



west virginia department of environmental protection

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

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

Monday, March 1, 2021
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

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

Re: Permit Modification Approval for KNOB CREEK N-2HM
47-051-02279-00-00

Lateral Extension Approved

TUG HILL OPERATING, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: KNOB CREEK N-2HM
Farm Name: DAVID LEE FRANKLIN
U.S. WELL NUMBER: 47-051-02279-00-00
Horizontal 6A New Drill
Date Modification Issued: 03/01/2021

Promoting a healthy environment.



February 12, 2021

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

VIA USPS

**RE: Knob Creek N-2HM API # 47-051-02279 (H6A Permit Modification)
Meade District, Marshall County, WV**

Dear Wade:

Tug Hill Operating, LLC is submitting a permit modification for its permitted well, Knob Creek N-2HM to add 12,117.88' to the lateral length. Therefore, enclosed please find the following:

- Modified WW-6B with changes highlighted in yellow
- Updated well plat
- Updated WW-6A1 information
- Updated Site Safety Plan (The only information that has changed is the contact information for the Inspector at the contact list at the end of the Plan).

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

Sincerely,

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

Enclosures

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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: Knob Creek N-2HM Well Pad Name: Knob Creek

3) Farm Name/Surface Owner: David Lee Franklin Public Road Access: St. Joseph Road - CR 21

4) Elevation, current ground: 737' Elevation, proposed post-construction: 737'

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal

JL
10/29/2020

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus is the target formation at a depth of 6192' - 6243', thickness of 51' and an anticipated approximate pressure of 3800 psi.

8) Proposed Total Vertical Depth: 6,343'

9) Formation at Total Vertical Depth: Onondaga

10) Proposed Total Measured Depth: 19,667'

11) Proposed Horizontal Leg Length: 13,029.46'

12) Approximate Fresh Water Strata Depths: 70'; 380'

13) Method to Determine Fresh Water Depths: Use shallow offset wells to determine deepest freshwater, or determine using pre-drill tests, testing while drilling or petrophysical evaluation of resistivity.

14) Approximate Saltwater Depths: 1,740'

15) Approximate Coal Seam Depths: Sewickley Coal - 292' and Pittsburgh Coal - 374'

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

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

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

Depth: _____

Seam: _____

Owner: _____

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18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120'	259ft ³ (CTS)
Fresh Water	13 3/8"	NEW	J55	54.5#	480'	480'	683ft ³ (CTS)
Coal	13 3/8"	NEW	J55	54.5#	480'	480'	683ft ³ (CTS)
Intermediate	9 5/8"	NEW	J55	36#	2,302'	2,302'	745ft ³ (CTS)
Production	5 1/2"	NEW	P110	20#	19,667'	19,667'	5,011ft ³ (CTS)
Tubing	2 3/8"	NEW	N80	4.7#	6,274'		
Liners							

JW
10/29/2020

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	13 3/8"	17.5"	.33	2,740	2,192	SEE #24	1.2
Coal	13 3/8"	17.5"	.33	2,740	2,192	SEE #24	1.2
Intermediate	9 5/8"	12 1/4"	.352	3,520	2,816	SEE #24	1.19
Production	5 1/2"	8 7/8" _ 8 3/4"	.361	12,640	10,112	SEE #24	1.17/1.19
Tubing	2 3/8"		.19	11,200	8,960		
Liners							

PACKERS

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

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WW-6B
(10/14)

API NO. 47- 051 - 02279
OPERATOR WELL NO. Knob Creek N-2HM
Well Pad Name: Knob Creek

Jan
10/29/2020

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

Drill through the Marcellus tagging less than 100' from the top of the Onondaga to get depths and log data. Plug back to proposed kick off point. Drill the horizontal section to planned and proposed TD. Run casing and cement to surface. Run Bond Log from app. 60 deg to surface. Make clean out run and stimulate.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Well to completed with approximately 32,500,000 lb. proppant and 585,000 barrels of water. Max rate = 80bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 12.93 acres

22) Area to be disturbed for well pad only, less access road (acres): 5.55 acres

23) Describe centralizer placement for each casing string:

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

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

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

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

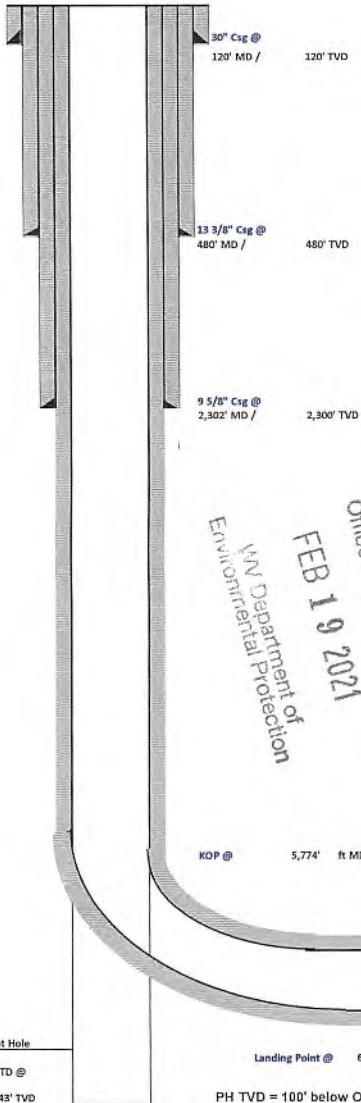


WELL NAME: Knob Creek N-2HM
 STATE: WV COUNTY: Marshall
 DISTRICT: Meade
 DF Elev: 737' GL Elev: 737'
 TD: 19,667'
 TH Latitude: 39.77000567
 TH Longitude: -80.70555741
 BH Latitude: 39.80257637
 BH Longitude: -80.73196471

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	380
Sewickley Coal	292
Pittsburgh Coal	374
Big Lime	1687
Weir	1988
Berea	2172
Gordon	2439
Rhinestraet	5549
Genesee/Burkett	6061
Tully	6091
Hamilton	6124
Marcellus	6192
Landing Depth	6227
Onondaga	6243
Pilot Hole Depth	6343

CASING SUMMARY							
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement
Conductor	36	30	120'	120'	BW	BW	Surface
Surface	17.5	13 3/8	480'	480'	54.5	J55	Surface
Intermediate 1	12 1/4	9 5/8	2,302'	2,300'	36	J55	Surface
Production	8 7/8 x 8 3/4	5 1/2	19,667'	6,000'	20	CYHP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
	Sacks	Class	Density	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	661	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	784	A	15	Air	1 Centralizer every other jt
Production	4,610	A	14.5	Air / SOBM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to sfc



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Pilot Hole
 PH TD @ 6,343' TVD
 Landing Point @ 6,640' MD / 6,227' TVD
 PH TVD = 100' below Onondaga Top

Lateral TD @ 19,667' ft MD
 6,000' ft TVD



Tug Hill Operating, LLC Casing and Cement Program

Knob Creek N-2HM

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	13 3/8"	J55	17 1/2"	480'	CTS
Intermediate	9 5/8"	J55	12 1/4"	2,302'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4"	19,667'	CTS

Cement

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

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

Intermediate: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.19

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

Production: 50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L – Production Cement mixed at 15.2ppg, Y = 1.19

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Well: Knob Creek N-02HM (slot B)
 Site: Knob Creek
 Project: Marshall County, West Virginia.
 Design: rev2

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
2	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.000	0.00	KOP Begin 2°/100' build
3	1600.00	4.00	280.00	1599.84	1.21	-6.87	2.00	280.000	4.69	Begin 4.00° tangent
4	4707.73	4.00	280.00	4700.00	38.86	-220.36	0.00	0.000	150.32	Begin 3°/100' build/turn
5	5197.90	18.68	285.21	5179.29	62.55	-313.48	3.00	6.576	220.00	Begin 18.68° tangent section
6	5773.94	18.68	285.21	5724.97	110.95	-491.55	0.00	0.000	355.86	Begin 8°/100' build/turn
7	6215.86	50.00	317.83	6087.90	259.72	-679.49	8.00	45.541	581.99	Begin 10°/100' build/turn
8	6640.20	91.00	329.81	6227.00	578.25	-905.72	10.00	17.913	971.99	Begin 91.00° lateral section
9	19667.24	91.00	329.81	6000.00	11836.59	-7455.66	0.00	0.000	3988.99	PBHL/TD 19667.24 MD 6000.00 TVD



Azimuths to Grid North
 True North: -0.19°
 Magnetic North: -8.88°

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

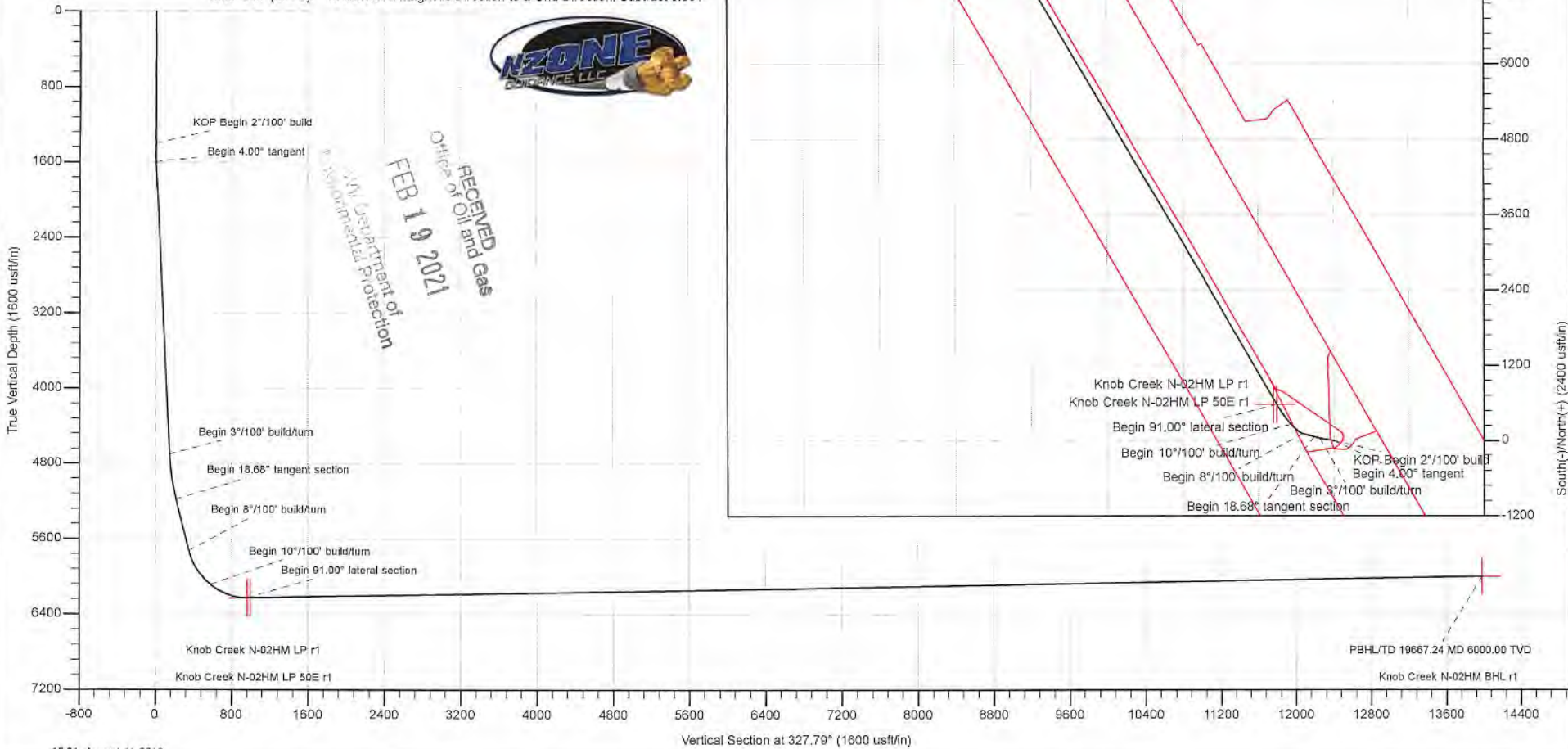
System Datum: Mean Sea Level
 Depth Reference: GL=737 @ 737.00usft
 Surface location

Northing	Easting	Latitude	Longitude
14443120.91	1723151.64	39.77000567	-80.70555741

Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.881°



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Planning Report - Geographic

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Database:	DB_Jul2216dt_v14 It	Local Co-ordinate Reference:	Well Knob Creek N-02HM (slot B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL=737 @ 737.00usft
Project:	Marshall County, West Virginia.	MD Reference:	GL=737 @ 737.00usft
Site:	Knob Creek	North Reference:	Grid
Well:	Knob Creek N-02HM (slot B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

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

Site	Knob Creek				
Site Position:		Northing:	14,443,053.74 usft	Latitude:	39.76982148
From:	Lat/Long	Easting:	1,723,120.29 usft	Longitude:	-80.70566975
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.188 °

Well	Knob Creek N-02HM (slot B)					
Well Position	+N/-S	0.00 usft	Northing:	14,443,120.91 usft	Latitude:	39.77000567
	+E/-W	0.00 usft	Easting:	1,723,151.64 usft	Longitude:	-80.70555741
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	737.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/19/2017	-8.693	66.922	52,139.59039564

Design	rev2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	327.79

Plan Survey Tool Program	Date	8/11/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,667.24 rev2 (Original Hole)	MWD	MWD - Standard

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	0.000	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,600.00	4.00	280.00	1,599.84	1.21	-6.87	2.00	2.00	0.00	280.000	
4,707.73	4.00	280.00	4,700.00	38.86	-220.36	0.00	0.00	0.00	0.000	
5,197.90	18.68	285.21	5,179.29	62.55	-313.48	3.00	3.00	1.06	6.576	
5,773.94	18.68	285.21	5,724.97	110.95	-491.55	0.00	0.00	0.00	0.000	
6,215.86	50.00	317.83	6,087.90	259.72	-679.49	8.00	7.09	7.38	45.541	
6,640.20	91.00	329.81	6,227.00	578.25	-905.72	10.00	9.66	2.82	17.913	
19,667.24	91.00	329.81	6,000.00	11,836.59	-7,455.66	0.00	0.00	0.00	0.000	Knob Creek N-02HM



Planning Report - Geographic

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Database:	DB_Jul2216dt_v14 lt	Local Co-ordinate Reference:	Well Knob Creek N-02HM (slot B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL=737 @ 737.00usft
Project:	Marshall County, West Virginia.	MD Reference:	GL=737 @ 737.00usft
Site:	Knob Creek	North Reference:	Grid
Well:	Knob Creek N-02HM (slot 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	
0.00	0.00	0.00	0.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
100.00	0.00	0.00	100.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
200.00	0.00	0.00	200.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
300.00	0.00	0.00	300.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
400.00	0.00	0.00	400.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
500.00	0.00	0.00	500.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
600.00	0.00	0.00	600.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
700.00	0.00	0.00	700.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
800.00	0.00	0.00	800.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
900.00	0.00	0.00	900.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,443,120.91	1,723,151.64	39.77000567	-80.70555741	
KOP Begin 2°/100' build										
1,500.00	2.00	280.00	1,499.98	0.30	-1.72	14,443,121.21	1,723,149.92	39.77000652	-80.70556352	
1,600.00	4.00	280.00	1,599.84	1.21	-6.87	14,443,122.12	1,723,144.77	39.77000906	-80.70558185	
Begin 4.00° tangent										
1,700.00	4.00	280.00	1,699.59	2.42	-13.74	14,443,123.33	1,723,137.90	39.77001245	-80.70560629	
1,800.00	4.00	280.00	1,799.35	3.63	-20.61	14,443,124.54	1,723,131.03	39.77001584	-80.70563072	
1,900.00	4.00	280.00	1,899.11	4.85	-27.48	14,443,125.75	1,723,124.16	39.77001923	-80.70565516	
2,000.00	4.00	280.00	1,998.86	6.06	-34.35	14,443,126.97	1,723,117.29	39.77002262	-80.70567959	
2,100.00	4.00	280.00	2,098.62	7.27	-41.22	14,443,128.18	1,723,110.42	39.77002600	-80.70570402	
2,200.00	4.00	280.00	2,198.38	8.48	-48.09	14,443,129.39	1,723,103.55	39.77002939	-80.70572846	
2,300.00	4.00	280.00	2,298.13	9.69	-54.96	14,443,130.60	1,723,096.68	39.77003278	-80.70575289	
2,400.00	4.00	280.00	2,397.89	10.90	-61.83	14,443,131.81	1,723,089.81	39.77003617	-80.70577732	
2,500.00	4.00	280.00	2,497.65	12.11	-68.70	14,443,133.02	1,723,082.94	39.77003956	-80.70580176	
2,600.00	4.00	280.00	2,597.40	13.32	-75.57	14,443,134.23	1,723,076.07	39.77004295	-80.70582619	
2,700.00	4.00	280.00	2,697.16	14.54	-82.44	14,443,135.44	1,723,069.20	39.77004634	-80.70585063	
2,800.00	4.00	280.00	2,796.91	15.75	-89.31	14,443,136.66	1,723,062.33	39.77004972	-80.70587506	
2,900.00	4.00	280.00	2,896.67	16.96	-96.18	14,443,137.87	1,723,055.46	39.77005311	-80.70589949	
3,000.00	4.00	280.00	2,996.43	18.17	-103.05	14,443,139.08	1,723,048.59	39.77005650	-80.70592393	
3,100.00	4.00	280.00	3,096.18	19.38	-109.92	14,443,140.29	1,723,041.72	39.77005989	-80.70594836	
3,200.00	4.00	280.00	3,195.94	20.59	-116.79	14,443,141.50	1,723,034.85	39.77006328	-80.70597279	
3,300.00	4.00	280.00	3,295.70	21.80	-123.66	14,443,142.71	1,723,027.98	39.77006667	-80.70599723	
3,400.00	4.00	280.00	3,395.45	23.02	-130.53	14,443,143.92	1,723,021.11	39.77007006	-80.70602166	
3,500.00	4.00	280.00	3,495.21	24.23	-137.40	14,443,145.14	1,723,014.24	39.77007344	-80.70604610	
3,600.00	4.00	280.00	3,594.97	25.44	-144.27	14,443,146.35	1,723,007.37	39.77007683	-80.70607053	
3,700.00	4.00	280.00	3,694.72	26.65	-151.14	14,443,147.56	1,723,000.51	39.77008022	-80.70609496	
3,800.00	4.00	280.00	3,794.48	27.86	-158.01	14,443,148.77	1,722,993.64	39.77008361	-80.70611940	
3,900.00	4.00	280.00	3,894.23	29.07	-164.87	14,443,149.98	1,722,986.77	39.77008700	-80.70614383	
4,000.00	4.00	280.00	3,993.99	30.28	-171.74	14,443,151.19	1,722,979.90	39.77009039	-80.70616827	
4,100.00	4.00	280.00	4,093.75	31.49	-178.61	14,443,152.40	1,722,973.03	39.77009377	-80.70619270	
4,200.00	4.00	280.00	4,193.50	32.71	-185.48	14,443,153.61	1,722,966.16	39.77009716	-80.70621713	
4,300.00	4.00	280.00	4,293.26	33.92	-192.35	14,443,154.83	1,722,959.29	39.77010055	-80.70624157	
4,400.00	4.00	280.00	4,393.02	35.13	-199.22	14,443,156.04	1,722,952.42	39.77010394	-80.70626600	
4,500.00	4.00	280.00	4,492.77	36.34	-206.09	14,443,157.25	1,722,945.55	39.77010733	-80.70629043	
4,600.00	4.00	280.00	4,592.53	37.55	-212.96	14,443,158.46	1,722,938.68	39.77011072	-80.70631487	
4,700.00	4.00	280.00	4,692.29	38.76	-219.83	14,443,159.67	1,722,931.81	39.77011411	-80.70633930	
4,707.73	4.00	280.00	4,700.00	38.86	-220.36	14,443,159.76	1,722,931.28	39.77011437	-80.70634119	
Begin 3°/100' build/tum										
4,800.00	6.76	282.69	4,791.85	40.61	-228.83	14,443,161.52	1,722,922.81	39.77011926	-80.70637130	
4,900.00	9.75	283.90	4,890.81	43.94	-242.79	14,443,164.84	1,722,908.85	39.77012852	-80.70642096	



Planning Report - Geographic

Oil and Gas
 Dec 19 2021
 Department of Environmental Protection

Database: DB_Jul2216dt_v14 lt
Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia,
Site: Knob Creek
Well: Knob Creek N-02HM (slot B)
Wellbore: Original Hole
Design: rev2

Local Co-ordinate Reference: Well Knob Creek N-02HM (slot B)
TVD Reference: GL=737 @ 737.00usft
MD Reference: GL=737 @ 737.00usft
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
5,000.00	12.75	284.54	4,988.87	48.74	-261.70	14,443,169.65	1,722,889.94	39.77014189	-80.70648819
5,100.00	15.75	284.94	5,085.78	55.01	-285.50	14,443,175.92	1,722,866.14	39.77015932	-80.70657281
5,197.90	18.68	285.21	5,179.29	62.55	-313.48	14,443,183.46	1,722,838.17	39.77018027	-80.70667228
Begin 18.68° tangent section									
5,200.00	18.68	285.21	5,181.28	62.73	-314.12	14,443,183.63	1,722,837.52	39.77018076	-80.70667459
5,300.00	18.68	285.21	5,278.01	71.13	-345.04	14,443,192.04	1,722,806.60	39.77020412	-80.70678451
5,400.00	18.68	285.21	5,370.74	79.53	-375.95	14,443,200.44	1,722,775.69	39.77022747	-80.70689443
5,500.00	18.68	285.21	5,465.47	87.93	-406.87	14,443,208.84	1,722,744.78	39.77025082	-80.70700435
5,600.00	18.68	285.21	5,560.20	96.34	-437.78	14,443,217.24	1,722,713.86	39.77027418	-80.70711427
5,700.00	18.68	285.21	5,654.93	104.74	-468.69	14,443,225.65	1,722,682.95	39.77029753	-80.70722419
5,773.94	18.68	285.21	5,724.97	110.95	-491.55	14,443,231.86	1,722,660.09	39.77031480	-80.70730546
Begin 8°/100' build/turn									
5,800.00	20.20	289.52	5,749.54	113.55	-499.82	14,443,234.46	1,722,651.82	39.77032201	-80.70733486
5,900.00	26.70	301.36	5,841.29	131.04	-535.33	14,443,251.95	1,722,616.31	39.77037035	-80.70746104
6,000.00	33.81	308.67	5,927.64	160.16	-576.31	14,443,281.07	1,722,575.33	39.77045070	-80.70760653
6,100.00	41.22	313.65	6,006.92	200.35	-621.95	14,443,321.26	1,722,529.69	39.77056149	-80.70776850
6,200.00	48.79	317.33	6,077.58	250.83	-671.37	14,443,371.74	1,722,480.27	39.77070056	-80.70794379
6,215.86	50.00	317.83	6,087.90	259.72	-679.49	14,443,380.63	1,722,472.15	39.77072505	-80.70797259
Begin 10°/100' build/turn									
6,300.00	58.05	320.87	6,137.30	311.39	-723.73	14,443,432.30	1,722,427.91	39.77086734	-80.70812944
6,400.00	67.69	323.86	6,182.85	381.84	-777.93	14,443,502.74	1,722,373.71	39.77106128	-80.70832149
6,500.00	77.38	326.46	6,212.84	460.06	-832.31	14,443,580.96	1,722,319.33	39.77127658	-80.70851412
6,600.00	87.09	328.86	6,226.33	543.68	-885.23	14,443,664.58	1,722,266.42	39.77150670	-80.70870148
6,640.20	91.00	329.81	6,227.00	578.24	-905.72	14,443,699.15	1,722,245.92	39.77160181	-80.70877402
Begin 91.00° lateral section									
6,700.00	91.00	329.81	6,225.96	629.92	-935.79	14,443,750.83	1,722,215.85	39.77174401	-80.70888042
6,800.00	91.00	329.81	6,224.22	716.35	-986.07	14,443,837.25	1,722,165.57	39.77198180	-80.70905837
6,900.00	91.00	329.81	6,222.48	802.77	-1,036.35	14,443,923.68	1,722,115.29	39.77219599	-80.70923631
7,000.00	91.00	329.81	6,220.73	889.19	-1,086.63	14,444,010.10	1,722,065.01	39.77245738	-80.70941425
7,100.00	91.00	329.81	6,218.99	975.62	-1,136.91	14,444,096.52	1,722,014.74	39.77269516	-80.70959220
7,200.00	91.00	329.81	6,217.25	1,062.04	-1,187.19	14,444,182.95	1,721,964.46	39.77293295	-80.70977014
7,300.00	91.00	329.81	6,215.51	1,148.46	-1,237.46	14,444,269.37	1,721,914.18	39.77317074	-80.70994809
7,400.00	91.00	329.81	6,213.76	1,234.88	-1,287.74	14,444,355.79	1,721,863.90	39.77340853	-80.71012604
7,500.00	91.00	329.81	6,212.02	1,321.31	-1,338.02	14,444,442.22	1,721,813.62	39.77364632	-80.71030399
7,600.00	91.00	329.81	6,210.28	1,407.73	-1,388.30	14,444,528.64	1,721,763.34	39.77388410	-80.71048194
7,700.00	91.00	329.81	6,208.54	1,494.15	-1,438.58	14,444,615.06	1,721,713.06	39.77412189	-80.71065989
7,800.00	91.00	329.81	6,206.79	1,580.58	-1,488.86	14,444,701.48	1,721,662.78	39.77435967	-80.71083785
7,900.00	91.00	329.81	6,205.05	1,667.00	-1,539.14	14,444,787.91	1,721,612.50	39.77459746	-80.71101580
8,000.00	91.00	329.81	6,203.31	1,753.42	-1,589.42	14,444,874.33	1,721,562.22	39.77483525	-80.71119376
8,100.00	91.00	329.81	6,201.57	1,839.84	-1,639.70	14,444,960.75	1,721,511.94	39.77507303	-80.71137172
8,200.00	91.00	329.81	6,199.82	1,926.27	-1,689.98	14,445,047.18	1,721,461.66	39.77531082	-80.71154967
8,300.00	91.00	329.81	6,198.08	2,012.69	-1,740.26	14,445,133.60	1,721,411.38	39.77554860	-80.71172763
8,400.00	91.00	329.81	6,196.34	2,099.11	-1,790.54	14,445,220.02	1,721,361.10	39.77578639	-80.71190559
8,500.00	91.00	329.81	6,194.60	2,185.54	-1,840.82	14,445,306.44	1,721,310.82	39.77602417	-80.71208356
8,600.00	91.00	329.81	6,192.85	2,271.96	-1,891.10	14,445,392.87	1,721,260.54	39.77626196	-80.71226152
8,700.00	91.00	329.81	6,191.11	2,358.38	-1,941.38	14,445,479.29	1,721,210.26	39.77649974	-80.71243948
8,800.00	91.00	329.81	6,189.37	2,444.81	-1,991.66	14,445,565.71	1,721,159.98	39.77673752	-80.71261745
8,900.00	91.00	329.81	6,187.62	2,531.23	-2,041.94	14,445,652.14	1,721,109.70	39.77697531	-80.71279542
9,000.00	91.00	329.81	6,185.88	2,617.65	-2,092.22	14,445,738.56	1,721,059.42	39.77721309	-80.71297339
9,100.00	91.00	329.81	6,184.14	2,704.07	-2,142.50	14,445,824.98	1,721,009.14	39.77745087	-80.71315136
9,200.00	91.00	329.81	6,182.40	2,790.50	-2,192.78	14,445,911.41	1,720,958.86	39.77768865	-80.71332933
9,300.00	91.00	329.81	6,180.65	2,876.92	-2,243.06	14,445,997.83	1,720,908.58	39.77792644	-80.71350730
9,400.00	91.00	329.81	6,178.91	2,963.34	-2,293.34	14,446,084.25	1,720,858.30	39.77816422	-80.71368527
9,500.00	91.00	329.81	6,177.17	3,049.77	-2,343.62	14,446,170.67	1,720,808.02	39.77840200	-80.71386325



Planning Report - Geographic

RECEIVED
Office of Oil and Gas
FEB 19 2021
WV Department of
Environmental Protection

Database: DB_Jul2216dt_v14 lt
Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia.
Site: Knob Creek
Well: Knob Creek N-02HM (slot B)
Wellbore: Original Hole
Design: rev2

Local Co-ordinate Reference: Well Knob Creek N-02HM (slot B)
TVD Reference: GL=737 @ 737.00usft
MD Reference: GL=737 @ 737.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey										
Measured			Vertical			Map	Map			
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
9,600.00	91.00	329.81	6,175.43	3,136.19	-2,393.90	14,446,257.10	1,720,757.75	39.77863978	-80.71404122	
9,700.00	91.00	329.81	6,173.68	3,222.61	-2,444.18	14,446,343.52	1,720,707.47	39.77887756	-80.71421920	
9,800.00	91.00	329.81	6,171.94	3,309.03	-2,494.45	14,446,429.94	1,720,657.19	39.77911534	-80.71439718	
9,900.00	91.00	329.81	6,170.20	3,395.46	-2,544.73	14,446,516.37	1,720,606.91	39.77935312	-80.71457516	
10,000.00	91.00	329.81	6,168.46	3,481.88	-2,595.01	14,446,602.79	1,720,556.63	39.77959090	-80.71475314	
10,100.00	91.00	329.81	6,166.71	3,568.30	-2,645.29	14,446,689.21	1,720,506.35	39.77982868	-80.71493112	
10,200.00	91.00	329.81	6,164.97	3,654.73	-2,695.57	14,446,775.64	1,720,456.07	39.78006664	-80.71510910	
10,300.00	91.00	329.81	6,163.23	3,741.15	-2,745.85	14,446,862.06	1,720,405.79	39.78030424	-80.71528709	
10,400.00	91.00	329.81	6,161.49	3,827.57	-2,796.13	14,446,948.48	1,720,355.51	39.78054202	-80.71546507	
10,500.00	91.00	329.81	6,159.74	3,914.00	-2,846.41	14,447,034.90	1,720,305.23	39.78077980	-80.71564306	
10,600.00	91.00	329.81	6,158.00	4,000.42	-2,896.69	14,447,121.33	1,720,254.95	39.78101758	-80.71582105	
10,700.00	91.00	329.81	6,156.26	4,086.84	-2,946.97	14,447,207.75	1,720,204.67	39.78125536	-80.71599903	
10,800.00	91.00	329.81	6,154.52	4,173.26	-2,997.25	14,447,294.17	1,720,154.39	39.78149314	-80.71617702	
10,900.00	91.00	329.81	6,152.77	4,259.69	-3,047.53	14,447,380.60	1,720,104.11	39.78173091	-80.71635502	
11,000.00	91.00	329.81	6,151.03	4,346.11	-3,097.81	14,447,467.02	1,720,053.83	39.78196869	-80.71653301	
11,100.00	91.00	329.81	6,149.29	4,432.53	-3,148.09	14,447,553.44	1,720,003.55	39.78220647	-80.71671100	
11,200.00	91.00	329.81	6,147.55	4,518.96	-3,198.37	14,447,639.86	1,719,953.27	39.78244425	-80.71688900	
11,300.00	91.00	329.81	6,145.80	4,605.38	-3,248.65	14,447,726.29	1,719,902.99	39.78268202	-80.71706699	
11,400.00	91.00	329.81	6,144.06	4,691.80	-3,298.93	14,447,812.71	1,719,852.71	39.78291980	-80.71724499	
11,500.00	91.00	329.81	6,142.32	4,778.22	-3,349.21	14,447,899.13	1,719,802.43	39.78315757	-80.71742299	
11,600.00	91.00	329.81	6,140.58	4,864.65	-3,399.49	14,447,985.56	1,719,752.15	39.78339535	-80.71760099	
11,700.00	91.00	329.81	6,138.83	4,951.07	-3,449.77	14,448,071.98	1,719,701.87	39.78363313	-80.71777899	
11,800.00	91.00	329.81	6,137.09	5,037.49	-3,500.05	14,448,158.40	1,719,651.59	39.78387090	-80.71795699	
11,900.00	91.00	329.81	6,135.35	5,123.92	-3,550.33	14,448,244.83	1,719,601.31	39.78410868	-80.71813500	
12,000.00	91.00	329.81	6,133.61	5,210.34	-3,600.61	14,448,331.25	1,719,551.04	39.78434645	-80.71831300	
12,100.00	91.00	329.81	6,131.86	5,296.76	-3,650.89	14,448,417.67	1,719,500.76	39.78458422	-80.71849101	
12,200.00	91.00	329.81	6,130.12	5,383.19	-3,701.16	14,448,504.09	1,719,450.48	39.78482200	-80.71866902	
12,300.00	91.00	329.81	6,128.38	5,469.61	-3,751.44	14,448,590.52	1,719,400.20	39.78505977	-80.71884703	
12,400.00	91.00	329.81	6,126.64	5,556.03	-3,801.72	14,448,676.94	1,719,349.92	39.78529755	-80.71902504	
12,500.00	91.00	329.81	6,124.89	5,642.45	-3,852.00	14,448,763.36	1,719,299.64	39.78553532	-80.71920305	
12,600.00	91.00	329.81	6,123.15	5,728.88	-3,902.28	14,448,849.79	1,719,249.36	39.78577309	-80.71938106	
12,700.00	91.00	329.81	6,121.41	5,815.30	-3,952.56	14,448,936.21	1,719,199.08	39.78601087	-80.71955907	
12,800.00	91.00	329.81	6,119.67	5,901.72	-4,002.84	14,449,022.63	1,719,148.80	39.78624864	-80.71973709	
12,900.00	91.00	329.81	6,117.92	5,988.15	-4,053.12	14,449,109.05	1,719,098.52	39.78648641	-80.71991510	
13,000.00	91.00	329.81	6,116.18	6,074.57	-4,103.40	14,449,195.48	1,719,048.24	39.78672418	-80.72009312	
13,100.00	91.00	329.81	6,114.44	6,160.99	-4,153.68	14,449,281.90	1,718,997.96	39.78696195	-80.72027114	
13,200.00	91.00	329.81	6,112.70	6,247.42	-4,203.96	14,449,368.32	1,718,947.68	39.78719972	-80.72044916	
13,300.00	91.00	329.81	6,110.95	6,333.84	-4,254.24	14,449,454.75	1,718,897.40	39.78743750	-80.72062718	
13,400.00	91.00	329.81	6,109.21	6,420.26	-4,304.52	14,449,541.17	1,718,847.12	39.78767527	-80.72080520	
13,500.00	91.00	329.81	6,107.47	6,506.68	-4,354.80	14,449,627.59	1,718,796.84	39.78791304	-80.72098322	
13,600.00	91.00	329.81	6,105.72	6,593.11	-4,405.08	14,449,714.02	1,718,746.56	39.78815081	-80.72116125	
13,700.00	91.00	329.81	6,103.98	6,679.53	-4,455.36	14,449,800.44	1,718,696.28	39.78838858	-80.72133928	
13,800.00	91.00	329.81	6,102.24	6,765.95	-4,505.64	14,449,886.86	1,718,646.00	39.78862635	-80.72151730	
13,900.00	91.00	329.81	6,100.50	6,852.38	-4,555.92	14,449,973.28	1,718,595.72	39.78886412	-80.72169533	
14,000.00	91.00	329.81	6,098.75	6,938.80	-4,606.20	14,450,059.71	1,718,545.44	39.78910188	-80.72187336	
14,100.00	91.00	329.81	6,097.01	7,025.22	-4,656.48	14,450,146.13	1,718,495.16	39.78933965	-80.72205139	
14,200.00	91.00	329.81	6,095.27	7,111.64	-4,706.76	14,450,232.55	1,718,444.88	39.78957742	-80.72222942	
14,300.00	91.00	329.81	6,093.53	7,198.07	-4,757.04	14,450,318.98	1,718,394.60	39.78981519	-80.72240746	
14,400.00	91.00	329.81	6,091.78	7,284.49	-4,807.32	14,450,405.40	1,718,344.32	39.79005296	-80.72258549	
14,500.00	91.00	329.81	6,090.04	7,370.91	-4,857.60	14,450,491.82	1,718,294.05	39.79029073	-80.72276353	
14,600.00	91.00	329.81	6,088.30	7,457.34	-4,907.88	14,450,578.24	1,718,243.77	39.79052849	-80.72294156	
14,700.00	91.00	329.81	6,086.56	7,543.76	-4,958.15	14,450,664.67	1,718,193.49	39.79076626	-80.72311960	
14,800.00	91.00	329.81	6,084.81	7,630.18	-5,008.43	14,450,751.09	1,718,143.21	39.79100403	-80.72329764	
14,900.00	91.00	329.81	6,083.07	7,716.61	-5,058.71	14,450,837.51	1,718,092.93	39.79124179	-80.72347568	
15,000.00	91.00	329.81	6,081.33	7,803.03	-5,108.99	14,450,923.94	1,718,042.65	39.79147956	-80.72365372	



Planning Report - Geographic

RECEIVED
Office of Oil and Gas
FEB 19 2021
WV Department of
Environmental Protection

Database: DB_Jul2216dt_v14 It
Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia.
Site: Knob Creek
Well: Knob Creek N-02HM (slot B)
Wellbore: Original Hole
Design: rev2

Local Co-ordinate Reference: Well Knob Creek N-02HM (slot B)
TVD Reference: GL=737 @ 737.00usft
MD Reference: GL=737 @ 737.00usft
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
15,100.00	91.00	329.81	6,079.59	7,889.45	-5,159.27	14,451,010.36	1,717,992.37	39.79171733	-80.72383176
15,200.00	91.00	329.81	6,077.84	7,975.87	-5,209.55	14,451,096.78	1,717,942.09	39.79195509	-80.72400981
15,300.00	91.00	329.81	6,076.10	8,062.30	-5,259.83	14,451,183.21	1,717,891.81	39.79219286	-80.72418785
15,400.00	91.00	329.81	6,074.36	8,148.72	-5,310.11	14,451,269.63	1,717,841.53	39.79243062	-80.72436590
15,500.00	91.00	329.81	6,072.62	8,235.14	-5,360.39	14,451,356.05	1,717,791.25	39.79266839	-80.72454395
15,600.00	91.00	329.81	6,070.87	8,321.57	-5,410.67	14,451,442.47	1,717,740.97	39.79290615	-80.72472200
15,700.00	91.00	329.81	6,069.13	8,407.99	-5,460.95	14,451,528.90	1,717,690.69	39.79314392	-80.72490005
15,800.00	91.00	329.81	6,067.39	8,494.41	-5,511.23	14,451,615.32	1,717,640.41	39.79338168	-80.72507810
15,900.00	91.00	329.81	6,065.65	8,580.83	-5,561.51	14,451,701.74	1,717,590.13	39.79361944	-80.72525615
16,000.00	91.00	329.81	6,063.90	8,667.26	-5,611.79	14,451,788.17	1,717,539.85	39.79385721	-80.72543420
16,100.00	91.00	329.81	6,062.16	8,753.68	-5,662.07	14,451,874.59	1,717,489.57	39.79409497	-80.72561226
16,200.00	91.00	329.81	6,060.42	8,840.10	-5,712.35	14,451,961.01	1,717,439.29	39.79433273	-80.72579032
16,300.00	91.00	329.81	6,058.68	8,926.53	-5,762.63	14,452,047.44	1,717,389.01	39.79457050	-80.72596837
16,400.00	91.00	329.81	6,056.93	9,012.95	-5,812.91	14,452,133.86	1,717,338.73	39.79480826	-80.72614643
16,500.00	91.00	329.81	6,055.19	9,099.37	-5,863.19	14,452,220.28	1,717,288.45	39.79504602	-80.72632449
16,600.00	91.00	329.81	6,053.45	9,185.80	-5,913.47	14,452,306.70	1,717,238.17	39.79528378	-80.72650255
16,700.00	91.00	329.81	6,051.71	9,272.22	-5,963.75	14,452,393.13	1,717,187.89	39.79552155	-80.72668062
16,800.00	91.00	329.81	6,049.96	9,358.64	-6,014.03	14,452,479.55	1,717,137.61	39.79575931	-80.72685868
16,900.00	91.00	329.81	6,048.22	9,445.06	-6,064.31	14,452,565.97	1,717,087.34	39.79599707	-80.72703674
17,000.00	91.00	329.81	6,046.48	9,531.49	-6,114.59	14,452,652.40	1,717,037.06	39.79623483	-80.72721481
17,100.00	91.00	329.81	6,044.74	9,617.91	-6,164.86	14,452,738.82	1,716,986.78	39.79647259	-80.72739288
17,200.00	91.00	329.81	6,042.99	9,704.33	-6,215.14	14,452,825.24	1,716,936.50	39.79671035	-80.72757095
17,300.00	91.00	329.81	6,041.25	9,790.76	-6,265.42	14,452,911.66	1,716,886.22	39.79694811	-80.72774902
17,400.00	91.00	329.81	6,039.51	9,877.18	-6,315.70	14,452,998.09	1,716,835.94	39.79718587	-80.72792709
17,500.00	91.00	329.81	6,037.77	9,963.60	-6,365.98	14,453,084.51	1,716,785.66	39.79742363	-80.72810516
17,600.00	91.00	329.81	6,036.02	10,050.03	-6,416.26	14,453,170.93	1,716,735.38	39.79766139	-80.72828323
17,700.00	91.00	329.81	6,034.28	10,136.45	-6,466.54	14,453,257.36	1,716,685.10	39.79789915	-80.72846131
17,800.00	91.00	329.81	6,032.54	10,222.87	-6,516.82	14,453,343.78	1,716,634.82	39.79813690	-80.72863938
17,900.00	91.00	329.81	6,030.80	10,309.29	-6,567.10	14,453,430.20	1,716,584.54	39.79837466	-80.72881746
18,000.00	91.00	329.81	6,029.05	10,395.72	-6,617.38	14,453,516.63	1,716,534.26	39.79861242	-80.72899554
18,100.00	91.00	329.81	6,027.31	10,482.14	-6,667.66	14,453,603.05	1,716,483.98	39.79885018	-80.72917362
18,200.00	91.00	329.81	6,025.57	10,568.56	-6,717.94	14,453,689.47	1,716,433.70	39.79908794	-80.72935170
18,300.00	91.00	329.81	6,023.82	10,654.99	-6,768.22	14,453,775.89	1,716,383.42	39.79932569	-80.72952978
18,400.00	91.00	329.81	6,022.08	10,741.41	-6,818.50	14,453,862.32	1,716,333.14	39.79956345	-80.72970786
18,500.00	91.00	329.81	6,020.34	10,827.83	-6,868.78	14,453,948.74	1,716,282.86	39.79980121	-80.72988595
18,600.00	91.00	329.81	6,018.60	10,914.25	-6,919.06	14,454,035.16	1,716,232.58	39.80003896	-80.73006403
18,700.00	91.00	329.81	6,016.85	11,000.68	-6,969.34	14,454,121.59	1,716,182.30	39.80027672	-80.73024212
18,800.00	91.00	329.81	6,015.11	11,087.10	-7,019.62	14,454,208.01	1,716,132.02	39.80051447	-80.73042021
18,900.00	91.00	329.81	6,013.37	11,173.52	-7,069.90	14,454,294.43	1,716,081.74	39.80075223	-80.73059830
19,000.00	91.00	329.81	6,011.63	11,259.95	-7,120.18	14,454,380.85	1,716,031.46	39.80098998	-80.73077639
19,100.00	91.00	329.81	6,009.88	11,346.37	-7,170.46	14,454,467.28	1,715,981.18	39.80122774	-80.73095448
19,200.00	91.00	329.81	6,008.14	11,432.79	-7,220.74	14,454,553.70	1,715,930.90	39.80146549	-80.73113257
19,300.00	91.00	329.81	6,006.40	11,519.22	-7,271.02	14,454,640.12	1,715,880.62	39.80170325	-80.73131067
19,400.00	91.00	329.81	6,004.66	11,605.64	-7,321.30	14,454,726.55	1,715,830.35	39.80194100	-80.73148876
19,500.00	91.00	329.81	6,002.91	11,692.06	-7,371.58	14,454,812.97	1,715,780.07	39.80217876	-80.73166686
19,600.00	91.00	329.81	6,001.17	11,778.48	-7,421.85	14,454,899.39	1,715,729.79	39.80241651	-80.73184496
19,667.24	91.00	329.81	6,000.00	11,836.59	-7,455.66	14,454,957.50	1,715,695.98	39.80257637	-80.73196471

PBHL/TD 19667.24 MD 6000.00 TVD



Planning Report - Geographic

Database:	DB_Jul2216dt_v14 It	Local Co-ordinate Reference:	Well Knob Creek N-02HM (slot B)
Company:	Tug Hill Operating LLC	TVD Reference:	GL=737 @ 737.00usft
Project:	Marshall County, West Virginia.	MD Reference:	GL=737 @ 737.00usft
Site:	Knob Creek	North Reference:	Grid
Well:	Knob Creek N-02HM (slot B)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Knob Creek N-02HM BH - plan hits target center - Point	0.00	0.00	6,000.00	11,836.59	-7,455.66	14,454,957.50	1,715,695.98	39.80257637	-80.73196471
Knob Creek N-02HM LP - plan misses target center by 43.16usft at 6665.33usft MD (6226.57 TVD, 599.96 N, -918.36 E) - Point	0.00	0.00	6,227.00	578.27	-955.66	14,443,699.17	1,722,195.98	39.77160232	-80.70895175
Knob Creek N-02HM LP - plan misses target center by 0.06usft at 6640.19usft MD (6227.00 TVD, 578.23 N, -905.71 E) - Point	0.00	0.01	6,227.00	578.27	-905.66	14,443,699.17	1,722,245.98	39.77160188	-80.70877380

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
1,400.00	1,400.00	0.00	0.00	KOP Begin 2°/100' build
1,600.00	1,599.84	1.21	-6.87	Begin 4.00° tangent
4,707.73	4,700.00	38.86	-220.36	Begin 3°/100' build/turn
5,197.90	5,179.29	62.55	-313.48	Begin 18.68° tangent section
5,773.94	5,724.97	110.95	-491.55	Begin 8°/100' build/turn
6,215.86	6,087.90	259.72	-679.49	Begin 10°/100' build/turn
6,640.20	6,227.00	578.24	-905.72	Begin 91.00° lateral section
19,667.24	6,000.00	11,836.59	-7,455.66	PBHL/TD 19667.24 MD 6000.00 TVD

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FEB 19 2021
WV Department of
Environmental Protection

**KNOB CREEK N LEASE
WELL 2HM
TUG HILL OPERATING**

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

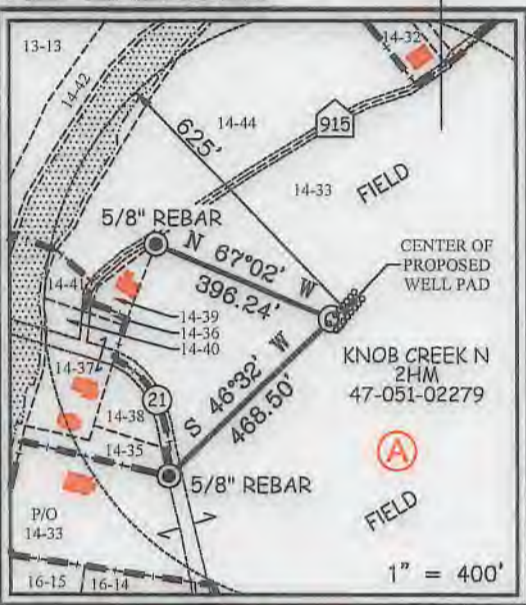
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'83 S.P.C.(FT) N. 464,848.89 E. 1,829,646.16
 NAD'83 GEO. LAT-(N) 39.770006 LONG-(W) 80.705557
 NAD'83 UTM (M) N. 4,402,272.06 E. 525,217.67
LANDING POINT
 NAD'83 S.P.C.(FT) N. 465,442.4 E. 1,828,750.0
 NAD'83 GEO. LAT-(N) 39.771602 LONG-(W) 80.708774
 NAD'83 UTM (M) N. 4,402,448.3 E. 524,941.6
BOTTOM HOLE
 NAD'83 S.P.C.(FT) N. 476,812.4 E. 1,622,386.8
 NAD'83 GEO. LAT-(N) 39.802576 LONG-(W) 80.731965
 NAD'83 UTM (M) N. 4,405,879.9 E. 522,945.2

T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°42'30"

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. WERE FOUND WITHIN 525' OF THE CENTER OF PROPOSED WELL PAD.
- SEE REFERENCES FOR DWELLINGS LOCATED WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.
- BASED ON WV DOT COUNTY ROUTE 74 IS A 40' STRIP OF LAND ACQUIRED IN NUMEROUS DEEDS.

REFERENCES



MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-6-1.2	CONSOLIDATION COAL COMPANY, MURRAY ENERGY	2.222
9-6-3.1	CONSOLIDATION COAL COMPANY, MURRAY ENERGY	10.00
9-10-7	DAVID & PAMELA SCHIMMEL	1.00
9-10-8	BRENT ALLEN CONNER	2.00
9-10-16	WILLIAM D. MCCONNELL	0.859
9-11-2.1	KENNETH P. GATEWOOD, ET UX	0.308
9-11-2.2	GERALD PADLOW, ET UX	0.291
9-13-9	ARTHUR L. MOORE	50 X 100 SQ. FT.
9-13-12.1	ROBERT T. & BARBARA A. ANKROM	2.632
9-13-13.1	THOMAS JOHN FOX	0.827
9-13-14	MARGARET FOX - LIFE	3.00
9-13-16	IVAN H. & MARGARET A. RICHMOND	21.354
9-13-22.1	HENRY, JR. & BARBARA DICK	11.82
9-13-22.2	EUGENE A. SCHERRER	0.923
9-13-25	MARGARET K. FOX - LIFE	1.52
9-14-1.2	KENNETH N. & TERESA A. SMERTNECK	1.02
9-14-11.3	PATRICK J. SCHELLHASE - TRUST	23.424
9-14-28	CHARLES R. SCHELLHASE, ET UX	3.029
9-14-29	ANDREW FASOULETOS, ET UX	0.209
9-14-29.1	ANDREW FASOULETOS, ET UX	1.171
9-14-30	WILLIAM C. GROFT, ET UX	0.35
9-14-31	WILFORD F. NELSON, JR., ET UX	0.954
9-14-32	TWILA C. COFFIELD	0.583
9-14-32.1	TWILA C. COFFIELD	0.184
9-14-35	PAUL G. FOX	0.338
9-14-36	MARGARET FOX - LIFE	1600 SQ. FT.
9-14-37	MARGARET FOX - LIFE	LOT
9-14-38	MARGARET FOX - LIFE	0.631
9-14-40	MARGARET FOX - LIFE	19,560 SQ. FT.
9-14-41	MARGARET FOX - LIFE	9163 SQ. FT.
9-14-43	JAMES G. FOX	0.66
9-14-44.1	GEORGE R. TAYLOR, ET UX	4.423
9-14-45	GEORGE R. TAYLOR, ET UX	10.98
9-14-46	MARGARET K. FOX - LIFE	13.888
9-14-47	MICHAEL L. & CHERYL J. ACREE	0.355
9-14-48	MICHAEL L. & CHERYL J. ACREE	0.473
9-14-49	MICHAEL L. & CHERYL J. ACREE	0.118
9-14-50	RONALD MARSH	0.707
9-14-51	GEORGE R. TAYLOR, ET UX	1.621
9-14-52	JAMES E. PEELMAN	0.439
9-14-53	JAMES E. PEELMAN	0.555
9-14-54	RICHARD L. HARVETH, ET UX	1.649
9-16-14	LYNN CAMP METHODIST CHURCH	0.762
9-16-15	RONALD R. YOUNG, ET UX - LIFE	52.02
9-16-15.1	ERIC J. YOUNG	1.98



12 Vashorn Drive | P.O. Box 190 | Glenville, WV 26351 | 304.462.5634
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.546.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5396
 slswv.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. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE JULY 27, 20 18
 REVISED 09-30-2019, 08-28-2020, 10-29-2020
 OPERATORS WELL NO. KNOB CREEK N-2HM
 API WELL NO. 47 - 051 - 02279
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8789P2HMR3.dwg
KNOB CREEK N-2HM-REV2
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

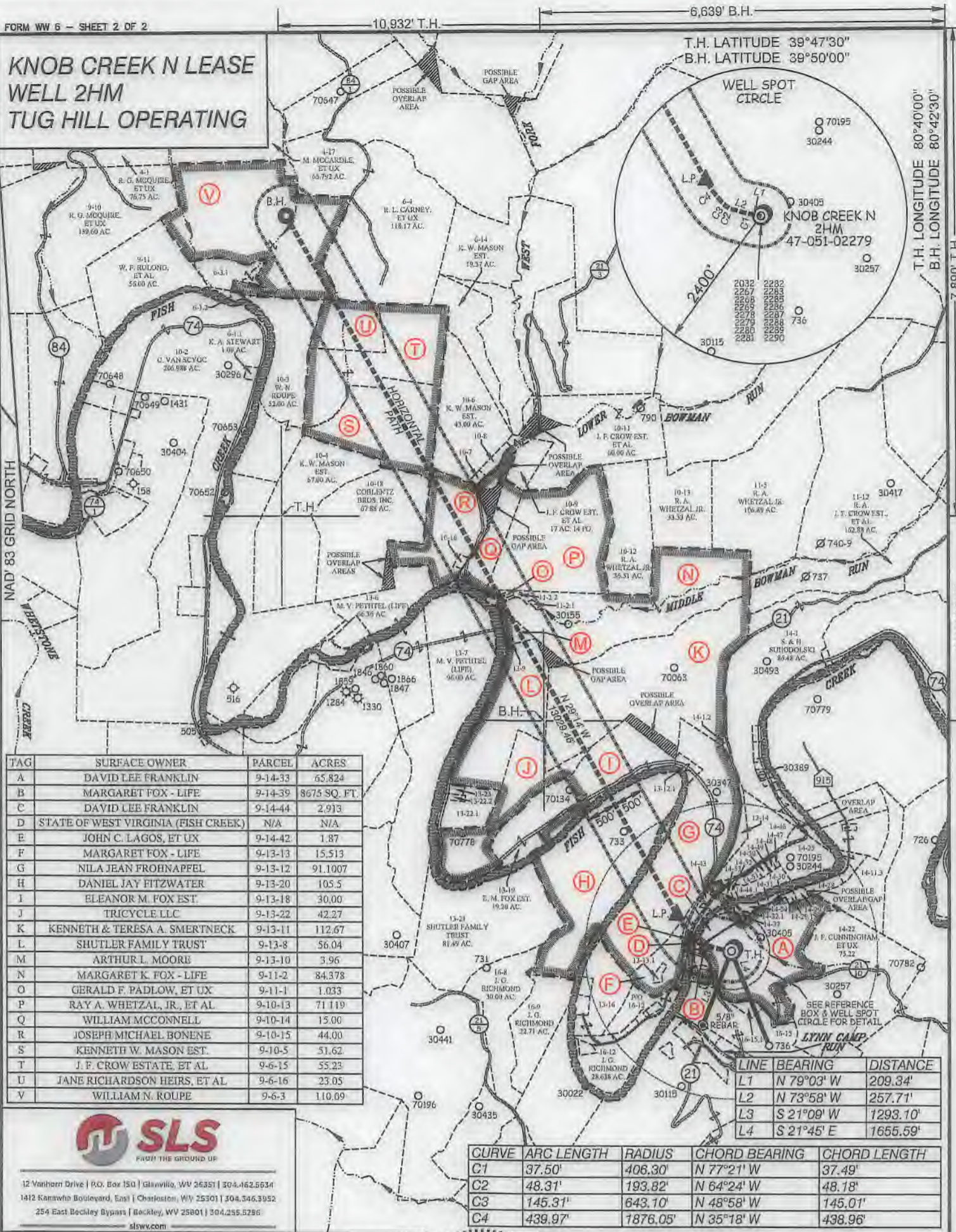
STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW
 LOCATION:
 ELEVATION 737.50' WATERSHED FISH CREEK (HUC 10)
 DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'
 SURFACE OWNER DAVID LEE FRANKLIN ACREAGE 65.824±
 ROYALTY OWNER DAVID LEE FRANKLIN, ET AL - SEE WW-6A1 ACREAGE 65.824±
 PROPOSED WORK:
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
 PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH TVD: 6,343' / TMD: 19,667'

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

COUNTY NAME PERMIT

Knob Creek N Lease Well 2HM Tug Hill Operating



TAG	SURFACE OWNER	PARCEL	ACRES
A	DAVID LEE FRANKLIN	9-14-33	65.824
B	MARGARET FOX - LIFE	9-14-39	8675 SQ. FT.
C	DAVID LEE FRANKLIN	9-14-44	2.913
D	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
E	JOHN C. LAGOS, ET UX	9-14-42	1.87
F	MARGARET FOX - LIFE	9-13-13	15.513
G	NILA JEAN FROHNAPPEL	9-13-12	91.1007
H	DANIEL JAY FITZWATER	9-13-20	105.5
J	ELEANOR M. FOX EST.	9-13-18	30.00
J	TRICYCLE LLC	9-13-22	42.27
K	KENNETH & TERESA A. SMERTNECK	9-13-11	112.67
L	SHUTLER FAMILY TRUST	9-13-8	56.04
M	ARTHUR L. MOORE	9-13-10	3.96
N	MARGARET K. FOX - LIFE	9-11-2	84.378
O	GERALD F. PADLOW, ET UX	9-11-1	1.033
P	RAY A. WHETZAL, JR., ET AL	9-10-13	71.119
Q	WILLIAM MCCONNELL	9-10-14	15.00
R	JOSEPH MICHAEL BONENE	9-10-15	44.00
S	KENNETH W. MASON EST.	9-10-5	51.62
T	J. F. CROW ESTATE, ET AL	9-6-15	55.23
U	JANE RICHARDSON HEIRS, ET AL	9-6-16	23.05
V	WILLIAM N. ROUPE	9-6-3	110.09

LINE	BEARING	DISTANCE
L1	N 79°03' W	209.34'
L2	N 73°58' W	257.71'
L3	S 21°09' W	1293.10'
L4	S 21°45' E	1655.59'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	37.50'	406.30'	N 77°21' W	37.49'
C2	48.31'	193.82'	N 64°24' W	48.18'
C3	145.31'	643.10'	N 48°58' W	145.01'
C4	439.97'	1876.05'	N 35°18' W	438.96'



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 slsww.com



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

P.S. 849 *C. Victor Moyers*

LEGEND

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

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'83 S.P.C.(FT) N. 464,848.89 E. 1,629,646.16
 NAD'83 GEO. LAT-(N) 39.770008 LONG-(W) 80.705557
 NAD'83 UTM (M) N. 4,402,272.06 E. 525,217.67
LANDING POINT
 NAD'83 S.P.C.(FT) N. 485,442.4 E. 1,628,750.0
 NAD'83 GEO. LAT-(N) 39.771802 LONG-(W) 80.708774
 NAD'83 UTM (M) N. 4,402,448.9 E. 524,941.6
BOTTOM HOLE
 NAD'83 S.P.C.(FT) N. 476,812.4 E. 1,622,386.8
 NAD'83 GEO. LAT-(N) 39.802576 LONG-(W) 80.731965
 NAD'83 UTM (M) N. 4,405,879.9 E. 522,945.2

SCALE 1" = 2000' FILE NO. 8789P2HMR3.dwg
 KNOB CREEK N-2HM-REV2
 DATE JULY 27, 20 18
 REVISED 09-30-2019, 08-28-2020, 10-29-2020
 OPERATORS WELL NO. KNOB CREEK N-2HM
 API WELL NO. 47 - 051 - 02279
 NO. STATE COUNTY PERMIT

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

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

COUNTY NAME PERMIT



Well Site Safety Plan

Tug Hill Operating, LLC

JM
10/29/2020

Well Name: Knob Creek N-2HM

Pad Location: Knob Creek Pad

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

Northing: 4,402,272.06

Easting: 525,217.67

October 2020

RECEIVED
Office of Oil and Gas

FEB 19 2021

WV Department of
Environmental Protection

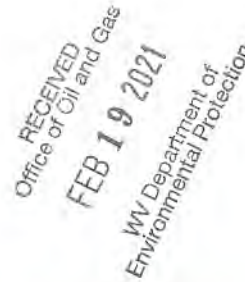
**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

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

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

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



***Co-tenancy utilization – At least 7 mineral owners in tract. At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act.**

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

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

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

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

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

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*47051.219.1	9-14-33	A	DAVID LEE FRANKLIN	TH EXPLORATION LLC	1/8+	874 312	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.219.1	9-14-39	B	DAVID LEE FRANKLIN	TH EXPLORATION LLC	1/8+	937 385	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.219.1	9-14-44	C	DAVID LEE FRANKLIN	TH EXPLORATION LLC	1/8+	937 385	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23458	FISH CREEK	D	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	TH EXPLORATION LLC	1/8+	1019 373	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19538	9-14-42	E	JOHN C LAGOS AND CYNTHIA M LAGOS	TH EXPLORATION LLC	1/8+	936 531	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19565	9-14-42	E	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS	TH EXPLORATION LLC	1/8+	947 566	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18732	9-13-13	F	SHERRILL M LEAVERS AND JAMES H LEAVERS	TH EXPLORATION LLC	1/8+	938 245	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18734	9-13-13	F	KENNETH EMERY AND MARTHA L EMERY	TH EXPLORATION LLC	1/8+	938 247	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18735	9-13-13	F	DIANE E AND DENNIS P FOWLER	TH EXPLORATION LLC	1/8+	938 243	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18736	9-13-13	F	DOROTHY JEAN HUSTON AND KENNETH HUSTON	TH EXPLORATION LLC	1/8+	938 221	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19401	9-13-13	F	JOYCE A WILSON AND D MURPHY WILSON	TH EXPLORATION LLC	1/8+	940 346	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19402	9-13-13	F	HOWARD G AND CLARA J RICHMOND	TH EXPLORATION LLC	1/8+	940 348	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19474	9-13-13	F	EDGAR ALLEN RICHMOND	TH EXPLORATION LLC	1/8+	941 318	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19475	9-13-13	F	ARDETH L PIPER AND PAUL E PIPER	TH EXPLORATION LLC	1/8+	941 316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19481	9-13-13	F	WILLIAM EMERY	TH EXPLORATION LLC	1/8+	941 314	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19674	9-13-13	F	DEBRA SHORT AND RODNEY SHORT	TH EXPLORATION LLC	1/8+	944 337	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19675	9-13-13	F	BARBARA C LEISHMAN AND DANNY K LEISHMAN	TH EXPLORATION LLC	1/8+	944 432	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19714	9-13-13	F	DAVID A ROBINSON AND PATRICIA A ROBINSON	TH EXPLORATION LLC	1/8+	944 434	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19868	9-13-13	F	TERRI J STREAM AND JOHN T STREAM	TH EXPLORATION LLC	1/8+	945 580	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19869	9-13-13	F	SHIRLEY J DUFFY	TH EXPLORATION LLC	1/8+	945 578	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19870	9-13-13	F	DORIS L MASTERS AND ROY N MASTERS	TH EXPLORATION LLC	1/8+	945 576	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21027	9-13-13	F	MARY D LING	TH EXPLORATION LLC	1/8+	951 126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21087	9-13-13	F	THOMAS E DODD AND ANITA M DODD	TH EXPLORATION LLC	1/8+	951 124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21088	9-13-13	F	DONALD E WEST AND MARTHA E WEST	TH EXPLORATION LLC	1/8+	951 122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21104	9-13-13	F	LARRY W BAILEY AND MARSHA K BAILEY	TH EXPLORATION LLC	1/8+	951 131	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21105	9-13-13	F	THE CALVIN O WILLIAMS & PATSY S WILLIAMS REVOCABLE LIVING TRUST	TH EXPLORATION LLC	1/8+	951 137	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21107	9-13-13	F	RONALD L WEST	TH EXPLORATION LLC	1/8+	951 135	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21108	9-13-13	F	SANDRA A WHITE	TH EXPLORATION LLC	1/8+	951 140	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21491	9-13-13	F	DARLENA BRY AND LEE V BRY	TH EXPLORATION LLC	1/8+	957 290	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21507	9-13-13	F	DONALD FURLONG AND LISA K FURLONG	TH EXPLORATION LLC	1/8+	951 128	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21838	9-13-13	F	FIRST PRESBYTERIAN CHURCH OF CLARKSBURG	TH EXPLORATION LLC	1/8+	959 625	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21956	9-13-13	F	THEODORE F MASLOWSKI AND ANITA MASLOWSKI	TH EXPLORATION LLC	1/8+	960 13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21963	9-13-13	F	LINDA R JANSSEN AND DENNIS D JANSSEN	TH EXPLORATION LLC	1/8+	960 28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21964	9-13-13	F	WILLIAM R DODD AND SHIRLEY A DODD	TH EXPLORATION LLC	1/8+	960 30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21983	9-13-13	F	OPAL V BUCKMASTER	TH EXPLORATION LLC	1/8+	953 497	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22113	9-13-13	F	SYLVIA D WEST	TH EXPLORATION LLC	1/8+	962 224	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22117	9-13-13	F	DEBORAH L WROBEL AND GREGORY G WROBEL	TH EXPLORATION LLC	1/8+	961 354	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22119	9-13-13	F	JAMES S RICHMOND	TH EXPLORATION LLC	1/8+	953 499	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22121	9-13-13	F	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	TH EXPLORATION LLC	1/8+	961 352	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22377	9-13-13	F	MONTY W BAILEY AND MARTHA E BAILEY	TH EXPLORATION LLC	1/8+	962 226	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22378	9-13-13	F	KEVIN R RICHMOND AND VALERIE L RICHMOND	TH EXPLORATION LLC	1/8+	962 228	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22458	9-13-13	F	JAMES RICHMOND AND CINDY L RICHMOND	TH EXPLORATION LLC	1/8+	963 132	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22463	9-13-13	F	STEVEN R MCCLINTOCK	TH EXPLORATION LLC	1/8+	964 458	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22517	9-13-13	F	PHYLLIS M RADER	TH EXPLORATION LLC	1/8+	964 456	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22545	9-13-13	F	JANICE L MASLOWSKI AND FLOYD F MECHLING	TH EXPLORATION LLC	1/8+	968 9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23140	9-13-13	F	MELISSA JENKINS	TH EXPLORATION LLC	1/8+	984 86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23144	9-13-13	F	MARGARET A WALTERS	TH EXPLORATION LLC	1/8+	984 84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23145	9-13-13	F	WILLIAM BENNETT	TH EXPLORATION LLC	1/8+	984 82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23146	9-13-13	F	RETA I GRIFFIN AND MARTIN A GRIFFIN	TH EXPLORATION LLC	1/8+	984 80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23154	9-13-13	F	CAROLYN FAY BENNETT	TH EXPLORATION LLC	1/8+	984 78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23188	9-13-13	F	LISA MCMANUS	TH EXPLORATION LLC	1/8+	984 530	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23299	9-13-13	F	PATRICIA L BECK	TH EXPLORATION LLC	1/8+	988 19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23312	9-13-13	F	DONNA M CARTER	TH EXPLORATION LLC	1/8+	988 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Environmental Protection

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
10*23559	9-13-13	F	ROBERT TOOMBS WRIGHT MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AT LITEM	TH EXPLORATION LLC	1/8+	1009 249	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*23577	9-13-13	F	JOHN WILLIAM MACKENZIE MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM	TH EXPLORATION LLC	1/8+	1009 253	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*23578	9-13-13	F	DUDLEY PORTER THAYER MONTAGUE JR BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM	TH EXPLORATION LLC	1/8+	1009 251	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*24740	9-13-13	F	*RICARDO THOMAS MAYA	TH EXPLORATION LLC	1/8+	1025 614	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*25442	9-13-13	F	SARAH BETH PREWITT ET AL	TH EXPLORATION LLC	1/8+	1033 297	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*27947	9-13-13	F	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063 568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*24858	9-13-12	G	NILA JEAN FROHNAPFEL	TH EXPLORATION LLC	1/8+	1028 119	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*17193	9-13-20	H	JOHN P. ICARD	CHESAPEAKE APPALACHIA LLC	1/8+	716 12	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 29/325	Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC: 33/424	Cert of Merger of SWN Exchange Titleholder LLC to SWN Production Company LLC: 19/624	Chesapeake Appalachia LLC to SWN Production Co. LLC: 33/110	SWN Production Company LLC to TH Exploration LLC: 41/256	Statoil USA Onshore Properties Inc to TH Exploration LLC: 41/238
10*18351	9-13-20	H	MARK ALLEN LENENBERG	TH EXPLORATION LLC	1/8+	931 399	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18456	9-13-20	H	DANIEL J FITZWATER	TH EXPLORATION LLC	1/8+	933 180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18469	9-13-20	H	THOMAS RICHMOND YOUNG ANITA A YOUNG	TH EXPLORATION LLC	1/8+	933 151	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18470	9-13-20	H	CHERYL STEFFEN AND GREGORY STEFFEN	TH EXPLORATION LLC	1/8+	933 148	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18471	9-13-20	H	MORGAN C GUMP AND MARY J GUMP	TH EXPLORATION LLC	1/8+	942 210	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18472	9-13-20	H	LEIGH A DURRAH	TH EXPLORATION LLC	1/8+	933 136	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18524	9-13-20	H	DAVID A GUMP AND BETTY J GUMP	TH EXPLORATION LLC	1/8+	933 597	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18527	9-13-20	H	ANN TURNER YOUNG SHRIVER	TH EXPLORATION LLC	1/8+	933 589	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18967	9-13-20	H	NATALIE GIBBS	TH EXPLORATION LLC	1/8+	941 266	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*19349	9-13-20	H	MARJOLEA A DEBOLD	TH EXPLORATION LLC	1/8+	932 409	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*19516	9-13-20	H	JAMES E NICHOLAS AND BEVERLY D NICHOLAS	TH EXPLORATION LLC	1/8+	944 366	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*19883	9-13-20	H	JILL A WILLIAMS AND TERRY L WILLIAMS	TH EXPLORATION LLC	1/8+	948 547	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*19885	9-13-20	H	NANCY L RICHMOND AND GREGORY RICHMOND	TH EXPLORATION LLC	1/8+	948 549	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*19886	9-13-20	H	MARK A RICHMOND & LISA D RICHMOND	TH EXPLORATION LLC	1/8+	948 543	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*19887	9-13-20	H	ELIZABETH S SCOVELL & JONATHAN A SCOVELL	TH EXPLORATION LLC	1/8+	948 545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*19892	9-13-20	H	REX B FISHER AND DEBORAH FISHER	TH EXPLORATION LLC	1/8+	948 292	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*21012	9-13-20	H	TIMOTHY R RICHMOND II AND BRANDI N RICHMOND	TH EXPLORATION LLC	1/8+	951 149	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*21014	9-13-20	H	JAMES P MCLAUGHLIN & ALICE W MCLAUGHLIN	TH EXPLORATION LLC	1/8+	946 29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*21015	9-13-20	H	ROBERT L MCLAUGHLIN	TH EXPLORATION LLC	1/8+	946 339	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*21485	9-13-20	H	ROBERT R FISHER AND AUDREY L IRVIN	TH EXPLORATION LLC	1/8+	942 572	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*21504	9-13-20	H	PAULETA LINDA CHEATHAM AND CARL WOHLERS	TH EXPLORATION LLC	1/8+	951 142	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*21598	9-13-20	H	THE MILDRED Y MILLS TRUST JULY 5TH 2007	TH EXPLORATION LLC	1/8+	954 332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*21709	9-13-20	H	THOMAS YOUNG AND JANE CLAIRE YOUNG	TH EXPLORATION LLC	1/8+	959 350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*21710	9-13-20	H	PENELOPE A JONES	TH EXPLORATION LLC	1/8+	959 355	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*22863	9-13-20	H	JAMES H CAMPBELL	TH EXPLORATION LLC	1/8+	977 55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*22864	9-13-20	H	MARGARET R DONOFRIO	TH EXPLORATION LLC	1/8+	977 53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*23164	9-13-20	H	J C RICHMOND AND MARY RICHMOND	TG STILES	1/8+	63 154	N/A	N/A	Hope Natural Gas Company to AM Snider and Dane M Snider dba Hundred Gas Company: 446/186	Hundred Gas Company to Carl D Perkins: 451/132 & 451/418	Carl D Perkins to Perkins Oil and Gas Inc: 583/72	Perkins Oil & Gas Inc to Stone Energy Corporation: 26/322	Stone Energy Corporation to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*23190	9-13-20	H	COUNTY OF MARSHALL GENERAL RECEIVER FOR MARSHALL COUNTY	TH EXPLORATION LLC	1/8+	979 191	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*27947	9-13-20	H	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063 568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18351	9-13-18	I	MARK ALLEN LENENBERG	TH EXPLORATION LLC	1/8+	931 399	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18469	9-13-18	I	THOMAS RICHMOND YOUNG ANITA A YOUNG	TH EXPLORATION LLC	1/8+	933 151	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18470	9-13-18	I	CHERYL STEFFEN AND GREGORY STEFFEN	TH EXPLORATION LLC	1/8+	933 148	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*18527	9-13-18	I	ANN TURNER YOUNG SHRIVER	TH EXPLORATION LLC	1/8+	933 589	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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10*18694	9-13-18	I	PEGGY A GOULDSBERRY AND JOSEPH W GOULDSBERRY	TH EXPLORATION LLC	1/8+	938 283	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18695	9-13-18	I	JOSEPH S EMERY	TH EXPLORATION LLC	1/8+	938 572	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18696	9-13-18	I	CHARLES E EMERY AND DEBBIE EMERY	TH EXPLORATION LLC	1/8+	938 280	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18697	9-13-18	I	CHRISTAL L RINE AND JOHN O RINE	TH EXPLORATION LLC	1/8+	938 499	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18698	9-13-18	I	LORETTA K CONNER AND OBERT L CONNER	TH EXPLORATION LLC	1/8+	938 490	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18699	9-13-18	I	JAMIE A LANTZ AND JAMES L LANTZ	TH EXPLORATION LLC	1/8+	938 286	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18700	9-13-18	I	NOVA PAYNE	TH EXPLORATION LLC	1/8+	938 488	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18701	9-13-18	I	SHERRI J ANDERSON AND GEORGE C ANDERSON	TH EXPLORATION LLC	1/8+	938 277	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18702	9-13-18	I	JOHN W NICE JR	TH EXPLORATION LLC	1/8+	938 496	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24467	9-13-18	I	GREGORY W FRITZMAN	TH EXPLORATION LLC	1/8+	1059 232	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18714	9-13-18	I	LARRY J RICHARDSON AND D MARGARET RICHARDSON	TH EXPLORATION LLC	1/8+	938 543	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18715	9-13-18	I	MARY ANN CROW RICHARDSON	TH EXPLORATION LLC	1/8+	938 546	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18716	9-13-18	I	MARCIA J MECHLING AND DENNIS J MECHLING	TH EXPLORATION LLC	1/8+	938 549	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18717	9-13-18	I	RACHEL E AND ALLAN L SHEASLEY	TH EXPLORATION LLC	1/8+	938 552	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18718	9-13-18	I	PEGGY L STEWART AND DEWEY R STEWART	TH EXPLORATION LLC	1/8+	938 555	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18719	9-13-18	I	DONNA M CROW	TH EXPLORATION LLC	1/8+	938 504	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18829	9-13-18	I	CAROL A SAVOY	TH EXPLORATION LLC	1/8+	937 620	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18958	9-13-18	I	NANCY L GABLER	TH EXPLORATION LLC	1/8+	941 259	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18959	9-13-18	I	SALLY L DUNMIRE AND DAVID W DUNMIRE	TH EXPLORATION LLC	1/8+	941 270	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18967	9-13-18	I	NATALIE GIBBS	TH EXPLORATION LLC	1/8+	941 266	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19461	9-13-18	I	KELLY OCONNOR	TH EXPLORATION LLC	1/8+	942 569	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19611	9-13-18	I	JOHN H EMERY AND JANET M EMERY	TH EXPLORATION LLC	1/8+	944 201	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19612	9-13-18	I	MARY JANE HYDE AND HARRY K HYDE	TH EXPLORATION LLC	1/8+	944 198	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19613	9-13-18	I	SHEILA LYNN GARRISON	TH EXPLORATION LLC	1/8+	944 196	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19832	9-13-18	I	DOWNIE E EMERY JR AND ELAINE EMERY	TH EXPLORATION LLC	1/8+	945 619	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19834	9-13-18	I	STEVEN D BEAKLEY	TH EXPLORATION LLC	1/8+	945 613	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19835	9-13-18	I	BARBARA JEAN SAMAJ AND ANDREW J SAMAJ	TH EXPLORATION LLC	1/8+	945 616	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19883	9-13-18	I	JILL A WILLIAMS AND TERRY L WILLIAMS	TH EXPLORATION LLC	1/8+	948 547	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19885	9-13-18	I	NANCY L RICHMOND AND GREGORY RICHMOND	TH EXPLORATION LLC	1/8+	948 549	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19886	9-13-18	I	MARK A RICHMOND & LISA D RICHMOND	TH EXPLORATION LLC	1/8+	948 543	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19887	9-13-18	I	ELIZABETH S SCOVELL & JONATHAN A SCOVELL	TH EXPLORATION LLC	1/8+	948 545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19981	9-13-18	I	WILLIAM G EMERY	TH EXPLORATION LLC	1/8+	948 206	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21012	9-13-18	I	TIMOTHY R RICHMOND II AND BRANDI N RICHMOND	TH EXPLORATION LLC	1/8+	951 149	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21051	9-13-18	I	JAMES S NEPERENY AND PHOBE A NEPERENY	TH EXPLORATION LLC	1/8+	966 501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21139	9-13-18	I	JOHN C BAKER JR AND TRACIE L BAKER	TH EXPLORATION LLC	1/8+	952 167	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21251	9-13-18	I	GREGORY R BAKER AND TRACEY L BAKER	TH EXPLORATION LLC	1/8+	953 62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21318	9-13-18	I	LINDA D GORDON AND JOHN L GORDON	TH EXPLORATION LLC	1/8+	944 204	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21341	9-13-18	I	RITA M BAKER	TH EXPLORATION LLC	1/8+	953 225	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21598	9-13-18	I	THE MILDRED Y MILLS TRUST JULY 5TH 2007	TH EXPLORATION LLC	1/8+	954 332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21613	9-13-18	I	ROBERT MATTHEW KEDWARD	TH EXPLORATION LLC	1/8+	959 462	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21614	9-13-18	I	NICOLE RAE BRACHER-MUSTY AND JASON BRACHER-MUSTY	TH EXPLORATION LLC	1/8+	959 464	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21709	9-13-18	I	THOMAS YOUNG AND JANE CLAIRE YOUNG	TH EXPLORATION LLC	1/8+	959 350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21710	9-13-18	I	PENELOPE A JONES	TH EXPLORATION LLC	1/8+	959 355	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22002	9-13-18	I	DAVID E EMERY SR	TH EXPLORATION LLC	1/8+	953 223	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22038	9-13-18	I	SANDRA C SHAFFER AND RONALD G SHAFFER	TH EXPLORATION LLC	1/8+	954 334	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22271	9-13-18	I	MARY ANN CROW RICHARDSON LT ETAL	TH EXPLORATION LLC	1/8+	988 60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22415	9-13-18	I	PAUL A YOUNG	TH EXPLORATION LLC	1/8+	963 344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22497	9-13-18	I	BRANDON C CANFIELD	TH EXPLORATION LLC	1/8+	966 622	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23190	9-13-18	I	COUNTY OF MARSHALL GENERAL RECEIVER FOR MARSHALL COUNTY	TH EXPLORATION LLC	1/8+	979 191	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23250	9-13-18	I	BUENA WELLMAN ET AL C/O HERMAN LANTZ, SPECIAL COMMISSIONER	TH EXPLORATION LLC	1/8+	979 189	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27947	9-13-18	I	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063 568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29453	9-13-22	J	TRICYCLE, LLC	TH EXPLORATION LLC	1/8+	1096 307	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27247	9-13-22	J	DANIEL R AND JOANNA L JOHNSON	TH EXPLORATION LLC	1/8+	1053 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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10*27248	9-13-22	J	NILA K & THOMAS R MOWDER	TH EXPLORATION LLC	1/8+	1053 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27835	9-13-22	J	STONE HILL MINERALS HOLDINGS, LLC	TH EXPLORATION LLC	1/8+	1058 124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28267	9-13-22	J	STONE HILL MINERALS HOLDINGS, LLC	TH EXPLORATION LLC	1/8+	1062 266	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29963	9-13-22	J	STONE HILL MINERALS HOLDINGS, LLC	TH EXPLORATION LLC	1/8+	1101 34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18265	9-13-11	K	KENNETH NELSON SMERTNECK AND TERESA ANN SMERTNECK	TH EXPLORATION LLC	1/8+	933 103	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28299	9-13-8	L	ROBERT LEE SHUTLER AND PATRICIA A. SHULER, TRUSTEES OF THE SHUTLER FAMILY TRUST	TH EXPLORATION LLC	1/8+	1070 425	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19534	9-13-10	M	ARTHUR L MOORE AND SHARON A MOORE	TH EXPLORATION LLC	1/8+	936 553	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28299	9-13-10	M	ROBERT LEE SHUTLER AND PATRICIA A. SHULER, TRUSTEES OF THE SHUTLER FAMILY TRUST	TH EXPLORATION LLC	1/8+	1070 425	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.243.1	9-11-2	N	MARY A FOX	TH EXPLORATION LLC	1/8+	879 332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.243.2	9-11-2	N	PAUL G FOX	TH EXPLORATION LLC	1/8+	879 335	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.243.3	9-11-2	N	MARK H FOX	TH EXPLORATION LLC	1/8+	879 338	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.243.4	9-11-2	N	DAVID E FOX	TH EXPLORATION LLC	1/8+	876 55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.243.5	9-11-2	N	LOUIS T FOX AND KAREN A FOX	TH EXPLORATION LLC	1/8+	876 58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.243.6	9-11-2	N	THOMAS J FOX	TH EXPLORATION LLC	1/8+	876 61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16526	9-11-1	O	JUDITH PADLOW AKA JUDI L PADLOW	TH EXPLORATION LLC	1/8+	957 134	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15567	9-10-13	P	VICKIE J MASON	CHESAPEAKE APPALACHIA LLC	1/8+	680 409	N/A	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/6	Statoil USA Onshore Properties Inc to Chevron USA Inc: 30/427	Chesapeake Appalachia LLC to Chevron USA Inc: 30/461	Chevron USA Inc to TH Exploration LLC: 36/148
10*15568	9-10-13	P	MARY A SOUTH	CHESAPEAKE APPALACHIA LLC	1/8+	681 410	N/A	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/463	Statoil USA Onshore Properties Inc to Chevron USA Inc: 30/427	Chesapeake Appalachia LLC to Chevron USA Inc: 30/461	Chevron USA Inc to TH Exploration LLC: 36/148
10*15569	9-10-13	P	MARK L WHETZAL	CHESAPEAKE APPALACHIA LLC	1/8+	682 560	N/A	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/463	Statoil USA Onshore Properties Inc to Chevron USA Inc: 30/427	Chesapeake Appalachia LLC to Chevron USA Inc: 30/461	Chevron USA Inc to TH Exploration LLC: 36/148
10*15570	9-10-13	P	ESTATE OF RAY A WHETZAL JR	CHESAPEAKE APPALACHIA LLC	1/8+	682 584	N/A	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/463	Statoil USA Onshore Properties Inc to Chevron USA Inc: 30/427	Chesapeake Appalachia LLC to Chevron USA Inc: 30/461	Chevron USA Inc to TH Exploration LLC: 36/148
10*15571	9-10-13	P	SHARON L WHETZAL	CHESAPEAKE APPALACHIA LLC	1/8+	682 568	N/A	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/463	Statoil USA Onshore Properties Inc to Chevron USA Inc: 30/427	Chesapeake Appalachia LLC to Chevron USA Inc: 30/461	Chevron USA Inc to TH Exploration LLC: 36/148
10*15572	9-10-13	P	ROBERT L WHETZAL	CHESAPEAKE APPALACHIA LLC	1/8+	682 500	N/A	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 23/463	Statoil USA Onshore Properties Inc to Chevron USA Inc: 30/427	Chesapeake Appalachia LLC to Chevron USA Inc: 30/461	Chevron USA Inc to TH Exploration LLC: 36/148
10*15724	9-10-13	P	JAMES RODNEY BRIGGS	TH EXPLORATION LLC	1/8+	901 325	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15725	9-10-13	P	ROGER JACOB BRIGGS	TH EXPLORATION LLC	1/8+	901 318	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15726	9-10-13	P	JOHN DEAN BRIGGS AND PATTY KAY BRIGGS	TH EXPLORATION LLC	1/8+	901 321	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16079	9-10-13	P	LORI ASTON DIXON	TH EXPLORATION LLC	1/8+	904 565	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16236	9-10-13	P	FRANCIS Y RIGGLE	TH EXPLORATION LLC	1/8+	907 156	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16237	9-10-13	P	GREGORY J ASTON AND TAMMY E ASTON	TH EXPLORATION LLC	1/8+	907 149	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16275	9-10-13	P	JEFFREY A ASTON	TH EXPLORATION LLC	1/8+	907 153	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21206	9-10-13	P	MICHAEL BAUM	TH EXPLORATION LLC	1/8+	952 164	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27947	9-10-13	P	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063 568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.1	9-10-13	P	MICHAEL A WHETZEL	TH EXPLORATION LLC	1/8+	885 51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.29	9-10-13	P	PATRICIA ANN MCDUGAL	TH EXPLORATION LLC	1/8+	901 306	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.30	9-10-13	P	STEVEN L ASTON	TH EXPLORATION LLC	1/8+	901 308	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.31	9-10-13	P	FRED T KERNS	TH EXPLORATION LLC	1/8+	901 298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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10*47051.108.36	9-10-13	P	YVONNE K BOGERT	TH EXPLORATION LLC	1/8+	901 300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.37	9-10-13	P	CARL E ASTON	TH EXPLORATION LLC	1/8+	901 304	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.38	9-10-13	P	CAROLYN SUE WELLS	TH EXPLORATION LLC	1/8+	901 310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.41	9-10-13	P	ELMER ASTON	TH EXPLORATION LLC	1/8+	901 296	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.48	9-10-13	P	WILLIAM ASTON	TH EXPLORATION LLC	1/8+	901 312	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.5	9-10-13	P	BRENDA J WHETZEL	TH EXPLORATION LLC	1/8+	885 55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.50	9-10-13	P	DAVID U ASTON ESTATE BY EXECUTOR DAWN R MARKS	TH EXPLORATION LLC	1/8+	901 314	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.52	9-10-13	P	CONNIE N ASTON	TH EXPLORATION LLC	1/8+	901 316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.53	9-10-13	P	MARY JANE KYLE	TH EXPLORATION LLC	1/8+	901 339	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.56	9-10-13	P	PAULA HUNDL	TH EXPLORATION LLC	1/8+	901 347	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.57	9-10-13	P	ROBERT B KERNS	TH EXPLORATION LLC	1/8+	901 349	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.58	9-10-13	P	RONALD W KERNS	TH EXPLORATION LLC	1/8+	901 341	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.59	9-10-13	P	PAUL ULYSSES KERNS ESTATE SALVATORE P PUGLISI, EXECUTOR	TH EXPLORATION LLC	1/8+	901 343	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.6	9-10-13	P	TERRI MCCARDLE	TH EXPLORATION LLC	1/8+	895 23	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.61	9-10-13	P	AMANDA FEIGH	TH EXPLORATION LLC	1/8+	901 345	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.7	9-10-13	P	GARY FRANCIS WHETZAL	TH EXPLORATION LLC	1/8+	895 26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.73	9-10-13	P	JOHN ASTON JR	TH EXPLORATION LLC	1/8+	901 351	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.77	9-10-13	P	SHONDA WOOD	TH EXPLORATION LLC	1/8+	901 356	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.78	9-10-13	P	DONNA WOODS MOODY	TH EXPLORATION LLC	1/8+	901 354	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.108.79	9-10-13	P	MARK A ASTON	TH EXPLORATION LLC	1/8+	901 358	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15600	9-10-14	Q	WILLIAM D MCCONNELL	CHESAPEAKE APPALACHIA LLC	1/8+	715 447	N/A	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 29/325	Statoil USA Onshore Properties Inc to Chevron USA Inc: 30/427	Chesapeake Appalachia LLC to Chevron USA Inc: 30/461	Chevron USA Inc to TH Exploration LLC: 36/148
10*15735	9-10-15	R	JOSEPH MICHAEL BONENE	TH EXPLORATION LLC	1/8+	928 560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15504	9-10-5	S	JAMES MASON ET AL	AB RESOURCES	1/8+	692 461	N/A	N/A	N/A	N/A	AB Resources LLC & NPAR LLC to Chief Exploration & Development LLC & Radler 2000 LP: 24/490	Chief Exploration & Development LLC, Chief O&G LLC, Radler 2000 LP & Enerplus Resources Corp to Chevron USA Inc: 25/1	AB Resources LLC to Chevron USA Inc: 756/397	Chevron USA Inc to TH Exploration LLC: 36/148
10*15510	9-6-15	T	ELAINE PHELPS ET VIR	TRIENERGY HOLDINGS, LLC	1/8+	718 326	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 24/430	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*15511	9-6-15	T	DAVID E CROW	TRIENERGY HOLDINGS, LLC	1/8+	718 376	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 25/463	NPAR LLC to Chevron USA Inc: 26/269	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*15512	9-6-15	T	FRANCES COFFEY	TRIENERGY HOLDINGS, LLC	1/8+	718 378	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 24/430	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*15513	9-6-15	T	KAY KEYES	TRIENERGY HOLDINGS, LLC	1/8+	718 330	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 24/430	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*15514	9-6-15	T	L PAUL CROW	TRIENERGY HOLDINGS, LLC	1/8+	718 336	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 24/430	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148

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10*15515	9-6-15	T	DESIRE L CROW	TRIENERGY HOLDINGS, LLC	1/8+	718 334	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 24/430	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*15516	9-6-15	T	ROSE MARIE KIELCZEWSKI	TRIENERGY HOLDINGS, LLC	1/8+	718 354	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 24/430	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*15517	9-6-15	T	DIANNE GELLNER & GARY GELLNER	TRIENERGY HOLDINGS, LLC	1/8+	718 345	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 24/430	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*15519	9-6-15	T	JOHN CROW	TRIENERGY HOLDINGS, LLC	1/8+	726 580	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 25/449	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*15520	9-6-15	T	TIMOTHY CROW	TRIENERGY HOLDINGS, LLC	1/8+	726 582	N/A	N/A	N/A	N/A	TriEnergy Holdings LLC to NPAR LLC: 25/449	NPAR LLC to Chevron USA Inc: 756/332	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration LLC: 36/148
10*47051.123.1	9-6-15	T	LLOYD G BAKER	TH EXPLORATION LLC	1/8+	865 389	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15518	9-6-15	T	JAMES P HOLLIDAY AND JACQUELINE HOLLIDAY	TH EXPLORATION LLC	1/8+	718 347	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15464	9-6-16	U	MARY ALENE THOMAS MELLOTT	TH EXPLORATION LLC	1/8+	906 527	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15467	9-6-16	U	DEBORAH ELEANOR MONROE THOMPSON AND JOSEPH THOMPSON	TH EXPLORATION LLC	1/8+	906 533	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15471	9-6-16	U	GARY RICHARDSON	TH EXPLORATION LLC	1/8+	906 529	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15479	9-6-16	U	BARBARA M GILBERT CHESNUT AND WAYNE H CHESNUT	TH EXPLORATION LLC	1/8+	906 525	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15483	9-6-16	U	ROBERT R RICHARDSON AND ANDREA RICHARDSON	TH EXPLORATION LLC	1/8+	906 535	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15499	9-6-16	U	IVAN NUNN AND BRIANA NUNN	TH EXPLORATION LLC	1/8+	906 558	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15675	9-6-16	U	ALICIA J MONROE	TH EXPLORATION LLC	1/8+	906 560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15676	9-6-16	U	MARSHA ANN BOVEE AND DON EARL BOVEE	TH EXPLORATION LLC	1/8+	906 562	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15677	9-6-16	U	JASON S LASHARE	TH EXPLORATION LLC	1/8+	906 564	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15678	9-6-16	U	KEITH DAWSON	TH EXPLORATION LLC	1/8+	906 566	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15723	9-6-16	U	NANCY C LONG AND RONALD LONG	TH EXPLORATION LLC	1/8+	906 570	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15731	9-6-16	U	MARYJO LORENA VINCENT	TH EXPLORATION LLC	1/8+	906 573	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15736	9-6-16	U	LORETTA PEARL LUCAS	TH EXPLORATION LLC	1/8+	906 575	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15737	9-6-16	U	JANICE LOUISE BLANTON	TH EXPLORATION LLC	1/8+	906 577	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15738	9-6-16	U	DONALD E GILBERT AND PATRICIA GILBERT	TH EXPLORATION LLC	1/8+	906 579	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15739	9-6-16	U	KENNETH EWELL	TH EXPLORATION LLC	1/8+	906 581	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15742	9-6-16	U	MARY ELLEN FOSTER	TH EXPLORATION LLC	1/8+	906 583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15743	9-6-16	U	CLYDE WILLIAMS ROMEO	TH EXPLORATION LLC	1/8+	906 585	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*15744	9-6-16	U	GARY LEE ROMEO AND SHELIA ROMEO	TH EXPLORATION LLC	1/8+	906 587	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16015	9-6-16	U	LARRY RAY GILBERT	TH EXPLORATION LLC	1/8+	906 603	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16016	9-6-16	U	LINDA DARLENE MARTIN AND DALE MARTIN	TH EXPLORATION LLC	1/8+	906 608	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16044	9-6-16	U	TERRY LEE SOVINSKY AND DAWN S SOVINSKY	TH EXPLORATION LLC	1/8+	906 613	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16045	9-6-16	U	JASON ALAN PETROVIC AND VALARI PETROVIC	TH EXPLORATION LLC	1/8+	906 617	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16046	9-6-16	U	JOSEPH MICHAEL ROMEO	TH EXPLORATION LLC	1/8+	906 619	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16055	9-6-16	U	SYLVIA A GILBERT KRAFFT	TH EXPLORATION LLC	1/8+	906 611	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16112	9-6-16	U	DAVID A JOHNSON AND KELLI A JOHNSON	TH EXPLORATION LLC	1/8+	906 623	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16117	9-6-16	U	TRACY J GILBERT	TH EXPLORATION LLC	1/8+	906 621	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16142	9-6-16	U	JON TEX RONSHAUSEN	TH EXPLORATION LLC	1/8+	906 627	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16146	9-6-16	U	RICHARD K PETROVIC AND WENDY PETROVIC	TH EXPLORATION LLC	1/8+	906 625	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16185	9-6-16	U	ANDREW R NUNN	TH EXPLORATION LLC	1/8+	913 592	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16188	9-6-16	U	ELIZABETH ANN WENSYEL	TH EXPLORATION LLC	1/8+	906 631	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16231	9-6-16	U	JAMES R RONSHAUSEN AND JOAN RONSHAUSEN	TH EXPLORATION LLC	1/8+	906 635	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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10*16233	9-6-16	U	MICHELLE DAWN MORENO	TH EXPLORATION LLC	1/8+	906 633	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16234	9-6-16	U	MICHELLE LYNN MCNEIL	TH EXPLORATION LLC	1/8+	906 637	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16284	9-6-16	U	RONDAL HALL	TH EXPLORATION LLC	1/8+	906 531	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16291	9-6-16	U	THOMAS L CONNER AND MARY BETH CONNER	TH EXPLORATION LLC	1/8+	906 639	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16292	9-6-16	U	BRENDA G KITCHENS	TH EXPLORATION LLC	1/8+	906 641	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16332	9-6-16	U	JOHN RICHARDSON AND KAREN RICHARDSON	TH EXPLORATION LLC	1/8+	906 538	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16362	9-6-16	U	MILDRED ALICE GILBERT SAPP AND EDGAR SAPP	TH EXPLORATION LLC	1/8+	906 548	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16363	9-6-16	U	RHONDA OCONNOR AND TERRANCE OCONNOR	TH EXPLORATION LLC	1/8+	906 552	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16372	9-6-16	U	ROBERT ALLAN PATERSON AND LEZLIE PATERSON	TH EXPLORATION LLC	1/8+	906 556	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16373	9-6-16	U	CAROL L DUNCIL EARLEWINE	TH EXPLORATION LLC	1/8+	906 554	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16379	9-6-16	U	TIMOTHY A LASHARE AND FELICIA E LASHARE	TH EXPLORATION LLC	1/8+	906 591	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16385	9-6-16	U	MARSHA BAKER MORLOCK	TH EXPLORATION LLC	1/8+	906 593	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16386	9-6-16	U	MARK A LASHARE AND JENNIFER L WETMORE	TH EXPLORATION LLC	1/8+	906 589	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16387	9-6-16	U	JAMES CLARK PETROVIC AND LORI J PETROVIC	TH EXPLORATION LLC	1/8+	906 595	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16388	9-6-16	U	RICHARD WAYNE ROMEO	TH EXPLORATION LLC	1/8+	906 597	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16405	9-6-16	U	JACKIE JAMES HIBBS HESS	TH EXPLORATION LLC	1/8+	906 545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16417	9-6-16	U	BILL DAWSON	TH EXPLORATION LLC	1/8+	906 550	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16420	9-6-16	U	DAVID EUGENE ROMEO	TH EXPLORATION LLC	1/8+	906 601	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16431	9-6-16	U	TRACY L MAJORS	TH EXPLORATION LLC	1/8+	906 629	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16447	9-6-16	U	JODY LYNN ROMEO	TH EXPLORATION LLC	1/8+	913 594	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16489	9-6-16	U	GINNIE L BANKS	TH EXPLORATION LLC	1/8+	913 596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16509	9-6-16	U	PEGGY SUE HILL DOLIN FORDYCE	TH EXPLORATION LLC	1/8+	913 598	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16512	9-6-16	U	TIMOTHY D CONNER AND MELISSA S CONNER	TH EXPLORATION LLC	1/8+	913 600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16529	9-6-16	U	CHARLES T LASHARE AND MELISSA S LASHARE	TH EXPLORATION LLC	1/8+	913 602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16530	9-6-16	U	THERESA ANN WOOLLARD	TH EXPLORATION LLC	1/8+	906 599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16587	9-6-16	U	KEVIN DEAN PETROVIC AND RENE THERESE PETROVIC	TH EXPLORATION LLC	1/8+	942 426	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16809	9-6-16	U	TIMOTHY JOHNSON	TH EXPLORATION LLC	1/8+	913 606	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16841	9-6-16	U	ROBERT A BAKER	TH EXPLORATION LLC	1/8+	913 604	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16960	9-6-16	U	FRANCES MARIE DOLIN	TH EXPLORATION LLC	1/8+	913 610	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16970	9-6-16	U	WILLIAM E ROMEO JR AND JOSHUA WAYNE HOLDEN	TH EXPLORATION LLC	1/8+	913 608	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*16997	9-6-16	U	RICHARD A DOLIN AND MARGARET ANN DOLIN	TH EXPLORATION LLC	1/8+	913 632	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17272	9-6-16	U	HERSHEL DUTTON AND KATHY DOLIN DUTTON	TH EXPLORATION LLC	1/8+	913 634	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17418	9-6-16	U	PENNY L SKOK AND ELVIN M SKOK	TH EXPLORATION LLC	1/8+	913 636	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17451	9-6-16	U	MICHELE J PERKINS AND GARY WAYNE PERKINS	TH EXPLORATION LLC	1/8+	942 441	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17473	9-6-16	U	LINDA J BRAZIS AND BERNARD A BRAZIS	TH EXPLORATION LLC	1/8+	942 439	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17510	9-6-16	U	JUDY LYNN KOHLER AND RONALD KOHLER	TH EXPLORATION LLC	1/8+	957 137	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17524	9-6-16	U	SHARON DOROTHY PETROVIC HANNAN	TH EXPLORATION LLC	1/8+	943 8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17556	9-6-16	U	NATHAN PATRICK MONROE	TH EXPLORATION LLC	1/8+	942 430	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17557	9-6-16	U	ROBERT JONES AND CLAUDIA JONES	TH EXPLORATION LLC	1/8+	942 428	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17562	9-6-16	U	JOSEPH T MONROE JR	TH EXPLORATION LLC	1/8+	942 437	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17583	9-6-16	U	CHRISTOPHER BRIAN BORDER, INCARCERATED PERSON COURT APPTED GUARDIAN AD LITEM ERIC GORDON ESQ	TH EXPLORATION LLC	1/8+	916 114	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17669	9-6-16	U	RICHARD D HUGHES	TH EXPLORATION LLC	1/8+	942 424	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17706	9-6-16	U	KELLY JO DOLIN WETZEL	TH EXPLORATION LLC	1/8+	924 593	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17770	9-6-16	U	CAROL A DIXON AND JAMES DIXON	TH EXPLORATION LLC	1/8+	932 565	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*17832	9-6-16	U	ROMAN CATHOLIC DIOCESE OF WHEELING BY MICHAEL J BRANSFIELD BISHOP	TH EXPLORATION LLC	1/8+	942 456	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18257	9-6-16	U	BONNIE MCKENNA AND THOMAS MCKENNA	TH EXPLORATION LLC	1/8+	942 454	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18258	9-6-16	U	PATRICIA M AVERY AND TERRY AVERY	TH EXPLORATION LLC	1/8+	929 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19629	9-6-16	U	BRITTANY LEMASTERS AND RACHELLE KIM	TH EXPLORATION LLC	1/8+	944 190	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19690	9-6-16	U	GENERAL RECEIVER OF MARSHALL COUNTY ATTN: BERNIE TWIGG	TH EXPLORATION LLC	1/8+	944 335	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21234	9-6-16	U	HERB YOUNG JR AND GALE YOUNG	TH EXPLORATION LLC	1/8+	953 47	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21235	9-6-16	U	TAMMY GOULDSBERRY & DOUGLAS GOULDSBERRY	TH EXPLORATION LLC	1/8+	953 49	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21236	9-6-16	U	HELEN VIRGINIA LASHARE MCKOWN	TH EXPLORATION LLC	1/8+	953 45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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10*21237	9-6-16	U	ANGEL M ROLLINS	TH EXPLORATION LLC	1/8+	953 43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21913	9-6-16	U	MICHAEL WAYNE THOMAS AND DARLA R THOMAS	TH EXPLORATION LLC	1/8+	960 11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22413	9-6-16	U	TERESA HUGHES	TH EXPLORATION LLC	1/8+	963 346	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22414	9-6-16	U	SHERYL A HUGHES	TH EXPLORATION LLC	1/8+	963 348	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22487	9-6-16	U	MARK A THOMAS AND MICHELLE D J THOMAS	TH EXPLORATION LLC	1/8+	964 485	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22546	9-6-16	U	PENNY WHITE	TH EXPLORATION LLC	1/8+	966 624	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22774	9-6-16	U	PAMELA J THOMAS KNIRSCH	TH EXPLORATION LLC	1/8+	970 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22816	9-6-16	U	VIRGINIA R THOMAS	TH EXPLORATION LLC	1/8+	972 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27528	9-6-16	U	LAWRENCE ROBERT EARLEWINE	TH EXPLORATION LLC	1/8+	1060 191	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27599	9-6-16	U	LORI KAY JARVIS	TH EXPLORATION LLC	1/8+	1060 587	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27947	9-6-16	U	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION LLC	1/8+	1063 568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.1	9-6-16	U	BONNIE A CARNEY AKA BONNIE ANNE CARNEY	TH EXPLORATION LLC	1/8+	898 428	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.2	9-6-16	U	BARBARA A FARMER	TH EXPLORATION LLC	1/8+	904 644	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.3	9-6-16	U	SHIRLEY C EARLEWINE	TH EXPLORATION LLC	1/8+	904 468	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.4	9-6-16	U	CAROL A JONES	TH EXPLORATION LLC	1/8+	906 481	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.5	9-6-16	U	BEATRICE PEARL COLVIN PROCHASKA	TH EXPLORATION LLC	1/8+	906 220	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.6	9-6-16	U	BRANDON FORRESTER	TH EXPLORATION LLC	1/8+	906 483	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.7	9-6-16	U	ELIZABETH R MERCER AKA ROSE LEMASTERS MERCER	TH EXPLORATION LLC	1/8+	906 485	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.8	9-6-16	U	DAVID R JOHNSON	TH EXPLORATION LLC	1/8+	906 487	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.9	9-6-16	U	RUSSELL C LEMASTERS	TH EXPLORATION LLC	1/8+	906 489	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.10	9-6-16	U	DOLLY M BOYER AND HUBERT R BOYER	TH EXPLORATION LLC	1/8+	906 491	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.11	9-6-16	U	SONDRA G SHIBEN EARLEWINE	TH EXPLORATION LLC	1/8+	906 493	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.12	9-6-16	U	SHIRLEY ANN PALMER MONROE	TH EXPLORATION LLC	1/8+	906 495	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.13	9-6-16	U	MARYA L MCCLELLAND AND JOHN A MCCLELLAND	TH EXPLORATION LLC	1/8+	906 501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.14	9-6-16	U	THOMAS H MONROE SR AND JANET MONROE	TH EXPLORATION LLC	1/8+	906 503	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.15	9-6-16	U	FREDA C COX	TH EXPLORATION LLC	1/8+	906 497	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.16	9-6-16	U	JOSEPH M GRODHAUS	TH EXPLORATION LLC	1/8+	906 499	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.17	9-6-16	U	CHARLES J RICHARDSON	TH EXPLORATION LLC	1/8+	906 505	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.18	9-6-16	U	MELVIN ALFRED & REBECCA MONROE	TH EXPLORATION LLC	1/8+	906 507	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.19	9-6-16	U	WILLIAM H MONROE AND KRISTA M MONROE	TH EXPLORATION LLC	1/8+	906 509	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.20	9-6-16	U	CAROL N LARUE MONROE AND WILLIAM E BROWN	TH EXPLORATION LLC	1/8+	906 511	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.21	9-6-16	U	MARLENE HRIVNAK	TH EXPLORATION LLC	1/8+	906 513	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.22	9-6-16	U	DEBORAH HRIVNAK	TH EXPLORATION LLC	1/8+	906 515	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.23	9-6-16	U	TERRI K SONDERGARD	TH EXPLORATION LLC	1/8+	906 517	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.24	9-6-16	U	MARGARET GILBERT	TH EXPLORATION LLC	1/8+	913 579	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.25	9-6-16	U	MARGARET GILBERT	TH EXPLORATION LLC	1/8+	906 523	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.26	9-6-16	U	CAROLE A GILBERT	TH EXPLORATION LLC	1/8+	906 519	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*47051.296.27	9-6-16	U	GEORGE RONALD MONROE JR AND CRYSTAL L MONROE	TH EXPLORATION LLC	1/8+	906 521	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18839	9-6-3	V	MARGARET DARLENE DUTTON	TH EXPLORATION LLC	1/8+	937 607	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18840	9-6-3	V	JAY HAROLD DUTTON AND JANICE L DUTTON	TH EXPLORATION LLC	1/8+	937 609	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*18841	9-6-3	V	THEODORE FRANCIS DUTTON AND PHYLLIS JEAN DUTTON	TH EXPLORATION LLC	1/8+	937 612	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19000	9-6-3	V	KENNETH M MCCARDLE AND DELORES MCCARDLE	CHEVRON USA INC	1/8+	789 154	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19013	9-6-3	V	SUSAN JANE MULLEN AND RICHARD S MULLEN	CHEVRON USA INC	1/8+	789 147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19014	9-6-3	V	JAMES F CARMICHAEL	CHEVRON USA INC	1/8+	793 366	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19015	9-6-3	V	SUSAN J CARMICHAEL	CHEVRON USA INC	1/8+	793 433	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127

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10*19016	9-6-3	V	JOHN LINDSEY DERROW	CHEVRON USA INC	1/8+	795 351	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19019	9-6-3	V	CATHERINE HUMMEL	CHEVRON USA INC	1/8+	797 602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19020	9-6-3	V	DURWOOD WRIGHT BY CATHERINE HUMMEL AIF	CHEVRON USA INC	1/8+	796 191	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19022	9-6-3	V	BETTY L ELMER	CHEVRON USA INC	1/8+	803 240	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19023	9-6-3	V	DARLENE K ALBORN	CHEVRON USA INC	1/8+	803 573	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19024	9-6-3	V	MARLENE F WAGMILLER	CHEVRON USA INC	1/8+	803 567	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19025	9-6-3	V	ELLEN G KIRKBRIDE	CHEVRON USA INC	1/8+	804 615	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19028	9-6-3	V	ELMER DEAN EVANS	CHEVRON USA INC	1/8+	805 8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19062	9-6-3	V	BRENDA WOOD	CHEVRON USA INC	1/8+	818 151	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19064	9-6-3	V	JODY KORN	CHEVRON USA INC	1/8+	818 137	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19194	9-6-3	V	CHARLES D DERROW II	CHEVRON USA INC	1/8+	781 230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19195	9-6-3	V	DAVID DERROW	CHEVRON USA INC	1/8+	781 237	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19196	9-6-3	V	JAMES W DERROW	CHEVRON USA INC	1/8+	781 223	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19197	9-6-3	V	THOMAS J DERROW	CHEVRON USA INC	1/8+	781 244	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19198	9-6-3	V	SAMUEL W DERROW	CHEVRON USA INC	1/8+	781 251	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19199	9-6-3	V	CHRISTIE S MITCHELL	CHEVRON USA INC	1/8+	781 277	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19200	9-6-3	V	KATHLEEN A KELLEY	CHEVRON USA INC	1/8+	781 300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19208	9-6-3	V	MICHAEL E DERROW JR	CHEVRON USA INC	1/8+	786 146	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127

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10*19215	9-6-3	V	JOSEPH R DERROW	CHEVRON USA INC	1/8+	786 350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19262	9-6-3	V	BARBARA L MCGAHA	CHEVRON USA INC	1/8+	787 400	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19263	9-6-3	V	WILLIAM POLEN	CHEVRON USA INC	1/8+	788 224	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19264	9-6-3	V	HOWARD E SPEAR AIF PATTIE S MADRID	CHEVRON USA INC	1/8+	788 219	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19265	9-6-3	V	BETTY L STARKEY	CHEVRON USA INC	1/8+	788 384	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19266	9-6-3	V	DALE ADORIN SALSBERY	CHEVRON USA INC	1/8+	791 66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19267	9-6-3	V	REGINA KAY ST GEORGE AND FRED ST GEOGRE	CHEVRON USA INC	1/8+	788 379	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19268	9-6-3	V	ANITA STANLEY	CHEVRON USA INC	1/8+	790 99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19269	9-6-3	V	LINDA D MAYO RONALD A MAYO	CHEVRON USA INC	1/8+	789 501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19270	9-6-3	V	FORREST STARKEY DODA STARKEY	CHEVRON USA INC	1/8+	790 110	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19271	9-6-3	V	JANICE M HIXSON AND HARRY C HIXSON	CHEVRON USA INC	1/8+	790 208	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19272	9-6-3	V	JOHN M SALSBERY	CHEVRON USA INC	1/8+	792 218	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19273	9-6-3	V	JODIE R MORRIS JOHN MORRIS	CHEVRON USA INC	1/8+	790 188	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19274	9-6-3	V	ETHEL E STARKEY	CHEVRON USA INC	1/8+	790 203	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19275	9-6-3	V	TRACY M SALSBERY	CHEVRON USA INC	1/8+	791 165	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19276	9-6-3	V	SANDRA LEE KNAPSKI JOHN KNAPSKI	CHEVRON USA INC	1/8+	790 193	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19277	9-6-3	V	GINGER L SALSBERY	CHEVRON USA INC	1/8+	790 198	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19278	9-6-3	V	DELLA J COVERDALE TOM COVERDALE	CHEVRON USA INC	1/8+	790 213	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127

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10*19279	9-6-3	V	CALLENE M PETERSON	CHEVRON USA INC	1/8+	789 342	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19280	9-6-3	V	BRENT LEE STARKEY	CHEVRON USA INC	1/8+	789 357	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19281	9-6-3	V	MAUREEN C COOPER	CHEVRON USA INC	1/8+	790 218	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19282	9-6-3	V	KENNETH D MCMECHEN	CHEVRON USA INC	1/8+	789 337	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19283	9-6-3	V	SARAH SISLEY ROBERT W SISLEY	CHEVRON USA INC	1/8+	789 332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19284	9-6-3	V	REXENA A CUNNINGHAM	CHEVRON USA INC	1/8+	790 157	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19285	9-6-3	V	CARALOTTA J GIBSON	CHEVRON USA INC	1/8+	792 251	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19286	9-6-3	V	ELAINE M KENNER JACK KENNER	CHEVRON USA INC	1/8+	792 256	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19287	9-6-3	V	DEBBIE MAE MOORE	CHEVRON USA INC	1/8+	792 234	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19288	9-6-3	V	REGINA F HAUGHT DANIEL HAUGHT	CHEVRON USA INC	1/8+	792 174	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19289	9-6-3	V	RUIEANN HORSFALL	CHEVRON USA INC	1/8+	793 447	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19290	9-6-3	V	RICHARD CECIL LUTISHIA CECIL	CHEVRON USA INC	1/8+	795 399	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19291	9-6-3	V	JO ANN HYNDMAN ROBERT HYNDMAN	CHEVRON USA INC	1/8+	800 203	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*19292	9-6-3	V	CHARLES M STARKEY TRUST THELMA B STARKEY, SOLE TRUSTEE	CHEVRON USA INC	1/8+	800 223	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 40/127
10*21007	9-6-3	V	SANDRA EILEEN WORKMAN RUSH AND JAMES EARL RUSH	TH EXPLORATION LLC	1/8+	951 638	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21008	9-6-3	V	DALE EDWARD WORKMAN	TH EXPLORATION LLC	1/8+	949 343	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21581	9-6-3	V	DAVID CARMICHAEL	TH EXPLORATION LLC	1/8+	957 402	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21582	9-6-3	V	GARY CARMICHAEL	TH EXPLORATION LLC	1/8+	957 393	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22327	9-6-3	V	NANCY WHITLATCH	TH EXPLORATION LLC	1/8+	962 551	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23915	9-6-3	V	GENERAL RECEIVER OF MARSHALL COUNTY ATTN: BERNIE TWIGG	TH EXPLORATION LLC	1/8+	1011 523	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24718	9-6-3	V	DOUGLAS G DERROW	TH EXPLORATION LLC	1/8+	1027 598	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24786	9-6-3	V	HADEN W DERROW	TH EXPLORATION LLC	1/8+	1027 600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24788	9-6-3	V	MICHAEL W DERROW	TH EXPLORATION LLC	1/8+	1027 596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24959	9-6-3	V	CODY S DERROW	TH EXPLORATION LLC	1/8+	1028 626	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24960	9-6-3	V	CHARLES S DERROW	TH EXPLORATION LLC	1/8+	1028 624	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*25289	9-6-3	V	SHERRY KAY RISHER	TH EXPLORATION LLC	1/8+	1030 152	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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10*25499	9-6-3	V	THOMAS G DERROW AND DOROTHY DERROW	TH EXPLORATION LLC	1/8+	1033	134	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26369	9-6-3	V	WILLIAM N ROUPE AND VIRGINIA A ROUPE	CHEVRON USA INC	1/8+	1026	35	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26370	9-6-3	V	VINCENT PATRELLO AND AMANDA PATRELLO	CHEVRON USA INC	1/8+	1026	37	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26371	9-6-3	V	WILLIAM B ROUPE AND KATHERINE A ROUPE	CHEVRON USA INC	1/8+	1026	39	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26372	9-6-3	V	CHRISTOPHER A ROUPE AND KARI S ROUPE	CHEVRON USA INC	1/8+	1026	33	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26491	9-6-3	V	MATTHEW ROY FURBEE	TH EXPLORATION LLC	1/8+	1037	438	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26740	9-6-3	V	*TIMOTHY SEAN GRIFFIN	TH EXPLORATION LLC	1/8+	1038	190	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27159	9-6-3	V	*CHRISTOPHER FURBEE AND KATIE FURBEE	TH EXPLORATION LLC	1/8+	1047	438	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28148	9-6-3	V	MADALYN DERROW	TH EXPLORATION LLC	1/8+	1067	320	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28333	9-6-3	V	DOUGLAS S SINGER	TH EXPLORATION LLC	1/8+	1070	430	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28470	9-6-3	V	STONE HILL MINERALS HOLDINGS, LLC	TH EXPLORATION LLC	1/8+	1072	157	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28566	9-6-3	V	JODY L JAMES	TH EXPLORATION LLC	1/8+	1072	42	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28632	9-6-3	V	RANDY D ROBINSON	CHEVRON USA INC	1/8+	976	256	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 45/92
10*28636	9-6-3	V	MARK A ROBINSON	CHEVRON USA INC	1/8+	986	517	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 45/92
10*28635	9-6-3	V	JEFFREY D ROBINSON EY UX	CHEVRON USA INC	1/8+	976	253	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC: 45/92
10*28940	9-6-3	V	*BRANDY R LOVERA	TH EXPLORATION LLC	1/8+	1078	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28942	9-6-3	V	*BRIAN L FURBEE	TH EXPLORATION LLC	1/8+	1078	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28944	9-6-3	V	*GREGORY D FURBEE	TH EXPLORATION LLC	1/8+	1078	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*28946	9-6-3	V	*EDMOND J FURBEE	TH EXPLORATION LLC	1/8+	1078	27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*31354	9-6-3	V	THOMAS MICHAEL GRIFFIN	STONE ENERGY CORPORATION	1/8+	870	128	N/A	N/A	N/A	N/A	N/A	N/A	Stone Energy Corp to EQT Production Company: 38/75 EQT Production Company to TH Exploration LLC: 48/21
10*31358	9-6-3	V	THE DERROW FAMILY IRREVOCABLE TRUST	STONE ENERGY CORPORATION	1/8+	874	500	N/A	N/A	N/A	N/A	N/A	N/A	Stone Energy Corp to EQT Production Company: 38/75 EQT Production Company to TH Exploration LLC: 48/21
10*31375	9-6-3	V	SONDRA S. MENENDEZ	STONE ENERGY CORPORATION	1/8+	864	565	N/A	N/A	N/A	N/A	N/A	N/A	Stone Energy Corp to EQT Production Company: 38/75 EQT Production Company to TH Exploration LLC: 48/21

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10*31376	9-6-3	V	JOSEPH MARK MENENDEZ	STONE ENERGY CORPORATION	1/8+	868	440	N/A	N/A	N/A	N/A	N/A	N/A	Stone Energy Corp to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31407	9-6-3	V	RUTH FLINNER	STONE ENERGY CORPORATION	1/8+	870	132	N/A	N/A	N/A	N/A	N/A	N/A	Stone Energy Corp to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31408	9-6-3	V	CATHERINE E. GRIFFIN	STONE ENERGY CORPORATION	1/8+	889	13	N/A	N/A	N/A	N/A	N/A	N/A	Stone Energy Corp to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21
10*31409	9-6-3	V	VICKY JO GRIFFIN AKA VICKIE JO GRIFFIN	STONE ENERGY CORPORATION	1/8+	870	134	N/A	N/A	N/A	N/A	N/A	N/A	Stone Energy Corp to EQT Production Company: 38/75	EQT Production Company to TH Exploration LLC: 48/21

*Co-tenancy utilization – At least 7 mineral owners in tract. At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act.

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ASSIGNMENT AND CONVEYANCE

This Assignment and Conveyance (this "*Assignment*") is from STATOIL USA ONSHORE PROPERTIES INC., a Delaware corporation ("*Assignor*"), to TH Exploration, LLC, a Texas limited liability company ("*Assignee*"), and is executed on December 18, 2017 (the "*Effective Date*"). Assignor and Assignee may be referred to herein collectively as the "*Parties*," or individually as a "*Party*." Capitalized terms used herein but not otherwise defined herein (including in Section 3.7) shall have the meanings given such terms in that certain Acreage Trade Agreement between the Assignor and the Assignee dated August 24, 2017 (the "*Acreage Trade Agreement*").

**ARTICLE 1
ASSIGNMENT OF ASSETS**

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

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

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

**ARTICLE 2
SPECIAL WARRANTY OF TITLE AND DISCLAIMERS**

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

Section 2.2 Disclaimers of Warranties and Representations.

(a) EXCEPT AS EXPRESSLY REPRESENTED OTHERWISE IN SECTION VI OF THE ACREAGE TRADE AGREEMENT OR THIS ASSIGNMENT, ASSIGNOR MAKES NO, AND HEREBY EXPRESSLY DISCLAIMS, ANY REPRESENTATION OR

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ASSIGNMENT AND BILL OF SALE

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

RECITALS

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

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

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

ARTICLE I
DEFINED TERMS

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

ARTICLE II
ASSIGNMENT OF ASSETS

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

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

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

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STATE OF WEST VIRGINIA §
 §
COUNTY OF MARSHALL §

Marshall County
Jan Pest, Clerk
Instrument 1428356
08/16/2017 @ 12:08:49 PM
ASSIGNMENTS
Book 40 @ Page 127
Pages Recorded 25
Recording Cost \$ 33.00

ASSIGNMENT AND CONVEYANCE

THIS ASSIGNMENT AND CONVEYANCE (the "Assignment") is made and entered into this 1 day of AUGUST, 2017 (the "Effective Date"), by and between CHEVRON U.S.A. INC. (hereinafter "Assignor") and TH EXPLORATION, LLC (hereinafter "Assignee") pursuant to the terms of that certain Acreage Trade Agreement between the Assignor and the Assignee dated the 1st day of August, 2017 (the "Acreage Trade Agreement"). Capitalized terms used but not defined herein and defined in the Acreage Trade Agreement shall have the meanings given to such terms in the Acreage Trade Agreement.

WITNESSETH:

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

WHEREAS, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to the Leases as described below, subject to certain overriding royalty interests and less and except certain exclusions.

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

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

A. The Chevron ORRI previously conveyed to Assignor and as described in that certain Memorandum of Assignment of Oil and Gas Lease Interests dated November 6, 2012 by and between Cornell Holdings Incorporated and Chevron U.S.A. Inc., which is recorded at Book 0028, Page 0239 in the Office of the County Clerk of Marshall County, West Virginia, and

B. As to each of the Leases and all oil, gas, and associated hydrocarbons produced, saved and sold thereunder, an overriding royalty interest equal to the difference between 82% and the

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STATE OF WEST VIRGINIA §
 §
COUNTY OF MARSHALL §

ASSIGNMENT AND BILL OF SALE

This ASSIGNMENT AND BILL OF SALE (this "Assignment") dated as of February 7, 2019 (the "Signing Date"), but effective from and after 7:00 a.m., Eastern Standard Time on February 1, 2019 (the "Effective Date"), is made by Chevron U.S.A. Inc., a Pennsylvania corporation, with an address at 700 Cherrington Parkway, Coraopolis, PA 15108 ("Chevron" or "Assignor") to TH Exploration II, LLC and TH Exploration, LLC, Texas limited liability companies, with an address at 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (collectively "Assignee") and is accepted by Assignee upon the following terms and conditions.

RECITALS

- A. Assignor desires to sell, convey, transfer, assign and deliver to Assignee Assignor's Crawford 1 well and certain related assets, including certain leasehold interests, located in Marshall County, West Virginia.
- B. Through an Acreage Trade Agreement to be executed contemporaneously with this Assignment, Assignor desires to transfer, convey and assign to Assignee certain of Assignor's oil and gas leasehold interests located in Marshall County, West Virginia in exchange for the transfer, conveyance and assignment to Assignor by Assignee certain of Assignee's oil and gas leasehold interests located in Marshall County, West Virginia.
- C. In consideration of the mutual promises set out in this Assignment, including execution of the Acreage Trade Agreement, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree to be bound by the terms of this Assignment.

1. DEFINITIONS

1.1 **Definitions.** As used in this Assignment, these words and expressions have the following meanings:

"Acreage Trade Agreement" means that certain Acreage Trade Agreement by and between Chevron U.S.A. Inc. and TH Exploration, LLC with an Effective Date of February 1, 2019 to be contemporaneously executed with this Assignment.

"Act" has the meaning given to such term in Section 9.1(C).

"Affiliate" means any legal entity which controls, is controlled by, or is under common control with, another legal entity. An entity is deemed to "control" another if it owns directly or indirectly at least fifty percent of either of the following: (A) the shares entitled to vote at a general election of directors of such

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ASSIGNMENT AND BILL OF SALE

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

RECITALS

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

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

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

ARTICLE I
DEFINED TERMS

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

ARTICLE II
ASSIGNMENT OF ASSETS

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

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

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

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