLORATION LLC	1/8+	921 76	N/A	N/A	N/A
10*17377	E	9-7-25.2	MILTON HOWARD EZELLE JR AND ELIZABETH A EZELLE	TH EXPLORATION LLC	1/8+	921 123	N/A	N/A	N/A
10*17416	E	9-7-25.2	ANDREW M ORTIZ	TH EXPLORATION LLC	1/8+	921 346	N/A	N/A	N/A
10*17438	E	9-7-25.2	DENNIS M WILSON	TH EXPLORATION LLC	1/8+	921 476	N/A	N/A	N/A
10*17440	E	9-7-25.2	KENDRA WALISA	TH EXPLORATION LLC	1/8+	927 484	N/A	N/A	N/A
10*17441	E	9-7-25.2	RALPH J WILSON	TH EXPLORATION LLC	1/8+	921 522	N/A	N/A	N/A
10*17442	E	9-7-25.2	SHANE ALLEN AND MENDY JEAN ALLEN	TH EXPLORATION LLC	1/8+	921 134	N/A	N/A	N/A
10*17443	E	9-7-25.2	MICHELLE MORROW-BACK	TH EXPLORATION LLC	1/8+	921 337	N/A	N/A	N/A
10*17444	E	9-7-25.2	KELLY FOUNDS CAMPBELL	TH EXPLORATION LLC	1/8+	921 99	N/A	N/A	N/A
10*17449	E	9-7-25.2	PHYLLIS J BLAKE	TH EXPLORATION LLC	1/8+	921 150	N/A	N/A	N/A
10*17482	E	9-7-25.2	TERESA EZELLE RALYA AND DAVID L RALYA	TH EXPLORATION LLC	1/8+	927 487	N/A	N/A	N/A
10*17483	E	9-7-25.2	RICHARD I PYLE	TH EXPLORATION LLC	1/8+	921 359	N/A	N/A	N/A
10*17484	E	9-7-25.2	NELDA S JACKSON	TH EXPLORATION LLC	1/8+	921 330	N/A	N/A	N/A
10*17485	E	9-7-25.2	MARGIE ANN JACKSON ROBBINS GRAHAM	TH EXPLORATION LLC	1/8+	921 91	N/A	N/A	N/A
10*17526	E	9-7-25.2	JEFFREY L REEVES AND JODY L REEVES	TH EXPLORATION LLC	1/8+	921 370	N/A	N/A	N/A
10*17527	E	9-7-25.2	JAMES MICHAEL EZELL AND LUCILLE D EZELL	TH EXPLORATION LLC	1/8+	921 111	N/A	N/A	N/A
10*17538	E	9-7-25.2	CHERYL RANKIN KING	TH EXPLORATION LLC	1/8+	952 160	N/A	N/A	N/A
10*17552	E	9-7-25.2	JOHN BEVACQUA AND PATRICIA A BEVACQUA	TH EXPLORATION LLC	1/8+	921 144	N/A	N/A	N/A
10*17554	E	9-7-25.2	MICHAEL T RANKIN	TH EXPLORATION LLC	1/8+	921 361	N/A	N/A	N/A
10*17561	E	9-7-25.2	ROGER L TYRELL AND KATHRYN L TYRELL	TH EXPLORATION LLC	1/8+	921 519	N/A	N/A	N/A
10*17564	E	9-7-25.2	JAMES RONALD NICKOLSON AND TRACEY E NICKOLSON	TH EXPLORATION LLC	1/8+	921 340	N/A	N/A	N/A
10*17565	E	9-7-25.2	JESSE ALLEN JACKSON AND ELIZABETH D JACKSON	TH EXPLORATION LLC	1/8+	921 327	N/A	N/A	N/A
10*17566	E	9-7-25.2	NATHAN P ERDOSSY AND BARBARA T ERDOSSY	TH EXPLORATION LLC	1/8+	921 108	N/A	N/A	N/A
10*17588	E	9-7-25.2	JAMES M JACKSON	TH EXPLORATION LLC	1/8+	921 325	N/A	N/A	N/A
10*17589	E	9-7-25.2	MARY CHRISTINE MCKENNA	TH EXPLORATION LLC	1/8+	921 332	N/A	N/A	N/A
10*17677	E	9-7-25.2	GEORGE M GONTA JR	TH EXPLORATION LLC	1/8+	921 89	N/A	N/A	N/A
10*17744	E	9-7-25.2	SAM PRESLEY EZELL	TH EXPLORATION LLC	1/8+	921 116	N/A	N/A	N/A
10*17983	E	9-7-25.2	HOLLY SUE CUTHBERT	TH EXPLORATION LLC	1/8+	925 380	N/A	N/A	N/A
10*18021	E	9-7-25.2	CHRISTOPHER & JACKIE HANIFAN	TH EXPLORATION LLC	1/8+	927 267	N/A	N/A	N/A
10*18022	E	9-7-25.2	DALE P & CYNTHIA J WARD	TH EXPLORATION LLC	1/8+	927 264	N/A	N/A	N/A
10*19524	E	9-7-25.2	ESTATE OF AGNES IRENE E CLARK	TH EXPLORATION LLC	1/8+	942 633	N/A	N/A	N/A
10*19692	E	9-7-25.2	KENDRA WALISA	TH EXPLORATION LLC	1/8+	924 484	N/A	N/A	N/A
10*19693	E	9-7-25.2	MARIO R FUNARI BY HIS AIF ROBERT FUNARI	TH EXPLORATION LLC	1/8+	936 145	N/A	N/A	N/A
10*19695	E	9-7-25.2	VIRGINIA P FOUNDS KASSERMAN	TH EXPLORATION LLC	1/8+	944 333	N/A	N/A	N/A

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Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*19939	E	9-7-25.2	ROBERT J MILLS & SHERRA SUE MILLS	TH EXPLORATION LLC	1/8+	949 212	N/A	N/A	N/A
10*47051.223.12	E	9-7-25.2	ALICE GORBY MARTIN	TH EXPLORATION LLC	1/8+	908 52	N/A	N/A	N/A
10*47051.223.13	E	9-7-25.2	JAMES A GORBY	TH EXPLORATION LLC	1/8+	908 42	N/A	N/A	N/A
10*47051.223.15	E	9-7-25.2	LARRY D TAUNT AND NANCY L TAUNT	TH EXPLORATION LLC	1/8+	908 14	N/A	N/A	N/A
10*47051.223.20	E	9-7-25.2	BARBARA A BUZZARD	TH EXPLORATION LLC	1/8+	908 24	N/A	N/A	N/A
10*47051.223.21	E	9-7-25.2	GARY T WARD AND SHARON D WARD	TH EXPLORATION LLC	1/8+	908 19	N/A	N/A	N/A
10*47051.223.30	E	9-7-25.2	LAURIE DRIGGERS MANDERSON	TH EXPLORATION LLC	1/8+	908 165	N/A	N/A	N/A
10*47051.223.33	E	9-7-25.2	NANCY CIAFFAGLIONE HOUSLEY	TH EXPLORATION LLC	1/8+	908 185	N/A	N/A	N/A
10*47051.223.35	E	9-7-25.2	DEBRA L CIAFFAGLIONE	TH EXPLORATION LLC	1/8+	908 190	N/A	N/A	N/A
10*47051.223.6	E	9-7-25.2	JOSHUA RINE AND REBECCA RINE	TH EXPLORATION LLC	1/8+	907 634	N/A	N/A	N/A
10*47051.223.9	E	9-7-25.2	LINDA DELBERT	TH EXPLORATION LLC	1/8+	908 32	N/A	N/A	N/A
10*47051.303.1	E	9-7-25.2	THOMAS R WHITFIELD	TH EXPLORATION LLC	1/8+	890 401	N/A	N/A	N/A
10*47051.303.2	E	9-7-25.2	KIMBERLY A WHITFIELD	TH EXPLORATION LLC	1/8+	890 403	N/A	N/A	N/A
10*47051.303.1	F	9-7-25.1	THOMAS R WHITFIELD	TH EXPLORATION LLC	1/8+	890 401	N/A	N/A	N/A
10*47051.303.2	F	9-7-25.1	KIMBERLY A WHITFIELD	TH EXPLORATION LLC	1/8+	890 403	N/A	N/A	N/A
10*47051.303.1	G	9-7-25	THOMAS R WHITFIELD	TH EXPLORATION LLC	1/8+	890 401	N/A	N/A	N/A
10*47051.303.2	G	9-7-25	KIMBERLY A WHITFIELD	TH EXPLORATION LLC	1/8+	890 403	N/A	N/A	N/A
10*15481	H	9-12-4	DEAN P RIGBY AND SUSAN RIGBY	TH EXPLORATION LLC	1/8+	908 197	N/A	N/A	N/A
10*15482	H	9-12-4	SUSAN NELSON	TH EXPLORATION LLC	1/8+	908 203	N/A	N/A	N/A
10*15686	H	9-12-4	JOHN OMER BOLTZ	TH EXPLORATION LLC	1/8+	908 160	N/A	N/A	N/A
10*15750	H	9-12-4	SANDRA K TRULL	TH EXPLORATION LLC	1/8+	908 229	N/A	N/A	N/A
10*16058	H	9-12-4	MATTIE RUTH JACKSON PRESCOTT	TH EXPLORATION LLC	1/8+	908 231	N/A	N/A	N/A
10*16118	H	9-12-4	RUBY RIDDLE JACKSON	TH EXPLORATION LLC	1/8+	908 233	N/A	N/A	N/A
10*16297	H	9-12-4	ROBERT A LEADBETTER AND M REBECCA LEADBETTER	TH EXPLORATION LLC	1/8+	908 235	N/A	N/A	N/A
10*16298	H	9-12-4	GEOFFREY A SHIEFER AND STEPHANIE L SCHIEFER	TH EXPLORATION LLC	1/8+	908 238	N/A	N/A	N/A
10*16383	H	9-12-4	ROBERT STEPHEN DRIGGERS	TH EXPLORATION LLC	1/8+	908 224	N/A	N/A	N/A
10*16414	H	9-12-4	MARY ELIZABETH DRIGGERS	TH EXPLORATION LLC	1/8+	908 208	N/A	N/A	N/A
10*16415	H	9-12-4	TERENCE J ANDERSON AND NANCY J ANDERSON	TH EXPLORATION LLC	1/8+	908 213	N/A	N/A	N/A
10*16416	H	9-12-4	CYNTHIA HUDSON	TH EXPLORATION LLC	1/8+	908 219	N/A	N/A	N/A
10*16424	H	9-12-4	ROBERT J RIGBY	TH EXPLORATION LLC	1/8+	908 241	N/A	N/A	N/A
10*16448	H	9-12-4	RALPH L AND JUANITA L CRIM	TH EXPLORATION LLC	1/8+	908 584	N/A	N/A	N/A
10*16478	H	9-12-4	MARION L AND EMILY CAMPBELL	TH EXPLORATION LLC	1/8+	908 245	N/A	N/A	N/A
10*16514	H	9-12-4	ALEX RUSSELL AND JOYCE A CAMPBELL	TH EXPLORATION LLC	1/8+	908 248	N/A	N/A	N/A
10*16515	H	9-12-4	ANNA MARIE JACKSON	TH EXPLORATION LLC	1/8+	908 251	N/A	N/A	N/A
10*16516	H	9-12-4	WILSON ANDREW JACKSON	TH EXPLORATION LLC	1/8+	908 253	N/A	N/A	N/A
10*16545	H	9-12-4	ROBERT G & ELLEN FOUNDS	TH EXPLORATION LLC	1/8+	908 260	N/A	N/A	N/A
10*16662	H	9-12-4	RICHARD THOMAS AND VICKI J MIMS	TH EXPLORATION LLC	1/8+	908 863	N/A	N/A	N/A
10*16666	H	9-12-4	MICHAEL P PYLE	TH EXPLORATION LLC	1/8+	908 255	N/A	N/A	N/A
10*16667	H	9-12-4	CHARLES F AND GAIL ANN PYLE	TH EXPLORATION LLC	1/8+	908 266	N/A	N/A	N/A
10*16668	H	9-12-4	JACK I AND MERRILEE PYLE	TH EXPLORATION LLC	1/8+	908 257	N/A	N/A	N/A
10*16669	H	9-12-4	JOHN S AND PATRICIA S DADO	TH EXPLORATION LLC	1/8+	908 269	N/A	N/A	N/A

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Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*16686	H	9-12-4	CHERYLE M TRACEY	TH EXPLORATION LLC	1/8+	927 475	N/A	N/A	N/A
10*16688	H	9-12-4	SHERRYL PYLE BAIR	TH EXPLORATION LLC	1/8+	927 481	N/A	N/A	N/A
10*16689	H	9-12-4	JOHN C FOUNDS	TH EXPLORATION LLC	1/8+	927 478	N/A	N/A	N/A
10*16690	H	9-12-4	RICARDO ORTIZ	TH EXPLORATION LLC	1/8+	921 352	N/A	N/A	N/A
10*16720	H	9-12-4	DONNA ELAINE BRASKETT	TH EXPLORATION LLC	1/8+	921 152	N/A	N/A	N/A
10*16738	H	9-12-4	CHARLES A RINE AND RUTH K RINE	TH EXPLORATION LLC	1/8+	908 274	N/A	N/A	N/A
10*16742	H	9-12-4	PAUL C WILSON	TH EXPLORATION LLC	1/8+	924 490	N/A	N/A	N/A
10*16747	H	9-12-4	WILLIAM DALE BRASKETT	TH EXPLORATION LLC	1/8+	921 96	N/A	N/A	N/A
10*16787	H	9-12-4	HERBERT B CAMPBELL & DONNA D CAMPBELL	TH EXPLORATION LLC	1/8+	942 451	N/A	N/A	N/A
10*16798	H	9-12-4	PATRICK A RANKIN AND ROBIN A RANKIN	TH EXPLORATION LLC	1/8+	921 364	N/A	N/A	N/A
10*16800	H	9-12-4	JAMES KENNETH JACKSON AND JULIE JACKSON	TH EXPLORATION LLC	1/8+	921 93	N/A	N/A	N/A
10*16802	H	9-12-4	CHRISTOPHER AND TAMMY RICHARDSON	TH EXPLORATION LLC	1/8+	921 495	N/A	N/A	N/A
10*16804	H	9-12-4	WILLIAM N AND SHERRY D TAYLOR	TH EXPLORATION LLC	1/8+	921 510	N/A	N/A	N/A
10*16806	H	9-12-4	VIRGINIA I WHITMAN	TH EXPLORATION LLC	1/8+	921 528	N/A	N/A	N/A
10*16807	H	9-12-4	DAVID TULLER AND SUSAN STORTS TULLER	TH EXPLORATION LLC	1/8+	921 513	N/A	N/A	N/A
10*16808	H	9-12-4	MICHAEL L ORTIZ	TH EXPLORATION LLC	1/8+	921 349	N/A	N/A	N/A
10*16815	H	9-12-4	HAROLD W PYLE	TH EXPLORATION LLC	1/8+	921 357	N/A	N/A	N/A
10*16819	H	9-12-4	TERESA ORTIZ BIGGS	TH EXPLORATION LLC	1/8+	921 147	N/A	N/A	N/A
10*16821	H	9-12-4	SHEILA BRASKETT WEICHEY	TH EXPLORATION LLC	1/8+	921 516	N/A	N/A	N/A
10*16836	H	9-12-4	RICK A AND LENORE A STORTS	TH EXPLORATION LLC	1/8+	921 507	N/A	N/A	N/A
10*16837	H	9-12-4	TERRY L AND THELMA A POFF	TH EXPLORATION LLC	1/8+	927 472	N/A	N/A	N/A
10*16838	H	9-12-4	ROBERT G FUNARI	TH EXPLORATION LLC	1/8+	921 82	N/A	N/A	N/A
10*16839	H	9-12-4	JAMES B FOUNDS AND LYNN M MOWERY	TH EXPLORATION LLC	1/8+	921 73	N/A	N/A	N/A
10*16863	H	9-12-4	TINA MOORE	TH EXPLORATION LLC	1/8+	921 334	N/A	N/A	N/A
10*16868	H	9-12-4	MICHAEL W STORTS AND JESSICA M STORTS	TH EXPLORATION LLC	1/8+	921 504	N/A	N/A	N/A
10*16879	H	9-12-4	MARK E AND LESLEY A STORTS	TH EXPLORATION LLC	1/8+	921 501	N/A	N/A	N/A
10*16880	H	9-12-4	BEVERLY ANN STORTS	TH EXPLORATION LLC	1/8+	921 498	N/A	N/A	N/A
10*16902	H	9-12-4	MARY BARCAW DUKE	TH EXPLORATION LLC	1/8+	921 105	N/A	N/A	N/A
10*16962	H	9-12-4	DENNIS P AND BARBARA EZELL FLORY	TH EXPLORATION LLC	1/8+	921 70	N/A	N/A	N/A
10*16976	H	9-12-4	LESTER G AND CONSTANCE B NICKOLSON	TH EXPLORATION LLC	1/8+	921 343	N/A	N/A	N/A
10*16977	H	9-12-4	JEREMY COCHENOUR	TH EXPLORATION LLC	1/8+	921 102	N/A	N/A	N/A
10*16987	H	9-12-4	LURIE EZELL PERRY	TH EXPLORATION LLC	1/8+	921 355	N/A	N/A	N/A
10*16989	H	9-12-4	BRITTANY RICHARDSON	TH EXPLORATION LLC	1/8+	916 135	N/A	N/A	N/A
10*16991	H	9-12-4	MARYELLEN FOUNDS AND LAUREN FOUNDS	TH EXPLORATION LLC	1/8+	921 79	N/A	N/A	N/A
10*16996	H	9-12-4	THOMAS RANKIN	TH EXPLORATION LLC	1/8+	917 75	N/A	N/A	N/A
10*17130	H	9-12-4	CINDY L BARGER	TH EXPLORATION LLC	1/8+	921 137	N/A	N/A	N/A
10*17155	H	9-12-4	JESSE LEON JR AND TERESA GAIL EZELLE	TH EXPLORATION LLC	1/8+	921 118	N/A	N/A	N/A
10*17156	H	9-12-4	HENRI NELL JACKSON KENT BARNES	TH EXPLORATION LLC	1/8+	921 139	N/A	N/A	N/A
10*17157	H	9-12-4	JAMES N REEVES JR AND RITA M REEVES	TH EXPLORATION LLC	1/8+	921 367	N/A	N/A	N/A
10*17198	H	9-12-4	THOMAS G AND DIANE W BAYLESS	TH EXPLORATION LLC	1/8+	921 141	N/A	N/A	N/A
10*17205	H	9-12-4	SANDRA JEAN WILSON	TH EXPLORATION LLC	1/8+	921 524	N/A	N/A	N/A

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10*17208	H	9-12-4	PATRICK S GALLAGHER AND JOYCE ANN FOUNDS	TH EXPLORATION LLC	1/8+	921 86	N/A	N/A	N/A
10*17274	H	9-12-4	DAVID H WILSON	TH EXPLORATION LLC	1/8+	921 474	N/A	N/A	N/A
10*17275	H	9-12-4	JOHN R REEVES AND MONA G REEVES	TH EXPLORATION LLC	1/8+	921 373	N/A	N/A	N/A
10*17276	H	9-12-4	BERTHA EZELL WYATT	TH EXPLORATION LLC	1/8+	921 526	N/A	N/A	N/A
10*17278	H	9-12-4	MICHAEL L EZELLE	TH EXPLORATION LLC	1/8+	921 121	N/A	N/A	N/A
10*17339	H	9-12-4	JOSEPH W FOUNDS	TH EXPLORATION LLC	1/8+	921 76	N/A	N/A	N/A
10*17377	H	9-12-4	MILTON HOWARD EZELLE JR AND ELIZABETH A EZELLE	TH EXPLORATION LLC	1/8+	921 123	N/A	N/A	N/A
10*17416	H	9-12-4	ANDREW M ORTIZ	TH EXPLORATION LLC	1/8+	921 346	N/A	N/A	N/A
10*17438	H	9-12-4	DENNIS M WILSON	TH EXPLORATION LLC	1/8+	921 476	N/A	N/A	N/A
10*17440	H	9-12-4	KENDRA WALISA	TH EXPLORATION LLC	1/8+	927 484	N/A	N/A	N/A
10*17441	H	9-12-4	RALPH J WILSON	TH EXPLORATION LLC	1/8+	921 522	N/A	N/A	N/A
10*17442	H	9-12-4	SHANE ALLEN AND MENDY JEAN ALLEN	TH EXPLORATION LLC	1/8+	921 134	N/A	N/A	N/A
10*17443	H	9-12-4	MICHELLE MORROW-BACK	TH EXPLORATION LLC	1/8+	921 337	N/A	N/A	N/A
10*17444	H	9-12-4	KELLY FOUNDS CAMPBELL	TH EXPLORATION LLC	1/8+	921 99	N/A	N/A	N/A
10*17449	H	9-12-4	PHYLLIS J BLAKE	TH EXPLORATION LLC	1/8+	921 150	N/A	N/A	N/A
10*17482	H	9-12-4	TERESA EZELLE RALYA AND DAVID L RALYA	TH EXPLORATION LLC	1/8+	927 487	N/A	N/A	N/A
10*17483	H	9-12-4	RICHARD I PYLE	TH EXPLORATION LLC	1/8+	921 359	N/A	N/A	N/A
10*17484	H	9-12-4	NELDA S JACKSON	TH EXPLORATION LLC	1/8+	921 330	N/A	N/A	N/A
10*17485	H	9-12-4	MARGIE ANN JACKSON ROBBINS GRAHAM	TH EXPLORATION LLC	1/8+	921 91	N/A	N/A	N/A
10*17526	H	9-12-4	JEFFREY L REEVES AND JODY L REEVES	TH EXPLORATION LLC	1/8+	921 370	N/A	N/A	N/A
10*17527	H	9-12-4	JAMES MICHAEL EZELL AND LUCILLE D EZELL	TH EXPLORATION LLC	1/8+	921 111	N/A	N/A	N/A
10*17552	H	9-12-4	JOHN BEVACQUA AND PATRICIA A BEVACQUA	TH EXPLORATION LLC	1/8+	921 144	N/A	N/A	N/A
10*17554	H	9-12-4	MICHAEL T RANKIN	TH EXPLORATION LLC	1/8+	921 361	N/A	N/A	N/A
10*17561	H	9-12-4	ROGER L TYRELL AND KATHRYN L TYRELL	TH EXPLORATION LLC	1/8+	921 519	N/A	N/A	N/A
10*17564	H	9-12-4	JAMES RONALD NICKOLSON AND TRACEY E NICKOLSON	TH EXPLORATION LLC	1/8+	921 340	N/A	N/A	N/A
10*17565	H	9-12-4	JESSE ALLEN JACKSON AND ELIZABETH D JACKSON	TH EXPLORATION LLC	1/8+	921 327	N/A	N/A	N/A
10*17566	H	9-12-4	NATHAN P ERDOSSY AND BARBARA T ERDOSSY	TH EXPLORATION LLC	1/8+	921 108	N/A	N/A	N/A
10*17588	H	9-12-4	JAMES M JACKSON	TH EXPLORATION LLC	1/8+	921 325	N/A	N/A	N/A
10*17589	H	9-12-4	MARY CHRISTINE MCKENNA	TH EXPLORATION LLC	1/8+	921 332	N/A	N/A	N/A
10*17677	H	9-12-4	GEORGE M GONTA JR	TH EXPLORATION LLC	1/8+	921 89	N/A	N/A	N/A
10*17744	H	9-12-4	SAM PRESLEY EZELL	TH EXPLORATION LLC	1/8+	921 116	N/A	N/A	N/A
10*17983	H	9-12-4	HOLLY SUE CUTHBERT	TH EXPLORATION LLC	1/8+	925 380	N/A	N/A	N/A
10*18021	H	9-12-4	CHRISTOPHER & JACKIE HANIFAN	TH EXPLORATION LLC	1/8+	927 267	N/A	N/A	N/A
10*18022	H	9-12-4	DALE P & CYNTHIA J WARD	TH EXPLORATION LLC	1/8+	927 264	N/A	N/A	N/A
10*19524	H	9-12-4	ESTATE OF AGNES IRENE E CLARK	TH EXPLORATION LLC	1/8+	942 633	N/A	N/A	N/A
10*19693	H	9-12-4	MARIO R FUNARI BY HIS AIF ROBERT FUNARI	TH EXPLORATION LLC	1/8+	936 145	N/A	N/A	N/A
10*19695	H	9-12-4	VIRGINIA P FOUNDS KASSERMAN	TH EXPLORATION LLC	1/8+	944 333	N/A	N/A	N/A
10*19939	H	9-12-4	ROBERT J MILLS & SHERRA SUE MILLS	TH EXPLORATION LLC	1/8+	949 212	N/A	N/A	N/A
10*47051.223.1	H	9-12-4	JEAN ANNE GORBY STORCH	TH EXPLORATION LLC	1/8+	877 216	N/A	N/A	N/A
10*47051.223.10	H	9-12-4	ROBERT E GORBY	TH EXPLORATION LLC	1/8+	908 47	N/A	N/A	N/A
10*47051.223.11	H	9-12-4	ELIZABETH ESTEP	TH EXPLORATION LLC	1/8+	908 37	N/A	N/A	N/A

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10*47051.223.12	H	9-12-4	ALICE GORBY MARTIN	TH EXPLORATION LLC	1/8+	908 52	N/A	N/A	N/A
10*47051.223.13	H	9-12-4	JAMES A GORBY	TH EXPLORATION LLC	1/8+	908 42	N/A	N/A	N/A
10*47051.223.14	H	9-12-4	JUSTIN RINE AND BECKY RINE	TH EXPLORATION LLC	1/8+	907 639	N/A	N/A	N/A
10*47051.223.15	H	9-12-4	LARRY D TAUNT AND NANCY L TAUNT	TH EXPLORATION LLC	1/8+	908 14	N/A	N/A	N/A
10*47051.223.16	H	9-12-4	BETTY LOU STERN AND WILLIAM KEITH STERN	TH EXPLORATION LLC	1/8+	908 64	N/A	N/A	N/A
10*47051.223.17	H	9-12-4	RALPH E HUNTER JR AND CHARLOTTE HUNTER	TH EXPLORATION LLC	1/8+	908 9	N/A	N/A	N/A
10*47051.223.18	H	9-12-4	BRITTNEY MENEAR	TH EXPLORATION LLC	1/8+	908 57	N/A	N/A	N/A
10*47051.223.19	H	9-12-4	JASON RINE AND HEATHER RINE	TH EXPLORATION LLC	1/8+	907 629	N/A	N/A	N/A
10*47051.223.20	H	9-12-4	BARBARA A BUZZARD	TH EXPLORATION LLC	1/8+	908 24	N/A	N/A	N/A
10*47051.223.21	H	9-12-4	GARY T WARD AND SHARON D WARD	TH EXPLORATION LLC	1/8+	908 19	N/A	N/A	N/A
10*47051.223.22	H	9-12-4	SALLY COLE	TH EXPLORATION LLC	1/8+	908 74	N/A	N/A	N/A
10*47051.223.23	H	9-12-4	RONALD S CRIM	TH EXPLORATION LLC	1/8+	908 79	N/A	N/A	N/A
10*47051.223.24	H	9-12-4	JO DEE K DAVIS	TH EXPLORATION LLC	1/8+	908 136	N/A	N/A	N/A
10*47051.223.25	H	9-12-4	JOANNE WELCH	TH EXPLORATION LLC	1/8+	908 141	N/A	N/A	N/A
10*47051.223.26	H	9-12-4	WENDY L SMARKEL	TH EXPLORATION LLC	1/8+	908 69	N/A	N/A	N/A
10*47051.223.27	H	9-12-4	TIMI J HOBBS	TH EXPLORATION LLC	1/8+	908 277	N/A	N/A	N/A
10*47051.223.28	H	9-12-4	KAREN S GAST	TH EXPLORATION LLC	1/8+	908 150	N/A	N/A	N/A
10*47051.223.29	H	9-12-4	PATSY JO RAJU	TH EXPLORATION LLC	1/8+	908 155	N/A	N/A	N/A
10*47051.223.30	H	9-12-4	LAURIE DRIGGERS MANDERSON	TH EXPLORATION LLC	1/8+	908 165	N/A	N/A	N/A
10*47051.223.31	H	9-12-4	JANICE M GONTA GAVALIK	TH EXPLORATION LLC	1/8+	908 180	N/A	N/A	N/A
10*47051.223.32	H	9-12-4	JOSEPH GORBY DAKAN	TH EXPLORATION LLC	1/8+	908 175	N/A	N/A	N/A
10*47051.223.33	H	9-12-4	NANCY CIAFFAGLIONE HOUSLEY	TH EXPLORATION LLC	1/8+	908 185	N/A	N/A	N/A
10*47051.223.34	H	9-12-4	JOHN CIAFFAGLIONE	TH EXPLORATION LLC	1/8+	908 170	N/A	N/A	N/A
10*47051.223.35	H	9-12-4	DEBRA L CIAFFAGLIONE	TH EXPLORATION LLC	1/8+	908 190	N/A	N/A	N/A
10*47051.223.5	H	9-12-4	HAROLD S BROWN II AND MARIA A BROWN	TH EXPLORATION LLC	1/8+	907 641	N/A	N/A	N/A
10*47051.223.6	H	9-12-4	JOSHUA RINE AND REBECCA RINE	TH EXPLORATION LLC	1/8+	907 634	N/A	N/A	N/A
10*47051.223.7	H	9-12-4	JACK R WILSON JR AND JANE A WILSON	TH EXPLORATION LLC	1/8+	908 4	N/A	N/A	N/A
10*47051.223.8	H	9-12-4	DAVID M WILSON	TH EXPLORATION LLC	1/8+	907 649	N/A	N/A	N/A
10*47051.223.9	H	9-12-4	LINDA DELBERT	TH EXPLORATION LLC	1/8+	908 32	N/A	N/A	N/A
10*15463	I	9-11-8	CHARLES A RINE	TH EXPLORATION LLC	1/8+	908 274	N/A	N/A	N/A
10*15481	I	9-11-8	DEAN P RIGBY AND SUSAN RIGBY	TH EXPLORATION LLC	1/8+	908 197	N/A	N/A	N/A
10*15482	I	9-11-8	SUSAN NELSON	TH EXPLORATION LLC	1/8+	908 203	N/A	N/A	N/A
10*15686	I	9-11-8	JOHN OMER BOLTZ	TH EXPLORATION LLC	1/8+	908 160	N/A	N/A	N/A
10*15750	I	9-11-8	SANDRA K TRULL	TH EXPLORATION LLC	1/8+	908 229	N/A	N/A	N/A
10*16058	I	9-11-8	MATTIE RUTH JACKSON PRESCOTT	TH EXPLORATION LLC	1/8+	908 231	N/A	N/A	N/A
10*16118	I	9-11-8	RUBY RIDDLE JACKSON	TH EXPLORATION LLC	1/8+	908 233	N/A	N/A	N/A
10*16297	I	9-11-8	ROBERT A LEADBETTER AND M REBECCA LEADBETTER	TH EXPLORATION LLC	1/8+	908 235	N/A	N/A	N/A
10*16298	I	9-11-8	GEOFFREY A SHIEFER AND STEPHANIE L SCHIEFER	TH EXPLORATION LLC	1/8+	908 238	N/A	N/A	N/A
10*16383	I	9-11-8	ROBERT STEPHEN DRIGGERS	TH EXPLORATION LLC	1/8+	908 224	N/A	N/A	N/A
10*16414	I	9-11-8	MARY ELIZABETH DRIGGERS	TH EXPLORATION LLC	1/8+	908 208	N/A	N/A	N/A
10*16415	I	9-11-8	TERENCE J & NANCY J ANDERSON	TH EXPLORATION LLC	1/8+	908 213	N/A	N/A	N/A



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Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*16416		9-11-8	CYNTHIA HUDSON	TH EXPLORATION LLC	1/8+	908 219	N/A	N/A	N/A
10*16424		9-11-8	ROBERT J RIGBY	TH EXPLORATION LLC	1/8+	908 241	N/A	N/A	N/A
10*16448		9-11-8	RALPH L AND JUANITA L CRIM	TH EXPLORATION LLC	1/8+	908 584	N/A	N/A	N/A
10*16478		9-11-8	MARION L AND EMILY CAMPBELL	TH EXPLORATION LLC	1/8+	908 245	N/A	N/A	N/A
10*16514		9-11-8	ALEX RUSSELL AND JOYCE A CAMPBELL	TH EXPLORATION LLC	1/8+	908 248	N/A	N/A	N/A
10*16515		9-11-8	ANNA MARIE JACKSON	TH EXPLORATION LLC	1/8+	908 251	N/A	N/A	N/A
10*16516		9-11-8	WILSON ANDREW JACKSON	TH EXPLORATION LLC	1/8+	908 253	N/A	N/A	N/A
10*16545		9-11-8	ROBERT G & ELLEN FOUNDS	TH EXPLORATION LLC	1/8+	908 260	N/A	N/A	N/A
10*16662		9-11-8	RICHARD THOMAS AND VICKI J MIMS	TH EXPLORATION LLC	1/8+	908 863	N/A	N/A	N/A
10*16666		9-11-8	MICHAEL P PYLE	TH EXPLORATION LLC	1/8+	908 255	N/A	N/A	N/A
10*16667		9-11-8	CHARLES F AND GAIL ANN PYLE	TH EXPLORATION LLC	1/8+	908 266	N/A	N/A	N/A
10*16668		9-11-8	JACK I AND MERRILEE PYLE	TH EXPLORATION LLC	1/8+	908 257	N/A	N/A	N/A
10*16669		9-11-8	JOHN S AND PATRICIA S DADO	TH EXPLORATION LLC	1/8+	908 269	N/A	N/A	N/A
10*16686		9-11-8	CHERYLE M TRACEY	TH EXPLORATION LLC	1/8+	927 475	N/A	N/A	N/A
10*16688		9-11-8	SHERRYL PYLE BAIR	TH EXPLORATION LLC	1/8+	927 481	N/A	N/A	N/A
10*16689		9-11-8	JOHN C FOUNDS	TH EXPLORATION LLC	1/8+	927 478	N/A	N/A	N/A
10*16690		9-11-8	RICARDO ORTIZ	TH EXPLORATION LLC	1/8+	921 352	N/A	N/A	N/A
10*16720		9-11-8	DONNA ELAINE BRASKETT	TH EXPLORATION LLC	1/8+	921 152	N/A	N/A	N/A
10*16742		9-11-8	PAUL C WILSON	TH EXPLORATION LLC	1/8+	927 490	N/A	N/A	N/A
10*16747		9-11-8	WILLIAM DALE BRASKETT	TH EXPLORATION LLC	1/8+	921 96	N/A	N/A	N/A
10*16798		9-11-8	PATRICK A RANKIN AND ROBIN A RANKIN	TH EXPLORATION LLC	1/8+	921 364	N/A	N/A	N/A
10*16800		9-11-8	JAMES KENNETH JACKSON AND JULIE JACKSON	TH EXPLORATION LLC	1/8+	921 93	N/A	N/A	N/A
10*16802		9-11-8	CHRISTOPHER AND TAMMY RICHARDSON	TH EXPLORATION LLC	1/8+	921 495	N/A	N/A	N/A
10*16804		9-11-8	WILLIAM N AND SHERRY D TAYLOR	TH EXPLORATION LLC	1/8+	921 510	N/A	N/A	N/A
10*16806		9-11-8	VIRGINIA I WHITMAN	TH EXPLORATION LLC	1/8+	921 528	N/A	N/A	N/A
10*16807		9-11-8	DAVID TULLER AND SUSAN STORTS TULLER	TH EXPLORATION LLC	1/8+	921 513	N/A	N/A	N/A
10*16808		9-11-8	MICHAEL L ORTIZ	TH EXPLORATION LLC	1/8+	921 349	N/A	N/A	N/A
10*16815		9-11-8	HAROLD W PYLE	TH EXPLORATION LLC	1/8+	921 357	N/A	N/A	N/A
10*16819		9-11-8	TERESA ORTIZ BIGGS	TH EXPLORATION LLC	1/8+	921 147	N/A	N/A	N/A
10*16821		9-11-8	SHEILA BRASKETT WEICHEY	TH EXPLORATION LLC	1/8+	921 516	N/A	N/A	N/A
10*16836		9-11-8	RICK A AND LENORE A STORTS	TH EXPLORATION LLC	1/8+	921 507	N/A	N/A	N/A
10*16837		9-11-8	TERRY L AND THELMA A POFF	TH EXPLORATION LLC	1/8+	927 472	N/A	N/A	N/A
10*16838		9-11-8	ROBERT G FUNARI	TH EXPLORATION LLC	1/8+	921 82	N/A	N/A	N/A
10*16839		9-11-8	JAMES B FOUNDS AND LYNN M MOWERY	TH EXPLORATION LLC	1/8+	921 73	N/A	N/A	N/A
10*16863		9-11-8	TINA MOORE	TH EXPLORATION LLC	1/8+	921 334	N/A	N/A	N/A
10*16868		9-11-8	MICHAEL W STORTS AND JESSICA M STORTS	TH EXPLORATION LLC	1/8+	921 504	N/A	N/A	N/A
10*16879		9-11-8	MARK E AND LESLEY A STORTS	TH EXPLORATION LLC	1/8+	921 501	N/A	N/A	N/A
10*16880		9-11-8	BEVERLY ANN STORTS	TH EXPLORATION LLC	1/8+	921 498	N/A	N/A	N/A
10*16902		9-11-8	MARY BARCAW DUKE	TH EXPLORATION LLC	1/8+	921 105	N/A	N/A	N/A
10*16962		9-11-8	DENNIS P AND BARBARA EZELL FLORY	TH EXPLORATION LLC	1/8+	921 70	N/A	N/A	N/A
10*16976		9-11-8	LESTER G AND CONSTANCE B NICKOLSON	TH EXPLORATION LLC	1/8+	921 343	N/A	N/A	N/A

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10*16977	I	9-11-8	JEREMY COCHENOUR	TH EXPLORATION LLC	1/8+	921 102	N/A	N/A	N/A
10*16987	I	9-11-8	LAURIE EZELL PERRY	TH EXPLORATION LLC	1/8+	921 355	N/A	N/A	N/A
10*16989	I	9-11-8	BRITTANY RICHARDSON	TH EXPLORATION LLC	1/8+	921 376	N/A	N/A	N/A
10*16991	I	9-11-8	MARYELLEN FOUNDS AND LAUREN FOUNDS	TH EXPLORATION LLC	1/8+	921 79	N/A	N/A	N/A
10*16996	I	9-11-8	THOMAS RANKIN	TH EXPLORATION LLC	1/8+	917 75	N/A	N/A	N/A
10*17130	I	9-11-8	CINDY L BARGER	TH EXPLORATION LLC	1/8+	921 137	N/A	N/A	N/A
10*17155	I	9-11-8	JESSE LEON JR AND TERESA GAIL EZELLE	TH EXPLORATION LLC	1/8+	921 118	N/A	N/A	N/A
10*17156	I	9-11-8	HENRI NELL JACKSON KENT BARNES	TH EXPLORATION LLC	1/8+	921 139	N/A	N/A	N/A
10*17157	I	9-11-8	JAMES N REEVES JR AND RITA M REEVES	TH EXPLORATION LLC	1/8+	921 367	N/A	N/A	N/A
10*17198	I	9-11-8	THOMAS G AND DIANE W BAYLESS	TH EXPLORATION LLC	1/8+	921 141	N/A	N/A	N/A
10*17205	I	9-11-8	SANDRA JEAN WILSON	TH EXPLORATION LLC	1/8+	921 524	N/A	N/A	N/A
10*17208	I	9-11-8	PATRICK S GALLAGHER AND JOYCE ANN FOUNDS	TH EXPLORATION LLC	1/8+	921 86	N/A	N/A	N/A
10*17274	I	9-11-8	DAVID H WILSON	TH EXPLORATION LLC	1/8+	921 474	N/A	N/A	N/A
10*17275	I	9-11-8	JOHN R REEVES AND MONA G REEVES	TH EXPLORATION LLC	1/8+	921 373	N/A	N/A	N/A
10*17276	I	9-11-8	BERTHA EZELL WYATT	TH EXPLORATION LLC	1/8+	921 526	N/A	N/A	N/A
10*17278	I	9-11-8	MICHAEL L EZELLE	TH EXPLORATION LLC	1/8+	921 121	N/A	N/A	N/A
10*17339	I	9-11-8	JOSEPH W FOUNDS	TH EXPLORATION LLC	1/8+	921 76	N/A	N/A	N/A
10*17377	I	9-11-8	MILTON HOWARD EZELLE JR AND ELIZABETH A EZELLE	TH EXPLORATION LLC	1/8+	921 123	N/A	N/A	N/A
10*17416	I	9-11-8	ANDREW M. ORTIZ	TH EXPLORATION LLC	1/8+	921 346	N/A	N/A	N/A
10*17438	I	9-11-8	DENNIS M WILSON	TH EXPLORATION LLC	1/8+	921 476	N/A	N/A	N/A
10*17440	I	9-11-8	KENDRA WALISA	TH EXPLORATION LLC	1/8+	927 484	N/A	N/A	N/A
10*17441	I	9-11-8	RALPH J WILSON	TH EXPLORATION LLC	1/8+	921 522	N/A	N/A	N/A
10*17442	I	9-11-8	SHANE ALLEN AND MENDY JEAN ALLEN	TH EXPLORATION LLC	1/8+	921 134	N/A	N/A	N/A
10*17443	I	9-11-8	MICHELLE MORROW-BACK	TH EXPLORATION LLC	1/8+	921 337	N/A	N/A	N/A
10*17444	I	9-11-8	KELLY FOUNDS CAMPBELL	TH EXPLORATION LLC	1/8+	921 99	N/A	N/A	N/A
10*17449	I	9-11-8	PHYLLIS J BLAKE	TH EXPLORATION LLC	1/8+	921 150	N/A	N/A	N/A
10*17482	I	9-11-8	TERESA EZELLE RALYA AND DAVID L RALYA	TH EXPLORATION LLC	1/8+	927 487	N/A	N/A	N/A
10*17483	I	9-11-8	RICHARD I PYLE	TH EXPLORATION LLC	1/8+	921 359	N/A	N/A	N/A
10*17484	I	9-11-8	NELDA S JACKSON	TH EXPLORATION LLC	1/8+	921 330	N/A	N/A	N/A
10*17485	I	9-11-8	MARGIE ANN JACKSON ROBBINS GRAHAM	TH EXPLORATION LLC	1/8+	921 91	N/A	N/A	N/A
10*17526	I	9-11-8	JEFFREY L REEVES AND JODY L REEVES	TH EXPLORATION LLC	1/8+	921 370	N/A	N/A	N/A
10*17527	I	9-11-8	JAMES MICHAEL EZELL AND LUCILLE D EZELL	TH EXPLORATION LLC	1/8+	921 111	N/A	N/A	N/A
10*17552	I	9-11-8	JOHN BEVACQUA AND PATRICIA A BEVACQUA	TH EXPLORATION LLC	1/8+	921 144	N/A	N/A	N/A
10*17554	I	9-11-8	MICHAEL T RANKIN	TH EXPLORATION LLC	1/8+	921 361	N/A	N/A	N/A
10*17561	I	9-11-8	KATHRYN L & ROGER L TYRELL	TH EXPLORATION LLC	1/8+	921 519	N/A	N/A	N/A
10*17564	I	9-11-8	JAMES R & TRACEY E NICKOLSON	TH EXPLORATION LLC	1/8+	921 340	N/A	N/A	N/A
10*17565	I	9-11-8	JESSE ALLEN JACKSON AND ELIZABETH D JACKSON	TH EXPLORATION LLC	1/8+	921 327	N/A	N/A	N/A
10*17566	I	9-11-8	NATHAN P & BARBARA T ERDOSSY	TH EXPLORATION LLC	1/8+	921 108	N/A	N/A	N/A
10*17588	I	9-11-8	JAMES M JACKSON	TH EXPLORATION LLC	1/8+	921 325	N/A	N/A	N/A
10*17589	I	9-11-8	MARY CHRISTINE MCKENNA	TH EXPLORATION LLC	1/8+	921 332	N/A	N/A	N/A
10*17677	I	9-11-8	GEORGE M GONTA JR	TH EXPLORATION LLC	1/8+	921 89	N/A	N/A	N/A

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10*17744	I	9-11-8	SAM PRESLEY EZELL	TH EXPLORATION LLC	1/8+	921 116	N/A	N/A	N/A
10*47051.223.1	I	9-11-8	JEAN ANNE GORBY STORCH	TH EXPLORATION LLC	1/8+	877 216	N/A	N/A	N/A
10*47051.223.10	I	9-11-8	ROBERT E GORBY	TH EXPLORATION LLC	1/8+	908 47	N/A	N/A	N/A
10*47051.223.11	I	9-11-8	ELIZABETH ESTEP	TH EXPLORATION LLC	1/8+	908 39	N/A	N/A	N/A
10*47051.223.12	I	9-11-8	ALICE GORBY MARTIN	TH EXPLORATION LLC	1/8+	908 52	N/A	N/A	N/A
10*47051.223.13	I	9-11-8	JAMES A GORBY	TH EXPLORATION LLC	1/8+	908 42	N/A	N/A	N/A
10*47051.223.14	I	9-11-8	JUSTIN RINE AND BECKY RINE	TH EXPLORATION LLC	1/8+	907 639	N/A	N/A	N/A
10*47051.223.15	I	9-11-8	LARRY D TAUNT AND NANCY L TAUNT	TH EXPLORATION LLC	1/8+	908 14	N/A	N/A	N/A
10*47051.223.16	I	9-11-8	BETTY LOU STERN AND WILLIAM KEITH STERN	TH EXPLORATION LLC	1/8+	908 64	N/A	N/A	N/A
10*47051.223.17	I	9-11-8	RALPH E HUNTER JR AND CHARLOTTE HUNTER	TH EXPLORATION LLC	1/8+	908 9	N/A	N/A	N/A
10*47051.223.18	I	9-11-8	BRITTNEY MENEAR	TH EXPLORATION LLC	1/8+	908 57	N/A	N/A	N/A
10*47051.223.19	I	9-11-8	JASON RINE AND HEATHER RINE	TH EXPLORATION LLC	1/8+	907 629	N/A	N/A	N/A
10*47051.223.20	I	9-11-8	BARBARA A BUZZARD	TH EXPLORATION LLC	1/8+	908 24	N/A	N/A	N/A
10*47051.223.21	I	9-11-8	GARY T WARD AND SHARON D WARD	TH EXPLORATION LLC	1/8+	908 19	N/A	N/A	N/A
10*47051.223.22	I	9-11-8	SALLY COLE	TH EXPLORATION LLC	1/8+	908 74	N/A	N/A	N/A
10*47051.223.23	I	9-11-8	RONALD S CRIM	TH EXPLORATION LLC	1/8+	908 81	N/A	N/A	N/A
10*47051.223.24	I	9-11-8	JO DEE K DAVIS	TH EXPLORATION LLC	1/8+	908 136	N/A	N/A	N/A
10*47051.223.25	I	9-11-8	JOANNE WELCH	TH EXPLORATION LLC	1/8+	908 141	N/A	N/A	N/A
10*47051.223.26	I	9-11-8	WENDY L SMARKEL	TH EXPLORATION LLC	1/8+	908 69	N/A	N/A	N/A
10*47051.223.27	I	9-11-8	TIMI J HOBBS	TH EXPLORATION LLC	1/8+	908 277	N/A	N/A	N/A
10*47051.223.28	I	9-11-8	KAREN S GAST	TH EXPLORATION LLC	1/8+	908 150	N/A	N/A	N/A
10*47051.223.29	I	9-11-8	PATSY JO RAJU	TH EXPLORATION LLC	1/8+	908 155	N/A	N/A	N/A
10*47051.223.30	I	9-11-8	LAURIE DRIGGERS MANDERSON	TH EXPLORATION LLC	1/8+	908 165	N/A	N/A	N/A
10*47051.223.31	I	9-11-8	JANICE M GONTA GAVALIK	TH EXPLORATION LLC	1/8+	908 180	N/A	N/A	N/A
10*47051.223.32	I	9-11-8	JOSEPH GORBY DAKAN	TH EXPLORATION LLC	1/8+	908 175	N/A	N/A	N/A
10*47051.223.33	I	9-11-8	NANCY CIAFFAGLIONE HOUSLEY	TH EXPLORATION LLC	1/8+	908 185	N/A	N/A	N/A
10*47051.223.34	I	9-11-8	JOHN CIAFFAGLIONE	TH EXPLORATION LLC	1/8+	908 170	N/A	N/A	N/A
10*47051.223.35	I	9-11-8	DEBRA L CIAFFAGLIONE	TH EXPLORATION LLC	1/8+	908 192	N/A	N/A	N/A
10*47051.223.5	I	9-11-8	HAROLD S BROWN II AND MARIA A BROWN	TH EXPLORATION LLC	1/8+	907 641	N/A	N/A	N/A
10*47051.223.6	I	9-11-8	JOSHUA RINE AND REBECCA RINE	TH EXPLORATION LLC	1/8+	907 634	N/A	N/A	N/A
10*47051.223.7	I	9-11-8	JACK R WILSON JR AND JANE A WILSON	TH EXPLORATION LLC	1/8+	908 4	N/A	N/A	N/A
10*47051.223.8	I	9-11-8	DAVID M WILSON	TH EXPLORATION LLC	1/8+	907 649	N/A	N/A	N/A
10*47051.223.9	I	9-11-8	LINDA DELBERT	TH EXPLORATION LLC	1/8+	908 32	N/A	N/A	N/A
10*15606	J	9-12-2	CHK-MAC LLC	CHESAPEAKE APPALACHIA LLC	1/8+	798 150	N/A	Chesapeake to Chevron: 30/461	Chevron to Tug Hill: 36/148
10*16145	J	9-12-2	CHARLES STEVEN JOHNSON AND SHIRLEY LOUISE JOHNSON	TH EXPLORATION LLC	1/8+	924 612	N/A	N/A	N/A
10*16238	J	9-12-2	SUSAN MARIE JOHNSON AKA SUSAN MARIE HUBER	TH EXPLORATION LLC	1/8+	924 614	N/A	N/A	N/A
10*16932	J	9-12-2	HAYMAKER PROPERTIES LP	CHEVRON USA INC	1/8+	902 447	N/A	N/A	Chevron to Tug Hill: 37/437
10*47051.309.1	J	9-12-2	LESLIE E QUIGLEY	TH EXPLORATION LLC	1/8+	905 8	N/A	N/A	N/A
10*47051.309.2	J	9-12-2	LEWIS M QUIGLEY AND MAXINE V QUIGLEY	TH EXPLORATION LLC	1/8+	907 217	N/A	N/A	N/A
10*47051.309.3	J	9-12-2	GERALD W QUIGLEY AND VICKI L QUIGLEY	TH EXPLORATION LLC	1/8+	905 12	N/A	N/A	N/A
10*47051.222.1	K	9-12-6	DONALD D MCCARDLE AND LUCY MCCARDLE	TH EXPLORATION LLC	1/8+	879 314	N/A	N/A	N/A



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10*47051.222.10	L	9-12-7	CHRISTINA CAIN	TH EXPLORATION LLC	1/8+	905 27	N/A	N/A	N/A
10*47051.222.11	L	9-12-7	MARK DAVID HUNT	TH EXPLORATION LLC	1/8+	904 451	N/A	N/A	N/A
10*47051.222.12	L	9-12-7	MELISSA ELAINE SCHROTH	TH EXPLORATION LLC	1/8+	904 453	N/A	N/A	N/A
10*47051.222.13	L	9-12-7	BRETT J LAUSIN SR	TH EXPLORATION LLC	1/8+	907 205	N/A	N/A	N/A
10*47051.222.14	L	9-12-7	MICHAEL E LAUSIN AND SHARON G LAUSIN	TH EXPLORATION LLC	1/8+	913 526	N/A	N/A	N/A
10*47051.222.1	L	9-12-7	DONALD D MCCARDLE AND LUCY MCCARDLE	TH EXPLORATION LLC	1/8+	879 314	N/A	N/A	N/A
10*47051.222.2	L	9-12-7	PATRICIA A GULUTZ AND THOMAS L GULUTZ	TH EXPLORATION LLC	1/8+	888 640	N/A	N/A	N/A
10*47051.222.3	L	9-12-7	SHARON L SMITH	TH EXPLORATION LLC	1/8+	894 487	N/A	N/A	N/A
10*47051.222.4	L	9-12-7	KENNETH M MCCARDLE AND DELORES MCCARDLE	TH EXPLORATION LLC	1/8+	888 642	N/A	N/A	N/A
10*47051.222.5	L	9-12-7	DONALD B WESLEY AND SUSAN J WESLEY	TH EXPLORATION LLC	1/8+	895 76	N/A	N/A	N/A
10*47051.222.6	L	9-12-7	DIANA S GRAFTON AND TIMOTHY A GRAFTON	TH EXPLORATION LLC	1/8+	898 571	N/A	N/A	N/A
10*47051.222.7	L	9-12-7	FREDRICK M YEATER AND SHERI C YEATER	TH EXPLORATION LLC	1/8+	898 626	N/A	N/A	N/A
10*47051.222.8	L	9-12-7	LEONARD O HABERBOSCH	TH EXPLORATION LLC	1/8+	902 442	N/A	N/A	N/A
10*47051.222.9	L	9-12-7	TERRIE L LAUSIN	TH EXPLORATION LLC	1/8+	904 591	N/A	N/A	N/A
10*15484	M	9-12-29	LISA R IMHOFF AND CHAD IMHOFF	TH EXPLORATION LLC	1/8+	913 552	N/A	N/A	N/A
10*15681	M	9-12-29	THELMA W BIRDWELL	TH EXPLORATION LLC	1/8+	921 482	N/A	N/A	N/A
10*15685	M	9-12-29	TRACY RAND	TH EXPLORATION LLC	1/8+	906 4	N/A	N/A	N/A
10*16033	M	9-12-29	MELINDA M GREENOUGH AND DOUGLAS CORWIN GREENOUGH	TH EXPLORATION LLC	1/8+	926 616	N/A	N/A	N/A
10*16036	M	9-12-29	CLARISSA MALONE	TH EXPLORATION LLC	1/8+	926 614	N/A	N/A	N/A
10*16111	M	9-12-29	KATHLEEN D AND STEVEN MONIGOLD	TH EXPLORATION LLC	1/8+	926 619	N/A	N/A	N/A
10*16283	M	9-12-29	RHONDA L PALASOTA AND SAM A PALASOTA	TH EXPLORATION LLC	1/8+	913 583	N/A	N/A	N/A
10*16334	M	9-12-29	LOLA F BLEVINS	TH EXPLORATION LLC	1/8+	914 416	N/A	N/A	N/A
10*16364	M	9-12-29	STEVEN P ROBERTS	TH EXPLORATION LLC	1/8+	914 418	N/A	N/A	N/A
10*16380	M	9-12-29	DONNA BURNS	TH EXPLORATION LLC	1/8+	926 611	N/A	N/A	N/A
10*16525	M	9-12-29	THE JENNIFER TEACHNOR GAFFEY LIVING TRUST DATED OCTOBER 30TH 2013	TH EXPLORATION LLC	1/8+	926 637	N/A	N/A	N/A
10*16527	M	9-12-29	ROSELLA M HERR AND WILLARD L HERR	TH EXPLORATION LLC	1/8+	927 4	N/A	N/A	N/A
10*16748	M	9-12-29	KATHRYN BROWN AND BRUCE G BROWN	TH EXPLORATION LLC	1/8+	926 639	N/A	N/A	N/A
10*17882	M	9-12-29	MARY E HAMM	TH EXPLORATION LLC	1/8+	924 552	N/A	N/A	N/A
10*17890	M	9-12-29	JANICE MEDER TRST MEDER LIVING	TH EXPLORATION LLC	1/8+	905 545	N/A	N/A	N/A
10*17893	M	9-12-29	ERIC D & AMANDA N PETRUCCI	TH EXPLORATION LLC	1/8+	924 545	N/A	N/A	N/A
10*17978	M	9-12-29	MARGARET INGALLS SCHICK	TH EXPLORATION LLC	1/8+	925 366	N/A	N/A	N/A
10*18018	M	9-12-29	KATHARINE & WILLIAM BUCKHAM	TH EXPLORATION LLC	1/8+	927 280	N/A	N/A	N/A
10*18171	M	9-12-29	MARYANNE I & HOWARD R BAUM	TH EXPLORATION LLC	1/8+	928 74	N/A	N/A	N/A
10*47051.318.1	M	9-12-29	JOSEPH PAUL FOX AND MARGARET H FOX	TH EXPLORATION LLC	1/8+	905 569	N/A	N/A	N/A
10*47051.318.25	M	9-12-29	MARIANN T DARGUSCH AND JONATHON DARGUSCH	TH EXPLORATION LLC	1/8+	905 549	N/A	N/A	N/A
10*47051.318.30	M	9-12-29	CYNTHIA TEACHNOR GRAHAM	TH EXPLORATION LLC	1/8+	905 553	N/A	N/A	N/A
10*47051.318.31	M	9-12-29	WILLIAM RICHARD FOX	TH EXPLORATION LLC	1/8+	905 561	N/A	N/A	N/A
10*47051.318.33	M	9-12-29	J RONALD FOX	TH EXPLORATION LLC	1/8+	905 565	N/A	N/A	N/A
10*47051.318.35	M	9-12-29	ANNA MAE PATTERSON	TH EXPLORATION LLC	1/8+	905 573	N/A	N/A	N/A
10*47051.318.36	M	9-12-29	DANNY CARMICHAEL III	TH EXPLORATION LLC	1/8+	905 576	N/A	N/A	N/A
10*47051.318.4	M	9-12-29	MARY ELISE CAMP	TH EXPLORATION LLC	1/8+	905 557	N/A	N/A	N/A

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Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*47051.318.56	M	9-12-29	SALLY MERRICK	TH EXPLORATION LLC	1/8+	905 614	N/A	N/A	N/A
10*47051.318.9	M	9-12-29	JANICE M MEDER	TH EXPLORATION LLC	1/8+	905 545	N/A	N/A	N/A
10*17831	N	9-12-25	TAMMY L MITCHELL AND ADAM J MITCHELL	TH EXPLORATION LLC	1/8+	921 131	N/A	N/A	N/A
10*16145	O	9-12-28	CHARLES STEVEN JOHNSON AND SHIRLEY LOUISE JOHNSON	TH EXPLORATION LLC	1/8+	924 612	N/A	N/A	N/A
10*16238	O	9-12-28	SUSAN MARIE JOHNSON AKA SUSAN MARIE HUBER	TH EXPLORATION LLC	1/8+	924 614	N/A	N/A	N/A
10*16932	O	9-12-28	HAYMAKER PROPERTIES LP	CHEVRON USA INC	1/8+	902 447	N/A	N/A	Chevron to Tug Hill: 37/437
10*47051.309.1	O	9-12-28	LESLIE E QUIGLEY	TH EXPLORATION LLC	1/8+	905 8	N/A	N/A	N/A
10*47051.309.2	O	9-12-28	LEWIS M QUIGLEY AND MAXINE V QUIGLEY	TH EXPLORATION LLC	1/8+	907 217	N/A	N/A	N/A
10*47051.309.3	O	9-12-28	GERALD W QUIGLEY AND VICKI L QUIGLEY	TH EXPLORATION LLC	1/8+	905 12	N/A	N/A	N/A
10*15461	P	9-12-30	SANDRA SUE HALL AND DAVID HALL	TH EXPLORATION LLC	1/8+	905 622	N/A	N/A	N/A
10*15462	P	9-12-30	JUDITH F TEMPLE AND LOUIS I TEMPLE	TH EXPLORATION LLC	1/8+	905 617	N/A	N/A	N/A
10*15468	P	9-12-30	KEITH W STORCH AND DEBORAH A STORCH	TH EXPLORATION LLC	1/8+	905 624	N/A	N/A	N/A
10*15496	P	9-12-30	FRANK A STORCH JR AND SUSAN STORCH	TH EXPLORATION LLC	1/8+	906 1	N/A	N/A	N/A
10*15497	P	9-12-30	TOM ALLEY	TH EXPLORATION LLC	1/8+	905 644	N/A	N/A	N/A
10*15498	P	9-12-30	DELBERT D RUSH AND BETTY RUTH RUSH	TH EXPLORATION LLC	1/8+	905 647	N/A	N/A	N/A
10*15682	P	9-12-30	THELMA W BIRDWELL	TH EXPLORATION LLC	1/8+	906 9	N/A	N/A	N/A
10*15684	P	9-12-30	CHARLES R WILLIAMSON JR	TH EXPLORATION LLC	1/8+	906 7	N/A	N/A	N/A
10*15685	P	9-12-30	TRACY RAND	TH EXPLORATION LLC	1/8+	906 4	N/A	N/A	N/A
10*15727	P	9-12-30	TIMOTHY LEE COLLEY	TH EXPLORATION LLC	1/8+	906 12	N/A	N/A	N/A
10*15740	P	9-12-30	LARRY W ALLEY	TH EXPLORATION LLC	1/8+	912 49	N/A	N/A	N/A
10*16032	P	9-12-30	MELINDA M GREENOUGH AND DOUGLAS CORWIN GREENOUGH	TH EXPLORATION LLC	1/8+	906 26	N/A	N/A	N/A
10*16035	P	9-12-30	CLARISSA MALONE	TH EXPLORATION LLC	1/8+	906 23	N/A	N/A	N/A
10*16047	P	9-12-30	PEGGY KOHRMANN AND DAVID KOHRMANN	TH EXPLORATION LLC	1/8+	906 32	N/A	N/A	N/A
10*16054	P	9-12-30	MEGAN R AUSTIN AND ANTHONY B POWERS	TH EXPLORATION LLC	1/8+	906 29	N/A	N/A	N/A
10*16071	P	9-12-30	VIRGINIA LESLIE BERTRAM	TH EXPLORATION LLC	1/8+	901 370	N/A	N/A	N/A
10*16110	P	9-12-30	KATHLEEN D AND STEVEN MONIGOLD	TH EXPLORATION LLC	1/8+	906 35	N/A	N/A	N/A
10*16137	P	9-12-30	RODNEY K. BANE & CATHIE J. BANE	TH EXPLORATION LLC	1/8+	906 41	N/A	N/A	N/A
10*16184	P	9-12-30	RAYMOND P RIEK AND GARDALEE RIECK	TH EXPLORATION LLC	1/8+	906 44	N/A	N/A	N/A
10*16189	P	9-12-30	MARLENE BAKER	TH EXPLORATION LLC	1/8+	906 50	N/A	N/A	N/A
10*16232	P	9-12-30	DANIEL L ALLEY AND TERESA ALLEY	TH EXPLORATION LLC	1/8+	906 53	N/A	N/A	N/A
10*16241	P	9-12-30	NANNETTE BERLETCH AND MATTHEW S BERLETCH JR	TH EXPLORATION LLC	1/8+	906 56	N/A	N/A	N/A
10*16243	P	9-12-30	CATHERINE I AND ERNEST M SILVERIO	TH EXPLORATION LLC	1/8+	906 47	N/A	N/A	N/A
10*16280	P	9-12-30	CHRISTOPHER SAUDERS	TH EXPLORATION LLC	1/8+	905 612	N/A	N/A	N/A
10*16290	P	9-12-30	JENNIFER ALLEY	TH EXPLORATION LLC	1/8+	906 59	N/A	N/A	N/A
10*16330	P	9-12-30	LISA R IMHOFF AND CHAD IMHOFF	TH EXPLORATION LLC	1/8+	905 626	N/A	N/A	N/A
10*16331	P	9-12-30	LOLA F BLEVINS	TH EXPLORATION LLC	1/8+	905 630	N/A	N/A	N/A
10*16366	P	9-12-30	STEVEN P ROBERTS	TH EXPLORATION LLC	1/8+	905 628	N/A	N/A	N/A
10*16374	P	9-12-30	KAREN L ZUCKER AND MICHAEL D ZUCKER	TH EXPLORATION LLC	1/8+	905 632	N/A	N/A	N/A
10*16375	P	9-12-30	GEORGE E HOLMES AND SUSAN HOLMES	TH EXPLORATION LLC	1/8+	905 635	N/A	N/A	N/A
10*16381	P	9-12-30	DONNA BURNS	TH EXPLORATION LLC	1/8+	906 20	N/A	N/A	N/A
10*16382	P	9-12-30	LINDA M HONE AND VAUGHN HONE SR	TH EXPLORATION LLC	1/8+	906 17	N/A	N/A	N/A



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Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*16410	P	9-12-30	SUSAN I BAKER	TH EXPLORATION LLC	1/8+	905 638	N/A	N/A	N/A
10*16418	P	9-12-30	DENZIL ALLEY JR	TH EXPLORATION LLC	1/8+	905 641	N/A	N/A	N/A
10*16435	P	9-12-30	DENISE WILLIAMSON	TH EXPLORATION LLC	1/8+	926 622	N/A	N/A	N/A
10*16437	P	9-12-30	BECKY LANDRIS	TH EXPLORATION LLC	1/8+	926 625	N/A	N/A	N/A
10*16487	P	9-12-30	JOHN WILLIAMSON JR	TH EXPLORATION LLC	1/8+	927 27	N/A	N/A	N/A
10*16488	P	9-12-30	RACHEL AND FRED THORNE JR	TH EXPLORATION LLC	1/8+	926 628	N/A	N/A	N/A
10*16491	P	9-12-30	BELA N WELLENREITER	TH EXPLORATION LLC	1/8+	921 467	N/A	N/A	N/A
10*16508	P	9-12-30	JUDITH C LORADITCH	TH EXPLORATION LLC	1/8+	926 631	N/A	N/A	N/A
10*16528	P	9-12-30	ROSELLA M HERR AND WILLARD L HERR	TH EXPLORATION LLC	1/8+	927 1	N/A	N/A	N/A
10*16539	P	9-12-30	KATHRYN BROWN AND BRUCE G BROWN	TH EXPLORATION LLC	1/8+	926 641	N/A	N/A	N/A
10*16541	P	9-12-30	DEBORAH L TURLEY	TH EXPLORATION LLC	1/8+	926 644	N/A	N/A	N/A
10*16578	P	9-12-30	JESSE HOLMES	TH EXPLORATION LLC	1/8+	909 502	N/A	N/A	N/A
10*16606	P	9-12-30	WILLIAM T AND BARBARA W PAUL	TH EXPLORATION LLC	1/8+	919 252	N/A	N/A	N/A
10*16607	P	9-12-30	LOUISE M AND WILSON D MCELHINNY	TH EXPLORATION LLC	1/8+	909 72	N/A	N/A	N/A
10*16616	P	9-12-30	WILLIAM BRYAN COLLEY	TH EXPLORATION LLC	1/8+	913 628	N/A	N/A	N/A
10*16671	P	9-12-30	NATHAN AND KARI KOHRMANN	TH EXPLORATION LLC	1/8+	913 40	N/A	N/A	N/A
10*16672	P	9-12-30	ANNE R AND JOSEPH A MURPHY	TH EXPLORATION LLC	1/8+	910 215	N/A	N/A	N/A
10*16737	P	9-12-30	ARIC A HOLMES AND CARI M HOLMES	TH EXPLORATION LLC	1/8+	913 389	N/A	N/A	N/A
10*16744	P	9-12-30	THE JENNIFER TEACHNOR GAFFEY LIVING TRUST DATED OCTOBER 30TH 2013	TH EXPLORATION LLC	1/8+	926 634	N/A	N/A	N/A
10*16769	P	9-12-30	CHARLES C SEAMON	TH EXPLORATION LLC	1/8+	910 219	N/A	N/A	N/A
10*16785	P	9-12-30	JOSHUA W SEAMON	TH EXPLORATION LLC	1/8+	910 223	N/A	N/A	N/A
10*16818	P	9-12-30	BRENDA REED	TH EXPLORATION LLC	1/8+	927 30	N/A	N/A	N/A
10*16823	P	9-12-30	PEGGY N AND JAMES E GLASER	TH EXPLORATION LLC	1/8+	913 373	N/A	N/A	N/A
10*16886	P	9-12-30	DALE R ALLEY	TH EXPLORATION LLC	1/8+	927 19	N/A	N/A	N/A
10*16898	P	9-12-30	VICTOR E ALLEY JR AND DEBRA A ALLEY	TH EXPLORATION LLC	1/8+	926 647	N/A	N/A	N/A
10*17172	P	9-12-30	LINDA K AND MICHAEL HUMES	TH EXPLORATION LLC	1/8+	927 33	N/A	N/A	N/A
10*17177	P	9-12-30	JAMES P MILLER	TH EXPLORATION LLC	1/8+	926 608	N/A	N/A	N/A
10*17294	P	9-12-30	JOHN P HOLMES AND DEBRA A HOLMES	TH EXPLORATION LLC	1/8+	927 6	N/A	N/A	N/A
10*17375	P	9-12-30	GEORGE R CORNELIUS JR AND JANNA JANOUSEK CORNELIUS	TH EXPLORATION LLC	1/8+	927 36	N/A	N/A	N/A
10*17388	P	9-12-30	LORI A FARMER AND DANIEL K FARMER	TH EXPLORATION LLC	1/8+	927 9	N/A	N/A	N/A
10*17475	P	9-12-30	LARRY R CRANE	TH EXPLORATION LLC	1/8+	927 13	N/A	N/A	N/A
10*17476	P	9-12-30	CHRISTINA NESTELL AND CHARLES E NESTELL III	TH EXPLORATION LLC	1/8+	927 207	N/A	N/A	N/A
10*17477	P	9-12-30	MICHAEL SAUDERS AND AMI SAUDERS	TH EXPLORATION LLC	1/8+	927 39	N/A	N/A	N/A
10*17496	P	9-12-30	STACY L BARNHART	TH EXPLORATION LLC	1/8+	927 16	N/A	N/A	N/A
10*17536	P	9-12-30	MABEL MCCARTHY	TH EXPLORATION LLC	1/8+	909 512	N/A	N/A	N/A
10*17619	P	9-12-30	BRENDA GILBERT	TH EXPLORATION LLC	1/8+	927 211	N/A	N/A	N/A
10*17620	P	9-12-30	DANIEL E WILLIAMSON AND HEATHER R WILLIAMSON	TH EXPLORATION LLC	1/8+	927 204	N/A	N/A	N/A
10*17665	P	9-12-30	ANN M & CURTIS STEVENS	TH EXPLORATION LLC	1/8+	927 215	N/A	N/A	N/A
10*17678	P	9-12-30	KATHERINE & DANIEL DEGROOT	TH EXPLORATION LLC	1/8+	927 218	N/A	N/A	N/A
10*17705	P	9-12-30	EARL & LYDIA ARMENTA FRAZIER	TH EXPLORATION LLC	1/8+	927 200	N/A	N/A	N/A
10*17726	P	9-12-30	C FREEMAN MCCALL AND SUSAN M MCCALL	TH EXPLORATION LLC	1/8+	915 480	N/A	N/A	N/A

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Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*17809	P	9-12-30	MARY M MORRIS	TH EXPLORATION LLC	1/8+	921 66	N/A	N/A	N/A
10*17815	P	9-12-30	THE TESTAMENTARY TRUST OF CAREY B PAUL III	TH EXPLORATION LLC	1/8+	919 252	N/A	N/A	N/A
10*17818	P	9-12-30	KATHLEEN REILLY MANNIX AND J MICHAEL MANNIX	TH EXPLORATION LLC	1/8+	917 128	N/A	N/A	N/A
10*17882	P	9-12-30	MARY E HAMM	TH EXPLORATION LLC	1/8+	924 552	N/A	N/A	N/A
10*17893	P	9-12-30	ERIC D & AMANDA N PETRUCCI	TH EXPLORATION LLC	1/8+	924 545	N/A	N/A	N/A
10*47051.318.1	P	9-12-30	JOSEPH PAUL FOX AND MARGARET H FOX	TH EXPLORATION LLC	1/8+	905 569	N/A	N/A	N/A
10*47051.318.10	P	9-12-30	DONNA JUNE STRAIT	TH EXPLORATION LLC	1/8+	904 600	N/A	N/A	N/A
10*47051.318.11	P	9-12-30	RICHARD TAYLOR	TH EXPLORATION LLC	1/8+	904 604	N/A	N/A	N/A
10*47051.318.12	P	9-12-30	BARBARA J BEVERIDGE	TH EXPLORATION LLC	1/8+	904 606	N/A	N/A	N/A
10*47051.318.15	P	9-12-30	DONNA CHMELYSKI	TH EXPLORATION LLC	1/8+	904 610	N/A	N/A	N/A
10*47051.318.16	P	9-12-30	BULA F YOST	TH EXPLORATION LLC	1/8+	904 614	N/A	N/A	N/A
10*47051.318.17	P	9-12-30	CORA ALICE DAUBE	TH EXPLORATION LLC	1/8+	904 618	N/A	N/A	N/A
10*47051.318.18	P	9-12-30	MICHAEL WAYNE ALLEY AND LINDA ALLEY	TH EXPLORATION LLC	1/8+	904 622	N/A	N/A	N/A
10*47051.318.19	P	9-12-30	JUDY LYNN CHIPLINSKI	TH EXPLORATION LLC	1/8+	904 496	N/A	N/A	N/A
10*47051.318.2	P	9-12-30	CHRISTAL L SCHAFER	TH EXPLORATION LLC	1/8+	904 531	N/A	N/A	N/A
10*47051.318.20	P	9-12-30	CHARLES R BENNETT JR AND DONNA S BENNETT	TH EXPLORATION LLC	1/8+	904 500	N/A	N/A	N/A
10*47051.318.21	P	9-12-30	DORETTA RUSH	TH EXPLORATION LLC	1/8+	904 504	N/A	N/A	N/A
10*47051.318.22	P	9-12-30	ELIZABETH STARC	TH EXPLORATION LLC	1/8+	904 508	N/A	N/A	N/A
10*47051.318.23	P	9-12-30	EMMA CRISWELL	TH EXPLORATION LLC	1/8+	904 512	N/A	N/A	N/A
10*47051.318.24	P	9-12-30	CARLA MAE ALLEY	TH EXPLORATION LLC	1/8+	904 516	N/A	N/A	N/A
10*47051.318.25	P	9-12-30	MARIANN T DARGUSCH AND JONATHON DARGUSCH	TH EXPLORATION LLC	1/8+	905 549	N/A	N/A	N/A
10*47051.318.27	P	9-12-30	KAREN J BRUGGEMAN	TH EXPLORATION LLC	1/8+	904 520	N/A	N/A	N/A
10*47051.318.28	P	9-12-30	LORAIN GAIL STARC HORNER AND CHARLES HORNER	TH EXPLORATION LLC	1/8+	904 524	N/A	N/A	N/A
10*47051.318.3	P	9-12-30	RANDY W MORRIS AND CHERYL MORRIS	TH EXPLORATION LLC	1/8+	904 535	N/A	N/A	N/A
10*47051.318.30	P	9-12-30	CYNTHIA TEACHNOR GRAHAM	TH EXPLORATION LLC	1/8+	905 553	N/A	N/A	N/A
10*47051.318.31	P	9-12-30	WILLIAM RICHARD FOX	TH EXPLORATION LLC	1/8+	905 561	N/A	N/A	N/A
10*47051.318.32	P	9-12-30	SHARON KELLER JOEY KELLER JR	TH EXPLORATION LLC	1/8+	904 539	N/A	N/A	N/A
10*47051.318.33	P	9-12-30	J RONALD FOX	TH EXPLORATION LLC	1/8+	905 565	N/A	N/A	N/A
10*47051.318.34	P	9-12-30	DONNA SMITH WEEKLEY	TH EXPLORATION LLC	1/8+	905 442	N/A	N/A	N/A
10*47051.318.35	P	9-12-30	ANNA MAE PATTERSON	TH EXPLORATION LLC	1/8+	905 573	N/A	N/A	N/A
10*47051.318.36	P	9-12-30	DANNY CARMICHAEL III	TH EXPLORATION LLC	1/8+	905 576	N/A	N/A	N/A
10*47051.318.37	P	9-12-30	GENELDA MASON	TH EXPLORATION LLC	1/8+	905 580	N/A	N/A	N/A
10*47051.318.38	P	9-12-30	SHERWOOD MASON NILA JUNE MASON	TH EXPLORATION LLC	1/8+	905 448	N/A	N/A	N/A
10*47051.318.39	P	9-12-30	DONNA K DUNN AND JAMES DUNN	TH EXPLORATION LLC	1/8+	905 444	N/A	N/A	N/A
10*47051.318.4	P	9-12-30	MARY ELISE CAMP	TH EXPLORATION LLC	1/8+	905 557	N/A	N/A	N/A
10*47051.318.40	P	9-12-30	NANCY MARIE DUNN AND GEORGE L DUNN	TH EXPLORATION LLC	1/8+	905 590	N/A	N/A	N/A
10*47051.318.41	P	9-12-30	JOHN T CRISWELL AND CATHERINE A CRISWELL	TH EXPLORATION LLC	1/8+	905 582	N/A	N/A	N/A
10*47051.318.42	P	9-12-30	TARA E CAUSEY	TH EXPLORATION LLC	1/8+	905 586	N/A	N/A	N/A
10*47051.318.43	P	9-12-30	CHAD ERIC BENNETT AND MARY A BENNETT	TH EXPLORATION LLC	1/8+	905 588	N/A	N/A	N/A
10*47051.318.44	P	9-12-30	STACY R BENNETT	TH EXPLORATION LLC	1/8+	905 596	N/A	N/A	N/A
10*47051.318.45	P	9-12-30	PATRICIA KIRCHNER	TH EXPLORATION LLC	1/8+	905 592	N/A	N/A	N/A



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10*47051.318.46	P	9-12-30	CAROL L BOBBY AND DONALD J BOBBY	TH EXPLORATION LLC	1/8+	905 603	N/A	N/A	N/A
10*47051.318.47	P	9-12-30	FRIEDA A REINBEAU AND RONALD REINBEAU	TH EXPLORATION LLC	1/8+	905 598	N/A	N/A	N/A
10*47051.318.48	P	9-12-30	DEBORAH SUE KYLE 231 EAST 24TH AVENUE	TH EXPLORATION LLC	1/8+	905 600	N/A	N/A	N/A
10*47051.318.49	P	9-12-30	SHARLA ROLLINS AND GARY ROLLINS	TH EXPLORATION LLC	1/8+	905 594	N/A	N/A	N/A
10*47051.318.5	P	9-12-30	WILLIAM F EWART JR AND JOAN REED EWART	TH EXPLORATION LLC	1/8+	905 438	N/A	N/A	N/A
10*47051.318.50	P	9-12-30	SHEILA SIMMONS	TH EXPLORATION LLC	1/8+	905 606	N/A	N/A	N/A
10*47051.318.52	P	9-12-30	PETER G STORCH AND LAURIE L STORCH	TH EXPLORATION LLC	1/8+	905 608	N/A	N/A	N/A
10*47051.318.53	P	9-12-30	ROSEMARIE BERISFORD	TH EXPLORATION LLC	1/8+	905 610	N/A	N/A	N/A
10*47051.318.56	P	9-12-30	SALLY MERRICK	TH EXPLORATION LLC	1/8+	905 614	N/A	N/A	N/A
10*47051.318.57	P	9-12-30	RHONDA L PALASOTA AND SAM A PALASOTA	TH EXPLORATION LLC	1/8+	905 620	N/A	N/A	N/A
10*47051.318.6	P	9-12-30	JOSEPH F STARC JR AND DONNA STARC	TH EXPLORATION LLC	1/8+	904 596	N/A	N/A	N/A
10*47051.318.7	P	9-12-30	REED O MILLER AND EFFIE M MILLER	TH EXPLORATION LLC	1/8+	904 598	N/A	N/A	N/A
10*47051.318.8	P	9-12-30	JOHN M SHALLENBERGER AND JOANNE SHALLENBERGER	TH EXPLORATION LLC	1/8+	905 541	N/A	N/A	N/A
10*47051.318.9	P	9-12-30	JANICE M MEDER	TH EXPLORATION LLC	1/8+	905 545	N/A	N/A	N/A
10*47051.312.0	Q	9-12-37	JAN GRIMES SIMNACHER LEONARD A SIMNACHER	TH EXPLORATION LLC	1/8+	904 472	N/A	N/A	N/A
10*47051.311.0	R	9-12-23	MICHAEL J GUNTO AND ROSEMARY GUNTO	TH EXPLORATION LLC	1/8+	905 16	N/A	N/A	N/A
				AMERICAN PETROEUM					
10*19724	S	9-12-24	VENABLE ROYALTY LTD AND VENRO LTD	PARTNERS OPERATING LLC	1/8+	935 216	N/A	N/A	APP to Tug Hill: 40/408
10*47051.140.1	T	9-12-32	DAVID P CHAPMAN & DEBORAH BORCK-CHAPMAN	TH EXPLORATION LLC	1/8+	866 318	N/A	N/A	N/A
10*47051.140.2	T	9-12-32	DOROTHY SULLIVAN POA JAMES REID SULLIVAN	TH EXPLORATION LLC	1/8+	873 501	N/A	N/A	N/A
10*15477	U	9-14-18	RONALD A WYCINSKI	TH EXPLORATION LLC	1/8+	906 241	N/A	N/A	N/A
10*15730	U	9-14-18	FRANCES V CARPENTER	TH EXPLORATION LLC	1/8+	906 256	N/A	N/A	N/A
10*15752	U	9-14-18	KIM O CHAMBERS AND DEBRA CHAMBERS	TH EXPLORATION LLC	1/8+	906 258	N/A	N/A	N/A
10*16017	U	9-14-18	FLOYD A MCFADDEN	TH EXPLORATION LLC	1/8+	906 260	N/A	N/A	N/A
10*16018	U	9-14-18	BARBARA MCFADDEN ALBRIGHT	TH EXPLORATION LLC	1/8+	906 262	N/A	N/A	N/A
10*16030	U	9-14-18	JOSEPH F CHMIELEWSKI AND SANDRA CHMIELEWSKI	TH EXPLORATION LLC	1/8+	906 264	N/A	N/A	N/A
10*16031	U	9-14-18	CARL J CHMIELEWSKI AND KATHLEEN A CHMIELEWSKI	TH EXPLORATION LLC	1/8+	906 266	N/A	N/A	N/A
10*16083	U	9-14-18	CECIL HARRY LILLY, III AND PAMELA KAY KNIGHT LILLY	TH EXPLORATION LLC	1/8+	912 47	N/A	N/A	N/A
10*16085	U	9-14-18	KATHARYN ANNETTE LILLY LAING AND FREDDIE JOE LAING	TH EXPLORATION LLC	1/8+	912 45	N/A	N/A	N/A
10*16086	U	9-14-18	KATHARYN DAY LILLY	TH EXPLORATION LLC	1/8+	906 272	N/A	N/A	N/A
10*16087	U	9-14-18	MARY PENELOPE LILLY MURPHY	TH EXPLORATION LLC	1/8+	912 41	N/A	N/A	N/A
10*16131	U	9-14-18	ERIC S DOBBS	TH EXPLORATION LLC	1/8+	902 68	N/A	N/A	N/A
10*16144	U	9-14-18	PATTIE S MADRID	TH EXPLORATION LLC	1/8+	906 278	N/A	N/A	N/A
10*16180	U	9-14-18	LARRY L CHAMBERS	TH EXPLORATION LLC	1/8+	906 280	N/A	N/A	N/A
10*16181	U	9-14-18	NORMA CHRISTINE WHIPP AND GERALD WAYNE BLACK	TH EXPLORATION LLC	1/8+	906 281	N/A	N/A	N/A
10*16182	U	9-14-18	FIRST CHRISTIAN CHURCH OF MOUNDSVILLE BY ROGER FRANCIS AND ROBERT ALBERT TRUSTEES	TH EXPLORATION LLC	1/8+	906 283	N/A	N/A	N/A
10*16183	U	9-14-18	ALLEN R L DAVIS AND DIANA LEE PATTERSON	TH EXPLORATION LLC	1/8+	906 285	N/A	N/A	N/A
10*16239	U	9-14-18	ANGELA L OLDFIELD AND KENNETH W OLDFIELD	TH EXPLORATION LLC	1/8+	906 287	N/A	N/A	N/A
10*16240	U	9-14-18	BONNIE SUE PATTERSON SWISHER	TH EXPLORATION LLC	1/8+	906 289	N/A	N/A	N/A
10*16285	U	9-14-18	JOHN A SHUTZ AND CYNTHIA J SHUTZ	TH EXPLORATION LLC	1/8+	906 291	N/A	N/A	N/A
10*16441	U	9-14-18	GEORGE FRANKLIN AND NANCY ANN REED	TH EXPLORATION LLC	1/8+	924 619	N/A	N/A	N/A

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10*16442	U	9-14-18	FRED T AND JERRY L CHAMBERS	TH EXPLORATION LLC	1/8+	924 174	N/A	N/A	N/A
10*16443	U	9-14-18	BARBARA BROWN CHAMBERS	TH EXPLORATION LLC	1/8+	924 621	N/A	N/A	N/A
10*16444	U	9-14-18	CATHERINE ELLEN CHAMBERS	TH EXPLORATION LLC	1/8+	924 623	N/A	N/A	N/A
10*16445	U	9-14-18	DOUGLAS C AND GWENDLYN D LEWTON	TH EXPLORATION LLC	1/8+	925 123	N/A	N/A	N/A
10*16483	U	9-14-18	JOHN C AND BARBARA H WINTER	TH EXPLORATION LLC	1/8+	924 178	N/A	N/A	N/A
10*16486	U	9-14-18	DAVID ALAN WILKINSON AND PATRICIA LYNN WILKINSON	TH EXPLORATION LLC	1/8+	924 180	N/A	N/A	N/A
10*16490	U	9-14-18	WILLIAM H AND MERRY C COTTON	TH EXPLORATION LLC	1/8+	924 176	N/A	N/A	N/A
10*16498	U	9-14-18	SHELLY YEATER	TH EXPLORATION LLC	1/8+	925 283	N/A	N/A	N/A
10*16511	U	9-14-18	DOUGLAS R BOWEN	TH EXPLORATION LLC	1/8+	906 475	N/A	N/A	N/A
10*16531	U	9-14-18	KATHY DOBBS WELLS	TH EXPLORATION LLC	1/8+	906 472	N/A	N/A	N/A
10*16532	U	9-14-18	JEAN ANN MCFADDEN	TH EXPLORATION LLC	1/8+	906 459	N/A	N/A	N/A
10*16533	U	9-14-18	SHIRLEY ANN DOBBS	TH EXPLORATION LLC	1/8+	906 469	N/A	N/A	N/A
10*16534	U	9-14-18	TERRY LEE LASAVAGE	TH EXPLORATION LLC	1/8+	906 443	N/A	N/A	N/A
10*16535	U	9-14-18	CHARLES E CARSON AND MARY KAY CARSON	TH EXPLORATION LLC	1/8+	906 420	N/A	N/A	N/A
10*16537	U	9-14-18	KIM D BOWEN AND MADONNA M BOWEN	TH EXPLORATION LLC	1/8+	907 415	N/A	N/A	N/A
10*16540	U	9-14-18	JAMES A WINTER AND CONNIE G WINTER	TH EXPLORATION LLC	1/8+	924 184	N/A	N/A	N/A
10*16569	U	9-14-18	JANICE C BALE	TH EXPLORATION LLC	1/8+	907 425	N/A	N/A	N/A
10*16570	U	9-14-18	ROBERT D BOWEN AND MARCIA M R BOWEN	TH EXPLORATION LLC	1/8+	907 420	N/A	N/A	N/A
10*16576	U	9-14-18	LINDA A MINER AND MICHAEL W MINER	TH EXPLORATION LLC	1/8+	907 484	N/A	N/A	N/A
10*16580	U	9-14-18	HAROLD C MCFADDEN	TH EXPLORATION LLC	1/8+	907 480	N/A	N/A	N/A
10*16581	U	9-14-18	HELEN L SCHILLING	TH EXPLORATION LLC	1/8+	907 489	N/A	N/A	N/A
10*16582	U	9-14-18	DORA BROCK BRAMMER	TH EXPLORATION LLC	1/8+	907 429	N/A	N/A	N/A
10*16680	U	9-14-18	RONALD J AND JENNIFER CHAMBERS FICCA	TH EXPLORATION LLC	1/8+	924 186	N/A	N/A	N/A
10*16726	U	9-14-18	LESLEY K WHITE	TH EXPLORATION LLC	1/8+	924 182	N/A	N/A	N/A
10*16733	U	9-14-18	SARAH L BISHOP	TH EXPLORATION LLC	1/8+	924 172	N/A	N/A	N/A
10*16835	U	9-14-18	ERNEST CARL AUGUSTINE JR	TH EXPLORATION LLC	1/8+	924 188	N/A	N/A	N/A
10*16882	U	9-14-18	JAMES LEROY AND DARLENE DOBBS OWENS	TH EXPLORATION LLC	1/8+	924 190	N/A	N/A	N/A
10*16948	U	9-14-18	FREDERICK M LEWTON	TH EXPLORATION LLC	1/8+	924 136	N/A	N/A	N/A
10*16949	U	9-14-18	STEVEN R AND BRIANNE L UTT	TH EXPLORATION LLC	1/8+	924 138	N/A	N/A	N/A
10*16950	U	9-14-18	JAY E AND CECILIA E LEWTON	TH EXPLORATION LLC	1/8+	924 134	N/A	N/A	N/A
10*16952	U	9-14-18	RUSSELL D HERVEY	TH EXPLORATION LLC	1/8+	924 132	N/A	N/A	N/A
10*16953	U	9-14-18	DONALD T AND JEAN K HOGAN	TH EXPLORATION LLC	1/8+	924 140	N/A	N/A	N/A
10*16965	U	9-14-18	WILLIAM L WRIGHT AND CAROLINA WRIGHT	TH EXPLORATION LLC	1/8+	914 524	N/A	N/A	N/A
10*16966	U	9-14-18	JOHN GILLETTE AND BARBARA GILLETTE	TH EXPLORATION LLC	1/8+	913 377	N/A	N/A	N/A
10*16967	U	9-14-18	TARA JEANNE MINOR AND JENNIFER A KNAPP	TH EXPLORATION LLC	1/8+	914 612	N/A	N/A	N/A
10*16990	U	9-14-18	ROSEMARY H BEAVERS	TH EXPLORATION LLC	1/8+	924 152	N/A	N/A	N/A
10*16992	U	9-14-18	LINDA C ABRAHAM	TH EXPLORATION LLC	1/8+	924 148	N/A	N/A	N/A
10*16993	U	9-14-18	JULIA HOOVER	TH EXPLORATION LLC	1/8+	924 150	N/A	N/A	N/A
10*16995	U	9-14-18	DIANE ELSIE RAMSEY	TH EXPLORATION LLC	1/8+	924 146	N/A	N/A	N/A
10*17129	U	9-14-18	ROBERTA JANE PARKINSON	TH EXPLORATION LLC	1/8+	924 142	N/A	N/A	N/A
10*17131	U	9-14-18	LAURA E TOTTEN AND LONNIE R TOTTEN	TH EXPLORATION LLC	1/8+	924 154	N/A	N/A	N/A

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10*17134	U	9-14-18	UNITED CHRISTIAN MISSIONARY SOCIETY		TH EXPLORATION LLC	1/8+	924 144	N/A	N/A	N/A
10*17139	U	9-14-18	ALICE G WEINER AND GERALD S WEINER		TH EXPLORATION LLC	1/8+	915 131	N/A	N/A	N/A
10*17209	U	9-14-18	GAYLE S SHANNON		TH EXPLORATION LLC	1/8+	924 168	N/A	N/A	N/A
10*17289	U	9-14-18	HAROLD R HUNT JR AND ELIZABETH A HUNT		TH EXPLORATION LLC	1/8+	924 170	N/A	N/A	N/A
10*17396	U	9-14-18	CHRISTINE L KIDD		TH EXPLORATION LLC	1/8+	924 158	N/A	N/A	N/A
10*17413	U	9-14-18	ROBERT M CHAMBERS AND CHARLOTTE A CHAMBERS		TH EXPLORATION LLC	1/8+	924 160	N/A	N/A	N/A
10*17436	U	9-14-18	ANDREW M HOOVER AND DINAH R HOOVER		TH EXPLORATION LLC	1/8+	924 156	N/A	N/A	N/A
10*17448	U	9-14-18	FREDERICK L HERVEY AND CATHY J HERVEY		TH EXPLORATION LLC	1/8+	924 162	N/A	N/A	N/A
10*17452	U	9-14-18	ALAN H & MARY K DEGARMO		TH EXPLORATION LLC	1/8+	924 164	N/A	N/A	N/A
10*17487	U	9-14-18	DEBORAH R MOKOSH		TH EXPLORATION LLC	1/8+	924 166	N/A	N/A	N/A
10*17503	U	9-14-18	JANICE L KUHN		TH EXPLORATION LLC	1/8+	924 122	N/A	N/A	N/A
10*17504	U	9-14-18	GREGG ALAN MILLER AND BETH ANN MILLER		TH EXPLORATION LLC	1/8+	924 118	N/A	N/A	N/A
10*17505	U	9-14-18	MICHAEL R & LEANNE DOBBS		TH EXPLORATION LLC	1/8+	924 116	N/A	N/A	N/A
10*17515	U	9-14-18	GLADYS E DOBBS		TH EXPLORATION LLC	1/8+	923 541	N/A	N/A	N/A
10*17516	U	9-14-18	MARY V DOBBS		TH EXPLORATION LLC	1/8+	923 539	N/A	N/A	N/A
10*17517	U	9-14-18	JULIO ENRIQUE & DEBRA K TORRES		TH EXPLORATION LLC	1/8+	923 537	N/A	N/A	N/A
10*17520	U	9-14-18	LUCY P SULLIVAN		TH EXPLORATION LLC	1/8+	923 533	N/A	N/A	N/A
10*17528	U	9-14-18	DEAN E GARRISON		TH EXPLORATION LLC	1/8+	923 535	N/A	N/A	N/A
10*17555	U	9-14-18	AARON AND JANA K PARRY		TH EXPLORATION LLC	1/8+	924 113	N/A	N/A	N/A
10*17559	U	9-14-18	MARVIN JERRY BLAKE AND LINDA D BLAKE		TH EXPLORATION LLC	1/8+	923 528	N/A	N/A	N/A
10*17560	U	9-14-18	TREVOR HOOKS		TH EXPLORATION LLC	1/8+	924 110	N/A	N/A	N/A
10*17563	U	9-14-18	DONALD L WOOD		TH EXPLORATION LLC	1/8+	923 523	N/A	N/A	N/A
10*17579	U	9-14-18	DON COFFIELD & GLENDA DOBBS		TH EXPLORATION LLC	1/8+	923 525	N/A	N/A	N/A
10*17580	U	9-14-18	PAUL CRAIG CUNNINGHAM		TH EXPLORATION LLC	1/8+	923 530	N/A	N/A	N/A
10*17581	U	9-14-18	PAULA WEIRES		TH EXPLORATION LLC	1/8+	923 486	N/A	N/A	N/A
10*17582	U	9-14-18	JOHN THOMAS ERAZMUS AND JEAN R ERAZMUS		TH EXPLORATION LLC	1/8+	924 124	N/A	N/A	N/A
10*17612	U	9-14-18	BEVERLY A LEDBETTER		TH EXPLORATION LLC	1/8+	923 480	N/A	N/A	N/A
10*17613	U	9-14-18	CARLTON DOBBS JR AND MIKHAIL PROKOPENKO		TH EXPLORATION LLC	1/8+	924 120	N/A	N/A	N/A
10*17614	U	9-14-18	DAVID DOBBS		TH EXPLORATION LLC	1/8+	923 489	N/A	N/A	N/A
10*17615	U	9-14-18	PAULA JO WRIGHT		TH EXPLORATION LLC	1/8+	923 482	N/A	N/A	N/A
10*17616	U	9-14-18	RONALD & ELIZABETH DOBBS		TH EXPLORATION LLC	1/8+	924 107	N/A	N/A	N/A
10*17617	U	9-14-18	UNITED DISCIPLES OF CHRIST CHURCH		TH EXPLORATION LLC	1/8+	924 129	N/A	N/A	N/A
10*17664	U	9-14-18	RUDOLPH H PARSONS		TH EXPLORATION LLC	1/8+	923 511	N/A	N/A	N/A
10*17667	U	9-14-18	THOMAS BRIAN WARRICK		TH EXPLORATION LLC	1/8+	923 509	N/A	N/A	N/A
10*17668	U	9-14-18	KENNETH R DOBBS		TH EXPLORATION LLC	1/8+	923 503	N/A	N/A	N/A
10*17671	U	9-14-18	JAMES L STOUT		TH EXPLORATION LLC	1/8+	923 484	N/A	N/A	N/A
10*17674	U	9-14-18	HOWARD L & BETH E WOOD		TH EXPLORATION LLC	1/8+	923 505	N/A	N/A	N/A
10*17675	U	9-14-18	GREGORY D & CAROLYN J WIBLE		TH EXPLORATION LLC	1/8+	923 507	N/A	N/A	N/A
10*17676	U	9-14-18	JAMES C & DEIDRE G DORIA		TH EXPLORATION LLC	1/8+	923 513	N/A	N/A	N/A
10*17700	U	9-14-18	ROGER L & MARILYN L GARRISON		TH EXPLORATION LLC	1/8+	923 472	N/A	N/A	N/A
10*17701	U	9-14-18	SUE ANN WORD		TH EXPLORATION LLC	1/8+	923 470	N/A	N/A	N/A



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10*17702	U	9-14-18	TAMMY BETH RAMSEY		TH EXPLORATION LLC	1/8+	925 500	N/A	N/A	N/A
10*17703	U	9-14-18	SHIRLEY N COX		TH EXPLORATION LLC	1/8+	923 498	N/A	N/A	N/A
10*17708	U	9-14-18	BETTY LOU NOBLE		TH EXPLORATION LLC	1/8+	924 127	N/A	N/A	N/A
10*17711	U	9-14-18	DEBRA A WENNEMAN AND KURT J WENNEMAN		TH EXPLORATION LLC	1/8+	923 520	N/A	N/A	N/A
10*17731	U	9-14-18	JAMES J MCGHEE AND JEANNINE CHAMBERS MCGHEE		TH EXPLORATION LLC	1/8+	914 519	N/A	N/A	N/A
10*17766	U	9-14-18	EDWARD S & NANCY A ROSENTHAL		TH EXPLORATION LLC	1/8+	923 495	N/A	N/A	N/A
10*17767	U	9-14-18	WILLIAM K & LINDA J MERRITT		TH EXPLORATION LLC	1/8+	923 474	N/A	N/A	N/A
10*17769	U	9-14-18	GLADYS FRAZIER KING		TH EXPLORATION LLC	1/8+	923 492	N/A	N/A	N/A
10*17771	U	9-14-18	CHARLES AND LISA WARRICK		TH EXPLORATION LLC	1/8+	923 477	N/A	N/A	N/A
10*17830	U	9-14-18	BRIAN AND MELINDA MASTERS		TH EXPLORATION LLC	1/8+	925 319	N/A	N/A	N/A
10*17878	U	9-14-18	ROBERT E & SARAH M ROUSH		TH EXPLORATION LLC	1/8+	924 590	N/A	N/A	N/A
10*17879	U	9-14-18	HARRY R WRIGHT JR		TH EXPLORATION LLC	1/8+	924 588	N/A	N/A	N/A
10*17880	U	9-14-18	ANNA M WRIGHT		TH EXPLORATION LLC	1/8+	924 586	N/A	N/A	N/A
10*17881	U	9-14-18	WAYLON L & ANGELA J MURPHEE		TH EXPLORATION LLC	1/8+	924 555	N/A	N/A	N/A
10*17885	U	9-14-18	JOHN RUSSELL BECKER		TH EXPLORATION LLC	1/8+	924 540	N/A	N/A	N/A
10*47051.325.1	U	9-14-18	JUDITH A LEWANDOSKY AND ALAN E LEWANDOSKY		TH EXPLORATION LLC	1/8+	906 225	N/A	N/A	N/A
10*47051.325.2	U	9-14-18	TIMMY LEE STOUT AND DOROTHY MARIE STOUT		TH EXPLORATION LLC	1/8+	906 222	N/A	N/A	N/A
10*47051.325.3	U	9-14-18	NICHOLAS D PAVLIK AND GLORIA K PAVLIK		TH EXPLORATION LLC	1/8+	906 228	N/A	N/A	N/A
10*47051.325.4	U	9-14-18	JAMES H WHITE AND RITA FRANKS WHITE		TH EXPLORATION LLC	1/8+	906 230	N/A	N/A	N/A
10*47051.325.5	U	9-14-18	SAMUEL ALAN MCCORD AND WINIFRED A MCKEE		TH EXPLORATION LLC	1/8+	906 232	N/A	N/A	N/A
10*47051.325.6	U	9-14-18	THOMAS O MCCORD		TH EXPLORATION LLC	1/8+	906 235	N/A	N/A	N/A
10*47051.325.7	U	9-14-18	SHERON JONES		TH EXPLORATION LLC	1/8+	906 237	N/A	N/A	N/A
10*47051.325.8	U	9-14-18	RICK PAVLIK		TH EXPLORATION LLC	1/8+	906 239	N/A	N/A	N/A
10*15752	V	9-15-3	KIM O CHAMBERS AND DEBRA CHAMBERS		TH EXPLORATION LLC	1/8+	906 258	N/A	N/A	N/A
10*16017	V	9-15-3	FLOYD A MCFADDEN		TH EXPLORATION LLC	1/8+	906 260	N/A	N/A	N/A
10*16018	V	9-15-3	BARBARA MCFADDEN ALBRIGHT		TH EXPLORATION LLC	1/8+	906 262	N/A	N/A	N/A
10*16143	V	9-15-3	MARY LOU CHAMBERS		TH EXPLORATION LLC	1/8+	906 276	N/A	N/A	N/A
10*16144	V	9-15-3	PATTIE S MADRID		TH EXPLORATION LLC	1/8+	906 278	N/A	N/A	N/A
10*16180	V	9-15-3	LARRY L CHAMBERS		TH EXPLORATION LLC	1/8+	906 280	N/A	N/A	N/A
10*16181	V	9-15-3	NORMA CHRISTINE WHIPP AND GERALD WAYNE BLACK		TH EXPLORATION LLC	1/8+	906 281	N/A	N/A	N/A
10*16182	V	9-15-3	FIRST CHRISTIAN CHURCH OF MOUNDSVILLE BY ROGER FRANCIS AND ROBERT ALBERT TRUSTEES		TH EXPLORATION LLC	1/8+	906 283	N/A	N/A	N/A
10*16239	V	9-15-3	ANGELA L OLDFIELD AND KENNETH W OLDFIELD		TH EXPLORATION LLC	1/8+	906 287	N/A	N/A	N/A
10*16285	V	9-15-3	JOHN A SHUTZ AND CYNTHIA J SHUTZ		TH EXPLORATION LLC	1/8+	906 291	N/A	N/A	N/A
10*16441	V	9-15-3	GEORGE FRANKLIN AND NANCY ANN REED		TH EXPLORATION LLC	1/8+	924 619	N/A	N/A	N/A
10*16442	V	9-15-3	FRED T AND JERRY L CHAMBERS		TH EXPLORATION LLC	1/8+	924 174	N/A	N/A	N/A
10*16443	V	9-15-3	BARBARA BROWN CHAMBERS		TH EXPLORATION LLC	1/8+	924 621	N/A	N/A	N/A
10*16444	V	9-15-3	CATHERINE ELLEN CHAMBERS		TH EXPLORATION LLC	1/8+	924 623	N/A	N/A	N/A
10*16445	V	9-15-3	DOUGLAS C AND GWENDLYN D LEWTON		TH EXPLORATION LLC	1/8+	925 123	N/A	N/A	N/A
10*16483	V	9-15-3	JOHN C AND BARBARA H WINTER		TH EXPLORATION LLC	1/8+	924 178	N/A	N/A	N/A
10*16486	V	9-15-3	DAVID ALAN WILKINSON AND PATRICIA LYNN WILKINSON		TH EXPLORATION LLC	1/8+	924 180	N/A	N/A	N/A
10*16490	V	9-15-3	WILLIAM H AND MERRY C COTTON		TH EXPLORATION LLC	1/8+	924 176	N/A	N/A	N/A

1-01926  
**WW-6A1 Supplement**

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 Office of Oil and Gas

**Operator's Well No. Ten High 1S 14HU**

APR 9 2018

WV Department of  
 Environmental Protection

Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*16540	V	9-15-3	JAMES A WINTER AND CONNIE G WINTER	TH EXPLORATION LLC	1/8+	924 184	N/A	N/A	N/A
10*16580	V	9-15-3	HAROLD C MCFADDEN	TH EXPLORATION LLC	1/8+	907 480	N/A	N/A	N/A
10*16680	V	9-15-3	RONALD J AND JENNIFER CHAMBERS FICCA	TH EXPLORATION LLC	1/8+	924 186	N/A	N/A	N/A
10*16726	V	9-15-3	LESLEY K WHITE	TH EXPLORATION LLC	1/8+	924 182	N/A	N/A	N/A
10*16733	V	9-15-3	SARAH L BISHOP	TH EXPLORATION LLC	1/8+	924 172	N/A	N/A	N/A
10*16835	V	9-15-3	ERNEST CARL AUGUSTINE JR	TH EXPLORATION LLC	1/8+	924 188	N/A	N/A	N/A
10*16948	V	9-15-3	FREDERICK M LEWTON	TH EXPLORATION LLC	1/8+	924 136	N/A	N/A	N/A
10*16949	V	9-15-3	STEVEN R AND BRIANNE L UTT	TH EXPLORATION LLC	1/8+	924 138	N/A	N/A	N/A
10*16950	V	9-15-3	JAY E AND CECILIA E LEWTON	TH EXPLORATION LLC	1/8+	924 134	N/A	N/A	N/A
10*16952	V	9-15-3	RUSSELL D HERVEY	TH EXPLORATION LLC	1/8+	924 132	N/A	N/A	N/A
10*16953	V	9-15-3	DONALD T AND JEAN K HOGAN	TH EXPLORATION LLC	1/8+	924 140	N/A	N/A	N/A
10*16990	V	9-15-3	ROSEMARY H BEAVERS	TH EXPLORATION LLC	1/8+	924 152	N/A	N/A	N/A
10*16992	V	9-15-3	LINDA C ABRAHAM	TH EXPLORATION LLC	1/8+	924 148	N/A	N/A	N/A
10*16993	V	9-15-3	JULIA HOOVER	TH EXPLORATION LLC	1/8+	924 150	N/A	N/A	N/A
10*16995	V	9-15-3	DIANE ELSIE RAMSEY	TH EXPLORATION LLC	1/8+	924 146	N/A	N/A	N/A
10*17129	V	9-15-3	ROBERTA JANE PARKINSON	TH EXPLORATION LLC	1/8+	924 142	N/A	N/A	N/A
10*17131	V	9-15-3	LAURA E TOTTEN AND LONNIE R TOTTEN	TH EXPLORATION LLC	1/8+	924 154	N/A	N/A	N/A
10*17134	V	9-15-3	UNITED CHRISTIAN MISSIONARY SOCIETY	TH EXPLORATION LLC	1/8+	924 14	N/A	N/A	N/A
10*17209	V	9-15-3	GAYLE S SHANNON	TH EXPLORATION LLC	1/8+	924 168	N/A	N/A	N/A
10*17289	V	9-15-3	HAROLD R HUNT JR AND ELIZABETH A HUNT	TH EXPLORATION LLC	1/8+	924 170	N/A	N/A	N/A
10*17396	V	9-15-3	CHRISTINE L KIDD	TH EXPLORATION LLC	1/8+	924 158	N/A	N/A	N/A
10*17413	V	9-15-3	ROBERT M CHAMBERS AND CHARLOTTE A CHAMBERS	TH EXPLORATION LLC	1/8+	924 160	N/A	N/A	N/A
10*17436	V	9-15-3	ANDREW M HOOVER AND DINAH R HOOVER	TH EXPLORATION LLC	1/8+	924 156	N/A	N/A	N/A
10*17448	V	9-15-3	FREDERICK L HERVEY AND CATHY J HERVEY	TH EXPLORATION LLC	1/8+	924 162	N/A	N/A	N/A
10*17452	V	9-15-3	ALAN H & MARY K DEGARMO	TH EXPLORATION LLC	1/8+	924 164	N/A	N/A	N/A
10*17486	V	9-15-3	JOSELYN M KEELY	TH EXPLORATION LLC	1/8+	929 364	N/A	N/A	N/A
10*17487	V	9-15-3	DEBORAH R MOKOSH	TH EXPLORATION LLC	1/8+	924 166	N/A	N/A	N/A
10*17563	V	9-15-3	DONALD L WOOD	TH EXPLORATION LLC	1/8+	923 523	N/A	N/A	N/A
10*17617	V	9-15-3	UNITED DISCIPLES OF CHRIST CHURCH	TH EXPLORATION LLC	1/8+	924 129	N/A	N/A	N/A
10*17674	V	9-15-3	HOWARD L WOOD AND BETH E WOOD	TH EXPLORATION LLC	1/8+	923 505	N/A	N/A	N/A
10*17675	V	9-15-3	GREGORY DEANE WIBLE AND CAROLYN JEAN WIBLE	TH EXPLORATION LLC	1/8+	923 507	N/A	N/A	N/A
10*17701	V	9-15-3	SUE ANN WORD	TH EXPLORATION LLC	1/8+	923 470	N/A	N/A	N/A
10*17702	V	9-15-3	TAMMY BETH RAMSEY	TH EXPLORATION LLC	1/8+	925 500	N/A	N/A	N/A
10*18416	V	9-15-3	BETH W WISHARD & GREG WISHARD	TH EXPLORATION LLC	1/8+	932 584	N/A	N/A	N/A
10*19523	V	9-15-3	CHRISTIAN CHURCH DISCIPLES OF CHRIST	TH EXPLORATION LLC	1/8+	943 6	N/A	N/A	N/A
10*19539	V	9-15-3	SUSAN VAN DYNE NKA SUSAN ASTON	TH EXPLORATION LLC	1/8+	936 505	N/A	N/A	N/A
10*19946	V	9-15-3	THE ESTATE OF CHARLIN GUDGEL	TH EXPLORATION LLC	1/8+	948 301	N/A	N/A	N/A
10*19952	V	9-15-3	THE JOHN C BURNS SUPPLEMENTAL NEEDS TRUST	TH EXPLORATION LLC	1/8+	948 212	N/A	N/A	N/A
10*21109	V	9-15-3	WILLIAM JUDSON HERVEY III AND THERESA HERVEY	TH EXPLORATION LLC	1/8+	953 98	N/A	N/A	N/A
10*21110	V	9-15-3	JAMES ROBERT HERVEY AND KAREN HERVEY	TH EXPLORATION LLC	1/8+	953 100	N/A	N/A	N/A
10*21869	V	9-15-3	DAVID A WEBER AND JUDITH V WEBER	TH EXPLORATION LLC	1/8+	953 495	N/A	N/A	N/A

51-01966 WW-6A1 Supplement

Operator's Well No. Ten High 1S 14HU

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Environmental Protection

Lease Name or No	Tag	Parcel	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Deed Book / Page	Assignment	Assignment	Assignment
10*21931	V	9-15-3	DONALD M BURNS SUPPLEMENT NEEDS TRUST	TH EXPLORATION LLC	1/8+	953 491	N/A	N/A	N/A
10*21932	V	9-15-3	VAUGHN D BURNS SUPPLEMENT NEEDS TRUST	TH EXPLORATION LLC	1/8+	953 487	N/A	N/A	N/A
10*22192	V	9-15-3	WILLIAM SHEPHERD AND JERRY LEA SHEPHERD	TH EXPLORATION LLC	1/8+	954 347	N/A	N/A	N/A
10*47051.325.1	V	9-15-3	JUDITH A LEWANDOSKY AND ALAN E LEWANDOSKY	TH EXPLORATION LLC	1/8+	906 225	N/A	N/A	N/A
10*47051.325.3	V	9-15-3	NICHOLAS D PAVLIK AND GLORIA K PAVLIK	TH EXPLORATION LLC	1/8+	906 228	N/A	N/A	N/A
10*47051.325.4	V	9-15-3	JAMES H WHITE AND RITA FRANKS WHITE	TH EXPLORATION LLC	1/8+	906 230	N/A	N/A	N/A
10*47051.325.5	V	9-15-3	SAMUEL ALAN MCCORD AND WINIFRED A MCKEE	TH EXPLORATION LLC	1/8+	906 232	N/A	N/A	N/A
10*47051.325.6	V	9-15-3	THOMAS O MCCORD	TH EXPLORATION LLC	1/8+	906 235	N/A	N/A	N/A
10*47051.325.7	V	9-15-3	SHERON JONES	TH EXPLORATION LLC	1/8+	906 237	N/A	N/A	N/A
10*47051.325.8	V	9-15-3	RICK PAVLIK	TH EXPLORATION LLC	1/8+	906 239	N/A	N/A	N/A
10*16402	W	9-15-4	VALIE L WAGNER	TH EXPLORATION LLC	1/8+	921 464	N/A	N/A	N/A
10*16421	W	9-15-4	SAMUEL EDGAR LEWIS AND ELIZABETH LEWIS	TH EXPLORATION LLC	1/8+	921 449	N/A	N/A	N/A
10*16491	W	9-15-4	BELA N WELLENREITER	TH EXPLORATION LLC	1/8+	921 467	N/A	N/A	N/A
10*17325	W	9-15-4	PHYLLIS ADAMS AND JOSEPH ADAMS	TH EXPLORATION LLC	1/8+	909 520	N/A	N/A	N/A
10*17341	W	9-15-4	JUDITH V RICHARDSON AND DENNIS L ROBICHAUD	TH EXPLORATION LLC	1/8+	921 456	N/A	N/A	N/A
10*17412	W	9-15-4	CHARLES L SHILLITO	TH EXPLORATION LLC	1/8+	921 458	N/A	N/A	N/A
10*17439	W	9-15-4	WILLARD D MCCALL JR AND ADELE HUEY MCCALL	TH EXPLORATION LLC	1/8+	921 454	N/A	N/A	N/A
10*17509	W	9-15-4	BRIAN A MCCALL	TH EXPLORATION LLC	1/8+	921 451	N/A	N/A	N/A
10*17525	W	9-15-4	PAUL W STIFEL AND MARY M GROVER-STIFEL	TH EXPLORATION LLC	1/8+	921 460	N/A	N/A	N/A
10*18294	W	9-15-4	MARY M AND WINFRED K MARTIN	TH EXPLORATION LLC	1/8+	929 342	N/A	N/A	N/A
10*22089	W	9-15-4	MARCIA A LUKE	TH EXPLORATION LLC	1/8+	961 333	N/A	N/A	N/A
10*22108	W	9-15-4	KATHLEEN A MCNEILL AND MICHAEL MCNEILL	TH EXPLORATION LLC	1/8+	961 511	N/A	N/A	N/A
10*22124	W	9-15-4	WILLIAM B EVENS JR AND PENNY EVENS	TH EXPLORATION LLC	1/8+	PENDING	N/A	N/A	N/A
10*22257	W	9-15-4	CHARLES F ALLEY TRUST	TH EXPLORATION LLC	1/8+	PENDING	N/A	N/A	N/A
10*22380	W	9-15-4	JUDITH S KNIGHT	TH EXPLORATION LLC	1/8+	962 276	N/A	N/A	N/A
10*47051.318.46	W	9-15-4	CAROL L BOBBY AND DONALD J BOBBY	TH EXPLORATION LLC	1/8+	905 603	N/A	N/A	N/A
10*47051.318.48	W	9-15-4	DEBORAH SUE KYLE 231 EAST 24TH AVENUE	TH EXPLORATION LLC	1/8+	905 600	N/A	N/A	N/A



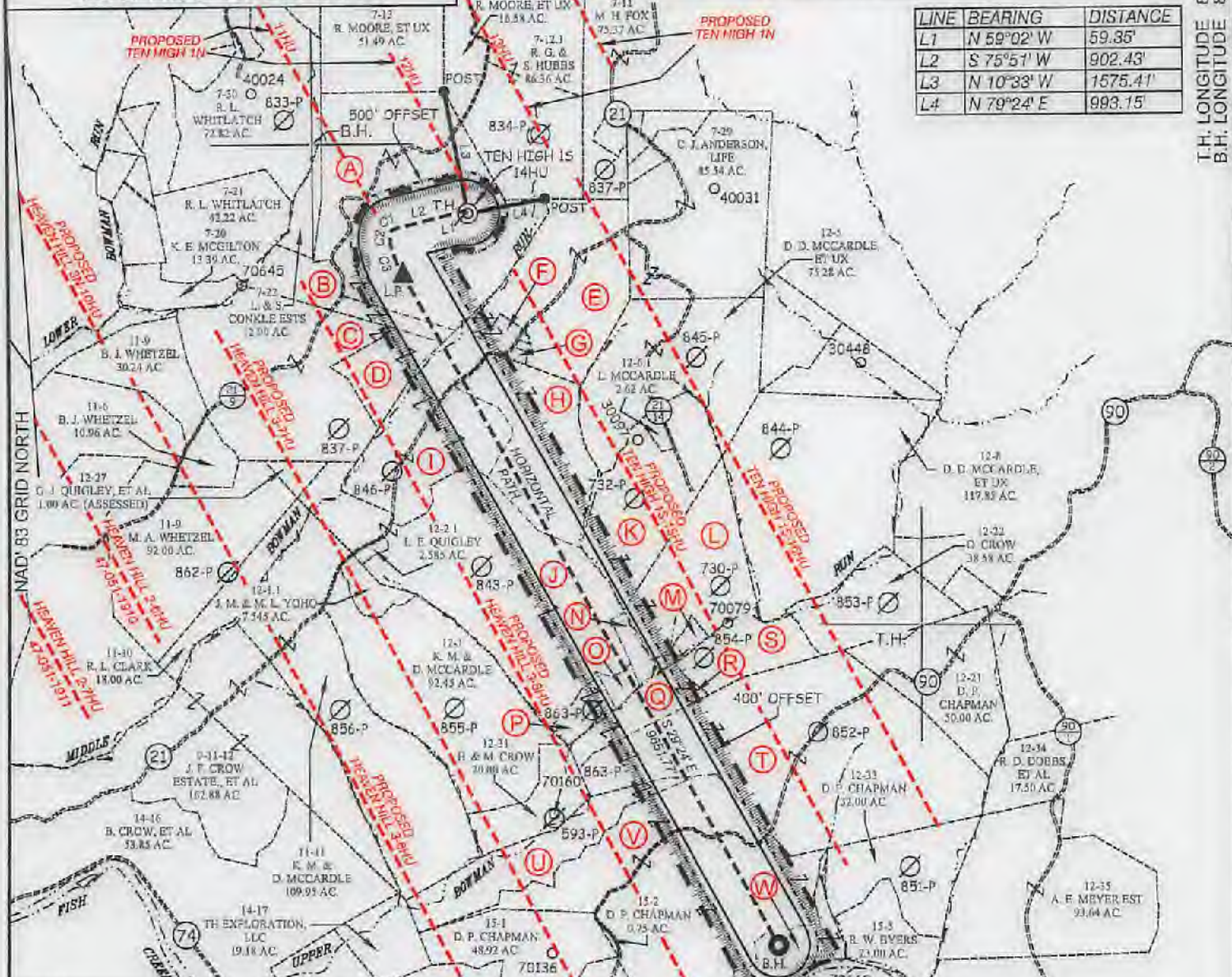
**TEN HIGH 1S LEASE  
UTICA UNIT - 328.13 AC. ±  
WELL 14HU  
TUG HILL OPERATING**

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

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	62.27'	71.78'	S 48°20' W	60.33'
C2	130.83'	261.59'	S 04°31' W	129.47'
C3	448.81'	1281.71'	S 20°31' E	448.52'

LINE	BEARING	DISTANCE
L1	N 59°02' W	59.35'
L2	S 75°51' W	902.43'
L3	N 10°33' W	1575.41'
L4	N 79°24' E	993.15'

T.H. LONGITUDE 80°40'00"  
B.H. LONGITUDE 80°37'30"  
3,622' T.H.  
9,665' T.H.



TAG	SURFACE OWNER	PARCEL	ACRES
A	LAWRENCE & SHIRLEY CONKLE ESTS	9-7-29	139.79
B	LARRY J. WHETZEL, ET UX	9-7-23	36.00
C	BRENDA J. WHETZEL	9-11-7	82.85
D	BRENDA J. WHETZEL	9-11-7-1	17.81
E	THOMAS R. & KIMBERLY WHITFIELD	9-7-25-2	76.40
F	THOMAS R. & KIMBERLY WHITFIELD	9-7-25-1	4.23
G	THOMAS R. & KIMBERLY WHITFIELD	9-7-25	0.83
H	THOMAS R. & KIMBERLY WHITFIELD	9-12-4	54.02
I	WNEK FAMILY IRREVOCABLE TR	9-11-8	50.10
J	GERALD W. QUIGLEY, ET'AL	9-12-2	139.79
K	DONALD DALE MCCARDLE, ET UX	9-12-6	53.38
L	DONALD DALE MCCARDLE, ET UX	9-12-7	53.00

TAG	SURFACE OWNER	PARCEL	ACRES
M	ROBERT MCCARDLE, ET UX	9-12-29	7.50
N	TAMMY L. MITCHELL	9-12-25	5.00
O	MYRTLE ELIZABETH GARTEN	9-12-28	4.00
P	MYRTLE ELIZABETH GARTEN	9-12-30	7.26
Q	GARY L. DOBBS	9-12-37	20.00
R	MICHAEL J. GUNTO, ET UX	9-12-23	10.00
S	EVERETT F. MOORE HEIRS	9-12-24	70.00
T	DAVID P. CHAPMAN	9-12-32	150.00
U	MYRTLE ELIZABETH GARTEN	9-12-18	20.00
V	SUSAN VAN DYNE	9-15-3	167.00
W	ROBERT FRANK KOTSON, ET'AL	9-15-4	26.40

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Land & Energy Development  
Solutions from the ground up.  
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www.slsurveyors.com

P.S. 677  
*Gregory A. Smith*

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)  
NAD83 S.P.C. (FT) N. 478,158.76 E. 1,036,733.80  
NAD83 GEO. LAT. (N) 39.906801 LONG. (W) 80.680967  
NAD83 UTM (M) N. 4,406,363.07 E. 527,309.20

**LANDING POINT**  
NAD83 S.P.C. (FT) N. 477,381.2 E. 1,035,900.1  
NAD83 GEO. LAT. (N) 39.804637 LONG. (W) 80.683866  
NAD83 UTM (M) N. 4,406,122.0 E. 527,081.9

**BOTTOM HOLE**  
NAD83 S.P.C. (FT) N. 469,971.8 E. 1,640,646.1  
NAD83 GEO. LAT. (N) 39.781722 LONG. (W) 80.666617  
NAD83 UTM (M) N. 4,403,584.1 E. 528,547.9



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

**LEGEND**

- UNIT BOUNDARY
- LEASED TRACTS INSIDE UNIT BOUNDARY
- SURFACE LINE
- DEED WELL LATERAL WITHIN 3000'
- WELL LATERAL
- 400' OFFSET LINE
- 500' OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SURFACE OWNER (SEE TABLE-SHEET 2)
- LEASE # (SEE SHEETS 3,4,5 & 6)

SCALE 1" = 2000' FILE NO. 3655P14HUR2.dwg  
DATE AUGUST 14 20 17  
REVISED JANUARY 12, 2018 & MARCH 22, 2018  
OPERATORS WELL NO. TEN HIGH 1S-14HU  
API WELL NO. 47 - 051 - 01966 HGA  
STATE COUNTY PERMIT

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

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER  
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5400 D BIG TYLER ROAD  
FORT WORTH, TX 76107 CHARLESTON, WV 25313



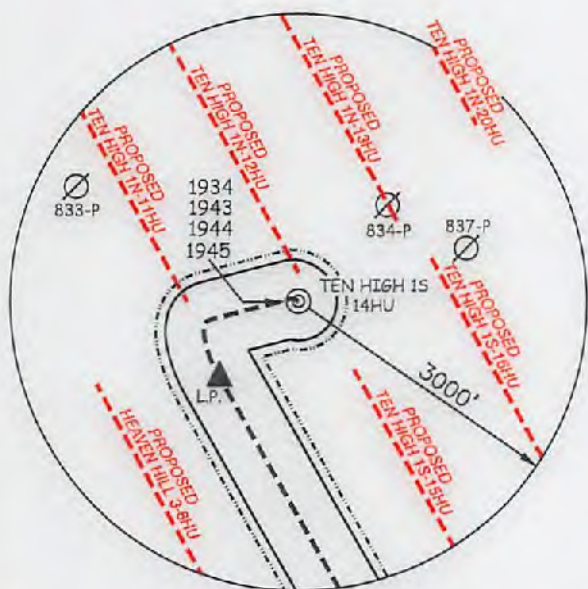
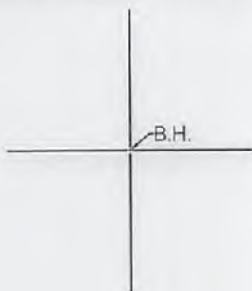
**TEN HIGH 1S LEASE  
UTICA UNIT - 328.13 AC. ±  
WELL 14HU  
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T.H. LATITUDE 39°50'00"  
B.H. LATITUDE 39°47'30"

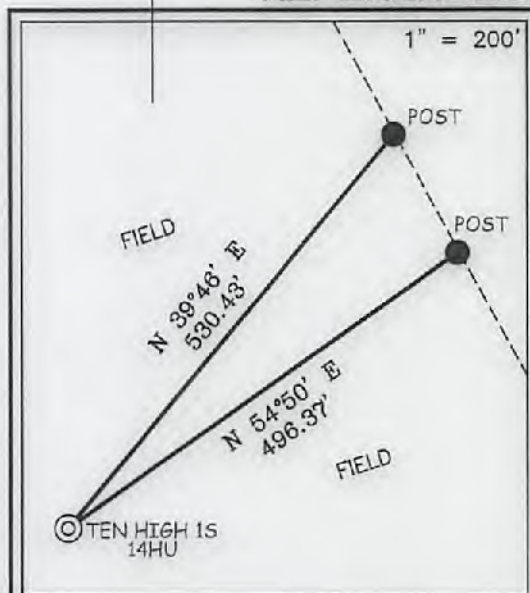
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'83 S.P.C.(FT)	N. 470,159.76	E. 1,636,733.80	
NAD'83 GEO.	LAT-(N) 39.806801	LONG-(W) 80.680967	
NAD'83 UTM (M)	N. 4,406,363.07	E. 527,309.20	
<u>LANDING POINT</u>			
NAD'83 S.P.C.(FT)	N. 477,361.2	E. 1,635,909.1	
NAD'83 GEO.	LAT-(N) 39.804637	LONG-(W) 80.663866	
NAD'83 UTM (M)	N. 4,408,122.0	E. 527,081.9	
<u>BOTTOM HOLE</u>			
NAD'83 S.P.C.(FT)	N. 468,971.8	E. 1,640,646.1	
NAD'83 GEO.	LAT-(N) 39.781722	LONG-(W) 80.666617	
NAD'83 UTM (M)	N. 4,403,584.1	E. 526,547.9	

T.H. LONGITUDE 80°40'00"  
B.H. LONGITUDE 80°37'30"

3,622' B.H.  
9,665' T.H.



**REFERENCES**



**NOTES ON SURVEY**

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'

P.O. Box 150 | 12 Vanhorn Drive | Glenville, WV 26031 | (304) 462-5834  
www.slsurveys.com

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

P.S. 677 Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
DATE AUGUST 14, 20 17  
REVISED JANUARY 12, 2018 & MARCH 22, 2018  
OPERATORS WELL NO. TEN HIGH 1S-14HU  
API WELL NO. 47-051-01966 **H6A**  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8655P14HUR2.dwg  
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 <input type="checkbox"/>	GAS <input checked="" type="checkbox"/>	LIQUID INJECTION <input type="checkbox"/>	WASTE DISPOSAL <input type="checkbox"/>	IF "GAS" PRODUCTION <input checked="" type="checkbox"/>	STORAGE <input type="checkbox"/>	DEEP <input checked="" type="checkbox"/>	SHALLOW <input type="checkbox"/>
LOCATION:	GROUND = 1,323.00'		PROPOSED = 1,310.06'		WATERSHED <u>MIDDLE BOWMAN RUN OF FISH CREEK (HUC 10)</u>			
DISTRICT:	<u>MEADE</u>		COUNTY <u>MARSHALL</u>		QUADRANGLE <u>GLEN EASTON 7.5'</u>		COUNTY NAME	
SURFACE OWNER:	<u>LAWRENCE &amp; SHIRLEY CONKLE ESTS</u>				ACREAGE <u>139.79±</u>		PERMIT	
ROYALTY OWNER:	<u>ANDY PAUL &amp; JACKIE KUHN, ET AL - SEE SHEETS 3, 4, 5 &amp; 6</u>				ACREAGE <u>139.79±</u>		LEASE NO. <u>SEE SHEETS 3, 4, 5 &amp; 6</u>	
PROPOSED WORK:	DRILL <input checked="" type="checkbox"/>		CONVERT <input type="checkbox"/>		DRILL DEEPER <input type="checkbox"/>		REDRILL <input type="checkbox"/>	
	FORMATION <input type="checkbox"/>		PERFORATE NEW FORMATION <input type="checkbox"/>		PLUG AND ABANDON <input type="checkbox"/>		CLEAN OUT AND REPLUG <input type="checkbox"/>	
	OTHER <input type="checkbox"/>		PHYSICAL CHANGE IN WELL (SPECIFY) _____		TARGET FORMATION <u>POINT PLEASANT</u>		ESTIMATED DEPTH <u>TVD: 11,878' / TMD: 21,759'</u>	

WELL OPERATOR <u>TUG HILL OPERATING, LLC</u>	DESIGNATED AGENT <u>DIANNA STAMPER</u>
ADDRESS <u>1320 SOUTH UNIVERSITY DRIVE, SUITE 500</u>	ADDRESS <u>CT CORPORATION SYSTEM</u>
<u>FORT WORTH, TX 76107</u>	<u>5400 D BIG TYLER ROAD</u>
	<u>CHARLESTON, WV 25313</u>



TEN HIGH 1S LEASE
UTICA UNIT - 328.13 AC. ±
WELL 14HU
TUG HILL OPERATING



Table with columns: No., Lease Name or No., Tag, Parcel, Oil & Gas Royalty Owners, Dead Book / Page. Lists lease details for various parcels and owners.

Table with columns: No., Lease Name or No., Tag, Parcel, Oil & Gas Royalty Owners - Continued, Dead Book / Page. Continuation of lease details from the previous table.

FILE NO. 8655P14HUR2.dwg
DATE AUGUST 29, 2017
REVISED JANUARY 12, 2018 & MARCH 22, 2018
OPERATORS WELL NO. TEN HIGH 1S-14HU
API WELL NO. 47-051-01966
STATE COUNTY PERMIT



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
P.S. 677
Signature: Gregory A. Smith

WELL OPERATOR TUG HILL OPERATING, LLC
ADDRESS 132 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107
DESIGNATED AGENT DIANNA STAMPER
ADDRESS CT CORPORATION SYSTEM 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

COUNTY NAME PERMIT



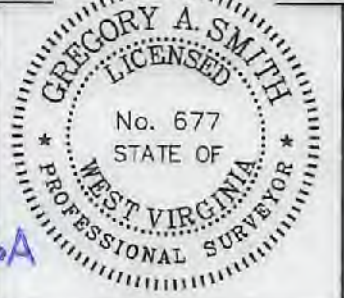
TEN HIGH 1S LEASE
UTICA UNIT - 328.13 AC. ±
WELL 14HU
TUG HILL OPERATING



Table with columns: No., Lease Name or No., Exp., Price, Oil & Gas Royalty Owner - Continued, Sheet Number/Total. Lists lease details for various owners like WILLIAM H AND SHERRY T BARNES, VIRGINIA J WHITMAN, etc.

Table with columns: No., Lease Name or No., Exp., Price, Oil & Gas Royalty Owner - Continued, Sheet Number/Total. Continuation of lease details from the previous table.

FILE NO. 8555P14HUR2.dwg
DATE AUGUST 29, 2017
REVISED JANUARY 12, 2018 & MARCH 22, 2018
OPERATORS WELL NO. TEN HIGH 1S-14HU
API WELL NO. 47 - 051 - 01966 H6A



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
COUNTY NAME
PERMIT No. 677
Signature of Gregory A. Smith

WELL OPERATOR TUG HILL OPERATING, LLC
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107
DESIGNATED AGENT DIANNA STAMPER
ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313



TEN HIGH 1S LEASE
UTICA UNIT - 328.13 AC. ±
WELL 14HU
TUG HILL OPERATING



Land & Energy Development
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www.slsurvey.com

Table with columns: Well Name or No, Tract, Parcel, Date of Lease/Permit, and Oil & Gas Lease Owner - Continued. Lists various well names and lease owners.

Table with columns: Well Name or No, Tract, Parcel, Date of Lease/Permit, and Oil & Gas Lease Owner - Continued. Lists various well names and lease owners.

FILE NO. 8655P14HUR2.dwg
DATE AUGUST 29, 2017
REVISED JANUARY 12, 2018 & MARCH 22, 2018
OPERATORS WELL NO. TEN HIGH 1S-14HU
API WELL NO. 47 - 051 - 01966
NO. STATE COUNTY PERMIT



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
P.S 677
Dianna Stamber
PERMIT

WELL OPERATOR TUG HILL OPERATING, LLC
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107
DESIGNATED AGENT DIANNA STAMPER
ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313



TEN HIGH 1S LEASE  
 UTICA UNIT - 328.13 AC. ±  
 WELL 14HU  
 TUG HILL OPERATING



No.	Lease Name or No.	Int.	Parted	Oil & Gas Royalty Owner - Continued	Deed Book/Page
750	10*1750	U	9-14-18	JOHN THOMAS TRAZMUS AND JEAN R. TRAZMUS	924 224
751	10*1761.2	U	9-14-18	BEVERLY A LEDBETTER	924 480
752	10*1761.3	U	9-14-18	CARLTON DOBBS JR AND MIKHAIL PROKOPENKO	924 320
753	10*1761.4	U	9-14-18	DAVID DOBBS	923 489
754	10*1761.5	U	9-14-18	PAULA JO WRIGHT	923 482
755	10*1761.6	U	9-14-18	RONALD & ELIZABETH DOBBS	924 307
756	10*1761.7	U	9-14-18	UNITED DISCIPLES OF CHRIST CHURCH	924 173
757	10*1766.4	U	9-14-18	BUDOLPH H PARSONS	923 511
758	10*1766.7	U	9-14-18	THOMAS BRIAN WARRICK	923 500
759	10*1766.8	U	9-14-18	KENNETH B DOBBS	923 503
760	10*1767.1	U	9-14-18	JAMES L STOUT	923 484
761	10*1767.4	U	9-14-18	HOWARD L & BETH E WOOD	923 505
762	10*1767.5	U	9-14-18	RICHARD & CAROLYN J WIBLE	923 307
763	10*1767.6	U	9-14-18	JAMES C & DENISE DOBBS	923 513
764	10*1770.0	U	9-14-18	ROGER L & MARILYN L GARRISON	923 472
765	10*1770.1	U	9-14-18	SUE ANN WORD	923 470
766	10*1770.2	U	9-14-18	TAMMY BETH RAMSEY	923 500
767	10*1770.8	U	9-14-18	SHIRLEY N COX	923 498
768	10*1770.8	U	9-14-18	METTY LOU NOLLE	924 127
769	10*1771.1	U	9-14-18	DEBRA A WENNEMAN AND KURT J WENNEMAN	923 520
770	10*1771.1	U	9-14-18	JAMES J MCGHEE AND JEANNINE CHAMBERS MCGHEE	914 519
771	10*1779.6	U	9-14-18	EDWARD S & NANCY A ROSENTHAL	923 435
772	10*1779.7	U	9-14-18	WILLIAM K & LINDA J MERRITT	923 474
773	10*1779.9	U	9-14-18	GLADYS FRAZIER KING	923 492
774	10*1771.1	U	9-14-18	CHARLES AND USA WARRICK	923 477
775	10*1789.0	U	9-14-18	BRIAN AND MELINDA MASTERS	923 319
776	10*1787.8	U	9-14-18	ROBERT E & SARAH M ROUSH	924 390
777	10*1789.9	U	9-14-18	HARVEY WRIGHT JR	924 388
778	10*1789.0	U	9-14-18	JANNA M WRIGHT	924 386
779	10*1788.1	U	9-14-18	WAYLON L & ANGELA J MURPHEE	924 555
780	10*1788.5	U	9-14-18	JOHN RUSSELL BECKER	924 540
781	10*4703.325.1	U	9-14-18	JUDITH A LEWANDOSKY AND ALAN E LEWANDOSKY	906 225
782	10*4703.325.2	U	9-14-18	TIMMY LEE STOUT AND GOROTHY MARIE STOUT	906 222
783	10*4703.325.3	U	9-14-18	NICHOLAS D PAVUK AND GLORIA E PAVUK	906 228
784	10*4703.325.4	U	9-14-18	JAMES H WHITE AND RITA FRANKS WHITE	906 230
785	10*4703.325.5	U	9-14-18	SAMUEL ALAN MCCORD AND WINIFRED A MCKEE	906 232
786	10*4703.325.6	U	9-14-18	THOMAS O MCCORD	906 235
787	10*4703.325.7	U	9-14-18	SHERON JONES	906 237
788	10*4703.325.8	U	9-14-18	RICK PAVUK	906 239
789	10*1592	V	9-15-3	KIM O CHAMBERS AND DEBRA CHAMBERS	906 256
790	10*1643	V	9-15-3	MARY LOU CHAMBERS	906 276
791	10*1644	V	9-15-3	PATTIE S MAJOR	906 278
792	10*1680	V	9-15-3	LARRY L CHAMBERS	906 280
793	10*1681	V	9-15-3	NORMA CHRISTINE WHIP AND GERALD WAYNE BLACK	906 281
794	10*1682	V	9-15-3	FIRST CHRISTIAN CHURCH OF MOUNDSVILLE BY FREDERICK FRANCIS AND ROBERT ALBERT TRUSTEES	906 283
795	10*1623.9	V	9-15-3	ANGELA L OLDFIELD AND KENNETH W OLDFIELD	906 287
796	10*1628.5	V	9-15-3	JOHN A SHUTZ AND CYNTHIA J SHUTZ	906 291
797	10*1641	V	9-15-3	GEORGE FRANKLIN AND NANCY ANN REED	914 639
798	10*1642	V	9-15-3	FRED T AND FRYL CHAMBERS	914 174
799	10*1643	V	9-15-3	BARBARA BROWN CHAMBERS	914 621
800	10*1644	V	9-15-3	CATHERINE ELLIN CHAMBERS	914 623
801	10*1645	V	9-15-3	DOUGLAS C AND GWENDLYN D LEWTON	925 123
802	10*1683	V	9-15-3	JOHN C AND BARBARA H WINTER	924 178
803	10*1686	V	9-15-3	DAVID ALAN WILKINSON AND PATRICIA LYNN WILKINSON	924 180
804	10*1680	V	9-15-3	WILLIAM H AND MERRY C COTTON	924 176
805	10*16540	V	9-15-3	JAMES A WINTER AND CONNIE G WINTER	924 184
806	10*1680	V	9-15-3	RONALD J AND JENNIFER CHAMBERS PECCA	924 186
807	10*16726	V	9-15-3	LESLY K WHITE	924 182
808	10*1623	V	9-15-3	SARAH L BENOIF	924 172
809	10*1683	V	9-15-3	ERNEST CARL AUGUSTINE JR	924 188
810	10*1684	V	9-15-3	FREDERICK M LEWTON	924 136
811	10*1684	V	9-15-3	STEVEN R AND BRIANNE L LUTT	924 138
812	10*1680	V	9-15-3	JAY AND CELIA E LEWTON	924 154
813	10*1683	V	9-15-3	RUSSELL D HERVEY	924 157
814	10*1683	V	9-15-3	DONALD T AND JEAN K HOGAN	924 140
815	10*1680	V	9-15-3	ROSEMARY H BEAVERS	924 152
816	10*1680	V	9-15-3	LINDA C ABRAHAM	924 148
817	10*1683	V	9-15-3	JULIA HOOVER	924 150
818	10*1683	V	9-15-3	DIANE ELISE RAMSEY	924 146
819	10*1712.9	V	9-15-3	ROBERTA JANE PARKINSON	924 142
820	10*1751	V	9-15-3	LAURA E TOTTEN AND LONNIE R TOTTEN	924 154
821	10*1754	V	9-15-3	UNITED CHRISTIAN MISSIONARY SOCIETY	924 144
822	10*1729	V	9-15-3	GAVIE'S SHANNON	924 168
823	10*1729	V	9-15-3	HAROLD B HUNT JR AND ELIZABETH A HUNT	924 170
824	10*1729	V	9-15-3	CHRISTINE A KIDD	924 158
825	10*1741.3	V	9-15-3	ROBERT M CHAMBERS AND CHARLOTTE A CHAMBERS	924 160
826	10*1743.5	V	9-15-3	ANDREW M HOOVER AND DINAH R HOOVER	924 156
827	10*1744.8	V	9-15-3	FREDERICK L HERVEY AND CATHY J HERVEY	924 162
828	10*1745.2	V	9-15-3	ALAN H & MARY K DEGARMO	924 164
829	10*1748.8	V	9-15-3	JOSELYN M KEELY	929 364
830	10*1748.7	V	9-15-3	DEBORAH R MOKOSH	924 166
831	10*1756.3	V	9-15-3	DOHALD L WOOD	923 523
832	10*1761.7	V	9-15-3	UNITED DISCIPLES OF CHRIST CHURCH	924 179
833	10*1767.4	V	9-15-3	HOWARD L WOOD AND BETH E WOOD	923 505
834	10*1767.5	V	9-15-3	GREGORY DEANE WIBLE AND CAROLYN JEAN WIBLE	923 507
835	10*1770.1	V	9-15-3	SUE ANN WORD	923 470
836	10*1770.2	V	9-15-3	TAMMY BETH RAMSEY	923 500
837	10*4703.325.1	V	9-15-3	JUDITH A LEWANDOSKY AND ALAN E LEWANDOSKY	906 225
838	10*4703.325.2	V	9-15-3	NICHOLAS D PAVUK AND GLORIA E PAVUK	906 228
839	10*4703.325.4	V	9-15-3	JAMES H WHITE AND RITA FRANKS WHITE	906 230
840	10*4703.325.5	V	9-15-3	SAMUEL ALAN MCCORD AND WINIFRED A MCKEE	906 232
841	10*4703.325.6	V	9-15-3	THOMAS O MCCORD	906 235
842	10*4703.325.7	V	9-15-3	SHERON JONES	906 237
843	10*4703.325.8	V	9-15-3	RICK PAVUK	906 239
844	10*16071	W	9-15-4	VIRGINIA LESLIE BERTRAM	921 370
845	10*16402	W	9-15-4	VALERIE LWAGNER	921 464
846	10*16421	W	9-15-4	SAMUEL EDGAR LEWIS AND ELIZABETH LEWIS	921 448
847	10*16491	W	9-15-4	BELA N WELLENREITER	921 467
848	10*17343	W	9-15-4	JUDITH Y RICHARDSON AND DENNIS L ROBICHAUD	921 456
849	10*17412	W	9-15-4	CHARLES L SHILITO	921 458
850	10*17439	W	9-15-4	WILLARD O MCCALL JR AND ADELE HUEY MCCALL	921 454
851	10*17509	W	9-15-4	BRIAN A MCCALL	921 455
852	10*17505	W	9-15-4	PAUL W STIFEL AND MARY M GROVER-STIFEL	921 460
853	10*18294	W	9-15-4	MARY M AND WINFRED K MARTIN	929 342
854	10*42051.318.46	W	9-15-4	CAROL B BOBBY AND DONALD J BOBBY	929 608
855	10*42051.318.48	W	9-15-4	DENORAH SUE KYLE 231 EAST 24TH AVENUE	929 600

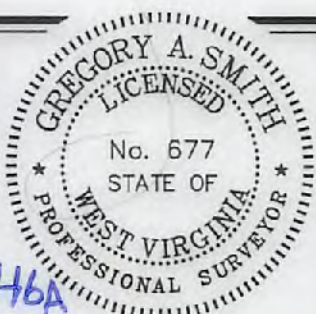
FILE NO. 8655P14HUR2.dwg

DATE AUGUST 29, 20 17

REVISED JANUARY 12, 2018 & MARCH 22, 2018

OPERATORS WELL NO. TEN HIGH 1S-14HU

API WELL NO. 47 — 051 — 01966  
 STATE COUNTY PERMIT



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



P.S. 677

*Gregory A. Smith*

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

DESIGNATED AGENT DIANNA STAMPER  
 ADDRESS CT CORPORATION SYSTEM  
 5400 D BIG TYLER ROAD  
 CHARLESTON, WV 25313

COUNTY NAME PERMIT





July 18, 2017

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

RE: Ten High 1S-14HU

Dear Laura:

Tug Hill Operating, LLC (THO) hereby submits this letter as confirmation that THO has obtained the right to drill, extract and produce the minerals under Marshall County Route 21/9 and 21/11 in the area reflected on the Ten High 1S-14HU well plat. THO has conducted a full title search in the relevant Court House to confirm its' ownership under said County Routes and is not currently aware of any recorded document that would suggest an ownership other than THO.

If your office has any questions or concerns regarding the contents of this letter, please do not hesitate to contact me at 304-376-0111 or by email at [amiller@tug-hilop.com](mailto:amiller@tug-hilop.com).

Sincerely,

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

Amy L. Miller  
Permit Specialist – Appalachia

RECEIVED  
Office of Oil and Gas

APR 9 2018

WV Department of  
Environmental Protection

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

Date of Notice Certification: 06/21/2017

API No. 47- 051 - 019166  
Operator's Well No. Ten High 1S-14HU  
Well Pad Name: Ten High

**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	Eastings: <u>527,311.49</u>
County: <u>Marshall</u>		Northing: <u>4,406,355.98</u>
District: <u>Meade</u>	Public Road Access: <u>Shepherd Ridge Lane (Co. Rt. 21/9)</u>	
Quadrangle: <u>Glen Easton 7.5'</u>	Generally used farm name: <u>LAWRENCE &amp; SHIRLEY CONKLE, ESTS</u>	
Watershed: <u>(HUC 10) Fish Creek</u>		

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

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

**Required Attachments:**

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

RECEIVED  
Office of Oil and Gas

APR 9 2018

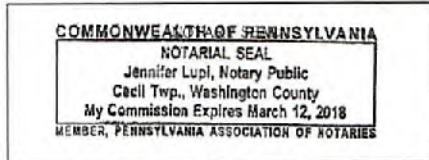
WV Department of  
Environmental Protection



**Certification of Notice is hereby given:**

THEREFORE, I Amy L. Miller *Amy Miller* 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 Blvd, Southpointe Plaza II, Suite 200</u>
By:	<u>Amy Miller</u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Permit Specialist - Appalachia</u>	Facsimile:	<u>724-338-2030</u>
Telephone:	<u>724-749-8388</u>	Email:	<u>amiller@tug-hillop.com</u>



Subscribed and sworn before me this 16<sup>th</sup> day of August 2018  
*Jennifer Lupi* Notary Public  
 My Commission Expires March 12, 2018

**Oil and Gas Privacy Notice:**

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

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WW-6A  
(9-13)

API NO. 47- 051 - 01966  
OPERATOR WELL NO. Ten High 1S-14HU  
Well Pad Name: Ten High

**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:** 3/28/2018 **Date Permit Application Filed:** 4/3/2018

**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: Estate of Lawrence & Shirley Mae Conkle c/o Roy Conkle

Address: 75 Arlington Avenue  
Moundsville, WV 26041

Name: Roy A. Conkle, Sr., and Lorie A.

Address: 75 Arlington Avenue  
Moundsville, WV 26041      \*See Attached\*

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

Name: Robert G. Hubbs and Scarlett E. Otte

Address: 132 Shepherds Ridge Lane  
Glen Easton, WV 26039

Name: \_\_\_\_\_

Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: None

Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: Murray Energy Corporation

Address: 46226 National Road  
St. Clairsville, OH 43950

COAL OPERATOR

Name: Same as above coal owner

Address: \_\_\_\_\_

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

Name: \*See supplement page 1A attached

Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: None

Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

**Well Location Restrictions**

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

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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

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

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> 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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WV Department of Energy and Mineral Resources

WW-6A  
(8-13)

API NO. 47- 051 - 01966  
OPERATOR WELL NO. Ten High 1S-14HU  
Well Pad Name: Ten High

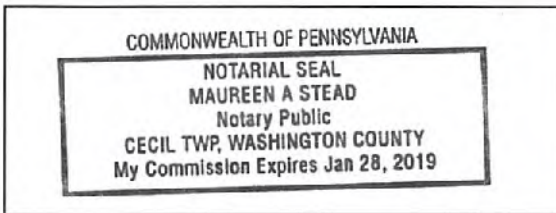
**Notice is hereby given by:**

Well Operator: Tug Hill Operating, LLC  
Telephone: 724-749-8388  
Email: amiller@tug-hilop.com *any Miller*

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

**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 3 day of APRIL 2018.  
Maureen A Stead Notary Public  
My Commission Expires 1/28/19

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COMMONWEALTH OF PENNSYLVANIA  
NOTARIAL SEAL  
MAUREEN A STEAD  
Notary Public  
CECIL TWP, WASHINGTON COUNTY  
My Commission Expires Jan 28, 2019

MAUREEN A STEAD  
Notary Public  
CECIL TWP, WASHINGTON COUNTY  
My Commission Expires Jan 28, 2019

MAUREEN A STEAD  
Notary Public  
CECIL TWP, WASHINGTON COUNTY  
My Commission Expires Jan 28, 2019

**Exhibit WW-6A**

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

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

Well: Ten High 1S – 14HU  
 District: Meade (House #'s 1-3)  
 State: WV

There are three (3) residences, no businesses, no churches, no schools or no emergency facilities within two-thousand feet (2,000') of the above referenced well location.

<p><b>House 1</b>            TM 7 Pcl. 24            Lawrence &amp; Shirley Conkle Ests            Phone: 304-845-1808; 304-848-1808  <b>Physical Address:</b>            77B Shepards Lane            932 Shepherd Ridge Ln.            Glen Easton, WV 26039  <b>Tax Address:</b>            75 Arlington Ave.            Moundsville, WV 26041</p>	<p><b>House 2</b>            TM 7 Pcl. 25            Thomas R. &amp; Kimberly Whitfield            Phone: 304-843-1753  <b>Physical Address:</b>            53 Sallys Backbone Rd.            1834 Sally's Backbone Rd.            Glen Easton, WV 26039  <b>Tax Address:</b>            1838 Sallys Backbone Rd.            Glen Easton, WV 26039</p>	<p><b>House 3</b>            TM 7 Pcl. 25            Thomas R. &amp; Kimberly Whitfield            Phone: 304-843-1753  <b>Physical Address:</b>            53 Sallys Backbone Rd.            1838 Sally's Backbone Rd.            Glen Easton, WV 26039  <b>Tax Address:</b>            Same</p>
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51-01966

Operator Well Nos. TEN HIGH 1S-14HU

**WW-6A Notice of Application ..... Attachment 1 of 1**

**Surface Owner(s):**

**Name:** Teresa Anne Hughes and Michael J.  
**Address:** 252 Conkle Drive  
Glen Easton, WV 26039

Brenda Joyce Whetzel  
1863 Shepherds Ridge Lane  
Glen Easton, WV 26039

Larry Lee Conkle and Donna D.  
154 Conkle Drive  
Glen Easton, WV 26039

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51-01966

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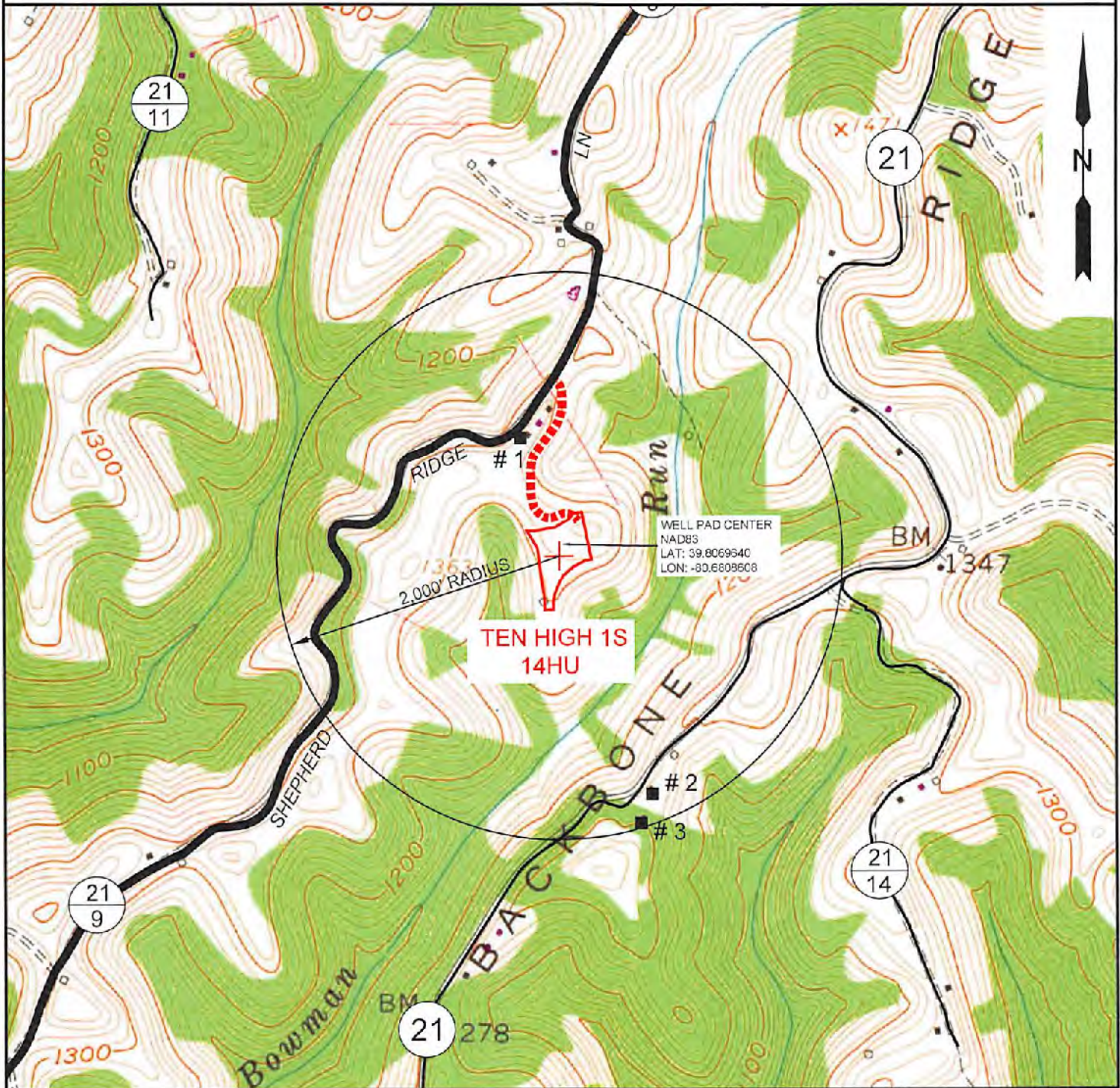
APR 9 2018

PROPOSED

SUPPLEMENT PG. 1B

WV Department of  
Environmental Protection

TEN HIGH 1S - 14HU



NOTE: THERE APPEARS TO BE THREE (3) POSSIBLE WATER SOURCES WITHIN 2,000'.

**SLS**  
Land & Energy Development  
Solutions from the ground up.  
P.O. Box 150 • 12 Venham Drive • Glenville, WV 26031 • (304) 482-6634  
www.slsurveys.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	MEADE		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8655	08-14-17	1" = 1000'

**TUG HILL**  
OPERATING



51-01966

WW-6A3  
(1/12)

Operator Well No. TEN HIGH 1S-14HU

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

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

**Date of Notice:** December 9, 2016      **Date of Planned Entry:** December 20, 2016

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

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

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

**Notice is hereby provided to:**

**SURFACE OWNER(s)**

Name: ESTATE OF LAWRENCE & SHIRLEY MAE CONKLE e/o Roy Conkle

Address: 75 ARLINGTON AVENUE  
MOUNDSVILLE, WV 26041

Name: ROY A CONKLE, SR.

Address: 75 ARLINGTON AVENUE  
MOUNDSVILLE, WV 26041

Name: LARRY CONKLE

Address: 154 CONKLE DRIVE  
GLEN EASTON, WV 26039      **\*\*SEE ATTACHED\*\***

**COAL OWNER OR LESSEE**

Name: MURRAY ENERGY CORPORATION

Address: 46225 NATIONAL ROAD  
ST. CLAIRSVILLE, OH 43950

**MINERAL OWNER(s)**

Name: ESTATE OF LAWRENCE & SHIRLEY MAE CONKLE e/o Roy Conkle

Address: 75 ARLINGTON AVENUE  
MOUNDSVILLE, WV 26041      **\*\*SEE ATTACHED\*\***

*\*please attach additional forms if necessary*

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WV Department of  
Environmental Protection

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State:	<u>WEST VIRGINIA</u>	Approx. Latitude & Longitude:	<u>LAT 39.8057775 LONG -80.6809192</u>
County:	<u>MARSHALL</u>	Public Road Access:	<u>SHEPHERD RIDGE LANE (Co. RT. 21/9)</u>
District:	<u>MEADE</u>	Watershed:	<u>HUC-10 FISH CREEK</u>
Quadrangle:	<u>GLEN EASTON 7.5'</u>	Generally used farm name:	<u>LAWRENCE CONKLE, SR.</u>

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

**Notice is hereby given by:**

Well Operator:	<u>TUG HILL OPERATING, LLC</u>	Address:	<u>380 SOUTHPOINTE BLVD., SOUTHPOINTE PLAZA II, SUITE 200</u>
Telephone:	<u>(724) 749-8388</u>		<u>CANONSBURG, PA15317</u>
Email:	<u>jwhite@tug-hilltop.com</u>	Facsimile:	<u>(724) 388-2030</u>

**Oil and Gas Privacy Notice:**

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

Operator Well No. TEN HIGH 1S-14HU

**WW-6A3 Notice of Entry for Plat Survey ..... Attachment 1 of 1**

**Surface Owner(s):**

**Name:** Teresa Hughes  
**Address:** 252 Conkle Drive  
Glen Easton, WV 26039

Brenda Joyce Wetzel  
RD 1, Box 79  
Glen Easton, WV 26039

**Surface Owner(s) Access Road:**

**Name:** Robert G. Hubbs and Scarlett E. Otte  
132 Sheperd Ridge Lane  
Glen Easton, WV 26039

**Mineral Owner(s):**

**Name:** Roy A. Conkle, Sr.  
75 Arlington Avenue  
Moundsville, WV 26041

Larry Conkle  
154 Conkle Drive  
Glen Easton, WV 26039

Teresa Hughes  
252 Conkle Drive  
Glen Easton, WV 26039

Brenda Joyce Wetzel  
RD 1, Box 79  
Glen Easton, WV 26039

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

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

**Date of Notice:** 08/14/2017      **Date Permit Application Filed:** 08/18/2017

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

- CERTIFIED MAIL                                       HAND
- RETURN RECEIPT REQUESTED                                      DELIVERY

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

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

**Name:** Estate of Lawrence & Shirley Mae Conkle c/o Roy Conkle  
**Address:** 75 Arlington Avenue  
Moundsville, WV 26041

**Name:** Roy A. Conkle, Sr., and Lorie A.  
**Address:** 75 Arlington Avenue  
Moundsville, WV 26041      **\*\*See Attached\*\***

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

<b>State:</b> <u>West Virginia</u>	<b>UTM NAD 83 Easting:</b> <u>527,311.49</u>
<b>County:</b> <u>Marshall</u>	<b>Northing:</b> <u>4,405,355.96</u>
<b>District:</b> <u>Meade</u>	<b>Public Road Access:</b> <u>Shepherd Ridge Lane (Co. Rt. 21/9)</u>
<b>Quadrangle:</b> <u>Glen Easton 7.5'</u>	<b>Generally used farm name:</b> <u>LAWRENCE &amp; SHIRLEY CONKLE, ESTS</u>
<b>Watershed:</b> <u>(HUC 10) Fish Creek</u>	

**This Notice Shall Include:**

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

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

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

**Oil and Gas Privacy Notice:**

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

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**WW-6A5 Notice of Planned Operation..... Attachment 1 of 1**

**Surface Owner(s):**

**Name:** Teresa Anne Hughes and Michael J.  
**Address:** 252 Conkle Drive  
Glen Easton, WV 26039

Brenda Joyce Whetzel  
1863 Shepherds Ridge Lane  
Glen Easton, WV 26039

Larry Lee Conkle and Donna D.  
154 Conkle Drive  
Glen Easton, WV 26039

Robert G. Hubbs and Scarlett E. Otte  
132 Shepherds Ridge Lane  
Glen Easton, WV 26039

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SI-01966



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Jim Justice  
Governor

Thomas J. Smith, P. E.  
Secretary of Transportation/  
Commissioner of Highways

May 16, 2017

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

Subject: DOH Permit for the Ten High 1N Pad, Marshall County  
Ten High 1S Unit-14HU Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2017-0127 which has been issued to Tug Hill Operating, LLC for access to the State Road for a well site located off of Marshall County Route 21/9 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

A handwritten signature in blue ink that reads "Gary K. Clayton".

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

Cc: Jonathan White  
Tug Hill Operating, LLC  
CH, OM, D-6  
File

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**PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION**

Well No. Ten High 1S-14HU

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

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