

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, December 3, 2019 WELL WORK PERMIT Horizontal 6A / New Drill

TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD

CANONSBURG, PA 15317

Permit approval for KNOB CREEK N-3HM

47-051-02280-00-00

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: KNOB CREEK N-3HM

Farm Name: DAVID LEE FRANKLIN

Horizontal 6A New Drill

U.S. WELL NUMBER: 47-051-02280-00-00

Date Issued: 12/3/2019

API Number:	
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PERMIT CONDITIONS

4705102280

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.

PERMIT CONDITIONS

4705102280

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.

WW-6B (04/15)

API NO. 47-051 -	
OPERATOR WELL NO.	Knob Creek N-3HM
Well Pad Name: Knob	Creek

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

1) Well Operator	: Tug Hill Op	erating, LLC	494510851	Marshall	Meade	Powhatan Point 7
			Operator ID	County	District	Quadrangle
2) Operator's We	ell Number: Kı	nob Creek N-3F	HM Well F	ad Name: Kno	b Creek	
3) Farm Name/St	urface Owner:	David Lee Fra	nklin Public R	oad Access: St	. Joseph R	oad - CR 21
4) Elevation, curi	rent ground:	734.67'	Elevation, propose	ed post-construc	tion: 734.6	7'
	a) Gas <u>×</u> Other	Oil _	Ur	nderground Stor	rage	
(b)If Gas Sh	allow x	Deep			1.4
	Но	rizontal x			89/2	117
6) Existing Pad:	Yes or No No			_	0 7/0	1.1
			cicipated Thickness ated approximate pressure of 3800 ps		Pressure(s):	
8) Proposed Tota	l Vertical Den	th· 6343'				
9) Formation at T			aga			
10) Proposed Tot	tal Measured D	Depth: 7,922'				
11) Proposed Ho	rizontal Leg L	ength: 780.55'				
12) Approximate	Fresh Water S	Strata Depths:	40'; 380'			
13) Method to De	etermine Fresh	Water Depths:	Use shallow offset wells to determine of	eepest freshwater, or determine us.	ng pre-drill tests, testing whi	e drilling or petrophysical evaluation of resistivity.
14) Approximate	Saltwater Dep	oths: 1,740'				
15) Approximate	Coal Seam Do	epths: Sewickle	ey Coal - 292' and	d Pittsburgh Co	oal - 374'	
16) Approximate	Depth to Poss	ible Void (coal	mine, karst, other)	: None		
17) Does Propose directly overlying				N	10 X	RECEIVED Office of Oil and Gas
(a) If Yes, prov	ide Mine Info:	Name:				OCT - 2 2019
(3) 1. 200, pro		Depth:				WV Department of Environmental Protectio
		Seam:				EUMOUNIO
		Owner:				

WW-6B (04/15)

OPERATOR WELL NO. Knob Creek N-3HM Well Pad Name: Knob Creek

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120'	259ft^3(CTS)
Fresh Water	13 3/8"	NEW	J55	54.5#	480'	480'	683ft^3(CTS)
Coal	13 3/8"	NEW	J55	54.5#	480'	480'	683ft^3(CTS)
Intermediate	9 5/8"	NEW	J55	36#	2,250'	2,250'	729ft^3(CTS)
Production	5 1/2"	NEW	P110	20#	7,922'	7,922'	2,044ft^3(CTS)
Tubing	2 3/8"	NEW	N80	4.7#	6,177'		
Liners							

M9/21/19

ТҮРЕ	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	13 3/8"	17.5"	.33	2,740	2,192	SEE #24	1.2
Coal	13 3/8"	17.5"	.33	2,740	2,192	SEE #24	1.2
Intermediate	9 5/8"	12 1/4"	.352	3,520	2,816	SEE #24	1.19
Production	5 1/2"	8 7/8"_8 3/4"	.361	12,640	10,112	SEE #24	1.17/1.19
Tubing	2 3/8"		.19	8,960	11,200		
Liners							

PACKERS

Kind:	N/A	Office of Oil and Gas
Sizes:	N/A	0CT - 2 2019
Depths Set:	N/A	WV Department of Environmental Protection

WW-6B (10/14) API NO. 47- 051 OPERATOR WELL NO. Knob Creek N-3HM
Well Pad Name: Knob Creek

Ma/27/19

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

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

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

Well to completed with approximately 3,237,500 lb. proppant and 50,054 barrels of water. Max rate = 80bpm; max psi = 9,000#.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 12.93 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 5.55 acres

23) Describe centralizer placement for each casing string:

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

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

*See attachment

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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.

^{*}Note: Attach additional sheets as needed.

	CASING SUMMARY	Type Hole Size (in) Csg Size (in) Depth (MD)		Surface 17.5 13.3/8 480'	87/8×83/4 51/2			SUMMARY	Sacks Class	338 V	661 A	Intermediate 1 766 A 15	Production 1,868 A 14.5									
COUNTY: Marshall GLEvc 737"	Sdi	Depth TVD	380	292	 	7661	2181	2444	6555	6071	6100	6134	6202	6253	2363	9696						
### SAPP Creek N-3HM STATE: WV V V V V V V V V V V V V V V V V V V	FORMATION TOPS	Formation	Deepest Fresh Water	Sewickley Coal	Blg Uma	Weir	Berea	Gordon	Rhinestreet	Geneseo/Burkett	ylluT	Hamilton	Marcellus Landing Depth	Onondaga	de de la constante de la const	Flot note Depth				01	RECEIVE ce of Oil a CT - 2	201



Tug Hill Operating, LLC Casing and Cement Program

Knob Creek N-3HM

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	13 3/8"	J55	17 1/2"	480'	CTS
Intermediate	9 5/8"	J55	12 1/4"	2,250'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4	7,922'	CTS

Cement

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

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

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

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

50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170,

Production: 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L - Production Cement mixed at 15.2ppg, Y = 1.19

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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, <u>dducoeur@dpslandservices.com</u> DPS GIS (9/23/2019) 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 - Knob Creek N-3HM

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 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 Perforated Producing zones not wells that might be within in **API Number** Operator Name **Total Depth** Fms perforated range of fracture propagation Comments Yes, existing Marcellus permit Proper casing and cement should prevent migration of fluids from new wellbore to 4705102267 Tug Hill Operating existing wellbore Currently a permit Yes, existing Marcellus permit Proper casing and cement should prevent migration of fluids from new wellbore to 4705102032 Tug Hill Operating n/a existing wellbore n/a Currently a permit n/a No, existing Point Pleasant permit Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore 4705102268 Tug Hill Operating n/a n/a n/a Currently a permit No, existing Point Pleasant permit Proper casing and cement should prevent migration of fluids from new 4705102269 Tug Hill Operating n/a wellbore to existing wellbore Currently a permit n/a n/a Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be effected by fracturing in Well plugged 12/4/1959 4705130405 Wilhelm & Jackson Unknown Unknown Unknown the planned Marcellus well.

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Well: County = 51 Permit = 30405

Location information: View Maga.

per COUNTY PERMY TAX_CISTRICT GIAB_75 GUAD_15 LAT_56 LOR_56 UTINE UTINN LITERATURE AND MAGAS.

Gen Baston Connect: 36 T0024 - 30 T00365 555952 1 440241 2)

There is no Bottom Hole Location data for this well

Const information:

DAY OF SUPPOR 19TATUS SUBJECT CONSTRUCTION OF NON LEASE LEASE NOW MINERAL CONF. OFFERIOR AT CONFLICTION PROF YO PROF, TROT FOR THE TEST FOR THE LEASE NOW MINERAL CONFLICTION PROF YO PROF, TROT FOR THE LEASE NOW CONFINED ASSOCIATION AS CONFIDENCE ASSOCIATION ASSO

Competion Information.

APP ONLY OF SPECIO ELEY CARRIAM FIELD DESPEST FM DESPEST FMT INITIAL CLASS FMAL CLASS TYPE RG CMF_UNITED TVO TMG NEW_FIG KOD G_BEF_G_APT_C_BEF_
CERTIFICATION OF SPECIO CONTROL OF SPECIAL CLASS FMAL CLASS TYPE RG CMF_UNITED TVO TMG NEW_FIG KOD G_BEF_G_APT_C_BEF

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

There is no Stratigraphy data for this well

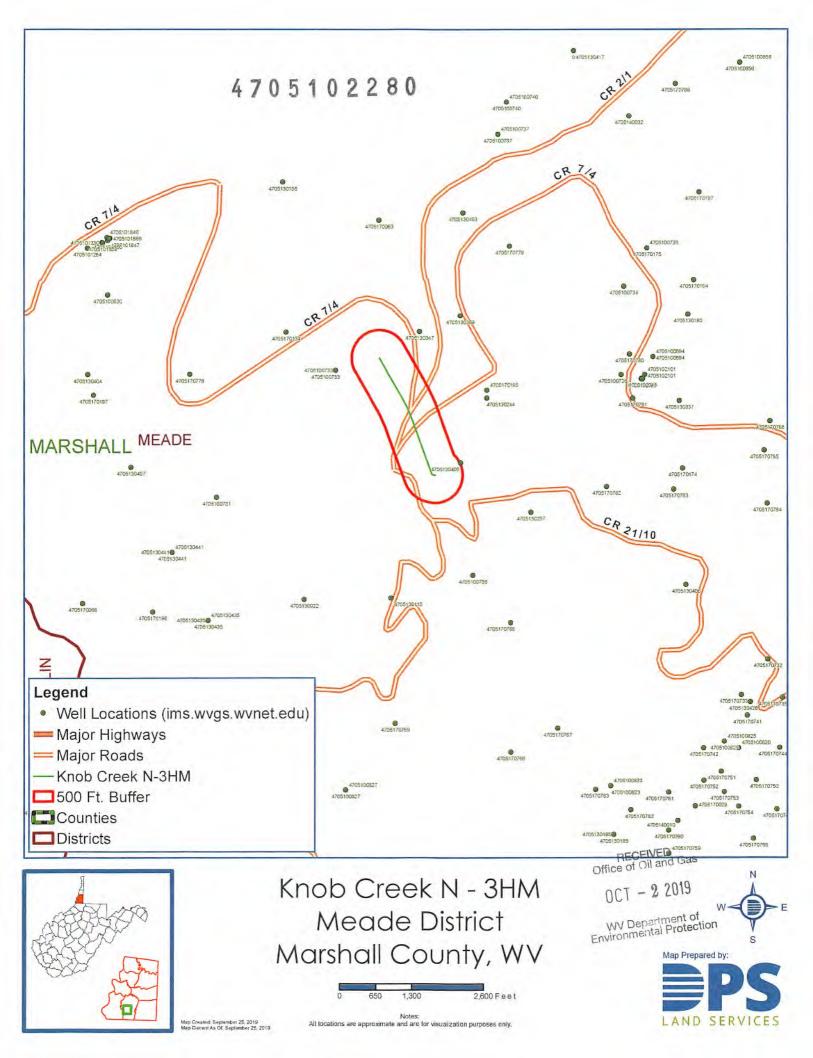
There is no Wireline (E-Log) data for this well

Plugging Information: API PLO_DT DEPTH_PBT PTDS103405 12/41609 0

There is no Sample data for this well

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WW-9 (4/16)

API Number	47 -	051	
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Operator's Well No. Knob Creek N-3HM

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 Glen Easton 7.5'
Do you anticipate using more than 5,000 bbls of water to Will a pit be used? Yes No	
If so, please describe anticipated pit waste: AS	T 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 Tense will be used with proper containing
Proposed Disposal Method For Treated Pit Wast	res:
Land Application	
	Permit Number_ UIC 2459, UIC 965, UIC 359, UIC 2D0732540, UIC 2D0732523
Reuse (at API Number_	m WW-9 for disposal location)
Other (Explain	n w w-9 for disposal location)
Will closed loop system be used? If so, describe: Yes - I	For Vertical and Horizontal Drilling
Drilling medium anticipated for this well (vertical and ho	rizontal)? Air, freshwater, oil based, etc. Air for vertical / Oil for Horizontal
-If oil based, what type? Synthetic, petroleum, e	tc. Synthetic Oil Base
Additives to be used in drilling medium? Barite for weight	
Drill cuttings disposal method? Leave in pit, landfill, ren	noved offsite, etc. All drill cuttings to be disposed of in a Landfill
-If left in pit and plan to solidify what medium w	vill be used? (cement, lime, sawdust) N/A
-Landfill or offsite name/permit number?Wetzel Co	ounty Sanitary Landfil (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP EC#1386428)
Permittee shall provide written notice to the Office of Oil West Virginia solid waste facility. The notice shall be prowhere it was properly disposed.	and Gas of any load of drill cuttings or associated waste rejected at any ovided within 24 hours of rejection and the permittee shall also disclose
on August 1, 2005, by the Office of Oil and Gas of the W provisions of the permit are enforceable by law. Violati law or regulation can lead to enforcement action. I certify under penalty of law that I have persapplication form and all attachments thereto and that,	s and conditions of the GENERAL WATER POLLUTION PERMIT issued est Virginia Department of Environmental Protection. I understand that the ions of any term or condition of the general permit and/or other applicable conally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for on is true, accurate, and complete. I am aware that there are significant possibility of fine or imprisonment.
Company Official Signature and anca	RECEIVED Office of Oil and Gas
Company Official (Typed Name) Jim Pancake	OCT - 2 2019
Company Official Title_ VP Geosciences	
	WV Department of Environmental Protection
Subscribed and sworn before me this 2/2 day	of SEPTEMBER, 20 19
My commission expires 1/26/	Notary Public monwealth of Pennsylvania - Notary Seal MAUREEN A STEAD - Notary Public Washington County
	My Commission Expires Jan 28, 2023

Spring Oats 96 Ladino 3 White Clover 2 Manage (s) of road, location, pit and proposed area for land application (unless engineered plans including this info have rovided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x creage, of the land application area. Photocopied section of involved 7.5' topographic sheet. Clan Approved by: June Wulbboard Comments: MANDER Oil and Gas Inspector.				0.0
Fertilizer type 10-20-20 Fertilizer amount 500				6.0
Fertilizer amount 500 lbs/acre			ct to pH 6.5	
Seed Mixtures				
Temporary Permanent Seed Type Ibs/acre Seed Type Ibs/acre Annual Ryegrass 40 Orchard Grass 12 Spring Oats 96 Ladino 3 White Clover 2 Attach: Apps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have creage, of the land application area. Photocopied section of involved 7.5' topographic sheet.		0	lbs/acre	
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White Clover 2 Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have rovided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x creage, of the land application area. Photocopied section of involved 7.5' topographic sheet. Plan Approved by: Comments:	Annual Ryegrass	40	Orchard Grass	12
Attach: Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info hav rovided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x creage, of the land application area. Photocopied section of involved 7.5' topographic sheet. Plan Approved by: Comments:	Spring Oats	96	Ladino	3
Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x creage, of the land application area. Photocopied section of involved 7.5' topographic sheet. Plan Approved by: Comments:			White Clover	2
WVDEP Oil and Gas Inspector	Maps(s) of road, location, pit a provided). If water from the pit acreage, of the land application	t will be land applied, inc n area.	elude dimensions (L x W x D) of the pit, and	ling this info have been dimensions (L x W), and
WVDEP Oil and Gas Inspector	Maps(s) of road, location, pit a provided). If water from the pit acreage, of the land application Photocopied section of involve	it will be land applied, inc n area. ed 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	ling this info have been dimensions (L x W), and
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WVDEP Oil and Gas Inspector 9 /93 /18	Maps(s) of road, location, pit a provided). If water from the pit acreage, of the land application Photocopied section of involve	it will be land applied, inc n area. ed 7.5' topographic sheet.	clude dimensions (L x W x D) of the pit, and	ling this info have been dimensions (L x W), and
Title: VVV DET On and Gas mapecial Date: 7/27//	Maps(s) of road, location, pit a provided). If water from the pit acreage, of the land application Photocopied section of involve Plan Approved by: Comments:	it will be land applied, income area. ed 7.5' topographic sheet. Ly Unlock	elude dimensions (L x W x D) of the pit, and	dimensions (L x W), and

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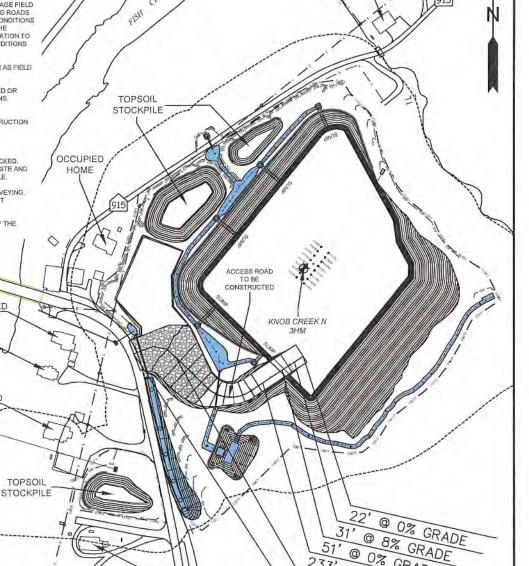
- O- DENOTES INSTALL 18" PVC CULVERT AND APPLY APPROPRIATE SEDIMENT OUTLET CONTROL (RIP RAP SPLASH PAD)
- 2. DRAWING NOT TO SCALE
- REFERENCE IS HEREBY MADE TO THE
 WW D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL
 FIELD MANUAL" FOR REQUIREMENTS AND BMPS FOR AVERAGE FIELD
 CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS
 AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS
 MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.
- 4. INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.
- 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 SLOPS UPON CONSTRUCTION OF LOCATION.
- 7. ALL OUT AND FILL SLOPES ARE 2H: 1V SLOPE.
- 8. ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO BE UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.
- SEE KNOB CREEK N SITE PLAN PREPARED BY KELLEY SURVEYING, FOR COMPLETE CONSTRUCTION & EROSION AND SEDIMENT CONTROL DETAILS.
- DWELLINGS WERE FOUND WITHIN 625 OF THE CENTER OF THE PROPOSED WELL PAD. WAIVER TO BE OBTAINED.

OCCUPIED HOME

OCCUPIED HOME

> OCCUPIED HOME

FISIA





Solutions from the ground up.

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www.slssurveys.com

TOPO SE	CTION:	OPERAT	OR:
GLEN EAS	STON 7.5'	PREPARED FOR: TUG HILL OPERA	ATING, LLC
COUNTY	DISTRICT	380 SOUTHPOIN	LE BLAD
MARSHALL	MEADE	SUITE 200 CANONSBURG, F	PA 15317
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8789	07/27/2018	NONE

CHURCH



GRADEOffice of Oil and Gas

SILT FENCE AND/OR SEDIMENT AND EROSION CONTROL MEASURE ATTEMENT OF Environmental Protection

OCT - 2 2019



Well Site Safety Plan Tug Hill Operating, LLC

Sylvelly

Well Name: Knob Creek N-3HM

Pad Location: Knob Creek Pad

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17: Northing: 4,402,274.92

Easting: 525,219.95

September 2019

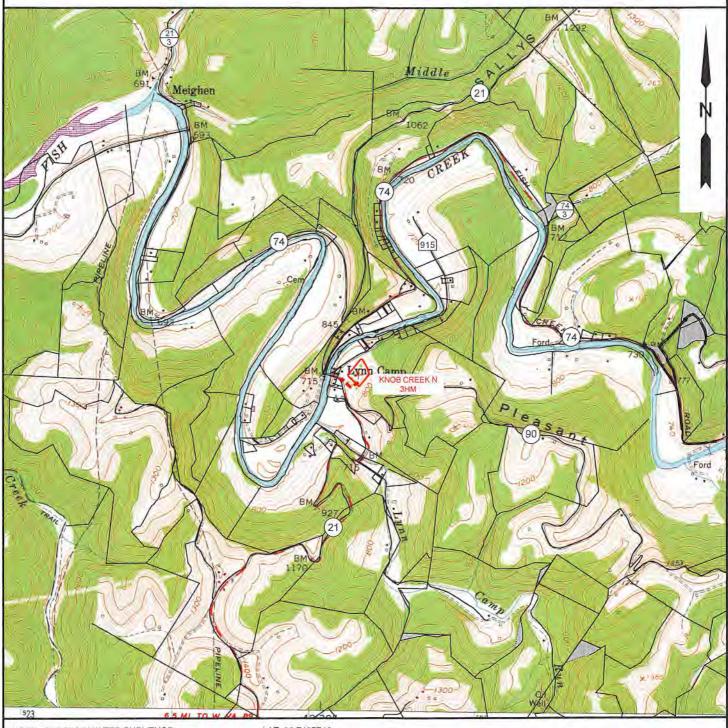
RECEIVED Office of Oil and Gas

OCT - 2 2019

WW-9

PROPOSED KNOB CREEK N - 3HM

SUPPLEMENT PG. 2



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

LAT: 39.7137712 LON: -80.8258327

LOCATED: S 59°36'12" W AT 39,574.55' FROM THE CENTER OF KNOB CREEK N WELL PAD LOCATION.



TOPO S	ECTION:	OPERA	ATOR:
GLEN EAS	STON 7.5'	PREPARED FOR	
COUNTY	DISTRICT	380 SOUTHPOI	NTE BLVD
MARSHALL	MEADE	SUITE 200 CANONSBURG	PA 15317
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8789	07/27/2018	1" - 2000'



-10,924' T.H.

216' B.H.

80°42'30"

LONGITUDE

T.H. B.H

KNOB CREEK N LEASE WELL 3HM TUG HILL OPERATING

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-6-1.2	CONSOLIDATION COAL COMPANY, MURRAY ENERGY	2,222
9-6-3.1	CONSOLIDATION COAL COMPANY, MURRAY ENERGY	10.00
9-10-9	J. F. CROW EST., ET AL	17 AC. 14 P.
9-10-16	WILLIAM D. MCCONNELL	0.859
9-11-1	GERALD F. PADLOW	1.033
9-11-2.1	KENNETH P. GATEWOOD, ET UX	0.308
9-11-2,2	GERALD F. PADLOW, ET UX	0.291
9-13-10	ARTHUR L. MOORE	3.96
9-13-12.1	ROBERT T. & BARBARA A. ANKROM	2,632
9-13-13.1	THOMAS JOHN FOX	0.827
9-13-14	MARGARET K. FOX - LIFE	3.00
9-13-16	IVAN H. & MARGARET A. RICHMOND	21.354
9-14-1-2	KENNETH N. & TERESA A. SMERTNECK	1.02
9-14-113	PATRICK J. SCHELLHASE - TRUST	23,424
9-14-28	CHARLES R. SCHELLHASE, ET UX	3.029
9-14-29	ANDREW FASOULETOS, ET UX	0.209
9-14-29.1	ANDREW FASOULETOS, ET UX	1,171
9-14-30	WILLIAM C. GROFT, ET UX	0.35
9-14-31	WILFORD F. NELSON, JR., ET UX	0.954
9-14-32	TWILA C. COFFIELD	0,583
9-14-32.1	TWILA C. COFFIELD	0.184

T.H REFERENCES 915 FIELD 14-33 CENTER OF PROPOSED WELL PAD KNOB CREEK N 5/8" REBAR FIELD 14-33 1" = 400' 16-15 16-14

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

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH) NAD'83 S.P.C.(FT) N. 464,858.14 E. 1,629,653.80 NAD'83 GEO. LAT-(N) 39.770031 LONG-(W) 80.705531 NAD'83 UTM (M) N. 4,402,274.92 E. 525,219.95

LANDING POINT

NAD'83 S.P.C.(FT) N. 466,297.5 E. 1,629,056.0 NAD'83 GEO. LAT-(N) 39.773961 LONG-(W) 80.707726 NAD'83 UTM (M) N. 4,402,710.4 E. 525,030.5

BOTTOM HOLE N. 466,980.7

NAD'83 S.P.C.(FT) E. 1.628.678.4 LAT-(N) 39.775822 NAD'83 GEO. LONG-(W) 80.709102 NAD'83 UTM (M) N. 4,402,916.6 E. 524,912.0

	ACRES	ADJOINING SURFACE OWNER LIST - CONTINUED	MAP/PARCEL
	0.338	PAUL G. FOX	9-14-35
	1600 SQ. FT.	MARGARET FOX - LIFE	9-14-36
	LOT	MARGARET FOX - LIFE	9-14-37
	0.631	MARGARET FOX - LIFE	9-14-38
	8675 SQ. FT.	MARGARET FOX - LIFE	9-14-39
	19,560 SQ. FT.	MARGARET FOX - LIFE	9-14-40
B.F	9165 SQ. FT.	MARGARET FOX - LIFE	9-14-41
10.1	1.87	JOHN C. LAGOS, ET UX	9-14-42
	2,913	DAVID LEE FRANKLIN	9-14-44
	4.423	GEORGE R. TAYLOR, ET UX	9-14-44.1
	10.98	GEORGE R. TAYLOR, ET UX	9-14-45
1	18.388	MARGARET K. FOX - LIFE	9-14-45
	0.355	MICHAEL L, & CHERYL J, ACREE	9-14-47
	0.473	MICHAEL L, & CHERYL J. ACREE	9-14-48
1	0.118	MICHAEL L. & CHERYL J. ACREE	9-14-49
1	0.707	RONALD MARSH	9-14-50
	1.621	GEORGER, TAYLOR, ET UX	9-14-51
1	0.439	JAMES E. PEELMAN	9-14-52
1	0.555	JAMES E. PEELMAN	9-14-53
	1.649	RICHARD L. HARVETH, ET UX	9-14-54
	0,762	LYNN CAMP METHODIST CHURCH	9-16-14
1	52.02	RONALD R. YOUNG, ET UX - LIFE	9-16-15
1	1,98	ERIC J. YOUNG	9-16-15.1

NOTES ON SURVEY

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

BASED ON WY DOT COUNTY ROUTE 74 IS A 40' STRIP OF LAND ACQUIRED IN NUMEROUS DEEDS.

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

Land & Energy Development
Solutions from the ground up.
P.O. Box 150 • 12 Vanhom Drive • Glenville, WV 28351 • (304) 482-5834

No. 849
STATE OF
STATE OF STAT P.S 849

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. DATE JULY 27 REVISED SEPTEMBER 30 , 20 19

OPERATORS WELL NO.

KNOB CREEK N-3HM

WELL

STATE

051 COUNTY 02280 PERMIT

MINIMUM DEGREE OF ACCURACY

HORIZONTAL & VERTICAL

CONTROL DETERMINED BY

FILE NO.

8789P3HMR.dwg

KNOB CREEK N-3HM REV3

1" = 2000"

DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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



WASTE LIOUID IF GAS X _ DEEP__ "GAS" PRODUCTION X STORAGE SHALLOW OIL INJECTION DISPOSAL LOCATION: GROUND = 734,20' PROPOSED = 734.67' FISH CREEK (HUC 10) **ELEVATION** WATERSHED_ COUNTY MARSHALL GLEN EASTON 7.5' DISTRICT COUNTY QUADRANGLE DAVID LEE FRANKLIN 65.824± SURFACE OWNER . ACREAGE _ DAVID LEE FRANKLIN, ET AL - SEE WW-6A1 65.824± ROYALTY OWNER -ACREAGE _

PROPOSED WORK:

_ DRILL DEEPER ____ _ REDRILL __

SEE WW-6A1 LEASE NO.

DRILL X CONVERT _

___ FRACTURE OR STIMULATE __X__ PLUG OFF OLD

FORMATION ____ PERFORATE NEW FORMATION ____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG___ __ OTHER

PHYSICAL CHANGE IN WELL (SPECIFY)

MARCELLUS TARGET FORMATION _ ESTIMATED DEPTH TVD: 6,343' / TMD: 7,922

WELL OPERATOR TUG HILL OPERATING, LLC

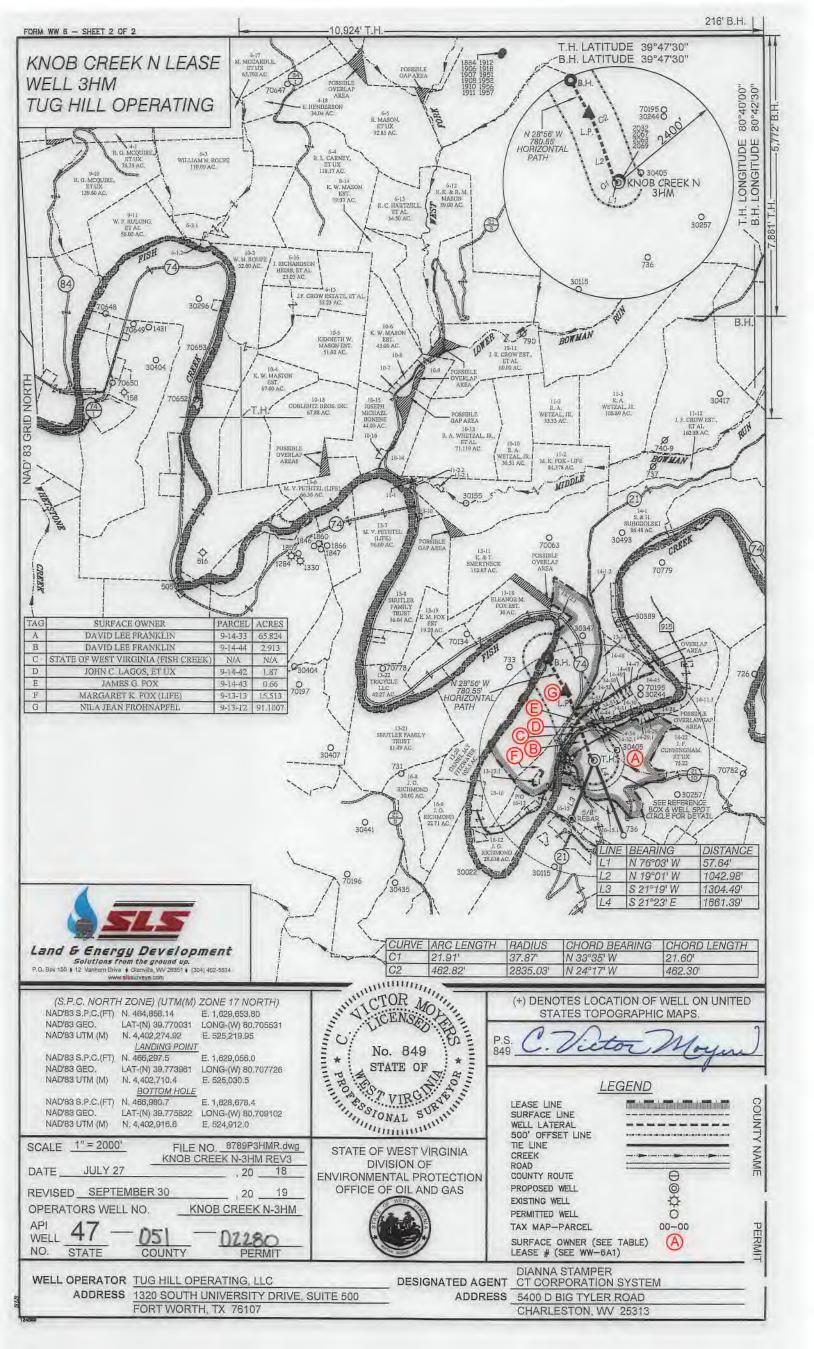
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500

FORT WORTH, TX 76107

DESIGNATED AGENT

DIANNA STAMPER CT CORPORATION SYSTEM

ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313



Knob Creek N-3HM

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

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

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

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

*See attached pages

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 Wy Stulle	
Its:	Permitting Specialist - Appalachia Region	

WW-6A1 Supplement

4705102280

Operator's Well No. Knob Creek N - 3HM

N/A	352	961	1/8+	TH EXPLORATION LLC	E VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	9-14-43 E	10*22121
N/A	499	953	1/8+	TH EXPLORATION LLC	E JAMES S RICHMOND	9-14-43 E	10*22119
N/A	354	961	1/8+	TH EXPLORATION LLC	E DEBORAH L WROBEL AND GREGORY G WROBEL	9-14-43 E	10*22117
N/A	224	962	1/8+	TH EXPLORATION LLC	E SYLVIA D WEST	9-14-43 E	10*22113
N/A	497	953	1/8+	TH EXPLORATION LLC	E OPAL V BUCKMASTER	9-14-43 E	10*21983
N/A	30	960	1/8+	TH EXPLORATION LLC	E WILLIAM R DODD AND SHIRLEY A DODD	9-14-43 E	10*21964
N/A	28	960	1/8+	TH EXPLORATION LLC	E LINDA R JANSSEN AND DENNIS D JANSSEN	9-14-43 E	10*21963
N/A	13	960	1/8+	TH EXPLORATION LLC	THEODORE F MASLOWSKI AND ANITA MASLOWSKI	9-14-43 E	10*21956
N/A	625	959	1/8+	TH EXPLORATION LLC	FIRST PRESBYTERIAN CHURCH OF CLARKSBURG	9-14-43 E	10*21838
N/A	128	951	1/8+	TH EXPLORATION LLC	DONALD FURLONG AND LISA K FURLONG	9-14-43 E	10*21507
N/A	290	957	1/8+	TH EXPLORATION LLC	E DARLENA BRY AND LEE V BRY	9-14-43 E	10*21491
N/A	140	951	1/8+	TH EXPLORATION LLC	E SANDRA A WHITE	9-14-43 E	10*21108
N/A	135	951	1/8+	TH EXPLORATION LLC	RONALD L WEST	9-14-43 E	10*21107
N/A	137	951	1/8+	TH EXPLORATION LLC	THE CALVIN O WILLIAMS & PATSY S WILLIAMS REVOCABLE LIVING TRUST	9-14-43 E	10*21105
N/A	131	951	1/8+	TH EXPLORATION LLC	E LARRY W BAILEY AND MARSHA K BAILEY	9-14-43 E	10*21104
N/A	122	951	1/8+	TH EXPLORATION LLC		9-14-43 E	10*21088
N/A	124	951	1/8+	TH EXPLORATION LLC	THOMAS E DODD AND ANITA M DODD	9-14-43 E	10*21087
N/A	126	951	1/8+	TH EXPLORATION LLC	MARY D LING	9-14-43 E	10*21027
N/A	576	945	1/8+	TH EXPLORATION LLC	DORIS L MASTERS AND ROY N MASTERS	9-14-43 E	10*19870
N/A	578	945	1/8+	TH EXPLORATION LLC	E SHIRLEY J DUFFY	9-14-43 E	10*19869
N/A	580	945	1/8+	TH EXPLORATION LLC	E TERRI J STREAM AND JOHN T STREAM	9-14-43 E	10*19868
N/A	434	944	1/8+	TH EXPLORATION LLC	DAVID A ROBINSON AND PATRICIA A ROBINSON	9-14-43 E	10*19714
N/A	432	944	1/8+	TH EXPLORATION LLC	BARBARA C LEISHMAN AND DANNY K LEISHMAN	9-14-43 E	10*19675
N/A	337	944	1/8+	TH EXPLORATION LLC	DEBRA SHORT AND RODNEY SHORT	9-14-43 E	10*19674
N/A	314	941	1/8+	TH EXPLORATION LLC	E WILLIAM EMERY	9-14-43 E	10*19481
N/A	316	941	1/8+	TH EXPLORATION LLC	ARDETH L PIPER AND PAUL E PIPER	9-14-43 E	10*19475
N/A	318	941	1/8+	TH EXPLORATION LLC	E EDGAR ALLEN RICHMOND	9-14-43 E	10*19474
N/A	348	940	1/8+	TH EXPLORATION LLC	HOWARD G AND CLARA J RICHMOND	9-14-43 E	10*19402
N/A	346	940	1/8+	TH EXPLORATION LLC			10*19401
N/A	221	938	1/8+	TH EXPLORATION LLC	E DOROTHY JEAN HUSTON AND KENNETH HUSTON	9-14-43 E	10*18736
N/A	243	938	1/8+	TH EXPLORATION LLC	DIANE E AND DENNIS P FOWLER		10*18735
N/A	247	938	1/8+	TH EXPLORATION LLC	KENNETH EMERY AND MARTHA LEMERY	9-14-43 E	10*18734
N/A	245	938	1/8+	TH EXPLORATION LLC	SHERRILL M LEAVERS AND JAMES H LEAVERS	9-14-43 E	10*18732
N/A	531	936	1/8+	TH EXPLORATION LLC	JOHN C LAGOS AND CYNTHIA M LAGOS	9-14-42 D	10*19538
N/A	373	1019	1/8+	TH EXPLORATION LLC		FISH CREEK C	
N/A	385	937	1/8+	TH EXPLORATION LLC	DAVID LEE FRANKLIN		10*47051.219.1
N/A	312	874	1/8+	TH EXPLORATION LLC	DAVID LEE FRANKLIN	9-14-33 A	10*47051.219.1
Assignment	Deed Book/Page	Deed B	Royalty	Grantee, Lessee, Etc.	gs Grantor, Lessor, Etc.	Parcel Tags	Lease ID

WW-6A1 Supplement

4705102280

Operator's Well No. Knob Creek N - 3HM

Lease ID	Parcel	Tags	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	ok/Page	Assignment
10*22377	9-14-43	Е	MONTY W BAILEY AND MARTHA E BAILEY	TH EXPLORATION LLC	1/8+	962	226	N/A
10*22378	9-14-43	Е	KEVIN R RICHMOND AND VALERIE L RICHMOND	TH EXPLORATION LLC	1/8+	962	228	N/A
10*22458	9-14-43	Е	JAMES RICHMOND AND CINDY L RICHMOND	TH EXPLORATION LLC	1/8+	963	132	N/A
10*22463	9-14-43	E	STEVEN R MCCLINTOCK	TH EXPLORATION LLC	1/8+	964	458	N/A
10*22517	9-14-43	Е	PHYLLIS M RADER	TH EXPLORATION LLC	1/8+	964	456	N/A
10*22545	9-14-43	Е	JANICE L MASLOWSKI AND FLOYD F MECHLING	TH EXPLORATION LLC	1/8+	968	9	N/A
10*23140	9-14-43	Е	MELISSA JENKINS	TH EXPLORATION LLC	1/8+	984	86	N/A
10*23144	9-14-43	Е	MARGARET A WALTERS	TH EXPLORATION LLC	1/8+	984	84	N/A
10*23145	9-14-43	П	WILLIAM BENNETT	TH EXPLORATION LLC	1/8+	984	82	N/A
10*23146	9-14-43	Е	RETA I GRIFFIN AND MARTIN A GRIFFIN	TH EXPLORATION LLC	1/8+	984	80	N/A
10*23154	9-14-43	Е	CAROLYN FAY BENNETT	TH EXPLORATION LLC	1/8+	984	78	N/A
10*23188	9-14-43	Е	LISA MCMANUS	TH EXPLORATION LLC	1/8+	984	530	N/A
10*23299	9-14-43	Е	PATRICIA L BECK	TH EXPLORATION LLC	1/8+	988	19	N/A
10*23312	9-14-43	Е	DONNA M CARTER	TH EXPLORATION LLC	1/8+	988	17	N/A
10*23559	9-14-43	Ε	ROBERT TOOMBS WRIGHT MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AT LITEM	TH EXPLORATION LLC	1/8+	1009	249	N/A
10*23577	9-14-43	Е	JOHN WILLIAM MACKENZIE MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM	TH EXPLORATION LLC	1/8+	1009	253	N/A
10*23578	9-14-43	Е	DUDLEY PORTER THAYER MONTAGUE JR BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM	TH EXPLORATION LLC	1/8+	1009	251	N/A
10*24739	9-14-43	Е	RICARDO THOMAS MAYA	TH EXPLORATION LLC	1/8+	1025	611	N/A
10*25442	9-14-43	Е	SARAH BETH PREWITT ET AL	TH EXPLORATION LLC	1/8+	1033	297	N/A
10*18732	9-13-13	F	SHERRILL M LEAVERS AND JAMES H LEAVERS	TH EXPLORATION LLC	1/8+	938	245	N/A
10*18734	9-13-13	F	KENNETH EMERY AND MARTHA LEMERY	TH EXPLORATION LLC	1/8+	938	247	N/A
10*18735	9-13-13	F	DIANE E AND DENNIS P FOWLER	TH EXPLORATION LLC	1/8+	938	243	N/A
10*18736	9-13-13	F	DOROTHY JEAN HUSTON AND KENNETH HUSTON	TH EXPLORATION LLC	1/8+	938	221	N/A
10*19401	9-13-13	F	JOYCE A WILSON AND D MURPHY WILSON	TH EXPLORATION LLC	1/8+	940	346	N/A
10*19402	9-13-13	F	HOWARD G AND CLARA J RICHMOND	TH EXPLORATION LLC	1/8+	940	348	N/A
10*19474	9-13-13	F	EDGAR ALLEN RICHMOND	TH EXPLORATION LLC	1/8+	941	318	N/A
10*19475	9-13-13	F	ARDETH L PIPER AND PAUL E PIPER	TH EXPLORATION LLC	1/8+	941	316	N/A
10*19481	9-13-13	F	WILLIAM EMERY	TH EXPLORATION LLC	1/8+	941	314	N/A
10*19674	9-13-13	F	DEBRA SHORT AND RODNEY SHORT	TH EXPLORATION LLC	1/8+	944	337	N/A
10*19675	9-13-13	F	BARBARA C LEISHMAN AND DANNY K LEISHMAN	TH EXPLORATION LLC	1/8+	944	432	N/A
10*19714	9-13-13	F	DAVID A ROBINSON AND PATRICIA A ROBINSON	TH EXPLORATION LLC	1/8+	944	434	N/A
10*19868	9-13-13	F	TERRI J STREAM AND JOHN T STREAM	TH EXPLORATION LLC	1/8+	945	580	N/A
10*19869	9-13-13	Ŧ	SHIRLEY J DUFFY	TH EXPLORATION LLC	1/8+	945	578	N/A
10*19870	9-13-13	F	DORIS L MASTERS AND ROY N MASTERS	TH EXPLORATION LLC	1/8+	945	576	N/A
10*21027	9-13-13	F	MARY D LING	TH EXPLORATION LLC	1/8+	951	126	N/A
10*21087	9-13-13	F	THOMAS E DODD AND ANITA M DODD	TH EXPLORATION LLC	1/8+	951	124	N/A
10*21088	9-13-13	ī	DONALD E WEST AND MARTHA E WEST	TH EXPLORATION LLC	1/8+	951	122	N/A

WW-6A1 Supplement

4705102280

Operator's Well No. Knob Creek N - 3HM

Lease ID	Parcel	Tags	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	k/Page	Assignment
10*21104	9-13-13	T	LARRY W BAILEY AND MARSHA K BAILEY	TH EXPLORATION LLC	1/8+	951	131	N/A
10*21105	9-13-13	F	THE CALVIN O WILLIAMS & PATSY S WILLIAMS REVOCABLE LIVING TRUST	TH EXPLORATION LLC	1/8+	951	137	N/A
10*21107	9-13-13	Ŧ	RONALD L WEST	TH EXPLORATION LLC	1/8+	951	135	N/A
10*21108	9-13-13	F	SANDRA A WHITE	TH EXPLORATION LLC	1/8+	951	140	N/A
10*21491	9-13-13	П	DARLENA BRY AND LEE V BRY	TH EXPLORATION LLC	1/8+	957	290	N/A
10*21507	9-13-13	T	DONALD FURLONG AND LISA K FURLONG	TH EXPLORATION LLC	1/8+	951	128	N/A
10*21838	9-13-13	Ŧ	FIRST PRESBYTERIAN CHURCH OF CLARKSBURG	TH EXPLORATION LLC	1/8+	959	625	N/A
10*21956	9-13-13	F	THEODORE F MASLOWSKI AND ANITA MASLOWSKI	TH EXPLORATION LLC	1/8+	960	13	N/A
10*21963	9-13-13	T	LINDA R JANSSEN AND DENNIS D JANSSEN	TH EXPLORATION LLC	1/8+	960	28	N/A
10*21964	9-13-13	Ŧ	WILLIAM R DODD AND SHIRLEY A DODD	TH EXPLORATION LLC	1/8+	960	30	N/A
10*21983	9-13-13	T	OPAL V BUCKMASTER	TH EXPLORATION LLC	1/8+	953	497	N/A
10*22113	9-13-13	F	SYLVIA D WEST	TH EXPLORATION LLC	1/8+	962	224	N/A
10*22117	9-13-13	F	DEBORAH L WROBEL AND GREGORY G WROBEL	TH EXPLORATION LLC	1/8+	961	354	N/A
10*22119	9-13-13	F	JAMES S RICHMOND	TH EXPLORATION LLC	1/8+	953	499	N/A
10*22121	9-13-13	F	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	TH EXPLORATION LLC	1/8+	961	352	N/A
10*22377	9-13-13	F	MONTY W BAILEY AND MARTHA E BAILEY	TH EXPLORATION LLC	1/8+	962	226	N/A
10*22378	9-13-13	F	KEVIN R RICHMOND AND VALERIE L RICHMOND	TH EXPLORATION LLC	1/8+	962	228	N/A
10*22458	9-13-13	F	JAMES RICHMOND AND CINDY L RICHMOND	TH EXPLORATION LLC	1/8+	963	132	N/A
10*22463	9-13-13	F	STEVEN R MCCLINTOCK	TH EXPLORATION LLC	1/8+	964	458	N/A
10*22517	9-13-13	F	PHYLLIS M RADER	TH EXPLORATION LLC	1/8+	964	456	N/A
10*22545	9-13-13	F	JANICE L MASLOWSKI AND FLOYD F MECHLING	TH EXPLORATION LLC	1/8+	968	9	N/A
10*23140	9-13-13	F	MELISSA JENKINS	TH EXPLORATION LLC	1/8+	984	86	N/A
10*23144	9-13-13	F	MARGARET A WALTERS	TH EXPLORATION LLC	1/8+	984	84	N/A
10*23145	9-13-13	F	WILLIAM BENNETT	TH EXPLORATION LLC	1/8+	984	82	N/A
10*23146	9-13-13	F	RETA I GRIFFIN AND MARTIN A GRIFFIN	TH EXPLORATION LLC	1/8+	984	80	N/A
10*23154	9-13-13	F	CAROLYN FAY BENNETT	TH EXPLORATION LLC	1/8+	984	78	N/A
10*23188	9-13-13	F	LISA MCMANUS	TH EXPLORATION LLC	1/8+	984	530	N/A
10*23299	9-13-13	F	PATRICIA L BECK	TH EXPLORATION LLC	1/8+	988	19	N/A
10*23312	9-13-13	F	DONNA M CARTER	TH EXPLORATION LLC	1/8+	988	17	N/A
10*23559	9-13-13	F	ROBERT TOOMBS WRIGHT MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AT LITEM	TH EXPLORATION LLC	1/8+	1009	249	N/A
10*23577	9-13-13	F	JOHN WILLIAM MACKENZIE MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM	TH EXPLORATION LLC	1/8+	1009	253	N/A
10*23578	9-13-13	F	DUDLEY PORTER THAYER MONTAGUE JR BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM	TH EXPLORATION LLC	1/8+	1009	251	N/A
10*24739	9-13-13	F	RICARDO THOMAS MAYA	TH EXPLORATION LLC	1/8+	1025	611	N/A
10*25442	9-13-13	F	SARAH BETH PREWITT ET AL	TH EXPLORATION LLC	1/8+	1033	297	N/A
10*24858	9-13-12	G	NILA JEAN FROHNAPFEL	TH EXPLORATION LLC	1/8+	1028	119	N/A



October 1, 2019

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

RE: Knob Creek N-3HM

Subject: CR 21, 74 and 915 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 21, 74 and 915 in the area reflected on the Knob Creek N-3HM 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-hillop.com.

Sincerely,

Amy Miller

Permit Specialist - Appalachia Region

Cell 304-376-0111

Email: amiller@tug-hillop.com

Office of Oil and Gas

OCT - 2 2019

Date of Notice Certification: 10/01/2019

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

API No. 47- 051

			Operator's	Well No. Knob	Creek N-3HM
			Well Pad	Name: Knob Cr	eek
Notice has l					
	e provisions in West Virginia Code	§ 22-6A, the Operator has prov	ided the red	quired parties v	vith the Notice Forms listed
	tract of land as follows:		P1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	505 040 05	
State:	West Virginia Marshall		Easting: Northing:	525,219.95 4,402,274.92	
County: District:	Meade	Public Road Acce	_	St. Joseph Road	CR 21
Quadrangle:	Glen Easton 7.5'	Generally used fa		David Lee Frankl	
Watershed:	Fish Creek (HUC 10)	Generally used to	m name.	David LCC 1 falls	
r, aterorica.					
prescribed by it has provide information re of giving the requirements Virginia Code of this article	West Virginia Code § 22-6A-7(b), the secretary, shall be verified and set the owners of the surface described and the owners of the surface described and the owner of the surface owner notice of entry to surface owner notice of subsection (b), section sixteen of \$22-6A-11(b), the applicant shall have been completed by the applicant owner west Virginia Code § 22-6A, the Open the section of the sectio	shall contain the following info ibed in subdivisions (1), (2) an ection sixteen of this article; (ii urvey pursuant to subsection (of this article were waived in tender proof of and certify to the nt.	rmation: (1 nd (4), subs) that the re a), section writing by ne secretary	4) A certification (b), section (b), section (b), section (c), section that the surface over that the notice	on from the operator that (i) ction ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice wher; and Pursuant to West
that the Ope	rator has properly served the require		ns rionee c	Simounon	OOG OFFICE USE
☐ 1. NO	TICE OF SEISMIC ACTIVITY or	NOTICE NOT REQUIR SEISMIC ACTIVITY WAS			☐ RECEIVED/
					NOT REQUIRED
■ 2. NO	TICE OF ENTRY FOR PLAT SURV	VEY or NO PLAT SURVE	EY WAS CO		NOT REQUIRED RECEIVED
	TICE OF ENTRY FOR PLAT SURV		ED BECA	ONDUCTED	RECEIVED RECEIVED/ NOT REQUIRED Office of Calved
		■ NOTICE NOT REQUIR	RED BECA	ONDUCTED USE VEY	RECEIVED RECEIVED/ NOT REQUIRED Office of Oil and OCT - 2 201
☐ 3. NO		■ NOTICE NOT REQUIR NOTICE OF ENTRY FOR F WAS CONDUCTED or	RED BECA	ONDUCTED USE VEY	RECEIVED RECEIVED/ NOT REQUIRED Office of COVED
□ 3. NO*	FICE OF INTENT TO DRILL or	■ NOTICE NOT REQUIR NOTICE OF ENTRY FOR F WAS CONDUCTED or	RED BECA	ONDUCTED USE VEY	RECEIVED RECEIVED/ NOT REQUIRED Office of Oil and OCT - 2 201

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.

4705-102280
API NO. 47OPERATOR WELL NO. Knob Creek N-3HM
Well Pad Name: Knob Creek

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: 9/30/2019 Date Permit Application Filed: 10/1/2019 Notice of: ✓ PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) REGISTERED ✓ METHOD OF DELIVERY THAT REQUIRES A ☐ PERSONAL RECEIPT OR SIGNATURE CONFIRMATION SERVICE MAIL 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) COAL OWNER OR LESSEE Name: David Lee Franklin Name: CNX Land Resources, Inc. Address: 131 Saint Joseph Road Address: 1000 Consol Energy Drive Glen Easton, WV 26039 Canonsburg, PA 15318 Name: ☐ COAL OPERATOR Address: Name: Address: — WV Department of Environmental Protection ☑ SURFACE OWNER(s) (Road and/or Other Disturbance) Name: David Lee Franklin SURFACE OWNER OF WATER WELL Address: 131 Saint Joseph Road AND/OR WATER PURVEYOR(s) Glen Easton, WV 26039 Name: *See attached list Name: Address: Address: ☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: Name: Address: Address: *Please attach additional forms if necessary

WW-6AC (1/12)

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: Tug Hill Operating, LLC . Address: 380 Southpointe Boulevard, Plaza II, Suite 200

By: Amy L. Miller Wy L. Miller Canonsburg, PA 15317

Its: Permitting Specialist - Appalachia Facsimile: 724-749-8388

Telephone: 724-749-8388 Email: amiller@tug-hillop.com

NOTARY SEAL

Commonwealth of Pennsylvania - Notary Seal MAUREEN A STEAD - Notary Public Washington County My Commission Expires Jan 28, 2023 Commission Number 1259926 Subscribed and sworn before me this 1 day of DUTOBER 2019

Null Holling

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.

My Commission Expires

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Office of Oil and Gas

OCT - 2 2019

OPERATOR WELL NO. Knob Creek N-3HM Well Pad Name: Knob Creek

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.

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

Well Location Restrictions

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

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API NO. 47-_

OPERATOR WELL NO. Knob Creek N-3HM

Well Pad Name: Knob Creek

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

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

OCT - 2 2019

2 2010

WV Department of

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.

API NO. 47- 0 5-1 0 2 2 8 0
OPERATOR WELL NO. Knob Creek N-3HM
Well Pad Name: Knob Creek

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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OCT - 2 2019

Well Pad Name: Knob Creek

Notice is hereby given by:

Well Operator: Tug Hill Operating, LLC

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.

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

Subscribed and sworn before me this 30 day of X77., 2019

My Commission Expires

128123 Notary Public

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Exhibit WW-6A

Supplement Pg. 1A

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

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

Well:

KNOB CREEK N - 3HM

District:

Meade (House #'s 1-12, 14-26) (Church #13)

State:

WV

There are twenty-six (25) residences, no businesses, one (1) church, no schools or no emergency facilities within two-thousand feet (2,000') of the above referenced well location.

House 1 TM 14 Pcl. 39 Margaret Fox – Life c/o Paul Fox Phone: 304-455-3817 (Per Tax Addre – Paul G. Fox) Physical Address: 31 Crow Dr. Glen Easton, WV 26039 Tax Address: 5761 Saint Joseph Rd. Proctor, WV 26055	House 2 TM 14 Pcl. 32 Twila C. Coffield Phone: 304-845-5941 Physical Address: 184 Crow Dr. Glen Easton, WV 26039 Tax Address: 16 Sandy Ave. Moundsville, WV 26041-1020	House 3 TM 14 Pcl. 54 Richard L. Harveth, Et Ux c/o Richard Lee Harveth Phone: 304-845-7397; 304-845-5128 Physical Address: 220 Crow Dr. Glen Easton, WV 26039 Tax Address: Same
House 4 TM 14 Pcl. 42 John C. Lagos, Et Ux Phone: 304-845-2793 Physical Address: 12529 Fish Creek Rd. Glen Easton, WV 26039 Tax Address: 404 Jefferson Ave. Glen Dale, WV 26038	House 5 TM 14 Pcl. 53 James E. Peelman Phone: None Found Physical Address: 12551 Fish Creek Rd. Glen Easton, WV 26039 Tax Address: 12551 Fish Creek Rd. Glen Easton, WV 26039	House 6 TM 14 Pcl. 29.1 Andrew Fasouletos, Et Ux Phone: 304-845-9009 Physical Address: 329 Crow Dr. Glen Easton, WV 26039 Tax Address: 1. Rd. 2 Box 150 Proctor, WV 26055 2. 3391 Taylors Ridge Rd. UCT - 2 2019 Proctor, WV 26055-9723
House 7 TM 14 Pcl. 29.1 Andrew Fasouletos, Et Ux Phone: 304-845-9009 Physical Address: 361 Crow Dr. Glen Easton, WV 26039 Tax Address: 1. Rd. 2 Box 150 Proctor, WV 26055 2. 3391 Taylors Ridge Rd. Proctor, WV 26055-9723	House 8 TM 14 Pcl. 29 Andrew Fasouletos, Et Ux c/o Tena Marie Stricklin Phone: 304-845-9009 Physical Address: 389 Crow Dr. Glen Easton, WV 26039 Tax Address: 1. 3391 Taylors Ridge Rd. Proctor, WV 26055-9723 2. Rd. 2 Box 150 Proctor, WV 26055	House 9 TM 14 Pcl. 48 Michael L. & Cheryl J. Acree Phone: 304-455-2148; 304-455-5859 Physical Address: 12725 Fish Creek Rd. Glen Easton, WV 26039 Tax Address: 189 Plum St. Proctor, WV 26055

House 10 TM 14 Pcl. 45 George R. Taylor, Et Ux Phone: 304-845-2987 Physical Address: 12781 Fish Creek Rd. Glen Easton, WV 26039 Tax Address: Same	House 11 TM 16 Pcl. 15.1 Eric J. Young Phone: 304-686-3398; 304-905-1986 (Per Address – Chelsey Long); 304-845- 0154 (Per Address – Bill J. Blatt) Physical Address: 153 Young Ln. Glen Easton, WV 26039 Tax Address: Same	House 12 TM 16 Pcl. 15 Ronald R. Young, Et Ux - Life Phone: 304-845-6044 (Per Tax Address – Geraldine M. Young) Physical Address: 348 Saint Joseph Rd. Glen Easton, WV 26039 Tax Address: Same
House 13 TM 16 Pcl. 14 Lynn Camp Methodist Church Phone: Physical Address: 171 Saint Joseph Rd. Glen Easton, WV 26039 Tax Address: Unknown Address Moundsville, WV 26041	House 14 TM 16 Pcl. 15 Ronald R. Young, Et Ux - Life Phone: 304-845-6044 (Per Tax Address – Geraldine M. Young) Physical Address: 323 Saint Joseph Rd. Glen Easton, WV 26039 Tax Address: 348 Saint Joseph Rd. Glen Easton, WV 26039	House 15 TM 16 Pcl. 13.5 Paul R. Blake & Paul R. Blake II Phone: 304-845-9369 Physical Address: 616 Saint Joseph Rd. Glen Easton, WV 26039 Tax Address: 121 Vandivere Ln. Glen Easton, WV 26039-9707
House 16 TM 16 Pcl. 13.1 Paul W. Blake - Life Phone: 304-845-2999 Physical Address: 581 Saint Joseph Rd. Glen Easton, WV 26039 Tax Address: 1500 8th St. Moundsville, WV 26041-2031	House 17 TM 16 Pcl. 13.6 Wesley D. Yeater, Et Ux Phone: 304-843-5212 Physical Address: 37 Vandivere Ln. Glen Easton, WV 26039 Tax Address: Same	House 18 TM 16 Pcl. 13.3 Paul R. Blake Phone: 304-845-9369 Physical Address: 121 Vandivere Ln. Glen Easton, WV 26039 Tax Address: Same
House 19 TM 16 Pcl. 12.2 Spencer J. & Carrie A. Richmond Phone: 304-845-2274; 304-845-8186 Physical Address: 293 Richmond Ln. Glen Easton, WV 26039 Tax Address: 243 Richmond Ln. Glen Easton, WV 26039	House 20 TM 16 Pcl. 12.7 Spencer J. & Carrie A. Richmond Phone: 304-845-2274; 304-845-8186 Physical Address: 243 Richmond Ln. Glen Easton, WV 26039 Tax Address: Same	House 21 TM 16 Pcl. 12.1 James G. Richmond, Et Ux Phone: 304-845-8186 Physical Address: 157 Richmond Ln. Glen Easton, WV 26039 Tax Address: Same WV Department Environmental Protes
House 22 TM 14 Pcl. 33 David Lee Franklin Phone: 304-845-6025; 304-845-3203 Physical Address: 131 Saint Joseph Rd. Glen Easton, WV 26039 Tax Address: 131 Saint Joseph Rd. Glen Easton, WV 26039	House 23 TM 14 Pcl. 37 Margaret Fox – Life c/o Paul Fox Phone: 304-455-3817 (Per Tax Address – Paul G. Fox) Physical Address: 107 Saint Joseph Rd. Glen Easton, WV 26039 Tax Address: 5761 Saint Joseph Rd. Proctor, WV 26055	House 24 TM 14 Pcl. 37 Margaret Fox – Life c/o Paul Fox Phone: 304-455-3817 (Per Tax Address – Paul G. Fox) Physical Address: 51 Saint Joseph Rd. Glen Easton, WV 26039 Tax Address: 5761 Saint Joseph Rd. Proctor, WV 26055

4705102280

House 25

TM 13 Pcl. 13

Margaret K. Fox – Life

c/o Paul Fox

Phone: 304-455-3817 (Per Tax Address

- Paul G. Fox)

Physical Address: 28 Richmond Ln.

Glen Easton, WV 26039

Tax Address:

5761 Saint Joseph Rd. Proctor, WV 26055 House 26

TM 13 Pcl. 12

Nila Jean Prohnapfel

Phone: None Found

Physical Address:

11975 Fish Creek Rd.

Glen Easton, WV 26039

Tax Address:

Rd. 1 Box 190

Proctor WV 26055-9703

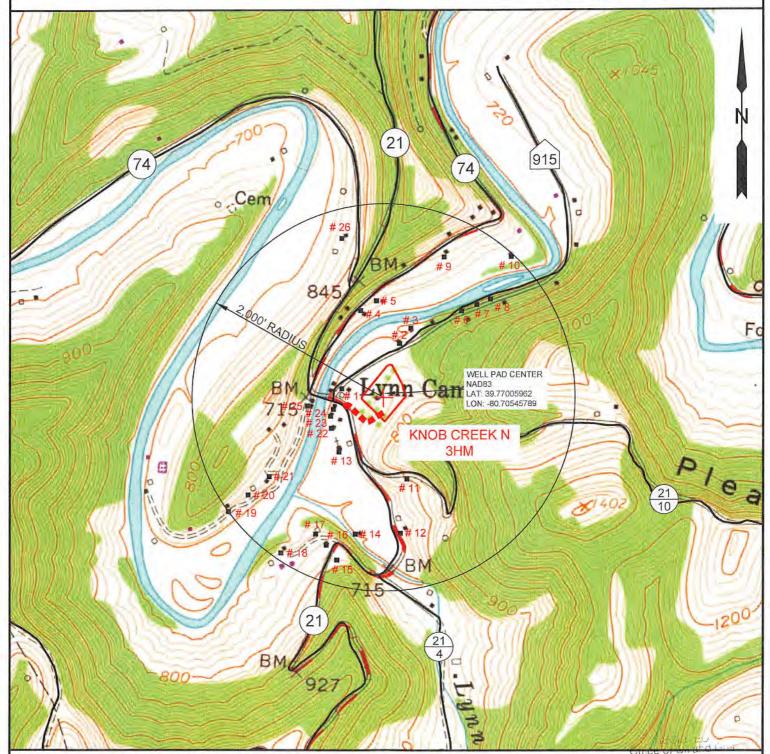
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Office of Oil and Gas

OCT - 2 2019

WW-6A

PROPOSED KNOB CREEK N - 3HM 4705102280

SUPPLEMENT PG. 1B



NOTE: THERE APPEARS TO BE TWENTY-SIX (26) POSSIBLE WATER SOURCES WITHIN 2,000'.

OCT - 2 2019



I	TOPO SECTION: GLEN EASTON 7.5'		OPERATOR: PREPARED FOR: TUG HILL OPERATING, LLC				
	COUNTY	DISTRICT	380 SOUTHPOINTE BLVD				
I	MARSHALL	MEADE	SUITE 200 CANONSBURG, PA 15317				
İ	DRAWN BY	JOB NO.	DATE	SCALE			
1	K.G.M.	8789	07/27/2018	1" - 1000'			



Operator Well No. Knob Creek N-3HM

WW-6A3 (1/12)

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

Notice Time entry	Requirement: Notice shall be prov	vided at least SEVEN (7) da	ys but no more than	FORTY-FIVE (4	5) days prior to		
Date of Noti	ce: 2/5/2018 Date of Pla	nned Entry: 2/12/2018					
Delivery me	thod pursuant to West Virginia C	ode § 22-6A-10a					
☐ PERSO	NAL REGISTERED						
SERVIC		RECEIPT OR SIGNATURE CONFIRMATION					
on to the surf but no more to beneath such owner of min and Sediment Secretary, when able the sur	Vest Virginia Code § 22-6A-10(a), I ace tract to conduct any plat survey han forty-five days prior to such en tract that has filed a declaration purerals underlying such tract in the cost Control Manual and the statutes are sich statement shall include contact rface owner to obtain copies from the	is required pursuant to this a try to: (1) The surface owne rsuant to section thirty-six, a punty tax records. The notice and rules related to oil and ga- information, including the a	rticle. Such notice s r of such tract; (2) to rticle six, chapter tw e shall include a sta s exploration and pr	hall be provided at o any owner or less venty-two of this co tement that copies of roduction may be of	least seven days ee of coal seams ode; and (3) any of the state Erosion otained from the		
Notice is her	eby provided to:	4.4					
■ SURFA	CE OWNER(s)	■ COA	COAL OWNER OR LESSEE				
Name: David L	ee Franklin (Pad and Access Road)		Name: CNX Land Resources, Inc.				
Address: 131 Saint Joseph Road			Address: 1000 Cansa Energy Drive				
Gle	Easton, WV 26039		Canonsburg, PA 15318				
			no viz rucedana e n				
Address:			ERAL OWNER(s)				
NT.			Name: David Lee Franklin				
			Address: 131 Saint Joseph Road				
Address:			Glen Easton, WV 26039 *please attach additional forms if necessary				
		prease actac	n additional forms if fice	essary			
Notice is he	rehy given:						
	Vest Virginia Code § 22-6A-10(a), r	notice is hereby given that th	e undersigned well	operator is plannin	g entry to conduct		
	on the tract of land as follows:	iones is marroy Brian mine	e massagness nen	A Product of Programme	8 **** 2 ***		
State:	West Virginia	Approx. Latit	ude & Longitude:	39.7700596; -80.7054579			
County:	The state of the s		Public Road Access:		St. Joseph Road - County Route 21		
District:	District: Meade		Watershed:		Fish Creek (HUC 10)		
Quadrangle: Glen Easton 7.5'		Generally use	Generally used farm name: David Lee Franklin				
may be obtain Charleston, V obtained from	state Erosion and Sediment Controlled from the Secretary, at the WV IVV 25304 (304-926-0450). Copies the Secretary by visiting www.deg	Department of Environmenta s of such documents or addit	l Protection headquional information re	arters, located at 60	1 57th Street, SE,		
	reby given by:	Address:	000000000000000000000000000000000000000	1 Di 11 C 1 CC	OCT 9 2010		
Well Operator: Tug Hill Operating, LLC 724-749-8388		Address:		thpointe Boulevard, Plaza II, Suite 200 OCT - 2 2019			
Email:	724-749-8388	Facsimile:	Canonsburg, PA 15317		WV Department of		
Eman.	amiller@tug-hillop.com	racsimile:	724-338-2030		Environmental Protectio		
Oil and Car	Privacy Nation						

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-6A5 (1/12)

Operator Well No. Knob Creek N-3HM

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

Notice Time Date of Notic	Requirement: notice shall le: 10/01/2019 D		o later than the filing pplication Filed: 10/0		application.	
Delivery met	hod pursuant to West Virg	ginia Code § 2	22-6A-16(c)			
■ CERTII	FIED MAIL		HAND			
	N RECEIPT REQUESTED)	DELIVERY			
Pursuant to V return receipt the planned of required to be drilling of a lidamages to the (d) The notice of notice.	7. Va. Code § 22-6A-16(c), requested or hand delivery, peration. The notice requiporovided by subsection (b) norizontal well; and (3) A period of the surface affected by oil and a required by this section sleeps provided to the SURF. I listed in the records of the	, no later than give the surfaired by this su, section ten or proposed surfad gas operation hall be given t	the date for filing to ace owner whose land absection shall inclused this article to a surface use and compensate to the extent the date of the surface owner at R(s)	d will be used for de: (1) A copy ace owner whose sation agreement amages are comp	or the drilling of a ho of this code section the land will be used in the containing an offer pensable under article	rizontal well notice of (2) The information conjunction with the of compensation for e six-b of this chapter.
Name: David Le Address: 131 S Glen Easton, WV Notice is here Pursuant to W	e Franklin aint Joseph Road 26039	16(c), notice i	Name: Addres	s:ne undersigned v		
Name: David Le Address: 131 s Glen Easton, WV Notice is here Pursuant to W operation on State:	e Franklin aint Joseph Road 26039 eby given: est Virginia Code § 22-6A-	16(c), notice i	Name: Addres s hereby given that the	s:		
Name: David Le Address: 131 s Glen Easton, WV Notice is here Pursuant to W operation on State: County:	e Franklin aint Joseph Road 26039 eby given: est Virginia Code § 22-6A- the surface owner's land for	16(c), notice i	Name: Addres s hereby given that the drilling a horizonta UTM NAD 8	he undersigned valued on the tra Easting: Northing:	ct of land as follows: 525,219.95 4,402,274.92	
Name: David Le Address: 131 S Glen Easton, WV Notice is here Pursuant to W operation on State: County: District:	e Franklin aint Joseph Road 26039 eby given: est Virginia Code § 22-6A- the surface owner's land for West Virginia Marshall Meade	16(c), notice i	Name: Addres s hereby given that the familing a horizonta UTM NAD 8	he undersigned valued on the tra Basting: Northing:	ct of land as follows: 525,219.95 4,402,274.92 St. Joseph Road - CR 21	
Name: David Le Address: 131 S Glen Easton, WV Notice is here Pursuant to W	e Franklin aint Joseph Road 26039 eby given: fest Virginia Code § 22-6A- the surface owner's land for West Virginia Marshall	16(c), notice i	Name: Addres s hereby given that the familing a horizonta UTM NAD 8	he undersigned valued on the tra Easting: Northing:	ct of land as follows: 525,219.95 4,402,274.92	
Name: David Le Address: 131 S Glen Easton, WV Notice is here Pursuant to W operation on State: County: District: Quadrangle: Watershed: Fhis Notice S Pursuant to W to be provide morizontal we surface affect information re meadquarters, gas/pages/defi	e Franklin aint Joseph Road 26039 Pby given: est Virginia Code § 22-6A- the surface owner's land for West Virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC 10) hall Include: est Virginia Code § 22-6A- d by W. Va. Code § 22-6A- d by W. Va. Code § 22-6A- ed by oil and gas operation elated to horizontal drilling located at 601 57 th Street, ault.aspx.	-16(c), notice is the purpose of the purpose of A-10(b) to a sace use and coast to the extens may be obta	Name: Addres s hereby given that the drilling a horizonta UTM NAD 8 Public Road Generally use tice shall include: (1) surface owner whose mpensation agreement the damages are contended from the Secret eston, WV 25304	he undersigned valuell on the tra Easting: Northing: Access: ed farm name: A copy of this e land will be understand and the containing and the co	ct of land as follows: 525,219.95 4,402,274.92 St. Joseph Road - CR 21 David Lee Franklin code section; (2) The used in conjunction offer of compensation article six-b of the Department of Environ by visiting www.	e information required with the drilling of a on for damages to the is chapter. Additional ironmental Protection v.dep.wv.gov/oil-and-
Name: David Le Address: 1318 Glen Easton, WV Notice is here Pursuant to We operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to We obe provide norizontal we surface affect information re neadquarters, gas/pages/defi	e Franklin aint Joseph Road 26039 Peby given: Fest Virginia Code § 22-6A- the surface owner's land for West Virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC 10) hall Include: Fest Virginia Code § 22-6A- d by W. Va. Code § 22-6A- d by W. Va. Code § 22-6A- d by oil and gas operation elated to horizontal drilling located at 601 57 th Street, ault.aspx. Tug Hill Operating, LLC	-16(c), notice is the purpose of the purpose of A-10(b) to a sace use and coast to the extens may be obta	Name: Addres s hereby given that the farilling a horizonta UTM NAD 8 Public Road Generally use tice shall include: (1) surface owner whose mpensation agreement the damages are coined from the Secret	he undersigned of all well on the traces are name: Access: ad farm name: A copy of this are land will be understand and larry, at the WV (304-926-0450)	ct of land as follows: 525,219.95 4,402,274.92 St. Joseph Road - CR 21 David Lee Franklin code section; (2) The used in conjunction offer of compensation article six-b of the Department of Envior by visiting www.	e information required with the drilling of a on for damages to the is chapter. Additional ironmental Protection v.dep.wv.gov/oil-and- RECEIVED Office of Oil and Gas
Name: David Le Address: 131 s Glen Easton, WV Notice is here Pursuant to W operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W to be provide norizontal we surface affect	e Franklin aint Joseph Road 26039 Pby given: est Virginia Code § 22-6A- the surface owner's land for West Virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC 10) hall Include: est Virginia Code § 22-6A- d by W. Va. Code § 22-6A- d by W. Va. Code § 22-6A- ed by oil and gas operation elated to horizontal drilling located at 601 57 th Street, ault.aspx.	-16(c), notice is the purpose of the purpose of A-10(b) to a sace use and coast to the extens may be obta	Name: Addres s hereby given that the drilling a horizonta UTM NAD 8 Public Road Generally use tice shall include: (1) surface owner whose mpensation agreement the damages are contended from the Secret eston, WV 25304	he undersigned valuell on the tra Easting: Northing: Access: ed farm name: A copy of this e land will be understand and the containing and the co	ct of land as follows: 525,219.95 4,402,274.92 St. Joseph Road - CR 21 David Lee Franklin code section; (2) The used in conjunction offer of compensation article six-b of the Department of Envior by visiting www.	e information required with the drilling of a on for damages to the is chapter. Additional ironmental Protection

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 deepprivacyofficer@wv.gov.

API NO. 47-		
OPERATOR WELL	LNO.	Knob Creek N-3HM
Well Pad Name:	Knob C	reek

STATE OF WEST VIRGINIA

	The street of th	or twenty-four (24) months.	of West Virginia to conduct oil or gas well
Pursuant to Vany existing located within larger used to was provided in sarticle was proposed within the colorist of the coveriance by the practices to conditions the cond	on Restrictions West Virginia Code § 22-6A-12(a), Wells may water well or developed spring used for hum in six hundred twenty-five feet of an occupied to house or shelter dairy cattle or poultry has agricultural buildings that existed on the date ection ten of this article or a notice of intent to rovided, whichever occurs first, and to any dwonsent of the surface owner transmitted to the county commission for the county in which is the secretary from these distance restrictions up to be employed during well site construction, e department requires to ensure the safety and	an or domestic animal consum dwelling structure, or a buildir sbandry. This limitation is ap a notice to the surface owner of drill a horizontal well as provi- elling under construction prior e department and recorded in to unch property is located. Furthe pon submission of a plan which drilling and operations. The protection of affected persons a	aption. The center of well pads may not be ag two thousand five hundred square feet or plicable to those wells, developed springs, of planned entry for surveying or staking as ded in subsection (b), section sixteen of this to that date. This limitation may be waived the real property records maintained by the stronger, the well operator may be granted a a identifies the sufficient measures, facilities trainance, if granted, shall include terms and
nclude insur	ance, bonding and indemnification, as well as	VAIVER	
WW-6A and	atted above, and that I have received copies of a attachments consisting of pages one (1) through the well plat, all for proposed well work on the West Virginia Marshall Meade	th, including the	erosion and sediment control plan, if 525,219.95 4,402,274.92
	Glen Easton 7.5'	Generally used farm name:	St. Joseph Road - County Route 21
Watershed:	Fish Creek (HUC-10)		
further state	that I have no objection to the planned work of se materials and I therefore waive all well site	lescribed in these materials, and	I I have no objection to a permit being
WELL SITE *Please check	E RESTRICTIONS BEING WAIVED k all that apply		TION BY A NATURAL PERSON
	NG WATER WELLS OPED SPRINGS		TION BY A CORPORATION, ETC.
DWELI	LINGS	By: Douglas L. Del	
☐ AGRICU	ULTURAL BUILDINGS	Its: Attomey-in-Fac Signature: S Date: 17	
	r: Tug Hill Operating, LLC	Signature:	
y: David G. Del		Telephone: 724-749-8388	
ts: Land Team L	ead		
	WEALTH OF PENNSYLVANIA		and the same of th

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.

RECEIVED Office of Oil and Gas

OCT - 2 2019

LIMITED POWER OF ATTORNEY 7 0 5 1 0 2 2 8 0

That I, Thomas John Fox, hereby make, name and appoint, Tug Hill Operating, LLC, by and through its officers, agents or employees to be my limited power of attorney, for the sole and specific purpose of executing Well Location Restriction Waivers(s) that permit the conducting of oil or gas well work and the drilling of additional oil and gas wells on the Knob Creek Well Pad situate in Meade District, Marshall County, West Virginia, shown on Tax Map 14, as Parcel 33. See attached Exhibit A. Said waivers shall be of the type shown on the attached Exhibit B, differing only in the api number and operator well number located on the form.

I the said Thomas John Fox hereby declare that acts done by my said attorney for said specific and sole purpose shall be as good, valid and effective, to all intents and purposes whatsoever, as if the same had been made or done by me, and I hereby undertake to ratify whatsoever my attorney shall lawfully do or cause to be done, by virtue of these presents.

I further direct this Limited Power of Attorney shall be good and valid until a revocation thereof has been duly executed by the undersigned.

Thomas John Fox

STATE OF West Virguirs: County of MArs hall . to-wit:

The foregoing instrument was acknowledged before me this 31st day of March, 2018, by Thomas John Fox.

Given under my hand this 31st day of MARY

RECEIVED Office of Oil and Gas

My commission expires: Jan 18,2020

OCT - 2 2019

(NOTARY SEAL/STAMP REQUIRED)

WV Department of Environmental Protection

OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA ERIC M. GORDON 514 7th St. Moundsville, WV 26041 My Commission Expires January 18, 2022

Notary Public for the aforesaid County and/or State

This Instrument Prepared By:

Eric M. Gordon, Esquire Berry, Kessler, Crutchfield, Taylor & Gordon 514 Seventh Street Moundsville, WV 26041

API NO. 47-	
OPERATOR WELL NO.	Knob Creek N-3HM
Well Pad Name: Knob C	reak

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION DESTRUCTION WALVED

	rator, Tug Hill Operating, LLC be advised that well work permits an			e of West Virginia to conduct oil or gas	well
Pursuant to V uny existing vocated within arger used to twellings or or provided in surfice was pro- your written co- clerk of the co- variance by the proportions the conditions the	water well or developed spring used in six hundred twenty-five feet of an oblive or shelter dairy cattle or pagricultural buildings that existed or ection ten of this article or a notice ovoided, whichever occurs first, and insent of the surface owner transmit county commission for the county is the secretary from these distance rest to be employed during well site con	d for human or do occupied dwelling oultry husbandry. In the date a notice of intent to drill a h to any dwelling untted to the department which such proprictions upon submistruction, drilling afety and protection	mestic animal consum structure, or a building This limitation is ap- to the surface owner orizontal well as prov- der construction prior ment and recorded in erty is located. Furth dission of a plan which and operations. The mof affected persons are requirements.	ndred fifty feet measured horizontally aption. The center of well pads may not not to thousand five hundred square feeplicable to those wells, developed sproof planned entry for surveying or staking ided in subsection (b), section sixteen of to that date. This limitation may be wather real property records maintained by the real property. The terms and conditions	of be ef or ings, g as f this ivived y the ed a lities and
provisions lis WW-6A and required, and	ted above, and that I have received of attachments consisting of pages one the well plat, all for proposed well v	have read the Inst opies of a Notice of (1) through work on the tract of	ructions to Persons Na f Application, an App , including the land as follows:	amed on Page WW-6A and the associate lication for a Well Work Permit on Forn erosion and sediment control plan, if	d n
State:	West Virginia		NAD 83 Easting:	525,219.95	
County:	Marshall		NAD 83 Northing:	4,402,274.92	
District:	Meade		c Road Access:	St. Joseph Road - County Route 21	
	Glen Easton 7.5	Gene	rally used farm name:	David Lee Franklin	
Watershed:	Fish Creek (HUC-10)	administration	to these constitute as	ATTA DE LA CALITACIONE DE LA CONTRACTOR	
	se materials and I therefore waive all			d I have no objection to a permit being	
WELL SITE	RESTRICTIONS BEING WAIV			TION BY A NATURAL PERSON	7
TEXISTE	NG WATER WELLS		Print Name:		
	OPED SPRINGS		FOR EXECU	TION BY A CORPORATION, ETC.	
				pioration, LLC as Attorney-in-Fact for David Lee Franklin	
DWELI	LINGS		By: Douglas L. De		
☐ AGRICU	JLTURAL BUILDINGS		Its: Attorney-in-Fac	40	
				50/2019	
	r: Tug Hill Operating, LLC		Signature:		=
By: David G. DeL			Telephone: 724-749-8388		-
LS. Land Tourne	.000		1		RECEIVED Office of Oil and Gas
Chester A	WEALTH OF PENNSYLVANIA NSOATARIY SEAL ATHUR West IV, Notary Public Twp., Allegheny County ission Expires Feb. 10, 2020 VSYLVANIA ASSOCIATION OF NOTARIES	Subscribed/and My Commission	sworn before me this_	Notary Pub	OCT - 2 2019
Oil and Gas P. The Office of Opersonal inform	rivacy Notice: Oil and Gas processes your personal infonation may be disclosed to other State ap	ormation, such as na gencies or third parti	me, address and telephores in the normal course	ne number, as part of our regulatory duties. of business or as needed to comply with state or intelly secure your personal information. It	 Environmental Protection Your utory

LIMITED POWER OF ATTORNE 7 0 5 1 0 2 2 8 0

That I, David lee Franklin, hereby make, name and appoint, Tug Hill Operating, LLC, by and through its officers, agents or employees to be my limited power of attorney, for the sole and specific purpose of executing Well Location Restriction Waivers(s) that permit the conducting of oil or gas well work and the drilling of additional oil and gas wells on the Knob Creek Well Pad situate in Meade District, Marshall County, West Virginia, shown on Tax Map 14, as Parcel 33. See attached Exhibit A. Said waivers shall be of the type shown on the attached Exhibit B, differing only in the api number and operator well number located on the form.

I the said David Lee Franklin hereby declare that acts done by my said attorney for said specific and sole purpose shall be as good, valid and effective, to all intents and purposes whatsoever, as if the same had been made or done by me, and I hereby undertake to ratify whatsoever my attorney shall lawfully do or cause to be done, by virtue of these presents.

I further direct this Limited Power of Attorney shall be good and valid until a revocation thereof has been duly executed by the undersigned.

STATE OF West Virginia:

County of Macs hall , to-wit:

The foregoing instrument was acknowledged before me this meday of March, 2018, by DAVIDLEC Franklin

Given under my hand this 29ry day of ____

My commission expires: <u>Jan 18</u>, 2000

(Would for Franklin: (SEAL)

(NOTARY SEAL/STAMP REQUIRED)

OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA RIC M. GORDON Moundaville, WV 26041 My Commission Expires January 18, 2022

Notary Public for the aforesaid County and/or State

This Instrument Prepared By:

Eric M. Gordon, Esquire Berry, Kessler, Crutchfield, Taylor & Gordon 514 Seventh Street Moundsville, WV 26041

API NO. 47-	
OPERATOR WELL NO.	Knob Creek N-3HM
Well Pad Name: Knob C	reek

STATE OF WEST VIRGINIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER is applying for a permit from the State of West Virginia to conduct oil or gas well The well operator, Tug HIII Operating, LLC work. Please be advised that well work permits are valid for twenty-four (24) months. Well Location Restrictions Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. WAIVER I, Unsales Francia, by my Neurosci-Pasa, This September, LLC, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through , including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows: UTM NAD 83 Easting: State: West Virginia 525.219.95 County: Marshall UTM NAD 83 Northing: 4,402,274.92 Public Road Access: District: Meade St. Joseph Road - County Route 21 Quadrangle: Generally used farm name: David Lee Franklin Glen Easton 7.5 Watershed: Fish Greek (HUC-10) I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a). WELL SITE RESTRICTIONS BEING WAIVED FOR EXECUTION BY A NATURAL PERSON *Please check all that apply Signature: Print Name: □ EXISTING WATER WELLS Date: FOR EXECUTION BY A CORPORATION, ETC. □ DEVELOPED SPRINGS Company: Tri Exploration, LLC as Attorney-in-Fact for Linda Lee Frankli By: Douglas L. DeMartino DWELLINGS Its: Attorney-in-Fact □ AGRICULTURAL BUILDINGS 9/30/20 Signature: Date Well Operator: Tug Hill Operating, LLC Signature: Telephone: 724-749-8388 By; David G. DeLallo Its: Land Team Lead RECEIVED ffice of Oil and Gas COMMONVERTHEOF SENNSYLVANIA Subscribed and sworn before me this NOTARIAL SEAL Chester Arthur West IV, Notary Public Notary Public Pine Twp., Allegheny County My Commission Expires Feb. 10, 2020 OCT - 2 2019 My Commission Expires 2-0-2020 Oil MEMPER'S PHYSACY NO FICE:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your Department of 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 normanical Protection 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.

LIMITED POWER OF ATTORNEY 4 7 0 5 1 0 2 2 8 0

That I, Linda Lee Franklin, hereby make, name and appoint, Tug Hill Operating,
LLC, by and through its officers, agents or employees to be my limited power of attorney, for the sole and
specific purpose of executing Well Location Restriction Waivers(s) that permit the conducting of oil or gas
well work and the drilling of additional oil and gas wells on the Knob Creek Well Pad situate in Meade
District, Marshall County, West Virginia, shown on Tax Map 14, as Parcel 33. See attached Exhibit A . Said
waivers shall be of the type shown on the attached Exhibit B, differing only in the api number and
operator well number located on the form.

I the said Inda lee Franklin hereby declare that acts done by my said attorney for said specific and sole purpose shall be as good, valid and effective, to all intents and purposes whatsoever, as if the same had been made or done by me, and I hereby undertake to ratify whatsoever my attorney shall lawfully do or cause to be done, by virtue of these presents.

I further direct this Limited Power of Attorney shall be good and valid until a revocation thereof has been duly executed by the undersigned.

Linda See Franklin (SEAL)

STATE OF Libes & Virginia:

County of MArshall , to-wit:

The foregoing instrument was acknowledged before me this 24 day of Mark, 2018, by Linda Lee Franklin.

Given under my hand this 29th day of March

Ja 18,2022 My commission expires:

RECEIVED
Office of Oil and Gas

(NOTARY SEAL/STAMP REQUIRED)

OFFICIAL SEAL

0CT - 22019

WV Department of Environmental Protection

Notary Public for the aforesaid

NOTARY PUBLIC STATE OF WEST VIRGINIA ERIC M. GORDON 514 7th St. County and/or State Moundsville, WV 26041 My Commission Expires January 18, 2022

This Instrument Prepared By:

Eric M. Gordon, Esquire Berry, Kessler, Crutchfield, Taylor & Gordon 514 Seventh Street Moundsville, WV 26041

API NO. 47-	
OPERATOR WELL NO.	Knob Creek N-3HM
Well Pad Name: Knob C	reek

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

WELL LOCATION RESTRICTION WAIVER The well operator, Tug Hill Operating, LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months. Well Location Restrictions Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. WAIVER I, Paul G. Foil by my Assembly in Fact. This instruction, LLC, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through , including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows: West Virginia UTM NAD 83 Easting: 525.219.95 UTM NAD 83 Northing: County: Marshall 4.402.274.92 District: Meade Public Road Access: St. Joseph Road - County Route 21 Quadrangle: Glen Easton 7.5 Generally used farm name: David Lee Franklin Watershed: Fish Creek (HUC-10) I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a). WELL SITE RESTRICTIONS BEING WAIVED FOR EXECUTION BY A NATURAL PERSON *Please check all that apply Signature: Print Name: □ EXISTING WATER WELLS FOR EXECUTION BY A CORPORATION, ETC. ☐ DEVELOPED SPRINGS Company: TH Exploration, LLC as Attorney-in-Fact for Paul G, Fox By: Douglas L. DeMartino DWELLINGS Its: Attorney-in-Fact ☐ AGRICULTURAL BUILDINGS 9130/2019 Signature: Date: Well Operator: Tug Hill Operating, LLC Signature: Signature: Telephone. 724-749 8388 By: David G. DeLallo Its: Land Team Lead Subscribed and sworn before me this 30 COMMONWEATHRESEMINSYLVANIA NOTARIAL SEAL Sean Cotter, Notary Public City of Pittsburgh, Allegheny County My Commission Expires Oct. 12, 2019 Notary Public

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.

My Commission Expires

RECEIVED Office of Oil and Gas

OCT - 2 2019

LIMITED POWER OF ATTORNEY

4705102280

That I, Paul G. Fox here	by make, name and appoint, Tug Hill Operating,
LLC, its successors and assigns, by and through its office	ers, agents or employees to be my limited power of
attorney, for the sole and specific purpose of executing	Well Location Restriction Waivers(s) waiving all well
site restrictions listed under West Virginia Code 22-6A-1	12(a) for the Knob Creek Well Pad situate in Meade
District, Marshall County, West Virginia, located on Ta	x Map 14, Parcel 33 and depicted on the attached
Exhibit A. Said waivers shall be of the type shown on t	he attached Exhibit B.
I the said Rul G. Fox hereby	declare that acts done by my said attorney for said
specific and sole purpose shall be as good, valid and eff	ective, to all intents and purposes whatsoever, as if
the same had been made or done by me, and I hereb	y undertake to ratify whatsoever my attorney shall
lawfully do or cause to be done, by virtue of these prese	ents.
I further direct this Limited Power of Attorney s	hall be good and valid until a revocation thereof has
been duly executed by the undersigned.	
\mathscr{A}	I SEAL)
<u> </u>	19. 19. 344-18 (SEAL)
	19. 193 344-18 (SEAL)
STATE OF West Virginia: COUNTY OF Marshall to-wit:	19. 19. 344-18 (SEAL)
STATE OF West Virginia: COUNTY OF Marshall, to-wit:	before me this Halay of Manh, 2018, by
STATE OF West Virginia: COUNTY OF Marshall, to-wit:	
STATE OF West Virginia: COUNTY OF Marshall, to-wit: The foregoing instrument was acknowledged Pal G. Fax.	before me this 24 day of Mark, 2018, by
STATE OF West Virginia: COUNTY OF Marshall, to-wit: The foregoing instrument was acknowledged	before me this 24 day of Mark, 2018, by
STATE OF West Virginia: COUNTY OF Marshall, to-wit: The foregoing instrument was acknowledged Pal G. Fax.	before me this History of March, 2018, by
STATE OF West Virginia: COUNTY OF Marshall, to-wit: The foregoing instrument was acknowledged Pal G. Fox Given under my hand this 24thday of My commission expires: (NOTARY SEAL/STAMP REQUIRED)	before me this Halay of March, 2018, by 1072 , 2018. RECEIVED Office of Oil and Gas
STATE OF West Virgue: COUNTY OF Marshall, to-wit: The foregoing instrument was acknowledged Pal G. Fox Given under my hand this 24th day of My commission expires: (NOTARY SEAL/STAMP REQUIRED)	before me this History of March, 2018, by

This Instrument Prepared By:

Eric M. Gordon, Esquire
Berry, Kessler, Crutchfield, Taylor & Gordon
514 Seventh Street
Moundsville, WV 26041
(304) 845-2580

API NO. 47	
OPERATOR WELL NO.	Knob Creek N-3HM
Well Pad Name: Knob C	reek

STATE OF WEST VIRGINIA

	rator, Tug Hill Operating, LLC be advised that well work permits			of West Virginia to conduct oil or gas we	ell
Pursuant to V any existing value of the value of	water well or developed spring us a six hundred twenty-five feet of a b house or shelter dairy cattle or agricultural buildings that existed ection ten of this article or a notice ovided, whichever occurs first, and nsent of the surface owner transmounty commission for the county he secretary from these distance re- to be employed during well site co	ed for human or n occupied dwel poultry husband on the date a no of intent to drill it it to any dwelling hitted to the dep in which such p strictions upon s instruction, drilli safety and prote as well as techn	r domestic animal consumulting structure, or a buildir lay. This limitation is aptice to the surface owner of a horizontal well as proof at the construction prior artment and recorded in the property is located. Further ubmission of a plan which ing and operations. The vection of affected persons a fical requirements.	ndred fifty feet measured horizontally fro pition. The center of well pads may not be go two thousand five hundred square feet plicable to those wells, developed spring of planned entry for surveying or staking ded in subsection (b), section sixteen of the to that date. This limitation may be waive he real property records maintained by the remove, the well operator may be granted identifies the sufficient measures, facilitiariance, if granted, shall include terms and property. The terms and conditions may	be or or s, sas sis ed one a ees
			IVER	med on Page WW-6A and the associated	
WW-6A and a required, and State: County: District: Quadrangle: Watershed: I further state issued on those	attachments consisting of pages on the well plat, all for proposed well West Virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the plan te materials and I therefore waive a	e (1) through work on the trac U U P G anned work descri	, including the ct of land as follows: ITM NAD 83 Easting: ITM NAD 83 Northing: ublic Road Access: ienerally used farm name: bed in these materials, and ctions listed under West N	I have no objection to a permit being /irginia Code § 22-6A-12(a).	
*Please check	RESTRICTIONS BEING WAIT all that apply	VED	FOR EXECUT	TION BY A NATURAL PERSON	
□ EXISTIN	NG WATER WELLS		Print Name: Date:		
□ DEVEL	OPED SPRINGS		FOR EXECUT	TION BY A CORPORATION, ETC.	
■ DWELLINGS			Company: TH Exploration, LLC as Attorney-in-Fact for Mark H. Fox By: Douglas L. DeMartino		
E 02.12	ILTURAL BUILDINGS)in &) in &) i	
	Tug Hill Operating, LLC		Signature:	3	
By: David G. DeL			Telephone: 724-749-8388	<u> </u>	
COMMO!	NWEACH OR PENNSYLVANIA NOTARIAL SEAL san Cotter, Notary Public Pittsburgh, Allegheny County		and Syom before me this_	Notary Public	RECEIVED Office of Oil and Gas
City of My Com Oil and Gas Pi The Office of O personal inform or regulatory re	Pittsburgh, Allegheny County mission Expires Oct. 12, 2019 rivacy Notice: Dil and Gas processes your personal in lation may be disclosed to other State equirements, including Freedom of Interest.	formation, such as agencies or third p formation Act requ	parties in the normal course of uests. Our office will approp		ur OCT - 2 2019

Environmental Protection

LIMITED POWER OF ATTORNEY 4705102280

That I, MARK H. Fox, hereby make, name and appoint, Tug Hill Operating,
LLC, its successors and assigns, by and through its officers, agents or employees to be my limited power of
attorney, for the sole and specific purpose of executing Well Location Restriction Waivers(s) waiving all well
site restrictions listed under West Virginia Code 22-6A-12(a) for the Knob Creek Well Pad situate in Meade
District, Marshall County, West Virginia, located on Tax Map 14, Parcel 33 and depicted on the attached
Exhibit A. Said waivers shall be of the type shown on the attached Exhibit B.

I the said MARK IT. Fox hereby declare that acts done by my said attorney for said specific and sole purpose shall be as good, valid and effective, to all intents and purposes whatsoever, as if the same had been made or done by me, and I hereby undertake to ratify whatsoever my attorney shall lawfully do or cause to be done, by virtue of these presents.

I further direct this Limited Power of Attorney shall be good and valid until a revocation thereof has been duly executed by the undersigned.

Mark H. Fox 3-24-18 (SEAL)

STATE OF West Virginia:

COUNTY OF MACS MALL, to-wit:

The foregoing instrument was acknowledged before me this of Marin, 2018, by

MAIK H. Fox

Given under my hand this 24th day of _______, 2018.

My commission expires: Jan 18 2002

(NOTARY SEAL/STAMP REQUIRED)

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
ERIC M. GORDON
514 7th St.
Moundsville, WV 26041
My Commission Expires January 18, 2022

RECEIVED Office of Oil and Gas

OCT - 2 2019

Notary Public for the aforesaid County and/or State

WV Department of Environmental Protection

This Instrument Prepared By:

Eric M. Gordon, Esquire
Berry, Kessler, Crutchfield, Taylor & Gordon
514 Seventh Street
Moundsville, WV 26041
(304) 845-2580

T:\MSAston\Limited Power of Attorney\EMG.Limited.POA.wpd

API NO. 47-OPERATOR WELL NO. Knob Creek N-3HM Well Pad Name: Knob Creek

STATE OF WEST VIRGINIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER The well operator, Tug Hill Operating, LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months. Well Location Restrictions Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. WAIVER I, Great E. First by may Automoty: In-Fast TH Enderstein, U.G., hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form , including the erosion and sediment control plan, if WW-6A and attachments consisting of pages one (1) through required, and the well plat, all for proposed well work on the tract of land as follows: State: West Virginia UTM NAD 83 Easting: UTM NAD 83 Northing: County: Marshall 4,402,274.92 District: Meade Public Road Access: St. Joseph Road - County Route 21 Quadrangle: Glen Easton 7.5' Generally used farm name: David Lee Franklin Watershed: Fish Creek (HUC-10) I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a). WELL SITE RESTRICTIONS BEING WAIVED FOR EXECUTION BY A NATURAL PERSON *Please check all that apply Signature: Print Name: ☐ EXISTING WATER WELLS Date: FOR EXECUTION BY A CORPORATION, ETC. ☐ DEVELOPED SPRINGS Company: TH Exploration, LLC as Attorney-in-Fact for David E. Fox By: Douglas L. DeMartino DWELLINGS Its: Attorney-in-Fact ☐ AGRICULTURAL BUILDINGS Signature: 9/30/00/0 Date: Well Operator: Tug Hill Operating, LLC Signature: 724-749-8388 By: David G. DeLallo Its: Land Team Lead Commonwealth of Perosphaniq - Notary Seal MAUREEN A STEAD - Notary Public and sworn before me this Washington County Notary Public My Commission Expires Jan 28, 2023 RECEIVED Office of Oil and Gas Commission Number 1259926 My Commission Expires

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.

OCT - 2 2019

LIMITED POWER OF ATTORNEY 4 7 0 5 1 0 2 2 8 0

That I, David E. Fox, hereby make, name and appoint, Tug Hill Operating, LLC, by and through its officers, agents or employees to be my limited power of attorney, for the sole and specific purpose of executing Well Location Restriction Waivers(s) that permit the conducting of oil or gas well work and the drilling of additional oil and gas wells on the Knob Creek Well Pad situate in Meade District, Marshall County, West Virginia, shown on Tax Map 14, as Parcel 33. See attached Exhibit A. Said waivers shall be of the type shown on the attached Exhibit B, differing only in the api number and operator well number located on the form.

I the said David E. Fox hereby declare that acts done by my said attorney for said specific and sole purpose shall be as good, valid and effective, to all intents and purposes whatsoever, as if the same had been made or done by me, and I hereby undertake to ratify whatsoever my attorney shall lawfully do or cause to be done, by virtue of these presents.

I further direct this Limited Power of Attorney shall be good and valid until a revocation thereof has been duly executed by the undersigned.

Num 9 Seco

STATE OF West Vivainia

County of Marshau

The foregoing instrument was acknowledged before me this 2 day of 2018, by David E. Fox.

Given under my hand this 27 day of March

My commission expires: August 30, 2023

(NOTARY SEAL/STAMP REQUIRED)

= in Harman occumentation markan m Official Seal Notary Public, State Of West Virginia Mary M Aston

514 Seventh Street Moundsville WV 26041 My commission expires August 30, 2023 Notary Public for the aforesaid

County and/or State

This Instrument Prepared By:

Eric M. Gordon, Esquire Berry, Kessler, Crutchfield, Taylor & Gordon 514 Seventh Street Moundsville, WV 26041

API NO. 47-	-	
OPERATOR WELL	NO.	Knob Creek N-3HM
Well Pad Name:	Knob C	reek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

	rator, Tug Hill Operating, LLC be advised that well work permit	is applying for a permit from the S are valid for twenty-four (24) months.	ate of West Virginia to conduct oil or gas	well
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1		WAIVER		
provisions list WW-6A and a required, and State: County: District:	ied above, and that I have receive attachments consisting of pages of the well plat, all for proposed wel West Virginia Marshall Meade	d copies of a Notice of Application, an A ne (1) through, including t Il work on the tract of land as follows:UTM NAD 83 Easting:UTM NAD 83 Northing Public Road Access:	Named on Page WW-6A and the associate oplication for a Well Work Permit on Forme erosion and sediment control plan, if 525,219.95 4,402,274.92 St. Joseph Road - County Route 21	n
Quadrangle: Watershed:	Glen Easton 7.5' Fish Creek (HUC-10)	Generally used farm nan	e: David Lee Franklin	
I further state	that I have no objection to the pla	anned work described in these materials,	and I have no objection to a permit being	
WELL SITE	RESTRICTIONS BEING WA	all well site restrictions listed under We	st Virginia Code § 22-6A-12(a). UTION BY A NATURAL PERSON	1
*Please check		Signature:	orion by Atharona Paragon	
☐ EXISTIN	NG WATER WELLS	Print Name: Date:		
□ DEVEL	OPED SPRINGS	1 200 1 3	UTION BY A CORPORATION, ETC.	
			Exploration, LLC as Attorney-in-Fact for Mary A. Fox	
DWELL	INGS	By: Douglas L. Its: Attorney-in-	A CONTRACTOR OF THE CONTRACTOR	
☐ AGRICU	ILTURAL BUILDINGS	Signature:	\$ 0	
		Date: 9	0/2019	
	Tug Hill Operating, LLC	Signature:		_
By: David G. DeLi Its: Land Team L		Telephone: 724-749-8	88	 -
Its.				
MAL My Co	veNIO (T.ARONS), NEMAL - Notary Seal IREEN A STEAD - Notary Public Washington Country mmission Expires Jan 28, 2023 ommission Number 1259926	Subscribed and sworn before me th	s 30 day of SCPT MBCL / Stuff Notary Publ	- COUNTED
Oil and Gas Pr				Office of Oil and Con
The Office of C	oil and Gas processes your personal is ation may be disclosed to other State	information, such as name, address and telep	one number, as part of our regulatory duties. e of business or as needed to comply with state	V
or regulatory re	quirements, including Freedom of In	nformation Act requests. Our office will app	opriately secure your personal information. If	utory OCT - 2 2019
have any questi-	ons about our use or your personal in	formation, please contact DEP's Chief Privac	Officer at depprivacyofficer@wv.gov.	

LIMITED POWER OF ATTORNEY

4705102280

That I, Mary A. Fox, h	nereby make, name and appoint,	Tug Hill Operating,		
LLC, its successors and assigns, by and through its o	officers, agents or employees to be I	my limited power of		
attorney, for the sole and specific purpose of executing Well Location Restriction Waivers(s) waiving all well				
site restrictions listed under West Virginia Code 22-6	5A-12(a) for the Knob Creek Well Pa	ad situate in Meade		
District, Marshall County, West Virginia, located on	Tax Map 14, Parcel 33 and depict	ed on the attached		
Exhibit A. Said waivers shall be of the type shown of	on the attached Exhibit B.			
I the said Mary A. Fox here	eby declare that acts done by my sa	aid attorney for said		
specific and sole purpose shall be as good, valid and	effective, to all intents and purpose	es whatsoever, as if		
the same had been made or done by me, and I he	reby undertake to ratify whatsoeve	er my attorney shall		
lawfully do or cause to be done, by virtue of these pr	resents.	•		
I further direct this Limited Power of Attorne	y shall be good and valid until a rev	ocation thereof has		
been duly executed by the undersigned.				
	Mary & Dx	(SEAL)		
	Mary a De	(SEAL)		
STATE OF West Virginia:	Mary à De	(SEAL)		
STATE OF West Virginia:	Mary a Dx	(SEAL)		
STATE OF Liest Virginia: COUNTY OF MARShall to-wit: The foregoing instrument was acknowledge	v			
	v			
The foregoing instrument was acknowledg May A. Fac Given under my hand this 30f4 day of	led before me this 30 d ay of <u>M</u>	محدلم , 2018, by		
The foregoing instrument was acknowledg May A. Fac Given under my hand this 30f4 day of	led before me this 30 d ay of <u>M</u>	محدلم , 2018, by		
The foregoing instrument was acknowledg	led before me this 30 d ay of <u>M</u>	محدلم , 2018, by		
The foregoing instrument was acknowledged May A. Foc. Given under my hand this 30fh day of My commission expires: (NOTARY SEAL/STAMP REQUIRED)	led before me this 30 d ay of <u>M</u>	محدلم , 2018, by		
The foregoing instrument was acknowledg May A. Fac Given under my hand this 30% day of My commission expires:	led before me this 30 d ay of <u>M</u>	مردل , 2018, by		

WV Department of Environmental Protection

This Instrument Prepared By:

Eric M. Gordon, Esquire Berry, Kessler, Crutchfield, Taylor & Gordon 514 Seventh Street Moundsville, WV 26041 (304) 845-2580

T:\MSAston\Limited Power of Attorney\EMG.Limited.POA.wpd

API NO. 47OPERATOR WELL NO. Knob Creek N-3HM
Well Pad Name: Knob Creek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

	rator, Tug Hill Operating, LLC is appl be advised that well work permits are valid fo		of West Virginia to conduct oil or gas well	
Well Locatio Pursuant to W any existing v located withir larger used to dwellings or a provided in se article was pr by written co clerk of the c variance by th or practices to conditions the	n Restrictions Vest Virginia Code § 22-6A-12(a), Wells may water well or developed spring used for hun a six hundred twenty-five feet of an occupied to house or shelter dairy cattle or poultry hungricultural buildings that existed on the date ection ten of this article or a notice of intent to ovided, whichever occurs first, and to any dwn ment of the surface owner transmitted to the ounty commission for the county in which is the secretary from these distance restrictions up to be employed during well site construction, a department requires to ensure the safety and ince, bonding and indemnification, as well as	y not be drilled within two husen or domestic animal consum dwelling structure, or a building sbandry. This limitation is ap a notice to the surface owner to drill a horizontal well as provieiling under construction prior e department and recorded in the such property is located. Further pon submission of a plan which drilling and operations. The protection of affected persons a	ption. The center of well pads may not be g two thousand five hundred square feet or plicable to those wells, developed springs, of planned entry for surveying or staking as ded in subsection (b), section sixteen of this to that date. This limitation may be waived he real property records maintained by the rmore, the well operator may be granted a identifies the sufficient measures, facilities ariance, if granted, shall include terms and	
I. Louis T. Pox, by my Alls	permy-in-Fact, TH Emploration, LLC, hereby state that I have real		med on Page WW-6A and the associated	
WW-6A and a required, and State: County: District: Quadrangle: Watershed: I further state	ed above, and that I have received copies of a attachments consisting of pages one (1) through the well plat, all for proposed well work on the West Virginia Marshall Mende Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the planned work of the materials and I therefore waive all well site of the planned work of the materials and I therefore waive all well site.	gh, including the te tract of land as follows: UTM NAD 83 Easting: UTM NAD 83 Northing: Public Road Access: Generally used farm name: described in these materials, and	525,219.95 4,402,274.92 St. Joseph Road - County Route 21 David Lee Franklin	
WELL SITE	RESTRICTIONS BEING WAIVED all that apply	FOR EXECU	TION BY A NATURAL PERSON	
	NG WATER WELLS	Signature: Print Name:		
		Date:FOR EXECUT	TION BY A CORPORATION, ETC.	
	OPED SPRINGS	Company: THEx	ploration, LLC as Attorney-in-Fact for Louis T. Fox	
■ DWELL	INGS	By: Douglas L. Del Its: Attorney-in-Fac		
☐ AGRICU	ILTURAL BUILDINGS	Signature: _ Signa	00000	
Well Operator	Tug Hill Operating, LLC	Signature:	aner	
By: David G. DeL: Its: Land Team L		Telephone: 724-749-8388		
Commonw MAUI My Co: Co: Oil and Gas P The Office of C personal inform or regulatory re	Subscr REEN A STEAD - Notary Public Washington County Inmission Expires Jan 28, 2023 Immission Number 1259926 My Co	mmission Expires such as name, address and telephor third parties in the normal course of trequests. Our office will appropriate the property of the private parties and telephore the private	Notary Public V28/13 e number, as part of our regulatory duties. Your f business or as needed to comply with statutory riately secure your personal information. If you	RECEIVED Office of Oil and Gas

LIMITED POWER OF ATTORNEY, 7 0 5 1 0 2 2 8 0

____, hereby make, name and appoint, Tug Hill Operating,

LLC, its successors and assigns, by and through its officers, agents or employees to be my limited power of
attorney, for the sole and specific purpose of executing Well Location Restriction Waivers(s) waiving all well
site restrictions listed under West Virginia Code 22-6A-12(a) for the Knob Creek Well Pad situate in Meade
District, Marshall County, West Virginia, located on Tax Map 14, Parcel 33 and depicted on the attached
Exhibit A. Said waivers shall be of the type shown on the attached Exhibit B.
I the said Louis T. Fox hereby declare that acts done by my said attorney for said
specific and sole purpose shall be as good, valid and effective, to all intents and purposes whatsoever, as if
the same had been made or done by me, and I hereby undertake to ratify whatsoever my attorney shall
lawfully do or cause to be done, by virtue of these presents.
I further direct this Limited Power of Attorney shall be good and valid until a revocation thereof has
been duly executed by the undersigned. Aauto T, 74. 3-24. (SEAL)
STATE OF West Virginin: COUNTY OF MArshall , to-wit:
The foregoing instrument was acknowledged before me this 24 day of Marin, 2018, by Louis T. Fox
Given under my hand this 24th day of March, 2018. My commission expires: Jan 18, 2022.
(NOTARY SEAL/STAMP REQUIRED)

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
ERIC M. GORDON
514 7th St.
Moundsville, WV 26041
My Commission Expires January 18, 2022

That I, Louis T. Fox

Notary Public for the aforesaid County and/or State

RECEIVED Office of Oil and Gas

OCT - 2 2019

WV Department of Environmental Protection

This Instrument Prepared By:

Eric M. Gordon, Esquire
Berry, Kessler, Crutchfield, Taylor & Gordon
514 Seventh Street
Moundsville, WV 26041
(304) 845-2580
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API NO. 47-	- Y	
OPERATOR WELL	NO.	Knob Creek N-3HM
Well Pad Name:	Knob C	reek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

The well operator, Tug Hill Operating, LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months. Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. WAIVER I. Douglas L. DeMartino, Esq. , hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through , including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows: State: West Virginia UTM NAD 83 Easting: County: Marshall UTM NAD 83 Northing: 4,402,274.92 District: Public Road Access: Meade St. Joseph Road - County Route 21 Quadrangle: Glen Easton 7.5 Generally used farm name: David Lee Franklin Watershed: Fish Creek (HUC-10) I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a). WELL SITE RESTRICTIONS BEING WAIVED FOR EXECUTION BY A NATURAL PERSON *Please check all that apply Signature: Print Name: ☐ EXISTING WATER WELLS Date: FOR EXECUTION BY A CORPORATION, ETC. □ DEVELOPED SPRINGS Company: TH Exploration, LLC By: Douglas L. DeMartino, Esq. DWELLINGS Its: Attorney-in-Fa □ AGRICULTURAL BUILDINGS Signature: Date: Well Operator; Tug Hill Operating, LLC Signature: 724-749-8388 By: David G. DeLallo Its: Land Team Lead COMMONWEALTH OF PENNSYLVANIA Subscribed and sworn before me this Chester Arthur West IV, Notary Public Notary Public Pine Twp., Allegheny County My Commission Expires Feb. 10, 2020 2-10-2010 My Commission Expires MEMBER PENNSYLVANIA ASSOCIATION OF NOTARIES

Oil and Gas Privacy Notice:

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 encourage of oil and Gas 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. OCT - 2 2019

4705102280

Notary Public

WW-6RW (1-12)

API NO. 47-OPERATOR WELL NO. Knob Creek N-3HM Well Pad Name: Knob Creek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

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Oil and Gas Privacy Notice:

MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

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.

My Commission Expires

Marshall County Jan Pest, Clerk Instrument 1459582 10/01/2019 @ 01:24:54 PM MISCELLANEOUS Book 40 @ Page 50 Pages Recorded 1 11.00 Recording Cost \$

RECEIVED Office of Oil and Gas

1-10-7020

NOV 26 2019

WW-6RW (1-12)

API NO. 47-	-	
OPERATOR WELI	NO.	Knob Creek N-3HM
Well Pad Name:	Knob C	reek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

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dwellings or	agricultural buildings that existed	on the date a notice to the sur	itation is ap	plicable to those wells, developed springs, of planned entry for surveying or staking as	
provided in se	ection ten of this article or a notice	of intent to drill a horizontal	vell as provi	ded in subsection (b), section sixteen of this	
article was pr	ovided, whichever occurs first, an	d to any dwelling under consti	uction prior	to that date. This limitation may be waived	
by written co	onsent of the surface owner transi	nitted to the department and	ecorded in t	the real property records maintained by the	
clerk of the c	county commission for the county	in which such property is lo	cated. Furthe	ermore, the well operator may be granted a	
variance by tl	he secretary from these distance re	estrictions upon submission of	a plan which	identifies the sufficient measures, facilities	
or practices t	o be employed during well site co	onstruction, drilling and opera	tions. The v	variance, if granted, shall include terms and	
				and property. The terms and conditions may	
include insura	ance, bonding and indemnification	, as well as technical requirem	ents.		
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				erosion and sediment control plan, if	
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State:	West Virginia	UTM NAD 83		525,219.95	
County:	Marshall	UTM NAD 83		4,402,274.92	
District:	Meade	Public Road A		St. Joseph Road - County Route 21	
Quadrangle:	Glen Easton 7.5'	Generally used	farm name:	David Lee Franklin	
Watershed:	Fish Creek (HUC-10)				
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□ AGRICI	ULTURAL BUILDINGS		gnature:		
- AGRICI	DETORAL BUILDINGS	D	ate:	50/2019	
Well Operato	Tug Hill Operating, LLC	Signature		2012011	
By: David G. Del			2: 724-749-8388		
Its: Land Team I		Coopilate			
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COMMON	WEALTH OF PENNSYLVANIA	01 01 1		3al	
	NINOTATALIN SEFAL	Subscribed and sworn be	rore me this	30h day of Of phubrioi?	
Chester	Arthur West IV, Notary Public	110	TW.	Notary Public	
My Comn	Twp., Allegheny County mission Expires Feb. 10, 2020		A /	Notary Public	
TEMBER PEN	NSYLVANIA ASSOCIATION OF NOTARIES	My Commission Expires	2	0.7020	
	rivacy Notice:	1413 COMMISSION EXPINES	2-11	ST (DEC	
The Office of	Oil and Gas processes your personal	information, such as name, addres	s and telephor	ne number, as part of our regulatory duties. Your	
personal inform	nation may be disclosed to other State	e agencies or third parties in the n	ormal course	of business or as needed to comply with statutory	

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> Marshall County Jan Pest, Clerk Instrument 1459583 10/01/2019 @ 01:24:55 PM MISCELLANEOUS Book 40 @ Page 51 Pages Recorded 1 Rorardina Cost \$ 11.00

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WW-6RW (1-12)

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OPERATOR WELL NO.	Knob Creek N-3HM
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Quadrangle: Watershed:	Glen Easton 7.5'	Generally use	ed farm name:	David Lee Franklin	
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RECEIVED
Office of Oil and Gas

NOV 2 6 2019

WV Department of Environmental Protection Marshall County
Jan Pest, Clerk
Instrument 1459584
10/01/2019 @ 01:24:56 PM
MISCELLANEOUS
Book 40 @ Page 52
Pages Recorded 1
Recording Cost \$ 11.00

4705102280

WW-6RW (1-12)

API NO. 47-OPERATOR WELL NO. Knob Creek N-3HM Well Pad Name: Knob Creek

day of September 2019

Notary Public

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

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WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state issued on the WELL SITI *Please chec	attachments consisting of pages one (1) the well plat, all for proposed well work West Virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) E that I have no objection to the planned was materials and I therefore waive all well E RESTRICTIONS BEING WAIVED	nrough, including on the tract of land as follows: UTM NAD 83 Easting: UTM NAD 83 Northin Public Road Access: Generally used farm natoric described in these materials is site restrictions listed under West Signature:	Application for a Well Work Permit on Form the erosion and sediment control plan, if 525,219.95 g: 4,402,274.92 St. Joseph Road - County Route 21 me: David Lee Franklin , and I have no objection to a permit being fest Virginia Code § 22-6A-12(a). CUTION BY A NATURAL PERSON
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WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state issued on the WELL SITI *Please chec	attachments consisting of pages one (1) the well plat, all for proposed well work west virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the planned well well all that apply RESTRICTIONS BEING WAIVED k all that apply NG WATER WELLS LOPED SPRINGS	prough, including on the tract of land as follows: UTM NAD 83 Easting: UTM NAD 83 Northin Public Road Access: Generally used farm national site restrictions listed under Was Signature: Print Name Date: FOR EXE Company: By: Douglas	Application for a Well Work Permit on Form the erosion and sediment control plan, if 525,219.95 g: 4,402,274.92 St. Joseph Road - County Route 21 David Lee Franklin , and I have no objection to a permit being fest Virginia Code § 22-6A-12(a). CUTION BY A NATURAL PERSON E: CUTION BY A CORPORATION, ETC. TH Exploration, LLC L. DeMartino, Esq.
WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state issued on the WELL SITI *Please chec EXISTI DEVEL DWEL DWELL DWELL DWELL DWELL DWELL	attachments consisting of pages one (1) the well plat, all for proposed well work west virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the planned well well all that apply RESTRICTIONS BEING WAIVED k all that apply NG WATER WELLS LOPED SPRINGS	nrough, including on the tract of land as follows: UTM NAD 83 Easting: UTM NAD 83 Northin Public Road Access: Generally used farm national site restrictions listed under Ward Signature: Print Name Date: FOR EXE Company:	Application for a Well Work Permit on Form the erosion and sediment control plan, if 525,219.95 g: 4,402,274.92 St. Joseph Road - County Route 21 David Lee Franklin , and I have no objection to a permit being fest Virginia Code § 22-6A-12(a). CUTION BY A NATURAL PERSON E: CUTION BY A CORPORATION, ETC. TH Exploration, LLC L. DeMartino, Esq. in-Fact
WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state issued on the WELL SITI *Please chec EXISTI DEVEL DWEL AGRIC Well Operate	attachments consisting of pages one (1) the well plat, all for proposed well work west virginia Marshall	prough, including on the tract of land as follows: UTM NAD 83 Easting: UTM NAD 83 Northing Public Road Access: Generally used farm nate ork described in these materials site restrictions listed under Ward Signature: Print Name Date: FOR EXE Company: By: Douglas Its: Attorney- Signature: Signature: Signature: FOR EXE Company: By: Douglas Its: Attorney- Signature:	Application for a Well Work Permit on Form the erosion and sediment control plan, if 525,219.95 g: 4,402,274.92 St. Joseph Road - County Route 21 David Lee Franklin , and I have no objection to a permit being fest Virginia Code § 22-6A-12(a). CUTION BY A NATURAL PERSON E: CUTION BY A CORPORATION, ETC. TH Exploration, LLC L. DeMartino, Esq. in-Fact
WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state issued on the WELL SITI *Please chec EXISTI DEVEL DWEL AGRIC	attachments consisting of pages one (1) the well plat, all for proposed well work west virginia Marshall Meade	prough, including on the tract of land as follows: UTM NAD 83 Easting: UTM NAD 83 Northing Public Road Access: Generally used farm national described in these materials a site restrictions listed under Ward Signature: Print Name Date: FOR EXE Company: By: Douglas Its: Attorney- Signature: Date: Date: Date:	Application for a Well Work Permit on Form the erosion and sediment control plan, if 525,219.95 g: 4,402,274.92 St. Joseph Road - County Route 21 me: David Lee Franklin , and I have no objection to a permit being sest Virginia Code § 22-6A-12(a). CUTION BY A NATURAL PERSON CUTION BY A CORPORATION, ETC. TH Exploration, LLC L. DeMartino, Esq. in-Fact

Chester Arthur West IV, Notary Public Pine Twp., Allegheny County My Commission Expires Feb. 10, 2020 EMBER PENNSYLVANIA ASSOCIATION OF NOTARIES

2-10-2020 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.

My Commission Expires

Subscribed and sworn before me this

RECEIVED Office of Oil and Gas

COMMONWEALTH OF PENNSYLVANIA

NOV 26 2019

WV Department of **Environmental Protection**

Marshall County Jan Pest, Clerk Instrument 1459585 10/01/2019 @ 01:24:57 PM MISCELLANEOUS Book 40 @ Page 53 Pages Recorded 1 Recording Cost \$

11.00

API NO. 47OPERATOR WELL NO. Knob Creek N-3HM
Well Pad Name: Knob Creek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

	rator, _Tug Hill Operating, LLC be advised that well work per			of West Virginia to conduct oil or gas well
Pursuant to Wany existing value of the dwellings or a provided in searticle was proby written coclerk of the evariance by the or practices to conditions the	water well or developed spring a six hundred twenty-five feet to house or shelter dairy cattle agricultural buildings that exication ten of this article or a novided, whichever occurs first as the surface owner to the surface owner to county commission for the cone secretary from these distants to be employed during well significant to the surface owner as the surface of the surface owner to be employed during well significant to the surface of the surface of the surface of the surface owner to the surface owner to the surface of the surfac	ng used for human t of an occupied dw le or poultry husban isted on the date a n lotice of intent to dri st, and to any dwelli ransmitted to the de- punty in which such ce restrictions upon ite construction, dri re the safety and pro	or domestic animal consumple of the property of the surface owner of the sufface of the submission of a plan which a property is located. Further submission of a plan which and operations. The vartection of affected persons and operations of a surface of the surfa	dred fifty feet measured horizontally from ption. The center of well pads may not be g two thousand five hundred square feet or olicable to those wells, developed springs, f planned entry for surveying or staking as ded in subsection (b), section sixteen of this to that date. This limitation may be waived the real property records maintained by the remore, the well operator may be granted a identifies the sufficient measures, facilities ariance, if granted, shall include terms and and property. The terms and conditions may
			AIVER	ned on Page WW-6A and the associated
WW-6A and required, and State: County: District; Quadrangle: Watershed: I further state	attachments consisting of pag the well plat, all for proposed West Virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10)	es one (1) through _ I well work on the tr	, including the eract of land as follows: UTM NAD 83 Easting: UTM NAD 83 Northing: Public Road Access: Generally used farm name: cribed in these materials, and	I have no objection to a permit being
	RESTRICTIONS BEING 's all that apply	WAIVED	FOR EXECUT Signature:	TON BY A NATURAL PERSON
☐ EXISTIN☐ DEVEL ☐ DWELI	NG WATER WELLS OPED SPRINGS		Print Name: Date: FOR EXECUT Company: TH Exp By: Douglas L. Delv Its: Attorney-in-Fact Signature:	CION BY A CORPORATION, ETC. Sloration, LLC as Attorney-in-Fact for Paul G. Fox fartino
	r: Tug Hill Operating, LLC		Signature:	
By: David G. DeL Its: Land Team L			Telephone. 724-749-8388	
	NWEATHROSEMINSYLVANI.	A Subscribe	d and sworn before me this_	30 day of Saptember

Sean Cotter, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires Oct. 12, 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.

My Commission Expires

RECEIVED
Office of Oil and Gas

NOV 26 2019

WV Department of Environmental Protection Marshall County
Jan Pest, Clerk
Instrument 1459586
10/01/2019 @ 01:24:58 PM
MISCELLANEOUS
Book 40 @ Page 54
Pages Recorded 1
Recording Cost \$ 11.00

WW-6RW (1-12)

The well operator, Tug Hill Operating, LLC

API NO. 47-OPERATOR WELL NO. Knob Creek N-3HM Well Pad Name: Knob Creek

is applying for a permit from the State of West Virginia to conduct oil or gas well

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

work. Please be advised that well work permits	are valid for twenty-four (24) months.			
Well Location Restrictions				
Pursuant to West Virginia Code § 22-6A-12(a)	. Wells may not be drilled within two l	undred fifty feet measured horizontally from		
any existing water well or developed spring us	sed for human or domestic animal const	imption. The center of well pads may not be		
located within six hundred twenty-five feet of a	m occupied dwelling structure, or a build	ling two thousand five hundred square feet or		
larger used to house or shelter dairy cattle or	poultry husbandry. This limitation is	applicable to those wells, developed springs.		
dwellings or agricultural buildings that existed	on the date a notice to the surface owner	r of planned entry for surveying or staking as		
provided in section ten of this article or a notice	of intent to drill a horizontal well as pro	vided in subsection (b), section sixteen of this		
article was provided, whichever occurs first, and	d to any dwelling under construction price	or to that date. This limitation may be waived		
by written consent of the surface owner transn	nitted 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. Furt	hermore, the well operator may be granted a		
variance by the secretary from these distance re	strictions upon submission of a plan whi	ch identifies the sufficient measures, facilities		
or practices to be employed during well site co	enstruction, drilling and operations. The	variance, if granted, shall include terms and		
conditions the department requires to ensure the	safety and protection of affected person	and property. The terms and conditions may		
include insurance, bonding and indemnification,	as well as technical requirements.	A THE STATE OF THE		
	WAIVED			
	WAIVER			
I, Mark H. Fox, by my Allomoy-in-Fact, TH Exploration, LLC, hereby state that	I have read the Instructions to Persons 1	Named on Page WW-6A and the associated		
provisions listed above, and that I have received	copies of a Notice of Application, an Ap	plication for a Well Work Permit on Form		
WW-6A and attachments consisting of pages on	e (1) through, including the	e erosion and sediment control plan, if		
required, and the well plat, all for proposed well				
State: West Virginia	UTM NAD 83 Easting:	525,219.95		
County: Marshall	UTM NAD 83 Northing:	4,402,274.92		
District: Meade	Public Road Access:	St. Joseph Road - County Route 21 David Lee Franklin		
Quadrangle: Gien Easton 7.5'	Generally used farm nam			
Watershed: Fish Creek (HUC-10)				
I further state that I have no objection to the plan	aned work described in these materials, a	nd I have no objection to a permit being		
issued on those materials and I therefore waive a				
WELL SITE RESTRICTIONS BEING WAI *Please check all that apply		FOR EXECUTION BY A NATURAL PERSON Signature:		
r lease check an mat apply				
☐ EXISTING WATER WELLS	Print Name:			
		Date: FOR EXECUTION BY A CORPORATION, ETC.		
☐ DEVELOPED SPRINGS				
DWELLINGS		Company: TH Exploration, LLC as Attorney-in-Fact for Mark H. Fox By: Douglas L. DeMartino		
E DWELLINGS		Its: Attorney-in-Fact		
☐ AGRICULTURAL BUILDINGS	Signature:	1): 6) 4		
= .verdeed.e.d.d bolbbiltob		Date: 9/60/20/9		
Well Operator: Tug Hill Operating, LLC	Signature:	0 20 0		
By; David G. DeLallo	Telephone: 724-749-63	38		
Its: Land Team Lead	Telephone, 121 / 10 00			
	7			
		3 (1)		
COMMONWEALTH 中国中国NSYLVANIA	Subscribed and syorn before me this	day of Septenber		
NOTARIAL SEAL	X	since Salar		
Sean Cotter, Notary Public City of Pittsburgh, Allegheny County	-0	Notary Public		
My Commission Expires Oct. 12, 2019	My Commission Expires	2/246		
Oil and Gas Privacy Notice:	My Commission Expires	2/2019		
The Office of Oil and Gas processes your personal in	nformation, such as name, address and teleph	one number, as part of our regulatory duties. Vous		
personal information may be disclosed to other State	agencies or third parties in the normal course	of husiness or as needed to comply with statutory		
or regulatory requirements, including Freedom of In	formation Act requests. Our office will appr	opriately 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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NOV 2 6 2019

WV Department of Environmental Protection Marshall County Jan Pest, Clerk Instrument 1459587 10/01/2019 @ 01:24:59 PM MISCELLANEOUS Book 40 @ Page 55 Pages Recorded 1 Remording Cost \$ 11.00

4705102280

WW-6RW (1-12) API NO. 47OPERATOR WELL NO. Knob Creek N-3HM
Well Pad Name: Knob Creek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

	erator, Tug Hill Operating, LLC be advised that well work permits			of West Virginia to conduct oil or gas well
Pursuant to V any existing located within larger used to dwellings or provided in so article was pro- by written or clerk of the overlance by to or practices to conditions the	water well or developed spring us in six hundred twenty-five feet of a co house or shelter dairy cattle or agricultural buildings that existed ection ten of this article or a notice covided, whichever occurs first, an onsent of the surface owner trans- county commission for the county he secretary from these distance re- to be employed during well site of	sed for human or an occupied dwell poultry husbandr on the date a noti e of intent to drill a d to any dwelling nitted to the depa in which such prestrictions upon su enstruction, drilling e safety and protect	domestic animal consuming structure, or a building y. This limitation is approved to the surface owner of a horizontal well as provide under construction prior trument and recorded in the roperty is located. Further bmission of a plan which ag and operations. The vertion of affected persons are	dred fifty feet measured horizontally from ption. The center of well pads may not be g two thousand five hundred square feet or blicable to those wells, developed springs, f planned entry for surveying or staking as led in subsection (b), section sixteen of this to that date. This limitation may be waived he real property records maintained by the rmore, the well operator may be granted a identifies the sufficient measures, facilities ariance, if granted, shall include terms and and property. The terms and conditions may
		WA	IVER	
provisions lis WW-6A and required, and	ted above, and that I have received attachments consisting of pages or the well plat, all for proposed well	t I have read the In I copies of a Notic ne (1) through I work on the tract	nstructions to Persons Nar e of Application, an Appli , including the e of land as follows:	ned on Page WW-6A and the associated ication for a Well Work Permit on Form prosion and sediment control plan, if
State: County:	West Virginia Marshall		ΓM NAD 83 Easting: ΓM NAD 83 Northing:	525,219.95 4,402,274.92
District:	Meade		blic Road Access:	St. Joseph Road - County Route 21
Quadrangle:	Glen Easton 7.5'		enerally used farm name:	
Watershed:	Fish Creek (HUC-10)		and the factor	
I further state	that I have no objection to the pla	nned work describ	ed in these materials, and	I have no objection to a permit being
issued on tho	se materials and I therefore waive	all well site restric	ctions listed under West V	'irginia Code § 22-6A-12(a).
	RESTRICTIONS BEING WAI	VED	The state of the s	TON BY A NATURAL PERSON
*Please check	c all that apply		Signature:	
☐ EXISTI	NG WATER WELLS		Print Name: Date:	
DEVEL	OPED SPRINGS			TON BY A CORPORATION, ETC.
L DEVEL	OFED SERINGS			loration, LLC as Attorney-in-Fact for David E. Fox
DWELL	LINGS		By: Douglas L. DeM	
- ACDIC	H THE LE DIVINDRES		Its: Attorney-in-Fact	
LI AGRICI	JLTURAL BUILDINGS		Signature:	
Wall Operato	r: Tug Hill Operating, LLC		Date: 9301	2014
By: David G. Del			Signature: 724-749-8388	2
Its: Land Team I			retephone: 124-745-6566	
				The same of the same of
My	iwealth of Panosylvania - Notary Seal LUREEN A STEAD - Notary Public Washington County Commission Expires Jan 28, 2023 Commission Number 1259926	Subscribed in	nd sworn before me this	day of NATOMBER 2019 Notary Public
Oil and Gas P				11010
The Office of	Oil and Gas processes your personal in	nformation, such as	name, address and telephone	e number, as part of our regulatory duties. Your
personal inform	nation may be disclosed to other State	agencies or third pa	arties in the normal course of	business or as needed to comply with statutory intelly secure your personal information. If you
Samuely 1	-q mending ricedom of m	normation Act requ	colo. Our office will appropr	ratery secure your personal information. If you

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Office of Oil and Gas

NOV 2 6 2019

WV Department of Environmental Protection Marshall County
Jan Pest, Clerk
Instrument 1459588
10/01/2019 @ 01:25:00 PM
MISCELLANEOUS
Book 40 @ Page 56
Pages Recorded 1
Recording Cost \$ 1

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11.00

DPS LAND SERVICES CURP 6000 TOWN CENTER BOULEVARD, SUITE 145 CANONSBURG PA 15317-5841

100K 0 0 4 0 PAGE 0 0 5 7

4705102280

WW-6RW (1-12) API NO. 47OPERATOR WELL NO. Knob Creek N-3HM
Well Pad Name: Knob Creek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL LOCATION RESTRICTION WAIVER

The well ope work. Please	rator, _Tug Hill Operating, LLC be advised that well work permits	is applying for a are valid for twenty-f	permit from the State our (24) months.	e of West Virginia to conduct oil or gas well
Pursuant to V any existing value of the conditions the located within larger used to dwellings or a provided in so article was provided in so article was provided in so clerk of the conditions the conditions the	water well or developed spring us a six hundred twenty-five feet of a cohouse or shelter dairy cattle or agricultural buildings that existed ection ten of this article or a notice ovided, whichever occurs first, and insent of the surface owner transmit county commission for the county are secretary from these distance re to be employed during well site of	sed for human or don an occupied dwelling poultry husbandry. on the date a notice to e of intent to drill a ho d to any dwelling und nitted to the department in which such proper estrictions upon submit construction, drilling and estafety and protection	nestic animal consunt structure, or a building This limitation is apported the surface owner of rizontal well as proving the construction prior and recorded in the rety is located. Further, ssion of a plan which and operations. The standard of affected persons a	ndred fifty feet measured horizontally from aption. The center of well pads may not be ng two thousand five hundred square feet or oplicable to those wells, developed springs, of planned entry for surveying or staking as ided in subsection (b), section sixteen of this to that date. This limitation may be waived the real property records maintained by the ermore, the well operator may be granted a in identifies the sufficient measures, facilities variance, if granted, shall include terms and and property. The terms and conditions may
		WAIN		
provisions lis WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state	ted above, and that I have received attachments consisting of pages on the well plat, all for proposed well West Virginia Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10)	I copies of a Notice of the (1) through I work on the tract of I UTM UTM Public General	Application, an App , including the and as follows: NAD 83 Easting: NAD 83 Northing: Road Access: ally used farm name:	d I have no objection to a permit being
WELL SITE	RESTRICTIONS BEING WAI		FOR EXECU	TION BY A NATURAL PERSON
□ EXISTIN	of all that apply NG WATER WELLS		Signature: Print Name: Date: FOR EXECU	TION BY A CORPORATION, ETC.
□ DEVELOPED SPRINGS			xploration, LLC as Attorney-in-Fact for Mary A. Fox	
■ DWELLINGS□ AGRICULTURAL BUILDINGS		Its: Attorney-in-Factorial Signature: Date: 9 30	ot .	
	r: Tug Hill Operating, LLC	S	ignature:	
By: David G. Del.			elephone: 724-749-8388	1
Its: Land Team L	ead			100000000000000000000000000000000000000
Common	weNIのTR代列SSIAL Notary Seal	Subscribed and s	worn before me this	30 day of SEPTEMBER 2010

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.

My Commission Expires

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Office of Oil and Gas

CommonweNMOTANNS/SPAA_ Notary Seal
MAUREEN A STEAD - Notary Public
Washington County
My Commission Expires Jan 28, 2023
Commission Number 1259926

NOV 26 2019

WV Department of Environmental Protection Marshall County
Jan Pest, Clerk
Instrument 1459589
10/01/2019 @ 01:25:01 PM
MISCELLANEOUS
Book 40 @ Page 57
Pages Recorded 1
Recording Cost \$ 11.00

4705102280

WW-6RW (1-12)

API NO. 47-OPERATOR WELL NO. Knob Creek N-3HM Well Pad Name: Knob Creek

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS VELL LOCATION RESTRICTION WAIVER

The well operator, Tug Hill Operating, LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months. Well Location Restrictions Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. WAIVER I, Louis T. Fox, by my Altomosy-in-Fox, TH Exploration, LLC, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through , including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows: State: West Virginia UTM NAD 83 Easting: 525,219.95 UTM NAD 83 Northing: County: Marshall 4.402.274.92 District: Meade Public Road Access: St. Joseph Road - County Route 21 Quadrangle: Glen Easton 7.5 Generally used farm name: David Lee Franklin Watershed: Fish Creek (HUC-10) I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a). WELL SITE RESTRICTIONS BEING WAIVED FOR EXECUTION BY A NATURAL PERSON *Please check all that apply Signature: Print Name: ☐ EXISTING WATER WELLS FOR EXECUTION BY A CORPORATION, ETC. ☐ DEVELOPED SPRINGS Company: TH Exploration, LLC as Attorney-in-Fact for Louis T, Fox By: Douglas L. DeMartino DWELLINGS Its: Attorney-in-Fact ☐ AGRICULTURAL BUILDINGS Signature: Date: Well Operator: Tug Hill Operating, LLC Signature: By: David G. DeLallo Telephone: 724-749-8388 Its: Land Team Lead day of SEPTEMBER 2019 Subscribed and sworn before me this Commonweakh of Penesylvania I Notary Seal MAUREEN A STEAD - Notary Public Washington County My Commission Expires Jan 28, 2023 Commission Number 1259926 My Commission Expires 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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NOV 2 6 2019

WV Department of **Environmental Protection**

Marshall County Jan Pest, Clerk Instrument 1459590 10/01/2019 @ 01:25:02 PM MISCELLANEOUS Book 40 @ Page 58 Pages Recorded 1 11_00 Donnetina Chet &



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

October 1, 2019

Byrd E. White, III Secretary of Transportation/ Commissioner of Highways

Jimmy Wriston, P. E.
Deputy Secretary/
Deputy Commissioner

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

Subject: DOH Permit for the Knob Creek Pad, Marshall County

Knob Creek Unit N-1HM Knob Creek Unit S-6HM	Knob Creek Unit N-2HM Knob Creek Unit S-7HM	Knob Creek Unit N-3HM
Knob Creek Unit S-9HM	Knob Creek Unit S-10HM	Knob Creek Unit S-8HM Knob Creek Unit N-11HU
Knob Creek Unit S-14HU	Knob Creek Unit S-15HU	Knob Creek Unit S-16HU

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2018-0224 which has been issued to Tug Hill Operating, LLC for access to the State Road for a well site located off of Marshall County Route 21 SLS.

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

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

OCT - 2 2019

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Cc: Amy Miller

Tug Hill Operating, LLC

CH, OM, D-6

File

HAZARDOUS COMPONENT.

Hydrotreated light distillate

Ethylene glycol – CAS# 000107-21-1 Diethylene glycol – CAS# 000111-46-6

CAS# 064742-47-8



PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

CHEMICAL DESCRIPTION: DRODUCT LISE:

Well No. Knob Creek N-3HM

DECENICT NAME.

FRW-18

Scaletrol

PRODUCT NAME:	CHEWICAL DESCRIPTION:	PRODUCT USE:	HAZARDOUS COMPONENT:
GBW-20C	Hemicellulase Breaker	Breaker - Water	None
ALPHA 1427		Biocide	Glutaraldehyde – CAS#000111-30-8 Quatemary 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
		Assertance Control	A CONTRACTOR OF THE STATE OF TH

Friction Reducer

Scale Inhibitor

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