



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

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Friday, February 24, 2017
WELL WORK PERMIT
Horizontal 6A / New Drill

TUG HILL OPERATING, LLC (A)
1320 SOUTH UNIVERSITY DRIVE, SUITE 500

FORT WORTH , TX 76107

Re: Permit approval for YODER W-3HM
47-051-01905-00-00

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: YODER W-3HM
Farm Name: PPG INDUSTRIES, INC.
U.S. WELL NUMBER: 47-051-01905-00-00
Horizontal 6A / New Drill
Date Issued: 2/24/2017

Promoting a healthy environment.

02/25/2017

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.

PERMIT CONDITIONS

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

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

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

2) Operator's Well Number: Yoder W-3HM Well Pad Name: Yoder

3) Farm Name/Surface Owner: PPG Industries, Inc. Public Road Access: Waynes Ridge Rd. - County Route 78

4) Elevation, current ground: 1,090' Elevation, proposed post-construction: 1,084'

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

(b) If Gas Shallow X Deep _____
Horizontal X _____

ju 2/21/17

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus is the target formation at a depth of 6,129' - 6,184', thickness of 55' and anticipated pressure of approx. 3800 psi

8) Proposed Total Vertical Depth: 6,284'

9) Formation at Total Vertical Depth: Onondaga

10) Proposed Total Measured Depth: 13,965'

11) Proposed Horizontal Leg Length: 7,325'

12) Approximate Fresh Water Strata Depths: 70', 661'

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

14) Approximate Saltwater Depths: 1,740'

15) Approximate Coal Seam Depths: Sewickly Coal - 564' and Pittsburgh Coal - 654'

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

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

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

18)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	30"	NEW	BW	BW	125'	120'	338FT^3(CTS)
Fresh Water	13 3/8"	NEW	H40	48#	810'	800'	909ft^3(CTS)
Coal	13 3/8"	NEW	H40	48#	810'	800'	909ft^3(CTS)
Intermediate	9 5/8"	NEW	J55	36#	2,615'	2,605'	842ft^3(CTS)
Production	5 1/2"	NEW	P110	20#	13,975'	13,965'	3,143ft^3(CTS)
Tubing	2 3/8"	NEW	N80	4.7#		5,840'	
Liners							

JM 2/21/17

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	13 3/8"	17.5"	.33	1,730	1,384	SEE #24	1.2
Coal	13 3/8"	17.5"	.33	1,730	1,384	SEE#24	1.2
Intermediate	9 5/8"	12 1/4"	.352	3,520	2,816	SEE#24	1.19
Production	5 1/2"	8 7/8_8 3/4	.361	12,640	10,112	SEE#24	1.17/1.19
Tubing	2 3/8"		.19	11,200	8,960		
Liners							

PACKERS

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

WW-6B
(10/14)

API NO. 47- 051 - 01905
OPERATOR WELL NO. Yoder W-3HM
Well Pad Name: Yoder

pc
2/21/17

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

Drill through the Marcellus and TD Pilot Hole 100' into the Onondaga. Log vertical section and run a solid cement plug back to proposed KOP. Drill curve and lateral per proposed well plan, run and cement production casing. Perform CBL from 60 deg to surface, make cleanout run, and stimulate.

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

Well to be completed with approximately 18,312,500 lb proppant and 501,414 bbl of water. Max rate = 80 bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 19.66

22) Area to be disturbed for well pad only, less access road (acres): 4.36

23) Describe centralizer placement for each casing string:

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

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

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

25) Proposed borehole conditioning procedures:

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

*Note: Attach additional sheets as needed.

HEAVEN HILL UNIT 2-2HM WW6B Attachment to #24 (REV 02/08/17)

Conductor and Surface Casing Cement:

Premium NE-1 + 2% CaCl

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

Intermediate Casing:

Premium NE-1 + 1.5% CaCl + Flake

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

Intermediate Casing 2:

Lead: *Premium NE-1 + 5% BA-90 + .85% R-3 + 3% KCl + .75 gals/100sk FP-13L + 1% MPA-170*

Tail: *Premium NE-1 + .1% R-3 + 5% KCl + 1% CD-32 + .4% FL-52 + .2% ASA-301 + .6% Sodium Metasilicate*

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

Kick Off Plug:

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

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

Production Casing Cement:

Lead: *50:50 (Poz:Class H) + .3% R-3 + .3% MPA-250 + .75 gal/100sk FP-13L*

Tail: *25:75 (Poz:Class H) + .3% R-3 + .3% MPA-250 + .375 gal/100sk FP-13L*

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

51-01905



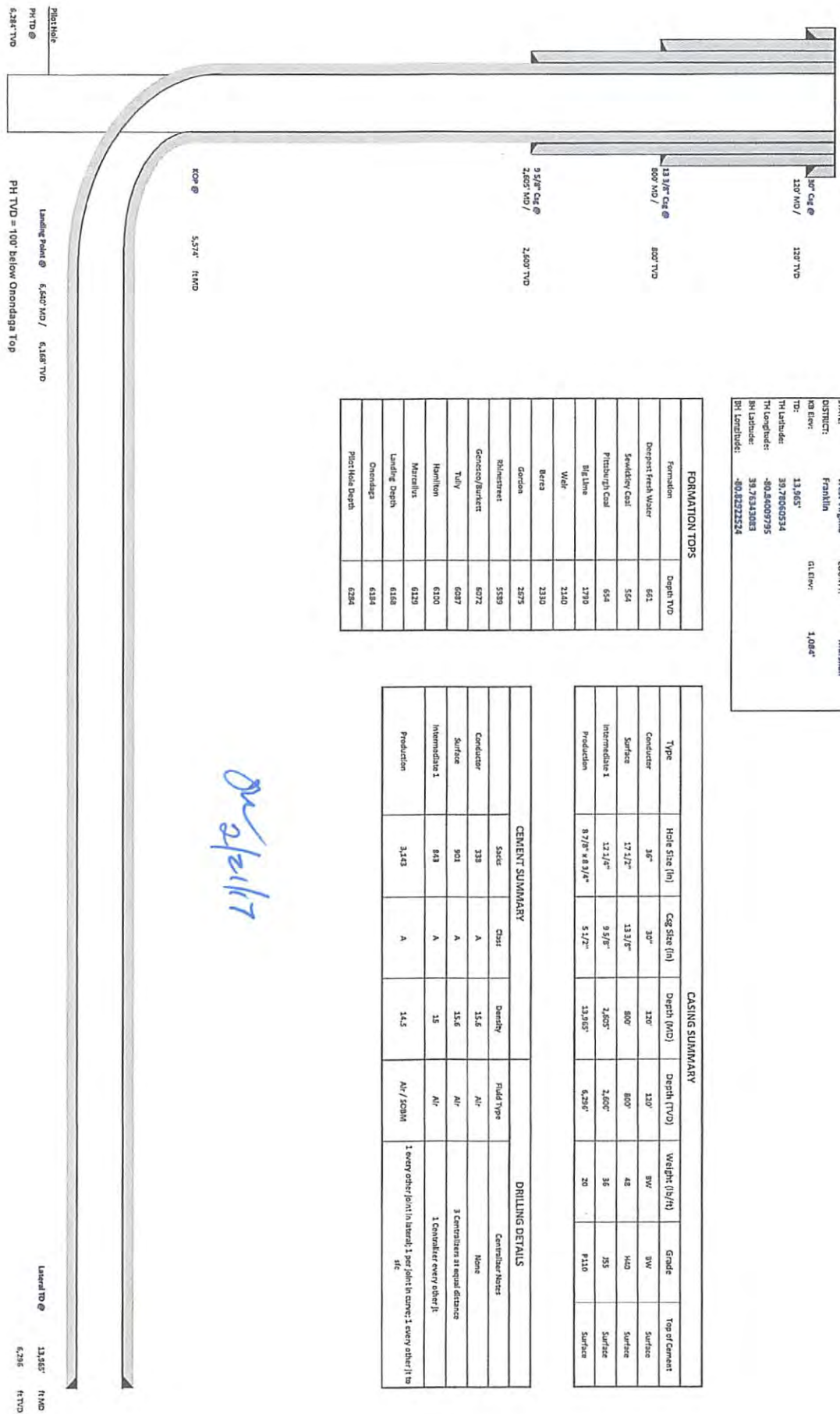
WELL NAME:	Yoder W-31M4	COUNTY:	Marshall
STATE:	West Virginia		
DISTRICT:	Fanblin	GL Elev:	1,084'
TD:	13,965'		
TR Lat/Long:	39.78060534		
TR Long/lat:	-80.46009795		
RI Lat/Long:	39.75343083		
RI Long/lat:	-80.82222524		

FORMATION TDPS	Depth T/D
Formation	661
Deepest Fresh Water	564
Shankley Coal	554
Pittsburgh Coal	654
Big Line	1210
Water	2140
Beitz	2310
Gardian	2075
Robustreet	5539
Genesco/Burket	6072
Tilly	6087
Hamilton	6100
Merrittus	6120
Landing Depth	6180
Onondaga	6184
Pilot Hole Depth	6234

CASING SUMMARY									
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement		
Conductor	36"	30"	120'	110'	3W	SW	Surface		
Surface	17 1/2"	13 3/8"	800'	800'	4S	HD	Surface		
Intermediate 1	12 1/4"	9 5/8"	2,605'	2,600'	3S	TS	Surface		
Production	8 7/8" x 8 3/4"	5 1/2"	13,965'	6,290'	20	P110	Surface		

CEMENT SUMMARY				DRILLING DETAILS	
Sacks	Class	Density	Fluid Type	Cement/Neets	
338	A	15.5	Air	None	
901	A	15.5	Air	3 Concentrators at equal distance	
848	A	15	Air	1 Concentrator every other ft	
3,163	A	14.5	Air / SCBM	1 every other foot in interval; 1 per joint in cement; 1 every other ft in MC	

Handwritten signature



PH TVD = 100' Below Onondaga Top

Landed TD @ 13,965' RMD
6,295' RTD

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 (11/16/2016) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it as the best publicly available. See attached map he provided.

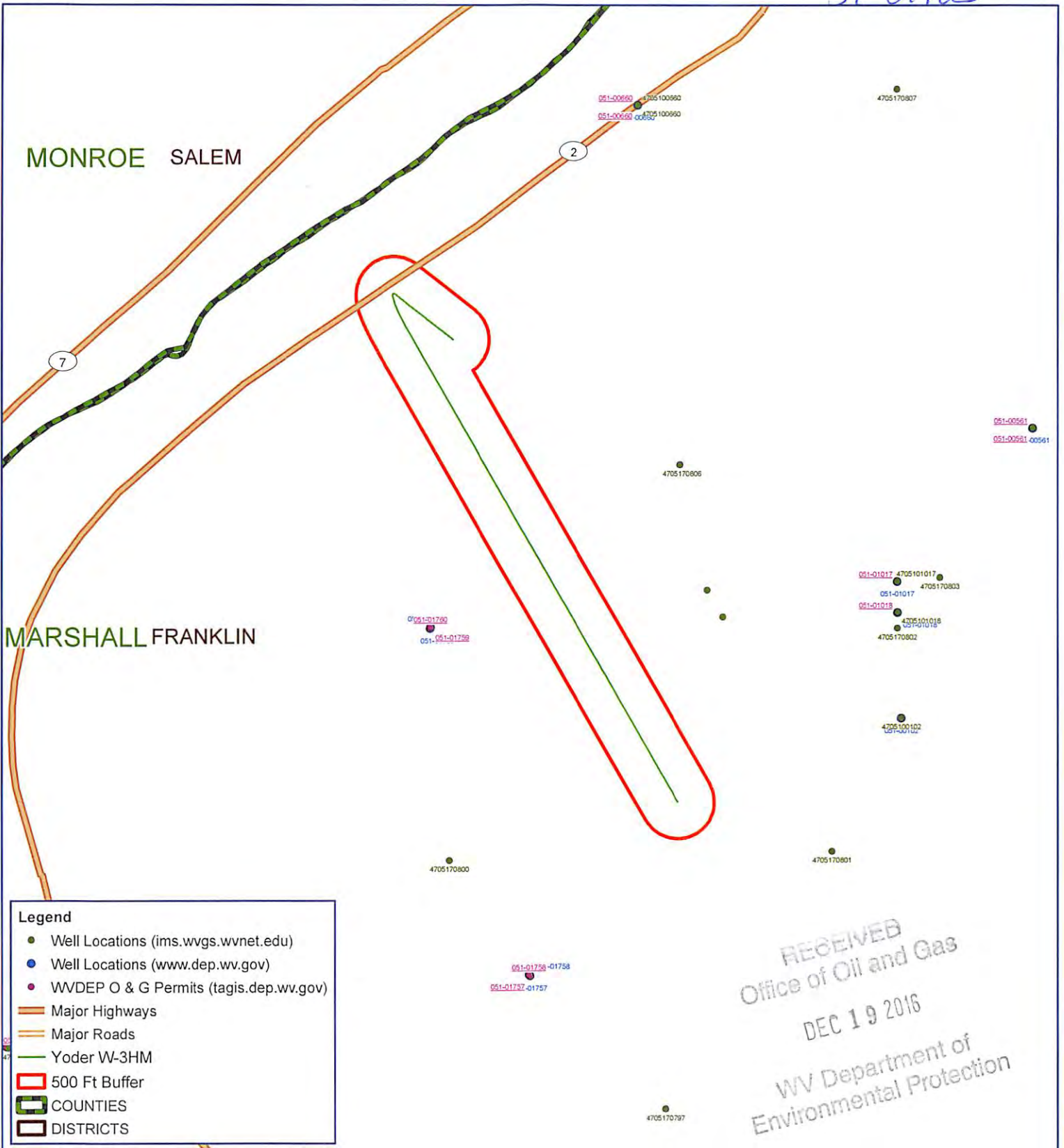
Request maps for:

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

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

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

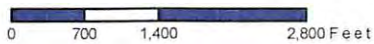
51-01905



- Legend**
- Well Locations (ims.wvgs.wvnet.edu)
 - Well Locations (www.dep.wv.gov)
 - WVDEP O & G Permits (tagis.dep.wv.gov)
 - Major Highways
 - Major Roads
 - Yoder W-3HM
 - 500 Ft Buffer
 - ▭ COUNTIES
 - ▭ DISTRICTS

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DEC 19 2016
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Environmental Protection

Yoder W-3HM
Franklin District
Marshall County, WV



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



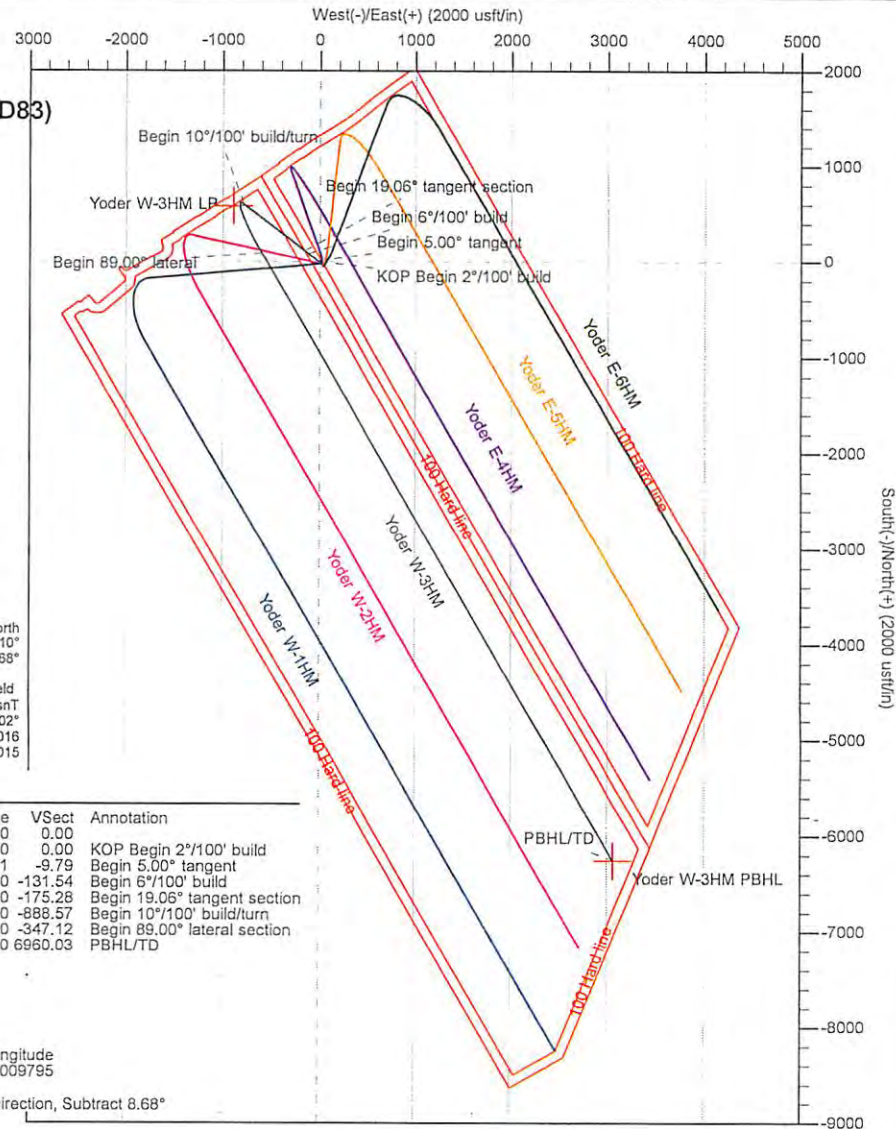
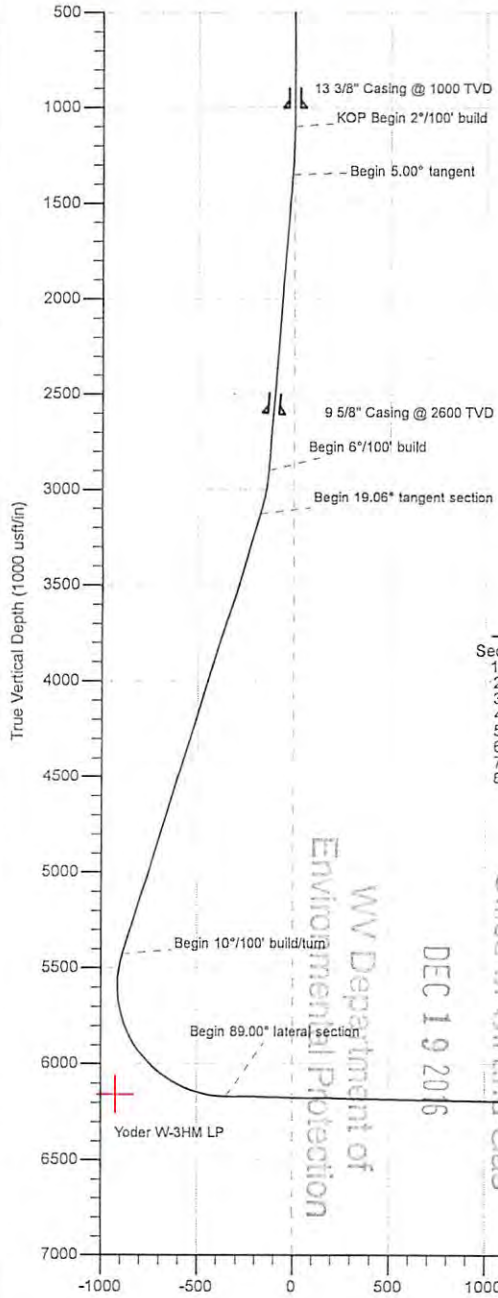
Map Created: November 14, 2016
Map Current As Of: November 16, 2016





TUG HILL
OPERATING

Tug Hill Operating LLC
Well: Yoder W-3HM
Site: Yoder
Project: Wetzel County, West Virginia (UTM17 NAD83)
Design: rev0



Azimuths to Grid North
True North: -0.10°
Magnetic North: -8.68°

Magnetic Field
Strength: 52257.4nT
Dip Angle: 67.02°
Date: 11/6/2016
Model: IGRF2015

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSEct	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
3	1350.00	5.00	307.71	1349.68	6.67	-8.62	2.00	307.71	-9.79	Begin 5.00° tangent
4	2906.24	5.00	307.71	2900.00	89.63	-115.93	0.00	0.00	-131.54	Begin 6°/100' build
5	3140.62	19.06	307.71	3128.65	119.44	-154.48	6.00	0.00	-175.28	Begin 19.06° tangent section
6	5573.60	19.06	307.71	5428.22	605.46	-783.13	0.00	0.00	-888.57	Begin 10°/100' build/turn
7	6639.60	89.00	149.98	6168.16	93.53	-597.26	10.00	-156.70	-347.12	Begin 89.00° lateral section
8	13964.60	89.00	149.98	6296.00	-6248.05	3066.56	0.00	0.00	6960.03	PBHL/TD

Surface Location: GL @ 1086.00usft
Universal Transverse Mercator (US Survey Feet)
NAD83 West Virginia - HARN
Zone 17N (84 W to 78 W)

Northing: 14446884.64
Easting: 1685340.35
Latitude: 39.78060534
Longitude: -80.84009795

Total Correction (M => G) To convert a Magnetic Direction to a Grid Direction, Subtract 8.68°

WV Department of
Environmental Protection
Office of Oil and Gas
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Vertical Section at 153.86° (1000 usft/in)

51-01905

WW-9
(4/16)

API Number 47 - 051 - 01905
Operator's Well No. Yoder W-3HM

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Tug Hill Operating, LLC OP Code 494510851

Watershed (HUC 10) Fish Creek - Ohio River Quadrangle Powhatan Point 7.5'

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? Barite for weight

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

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

-Landfill or offsite name/permit number? Wetzel County Sanitary Landfill (SWF-1021 / WV0109185)

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

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

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

Company Official Signature [Signature] DEC 19 2016

Company Official (Typed Name) Sean Willis

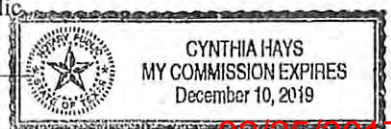
Company Official Title VP, Engineering & Development Manager - Appalachia Region

WV Department of Environmental Protection

Subscribed and sworn before me this 13th day of December, 20 16

Cynthia Hays Notary Public

My commission expires Dec 10, 2019



02/25/2017

SI-01905

Form WW-9

Operator's Well No. Yoder W-3HM

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 19.66 Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	<u>26</u>	Tall Fescue	<u>40</u>
Spring Oats	<u>64</u>	Ladino Clover	<u>5</u>

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Jim Wilson

Comments: _____

RECEIVED
Office of Oil and Gas

DEC 19 2016

WV Department of
Environmental Protection

Title: Oil + Gas Inspector

Date: 12/14/16

Field Reviewed? () Yes () No

02/25/2017

WW-9

PROPOSED YODER W-3HM

SUPPLEMENT PG 1

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

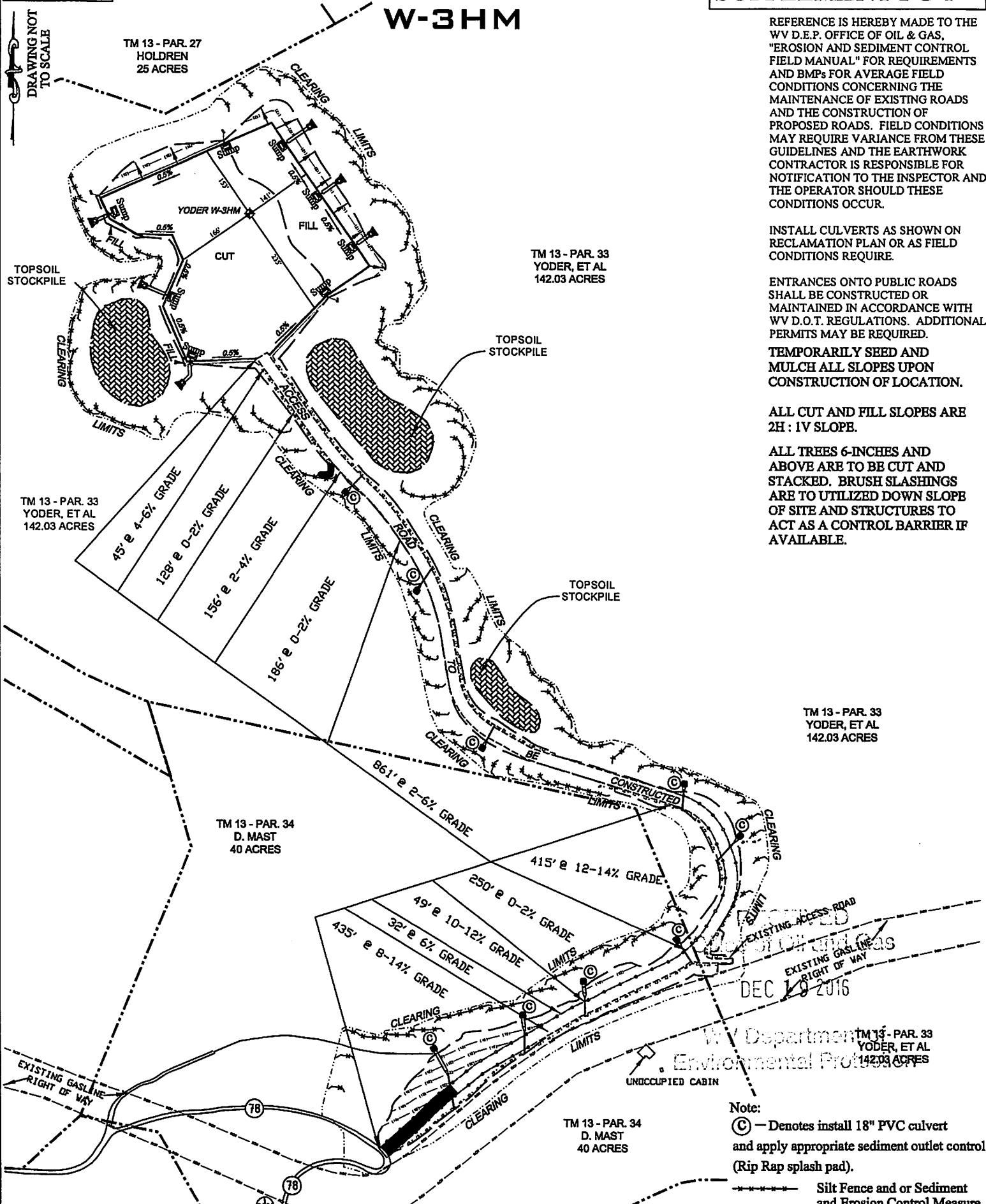
INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.

ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.

TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

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

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



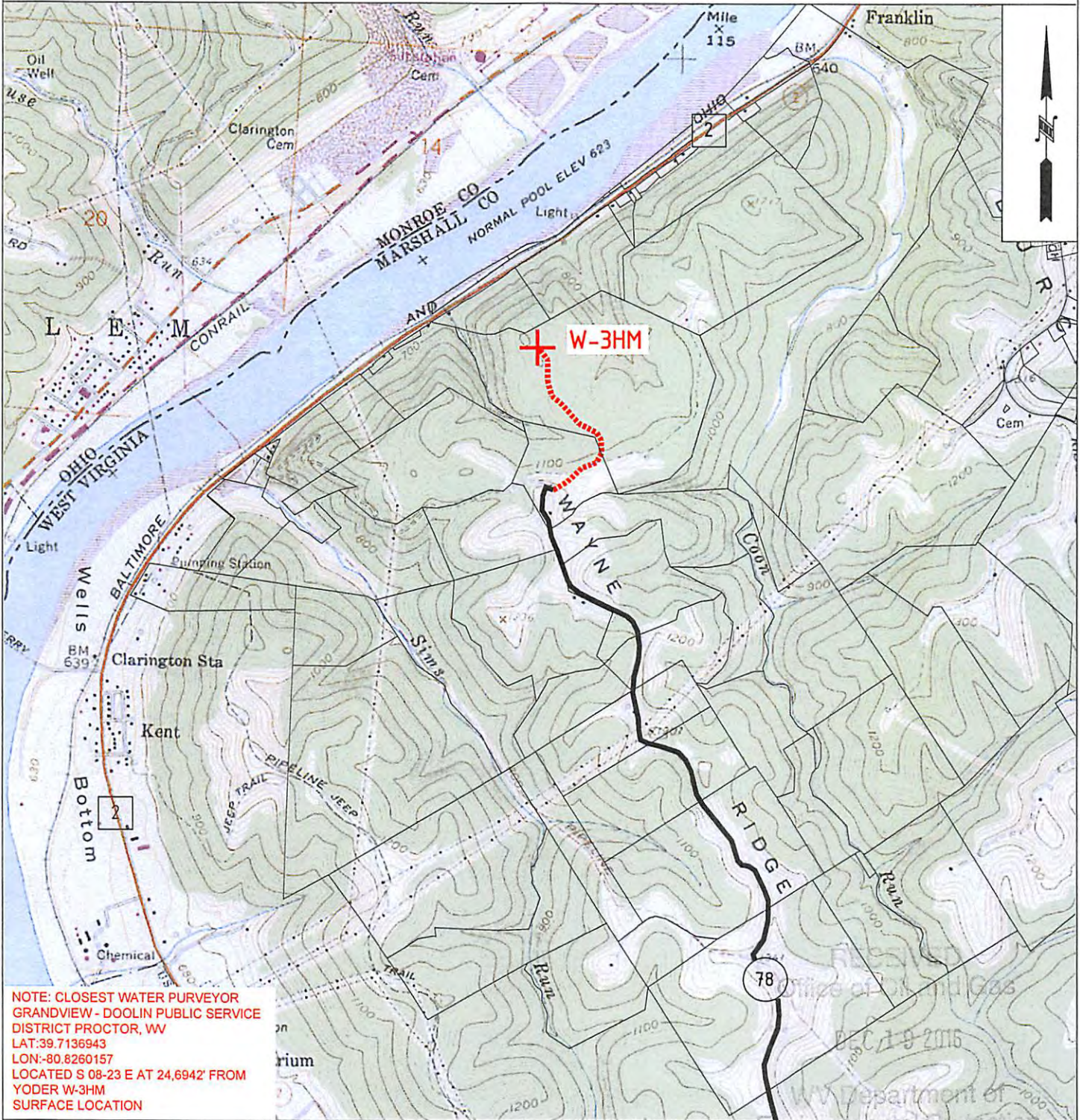
Note:
 (C) — Denotes install 18" PVC culvert and apply appropriate sediment outlet control (Rip Rap splash pad).
 - - - - - Silt Fence and or Sediment and Erosion Control Measure.

02/25/2017

WW-9

PROPOSED YODER W-3HM

SUPPLEMENT PG 2



NOTE: CLOSEST WATER PURVEYOR
GRANDVIEW - DOOLIN PUBLIC SERVICE
DISTRICT PROCTOR, WV
LAT: 39.7136943
LON: -80.8260157
LOCATED S 08-23 E AT 24,694' FROM
YODER W-3HM
SURFACE LOCATION



OPERATOR **163-697(CEC)**
TUG HILL OPERATING, LLC
380 SOUTHPOINTE BLVD
SUITE 200
CANONSBURG, PA 15317

TOPO SECTION
POWHATAN POINT 7.5'
SCALE:
1" = 2000'

LEASE NAME
YODER
DATE:
DATE: 12/06/16

02/25/2017



Well Site Safety Plan

Tug Hill Operating, LLC

Handwritten signature
12/14/16

Well Name: Yoder W-3HM

Pad Location: Yoder Pad

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:
Northing -4,403,419.3
Easting -513,692.8

December 2016

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Office of Oil and Gas

DEC 19 2016

WV Department of
Environmental Protection

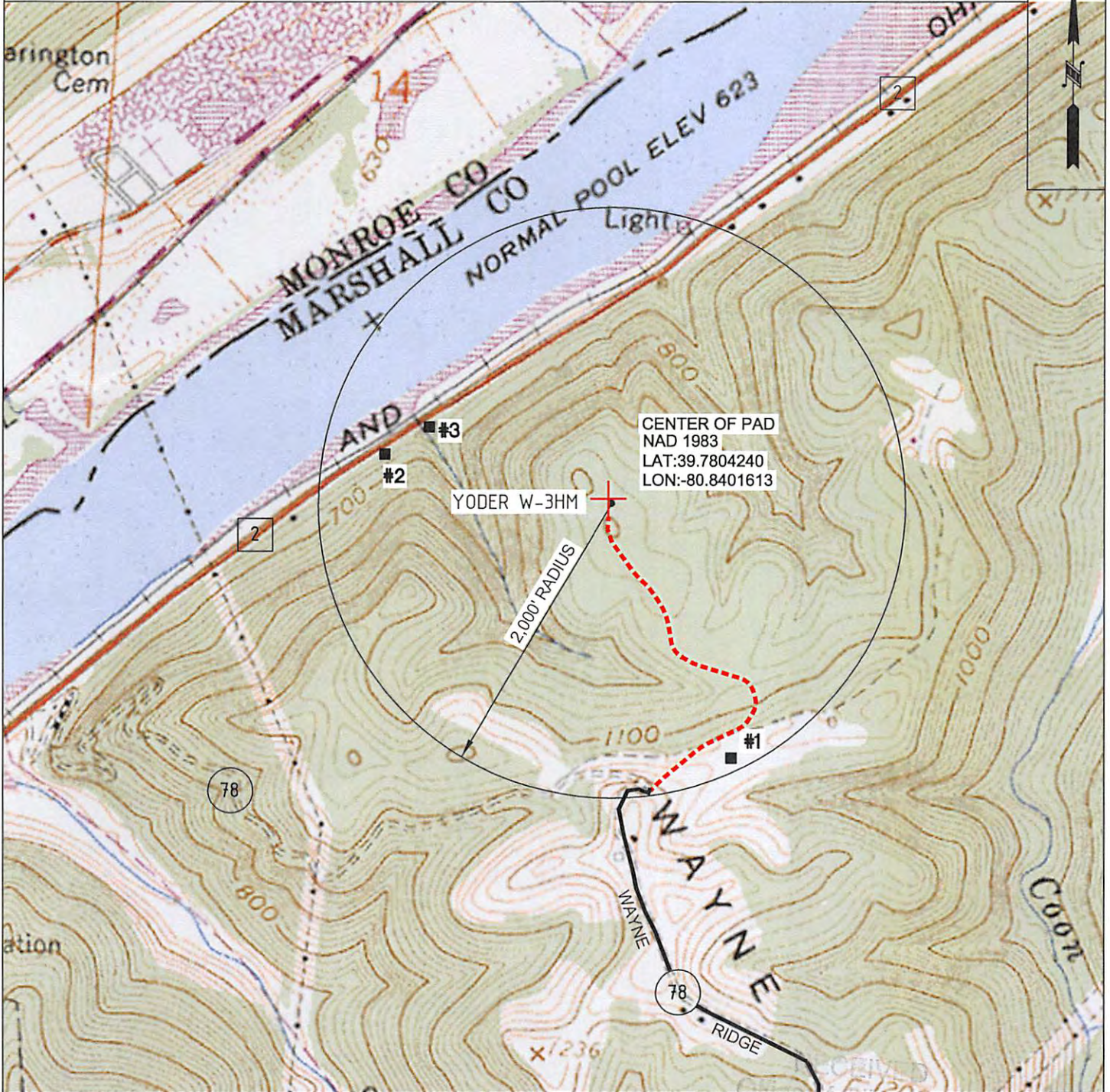
SI-01905

WW-6A

PROPOSED YODER W-3HM

SUPPLEMENT PG 1B

There appears to be Three (3) possible water source within 2,000'.



TUG HILL
OPERATING

OPERATOR **163-697(CEC)**
TUG HILL OPERATING, LLC
380 SOUTHPOINTE BLVD
SUITE 200
CANONSBURG, PA 15317

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

LEASE NAME
YODER
DATE:
DATE: 12/06/16

02/25/2017

WW-6A1
(5/13)

Operator's Well No. Yoder W-3HM

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

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

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

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

See Attached

**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: Jonathan White *Jonathan White*

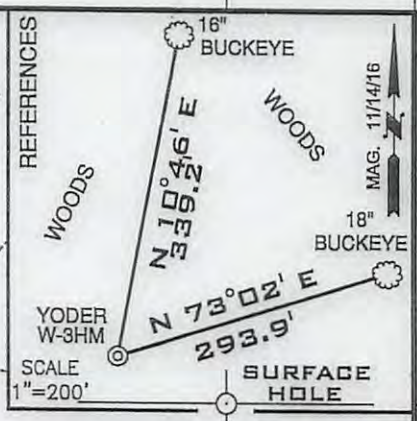
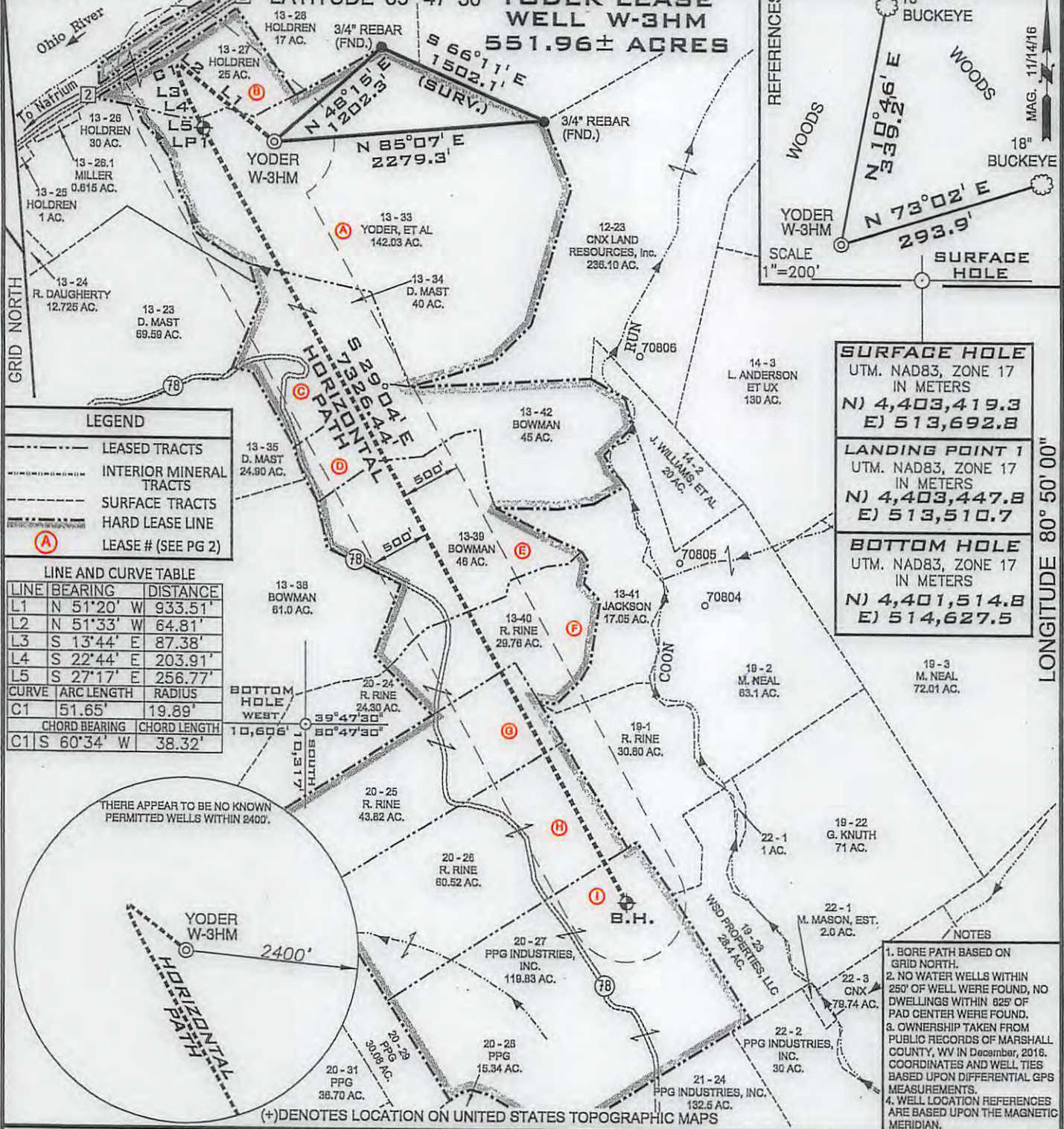
Its: Regulatory Analyst - Appalachia Region

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form wv6

PG 1 OF 2

LATITUDE 39° 47' 30" YODER LEASE WELL W-3HM 551.96± ACRES



SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,403,419.3
E) 513,692.8

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,403,447.8
E) 513,510.7

BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,401,514.8
E) 514,627.5

FILE NUMBER YODER

DRAWING NUMBER YODER_WP_W-3HM

SCALE 1" = 1200'

MINIMUM DEGREE OF ACCURACY 1/2500

PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

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

P.S. 2122 *Jonathan N. White*



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



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

LOCATION ELEVATION 1084' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE ATTACHED PG 2 OF 2

SURFACE OWNER NATHAN D. YODER, et al ACREAGE 142.03

OIL & GAS ROYALTY OWNER NATHAN D. YODER, et al - SEE PAGE 2 LEASE ACREAGE 551.96

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

TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD 6,334' TMD:13,965'

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

02/25/2017

COUNTY NAME PERMIT

**YODER W-3HM
WELL PLAT LEASE INFORMATION**

Lease_NO.	Tag	Parcel	Oil & Gas Royalty Owner	Deed Book / Pg	
10*14702	A	5-13-33	NATHAN D. YODER	708	71
10*14701	A	5-13-33	ROSEITA THORNTON	885	600
10*14506	B	5-13-27	JACK L MASON	754	240
10*14617	C	5-13-34	DAVID J MAST AND MIRIAM A MAST	716	628
10*14526	D	5-13-42	THOMAS WILLIAM BOWMAN	761	432
10*14527	D	5-13-42	VICTORIA BOWMAN	761	434
10*14526	E	5-13-39	THOMAS WILLIAM BOWMAN	761	432
10*14527	E	5-13-39	VICTORIA BOWMAN	761	434
10*14502	F	5-13-40	ROBERT E RINE AND DONNA M RINE	752	206
10*14685	G	5-20-25	ROBERT E RINE AND DONNA M RINE	708	253
10*14616	H	5-20-26	ROBERT E RINE AND DONNA M RINE	708	250
10*14325	I	5-20-27	ELIZABETH ANN STRAUSBAUGH	792	104
10*14326	I	5-20-27	JANET LEA BLANKENSHIP	792	580
10*14310	I	5-20-27	JEAN C. THOMAS	781	614
10*14308	I	5-20-27	MARY E. BASSETT	779	492
10*14300	I	5-20-27	PPG INDUSTRIES, INC.	725	123
10*14309	I	5-20-27	ROBERT B. THOMAS	779	484
10*14324	I	5-20-27	RUTH E. BASSETT MEADOWS	792	100
10*14307	I	5-20-27	SALLY CYNTHIA HOPKINS	777	572

51-01905

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Natural Protection

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

Lease No.	Tag	Parcel	GRANTOR, LESSOR, ETC.	GRANTEE, LESSEE, ETC.	ROYALTY	BOOK	PG	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT
10*14702	A	5-13-33	NATHAN D. YODER	CHESAPEAKE APPALACHIA LLC	1/8+	708	71	27/321 Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc. to Gastar Exploration USA, Inc	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC ✓
10*14701	A	5-13-33	ROSEITA THORNTON	GASTAR EXPLORATION INC	1/8+	885	600	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A	N/A ✓
10*14506	B	5-13-27	JACK L MASON	GASTAR EXPLORATION USA, INC	1/8+	754	240	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓
10*14617	C	5-13-34	DAVID J MAST AND MIRIAM A MAST	CHESAPEAKE APPALACHIA LLC	1/8+	716	628	27/321 Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc. to Gastar Exploration USA, Inc	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC ✓
10*14526	D	5-13-42	THOMAS WILLIAM BOWMAN	GASTAR EXPLORATION USA, INC	1/8+	761	432	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓
10*14527	D	5-13-42	VICTORIA BOWMAN	GASTAR EXPLORATION USA, INC	1/8+	761	434	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓
10*14526	E	5-13-39	THOMAS WILLIAM BOWMAN	GASTAR EXPLORATION USA, INC	1/8+	761	432	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓
10*14527	E	5-13-39	VICTORIA BOWMAN	GASTAR EXPLORATION USA, INC	1/8+	761	434	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓
10*14502	F	5-13-40	ROBERT E RINE AND DONNA M RINE	GASTAR EXPLORATION USA, INC	1/8+	752	206	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓
10*14685	G	5-20-25	ROBERT E RINE AND DONNA M RINE	CHESAPEAKE APPALACHIA LLC	1/8+	708	253	27/321 Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc. to Gastar Exploration USA, Inc	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC ✓
10*14616	H	5-20-25	ROBERT E RINE AND DONNA M RINE	CHESAPEAKE APPALACHIA LLC	1/8+	708	250	27/321 Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc. to Gastar Exploration USA, Inc	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC ✓
10*14325	I	5-20-27	ELIZABETH ANN STRAUSBAUGH	GASTAR EXPLORATION USA, INC	1/8+	792	104	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓
10*14326	I	5-20-27	JANET LEA BLANKENSHIP	GASTAR EXPLORATION USA, INC	1/8+	792	580	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓

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Lease No.	Tag	Parcel	GRANTOR, LESSOR, ETC.	GRANTEE, LESSEE, ETC.	ROYALTY	BOOK	PG	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT
10*14310	I	5-20-27	JEAN C. THOMAS	GASTAR EXPLORATION USA, INC	1/8+	781	614	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A ✓
10*14308	I	5-20-27	MARY E. BASSETT	GASTAR EXPLORATION USA, INC	1/8+	779	492	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A /
10*14300	I	5-20-27	PPG INDUSTRIES, INC.	GASTAR EXPLORATION USA, INC	1/8+	725	123	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A /
10*14309	I	5-20-27	ROBERT B. THOMAS	GASTAR EXPLORATION USA, INC	1/8+	779	484	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A /
10*14324	I	5-20-27	RUTH E. BASSETT MEADOWS	GASTAR EXPLORATION USA, INC	1/8+	792	100	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A /
10*14307	I	5-20-27	SALLY CYNTHIA HOPKINS	GASTAR EXPLORATION USA, INC	1/8+	777	572	21/41 Cert. of Merger Gastar Exploration USA, Inc to Gastar Exploration Inc	36/009 Gastar Exploration Inc to TH Exploration II, LLC	N/A /

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 WV Department of
 Environmental Protection

S1-01905

COPY

AFFIDAVIT

STATE OF TEXAS §
 § SS
COUNTY OF TARRANT §

On this 18th day of October, 2016, before me, the undersigned authority, personally appeared David D. Kalish ("Affiant") who being first duly sworn under oath, deposes and saith:

- 1. TH Exploration, LLC, TH Exploration II, LLC and TH Exploration III, LLC are wholly owned subsidiaries of THQ Appalachia I, LLC.
- 2. Tug Hill Operating, LLC provides oil and gas operations services to THQ Appalachia I, LLC under an Operating Services Agreement dated July 23, 2014.
- 3. David D. Kalish, the Affiant, is the Vice President of Tug Hill Operating, LLC, THQ Appalachia I, LLC, TH Exploration, LLC, TH Exploration II, LLC and TH Exploration III, LLC, and;
- 3. Tug Hill Operating, LLC is authorized to operate and maintain the assets owned by THQ Appalachia I, LLC, including, as referenced above, TH Exploration, LLC, TH Exploration II, LLC, and TH Exploration III, LLC, including oil and gas leases, wells, pipelines, surface facilities, and other all other assets that support the business of THQ Appalachia I, LLC, and;
- 4. Specifically, Tug Hill Operating, LLC is authorized to submit and obtain well work permits and carry out all activities pursuant to such work permits for assets owned by TH Exploration, LLC, TH Exploration II, LLC, TH Exploration III, LLC.

FURTHER, AFFIANT SAITH NOT.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 18th day of October, 2016.

David D. Kalish
Affiant: David D. Kalish

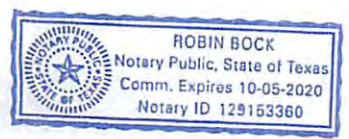
Jan Pest
MARSHALL County 03:44:28 PM
Instrument No 1416299
Date Recorded 10/19/2016
Document Type NIS
Pages Recorded 1
Book-Page 28-62
Recording Fee \$5.00
Additional \$5.00

JURAT

STATE OF TEXAS §
 § SS
COUNTY OF TARRANT §

Sworn and subscribed to (or affirmed) before me on this, the 18th day of October, 2016, by David D Kalish

IN WITNESS WHEREOF, I hereunto set my hand and official seal.



My Commission Expires: 10-05-2020
Signature/Notary Public: [Signature]
Name/Notary Public (Print): Robin Bock

WV Department of
Environmental Protection

51-01905



December 14, 2016

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

RE: Yoder W-3HM

Subject: Road Crossing Letter

Dear Laura:

Tug Hill Operating, LLC will not be drilling, extracting or producing any minerals under any WV County or State Routes in the area reflected on the Yoder W-3HM well plat.

If your office has any questions or concerns regarding the contents of this letter, please do not hesitate to contact me directly at 304-689-7676, or by email at Jwhite@tug-hilop.com.

Sincerely,

A handwritten signature in blue ink that reads "Jonathan White".

Jonathan White
Regulatory Analyst – Appalachia Region
Cell 304-689-7676
Email: jwhite@tug-hilop.com

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Office of Oil and Gas

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WV Department of
Environmental Protection

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

Date of Notice Certification: 12/15/2016

API No. 47- 051 - 01905
Operator's Well No. Yoder W-3HM
Well Pad Name: Yoder

Notice has been given:

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>513,692.8</u>
County: <u>Marshall</u>	Northing: <u>4,403,419.3</u>
District: <u>Franklin</u>	Public Road Access: <u>Wayne Ridge Road (County Route 78)</u>
Quadrangle: <u>Powhatan Point 7.5'</u>	Generally used farm name: <u>Nathan D. Yoder</u>
Watershed: <u>(HUC 10) French Creek - Ohio River</u>	

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

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

Required Attachments:

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

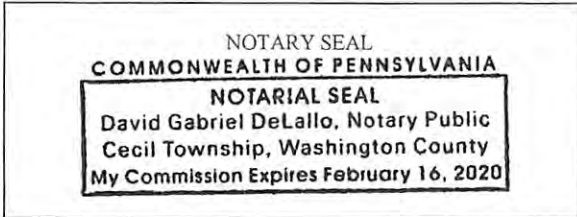
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 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 WV Department of Environmental Protection

02/25/2017

Certification of Notice is hereby given:

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

Well Operator:	<u>Tug Hill Operating, LLC</u>	Address:	<u>380 Southpointe Blvd, Souhepointe Plaza II, Suite 200</u>
By:	<u>Jonathan White</u> <i>Jonathan White</i>		<u>Canonsburg, PA 15317</u>
Its:	<u>Regulatory Analyst - Appalachia</u>	Facsimile:	<u>724-338-2030</u>
Telephone:	<u>(724) 749-8388</u>	Email:	<u>jwhite tug-hillop.com</u>



Subscribed and sworn before me this 15 day of DECEMBER, 2016
David D. DeLallo
 _____ 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 depprivacyofficer@wv.gov.

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WV Department of
Environmental Protection

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

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

Date of Notice: 12/15/16 **Date Permit Application Filed:** 12/16/16

Notice of:

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

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

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

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

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

SURFACE OWNER(s)
Name: Nathan D. Yoder
Address: 2150 County Road 150
Millersburg, OH 44654

Name: Roseita Thornton
Address: 2550 State Road 580, Lot 392
Clearwater, FL 33761

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: David J. Mast and Miriam A. Mast
Address: 7271 TR 664
Dundee, OH 44625

Name: NONE
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: NONE
Address: _____

COAL OWNER OR LESSEE
Name: Appalachia Power Company
Address: 1 Riverside Place
Columbus, OH 43215 **SEE SUPPLEMENT PAGE**

COAL OPERATOR
Name: NONE
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: David J. Mast and Miriam A. Mast
Address: 271 TR 664
Dundee, OH 44625

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: NONE
Address: _____

*Please attach additional forms if necessary
Department of Environmental Protection

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OFFICE OF OIL AND GAS
DEC 19 2016

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

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Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WW-6A
(8-13)

API NO. 47-051 - 01905
OPERATOR WELL NO. Yoder W-3HM
Well Pad Name: Yoder

Notice is hereby given by:

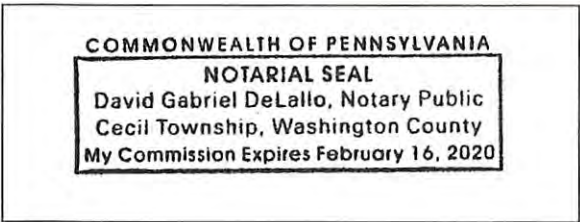
Well Operator: Tug Hill Operating, LLC
Telephone: 724-338-2026
Email: jwhite@tug-hilltop.com

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

Jonathan White

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 15 day of DECEMBER, 2016.

David Gabriel DeLallo Notary Public

My Commission Expires 2/16/2020

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WW-6A Notice of ApplicationOperator Well No. Yoder W-3HM
Supplement Page

Coal Owner(s):

Name: CNX Land, LLC
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(S):

Name: Aaron Paul Holdren, et ux
110 Ridgemont Drive
Mars, PA 16066-5402

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WW-6A

Supplement Pg. 1A

December 12, 2016
 Tug Hill Operating, LLC
 380 Southpointe BLVD
 Suite 200
 Canonsburg, PA 15317

WATER WELL REPORT

Well: Yoder W-3HM
 District: Franklin
 County: Marshall
 State: WV

There appears to be three (3) possible water sources within 2,000 feet of the above referenced well location.

House 1 TM 13 Par. 34 (Hunting Cabin) David Mast Phone 330-359-5622 7271 TR 664 Dundee, OH 44626	House 2 TM 13 Par. 26 (Old House Foundation) Aaron Paul Holdren, et ux Phone Unisted 110 Ridgemont Drive Mars, PA 16066-5402	House 3 TM 13 Par. 27 (Old House Foundation) Aaron Paul Holdren, et ux Phone Unisted 110 Ridgemont Drive Mars, PA 16066-5402

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

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

Date of Notice: November 2, 2016 **Date of Planned Entry:** November 9, 2016

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Nathan D. Yoder, et al

Address: 2150 County Road 150
Millersburg, OH 44654

Name: Roseita Thornton

Address: 2550 State Road 580, Lot 392
Clearwater, FL 33761

Name: David J. Mast and Miriam A. Mast

Address: 7271 TR 664
Dundee, OH 44624

COAL OWNER OR LESSEE

Name: Appalachia Power Company

Address: 1 Riverside Place
Columbus, OH 43215 *See Attached

MINERAL OWNER(s)

Name: Nathan D. Yoder

Address: 2150 County Road 150
Millersburg, OH 44654 *See Attached

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>WEST VIRGINIA</u>	Approx. Latitude & Longitude: <u>LAT: 39 7806053, LONG: -80.8400980</u>
County: <u>MARSHALL</u>	Public Road Access: <u>WAYNE RIDGE ROAD (COUNTY ROUTE 78)</u>
District: <u>FRANKLIN</u>	Watershed: <u>(HUC 10) FRENCH CREEK- OHIO RIVER</u>
Quadrangle: <u>POWHATAN POINT 7.5'</u>	Generally used farm name: <u>Nathan D. Yoder</u>

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

Notice is hereby given by:

Well Operator: <u>TUG HILL OPERATING, LLC</u>	Address: <u>380 SOUTHPOINTE BLVD, SOUTHPOINTE PLAZA II, SUITE 200</u>
Telephone: <u>724-749-8388</u>	<u>CANONSBURG, PA 15317</u>
Email: <u>JWHITE@TUG-HILLOP.COM</u>	Facsimile: <u>724-338-2030</u>

Oil and Gas Privacy Notice:

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

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SI-01905

WW-6A3 Notice of Entry for Plat SurveyOperator Well No. Yoder W-3HM
Supplement Page

Mineral Owner(s):

Name: Bounty Minerals, LLC
Address: 777 Main Street, Suite 850
Fort Worth, TX 76102

Name: Roseita Thornton
Address: 2550 State Road 580, Lot 392
Clearwater, FL 33761

Name: David J. Mast and Miriam A. Mast
Address: 7271 TR 664
Dundee, OH 44624

Coal Owner(s):

Name: CNX Land LLC
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

51-01905

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

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

Date of Notice: 12/15/2016 **Date Permit Application Filed:** 12/15/2016

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

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

Name: Nathan D. Yoder
Address: 2150 County Road 150
Millersburg, OH 44654

Name: Roseita Thornton
Address: 2550 State Road 580, Lot 392
Clearwater, FL 33761 ****SEE ATTACHED PAGE****

Notice is hereby given:

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

State:	<u>WEST VIRGINIA</u>	UTM NAD 83	Easting:	<u>513,692.8</u>
County:	<u>MARSHALL</u>		Northing:	<u>4,403,419.3</u>
District:	<u>FRANKLIN</u>	Public Road Access:	<u>WAYNE RIDGE ROAD (COUNTY ROUTE 78)</u>	
Quadrangle:	<u>POWHATAN POINT 7.5'</u>	Generally used farm name:	<u>NATHAN D. YODER</u>	
Watershed:	<u>(HUC 10) FRENCH CREEK - OHIO RIVER</u>			

This Notice Shall Include:

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

Well Operator: TUG HILL OPERATING, LLC
Telephone: (724) 749-8388
Email: JWHITE@TUG-HILLOP.COM

Address: 380 SOUTHPOINTE BLVD., SOUTEPOINTE PLAZA II, SUITE 200
CANONSBURG, PA 15317
Facsimile: (724) 338-2030

Oil and Gas Privacy Notice:

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

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WW-6A5 Notice of Planned OperationsOperator Well No. Yoder W-3HM
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Surface Owner(s):

Name: David J. Mast and Miriam A. Mast
Address: 7271 TR 664
Dundee, OH 44624

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

November 21, 2016

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 Yoder Pad, Marshall County
Yoder W-3HM Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2016-0506 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 78 SLS.

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

Very Truly Yours,

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

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

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TUG HILL

51-01905

PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Well No. Yoder W-3HM

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

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National Flood Hazard Layer FIRMette

39°47'3.74"N

80°50'43.69"W

SI-01905



Legend

— Cross-Sections

~ Base Flood Elevations



Flood Hazard Zones

1% Annual Chance Flood

Regulatory Floodway

Special Floodway

Area of Undetermined Flood Hazard

0.2% Annual Chance Flood

Future Conditions 1% Annual Chance Flood Hazard

Area with Reduced Risk Due to Levee

LOMRs

Effective

Map Panels

Digital Data

Unmodernized Maps

Unmapped

This map complies with FEMA's standards for the use of digital flood maps. The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. The base map shown complies with FEMA's base map accuracy standards.

The NFHL is a living database, updated daily, and this map represents a snapshot of information at a specific time.

Flood risks are dynamic and can change frequently due to a variety of factors, including weather patterns, erosion, and new development. FEMA flood maps are continually updated through a variety of processes. Users should always verify through the Map Service Center (<http://msc.fema.gov>) or the Community Map Repository that they have the current effective information.

NFHL maps should not be created for unmapped or unmodernized areas.

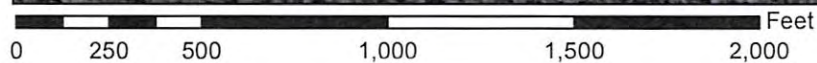


FEMA

USGS The National Map: Orthoimagery

39°46'34.90"N

80°50'4.62"W





APPROVED WVDEP OOG

2/24 2/24/2017

Yoder Well Site

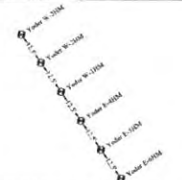
Site Design, Construction Plan, &
Erosion and Sediment Control Plans
Tug Hill Operating
Marshall County
Franklin District
Latitude 39.78042403°
Longitude -80.84016128°
Stillhouse Run - Ohio River Watershed

Pertinent Site Information

Yoder Well Site
Emergency Number 304-845-1920
Franklin District, Marshall County, WV
Watershed: Stillhouse Run - Ohio River Watershed
Tug Hill Contact Number: 1-817-632-3400

Exhibit A: Final Design: Issue for Permitting

Site Location	Center of Well Pad
WV-NAD 83 E: 142188.44	WV-NAD 83 E: 159187.45
WV-NAD 83 N: 447258.81	WV-NAD 83 N: 448133.80
WV-NAD 27 E: 142328.29	WV-NAD 27 E: 142328.29
WV-NAD 27 N: 752317.57	WV-NAD 27 N: 752317.57
Low NAD 83: 80.8399051	Low NAD 83: 80.84016128
Low NAD 27: 39.78171716	Low NAD 27: 39.7804462
Low NAD 27: 80.8399051	Low NAD 27: 80.84016128
UTM 17 NAD 83 (m): 448132.21	UTM 17 NAD 83 (m): 448139.11
UTM 17 NAD 83 (m): 513677.88	UTM 17 NAD 83 (m): 513687.29
Pad Size: 108' x 74'	Pad Size: 108' x 74'



WV-NAD 83	WV-NAD 83	WV-NAD 83	WV-NAD 83
WV-NAD 83 E: 142188.44	WV-NAD 83 E: 142188.44	WV-NAD 83 E: 142188.44	WV-NAD 83 E: 142188.44
WV-NAD 83 N: 447258.81	WV-NAD 83 N: 447258.81	WV-NAD 83 N: 447258.81	WV-NAD 83 N: 447258.81
WV-NAD 27 E: 142328.29	WV-NAD 27 E: 142328.29	WV-NAD 27 E: 142328.29	WV-NAD 27 E: 142328.29
WV-NAD 27 N: 752317.57	WV-NAD 27 N: 752317.57	WV-NAD 27 N: 752317.57	WV-NAD 27 N: 752317.57
Low NAD 83: 80.8399051	Low NAD 83: 80.8399051	Low NAD 83: 80.8399051	Low NAD 83: 80.8399051
Low NAD 27: 39.78171716	Low NAD 27: 39.78171716	Low NAD 27: 39.78171716	Low NAD 27: 39.78171716
Low NAD 27: 80.8399051	Low NAD 27: 80.8399051	Low NAD 27: 80.8399051	Low NAD 27: 80.8399051
UTM 17 NAD 83 (m): 448132.21	UTM 17 NAD 83 (m): 448132.21	UTM 17 NAD 83 (m): 448132.21	UTM 17 NAD 83 (m): 448132.21
UTM 17 NAD 83 (m): 513677.88	UTM 17 NAD 83 (m): 513677.88	UTM 17 NAD 83 (m): 513677.88	UTM 17 NAD 83 (m): 513677.88



WV State Plane Coordinate System
North Zone, NAD 83
Elevation based on NAVD83
Established by Survey Grade GPS
and GPS Post Processing

Property Owner Information - Yoder Well Site						
Franklin District, Marshall County						
Owner	TM	Parcel	Dist	Access Road	Legal	Area
Yoder	1533	2.84	1.05	1.0	6.34	1.00
Yoder	1533	2.84	1.05	1.0	6.34	1.00
Site Total	1533	2.84	1.05	1.0	12.68	2.00

Access Road			
Surface Change	TM	Parcel	Area (sq ft)
Yoder	1533	1.84E-07	2762
Yoder	1533	1.84E-07	2762
Yoder	1533	1.84E-07	2762

Disturbed Area	
Well Pad Construction	4.34
Access Road Construction	1.00
Yoder Access Road	1.00
Additional Change	11.33
Total Disturbed Area	17.68

Yoder Well Site Summary							
Description	WV-NAD 83 E	WV-NAD 83 N	WV-NAD 27 E	WV-NAD 27 N	Mag. Area	Length (feet)	Area (sq ft)
Well Pad	142188.44	447258.81	142328.29	752317.57	6.34	108'	7400
Well Pad Access Road	142188.44	447258.81	142328.29	752317.57	1.00	108'	1000
Access Road	142188.44	447258.81	142328.29	752317.57	1.00	108'	1000
Yoder Access Road	142188.44	447258.81	142328.29	752317.57	1.00	108'	1000
Total	142188.44	447258.81	142328.29	752317.57	9.34	336'	10400

Project Contacts

Tug Hill Operating
Jonathan White - Regulatory Analyst
734-435-2088 O/E 304-442-3434 Cell
Clyff Baile - V.P. Production
817-632-3368 O/E

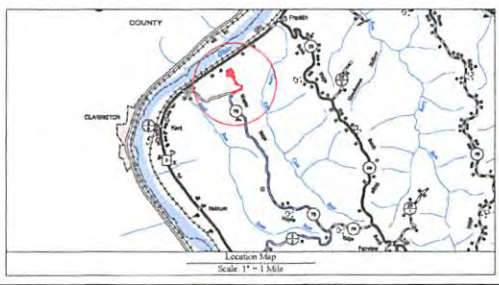
WVDEP
Zakary Zimmerman
304-536-6887 Cell
Amanda Gresham, Inc.
Kurt Pfeil
304-344-2777 Cell

WVDEP
WV-NAD 83 E: 142188.44
WV-NAD 83 N: 447258.81
WV-NAD 27 E: 142328.29
WV-NAD 27 N: 752317.57
Low NAD 83: 80.8399051
Low NAD 27: 39.78171716
Low NAD 27: 80.8399051
UTM 17 NAD 83 (m): 448132.21
UTM 17 NAD 83 (m): 513677.88

Approach Routes:

From the intersection of WV Rt 2 and OH Rt 7 near New Martinsville, WV. Follow WV Rt 2 North for 6.1 mi. Turn Right onto Co Rd 27 (Wells Hill Rd). Follow Co Rd 27 for 2.4 mi. Turn Left onto Co Rd 78 (Waynes Ridge Rd). Follow Co Rd 78 for 3.4 mi. The site entrance will be on the Right (Northwest) side of the road.

Site Locations (NAD 27)				Site Locations (NAD 83)			
Structure	Latitude (DEC)	Longitude (DEC)	Center of Well Pad	Structure	Latitude (DEC)	Longitude (DEC)	Center of Well Pad
Well Pad	39.78171716	-80.8399051	Center of Well Pad	Well Pad	39.78171716	-80.8399051	Center of Well Pad
Well Pad	39.78171716	-80.8399051	Center of Well Pad	Well Pad	39.78171716	-80.8399051	Center of Well Pad



Well Location Restrictions

All Pad construction complies with the following restrictions:

- *10' from an existing well or developed system used for human or domestic animals
- *12' from an occupied dwelling or beam greater than 2,500' used for poultry or other kind of livestock
- *10' from the edge of disturbance to wetlands, perennial streams, natural or artificial fish pond or reservoir
- *10' from the edge of disturbance to a naturally reproducing forest stream
- *1,000' of a surface or ground-water table to a public water supply

(W) Well Location Restrictions of WV Code 22-6A-12

Design Certification

The drawings, contained on and/or reference documents attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas (202-24).

All Plans, Reports, and/or Documents incorporated in this design constitute a complete set of plans in compliance with the provisions of the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas (202-24).

Date: 11/29/2016
Scale: As Shown

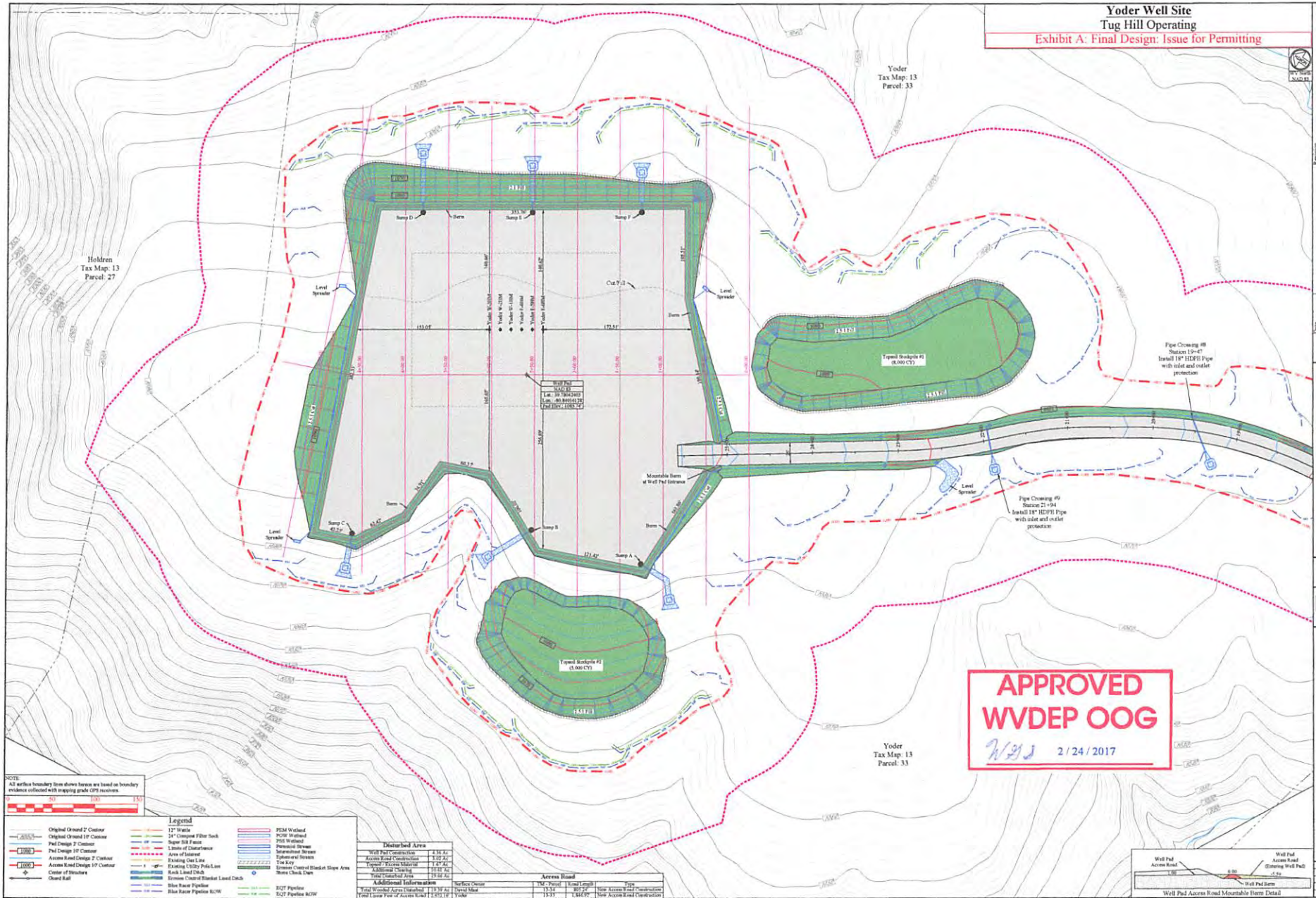
Sheet	Description
1	Cover Sheet
V1	Schedule of Quantities
W1-N3	Site Notes
2	Pre-Construction Site Conditions
3	Site Visit Map
4	Cleaning Exhibit
5	Overall Plan View
7	E&S Plan View
8	Flow Key Exhibit
9	Plan View
10	Cross Section - Well Pad
11	Cross Section - Tank Pad
12	Cross Section - Access Road
01-04	Geotechnical Exhibit
13	Landowner Disturbed Area Exhibit
14	Site Reclamation
M1-M3	Production Exhibit
D1-D2	Erosion and Sediment Control Details
R1	Access Road Details
P1	Pad Details

Cover Sheet
Yoder Well Site
 Franklin District
 Marshall County, WV

THIS DOCUMENT PREPARED FOR TUG HILL OPERATING

K&S SURVEYING
 11299 2016
 Scale: As Shown
 Issued By: JRS
 File No:
 Sheet 1 of 14

Yoder Well Site
Tug Hill Operating
Exhibit A: Final Design: Issue for Permitting

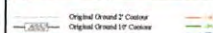


Yoder
 Tax Map: 13
 Parcel: 33

Holdren
 Tax Map: 13
 Parcel: 27

Yoder
 Tax Map: 13
 Parcel: 33

NOTE:
 All vertical boundaries from shown herein are based on boundary evidence collected with mapping grade (CG) receivers.



Legend

Original Ground 2' Contour	12" Weir	PEM Without
Original Ground 10' Contour	24" Compacted Fiber Tank	PCW Wetland
Pad Design 2' Contour	Super Sil Fence	PEM Wetland
Pad Design 10' Contour	1' Zone of Disturbance	Regulated Stream
Access Road Design 2' Contour	Area of Interest	Unregulated Stream
Access Road Design 10' Contour	Existing Utility Pole Line	Stream Control Blanket Slope Area
Center of Structure	Stock Land Ditch	Stream Check Dam
Shield Rail	Existing Control Blanket Land Ditch	Storm Check Dam
	Blue River Pipeline	322P Pipeline
	Blue River Pipeline ROW	322P Pipeline ROW

Disturbed Area

Well Pad Construction	1.36 AC
Access Road Construction	3.72 AC
Impoundment Construction	11.87 AC
Additional Area	15.15 AC
Total Disturbed Area (Estimated)	32.04 AC

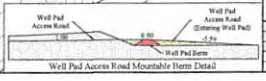
Access Road

WV Permit	Local Permit	Type
11-11	807-27	New Access Road Construction
11-11	1-022-07	New Access Road Construction

Additional Information

Surface Owner	David Mize
Total Well Pad Area (Estimated)	11.93 AC
Total Impoundment Area (Estimated)	12.01 AC

APPROVED
WVDEP OOG
 2/24/2017



TUG HILL OPERATING
 THIS DOCUMENT PREPARED FOR TUG HILL OPERATING
 K&S SURVEYING
 1125 W. 10th St., Charleston, WV 25302
 304.263.1111
 Site Plan
Yoder Well Site
 Franklin District
 Marshall County, WV
 Date: 11/20/2016
 Scale: As Shown
 Drawn by: JLS
 P&E No.:
 Sheet 12 of 14

SI-01905

Well Site

Construction Plan, &
 Erosion Control Plans
 Operating
 Franklin County
 Franklin District
 39.78042403°
 -80.84016128°
 Ohio River Watershed

Pertinent Site Information
 Yoder Well Site
 Emergency Number: 304-845-1920
 Franklin District, Marshall County, WV
 Watershed: Stillhouse Run - Ohio River Watershed
 Tug Hill Contact Number: 1-817-632-3400

Design: Issue for Permitting



WV State Plane Coordinate System
 North Zone, NAD 83
 Elevations Based on NAV88
 Established By Survey Grade GPS
 and OPUS Post-Processing

Property Owner Information - Yoder Well Site
 Franklin District - Marshall County

Owner	TM - Parcel	Well Pad	Access Road	Topsoil/Excess	Add. Clearing	Total Disturbed
David Mast	13-34	0.00	1.39	0.00	2.27	3.66
Yoder	13-33	4.36	1.63	1.67	8.34	16.00
Site Totals (Ac)	4.36	3.02	1.67	10.61	19.66	

Access Road

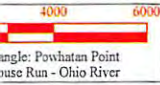
Surface Owner	TM - Parcel	Road Length	Type
David Mast	13-34	805.24'	New Access Road Construction
Yoder	13-33	1,446.92'	New Access Road Construction

Disturbed Area

Well Pad Construction	4.36 Ac
Access Road Construction	3.02 Ac
Topsoil / Excess Material	1.67 Ac
Additional Clearing	10.61 Ac
Total Disturbed Area	19.66 Ac
Additional Information	
Total Wooded Acres Disturbed	13.39 Ac
Total Linear Feet of Access Road	2,652.16'

Yoder Well Site Quantities

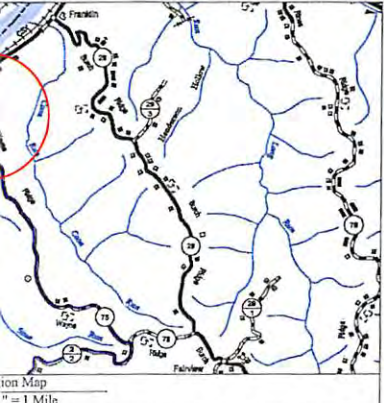
Description	Cut (CY)	Fill (CY)	Spoil (CY)	Borrow (CY)	Max. Slope	Length of Slope
Well Pad	37,069.10	13,069.13	23,999.97	N/A	N/A	N/A
Well Pad Access Road	2,378.10	16,451.93		14,073.83	14.00%	428.58'
Access Road Tie	252.31	1.12	257.99		10.00%	50.15'
Topsoil/Excess Material Stockpile	0.00	14,009.75			N/A	N/A
Totals	39,706.51	43,532.13	24,257.96	28,083.58		
			Total Spoil (CY) =	-3,825.62	(Excess Spoil Capacity)	



Upright: Powhatan Point
 Stillhouse Run - Ohio River

Site Locations (NAD 83)

Structure	Latitude (DD)	Longitude (DD)
Site Entrance	39.77525147	-80.83900451
Center of Well Pad	39.78042403	-80.84016128



Well Location Restrictions

All Pad construction complies with the following restrictions.

- *250' from an existing well or developed spring used for human or domestic animals.
- *625' from an occupied dwelling or barn greater than 2,500 SF used for poultry or dairy measured from the center of the pad.
- *100' from the edge of disturbance to wetlands, perennial streams, natural or artificial lake, pond or reservoir.
- *300' from the edge of disturbance to a naturally reproducing trout stream.
- *1,000' of a surface or ground water intake to a public water supply.

(Well Location Restrictions of WV Code 22-6A-12)



Design Certification

The drawings, construction notes and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas 39CSR02.

All Plans, Sheets, and/or Reference Diagrams included in this design constitute a complete set of plans. A complete set of plans is necessary to construct the site in accordance with the design.

John P. Sewer RPE 0051;
 Kelly Surveying PLLC
 COA: 024323-00

Date: 11/29/2016

Sheet	Description
1	Cover Sheet
V1	Schedule of Quantities
N1-N3	Site Notes
2	Pre-Construction Site Conditions
3	Site Soil Map
4	Clearing Exhibit
5	Overall Plan View
7	E&S Plan View
8	Toe Key Exhibit
9	Plan View
10	Cross Sections - Well Pad
11	Cross Sections - Tank Pad
12	Cross Sections - Access Road
G1-G4	Geotechnical Exhibit
L1	Landowner Disturbed Area Exhibit
S1	Site Reclamation
M1-M3	Production Exhibit
D1-D2	Erosion and Sediment Control Details
R1	Access Road Details
P1	Pad Details

Revision
 Design
 Date
 11-29-2016

TUG HILL OPERATING

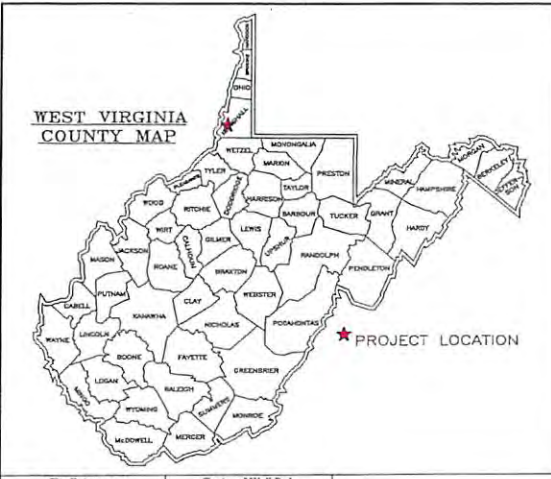


THIS DOCUMENT
 PREPARED FOR
 TUG HILL
 OPERATING

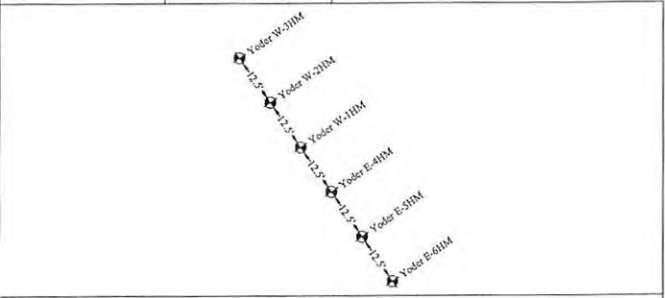
Kelly Surveying
 P.O. Box 336
 Fairley, WV 26039
 (304) 338-6982

Cover Sheet
 Yoder Well Site
 Franklin District
 Marshall County, WV

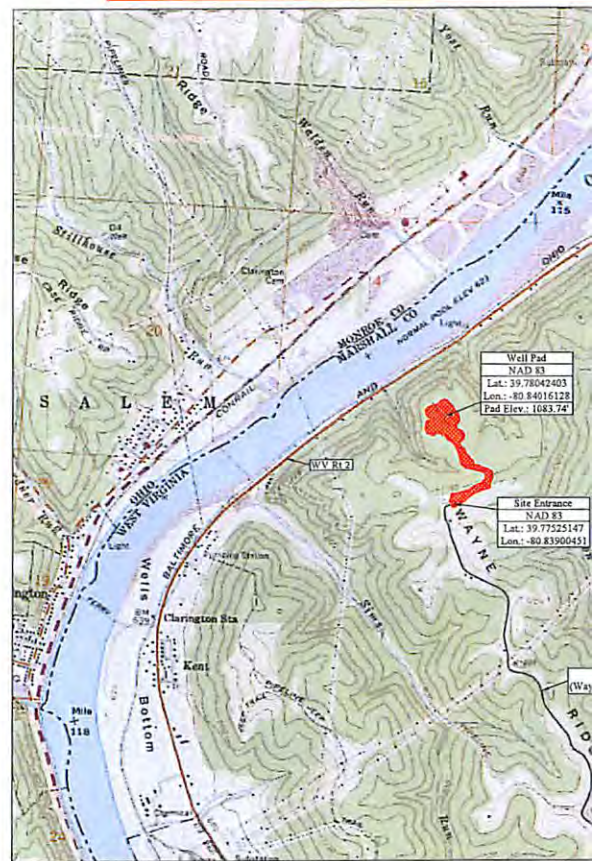
Date: 11/29/2016
 Scale: As Shown
 Designed By: ZS
 File No.
 02/25/2017



Site Entrance	Center of Well Pad
WV-N NAD 83 N: 467290.66	WV-N NAD 83 N: 469179.41
WV-N NAD 83 E: 1592168.44	WV-N NAD 83 E: 1591871.45
WV-N NAD 27 N: 467254.83	WV-N NAD 27 N: 469143.60
WV-N NAD 27 E: 1623606.29	WV-N NAD 27 E: 1623309.29
Lat. NAD 83: 39.77525147	Lat. NAD 83: 39.78042403
Lon. NAD 83: -80.83900451	Lon. NAD 83: -80.84016128
Lat. NAD 27: 39.77517256	Lat. NAD 27: 39.78034821
Lon. NAD 27: -80.83918919	Lon. NAD 27: -80.84034601
UTM 17 NAD 83 N: 4402325.21	UTM 17 NAD 83 N: 4403399.11
UTM 17 NAD 83 E: 513787.48	UTM 17 NAD 83 E: 513687.39
	Pad Elev.: 1083.74'



Yoder W-1HM	Yoder W-2HM	Yoder W-3HM
WV-N NAD 83 N: 469245.18	WV-N NAD 83 N: 469234.91	WV-N NAD 83 N: 469224.64
WV-N NAD 83 E: 1591898.23	WV-N NAD 83 E: 1591897.36	WV-N NAD 83 E: 1591904.49
WV-N NAD 27 N: 469209.37	WV-N NAD 27 N: 469199.10	WV-N NAD 27 N: 469188.83
WV-N NAD 27 E: 1623328.07	WV-N NAD 27 E: 1623335.19	WV-N NAD 27 E: 1623342.32
Lat. NAD 83: 39.78060534	Lat. NAD 83: 39.78057744	Lat. NAD 83: 39.78054954
Lon. NAD 83: -80.84009795	Lon. NAD 83: -80.84007205	Lon. NAD 83: -80.84004615
Lat. NAD 27: 39.78052952	Lat. NAD 27: 39.78050162	Lat. NAD 27: 39.78047372
Lon. NAD 27: -80.84028269	Lon. NAD 27: -80.84025679	Lon. NAD 27: -80.84023089
JTM 17 NAD 83 (m) N: 4403419.24	UTM 17 NAD 83 (m) N: 4403416.15	UTM 17 NAD 83 (m) N: 4403413.05
UTM 17 NAD 83 (m) E: 513692.78	UTM 17 NAD 83 (m) E: 513695.00	UTM 17 NAD 83 (m) E: 513697.22



Well Pad	NAD 83
Lat.: 39.78042403	
Lon.: -80.84016128	
Pad Elev.: 1083.74'	

Site Entrance	NAD 83
Lat.: 39.77525147	
Lon.: -80.83900451	



Project Contacts

Tug Hill Operating Jonathan White - Regulatory Analyst 724-485-2000 Off. 304-689-7676 Cell Geoff Radler - V.P. Production 817-632-5200 Off.	Survey and Engineer Kenneth Kelly 304-338-6983 Off. John P. See 304-442-0220 Off. Zackary Sumnerfield 304-338-6987 Off.
Tug Hill Operating, LLC 380 Southpointe Blvd Southpointe Plaza II, Suite 200 Cansonsburg, PA 15317	Geotechnical Engineer American Geotech, Inc. Kantil Patel 304-340-4277 Off.

Environmental:
Wetland Delineations as provided by Allstar Ecology
dated December 7, 2016

Topographic Information:
The topographic information shown herein is based on aerial photography by Blue Mountain Aerial Mapping, Burton, WV

MISS UTILITY OF WEST VIRGINIA
1-800-245-4848
West Virginia State Law Section XIV, Chapter 24-C requires that you call two business days before you dig in the state of West Virginia. IT'S THE LAW

811
Know what's below. Call before you dig.

Approach Routes:
From the intersection of WV Rt 2 and OH Rt 7 near New Martinsville, WV. Follow WV Rt 2 North for 6.1 mi. Turn Right onto Co Rt 2/2 (Wells Hill Rd). Follow Co Rt 2/2 for 2.4 mi. Turn Left onto Co Rt 78 (Waynes Ridge Rd). Follow Co Rt 78 for 3.4 mi. The site entrance will be on the Right (Northeast) side of the road.

Floodplain Conditions

Do site construction activities take place in a floodplain:	NO
Permit needed from county floodplain coordinator:	NO
Flood Hazard Zone:	X
HEC-RAS Study completed:	N/A
Floodplain shown on drawings:	N/A
FIRM Map Number(s) for site:	54051C 0140E
Acres of construction in floodplain:	N/A

Tug Hill Operating will obtain an Encroachment Permit (Form MM-109) from the WV Department of Transportation, Division of Highways, prior to the commencement of any construction activities.

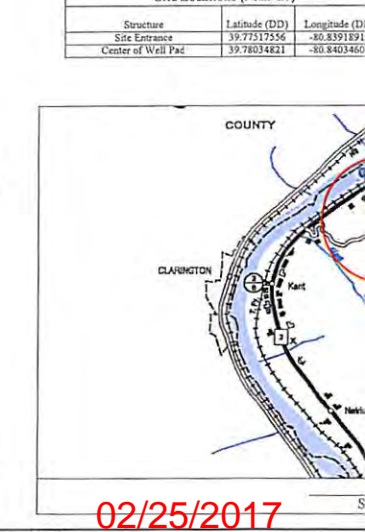
The WV Mines Website was consulted. Previous (Current) mining activities are not within the AOI.

WVDEP Website files show that there are no active and/or abandoned gas wells within the AOI.

Site Locations (NAD 27)

Structure	Latitude (DD)	Longitude (DD)
Site Entrance	39.77517256	-80.83918919
Center of Well Pad	39.78034821	-80.84034601

RECEIVED
Office of Oil and Gas
DEC 19 2018



02/25/2017