



west virginia department of environmental protection

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

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

Wednesday, August 29, 2018
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for EVAD 2HM
47-051-02057-00-00

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: EVAD 2HM
Farm Name: LOUIS J. & PATRICIA ACCET.
U.S. WELL NUMBER: 47-051-02057-00-00
Horizontal 6A New Drill
Date Issued: 8/29/2018

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.



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Austin Caperton, Cabinet Secretary
dep.wv.gov

**ORDER
ISSUED UNDER
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: Tug Hill Operating
380 Southpointe Boulevard, Plaza II, Suite 200
Cannonsburg, Pa 15317

DATE: August 21, 2018
ORDER NO.: 2018-W-6

INTRODUCTION

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Tug Hill Operating (hereinafter "Tug Hill" or "Operator"), collectively the "Parties."

FINDINGS OF THE CHIEF

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. Tug Hill is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 380 Southpointe Boulevard, Plaza II, Suite 200, Cannonsburg, Pa 15317
3. On June 5, 2018 Tug Hill submitted a well work permit application identified as API# 47-051-02051. Then on June 18, 2018 Tug Hill also submitted well work permits identified as API#s 47-051-02056, 47-051-02057, 47-051-02058, 47-051-02059 and 47-051-02060. The proposed wells are to be located on the Accettolo Pad in the Franklin District of Marshall County, West Virginia.
4. On August 16, 2018 Tug Hill requested a waiver for Wetland W1 and Wetland W3 outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API# 47-051-02051, 47-051-02056, 47-051-02057, 47-051-02058, 47-051-02059 and 47-051-02060.

CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “in addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “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 Office of Oil and Gas 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 Office of Oil and Gas 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.”

ORDER

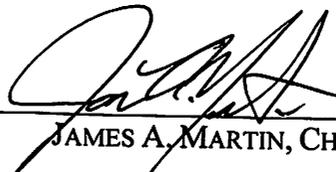
West Virginia Code §22-6A-12(b) requires, in part, that “no well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland. The Office of Oil and Gas grants the request for a waiver for Wetland W1 and Wetland W3 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-051-02051, 47-051-02056, 47-051-02057, 47-051-02058, 47-051-02059 and 47-051-02060. The Office of Oil and Gas hereby **ORDERS** that Tug Hill shall meet the following site construction and operational requirements for the Accettolo Well Pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetlands W1 and W3 shall be protected by twenty-four-inch (24”) compost filter sock and super silt fence. This along with temporary and permanent vegetative cover will prevent sediment from reaching the wetlands
- d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- k. All records from inspections shall be maintained on site for the life of the project and be available upon request.

Thus ORDERED, the 21th day of August, 2018.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By: 

JAMES A. MARTIN, CHIEF

API Number: _____
Operator's Well Number: 1HM

Wetland and Perennial Stream Waiver Request

Well Operator: Tug Hill Operating, LLC

Well Number: 1HM

Well Pad Name: Accettolo Well Pad

County, District, Quadrangle of Well Location: Marshall, Franklin, New Martinsville

1. Describe the proposed project location, including unique identifying names of all wetlands, and the names of perennial streams for which the waiver is sought.

The Accettolo Well Pad is an existing pad located along County Route 29 (Burch Ridge) in Franklin District, Marshall County, WV. The proposed project location is along a ridge top. The proposed project location will be within 100' of two delineated wetlands. Exhibit A, current site conditions, will be attached and made part of this waiver request. Exhibit A shows the locations of Wetland W1 and Wetland W3.

Wetland W1: Wetland W1 is located within the existing site LOD. Wetland W1 is situated downslope of the existing well pad on the north side of the well pad. The proposed sump locations on the well pad are positioned to direct collected water flow around Wetland W1. Super silt fence and 24" compost filter sock shall be installed upslope of Wetland W1 to control perimeter run-off and also provide a physical barrier between the work area and protected area. Minimal upslope earthwork will take place above Wetland W1, with the primary activity being berm construction and sump/outlet construction. There is a proposed repair area to the southwest and upslope of the protected area. The proposed reworked material will be graded so that water is directed towards the west side of the repair area, away from the protected area.

Wetland W3: Wetland W3 is located within the existing site LOD. Wetland W3 is situated downslope of the existing well pad on the south side of the well pad. Super silt fence and 24" compost filter sock shall be installed upslope of Wetland W3 to control perimeter run-off and also provide a physical barrier between the work area and protected area. Minimal upslope earthwork will take place above Wetland W3, with the primary activity being berm construction and sump/outlet construction.

- 2. Justify the proposed activity by describing alternatives to the project that were considered.**
- a. Include a No-Action Alternative to show "the future without the project"
 - b. Location Alternatives must be shown
 - c. Must demonstrate why a one hundred buffer cannot be maintained
 - d. Describe how the proposed project is the least environmentally damaging practicable alternative.

2a. No-Action Alternative: In a no-action alternative to the proposed project, the existing location would not be modified to provide containment for additional drilling activity. Currently the proposed project location is an active well site. In a no-action alternative, Wetland W1 and W3 would still be within the existing LOD of the well pad.

2b.1. Location Alternative #1: Prior to the environmental assessment, it was proposed that an earthen berm be reconstructed on the well pad to provide pad containment and meet WVDEP requirements. With the close proximity of Wetland W1 and W3 to the well site, a second alternative was examined to help further protect Wetland W1 and W3 while providing an avenue for constructing a compliant well pad during late fall/winter.

2b.2 Location Alternative #2: After receiving the environmental assessment, the proposed earth berm was reevaluated to address the potential impacts to the delineated wetlands. The proximity of Wetland W1 and W3 to the proposed earthen berm along with the proposed construction may affect the proposed design of the well pad containment. Rather than importing soil to construct the earthen berm, an alternative containment structure may be constructed around the perimeter of the pad to provide containment while providing containment while minimizing soil disturbance during construction activities outside of optimal growing seasons. It is proposed that concrete traffic barriers ("Jersey Barriers") be used for the structure of the well pad berm and that 60 mil HDPE liner material be utilized for containment. The liner material will be anchored to the side/bottom of the barriers, ran over the top of the barriers and into the well pad area where it will be trenched into the pad approximately 20-30' inside the well pad at a minimum depth of 2 feet. In addition to the concrete barriers and liner material, pre-cast sumps will be installed to aid in pad dewatering (all pad dewatering releases will be compliant with current WVDEP OOG rules and regulations). The liner material will be overlapped at the sumps and adhered to the inside of the sumps with polyurea spray to prevent seepage around the sump. If construction of the sumps and sump outlet is to take place during the late fall/winter, a temporary PVC outlet pipe and level spreader system may be implemented to minimize soil disturbance during the non-growing season. The PVC outlet pipe and level spreader will be replaced with a rock-lined outlet channel and scour hole at the time of pad reclamation.

2c. Must Demonstrate why a one hundred foot buffer cannot be maintained: See Exhibit A, Existing Site Conditions. A 100' buffer cannot be maintained due to the existing site conditions. Wetland W1 and W3 are within the existing site LOD.

2d. Describe how the proposed project is the least environmentally damaging practicable alternative: The proposed alternative, as shown on Exhibit C, Option 1: Existing Well Pad Berm, is the least environmentally damaging practicable alternative because it allows for the utilization of the existing well pad while protecting the existing delineated wetlands. Constructing an additional well pad in close proximity to the existing well pad for the purpose of drilling the proposed wells would require additional clearing of existing vegetation and potentially impacting other aquatic features. By utilizing the existing modified pad and providing protective structures around the existing wetlands, the proposed wells can be installed without the large amount of additional clearing and earthwork that a separate pad would require. By modifying the existing well pad and upgrading it to current industry standards, the water that may be discharged from the site under regulatory conditions can be better controlled with BMPs to prevent slope erosion that may occur on the well pad in its current condition.

3. Identify sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. This description should include all additional erosion and sediment control measures and devices that will be used.

Wetland W1 and W3 will be protected with super silt fence and 24" compost filter sock. The controls shall be installed upslope of the wetlands. In addition to the E&S controls, an orange construction fence shall be installed to provide a minimum 10' buffer around the existing wetlands. As an additional measure to the reduced amount of exposed soil upslope of the wetlands, a revised berm may be used instead of a traditional earthen berm if construction is to take place outside of optimal growing season. The revised berm will consist of 32" high concrete barriers ("Jersey Barriers") wrapped with 60 mil HDPE liner material to provide well pad containment without the need to disturb additional soil for berm installation. The existing slope vegetation will be maintained and any areas disturbed due to the installation of the upslope erosion and sedimentation controls shall be repaired and seeded. During drilling and completion operations, the well pad berm shall provide containment of the well pad which will further protect Wetland W1 and W3.

4. Provide mapping, plans, specifications and design analysis for the preferred alternative to the project.

4.a Specify in writing what additional controls, measures, devices, monitoring, etc. will be used to protect these wetlands and/or perennial streams for which the waiver is sought.

See Exhibit B, Proposed Design for the proposed site layout and protective control installation locations.

Vegetative Buffer: A minimum 10' vegetative buffer shall be maintained around both wetlands at all times during construction and operation. The minimum 10' buffer shall be designated with an orange construction fence.

Super Silt Fence: Super silt fence shall be installed at the upslope edge of the vegetative buffer for both wetlands. The super silt fence shall provide sedimentation control above the wetland to prevent sediments and other materials from being carried downslope into the wetlands. Should any large material, typically rock or stone, manage to roll down a slope, the chainlink fence of the super silt fence structure shall act as a net to capture the material before it can proceed further downslope towards the wetlands.

24" Compost Filter Sock: A 24" compost filter sock shall be installed 2' upslope of the super silt fence to provide additional sedimentation protection for the wetlands. The 24" compost filter sock will be the primary sediment filter protection for the wetland with the super silt fence being the secondary filter.

Permanent Seeding / Rolled Erosion Control Blankets: Permanent seeding of all disturbed areas upslope of the wetlands shall be performed as soon as practical. Earthwork above the wetlands shall be kept to a minimum to reduce the amount of disturbed area upslope of the wetlands and shall be vegetated as soon as construction permits. If construction activities upslope of the wetlands are completed at the end of the growing season, rolled erosion control blankets shall be installed to provide additional erosion control until permanent vegetation can be established.

API Number: _____
Operator's Well Number: **1HM**

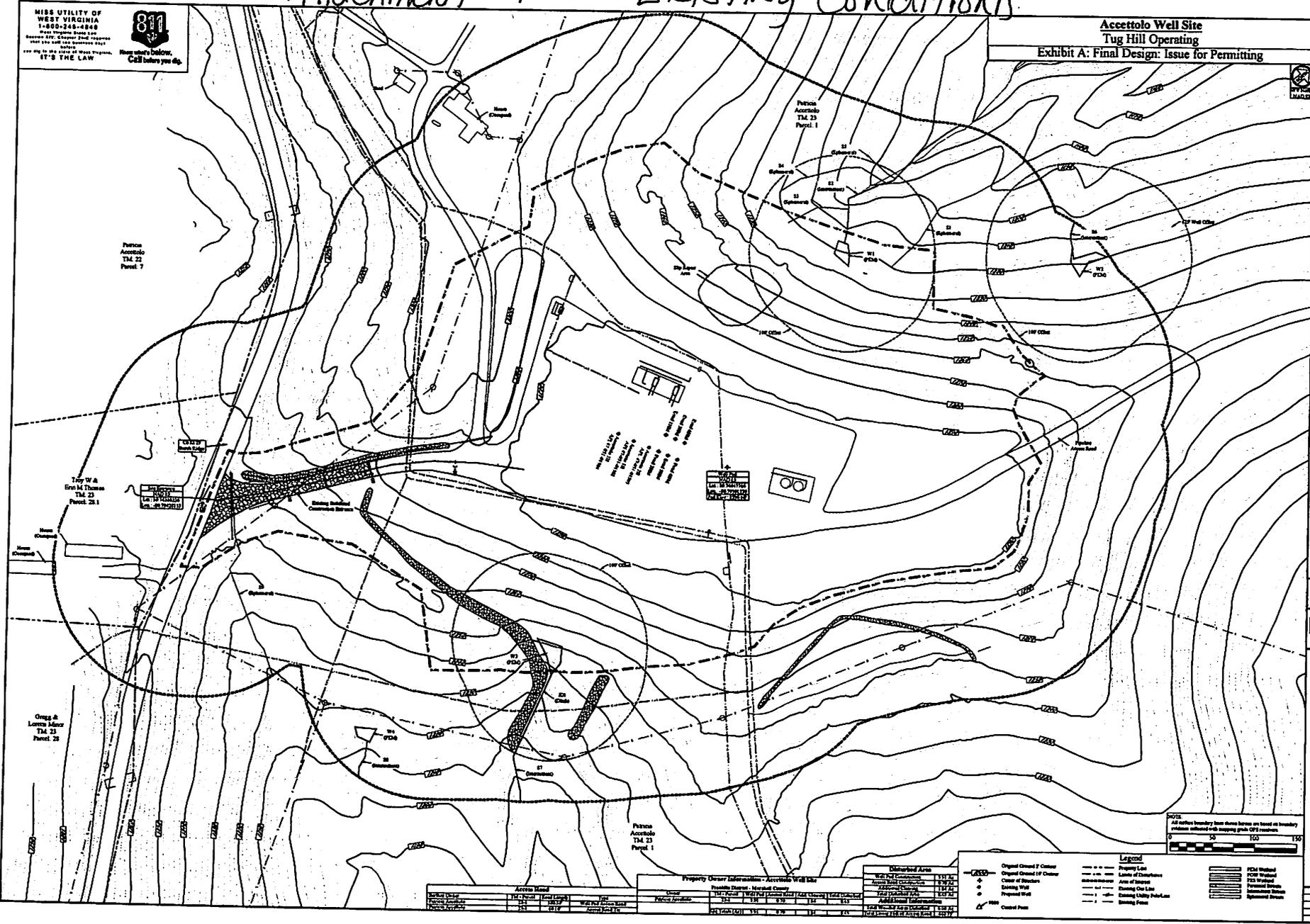
Well Pad Berm: Once installed, the well pad berm will provide well pad containment and prevent water from leaving the well pad except at the designated sump outlet locations (water from the sumps shall only be released in accordance with WVDEP requirements). The sump outlets shall have erosion controls to prevent erosion of the well pad slopes that may lead to sedimentation within the wetlands. The proposed well pad sump outlets shall be placed so that they do not discharge at or near the wetlands, providing additional protection to the wetlands.

Attachment #1 - Existing Conditions

MISS UTILITY OF WEST VIRGINIA
1-800-248-8888
West Virginia Gas and Electric
Service, Inc. (WVGS&E) is a public utility
company and is subject to the Public Utility
Code of West Virginia.
For more information, call 1-800-248-8888.
IT'S THE LAW.
Please check below. Call before you dig.



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

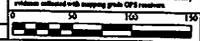


TUG HILL OPERATING
 THIS DOCUMENT PREPARED FOR TUG HILL OPERATING
 Pre-Construction Site Conditions
 Accetollo Well Site
 Franklin District
 Marshall County, WV

Adjacent Parcel		Property Owner Information - Accetollo Well Site	
Parcel No.	Owner	Parcel No.	Owner
1	Patricia Accetollo	1	Patricia Accetollo
2	Patricia Accetollo	2	Patricia Accetollo
3	Patricia Accetollo	3	Patricia Accetollo
4	Patricia Accetollo	4	Patricia Accetollo
5	Patricia Accetollo	5	Patricia Accetollo
6	Patricia Accetollo	6	Patricia Accetollo
7	Patricia Accetollo	7	Patricia Accetollo
8	Patricia Accetollo	8	Patricia Accetollo
9	Patricia Accetollo	9	Patricia Accetollo
10	Patricia Accetollo	10	Patricia Accetollo

Legend	
Original Ground Elevation	Property Line
Original Ground F.C. Contour	Line of Disruption
Clear of Structure	Area of Impact
Existing Strip	Existing Out Line
Proposed Strip	Existing Utility Path/Line
Control Point	Shading Point
	PCW Method

NOTES:
All surface boundary lines shown herein are based on boundary evidence collected with measuring grade GPS receivers.



WW-6B
(04/15)

API NO. 47-051 **4705102057**
OPERATOR WELL NO. Evad 2HM
Well Pad Name: Accettolo

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 Glen Easton 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Evad 2HM Well Pad Name: Accettolo

3) Farm Name/Surface Owner: Accettolo, Patricia & Louis Public Road Access: Burch Ridge Road - County Route 29

4) Elevation, current ground: 1290' Elevation, proposed post-construction: 1290'

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

Other _____

(b) If Gas Shallow Deep _____

Horizontal _____

6) Existing Pad: Yes or No Yes

me
6/6/18

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus is the target formation at a depth of 6493 - 6544' thickness of 51' and anticipated pressure of approx. 3800 psi

8) Proposed Total Vertical Depth: 6,644'

9) Formation at Total Vertical Depth: Onondaga

10) Proposed Total Measured Depth: 15,073'

11) Proposed Horizontal Leg Length: 8,220'

12) Approximate Fresh Water Strata Depths: 70', 877' ✓

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

14) Approximate Saltwater Depths: 2,167' ✓

15) Approximate Coal Seam Depths: Sewickly Coal - 771' ✓ and Pittsburgh Coal - 871' ✓

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

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

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Office of Oil and Gas
JUN 18 2018
Page 1 of 3
WV Department of
Environmental Protection

WW-6B
(04/15)

API NO. 47-051 -
OPERATOR WELL NO. Evad 2HM
Well Pad Name: Accattolo

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120' ✓	259FT^3(CTS)
Fresh Water	13 3/8"	NEW	H40	48#	980'	980' ✓	1031ft^3(CTS)
Coal	13 3/8"	NEW	H40	48#	980'	980'	1031ft^3(CTS)
Intermediate	9 5/8"	NEW	J55	36#	2,800'	2,800' ✓	926ft^3(CTS)
Production	5 1/2"	NEW	P110	20#	15,073'	15,073'	3847ft^3(CTS)
Tubing	2 3/8"	NEW	N80	4.7#		6,788'	
Liners							

JW
6/6/18

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	13 3/8"	17 1/2"	.33	1,730	1,384	SEE #24	1.2
Coal	13 3/8"	17 1/2"	.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	9,000	SEE#24	1.17/1.19
Tubing	2 3/8"		.19	11,200	8,960		
Liners							

PACKERS

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

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JUN 18 2018

Page 2 of 3

WV Department of
Environmental Protection

WW-6B
(10/14)

4705102057

API NO. 47-051 -

OPERATOR WELL NO. Evad 2HM

Well Pad Name: Accettolo

JK
6/6/18

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 20,550,000 lb proppant and 317,718 bbl of water. Max rate = 80 bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 8.45 acres

22) Area to be disturbed for well pad only, less access road (acres): 5.91 acres

23) Describe centralizer placement for each casing string:

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

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

*See Attachment

25) Proposed borehole conditioning procedures:

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

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JUN 18 2018

*Note: Attach additional sheets as needed.

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 (05/24/2018) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it as the best publicly available. See attached map he provided.

Request maps for:

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

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

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

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Permit well - Evad 2HM

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

API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705101502	Tug Hill Operating	6570' TVD 12433' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101503	Tug Hill Operating	6557' TVD 11319' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101504	Tug Hill Operating	6553' TVD 12000' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101505	Tug Hill Operating	6608' TVD 13102' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101507	Tug Hill Operating	6602' TVD 12348' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101508	Tug Hill Operating	6595' TVD 12543' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101521	Tug Hill Operating	6617' TVD 12620' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705100103	Unknown	Unknown	Unknown	Unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be effected by fracturing in the planned Marcellus well.	State records are incomplete
4705170365	Manufacturers Light & Heat	Unknown	Unknown	Unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be effected by fracturing in the planned Marcellus well.	State records are incomplete
4705170354	Unknown	Unknown	Unknown	Unknown	Unknown but unlikely. The well likely represents an old shallow well that is too shallow to be effected by	State records are incomplete

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Tug Hill Operating, LLC Casing and Cement Program

Evad 2HM

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	13 3/8"	J55	17 1/2"	980'	CTS
Intermediate	9 5/8"	J55	12 1/4"	2,802'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4"	15,073'	CTS

Cement

Conductor:	Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Conductor Cement mixed at 15.6 ppg, Y=1.2
Surface:	Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Surface Cement mixed at 15.6 ppg, Y=1.2
Intermediate:	Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.19
Kick Off Plug:	Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L – KOP Plug
Production:	50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L – Production Cement mixed at 15.2ppg, Y = 1.19

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4705102057

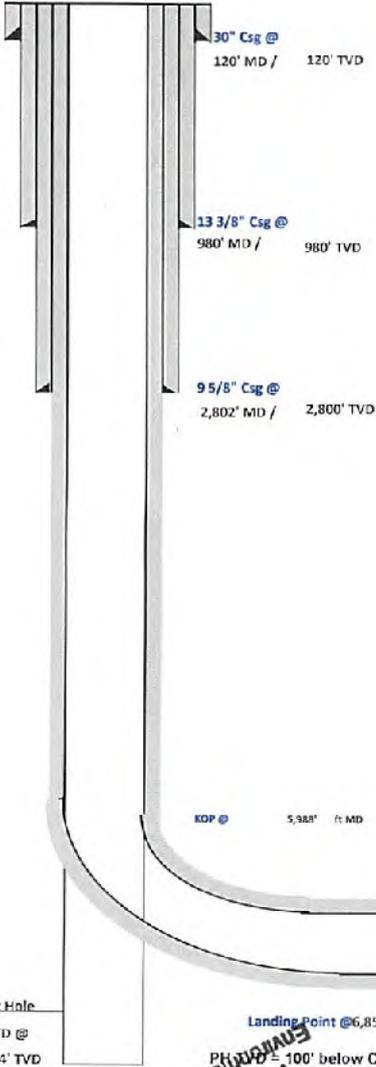


WELL NAME: Evad 2HM
 STATE: WV COUNTY: Marshall
 DISTRICT: Franklin
 DF Elev: 1,291' GL Elev: 1,291'
 TD: 15,073'
 TH Latitude: 39.74433754
 TH Longitude: -80.79324462
 BH Latitude: 39.72272061
 BH Longitude: 80.7775806

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	877
Sewickley Coal	771
Pittsburgh Coal	871
Big Lime	2051
Weir	2407
Berea	2591
Gordon	2901
Rhinestreet	5895
Genesee/Burkett	6403
Tully	6426
Hamilton	6455
Marcellus	6493
Landing Depth	6528
Onondaga	6544
Pilot Hole Depth	6644

CASING SUMMARY							
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement
Conductor	36	30	120'	120'	BW	BW	Surface
Surface	17.5	13 3/8	980'	980'	54.5	J55	Surface
Intermediate 1	12 1/4	9 5/8	2,802'	2,800'	36	J55	Surface
Production	8 7/8 x 8 3/4	5 1/2	15,073'	6,657'	20	CYHP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
	Sacks	Class	Density	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	1,037	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	912	A	15	Air	1 Centralizer every other jt
Production	3,392	A	14.5	Air / SOBM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to sfc.



John
6/6/18

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100' below Onondaga Top

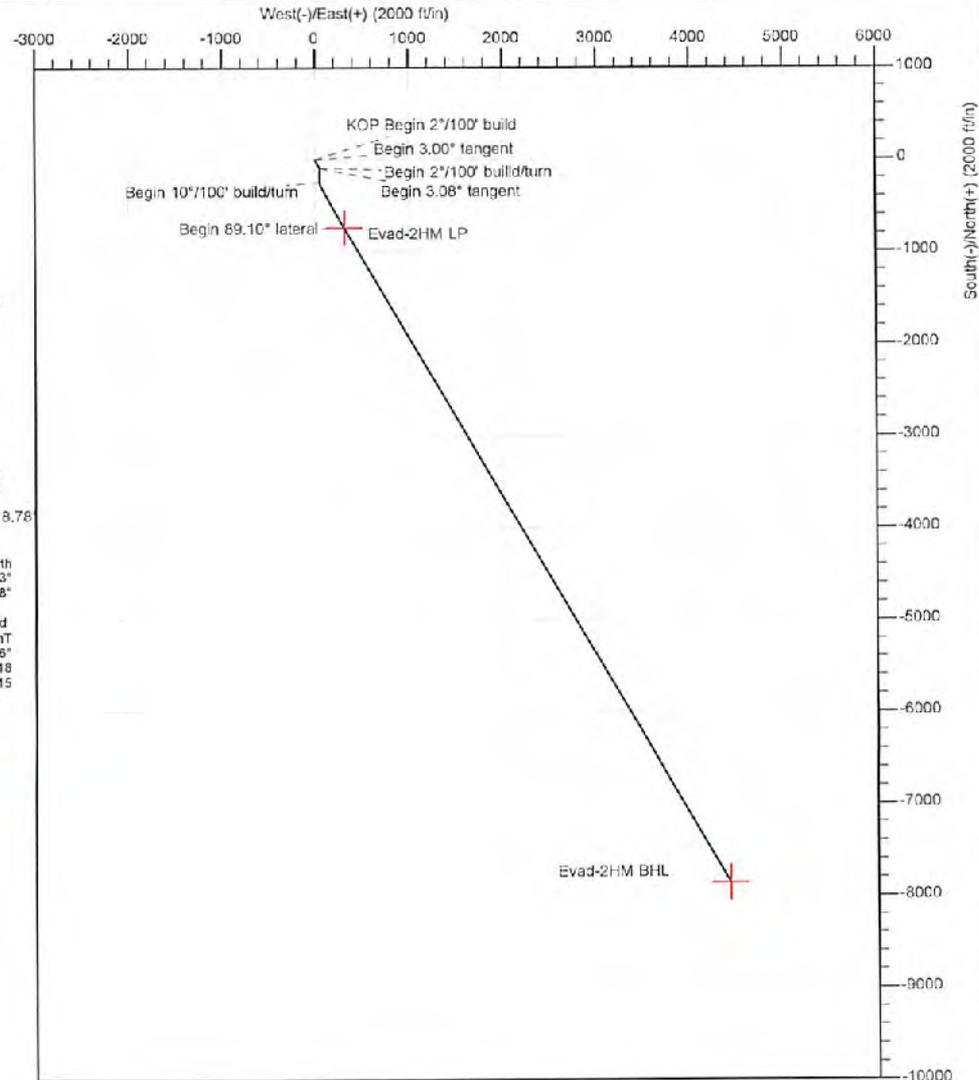
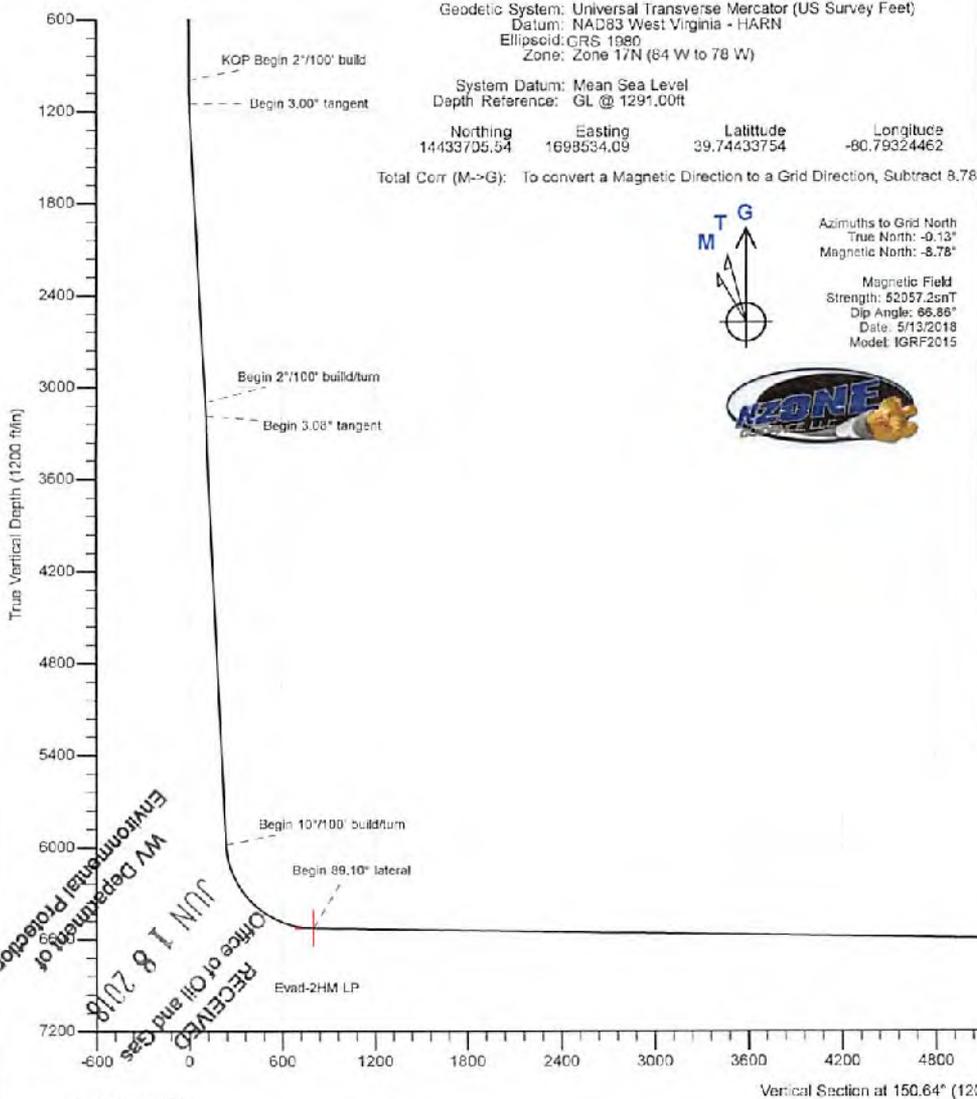
Lateral TD @ 15,073' ft MD
 6,657' ft TVD



Well: Evad 02HM (D)
 Site: Accettolo/Evad Pad
 Project: Marshall County, West Virginia.
 Design: rev0

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
3	1150.00	3.00	150.00	1149.93	-3.40	1.96	2.00	150.00	3.93	Begin 3.00° tangent
4	3102.74	3.00	150.00	3100.00	-91.91	53.06	0.00	0.00	106.12	Begin 2°/100' build/turn
5	3189.01	3.08	162.97	3186.15	-96.17	54.07	2.00	104.01	110.33	Begin 3.08° tangent
6	5989.04	3.08	162.97	5981.15	-246.22	46.29	0.00	0.00	237.29	Begin 10°/100' build/turn
7	6853.24	89.10	150.01	6528.00	-742.05	314.26	10.00	-33.02	800.82	Begin 89.10° lateral
8	15073.36	89.10	150.01	6657.00	-7660.72	4422.59	0.00	0.00	9019.43	PBHL/TD 15073.36 MD/6657.00 TVD



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Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Evad 02HM (D)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1291.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1291.00ft
Site:	Accettolo/Evad Pad	North Reference:	Grid
Well:	Evad 02HM (D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

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

Site	Accettolo/Evad Pad				
Site Position:		Northing:	14,433,724.12 usft	Latitude:	39.74438861
From:	Lat/Long	Easting:	1,698,524.31 usft	Longitude:	-80.79327927
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13 °

Well	Evad 02HM (D)					
Well Position	+N/-S	0.00 ft	Northing:	14,433,705.55 usft	Latitude:	39.74433754
	+E/-W	0.00 ft	Easting:	1,698,534.09 usft	Longitude:	-80.79324462
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level:	1,291.00 ft	

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/13/2018	-8.65	66.86	52,057.16393834

Design	rev0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	150.64

Plan Survey Tool Program	Date	5/13/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,072.63 rev0 (Original Hole)	MWD	
			MWD - Standard	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,150.00	3.00	150.00	1,149.93	-3.40	1.96	2.00	2.00	0.00	150.00	0.00
3,102.74	3.00	150.00	3,100.00	-91.91	53.06	0.00	0.00	0.00	0.00	0.00
3,189.01	3.08	182.97	3,186.15	-96.17	54.07	2.00	0.09	38.22	104.01	0.00
5,988.04	3.08	182.97	5,981.15	-246.22	46.29	0.00	0.00	0.00	0.00	0.00
6,653.24	89.10	150.01	6,526.00	-742.05	314.26	10.00	9.94	-3.81	-33.00	0.00
15,073.36	89.10	150.01	6,657.00	-7,860.72	4,422.59	0.00	0.00	0.00	0.00	0.00

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Planning Report - Geographic

Database:	DB_Jul2218dt_v14	Local Co-ordinate Reference:	Well Evad 02HM (D)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1291.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1291.00ft
Site:	Accattolo/Evad Pad	North Reference:	Grid
Well:	Evad 02HM (D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
100.00	0.00	0.00	100.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
200.00	0.00	0.00	200.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
300.00	0.00	0.00	300.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
400.00	0.00	0.00	400.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
500.00	0.00	0.00	500.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
600.00	0.00	0.00	600.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
700.00	0.00	0.00	700.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
800.00	0.00	0.00	800.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
900.00	0.00	0.00	900.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,433,705.55	1,698,534.09	39.74433754	-80.79324462	
KOP Begin 2°/100' build										
1,100.00	2.00	150.00	1,099.98	-1.51	0.87	14,433,704.04	1,698,534.96	39.74433339	-80.79324153	
1,150.00	3.00	150.00	1,149.93	-3.40	1.96	14,433,702.15	1,698,536.05	39.74432819	-80.79323767	
Begin 3.00° tangent										
1,200.00	3.00	150.00	1,199.86	-5.67	3.27	14,433,699.88	1,698,537.36	39.74432166	-80.79323303	
1,300.00	3.00	150.00	1,299.73	-10.20	5.89	14,433,695.35	1,698,539.98	39.74430950	-80.79322376	
1,400.00	3.00	150.00	1,399.58	-14.73	8.51	14,433,690.82	1,698,542.60	39.74429703	-80.79321449	
1,500.00	3.00	150.00	1,499.45	-19.26	11.12	14,433,686.28	1,698,545.21	39.74428457	-80.79320521	
1,600.00	3.00	150.00	1,599.31	-23.80	13.74	14,433,681.75	1,698,547.83	39.74427210	-80.79319594	
1,700.00	3.00	150.00	1,699.18	-28.33	16.36	14,433,677.22	1,698,550.45	39.74425964	-80.79318667	
1,800.00	3.00	150.00	1,799.04	-32.86	18.97	14,433,672.69	1,698,553.06	39.74424718	-80.79317740	
1,900.00	3.00	150.00	1,898.90	-37.39	21.59	14,433,668.15	1,698,555.68	39.74423471	-80.79316812	
2,000.00	3.00	150.00	1,998.77	-41.93	24.21	14,433,663.62	1,698,558.30	39.74422225	-80.79315885	
2,100.00	3.00	150.00	2,098.63	-46.46	26.82	14,433,659.09	1,698,560.91	39.74420978	-80.79314958	
2,200.00	3.00	150.00	2,198.49	-50.99	29.44	14,433,654.56	1,698,563.53	39.74419732	-80.79314031	
2,300.00	3.00	150.00	2,298.36	-55.52	32.06	14,433,650.02	1,698,566.15	39.74418486	-80.79313104	
2,400.00	3.00	150.00	2,398.22	-60.05	34.67	14,433,645.49	1,698,568.76	39.74417239	-80.79312176	
2,500.00	3.00	150.00	2,498.08	-64.58	37.29	14,433,640.96	1,698,571.38	39.74415993	-80.79311249	
2,600.00	3.00	150.00	2,597.94	-69.12	39.91	14,433,636.43	1,698,574.00	39.74414746	-80.79310322	
2,700.00	3.00	150.00	2,697.81	-73.65	42.52	14,433,631.89	1,698,576.61	39.74413500	-80.79309395	
2,800.00	3.00	150.00	2,797.67	-78.19	45.14	14,433,627.36	1,698,579.23	39.74412254	-80.79308468	
2,900.00	3.00	150.00	2,897.53	-82.72	47.76	14,433,622.83	1,698,581.85	39.74411007	-80.79307540	
3,000.00	3.00	150.00	2,997.40	-87.25	50.37	14,433,618.30	1,698,584.46	39.74409761	-80.79306613	
3,100.00	3.00	150.00	3,097.26	-91.78	52.99	14,433,613.76	1,698,587.08	39.74408514	-80.79305686	
3,102.74	3.00	150.00	3,100.00	-91.91	53.06	14,433,613.64	1,698,587.15	39.74408480	-80.79305661	
Begin 2°/100' build/turn										
3,189.01	3.08	182.97	3,186.15	-96.17	54.07	14,433,609.37	1,698,588.16	39.74407308	-80.79305305	
Begin 3.08° tangent										
3,200.00	3.08	182.97	3,197.12	-96.76	54.04	14,433,608.78	1,698,588.13	39.74407146	-80.79305317	
3,300.00	3.08	182.97	3,296.98	-102.12	53.76	14,433,603.42	1,698,587.85	39.74405674	-80.79305420	
3,400.00	3.08	182.97	3,396.84	-107.49	53.48	14,433,598.06	1,698,587.58	39.74404202	-80.79305523	
3,500.00	3.08	182.97	3,496.69	-112.85	53.21	14,433,592.70	1,698,587.30	39.74402730	-80.79305626	
3,600.00	3.08	182.97	3,596.55	-118.21	52.93	14,433,587.34	1,698,587.02	39.74401258	-80.79305730	
3,700.00	3.08	182.97	3,696.40	-123.57	52.65	14,433,581.98	1,698,586.74	39.74399786	-80.79305833	
3,800.00	3.08	182.97	3,796.26	-128.93	52.37	14,433,576.62	1,698,586.46	39.74398313	-80.79305936	
3,900.00	3.08	182.97	3,896.12	-134.29	52.09	14,433,571.26	1,698,586.19	39.74396841	-80.79306040	
4,000.00	3.08	182.97	3,995.97	-139.65	51.82	14,433,565.90	1,698,585.91	39.74395369	-80.79306143	
4,100.00	3.08	182.97	4,095.83	-145.01	51.54	14,433,560.54	1,698,585.63	39.74393897	-80.79306246	
4,200.00	3.08	182.97	4,195.68	-150.37	51.26	14,433,555.18	1,698,585.35	39.74392425	-80.79306350	
4,300.00	3.08	182.97	4,295.54	-155.73	50.98	14,433,549.82	1,698,585.07	39.74390953	-80.79306453	
4,400.00	3.08	182.97	4,395.39	-161.09	50.70	14,433,544.45	1,698,584.80	39.74389481	-80.79306556	
4,500.00	3.08	182.97	4,495.25	-166.45	50.43	14,433,539.09	1,698,584.52	39.74388009	-80.79306659	
4,600.00	3.08	182.97	4,595.11	-171.81	50.15	14,433,533.73	1,698,584.24	39.74386537	-80.79306763	

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Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Evad 02HM (D)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1291.00ft
Project:	Marshall County, West Virginia,	MD Reference:	GL @ 1291.00ft
Site:	Accettolo/Evad Pad	North Reference:	Grid
Well:	Evad 02HM (D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,700.00	3.06	182.97	4,694.96	-177.18	49.87	14,433,528.37	1,698,583.66	39.74385065	-80.79306866	
4,800.00	3.08	182.97	4,794.82	-182.54	49.59	14,433,523.01	1,698,583.68	39.74383593	-80.79306969	
4,900.00	3.08	182.97	4,894.67	-187.90	49.31	14,433,517.65	1,698,583.41	39.74382121	-80.79307073	
5,000.00	3.08	182.97	4,994.53	-193.26	49.04	14,433,512.29	1,698,583.13	39.74380649	-80.79307176	
5,100.00	3.08	182.97	5,094.39	-196.62	48.76	14,433,506.93	1,698,582.85	39.74379177	-80.79307279	
5,200.00	3.08	182.97	5,194.24	-203.98	48.48	14,433,501.57	1,698,582.57	39.74377705	-80.79307383	
5,300.00	3.08	182.97	5,294.10	-209.34	48.20	14,433,496.21	1,698,582.29	39.74376233	-80.79307486	
5,400.00	3.08	182.97	5,393.95	-214.70	47.92	14,433,490.85	1,698,582.02	39.74374761	-80.79307589	
5,500.00	3.08	182.97	5,493.81	-220.06	47.65	14,433,485.49	1,698,581.74	39.74373289	-80.79307692	
5,600.00	3.08	182.97	5,593.66	-225.42	47.37	14,433,480.12	1,698,581.46	39.74371816	-80.79307796	
5,700.00	3.08	182.97	5,693.52	-230.78	47.09	14,433,474.76	1,698,581.18	39.74370344	-80.79307899	
5,800.00	3.08	182.97	5,793.38	-236.14	46.81	14,433,469.40	1,698,580.90	39.74368872	-80.79308002	
5,900.00	3.08	182.97	5,893.23	-241.51	46.53	14,433,464.04	1,698,580.63	39.74367400	-80.79308106	
5,988.04	3.08	182.97	5,981.15	-246.22	46.29	14,433,459.32	1,698,580.38	39.74366104	-80.79308197	
Begin 10°/100' build/turn										
6,000.00	4.13	173.89	5,993.08	-246.97	46.32	14,433,458.57	1,698,580.41	39.74365896	-80.79308187	
6,100.00	13.88	158.79	6,091.74	-261.61	51.44	14,433,443.93	1,698,585.53	39.74361875	-80.79306376	
6,200.00	23.83	153.78	6,186.26	-290.83	65.13	14,433,414.71	1,698,599.22	39.74353842	-80.79301531	
6,300.00	33.81	152.49	6,273.76	-333.74	86.96	14,433,371.80	1,698,621.05	39.74342043	-80.79293799	
6,400.00	43.80	151.73	6,351.59	-389.04	116.28	14,433,316.50	1,698,650.37	39.74326836	-80.79283415	
6,500.00	53.79	151.21	6,417.38	-455.05	152.19	14,433,250.50	1,698,686.28	39.74306697	-80.79270694	
6,600.00	63.79	150.81	6,469.13	-529.76	193.60	14,433,175.79	1,698,727.69	39.74288143	-80.79256023	
6,700.00	73.78	150.47	6,505.27	-610.90	239.28	14,433,094.64	1,698,773.35	39.74265830	-80.79239648	
6,800.00	83.78	150.17	6,524.70	-696.01	287.78	14,433,009.54	1,698,821.86	39.74242426	-80.79222680	
6,853.24	89.10	150.01	6,528.00	-742.05	314.26	14,432,963.50	1,698,848.35	39.74229765	-80.79213275	
Begin 89.10° lateral										
6,900.00	89.10	150.01	6,528.73	-782.55	337.63	14,432,923.00	1,698,871.72	39.74218629	-80.79204994	
7,000.00	89.10	150.01	6,530.30	-869.15	387.61	14,432,836.40	1,698,921.70	39.74194814	-80.79187286	
7,100.00	89.10	150.01	6,531.87	-955.75	437.59	14,432,749.80	1,698,971.68	39.74170999	-80.79169579	
7,200.00	89.10	150.01	6,533.44	-1,042.35	487.57	14,432,663.20	1,699,021.66	39.74147184	-80.79151871	
7,300.00	89.10	150.01	6,535.01	-1,128.95	537.55	14,432,576.60	1,699,071.64	39.74123369	-80.79134163	
7,400.00	89.10	150.01	6,536.58	-1,215.55	587.53	14,432,490.00	1,699,121.62	39.74099554	-80.79116456	
7,500.00	89.10	150.01	6,538.15	-1,302.15	637.51	14,432,403.40	1,699,171.60	39.74075739	-80.79098748	
7,600.00	89.10	150.01	6,539.72	-1,388.75	687.49	14,432,316.80	1,699,221.57	39.74051924	-80.79081041	
7,700.00	89.10	150.01	6,541.29	-1,475.35	737.46	14,432,230.20	1,699,271.55	39.74028109	-80.79063334	
7,800.00	89.10	150.01	6,542.86	-1,561.95	787.44	14,432,143.60	1,699,321.53	39.74004294	-80.79045627	
7,900.00	89.10	150.01	6,544.43	-1,648.55	837.42	14,432,057.00	1,699,371.51	39.73980479	-80.79027920	
8,000.00	89.10	150.01	6,546.00	-1,735.15	887.40	14,431,970.40	1,699,421.49	39.73956663	-80.79010213	
8,100.00	89.10	150.01	6,547.57	-1,821.76	937.38	14,431,883.80	1,699,471.47	39.73932848	-80.78992507	
8,200.00	89.10	150.01	6,549.14	-1,908.36	987.36	14,431,797.19	1,699,521.45	39.73909033	-80.78974800	
8,300.00	89.10	150.01	6,550.70	-1,994.96	1,037.34	14,431,710.59	1,699,571.43	39.73885218	-80.78957094	
8,400.00	89.10	150.01	6,552.27	-2,081.56	1,087.32	14,431,623.99	1,699,621.41	39.73861402	-80.78939388	
8,500.00	89.10	150.01	6,553.84	-2,168.16	1,137.30	14,431,537.39	1,699,671.39	39.73837587	-80.78921681	
8,600.00	89.10	150.01	6,555.41	-2,254.76	1,187.27	14,431,450.79	1,699,721.36	39.73813772	-80.78903975	
8,700.00	89.10	150.01	6,556.98	-2,341.36	1,237.25	14,431,364.19	1,699,771.34	39.73789956	-80.78886270	
8,800.00	89.10	150.01	6,558.55	-2,427.96	1,287.23	14,431,277.59	1,699,821.32	39.73766141	-80.78868564	
8,900.00	89.10	150.01	6,560.12	-2,514.56	1,337.21	14,431,190.99	1,699,871.30	39.73742326	-80.78850858	
9,000.00	89.10	150.01	6,561.69	-2,601.16	1,387.19	14,431,104.39	1,699,921.28	39.73718510	-80.78833153	
9,100.00	89.10	150.01	6,563.26	-2,687.76	1,437.17	14,431,017.79	1,699,971.26	39.73694695	-80.78815447	
9,200.00	89.10	150.01	6,564.83	-2,774.36	1,487.15	14,430,931.19	1,700,021.24	39.73670879	-80.78797742	
9,300.00	89.10	150.01	6,566.40	-2,860.96	1,537.13	14,430,844.59	1,700,071.21	39.73647064	-80.78780037	
9,400.00	89.10	150.01	6,567.97	-2,947.56	1,587.11	14,430,757.99	1,700,121.19	39.73623248	-80.78762332	
9,500.00	89.10	150.01	6,569.54	-3,034.16	1,637.08	14,430,671.39	1,700,171.17	39.73599433	-80.78744627	
9,600.00	89.10	150.01	6,571.11	-3,120.76	1,687.06	14,430,584.79	1,700,221.15	39.73575618	-80.78726922	

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Planning Report - Geographic

Database:	DB_Jul2218dt_v14	Local Co-ordinate Reference:	Well Evad 02HM (D)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1291.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1291.00ft
Site:	Accetolo/Evad Pad	North Reference:	Grid
Well:	Evad 02HM (D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,700.00	89.10	150.01	6,572.67	-3,207.36	1,737.04	14,430,498.19	1,700,271.13	39.73551801	-80.78709217
9,800.00	89.10	150.01	6,574.24	-3,293.98	1,787.02	14,430,411.59	1,700,321.11	39.73527966	-80.78691513
9,900.00	89.10	150.01	6,575.81	-3,380.56	1,837.00	14,430,324.99	1,700,371.09	39.73504170	-80.78673808
10,000.00	89.10	150.01	6,577.38	-3,467.17	1,886.98	14,430,238.39	1,700,421.07	39.73480354	-80.78656104
10,100.00	89.10	150.01	6,578.95	-3,553.77	1,936.96	14,430,151.79	1,700,471.04	39.73458538	-80.78638400
10,200.00	89.10	150.01	6,580.52	-3,640.37	1,986.94	14,430,065.19	1,700,521.02	39.73432723	-80.78620696
10,300.00	89.10	150.01	6,582.09	-3,726.97	2,036.92	14,429,978.59	1,700,571.00	39.73408907	-80.78602992
10,400.00	89.10	150.01	6,583.66	-3,813.57	2,086.89	14,429,891.99	1,700,620.98	39.73385091	-80.78585288
10,500.00	89.10	150.01	6,585.23	-3,900.17	2,136.87	14,429,805.39	1,700,670.96	39.73361275	-80.78567584
10,600.00	89.10	150.01	6,586.80	-3,986.77	2,186.85	14,429,718.79	1,700,720.94	39.73337459	-80.78549881
10,700.00	89.10	150.01	6,588.37	-4,073.37	2,236.83	14,429,632.19	1,700,770.92	39.73313643	-80.78532177
10,800.00	89.10	150.01	6,589.94	-4,159.97	2,286.81	14,429,545.59	1,700,820.90	39.73289827	-80.78514474
10,900.00	89.10	150.01	6,591.51	-4,246.57	2,336.79	14,429,458.99	1,700,870.87	39.73266011	-80.78496771
11,000.00	89.10	150.01	6,593.08	-4,333.17	2,386.77	14,429,372.39	1,700,920.85	39.73242195	-80.78479067
11,100.00	89.10	150.01	6,594.65	-4,419.77	2,436.75	14,429,285.79	1,700,970.83	39.73218379	-80.78461364
11,200.00	89.10	150.01	6,596.22	-4,506.37	2,486.73	14,429,199.18	1,701,020.81	39.73194563	-80.78443662
11,300.00	89.10	150.01	6,597.78	-4,592.97	2,536.70	14,429,112.58	1,701,070.79	39.73170747	-80.78425959
11,400.00	89.10	150.01	6,599.35	-4,679.57	2,586.68	14,429,025.98	1,701,120.77	39.73146931	-80.78408256
11,500.00	89.10	150.01	6,600.92	-4,766.17	2,636.66	14,428,939.38	1,701,170.75	39.73123115	-80.78390554
11,600.00	89.10	150.01	6,602.49	-4,852.77	2,686.64	14,428,852.78	1,701,220.73	39.73099299	-80.78372851
11,700.00	89.10	150.01	6,604.06	-4,939.37	2,736.62	14,428,766.18	1,701,270.71	39.73075483	-80.78355149
11,800.00	89.10	150.01	6,605.63	-5,025.97	2,786.60	14,428,679.58	1,701,320.68	39.73051666	-80.78337447
11,900.00	89.10	150.01	6,607.20	-5,112.57	2,836.58	14,428,592.98	1,701,370.66	39.73027850	-80.78319745
12,000.00	89.10	150.01	6,608.77	-5,199.18	2,886.56	14,428,506.38	1,701,420.64	39.73004034	-80.78302043
12,100.00	89.10	150.01	6,610.34	-5,285.78	2,936.54	14,428,419.78	1,701,470.62	39.72980218	-80.78284341
12,200.00	89.10	150.01	6,611.91	-5,372.38	2,986.51	14,428,333.18	1,701,520.60	39.72956401	-80.78266640
12,300.00	89.10	150.01	6,613.48	-5,458.98	3,036.49	14,428,246.58	1,701,570.58	39.72932585	-80.78248938
12,400.00	89.10	150.01	6,615.05	-5,545.58	3,086.47	14,428,159.98	1,701,620.56	39.72908768	-80.78231237
12,500.00	89.10	150.01	6,616.62	-5,632.18	3,136.45	14,428,073.38	1,701,670.54	39.72884952	-80.78213535
12,600.00	89.10	150.01	6,618.19	-5,718.78	3,186.43	14,427,986.78	1,701,720.51	39.72861136	-80.78195834
12,700.00	89.10	150.01	6,619.75	-5,805.38	3,236.41	14,427,900.18	1,701,770.49	39.72837319	-80.78178133
12,800.00	89.10	150.01	6,621.32	-5,891.98	3,286.39	14,427,813.58	1,701,820.47	39.72813503	-80.78160432
12,900.00	89.10	150.01	6,622.89	-5,978.58	3,336.37	14,427,726.98	1,701,870.45	39.72789686	-80.78142732
13,000.00	89.10	150.01	6,624.46	-6,065.18	3,386.35	14,427,640.38	1,701,920.43	39.72765870	-80.78125031
13,100.00	89.10	150.01	6,626.03	-6,151.78	3,436.32	14,427,553.78	1,701,970.41	39.72742053	-80.78107330
13,200.00	89.10	150.01	6,627.60	-6,238.38	3,486.30	14,427,467.18	1,702,020.39	39.72718236	-80.78089630
13,300.00	89.10	150.01	6,629.17	-6,324.98	3,536.28	14,427,380.58	1,702,070.37	39.72694420	-80.78071930
13,400.00	89.10	150.01	6,630.74	-6,411.58	3,586.26	14,427,293.98	1,702,120.34	39.72670603	-80.78054229
13,500.00	89.10	150.01	6,632.31	-6,498.18	3,636.24	14,427,207.38	1,702,170.32	39.72646786	-80.78036529
13,600.00	89.10	150.01	6,633.88	-6,584.78	3,686.22	14,427,120.78	1,702,220.30	39.72622970	-80.78018829
13,700.00	89.10	150.01	6,635.45	-6,671.38	3,736.20	14,427,034.18	1,702,270.28	39.72599153	-80.78001130
13,800.00	89.10	150.01	6,637.02	-6,757.98	3,786.18	14,426,947.58	1,702,320.26	39.72575336	-80.77983430
13,900.00	89.10	150.01	6,638.59	-6,844.59	3,836.16	14,426,860.98	1,702,370.24	39.72551519	-80.77965730
14,000.00	89.10	150.01	6,640.16	-6,931.19	3,886.13	14,426,774.38	1,702,420.22	39.72527703	-80.77948031
14,100.00	89.10	150.01	6,641.73	-7,017.79	3,936.11	14,426,687.77	1,702,470.20	39.72503886	-80.77930331
14,200.00	89.10	150.01	6,643.29	-7,104.39	3,986.09	14,426,601.17	1,702,520.17	39.72480069	-80.77912632
14,300.00	89.10	150.01	6,644.85	-7,190.99	4,036.07	14,426,514.57	1,702,570.15	39.72456252	-80.77894933
14,400.00	89.10	150.01	6,646.43	-7,277.59	4,086.05	14,426,427.97	1,702,620.13	39.72432435	-80.77877234
14,500.00	89.10	150.01	6,648.00	-7,364.19	4,136.03	14,426,341.37	1,702,670.11	39.72408618	-80.77859535
14,600.00	89.10	150.01	6,649.57	-7,450.79	4,186.01	14,426,254.77	1,702,720.09	39.72384801	-80.77841837
14,700.00	89.10	150.01	6,651.14	-7,537.39	4,235.99	14,426,168.17	1,702,770.07	39.72360984	-80.77824138
14,800.00	89.10	150.01	6,652.71	-7,623.99	4,285.97	14,426,081.57	1,702,820.05	39.72337167	-80.77806440
14,900.00	89.10	150.01	6,654.28	-7,710.59	4,335.94	14,425,994.97	1,702,870.03	39.72313350	-80.77788741
15,000.00	89.10	150.01	6,655.85	-7,797.19	4,385.92	14,425,908.37	1,702,920.00	39.72289533	-80.77771043

JUN 18 2018



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Evad 02HM (D)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1291.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1291.00ft
Site:	Accetolo/Evad Pad	North Reference:	Grid
Well:	Evad 02HM (D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,073.36	89.10	150.01	6,657.00	-7,860.72	4,422.59	14,425,844.84	1,702,956.67	39.72272061	-80.77758060
PBHL/TD 15073.36 MD/6657.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Evad-2HM LP - hit/miss target - Shape	0.00	0.00	6,528.00	-742.05	314.26	14,432,983.50	1,698,848.35	39.74229765	-80.79213275
Evad-2HM BHL - plan hits target center - Point	0.00	0.00	6,657.00	-7,860.72	4,422.59	14,425,844.84	1,702,956.67	39.72272061	-80.77758060

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 2°/100' build	
1,150.00	1,149.93	-3.40	1.96	Begin 3.00° tangent	
3,102.74	3,100.00	-91.91	53.06	Begin 2°/100' build/turn	
3,189.01	3,186.15	-96.17	54.07	Begin 3.08° tangent	
5,988.04	5,981.15	-246.22	46.29	Begin 10°/100' build/turn	
6,853.24	6,528.00	-742.05	314.26	Begin 89.10° lateral	
15,073.36	6,657.00	-7,860.72	4,422.59	PBHL/TD 15073.36 MD/6657.00 TVD	

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WV Department of
Environmental Protection
COMPASS 5000.14 Build 85

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Tug Hill Operating, LLC OP Code 494510851

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

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? Barite for weight

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

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

-Landfill or offsite name/permit number? Wetzel County Sanitary Landfill (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (SAN1406 / PA DEP EGH1386426)

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 James A Pancake

Company Official (Typed Name) Jim Pancake

Company Official Title Vice President Geoscience

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JUN 18 2018
WV Department of
Environmental Protection

Subscribed and sworn before me this 6 day of JUNE, 2018

Maureen A Stead

Notary Public

My commission expires 1/28/19

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
MAUREEN A STEAD
Notary Public
CECIL TWR, WASHINGTON COUNTY
My Commission Expires Jan 28, 2019

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 8.45 Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

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

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Justin Nielsen*

Comments: _____

Title: Oil and Gas Inspector

Date: 4/6/18

Field Reviewed? Yes No

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Well Site Safety Plan

Tug Hill Operating, LLC

Handwritten signature and date: 6/6/18

Well Name: Evad 2HM

Pad Location: Accetollo Pad

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

Northing: 4,399,402.25

Easting: 517,714.23

June 2018

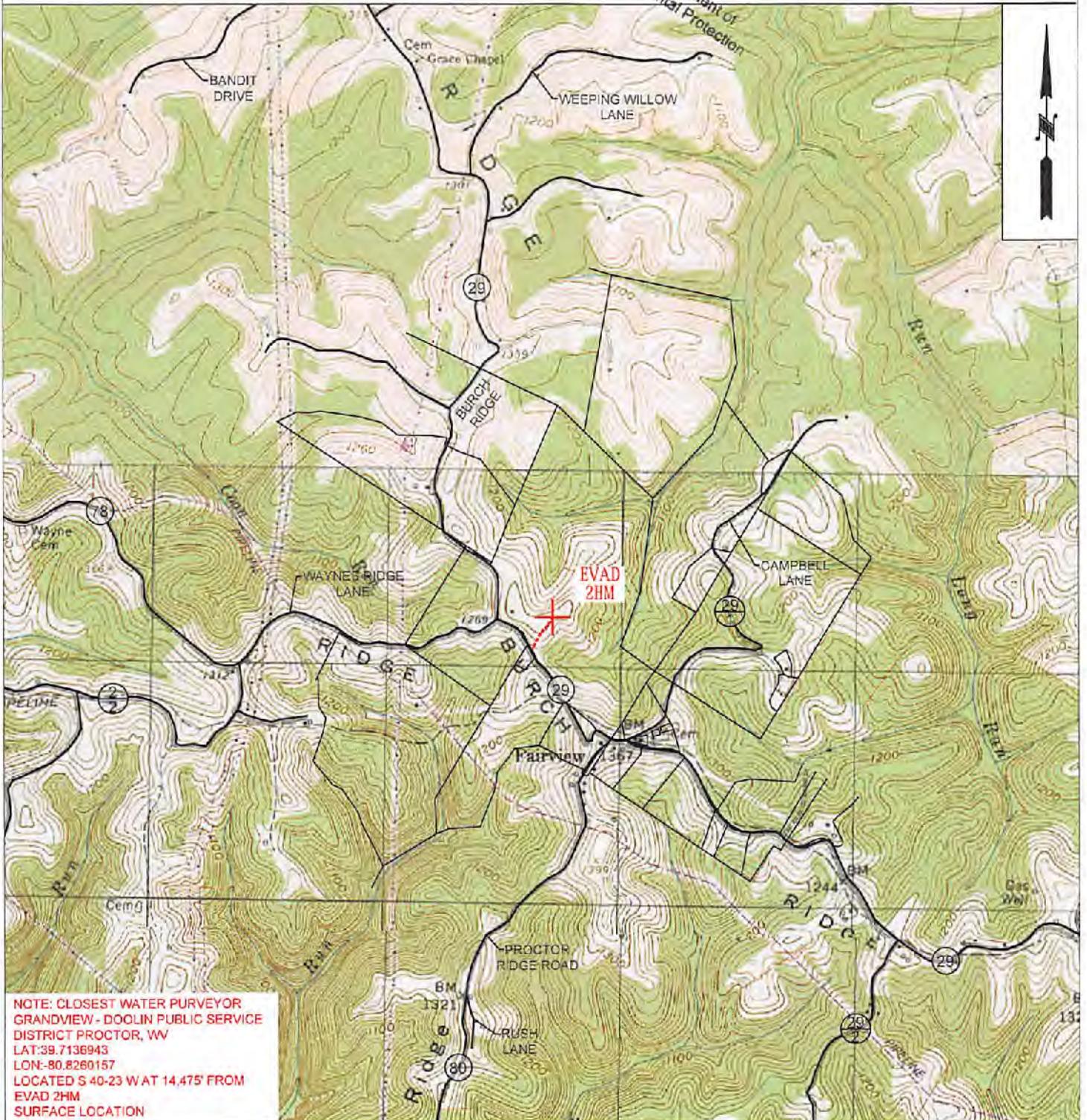
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WW-9

PROPOSED
EVAD 2HM

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SUPPLEMENT PG 2



NOTE: CLOSEST WATER PURVEYOR
GRANDVIEW - DOOLIN PUBLIC SERVICE
DISTRICT PROCTOR, WV
LAT:39.7136943
LON:-80.8260157
LOCATED S 40-23 W AT 14.475' FROM
EVAD 2HM
SURFACE LOCATION

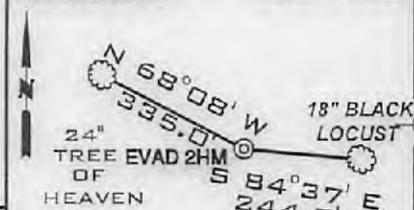
 TUG HILL OPERATING	OPERATOR	494510851	TOPO SECTION	LEASE NAME
	TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		NEW MARTINSVILLE 7.5'	EVAD
			SCALE: 1" = 2000'	DATE: DATE: 05-31-2018

EVAD LEASE WELL 2HM 425.091 ± ACRES

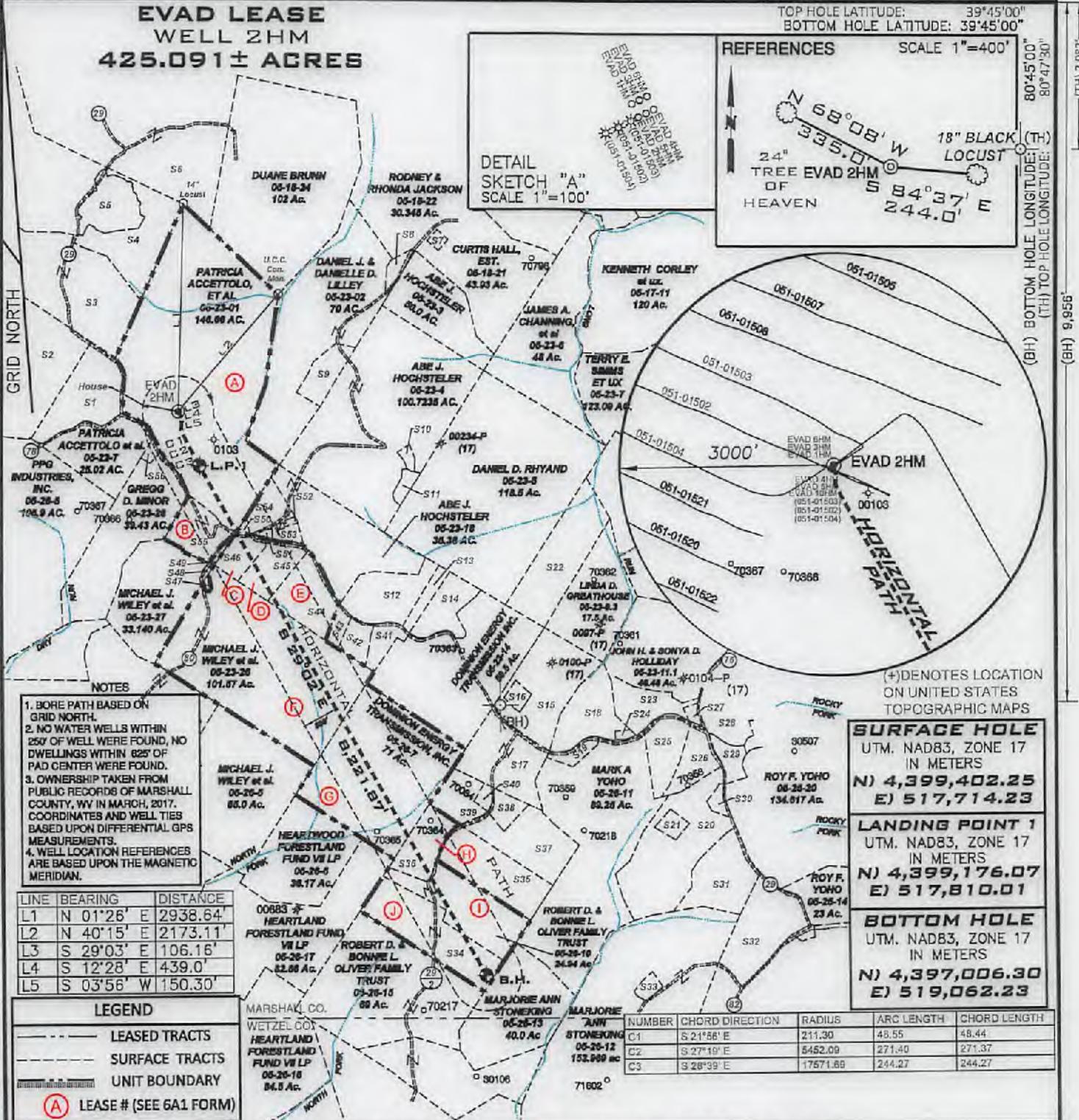
TOP HOLE LATITUDE: 39°45'00"
BOTTOM HOLE LATITUDE: 39°45'00"

REFERENCES

SCALE 1"=400'



DETAIL SKETCH "A"
SCALE 1"=100'



- NOTES**
1. BORE PATH BASED ON GRID NORTH.
 2. NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 825' OF PAD CENTER WERE FOUND.
 3. OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2017. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
 4. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.

LINE	BEARING	DISTANCE
L1	N 01°26' E	2938.64
L2	N 40°15' E	2173.11
L3	S 29°03' E	106.16'
L4	S 12°28' E	439.0'
L5	S 03°56' W	150.30'

LEGEND

- LEASED TRACTS
- SURFACE TRACTS
- UNIT BOUNDARY
- (A) LEASE # (SEE 6A1 FORM)

(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

SURFACE HOLE	UTM. NAD83, ZONE 17 IN METERS
N) 4,399,402.25	
E) 517,714.23	
LANDING POINT 1	UTM. NAD83, ZONE 17 IN METERS
N) 4,399,176.07	
E) 517,810.01	
BOTTOM HOLE	UTM. NAD83, ZONE 17 IN METERS
N) 4,397,006.30	
E) 519,062.23	

NUMBER	CHRD DIRECTION	RADIUS	ARC LENGTH	CHORD LENGTH
C1	S 21°56' E	211.30	48.55	48.44
C2	S 27°19' E	5452.09	271.40	271.37
C3	S 28°39' E	17571.69	244.27	244.27

FILE NUMBER _____

DRAWING NUMBER EVAD_WP_2HM

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

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

David L Jackson



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



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

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

DATE: JUNE 4, 2018

OPERATORS WELL NO. EVAD 2HM

API WELL NO. 47-051-02057 A6A

STATE WV COUNTY MARSHALL PERMIT SEE WW-6A1 FORM

LOCATION ELEVATION 1290.0' WATERSHED (HUC 10) FISH CREEK

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE NEW MARTINSVILLE 7.5' LEASE NUMBER SEE WW-6A1 FORM

SURFACE OWNER LOUIS J. & PATRICIA ACGETTOLO ET AL ACREAGE 146.66

OIL & GAS ROYALTY OWNER SEE WW-6A1 FORM LEASE ACREAGE 146.66

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 6,644' TMD: 15,073'

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

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

COUNTY NAME
PERMIT

47-051-02057

form wwf

PG 2 OF 2 **EVAD LEASE**
WELL 2HM
425.091 ± ACRES

Number	TAX MAP -PARCEL	ADJOINER OWNER	ACRES
S1	05-22-7.1	The Exploration II LLC & Antinum Marcellus I LLC	20.68
S2	05-22-8	PPG Industries Inc.	48.44
S3	05-22-6	CNX RCPC LLC	64.7
S4	05-22-5	CNX RCPC LLC	134.425
S5	05-22-5.1	Williams Ohio Valley Midstream LLC	12.875
S6	05-19-18	Mark E. Yoho Et Ux	55.948
S7	05-18-21.2	David P. Lassen Et Ux - Life	1.0
S8	05-23-2.1	William L. & Janice M. Wayne	2.364
S9	05-23-2.2	Jessica N. & Andrew L. Jones	7.636
S10	05-23-4.2	James S. & Jeanne B. Hall	1.169
S11	05-23-4.1	James S. & Jeanna B. Hall	2.1575
S12	05-23-16	Roy Friend Yoho Sr.	18.03
S13	05-23-16.1	Doanld B. Henry	1.97
S14	05-23-15	Henry Virginia Ethel Est.	15.5
S15	05-23-9.2	Linda D. Greathouse	25.58
S16	05-23-9.4	Jackson R. Davis Sr. & Deanna L. Davis	2.087
S17	05-23-9.1	John W. Van Orden Et Ux	23.376
S18	05-23-13	Linda D. Greathouse	14.24
S19	05-23-12	Mark A. Yoho	3.05
S20	05-25-18	Joseph Johnson Et Ux - Life	37.746
S21	05-25-18.1	Pamela Joan Ferrel Et Vir	2.491
S22	05-23-8	Carl David & Suzanne L. Guseman	29.5
S23	05-23-18	Abe J. Hochstetler	35.382
S24	05-23-13.1	James R. & Pamela J. Ferrel	0.7625
S25	05-23-11.3	Colin R. Yoho	11.29
S26	05-23-11.5	Zachary R. Stevey	9.25
S27	05-23-11.2	Evelyn Hudson	1.154
S28	05-23-11	Roy F. Yoho	5.28
S29	05-25-20.3	James A. & Jo C. Estep	4.49
S30	05-25-19	Joseph Johnson Et Ux - Life	1.973
S31	05-25-17	Emily Jones Irrevocable Trust	22.79
S32	05-25-16	Emily Jones Irrevocable Trust	23.5
S33	05-26-12.1	Alvin F. Stoneking Jr. & Kristen R. Stoneking	2.011
S34	05-26-14	Robert D. & Bonnie L. Oliver Family Trust	27.56
S35	05-26-9	Robert D. & Bonnie L. Oliver Family Trust	21.75
S36	05-26-23	Richard Joseph Otte Et Ux	11.34
S37	05-26-8	Richard Joseph Otte Et Ux	18.27
S38	05-26-20	Doanld Lee Anderson Et Al	4.2
S39	05-26-22	Richard Joseph Otte Et Ux	8.3
S40	05-26-21	Richard Joseph Otte Et Ux	1.25
S41	05-23-17.3	William & Catherine Flewelling	5.018
S42	05-23-17	Thomas E. & Tammy Brown	4.62
S43	05-23-17.4	Tammy D. Meadows	2.605
S44	05-23-17.2	Dick Rowan Jr & Carol J. Rowan	14.92
S45	05-23-17.1	Curtis E. Hall Et Ux	10.051
S46	05-23-22	Daniel D. Rhyend & Laurel R. Greene	6.25
S47	05-23-25	Arthur A. Wiley	0.43
S48	05-23-24	Michael J. Wiley Et Al	0.25
S49	05-23-23	Michael J. Wiley Et Al	1.0
S50	05-23-29	James Wiley	0.25
S51	05-23-21	Mark A. & Mark E. Yoho	0.588
S52	05-23-19	Doty Cemetery	1.0
S53	05-23-20	Christian Church	0.17
S54	05-23-18.1	Mark A. Yoho	7.8
S55	05-23-28.2	Mark W. & Carolyn L. Tennant	10.8
S56	05-23-28.1	Troy W. & Erin M. Thomas	1.0



P.S. 708 *David L Jackson*

	OPERATOR'S	WELL PLAT PAGE 2 OF 2 DATE: 06/04/2018	
	WELL #:		Evad 2HM
	DISTRICT:		Franklin
	COUNTY:		Marshall
	STATE:	WV	

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

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

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

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

*See attached pages

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

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

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

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

Well Operator: Tug Hill Operating, LLC
 By: Amy L. Miller *Amy Miller*
 Its: Permit Specialist - Appalachia

4705102057

Operator's Well No. Evad - 2HM

WW6A1 Supplement

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*14129	A	5-23-1	LOUIS J ACCETTOLO AND PATRICIA	GASTAR EXPLORATION USA, INC	1/8+	703	283	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*17190	B	5-23-28.2	MARK W. TENNANT CAROLYN L. TENNANT	CHESAPEAKE APPALACHIA LLC	1/8+	715	570	NA	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*14944	C	5-23-22	HERBERT D MINOR	TRIENERGY HOLDINGS LLC	1/8+	722	511	25/463 TriEnergy Holdings LLC to NPAR, LLC	26/269 NPAR, LLC to Chevron USA Inc	28/356 TriEnergy Holdings, LLC and TriEnergy, Inc to Chevron USA, Inc	32/355 Chevron USA Inc to Gastar Exploration Inc and Atinum Marcellus I, LLC	32/370 Chevron USA Inc to Gastar Exploration Inc and Atinum Marcellus I, LLC	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14825	D	5-23-17.1	PATRICIA HENRY HARVATH	GASTAR EXPLORATION USA, INC	1/8+	805	100	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14826	D	5-23-17.1	CAROL CLEMENS	GASTAR EXPLORATION USA, INC	1/8+	805	82	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14827	D	5-23-17.1	EUGENE RICHARD HENRY	GASTAR EXPLORATION USA, INC	1/8+	805	96	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14828	D	5-23-17.1	GLENDA PAULINE HENRY MOUNSEY	GASTAR EXPLORATION USA, INC	1/8+	805	84	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14829	D	5-23-17.1	DOROTHY TEDROW	GASTAR EXPLORATION USA, INC	1/8+	806	289	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14830	D	5-23-17.1	ALICIA HENRY	GASTAR EXPLORATION USA, INC	1/8+	806	285	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14831	D	5-23-17.1	CAROLYN WHITE	GASTAR EXPLORATION USA, INC	1/8+	806	287	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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10*14832	D	5-23-17.1	FLOYD ARNOLD HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	503	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14833	D	5-23-17.1	DAVID HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	505	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14834	D	5-23-17.1	KENNETH HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	510	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14835	D	5-23-17.1	LAWRENCE MICHAEL HENRY	GASTAR EXPLORATION USA, INC	1/8+	808	448	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14836	D	5-23-17.1	BOBBIE SUE GREATHOUSE	GASTAR EXPLORATION USA, INC	1/8+	808	452	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14837	D	5-23-17.1	HOWARD HENRY	GASTAR EXPLORATION USA, INC	1/8+	808	450	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14838	D	5-23-17.1	CHRISTOPHER HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	529	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14839	D	5-23-17.1	TAMMY HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	531	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14840	D	5-23-17.1	TIMOTHY HENRY	GASTAR EXPLORATION USA, INC	1/8+	810	321	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14841	D	5-23-17.1	RONALD HENRY	GASTAR EXPLORATION USA, INC	1/8+	810	323	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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10*14842	D	5-23-17.1	DONALD HENRY	GASTAR EXPLORATION USA, INC	1/8+	813	438	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14843	D	5-23-17.1	GARY PARSONS	GASTAR EXPLORATION USA, INC	1/8+	805	74	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14844	D	5-23-17.1	WANDA RIDING	GASTAR EXPLORATION USA, INC	1/8+	805	86	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14846	D	5-23-17.1	FAYE CAMPBELL	GASTAR EXPLORATION USA, INC	1/8+	805	91	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14847	D	5-23-17.1	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14848	D	5-23-17.1	NEVA KELLER	GASTAR EXPLORATION USA, INC	1/8+	806	268	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14849	D	5-23-17.1	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14850	D	5-23-17.1	CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14851	D	5-23-17.1	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14852	D	5-23-17.1	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	806	259	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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10*14853	D	5-23-17.1	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14854	D	5-23-17.1	CATHERINE HUMMEL	GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14855	D	5-23-17.1	JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/8+	808	445	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14856	D	5-23-17.1	GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14857	D	5-23-17.1	CHERYL HILL	GASTAR EXPLORATION USA, INC	1/8+	808	493	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14858	D	5-23-17.1	EUGENE FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	483	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14859	D	5-23-17.1	MELVIN FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	495	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14860	D	5-23-17.1	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14861	D	5-23-17.1	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14862	D	5-23-17.1	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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10*14863	D	5-23-17.1	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14864	D	5-23-17.1	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14865	D	5-23-17.1	VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14866	D	5-23-17.1	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14867	D	5-23-17.1	RANDY BERISFORD	GASTAR EXPLORATION USA, INC	1/8+	810	319	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14868	D	5-23-17.1	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14869	D	5-23-17.1	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14870	D	5-23-17.1	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14871	D	5-23-17.1	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14872	D	5-23-17.1	DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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 Office of Oil and Gas
 JUN 18 2018
 WY Department of
 Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*14873	D	5-23-17.1	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14874	D	5-23-17.1	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14875	D	5-23-17.1	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14876	D	5-23-17.1	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14877	D	5-23-17.1	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14878	D	5-23-17.1	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14879	D	5-23-17.1	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14880	D	5-23-17.1	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14881	D	5-23-17.1	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14882	D	5-23-17.1	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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 Office of Oil and Gas
 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*14883	D	5-23-17.1	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14884	D	5-23-17.1	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14885	D	5-23-17.1	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14886	D	5-23-17.1	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14887	D	5-23-17.1	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14888	D	5-23-17.1	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14889	D	5-23-17.1	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14890	D	5-23-17.1	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14891	D	5-23-17.1	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*16034	D	5-23-17.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA

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 Office of Oil and Gas
 JUN 18 2018
 WY Department of
 Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*17145	D	5-23-17.1	JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17146	D	5-23-17.1	CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17147	D	5-23-17.1	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17148	D	5-23-17.1	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17149	D	5-23-17.1	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17150	D	5-23-17.1	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17502	D	5-23-17.1	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	NA
10*17532	D	5-23-17.1	DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA
10*17535	D	5-23-17.1	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA
10*17539	D	5-23-17.1	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA

RECEIVED
Office of Oil and Gas
JUN 18 2018
WV Department of
Environmental Protection

WW6A1 Supplement

10*17540	D	5-23-17.1	MONTY ESTEL	TH EXPLORATION, LLC	1/8+	941	624	NA	NA	NA	NA	NA	NA
10*17541	D	5-23-17.1	ROBERT D STRAWN AND TAMMY J STRAWN	TH EXPLORATION, LLC	1/8+	942	21	NA	NA	NA	NA	NA	NA
10*17542	D	5-23-17.1	JEFFREY G HAZEL AND SHEILA M HAZEL	TH EXPLORATION, LLC	1/8+	942	12	NA	NA	NA	NA	NA	NA
10*17543	D	5-23-17.1	CARL EDWARD MCCOY AND CAROLYN SUE MCCOY	TH EXPLORATION, LLC	1/8+	942	15	NA	NA	NA	NA	NA	NA
10*17544	D	5-23-17.1	DEBORAH LYNN SCHWING	TH EXPLORATION, LLC	1/8+	942	377	NA	NA	NA	NA	NA	NA
10*17545	D	5-23-17.1	LINDA SWOPE	TH EXPLORATION, LLC	1/8+	942	24	NA	NA	NA	NA	NA	NA
10*17546	D	5-23-17.1	SAMUEL EARL FRANCIS AND ALICE L FRANCIS	TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA
10*17593	D	5-23-17.1	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA
10*17594	D	5-23-17.1	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA
10*17595	D	5-23-17.1	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA

RECEIVED
 Office of Oil and Gas
 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

10*17640	D	5-23-17.1	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA
10*17679	D	5-23-17.1	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA
10*17680	D	5-23-17.1	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA
10*17681	D	5-23-17.1	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA
10*17682	D	5-23-17.1	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA
10*17683	D	5-23-17.1	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA
10*17684	D	5-23-17.1	DAVID MCCOY AND LORI MCCOY	TH EXPLORATION, LLC	1/8+	942	18	NA	NA	NA	NA	NA	NA
10*17715	D	5-23-17.1	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA
10*17719	D	5-23-17.1	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA	NA
10*17720	D	5-23-17.1	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA	NA	NA

RECEIVED
 Office of Oil and Gas
 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

10*17775	D	5-23-17.1	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	NA	NA	NA
10*17776	D	5-23-17.1	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA	NA	NA	NA
10*17824	D	5-23-17.1	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA	NA	NA	NA
10*17901	D	5-23-17.1	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA	NA	NA	NA
10*17965	D	5-23-17.1	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA	NA	NA	NA	NA	NA
10*18042	D	5-23-17.1	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA	NA	NA	NA
10*18043	D	5-23-17.1	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA	NA	NA	NA	NA	NA
10*18044	D	5-23-17.1	TRACEY ESTEL	TH EXPLORATION, LLC	1/8+	927	109	NA	NA	NA	NA	NA	NA
10*18176	D	5-23-17.1	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA
10*18247	D	5-23-17.1	MILDRED S KIRKPATRICK	TH EXPLORATION, LLC	1/8+	917	132	NA	NA	NA	NA	NA	NA

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 Office of Oil and Gas
 JUL 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

10*18320	D	5-23-17.1	SAMUEL F HENRY	TH EXPLORATION, LLC	1/8+	931	246	NA	NA	NA	NA	NA	NA
10*18329	D	5-23-17.1	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA	NA	NA	NA
10*18367	D	5-23-17.1	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	NA
10*18368	D	5-23-17.1	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA
10*18371	D	5-23-17.1	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	461	NA	NA	NA	NA	NA	NA
10*18386	D	5-23-17.1	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA	NA	NA
10*18598	D	5-23-17.1	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA	NA	NA	NA
10*18795	D	5-23-17.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA
10*18994	D	5-23-17.1	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	NA	NA	NA
10*19656	D	5-23-17.1	DEBRA ROUDEBUSH	TH EXPLORATION, LLC	1/8+	944	105	NA	NA	NA	NA	NA	NA

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 JUN 18 2018

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*19736	D	5-23-17.1	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	NA	NA	NA
10*19999	D	5-23-17.1	MELISSA ANN BRAUN AND RAYMOND BRAUN	TH EXPLORATION, LLC	1/8+	951	627	NA	NA	NA	NA	NA	NA
10*21084	D	5-23-17.1	RANDALL C ROGERSON & TRACY LYNN ROGERSON	TH EXPLORATION, LLC	1/8+	949	368	NA	NA	NA	NA	NA	NA
10*21217	D	5-23-17.1	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	NA	NA	NA	NA
10*21222	D	5-23-17.1	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA	NA	NA	NA
10*21425	D	5-23-17.1	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA	NA	NA	NA	NA
10*21428	D	5-23-17.1	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	NA	NA	NA
10*21434	D	5-23-17.1	CATHERINE HUMMEL	TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	NA	NA	NA
10*21451	D	5-23-17.1	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA	NA
10*21452	D	5-23-17.1	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA	NA	NA

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JUN 18 2018
NY Department of
Environmental Protection

WW6A1 Supplement

10*21457	D	5-23-17.1	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	NA	NA	NA
10*21458	D	5-23-17.1	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA	NA	NA
10*21459	D	5-23-17.1	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA
10*21498	D	5-23-17.1	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA	NA
10*21500	D	5-23-17.1	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA
10*21501	D	5-23-17.1	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA
10*21502	D	5-23-17.1	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA
10*21503	D	5-23-17.1	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	NA	NA
10*21562	D	5-23-17.1	MARY ETTA TAYLOR AND GARY W TAYLOR	TH EXPLORATION, LLC	1/8+	958	414	NA	NA	NA	NA	NA	NA
10*21563	D	5-23-17.1	DAVID R TAYLOR AND MARIA TAYLOR	TH EXPLORATION, LLC	1/8+	958	422	NA	NA	NA	NA	NA	NA

RECEIVED
Office of Oil and Gas
JUN 18 2018
Tennessee
Department of
Environmental Protection

WW6A1 Supplement

Operator's Well No. Evad - 2HM

10*21565	D	5-23-17.1	KORENE SUE LANTZ	TH EXPLORATION, LLC	1/8+	957	462	NA	NA	NA	NA	NA	NA
10*21566	D	5-23-17.1	HERBERT M TAYLOR AND LENORA E TAYLOR	TH EXPLORATION, LLC	1/8+	958	418	NA	NA	NA	NA	NA	NA
10*21615	D	5-23-17.1	GARY PARSONS AND JOANN J PARSONS	TH EXPLORATION, LLC	1/8+	959	347	NA	NA	NA	NA	NA	NA
10*21626	D	5-23-17.1	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA	NA	NA
10*21631	D	5-23-17.1	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA	NA	NA	NA	NA	NA
10*21632	D	5-23-17.1	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA	NA	NA
10*21655	D	5-23-17.1	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	965	206	NA	NA	NA	NA	NA	NA
10*21656	D	5-23-17.1	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	NA	NA	NA	NA
10*21657	D	5-23-17.1	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	NA	NA	NA	NA
10*21774	D	5-23-17.1	JOYCE KAY BURTON AND SAMUEL C BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA	NA	NA

RECEIVED
Office of Oil and Gas
JUN 18 2018
WV Department of
Environmental Protection

WW6A1 Supplement

10*21951	D	5-23-17.1	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA
10*21994	D	5-23-17.1	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA
10*22013	D	5-23-17.1	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA
10*22014	D	5-23-17.1	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA
10*22018	D	5-23-17.1	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA
10*22026	D	5-23-17.1	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA
10*22027	D	5-23-17.1	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA
10*22093	D	5-23-17.1	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA
10*22102	D	5-23-17.1	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA
10*22128	D	5-23-17.1	BETTY PYSSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA

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 JUN 18 2018
 MW Department of
 Environmental Protection

WW6A1 Supplement

10*22142	D	5-23-17.1	CHERYL L HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA	NA	NA	NA
10*22143	D	5-23-17.1	WANDA J RIDING AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA
10*22144	D	5-23-17.1	VICKY STRAUSS AND DENNIS A STRAUSS	TH EXPLORATION, LLC	1/8+	961	529	NA	NA	NA	NA	NA	NA
10*22165	D	5-23-17.1	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA
10*22178	D	5-23-17.1	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA
10*22180	D	5-23-17.1	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA
10*22181	D	5-23-17.1	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA
10*22287	D	5-23-17.1	MISSY JONES AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA
10*22332	D	5-23-17.1	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA
10*22339	D	5-23-17.1	BETTY LEE HOWARD LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA

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 JUN 18 2018
 My Department for
 Environmental Protection

WW6A1 Supplement

10*22354	D	5-23-17.1	LORETTA M DOUGHERTY AND DAVID DOUGHERTY	TH EXPLORATION, LLC	1/8+	964	516	NA	NA	NA	NA	NA	NA
10*22436	D	5-23-17.1	TESSEAN FAMILY REVOCABLE LIVING TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA
10*22437	D	5-23-17.1	SHERRY L AND DANIEL IMRIE	TH EXPLORATION, LLC	1/8+	963	631	NA	NA	NA	NA	NA	NA
10*22440	D	5-23-17.1	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA	NA	NA	NA	NA	NA
10*22443	D	5-23-17.1	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA
10*22450	D	5-23-17.1	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA	NA	NA
10*22503	D	5-23-17.1	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA
10*22504	D	5-23-17.1	MELVIN FANKHAUSER	TH EXPLORATION, LLC	1/8+	974	351	NA	NA	NA	NA	NA	NA
10*22505	D	5-23-17.1	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA
10*22509	D	5-23-17.1	RANDY AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA

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 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*22560	D	5-23-17.1	RONALD J KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA
10*22592	D	5-23-17.1	RUSSELL W AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA
10*22593	D	5-23-17.1	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA
10*22594	D	5-23-17.1	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA
10*22609	D	5-23-17.1	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA
10*22613	D	5-23-17.1	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA
10*22644	D	5-23-17.1	RICHARD EUGENE KELLER	TH EXPLORATION, LLC	1/8+	968	214	NA	NA	NA	NA	NA	NA
10*22779	D	5-23-17.1	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA
10*22809	D	5-23-17.1	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA
10*22811	D	5-23-17.1	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA

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 Office of Oil and Gas
 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

10*22812	D	5-23-17.1	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA
10*22813	D	5-23-17.1	WANDA M BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA	NA	NA
10*22861	D	5-23-17.1	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA	NA	NA	NA
10*14825	E	5-23-17.2	PATRICIA HENRY HARVATH	GASTAR EXPLORATION USA, INC	1/8+	805	100	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14826	E	5-23-17.2	CAROL CLEMENS	GASTAR EXPLORATION USA, INC	1/8+	805	82	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14827	E	5-23-17.2	EUGENE RICHARD HENRY	GASTAR EXPLORATION USA, INC	1/8+	805	96	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14828	E	5-23-17.2	GLENDPAULINE HENRY MOUNSEY	GASTAR EXPLORATION USA, INC	1/8+	805	84	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14829	E	5-23-17.2	DOROTHY TEDROW	GASTAR EXPLORATION USA, INC	1/8+	806	289	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14830	E	5-23-17.2	ALICIA HENRY	GASTAR EXPLORATION USA, INC	1/8+	806	285	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14831	E	5-23-17.2	CAROLYN WHITE	GASTAR EXPLORATION INC	1/8+	806	287	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

RECEIVED
 JUN 18 2018
 Office of Oil and Gas
 WV Department of
 Environmental Protection

WW6A1 Supplement

10*14832	E	5-23-17.2	FLOYD ARNOLD HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	503	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14833	E	5-23-17.2	DAVID HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	505	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14834	E	5-23-17.2	KENNETH HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	510	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14835	E	5-23-17.2	LAWRENCE MICHAEL HENRY	GASTAR EXPLORATION USA, INC	1/8+	808	448	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14836	E	5-23-17.2	BOBBIE SUE GREATHOUSE	GASTAR EXPLORATION USA, INC	1/8+	808	452	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14837	E	5-23-17.2	HOWARD HENRY	GASTAR EXPLORATION USA, INC	1/8+	808	450	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14838	E	5-23-17.2	CHRISTOPHER HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	529	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14839	E	5-23-17.2	TAMMY HENRY	GASTAR EXPLORATION USA, INC	1/8+	809	531	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14840	E	5-23-17.2	TIMOTHY HENRY	GASTAR EXPLORATION USA, INC	1/8+	810	321	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14841	E	5-23-17.2	RONALD HENRY	GASTAR EXPLORATION USA, INC	1/8+	810	323	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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 JUN 18 2018
 Office of Oil and Gas
 My Department of
 Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*14842	E	5-23-17.2	DONALD HENRY	GASTAR EXPLORATION USA, INC	1/8+	813	438	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14843	E	5-23-17.2	GARY PARSONS	GASTAR EXPLORATION USA, INC	1/8+	805	74	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14844	E	5-23-17.2	WANDA RIDING	GASTAR EXPLORATION USA, INC	1/8+	805	86	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14846	E	5-23-17.2	FAYE CAMPBELL	GASTAR EXPLORATION USA, INC	1/8+	805	91	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14847	E	5-23-17.2	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14848	E	5-23-17.2	NEVA KELLER	GASTAR EXPLORATION USA, INC	1/8+	806	268	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14849	E	5-23-17.2	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14850	E	5-23-17.2	CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14851	E	5-23-17.2	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14852	E	5-23-17.2	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	806	259	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

RECEIVED
Office of Oil and Gas
Environmental Protection
WV Department of
JUN 18 2018

WW6A1 Supplement

10*14853	E	5-23-17.2	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14854	E	5-23-17.2	CATHERINE HUMMEL	GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14855	E	5-23-17.2	JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/8+	808	445	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14856	E	5-23-17.2	GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14857	E	5-23-17.2	CHERYL HILL	GASTAR EXPLORATION USA, INC	1/8+	808	493	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14858	E	5-23-17.2	EUGENE FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	483	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14859	E	5-23-17.2	MELVIN FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	495	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14860	E	5-23-17.2	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14861	E	5-23-17.2	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14862	E	5-23-17.2	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

RECEIVED
 JUN 18 2018
 Office of Oil and Gas
 My Department of
 Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*14863	E	5-23-17.2	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14864	E	5-23-17.2	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14865	E	5-23-17.2	VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14866	E	5-23-17.2	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14867	E	5-23-17.2	RANDY BERISFORD	GASTAR EXPLORATION USA, INC	1/8+	810	319	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14868	E	5-23-17.2	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14869	E	5-23-17.2	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14870	E	5-23-17.2	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14871	E	5-23-17.2	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14872	E	5-23-17.2	DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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Office of Oil and Gas
JUN 18 2018
NY Department of
Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*14873	E	5-23-17.2	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14874	E	5-23-17.2	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14875	E	5-23-17.2	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14876	E	5-23-17.2	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14877	E	5-23-17.2	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14878	E	5-23-17.2	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14879	E	5-23-17.2	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14880	E	5-23-17.2	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14881	E	5-23-17.2	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14882	E	5-23-17.2	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

RECEIVED
Office of Oil and Gas
JUN 18 2018
WV Department of
Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*14883	E	5-23-17.2	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14884	E	5-23-17.2	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14885	E	5-23-17.2	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14886	E	5-23-17.2	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14887	E	5-23-17.2	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14888	E	5-23-17.2	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14889	E	5-23-17.2	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14890	E	5-23-17.2	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14891	E	5-23-17.2	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*16034	E	5-23-17.2	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA

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 WVD Department of Environmental Protection

WW6A1 Supplement

10*17145	E	5-23-17.2	JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17146	E	5-23-17.2	CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17147	E	5-23-17.2	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17148	E	5-23-17.2	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17149	E	5-23-17.2	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17150	E	5-23-17.2	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17502	E	5-23-17.2	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	NA
10*17532	E	5-23-17.2	DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA
10*17535	E	5-23-17.2	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA
10*17539	E	5-23-17.2	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA

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JUN 18 2018
NA
WV Department of
Environmental Protection

WW6A1 Supplement

10*17540	E	5-23-17.2	MONTY ESTEL	TH EXPLORATION, LLC	1/8+	941	624	NA	NA	NA	NA	NA	NA
10*17541	E	5-23-17.2	ROBERT D STRAWN AND TAMMY J STRAWN	TH EXPLORATION, LLC	1/8+	942	21	NA	NA	NA	NA	NA	NA
10*17542	E	5-23-17.2	JEFFREY G HAZEL AND SHEILA M HAZEL	TH EXPLORATION, LLC	1/8+	942	12	NA	NA	NA	NA	NA	NA
10*17543	E	5-23-17.2	CARL EDWARD MCCOY AND CAROLYN SUE MCCOY	TH EXPLORATION, LLC	1/8+	942	15	NA	NA	NA	NA	NA	NA
10*17544	E	5-23-17.2	DEBORAH LYNN SCHWING	TH EXPLORATION, LLC	1/8+	942	377	NA	NA	NA	NA	NA	NA
10*17545	E	5-23-17.2	LINDA SWOPE	TH EXPLORATION, LLC	1/8+	942	24	NA	NA	NA	NA	NA	NA
10*17546	E	5-23-17.2	SAMUEL EARL FRANCIS AND ALICE L FRANCIS	TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA
10*17593	E	5-23-17.2	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA
10*17594	E	5-23-17.2	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA
10*17595	E	5-23-17.2	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA

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 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

10*17640	E	5-23-17.2	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA
10*17679	E	5-23-17.2	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA
10*17680	E	5-23-17.2	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA
10*17681	E	5-23-17.2	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA
10*17682	E	5-23-17.2	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA
10*17683	E	5-23-17.2	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA
10*17684	E	5-23-17.2	DAVID MCCOY AND LORI MCCOY	TH EXPLORATION, LLC	1/8+	942	18	NA	NA	NA	NA	NA	NA
10*17715	E	5-23-17.2	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA
10*17719	E	5-23-17.2	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA	NA
10*17720	E	5-23-17.2	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA	NA	NA

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 JUN 18 2018
 WV Department of Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*1775	E	5-23-17.2	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	NA	NA	NA
10*1776	E	5-23-17.2	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA	NA	NA	NA
10*17824	E	5-23-17.2	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA	NA	NA	NA
10*17901	E	5-23-17.2	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA	NA	NA	NA
10*17965	E	5-23-17.2	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA	NA	NA	NA	NA	NA
10*18042	E	5-23-17.2	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA	NA	NA	NA
10*18043	E	5-23-17.2	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA	NA	NA	NA	NA	NA
10*18044	E	5-23-17.2	TRACEY ESTEL	TH EXPLORATION, LLC	1/8+	927	109	NA	NA	NA	NA	NA	NA
10*18176	E	5-23-17.2	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA
10*18247	E	5-23-17.2	MILDRED S KIRKPATRICK	TH EXPLORATION, LLC	1/8+	917	132	NA	NA	NA	NA	NA	NA

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 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

10*18320	E	5-23-17.2	SAMUEL F HENRY	TH EXPLORATION, LLC	1/8+	931	246	NA	NA	NA	NA	NA	NA
10*18329	E	5-23-17.2	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA	NA	NA	NA
10*18367	E	5-23-17.2	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	NA
10*18368	E	5-23-17.2	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA
10*18371	E	5-23-17.2	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	461	NA	NA	NA	NA	NA	NA
10*18386	E	5-23-17.2	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA	NA	NA
10*18598	E	5-23-17.2	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA	NA	NA	NA
10*18795	E	5-23-17.2	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA
10*18994	E	5-23-17.2	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	NA	NA	NA
10*19656	E	5-23-17.2	DEBRA ROUDEBUSH	TH EXPLORATION, LLC	1/8+	944	105	NA	NA	NA	NA	NA	NA

WV Department of
 Environmental Protection
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 Office of Oil and Gas
 JUN 18 2018

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*19736	E	5-23-17.2	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	NA	NA	NA
10*19999	E	5-23-17.2	MELISSA ANN BRAUN AND RAYMOND BRAUN	TH EXPLORATION, LLC	1/8+	951	627	NA	NA	NA	NA	NA	NA
10*21084	E	5-23-17.2	RANDALL C ROGERSON & TRACY LYNN ROGERSON	TH EXPLORATION, LLC	1/8+	949	368	NA	NA	NA	NA	NA	NA
10*21217	E	5-23-17.2	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	NA	NA	NA	NA
10*21222	E	5-23-17.2	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA	NA	NA	NA
10*21425	E	5-23-17.2	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA	NA	NA	NA	NA
10*21428	E	5-23-17.2	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	NA	NA	NA
10*21434	E	5-23-17.2	CATHERINE HUMMEL	TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	NA	NA	NA
10*21451	E	5-23-17.2	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA	NA
10*21452	E	5-23-17.2	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA	NA	NA

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 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

10*21457	E	5-23-17.2	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	NA	NA	NA
10*21458	E	5-23-17.2	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA	NA	NA
10*21459	E	5-23-17.2	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA
10*21498	E	5-23-17.2	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA	NA
10*21500	E	5-23-17.2	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA
10*21501	E	5-23-17.2	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA
10*21502	E	5-23-17.2	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA
10*21503	E	5-23-17.2	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	NA	NA
10*21562	E	5-23-17.2	MARY ETTA TAYLOR AND GARY W TAYLOR	TH EXPLORATION, LLC	1/8+	958	414	NA	NA	NA	NA	NA	NA
10*21563	E	5-23-17.2	DAVID R TAYLOR AND MARIA TAYLOR	TH EXPLORATION, LLC	1/8+	958	422	NA	NA	NA	NA	NA	NA

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WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*21565	E	5-23-17.2	KORENE SUE LANTZ	TH EXPLORATION, LLC	1/8+	957	462	NA	NA	NA	NA	NA	NA
10*21566	E	5-23-17.2	HERBERT M TAYLOR AND LENORA E TAYLOR	TH EXPLORATION, LLC	1/8+	958	418	NA	NA	NA	NA	NA	NA
10*21615	E	5-23-17.2	GARY PARSONS AND JOANN J PARSONS	TH EXPLORATION, LLC	1/8+	959	347	NA	NA	NA	NA	NA	NA
10*21626	E	5-23-17.2	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA	NA	NA
10*21631	E	5-23-17.2	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA	NA	NA	NA	NA	NA
10*21632	E	5-23-17.2	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA	NA	NA
10*21655	E	5-23-17.2	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	965	206	NA	NA	NA	NA	NA	NA
10*21656	E	5-23-17.2	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	NA	NA	NA	NA
10*21657	E	5-23-17.2	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	NA	NA	NA	NA
10*21774	E	5-23-17.2	JOYCE KAY BURTON AND SAMUEL C BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA	NA	NA

WV Department of
 Environmental Protection
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 JUN 18 2018
 Office of Oil and Gas

WW6A1 Supplement

10*21813	E	5-23-17.2	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA	NA	NA
10*21815	E	5-23-17.2	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA	NA	NA	NA	NA	NA
10*21816	E	5-23-17.2	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA	NA	NA	NA	NA	NA
10*21817	E	5-23-17.2	MARY LOU HLINKA AND RICHARD G HLINKA SR	TH EXPLORATION, LLC	1/8+	959	514	NA	NA	NA	NA	NA	NA
10*21819	E	5-23-17.2	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA	NA	NA	NA	NA	NA
10*21820	E	5-23-17.2	MARION DAVID OTT & JANICE L OTT	TH EXPLORATION, LLC	1/8+	959	506	NA	NA	NA	NA	NA	NA
10*21832	E	5-23-17.2	MARQUITA CLYBURN	TH EXPLORATION, LLC	1/8+	959	510	NA	NA	NA	NA	NA	NA
10*21948	E	5-23-17.2	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA	NA	NA	NA	NA
10*21949	E	5-23-17.2	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA	NA	NA	NA	NA
10*21950	E	5-23-17.2	JUDITH A TAYLOR	TH EXPLORATION, LLC	1/8+	960	74	NA	NA	NA	NA	NA	NA

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Office of Oil and Gas
JUN 18 2018
WV Department of
Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad-2HM

10*21951	E	5-23-17.2	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA
10*21994	E	5-23-17.2	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA
10*22013	E	5-23-17.2	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA
10*22014	E	5-23-17.2	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA
10*22018	E	5-23-17.2	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA
10*22026	E	5-23-17.2	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA
10*22027	E	5-23-17.2	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA
10*22093	E	5-23-17.2	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA
10*22102	E	5-23-17.2	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA
10*22128	E	5-23-17.2	BETTY PYSSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA

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Office of Oil and Gas
JUN 18 2018
WV Department of
Environmental Protection

WW6A1 Supplement

10*22142	E	5-23-17.2	CHERYL L HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA	NA	NA	NA
10*22143	E	5-23-17.2	WANDA J RIDING AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA
10*22144	E	5-23-17.2	VICKY STRAUSS AND DENNIS A STRAUSS	TH EXPLORATION, LLC	1/8+	961	529	NA	NA	NA	NA	NA	NA
10*22165	E	5-23-17.2	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA
10*22178	E	5-23-17.2	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA
10*22180	E	5-23-17.2	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA
10*22181	E	5-23-17.2	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA
10*22287	E	5-23-17.2	MISSY JONES AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA
10*22332	E	5-23-17.2	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA
10*22339	E	5-23-17.2	BETTY LEE HOWARD LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA

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 Office of Oil and Gas
 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*22354	E	5-23-17.2	LORETTA M DOUGHERTY AND DAVID DOUGHERTY	TH EXPLORATION, LLC	1/8+	964	516	NA	NA	NA	NA	NA	NA
10*22436	E	5-23-17.2	TESSEAN FAMILY REVOCABLE LIVING TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA
10*22437	E	5-23-17.2	SHERRY L AND DANIEL IMRIE	TH EXPLORATION, LLC	1/8+	963	631	NA	NA	NA	NA	NA	NA
10*22440	E	5-23-17.2	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA	NA	NA	NA	NA	NA
10*22443	E	5-23-17.2	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA
10*22450	E	5-23-17.2	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA	NA	NA
10*22503	E	5-23-17.2	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA
10*22504	E	5-23-17.2	MELVIN FANKHAUSER	TH EXPLORATION, LLC	1/8+	974	351	NA	NA	NA	NA	NA	NA
10*22505	E	5-23-17.2	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA
10*22509	E	5-23-17.2	RANDY AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA

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 Office of Oil and Gas
 JUN 18 2018
 WV Department of
 Environmental Protection

WW6A1 Supplement

4705102057
Operator's Well No. Evad - 2HM

10*22560	E	5-23-17.2	RONALD J KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA
10*22592	E	5-23-17.2	RUSSELL W AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA
10*22593	E	5-23-17.2	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA
10*22594	E	5-23-17.2	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA
10*22609	E	5-23-17.2	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA
10*22613	E	5-23-17.2	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA
10*22644	E	5-23-17.2	RICHARD EUGENE KELLER	TH EXPLORATION, LLC	1/8+	968	214	NA	NA	NA	NA	NA	NA
10*22779	E	5-23-17.2	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA
10*22809	E	5-23-17.2	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA
10*22811	E	5-23-17.2	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA

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10*22812	E	5-23-17.2	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA
10*22813	E	5-23-17.2	WANDA M BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA	NA	NA
10*22861	E	5-23-17.2	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA	NA	NA	NA
10*14742	F	5-23-26	SUSAN GORE	GASTAR EXPLORATION USA, INC	1/8+	790	505	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14744	F	5-23-26	THE SAMUEL MILTON SHEETS TRUST	GASTAR EXPLORATION USA, INC	1/8+	791	637	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14745	F	5-23-26	RALPH B. TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	794	485	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14746	F	5-23-26	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	542	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*17716	F	5-23-26	MICHAEL J AND BARBARA L WILEY	TH EXPLORATION, LLC	1/8+	919	638	NA	NA	NA	NA	NA	NA
10*17777	F	5-23-26	MICHELLE E AND ROBERT T BAKER	TH EXPLORATION, LLC	1/8+	921	128	NA	NA	NA	NA	NA	NA
10*21420	F	5-23-26	DAVID D BURKETT	TH EXPLORATION, LLC	1/8+	957	3	NA	NA	NA	NA	NA	NA

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 Environmental Protection

WW6A1 Supplement

10*21421	F	5-23-26	BRYANNA FLYNN RANKIN	TH EXPLORATION, LLC	1/8+	957	5	NA	NA	NA	NA	NA	NA
10*21437	F	5-23-26	REBECCA MCMILLAN AND ROBERT MCMILLAN	TH EXPLORATION, LLC	1/8+	957	1	NA	NA	NA	NA	NA	NA
10*21821	F	5-23-26	LINDA K TAYLOR AND RAY P MAGEE	TH EXPLORATION, LLC	1/8+	951	631	NA	NA	NA	NA	NA	NA
10*18343	G	5-26-7	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79	NA	NA	NA	NA	NA	NA
10*14723	H	5-26-23	HERBERT D MINOR	TRIENERGY HOLDINGS LLC	1/8+	724	202	NA	25/463 TriEnergy Holdings, LLC to NPAR, LLC	26/269 NPAR, LLC to Chevron USA Inc	756/307 NPAR, LLC to Chevron USA Inc	32/355 Chevron USA Inc to Gastar Exploration Inc and Atinum Marcellus I LLC	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14724	H	5-26-23	HERBERT D MINOR	TRIENERGY HOLDINGS LLC	1/8+	724	204	NA	25/463 TriEnergy Holdings, LLC to NPAR, LLC	26/269 NPAR, LLC to Chevron USA Inc	756/307 NPAR, LLC to Chevron USA Inc	32/355 Chevron USA Inc to Gastar Exploration Inc and Atinum Marcellus I LLC	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14797	H	5-26-23	ORVILLE YOUNG	GASTAR EXPLORATION USA, INC	1/8+	800	598	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14816	H	5-26-23	DWG OIL AND GAS ACQUISITIONS LLC	STONE ENERGY CORPORATION	1/8+	787	49	NA	NA	NA	NA	31/113 Stone Energy Corporation to Gastar Exploration Inc and Atinum Marcellus I, LLC	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*18681	H	5-26-23	RICHARD WHITE II & GLORIA J WHITE	TH EXPLORATION, LLC	1/8+	936	133	NA	NA	NA	NA	NA	NA
10*18757	H	5-26-23	CLAUDIA R SCHEEHLE	TH EXPLORATION, LLC	1/8+	938	464	NA	NA	NA	NA	NA	NA

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4705102057
Operator's Well No. Evad-2HM

10*18758	H	5-26-23	SHIRLEY M DORSEY AND WILLIAM DORSEY	TH EXPLORATION, LLC	1/8+	938	468	NA	NA	NA	NA	NA	NA
10*18759	H	5-26-23	SHARON E YOHO	TH EXPLORATION, LLC	1/8+	938	472	NA	NA	NA	NA	NA	NA
10*18947	H	5-26-23	CHARLES ROBERT MYERS	TH EXPLORATION, LLC	1/8+	940	129	NA	NA	NA	NA	NA	NA
10*19719	H	5-26-23	SHIRLEY K WHITE	TH EXPLORATION, LLC	1/8+	944	581	NA	NA	NA	NA	NA	NA
10*22410	H	5-26-23	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	TBR	TBR	NA	NA	NA	NA	NA	NA
10*22734	H	5-26-23	CHESTNUT HOLDINGS INC	TH EXPLORATION, LLC	1/8+	974	166	NA	NA	NA	NA	NA	NA
10*14724	I	5-26-10	HERBERT D MINOR	TRIENERGY HOLDINGS LLC	1/8+	724	204	NA	25/463 TriEnergy Holdings, LLC to NPAR, LLC	26/269 NPAR, LLC to Chevron USA Inc	756/307 NPAR, LLC to Chevron USA Inc	32/355 Chevron USA Inc to Gastar Exploration Inc and Atinum Marcellus I LLC	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14797	I	5-26-10	ORVILLE YOUNG	GASTAR EXPLORATION USA, INC	1/8+	800	598	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14816	I	5-26-10	DWG OIL AND GAS ACQUISITIONS LLC	STONE ENERGY CORPORATION	1/8+	787	49	NA	NA	NA	NA	31/113 Stone Energy Corporation to Gastar Exploration Inc and Atinum Marcellus I, LLC	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*18681	I	5-26-10	RICHARD WHITE II & GLORIA J WHITE	TH EXPLORATION, LLC	1/8+	936	133	NA	NA	NA	NA	NA	NA

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10*18757	I	5-26-10	CLAUDIA R SCHEEHLE	TH EXPLORATION, LLC	1/8+	938	464	NA	NA	NA	NA	NA	NA
10*18758	I	5-26-10	SHIRLEY M DORSEY AND WILLIAM DORSEY	TH EXPLORATION, LLC	1/8+	938	468	NA	NA	NA	NA	NA	NA
10*18759	I	5-26-10	SHARON E YOHO	TH EXPLORATION, LLC	1/8+	938	472	NA	NA	NA	NA	NA	NA
10*18947	I	5-26-10	CHARLES ROBERT MYERS	TH EXPLORATION, LLC	1/8+	940	129	NA	NA	NA	NA	NA	NA
10*19719	I	5-26-10	SHIRLEY K WHITE	TH EXPLORATION, LLC	1/8+	944	581	NA	NA	NA	NA	NA	NA
10*22410	I	5-26-10	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	TBR	TBR	NA	NA	NA	NA	NA	NA
10*22734	I	5-26-10	CHESTNUT HOLDINGS INC	TH EXPLORATION, LLC	1/8+	974	166	NA	NA	NA	NA	NA	NA
10*14725	J	5-26-14	HERBERT D MINOR	TRIENERGY HOLDINGS LLC	1/8+	724	198	25/463 TriEnergy Holdings LLC to NPAR, LLC	26/269 NPAR, LLC to Chevron USA Inc	756/307 NPAR, LLC to Chevron USA Inc	28/356 TriEnergy Holdings, LLC and TriEnergy, Inc to Chevron USA Inc	32/355 Chevron USA Inc to Gastar Exploration Inc and Atinum Marcellus I LLC	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14797	J	5-26-14	ORVILLE YOUNG	GASTAR EXPLORATION USA, INC	1/8+	800	598	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14816	J	5-26-14	DWG OIL AND GAS ACQUISITIONS L	STONE ENERGY CORPORATION	1/8+	787	49	NA	NA	NA	NA	31/113 Stone Energy Corporation to Gastar Exploration Inc and Atinum Marcellus I, LLC	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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Operator's Well No. ⁴⁷⁰⁵¹⁰²⁰⁵⁷ Evad 2HM

10*18681	J	5-26-14	RICHARD WHITE II & GLORIA J WHITE	TH EXPLORATION, LLC	1/8+	936	133	NA	NA	NA	NA	NA	NA
10*18757	J	5-26-14	CLAUDIA R SCHEEHLE	TH EXPLORATION, LLC	1/8+	938	464	NA	NA	NA	NA	NA	NA
10*18758	J	5-26-14	SHIRLEY M DORSEY AND WILLIAM DORSEY	TH EXPLORATION, LLC	1/8+	938	468	NA	NA	NA	NA	NA	NA
10*18759	J	5-26-14	SHARON E YOHO	TH EXPLORATION, LLC	1/8+	938	472	NA	NA	NA	NA	NA	NA
10*18947	J	5-26-14	CHARLES ROBERT MYERS	TH EXPLORATION, LLC	1/8+	940	129	NA	NA	NA	NA	NA	NA
10*19658	J	5-26-14	CHESTNUT HOLDINGS INC	TH EXPLORATION, LLC	1/8+	949	315	NA	NA	NA	NA	NA	NA
10*19719	J	5-26-14	SHIRLEY K WHITE	TH EXPLORATION, LLC	1/8+	944	581	NA	NA	NA	NA	NA	NA
10*22410	J	5-26-14	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	TBR	TBR	NA	NA	NA	NA	NA	NA

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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 herunto set our hands and seals this 18th day of October, 2016.

David D. Kalish
Affiant: David D. Kalish

JURAT

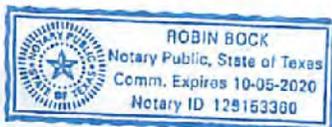
STATE OF TEXAS §
 § SS
COUNTY OF TARRANT §

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 \$6.00

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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: Robin Bock

Name/Notary Public (Print): Robin Bock

ASSIGNMENT AND CONVEYANCE

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

ARTICLE 1 ASSIGNMENT OF ASSETS

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

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

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

ARTICLE 2 SPECIAL WARRANTY OF TITLE AND DISCLAIMERS

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

Section 2.2 Disclaimers of Warranties and Representations.

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

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ASSIGNMENT AND CONVEYANCE

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

**ARTICLE 1
ASSIGNMENT OF ASSETS**

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

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

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

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

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

Section 2.2 Disclaimers of Warranties and Representations.

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

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June 14, 2018

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

RE: Evad 2HM

Subject: Marshall County Route 29/2 and 29 Road Crossing Letter

Dear Laura:

Tug Hill Operating, LLC (THO) hereby submits this letter as confirmation that THO has obtained the right to drill, extract and produce the minerals under Marshall County Route 29/2 and 29 in the area reflected on the Evad 2HM well plat. THO has conducted a full title search in the relevant Court House to confirm its ownership under said County Routes and is not currently aware of any recorded document that would suggest an ownership other than THO.

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

Sincerely,

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

Amy L. Miller
Permitting Specialist – Appalachia Region

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

Date of Notice Certification: 06/07/2018

API No. 47- 051 -
Operator's Well No. Evad 2HM
Well Pad Name: Accettolo

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: West Virginia
County: Marshall
District: Franklin
Quadrangle: New Martinsville 7.5'
Watershed: French Creek - Ohio River (HUC 10)

UTM NAD 83 Easting: 517,714.23
Northing: 4,399,402.25
Public Road Access: Burch Ridge Road - County Route 29
Generally used farm name: Accettolo, Patricia & Louis

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

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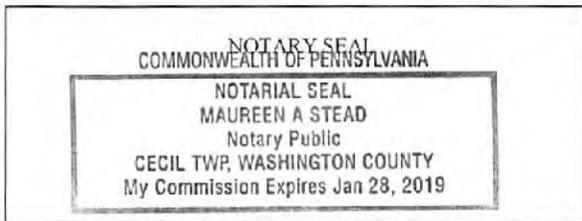
Required Attachments:

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

Certification of Notice is hereby given:

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

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



Subscribed and sworn before me this 7 day of JUNE 2018.
Maureen A Stead Notary Public
 My Commission Expires 1/28/19

Oil and Gas Privacy Notice:

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

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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: 6/7/2018 **Date Permit Application Filed:** 6/8/2018

Notice of:

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

RECEIVED
Office of Oil and Gas
JUN 18 2018
WV Department of
Environmental Protection

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: Louis J. and Patricia Accettolo (Access Road and Well Pad)
Address: 1103 Traubert Place
Folansbee, WV 26037

Name: Jesse P. McHenry (Access Road and Well Pad)
Address: 12 Cedarcrest Drive
Wheeling, WV 26003

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Wibur L. McHenry
Address: 13820 Micalf Avenue #11313
Overland Park, KS 66223

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Appalachian Power Company
Address: 1068 US-60
Milton, WV 25541

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: See attached list
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

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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 underground 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

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. **Environmental Protection** Environmental Protection person qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WW-6A
(8-13)

API NO. ~~47-051~~ **4705102057**
OPERATOR WELL NO. Evad 2HM
Well Pad Name: Accettola

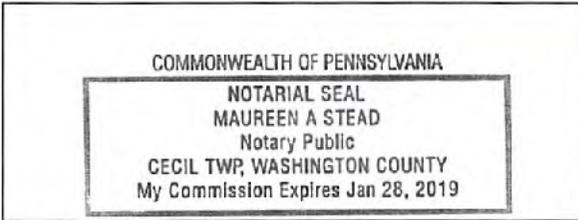
Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 7 day of JUNE 2018.
Maureen A Stead Notary Public
My Commission Expires 1/28/19

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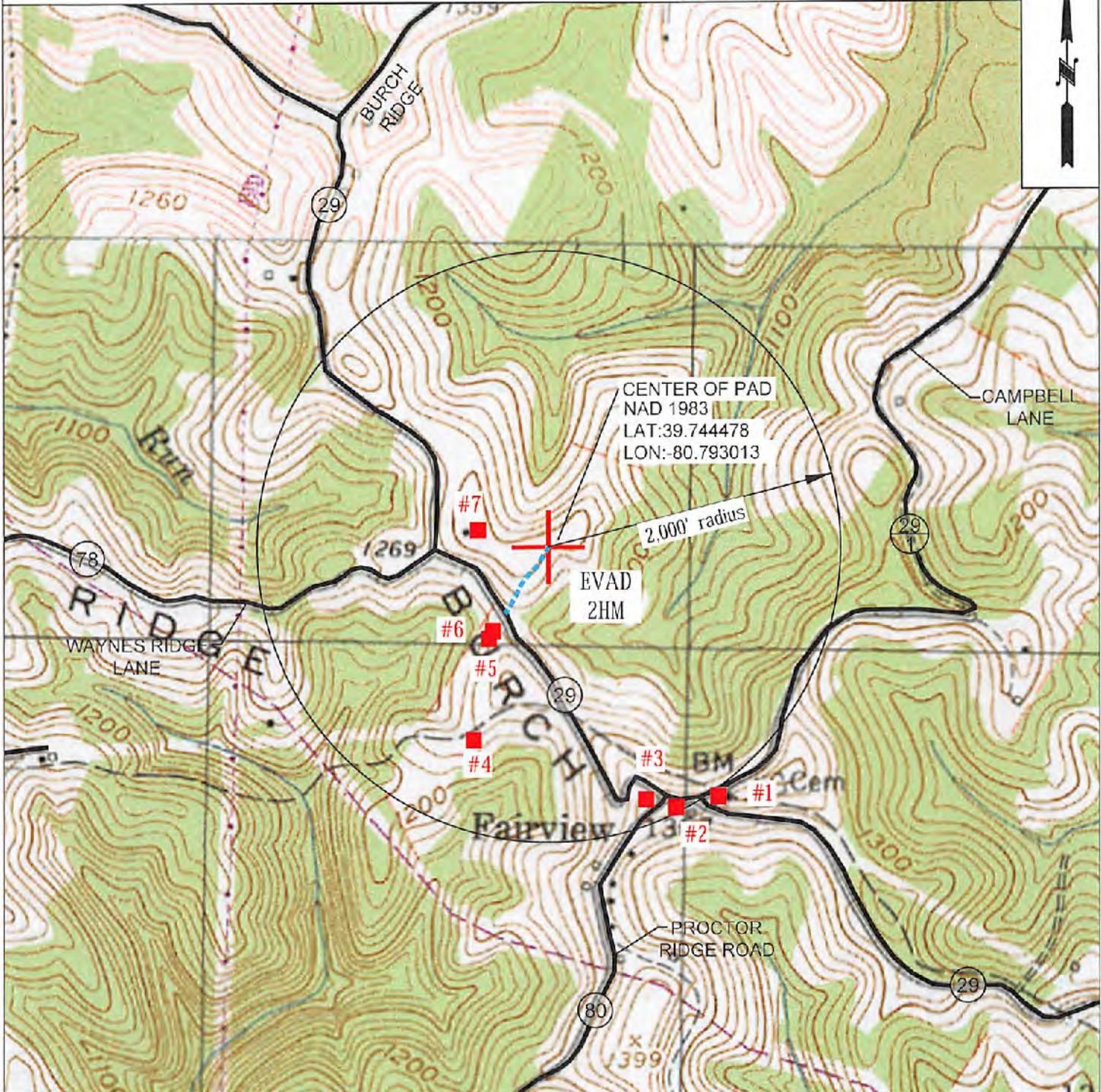
WW-6A

PROPOSED EVAD 2HM

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WV Department of
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SUPPLEMENT PG 1

There appears to be Seven (7) possible water sources within 2,000'.



 TUG HILL OPERATING	OPERATOR	494510851	TOPO SECTION	LEASE NAME
	TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		NEW MARTINSVILLE 7.5'	EVAD
	SCALE:		DATE:	
	1" = 1000'		DATE: 05-31-2018	

WW-6A

Supplement Pg. 1A

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

WATER WELL REPORT

Well: EVAD 2HM
 District: Franklin
 County: Marshall
 State: WV

There appears to be Seven (7) possible water sources within 2,000 feet of the above referenced well location.

Topo Spot #1 TM 23 Par.21 Mark A. Yoho & Mark E. Yoho 304-455-4282(H) 3998 Burch Ridge Rd. Proctor, WV 26055	Topo Spot #2 TM 23 Par. 22 (Abandoned House) Daniel D. Rhyand & Laurel R. Greene 216-906-1717 6145 Denison Blvd. Parma Heights, OH 44130	Topo Spot #3 TM 23 Par.28.2 Mark W. & Carolyn L. Tennant 304-337-9844(H) 13 Proctor Ridge Rd. Proctor, WV 26055
Topo Spot #4 TM 23 Par.28 Gregg D. Minor 304-455-6159(H) 5257 Burch Ridge Rd. Proctor, WV 26055	Topo spot #5 TM 23 Par.28.1 (Trailer) Troy W. & Erin M. Thomas 304-455-2729(H) 5123 Burch Ridge Rd. Proctor, WV 26055	Topo spot #6 TM 23 Par.28.1 (Trailer) Troy W. & Erin M. Thomas 304-455-2729(H) 5123 Burch Ridge Rd. Proctor, WV 26055
Topo spot #7 TM 23 Par.1 Patricia Accettolo, et al 304-527-0428(H) 1103 Traubert Pl. Follansbee, WV 26037		

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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: 5/2/2018 **Date of Planned Entry:** 5/9/2018

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: Louis J. and Patricia Accetolo (Access Road and Well Pad)
 Address: 1103 Traubert Place
Folansbee, WV 26037

Name: Jessa P. McHenry (Access Road and Well Pad)
 Address: 12 Cedarcrest Drive
Wheeling, WV 26003

Name: Wilbur L. McHenry
 Address: 13620 Mccalf Avenue #11313
Overland Park, KS 66223

COAL OWNER OR LESSEE

Name: Appalachian Power Company
Address: 1088 US-60
Milton, WV 25541

MINERAL OWNER(S)

Name: Louis J. and Patricia Accetolo *See attached list
Address: 1103 Traubert Place
Folansbee, WV 26037

*please attach additional forms if necessary

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Notice is hereby given:

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

State:	<u>West Virginia</u>	Approx. Latitude & Longitude:	<u>39.7443056; -80.7933468</u>
County:	<u>Marshall</u>	Public Road Access:	<u>Burch Ridge Road (County Route 29)</u>
District:	<u>Franklin</u>	Watershed:	<u>Fish Creek (HUC 10)</u>
Quadrangle:	<u>New Martinsville 7.5'</u>	Generally used farm name:	<u>Accetolo, Patricia and Lous J.</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 Boulevard, Plaza II, Suite 200</u>
Telephone:	<u>724-749-8388</u>		<u>Canonsburg, PA 15317</u>
Email:	<u>emiller@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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

4705102057

WW-6A3.....Notice of Entry for Plat Survey

EVAD 1HM, EVAD 2HM, EVAD 3HM, EVAD 4HM, EVAD 5HM, EVAD 6HM

Additional Mineral Owners

Jesse P. McHenry

12 Cedarcrest Drive

Wheeling, WV 26003

Wilbur L. McHenry

13820 Mtcalf Avenue #11313

Overland Park, KS 66223

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4705102057

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: 06/07/2018 **Date Permit Application Filed:** 06/06/2018

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: Louis J. and Patricia Accetolo
Address: 1103 Traubert Place
Folansbee, WV 26037

Name: Jesse P. McHenry (See attachment)
Address: 12 Cedarcrest Drive
Wheeling, WV 26003

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>517,714.23</u>
County:	<u>Marshall</u>		Northing:	<u>4,399,402.25</u>
District:	<u>Franklin</u>	Public Road Access:	<u>Burch Ridge Road (County Route 29)</u>	
Quadrangle:	<u>New Martinsville 7.5'</u>	Generally used farm name:	<u>Accetolo, Patricia and Louis J.</u>	
Watershed:	<u>Fish Creek (HUC 10)</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: amiller@tug-hillop.com

Address: 360 Southpointe Boulevard, Plaza II, Suite 200
Canonsburg, PA 15317
Facsimile: 724-338-2030

Oil and Gas Privacy Notice:

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

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WW-6A5 Notice of Planned Operation

Additional Landowner

Wilbur L. McHenry

13820 Mtcalf Avenue #11313

Overland Park, KS 66223

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505Thomas J. Smith, P. E.
Secretary of Transportation/
Commissioner of Highways

May 7, 2018

Jill M. Newman
Deputy CommissionerJames A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

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

Evad 2HM

Dear Mr. Martin,

This well site will be accessed from Permit #06-2011-0593 transferred to Tug Hill Operating for access to the State Road for a well site located off of Marshall County Route 29 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,

A handwritten signature in blue ink that reads "Gary K. Clayton".

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G CoordinatorCc: Jonathan White
Tug Hill Operating
CH, OM, D-6
FileRECEIVED
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JUN 18 2018
WV Department of
Environmental Protection



PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Well No. Evad 2HM

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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WEST VIRGINIA COUNTY MAP



APPROVED WVDEP OOG

8/23/2018

Accetolo Well Site
 Site Design, Construction Plan, &
 Erosion and Sediment Control Plans
 Tug Hill Operating
 Marshall County
 Frankln District
 Latitude 39 74447766°
 Longitude -80 79301320°
 Lower Fish Creek Watershed

Pertinent Site Information
 Accetolo Well Site
 Emergency Number: 204-845-1920
 Frankln District, Marshall County, WV
 Watershed: Lower Fish Creek Watershed
 Tug Hill Contract Number: 1-817-653-4400

Property Owner Information - Accetolo Well Site

Property Owner	Address	City	State	Zip	Phone
Tug Hill Operating	10000 Tug Hill Road	Marshall	WV	24659	204-845-1920

Exhibit A: Final Design: Issue for Permitting



WV State Plane Coordinate System
 North Zone NAD83
 Easting from False 500000
 Scaled by 0.000001
 and 0.000001 (Feet)

Area Summary

Area Type	Area (Ac)	Area (Sq Ft)
Total Area	10.1	438,000

Disturbed Area

Disturbance Type	Area (Ac)
Construction	1.0
Access	0.5
Other	0.5

Accetolo Well Site Quantities

Item	Quantity	Unit
Excavation	100	Cu Yd
Fill	50	Cu Yd
Gravel	100	Tons
Asphalt	100	Sq Yd

Project Details

Item	Description
Well ID	WV-123456
Well Depth	100 ft
Well Diameter	12 inches
Well Construction	Concrete
Well Completion	Open
Well Use	Water Supply



Site Locations (NAD 83)

Point	Easting	Northing
Well	500000.00	438000.00
Corner	500000.00	438000.00

Remarks:
 Points are located on the 7.5' and 15' contours. The well is located on the 7.5' contour. The well is located on the 7.5' contour. The well is located on the 7.5' contour.



Well Construction Information

- 1) Well construction is in accordance with the following information:
- 2) Well construction is in accordance with the following information:
- 3) Well construction is in accordance with the following information:
- 4) Well construction is in accordance with the following information:
- 5) Well construction is in accordance with the following information:

Legend

Symbol	Description
1	Well
2	Access Road
3	Erosion Control
4	Disturbed Area
5	Construction Area
6	Other

Professional Engineer Seal
 State of West Virginia
 License No. 12345
 Date: 8/23/2018

Project Contact

Lead Designer:
 Jonathan Miller, P.E.
 10000 Tug Hill Road
 Marshall, WV 24659

Client:
 Tug Hill Operating
 10000 Tug Hill Road
 Marshall, WV 24659

Environmental:
 Project Information as per attached site plan.
 Construction Information:
 The topographic information is based on aerial photography from the following source: [Source]

MISS UTILITY OF WEST VIRGINIA
 1-800-245-4343
 10000 Tug Hill Road
 Marshall, WV 24659
 204-845-1920

Call before you dig

WVDEP OOG
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TUG HILL OPERATING

10000 TUG HILL ROAD
 MARSHALL, WV 24659

Key Services

Accetolo Well Site
 Frankln District
 Marshall County, WV

