



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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, September 24, 2019
WELL WORK PERMIT
Horizontal 6A / New Drill

TUG HILL OPERATING, LLC
380 SOUTHPOINTE BLVD

CANONSBURG, PA 15317

Re: Permit approval for MICHTER N-8HU
47-051-02219-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: MICHTER N-8HU
Farm Name: LARRY W. DUNLAP, ET AL
U.S. WELL NUMBER: 47-051-02219-00-00
Horizontal 6A New Drill
Date Issued: 9/24/2019

Promoting a healthy environment.

PERMIT CONDITIONS

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

CONDITIONS

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

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



west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

September 12, 2019

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

RE: Application for Deep Well Permit – API #47-051-02219

COMPANY: Tug Hill Operating, LLC

FARM: Larry W. Dunlap, et ux Michter N-8HU

COUNTY: Marshall DISTRICT: Franklin QUAD: Powhatan Point

The deep well review of the application for the above company is Approved to drill to the Trenton for Point Pleasant completion. Pooling Docket No. 284-280

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

1. Comments to Notice of Deviation filed? Yes; withdrawn prior to hearing being set
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners? yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells: **yes, Docket 284-280
4. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

** Michter N-6HU 47-051-02206; Michter N-7HU 47-051-02207, Michter N-9HU 47-051-02220, MND 6 HHS 47-051-01732; MND20AU 47-051-02011; MND20BU 47-051-02012, MND20CU 47-051-02013, Old Crow N-19HU 47-051-02190; Old Crow N-20HU 47-051-02191, Old Crow N-18HU 47-051-02123; Old Crow N-17HU 47-051-02122; Bryan N-14HU 47-051-02031; Bryan N-13HU 47-051-02030; Bryan N-12HU 47-051-02029; Woodford -10HU 47-051-02152; Woodford-9HU 47-051-02150; Woodford-8HU 47-051-02149; Woodford-7HU 47-051-02147; Woodford-6HU 47-051-02143

Sincerely,

A handwritten signature in blue ink that reads "Susan Rose". The signature is written in a cursive style with a large initial 'S'.

Susan Rose
Administrator



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

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

2) Operator's Well Number: Michter N-8HU Well Pad Name: Michter

3) Farm Name/Surface Owner: Larry W. Dunlap, et ux Public Road Access: Rines Ridge Road (County Route 76)

4) Elevation, current ground: 1136.00' Elevation, proposed post-construction: 1127.11'

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

(b) If Gas Shallow Deep X
Horizontal X

6) Existing Pad: Yes or No No

JW
2/20/19

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Point Pleasant is the target formation at a depth of 10,918' - 11,039', thickness of 121' and anticipated pressure of approx. 9,500 psi

8) Proposed Total Vertical Depth: 11,189'

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 23,181'

11) Proposed Horizontal Leg Length: 11,308.03'

12) Approximate Fresh Water Strata Depths: 718'

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

14) Approximate Saltwater Depths: 1740'

15) Approximate Coal Seam Depths: Sewickly Coal - 614' and Pittsburgh Coal - 712'

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

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

(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	20"	NEW	J55	94#	810'	810'	1,327ft^3(CTS)
Coal	13 3/8"	NEW	J55	54.5#	2,600'	2,600'	1,835ft^3(CTS)
Intermediate	9 5/8"	NEW	HPP110	47#	10,238'	10,238'	3,335ft^3(CTS)
Production	5 1/2"	NEW	P110	23#	23,181'	23,181'	5,484ft^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#		11,118'	
Liners							

ju
2/20/19

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	20"	26"	.5	2,410	1,928	SEE #24	1.2
Coal	13 3/8"	17 1/2"	.38	2,740	2,192	SEE#24	1.2
Intermediate	9 5/8"	12 1/4"	.472	10,730	6,968	SEE#24	1.99
Production	5 1/2"	8 1/2"	.415	13,580	10,864	SEE#24	1.17/1.19
Tubing	2 7/8"			14,530	11,624		
Liners							

PACKERS

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

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2/20/19

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

Drill through the Point Pleasant and TD Pilot Hole 150' into the Trenton. Log vertical section and run a solid cement plug back to proposed KOP. Drill curve and lateral per proposed well plan, run and cement production casing. Perform CBL from 60 deg to surface, make cleanout run, and stimulate.

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

Well to be completed with approximately 28,264,775 lb proppant and 436,994 bbl of water. Max rate = 80 bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 21.11 acres

22) Area to be disturbed for well pad only, less access road (acres): 6.49 acres

23) Describe centralizer placement for each casing string:

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

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

*See Attached

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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: Michler N-8HU
 STATE: WV COUNTY: Marshall
 DISTRICT: Franklin
 DE Elev: 1,130' GL Elev: 1,130'
 TD: 23,181'
 TH Latitude: 35.80297218
 TH Longitude: -80.79757351
 BH Latitude: 39.83107996
 BH Longitude: 80.81160077

20" Csg @ 120' TVD

20" Csg @ 810' TVD

13 3/8" Csg @ 2,600' TVD

9 5/8" Csg @ 10,238' TVD

KOP @ 10,618' ft MD

Pilot Hole
 PH TD @ 11,189'

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Landing Point @ 1,875' MD / 10,968' TVD

PH TVD = 150' below Transition Top

Lateral TD @ 23,181' ft MD
 10,770' ft TVD

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	718'
Sewickley Coal	614'
Pittsburgh Coal	712'
Big Lime	2,048'
Berea	2,562'
Tully	6,220'
Marcellus	6,281'
Onondaga	6,335'
Salina	7,027'
Lockport	8,039'
Utica	10,667'
Point Pleasant	10,918'
Landing Depth	10,968'
Trenton	11,039'
Pilot Hole TD	11,189'

CASING SUMMARY						
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade
Conductor	36	30	120'	120'	BW	BW
Surface	26	20	810'	810'	106.5	J55
Intermediate 1	17 1/2	13 3/8	2,600'	2,600'	54.5	J55
Intermediate 2	12 1/4	9 5/8	10,238'	9,819'	47	HPP110
Production	8 1/2	5 1/2	23,481'	10,770'	23	HCP110

CEMENT SUMMARY				DRILLING DETAILS	
Sacks	Class	Density	Fluid Type	Centralizer Notes	
338	A	15.6	Air	None	
1,430	A	15.6	Air	3 Centralizers at equal distance	
1,989	A	15	Air	1 Centralizer every other jt	
2,747	A	14.5	Air	1 Centralizer every other jt	
4,862	A	15	Air / SOBMM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to sfc	

Handwritten signature and date: 2/7/19



Tug Hill Operating, LLC Casing and Cement Program

Michter N-8HU

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	20"	J55	26"	810'	CTS
Intermediate 1	13 3/8"	J55	17 1/2"	2,600'	CTS
Intermediate 2	9 5/8"	HPP110	12 1/4"	10,238'	CTS
Production	5 1/2"	HCP110	8 1/2"	23,181'	CTS

Cement

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

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

Intermediate 2: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.99

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 = 1.18

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Well Site Safety Plan

Tug Hill Operating, LLC

JW
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Well Name: Michter N-8HU

Pad Location: Michter
Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

NORTHING - 4,405,909.03

EASTING - 517,328.60

February 2019

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

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

Data Sources Reviewed:

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

Contacted Devin Ducoeur 724-705-0444, dducoeur@dpslandservices.com DPS GIS (07/02/2018) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it as the best publicly available. See attached map he provided.

Request maps for:

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

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

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

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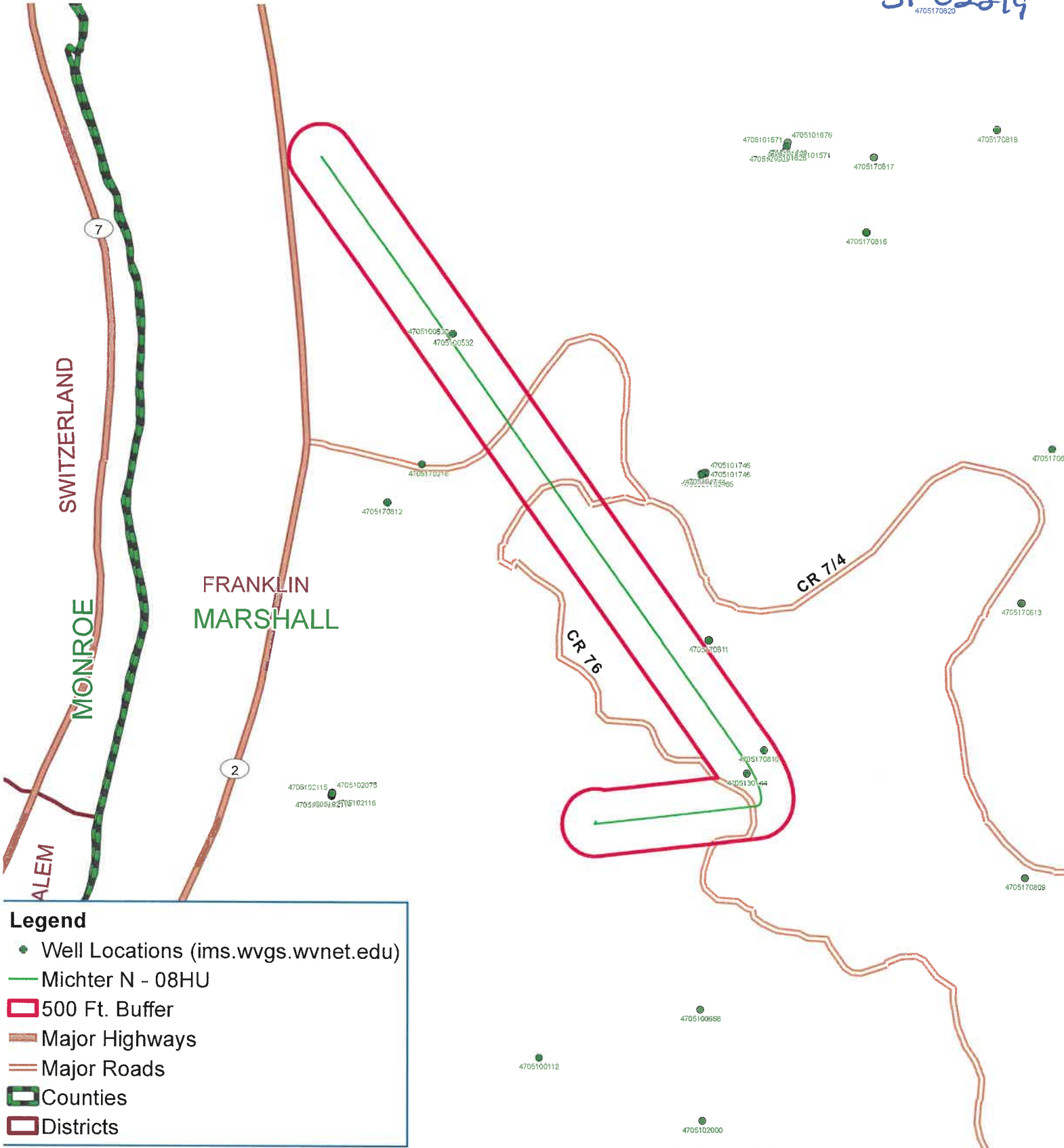
Permit well - Michter N-8HU

Wells within 500' Buffer

Note: Well spots depicted on Area of Review map (page 3) are derived from State held coordinates. The spots may differ from those depicted on the Well Plat because the Plat locations represent actual field surveyed locations. Please refer to the Plat for surveyed well spots

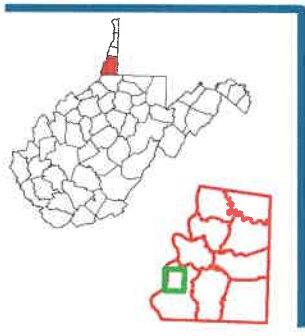
API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705170810	Manufacturers Light and Heat	Unknown	Unknown	Unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be effected by fracturing in the planned Point Pleasant well.	State records are incomplete
4705130144	Manufacturers Light and Heat	1835'	Salt Sands (U	Unknown	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation.	Plugged : 11/25/1940
4705100532	Allied Chemical	1943'	Salina	Unknown	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation.	Plugged : 12/20/1997
4705101765	HG Energy II, Appalachia, LLC	5,837' TVD, 13,752' TMD	Marcellus	None	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation.	Producing Marcellus well
4705101763	HG Energy II, Appalachia, LLC	5,940' TVD, 14,650' TMD	Marcellus	None	No, the well is not deep enough to be within the expected fracture propagation from a Point Pleasant stimulation.	Producing Marcellus well

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Legend

- Well Locations (ims.wvgs.wvnet.edu)
- Michter N - 08HU
- 500 Ft. Buffer
- Major Highways
- Major Roads
- Counties
- Districts



Michter N - 08HU Franklin District Marshall County, WV



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



Map Created: January 15, 2019

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Coordinate System: NAD 83
Datum: North American 1983
False Easting: 1560.0
False Northing: 0.0
Scale Factor: 0.9998
Units: Feet US

CONFIDENTIAL

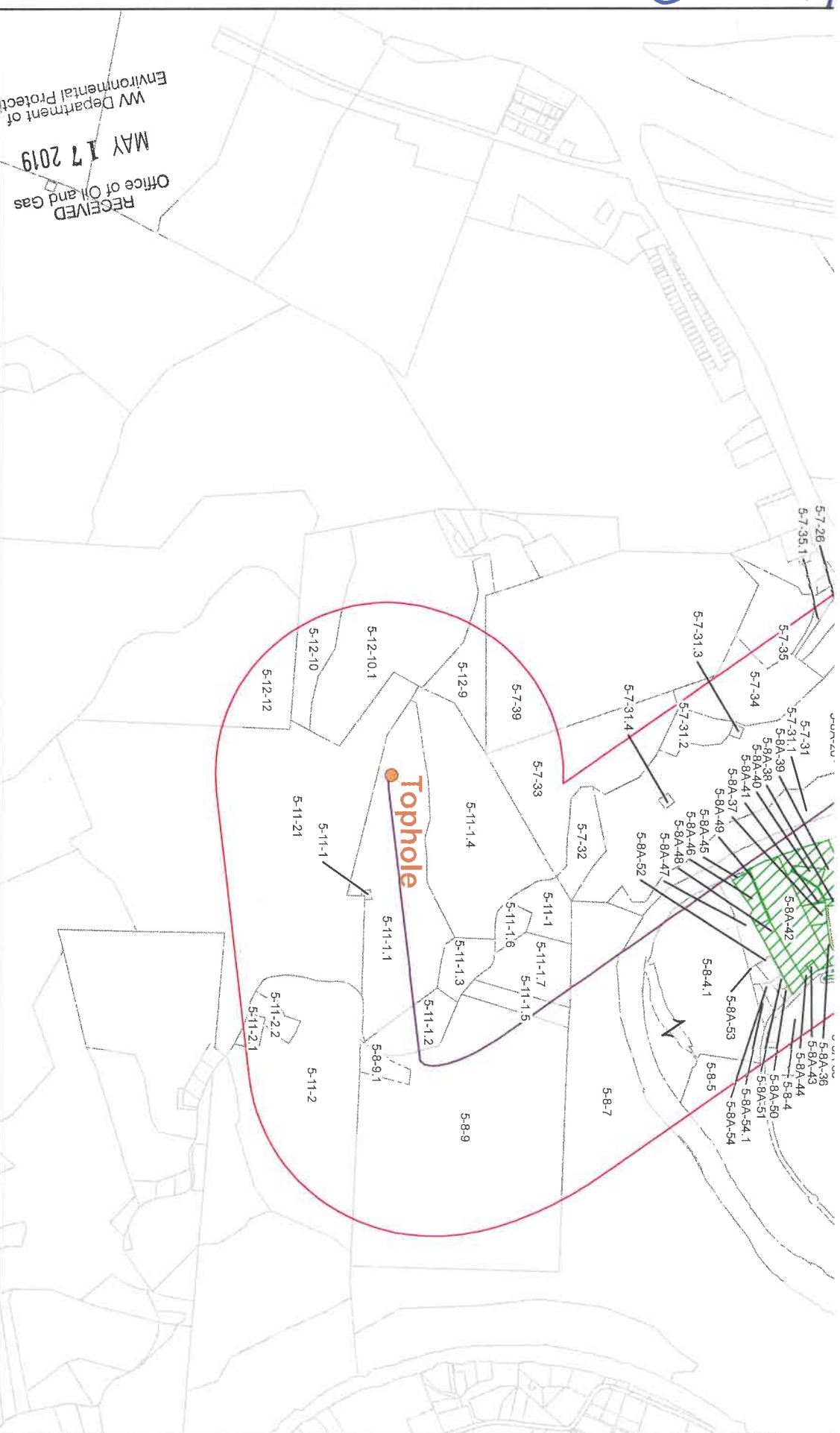


- 1500 Foot Buffer
- Utica Well
- Force Pool

Operators within 1500 Feet of Well Borehole

Michter N-8HU

Tophole





Well: Michter N-08HU (G)
Site: Michter
Project: Marshall County, West Virginia.
Design: rev1

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 @ 1130.00ft

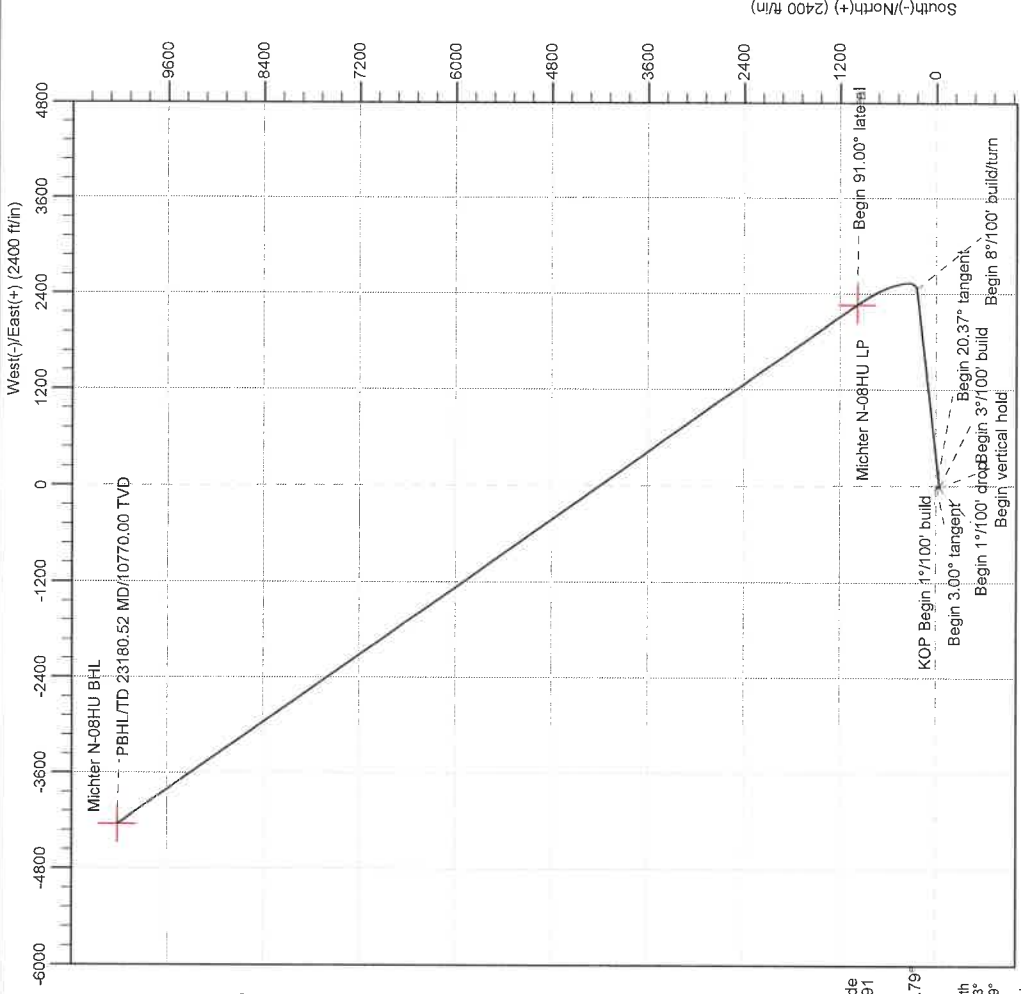
Northing: 14455053.20
 Easting: 1697268.90
 Latitude: 39.80297218
 Longitude: -80.79757391
 Total Corr. (M->G):

To convert a Magnetic Direction to a Grid Direction, Subtract 8.79°



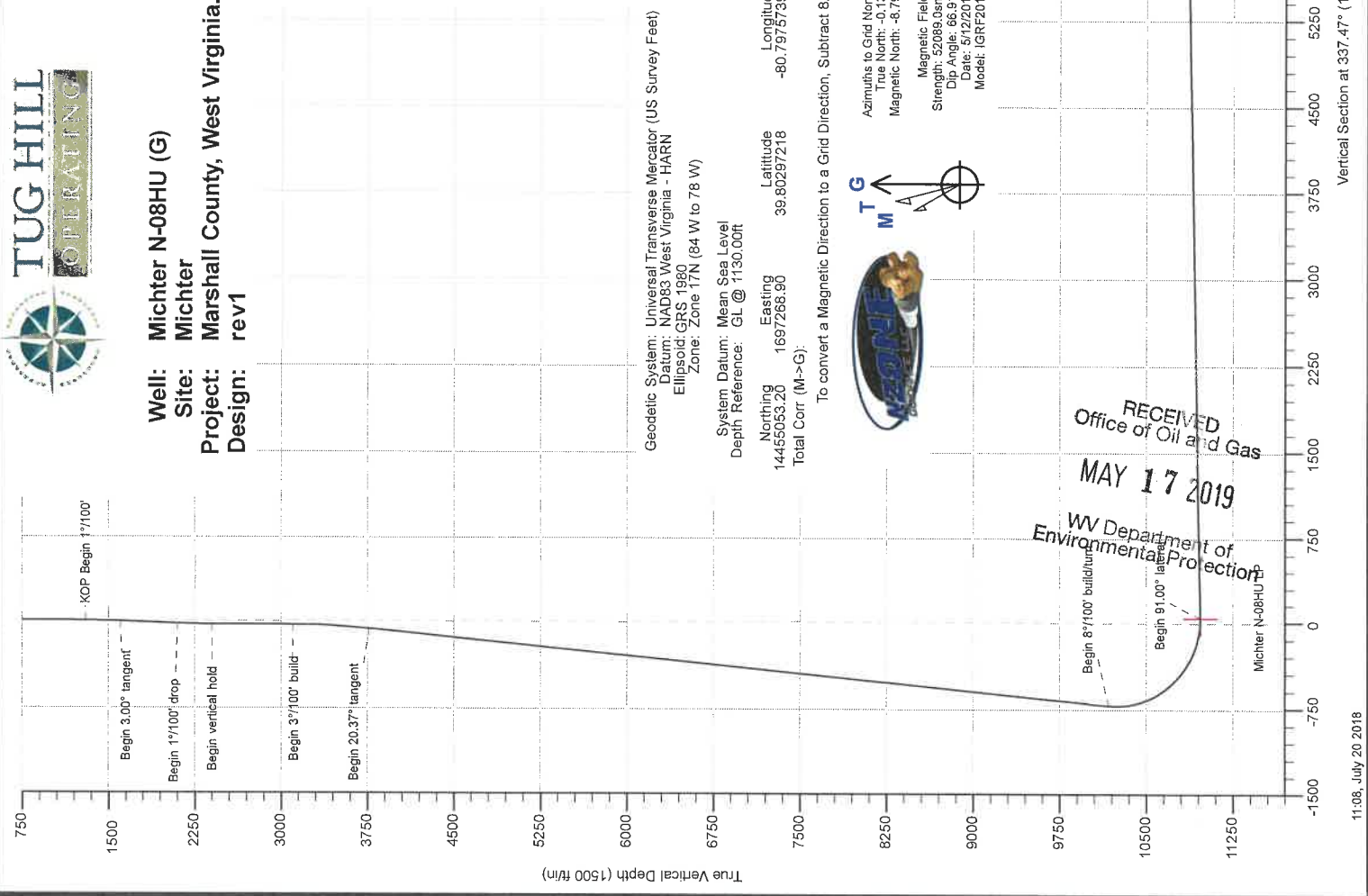
Azimuths to Grid North
 True North: -0.13°
 Magnetic North: -8.79°

Magnetic Field
 Strength: 52089.0nT
 Dip Angle: 66.91°
 Date: 5/12/2018
 Model: IGRF2015



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 1°/100' build
3	1600.00	3.00	200.00	1599.86	-7.38	-2.69	1.00	200.00	-5.79	Begin 3.00° tangent
4	2100.00	3.00	200.00	2099.16	-31.97	-11.54	1.00	180.00	-25.07	Begin 1°/100' drop
5	2400.00	0.00	200.00	2399.04	-38.35	-14.32	1.00	200.00	-30.86	Begin vertical hold
6	3100.96	0.00	200.00	3100.00	-38.35	-14.32	1.00	200.00	-30.86	Begin 3°/100' build
7	3779.85	20.37	83.42	3764.69	-25.67	104.29	3.00	83.42	-63.57	Begin 20.37° tangent
8	10617.63	20.37	83.42	10175.17	246.68	2468.45	3.00	0.00	-717.78	Begin 8°/100' build/turn
9	11874.62	91.00	324.83	10958.00	985.56	2270.04	8.00	-116.75	40.55	Begin 91.00° lateral
10	23180.52	91.00	324.83	10770.00	10225.69	-4241.81	0.00	0.00	1070.58	PBHL/TD 23180.52 MD/10770.00 TVD





Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Michter N-08HU (G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1130.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1130.00ft
Site:	Michter	North Reference:	Grid
Well:	Michter N-08HU (G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	Michter				
Site Position:		Northing:	14,454,962.42 usft	Latitude:	39.80272253
From:	Lat/Long	Easting:	1,697,325.45 usft	Longitude:	-80.79737330
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13 °

Well	Michter N-08HU (G)					
Well Position	+N/-S	0.00 ft	Northing:	14,455,053.20 usft	Latitude:	39.80297218
	+E/-W	0.00 ft	Easting:	1,697,268.90 usft	Longitude:	-80.79757391
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	1,130.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/12/2018	-8.66	66.91	52,088.97774828

Design	rev1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	337.47

Plan Survey Tool Program	Date	7/20/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	23,180.52 rev1 (Original Hole)	MWD	
			MWD - Standard	



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Michter N-08HU (G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1130.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1130.00ft
Site:	Michter	North Reference:	Grid
Well:	Michter N-08HU (G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	3.00	200.00	1,599.86	-7.38	-2.69	1.00	1.00	0.00	200.00	
2,100.00	3.00	200.00	2,099.18	-31.97	-11.64	0.00	0.00	0.00	0.00	
2,400.00	0.00	200.00	2,399.04	-39.35	-14.32	1.00	-1.00	0.00	180.00	
3,100.96	0.00	200.00	3,100.00	-39.35	-14.32	0.00	0.00	0.00	200.00	
3,779.86	20.37	83.42	3,764.69	-25.67	104.29	3.00	3.00	-17.17	83.42	
10,617.83	20.37	83.42	10,175.17	246.88	2,468.45	0.00	0.00	0.00	0.00	
11,874.62	91.00	324.83	10,968.00	985.56	2,270.04	8.00	5.62	-9.44	-116.75	Michter N-08HU LP
23,180.52	91.00	324.83	10,770.00	10,225.69	-4,241.81	0.00	0.00	0.00	0.00	Michter N-08HU BHL

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Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Michter N-08HU (G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1130.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1130.00ft
Site:	Michter	North Reference:	Grid
Well:	Michter N-08HU (G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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Environmental Protection

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
100.00	0.00	0.00	100.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
200.00	0.00	0.00	200.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
300.00	0.00	0.00	300.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
400.00	0.00	0.00	400.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
500.00	0.00	0.00	500.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
600.00	0.00	0.00	600.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
700.00	0.00	0.00	700.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
800.00	0.00	0.00	800.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
900.00	0.00	0.00	900.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,455,053.20	1,697,268.90	39.80297218	-80.79757391	
KOP Begin 1°/100' build										
1,400.00	1.00	200.00	1,399.99	-0.82	-0.30	14,455,052.38	1,697,268.60	39.80296993	-80.79757498	
1,500.00	2.00	200.00	1,499.96	-3.28	-1.19	14,455,049.92	1,697,267.71	39.80296318	-80.79757819	
1,600.00	3.00	200.00	1,599.86	-7.38	-2.69	14,455,045.82	1,697,266.21	39.80295193	-80.79758353	
Begin 3.00° tangent										
1,700.00	3.00	200.00	1,699.73	-12.30	-4.48	14,455,040.90	1,697,264.42	39.80293844	-80.79758995	
1,800.00	3.00	200.00	1,799.59	-17.21	-6.27	14,455,035.99	1,697,262.63	39.80292495	-80.79759636	
1,900.00	3.00	200.00	1,899.45	-22.13	-8.06	14,455,031.07	1,697,260.84	39.80291145	-80.79760277	
2,000.00	3.00	200.00	1,999.31	-27.05	-9.85	14,455,026.15	1,697,259.05	39.80289796	-80.79760918	
2,100.00	3.00	200.00	2,099.18	-31.97	-11.64	14,455,021.23	1,697,257.26	39.80288446	-80.79761560	
Begin 1°/100' drop										
2,200.00	2.00	200.00	2,199.08	-36.07	-13.13	14,455,017.13	1,697,255.77	39.80287321	-80.79762094	
2,300.00	1.00	200.00	2,299.05	-38.53	-14.02	14,455,014.67	1,697,254.88	39.80286646	-80.79762415	
2,400.00	0.00	200.00	2,399.04	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
Begin vertical hold										
2,500.00	0.00	0.00	2,499.04	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
2,600.00	0.00	0.00	2,599.04	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
2,700.00	0.00	0.00	2,699.04	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
2,800.00	0.00	200.00	2,799.04	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
2,900.00	0.00	0.00	2,899.04	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
3,000.00	0.00	200.00	2,999.04	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
3,100.00	0.00	0.00	3,099.04	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
3,100.96	0.00	0.00	3,100.00	-39.35	-14.32	14,455,013.85	1,697,254.58	39.80286421	-80.79762522	
Begin 3°/100' build										
3,200.00	2.97	83.42	3,199.00	-39.05	-11.77	14,455,014.15	1,697,257.13	39.80286500	-80.79761614	
3,300.00	5.97	83.42	3,298.68	-38.16	-4.03	14,455,015.04	1,697,264.87	39.80286741	-80.79758856	
3,400.00	8.97	83.42	3,397.82	-36.67	8.89	14,455,016.53	1,697,277.79	39.80287142	-80.79754256	
3,500.00	11.97	83.42	3,496.14	-34.59	26.94	14,455,018.61	1,697,295.84	39.80287702	-80.79747826	
3,600.00	14.97	83.42	3,593.38	-31.92	50.08	14,455,021.28	1,697,318.98	39.80288420	-80.79739585	
3,700.00	17.97	83.42	3,689.27	-28.68	78.24	14,455,024.52	1,697,347.14	39.80289294	-80.79729555	
3,779.86	20.37	83.42	3,764.69	-25.67	104.29	14,455,027.53	1,697,373.19	39.80290103	-80.79720279	
Begin 20.37° tangent										
3,800.00	20.37	83.42	3,783.57	-24.87	111.26	14,455,028.33	1,697,380.16	39.80290319	-80.79717798	
3,900.00	20.37	83.42	3,877.32	-20.88	145.83	14,455,032.32	1,697,414.73	39.80291392	-80.79705485	
4,000.00	20.37	83.42	3,971.07	-16.90	180.40	14,455,036.30	1,697,449.30	39.80292465	-80.79693171	
4,100.00	20.37	83.42	4,064.82	-12.91	214.98	14,455,040.29	1,697,483.88	39.80293538	-80.79680858	
4,200.00	20.37	83.42	4,158.57	-8.93	249.55	14,455,044.27	1,697,518.45	39.80294611	-80.79668544	
4,300.00	20.37	83.42	4,252.32	-4.94	284.13	14,455,048.26	1,697,553.03	39.80295684	-80.79656231	
4,400.00	20.37	83.42	4,346.06	-0.96	318.70	14,455,052.24	1,697,587.60	39.80296757	-80.79643918	
4,500.00	20.37	83.42	4,439.81	3.03	353.27	14,455,056.23	1,697,622.17	39.80297830	-80.79631604	

SI-02219



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Michter N-08HU (G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1130.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1130.00ft
Site:	Michter	North Reference:	Grid
Well:	Michter N-08HU (G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,600.00	20.37	83.42	4,533.56	7.02	387.85	14,455,060.22	1,697,656.75	39.80298903	-80.79619291
4,700.00	20.37	83.42	4,627.31	11.00	422.42	14,455,064.20	1,697,691.32	39.80299976	-80.79606977
4,800.00	20.37	83.42	4,721.06	14.99	457.00	14,455,068.19	1,697,725.90	39.80301049	-80.79594664
4,900.00	20.37	83.42	4,814.81	18.97	491.57	14,455,072.17	1,697,760.47	39.80302122	-80.79582350
5,000.00	20.37	83.42	4,908.55	22.96	526.14	14,455,076.16	1,697,795.04	39.80303195	-80.79570037
5,100.00	20.37	83.42	5,002.30	26.95	560.72	14,455,080.15	1,697,829.62	39.80304268	-80.79557723
5,200.00	20.37	83.42	5,096.05	30.93	595.29	14,455,084.13	1,697,864.19	39.80305341	-80.79545410
5,300.00	20.37	83.42	5,189.80	34.92	629.87	14,455,088.12	1,697,898.76	39.80306414	-80.79533097
5,400.00	20.37	83.42	5,283.55	38.90	664.44	14,455,092.10	1,697,933.34	39.80307487	-80.79520783
5,500.00	20.37	83.42	5,377.30	42.89	699.01	14,455,096.09	1,697,967.91	39.80308560	-80.79508470
5,600.00	20.37	83.42	5,471.04	46.87	733.59	14,455,100.07	1,698,002.49	39.80309633	-80.79496156
5,700.00	20.37	83.42	5,564.79	50.86	768.16	14,455,104.06	1,698,037.06	39.80310706	-80.79483843
5,800.00	20.37	83.42	5,658.54	54.85	802.74	14,455,108.05	1,698,071.63	39.80311778	-80.79471529
5,900.00	20.37	83.42	5,752.29	58.83	837.31	14,455,112.03	1,698,106.21	39.80312851	-80.79459216
6,000.00	20.37	83.42	5,846.04	62.82	871.88	14,455,116.02	1,698,140.78	39.80313924	-80.79446902
6,100.00	20.37	83.42	5,939.79	66.80	906.46	14,455,120.00	1,698,175.36	39.80314997	-80.79434589
6,200.00	20.37	83.42	6,033.53	70.79	941.03	14,455,123.99	1,698,209.93	39.80316070	-80.79422275
6,300.00	20.37	83.42	6,127.28	74.78	975.61	14,455,127.98	1,698,244.50	39.80317142	-80.79409962
6,400.00	20.37	83.42	6,221.03	78.76	1,010.18	14,455,131.96	1,698,279.08	39.80318215	-80.79397648
6,500.00	20.37	83.42	6,314.78	82.75	1,044.75	14,455,135.95	1,698,313.65	39.80319288	-80.79385335
6,600.00	20.37	83.42	6,408.53	86.73	1,079.33	14,455,139.93	1,698,348.23	39.80320361	-80.79373021
6,700.00	20.37	83.42	6,502.28	90.72	1,113.90	14,455,143.92	1,698,382.80	39.80321433	-80.79360708
6,800.00	20.37	83.42	6,596.02	94.70	1,148.48	14,455,147.90	1,698,417.37	39.80322506	-80.79348394
6,900.00	20.37	83.42	6,689.77	98.69	1,183.05	14,455,151.89	1,698,451.95	39.80323579	-80.79336081
7,000.00	20.37	83.42	6,783.52	102.68	1,217.62	14,455,155.88	1,698,486.52	39.80324651	-80.79323767
7,100.00	20.37	83.42	6,877.27	106.66	1,252.20	14,455,159.86	1,698,521.10	39.80325724	-80.79311454
7,200.00	20.37	83.42	6,971.02	110.65	1,286.77	14,455,163.85	1,698,555.67	39.80326797	-80.79299140
7,300.00	20.37	83.42	7,064.77	114.63	1,321.35	14,455,167.83	1,698,590.24	39.80327869	-80.79286826
7,400.00	20.37	83.42	7,158.51	118.62	1,355.92	14,455,171.82	1,698,624.82	39.80328942	-80.79274513
7,500.00	20.37	83.42	7,252.26	122.61	1,390.49	14,455,175.80	1,698,659.39	39.80330015	-80.79262199
7,600.00	20.37	83.42	7,346.01	126.59	1,425.07	14,455,179.79	1,698,693.97	39.80331087	-80.79249886
7,700.00	20.37	83.42	7,439.76	130.58	1,459.64	14,455,183.78	1,698,728.54	39.80332160	-80.79237572
7,800.00	20.37	83.42	7,533.51	134.56	1,494.22	14,455,187.76	1,698,763.11	39.80333232	-80.79225259
7,900.00	20.37	83.42	7,627.26	138.55	1,528.79	14,455,191.75	1,698,797.69	39.80334305	-80.79212945
8,000.00	20.37	83.42	7,721.00	142.53	1,563.36	14,455,195.73	1,698,832.26	39.80335378	-80.79200632
8,100.00	20.37	83.42	7,814.75	146.52	1,597.94	14,455,199.72	1,698,866.84	39.80336450	-80.79188318
8,200.00	20.37	83.42	7,908.50	150.51	1,632.51	14,455,203.71	1,698,901.41	39.80337523	-80.79176004
8,300.00	20.37	83.42	8,002.25	154.49	1,667.09	14,455,207.69	1,698,935.98	39.80338595	-80.79163691
8,400.00	20.37	83.42	8,096.00	158.48	1,701.66	14,455,211.68	1,698,970.56	39.80339668	-80.79151377
8,500.00	20.37	83.42	8,189.75	162.46	1,736.23	14,455,215.66	1,699,005.13	39.80340740	-80.79139064
8,600.00	20.37	83.42	8,283.49	166.45	1,770.81	14,455,219.65	1,699,039.70	39.80341813	-80.79126750
8,700.00	20.37	83.42	8,377.24	170.44	1,805.38	14,455,223.63	1,699,074.28	39.80342885	-80.79114437
8,800.00	20.37	83.42	8,470.99	174.42	1,839.96	14,455,227.62	1,699,108.85	39.80343958	-80.79102123
8,900.00	20.37	83.42	8,564.74	178.41	1,874.53	14,455,231.61	1,699,143.43	39.80345030	-80.79089809
9,000.00	20.37	83.42	8,658.49	182.39	1,909.10	14,455,235.59	1,699,178.00	39.80346102	-80.79077496
9,100.00	20.37	83.42	8,752.24	186.38	1,943.68	14,455,239.58	1,699,212.57	39.80347175	-80.79065182
9,200.00	20.37	83.42	8,845.98	190.36	1,978.25	14,455,243.56	1,699,247.15	39.80348247	-80.79052869
9,300.00	20.37	83.42	8,939.73	194.35	2,012.83	14,455,247.55	1,699,281.72	39.80349320	-80.79040555
9,400.00	20.37	83.42	9,033.48	198.34	2,047.40	14,455,251.54	1,699,316.30	39.80350392	-80.79028241
9,500.00	20.37	83.42	9,127.23	202.32	2,081.97	14,455,255.52	1,699,350.87	39.80351464	-80.79015928
9,600.00	20.37	83.42	9,220.98	206.31	2,116.55	14,455,259.51	1,699,385.44	39.80352537	-80.79003614
9,700.00	20.37	83.42	9,314.73	210.29	2,151.12	14,455,263.49	1,699,420.02	39.80353609	-80.78991300
9,800.00	20.37	83.42	9,408.47	214.28	2,185.70	14,455,267.48	1,699,454.59	39.80354681	-80.78978987
9,900.00	20.37	83.42	9,502.22	218.27	2,220.27	14,455,271.46	1,699,489.17	39.80355754	-80.78966673
10,000.00	20.37	83.42	9,595.97	222.25	2,254.84	14,455,275.45	1,699,523.74	39.80356826	-80.78954360

Database: DB_Jul2216dt_v14
Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia.
Site: Michter
Well: Michter N-08HU (G)
Wellbore: Original Hole
Design: rev1

Local Co-ordinate Reference: Well Michter N-08HU (G)
TVD Reference: GL @ 1130.00ft
MD Reference: GL @ 1130.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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Planned Survey

WV Department of
 Environmental Protection

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,100.00	20.37	83.42	9,689.72	226.24	2,289.42	14,455,279.44	1,699,558.31	39.80357898	-80.78942046
10,200.00	20.37	83.42	9,783.47	230.22	2,323.99	14,455,283.42	1,699,592.89	39.80358970	-80.78929732
10,300.00	20.37	83.42	9,877.22	234.21	2,358.57	14,455,287.41	1,699,627.46	39.80360043	-80.78917419
10,400.00	20.37	83.42	9,970.96	238.19	2,393.14	14,455,291.39	1,699,662.04	39.80361115	-80.78905105
10,500.00	20.37	83.42	10,064.71	242.18	2,427.71	14,455,295.38	1,699,696.61	39.80362187	-80.78892791
10,600.00	20.37	83.42	10,158.46	246.17	2,462.29	14,455,299.37	1,699,731.18	39.80363259	-80.78880478
10,617.83	20.37	83.42	10,175.17	246.88	2,468.45	14,455,300.08	1,699,737.35	39.80363451	-80.78878282
Begin 8°/100' build/turn									
10,700.00	18.33	64.46	10,252.78	254.09	2,494.34	14,455,307.29	1,699,763.24	39.80365416	-80.78869057
10,800.00	18.78	39.17	10,347.73	273.39	2,518.74	14,455,326.59	1,699,787.64	39.80370699	-80.78860354
10,900.00	22.21	18.36	10,441.51	303.86	2,534.89	14,455,357.06	1,699,803.79	39.80379056	-80.78854579
11,000.00	27.52	4.02	10,532.29	344.91	2,542.48	14,455,398.11	1,699,811.37	39.80390325	-80.78851843
11,100.00	33.84	354.34	10,618.30	395.75	2,541.35	14,455,448.94	1,699,810.25	39.80404287	-80.78852201
11,200.00	40.69	347.50	10,697.88	455.38	2,531.54	14,455,508.58	1,699,800.43	39.80420669	-80.78855645
11,300.00	47.85	342.37	10,769.46	522.64	2,513.23	14,455,575.84	1,699,782.12	39.80439154	-80.78862109
11,400.00	55.19	338.29	10,831.66	596.23	2,486.77	14,455,649.43	1,699,755.67	39.80459380	-80.78871466
11,500.00	62.64	334.89	10,883.26	674.71	2,452.69	14,455,727.91	1,699,721.59	39.80480955	-80.78883534
11,600.00	70.17	331.93	10,923.27	756.56	2,411.65	14,455,809.76	1,699,680.55	39.80503459	-80.78898079
11,700.00	77.74	329.23	10,950.90	840.17	2,364.44	14,455,893.37	1,699,633.34	39.80526453	-80.78914817
11,800.00	85.33	326.68	10,965.61	923.94	2,311.99	14,455,977.13	1,699,580.89	39.80549490	-80.78933424
11,874.62	91.00	324.83	10,968.00	985.56	2,270.04	14,456,038.76	1,699,538.94	39.80566440	-80.78948309
Begin 91.00° lateral									
11,900.00	91.00	324.83	10,967.56	1,006.30	2,255.42	14,456,059.50	1,699,524.32	39.80572147	-80.78953497
12,000.00	91.00	324.83	10,965.80	1,088.03	2,197.83	14,456,141.23	1,699,466.72	39.80594628	-80.78973937
12,100.00	91.00	324.83	10,964.05	1,169.76	2,140.23	14,456,222.96	1,699,409.12	39.80617110	-80.78994377
12,200.00	91.00	324.83	10,962.30	1,251.49	2,082.63	14,456,304.68	1,699,351.53	39.80639592	-80.79014818
12,300.00	91.00	324.83	10,960.55	1,333.22	2,025.04	14,456,386.41	1,699,293.93	39.80662074	-80.79035258
12,400.00	91.00	324.83	10,958.80	1,414.94	1,967.44	14,456,468.14	1,699,236.33	39.80684556	-80.79055699
12,500.00	91.00	324.83	10,957.05	1,496.67	1,909.84	14,456,549.87	1,699,178.74	39.80707038	-80.79076139
12,600.00	91.00	324.83	10,955.30	1,578.40	1,852.24	14,456,631.60	1,699,121.14	39.80729519	-80.79096580
12,700.00	91.00	324.83	10,953.55	1,660.13	1,794.65	14,456,713.33	1,699,063.54	39.80752001	-80.79117021
12,800.00	91.00	324.83	10,951.79	1,741.86	1,737.05	14,456,795.05	1,699,005.95	39.80774483	-80.79137462
12,900.00	91.00	324.83	10,950.04	1,823.59	1,679.45	14,456,876.78	1,698,948.35	39.80796964	-80.79157903
13,000.00	91.00	324.83	10,948.29	1,905.31	1,621.86	14,456,958.51	1,698,890.75	39.80819446	-80.79178345
13,100.00	91.00	324.83	10,946.54	1,987.04	1,564.26	14,457,040.24	1,698,833.16	39.80841927	-80.79198786
13,200.00	91.00	324.83	10,944.79	2,068.77	1,506.66	14,457,121.97	1,698,775.56	39.80864409	-80.79219228
13,300.00	91.00	324.83	10,943.04	2,150.50	1,449.07	14,457,203.70	1,698,717.96	39.80886890	-80.79239670
13,400.00	91.00	324.83	10,941.29	2,232.23	1,391.47	14,457,285.42	1,698,660.37	39.80909372	-80.79260111
13,500.00	91.00	324.83	10,939.53	2,313.96	1,333.87	14,457,367.15	1,698,602.77	39.80931853	-80.79280553
13,600.00	91.00	324.83	10,937.78	2,395.69	1,276.28	14,457,448.88	1,698,545.17	39.80954335	-80.79300996
13,700.00	91.00	324.83	10,936.03	2,477.41	1,218.68	14,457,530.61	1,698,487.58	39.80976816	-80.79321438
13,800.00	91.00	324.83	10,934.28	2,559.14	1,161.08	14,457,612.34	1,698,429.98	39.80999297	-80.79341880
13,900.00	91.00	324.83	10,932.53	2,640.87	1,103.49	14,457,694.07	1,698,372.38	39.81021778	-80.79362323
14,000.00	91.00	324.83	10,930.78	2,722.60	1,045.89	14,457,775.79	1,698,314.79	39.81044260	-80.79382765
14,100.00	91.00	324.83	10,929.03	2,804.33	988.29	14,457,857.52	1,698,257.19	39.81066741	-80.79403208
14,200.00	91.00	324.83	10,927.28	2,886.06	930.69	14,457,939.25	1,698,199.59	39.81089222	-80.79423651
14,300.00	91.00	324.83	10,925.52	2,967.78	873.10	14,458,020.98	1,698,142.00	39.81111703	-80.79444094
14,400.00	91.00	324.83	10,923.77	3,049.51	815.50	14,458,102.71	1,698,084.40	39.81134184	-80.79464538
14,500.00	91.00	324.83	10,922.02	3,131.24	757.90	14,458,184.43	1,698,026.80	39.81156665	-80.79484981
14,600.00	91.00	324.83	10,920.27	3,212.97	700.31	14,458,266.16	1,697,969.21	39.81179146	-80.79505424
14,700.00	91.00	324.83	10,918.52	3,294.70	642.71	14,458,347.89	1,697,911.61	39.81201627	-80.79525868
14,800.00	91.00	324.83	10,916.77	3,376.43	585.11	14,458,429.62	1,697,854.01	39.81224108	-80.79546312
14,900.00	91.00	324.83	10,915.02	3,458.15	527.52	14,458,511.35	1,697,796.42	39.81246589	-80.79566756
15,000.00	91.00	324.83	10,913.27	3,539.88	469.92	14,458,593.08	1,697,738.82	39.81269070	-80.79587200



SI-02219

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Michter N-08HU (G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1130.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1130.00ft
Site:	Michter	North Reference:	Grid
Well:	Michter N-08HU (G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
15,100.00	91.00	324.83	10,911.51	3,621.61	412.32	14,458,674.80	1,697,681.22	39.81291550	-80.79607644	
15,200.00	91.00	324.83	10,909.76	3,703.34	354.73	14,458,756.53	1,697,623.63	39.81314031	-80.79628088	
15,300.00	91.00	324.83	10,908.01	3,785.07	297.13	14,458,838.26	1,697,566.03	39.81336512	-80.79648532	
15,400.00	91.00	324.83	10,906.26	3,866.80	239.53	14,458,919.99	1,697,508.43	39.81358993	-80.79668977	
15,500.00	91.00	324.83	10,904.51	3,948.53	181.94	14,459,001.72	1,697,450.84	39.81381473	-80.79689422	
15,600.00	91.00	324.83	10,902.76	4,030.25	124.34	14,459,083.45	1,697,393.24	39.81403954	-80.79709866	
15,700.00	91.00	324.83	10,901.01	4,111.98	66.74	14,459,165.17	1,697,335.64	39.81426435	-80.79730311	
15,800.00	91.00	324.83	10,899.26	4,193.71	9.14	14,459,246.90	1,697,278.04	39.81448915	-80.79750756	
15,900.00	91.00	324.83	10,897.50	4,275.44	-48.45	14,459,328.63	1,697,220.45	39.81471396	-80.79771202	
16,000.00	91.00	324.83	10,895.75	4,357.17	-106.05	14,459,410.36	1,697,162.85	39.81493876	-80.79791647	
16,100.00	91.00	324.83	10,894.00	4,438.90	-163.65	14,459,492.09	1,697,105.25	39.81516357	-80.79812092	
16,200.00	91.00	324.83	10,892.25	4,520.62	-221.24	14,459,573.81	1,697,047.66	39.81538837	-80.79832538	
16,300.00	91.00	324.83	10,890.50	4,602.35	-278.84	14,459,655.54	1,696,990.06	39.81561317	-80.79852984	
16,400.00	91.00	324.83	10,888.75	4,684.08	-336.44	14,459,737.27	1,696,932.46	39.81583798	-80.79873430	
16,500.00	91.00	324.83	10,887.00	4,765.81	-394.03	14,459,819.00	1,696,874.87	39.81606278	-80.79893876	
16,600.00	91.00	324.83	10,885.24	4,847.54	-451.63	14,459,900.73	1,696,817.27	39.81628758	-80.79914322	
16,700.00	91.00	324.83	10,883.49	4,929.27	-509.23	14,459,982.46	1,696,759.67	39.81651238	-80.79934768	
16,800.00	91.00	324.83	10,881.74	5,010.99	-566.82	14,460,064.18	1,696,702.08	39.81673719	-80.79955214	
16,900.00	91.00	324.83	10,879.99	5,092.72	-624.42	14,460,145.91	1,696,644.48	39.81696199	-80.79975661	
17,000.00	91.00	324.83	10,878.24	5,174.45	-682.02	14,460,227.64	1,696,586.88	39.81718679	-80.79996108	
17,100.00	91.00	324.83	10,876.49	5,256.18	-739.61	14,460,309.37	1,696,529.29	39.81741159	-80.80016555	
17,200.00	91.00	324.83	10,874.74	5,337.91	-797.21	14,460,391.10	1,696,471.69	39.81763639	-80.80037001	
17,300.00	91.00	324.83	10,872.99	5,419.64	-854.81	14,460,472.83	1,696,414.09	39.81786119	-80.80057449	
17,400.00	91.00	324.83	10,871.23	5,501.37	-912.41	14,460,554.55	1,696,356.50	39.81808599	-80.80077896	
17,500.00	91.00	324.83	10,869.48	5,583.09	-970.00	14,460,636.28	1,696,298.90	39.81831079	-80.80098343	
17,600.00	91.00	324.83	10,867.73	5,664.82	-1,027.60	14,460,718.01	1,696,241.30	39.81853559	-80.80118791	
17,700.00	91.00	324.83	10,865.98	5,746.55	-1,085.20	14,460,799.74	1,696,183.71	39.81876039	-80.80139238	
17,800.00	91.00	324.83	10,864.23	5,828.28	-1,142.79	14,460,881.47	1,696,126.11	39.81898518	-80.80159686	
17,900.00	91.00	324.83	10,862.48	5,910.01	-1,200.39	14,460,963.20	1,696,068.51	39.81920998	-80.80180134	
18,000.00	91.00	324.83	10,860.73	5,991.74	-1,257.99	14,461,044.92	1,696,010.92	39.81943478	-80.80200582	
18,100.00	91.00	324.83	10,858.98	6,073.46	-1,315.58	14,461,126.65	1,695,953.32	39.81965958	-80.80221030	
18,200.00	91.00	324.83	10,857.22	6,155.19	-1,373.18	14,461,208.38	1,695,895.72	39.81988437	-80.80241478	
18,300.00	91.00	324.83	10,855.47	6,236.92	-1,430.78	14,461,290.11	1,695,838.13	39.82010917	-80.80261927	
18,400.00	91.00	324.83	10,853.72	6,318.65	-1,488.37	14,461,371.84	1,695,780.53	39.82033397	-80.80282375	
18,500.00	91.00	324.83	10,851.97	6,400.38	-1,545.97	14,461,453.56	1,695,722.93	39.82055876	-80.80302824	
18,600.00	91.00	324.83	10,850.22	6,482.11	-1,603.57	14,461,535.29	1,695,665.34	39.82078356	-80.80323273	
18,700.00	91.00	324.83	10,848.47	6,563.83	-1,661.16	14,461,617.02	1,695,607.74	39.82100835	-80.80343721	
18,800.00	91.00	324.83	10,846.72	6,645.56	-1,718.76	14,461,698.75	1,695,550.14	39.82123315	-80.80364171	
18,900.00	91.00	324.83	10,844.96	6,727.29	-1,776.36	14,461,780.48	1,695,492.55	39.82145794	-80.80384620	
19,000.00	91.00	324.83	10,843.21	6,809.02	-1,833.96	14,461,862.21	1,695,434.95	39.82168273	-80.80405069	
19,100.00	91.00	324.83	10,841.46	6,890.75	-1,891.55	14,461,943.93	1,695,377.35	39.82190753	-80.80425519	
19,200.00	91.00	324.83	10,839.71	6,972.48	-1,949.15	14,462,025.66	1,695,319.76	39.82213232	-80.80445968	
19,300.00	91.00	324.83	10,837.96	7,054.20	-2,006.75	14,462,107.39	1,695,262.16	39.82235711	-80.80466418	
19,400.00	91.00	324.83	10,836.21	7,135.93	-2,064.34	14,462,189.12	1,695,204.56	39.82258191	-80.80486868	
19,500.00	91.00	324.83	10,834.46	7,217.66	-2,121.94	14,462,270.85	1,695,146.96	39.82280670	-80.80507318	
19,600.00	91.00	324.83	10,832.71	7,299.39	-2,179.54	14,462,352.58	1,695,089.37	39.82303149	-80.80527768	
19,700.00	91.00	324.83	10,830.95	7,381.12	-2,237.13	14,462,434.30	1,695,031.77	39.82325628	-80.80548218	
19,800.00	91.00	324.83	10,829.20	7,462.85	-2,294.73	14,462,516.03	1,694,974.17	39.82348107	-80.80568669	
19,900.00	91.00	324.83	10,827.45	7,544.58	-2,352.33	14,462,597.76	1,694,916.58	39.82370586	-80.80589119	
20,000.00	91.00	324.83	10,825.70	7,626.30	-2,409.92	14,462,679.49	1,694,858.98	39.82393065	-80.80609570	
20,100.00	91.00	324.83	10,823.95	7,708.03	-2,467.52	14,462,761.22	1,694,801.38	39.82415544	-80.80630020	
20,200.00	91.00	324.83	10,822.20	7,789.76	-2,525.12	14,462,842.94	1,694,743.79	39.82438023	-80.80650471	
20,300.00	91.00	324.83	10,820.45	7,871.49	-2,582.71	14,462,924.67	1,694,686.19	39.82460502	-80.80670922	
20,400.00	91.00	324.83	10,818.70	7,953.22	-2,640.31	14,463,006.40	1,694,628.59	39.82482981	-80.80691374	
20,500.00	91.00	324.83	10,816.94	8,034.95	-2,697.91	14,463,088.13	1,694,571.00	39.82505460	-80.80711825	



SI-02219

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Michter N-08HU (G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1130.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1130.00ft
Site:	Michter	North Reference:	Grid
Well:	Michter N-08HU (G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
20,600.00	91.00	324.83	10,815.19	8,116.67	-2,755.50	14,463,169.86	1,694,513.40	39.82527939	-80.80732276	
20,700.00	91.00	324.83	10,813.44	8,198.40	-2,813.10	14,463,251.59	1,694,455.80	39.82550417	-80.80752728	
20,800.00	91.00	324.83	10,811.69	8,280.13	-2,870.70	14,463,333.31	1,694,398.21	39.82572896	-80.80773180	
20,900.00	91.00	324.83	10,809.94	8,361.86	-2,928.30	14,463,415.04	1,694,340.61	39.82595375	-80.80793632	
21,000.00	91.00	324.83	10,808.19	8,443.59	-2,985.89	14,463,496.77	1,694,283.01	39.82617853	-80.80814084	
21,100.00	91.00	324.83	10,806.44	8,525.32	-3,043.49	14,463,578.50	1,694,225.42	39.82640332	-80.80834536	
21,200.00	91.00	324.83	10,804.69	8,607.04	-3,101.09	14,463,660.23	1,694,167.82	39.82662811	-80.80854988	
21,300.00	91.00	324.83	10,802.93	8,688.77	-3,158.68	14,463,741.96	1,694,110.22	39.82685289	-80.80875440	
21,400.00	91.00	324.83	10,801.18	8,770.50	-3,216.28	14,463,823.68	1,694,052.63	39.82707768	-80.80895893	
21,500.00	91.00	324.83	10,799.43	8,852.23	-3,273.88	14,463,905.41	1,693,995.03	39.82730246	-80.80916346	
21,600.00	91.00	324.83	10,797.68	8,933.96	-3,331.47	14,463,987.14	1,693,937.43	39.82752724	-80.80936798	
21,700.00	91.00	324.83	10,795.93	9,015.69	-3,389.07	14,464,068.87	1,693,879.84	39.82775203	-80.80957251	
21,800.00	91.00	324.83	10,794.18	9,097.42	-3,446.67	14,464,150.60	1,693,822.24	39.82797681	-80.80977704	
21,900.00	91.00	324.83	10,792.43	9,179.14	-3,504.26	14,464,232.33	1,693,764.64	39.82820160	-80.80998158	
22,000.00	91.00	324.83	10,790.67	9,260.87	-3,561.86	14,464,314.05	1,693,707.05	39.82842638	-80.81018611	
22,100.00	91.00	324.83	10,788.92	9,342.60	-3,619.46	14,464,395.78	1,693,649.45	39.82865116	-80.81039064	
22,200.00	91.00	324.83	10,787.17	9,424.33	-3,677.05	14,464,477.51	1,693,591.85	39.82887594	-80.81059518	
22,300.00	91.00	324.83	10,785.42	9,506.06	-3,734.65	14,464,559.24	1,693,534.26	39.82910072	-80.81079972	
22,400.00	91.00	324.83	10,783.67	9,587.79	-3,792.25	14,464,640.97	1,693,476.66	39.82932551	-80.81100426	
22,500.00	91.00	324.83	10,781.92	9,669.51	-3,849.85	14,464,722.69	1,693,419.06	39.82955029	-80.81120880	
22,600.00	91.00	324.83	10,780.17	9,751.24	-3,907.44	14,464,804.42	1,693,361.47	39.82977507	-80.81141334	
22,700.00	91.00	324.83	10,778.42	9,832.97	-3,965.04	14,464,886.15	1,693,303.87	39.82999985	-80.81161788	
22,800.00	91.00	324.83	10,776.66	9,914.70	-4,022.64	14,464,967.88	1,693,246.27	39.83022463	-80.81182242	
22,900.00	91.00	324.83	10,774.91	9,996.43	-4,080.23	14,465,049.61	1,693,188.68	39.83044941	-80.81202697	
23,000.00	91.00	324.83	10,773.16	10,078.16	-4,137.83	14,465,131.34	1,693,131.08	39.83067419	-80.81223152	
23,100.00	91.00	324.83	10,771.41	10,159.88	-4,195.43	14,465,213.06	1,693,073.48	39.83089896	-80.81243606	
23,180.52	91.00	324.83	10,770.00	10,225.69	-4,241.81	14,465,278.87	1,693,027.10	39.83107996	-80.81260077	

PBHL/TD 23180.52 MD/10770.00 TVD

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Michter N-08HU BHL - hit/miss target - Shape - Point	0.00	0.01	10,770.00	10,225.69	-4,241.81	14,465,278.87	1,693,027.10	39.83107996	-80.81260077	
Michter N-08HU LP - plan hits target center - Point	0.00	0.00	10,968.00	985.56	2,270.04	14,456,038.76	1,699,538.94	39.80566440	-80.78948309	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Michter N-08HU (G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1130.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1130.00ft
Site:	Michter	North Reference:	Grid
Well:	Michter N-08HU (G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,300.00	1,300.00	0.00	0.00	KOP Begin 1°/100' build
1,600.00	1,599.86	-7.38	-2.69	Begin 3.00° tangent
2,100.00	2,099.18	-31.97	-11.64	Begin 1°/100' drop
2,400.00	2,399.04	-39.35	-14.32	Begin vertical hold
3,100.96	3,100.00	-39.35	-14.32	Begin 3°/100' build
3,779.86	3,764.69	-25.67	104.29	Begin 20.37° tangent
10,617.83	10,175.17	246.88	2,468.45	Begin 8°/100' build/turn
11,874.62	10,968.00	985.56	2,270.04	Begin 91.00° lateral
23,180.52	10,770.00	10,225.69	-4,241.81	PBHL/TD 23180.52 MD/10770.00 TVD

RECEIVED
 Office of Oil and Gas
 MAY 17 2019
 WV Department of
 Environmental Protection

WW-9
(4/16)

API Number 47 - 051 - _____
Operator's Well No. Michter N-8HU

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Tug Hill Operating, LLC OP Code 494510851

Watershed (HUC 10) Fish Creek Quadrangle New Martinsville 7.5'

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? Barite for weight

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

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

-Landfill or offsite name/permit number? Wetzel County Sanitary Landfill (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP EC#1386426)

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

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

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

Company Official Signature Jim Pancake

Company Official (Typed Name) Jim Pancake

Company Official Title VP Geosciences

RECEIVED
Office of Oil and Gas
MAY 17 2019
WV Department of
Environmental Protection

Subscribed and sworn before me this 5 day of FEBRUARY, 20 19

Maureen A Stead

Notary Public

My commission expires 1/28/23

Commonwealth of Pennsylvania - Notary Seal
MAUREEN A STEAD - Notary Public
Washington County
My Commission Expires Jan 28, 2023
Commission Number 1259926

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 21.11 Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Orchard Grass	12
Spring Oats	96	Ladino	3
		White Clover	2

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *John Winkler*

Comments: _____

RECEIVED
Office of Oil and Gas
MAY 17 2019
WV Department of
Environmental Protection

Title: Oil and Gas Inspector

Date: 2/7/19

Field Reviewed? Yes

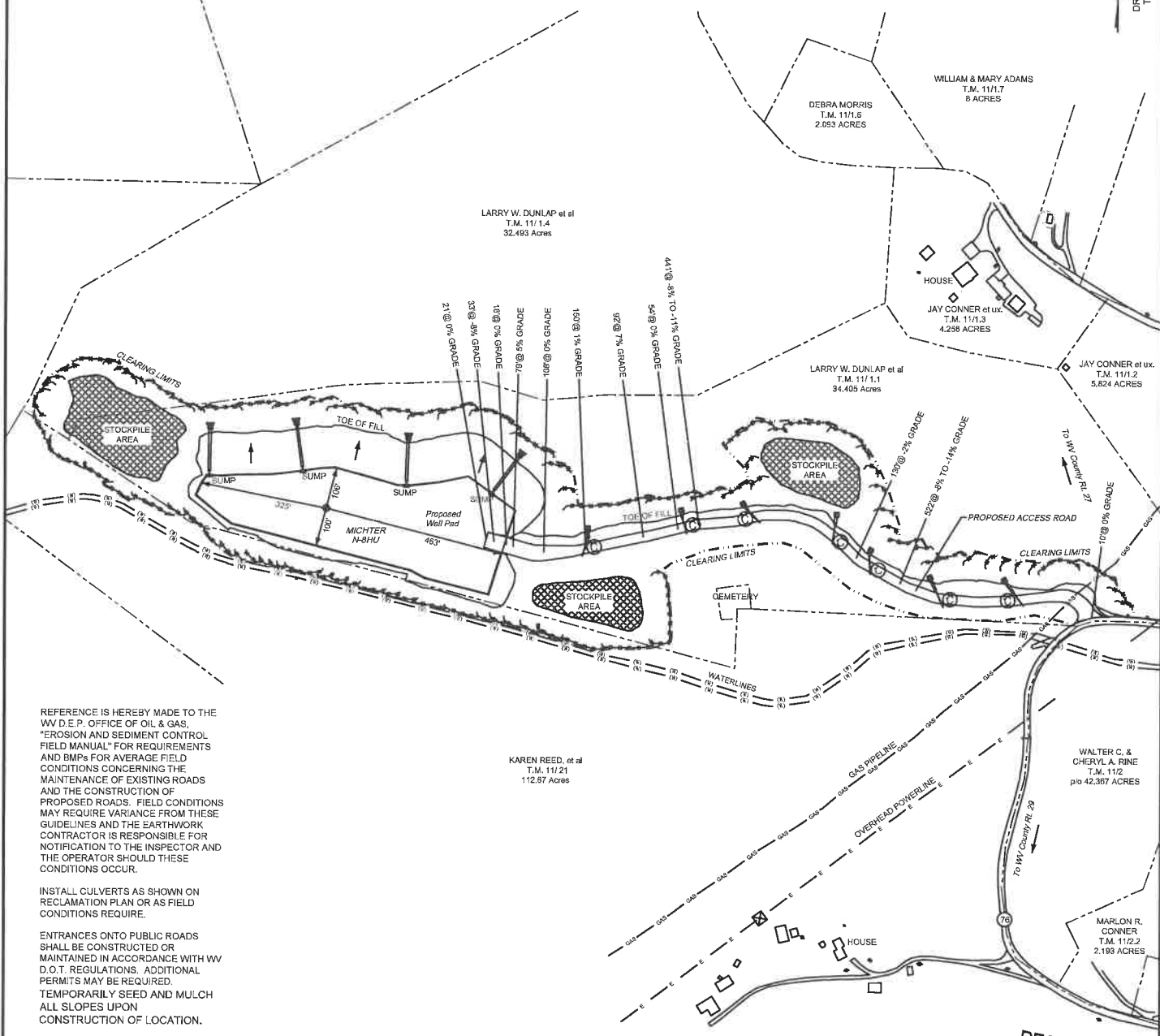
No

WW-9

PROPOSED MICTHER N-8HU

SUPPLEMENT PG 1

DRAWING NOT TO SCALE



REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.

INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.

ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED. TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.

ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.

LEGEND

- Note:
- ⊙ — Denotes proposed culvert with appropriate sediment outlet control (Rip Rap splash pad).
 - Silt Fence and or Sediment and Erosion Control Measure.
 - - - - - Surface Boundary

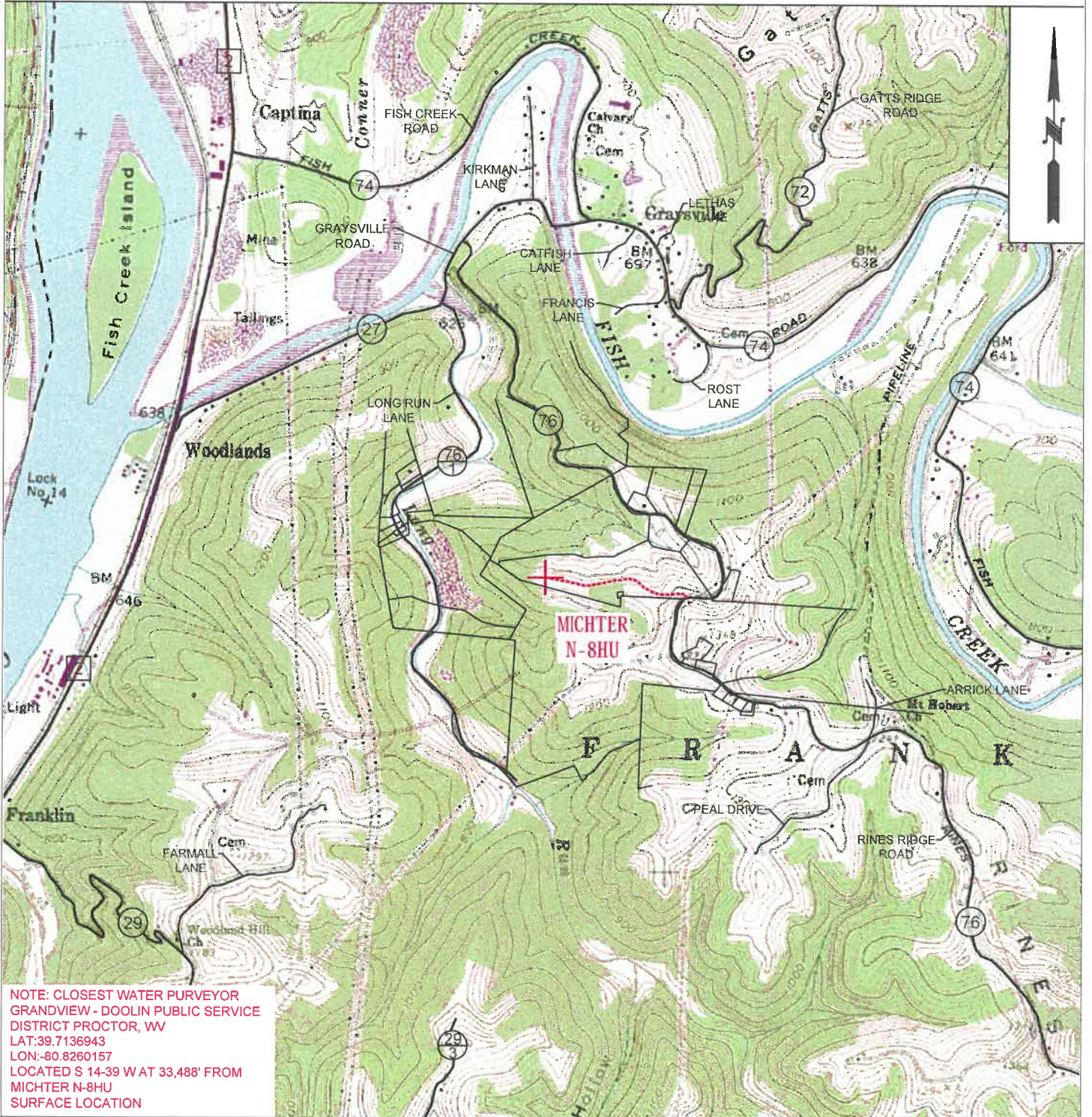
RECEIVED
Office of Oil and Gas
MAY 17 2019
WV Department of
Environmental Protection

DATE: 2-4-2019	PROJECT NO: 494510851	DRAWN BY: J.A.H.
----------------	-----------------------	------------------

WW-9

PROPOSED MICTER N-8HU

SUPPLEMENT PG 2



NOTE: CLOSEST WATER PURVEYOR
GRANDVIEW - DOOLIN PUBLIC SERVICE
DISTRICT PROCTOR, WV
LAT: 39.7136943
LON: -80.8260157
LOCATED S 14-39 W AT 33,488' FROM
MICTER N-8HU
SURFACE LOCATION



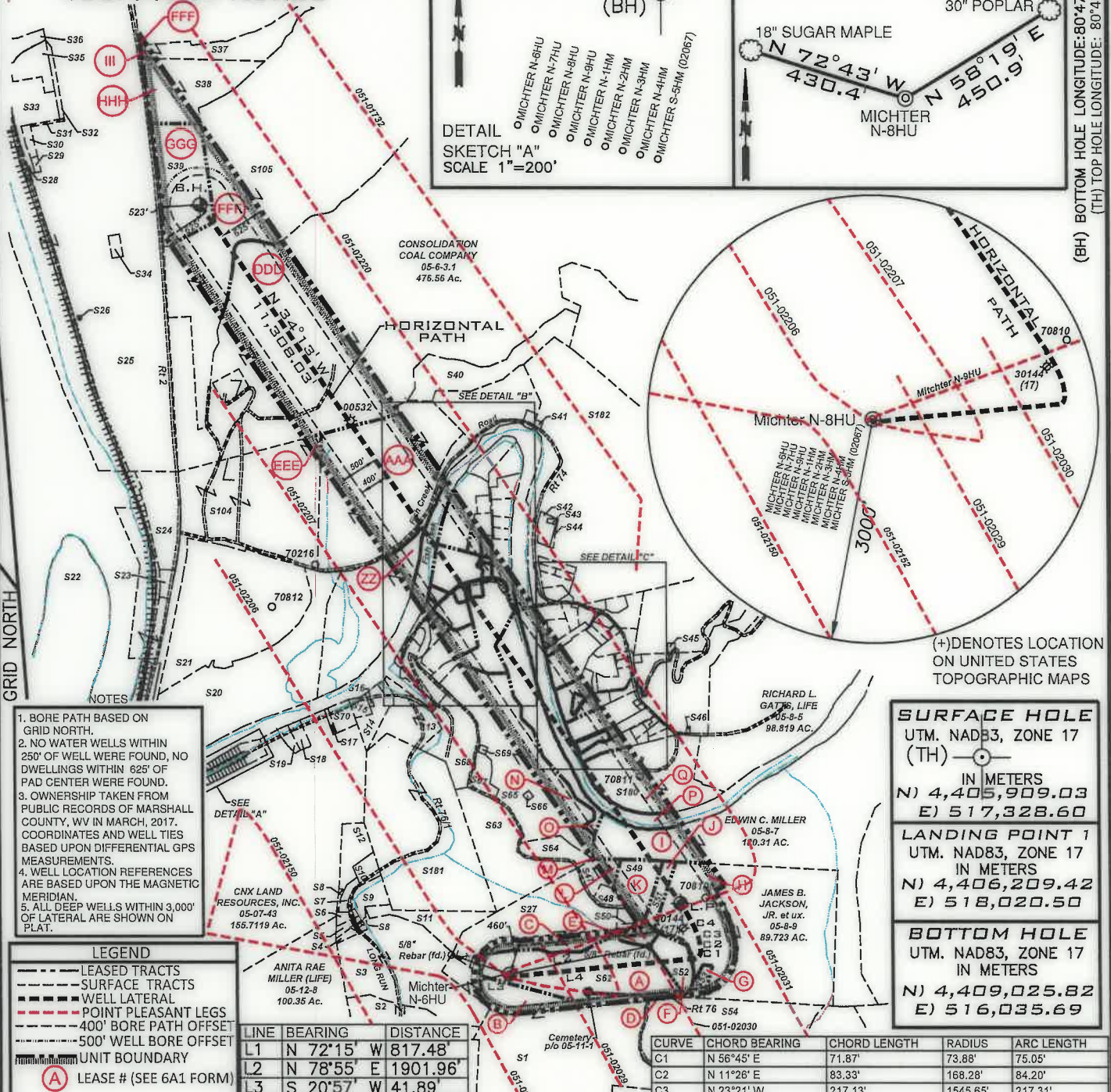
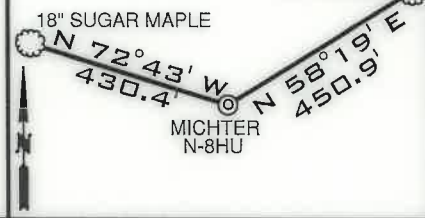
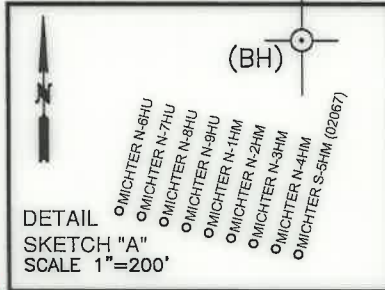
TUG HILL
OPERATING

OPERATOR	494510851	TOPO SECTION	LEASE NAME
TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		POWHATAN POINT 7.5'	MICTER
		SCALE:	DATE:
		1" = 2000'	DATE: 2-4-2019

**MICHTER LEASE
WELL N-8HU
436.4438± ACRES**

TOP HOLE LATITUDE: 39°50'00"
BOTTOM HOLE LATITUDE: 39°50'00"

REFERENCES SCALE 1"=200'
18" SUGAR MAPLE
30" POPLAR



- NOTES
- BORE PATH BASED ON GRID NORTH.
 - NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
 - OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2017. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
 - WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
 - ALL DEEP WELLS WITHIN 3,000' OF LATERAL ARE SHOWN ON PLAT.

LEGEND

- LEASE TRACTS
- SURFACE TRACTS
- WELL LATERAL
- POINT PLEASANT LEGS
- 400' BORE PATH OFFSET
- 500' WELL BORE OFFSET
- UNIT BOUNDARY

(A) LEASE # (SEE 6A1 FORM)

LINE	BEARING	DISTANCE
L1	N 72°15' W	817.48'
L2	N 78°55' E	1901.96'
L3	S 20°57' W	41.89'
L4	N 84°23' E	2500.07'

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 56°45' E	71.87'	73.88'	75.05'
C2	N 11°26' E	83.33'	168.28'	84.20'
C3	N 23°21' W	217.13'	1545.65'	217.31'
C4	N 30°46' W	269.34'	2200.75'	269.51'

SURFACE HOLE
UTM. NAD83, ZONE 17
(TH)

IN METERS
N) 4,405,909.03
E) 517,328.60

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,406,209.42
E) 518,020.50

BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,409,025.82
E) 516,035.69

FILE NUMBER _____

DRAWING NUMBER MICHTER_N-8HU_REV1

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

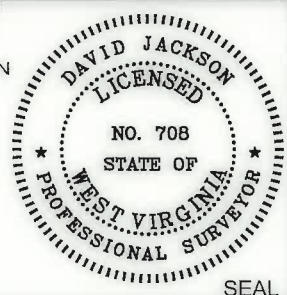
PROVEN SOURCE OF ELEVATION SUBMETER MAPPING GRADE GPS

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

P.S. 708 *David L Jackson*



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



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

DATE: JUNE 13, 2019

REVISED DATE: AUGUST 13, 2019

OPERATORS WELL NO. MICHTER N-8HU

API WELL NO. _____

47-051-02219
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___

LOCATION ELEVATION 1127.11' WATERSHED (HUC 10) FISH CREEK

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE POWATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 FORM

SURFACE OWNER LARRY W. DUNLAP, ET AL ACREAGE 34.405

OIL & GAS ROYALTY OWNER LARRY W. DUNLAP, ET AL LEASE ACREAGE 436.4438

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

TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TVD: 11,189' TMD: 23,181'

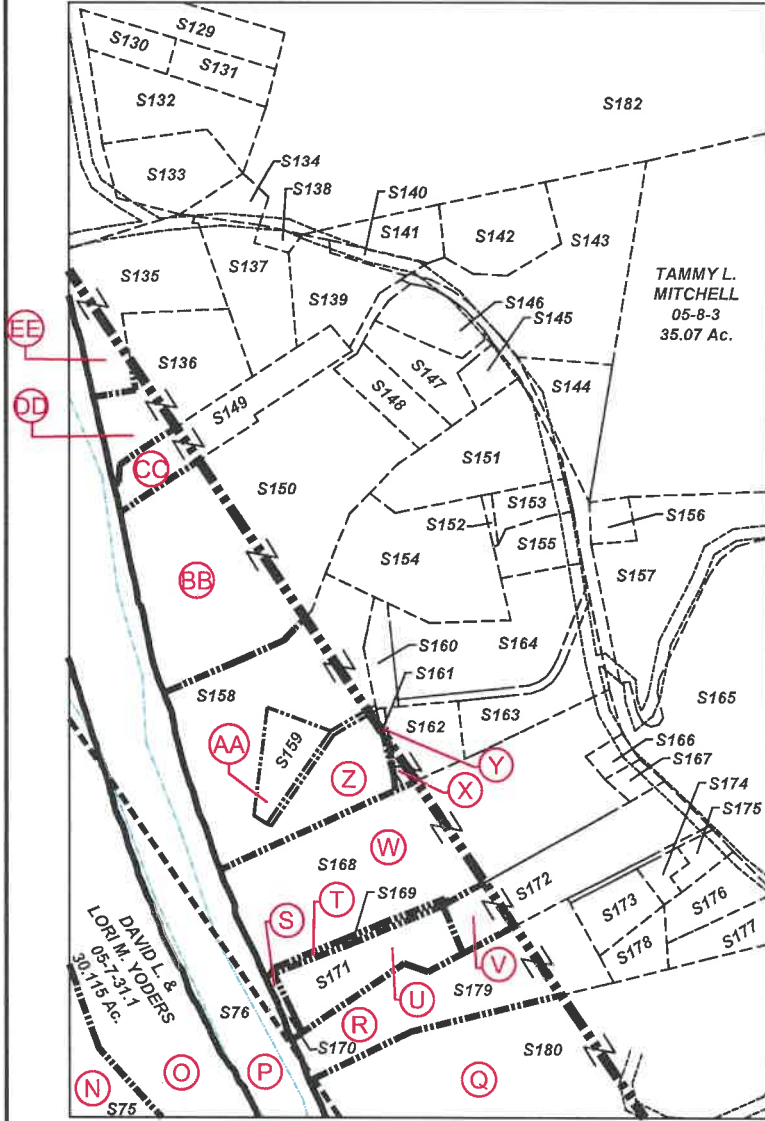
WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER CT CORPORATION SYSTEM

ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

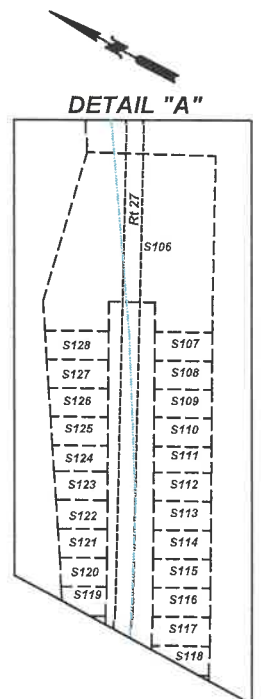
COUNTY NAME _____
PERMIT _____

FORM WW6

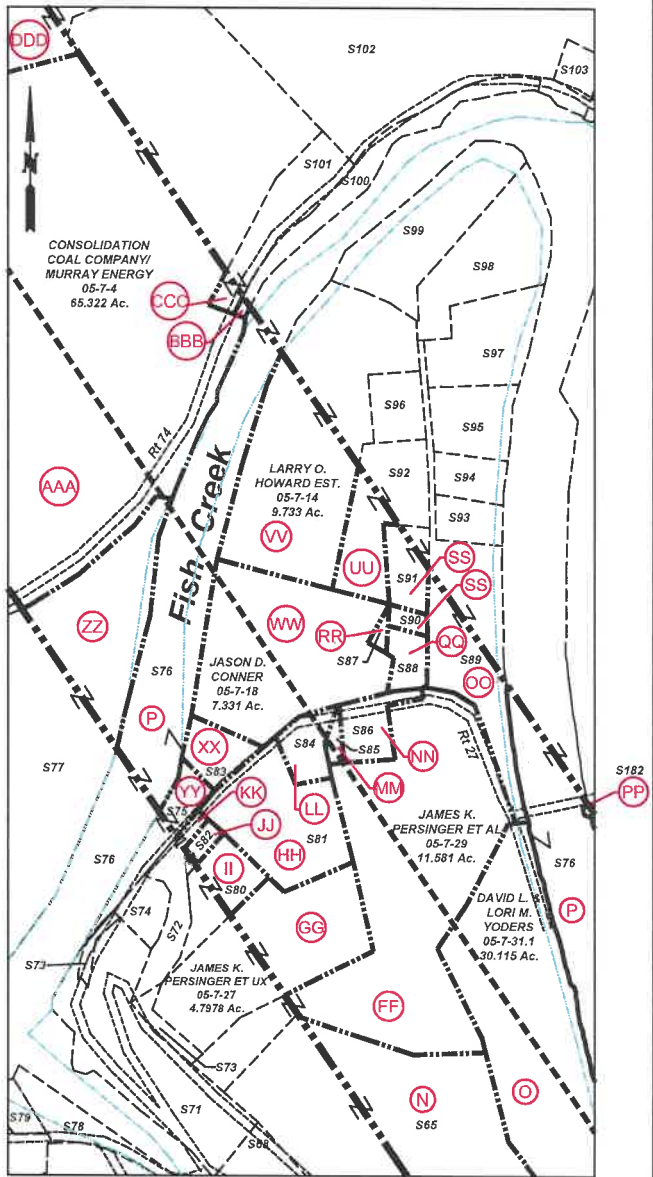
**MICHTER LEASE
WELL N-8HU
436.4438± ACRES**



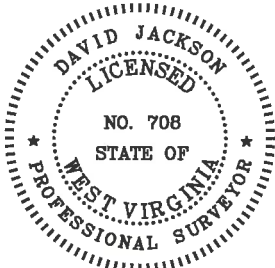
DETAIL "C" N.T.S.



DETAIL "A"



DETAIL "B"



P.S. 708

David L Jackson



**TUG HILL
OPERATING**

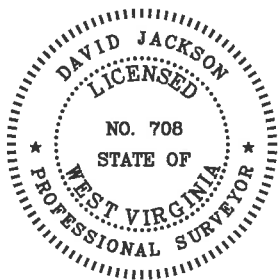
OPERATOR'S
WELL #: Michter N-8HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47 - 051 - 02219

WELL PLAT
PAGE 2 OF 7
DATE: 06/13/2019
**REVISED DATE:
08/08/2019**

**MICHTER LEASE
WELL N-8HU
436.4438± ACRES**

Number	TAX MAP -PARCEL	SURFACE OWNER	ACRES
S1	B 05-11-21	Karen Reed, et al	112.67
S2	05-12-10	Consolidation Coal Company/ Murray Energy c/o Land Dept	13.76
S3	05-12-10.1	Consolidation Coal Company/ Murray Energy	38.48
S4	05-07-42.4	Lionel & Mary Lee Persinger	0.94
S5	05-07-42.3	Joshua David Hartley	0.886
S6	05-07-42.2	Steven & Rhonda Lloyd	0.85
S7	05-07-44	Crystal B. Darrah	1.726
S8	05-07-42	Tracy M. Kesterson	0.54
S9	05-07-42.5	Matthew V. Conner, et al	3.791
S10	05-07-41	James A. Wade	1.00
S11	05-12-09	Lionel & Mary Lee Persinger	10.15
S12	05-07-42.1	Lionel L. & Mary Lee Persinger	5.99
S13	05-07-35	Samuel L. Persinger	10.708
S14	05-07-36	John Persinger	4.329
S15	05-07-38	John K. Persinger, et ux	2.65
S16	05-07-37	John K. Persinger, et ux	0.133
S17	05-07-43.3	M. Frank Mason	0.327
S18	05-7B-48	Cassidy Rain Carpenter	1.325
S19	05-7B-49	Cassidy Rain Carpenter	1.1441
S20	05-07-3.3	WV Economic Development Authority	65.2077
S21	05-07-3.4	WV Economic Development Authority	56.3496
S22	05-07-01	U.S. of America	50.0
S23	05-07-3.5	Wheeling Power Company	1.5004
S24	05-06-3.1	Ohio Power Company	28.9966
S25	05-06-10	Ohio Power Company	241.858
S26	05-06-16	Appalachian Power CP	0.61
S27	C 05-11-1.4	Larry Dunlap, et al	32.493
S28	05-06-18	CII Carbon, LLC	0.2754
S29	05-06-12	CII Carbon, LLC	0.43458
S30	05-06-09	CII Carbon, LLC	1.15
S31	05-06-13	CII Carbon, LLC	0.318
S32	05-06-14	CII Carbon, LLC	1.408
S33	05-06-7	CII Carbon, LLC	12.454
S34	05-06-11	Consolidation Coal Company/ Murray Energy	1.05
S35	05-06-08	CII Carbon, LLC	2.727
S36	05-06-15	CII Carbon, LLC	2.522
S37	III 05-06-01	Consolidation Coal Company/ Murray Energy	7.99
S38	HHH 05-06-06	Consolidation Coal Company/ Murray Energy	18.50
S39	GGG 05-06-05	Consolidation Coal Company/ Murray Energy	17.159
S40	05-06-04	Consolidation Coal Company/ Murray Energy	5.47
S41	05-07-09	Norman Thomas Jackson et al	0.25
S42	05-8A-02	Graysville Cemetery Association	1.76
S43	05-8A-01	Calvary M.E. Church	2.0
S44	05-8A-03	Calvary M.E. Church	0.259
S45	05-08-23	Robert L. Shields & Donald L. Shields Cemetery	0.3
S46	P/O 05-08-4	Cemetery	0.305
S47	L 05-11-01	William N. & Virginia A. Roupe	4.527
S48	05-11-1.6	Debra Morris	2.093
S49	K 05-11-1.7	William S. & Mary K. Adams	8.00
S50	E 05-11-1.3	Jay A. Conner, et ux	4.256
S51	J 05-11-1.5	Paul & Sandy Witt	3.507
S52	F 05-11-1.2	Jay A. Conner, et ux	5.824
S53	G 05-08-9.1	Scott E. Jackson, Tammy S. South & Marion Jackson	1.957
S54	D 05-11-02	Walter C. & Cheryl A. Rine	42.36
S55	05-11-2.2	Joshua Myers	2.193
S56	05-11-2.1	Walter C. & Cheryl A. Rine	1.19
S57	05-11-20	David E. Gray	0.69
S58	05-11-19	David E. Gray	0.532
S59	05-11-03	Kevin R. Corley, et ux	13.18
S60	05-11-17	Kevin R. Corley, et ux	36.13
S61	05-11-14	Hiram's Estate Family, LTD LLP	158.054
S62	A 05-11-1.1	Larry W. Dunlap, et al	34.405
S63	05-07-33	William N. Roupe	24.60
S64	M 05-07-32	William N. & Virginia A. Roupe	4.2

Number	TAX MAP -PARCEL	SURFACE OWNER	ACRES
S65	N 05-07-31	William N. Roupe, et ux	43.147
S66	05-07-31.4	Grandview-Doolen PSD	0.23
S67	05-07-31.2	William N. Roupe, et ux	3.304
S68	05-07-34	WV DOH	10.88
S69	05-07-31.3	William N. & Virginia A. Roupe	0.230
S70	05-07-43.2	M. Frank Mason	1.36
S71	05-07-26	James A. Wade	7.80
S72	KK 05-07-23.1	WV DOH	2.37
S73	05-07-25	WV DOH	0.50
S74	05-07-24	James A. Wade	0.578
S75	YY 05-07-45	Robert L. Henry (Life) & Jeffrey S. Henry	0.65
S76	P Fish Creek	State of WV	25.55 ^{calc}
S77	ZZ 05-07-3.2	Ohio Power Company	45.5348
S78	05-07-35.1	Lionel L. & Mary Lee Persinger	0.812
S79	05-07-36.1	Lionel L. & Mary Lee Persinger	0.5579
S80	II 05-07-23	Arle E. Powell	1.435
S81	HH 05-07-27.1	Mark L. Riter, et ux	3.427
S82	JJ 05-07-23.2	Robert L. Henry (Life) & Jeffrey S. Henry	0.256
S83	XX 05-07-21	Aaron S. Meyer	1.775
S84	LL 05-07-22	Jesus & Mary Bustamante	0.782
S85	MM 05-07-28.1	Jesus & Mary Bustamante	0.200
S86	NN 05-07-28	Thelma M. Roupe	0.940
S87	RR 05-07-18.1	Debora L. Bennett	0.13
S88	QQ 05-07-17	Debora L. Bennett	0.614
S89	OO 05-07-15	William Roupe, et ux	6.631
S90	SS 05-07-16	Debora L. Bennett	0.235
S91	TT 05-07-14.2	Robert L. Eyley, Sr. & Jessica L. Bennett	0.998
S92	UU 05-07-14.3	Steven H. Howard	2.669
S93	05-07-15.1	Woodland Hills Recreation Club	1.016
S94	05-07-13	Woodland Hills Recreation Club	1.109
S95	05-07-12	Carol A. & Shelva G. Smith	2.01
S96	05-07-14.1	Larry O. Howard, Est.	1.00
S97	05-07-11	Roy S. & Cynthia M. Meadows	2.90
S98	05-07-10.1	Sandra Kay Beymer & Chad M. Wright	4.237
S99	05-07-10	Darren Edward Thacker	4.737
S100	BBB 05-07-5.1	George A. Knuth	2.95
S101	CCC 05-07-05	CNX Gas Company, LLC	1.407
S102	05-07-06	CNX Gas Company, LLC	21.171
S103	05-07-07	Consolidation Coal Company/ Murray Energy	1.00
S104	EEE 05-07-02	Consolidation Coal Company/ Murray Energy	46.46
S105	FFF 05-06-03	Ohio Power Co.	281.046
S106	05-7B-01	Patricia L. Robinson	1.257
S107	05-7B-47	Daniel D. Robinson, et ux	0.1148
S108	05-7B-46	Daniel D. Robinson, et ux	0.1148
S109	05-7B-45	Daniel D. & Mary E. Robinson	0.1148
S110	05-7B-44	Daniel D. & Mary E. Robinson	0.1148
S111	05-7B-43	Teresa & Thomas Gouldsberry	0.1148
S112	05-7B-42	Teresa & Thomas Gouldsberry	0.1194
S113	05-7B-41	Teresa & Thomas Gouldsberry	0.1148
S114	05-7B-40	Teresa & Thomas Gouldsberry	0.1148
S115	05-7B-39	Teresa & Thomas Gouldsberry	0.1148
S116	05-7B-38	Teresa & Thomas Gouldsberry	0.1148
S117	05-7B-37	Teresa & Thomas Gouldsberry	0.1148
S118	05-7B-36	Albert J. Anderson, Jr.	0.1148
S119	05-7B-11	Teresa & Thomas Gouldsberry	0.1159
S120	05-7B-10	Teresa & Thomas Gouldsberry	0.1199
S121	05-7B-09	Teresa & Thomas Gouldsberry	0.1240
S122	05-7B-08	Teresa & Thomas Gouldsberry	0.1286
S123	05-7B-07	Teresa & Thomas Gouldsberry	0.1331
S124	05-7B-06	Teresa & Thomas Gouldsberry	0.1377
S125	05-7B-05	Daniel D. & Mary E. Robinson	0.1418
S126	05-7B-04	Daniel D. & Mary E. Robinson	0.1458
S127	05-7B-03	Daniel D. Robinson, et ux	0.1504
S128	05-7B-02	Daniel D. Robinson, et ux	0.1550
S129	05-8A-04	Cheryl A. & Tammie D. Persinger	1.07
S130	05-8A-05	Cheryl A. & Tammie D. Persinger	0.50
S131	05-8A-06	Cheryl A. & Tammie D. Persinger	0.48
S132	05-8A-07	Anne C. Klem	1.40
S133	05-8A-08	John Joseph Goudy	1.0
S134	05-8A-09	Kevin W. Wallace	0.323
S135	EE 05-8A-15	Kevin R. Morris	2.06
S136	DD 05-8A-16	John David Fromhart	2.0
S137	05-8A-17	Isaac Luke Vansycoc	1.44
S138	05-8A-55	H. G. Energy II Appalachia, LLC	0.10
S139	05-8A-19	Mary Catherine Brooks	1.0
S140	05-8A-20	Milton Christopher White	0.19
S141	05-8A-11	Gloria Jean White & Milton Christopher White	0.525
S142	05-8A-12	Mary D. Ruckman	1.137
S143	05-8A-13	Matthew Ruckman	2.993
S144	05-8A-14	Board of Education	0.86



P.S. 708

David L Jackson



**TUG HILL
OPERATING**

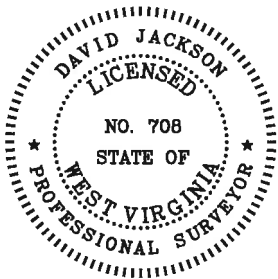
OPERATOR'S
WELL #: Michter N-8HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47 - 051 - 02219

WELL PLAT
PAGE 3 OF 7
DATE: 06/13/2019
**REVISED DATE:
08/08/2019**

form wv6

**MICHTER LEASE
WELL N-8HU
436.4438± ACRES**

Number	TAX MAP -PARCEL	SURFACE OWNER	ACRES
S145	05-8A-25	Whitney Woods	0.29
S146	05-8A-22	Whitney Woods	0.715
S147	05-8A-23	Danny Lee & Leona May Darrah	0.738
S148	05-8A-24	Clarence Paul Siburt, Hrs	0.653
S149	CC 05-8A-26	Albert James Anderson, Jr.	1.605
S150	BB 05-8A-27	Mary J. Siburt	8.296
S151	05-8A-28	Norman G. Johnson-Life	2.0
S152	05-8A-30	Randall Keith Keener, et ux	0.059
S153	05-8A-29	Catherine P. Rine	0.394
S154	05-8A-31	Randall K. Keener, et ux	2.346
S155	05-8A-32	Jonathan David Bopp	0.580
S156	05-8A-34	Norman G. Johnson, et ux	0.255
S157	05-8A-35	Jared C. Sills	2.780
S158	Z 05-8A-39	Barbara L. Daniels & Elaine Wills	3.223
S159	AA 05-8A-40	Barbara L. Daniels & Elaine Wills	0.627
S160	05-8A-38	William J. Gamble, et ux	0.35
S161	Y 05-8A-41	William J. Gamble, et ux	0.046
S162	X 05-8A-37	William J. Gamble, et ux	0.706
S163	05-8A-36	William J. Gamble, et ux	1.031
S164	05-8A-33	Elaine Wills & Jeffrey D. Brooks	2.517
S165	05-8-04	C. Wayne Berisford	23.355
S166	05-8A-43	Charles G. Stein & Eva A. Wade	0.17
S167	05-8A-44	Charles G. Stein & Eva A. Wade	0.18
S168	W 05-8A-42	Robert M. White	7.23
S169	T 05-8A-49	Raymand A. Jr. & Larriette Scott	0.159
S170	S 05-8A-45	Raymand A. Jr. & Larriette Scott	0.305
S171	U 05-8A-46	Barbara L. Rose & Mary L. Rose	1.5
S172	V 05-8A-48	Raymond A. Jr. & Larriette Scott	2.12
S173	05-8A-52	Barbara L. Rose & Mary L. Rose	0.59
S174	05-8A-51	Lucretia M. Harrison	0.210
S175	05-8A-50	Lucretia M. Harrison	0.277
S176	05-8A-54	David D. & Christine S. Daniels	0.68
S177	05-8A-54.1	David D. & Christine S. Daniels	0.69
S178	05-8A-53	Frances E. Nieman	0.422
S179	R 05-8A-47	Barbara L. Rose & Mary L. Rose	3.0
S180	Q 05-08-4.1	Frances E. Nieman	33.461
S181	05-07-39	Lionel L. Persinger, et ux	57.00
S182	PP 05-08-02	Consolidation Coal Company/ Murray Energy	136.587



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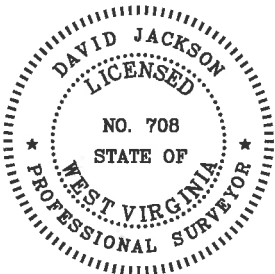
OPERATOR'S
WELL #: Michter N-8HU
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WELL PLAT
PAGE 4 OF 7
DATE: 06/13/2019
REVISED DATE:
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form wv6

**MICHTER LEASE
WELL N-8HU
436.4438± ACRES**

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Book/Page
10*47051.089.0	5-11-1.1	A	LARRY W DUNLAP AND BARBARA E DUNLAP	864 148
10*22667	5-11-21	B	REBEKAH DRAVER ELDRIDGE AND CHRISTOPHER ELDRIDGE	850 157
10*22773	5-11-21	B	CHRISTA DRAVER STALEY AND JOSHUA STALEY	851 3
10*22777	5-11-21	B	BOYD BUESKING	850 159
10*22780	5-11-21	B	BRENDA FAYE THOMAS PETRACK	850 161
10*22786	5-11-21	B	GUY YATES	848 206
10*22787	5-11-21	B	GAIL ANN YATES WOOD AND WESLEY J WOOD	848 208
10*22788	5-11-21	B	GENIE SUE THOMAS HOLMES AND JOHN L HOLMES	848 204
10*22801	5-11-21	B	BOYD DAIL YATES JR AND MARLA YATES	848 210
10*22808	5-11-21	B	SHIRLEY YATES HARTSELL AND FREDDIE LEE HARTSELL	848 212
10*22810	5-11-21	B	CLYDE V. & KAREN S REED	864 190
10*47051.089.0	5-11-1.4	C	LARRY W DUNLAP AND BARBARA E DUNLAP	864 148
10*19127	5-11-2	D	WALTER C RINE AND CHERYL A RINE	956 49
10*19167	5-11-1.3	E	JAY A CONNER PATTY LOUISE CONNER	724 156
10*19167	5-11-1.2	F	JAY A CONNER PATTY LOUISE CONNER	724 156
10*19219	5-8-9.1	G	SCOTT E JACKSON	731 102
10*19236	5-8-9.1	G	TAMMIE S JACKSON	749 213
10*19237	5-8-9.1	G	MARION L JACKSON	735 427
10*47051.105.0	5-8-9	H	JAMES B JACKSON JR AND MARION L JACKSON	859 478
10*21546	5-8-7	I	EDWIN C MILLER AND KIMBERLY ANN MILLER	957 257
10*19168	5-11-1.5	J	PAUL WHITT AND SANDY WHITT	715 565
10*19174	5-11-1.7	K	WILLIAM S ADAMS MARY K ADAMS	711 318
10*19173	5-11-1	L	RANDYLYN MOORE LUNDA G MOORE	717 46
10*19184	5-11-1	L	RANDY L PECK	716 26
TH19175	5-7-32	M	WILLIAM N. ROUPE AND VIRGINIA A ROUPE	711 503
10*22751	5-7-31	N	WILLIAM N ROUPE AND VIRGINIA A ROUPE	977 367
Q077562000	5-7-31.1	O	ELIZABETH ANNE MOORE	806 302
Q081960000	Fish Creek - State of WV	P	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	865 558
TH19101	5-8-4.1	Q	FRANCES E. NIEMAN	685 288
Q097976001	5-8A-47	R	SARA B ANDERSON AND ARTHUR A ANDERSON	890 310
Q097976004	5-8A-47	R	LORNA MARIE LEW	890 602
Q097976005	5-8A-47	R	MARJORIE B KIDD AND ROBERT C KIDD	890 596
Q097976006	5-8A-47	R	VICTORIA A PAKROVSKY AND STEPHEN W PAKROVSKY	890 599
Q097976007	5-8A-47	R	CHARLES EDWIN BLUE IV	890 316
Q098990000	5-8A-47	R	THOMAS DANIEL BLUE AND JOSEPHINE M BLUE (HG Energy - FEE)	898 584
Q097976001	5-8A-45	S	SARA B ANDERSON AND ARTHUR A ANDERSON	890 310
Q097976004	5-8A-45	S	LORNA MARIE LEW	890 602
Q097976005	5-8A-45	S	MARJORIE B KIDD AND ROBERT C KIDD	890 596
Q097976006	5-8A-45	S	VICTORIA A PAKROVSKY AND STEPHEN W PAKROVSKY	890 599
Q097976007	5-8A-45	S	CHARLES EDWIN BLUE IV	890 316
Q098990000	5-8A-45	S	THOMAS DANIEL BLUE AND JOSEPHINE M BLUE (HG Energy - FEE)	898 584
10*26619	5-8A-49	T	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	1054 30
Q097976007	5-8A-49	T	CHARLES EDWIN BLUE, IV, DEALING IN HIS SOLE AND SEPARATE PROPERTY	890 316
Q097976004	5-8A-49	T	LORNA MARIE LEW	890 602
Q097976005	5-8A-49	T	MARJORIE B. KIDD AND ROBERT C. KIDD, WIFE AND HUSBAND	890 596
Q097976001	5-8A-49	T	SARA B. ANDERSON AND ARTHUR A. ANDERSON, WIFE AND HUSBAND	890 310
Q097976006	5-8A-49	T	VICTORIA A. PAKROVSKY AND STEPHEN W. PAKROVSKY, WIFE AND HUSBAND	890 599
Q097976007	5-8A-49	T	CHARLES EDWIN BLUE, IV, DEALING IN HIS SOLE AND SEPARATE PROPERTY	890 316
10*26944	5-8A-49	T	COURTNEY D HALL	1046 465
10*26619	5-8A-49	T	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	1050 30
Q097976004	5-8A-49	T	LORNA MARIE LEW	890 602
Q097976005	5-8A-49	T	MARJORIE B. KIDD AND ROBERT C. KIDD, WIFE AND HUSBAND	890 596
Q087976001	5-8A-49	T	SARA B. ANDERSON AND ARTHUR A. ANDERSON, WIFE AND HUSBAND	890 310
10*26704	5-8A-49	T	SOUTHEASTERN GUIDE DOGS INC.	PENDING
Q097976005	5-8A-49	T	VICTORIA A. PAKROVSKY AND STEPHEN W. PAKROVSKY, WIFE AND HUSBAND	890 599
Q097976001	5-8A-46	U	SARA B ANDERSON AND ARTHUR A ANDERSON	890 310
Q097976004	5-8A-46	U	LORNA MARIE LEW	890 602
Q097976003	5-8A-46	U	MARJORIE B KIDD AND ROBERT C KIDD	890 596
Q097976006	5-8A-46	U	VICTORIA A PAKROVSKY AND STEPHEN W PAKROVSKY	890 599
Q097976007	5-8A-46	U	CHARLES EDWIN BLUE IV	890 316
Q098990000	5-8A-46	U	THOMAS DANIEL BLUE AND JOSEPHINE M BLUE (HG Energy - FEE)	898 584
10*27145	5-8A-46	U	BARBARA LOUELLEN ROSE AND MARY LOU ROSE, JTROS	1052 502
Q097976007	5-8A-48	V	Charles Edwin Blue, IV, dealing in his sole and separate property	890 316
Q097976004	5-8A-48	V	LORNA MARIE LEW	890 602
Q097976005	5-8A-48	V	Marjorie B. Kidd and Robert C. Kidd, wife and husband	890 596
Q097976001	5-8A-48	V	Sara B. Anderson and Arthur A. Anderson, wife and husband	89 310
Q097976006	5-8A-48	V	Victoria A. Pakrovsky and Stephen W. Pakrovsky, wife and husband	890 599
Q097976007	5-8A-48	V	Charles Edwin Blue, IV, dealing in his sole and separate property	890 316
10*26944	5-8A-48	V	COURTNEY D HALL	1046 465
Q097976004	5-8A-48	V	LORNA MARIE LEW	890 602
Q097976005	5-8A-48	V	Marjorie B. Kidd and Robert C. Kidd, wife and husband	890 596
Q097976001	5-8A-48	V	Sara B. Anderson and Arthur A. Anderson, wife and husband	890 310
10*26619	5-8A-48	V	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	1050 30
10*26704	5-8A-48	V	SOUTHEASTERN GUIDE DOGS INC.	PENDING
Q097976006	5-8A-48	V	Victoria A. Pakrovsky and Stephen W. Pakrovsky, wife and husband	890-599 599
Q097976001	5-8A-42	W	SARA B ANDERSON AND ARTHUR A ANDERSON	890 310
10*27249	5-8A-42	W	ROBERT M. WHITE AND DIANE WHITE	1253 12
Q097976004	5-8A-42	W	LORNA MARIE LEW	890 602
Q097976005	5-8A-42	W	MARJORIE B KIDD AND ROBERT C KIDD	890 596
Q097976006	5-8A-42	W	VICTORIA A PAKROVSKY AND STEPHEN W PAKROVSKY	890 599
Q097976007	5-8A-42	W	CHARLES EDWIN BLUE IV	890 316
Q098990000	5-8A-42	W	THOMAS DANIEL BLUE AND JOSEPHINE M BLUE (HG Energy - FEE)	898 584
10*25698	5-8A-37	X	KENNETH AND DAWN E MORRIS	1033 129
10*25752	5-8A-37	X	DEBRA ANN AND EARL V BUTCHER	1033 315
10*26438	5-8A-37	X	IANICE AND DONALD CROOK	1034 583
10*26439	5-8A-37	X	NANCY LOUISE SNYDER	1034 588
Q078626001	5-8A-37	X	LUCILLE E WINGROVE	810 80
Q078626003	5-8A-37	X	JUNE MORRIS	808 301
Q078626009	5-8A-37	X	H JAY ULBRICH	819 309
Q078626010	5-8A-37	X	MARILYN ULBRICH CHALMERS AND ROD N CHAMBERS	820 506
Q078626011	5-8A-37	X	BLYE ULBRICH JENSCHKE AND JIM JENSCHKE	819 305
Q078626012	5-8A-37	X	JUSTIN SMITH	819 307
Q078626013	5-8A-37	X	ROBERT LEE SMITH AND BETSY K SMITH	819 303
Q078626017	5-8A-37	X	SOUTHEASTERN GUIDE DOGS INC	820 516
Q078626023	5-8A-37	X	BRYCE E ULBRICH AND EDNA M ULBRICH	825 298
Q078626025	5-8A-37	X	COURTNEY D HALL	829 147
Q078626026	5-8A-37	X	BLASE JOSEPH ULCAK JR	829 127
Q078626036	5-8A-37	X	MARTHA FRANCES ULCAK	832 588
10*26619	5-8A-37	X	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	1050 30



P.S. 708

David L Jackson



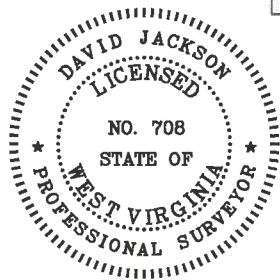
**TUG HILL
OPERATING**

OPERATOR'S
WELL #: Michter N-8HU
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WELL PLAT
PAGE 5 OF 7
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**MICHTER LEASE
WELL N-8HU
436.4438± ACRES**

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Book	Page
10*25698	5-8A-41	Y	KENNETH AND DAWN E MORRIS	1033	129
10*25752	5-8A-41	Y	DEBRA ANN AND EARL V BUTCHER	1033	315
10*26438	5-8A-41	Y	JANICE AND DONALD CROOK	1034	583
10*26439	5-8A-41	Y	NANCY LOUISE SNYDER	1034	588
Q078626001	5-8A-41	Y	LUCILLE E WINGROVE	810	80
Q078626003	5-8A-41	Y	JUNE MORRIS	808	301
Q078626006	5-8A-41	Y	BARBARA F DANIELS	813	246
Q078626009	5-8A-41	Y	H JAY ULBRICH	819	309
Q078626010	5-8A-41	Y	MARILYN ULBRICH CHALMERS AND ROD N CHAMBERS	820	506
Q078626011	5-8A-41	Y	BLYE ULBRICH JENSCHKE AND JIM JENSCHKE	819	305
Q078626012	5-8A-41	Y	JUSTIN SMITH	819	307
Q078626013	5-8A-41	Y	ROBERT LEE SMITH AND BETSY K SMITH	819	303
Q078626017	5-8A-41	Y	SOUTHEASTERN GUIDE DOGS INC	820	516
Q078626023	5-8A-41	Y	BRYCE E ULBRICH AND EDNA M ULBRICH	825	298
Q078626025	5-8A-41	Y	COURTNEY D HALL	829	147
Q078626026	5-8A-41	Y	BLASE JOSEPH ULCAK JR	829	127
Q078626036	5-8A-41	Y	MARTHA FRANCES ULCAK	832	588
10*26619	5-8A-41	Y	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	1050	30
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10*25752	5-8A-39	Z	DEBRA ANN AND EARL V BUTCHER	1033	315
10*26438	5-8A-39	Z	JANICE AND DONALD CROOK	1034	583
10*26439	5-8A-39	Z	NANCY LOUISE SNYDER	1034	588
Q078626001	5-8A-39	Z	LUCILLE E WINGROVE	810	80
Q078626003	5-8A-39	Z	JUNE MORRIS	808	301
Q078626006	5-8A-39	Z	BARBARA F DANIELS	813	246
Q078626007	5-8A-39	Z	JEFFREY BROOKS	813	540
Q078626008	5-8A-39	Z	ELAINE WILLIS	813	542
Q078626009	5-8A-39	Z	H JAY ULBRICH	819	309
Q078626010	5-8A-39	Z	MARILYN ULBRICH CHALMERS AND ROD N CHAMBERS	820	506
Q078626011	5-8A-39	Z	BLYE ULBRICH JENSCHKE AND JIM JENSCHKE	819	305
Q078626012	5-8A-39	Z	JUSTIN SMITH	819	307
Q078626013	5-8A-39	Z	ROBERT LEE SMITH AND BETSY K SMITH	819	303
Q078626017	5-8A-39	Z	SOUTHEASTERN GUIDE DOGS INC	820	516
Q078626023	5-8A-39	Z	BRYCE E ULBRICH AND EDNA M ULBRICH	825	298
Q078626025	5-8A-39	Z	COURTNEY D HALL	829	147
Q078626026	5-8A-39	Z	BLASE JOSEPH ULCAK JR	829	127
Q078626036	5-8A-39	Z	MARTHA FRANCES ULCAK	832	588
10*26619	5-8A-39	Z	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	1050	30
10*25698	5-8A-40	AA	KENNETH AND DAWN E MORRIS	1033	129
10*25752	5-8A-40	AA	DEBRA ANN AND EARL V BUTCHER	1033	315
10*26438	5-8A-40	AA	JANICE AND DONALD CROOK	1034	583
10*26439	5-8A-40	AA	NANCY LOUISE SNYDER	1034	588
Q078626001	5-8A-40	AA	LUCILLE E WINGROVE	810	80
Q078626003	5-8A-40	AA	JUNE MORRIS	808	301
Q078626006	5-8A-40	AA	BARBARA F DANIELS	813	246
Q078626007	5-8A-40	AA	JEFFREY BROOKS	813	540
Q078626008	5-8A-40	AA	ELAINE WILLIS	813	542
Q078626009	5-8A-40	AA	H JAY ULBRICH	819	309
Q078626010	5-8A-40	AA	MARILYN ULBRICH CHALMERS AND ROD N CHAMBERS	820	506
Q078626011	5-8A-40	AA	BLYE ULBRICH JENSCHKE AND JIM JENSCHKE	819	305
Q078626012	5-8A-40	AA	JUSTIN SMITH	819	307
Q078626013	5-8A-40	AA	ROBERT LEE SMITH AND BETSY K SMITH	819	303
Q078626017	5-8A-40	AA	SOUTHEASTERN GUIDE DOGS INC	820	516
Q078626023	5-8A-40	AA	BRYCE E ULBRICH AND EDNA M ULBRICH	825	298
Q078626025	5-8A-40	AA	COURTNEY D HALL	829	147
Q078626026	5-8A-40	AA	BLASE JOSEPH ULCAK JR	829	127
Q078626036	5-8A-40	AA	MARTHA FRANCES ULCAK	832	588
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Q078689000	5-8A-26	CC	EDWARD DAVID KNUTH AND KATHY JO KNUTH	803	598
Q078626027	5-8A-16	DD	BETTY JANE PARRIOTT, WIDOW	828	265
Q078626026	5-8A-16	DD	BLASE JOSEPH ULCAK JR, A SINGLE MAN	829	127
Q078626011	5-8A-16	DD	BLYE ULBRICH JENSCHKE AND JIM JENSCHKE	819	305
Q078626016	5-8A-16	DD	BRIAN EDWIN LEMASTERS AND BEVERLY J. LEMASTERS, HUSBAND AND WIFE	821	24
Q078626023	5-8A-16	DD	BRYCE E ULBRICH AND EDNA M ULBRICH	825	298
Q078626025	5-8A-16	DD	COURTNEY D HALL	829	147
Q078626015	5-8A-16	DD	DEBORAH D MERCER AND CLAVIN P MERCER	821	22
Q078626019	5-8A-16	DD	FRANCIS O. HALL A/K/A ORNETTA PARRIOTT, WIDOW	825	258
Q078626009	5-8A-16	DD	H. JAY ULBRICH, A SINGLE MAN	819	309
Q078626014	5-8A-16	DD	HARRY LEROY PARRIOTT AND NANCY S. PARRIOTT, HUSBAND AND WIFE	820	508
Q078626005	5-8A-16	DD	JANICE R. CROOK, A/K/A JANICE WINGROVE CROOK AND DONALD P. CROOK, A WIFE AND HUSBAND	808	305
Q077358001	5-8A-16	DD	JON DAVID FROMHART, SINGLE	805	580
Q078626012	5-8A-16	DD	JUSTIN SMITH, A/K/A JUSTINE SMITH, A WIDOW	819	307
Q077358002	5-8A-16	DD	JUNE MORRIS, A WIDOW	829	26
Q078626002	5-8A-16	DD	KENNETH R. MORRIS AND DAWN E. MORRIS, HUSBAND AND WIFE	808	303
Q078626018	5-8A-16	DD	KIMBERLY D. LAKE, A SINGLE WOMAN	825	272
Q078626010	5-8A-16	DD	MARILYN ULBRICH CHALMERS AND ROD N. CHALMERS, WIFE AND HUSBAND	820	506
Q078626036	5-8A-16	DD	MARTHA FRANCES ULCAK, A SINGLE WOMAN	832	588
Q078626021	5-8A-16	DD	MARY L. PARRIOTT, A WIDOW	827	164
Q078626004	5-8A-16	DD	NANCY L. SNYDER, A/K/A NANCY WINGROVE SNYDER, A WIDOW	808	309
Q078626028	5-8A-16	DD	PATRICIA PARRIOTT, A WIDOW	828	270
Q078626013	5-8A-16	DD	ROBERT LEE SMITH AND BETSY K. SMITH, HUSBAND AND WIFE	819	303
Q078626017	5-8A-16	DD	SOUTHEASTERN GUIDE DOGS INC, TITUS HERMAN CEO	820	516
Q078626022	5-8A-16	DD	TIMOTHY SCOTT LEMASTERS AND AMY C. LEMASTERS, HUSBAND AND WIFE	827	162
Q078626020	5-8A-16	DD	TRUDY B. SAMPSON AND DANNY SAMPSON, WIFE AND HUSBAND	825	260
Q078626027	5-8A-16	DD	BETTY JANE PARRIOTT, WIDOW	828	265
Q078626026	5-8A-16	DD	BLASE JOSEPH ULCAK JR, A SINGLE MAN	829	127
Q078626011	5-8A-16	DD	BLYE ULBRICH JENSCHKE AND JIM JENSCHKE	819	305
Q078626016	5-8A-16	DD	BRIAN EDWIN LEMASTERS AND BEVERLY J. LEMASTERS, HUSBAND AND WIFE	821	24
Q078626023	5-8A-16	DD	BRYCE E ULBRICH AND EDNA M ULBRICH	825	298
Q078626025	5-8A-16	DD	COURTNEY D HALL	829	147
Q078626015	5-8A-16	DD	DEBORAH D MERCER AND CLAVIN P MERCER	821	22
Q078626019	5-8A-16	DD	FRANCIS O. HALL A/K/A ORNETTA PARRIOTT, WIDOW	825	258
Q078626009	5-8A-16	DD	H. JAY ULBRICH, A SINGLE MAN	819	309
Q078626014	5-8A-16	DD	HARRY LEROY PARRIOTT AND NANCY S. PARRIOTT, HUSBAND AND WIFE	820	508
Q078626005	5-8A-16	DD	JANICE R. CROOK, A/K/A JANICE WINGROVE CROOK AND DONALD P. CROOK, A WIFE AND HUSBAND	808	305
Q077358001	5-8A-16	DD	JON DAVID FROMHART, SINGLE	805	580
Q078626012	5-8A-16	DD	JUSTIN SMITH, A/K/A JUSTINE SMITH, A WIDOW	819	307
Q077358002	5-8A-16	DD	JUNE MORRIS, A WIDOW	829	26
Q078626002	5-8A-16	DD	KENNETH R. MORRIS AND DAWN E. MORRIS, HUSBAND AND WIFE	808	303



P.S.
708

David L Jackson



**TUG HILL
OPERATING**

OPERATOR'S
WELL #: Michter N-8HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47 - 051- 02219

WELL PLAT
PAGE 6 OF 7
DATE: 06/13/2019
REVISED DATE:
08/08/2019

**MICHTER LEASE
WELL N-8HU
436.4438± ACRES**

61-02219

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Book/Page
Q078626018	5-8A-16	DD	KIMBERLY D. LAKE, A SINGLE WOMAN	825 272
Q078626010	5-8A-16	DD	MARILYN ULBRICH CHALMERS AND ROD N. CHALMERS, WIFE AND HUSBAND	820 506
Q078626036	5-8A-16	DD	MARTHA FRANCES ULCAK, A SINGLE WOMAN	832 588
Q078626021	5-8A-16	DD	MARY L. PARRIOTT, A WIDOW	827 164
Q078626004	5-8A-16	DD	NANCY L. SNYDER, A/W/A NANCY WINGROVE SNYDER, A WIDOW	808 309
Q078626028	5-8A-16	DD	PATRICIA PARRIOTT, A WIDOW	828 270
Q078626013	5-8A-16	DD	ROBERT LEE SMITH AND BETSY K. SMITH, HUSBAND AND WIFE	819 303
10*26619	5-8A-16	DD	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	1050 30
Q078626017	5-8A-16	DD	SOUTHEASTERN GUIDE DOGS INC., TITUS HERMAN CEO	820 516
Q078626022	5-8A-16	DD	TIMOTHY SCOTT LEMASTERS AND AMY C. LEMASTERS, HUSBAND AND WIFE	827 162
Q078626020	5-8A-16	DD	TRUDY B. SAMPSON AND DANNY SAMPSON, WIFE AND HUSBAND	825 260
Q076469000	5-8A-15	EE	JUNE MORRIS	802 275
Q078626009	5-8A-15	EE	H JAY ULBRICH	819 309
Q078626010	5-8A-15	EE	MARILYN ULBRICH CHALMERS AND ROD N. CHAMBERS	820 506
Q078626011	5-8A-15	EE	BLYE ULBRICH JENSCHKE AND JIM JENSCHKE	819 305
Q078626012	5-8A-15	EE	JUSTIN SMITH	819 307
Q078626013	5-8A-15	EE	ROBERT LEE SMITH AND BETSY K SMITH	819 303
Q078626014	5-8A-15	EE	HARRY LEROY PARRIOTT AND NANCY S PARRIOTT	820 508
Q078626015	5-8A-15	EE	DEBORAH D MERCER AND CLAVIN P MERCER	821 22
Q078626016	5-8A-15	EE	BRIAN EDWIN LEMASTERS ET UX	821 24
Q078626018	5-8A-15	EE	KIMBERLY D LAKE	825 272
Q078626020	5-8A-15	EE	TRUDY B SAMPSON ET VIR	825 260
Q078626021	5-8A-15	EE	MARY L PARRIOTT	827 164
Q078626022	5-8A-15	EE	TIMOTHY SCOTT LEMASTERS AND AMY C LEMASTERS	827 162
Q078626023	5-8A-15	EE	BRUCE E ULBRICH AND EDNA M ULBRICH	825 298
10*26619	5-8A-15	EE	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	1050 30
Q078626025	5-8A-15	EE	COURTNEY D HALL	829 147
Q078626026	5-8A-15	EE	BLASE JOSEPH ULCAK JR	829 127
Q078626027	5-8A-15	EE	BETTY JANE PARRIOTT	828 265
Q078626028	5-8A-15	EE	PATRICIA PARRIOTT	828 270
Q078626029	5-8A-15	EE	SOUTHEASTERN GUIDE DOGS INC	828 305
Q078626030	5-8A-15	EE	FRANCES O HALL AKA ORNETTA PARRIOTT	839 133
Q078626032	5-8A-15	EE	KENNETH MORRIS AND DAWN E MORRIS	829 43
Q078626033	5-8A-15	EE	LUCILLE E WINGROVE	829 45
Q078626034	5-8A-15	EE	JANICE R CROOK AKA JANICE WINGROVE CROOK AND DONALD P CROOK	831 60
Q078626035	5-8A-15	EE	NANCY L SNYDER AKA NANCY WINGROVE SNYDER	831 56
Q078626036	5-8A-15	EE	MARTHA FRANCES ULCAK	832 588
Q078626037	5-8A-15	EE	DEBRA ANN AND EARL V BUTCHER	839 215
Q083831000	5-7-29	FF	JAMES K PERSINGER AND TONDA J PERSINGER	836 460
Q08383100	5-7-27	GG	JAMES K PERSINGER AND TONDA J PERSINGER	836 460
Q083488000	5-7-27.1	HH	MARK L RITER AND MICHELLE A RITER	821 26
Q096159000	5-7-23	II	MARITHA F POWELL	881 21
Q097423000	5-7-23.2	JJ	ROBERT L HENRY JR AND GEORGEANNA HENRY ET AL	890 613
Q091953000	5-7-23.1	KK	PATRICIA Y DAHRAH	860 552
10*26015	5-7-22	LL	BUSTAMANTE JESUS ET UX	734 263
10*26015	5-7-28.1	MM	BUSTAMANTE JESUS ET UX	734 263
Q097973000	5-7-28	NN	THELMA M. ROUPE	890 313
624124	5-7-15	OO	KIRKMAN, CASPER SANFORD; KIRKMAN, LILLIAN E	311 390
PENDING	5-8-2	PP	CNX GAS COMPANY LLC	1039 1
Q097217000	5-7-17	QQ	DEBORA L BENNETT	546 58
Q097217000	5-7-18.1	RR	MILLER, ADAM & MARY	311 333
Q097217000	5-7-16	SS	MILLER, ADAM & MARY	311 333
Q097218000	5-7-14.2	TT	LACY MIDCAP ET AL	311 324
Q097218000	5-7-14.3	UU	LACY MIDCAP ET AL	311 324
NO LEASE SHOWN IN GIS	5-7-14	VV	LACY MIDCAP ET AL	311 324
Q097217000	5-7-18	WW	MILLER, ADAM & MARY	311 333
Q097216000	5-7-21	XX	WOLFE, BLAINE & VIVIAN ET AL	312 100
Q097220000	5-7-21	XX	WILLIS RINE ET UX	311 344
Q097423000	5-7-45	YY	ROBERT L HENRY JR AND GEORGEANNA HENRY ET AL	890 613
Pending	5-7-3.2	ZZ	WHEELING POWER COMPANY & KENTUCKY POWER COMPANY	1040 103
624083	5-7-4	AAA	LLOYD Q & MARY WOLFE GATTS	290 94
Q076636002	5-7-5.1	BBB	BRUCE SCOTT SCHMITT & JERRI MARIE BLANEY	813 244
Q076636003	5-7-5.1	BBB	ALAN GREGORY SCHMITT & LINDA LEE SCHMITT	813 538
	5-7-5.1	BBB	GEORGE A. KNUTH	819 298
Q076636004	5-7-5.1	BBB	CYNTHIA JEAN WARD & DALE P. WARD	816 261
Q076636005	5-7-5.1	BBB	SAMUEL O. COEN JR.	816 259
Q076636006	5-7-5.1	BBB	MARK ALAN DELBRUGGE & PATRICIA A. DELBRUGGE	820 512
Q076636007	5-7-5.1	BBB	WALTER L. DELBRUGGE JR & NORA L. DELBRUGGE	820 510
Q076636008	5-7-5.1	BBB	WILLIAM D. MARTIN & ANDREA R. MARTIN	819 298
Q076636009	5-7-5.1	BBB	KIMBERLY ANN DELBRUGGE DECREASE & VINCENT J. DECREASE	825 349
Q076636010	5-7-5.1	BBB	SUZANNE Q. PAVUC AKA SUZANNE DELBRUGGE PAVUC	825 262
Q076636011	5-7-5.1	BBB	MARGARET LYNN DELBRUGGE WATSON & JAMES W. WATSON	825 264
Q076636012	5-7-5.1	BBB	JANE LOU WILLIAMS AKA JANE LOU DELBRUGGE WILLIAMS & LAURENCE P. WILLIAMS	825 289
Q076636013	5-7-5.1	BBB	BEATRICE J. SCHMITT	828 292
Q090257000	5-7-5	CCC	KNUTH, GEORGE A & KELLY A	671 385
Q074011007	5-6-3.1	DDD	SUSAN WITTEN NEAL MYERS ET AL	815 375
Q074011008	5-6-3.1	DDD	JANE WITTEN VOTH	853 306
Q074011003	5-6-3.1	DDD	JOSEPH MOORE NEAL	859 512
Q074011006	5-6-3.1	DDD	FRANCES GALE NEAL	851 218
Q074011005	5-6-3.1	DDD	ANN ALEXANDER	853 310
Q074011013	5-6-3.1	DDD	MARY WITTEN NEAL WISEMAN	851 216
624074	5-6-3.1	DDD	GATTS, ALICE	282 394
624080	5-6-3.1	DDD	GATTS, ELIZABETH R J & HARLEY	290 97
624074	5-7-2	EEE	GATTS, ALICE	282 394
624074	5-6-3	FFF	GATTS, ALICE	282 394
624080	5-6-3	FFF	GATTS, ELIZABETH R J & HARLEY	290 97
624083	5-6-3	FFF	GATTS, LLOYD Q & MARY WOLFE	290 94
624150	5-6-3	FFF	RINE, G W & BESSIE J	313 200
Q074011007	5-6-3	FFF	SUSAN WITTEN NEAL MYERS ET AL	815 375
Q074011008	5-6-3	FFF	JANE WITTEN VOTH	853 306
Q074011003	5-6-3	FFF	JOSEPH MOORE NEAL	859 512
Q074011006	5-6-3	FFF	FRANCES GALE NEAL	851 218
Q074011005	5-6-3	FFF	ANN ALEXANDER	853 310
Q074011013	5-6-3	FFF	MARY WITTEN NEAL WISEMAN	851 216
Q074011002	5-6-3	FFF	DOROTHY ANN NEAL	851 396
Q074011004	5-6-3	FFF	MARGERY J. WITTEN	851 398
624080	5-6-5	GGG	GATTS, ELIZABETH R J & HARLEY	290 97
624073	5-6-6	HHH	STEIGNER, FREDERICK J; STEIGNER, ANNA KATHERYNE	282 61
Q090311000	5-6-6	HHH	ASHLAND OIL & REFINING CO.	277 490
Q090311000	5-6-1	III	ASHLAND OIL & REFINING CO.	277 490



P.S. 708 *David L Jackson*



**TUG HILL
OPERATING**

OPERATOR'S
WELL #: Michter N-8HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47 - 051- 02219

WELL PLAT
PAGE 7 OF 7
DATE: 06/13/2019
REVISED DATE:
08/08/2019

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

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

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

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

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

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

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

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

Well Operator: Tug Hill Operating, LLC
 By: Amy L. Miller *Amy Miller*
 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*19168	5-11-1.5	J	PAUL WHITT AND SANDY WHITT	CHESSAPEAKE APPALACHIA LLC	1/8+	715 565	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC.
10*19174	5-11-1.7	K	WILLIAM S ADAMS MARY K ADAMS	TRIENERGY HOLDINGS LLC	1/8+	711 318	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC.
10*19173	5-11-1	L	RANDYVN MOORE LINDA G MOORE	CHESSAPEAKE APPALACHIA LLC	1/8+	717 46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC.
10*19184	5-11-1	L	RANDI L PECK	CHESSAPEAKE APPALACHIA LLC	1/8+	716 26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration LLC.
TH19175	5-7-32	M	WILLIAM N. ROUPE AND VIRGINIA A ROUPE	TRIENERGY HOLDINGS LLC	1/8+	711 503	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, LLC.
10*2751	5-7-31	N	WILLIAM N ROUPE AND VIRGINIA A ROUPE	TH EXPLORATION LLC	1/8+	977 367	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, LLC.
Q077562000	5-7-31.1	Q	ELIZABETH ANNE MOORE	NOBLE ENERGY INC	1/8+	806 302	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, LLC.
G091960000	h Creek - State of	P	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	NOBLE ENERGY INC	1/8+	855 558	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, LLC.
TH19101	5-8-4.1	Q	FRANCES E NIEMAN	AB RESOURCES LLC	1/8+	685 288	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, LLC.
G091796001	5-8A-47	R	SARA B ANDERSON AND ARTHUR A ANDERSON	NOBLE ENERGY INC	1/8+	890 310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, LLC.
G091796004	5-8A-47	R	LORNA MARIE LEV	NOBLE ENERGY INC	1/8+	890 602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, LLC.

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
Q097976005	5-8A-47	R	MARJORIE B KIDD AND ROBERT C KIDD	NOBLE ENERGY INC	1/8+	890 596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286
Q097976006	5-8A-47	R	VICTORIA A PAKROVSKY AND STEPHEN W PAKROVSKY	NOBLE ENERGY INC	1/8+	890 599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286
Q097976007	5-8A-47	R	CHARLES EDWIN BLUE IV	NOBLE ENERGY INC	1/8+	890 316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286
Q098989000	5-8A-47	R	THOMAS DANIEL BLUE AND JOSEPHINE M BLUE (HG Energy - FEE)	NOBLE ENERGY INC	1/8+	898 584	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286
Q097976001	5-8A-45	S	SARA B ANDERSON AND ARTHUR A ANDERSON	NOBLE ENERGY INC	1/8+	890 310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286
Q097976004	5-8A-45	S	LORNA MARIE LEW	NOBLE ENERGY INC	1/8+	890 602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286
Q097976005	5-8A-45	S	MARJORIE B KIDD AND ROBERT C KIDD	NOBLE ENERGY INC	1/8+	890 596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286
Q097976006	5-8A-45	S	VICTORIA A PAKROVSKY AND STEPHEN W PAKROVSKY	NOBLE ENERGY INC	1/8+	890 599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286
Q097976007	5-8A-45	S	CHARLES EDWIN BLUE IV	NOBLE ENERGY INC	1/8+	890 316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II, HG Energy II, Appalachia, LLC. 988/286

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment						
Q098699000	5-8A-45	5	THOMAS DANIEL BLUE AND JOSEPHINE M BLUE (HG Energy - FEE)	NOBLE ENERGY INC	1/8+	898	584	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to CNX Gas Company LLC; 36/409	CNX Gas Company LLC to Noble Energy Inc; 37/169	Noble Energy Inc to HG Energy II Appalachia LLC; 39/1	Noble Energy Inc to HG Energy II Appalachia LLC; MB 988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC;	
N/A	5-8A-49	T	SHIRNERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	TH EXPLORATION LLC	1/8+	N/A	N/A																	
Q097976007	5-8A-49	T	CHARLES EDWIN BLUE, IV, DEALING IN HIS SOLE AND SEPARATE PROPERTY	NOBLE ENERGY INC	1/8+	890	316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC; 988/286
Q097976004	5-8A-49	T	LORNA MARIE LEW	NOBLE ENERGY INC	1/8+	890	602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC; 988/286
Q097976005	5-8A-49	T	MARJORIE B. KIDD AND ROBERT C. KIDD, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	890	596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC; 988/286
Q097976001	5-8A-49	T	SARA B. ANDERSON AND ARTHUR A. ANDERSON, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	890	310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC; 988/286
Q097976006	5-8A-49	T	VICTORIA A. PAKROVSKY AND STEPHEN W. PAKROVSKY, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	890	599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC; 988/286
Q097976007	5-8A-49	T	CHARLES EDWIN BLUE, IV, DEALING IN HIS SOLE AND SEPARATE PROPERTY	NOBLE ENERGY INC	1/8+	890	315	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC; 988/286
N/A	5-8A-49	T	COURTNEY D HALL	UNLEASED	1/8+	N/A	N/A																	
N/A	5-8A-49	T	SHIRNERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	UNLEASED	1/8+	N/A	N/A																	
Q097976004	5-8A-49	T	LORNA MARIE LEW	NOBLE ENERGY INC	1/8+	890	602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC; 988/286
Q097976005	5-8A-49	T	MARJORIE B. KIDD AND ROBERT C. KIDD, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	890	596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC; 988/286

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Q097976001	5-8A-49	T	SARA B. ANDERSON AND ARTHUR A. ANDERSON, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	890	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
10*26704	5-8A-49	T	SOUTHEASTERN GUIDE DOGS INC.	TH EXPLORATION LLC	1/8+	PENDING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Q097976006	5-8A-49	T	VICTORIA A. PAKROVSKY AND STEPHEN W. PAKROVSKY, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	890	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q097976001	5-8A-46	U	SARA B. ANDERSON AND ARTHUR A. ANDERSON	NOBLE ENERGY INC	1/8+	890	310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q097976004	5-8A-46	U	LONNA MARIE LEW	NOBLE ENERGY INC	1/8+	890	602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q097976005	5-8A-46	U	MARJORIE B KIDD AND ROBERT C KIDD	NOBLE ENERGY INC	1/8+	890	595	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q097976006	5-8A-46	U	VICTORIA A. PAKROVSKY AND STEPHEN W. PAKROVSKY	NOBLE ENERGY INC	1/8+	890	599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q097976007	5-8A-46	U	CHARLES EDWIN BLUE IV	NOBLE ENERGY INC	1/8+	890	316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q0989899000	5-8A-46	U	THOMAS DANIEL BLUE AND JOSEPHINE M BLUE (HG Energy - FEE)	NOBLE ENERGY INC	1/8+	898	584	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
N/A	5-8A-46	U	BARBARA LOUELEN ROSE AND MARY LOU ROSE, JTRRS	UNLEADED	1/8+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q097976007	5-8A-48	V	Charles Edwin Blue, IV, dealing in his sole and separate property	NOBLE ENERGY INC	1/8+	890	316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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Q097976004	5-8A-48	V	LORNA MARIE LEW	NOBLE ENERGY INC	1/8+	890 602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097976005	5-8A-48	V	Marjorie B. Kidd and Robert C. Kidd, wife and husband	NOBLE ENERGY INC	1/8+	890 596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097976001	5-8A-48	V	Sara B. Anderson and Arthur A. Anderson, wife and husband	NOBLE ENERGY INC	1/8+	89 310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097976006	5-8A-48	V	Victoria A. Pakrovsky and Stephen W. Pakrovsky, wife and husband	NOBLE ENERGY INC	1/8+	890 599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097976007	5-8A-48	V	Charles Edwin Blue, IV, dealing in his sole and separate property	NOBLE ENERGY INC	1/8+	890 316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
N/A	5-8A-48	V	COURTNEY D HALL	UNLEASED	1/8+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097976004	5-8A-48	V	LORNA MARIE LEW	NOBLE ENERGY INC	1/8+	890 602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097976005	5-8A-48	V	Marjorie B. Kidd and Robert C. Kidd, wife and husband	NOBLE ENERGY INC	1/8+	890 596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097976001	5-8A-48	V	Sara B. Anderson and Arthur A. Anderson, wife and husband	NOBLE ENERGY INC	1/8+	890 310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
N/A	5-8A-48	V	SHRINERS CHILDRENS HOSPITAL OF ST PETERSBURG FLORIDA	UNLEASED	1/8+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
10*26704	5-8A-48	V	SOUTHASTERN GUIDE DOGS INC.	TH EXPLORATION LLC	1/8+	PENDING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097976006	5-8A-48	V	Victoria A. Pakrovsky and Stephen W. Pakrovsky, wife and husband	NOBLE ENERGY INC	1/8+	890-599 599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286

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C097976001	5-8A-42	W	SARA B ANDERSON AND ARTHUR A ANDERSON ROBERT M. WHITE AND DIANNE WHITE	NOBLE ENERGY INC UNLEASSED	1/8+ 1/8+	890 N/A	310 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C097976004	5-8A-42	W	LORNA MARIE LEW	NOBLE ENERGY INC	1/8+	890	602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C097976005	5-8A-42	W	MARLOHE B KIDD AND ROBERT C KIDD	NOBLE ENERGY INC	1/8+	890	596	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C097976006	5-8A-42	W	VICTORIA A PAKROVSKY AND STEPHEN W PAKROVSKY	NOBLE ENERGY INC	1/8+	890	599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C097976007	5-8A-42	W	CHARLES EDWIN BLUE IV	NOBLE ENERGY INC	1/8+	890	316	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C098989000	5-8A-42	W	THOMAS DANIEL BLUE AND JOSEPHINE M BLUE (HG Energy - FEE)	NOBLE ENERGY INC	1/8+	898	584	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*252698	5-8A-37	X	KENNETH AND DAWN E MORRIS	TH EXPLORATION LLC	1/8+	1033	129	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*25752	5-8A-37	X	DEBRA ANN AND EARL V BUTCHER	TH EXPLORATION LLC	1/8+	1033	315	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26438	5-8A-37	X	JANICE AND DONALD CROOK	TH EXPLORATION LLC	1/8+	1034	583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26439	5-8A-37	X	NANCY LOUISE SNYDER	TH EXPLORATION LLC	1/8+	1034	588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C078626001	5-8A-37	X	JUQUILE E WINGROVE	NOBLE ENERGY INC	1/8+	810	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626003	5-8A-37	X	JUNE MORRIS	NOBLE ENERGY INC	1/8+	808	301	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626009	5-8A-37	X	H LAY UBRICH	NOBLE ENERGY INC	1/8+	819	309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286

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Q078626010	5-8A-37	X	MARILYN ULBRICH CHAMBERS AND RODD N CHAMBERS	NOBLE ENERGY INC	1/8+	820	506	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626011	5-8A-37	X	BVE ULBRICH JENSCHKE AND JIM JENSCHKE	NOBLE ENERGY INC	1/8+	819	305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626012	5-8A-37	X	JUSTIN SMITH	NOBLE ENERGY INC	1/8+	819	307	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626013	5-8A-37	X	ROBERT LEE SMITH AND BETSY K SMITH	NOBLE ENERGY INC	1/8+	819	303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626017	5-8A-37	X	SOUTHEASTERN GUIDE DOGS INC	NOBLE ENERGY INC	1/8+	820	516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626023	5-8A-37	X	RYCE E ULBRICH AND EDNA M ULBRICH	NOBLE ENERGY INC	1/8+	825	298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626025	5-8A-37	X	COURTNEY D HALL	NOBLE ENERGY INC	1/8+	829	147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626026	5-8A-37	X	BLASE JOSEPH ULCAK JR	NOBLE ENERGY INC	1/8+	829	127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626036	5-8A-37	X	MARTHA FRANCES ULCAK	NOBLE ENERGY INC	1/8+	832	588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
N/A	5-8A-37	X	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	UNLEASED	1/8+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*25698	5-8A-41	Y	KENNETH AND DAWN E MORRIS	TH EXPLORATION LLC	1/8+	1033	129	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*25752	5-8A-41	Y	DEBRA ANN AND EARL V BUTCHER	TH EXPLORATION LLC	1/8+	1033	315	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26438	5-8A-41	Y	JANICE AND DONALD CROOK	TH EXPLORATION LLC	1/8+	1034	583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26439	5-8A-41	Y	NANCY LOUISE SNYDER	TH EXPLORATION LLC	1/8+	1034	588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Q078626001	5-9A-41	Y	LUCILLE E WINGROVE	NOBLE ENERGY INC	1/8+	810 80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626003	5-9A-41	Y	JUNE MORRIS	NOBLE ENERGY INC	1/8+	808 301	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626006	5-9A-41	Y	BARBARA F DANIELS	NOBLE ENERGY INC	1/8+	813 246	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626009	5-9A-41	Y	H LAV ULBRICH	NOBLE ENERGY INC	1/8+	819 309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626010	5-9A-41	Y	MARILYN ULBRICH CHAMBERS AND ROD N CHAMBERS	NOBLE ENERGY INC	1/8+	820 506	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626011	5-9A-41	Y	BIVE ULBRICH JENSCHKE AND JIM JENSCHKE	NOBLE ENERGY INC	1/8+	819 305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626012	5-9A-41	Y	JUSTIN SMITH	NOBLE ENERGY INC	1/8+	819 307	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626013	5-9A-41	Y	ROBERT LEE SMITH AND BETSY K SMITH	NOBLE ENERGY INC	1/8+	819 303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626017	5-9A-41	Y	SOUTHEASTERN GUIDE DOGS INC	NOBLE ENERGY INC	1/8+	820 516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
C078626023	5-8A-41	Y	BRUCE E ULRICH AND EDNA M ULRICH	NOBLE ENERGY INC	1/8+	825 298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626025	5-8A-41	Y	COURTNEY D HALL	NOBLE ENERGY INC	1/8+	829 147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626026	5-8A-41	Y	BLASE JOSEPH ULCAK JR	NOBLE ENERGY INC	1/8+	829 127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626036	5-8A-41	Y	MARTHA FRANCES ULCAK	NOBLE ENERGY INC	1/8+	832 588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
																		FORCE POOL
N/A			SHRINES HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	THE EXPLORATION LLC	1/8+	N/A 129	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*25698	5-8A-39	Z	KENNETH AND DAWN E MORRIS	THE EXPLORATION LLC	1/8+	1033 315	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26438	5-8A-39	Z	DEBRA ANN AND EARL V BUTCHER	THE EXPLORATION LLC	1/8+	1034 583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26438	5-8A-39	Z	JANICE AND DONALD CROOK	THE EXPLORATION LLC	1/8+	1034 588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26439	5-8A-39	Z	NANCY LOUISE SNYDER	THE EXPLORATION LLC	1/8+	1034 588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C078626001	5-8A-39	Z	LUCILLE E WINGNOVE	NOBLE ENERGY INC	1/8+	810 80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626003	5-8A-39	Z	JUNE MORRIS	NOBLE ENERGY INC	1/8+	808 301	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626006	5-8A-39	Z	BARBARA F DANIELS	NOBLE ENERGY INC	1/8+	813 246	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626007	5-8A-39	Z	JEFFREY BROOKS	NOBLE ENERGY INC	1/8+	813 540	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626008	5-8A-39	Z	ELAINE WILLIS	NOBLE ENERGY INC	1/8+	813 542	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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Q078626009	5-9A-39	Z	H JAY ULBRICH	NOBLE ENERGY INC	1/8+	819	309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626010	5-9A-39	Z	MARILYN ULBRICH CHAMBERS AND ROD N CHAMBERS	NOBLE ENERGY INC	1/8+	820	506	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626011	5-9A-39	Z	BIVE ULBRICH JENSCHKE AND JIM JENSCHKE	NOBLE ENERGY INC	1/8+	819	305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626012	5-9A-39	Z	JUSTIN SMITH	NOBLE ENERGY INC	1/8+	819	307	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626013	5-9A-39	Z	ROBERT LEE SMITH AND BETSY K SMITH	NOBLE ENERGY INC	1/8+	819	303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626017	5-9A-39	Z	SOUTHEASTERN GUIDE DOGS INC	NOBLE ENERGY INC	1/8+	820	516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626023	5-9A-39	Z	BRUCE E ULBRICH AND EDNA M ULBRICH	NOBLE ENERGY INC	1/8+	825	298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626025	5-9A-39	Z	COURTNEY D HALL	NOBLE ENERGY INC	1/8+	829	147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626026	5-9A-39	Z	BLASE JOSEPH ULCAK JR	NOBLE ENERGY INC	1/8+	829	127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.

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Q078626036	5-8A-39	Z	MARTHA FRANCES ULCAK	NOBLE ENERGY INC	1/8+	832	588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
N/A	5-8A-39	Z	SHRIRES HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	NOBLE ENERGY INC	1/8+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*25698	5-8A-40	AA	KENNETH AND DAWN E MORRIS	THE EXPLORATION LLC	1/8+	1033	129	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*25752	5-8A-40	AA	DEBRA ANN AND EARL V BUTCHER	THE EXPLORATION LLC	1/8+	1033	315	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26438	5-8A-40	AA	JANICE AND DONALD CROOK	THE EXPLORATION LLC	1/8+	1034	583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26439	5-8A-40	AA	NANCY LOUISE SNYDER	THE EXPLORATION LLC	1/8+	1034	588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Q078626001	5-8A-40	AA	LUCILLE E WINGROVE	NOBLE ENERGY INC	1/8+	810	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626003	5-8A-40	AA	JUNE MORRIS	NOBLE ENERGY INC	1/8+	808	301	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626005	5-8A-40	AA	BARBARA F DANIELS	NOBLE ENERGY INC	1/8+	813	246	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626007	5-8A-40	AA	JEFFREY BROOKS	NOBLE ENERGY INC	1/8+	813	540	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626008	5-8A-40	AA	ELAINE WILLIS	NOBLE ENERGY INC	1/8+	813	542	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626009	5-8A-40	AA	H JAY ULBRICH	NOBLE ENERGY INC	1/8+	819	309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626010	5-8A-40	AA	MARILYN ULBRICH CHAMBERS AND ROD N CHAMBERS	NOBLE ENERGY INC	1/8+	820	506	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626011	5-8A-40	AA	BYE ULBRICH JENSCHKE AND JIM JENSCHKE	NOBLE ENERGY INC	1/8+	819	305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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C078626012	5-8A-40	AA	JUSTIN SMITH	NOBLE ENERGY INC	1/8+	819 307	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/296
C078626013	5-8A-40	AA	ROBERT LEE SMITH AND BETSY K SMITH	NOBLE ENERGY INC	1/8+	819 303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626017	5-8A-40	AA	SOUTHEASTERN GUIDE DOGS INC	NOBLE ENERGY INC	1/8+	820 516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626023	5-8A-40	AA	BRICE E ULBRICH AND EDNA M ULBRICH	NOBLE ENERGY INC	1/8+	825 298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/285
C078626025	5-8A-40	AA	COURTNEY D HALL	NOBLE ENERGY INC	1/8+	829 147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626026	5-8A-40	AA	BLASE JOSEPH ULCAK JR	NOBLE ENERGY INC	1/8+	829 127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626036	5-8A-40	AA	MARTHA FRANCES ULCAK	NOBLE ENERGY INC	1/8+	832 588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
	5-8A-40	AA	SHRINERS HOSPITALS FOR CHILDREN	UNLEASED	1/8+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
867770	5-8A-27	BB	CLARENCE S SIBURT AND MARY J SIBURT	TRIENERGY HOLDINGS LLC	1/8+	715 195	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 43/164
C076869000	5-8A-26	CC	EDWARD DAVID KNUUTH AND KATHY JO KNUUTH	NOBLE ENERGY INC	1/8+	803 598	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C078626027	5-8A-16	DD	BETTY JANE PARIOTT, WIDOW	NOBLE ENERGY INC	1/8+	828 265	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

* FORCE POOL *

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C078626026	5-8A-16	DD	BLASE JOSEPH UICAK JR., A SINGLE MAN	NOBLE ENERGY INC	1/8+	829	127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626011	5-8A-16	DD	BLVE UBRICH JENSCHKE AND JIM JENSCHKE	NOBLE ENERGY INC	1/8+	819	305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626016	5-8A-16	DD	BRIAN EDWIN LEMASTERS AND BEVERLY J. LEMASTERS, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	821	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626023	5-8A-16	DD	BRUCE E UBRICH AND EDNA M UBRICH	NOBLE ENERGY INC	1/8+	825	298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626025	5-8A-16	DD	COURTNEY D HALL	NOBLE ENERGY INC	1/8+	829	147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626015	5-8A-16	DD	DEBORAH D MARGER AND CLAYN P MARGER	NOBLE ENERGY INC	1/8+	821	22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626019	5-8A-16	DD	FRANCIS O. HALL A/K/A ORNETTA PARRIOTT, WIDOW	NOBLE ENERGY INC	1/8+	825	258	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626009	5-8A-16	DD	H. JAY UBRICH, A SINGLE MAN	NOBLE ENERGY INC	1/8+	819	309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
C078626014	5-8A-16	DD	HARRY LEROY PARRIOTT AND NANCY S. PARRIOTT, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	820	508	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286

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Q078626005	5-8A-16	DD	JANICE R. CROOK, A/K/A JANICE WINGROVE CROOK AND DONALD P. CROOK, A WIFE AND	NOBLE ENERGY INC	1/8+	808	305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q077358001	5-8A-16	DD	ION DAVID FROMHART, SINGLE	NOBLE ENERGY INC	1/8+	805	580	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626012	5-8A-16	DD	JUSTIN SMITH, A/K/A JUSTINE SMITH, A WIDOW	NOBLE ENERGY INC	1/8+	819	307	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q077358002	5-8A-16	DD	JUNE MORRIS, A WIDOW	NOBLE ENERGY INC	1/8+	829	26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626002	5-8A-16	DD	KENNETH R. MORRIS AND DAWN E. MORRIS, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	808	303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626018	5-8A-16	DD	KIMBERLY D. LAKE, A SINGLE WOMAN	NOBLE ENERGY INC	1/8+	825	272	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626010	5-8A-16	DD	MARILYN ULRICH CHALMERS AND ROD N. CHALMERS, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	820	506	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626036	5-8A-16	DD	MARTHA FRANCES ULCAK, A SINGLE WOMAN	NOBLE ENERGY INC	1/8+	832	588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626021	5-8A-16	DD	MARY L. PARRIOTT, A WIDOW	NOBLE ENERGY INC	1/8+	827	164	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment				
Q078626004	5-8A-16	DD	NANCY L. SNYDER, A/K/A NANCY WINGROVE SNYDER, A WIDOW	NOBLE ENERGY INC	1/8+	808 309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286	
Q078626028	5-8A-16	DD	PATRICIA PARROTT, A WIDOW	NOBLE ENERGY INC	1/8+	828 270	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626013	5-8A-16	DD	ROBERT LEE SMITH AND BETSY K. SMITH, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	819 303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626017	5-8A-16	DD	SOUTHEASTERN GUIDE DOGS INC., TITUS HERMAN CEO	NOBLE ENERGY INC	1/8+	820 516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626022	5-8A-16	DD	TIMOTHY SCOTT LEMASTERS AND AMY C. LEMASTERS, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	827 162	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626020	5-8A-16	DD	TRUDY B. SAMPSON AND DANIN SAMPSON, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	825 260	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626027	5-8A-16	DD	BETTY JANE PARROTT, WIDOW	NOBLE ENERGY INC	1/8+	828 265	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626026	5-8A-16	DD	BLASE JOSEPH ULCAK JR., A SINGLE MAN	NOBLE ENERGY INC	1/8+	829 127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626011	5-8A-16	DD	BLVE ULBRICH JENSCHKE AND JIM JENSCHKE	NOBLE ENERGY INC	1/8+	819 305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: MB 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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Q078626016	5-8A-16	DD	BRIAN EDWIN LEMASTERS AND BEVERLY J. LEMASTERS, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	821	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626023	5-8A-16	DD	BRYCE E. ULBRICH AND EDNA M. ULBRICH	NOBLE ENERGY INC	1/8+	825	298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626025	5-8A-16	DD	COURTNEY D. HALL	NOBLE ENERGY INC	1/8+	829	147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626015	5-8A-16	DD	DEBORAH D. MERCER AND CLAVIN P. MERCER	NOBLE ENERGY INC	1/8+	821	22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626019	5-8A-16	DD	FRANCIS O. HALL A/K/A ORNETTA PARRIOTT, WIDOW	NOBLE ENERGY INC	1/8+	825	258	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626009	5-8A-16	DD	H. JAY ULBRICH, A SINGLE MAN	NOBLE ENERGY INC	1/8+	819	309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626014	5-8A-16	DD	HARRY LEROY PARRIOTT AND NANCY S. PARRIOTT, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	820	508	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626005	5-8A-16	DD	JANICE R. CROOK, A/K/A JANICE WINGROVE CROOK AND DONALD P. CROOK, A WIFE AND	NOBLE ENERGY INC	1/8+	808	305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q077358001	5-8A-16	DD	JOH DAVID FROMHART, SINGLE	NOBLE ENERGY INC	1/8+	805	580	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.

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Q078626012	5-9A-16	DD	JUSTIN SMITH, A/K/A JUSTINE SMITH, A WIDOW	NOBLE ENERGY INC	1/8+	819 307	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q07358002	5-9A-16	DD	JUNE MORRIS, A WIDOW	NOBLE ENERGY INC	1/8+	829 26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q078626002	5-9A-16	DD	KENNETH R. MORRIS AND DAWN E. MORRIS, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	808 303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q078626018	5-9A-16	DD	KIMBERLY D. LAKE, A SINGLE WOMAN	NOBLE ENERGY INC	1/8+	825 272	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q078626010	5-9A-16	DD	MARILYN ULBRICH CHALMERS AND ROD N. CHALMERS, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	820 506	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q078626036	5-9A-16	DD	MARTHA FRANCES ULCAK, A SINGLE WOMAN	NOBLE ENERGY INC	1/8+	832 588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q078626021	5-9A-16	DD	MARY L. PARRIOTT, A WIDOW	NOBLE ENERGY INC	1/8+	827 164	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q078626004	5-9A-16	DD	NANCY L. SNYDER, A/K/A NANCY WINGROVE SNYDER, A WIDOW	NOBLE ENERGY INC	1/8+	808 309	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q078626028	5-9A-16	DD	PATRICIA PARRIOTT, A WIDOW	NOBLE ENERGY INC	1/8+	828 270	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286

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0078626013	5-8A-16	DD	ROBERT LEE SMITH AND BETSY K. SMITH, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	819	303	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
N/A	5-8A-16	DD	SHRINERS HOSPITALS FOR CHILDREN	UNLEASED	1/8+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	*FORCE POOL*
0078626017	5-8A-16	DD	SOUTHEASTERN GUIDE DOGS INC., TITUS HERMAN CEO	NOBLE ENERGY INC	1/8+	820	516	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
0078626022	5-8A-16	DD	TIMOTHY SCOTT LEMASTERS AND AMY C. LEMASTERS, HUSBAND AND WIFE	NOBLE ENERGY INC	1/8+	827	162	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
0078626020	5-8A-16	DD	TRUDY B. SAMPSON AND DANNY SAMPSON, WIFE AND HUSBAND	NOBLE ENERGY INC	1/8+	825	260	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
0076469000	5-8A-15	EE	JUNE MORRIS	NOBLE ENERGY INC	1/8+	802	275	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
0078626009	5-8A-15	EE	H LAY ULRICH	NOBLE ENERGY INC	1/8+	819	309	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
0078626010	5-8A-15	EE	MARILYN ULBRICH CHALMERS AND ROD N CHAMBERS	NOBLE ENERGY INC	1/8+	820	506	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
0078626011	5-8A-15	EE	BYVE ULBRICH JENSCHKE AND JIM JENSCHKE	NOBLE ENERGY INC	1/8+	819	305	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
0078626012	5-8A-15	EE	JUSTIN SMITH	NOBLE ENERGY INC	1/8+	819	307	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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Q078626013	5-8A-15	EE	ROBERT LEE SMITH AND Betsy K Smith	NOBLE ENERGY INC	1/8+	819	303	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286
Q078626014	5-8A-15	EE	HARRY LEFROY PARRIOTT AND NANCY S PARRIOTT	NOBLE ENERGY INC	1/8+	820	508	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286
Q078626015	5-8A-15	EE	DEBORAH D WERCER AND CLAVIN P WERCER	NOBLE ENERGY INC	1/8+	821	22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286
Q078626016	5-8A-15	EE	BRIAN EDWIN LEMASTERS ET UX	NOBLE ENERGY INC	1/8+	821	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286
Q078626018	5-8A-15	EE	KIMBERLY D LAKE	NOBLE ENERGY INC	1/8+	825	272	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286
Q078626020	5-8A-15	EE	TRUDY B SAMPSON ET VIR	NOBLE ENERGY INC	1/8+	825	260	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286
Q078626021	5-8A-15	EE	MARY L PARRIOTT	NOBLE ENERGY INC	1/8+	827	164	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286
Q078626022	5-8A-15	EE	TIMOTHY SCOTT LEMASTERS AND AMY C LEMASTERS	NOBLE ENERGY INC	1/8+	827	162	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286
Q078626023	5-8A-15	EE	BRYCE E ULBRICH AND EDNA M ULBRICH SHAINERS HOSPITALS FOR CHILDREN	NOBLE ENERGY INC	1/8+	825	298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 9889/286

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Q078626025	5-8A-15	EE	COURTNEY D HALL	NOBLE ENERGY INC	1/8+	829	147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626026	5-8A-15	EE	BLASE JOSEPH ULCAK JR	NOBLE ENERGY INC	1/8+	829	127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626027	5-8A-15	EE	BETTY JANE PARRIOTT	NOBLE ENERGY INC	1/8+	828	265	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626028	5-8A-15	EE	PATRICIA PARRIOTT	NOBLE ENERGY INC	1/8+	828	270	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626029	5-8A-15	EE	SOUTHEASTERN GUIDE DOGS INC	NOBLE ENERGY INC	1/8+	828	305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626030	5-8A-15	EE	FRANCES O HALL AKA ORNETTA PARRIOTT	NOBLE ENERGY INC	1/8+	839	133	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626032	5-8A-15	EE	KENNETH MORRIS AND DAWN E MORRIS	NOBLE ENERGY INC	1/8+	829	43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626033	5-8A-15	EE	LUCLILE E WINGROVE	NOBLE ENERGY INC	1/8+	829	45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q078626034	5-8A-15	EE	JANICE R CROOK AKA JANICE WINGROVE CROOK AND DONALD P CROOK	NOBLE ENERGY INC	1/8+	831	60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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Q078626035	5-8A-15	EE	NANCY L SWIDER AKA NANCY WINGROVE SWIDER	NOBLE ENERGY INC	1/8+	831 56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626036	5-8A-15	EE	MARTHA FRANCES ULCAK	NOBLE ENERGY INC	1/8+	832 588	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q078626037	5-8A-15	EE	DEBRA ANN AND EARL V BUTCHER	NOBLE ENERGY INC	1/8+	839 215	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q083831000	5-7-29	FF	JAMES K PERSINGER AND TONDA J PERSINGER	TRIENERGY HOLDINGS LLC	1/8+	836 460										TRIENERGY Holdings Inc & TriEnergy Inc to Chevron USA Inc.
Q08383100	5-7-27	GG	JAMES K PERSINGER AND TONDA J PERSINGER	TRIENERGY HOLDINGS LLC	1/8+	836 460										TRIENERGY Holdings Inc & TriEnergy Inc to Chevron USA Inc.
Q0832348000	5-7-27.1	HH	MARK L RITTER AND MICHELLE A RITTER	NOBLE ENERGY INC	1/8+	821 26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q096159000	5-7-23	II	MARTHA F POWELL	NOBLE ENERGY INC	1/8+	881 21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q097423000	5-7-23.2	JJ	ROBERT L HENRY JR AND GEORGEANNA HENRY ET AL	NOBLE ENERGY INC	1/8+	890 613	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q091963000	5-7-23.1	KK	PATRICIA Y DARRAH	NOBLE ENERGY INC	1/8+	860 552	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
10*26015	5-7-22	LL	BUSTAMANTE JESUS ET UX	TRIENERGY HOLDINGS LLC	1/8+	734 263	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	TriEnergy Holdings Inc & TriEnergy Inc to Chevron USA Inc.
10*26015	5-7-28.1	MM	BUSTAMANTE JESUS ET UX	TRIENERGY HOLDINGS LLC	1/8+	734 263	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	TriEnergy Holdings Inc & TriEnergy Inc to Chevron USA Inc.

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FORCE POOL

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
Q097973000	5-7-28	NN	THELMA M. ROUPE	NOBLE ENERGY INC	1/8+	890 313	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097217000	5-7-18.1	RR	MILLER, ADAM & MARY	THE M.A HANNA COMPANY	1/8+	311 333	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097217000	5-7-17	QQ	DEBORA L BENNETT	CONSOLIDATION COAL COMPANY	1/8+	546 58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097217000	5-7-16	SS	MILLER, ADAM & MARY	THE M.A HANNA COMPANY	1/8+	311 333	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286
Q097218000	5-7-14.2	TT	LACY MIDCAP ET AL	THE M.A HANNA COMPANY	1/8+	311 324	The M.A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Pittsburgh Consolidation Coal Company changes name to Pittsburgh Consolidation Coal Company: CB 6/203	Consolidation Coal Company, a PA corp to Consolidation Coal Corp.: 387/300	Consolidation Coal Company, CNX Land Resources Inc, Etc to CNX Gas Company LLC: 646/493	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: 34/392	Noble Energy Inc to HG Energy II Appalachia, LLC. 988/286	
Q097218000	5-7-14.3	UU	LACY MIDCAP ET AL	THE M.A HANNA COMPANY	1/8+	311 324	The M.A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Pittsburgh Consolidation Coal Company changes name to Pittsburgh Consolidation Coal Company: CB 6/203	Consolidation Coal Company, a PA corp to Consolidation Coal Corp.: 387/300	Consolidation Coal Company, CNX Land Resources Inc, Etc to CNX Gas Company LLC: 646/493	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286	
NO LEASE SHOWN I	5-7-14	VV	LACY MIDCAP ET AL	THE M.A HANNA COMPANY	1/8+	311 324	The M.A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Pittsburgh Consolidation Coal Company changes name to Pittsburgh Consolidation Coal Company: CB 6/203	Consolidation Coal Company, a PA corp to Consolidation Coal Corp.: 387/300	Consolidation Coal Company, CNX Land Resources Inc, Etc to CNX Gas Company LLC: 646/493	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: 34/392	Noble Energy Inc to HG Energy II Appalachia, LLC. 988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286	
Q097217000	5-7-18	WW	MILLER, ADAM & MARY	CONSOLIDATION COAL COMPANY	1/8+	311 333	The M.A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Pittsburgh Consolidation Coal Company changes name to Pittsburgh Consolidation Coal Company: CB 6/203	Consolidation Coal Company, a PA corp to Consolidation Coal Corp.: 387/300	Consolidation Coal Company, CNX Land Resources Inc, Etc to CNX Gas Company LLC: 646/493	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Noble Energy Inc to HG Energy II Appalachia LLC: 34/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC. 988/286	

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C097216000	5-7-21	XX	WOLFE, BLAINE & VIVIAN ET AL	THE M A HANNA COMPANY	1/8+	312	100	The M.A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Pittsburgh Consolidation Coal Company: CB 6/203	Consolidation Coal Company, a Delaware Corp: 387/300	Consolidation Coal Company, CNX Land Resources Inc, Etc to CNX Gas Company LLC: 646/493	851/220 & 909/94	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Appalachia LLC: 39/1	34/392	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
C097220000	5-7-21	XX	WILLIS HINE ET UX	THE M A HANNA COMPANY	1/8+	311	344	The M.A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Pittsburgh Consolidation Coal Company changes name to Consolidation Coal Company: CB 6/203	Consolidation Coal Company, a PA corp to Consolidation Coal Corp: 387/300	Consolidation Coal Company, CNX Land Resources Inc, Etc to CNX Gas Company LLC: 646/493	851/220 & 909/94	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Appalachia LLC: 39/1	34/392	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
C097423000	5-7-45	YY	ROBERT L HENRY JR AND GEORGEANNA HENRY ET AL	NOBLE ENERGY INC	1/8+	890	613	N/A	N/A	N/A	N/A	36/409	Noble Energy Inc to CNX Gas Company LLC: 37/169	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	34/392	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Pending	5-7-3-2	ZZ	WHEELING POWER COMPANY & KENTUCKY POWER COMPANY	NOBLE ENERGY INC	1/8+	1040	103	N/A	N/A	N/A	N/A	33/574	Noble Energy Inc to CNX Gas Company LLC: 37/169	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	34/392	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
624083	5-7-4	AAA	LLOYD Q & MARY WOLFE GATTS	CONSOLIDATION COAL COMPANY	1/8+	290	94	The M. A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Name Change: Pittsburgh Consolidation Coal Company to Consolidation Coal Company: 6/203	Pittsburgh Consolidation Coal Company to Consolidation Coal Company: 387/363	646/493	Noble Energy Inc to CNX Gas Company LLC: 752/66	Noble Energy Inc to HG Energy II Appalachia LLC: 909/94	391/43	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.	
C076636002	5-7-5.1	BBB	BRUCE SCOTT SCHMITT & JERRI MARIE BLANEY	NOBLE ENERGY INC	1/8+	813	244	N/A	N/A	N/A	N/A	34/177	Noble Energy Inc to CNX Gas Company LLC: 37/169	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	34/392	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
C076636003	5-7-5.1	BBB	ALAN GREGORY SCHMITT & LINDA LEE SCHMITT	NOBLE ENERGY INC	1/8+	813	538	N/A	N/A	N/A	N/A	34/177	Noble Energy Inc to CNX Gas Company LLC: 37/169	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	34/392	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
	5-7-5.1	BBB	GEORGE A. KNUUTH	NOBLE ENERGY INC	1/8+	819	298	N/A	N/A	N/A	N/A	34/177	Noble Energy Inc to CNX Gas Company LLC: 37/169	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	34/392	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
C076636004	5-7-5.1	BBB	CYNTHIA JEAN WARD & DALE P. WARD	NOBLE ENERGY INC	1/8+	816	261	N/A	N/A	N/A	N/A	34/189	Noble Energy Inc to CNX Gas Company LLC: 37/169	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	34/392	988/286	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.

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Q076636005	5-7-5.1	BBB	SAMUEL O. COHEN JR.	NOBLE ENERGY INC	1/8+	816	259	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q076636006	5-7-5.1	BBB	MARK ALAN DELBRUGE & PATRICIA A. DELBRUGE	NOBLE ENERGY INC	1/8+	820	512	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q076636007	5-7-5.1	BBB	WALTER L. DELBRUGE JR & NORA L. DELBRUGE	NOBLE ENERGY INC	1/8+	820	510	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q076636008	5-7-5.1	BBB	WILLIAM D. MARTIN & ANDREA R. MARTIN	NOBLE ENERGY INC	1/8+	819	298	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q076636009	5-7-5.1	BBB	KIMBERLY ANN DELBRUGE DEGREASE & VINCENT J. DEGREASE	NOBLE ENERGY INC	1/8+	825	349	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q076636010	5-7-5.1	BBB	SUZANNE Q. PAVLIC AKA SUZANNE DELBRUGE PAVLIC	NOBLE ENERGY INC	1/8+	825	262	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q076636011	5-7-5.1	BBB	MARGARET LYNN DELBRUGE WATSON & JAMES W. WATSON	NOBLE ENERGY INC	1/8+	825	264	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q076636012	5-7-5.1	BBB	JANE LOU WILLIAMS AKA JANE LOU DELBRUGE WILLIAMS & LAURENCE P. WILLIAMS	NOBLE ENERGY INC	1/8+	825	289	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q076636013	5-7-5.1	BBB	BEATRICE L. SCHMITT	NOBLE ENERGY INC	1/8+	828	292	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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C090257000	5-7-5	CCC	KNUTH, GEORGE A & KELLY A	MCELROY COAL COMPANY	1/8+	671 385	N/A	N/A	N/A	McElroy Coal Company, Consolidation Coal Company, etc to Consol Mining Gas Company LLC: 811/L	Consol Mining Gas Company LLC: 839/286	CNX Gas Company LLC to Noble Energy Inc: 909/94	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Noble Energy Inc to HG Energy II Appalachia LLC: MB 94/392	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C074011007	5-6-3-1	DDD	SUSAN WITTEN NEAL MERS ET AL	NOBLE ENERGY INC	1/8+	815 375	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C074011008	5-6-3-1	DDD	JANE WITTEN VOTH	NOBLE ENERGY INC	1/8+	853 306	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C074011003	5-6-3-1	DDD	JOSEPH MOORE NEAL	NOBLE ENERGY INC	1/8+	859 512	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C074011006	5-6-3-1	DDD	FRANCES GALE NEAL	NOBLE ENERGY INC	1/8+	851 218	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C074011005	5-6-3-1	DDD	ANN ALEXANDER	NOBLE ENERGY INC	1/8+	853 310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
C074011013	5-6-3-1	DDD	MARY WITTEN NEAL WISEMAN	NOBLE ENERGY INC	1/8+	851 216	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
624074	5-6-3-1	DDD	GATTS, ALICE	THE M A HANNA COMPANY	1/8+	282 394	N/A	N/A	Name Change: Pittsburgh Consolidation Coal Company to CNX Gas Company LLC: 315/417	Name Change: Pittsburgh Consolidation Coal Company to CNX Gas Company LLC: 6/203	Pittsburgh Consolidation Coal Company, CNX Land Resources Inc, Et Al to CNX Gas Company LLC: 646/493	CNV Gas Company LLC to Noble Energy Inc: 752/66	CNX Gas Company LLC to Noble Energy Inc: 909/94	Noble Energy Inc to HG Energy II Appalachia, LLC: 931/43	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
624080	5-6-3-1	DDD	GATTS, ELIZABETH R J & HARLEY	THE M A HANNA COMPANY	1/8+	290 97	N/A	N/A	Name Change: Pittsburgh Consolidation Coal Company to CNX Gas Company LLC: 315/417	Name Change: Pittsburgh Consolidation Coal Company to CNX Gas Company LLC: 6/203	Pittsburgh Consolidation Coal Company, CNX Land Resources Inc, Et Al to CNX Gas Company LLC: 646/493	CNX Gas Company LLC to Noble Energy Inc: 752/66	CNX Gas Company LLC to Noble Energy Inc: 909/94	Noble Energy Inc to HG Energy II Appalachia, LLC: 931/43	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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624074	5-7-2	EEE	GATTS, ALICE	CONSOLIDATION COAL COMPANY	1/8+	282	394	N/A	N/A	N/A	N/A	Consolidation Coal Company et al to CNX Gas Company LLC.	CNX Gas Company LLC to Noble Energy Inc.	CNX Gas Company LLC to Noble Energy Inc.	Noble Energy Inc to HG Energy II Appalachia, LLC.	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.			
624074	5-6-3	FFF	GATTS, ALICE	THE M A HANNA COMPANY	1/8+	282	394	N/A	The M. A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Name Change: Pittsburgh Consolidation Coal Company to Pittsburgh Consolidation Coal Company: 6/203	Pittsburgh Consolidation Coal Company to Pittsburgh Consolidation Coal Company: 387/363	Consolidation Coal Company, CNX Land Resources Inc, Et Al to CNX Gas Company LLC.	646/493	CNX Gas Company LLC to Noble Energy Inc.	909/94	Noble Energy Inc to HG Energy II Appalachia, LLC.	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.		
624080	5-6-3	FFF	GATTS, ELIZABETH R J & HARLEY	THE M A HANNA COMPANY	1/8+	290	97	N/A	The M. A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Name Change: Pittsburgh Consolidation Coal Company to Pittsburgh Consolidation Coal Company: 6/203	Pittsburgh Consolidation Coal Company to Pittsburgh Consolidation Coal Company: 387/363	Consolidation Coal Company, CNX Land Resources Inc, Et Al to CNX Gas Company LLC.	646/493	CNX Gas Company LLC to Noble Energy Inc.	909/94	Noble Energy Inc to HG Energy II Appalachia, LLC.	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.		
624083	5-6-3	FFF	GATTS, LLOYD Q & MARY WOLFE	THE M A HANNA COMPANY	1/8+	290	94	N/A	The M. A. Hanna Company to Pittsburgh Consolidation Coal Company: 315/417	Name Change: Pittsburgh Consolidation Coal Company to Pittsburgh Consolidation Coal Company: 6/203	Pittsburgh Consolidation Coal Company to Pittsburgh Consolidation Coal Company: 387/363	Consolidation Coal Company, CNX Land Resources Inc, Et Al to CNX Gas Company LLC.	646/493	CNX Gas Company LLC to Noble Energy Inc.	909/94	Noble Energy Inc to HG Energy II Appalachia, LLC.	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.		
624150	5-6-3	FFF	RINE, G W & BESSIE J	PITTSBURGH CONSOLIDATION COAL COMPANY	1/8+	313	200	N/A	N/A	Name Change: Pittsburgh Consolidation Coal Company to Pittsburgh Consolidation Coal Company: 6/203	Pittsburgh Consolidation Coal Company to Pittsburgh Consolidation Coal Company: 387/363	Consolidation Coal Company, CNX Land Resources Inc, Et Al to CNX Gas Company LLC.	646/493	CNX Gas Company LLC to Noble Energy Inc.	752/66	CNX Gas Company LLC to Noble Energy Inc.	909/94	Noble Energy Inc to HG Energy II Appalachia, LLC.	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q074011007	5-6-3	FFF	SUSAN WITTEN NEAL WERS ET AL	NOBLE ENERGY INC	1/8+	815	375	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.		
Q074011008	5-6-3	FFF	JANE WITTEN VOTH	NOBLE ENERGY INC	1/8+	853	305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.		
Q074011003	5-6-3	FFF	JOSEPH MOORE NEAL	NOBLE ENERGY INC	1/8+	859	512	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.		
Q074011006	5-6-3	FFF	FRANCES GALE NEAL	NOBLE ENERGY INC	1/8+	851	218	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.		

Lease ID	Parcel	Tap	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
Q074011005	5-6-3	FFF	ANN ALEXANDER	NOBLE ENERGY INC	1/8+	853	310	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q074011013	5-6-3	FFF	MARY WITTEN NEAL WISEMAN	NOBLE ENERGY INC	1/8+	851	216	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q074011002	5-6-3	FFF	DOROTHY ANN NEAL	NOBLE ENERGY INC	1/8+	851	396	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q074011004	5-6-3	FFF	MARGERY J. WITTEN	NOBLE ENERGY INC	1/8+	851	398	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
624080	5-6-5	GGG	GATT'S, ELIZABETH R J & HARLEY	CONSOLIDATION COAL COMPANY	1/8+	290	97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
624073	5-6-6	HHH	STEIGNER, FREDERICK J; STEIGNER, ANNA KATHERYNE	CONSOLIDATION COAL COMPANY	1/8+	282	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q090311000	5-6-6	HHH	ASHLAND OIL & REFINING CO.	CONSOLIDATION COAL COMPANY	1/8+	277	490	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.
Q090311000	5-6-1	III	ASHLAND OIL & REFINING CO.	CONSOLIDATION COAL COMPANY	1/8+	277	490	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC.

51-02219

STATE OF WEST VIRGINIA §
 §
COUNTY OF MARSHALL §

ASSIGNMENT AND CONVEYANCE

THIS ASSIGNMENT AND CONVEYANCE (the “Assignment”) is made and entered into this 29th day of March, 2018 (the “Effective Date”), by and between HG ENERGY II APPALACHIA, LLC, (hereinafter “Assignor”) and TH EXPLORATION, LLC (hereinafter “Assignee”) pursuant to the terms of that certain Exchange Agreement between the Assignor and the Assignee dated November 1st, 2017 (the “Exchange Agreement”). Capitalized terms used but not defined herein and defined in the Exchange Agreement shall have the meanings given to such terms in the Exchange 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”); and

WHEREAS, Assignor desires to assign, set over, and transfer to Assignee all of Assignor’s right, title, and interest in and to the Leases as described below.

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

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

TO HAVE AND TO HOLD such right, title and interest in and to the Leases unto Assignee or its designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

2. Special Warranty. Assignor represents and warrants that Assignor has not conveyed or otherwise encumbered (other than Permitted Encumbrances) its interest in the Leases since the time that Assignor obtained its interests in the Leases. Assignor does

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WV Department of
Environmental Protection

SI-02219

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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MEMORANDUM OF OPERATING AGREEMENT AND FINANCING STATEMENT

This Memorandum of Operating Agreement and Financing Statement (hereinafter referred to as "Memorandum") is executed to be effective concurrently with that certain Operating Agreement (the "Operating Agreement") by and between TH Exploration, LLC, as Operator, and HG Energy II Appalachia, LLC and TH Exploration II, LLC, as Non-Operators, covering, among other things, the development and production of crude oil, natural gas and associated substances from the leases (hereinafter called the "Contract Area") described on Exhibit "A-1" and Exhibit "A-2" attached hereto and owned by Operator and Non-Operator in the respective percentages of shares indicated on Exhibit "A" to the Operating Agreement.

The Operating Agreement contains an Accounting Procedure, along with provisions giving the parties hereto mutual liens and security interests where one or more parties hereto are or may become Debtors to one or more other parties hereto. This Memorandum incorporates by reference all of the terms and conditions of the Operating Agreement, including but not limited to the lien and security interest provisions.

The purpose of this Memorandum is to place third parties on notice of the Operating Agreement, and to secure and perfect the mutual liens and security interests of the parties hereto.

The Operating Agreement specifically provides and the parties do hereby confirm and agree that:

1. The Operator shall conduct and direct and have full control of all operations on the Contract Area as permitted and required by, and within the limits of, the Operating Agreement.
2. The liability of the parties under the Operating Agreement shall be several, not joint or collective. Each party shall be responsible only for its obligations and shall be liable only for its proportionate share of costs.
3. Each Non-Operator grants to Operator a lien upon its oil and gas rights, oil and gas leases and mineral interests in the Contract Area, and a security interest in its share of oil and/or gas when extracted and its interest in all fixtures, inventory, personal property and equipment located on or used on the Contract Area and in all its contract rights and receivables related thereto and arising therefrom to secure payment of its present and future share of costs and expenses, together with interest thereon at the rate provided in the Accounting Procedure referred to above. To the extent that Operator has a security interest under the Uniform Commercial Code ("Code") of the state or states in which the Contract Area is located, Operator without prejudice and in addition to all other legal, equitable and contractual remedies which are expressly reserved, shall be entitled to exercise the rights and remedies of a secured party under the Code. The bringing of a suit and the obtaining of judgment by Operator for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the rights or security interests for the payment thereof.
4. The Operator grants to Non-Operator a lien and security interest equivalent to that granted to Operator as described in Paragraph 3 above, to secure payment by Operator of its own share of costs and expenses when due.

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STATE OF WEST VIRGINIA §
 COUNTY OF MARSHALL §

ASSIGNMENT AND CONVEYANCE

THIS ASSIGNMENT AND CONVEYANCE (the "Assignment") is made and entered into this 7th day of February, 2019 (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 February, 2019 (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. Any portion of the Leases set forth in the column entitled "Less and Except" on Exhibit A.

TO HAVE AND TO HOLD such right, title and interest in and to the Leases unto Assignee or its designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

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May 9, 2019

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

RE: Michter N-8HU

Subject: Marshall County Route 74 Road Crossing Letter

Dear Laura:

Tug Hill Operating, LLC (THO) hereby submits this letter as confirmation that THO has obtained the right to drill, extract and produce the minerals under Marshall County Route 74 in the area reflected on the Michter N-8HU well plat. THO has conducted a full title search in the relevant Court House to confirm its ownership under said County Routes and is not currently aware of any recorded document that would suggest an ownership other than THO.

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

Sincerely,

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

Amy Miller
Permit Specialist – Appalachia Region
Cell 304-376-0111
Email: amiller@tug-hilop.com

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380 SOUTHPOINTE BLVD • SUITE 200 • CANONSBURG, PA 15317 • T 724.485-2000 • F
724.338.2030

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

Date of Notice Certification: 05/09/2019

API No. 47- 051 -

Operator's Well No. Michter N-8HU

Well Pad Name: Michter

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>517,328.60</u>
County: <u>Marshall</u>		Northing: <u>4,405,909.03</u>
District: <u>Franklin</u>	Public Road Access: <u>Rines Ridge Road (County Route 76)</u>	
Quadrangle: <u>Powhatan Point 7.5'</u>	Generally used farm name: <u>Larry W. Dunlap and Charles Leroy Dunlap</u>	
Watershed: <u>Fish Creek (HUC 10)</u>		

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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Required Attachments:

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

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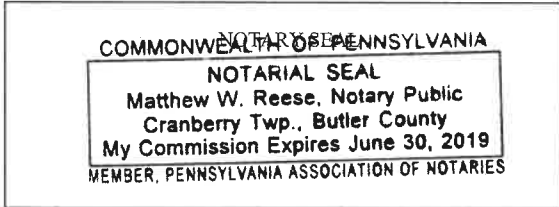
WV Department of
Environmental Protection

51-02219

Certification of Notice is hereby given:

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

Well Operator:	<u>Tug Hill Operating, LLC</u>	Address:	<u>380 Southpointe Boulevard, Plaza II, Suite 200</u>
By:	<u>Amy L. Miller <i>Amy Miller</i></u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Permitting Specialist</u>	Facsimile:	<u>412-338-2030</u>
Telephone:	<u>724-749-8388</u>	Email:	<u>amiller@tug-hilop.com</u>



Subscribed and sworn before me this 9 day of May, 2019.
Matthew W. Reese Notary Public
 My Commission Expires 6-30-2019

Oil and Gas Privacy Notice:

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

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WW-6A
(9-13)

API NO. 47- 051 -
OPERATOR WELL NO. Michter N-8HU
Well Pad Name: Michter

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

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

Date of Notice: 3/23/2019 Date Permit Application Filed: 3/29/2019

Notice of:

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

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

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

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

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

SURFACE OWNER(s)

Name: Larry W. and Barbara E. Dunlap (Pad and Access Road)
Address: 1549 Irish Ridge Road
Cameron, WV 26033

Name: Karen Sue Reed and Clyde Reed (Well Pad)
Address: 100 Orchard Lane
Moundsville, WV 26041

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

Name: Charles Leroy Dunlap (Pad and Access Road)
Address: 21 Gypsy Drive
Moundsville, WV 26041

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: CNX Resources, LLC - Attn: Casey Saunders
Address: 1000 CONSOL Energy Drive
Canonsburg, PA 15318

COAL OPERATOR

Name: _____
Address: _____

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

Name: _____
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

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*Please attach additional forms if necessary

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/RECEIVED/Office of Oil and Gas/and-gas/pages/default.aspx](http://www.dep.wv.gov/RECEIVED/Office%20of%20Oil%20and%20Gas/and-gas/pages/default.aspx).

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Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

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Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

RECEIVED
Office of Oil and Gas
MAY 17 2019
WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47-051 - 02219
OPERATOR WELL NO. Michter N-8HU
Well Pad Name: Michter

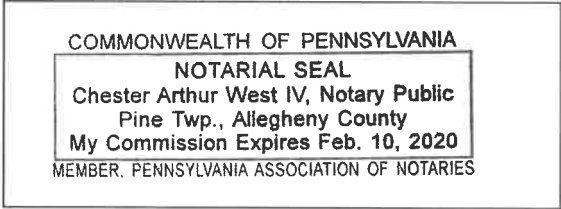
Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 26 day of March, 2019.

[Signature] Notary Public

My Commission Expires 2-10-2020

RECEIVED
Office of Oil and Gas
MAY 17 2019
WV Department of
Environmental Protection

SI-02219

WW-6A

Supplement Pg. 1A

Tug Hill Operating, LLC
380 Southpointe BLVD, Suite 200
Canonsburg, PA 15317

WATER WELL REPORT

Well: MICHTER N-8HU
District: Franklin
County: Marshall
State: WV

There appears to be Five (5) possible water sources within 2,000 feet of the above referenced well location.

Topo Spot # 1 TM 11 Par. 1.6 Debra Morris 304-810-0813 1082 Rines Ridge Rd. Proctor, WV 26055	Topo Spot # 2 TM 11 Par. 1.6 Debra Morris 304-810-0813 1082 Rines Ridge Rd. Proctor, WV 26055	Topo Spot # 3 TM 11 Par. 1.7 William S. & Mary K. Adams 330-718-0404 P.O. Box 303 Canfield, OH 44406
Topo Spot # 4 TM 11 Par. 1.3 Jay A. Conner, et ux 304-845-0641 1117 Rine Ridge Rd. Proctor, WV 26055	Topo Spot # 5 TM 11 Par. 21 Karen Reed, et al 304-845-7536 100 Orchard Ln. Moundsville, WV 26041	

RECEIVED
Office of Oil and Gas
MAY 17 2019
WV Department of
Environmental Protection

Rose, Susan W

From: Slagel, Luke <Luke.Slagel@chevron.com>
Sent: Wednesday, July 3, 2019 11:31 AM
To: Rose, Susan W
Cc: Stockman, David; Coleman, Kevin; Laird, Susan; Martz, Kenneth
Subject: RE: Chevron Objection - Tug Hill Michter N-8HU and N-9HU

Hi Susan,

Chevron is hereby removing our objection to the Tug Hill Michter N-8HU and N-9HU. Please let me know if you need any other information.

Thank you,

Luke Slagel
Land Representative
Luke.Slagel@chevron.com

Appalachian Mountain Business Unit
Chevron North America Exploration and Production Company
a division of Chevron U.S.A. Inc.
700 Cherrington Parkway
Coraopolis, PA 15108
Office (412)-865-1426 Cell (412) 667-2722

From: Slagel, Luke
Sent: Monday, June 3, 2019 10:36 AM
To: Rose, Susan W <Susan.W.Rose@wv.gov>
Cc: Stockman, David <dstockman@chevron.com>; Coleman, Kevin <kcoleman@chevron.com>; Laird, Susan <SLaird@chevron.com>; Martz, Kenneth <kmartz@chevron.com>
Subject: Chevron Objection - Tug Hill Michter N-8HU and N-9HU

Good morning Susan.

Chevron is hereby objecting to Tug Hill's application for the Michter N-8HU and Michter N-9HU. Chevron currently owns multiple leasehold interests within the planned operations. We are working to come to an agreement with Tug Hill in regards to these interests, but as of today, we have not executed a deal. I foresee us coming to an agreement with Tug Hill in the coming weeks and will notify you when that happens. However, until subject deal is closed, we are objecting to these wells.

Please let me know if you have any questions or need any additional information.

Regards,

Luke Slagel
Land Representative
Luke.Slagel@chevron.com

From: Slagel, Luke <Luke.Slagel@chevron.com>
Sent: Monday, June 3, 2019 10:36 AM
To: Rose, Susan W
Cc: Stockman, David; Coleman, Kevin; Laird, Susan; Martz, Kenneth
Subject: Chevron Objection - Tug Hill Michter N-8HU and N-9HU
Attachments: Tug Hill_Michter N-9HU_Notice of Deviation.pdf; Tug Hill_Michter N-8HU_Notice of Deviation.pdf

Good morning Susan.

Chevron is hereby objecting to Tug Hill's application for the Michter N-8HU and Michter N-9HU. Chevron currently owns multiple leasehold interests within the planned operations. We are working to come to an agreement with Tug Hill in regards to these interests, but as of today, we have not executed a deal. I foresee us coming to an agreement with Tug Hill in the coming weeks and will notify you when that happens. However, until subject deal is closed, we are objecting to these wells.

Please let me know if you have any questions or need any additional information.

Regards,

Luke Slagel
Land Representative
Luke.Slagel@chevron.com

Appalachian Mountain Business Unit
Chevron North America Exploration and Production Company
a division of Chevron U.S.A. Inc.
700 Cherrington Parkway
Coraopolis, PA 15108
Office (412)-865-1426



west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

May 22, 2019

Barbara Louellen Rose
Mary Lou Rose
2027 Fish Creek Rd
Proctor WV 26055

91 7199 9991 7039 1715 2120

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Michter N-8HU

Dear Ma'am:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commission's granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

A copy of the location plat is enclosed for your review. If no objection(s) are received within ten 10 days from the date of delivery, the application will be processed in the normal manner.

If you have any questions please call me at (304) 926-0499, extension 1274.

Sincerely,

A handwritten signature in cursive script that reads "Susan Rose".

Susan Rose
Administrator

encl:

June 26, 2019

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9171 9999 9170 3917 1521 20.

Item Details

Status: Delivered, Left with Individual
Status Date / Time: May 29, 2019, 12:35 pm
Location: PROCTOR, WV 26055
Postal Product: First-Class Mail®
Extra Services: Certified Mail™
Return Receipt Electronic

Shipment Details

Weight: 5lb, 14.3oz

Recipient Signature

Signature of Recipient:	Signature X <i>Mary L Rose</i>
	Printed Name <i>Mary L Rose</i>
Address of Recipient:	Delivery Address <i>2027 PSH Oak Rd Proctor WV</i>

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

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Washington, D.C. 20260-0004

SI-02219



west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

May 22, 2019

Robert M. White
Diane White
1951 Fish Creek Rd
Proctor WV 26055

91 7199 9991 7039 1715 2113

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Michter N-8HU

Dear Sir and Ma'am:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commission's granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

A copy of the location plat is enclosed for your review. If no objection(s) are received within ten 10 days from the date of delivery, the application will be processed in the normal manner.

If you have any questions please call me at (304) 926-0499, extension 1274.

Sincerely,

A handwritten signature in cursive script that reads "Susan Rose".

Susan Rose
Administrator

encl:

June 26, 2019

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9171 9999 9170 3917 1521 13.

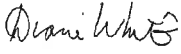
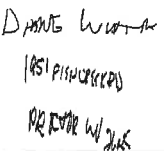
Item Details

Status: Delivered
Status Date / Time: May 28, 2019, 8:29 am
Location: PROCTOR, WV 26055
Postal Product: First-Class Mail®
Extra Services: Certified Mail™
Return Receipt Electronic

Shipment Details

Weight: 5lb, 14.1oz

Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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SI-02219



west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

May 22, 2019

Shriners Hospitals For Children
c/o The Northern Trust Company
2900 Rocky Point Drive
Tampa FL 33607

91 7199 9991 7039 1715 2106

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Michter N-8HU

Dear Sir:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commission's granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

A copy of the location plat is enclosed for your review. If no objection(s) are received within ten 10 days from the date of delivery, the application will be processed in the normal manner.

If you have any questions please call me at (304) 926-0499, extension 1274.

Sincerely,

A handwritten signature in cursive script that reads "Susan Rose".

Susan Rose
Administrator

encl:

June 26, 2019

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9171 9999 9170 3917 1521 06.



Item Details

Status: Delivered, Front Desk/Reception/Mail Room
Status Date / Time: May 28, 2019, 2:44 pm
Location: TAMPA, FL 33607
Postal Product: First-Class Mail®
Extra Services: Certified Mail™
Return Receipt Electronic

Shipment Details

Weight: 5lb, 13.5oz

Recipient Signature

Signature of Recipient:	
Address of Recipient:	

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Sincerely,
United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004



west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

May 22, 2019

Chevron Appalachia LLC
700 Cherrington Pkwy 04108C
Coraopolis PA 15108

91 7199 9991 7039 1715 2090

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Michter N-8HU

Dear Sir:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commission's granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

A copy of the location plat is enclosed for your review. If no objection(s) are received within ten 10 days from the date of delivery, the application will be processed in the normal manner.

If you have any questions please call me at (304) 926-0499, extension 1274.

Sincerely,

A handwritten signature in black ink that reads "Susan Rose". The signature is written in a cursive, flowing style.

Susan Rose
Administrator

encl:



June 26, 2019

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9171 9999 9170 3917 1520 90.

Item Details

Status: Delivered, Left with Individual
Status Date / Time: May 28, 2019, 2:43 pm
Location: CORAOPOLIS, PA 15108
Postal Product: First-Class Mail®
Extra Services: Certified Mail™
Return Receipt Electronic

Shipment Details

Weight: 5lb, 14.3oz

Recipient Signature

Signature of Recipient:	<table border="1"><tr><td>Signature</td><td><i>Diane Maloney</i></td></tr><tr><td>X</td><td></td></tr><tr><td>Printed Name</td><td></td></tr></table>	Signature	<i>Diane Maloney</i>	X		Printed Name	
Signature	<i>Diane Maloney</i>						
X							
Printed Name							
Address of Recipient:	<table border="1"><tr><td>Delivery Address</td><td><i>700 ENGELWOOD BLVD</i></td></tr></table>	Delivery Address	<i>700 ENGELWOOD BLVD</i>				
Delivery Address	<i>700 ENGELWOOD BLVD</i>						

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

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Washington, D.C. 20260-0004



west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

May 22, 2019

HG Energy II Appalachia, LLC
5260 Dupont Rd
Parkersburg WV 26101

91 7199 9991 7039 1715 2083

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Michter N-8HU

Dear Sir:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commission's granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

A copy of the location plat is enclosed for your review. If no objection(s) are received within ten 10 days from the date of delivery, the application will be processed in the normal manner.

If you have any questions please call me at (304) 926-0499, extension 1274.

Sincerely,

A handwritten signature in cursive script that reads "Susan Rose". The signature is written in black ink and is positioned above the printed name and title.

Susan Rose
Administrator

encl:



June 26, 2019

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9171 9999 9170 3917 1520 83.

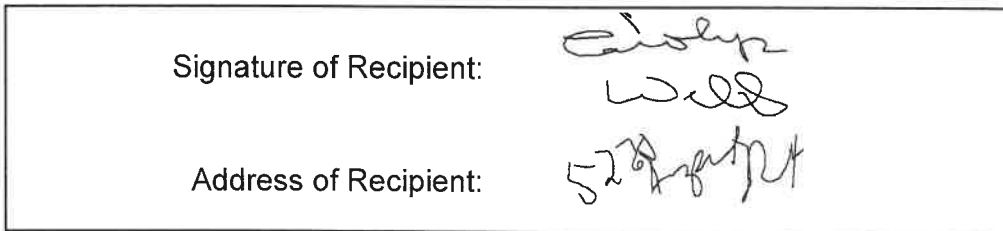
Item Details

Status: Delivered, Front Desk/Reception/Mail Room
Status Date / Time: May 28, 2019, 11:26 am
Location: PARKERSBURG, WV 26101
Postal Product: First-Class Mail®
Extra Services: Certified Mail™
Return Receipt Electronic

Shipment Details

Weight: 5lb, 14.6oz

Recipient Signature



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west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

May 22, 2019

TH Exploration, LLC
1320 S. University Dr Ste 500
Ft Worth TX 76107

91 7199 9991 7039 1715 2076

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Michter N-8HU

Dear Sir:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commission's granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

A copy of the location plat is enclosed for your review. If no objection(s) are received within ten 10 days from the date of delivery, the application will be processed in the normal manner.

If you have any questions please call me at (304) 926-0499, extension 1274.

Sincerely,

Susan Rose
Administrator

encl:



June 26, 2019

Dear Susan Rose:

The following is in response to your request for proof of delivery on your item with the tracking number:
9171 9999 9170 3917 1520 76.


Item Details

Status:	Delivered, Front Desk/Reception/Mail Room
Status Date / Time:	May 28, 2019, 2:43 pm
Location:	FORT WORTH, TX 76107
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic

Shipment Details

Weight:	5lb, 14.4oz
----------------	-------------

Recipient Signature

Signature of Recipient:	
Address of Recipient:	1320 S University 76107 #500

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United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004



west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

May 22, 2019

Courtney D. Hall
PO Box 673
Pine Lake GA 30072

91 7199 9991 7039 1715 2137

RE: Intentional Deviation of New Deep Well
Tug Hill Operating, LLC – Michter N-8HU

Dear Ma'am:

Please be advised that Tug Hill Operating, LLC, has applied to the Oil and Gas Conservation Commission for approval to intentionally deviate a new deep well. The Code of State Regulations Title 39 Section 1.4.10 requires that the Commission notify the offset operators of the applicants' intent to deviate the proposed well. You are receiving this notice because you are listed as an offset operator (unleased mineral owner is also an "offset operator") to the proposed well. Any offset operator has ten days to object to the Commission's granting approval to the proposed deviation. If you file an objection, the Commission will schedule a hearing and you will be notified of the date and time to attend.

A copy of the location plat is enclosed for your review. If no objection(s) are received within ten 10 days from the date of delivery, the application will be processed in the normal manner.

If you have any questions please call me at (304) 926-0499, extension 1274.

Sincerely,

A handwritten signature in cursive script that reads "Susan Rose". The signature is written in black ink and is positioned above the printed name and title.

Susan Rose
Administrator

encl:

Track Another Package +

Tracking Number: 9171999991703917152137

Remove X

Your item was returned to the sender on June 13, 2019 at 9:43 am in CHARLESTON, WV 25301 because the addressee moved and left no forwarding address.

Alert

June 13, 2019 at 9:43 am
Moved, Left no Address
CHARLESTON, WV 25301

Get Updates ✓

Feedback

Text & Email Updates ✓

Return Receipt Electronic ✓

Tracking History ^

June 13, 2019, 9:43 am
Moved, Left no Address
CHARLESTON, WV 25301
Your item was returned to the sender on June 13, 2019 at 9:43 am in CHARLESTON, WV 25301 because the addressee moved and left no forwarding address.

June 12, 2019
In Transit to Next Facility

June 9, 2019, 5:08 am
Arrived at USPS Regional Facility
GAINESVILLE FL DISTRIBUTION CENTER

May 29, 2019, 11:07 am
Moved, Left no Address
PINE LAKE, GA 30072

May 29, 2019, 11:03 am
Arrived at Unit
PINE LAKE, GA 30072

May 26, 2019, 10:44 pm
Departed USPS Regional Destination Facility
ATLANTA NORTH METRO DISTRIBUTION CENTER

May 25, 2019, 7:57 pm
Arrived at USPS Regional Destination Facility
ATLANTA NORTH METRO DISTRIBUTION CENTER

May 24, 2019, 4:27 am
Departed USPS Regional Facility
CHARLESTON WV PROCESSING CENTER

May 23, 2019, 10:17 pm
Arrived at USPS Regional Origin Facility
CHARLESTON WV PROCESSING CENTER

May 23, 2019, 9:02 pm
Accepted at USPS Origin Facility
CHARLESTON, WV 25311

May 23, 2019

Feedback

**Offset Operators within 1500'
Michter N - 8HU**

RECEIVED
Office of Oil and Gas

MAY 17 2019

WV Department of
Environmental Protection

COUNTY	DISTRICT	PARCEL	OWNER	ADDRESS
MARSHALL	FRANKLIN	5-11-1	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-1.1	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-1.2	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-1.3	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-1.4	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-1.5	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-1.6	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-1.7	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-2	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-2.1	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-2.2	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-11-21	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-12-10	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-12-10	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-12-10.1	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-12-10.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-12-12	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-12-9	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-6-10	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-6-3	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-6-3.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101

MARSHALL	FRANKLIN	5-6-4	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-6-5	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-6-6	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-6-11	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-10	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-10.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-11	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	5-7-12	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-13	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-14	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-14.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-14.2	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-14.3	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-15	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-15.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-16	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-17	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-18	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-18.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-2	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-21	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-22	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-23	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-23.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-23.2	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-24	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	5-7-25	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-26	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108

MARSHALL	FRANKLIN	5-7-27	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	5-7-27.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-28	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-28.1	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-29	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	5-7-3.2	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-3.3	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-31	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-31.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-31.2	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-31.3	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-31.4	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-32	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-33	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-33	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-34	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-35	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-35.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-39	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-7-4	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-5	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-5.1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-7-6	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8-2	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8-3	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101

MARSHALL	FRANKLIN	5-8-4	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8-4.1	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8-5	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8-7	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8-9	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8-9.1	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-1	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-10	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-11	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-12	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-13	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-14	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-15	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-16	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-17	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-17	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-17	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-18	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-18	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-18	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-19	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-19	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-19	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-2	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101

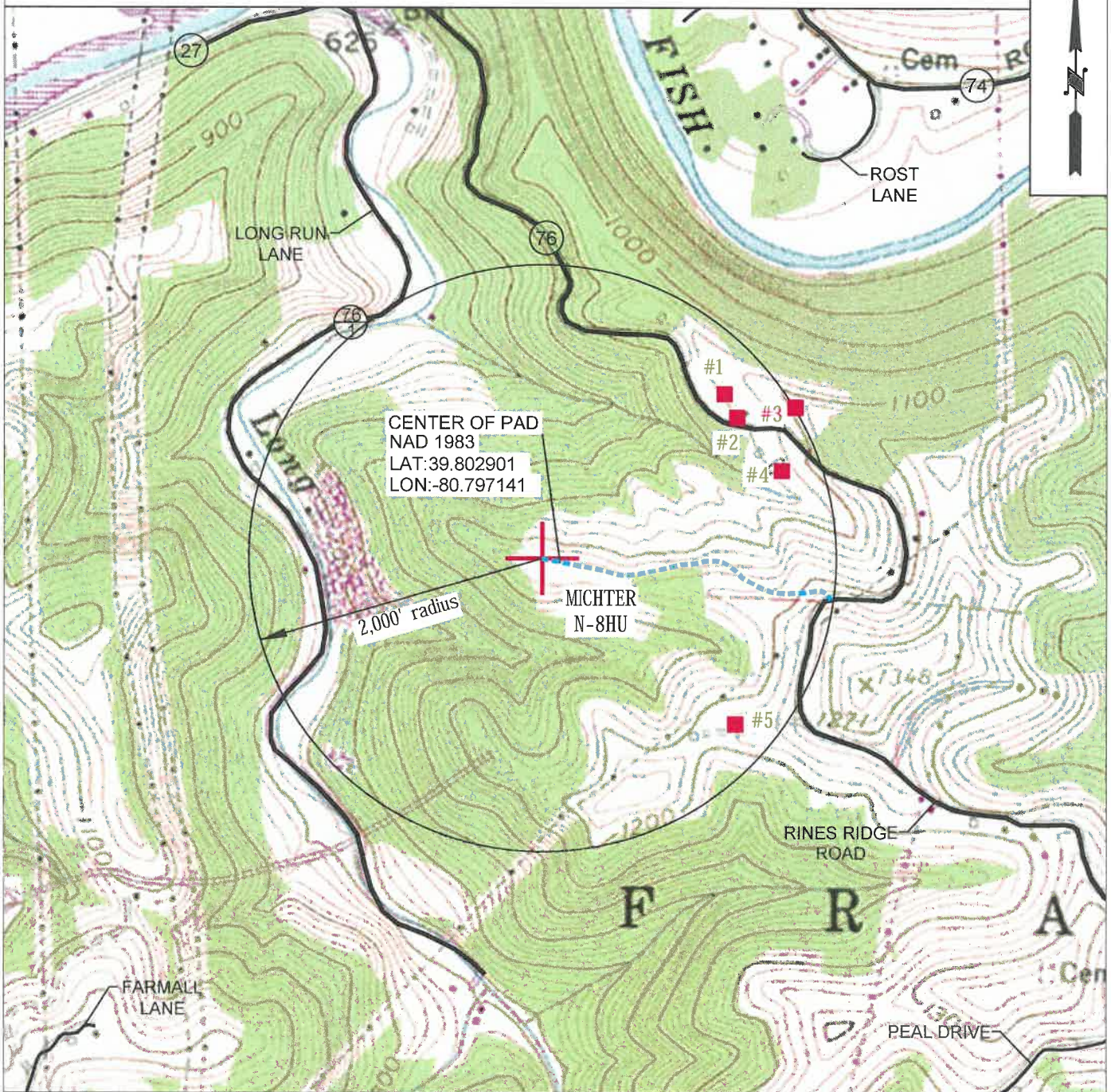
MARSHALL	FRANKLIN	5-8A-20	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-21	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-22	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-23	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-24	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-25	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-26	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-27	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-28	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-29	ROBERT F. RYAN HEIRS	UNKNOWN
MARSHALL	FRANKLIN	5-8A-29	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-3	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-30	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-30	ROBERT F. RYAN HEIRS	UNKNOWN
MARSHALL	FRANKLIN	5-8A-31	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-31	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-32	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-33	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-33	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-34	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-35	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-36	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-36	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-37	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101

MARSHALL	FRANKLIN	5-8A-37	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200, Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-38	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-38	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-39	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-39	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-4	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	5-8A-40	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-40	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-40	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-41	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-41	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-41	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-42	ROBERT M. WHITE AND DIANE WHITE	1951 Fish Creek Road Proctor, WV 26055
MARSHALL	FRANKLIN	5-8A-42	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-43	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-43	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-44	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-44	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-45	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-46	BARBARA LOUELLEN ROSE AND MARY LOU ROSE, JTROS	2027 Fish Creek Road Proctor, WV 26055
MARSHALL	FRANKLIN	5-8A-46	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101

MARSHALL	FRANKLIN	5-8A-47	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-48	COURTNEY D HALL	P.O. Box 673 Pine Lake, GA 30072
MARSHALL	FRANKLIN	5-8A-48	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-48	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-48	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-49	COURTNEY D HALL	P.O. Box 673 Pine Lake, GA 30072
MARSHALL	FRANKLIN	5-8A-49	SHRINERS HOSPITALS FOR CHILDREN C/O THE NORTHERN TRUST COMPANY	2900 Rocky Point Drive Tampa, FL 33607
MARSHALL	FRANKLIN	5-8A-49	TH EXPLORATION LLC	380 Southpointe Blvd., Ste 200 Canonsburg, PA 15317
MARSHALL	FRANKLIN	5-8A-49	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-5	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	5-8A-50	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-51	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-52	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-53	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-54	HG ENERGY II APPALACHIA LLC	5261 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-54.1	HG ENERGY II APPALACHIA LLC	5262 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-55	HG ENERGY II APPALACHIA LLC	5262 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-6	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	5-8A-7	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	5-8A-8	HG ENERGY II APPALACHIA LLC	5262 Dupont Road Parkersburg, WV 26101
MARSHALL	FRANKLIN	5-8A-9	CHEVRON APPALACHIA LLC	700 Cherrington Pkwy, 04108C Coraopolis, PA 15108
MARSHALL	FRANKLIN	WV FISH CREEK	HG ENERGY II APPALACHIA LLC	5260 Dupont Road Parkersburg, WV 26101

PROPOSED MICTER N-8HU

There appears to be Five (5) possible water sources within 2,000'.



CENTER OF PAD
NAD 1983
LAT: 39.802901
LON: -80.797141

2,000' radius

MICTER
N-8HU

#1

#2

#3

#4

#5



TUG HILL
OPERATING

OPERATOR 494510851
TUG HILL OPERATING, LLC
380 SOUTHPOINTE BLVD
SUITE 200
CANONSBURG, PA 15317

TOPO SECTION
POWHATAN POINT 7.5'
SCALE:
1" = 1000'

LEASE NAME RECEIVED
Office of Oil and Gas
MICTER
DATE: MAY 17 2019
DATE: 2-14-2019
Department of
Environmental Protection

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

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

Date of Notice: 1/14/2019 **Date of Planned Entry:** 1/21/2019

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Larry W. and Barbara E. Dunlap (Pad and Access Road)
Address: 1549 Irish Ridge Road
Cameron, WV 26033

Name: Charles Leroy Dunlap (Pad and Access Road)
Address: 21 Gypsy Drive
Moundsville, WV 26041

Name: Karen Sue Reed and Clyde Reed (Well Pad)
Address: 100 Orchard Lane
Moundsville, WV 26041

COAL OWNER OR LESSEE

Name: CNX Land Resources, LLC Attn: Casey Saunders
Address: 1000 CONSOL Energy Drive
Canonsburg, PA 15317

MINERAL OWNER(s)

Name: Larry W. and Barbara E. Dunlap (see attached list)
Address: 1549 Irish Ridge Road
Cameron, WV 26033

*please attach additional forms if necessary

Notice is hereby given:

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

State:	<u>West Virginia</u>	Approx. Latitude & Longitude:	<u>39.8027785; -80.7973528</u>
County:	<u>Marshall</u>	Public Road Access:	<u>Rines Ridge Road (County Route 76)</u>
District:	<u>Franklin</u>	Watershed:	<u>Fish Creek (HUC 10)</u>
Quadrangle:	<u>Powhatan Point 7.5'</u>	Generally used farm name:	<u>Larry Dunlap, et al</u>

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

Notice is hereby given by:

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

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

RECEIVED
Office of Oil and Gas
MAY 17 2019
WV Department of
Environmental Protection

Oil and Gas Privacy Notice:

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

**WW-6A3 NOTICE OF ENTRY FOR PLAT SURVEY
ATTACHMENT #1
WELL: MICTER N-8HU**

Mineral Owners (Well Pad)

Charles Leroy Dunlap
21 Gypsy Drive
Moundsville, WV 26041

Karen Sue Reed and Clyde Reed
100 Orchard Lane
Moundsville, WV 26041

Boyde Buesking
402 Hickory Street
Bloomington, IL 61701

Christian Drayer Staley
6725 Minier Road
Minier, IL 61759

Rebecca Drayer Eldridge
465 Harts Way
Collierville, TN 38017

Gennie Sue Thomas Petrack
704 N. School Street
Normal, IL 61761

Brenda Faye Thomas Petrack
998 Willow Drive
Pittsburgh, PA 15237

Guy Yates
4102 Blacks Road SW
Hebron, OH 43025

Gail Ann Yates Wood
8161 Goldsmith Drive
Reynoldsburg, OH 43068

Shirley Yates Hartsell
2150 Yorkdale Lane
Reynoldsburg, OH 13068

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

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

Date of Notice: 03/27/2019 **Date Permit Application Filed:** 03/29/2019

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Larry W. and Barbara E. Dunlap
Address: 4549 Irish Ridge Road
Cameron, WV 26033

Name: Karen Sue Ree and Clyde Reed (See attached list)
Address: 100 Orchard Lane
Moundsville, WV 26041

Notice is hereby given:

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

State:	West Virginia	UTM NAD 83	Easting:	517,328.60
County:	Marshall		Northing:	4,405,909.03
District:	Franklin	Public Road Access:	Rines Ridge Road (County Route 76)	
Quadrangle:	Powhatan Point 7.5'	Generally used farm name:	Larry W. Dunlap and Charles Leroy Dunlap	
Watershed:	Fish Creek (HUC 10)			

This Notice Shall Include:

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

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

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

Oil and Gas Privacy Notice:

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

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Environmental Protection

WW-6A5 Attachment
Michter N-8HU

Additional Landowner

Charles Leroy Dunlap
21 Gypsy Drive
Moundsville, WV 26041

47 05 902210



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

June 19, 2018 ✓

Jill M. Newman
Deputy Commissioner

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

Subject: DOH Permits for the Michter Well Pad, Marshall County

Michter N-8HU

Dear Mr. Martin,

This well site will be accessed from Permit #06-2018-0480 issued to Tug Hill Operating for access to the State Road for a well site located off of Marshall County Route 76 SLS.

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

Very Truly Yours,

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

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

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MAY 17 2019

WV Department of
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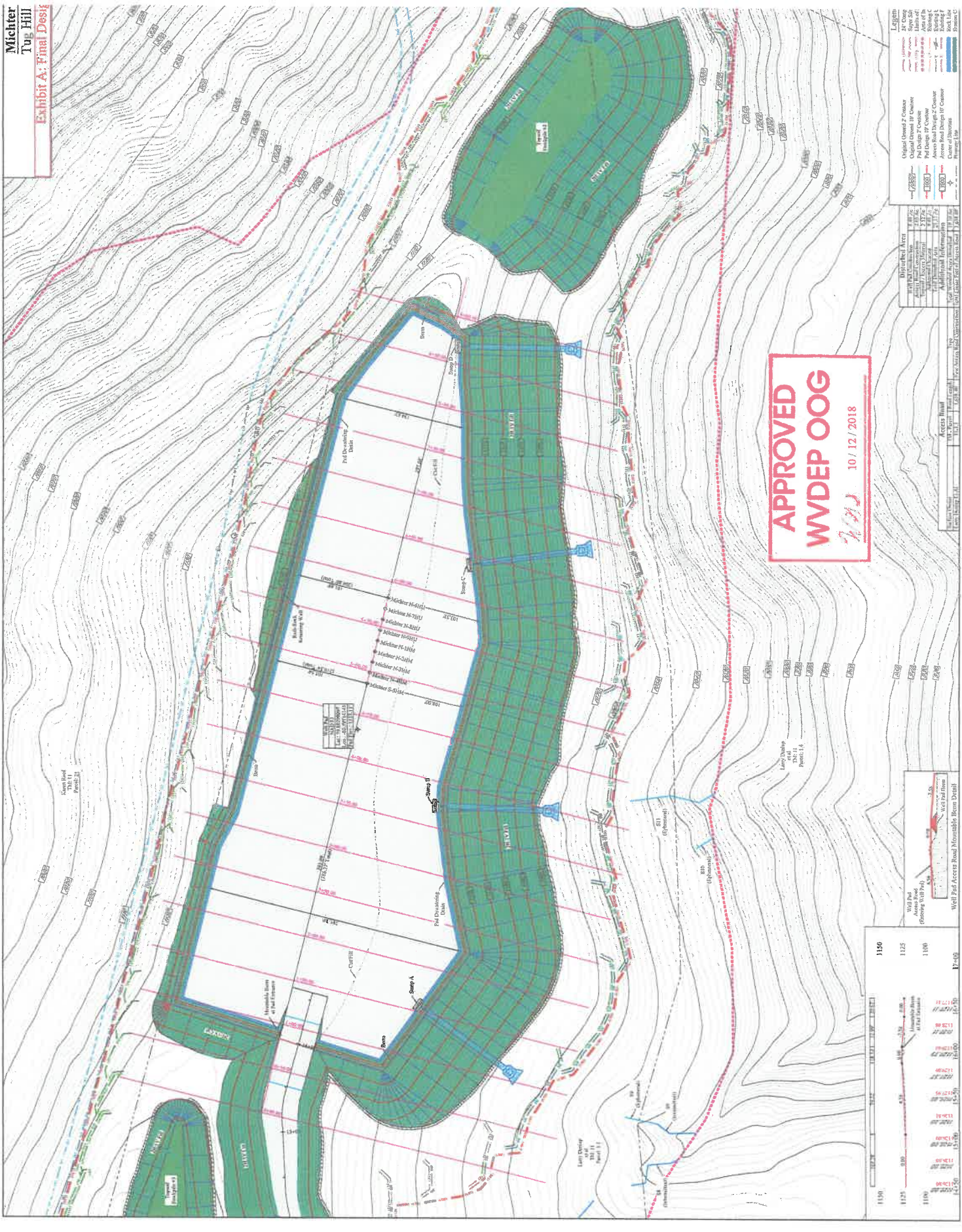


PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

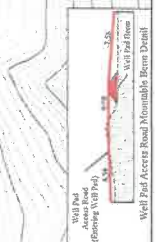
Well No. Michter N-8HU

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

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Environmental Protection



APPROVED
WVDEP OOG
7/21/18 10/12/2018



Legend	
Original Ground 2' Contour	Proposed 2' Contour
Proposed 10' Contour	Proposed 20' Contour
Proposed 30' Contour	Proposed 40' Contour
Proposed 50' Contour	Proposed 60' Contour
Proposed 70' Contour	Proposed 80' Contour
Proposed 90' Contour	Proposed 100' Contour
Proposed 110' Contour	Proposed 120' Contour
Proposed 130' Contour	Proposed 140' Contour
Proposed 150' Contour	Proposed 160' Contour
Proposed 170' Contour	Proposed 180' Contour
Proposed 190' Contour	Proposed 200' Contour
Proposed 210' Contour	Proposed 220' Contour
Proposed 230' Contour	Proposed 240' Contour
Proposed 250' Contour	Proposed 260' Contour
Proposed 270' Contour	Proposed 280' Contour
Proposed 290' Contour	Proposed 300' Contour
Proposed 310' Contour	Proposed 320' Contour
Proposed 330' Contour	Proposed 340' Contour
Proposed 350' Contour	Proposed 360' Contour
Proposed 370' Contour	Proposed 380' Contour
Proposed 390' Contour	Proposed 400' Contour
Proposed 410' Contour	Proposed 420' Contour
Proposed 430' Contour	Proposed 440' Contour
Proposed 450' Contour	Proposed 460' Contour
Proposed 470' Contour	Proposed 480' Contour
Proposed 490' Contour	Proposed 500' Contour
Proposed 510' Contour	Proposed 520' Contour
Proposed 530' Contour	Proposed 540' Contour
Proposed 550' Contour	Proposed 560' Contour
Proposed 570' Contour	Proposed 580' Contour
Proposed 590' Contour	Proposed 600' Contour
Proposed 610' Contour	Proposed 620' Contour
Proposed 630' Contour	Proposed 640' Contour
Proposed 650' Contour	Proposed 660' Contour
Proposed 670' Contour	Proposed 680' Contour
Proposed 690' Contour	Proposed 700' Contour
Proposed 710' Contour	Proposed 720' Contour
Proposed 730' Contour	Proposed 740' Contour
Proposed 750' Contour	Proposed 760' Contour
Proposed 770' Contour	Proposed 780' Contour
Proposed 790' Contour	Proposed 800' Contour
Proposed 810' Contour	Proposed 820' Contour
Proposed 830' Contour	Proposed 840' Contour
Proposed 850' Contour	Proposed 860' Contour
Proposed 870' Contour	Proposed 880' Contour
Proposed 890' Contour	Proposed 900' Contour
Proposed 910' Contour	Proposed 920' Contour
Proposed 930' Contour	Proposed 940' Contour
Proposed 950' Contour	Proposed 960' Contour
Proposed 970' Contour	Proposed 980' Contour
Proposed 990' Contour	Proposed 1000' Contour

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