

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

Re: Permit approval for KNOB CREEK S-7HM 47-051-02282-00-00

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 S-7HM

Farm Name: DAVID LEE FRANKLIN

U.S. WELL NUMBER: 47-051-02282-00-00

Horizontal 6A New Drill

Date Issued: 12/3/2019

API Number: 4705102282

PERMIT CONDITIONS

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

CONDITIONS

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

API Number: 4705102282

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, 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 S-7HM
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 (Operating, LLC	494510851	Marshall	Meade	Powhatan Point 7
7,		Operator ID	County	District	Quadrangle
2) Operator's Well Number:	Knob Creek S-7H	Mell P	ad Name: Kno	b Creek	
3) Farm Name/Surface Owne	r: David Lee Fra	nklin Public R	oad Access: S	t. Joseph R	oad - CR 21
4) Elevation, current ground:	734.67'	Elevation, propose	d post-construc	etion: 734.6	57'
5) Well Type (a) Gas x	Oil _	Un	derground Stor	rage	
Other					
(b)If Gas S	Shallow x	Deep	1	Vi.	
I-	Horizontal X			pre	127/19
6) Existing Pad: Yes or No	No			09	12111
7) Proposed Target Formation Marcellus is the target formation at a depth of 6197' - 6				Pressure(s):	
8) Proposed Total Vertical De	epth: 6348'				
9) Formation at Total Vertica		ga			
10) Proposed Total Measured	Depth: 7,464'				
11) Proposed Horizontal Leg	Length: 641.54'				
12) Approximate Fresh Water	Strata Depths:	40'; 380'			
13) Method to Determine Free	sh Water Depths:	Use shallow offset wells to determine de	epest freshwater, or determine us	ing pre-drill tests, testing whil	e drilling or petrophysical evaluation of resistivity.
14) Approximate Saltwater D	epths: 1,740'				
15) Approximate Coal Seam	Depths: Sewickle	y Coal - 292' and	Pittsburgh Co	oal - 374'	
16) Approximate Depth to Po	ssible Void (coal n	nine, karst, other):	None		
17) Does Proposed well locate directly overlying or adjacent			N	10 x	RECEIVED Office of Oil and Gas
(a) If Yes, provide Mine Info	o: Name:				OCT - 2 2019
A PARTY OF CHARLES	Depth:				WV Department of
	Seam:				
	Owner:				

WW-6B (04/15) API NO. 47- 051

OPERATOR WELL NO. Knob Creek S-7HM

Well Pad Name: Knob Creek

18)

CASING AND TUBING PROGRAM

ТҮРЕ	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#	2,253'	2,253'	729ft^3(CTS)
Production	5 1/2"	NEW	P110	20#	7,464'	7,464'	1,925ft^3(CTS)
Tubing	2 3/8"	NEW	N80	4.7#	5,982'		
Liners							

Ma/27/19

ТҮРЕ	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	<u>Cement</u> <u>Yield</u> (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	RECEIVED Office of Oil and Gas
Sizes:	N/A	OCT - 2 2019
Depths Set:	N/A	WV Department of Environmental Protection

WW-6B (10/14) API NO. 47-_051 OPERATOR WELL NO. Knob Creek S-7HM
Well Pad Name: Knob Creek

94/27/79

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 1,602,500 lb. proppant and 24,776 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

RECEIVED Office of Oil and Gas

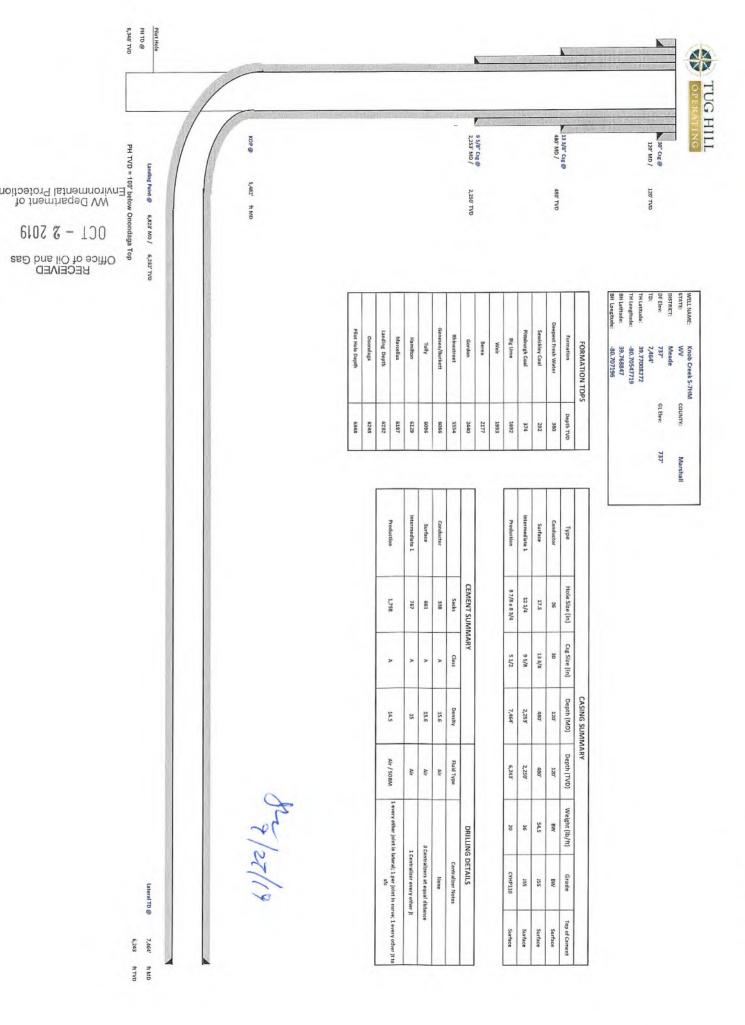
OCT - 2 2019

WV Department of Environmental Protection

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.





Tug Hill Operating, LLC Casing and Cement Program

Knob Creek S-7HM

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"	2,253'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4	7,464'	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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OCT - 2 2019

Operator's Well No. Knob Creek S-7HM

Area of Review

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

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

Data Sources Reviewed:

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

Contacted Devin Ducoeur 724-705-0444, dducoeur@dpslandservices.com DPS GIS (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
- RECEIVED Gas Office of Oil and Gas Phil indicated that other Operators are providing a screenshot of the WVGES map with their planned well and using that for permits

Page 1 of 4

Permit well - Knob Creek S-7HM

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 actua	field surveyed	locations.	Please refer to	the Plat for	surveyed well spo	its

API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit! would assign to wells that might be within in range of fracture propagation	Comments
4705102267	Tug Hill Operating	n/a	n/a	n/a	Yes, existing Marcellus permit Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Currently a permit
4705102032	Tug Hill Operating	n/a	n/a	n/a	Yes, existing Marcellus permit Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Currently a permit
4705102268	Tug Hill Operating	n/a	n/a	n/a	No, existing Point Pleasant permit Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Currently a permit
4705102269	Tug Hill Operating	n/a	n/a	n/a	No, existing Point Pleasant permit Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Currently a permit
4705130405	Wilhelm & Jackson	Unknown	Unknown	Unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be effected by fracturing in the planned Marcelius well.	Well plugged 12/4/1959

Page 2 of 4

RECEIVED Gas OCT - 2 2019 WV Department of WV Department of Environmental Protection Well: County = 51 Permit = 30405

Los aton information (Lips) Mark

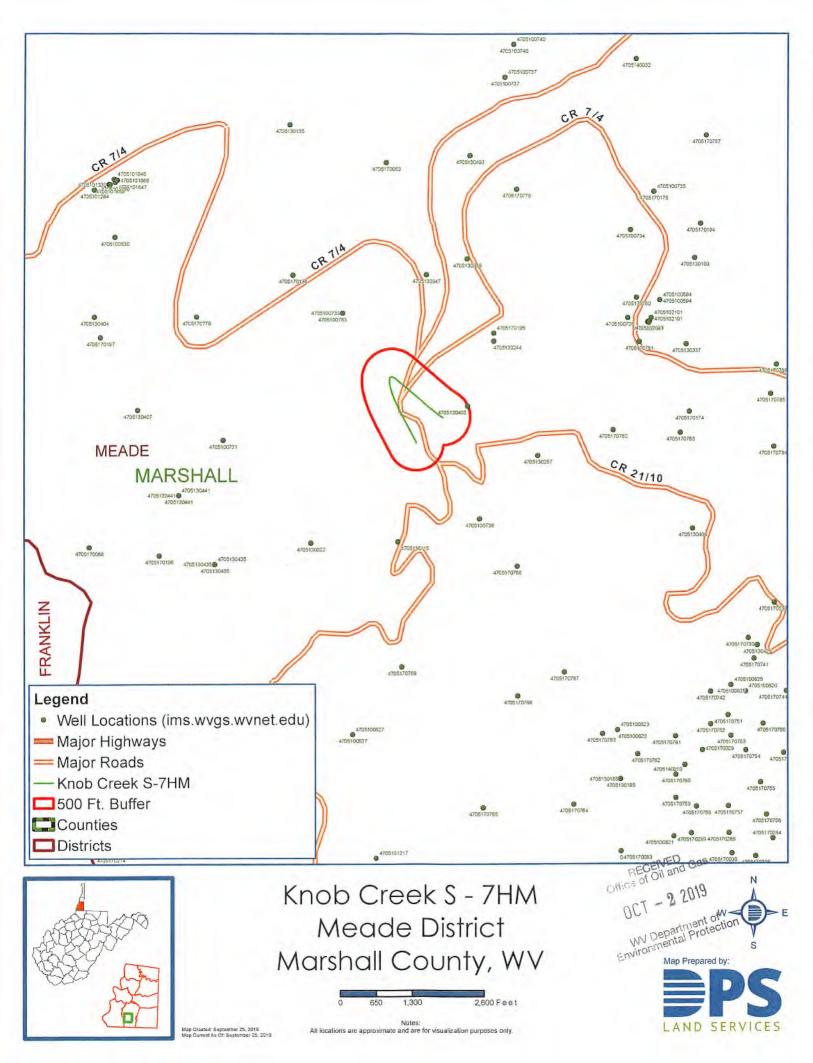
Los aton information (Lips) Mark

One laten Canage | 18 (1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1904 | 1

Office of Oil and Gas

OCT - 2 2019

WV Department of Environmental Protection



WW-9 (4/16)

API Number 47 - 051 Operator's Well No. Knob Creek S-7HM

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

RECEIVED

FLUIDS/ CUTTING	S DISPOSAL & RECLAMATION PLAN	Office of Oil and Ga
Operator Name Tug Hill Operating, LLC	OP Code 494510851	OCT - 2 2019
Watershed (HUC 10) Fish Creek	Quadrangle Glen Easton 7.5'	WV Department of
Oo you anticipate using more than 5,000 bbls of water to Will a pit be used? Yes No	to complete the proposed well work? Yes	No Environmental Protect
If so, please describe anticipated pit waste:	AST Tanks with proper containment will be used for staging fresh water for fre	ac and flow back water
Will a synthetic liner be used in the pit? Yes	No If so, what ml.? ASTTANKS Will be used with	h proper container
Proposed Disposal Method For Treated Pit Wa	astes:	
Reuse (at API Number_	C Permit Number_UIC 2459, UIC 965, UIC 359, UIC 2D07325. orm WW-9 for disposal location)	40, UIC 2D0732523)
Will closed loop system be used? If so, describe: Yes	- For Vertical and Horizontal Drilling	
rilling medium anticipated for this well (vertical and h	norizontal)? Air, freshwater, oil based, etc. Air for vert	ical / Oil for Horizontal
-If oil based, what type? Synthetic, petroleum,	etc. Synthetic Oil Base	
dditives to be used in drilling medium? Barite for weig	ht	
rill cuttings disposal method? Leave in pit, landfill, re	emoved offsite, etc. All drill cuttings to be disposed of in a	Landfill
-If left in pit and plan to solidify what medium		
	County Sanitary Landfil (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (S.	AN1405 / PA DEP EC#1386426)
Permittee shall provide written notice to the Office of Office of Office Vest Virginia solid waste facility. The notice shall be purposed it was properly disposed.		
on August 1, 2005, by the Office of Oil and Gas of the various ions of the permit are enforceable by law. Violates we or regulation can lead to enforcement action.	rsonally examined and am familiar with the informat, based on my inquiry of those individuals immedion is true, accurate, and complete. I am aware the	and I understand that the and/or other applicable ation submitted on this ediately responsible for
Subscribed and sworn before me this 26 da	ny of SEPTEMBER, 20 19	
Ty commission expires 1/2	0.00	vealth of Pennsylvania - Notary Seal
My commission expires	My Co	Washington County ommission Expires Jan 28, 2023 ommission Number 1259926

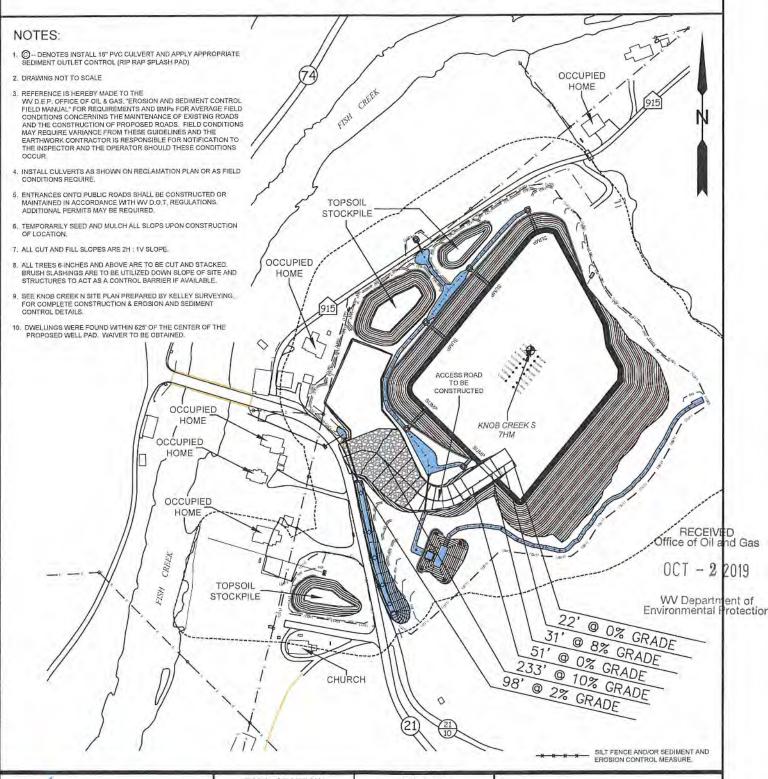
Operator's Well No. Knob Creek S-7HM

Proposed Revegetation Treatment: Ac	res Disturbed 12.93	Prevegetation ph	6.0
Lime 3 Tons	s/acre or to correct to pH	6.5	
Fertilizer type 10-20-20			
Fertilizer amount 500	lbs	s/acre	
Mulch 2.5	Tons/a	cre	
	Seed	Mixtures	
Temporary		Perma	nent
Seed Type lbs Annual Ryegrass	/acre 40	Seed Type Orchard Grass	lbs/acre 12
Spring Oats	96	Ladino	3
		White Clover	2
Attach: Maps(s) of road, location, pit and properovided). If water from the pit will be acreage, of the land application area. Photocopied section of involved 7.5' to	land applied, include din		
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WW-9

PROPOSED KNOB CREEK S - 7HM

SUPPLEMENT PG. 1





TOPO SE	CTION:	OPERATOR: PREPARED FOR: TUG HILL OPERATING, LLC		
GLEN EAS	STON 7.5'			
COUNTY	DISTRICT	380 SOUTHPOINT	TE BLVD	
MARSHALL	MEADE	SUITE 200 CANONSBURG, PA 15317		
DRAWN BY	JOB NO.	DATE	SCALE	
K.G.M.	8789	07/27/2018	NONE	





Well Site Safety Plan

Tug Hill Operating, LLC

My27/19

Well Name: Knob Creek S-7HM

Pad Location: Knob Creek Pad

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17: Northing: 4,402,280.63

Easting: 525,224.51

September 2019

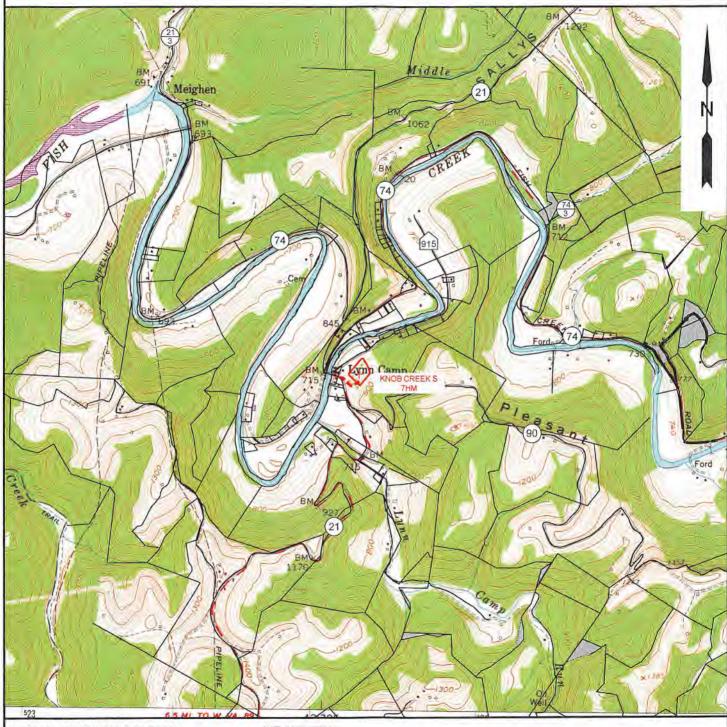
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WW-9

PROPOSED KNOB CREEK S - 7HM

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 S WELL PAD LOCATION.

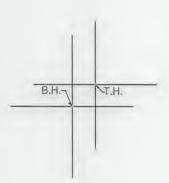


	TOPO SI	ECTION:	OPERATOR:			
	GLEN EAS	STON 7.5'	PREPARED FOR: TUG HILL OPERATING, LLC			
ı	COUNTY	DISTRICT	380 SOUTHPOI	NTE BLVD		
	MARSHALL	MEADE	SUITE 200 CANONSBURG, PA 15317			
	DRAWN BY	JOB NO.	DATE	SCALE		
4	K.G.M.	8789	07/27/2018	1" - 2000'		



KNOB CREEK S LEASE WELL 7HM TUG HILL OPERATING

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-16-13.2	ELEANOR M. FOX EST	1,570
9-16-17	ELEANOR ML FOX EST.	0.741
9-16-18.1	ROBIN D. & DAVID G. STEWART	3.333
9-16-14	LYNN CAMP METHODIST CHURCH	0.762



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

OF ACCURACY

PS 849

1/2500

MINIMUM DEGREE

No. 849
** STATE OF **

STATE OF **

PROPHING DAY

STATE OF **

PROPHING DAY

STATE OF **

STATE FILE NO. 8789P7HMR.dwg

KNOB CREEK S-7HM REV4

1" = 2000'

HORIZONTAL & VERTICAL DGPS (SURVEY GRADE TIE TO CORS NETWORK) CONTROL DETERMINED BY

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. 464,876.65 NAD'83 GEO.

NAD'83 UTM (M)

NAD'83 GEO.

E. 1,629,669.08

LAT-(N) 39.770083 LONG-(W) 80.705477 N. 4,402,280.63 E. 525,224.51

LANDING POINT

NAD'83 S.P.C.(FT) N. 465,006.7 NAD'83 GEO. NAD'83 UTM (M) N. 4,402,316.3

E. 1,628,892.7 LAT-(N) 39.770411 LONG-(W) 80.708245 E. 524,987.3

80°40'00"

T.H. LONGITUDE B.H. LONGITUDE

BOTTOM HOLE NAD'83 S.P.C.(FT) N. 464,433.1

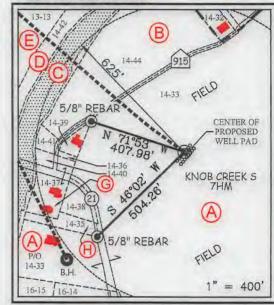
LAT-(N) 39,768847 NAD'83 UTM (M) N. 4,402,143.0

E. 1,629,179.9 LONG-(W) 80.707196

E. 525,077.8

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
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
9-14-1.2	KENNETH N. & TERESA A. SMERTNECK	1,02
9-14-11.3	PATRICK J. SCHELLHASE - TRUST	23,424
9-14-28	CHARLES R. SCHELLHASE, ET UX	3.029
9-14-29	ANDREW FASOULETOS, ET UX	0,209
9-14-29.1	ANDREW FASOULETOS, ET UX	1,171
9-14-30	WILLIAM C. GROFT, ET UX	0.35
9-14-31	WILFORD F. NELSON, JR., ET UX	0.954
9-14-32	TWILA C. COFFIELD	0.583
9-14-32.1	TWILA C, COFFIELD	0.184
9-14-36	MARGARET FOX - LIFE	1600 SO. FT.
9-14-38	MARGARET FOX - LIFE	0.631
9-14-39	MARGARET FOX - LIFE	8675 SQ. FT.
9-14-40	MARGARET FOX - LIFE	19,560 SQ. FI
9-14-41	MARGARET FOX - LIFE	9165 SQ, FT.
9-14-43	JAMES G. FOX	0.66
9-14-44.1	GEORGE R. TAYLOR, ET UX	4,423
9-14-51	GEORGE R. TAYLOR, ET UX	1,621
9-14-52	JAMES E. PEELMAN	0.439
9-14-53	JAMES E. PEELMAN	0.555
9-14-54	RICHARD L. HARVETH, ET UX	1,549
9-16-13.4	JOHN FOX	0.533
9-16-15.1	ERIC J. YOUNG	1.98
9-16-16	CLINTON B. WHITELATCH, SR., ET UX ESTS	1.98

REFERENCES



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

JULY 27 DATE_ , 20 _ 18

REVISED SEPTEMBER 30 , 20 _ 19

COUNTY

OPERATORS WELL NO. KNOB CREEK S-7HM

051

OFFICE OF OIL AND GAS

STATE

STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION



02282

PERMIT

LIQUID WASTE WELL IF OIL GAS_X INJECTION TYPE: DISPOSAL "GAS" PRODUCTION X STORAGE _ DEEP_ SHALLOW_ LOCATION: GROUND = 728.20 PROPOSED = 734.67' WATERSHED FISH CREEK (HUC 10) **ELEVATION** COUNTY

DISTRICT MEADE MARSHALL COUNTY QUADRANGLE GLEN EASTON 7.5 SURFACE OWNER _ DAVID LEE FRANKLIN ACREAGE _

DAVID LEE FRANKLIN, ET AL - SEE WW-6A1 65.824± ROYALTY OWNER . ACREAGE _ PROPOSED WORK: SEE WW-6A1

LEASE NO. _ DRILL X CONVERT _ _ DRILL DEEPER ___ REDRILL __ FRACTURE OR STIMULATE X PLUG OFF OLD

FORMATION___ PERFORATE NEW FORMATION ____ PLUG AND ABANDON ____ CLEAN OUT AND REPLUG___ _ OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) MARCELLUS TARGET FORMATION _____ ESTIMATED DEPTH TVD: 6,348' / TMD: 7,464'

WELL OPERATOR TUG HILL OPERATING, LLC

ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500

FORT WORTH, TX 76107

DESIGNATED AGENT

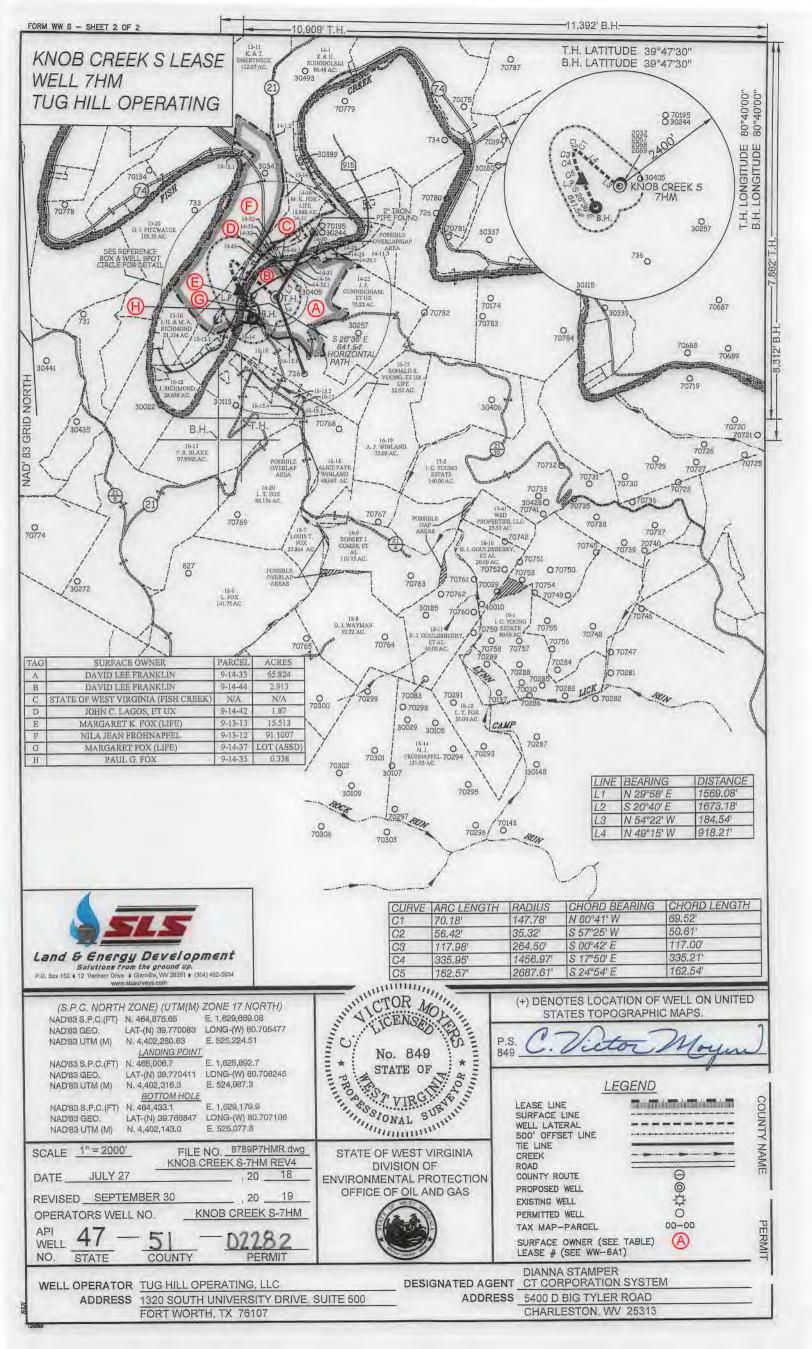
DIANNA STAMPER CT CORPORATION SYSTEM

ADDRESS 5400 D BIG TYLER ROAD

CHARLESTON, WV 25313

NAME

PERMIT



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	Cuantan Laggar ata	Cuantas I sassa ata	Dovolty	Book/Page
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royany	DOOK/Fage

*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 Stullen	
Its:	Permitting Specialist - Appalachia Region	

4705102282

Operator's Well No. Knob Creek N-7

10*23578	10*23577	10*23559	10*23312	10*23299	10*23188	10*23154	10*23146	10*23145	10*23144	10*23140	10*22545	10*22517	10*22463	10*22458	10*22378	10*22377	10*22121	10*22119	10*22117	10*21983	10*21964	10*21963	10*21956	10*21838	10*21507	10*21491	10*21108	10*21107	10*21104	10*21088	10*21087	10*21027	10*19870	10*19869	10*19714	10*19675	10*19674	10*19481	10*19475	10*19474	10*19401	10*18736	10*18735	10*18734	10*18732	10*19538	10*23458	10*47051.219.1	10*47051.219.1	Lease ID
9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-13-13	9-14-42	FISH CREEK	9-14-44	9-14-33	Parcel
m	ш	E	Е	Ε	Е	Э	3	3	Е	Е	Е	3	Е	т	Э	Е	ш	ш		7	1 1	m	Е	Е	.п	3		7	n m	Е	Е	E	П	m n	n m	E	Э	т	ш	m	n [n	n m	m	Е	Е	D	C	В	> 0	Tags
DUDLEY PORTER THAYER MONTAGUE JR BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM	JOHN WILLIAM MACKENZIE MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AD LITEM	ROBERT TOOMBS WRIGHT MONTAGUE BY DAVID C WHITE, ESQ, GUARDIAN AT LITEM	DONNA M CARTER	PATRICIA L BECK	LISA MCMANUS	CAROLYN FAY BENNETT	RETA I GRIFFIN AND MARTIN A GRIFFIN	WILLIAM BENNETT	MARGARET A WALTERS	MELISSA JENKINS	JANICE L MASLOWSKI AND FLOYD F MECHLING	PHYLLIS M RADER	STEVEN R MCCLINTOCK	JAMES RICHMOND AND CINDY L RICHMOND	KEVIN R RICHMOND AND VALERIE L RICHMOND	MONTY W BAILEY AND MARTHA E BAILEY	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	JAMES S RICHMOND	DEBORAH I WROREI AND GREGORY G WROREI	CYAL V BUCKIWASIER	WILLIAM R DODD AND SHIKLEY A DODD	LINDA R JANSSEN AND DENNIS D JANSSEN	THEODORE F MASLOWSKI AND ANITA MASLOWSKI	FIRST PRESBYTERIAN CHURCH OF CLARKSBURG	DONALD FURLONG AND LISA K FURLONG	DARLENA BRY AND LEE V BRY	SANDRA A WHITE	RONAI D.I. WEST	THE CALVIN O WILLIAMS & PATSYS WILLIAMS REVOCABLE LIVING TRUST	DONALD E WEST AND MARTHA E WEST	THOMAS E DODD AND ANITA M DODD	MARY D LING	DORIS L MASTERS AND ROY N MASTERS	SHIRLEY J DUFFY	TERRI I STREAM AND IONN T STREAM	BARBARA C LEISHMAN AND DANNY K LEISHMAN	DEBRA SHORT AND RODNEY SHORT	WILLIAM EMERY	ARDETH L PIPER AND PAUL E PIPER	EDGAR ALLEN RICHMOND	HOWARD G AND CLARA I RICHMOND	DOROTHY JEAN HUSTON AND KENNETH HUSTON	DIANE E AND DENNIS P FOWLER	KENNETH EMERY AND MARTHA LEMERY	SHERRILL M LEAVERS AND JAMES H LEAVERS	JOHN C LAGOS AND CYNTHIA M LAGOS	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	DAVID LEE FRANKLIN	DAVID LEE FRANKLIN	Grantor, Lessor, Etc.
TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC		TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC		TH EXPLORATION LLC	TH EXPLORATION LLC	TH EXPLORATION LLC		Grantee, Lessee, Etc.
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1009	1009	1009	988	988	984	984	984	984	984	984	968	964	964	963	962	962	961	953	961	963	953	960	960	959	951	957	951	951	951	951	951	951	945	945	944	944	944	941	941	941	940	940	938	938	938	936	1019	937	874	Deed I
251	253	249	17	19	530	78	80	82	84	86	9	456	458	132	228	226	352	499	354	224	497	28	13	625	128	290	140	135	137	122	124	126	576	578	580	432	337	314	316	318	348	372	243	247	245	531	373	385	312	Deed Book/Page
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A/N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Assignment
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Assignment
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		Assignment
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N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	sylphen Assignmen Assignment As
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N/A	A/N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2/3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N.	N N	N/A	N/b	N/A	N/A	N/A	2 2	N/A	N/A	N/A	N/A	N/A	N/N	N/A	Z N	N/A	N/A	N/A	Z,	NA.	N/A	Assignmo

N

WW-6A1 Supplement

Lease ID 10*24739 10*25442 10*24858 10*18298 10*18300 10*18805 10*19805 10*19937 10*47051.219.1 Parcel 9-13-13 9-13-13 9-13-12 9-14-37 9-14-37 9-14-37 9-14-37 9-14-37 9-14-37 9-14-37 Tags Grantor, Lessor, Etc. RICARDO THOMAS MAYA SARAH BETH PREWITT ET AL NILA JEAN FROHNAPFEL MALUREN GREGG ROBERT W ODOM AND CASSANDRA L ODOM CINDY STEVENS TOZIER EDMOND TURGEON JR AND CATHY STEVENS TURGEON JAMES D STEVENS AND DOROTHY M STEVENS JOHN H STEVENS AND LYNDA L STEVENS DAVID LEE FRANKLIN DAVID LEE FRANKLIN Grantee, Lessee, Etc. TH EXPLORATION LLC Deed Book/Page 1025 611 1025 119 1033 129 1028 119 929 273 929 283 937 628 944 156 949 114 949 124 937 385 937 385 937 385



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 S-7HM

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 S-7HM 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

RECEIVED 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

				Well No. Knob Co	
lotice has l	been given:		chen same		F 150. 7
ursuant to th	ne provisions in West Virginia Code	§ 22-6A, the Operator has pro-	vided the req	uired parties v	vith the Notice Forms listed
	tract of land as follows:				
tate:	West Virginia	UTM NAD 83	Easting:	525,224.51	
ounty:	Marshall	O IW NAD 83	Northing:	4,402,280.63	
istrict:	Meade	Public Road Acc	26.0	St. Joseph Road	- CR 21
uadrangle:	Glan Easton 7.5'	Generally used fa	arm name:	David Lee Frank	ln
/atershed:	Fish Creek (HUC 10)				
has provident formation references of giving the equirements firginia Code	the secretary, shall be verified and set the owners of the surface descriequired by subsections (b) and (c), so surface owner notice of entry to su of subsection (b), section sixteen ce § 22-6A-11(b), the applicant shall have been completed by the applicant	bed in subdivisions (1), (2) a ection sixteen of this article; (i urvey pursuant to subsection to of this article were waived in tender proof of and certify to t	ind (4), subset) that the received (a), section to writing by	ection (b), sec quirement was en of this arti the surface ov	ction ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice vner; and Pursuant to West
	West Virginia Code § 22-6A, the Operator has properly served the require		his Notice Co	ertification	AAR AFRICIA LCU
*PLEASE CIT	CK ALL THAT APPLY				OOG OFFICE USE ONLY
☐ 1. NO	TICE OF SEISMIC ACTIVITY or	NOTICE NOT REQUIRES SEISMIC ACTIVITY WAS			RECEIVED/ NOT REQUIRED
		A STATE OF THE STA			
■ 2. NO	TICE OF ENTRY FOR PLAT SURV	VEY or UNO PLAT SURV	EY WAS CC	NDUCTED	RECEIVED
	FICE OF ENTRY FOR PLAT SURY		RED BECAU	JSE	RECEIVED RECEIVED NOT REQUIRED
		NOTICE NOT REQUIRED NOTICE OF ENTRY FOR	RED BECAU PLAT SURV BY SURFAC	JSE YEY	☐ RECEIVED/
□ 3. NO		■ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR WAS CONDUCTED OF	RED BECAU PLAT SURV BY SURFAC	JSE YEY	☐ RECEIVED/
□ 3. NO	FICE OF INTENT TO DRILL OF	■ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR WAS CONDUCTED OF	RED BECAU PLAT SURV BY SURFAC	JSE YEY	☐ RECEIVED/ NOT REQUIRED ☐ RECEIVED ☐ RECEIVED
□ 3. NO′ □ 4. NO′ □ 5. PUE	TICE OF INTENT TO DRILL OF	■ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR WAS CONDUCTED OF	RED BECAU PLAT SURV BY SURFAC	JSE YEY	RECEIVED/ NOT REQUIRED RECEIVED

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have Been provided Ptotection 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.

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 anus Canonsburg, PA 15317 Its: Permitting Specialist - Appalachia Facsimile: 724-749-8388 Telephone: 724-749-8388 Email: amiller@tug-hillop.com day of OCTOBER 2019 Subscribed and sworn before me this NOTARY SEAL Commonwealth of Pennsylvania - Notary Seal

Oil and Gas Privacy Notice:

MAUREEN A STEAD - Notary Public Washington County My Commission Expires Jan 28, 2023

Commission Number 1259926

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

WW-6A (9-13) API NO. 47OPERATOR WELL NO. Knob Creek S-7HM
Well Pad Name: Knob Creek

Notice Time Require	ment: notice shall be prov	ided no later tha	n the filing date of permit application.	
Date of Notice: 9/30/20 Notice of:	Date Permit Applica	ation Filed: 10/1/	2019	
PERMIT FOR A	NY D CERTIF	ICATE OF APP	ROVAL FOR THE	
WELL WORK			AN IMPOUNDMENT OR PIT	
Delivery method pur	suant to West Virginia C	ode § 22-6A-10	(b)	
☐ PERSONAL	REGISTERED	✓ METHO	OD OF DELIVERY THAT REQUIRES A	
SERVICE	MAIL		PT OR SIGNATURE CONFIRMATION	
the surface of the tract oil and gas leasehold be described in the erosion operator or lessee, in the more coal seams; (4) The well work, if the surfaction impoundment or pit as have a water well, spring provide water for consuproposed well work act subsection (b) of this serecords of the sheriff reprovision of this article Code R. § 35-8-5.7.a re	on which the well is or is proving developed by the proposition and sediment control plans are event the tract of land on whe owners of record of the site tract is to be used for the produceribed in section nine of ag or water supply source local amption by humans or dome in its interest in the languired to be maintained pure to the contrary, notice to a lequires, in part, that the open	oposed to be local sed well work, if submitted pursual which the well prurface tract or traplacement, construction in this article; (5) A cated within one that the stic animals; and if more than three ands, the applicant suant to section elien holder is not rator shall also presume the stick of the section of the stick of the section	the well plat to each of the following persons: (1) The ted; (2) The owners of record of the surface tract or the surface tract is to be used for roads or other land into subsection (c), section seven of this article; (3) opposed to be drilled is located [sic] is known to be uncts overlying the oil and gas leasehold being developed action, enlargement, alteration, repair, removal or about any surface owner or water purveyor who is known to thousand five hundred feet of the center of the well person (6) The operator of any natural gas storage field with the tenants in common or other co-owners of interests of the traction and the person ight, article one, chapter eleven-a of this code. (2) No notice to a landowner, unless the lien holder is the landowide the Well Site Safety Plan ("WSSP") to the surface provided in section 15 of this rule.	racts overlying the disturbance as The coal owner, aderlain by one or ed by the proposed andonment of any the applicant to ad which is used to in which the described in described in the otwithstanding any andowner. W. Va.
			☑ Well Plat Notice is hereby provided to:	
☑ SURFACE OWNER Name: David Lee Franklin			☐ COAL OWNER OR LESSEE 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	Same Services
Address:		_	Name:	RECEIVED Office of Oil and Gas
	* * * * * * * * * * * * * * * * * * * *	-	Address:	
	k(s) (Road and/or Other Di	sturbance)		-0CT - 22019
Name: David Lee Franklin	n.e.		SURFACE OWNER OF WATER WELL	
Address: 131 Saint Joseph		_	AND/OR WATER PURVEYOR(s)	WV Department of Environmental Protection
Glen Easton, W	1 313 2 2		Name: *See attached list	The comment of the second of the second
Name:		-	Address:	
Address.		-	OPERATOR OF ANY NATURAL GAS STOR	ACE FIELD
SURFACE OWNER	t(s) (Impoundments or Pits	<u>5</u>		
	(s) (Impoundments of Fits	9	Address:	
Address:		5 0	· (Mai 000).	-
V 100.700			*Please attach additional forms if necessary	

WW-6A (8-13)

RECEIVED Office of Oil and Gas

OCT - 2 2019

OPERATOR WELL NO, Knob Creek S-7HM Well Pad Name: Knob Creek

Notice is hereby given:

WV Department of Environmental Protection

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

WW-6A (8-13) API NO. 44 7 0 - 5 1 0 2 2 8 2

OPERATOR WELL NO. Knob Creek S-7HM

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:

RECEIVED
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

0CT - 22019

WV Department of Environmental Protection

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WW-6A (8-13)

OPERATOR WELL NO. Knob Creek S-7HM Well Pad Name: Knob Creek

**				
Notice	IS	hereby	given	DV:

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 SEPT, 2019.

Notary Public

My Commission Expires 128/23

My Commission Expires

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OCT - 2 2019

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 S - 7HM

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 Address – 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. 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. RECEIVED Glen Easton, WV 26039Office of Oil and Gas Tax Address: 189 Plum St. Proctor, WV 26055 WV Department Environmental Profi

House 10	House 11	House 12
TM 14 Pcl. 45	TM 16 Pcl. 15.1	TM 16 Pcl. 15
George R. Taylor, Et Ux	Eric J. Young	Ronald R. Young, Et Ux - Life
Phone: 304-845-2987	Phone: 304-686-3398; 304-905-1986	Phone: 304-845-6044 (Per Tax Address –
Physical Address:	(Per Address – Chelsey Long); 304-845-	Geraldine M. Young
L2781 Fish Creek Rd.	0154 (Per Address – Bill J. Blatt)	Physical Address:
Glen Easton, WV 26039	Physical Address:	348 Saint Joseph Rd.
Tax Address:	153 Young Ln.	Glen Easton, WV 26039
Same	Glen Easton, WV 26039	Tax Address:
	Tax Address:	Same
	Same	
House 13	House 14	House 15
TM 16 Pcl. 14	TM 16 Pcl. 15	TM 16 Pcl. 13.5
Lynn Camp Methodist Church	Ronald R. Young, Et Ux - Life	Paul R. Blake & Paul R. Blake II
Phone:	Phone: 304-845-6044 (Per Tax Address	Phone: 304-845-9369
Physical Address:	- Geraldine M. Young)	Physical Address:
171 Saint Joseph Rd.	Physical Address:	616 Saint Joseph Rd.
Glen Easton, WV 26039	323 Saint Joseph Rd.	Glen Easton, WV 26039
Tax Address:	Glen Easton, WV 26039	Tax Address:
Unknown Address	Tax Address:	121 Vandivere Ln.
	348 Saint Joseph Rd.	Glen Easton, WV 26039-9707
Moundsville, WV 26041	Glen Easton, WV 26039	GIGH Editor, WV 20033-3707
House 16	House 17	House 18
TM 16 Pcl. 13.1	TM 16 Pcl. 13.6	TM 16 Pcl. 13.3
Paul W. Blake - Life	Wesley D. Yeater, Et Ux	Paul R. Blake
Phone: 304-845-2999	Phone: 304-843-5212	Phone: 304-845-9369
Physical Address:	Physical Address:	Physical Address: 121 Vandivere Ln.
581 Saint Joseph Rd.	37 Vandivere Ln.	
Glen Easton, WV 26039	Glen Easton, WV 26039	Glen Easton, WV 26039
Tax Address:	Tax Address:	Tax Address:
1500 8 th St.	Same	Same
Moundsville, WV 26041-2031		
House 19	House 20	House 21
TM 16 Pcl. 12.2	TM 16 Pcl. 12.7	TM 16 Pcl. 12.1
Spencer J. & Carrie A. Richmond	Spencer J. & Carrie A. Richmond	James G. Richmond, Et Ux
Phone: 304-845-2274; 304-845-8186	Phone: 304-845-2274; 304-845-8186	Phone: 304-845-8186
Physical Address:	Physical Address:	Physical Address:
293 Richmond Ln.	243 Richmond Ln.	157 Richmond Ln.
	7	
Glen Easton, WV 26039	Glen Easton, WV 26039	Glen Easton, WV 26039
Tax Address:	Tax Address:	Tax Address:
243 Richmond Ln. Glen Easton, WV 26039	Same	Same RECEIVED
Gien Easton, WV 20039		Same RECEIVED Office of Oil and 0
House 22	House 23	House 24 0CT - 2 20
TM 14 Pcl. 33	TM 14 Pcl. 37	TM 14 Pcl. 37
David Lee Franklin	Margaret Fox – Life	Margaret Fox – Life W Departme
Phone: 304-845-6025; 304-845-3203	c/o Paul Fox	TM 14 Pcl. 37 Margaret Fox – Life
Physical Address:	Phone: 304-455-3817 (Per Tax Address	Phone: 304-455-3817 (Per Tax Address –
131 Saint Joseph Rd.	- Paul G. Fox)	Paul G. Fox)
Glen Easton, WV 26039	Physical Address:	Physical Address:
Tax Address:	107 Saint Joseph Rd.	51 Saint Joseph Rd.
131 Saint Joseph Rd.	Glen Easton, WV 26039	Glen Easton, WV 26039
Glen Easton, WV 26039	Tax Address:	Tax Address:
GIGH LUSCOH, WV ZUUSS		
	5761 Saint Joseph Rd.	5761 Saint Joseph Rd.

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

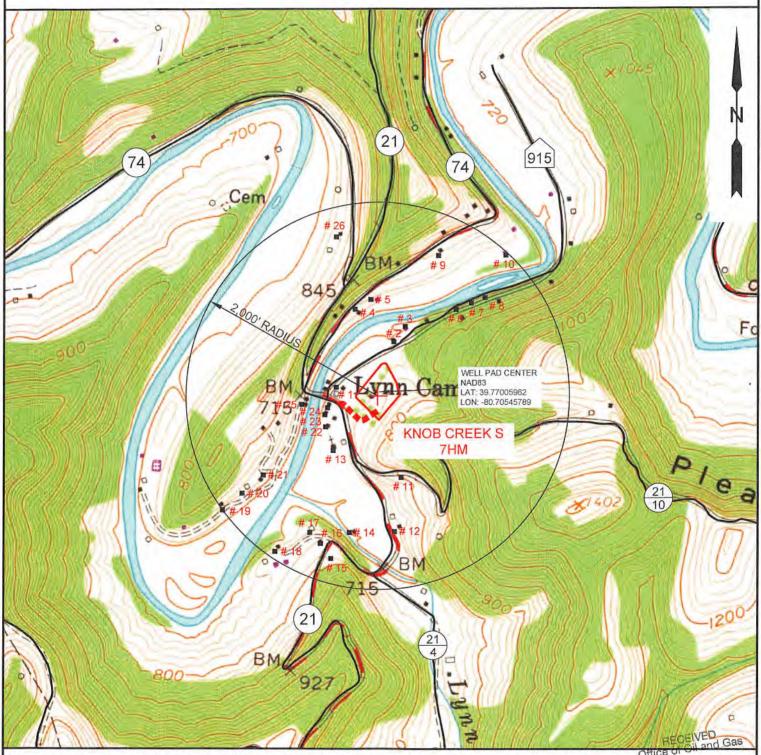
OCT - 2 2019

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WW-6A

PROPOSED KNOB CREEK S - 7HM

SUPPLEMENT PG. 1B



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

OCT - 2 2019



	TOPO S	ECTION:	OPER	ATOR:
	1010 3	LOTION.	OI LIV	ATOK.
	GLEN EAS	STON 7.5'	TUG HILL OPER	
	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" - 1000'



WW-6A3 (1/12)

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

Not entr		Requirement:	Notice shall be prov	ided at	least SEVEN (7) da	ys but no more tha	n FORTY-FIVE	2 (45) days prior to
	y e of Notic	e: 2/5/2018	Date of Plan	ned E	ntry: 2/12/2018			
Deli	ivery met	hod pursuant	to West Virginia Co	ode § 2	2-6A-10a			
	PERSON	JAL 🗆	REGISTERED		METHOD OF DEL	IVERY THAT RE	EOUIRES A	
	SERVIC		MAIL		RECEIPT OR SIGN			
on to but bend own and Seco	o the surfa no more the eath such the er of mine Sediment retary, whi	nce tract to cond nan forty-five d tract that has fil orals underlying Control Manual ich statement sl	luct any plat surveys ays prior to such ent ed a declaration pur- g such tract in the co- ll and the statutes an	requirery to: (suant to unty tax d rules nforma	ed pursuant to this and a pursuant to this and a pursuant to the surface owned as section thirty-six, a pursuant to the surface of the surfac	rticle. Such notice r of such tract; (2) rticle six, chapter t e shall include a st s exploration and p	shall be provided to any owner or l wenty-two of this atement that copi production may be	essee of coal seams s code; and (3) any es of the state Erosion e obtained from the
Not	ice is here	by provided to) :					
12	SURFAC	E OWNER(s)	,		■ COA	L OWNER OR LE	SSEE	
		e Franklin (Pad and A	(ccess Road)			X Land Resources, Inc.		
		aint Joseph Road			Address:	1000 Consol Energy Drive		
	Glen	Easton, WV 26039				Canonsburg, PA 15318		
Nan							1	
Add	ress:					ERAL OWNER(s)		
				-		vid Lee Franklin		
Nan	ress:					131 Saint Joseph Road		
Add	ress:			-		Glen Easton, WV 26039 h additional forms if ne	DODE OF C	_
Purs	uant to Wat survey o	eby given: est Virginia Co on the tract of la West Virginia		otice is		e undersigned wel	l operator is plans	ning entry to conduct
Cou	nty:	Marshall			Public Road A	Access:	St. Joseph Road - Co	unty Route 21
Dist	rict:	Meade			Watershed:		Fish Creek (HUC 10)	
Qua	drangle:	Glen Easton 7.5'			Generally use	d farm name:	David Lee Franklin	
may Cha	be obtain rleston, W	ed from the Sec V 25304 (304-	eretary, at the WV D 926-0450). Copies	epartm of such	al and the statutes an ent of Environmenta documents or addit v/oil-and-gas/pages/o	l Protection headq ional information r	uarters, located at	t 601 57 th Street, SE, tal drilling may be
Not	ice is her	eby given by						REO Oil all
	l Operator				Address:	380 Southpointe Boulev	rard Plaza II Suita 200	Office of Oil 21.
	phone:	724-749-8388	3, 220			Canonsburg, PA 15317		OCT - ant of sion
Ema	Transaction of the second	amiller@tug-hillop	o.com		Facsimile:	724-338-2030		OCT - 2 2000 WW Department of trotection Environmental Protection
		-						MANUMBLIE
Oil	and Gas	Privacy Noti	ce:					Elis

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.

WW-6A5 (1/12) Operator Well No. Knob Creek S-7HM

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 be prove: 20: 10/01/2019 Date Pe	vided no later than th rmit Application Fil			application.	
Delivery met	hod pursuant to West Virginia (Code § 22-6A-16(c)				
■ CERTII	FIED MAIL	☐ HAND				
	RN RECEIPT REQUESTED	DELIVERY				
eturn receipt he planned of equired to be Irilling of a l lamages to th	V. Va. Code § 22-6A-16(c), no la requested or hand delivery, give to peration. The notice required by a provided by subsection (b), section for its period with the propose surface affected by oil and gas of the section of the section shall be a surface affected by this section shall be	he surface owner who this subsection shat on ten of this article to ed surface use and coperations to the exter	ose land Il includ to a surfator compens the da	will be used for le: (1) A copy acc owner whose ation agreement mages are com	or the drilling of a horize of this code section; (see land will be used in containing an offer of pensable under article see	contal well notice of (2) The information conjunction with the of compensation for six-b of this chapter.
	eby provided to the SURFACE (s listed in the records of the sheriff e Franklin	at the time of notice): Name:			
	Saint Joseph Road	_	Address			
Glen Easton, WV						
State: County:	the surface owner's land for the pu West Virginia Marshall	UTM	NAD 8	Easting: Northing:	525,224.51 4,402,280.63	
District:	Meade		Public Road	Access: ed farm name:	St. Joseph Road - CR 21	
Quadrangle: Vatershed:	Glen Easton 7.5' Fish Creek (HUC 10)	Gener	rally use		David Lee Franklin	
Pursuant to Woo be provided to izontal we urface affect information re-	Shall Include: Vest Virginia Code § 22-6A-16(c), Ed by W. Va. Code § 22-6A-10(b) Il; and (3) A proposed surface use ed by oil and gas operations to the elated to horizontal drilling may be located at 601 57th Street, SE, ault.aspx.) to a surface owner and compensation a se extent the damage be obtained from the	r whose greemer s are co	land will be at containing an impensable undarry, at the WV	used in conjunction wing offer of compensation ler article six-b of this Department of Environment of Environme	th the drilling of a for damages to the chapter. Additional onmental Protection dep.wv.gov/oil-and-
Well Operato		Add	dress;	380 Southpointe Bo	ulevard, Plaza II, Suite 200	RECEIVED Gas
elephone:	724-749-8388			Canonsburg, PA 15317		OC1 - 5 5013
Email:	amiller@tug-hillop.com	Fac	simile:	724-338-2030		OC1 - P =
Oil and Gas I	Privacy Notice: Oil and Gas processes your person	nal information, such	as nam	e, address and	telephone number, as pa	WV Departmer WV Departmer art of Our regulatory

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.

API NO. 47-	-	
OPERATOR WELL	NO.	Knob Creek S-7HM
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 ope work. Please	erator, Tug Hill Operating, LLC be advised that well work permit	is applying s are valid for to	g for a permi wenty-four (2	t from the State (4) months.	of West Virginia to conduct oil or gas well	
Well Locatio	on Restrictions					
Pursuant to Vany existing located within larger used to dwellings or provided in sarticle was proby written occlerk of the color of the	water well or developed spring un six hundred twenty-five feet of oo house or shelter dairy cattle on agricultural buildings that existed ection ten of this article or a notic rovided, whichever occurs first, aronsent of the surface owner transcounty commission for the countries the secretary from these distance in the be employed during well site to be employed during well site or	used for human an occupied dw r poultry husbar l on the date a r e of intent to dr ad to any dwelli mitted to the de y in which such estrictions upon construction, dri e safety and pro	or domestic welling struct andry. This notice to the rill a horizont ining under con epartment an h property is a submission illing and op- potection of af	animal consunure, or a buildin limitation is ap- surface owner of all well as provin astruction prior of recorded in the located. Furthof a plan which erations. The valected persons a	ndred fifty feet measured horizontally from 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 ermore, the well operator may be granted a dentifies the sufficient measures, facilities variance, if granted, shall include terms and and property. The terms and conditions may	
	and it was the mountainment of		AIVE			
T There was the fire have	and the second section is a second section of the section of				med on Page WW-6A and the associated	
ww-6A and required, and State: County: District:	attachments consisting of pages of the well plat, all for proposed wel West Virginia Marshall Meade	ll work on the tr	ract of land a UTM NAD UTM NAD	s follows: 83 Easting: 83 Northing:	525,224.51 4,402,280.63	
	Glen Easton 7.5'		Public Road	Access: sed farm name:	St. Joseph Road - County Route 21	
Watershed:	Fish Creek (HUC-10)		Generally us	eu iaim name:	David Lee Franklin	
I further state issued on thos		anned work desc all well site rest	cribed in thes	e materials, and d under West V	I I have no objection to a permit being Virginia Code § 22-6A-12(a).	
WELL SITE	RESTRICTIONS BEING WAR	IVED		FOR EXECUT Signature:	TION BY A NATURAL PERSON	
☐ EXISTIN	NG WATER WELLS			Print Name: Date:		
□ DEVEL	OPED SPRINGS		1	FOR EXECUT	TION BY A CORPORATION, ETC.	
DWELI	LINGS			By: Douglas L. Del		
☐ AGRICU	JLTURAL BUILDINGS		19		12016	
Well Operato	r; Tug Hill Operating, LLC		Signatu		1201-1	
By: David G. DeL				ne: 724-749-8388		_
Its: Land Team L	ead		4 200			
Chester / Pine My Comm	WEALTH OF PENNSYLVANIA NOTARIAE SEAL Arthur West IV, Notary Public Twp., Allegheny County nission Expires Feb. 10, 2020	-6	d and sworn l	1	Notary Public	
Oil and Gas P	rivacy 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.

RECEIVED Gas
Office of Oil and Gas

OCT - 2 2019

WV Department of Environmental Protection

4705102282

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 Virginia: County of MArs Woll to-wit:

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

Given under my hand this 31st day of MANY

My commission expires: 18,2027

(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

WW Department of Notary Public for the aforesaid Environmental Protection

County and/or State

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-	- 4	
OPERATOR WEL	LNO.	Knob Creek S-7HM
Well Pad Name:	Knob C	reek

STATE OF WEST VIRGINIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WELL LOCATION RESTRICTION WAIVER

					The second second second second
The well ope work. Please	rator, Tug Hill Operating, LLC be advised that well work permi				e of West Virginia to conduct oil or gas well
Well Location Pursuant to W any existing and existing any existing any existing any existing and existing any existing and existing any existing any existing any existing and existing any existing any existing any existing any existing and existing any existing and existing any existing any existing and existing any existing and existing any existing and existing any existing and existing any	n Restrictions Vest Virginia Code § 22-6A-12(water well or developed spring a six hundred twenty-five feet of b house or shelter dairy cattle of agricultural buildings that existe ection ten of this article or a notio ovided, whichever occurs first, a meent of the surface owner trans- county commission for the count as escretary from these distance to be employed during well site	a), Wells may used for human an occupied do proposed for poultry hused on the date accept for any dwel some the try in which surestrictions upocconstruction, do no safety and present and	not be drilled van or domestic a dwelling structur bandry. This life a notice to the sudrill a horizontal elling under considepartment and che property is learn submission of drilling and oper protection of affe	within two hur nimal consum e, or a buildir nitation is ap urface owner well as provi truction prior recorded in the f a plan which ations. The toted persons a	ndred fifty feet measured horizontally from aption. The center of well pads may not being two thousand five hundred square feet or uplicable 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 an identifies the sufficient measures, facilities variance, if granted, shall include terms and and property. The terms and conditions may
		W	VAIVER		
provisions list WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state	ted above, and that I have receive attachments consisting of pages of the well plat, all for proposed wewest Virginia Marshall Meade Glen Easton 7.5° Fish Creek (HUC-10) that I have no objection to the pl	ed copies of a lone (1) through	Notice of Applic h	ation, an App including the follows: 3 Easting: 3 Northing: Access: d farm name: materials, and	amed on Page WW-6A and the associated lication for a Well Work Permit on Form erosion and sediment control plan, if 525.224.51 4,402,280.63 St. Joseph Road - County Route 21 David Lee Franklin d I have no objection to a permit being
WELL SITE	se materials and I therefore waive RESTRICTIONS BEING WAS all that apply		FS	OR EXECU ignature:	Virginia Code § 22-6A-12(a). TION BY A NATURAL PERSON
□ EXISTIN	NG WATER WELLS		C. C.	rint Name: late:	
□ DEVEL	OPED SPRINGS LINGS		C B		
☐ AGRICU	JLTURAL BUILDINGS		S	ignature:	Day O. A.S.
Well Operato	r: Tug Hill Operating, LLC		Signatur	e:	
By: David G. DeL	plia		Telephor	ne: 724-749-8368	
Chester Pin My Com	NWEALTH OF PENNSYLVANIA NOTARIAL SEGAL Arthur West IV, Notary Public e Twp., Allegheny County mission Expires Feb. 10, 2020 NNSYLVANIA ASSOCIATION OF NOTARIES	(bed and sworn b	No Co	30h day of Spokenber 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.

RECEIVED Gas OCT - 2 2019 WV Department of Environmental Protection

4705102282

That I, Linda Lee Frankla, 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 <u>loda lee Franklin</u> 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 West Virginia:

County of MArshall to-wit:

The foregoing instrument was acknowledged before me this Muday of March, 2018, by Lunda Lee Franklin.

Given under my hand this 29th day of March, 2018.

My commission expires:

Ten 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

En

Notary Public for the aforesaid County and/or State

RECEIVED Gas Office of Oil and Gas

W Department of W Department of Environmental Protection

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). Knab Creek S-7HM
Well Pad Name: Knob	Creek

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

	erator, _Tug Hill Operating, LLC be advised that well work permits	is apply s are valid fo	ying for a permit f or twenty-four (24)	rom the State	e of West Virgini	ia to conduct oil or gas well
Pursuant to Vany existing located within larger used the dwellings or provided in sarticle was publy written exclerk of the evariance by the conditions the conditions the same experience of the evariance by the conditions the conditions the same existing the same experience of the evariance by the conditions the conditions the same experience of the evariance by the experience of the evariance by the experience of the evariance	on Restrictions West Virginia Code § 22-6A-12(a water well or developed spring u n six hundred twenty-five feet of o house or shelter dairy cattle or agricultural buildings that existed ection ten of this article or a notic rovided, whichever occurs first, and onsent of the surface owner transicularly commission for the county he secretary from these distance reto be employed during well site of the department requires to ensure the ance, bonding and indemnification.	ased for hum an occupied r poultry hus on the date e of intent to hid to any dwe mitted to the y in which su- estrictions up- onstruction, e safety and p	an or domestic ar dwelling structure sbandry. This lin a notice to the su o drill a horizontal elling under conste department and uch property is lo pon submission of drilling and opera protection of affec	nimal consume, or a building a building is approximated as provinced in a cated. Further a plan which titions. The steed persons a	nption. The centing two thousand opplicable to those of planned entry ided in subsection to that date. This the real property ermore, the well in identifies the su variance, if grant	er of well pads may not be five hundred square feet or e wells, developed springs, for surveying or staking as in (b), section sixteen of this is limitation may be waived records maintained by the operator may be granted a afficient measures, facilities ed, shall include terms and
		V	VAIVER			
WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state	ted above, and that I have received attachments consisting of pages of 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 plase materials and I therefore waive	ne (1) throug Il work on the	gh, i e tract of land as f UTM NAD 83 UTM NAD 83 Public Road A Generally used	ncluding the follows: Easting: Northing: ccess: I farm name:	525,224.51 4,402,280.63 St. Joseph Road - C David Lee Franklin d I have no object	ment control plan, if
WELL SITE *Please check □ EXISTI □ DEVEL □ DWELL	RESTRICTIONS BEING WAI k all that apply NG WATER WELLS OPED SPRINGS	IVED	FO Si Pr Do FO Co By Its	OR EXECU gnature: int Name: ate:	TION BY A NA TION BY A CO reloration, LLC Martino, Esq.	TURAL PERSON RPORATION, ETC.
	or: Tug Hill Operating, LLC			ate: 9	30/2019	
By: David G. Del				e: 724-749-8388		
Its: Land Team L			relephon			
Chester Pine	NWEALTH OF PENNSYLVANIA NOTARIAY SEAIL Arthur West IV, Notary Public E Twp., Allegheny County nission Expires Feb. 10, 2020 NASYLVANIA ASSOCIATION OF NOTARIES		ibed and sworn be	7	30t day of	September 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.

OCT - 2 2019 WV Department of Environmental Protection

The well operator, Tug Hill Operating, LLC

Well Operator: Tug Hill Operating, LLC

By: David G. DeLallo Its: Land Team Lead

API NO. 47-	-	
OPERATOR WELL	NO.	Knob Creek S-7HM
Well Pad Name:	Knob C	reek

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. 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 rin-Fact, TH Endoardon, 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 , 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: UTM NAD 83 Easting: State: West Virginia UTM NAD 83 Northing: County: Marshall 4,402,280.63 District: Meade Public Road Access: St. Joseph Road - County Route 21 Quadrangle: Generally used farm name: David Lee Franklin Glen Easton 7.5 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 Attor By: Douglas L. DeMartino DWELLINGS Its: Attorney-in-Fact ☐ AGRICULTURAL BUILDINGS 9/30/2019 Signature: av Nicht

COMMONWEATTHROSEMNSYLVANIA

NOTARIAL SEAL
Sean Cotter, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires Oct. 12, 2019

Oil and Gas Privacy Notice:

My Commission Expires

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.

Signature: 724-749-3388

Office of Oil and Gas

OCT - 2 2019

WV Department of Environmental Protection

Notary Public

4705102282

That I, Poul G. 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 Rul G. 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.
Paul G. Fex 324-18 (SEAL)
STATE OF West Virginia:
COUNTY OF MArshall to-wit:
The foregoing instrument was acknowledged before me this day of Mark, 2018, by
Pal G. Fax
Given under my hand this 24Hday of March, 2018.
Given under my hand this 24H day of March, 2018. My commission expires: Jan 18, 2072
(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 My Commission Expires January 18, 2022 This I protection Environmental Protection
This Instrument Prenared Ry

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 S-7HM
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 HII Operating, LLC be advised that well work permits			e of West Virginia to conduct oil or gas	well
Pursuant to Weny existing vocated within arger used to dwellings or a provided in seurcicle was proy written collerk of the covariance by the practices to conditions the	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 voided, whichever occurs first, and insent of the surface owner transm ounty commission for the county are secretary from these distance reso be employed during well site co	ed for human or domes n occupied dwelling stra poultry husbandry. The on the date a notice to to of intent to drill a horize it to any dwelling under inted to the department in which such property strictions upon submissi nstruction, drilling and safety and protection of	tic animal consunucture, or a building is limitation is apple surface owner ontal well as provicenstruction prior and recorded in the is located. Furthon of a plan which operations. The vaffected persons a	ndred fifty feet measured horizontally uption. The center of well pads may not may two thousand five hundred square for plicable to those wells, developed sprof planned entry for surveying or staking ded in subsection (b), section sixteen of to that date. This limitation may be weare the real property records maintained by the remove, the well operator may be grann identifies the sufficient measures, facionariance, if granted, shall include terms and property. The terms and conditions	ot be eet or rings, ng as of this aived by the ited a ilities s and
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WW-6A and a		e (1) through work on the tract of land UTM NA UTM NA	, including the	lication for a Well Work Permit on Fore erosion and sediment control plan, if 525,224.51 4.402,280.63 St. Joseph Road - County Route 21	
uadrangle: Vatershed:	Glen Easton 7.5' Fish Creek (HUC-10)	Generally	used farm name:		
further state sued on thos		Il well site restrictions l	isted under West	d I have no objection to a permit being Virginia Code § 22-6A-12(a). FION BY A NATURAL PERSON	_
	all that apply	VED	Signature: Print Name:	HONDI A NATURAL PERSON	
EXISTIN	IG WATER WELLS		Date:		
DEVEL	OPED SPRINGS		Company: THE	TION BY A CORPORATION, ETC. ploration, LLC as Attorney-in-Fact for Mark H. Fox	
DWELL	INGS		By: Douglas L. De Its: Attorney-in-Fac		
AGRICU	JLTURAL BUILDINGS		Signature:		
	Tug Hill Operating, LLC		ature:		
y: David G. DeL		Tele	phone: 724-749-8388		
ts: Land Team L	ead				
Sity of	NWPAITH OF PENNSYLVANIA NOTARIAL SEAL ean Cotter, Notary Public r Pittsburgh, Allegheny County nmission Expires Oct. 12, 2019	Subscribed and swo		30 day of Saptenber	olic
Oil and Gas Pr	rivacy Notice:				-
he Office of C	oil and Gas processes your personal in	formation, such as name,	address and telephor	ne number, as part of our regulatory duties.	Your

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.

Office of Oil and Gas

OCT - 2 2019

WV Department of Environmental Protection

4705102282

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 H. 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:

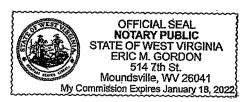
The foregoing instrument was acknowledged before me this way of Marin, 2018, by

MAIK H. FOX

Given under my hand this 34th day of MACC, 2018.

My commission expires: Jan 18 2022

(NOTARY SEAL/STAMP REQUIRED)



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

API NO. 47-	
OPERATOR WELL NO). Knob Creek S-7HM
Well Pad Name: Knob	Creek

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

any existing wan ocated within sarger used to lead dwellings or ago provided in sect article was provey written cons	est Virginia Code § 22-6A-12(a), Wells may ater well or developed spring used for hum six hundred twenty-five feet of an occupied house or shelter dairy cattle or poultry hus ricultural buildings that existed on the date tion ten of this article or a notice of intent to	nan or domestic animal consun dwelling structure, or a buildin sbandry. This limitation is ap	ndred fifty feet measured horizontally from nption. The center of well pads may not be ng two thousand five hundred square feet or policable to those wells, developed springs,
variance by the or practices to le conditions the d	sent of the surface owner transmitted to the unty commission for the county in which s secretary from these distance restrictions up be employed during well site construction,	elling under construction prior e department and recorded in to such property is located. Furth pon submission of a plan which drilling and operations. The v protection of affected persons a	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 identifies the sufficient measures, facilities variance, if granted, shall include terms and and property. The terms and conditions may
	V	VAIVER	
required, and the State: County: District: Quadrangle: Watershed: Further state th	tachments consisting of pages one (1) through the well plat, all for proposed well work on the West Virginia Marshall Meade (3) (3) (3) (3) (3) (3) (3) (3) (3) (3)	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	525,224.51 4.402,280.63 St. Joseph Road - County Route 21 David Lee Franklin d I have no objection to a permit being
WELL SITE R Please check a	RESTRICTIONS BEING WAIVED		TION BY A NATURAL PERSON
DEVELOR DWELLIN	PED SPRINGS	FOR EXECU	TION BY A CORPORATION, ETC. sploration, LLC as Attorney-in-Fact for David E. Fox Martino
	TURAL BUILDINGS	Its: Attorney-in-Fac Signature:	
	Tug Hill Operating, LLC	Signature:	
y: David G. DeLallo		Telephone: 724-749-8388	17-27

Oil and Gas Privacy Notice:

14011

___ My Commission Expires _

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@ww.gov.

RECEIVED Gas OCT -2 2019 WW Department of Environmental Protection

4705102282

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 G 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 day of March

My commission expires: ___

(NOTARY SEAL/STAMP REQUIRED)

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 S-7HM
Well Pad Name: Knob C	reek

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

The same of the same of	erator, Tug Hill Operating, LLC e be advised that well work permi			e of West Virginia to conduct oil or gas well
Pursuant to Vany existing ocated within arger used to invellings or provided in sample article was proposed to the collerk of the variance by the productions the conditions the condition	water well or developed spring in six hundred twenty-five feet of to house or shelter dairy cattle of agricultural buildings that existe section ten of this article or a not rovided, whichever occurs first, a consent of the surface owner tran county commission for the count the secretary from these distance to be employed during well site the department requires to ensure the	used for human or of an occupied dwelling poultry husbandred on the date a notice of intent to drill a and to any dwelling assmitted to the departy in which such prestrictions upon sulconstruction, drilling the safety and protect	domestic animal consuming structure, or a building. This limitation is appeted the surface owner of a horizontal well as proviunder construction prior trument and recorded in the operty is located. Further omission of a plan which go and operations. The value of affected persons a	ndred fifty feet measured horizontally from aption. The center of well pads may not be any two thousand five hundred square feet or plicable 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 an identifies the sufficient measures, facilities variance, if granted, shall include terms and and property. The terms and conditions may
nclude insur	rance, bonding and indemnification	The state of the s	Continue of the continue of th	
			IVER	med on Page WW-6A and the associated
equired, and State: County: District:	i the well plat, all for proposed we West Virginia Marshali Meade	ell work on the tract UT UT Put	of land as follows: M NAD 83 Easting: M NAD 83 Northing: olic Road Access:	erosion and sediment control plan, if 525,224.51 4.402,280.63 St. Joseph Road - County Route 21
Watershed: further state	Glen Easton 7.5' Fish Creek (HUC-10) e that I have no objection to the pi se materials and I therefore waive	lanned work describe	nerally used farm name: ed in these materials, and tions listed under West V	d I have no objection to a permit being
VELL SITE	E RESTRICTIONS BEING WA			TION BY A NATURAL PERSON
□ EXISTI	NG WATER WELLS		Print Name: Date:	
□ DEVEL	OPED SPRINGS		FOR EXECUT	TION BY A CORPORATION, ETC. ploration, LLC as Attorney-in-Fact for Mary A. Fox
DWEL.	LINGS		By: Douglas L. Del	
AGRIC	ULTURAL BUILDINGS		Its: Attorney-in-Fac	200
				2012019
Vell Operato	Or: Tug Hill Operating, LLC		Signature:	
y: David G. Del			Telephone: 724-749-8388	
	Lead nweb\07/AR\5\8E/AL\ Notary Seal AUREEN A STEAD - Notary Public Washington County Commission Expires Jan 28, 2023	Subscribed an	d swom before me this	30 day of NOTEWER 2019 Notary Public

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.

WV Department of Environmental Protection

4705102282

That I, Mary A. 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 Ma	ap 14, Parcel 33 and depicted on the attached	
Exhibit A. Said waivers shall be of the type shown on the a	attached Exhibit B.	
I the said Macy A. Fox hereby dec	clare that acts done by my said attorney for said	
specific and sole purpose shall be as good, valid and effective		
the same had been made or done by me, and I hereby ur	ndertake 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.		
Ma	ey à Je (SEAL)	
	0	
STATE OF West Virginia: COUNTY OF MArshall to-wit:		
COUNTY OF MARShall to-wit:		
The foregoing instrument was acknowledged before	ore me this 30 day of March, 2018, by	
Mary A. Fac.		
Given under my hand this 30th day of	rely, 2018.	
Given under my hand this <u>30代</u> day of <u>MA</u> My commission expires: <u>J4つ</u> じを, 20	72 ·	
(NOTARY SEAL/STAMP REQUIRED)	, ED 005	
WW. T. 284	tary Public for the aforesaid unty and/or State RECEIVED OFFICE OF Oil and Gas OFFICE OF Oil and Gas OFFICE OF Oil and Gas OFFICE OFFI	i otio

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 S-7HM
Well Pad Name: Knob C	reek

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

	erator, Tug Hill Operating, LLC is be advised that well work permits are va			of West Virginia to conduct oil or gas well
Pursuant to Vany existing located within larger used to dwellings or provided in suarticle was proby written occlerk of the avariance by the or practices to conditions the	water well or developed spring used for n six hundred twenty-five feet of an occu- to house or shelter dairy cattle or poultr agricultural buildings that existed on the ection ten of this article or a notice of int ovoided, whichever occurs first, and to an onsent of the surface owner transmitted county commission for the county in white secretary from these distance restriction to be employed during well site construction.	r human or domesti upied dwelling structy husbandry. This e date a notice to the tent to drill a horizon by dwelling under or to the department a nich such property ons upon submission tion, drilling and of and protection of a	c animal consumenture, or a building limitation is appeared as provious training and recorded in the significant of a plan which perations. The vaffected persons a	ndred fifty feet measured horizontally from aption. The center of well pads may not be a two thousand five hundred square feet or applicable 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 identifies the sufficient measures, facilities variance, if granted, shall include terms and and property. The terms and conditions may
		WAIVE	R	
provisions lis WW-6A and required, and State: County: District: Quadrangle: Watershed: I further state issued on tho	ted above, and that I have received copie attachments consisting of pages one (1) if the well plat, all for proposed well work West Virginia Mershall Meade Glen Easten 7.5' Fish Creek (HUC-10) that I have no objection to the planned we materials and I therefore waive all well	s of a Notice of App through on the tract of land UTM NAI UTM NAI Public Ros Generally	plication, an App _, including the as follows: 0 83 Easting: 0 83 Northing: d Access: used farm name: ese materials, and ted under West	I I have no objection to a permit being Virginia Code § 22-6A-12(a).
*Please check	RESTRICTIONS BEING WAIVED call that apply		Signature: Print Name: Date:	TION BY A NATURAL PERSON TION BY A CORPORATION, ETC.
DWELI	OPED SPRINGS LINGS ULTURAL BUILDINGS		Company: TH Ex By: Douglas L. Del Its: Attorney-in-Fac Signature:	ploration, LLC as Attorney-in-Fact for Louis T. Fox Martino
Well Operato By: David G. Del Its: Land Team L		Signa Telep		S
	realNGTFARIX/ISEIA LNotary Seal REEN A STEAD - Notary Public	ubscribed and sworn	1 \ //	30 day of SETTEMBER 2019

My Commission Expires Jan 28, 2023
Commission Number 1259926

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and

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.

Office of Oil and Gas

Office of Oil and Gas

OCT - 2 2019

WV Department of Environmental Protection

4705102282

That I, Louis T. 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 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. Nams 1, 7 (3.24. /S) (SEAL)
STATE OF West Virginin: COUNTY OF MArshall to-wit:
The foregoing instrument was acknowledged before me this 24 day of Mark, 2018, by
Louis T. Fox
Given under my hand this 24th day of March, 2018.
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

Notary Public for the aforesaid County and/or State

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

API NO. 47-		
OPERATOR WELL	LNO.	Knob Creek S-7HM
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, David Lee Francis. Lymy Attemptor-Sec. This Devision. 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 , 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: UTM NAD 83 Easting: State: West Virginia 525,224.51 UTM NAD 83 Northing: 4,402,280.63 County: Marshall Public Road Access: District: Meade St. Joseph Road - County Route 21 Generally used farm name: David Lee Franklin Quadrangle: Glen Easton 7.5' 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 Lee Fra By: Douglas L. DeMartino DWELLINGS Its: Attorney-in-Fact ☐ AGRICULTURAL BUILDINGS Signature: Date: 913012019 Well Operator: Tug Hill Operating, LLC Signature: By: David G. DeLallo Telephone: 724-748-8388 Its: Land Team Lead COMMONWEALTH OF PENNSYLVANIA NOTAPARAYSEAAL
Chester Arthur West IV, Notary Public
Pine Twp., Allegheny County
My Commission Expires Feb. 10, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES Subscribed and sworn before me the Notary Public My Commission Expires 2-16-2020

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 depprivacyofficen@wv.gov.

Office of Oil and Gas
OCT - 2 2019

WN Department of Environmental Protection

4705102282

That I. David lec 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 Franklich 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 MACINA ! , to-wit:

The foregoing instrument was acknowledged before me this 21 day of March, 2018, by David Lee Franklin

Woul for Frankfin.

My commission expires: 14018 2002

(NOTARY SEAL/STAMP REQUIRED)

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

Notary Public for the aforesaid County and/or State

WV Department of WV Department of Environmental Protection

This Instrument Prepared By:

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

NLO THAM SEKATOF2 COUL 6000 TOWN CENTER BOULEVARD, SUITE 145 CANONSBURG PA 15317-5841

100K 0 0 4 0 PAGE 0 0 7 7 4705102282

WW-6RW (1-12)

API NO. 47-OPERATOR WELL NO. Knob Creek S-7HM Well Pad Name: Knob Creek

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

	rator, Tug Hill Operating, LLC be advised that well work permits are	_ is applying for a permit from the State valid for twenty-four (24) months.	of West Virginia to conduct oil or gas well
Pursuant to W any existing v located within larger used to dwellings or a provided in se article was pro- by written co- clerk of the c- variance by the or practices to conditions the	water well or developed spring used a six hundred twenty-five feet of an abla house or shelter dairy cattle or posterior ten of this article or a notice of covided, whichever occurs first, and to ensent of the surface owner transmitt ounty commission for the county in the secretary from these distance restricts be employed during well site consideration.	for human or domestic animal consum- occupied dwelling structure, or a building bultry husbandry. This limitation is ap- the date a notice to the surface owner of intent to drill a horizontal well as provided any dwelling under construction prior ted to the department and recorded in the which such property is located. Further ictions upon submission of a plan which truction, drilling and operations. The value fety and protection of affected persons a	ndred fifty feet measured horizontally from 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 nd property. The terms and conditions may
		WAIVER	
provisions list WW-6A and a required, and	ted above, and that I have received co	opies of a Notice of Application, an Appl (1) through , including the	
State:			525 224 51
			525,224.51 4 402 280 63
County:	Marshall Meade	UTM NAD 83 Northing:	4,402,280.63
County: District:	Marshall Meade	UTM NAD 83 Northing: Public Road Access:	4,402,280.63 St. Joseph Road - County Route 21
County: District: Quadrangle:	Marshall Meade Glen Easton 7.5'	UTM NAD 83 Northing:	4,402,280.63 St. Joseph Road - County Route 21
County: District: Quadrangle: Watershed: I further state	Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the planner	UTM NAD 83 Northing: Public Road Access: Generally used farm name:	4,402,280.63 St. Joseph Road - County Route 21 David Lee Franklin I have no objection to a permit being
County: District: Quadrangle: Watershed: I further state issued on thos WELL SITE	Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the planner	UTM NAD 83 Northing: Public Road Access: Generally used farm name: ed work described in these materials, and well site restrictions listed under West VED FOR EXECUT	4,402,280.63 St. Joseph Road - County Route 21 David Lee Franklin I I have no objection to a permit being /irginia Code § 22-6A-12(a).
County: District: Quadrangle: Watershed: I further state issued on thos WELL SITE *Please check	Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the planne of the materials and I therefore waive all RESTRICTIONS BEING WAIVE	UTM NAD 83 Northing: Public Road Access: Generally used farm name: ed work described in these materials, and well site restrictions listed under West V ED FOR EXECUTA Signature: Print Name: Date:	4,402,280.63 St. Joseph Road - County Route 21 David Lee Franklin I have no objection to a permit being /irginia Code § 22-6A-12(a).
issued on thos WELL SITE *Please check EXISTIN	Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the plannes are materials and I therefore waive all RESTRICTIONS BEING WAIVE at all that apply	UTM NAD 83 Northing: Public Road Access: Generally used farm name: ed work described in these materials, and well site restrictions listed under West V ED FOR EXECUTA Signature: Print Name: Date: FOR EXECUTA Company: THEM	4,402,280.63 St. Joseph Road - County Route 21 David Lee Franklin I I have no objection to a permit being /irginia Code § 22-6A-12(a). FION BY A NATURAL PERSON FION BY A CORPORATION, ETC. ploration, LLC as Attorney-in-Fact for Thomas John Fox
County: District: Quadrangle: Watershed: I further state issued on thos WELL SITE *Please check EXISTIN	Marshall Meade Glen Easton 7.5' Fish Creek (HUC-10) that I have no objection to the plannesse materials and I therefore waive all RESTRICTIONS BEING WAIVE t all that apply NG WATER WELLS OPED SPRINGS	UTM NAD 83 Northing: Public Road Access: Generally used farm name: ed work described in these materials, and well site restrictions listed under West V ED FOR EXECUTA Signature: Print Name: Date: FOR EXECUTA F	4,402.280.63 St. Joseph Road - County Route 21 David Lee Franklin I I have no objection to a permit being /irginia Code § 22-6A-12(a). FION BY A NATURAL PERSON FION BY A CORPORATION, ETC. sloration, LLC as Attorney-in-Fact for Thomas John Fox Martino

Date: Well Operator: Tug Hill Operating, LLC Signature: By; David G. DeLallo Telephone: 724-749-8388 Its: Land Team Lead before me this 30% COMMONWEALTH OF PENNSYLVANIA Subscribed and sworn Chester Arthur West IV, Notary Public Pine Twp., Allegheny County My Commission Expires Feb. 10, 2020

Notary Public 2-10-2020 My Commission Expires

EMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES 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.

> RECEIVED Office of Oil and Gas

NOV 26 2019

WV Department of Environmental Protection Marshall County Jan Pest, Clerk Instrument 145%11 10/01/2019 @ 02:25:27 PM MISCELLANEOUS Book 40 @ Page 77 Pages Recorded 1 Recording Cost \$

11.00

100K 0 0 4 0 PAGE 0 0 7 8

4705102282

WW-6RW (1-12)

API NO. 47-OPERATOR WELL NO. Knob Creek S-7HM 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

State:	West Virginia	UTM NAD 83 Easting:	525,224.51
County:	Marshall	UTM NAD 83 Northing:	4,402,280,63
District:	Meade	Public Road Access:	St. Joseph Road - County Route 21
Quadrangle: Watershed:	Glen Easton 7.5' Fish Creek (HUC-10)	Generally used farm name:	David Lee Franklin
ssued on thos	that I have no objection to the planned wor se materials and I therefore waive all well si RESTRICTIONS BEING WAIVED	ite restrictions listed under West	Virginia Code § 22-6A-12(a). FION BY A NATURAL PERSON
	c all that apply	The state of the s	HON BY A NATURAL PERSON
		Print Name:	
_ EXISTI	NG WATER WELLS	Date:	
□ DEVEL	OPED SPRINGS		TION BY A CORPORATION, ETC. ploration, LLC as Attorney-In-Fact for David Lee Franklin
• DWELI	LINGS	By: Douglas L. De	
optor	T TITLE AT THE STATE OF THE STA	Its: Attorney-in-Fac	P
LI AGRICU	JLTURAL BUILDINGS	Signature:	12010
Wall Operate	r: Tug Hill Operating, LLC	Date: 9 80	12019
Well Operato By: David G. DeL		Signature: Telephone: 724-740-8388	\$
ts: Land Team L		refephone.	

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 26 2019

WV Department of Environmental Protection

Marshall County Jan Pest: Clerk Instrument 1459612 10/01/2019 @ 02:25:28 PM MISCELLANEOUS Book 40 @ Page 78 Pages Recorded 1 Recording Cost \$ 11.00

STATE OF WHOM YOU

MAK 0040 PAGE 0079

4705102282

WW-6RW (1-12)

API NO. 47-OPERATOR WELL NO. Knob Creek S-7HM 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.

			VER		
provisions lis WW-6A and required, and	waterney-in-Fact, THE Excloration, LLC, hereby state that ted above, and that I have received attachments consisting of pages one the well plat, all for proposed well	copies of a Notice c(1) through work on the tract o	of Application, an Appl , including the e of land as follows:	ication for a Well Work erosion and sediment co	k Permit on Form
State: County:	West Virginia Marshall		M NAD 83 Easting: M NAD 83 Northing:	525,224.51	
District:	Meade		lic Road Access:	4,402,280.63 St. Joseph Road - County Rou	do 21
Quadrangle:	Misaus.		erally used farm name:		16 2 1
Watershed:	Fish Creek (HUC-10)		crany used farm name.	David Loc Franklin	
issued on tho	that I have no objection to the plan se materials and I therefore waive a	ll well site restricti	ons listed under West V	Virginia Code § 22-6A-	12(a).
	RESTRICTIONS BEING WAIV c all that apply	ED	Signature:	TION BY A NATURA	L PERSON
□ EXISTI	NG WATER WELLS		Print Name: Date:		
□ DEVEL	OPED SPRINGS			FION BY A CORPOR loration, LLC as Attorney-In-Fact for	
• DWELI	LINGS		By: Douglas L. Del\ Its: Attorney-in-Fact		
☐ AGRICU	ULTURAL BUILDINGS			012010	
Well Operato	r: Tug Hill Operating, LLC		Signature:		
By: David G. Det			Telephone: 724-749-8388		
Its: Land Team I	Lead				
Chester Pin My Com MEMBER, PE	NOTARIAL SEAL Arthur West IV, Notary Public e Twp., Allegheny County mission Expires Feb. 10, 2020 NNSYLVANIA ASSOCIATION OF NOTARIES	(on Expires 2-6		Notary Public
Oil and Gas P	rivacy Notice:		7 . 7		

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.

> RECEIVED Office of Oil and Gas

NOV 26 2019

WV Department of Environmental Protection

Marshall County Jan Pest, Clerk Instrument 1459613 10/01/2019 @ 02:25:29 PM MISCELLANEOUS Book 40 @ Page 79 Pages Recorded 1 11.00 Recording Cost \$

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4705102282

WW-6RW (1-12)

API NO. 47OPERATOR WELL NO. Knob Creek S-7HM
Well Pad Name: Knob Creek

Notary Public

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

WOIK. Ficase	erator, Tug Hill Operating, LLC it be advised that well work permits are v	is applying for a permit from the State valid for twenty-four (24) months.	of West Virginia to conduct oil or gas well
Pursuant to any existing located within larger used of dwellings or provided in sarticle was p by written or clerk of the variance by or practices conditions the	water well or developed spring used for six hundred twenty-five feet of an occord house or shelter dairy cattle or poul agricultural buildings that existed on the ection ten of this article or a notice of it rovided, whichever occurs first, and to a consent of the surface owner transmitted county commission for the county in whe secretary from these distance restrict to be employed during well site constru	or human or domestic animal consum- cupied dwelling structure, or a building litry husbandry. This limitation is applied at a notice to the surface owner of the date a notice to the surface owner of the defiling under construction prior of to the department and recorded in the which such property is located. Further tions upon submission of a plan which function, drilling and operations. The very and protection of affected persons a	ndred fifty feet measured horizontally from 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 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 nd property. The terms and conditions may
		WAIVER	
provisions lis WW-6A and	sted above, and that I have received copi attachments consisting of pages one (1) the well plat, all for proposed well wor West Virginia	ies of a Notice of Application, an Appl through , including the	med on Page WW-6A and the associated ication for a Well Work Permit on Form erosion and sediment control plan, if
County:	Marshall	UTM NAD 83 Northing:	4,402,280.63
District:	Meade	Public Road Access:	C. Francisco Production
DISHIUL.		i ubite itoati Access.	St. Joseph Road - County Route 21
	Glen Easton 7.5'		St. Joseph Road - County Route 21 David Lee Franklin
Quadrangle:	Glen Easton 7.5' Fish Creek (HUC-10)	Generally used farm name:	
Quadrangle: Watershed:	Fish Creek (HUC-10)	Generally used farm name:	David Lee Franklin
Quadrangle: Watershed: I further state	Fish Creek (HUC-10) e that I have no objection to the planned	Generally used farm name: work described in these materials, and	David Lee Franklin I have no objection to a permit being
Quadrangle: Watershed: I further state issued on the WELL SITE	Fish Creek (HUC-10) that I have no objection to the planned use materials and I therefore waive all well E RESTRICTIONS BEING WAIVED	Generally used farm name: work described in these materials, and ell site restrictions listed under West To FOR EXECUTE.	David Lee Franklin I have no objection to a permit being
Quadrangle: Watershed: I further state issued on the WELL SITI *Please chec	Fish Creek (HUC-10) e that I have no objection to the planned see materials and I therefore waive all w	Generally used farm name: work described in these materials, and ell site restrictions listed under West V FOR EXECUTATION Signature: Print Name:	I have no objection to a permit being Virginia Code § 22-6A-12(a).
Quadrangle: Watershed: I further state issued on the WELL SITE *Please chec	Fish Creek (HUC-10) that I have no objection to the planned ose materials and I therefore waive all we E RESTRICTIONS BEING WAIVED is all that apply	Generally used farm name: work described in these materials, and ell site restrictions listed under West V FOR EXECUTATION Signature: Print Name: Date: FOR EXECUTATION	David Lee Franklin I I have no objection to a permit being Virginia Code § 22-6A-12(a). TION BY A NATURAL PERSON TION BY A CORPORATION, ETC.
Quadrangle: Watershed: I further state issued on the WELL SITE *Please chec EXISTI DEVEL	Fish Creek (HUC-10) that I have no objection to the planned ose materials and I therefore waive all well E RESTRICTIONS BEING WAIVED is all that apply NG WATER WELLS LOPED SPRINGS	Generally used farm name: work described in these materials, and ell site restrictions listed under West V FOR EXECUTATION Signature: Print Name: Date: FOR EXECUTATION FOR EXECUTATION SIGNATURE By: Douglas L. Del	David Lee Franklin I I have no objection to a permit being Virginia Code § 22-6A-12(a). FION BY A NATURAL PERSON FION BY A CORPORATION, ETC. ploration, LLC Martino, Esq.
Quadrangle: Watershed: I further state issued on the WELL SITE *Please chee EXISTI DEVEL DWEL	Fish Creek (HUC-10) that I have no objection to the planned ose materials and I therefore waive all well E RESTRICTIONS BEING WAIVED is all that apply NG WATER WELLS LOPED SPRINGS	Generally used farm name: work described in these materials, and ell site restrictions listed under West V FOR EXECUTATION Signature: Print Name: Date: FOR EXECUTATION FOR EXECUTATION SIGNATURE By: Douglas L. Del	David Lee Franklin I I have no objection to a permit being Virginia Code § 22-6A-12(a). FION BY A NATURAL PERSON FION BY A CORPORATION, ETC. ploration, LLC Martino, Esq.
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Oil and Gas Privacy Notice:

Chester Arthur West IV, Notary Public Pine Twp., Allegheny County My Commission Expires Feb. 10, 2020

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

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Office of Oil and Gas

NOV 26 2019

W// Department of Environmental Protection Marshall County
Jan Pest, Clerk
Instrument 1459614
10/01/2019 @ 02:25:30 PM
MISCELLANEOUS
Book 40 @ Page 80
Pages Recorded 1
Recording Cost \$ 11.00

2-10-2010

MOK 0 0 4 0 PAGE 0 0 8 1

4705102282

WW-6RW (1-12) API NO. 47OPERATOR WELL NO. Knob Creek S-7HM
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 ay-in-Fact, 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: West Virginia UTM NAD 83 Easting: 525,224.51 County: Marshall UTM NAD 83 Northing: 4,402,280.63 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 Signature: 9 Date: Signature: 784-749-3388 Well Operator: Tug Hill Operating, LLC By: David G. DeLallo Its: Land Team Lead Subscribed and sworn before me this 30 COMMONWEATHROFSEENINSYLVANIA NOTARIAL SEAL Notary Public Sean Cotter, Notary Public City of Pittsburgh, Allegheny County My Commission Expires Oct. 12, 2019 10/12/ 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 26 2019

Office of Oil and Gas

WV Department of Environmental Protection Marshall County
Jan Pest, Clerk
Instrument 1459615
10/01/2019 @ 02:25:31 PM
MISCELLANEOUS
Book 40 @ Page 81
Pages Recorded 1
Recording Cost \$ 11.00

4705102282

WW-6RW (1-12) API NO. 47OPERATOR WELL NO. Knob Creek S-7HM
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 permits			of West Virginia to conduct oil or gas well	1	
Well I contin	n Postulations					
Pursuant to V any existing value of the control of	water well or developed spring use a six hundred twenty-five feet of an o house or shelter dairy cattle or agricultural buildings that existed of ection ten of this article or a notice ovided, whichever occurs first, and onsent of the surface owner transmit county commission for the county are secretary from these distance res	ed for human or domesin occupied dwelling strupoultry husbandry. This on the date a notice to the of intent to drill a horized to any dwelling under contitted to the department in which such property strictions upon submission.	tic animal consum- neture, or a buildir is limitation is ap- ne surface owner of ontal well as provi- construction prior and recorded in to is located. Further on of a plan which	ndred fifty feet measured horizontally from pition. The center of well pads may not be not too thousand five hundred square feet of plicable to those wells, developed springs of planned entry for surveying or staking a ded in subsection (b), section sixteen of this to that date. This limitation may be waive the real property records maintained by the termore, the well operator may be granted in identifies the sufficient measures, facilities	e r s, s s d e a s	
or practices to	o be employed during well site co	nstruction, drilling and	operations. The v	variance, if granted, shall include terms and	1	
conditions the	e department requires to ensure the	safety and protection of	affected persons a	and property. The terms and conditions may	Y	
include insura	ance, bonding and indemnification,					
		WAIVI	ER			
Mark H. Fox, by my All	omoyin-Fact, TH Exploration, LLC , hereby state that	I have read the Instructi	ons to Persons Na	med on Page WW-6A and the associated		
WW-6A and	ted above, and that I have received attachments consisting of pages on the well plat, all for proposed well	e (1) through	, including the	lication for a Well Work Permit on Form erosion and sediment control plan, if		
State:	West Virginia		D 83 Easting:	525,224,51		
County:	County: Marshall		D 83 Northing:	4,402,280.63		
District:	Meade	Public Ro	ad 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 plan	ined work described in the	nese materials, and	I I have no objection to a permit being		
	se materials and I therefore waive a RESTRICTIONS BEING WAIV			Virginia Code § 22-6A-12(a). FION BY A NATURAL PERSON		
	all that apply		Signature:			
□ EXISTIN	NG WATER WELLS		Print Name:			
	TO WITTER WEEDS		Date:			
☐ DEVEL	OPED SPRINGS		FOR EXECUT	ITION BY A CORPORATION, ETC. ploration, LLC as Attorney-in-Fact for Mark H. Fox		
DWELI	TNIGS		By: Douglas L. Del			
D DWELL	LINGS		Its: Attorney-in-Fac			
☐ AGRICU	JLTURAL BUILDINGS		Signature:			
			Date: 9/30			
	r: Tug Hill Operating, LLC	Sign	ature:			
By: David G. DeL		Tele	phone: 724-749-8388			
Its: Land Team L	ead					
	NOTARIAL SEAL	Subscribed and swor	rn before me this_	30 day of Septenber		
Sean Cotter, Notary Public City of Pittsburgh, Allegheny County My Commission Expires Oct. 12, 2019 My Co		My Commission Ex	pires 101	Notary Public		
Oil a hd Gas P The Office of (personal inforn	Oil and Gas processes your personal in	formation, such as name, a agencies or third parties in	address and telephor the normal course of	ne number, as part of our regulatory duties. You of business or as needed to comply with statutor	r	

The Office of Off 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 1459616
10/01/2019 @ 02:25:32 PM
MISCELLANEOUS
Book 40 @ Page 82
Pages Recorded 1
Recording Cost \$ 11

11.00

50K 0 0 4 0 PAGE 0 0 8 3

4705102282

WW-6RW (1-12) API NO. 47OPERATOR WELL NO. Knob Creek S-7HM
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, Devid E. Fox by my Attorney-in-Fest 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 , 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: 525,224.51 UTM NAD 83 Northing: County: Marshall 4.402.280.63 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 David E. Fox By: Douglas L. DeMartino DWELLINGS Its: Attorney-in-Fact ☐ AGRICULTURAL BUILDINGS Signature: 010 Date: Well Operator: Tug Hill Operating, LLC Signature: Telephone: 724-749-8388 By: David G. DeLallo Its: Land Team Lead

Commonwe ND TARONS/SIZAL Notary Seal MAUREEN A STEAD - Notary Public Washington County
My Commission Expires Jan 28, 2023
Commission Number 1259926

Subscribed and sworn before the this 30 day of SEPTEMBER 2019

Notary Public

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.

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Office of Oil and Gas

NOV 26 2019

WV Department of Environmental Protection Marshall County
Jan Pest, Clerk
Instrument 1459617
10/01/2019 @ 02:25:33 PM
MISCELLANEOUS
Book 40 @ Page 83
Pages Recorded 1
Recording Cost \$ 11.00

00K 0040 PAGE 0084

4705102282

WW-6RW (1-12)

API NO. 47-OPERATOR WELL NO. Knob Creek S-7HM 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 be advised that well work permits are v			of West Virginia to conduct oil or gas well	
Pursuant to W any existing v located within larger used to dwellings or a provided in se article was pro- by written co- clerk of the co- variance by the or practices to conditions the	water well or developed spring used for a six hundred twenty-five feet of an occor house or shelter dairy cattle or poult agricultural buildings that existed on the ection ten of this article or a notice of in ovided, whichever occurs first, and to a unsent of the surface owner transmitted ounty commission for the county in we secretary from these distance restricts to be employed during well site constru	or human or domestic bupied dwelling structry husbandry. This is e date a notice to the tent to drill a horizon my dwelling under on to the department arbich such property ions upon submission to drilling and only and protection of a	c animal consum cture, or a buildin is limitation is app e surface owner of intal well as provide construction prior that and recorded in the is located. Further in of a plan which perations. The veriffected persons as	dred fifty feet measured horizontally from 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 the 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	
		WAIVE			
provisions list WW-6A and a required, and State:	ted above, and that I have received copic attachments consisting of pages one (1) the well plat, all for proposed well work West Virginia	es of a Notice of App through on the tract of land	olication, an Appl , including the e	ned on Page WW-6A and the associated ication for a Well Work Permit on Form crosion and sediment control plan, if	
County:	Marshall		0 83 Northing:	4,402,280.63 St. Joseph Road - County Route 21	
District:	Meade	Public Roa			
Quadrangle:	Glen Easton 7.5'	Generally	used farm name:	David Lee Franklin	
issued on thos	Fish Creek (HUC-10) that I have no objection to the planned view materials and I therefore waive all we	ell site restrictions lis	ese materials, and ted under West V	I have no objection to a permit being Virginia Code § 22-6A-12(a).	
WELL SITE	RESTRICTIONS BEING WAIVED all that apply			TION BY A NATURAL PERSON	
☐ EXISTIN	NG WATER WELLS		Print Name:		
			Date:		
☐ DEVEL	OPED SPRINGS		FOR EXECUTION BY A CORPORATION, ETC. Company: TH Exploration, LLC as Attorney-in-Fact for Mary A. Fox		
DWELL	INGS		By: Douglas L. DeM		
			Its: Attorney-in-Fact		
☐ AGRICU	ILTURAL BUILDINGS		Signature: 912012019		
Well Operator	Tug Hill Operating, LLC	Signa			
By: David G. DeLa			hone: 724-749-8388		
Its: Land Team L	ead		07 pts = 1		
MAL My Co	JREEN A STEAD - Notary Public Washington County pmmission Expires Jan 28, 2023	Subscribed and sworr My Commission Exp	ut St	day of JETEUBER 2019 Notary Public 1/18/123	

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.

> RECEIVED Office of Oil and Gas

NOV 26 2019

W/V Department of **Invironmental Protection**

Marshall County Jan Pest: Clerk Instrument 1459618 10/01/2019 @ 02:25:34 PM MISCELLANEOUS Book 40 @ Page 84 Pages Recorded 1 Recording Cost \$ 11.00 UPS LAMU SERVICES CURP 6000 TOWN CENTER BOULEVARD, SUITE 145 CANONSBURG PA 15317-5841

100K 0 0 4 0 PAGE 0 0 8 5

4705102282

WW-6RW (1-12)

API NO. 47OPERATOR WELL NO. Knob Creek S-7HM
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 ay-in-Fact, 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: 525,224.51 County: Marshall UTM NAD 83 Northing: 4,402,280.63 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 Louis T. Fox By: Douglas L. DeMartino DWELLINGS Its: Attorney-in-Fact ☐ AGRICULTURAL BUILDINGS Signature: Date: 2010 Well Operator: Tug Hill Operating, LLC Signature: By; David G. DeLallo Telephone: Its: Land Team Lead

CommonwealNOT分配外(SEIALNotary Seal MAUREEN A STEAD - Notary Public Washington County My Commission Expires Jan 28, 2023 Commission Number 1259926 abscribed and sworn before me this 30 day of SETEMBER 2016

Notary Public

My Commission Expires 1/28/25

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 1459619
10/01/2019 @ 02:25:35 PM
MISCELLANEOUS
Book 40 @ Fage 85
Pages Recorded 1
Recording Cost \$ 11.00



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 N-2HM	Knob Creek Unit N-3HM
Knob Creek Unit S-6HM	Knob Creek Unit S-7HM	Knob Creek Unit S-8HM
Knob Creek Unit S-9HM	Knob Creek Unit S-10HM	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

Cc:

Amy Miller Tug Hill Operating, LLC CH, OM, D-6

File

Office of Oil and Gas

Office of Oil and Gas

OCT - 2 2019

WV Department of Environmental Protection



PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Well No. Knob Creek S-7HM

CHEMICAL DESCRIPTION: PRODUCT USE: HAZARDOUS COMPONENT: PRODUCT NAME:

Hemicellulase Breaker Breaker - Water GBW-20C None

Biocide **ALPHA 1427** 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 Proppant Crystalline silica (quartz) CAS# 14808-60-7

sizes)

S-8C, Sand Silica Sand (100 mesh) Sand Silica - CAS# 14808-60-7

GW-3LDF Gellant - Water Petroleum Distillate Blend - Proprietary,

> (Not Associated with Diesel Fuel) Guar gum - CAS# 009000-30-0

FRW-18 Friction Reducer Hydrotreated light distillate

CAS# 064742-47-8

Scaletrol Scale Inhibitor Ethylene glycol – CAS# 000107-21-1

Diethylene glycol - CAS# 000111-46-6

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