



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

Thursday, August 30, 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 4HM
47-051-02059-00-00

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

A handwritten signature in blue ink, appearing to read "James A. Martin".

Operator's Well Number: EVAD 4HM
Farm Name: LOUIS J. & PATRICIA ACCET
U.S. WELL NUMBER: 47-051-02059-00-00
Horizontal 6A New Drill
Date Issued: 8/30/2018

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:

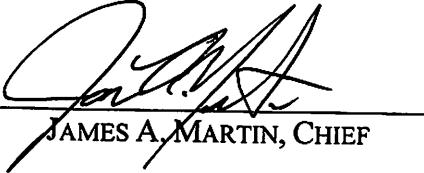
- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24") in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment 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 ($\frac{1}{2}$ ") 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 exiting 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.

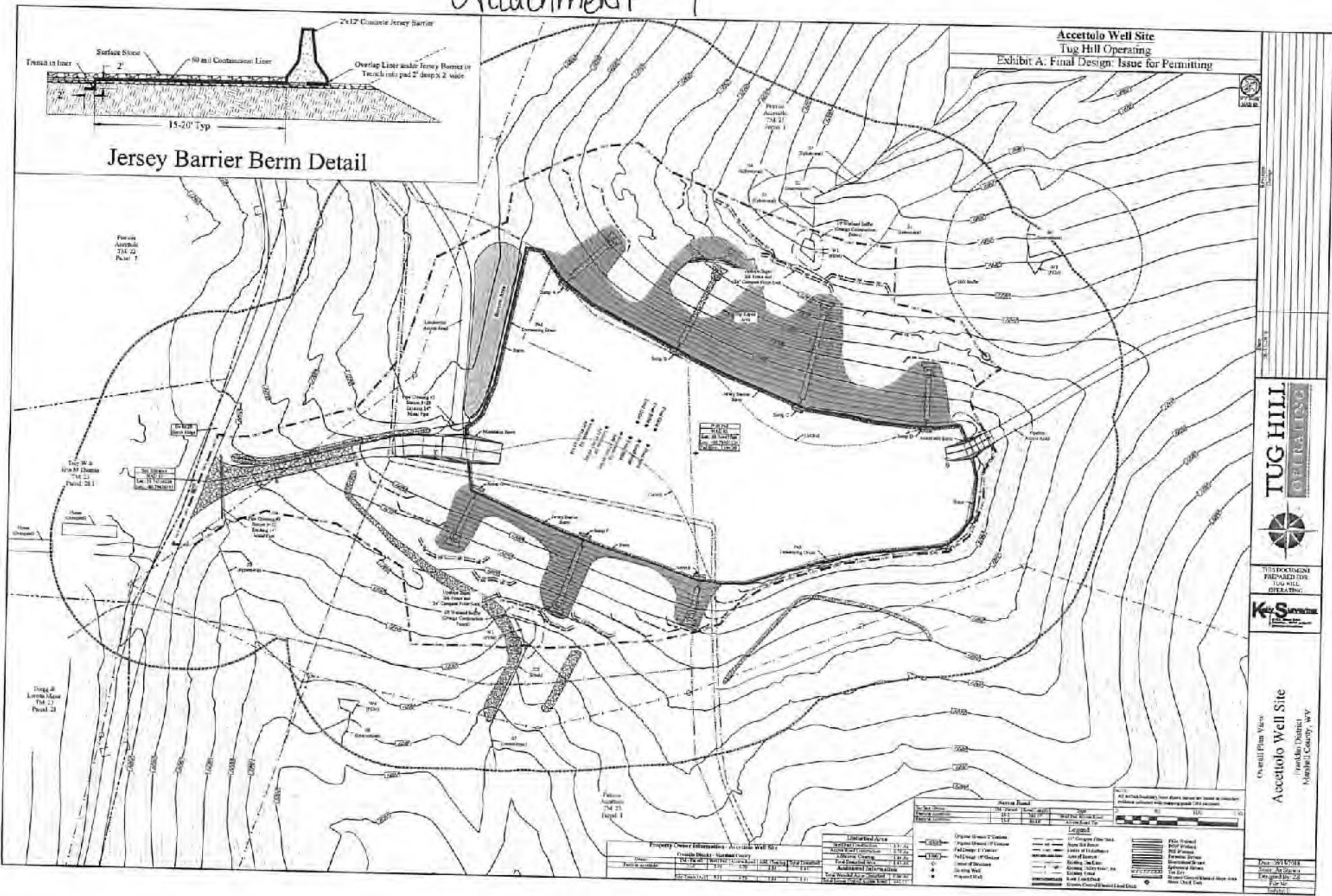
24" Compost Filter Sock: A 24" compost filter sock shall be installed 2' upslope of the super silt fence to provide additional sedimentation protection for the wetlands. The 24" compost filter sock will be the primary sediment filter protection for the wetland with the super silt fence being the secondary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

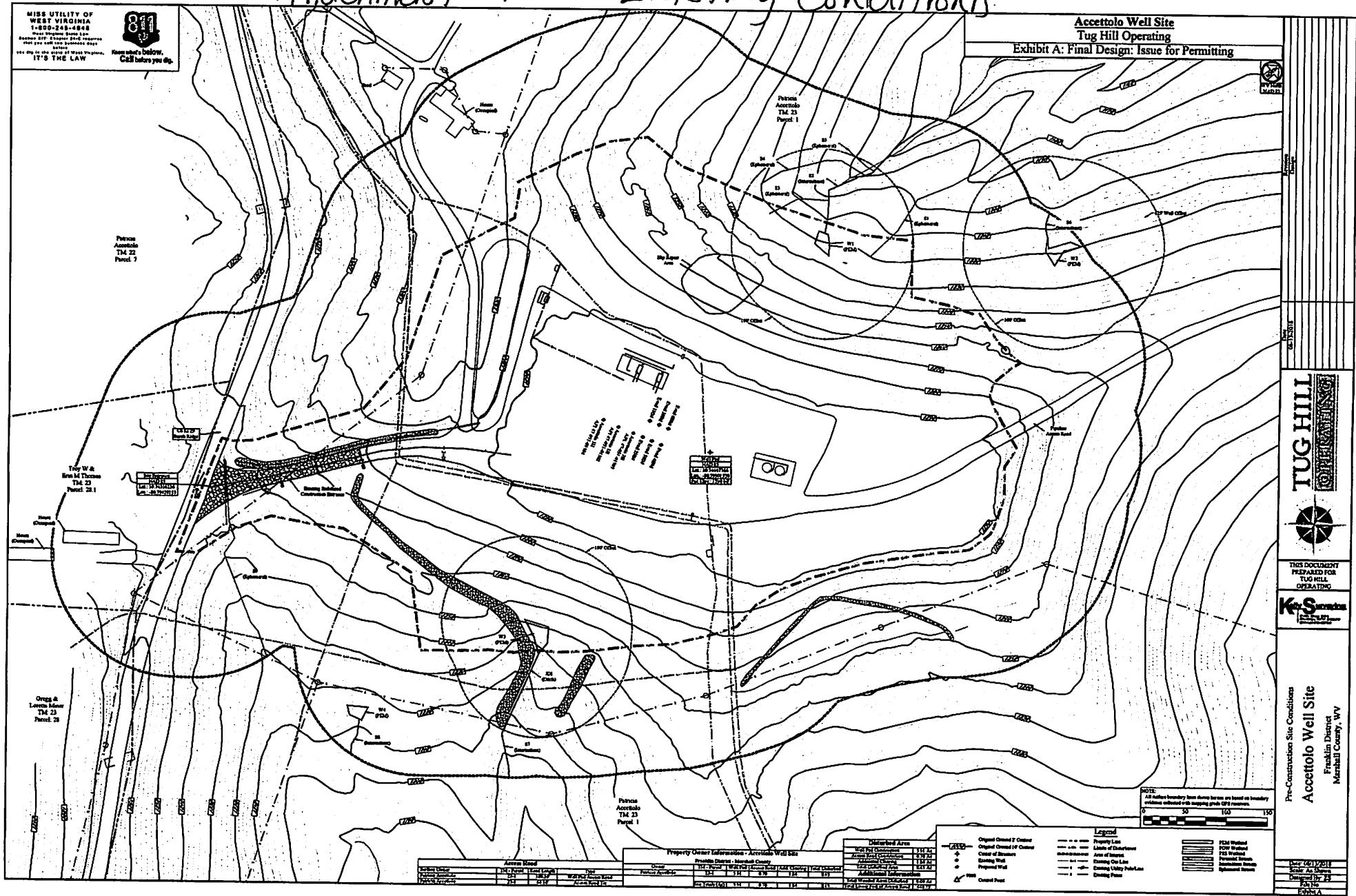
API Number: _____
Operator's Well Number: 1HM

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 sums 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



Attachment #1 - Existing Conditions



Well Pad Name: Acetato
4705 02059

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 4HM	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 <input checked="" type="checkbox"/>	Oil _____		Underground Storage _____	
	Other _____				
	(b) If Gas	Shallow <input checked="" type="checkbox"/>	Deep _____		
		Horizontal <input checked="" type="checkbox"/>		<i>JRW 4/16/18</i>	
6) Existing Pad: Yes or No	Yes				
7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):	Marcellus is the target formation at a depth of 6502 - 6553' thickness of 51' and anticipated pressure of approx. 3800 psi				
8) Proposed Total Vertical Depth:	6,653'				
9) Formation at Total Vertical Depth:	Onondaga				
10) Proposed Total Measured Depth:	16,123'				
11) Proposed Horizontal Leg Length:	9,035'				
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 X

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

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WW-6B
(04/15)

API NO. 47- 051 -
OPERATOR WELL NO. Evad 4HM
Well Pad Name: Accettolo
~~4705~~ 102059

18)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	30"	NEW	BW	BW	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' ✓	927ft^3(CTS)
Production	5 1/2"	NEW	P110	20#	16,123'	16,123'	4115ft^3(CTS)
Tubing	2 3/8"	NEW	N80	4.7#		6,970'	
Liners							

*JL
6/2/18*

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	13 3/8"	17 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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4705 102(0)159

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 22,587,250 lb proppant and 349,215 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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*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



4705102059

Permit well - Evad 4HM

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	6596' 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.
4705170363	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
4705170084	Wheeling Natural Gas	2793' TVD	Gordon	Unknown	No, the well is not deep enough to be within the expected fracture propagation from a Marcellus stimulation. The well is plugged	

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W.W. Geological & Economic Survey

Waukegan - County - St Permit - 01582

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Watauga County - 31 Permit - 91593

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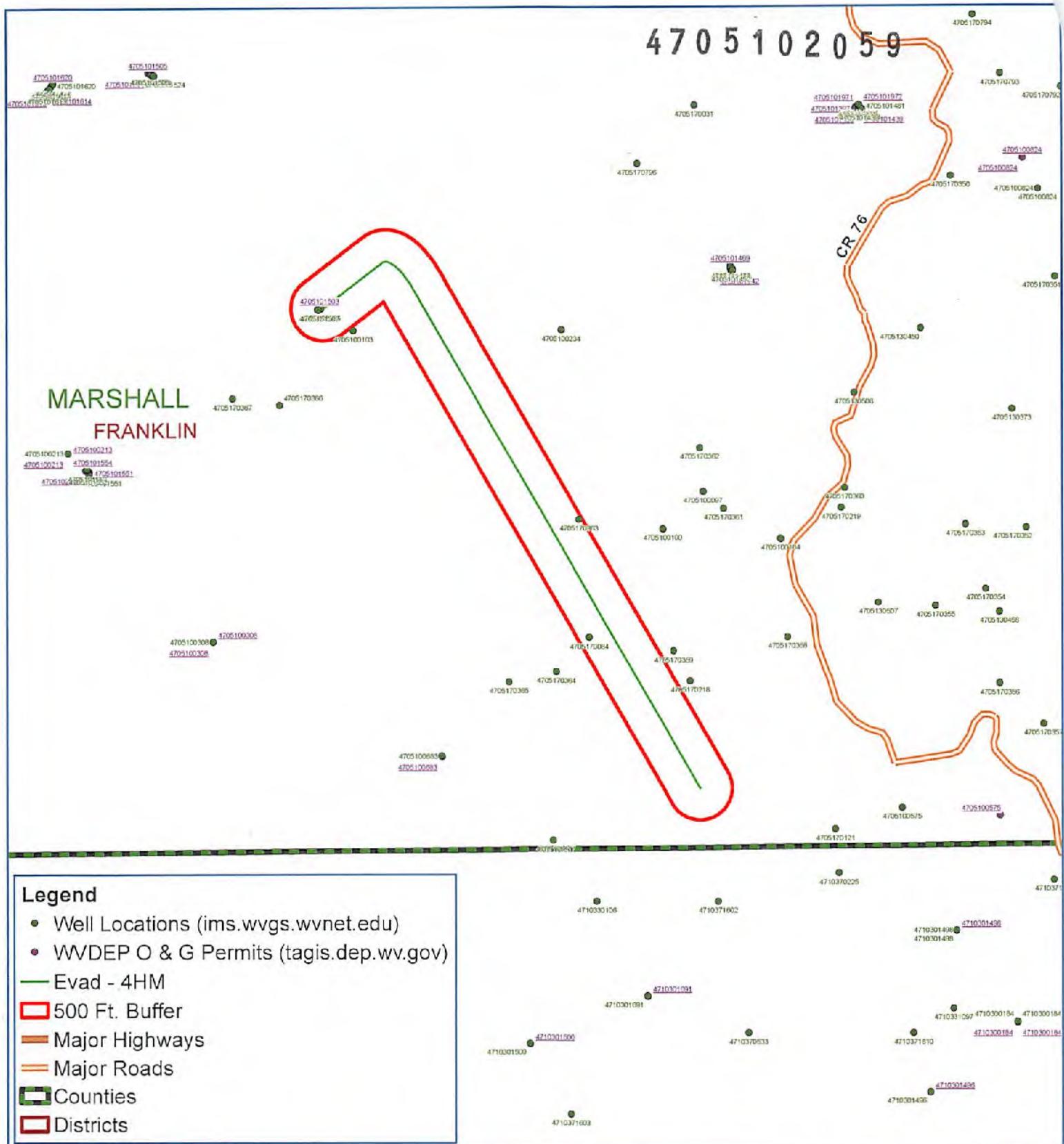
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Evad - 4HM
Franklin District
Marshall County, WV

0 800 1,600 3,200 Feet

Notes:

All locations are approximate and are for visualization purposes only.

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2016

Map Prepared by:



DPS
LAND SERVICES

4705102059



Tug Hill Operating, LLC Casing and Cement Program

Evad 4HM

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"	2,605'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4	16,123'	CTS

Cement

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

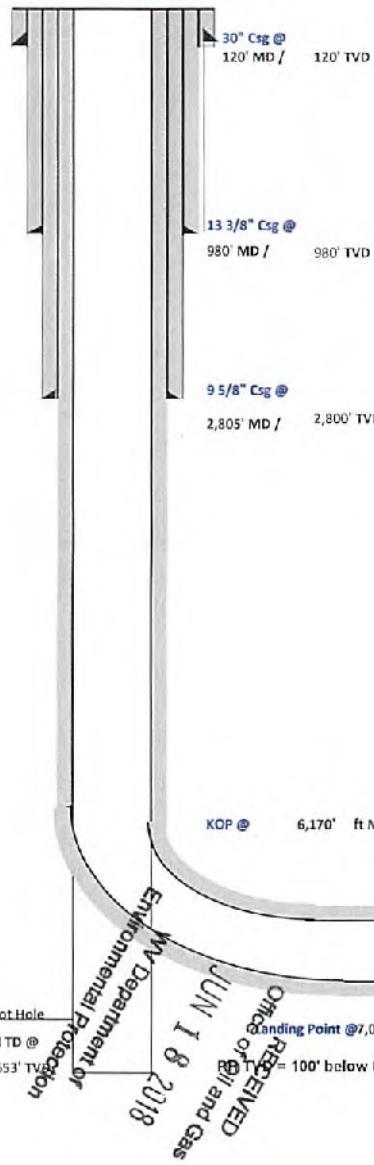
Surface: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Surface Cement mixed at 15.6 ppg, Y=1.2

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

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

50.50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 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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WELL NAME:	Evad 4HM
STATE:	WV
COUNTY:	Marshall
DISTRICT:	Franklin
DF Elev:	1,291'
GL Elev:	1,291'
ID:	16,123'
TH Latitude:	39.7443681
TH Longitude:	-80.79316901
BH Latitude:	39.72375025
BH Longitude:	80.77219609

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	6502
Landing Depth	6537
Onondaga	6553
Pilot Hole Depth	6653

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	2,805'	2,800'	36	J55	Surface
Production	8 7/8 x 8 3/4	5 1/2	16,123'	6,679'	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	913	A	15	Air	1 Centralizer every other jt
Production	3,629	A	14.5	Air / SOBM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to sfc

JK 06/18

4705-02059
Lateral @ 16,123' ft MD
6,679' ft TVD



Well: Evad 04HM (F)
Site: Accettolo/Evad Pad
Project: Marshall County, West Virginia.
Design: rev0

SECTION DETAILS

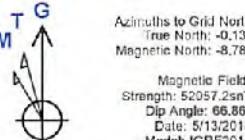
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Ddeg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		KOP Begin 2°/100' build
2	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00		
3	1650.00	5.00	52.60	1649.68	5.62	8.66	2.00	52.60	0.17	Begin 5.00° tangent
4	3105.66	5.00	52.60	3100.00	83.69	109.46	0.00	0.00	2.13	Begin 3°/100' build
5	3647.50	21.25	52.60	3625.73	158.14	205.84	3.00	0.00	4.02	Begin 21.25° tangent
6	5169.52	21.25	52.60	5976.28	932.98	0.00	0.00	18.14		Begin 10°/100' build/turn
7	7087.91	69.10	150.01	6537.00	331.15	1399.02	10.00	97.24	506.83	Begin 89.10° lateral
8	16122.81	69.10	150.01	6679.00	-7493.18	5914.43	0.00	0.00	9546.11	PBHL/TD 16122.81 MD/6679.00 TVD

Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD83 West Virginia - HARN
 Ellipsoid: GRS 1980
 Zone: Zone 17N (64 W to 78 W)

System Datum: Mean Sea Level
 Depth Reference: GL @ 1291.00ft

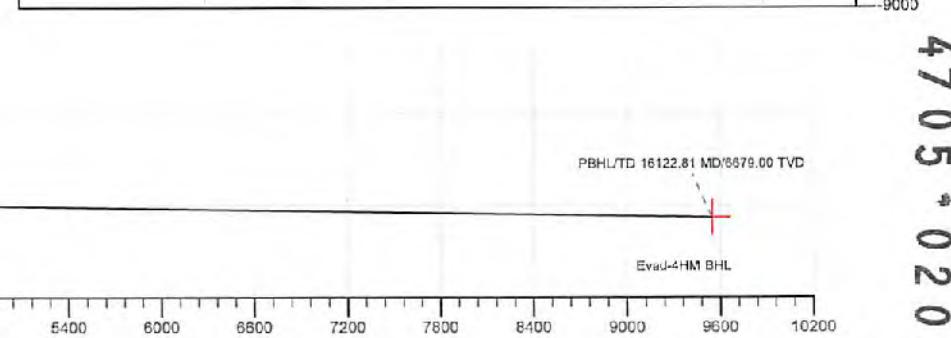
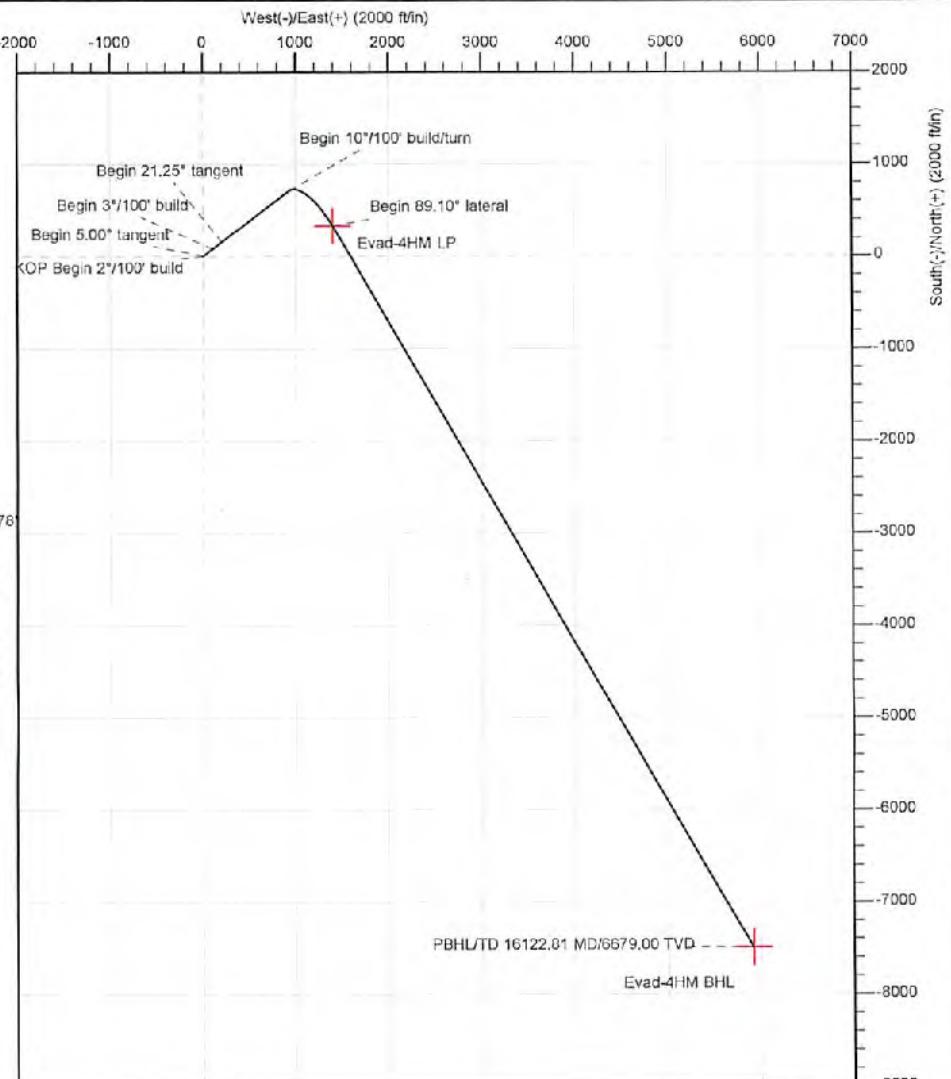
Nothing Easting Latitude Longitude
 14433716.72 1698555.32 39.744368910 -80.79316901

-- Begin 5.00° tangent Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.76



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4705 * 0205



Planning Report - Geographic

4705102059

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Evad 04HM (F)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1291.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1291.00ft
Site:	Accetollo/Evad Pad	North Reference:	Grid
Well:	Evad 04HM (F)	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	Accetollo/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 04HM (F)			
Well Position	+N/S +E/W	0.00 ft	Northing: Easting:	14,433,716.72 usft 1,698,555.32 usft
				Latitude: Longitude:
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level: 1,291.00 ft

Wellbore	Original Hole			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)
	IGRF2015	5/13/2018	-8.65	66.86
				52,057.17106422

Design	rev0			
Audit Notes:				
Version:		Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:		Depth From (TVD) (ft)	+N/S (ft)	+E/W (ft)
		0.00	0.00	0.00
				Direction (°)
				141.72

Plan Survey Tool Program	Date	5/13/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,122.81 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
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,650.00	5.00	52.60	1,649.68	6.62	8.86	2.00	2.00	0.00	0.00	52.60
3,105.86	5.00	52.60	3,100.00	83.69	109.46	0.00	0.00	0.00	0.00	0.00
3,647.50	21.25	52.60	3,625.73	158.14	208.84	3.00	3.00	0.00	0.00	0.00
6,169.52	21.25	52.60	5,976.28	713.30	932.98	0.00	0.00	0.00	0.00	0.00
7,087.91	89.10	150.01	6,537.00	331.16	1,399.02	10.00	7.39	10.61	97.24	Evad-4HM LP
16,122.81	89.10	150.01	6,679.00	-7,493.18	5,914.43	0.00	0.00	0.00	0.00	RECEIVED Office of Oil and Gas



Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Evad 04HM (F)
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 04HM (F)	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	14,433,716.72	1,698,555.32	39.74438810	-80.79316901	
100.00	0.00	0.00	100.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
200.00	0.00	0.00	200.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
300.00	0.00	0.00	300.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
400.00	0.00	0.00	400.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
500.00	0.00	0.00	500.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
600.00	0.00	0.00	600.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
700.00	0.00	0.00	700.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
800.00	0.00	0.00	800.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
900.00	0.00	0.00	900.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,433,716.72	1,698,555.32	39.74436810	-80.79316901	
KOP Begin 2°/100' build										
1,500.00	2.00	52.60	1,499.98	1.06	1.39	14,433,717.78	1,698,556.70	39.74437100	-80.79316407	
1,600.00	4.00	52.60	1,599.84	4.24	5.54	14,433,720.96	1,698,560.86	39.74437971	-80.79314925	
1,650.00	5.00	52.60	1,649.68	6.62	8.66	14,433,723.34	1,698,563.98	39.74438623	-80.79313815	
Begin 5.00° tangent										
1,700.00	5.00	52.60	1,699.49	9.27	12.12	14,433,725.99	1,698,567.44	39.74439348	-80.79312581	
1,800.00	5.00	52.60	1,798.11	14.56	19.05	14,433,731.29	1,698,574.36	39.74440797	-80.79310114	
1,900.00	5.00	52.60	1,898.73	19.86	25.97	14,433,735.58	1,698,581.29	39.74442247	-80.79307646	
2,000.00	5.00	52.60	1,998.35	25.15	32.89	14,433,741.87	1,698,588.21	39.74443696	-80.79305179	
2,100.00	5.00	52.60	2,097.97	30.44	39.82	14,433,747.17	1,698,595.14	39.74445145	-80.79302711	
2,200.00	5.00	52.60	2,197.59	35.74	48.74	14,433,752.46	1,698,602.06	39.74446595	-80.79300244	
2,300.00	5.00	52.60	2,297.21	41.03	53.66	14,433,757.75	1,698,608.98	39.74448044	-80.79297776	
2,400.00	5.00	52.60	2,396.83	46.32	60.59	14,433,763.05	1,698,615.91	39.74449494	-80.79295309	
2,500.00	5.00	52.60	2,496.45	51.62	67.51	14,433,768.34	1,698,622.83	39.74450943	-80.79292841	
2,600.00	5.00	52.60	2,596.07	56.91	74.44	14,433,773.63	1,698,629.75	39.74452392	-80.79290374	
2,700.00	5.00	52.60	2,695.69	62.20	81.36	14,433,778.93	1,698,636.68	39.74453842	-80.79287906	
2,800.00	5.00	52.60	2,795.31	67.50	88.28	14,433,784.22	1,698,643.60	39.74455291	-80.79285439	
2,900.00	5.00	52.60	2,894.93	72.79	95.21	14,433,789.52	1,698,650.53	39.74456740	-80.79282971	
3,000.00	5.00	52.60	2,994.55	78.09	102.13	14,433,794.81	1,698,657.45	39.74458190	-80.79280503	
3,100.00	5.00	52.60	3,094.17	83.38	109.06	14,433,800.10	1,698,664.37	39.74459639	-80.79278036	
3,105.86	5.00	52.60	3,100.00	83.69	109.46	14,433,800.41	1,698,664.78	39.74459724	-80.792777891	
Begin 3°/100' build										
3,200.00	7.82	52.60	3,193.54	90.07	117.81	14,433,806.80	1,698,673.13	39.74461472	-80.79274915	
3,300.00	10.82	52.60	3,292.21	99.91	130.68	14,433,815.84	1,698,686.00	39.74464166	-80.79270329	
3,400.00	13.82	52.60	3,389.90	112.88	147.64	14,433,829.60	1,698,702.95	39.74467715	-80.79264286	
3,500.00	16.82	52.60	3,486.33	128.93	168.63	14,433,845.65	1,698,723.95	39.74472110	-80.79256805	
3,600.00	19.82	52.60	3,581.25	148.02	193.80	14,433,864.74	1,698,748.92	39.74477338	-80.79247905	
3,647.50	21.25	52.60	3,625.73	158.14	206.84	14,433,874.86	1,698,762.16	39.74480109	-80.79243187	
Begin 21.25° tangent										
3,700.00	21.25	52.60	3,674.66	169.70	221.96	14,433,886.42	1,698,777.27	39.74483273	-80.79237800	
3,800.00	21.25	52.60	3,767.86	191.71	250.75	14,433,908.43	1,698,806.07	39.74489300	-80.79227539	
3,900.00	21.25	52.60	3,851.06	213.72	279.54	14,433,930.44	1,698,834.86	39.74495327	-80.79217278	
4,000.00	21.25	52.60	3,954.26	235.73	308.33	14,433,952.46	1,698,863.65	39.74501354	-80.79207017	
4,100.00	21.25	52.60	4,047.46	257.75	337.12	14,433,974.47	1,698,892.44	39.74507381	-80.79196756	
4,200.00	21.25	52.60	4,140.67	279.76	365.92	14,433,998.48	1,698,921.23	39.74513408	-80.79188495	
4,300.00	21.25	52.60	4,233.87	301.77	394.71	14,434,018.50	1,698,950.03	39.74519435	-80.79176234	
4,400.00	21.25	52.60	4,327.07	323.78	423.50	14,434,040.51	1,698,978.82	39.74525461	-80.79165973	
4,500.00	21.25	52.60	4,420.27	345.80	452.29	14,434,062.52	1,698,997.61	39.74531488	-80.79155711	
4,600.00	21.25	52.60	4,513.47	367.81	481.08	14,434,084.53	1,698,006.40	39.74537515	-80.79145450	

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Database:	DB_Jul2216dI_v14	Local Co-ordinate Reference:	Well Evad 04HM (F)
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 04HM (F)	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	21.25	52.60	4,606.67	389.82	509.88	14,434,106.55	1,699,065.19	39.74543542	-80.79135189
4,800.00	21.25	52.60	4,699.87	411.84	538.67	14,434,128.56	1,699,093.98	39.74540569	-80.79124928
4,900.00	21.25	52.60	4,783.07	433.85	567.48	14,434,150.57	1,699,122.78	39.74555596	-80.79114667
5,000.00	21.25	52.60	4,886.27	455.86	596.25	14,434,172.58	1,699,151.57	39.74561623	-80.79104405
5,100.00	21.25	52.60	4,979.48	477.87	625.04	14,434,194.60	1,699,180.36	39.74567850	-80.79094144
5,200.00	21.25	52.60	5,072.68	499.89	653.84	14,434,216.61	1,699,209.15	39.74573677	-80.79083883
5,300.00	21.25	52.60	5,165.88	521.90	682.63	14,434,238.62	1,699,237.94	39.74579703	-80.79073622
5,400.00	21.25	52.60	5,259.08	543.91	711.42	14,434,260.63	1,699,266.74	39.74585730	-80.79063360
5,500.00	21.25	52.60	5,352.28	565.92	740.21	14,434,282.65	1,699,295.53	39.74591757	-80.79053089
5,600.00	21.25	52.60	5,445.48	587.94	769.00	14,434,304.66	1,699,324.32	39.74597784	-80.79042638
5,700.00	21.25	52.60	5,538.68	609.95	797.80	14,434,326.67	1,699,353.11	39.74603811	-80.79032576
5,800.00	21.25	52.60	5,631.88	631.96	826.59	14,434,348.68	1,699,381.90	39.74609838	-80.79022315
5,900.00	21.25	52.60	5,725.09	653.97	855.38	14,434,370.70	1,699,410.70	39.74615864	-80.79012053
6,000.00	21.25	52.60	5,818.29	675.99	884.17	14,434,392.71	1,699,439.49	39.74621891	-80.79001792
6,100.00	21.25	52.60	5,911.49	698.00	912.96	14,434,414.72	1,699,468.28	39.74627918	-80.78991531
6,169.52	21.25	52.60	5,978.28	713.30	932.98	14,434,430.02	1,699,488.29	39.74632108	-80.78984397
Begin 10°/100' build/turn									
6,200.00	21.07	61.04	6,004.71	719.31	942.18	14,434,436.03	1,699,497.48	39.74633752	-80.78981124
6,300.00	23.33	87.04	6,097.52	729.06	977.76	14,434,445.79	1,699,533.07	39.74636407	-80.78968453
6,400.00	28.90	106.09	6,187.43	723.37	1,020.88	14,434,440.10	1,699,576.17	39.74634817	-80.78953125
6,500.00	36.28	118.70	6,271.73	702.42	1,070.15	14,434,419.14	1,699,625.47	39.74629030	-80.78935606
6,600.00	44.58	127.34	6,347.84	666.83	1,124.14	14,434,383.55	1,699,679.46	39.74619222	-80.78916427
6,700.00	53.36	133.71	6,413.46	617.70	1,181.18	14,434,334.42	1,699,736.51	39.74605691	-80.788616172
6,800.00	62.41	138.74	6,466.58	556.50	1,239.57	14,434,273.23	1,699,794.88	39.74588848	-80.78875456
6,900.00	71.61	143.00	6,505.61	485.12	1,297.49	14,434,201.84	1,699,852.81	39.74569205	-80.78854908
7,000.00	80.90	146.82	6,529.34	405.70	1,353.21	14,434,122.42	1,699,908.52	39.74547359	-80.78835154
7,087.91	89.10	150.01	6,537.00	331.16	1,399.02	14,434,047.89	1,699,954.33	39.74526860	-80.78818920
Begin 89.10° lateral									
7,100.00	89.10	150.01	6,537.19	320.69	1,405.06	14,434,037.41	1,699,980.38	39.74523980	-80.78816778
7,200.00	89.10	150.01	6,538.76	234.09	1,455.04	14,433,950.81	1,700,010.35	39.74500164	-80.78799072
7,300.00	89.10	150.01	6,540.33	147.49	1,505.02	14,433,864.21	1,700,060.33	39.74476348	-80.78781365
7,400.00	89.10	150.01	6,541.91	60.89	1,554.99	14,433,777.61	1,700,110.31	39.74452533	-80.78753659
7,500.00	89.10	150.01	6,543.48	-25.71	1,604.97	14,433,691.01	1,700,160.29	39.74428717	-80.78745952
7,600.00	89.10	150.01	6,545.05	-112.32	1,654.95	14,433,604.41	1,700,210.26	39.74404801	-80.78728245
7,700.00	89.10	150.01	6,546.62	-198.92	1,704.93	14,433,517.81	1,700,260.24	39.74381085	-80.78710539
7,800.00	89.10	150.01	6,548.19	-285.52	1,754.90	14,433,431.21	1,700,310.22	39.74357269	-80.78692833
7,900.00	89.10	150.01	6,549.76	-372.12	1,804.88	14,433,344.60	1,700,360.20	39.74333453	-80.78675127
8,000.00	89.10	150.01	6,551.34	-458.72	1,854.86	14,433,258.00	1,700,410.17	39.74309638	-80.78657421
8,100.00	89.10	150.01	6,552.91	-545.32	1,904.84	14,433,171.40	1,700,460.15	39.74285822	-80.78639715
8,200.00	89.10	150.01	6,554.48	-631.92	1,954.81	14,433,084.80	1,700,510.13	39.74262006	-80.78622009
8,300.00	89.10	150.01	6,555.05	-718.53	2,004.79	14,432,998.20	1,700,560.10	39.74238190	-80.78604304
8,400.00	89.10	150.01	6,557.62	-805.13	2,054.77	14,432,911.60	1,700,610.08	39.74214374	-80.78586598
8,500.00	89.10	150.01	6,559.19	-891.73	2,104.75	14,432,825.00	1,700,660.06	39.74190556	-80.78568893
8,600.00	89.10	150.01	6,560.77	-978.33	2,154.72	14,432,738.40	1,700,710.04	39.74166742	-80.78551188
8,700.00	89.10	150.01	6,562.34	-1,054.93	2,204.70	14,432,651.60	1,700,760.01	39.74142925	-80.78533483
8,800.00	89.10	150.01	6,563.91	-1,151.53	2,254.68	14,432,565.19	1,700,809.99	39.74119109	-80.78515778
8,900.00	89.10	150.01	6,565.48	-1,238.13	2,304.66	14,432,478.59	1,700,859.97	39.74095293	-80.78498073
9,000.00	89.10	150.01	6,567.05	-1,324.73	2,354.63	14,432,391.99	1,700,909.95	39.74071477	-80.78480368
9,100.00	89.10	150.01	6,568.62	-1,411.34	2,404.61	14,432,305.39	1,700,959.92	39.74047661	-80.78462664
9,200.00	89.10	150.01	6,570.20	-1,497.94	2,454.59	14,432,218.79	1,701,009.90	39.74023844	-80.78444859
9,300.00	89.10	150.01	6,571.77	-1,584.54	2,504.57	14,432,132.19	1,701,059.88	39.74000028	-80.78427255
9,400.00	89.10	150.01	6,573.34	-1,671.14	2,554.54	14,432,045.59	1,701,109.86	39.73976212	-80.78409551
9,500.00	89.10	150.01	6,574.91	-1,757.74	2,604.52	14,431,958.99	1,701,159.83	39.73952396	-80.78391847
9,600.00	89.10	150.01	6,576.48	-1,844.34	2,654.50	14,431,872.39	1,701,209.81	39.73928579	-80.78374143

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Planning Report - Geographic

4705102059

Database: DB_Jul2218dt_v14
Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia.
Site: Accettolo/Evad Pad
Well: Evad 04HM (F)
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Evad 04HM (F)
TVD Reference: GL @ 1291.00ft
MD Reference: GL @ 1291.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	6,578.05	-1,930.94	2,704.47	14,431,785.78	1,701,259.79	39.73904763	-80.78356439
9,800.00	89.10	150.01	6,579.63	-2,017.54	2,754.45	14,431,699.18	1,701,309.77	39.73880946	-80.78330735
9,900.00	89.10	150.01	6,581.20	-2,104.15	2,804.43	14,431,612.58	1,701,359.74	39.73857130	-80.78321031
10,000.00	89.10	150.01	6,582.77	-2,190.75	2,854.41	14,431,525.98	1,701,409.72	39.73833314	-80.78303328
10,100.00	89.10	150.01	6,584.34	-2,277.35	2,904.38	14,431,438.38	1,701,459.70	39.73809497	-80.78285625
10,200.00	89.10	150.01	6,585.91	-2,363.95	2,954.36	14,431,352.78	1,701,509.67	39.73785581	-80.78267921
10,300.00	89.10	150.01	6,587.48	-2,450.55	3,004.34	14,431,266.18	1,701,559.65	39.73761864	-80.78250218
10,400.00	89.10	150.01	6,589.06	-2,537.15	3,054.32	14,431,179.58	1,701,609.63	39.73738047	-80.78232515
10,500.00	89.10	150.01	6,590.63	-2,623.75	3,104.29	14,431,092.98	1,701,659.61	39.73714231	-80.78214812
10,600.00	89.10	150.01	6,592.20	-2,710.35	3,154.27	14,431,006.37	1,701,709.58	39.73690414	-80.78197109
10,700.00	89.10	150.01	6,593.77	-2,796.96	3,204.25	14,430,919.77	1,701,759.56	39.73686598	-80.78179407
10,800.00	89.10	150.01	6,595.34	-2,883.56	3,254.23	14,430,833.17	1,701,809.54	39.73642781	-80.78161704
10,900.00	89.10	150.01	6,596.91	-2,970.16	3,304.20	14,430,746.57	1,701,859.52	39.73618964	-80.78144002
11,000.00	89.10	150.01	6,598.49	-3,056.76	3,354.18	14,430,659.97	1,701,809.49	39.73595147	-80.78126300
11,100.00	89.10	150.01	6,600.06	-3,143.36	3,404.16	14,430,573.37	1,701,959.47	39.73571331	-80.78108598
11,200.00	89.10	150.01	6,601.63	-3,229.96	3,454.14	14,430,486.77	1,702,009.45	39.73547514	-80.78090695
11,300.00	89.10	150.01	6,603.20	-3,316.56	3,504.11	14,430,400.17	1,702,059.43	39.73523697	-80.78073194
11,400.00	89.10	150.01	6,604.77	-3,403.17	3,554.09	14,430,313.57	1,702,109.40	39.73499880	-80.78055492
11,500.00	89.10	150.01	6,606.34	-3,489.77	3,604.07	14,430,226.96	1,702,159.38	39.73476063	-80.78037790
11,600.00	89.10	150.01	6,607.92	-3,576.37	3,654.05	14,430,140.35	1,702,209.36	39.73452246	-80.78020089
11,700.00	89.10	150.01	6,609.49	-3,662.97	3,704.02	14,430,053.76	1,702,259.33	39.73428429	-80.78002387
11,800.00	89.10	150.01	6,611.06	-3,749.57	3,754.00	14,429,967.16	1,702,309.31	39.73404613	-80.77984686
11,900.00	89.10	150.01	6,612.63	-3,836.17	3,803.98	14,429,880.56	1,702,359.29	39.73380798	-80.77986985
12,000.00	89.10	150.01	6,614.20	-3,922.77	3,853.96	14,429,793.96	1,702,409.27	39.73356979	-80.77949284
12,100.00	89.10	150.01	6,615.77	-4,009.37	3,903.93	14,429,707.35	1,702,459.24	39.73335161	-80.77931583
12,200.00	89.10	150.01	6,617.35	-4,095.96	3,953.91	14,429,620.76	1,702,509.22	39.73309344	-80.77913682
12,300.00	89.10	150.01	6,618.92	-4,182.58	4,003.89	14,429,534.16	1,702,559.20	39.73285527	-80.77896181
12,400.00	89.10	150.01	6,620.49	-4,269.18	4,053.87	14,429,447.55	1,702,609.18	39.73261710	-80.77878481
12,500.00	89.10	150.01	6,622.06	-4,355.78	4,103.84	14,429,360.95	1,702,659.15	39.73237893	-80.77880780
12,600.00	89.10	150.01	6,623.63	-4,442.38	4,153.82	14,429,274.35	1,702,709.13	39.73214076	-80.77843080
12,700.00	89.10	150.01	6,625.20	-4,528.98	4,203.80	14,429,187.75	1,702,759.11	39.73190259	-80.77825380
12,800.00	89.10	150.01	6,626.78	-4,615.58	4,253.78	14,429,101.15	1,702,809.09	39.73166441	-80.77807680
12,900.00	89.10	150.01	6,628.35	-4,702.18	4,303.75	14,429,014.55	1,702,859.06	39.73142624	-80.77789980
13,000.00	89.10	150.01	6,629.92	-4,788.79	4,353.73	14,428,927.95	1,702,909.04	39.73118807	-80.77772280
13,100.00	89.10	150.01	6,631.49	-4,875.39	4,403.71	14,428,841.35	1,702,959.02	39.73094990	-80.77754580
13,200.00	89.10	150.01	6,633.06	-4,961.99	4,453.69	14,428,754.75	1,703,008.99	39.73071172	-80.77736880
13,300.00	89.10	150.01	6,634.63	-5,048.59	4,503.66	14,428,668.14	1,703,058.97	39.73047355	-80.77719181
13,400.00	89.10	150.01	6,636.21	-5,135.19	4,553.64	14,428,581.54	1,703,108.95	39.73023537	-80.77701482
13,500.00	89.10	150.01	6,637.78	-5,221.79	4,603.62	14,428,494.94	1,703,158.93	39.72998720	-80.77683782
13,600.00	89.10	150.01	6,639.35	-5,308.39	4,653.60	14,428,408.34	1,703,208.90	39.72975903	-80.776566083
13,700.00	89.10	150.01	6,640.92	-5,395.00	4,703.57	14,428,321.74	1,703,258.88	39.72952085	-80.77640334
13,800.00	89.10	150.01	6,642.49	-5,481.60	4,753.55	14,428,235.14	1,703,308.86	39.72928268	-80.77630685
13,900.00	89.10	150.01	6,644.06	-5,568.20	4,803.53	14,428,148.54	1,703,358.84	39.72904450	-80.77612987
14,000.00	89.10	150.01	6,645.64	-5,654.80	4,853.51	14,428,061.94	1,703,408.81	39.72880632	-80.77595288
14,100.00	89.10	150.01	6,647.21	-5,741.40	4,903.48	14,427,975.33	1,703,458.79	39.72856815	-80.77577539
14,200.00	89.10	150.01	6,648.78	-5,828.00	4,953.46	14,427,888.73	1,703,508.77	39.72832997	-80.77559891
14,300.00	89.10	150.01	6,650.35	-5,914.60	5,003.44	14,427,802.13	1,703,558.75	39.72809180	-80.77542193
14,400.00	89.10	150.01	6,651.92	-6,001.20	5,053.42	14,427,715.53	1,703,608.72	39.72785362	-80.77524495
14,500.00	89.10	150.01	6,653.49	-6,087.81	5,103.39	14,427,628.93	1,703,658.70	39.72761544	-80.77506797
14,600.00	89.10	150.01	6,655.07	-6,174.41	5,153.37	14,427,542.33	1,703,708.68	39.72737726	-80.77489099
14,700.00	89.10	150.01	6,656.64	-6,261.01	5,203.35	14,427,455.73	1,703,756.66	39.72713909	-80.77471401
14,800.00	89.10	150.01	6,658.21	-6,347.61	5,253.32	14,427,369.13	1,703,808.63	39.72690091	-80.77453703
14,900.00	89.10	150.01	6,659.78	-6,434.21	5,303.30	14,427,282.53	1,703,856.61	39.72666273	-80.77436006
15,000.00	89.10	150.01	6,661.35	-6,520.81	5,353.28	14,427,195.92	1,703,908.51	39.72642455	-80.77418308
15,100.00	89.10	150.01	6,662.92	-6,607.41	5,403.26	14,427,109.32	1,703,958.55	39.72618637	-80.77400611

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Office of Oil and Gas



Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Evad 04HM (F)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1281.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1281.00ft
Site:	Accettolo/Evad Pad	North Reference:	Grid
Well:	Evad 04HM (F)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth	+N/S	+E/W	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
			(ft)	(ft)	(ft)	(usft)	(usft)		
15,200.00	89.10	150.01	6,684.50	-6,894.01	5,453.23	14,427,022.72	1,704,006.54	39.72594819	-80.77382914
15,300.00	89.10	150.01	6,686.07	-6,780.62	5,503.21	14,426,936.12	1,704,058.52	39.72571002	-80.77365217
15,400.00	89.10	150.01	6,687.64	-6,867.22	5,553.19	14,426,849.52	1,704,108.50	39.72547184	-80.77347520
15,500.00	89.10	150.01	6,689.21	-6,953.82	5,603.17	14,426,762.92	1,704,158.47	39.72523368	-80.77329823
15,600.00	89.10	150.01	6,670.78	-7,040.42	5,653.14	14,426,676.32	1,704,208.45	39.72499548	-80.77312126
15,700.00	89.10	150.01	6,672.35	-7,127.02	5,703.12	14,426,589.72	1,704,258.43	39.72475730	-80.77294430
15,800.00	89.10	150.01	6,673.93	-7,213.62	5,753.10	14,426,503.12	1,704,308.41	39.72451912	-80.77276733
15,900.00	89.10	150.01	6,675.50	-7,300.22	5,803.08	14,426,416.51	1,704,358.38	39.72428093	-80.77259037
16,000.00	89.10	150.01	6,677.07	-7,386.82	5,853.05	14,426,329.91	1,704,408.36	39.72404275	-80.77241341
16,100.00	89.10	150.01	6,678.64	-7,473.43	5,903.03	14,426,243.31	1,704,458.34	39.72380457	-80.77223845
16,122.81	89.10	150.01	6,679.00	-7,493.18	5,914.43	14,426,223.55	1,704,469.74	39.72375025	-80.77219609

PBHL/TD 16122.81 MD/6679.00 TVD

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/S (ft)	+E/W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target - Shape									
Eved-4HM LP - plan hits target center - Point	0.00	0.00	6,537.00	331.16	1,399.02	14,434,047.89	1,699,954.33	39.74526880	-80.76816920
Evad-4HM BHL - plan hits target center - Point	0.00	0.00	6,679.00	-7,493.18	5,914.43	14,426,223.56	1,704,469.74	39.72375025	-80.77219609

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/S (ft)	+E/W (ft)	
1,400.00	1,400.00	0.00	0.00	KOP Begin 2°/100' build
1,650.00	1,649.68	6.62	8.66	Begin 5.00° tangent
3,105.86	3,100.00	83.69	109.46	Begin 3°/100' build
3,847.50	3,625.73	158.14	206.84	Begin 21.25° tangent
6,169.52	5,976.28	713.30	932.98	Begin 10°/100' build/turn
7,087.91	6,537.00	331.16	1,399.02	Begin 89.10° lateral
16,122.81	6,679.00	-7,493.18	5,914.43	PBHL/TD 16122.81 MD/6679.00 TVD

RECEIVED
Office of Oil and Gas

JUN 18 2018

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Tug Hill Operating, LLC OP Code 494510851

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

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? Barite for weight

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

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

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

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

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

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

RECEIVED

Office of Oil and Gas

Company Official Signature Jim Pancake JUN 18 2018

Company Official (Typed Name) Jim Pancake

Company Official Title Vice President Geoscience WV Department of Environmental Protection

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

Maureen A Stead
1/28/19

My commission expires 1/28/19

Notary Public

NOTARIAL SEAL
MAUREEN A STEAD
Notary Public
CECIL TWP, WASHINGTON COUNTY
My Commission Expires Jan 28, 2019

4705102059

Form WW-9

Operator's Well No. Evad 4HM

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 8.45

Prevegetation pH 6.0

4705 * 02059

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:

Comments:

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Office of Oil and Gas

JUN 18 2018

Title: Oil and Gas Inspector

Date:

WV Department of
Environmental Protection

Field Reviewed?

() Yes() No

WW-9

PROPOSED EVAD 4HM

4705-02059
SUPPLEMENT PG 59



DRAWING NOT
TO SCALE

PATRICIA ACCETTOLO, ET AL
T.M. 23/1
146.68 ACRES

BURCH RIDGE ROAD
COUNTY ROUTE 29

WAYNES RIDGE LANE
COUNTY ROUTE 78

PATRICIA ACCETTOLO, ET AL
T.M. 22/7
25.02 ACRES

TRAILER

TRAILER

GREGG D. MINOR
T.M. 23/28
39.43 ACRES

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Office of Oil and Gas

JUN 18 2018

WV Department of
Environmental Protection

DATE: 05-31-2018

PROJECT NO: 494510851

DRAWN BY: J.A.H.

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

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

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

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

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

PATRICIA ACCETTOLO, ET AL
T.M. 23/1
146.68 ACRES

CLEARING LIMITS
Toe of Fill

EVAD
4HM
203'

137' 397'
137' 397'
137' 397'

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137' 397'

LEGEND

Note:
 (C) — Denotes existing culvert
with appropriate sediment outlet control
(Rip Rap splash pad).

----- Silt Fence and or Sediment
and Erosion Control Measure.
----- Surface Boundary

4705102059



Well Site Safety Plan

Tug Hill Operating, LLC

*Joe
6/6/18*

Well Name: Evad 4HM

Pad Location: Accetollo Pad

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:
Northing: 4,399,405.66
Easting: 517,720.70

June 2018

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

WW-9

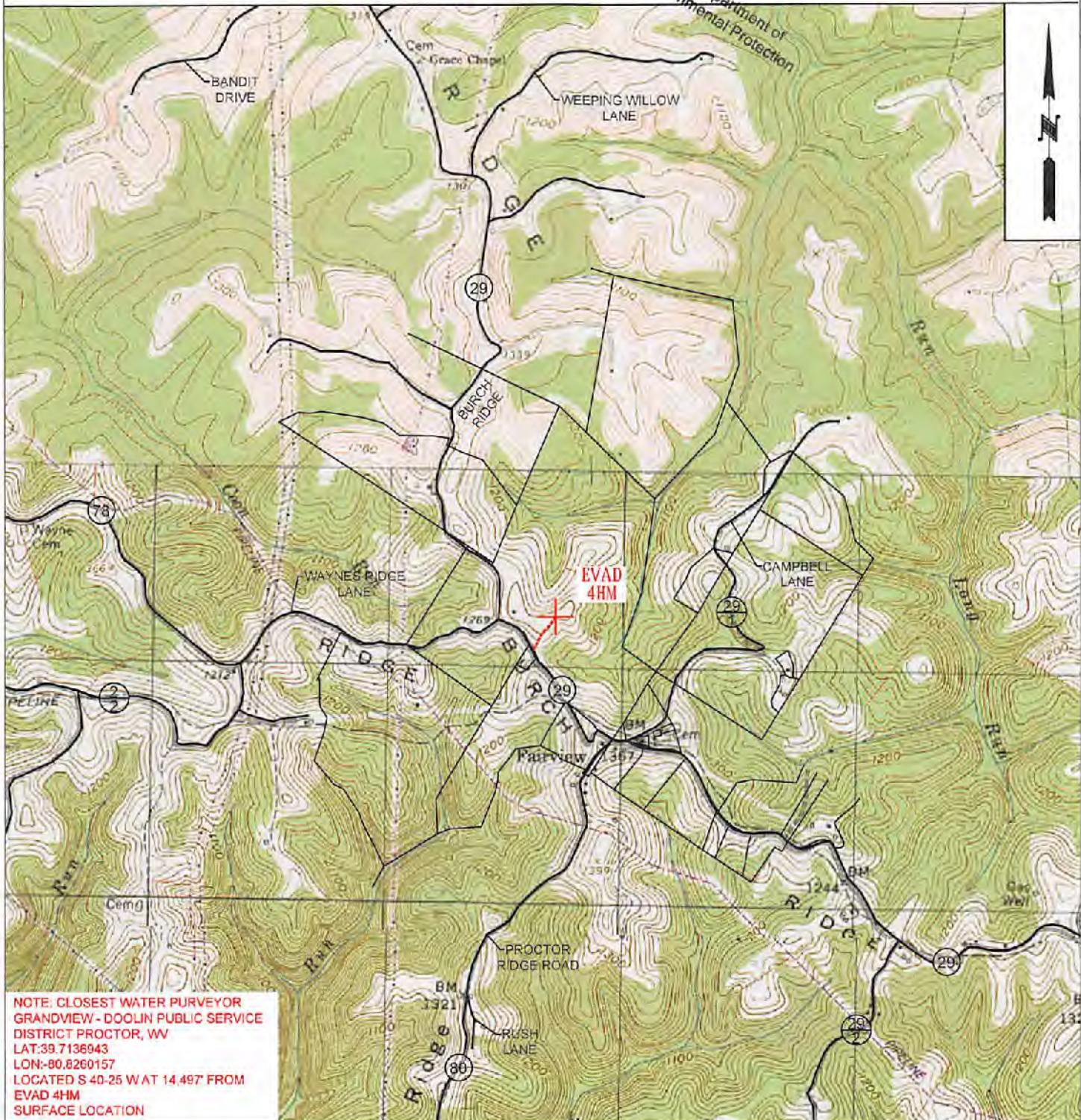
PROPOSED EVAD 4HM

RECEIVED
Office of Oil and Gas
JUN 18 2018

SUPPLEMENT PG 2

59

WV Department of
Environmental Protection



**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" = 2000'	DATE: 05-31-2018

(BH) 6,299' (TH) 469'

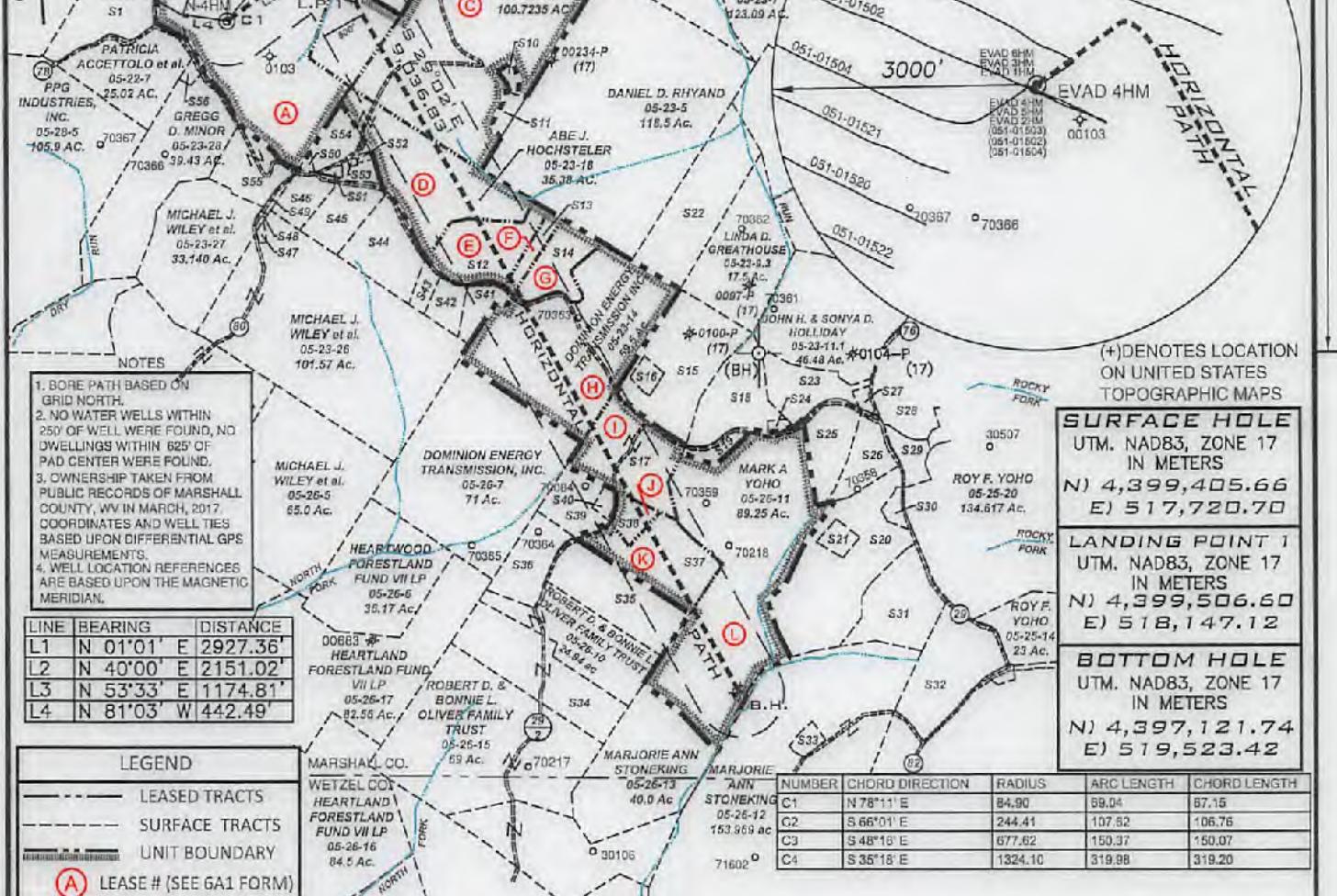
TOP HOLE LATITUDE: 39°45'00" BOTTOM HOLE LATITUDE: 39°45'00"

**EVAD LEASE
WELL 4HM
582.8595± ACRES**
**DETAIL
SKETCH "A"
SCALE 1"=100'**
REFERENCES

SCALE 1"=400'

N 70°38'38" W 353.6' 18" BLACK LOCUST
24" TREE EVAD 4HM S 82°07' E 222.3'
OF HEAVEN

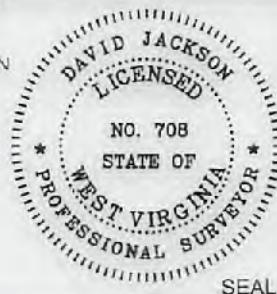
GRID NORTH



FILE NUMBER

DRAWING NUMBER EVAD_WP_4HMSCALE 1" = 2000'MINIMUM DEGREE
OF ACCURACY 1/200

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

P.S.
708*David L Jackson*JACKSON SURVEYING INC.
P.O. Box 1460
Clarksburg, WV 26302
304-623-5851PROVEN SOURCE
OF ELEVATION SUBMETER MAPPING

GRADE GPS

WVDEP
OFFICE OF OIL & GAS
601 57TH STREET, SE
CHARLESTON, WV 25304DATE: JUNE 04, 2018OPERATORS WELL NO. EVAD 4HM

API WELL NO.

47-051-02059 *H6A*STATE WV COUNTY MARSHALL

PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW LOCATION ELEVATION 1290.0' WATERSHED (HUC 10) FISH CREEKDISTRICT FRANKLIN COUNTY MARSHALL
QUADRANGLE NEW MARTINSVILLE 7.5' LEASE NUMBER SEE WW-B1 FormSURFACE OWNER LOUIS J. & PATRICIA ACCETTOLO ET AL ACREAGE 146.66OIL & GAS ROYALTY OWNER SEE WW-B1 Form LEASE ACREAGE 146.66PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY) PLUG & ABANDON CLEAN OUT & REPLUG ESTIMATED DEPTH TVD 6,662' TMD: 15,635'TARGET FORMATION MARCELLUSWELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPERADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS CT CORPORATION SYSTEM

FORT WORTH, TX 76107 CHARLESTON, WV 25313

PG 2 OF 2 EVAD LEASE
WELL 4HM
582.8595± 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	05-19-1B	Mark E. Yoho Et Ux	55.948
S7	05-18-21.2	David P. Lassan 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 Jean Farrel 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 Otto Et Ux	11.34
S37	05-26-8	Richard Joseph Otto Et Ux	18.27
S38	05-26-20	Doanld Lee Anderson Et Al	4.2
S39	05-26-22	Richard Joseph Otto Et Ux	8.3
S40	05-26-21	Richard Jospeh Otto 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. Rhyand & 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. Tenant	10.8
S56	05-23-28.1	Troy W. & Erin M. Thomas	1.0



P.S.
708 David L Jackson

 TUG HILL OPERATING	OPERATOR'S	WELL PLAT PAGE 2 OF 2 DATE: 06/04/2018
	WELL #: <u>EVAD 4HM</u>	
	DISTRICT: <u>Franklin</u>	
	COUNTY: <u>Marshall</u>	
	STATE: <u>WV</u>	

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

RECEIVED
Office of Oil and Gas
JUN 18 2011
WV Department of
Environmental Protection

**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:	<u>Tug Hill Operating, LLC</u>
By:	<u>Amy L. Miller</u>
Its:	<u>Permit Specialist - Appalachia</u>

4705102059

Operator's Well No. Evad - 4HM

WW-6A1 Supplement

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	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	RECEIVED Office of Oil and Gas JUN 18 2013	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC	
10*14022	B	5-23-2	HOWARD N WAYNE SR AND WIFE	GASTAR EXPLORATION USA, INC	1/8+	665	384	NA	NA	NA	WV Department of Environmental Protection	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC	
10*14784	C	5-23-4	ABE J. HOCHSTETLER	GASTAR EXPLORATION USA, INC	1/8+	797	184	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	C	5-23-4	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*14849	C	5-23-4	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	C	5-23-4	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	C	5-23-4	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	C	5-23-4	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	

WW-6A1 Supplement

4705102050
Operator's Well No. Evad-4HM

10*14853	C	5-23-4	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14854	C	5-23-4	CATHERINE HUMMEL	GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	NA	WV Department of Environmental Protection	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14855	C	5-23-4	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	C	5-23-4	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*14860	C	5-23-4	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	C	5-23-4	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	C	5-23-4	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
10*14863	C	5-23-4	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

4705102059

Operator's Well No. Evad - 4HM

WW-6A1 Supplement

10*14864	C	5-23-4	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14865	C	5-23-4	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	C	5-23-4	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*14868	C	5-23-4	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	C	5-23-4	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	C	5-23-4	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	C	5-23-4	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	C	5-23-4	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

4705102050

WW-6A1 Supplement

Operator's Well No. Evad - 4HM

10*14873	C	S-23-4	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14874	C	S-23-4	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14875	C	S-23-4	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14876	C	S-23-4	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14877	C	S-23-4	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14878	C	S-23-4	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14879	C	S-23-4	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14880	C	S-23-4	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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10*14881	C	5-23-4	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14882	C	5-23-4	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14883	C	5-23-4	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14884	C	5-23-4	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14885	C	5-23-4	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14886	C	5-23-4	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14887	C	5-23-4	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14888	C	5-23-4	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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										RECEIVED Office of Oil and Gas JUN 18 2018			
10*14889	C	5-23-4	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	C	5-23-4	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	C	5-23-4	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	C	5-23-4	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA
10*17145	C	5-23-4	JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc
10*17146	C	5-23-4	CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	NA	NA	NA	NA	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17147	C	5-23-4	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc
10*17148	C	5-23-4	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	NA	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC

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10*17149	C	5-23-4	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	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	C	5-23-4	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	C	5-23-4	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	NA
10*17532	C	5-23-4	DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA
10*17535	C	5-23-4	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA
10*17539	C	5-23-4	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA
10*17593	C	5-23-4	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA
10*17594	C	5-23-4	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA

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10*17595	C	5-23-4	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2013	WV Department of Environmental Protection	NA	NA
10*17640	C	5-23-4	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	WV Department of Environmental Protection	NA	NA
10*17679	C	5-23-4	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA	NA
10*17680	C	5-23-4	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA	NA
10*17681	C	5-23-4	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA	NA
10*17682	C	5-23-4	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA	NA
10*17683	C	5-23-4	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA	NA
10*17715	C	5-23-4	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA	NA

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10*17719	C	5-23-4	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*17720	C	5-23-4	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA	NA	NA
10*17775	C	5-23-4	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	NA	NA	NA
10*17776	C	5-23-4	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA	NA	NA	NA
10*17824	C	5-23-4	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA	NA	NA	NA
10*17901	C	5-23-4	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA	NA	NA	NA
10*17965	C	5-23-4	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA	NA	NA	NA	NA	NA
10*18042	C	5-23-4	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA	NA	NA	NA

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10*18043	C	5-23-4	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2013	4709102059
10*18176	C	5-23-4	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	WV Department of Environmental Protection	NA
10*18329	C	5-23-4	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA	NA	NA	NA
10*18367	C	5-23-4	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	NA
10*18368	C	5-23-4	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA
10*18386	C	5-23-4	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA	NA	NA
10*18598	C	5-23-4	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA	NA	NA	NA
10*18795	C	5-23-4	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA

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10*18994	C	5-23-4	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA
10*19736	C	5-23-4	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	PAV Department of Environmental Protection	NA	NA
10*21217	C	5-23-4	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	NA	PAV Department of Environmental Protection	NA	NA
10*21222	C	5-23-4	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA	PAV Department of Environmental Protection	NA	NA
10*21415	C	5-23-4	ABE J HOCHSTETLER AND ANNA E HOCHSTETLER	TH EXPLORATION, LLC	1/8+	957	7	NA	NA	NA	PAV Department of Environmental Protection	NA	NA
10*21425	C	5-23-4	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA	NA	PAV Department of Environmental Protection	NA	NA
10*21428	C	5-23-4	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	PAV Department of Environmental Protection	NA	NA
10*21434	C	5-23-4	CATHERINE HUMMEL	TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	PAV Department of Environmental Protection	NA	NA

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10*21451	C	5-23-4	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA	NA
10*21452	C	5-23-4	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA	RECEIVED COURT RECEIVED JUN 14 2013 Office of Oil and Gas WV Department of Environmental Protection	NA
10*21457	C	5-23-4	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	NA	NA	NA
10*21458	C	5-23-4	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA	NA	NA
10*21459	C	5-23-4	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA
10*21498	C	5-23-4	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA	NA
10*21500	C	5-23-4	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA
10*21501	C	5-23-4	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA

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10*21502	C	5-23-4	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010	NA
10*21503	C	5-23-4	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	WV Department of Environmental Protection	NA
10*21626	C	5-23-4	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA		NA
10*21631	C	5-23-4	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA	NA	NA	NA		NA
10*21632	C	5-23-4	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA		NA
10*21655	C	5-23-4	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	959	335	NA	NA	NA	NA		NA
10*21656	C	5-23-4	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	NA	NA		NA
10*21657	C	5-23-4	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	NA	NA		NA

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10*21774	C	5-23-4	JOYCE KAY BURTON AND SAMUEL C BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA	NA	NA
10*21813	C	5-23-4	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA
10*21815	C	5-23-4	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA	NA	NA	NA	WV Department of Environmental Protection	NA
10*21816	C	5-23-4	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA	NA	NA	NA	NA	NA
10*21817	C	5-23-4	MARY LOU HLINKA AND RICHARD G HLINKA SR	TH EXPLORATION, LLC	1/8+	959	514	NA	NA	NA	NA	NA	NA
10*21819	C	5-23-4	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA	NA	NA	NA	NA	NA
10*21820	C	5-23-4	MARION DAVID AND JANICE L OTT	TH EXPLORATION, LLC	1/8+	959	506	NA	NA	NA	NA	NA	NA
10*21832	C	5-23-4	MARQUITA CLYBURN	TH EXPLORATION, LLC	1/8+	959	510	NA	NA	NA	NA	NA	NA

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10*21948	C	5-23-4	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA
10*21949	C	5-23-4	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA	NA	NA	NA	NA	NA
10*21951	C	5-23-4	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA	NA
10*21994	C	5-23-4	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA	NA
10*22013	C	5-23-4	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA
10*22014	C	5-23-4	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA
10*22018	C	5-23-4	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA
10*22026	C	5-23-4	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA

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10*22027	C	5-23-4	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2014	NA	NA
10*22093	C	5-23-4	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	WY Department of Environmental Protection	NA	NA
10*22102	C	5-23-4	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA
10*22128	C	5-23-4	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA
10*22144	C	5-23-4	VICKY AND DENNIS STRAUSS	TH EXPLORATION, LLC	1/8+	961	429	NA	NA	NA	NA	NA	NA
10*22165	C	5-23-4	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA
10*22178	C	5-23-4	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA
10*22180	C	5-23-4	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA

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10*22181	C	5-23-4	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 1 2016 WV Department of Environmental Protection	NA
10*22332	C	5-23-4	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA
10*22339	C	5-23-4	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA
10*22436	C	5-23-4	TESSEAN FAMILY REVOCABLE TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA
10*22443	C	5-23-4	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA
10*22503	C	5-23-4	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA
10*22505	C	5-23-4	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA
10*22594	C	5-23-4	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA

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10*22609	C	5-23-4	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA
10*22613	C	5-23-4	JEWELL CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*22779	C	5-23-4	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*22809	C	5-23-4	MARGARET AND WILLIAM MCMURRY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA
10*22812	C	5-23-4	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA
10*22861	C	5-23-4	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA	NA	NA	NA
10*14784	D	5-23-18	ABE J. HOCHSTETLER	GASTAR EXPLORATION USA, INC	1/8+	797	184	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	5-23-18	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

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10*14849	D	5-23-18	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	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	5-23-18	CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	NA	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	5-23-18	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	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	5-23-18	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	806	259	NA	NA	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*14853	D	5-23-18	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	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	5-23-18	CATHERINE HUMMEL	GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	NA	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	5-23-18	JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/8+	808	445	NA	NA	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	5-23-18	GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	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*14860	D	5-23-18	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 NA	WV Department of Environmental Protection	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14861	D	5-23-18	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	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	5-23-18	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	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*14863	D	5-23-18	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	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	5-23-18	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	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	5-23-18	VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	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	5-23-18	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	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	5-23-18	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	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*14869	D	5-23-18	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	W. Department of Environmental Protection	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14870	D	5-23-18	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	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	5-23-18	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	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	5-23-18	DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	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*14873	D	5-23-18	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	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	5-23-18	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14875	D	5-23-18	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14876	D	5-23-18	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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10*14877	D	5-23-18	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	D	5-23-18	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	D	5-23-18	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	D	5-23-18	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	D	5-23-18	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	D	5-23-18	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14883	D	5-23-18	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	D	5-23-18	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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10*14885	D	5-23-18	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	RECEIVED Office of Oil and Gas WV Department of Environmental Protection	JUN 18 2018	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14886	D	5-23-18	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14887	D	5-23-18	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14888	D	5-23-18	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14889	D	5-23-18	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14890	D	5-23-18	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14891	D	5-23-18	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*16034	D	5-23-18	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA

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10*17145	D	5-23-18	JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	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	5-23-18	CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	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	5-23-18	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	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	5-23-18	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	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	5-23-18	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	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	5-23-18	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	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	5-23-18	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	NA	NA
10*17532	D	5-23-18	DONALD S BOBOVNICK AND DOLORES J BOBOVNICK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA	NA

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10*17535	D	5-23-18	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*17539	D	5-23-18	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	PA Department of Environmental Protection	NA	NA	NA
10*17593	D	5-23-18	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA
10*17594	D	5-23-18	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA
10*17595	D	5-23-18	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA
10*17640	D	5-23-18	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA
10*17679	D	5-23-18	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA
10*17680	D	5-23-18	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA

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10*17681	D	5-23-18	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	RECEIVED Office of Oil and Gas JUN 18 '18	WV Department of Environmental Protection	NA	NA	NA
10*17682	D	5-23-18	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA	NA
10*17683	D	5-23-18	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA	NA
10*17715	D	5-23-18	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA	NA
10*17719	D	5-23-18	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA	NA	NA
10*17720	D	5-23-18	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA	NA	NA	NA
10*17775	D	5-23-18	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	NA	NA	NA	NA
10*17776	D	5-23-18	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA	NA	NA	NA	NA

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10*17824	D	5-23-18	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA	NA	NA	NA
10*17901	D	5-23-18	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA	NA	NA	NA
10*17965	D	5-23-18	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA	NA	NA	NA	NA	NA
10*18042	D	5-23-18	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA	NA	NA	NA
10*18043	D	5-23-18	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA	NA	NA	NA	NA	NA
10*18176	D	5-23-18	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA
10*18247	D	5-23-18	MILDRED S KIRKPATRICK	TH EXPLORATION, LLC	1/8+	917	132	NA	NA	NA	NA	NA	NA
10*18320	D	5-23-18	SAMUEL F HENRY	TH EXPLORATION, LLC	1/8+	931	246	NA	NA	NA	NA	NA	NA

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10*18329	D	5-23-18	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA	NA	NA	NA
10*18367	D	5-23-18	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018
10*18368	D	5-23-18	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA
10*18386	D	5-23-18	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA	NA	NA
10*18598	D	5-23-18	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA	NA	NA	NA
10*18795	D	5-23-18	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA
10*18994	D	5-23-18	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	NA	NA	NA
10*19736	D	5-23-18	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	NA	NA	NA

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10*21217	D	5-23-18	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*21222	D	5-23-18	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21415	D	5-23-18	ABE J HOCHSTETLER AND ANNA E HOCHSTETLER	TH EXPLORATION, LLC	1/8+	957	7	NA	NA	NA	NA	NA	NA
10*21425	D	5-23-18	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA	NA	NA	NA	NA
10*21428	D	5-23-18	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	NA	NA	NA
10*21434	D	5-23-18	CATHERINE HUMMEL	TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	NA	NA	NA
10*21451	D	5-23-18	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA	NA
10*21452	D	5-23-18	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA	NA	NA

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10*21457	D	5-23-18	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA
10*21458	D	5-23-18	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	RECEIVED WV Department of Environmental Protection	NA	NA
10*21459	D	5-23-18	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	RECEIVED WV Department of Environmental Protection	NA	NA
10*21498	D	5-23-18	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	RECEIVED WV Department of Environmental Protection	NA	NA
10*21500	D	5-23-18	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	RECEIVED WV Department of Environmental Protection	NA	NA
10*21501	D	5-23-18	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	RECEIVED WV Department of Environmental Protection	NA	NA
10*21502	D	5-23-18	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	RECEIVED WV Department of Environmental Protection	NA	NA
10*21503	D	5-23-18	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	RECEIVED WV Department of Environmental Protection	NA	NA

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10*21951	D	5-23-18	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA
10*21994	D	5-23-18	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA	NA
10*22013	D	5-23-18	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA
10*22014	D	5-23-18	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA
10*22018	D	5-23-18	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA
10*22026	D	5-23-18	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA
10*22027	D	5-23-18	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA	NA
10*22093	D	5-23-18	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA

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10*22102	D	5-23-18	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA
10*22128	D	5-23-18	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	Department of Environmental Protection NA
10*22144	D	5-23-18	VICKY STRAUSS AND DENNIS A STRAUSS	TH EXPLORATION, LLC	1/8+	961	529	NA	NA	NA	NA	NA	NA
10*22165	D	5-23-18	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA
10*22178	D	5-23-18	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA
10*22180	D	5-23-18	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA
10*22181	D	5-23-18	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA
10*22332	D	5-23-18	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA

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10*22339	D	5-23-18	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA
10*22436	D	5-23-18	TESSEAN FAMILY REVOCABLE LIVING TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	WV Department of Environmental Protection	NA	NA
10*22443	D	5-23-18	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA		NA	NA
10*22503	D	5-23-18	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA		NA	NA
10*22505	D	5-23-18	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA		NA	NA
10*22594	D	5-23-18	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA		NA	NA
10*22609	D	5-23-18	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA		NA	NA
10*22613	D	5-23-18	JEWELL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA		NA	NA

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10*22779	D	5-23-18	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA
10*22809	D	5-23-18	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	WV Department of Environmental Protection	NA	NA
10*22812	D	5-23-18	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA		NA	NA
10*22861	D	5-23-18	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA		NA	NA
10*14843	E	5-23-16	GARY PARSONS	GASTAR EXPLORATION USA, INC	1/8+	805	74	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	5-23-16	WANDA RIDING	GASTAR EXPLORATION USA, INC	1/8+	805	86	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	5-23-16	FAYE CAMPBELL	GASTAR EXPLORATION USA, INC	1/8+	805	91	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	5-23-16	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	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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										RECEIVED Office of Oil and Gas	JUN 18 2018	WV Department of Environmental Protection			
10*14848	E	5-23-16	NEVA KELLER	GASTAR EXPLORATION USA, INC	1/8+	806	268	NA	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	5-23-16	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	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	5-23-16	CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	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	5-23-16	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	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	5-23-16	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	806	259	NA	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*14853	E	5-23-16	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	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	5-23-16	CATHERINE HUMMEL	GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	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	5-23-16	JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/8+	808	445	NA	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*14856	E	5-23-16	GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	Environmental Protection WV Department of	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc
10*14857	E	5-23-16	CHERYL HILL	GASTAR EXPLORATION USA, INC	1/8+	808	493	NA	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc
10*14858	E	5-23-16	EUGENE FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	483	NA	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc
10*14859	E	5-23-16	MELVIN FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	495	NA	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc
10*14860	E	5-23-16	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc
10*14861	E	5-23-16	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc
10*14862	E	5-23-16	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc
10*14863	E	5-23-16	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc

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10*14864	E	5-23-16	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010 WV Department of Environmental Protection	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	5-23-16	VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010 WV Department of Environmental Protection	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	5-23-16	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010 WV Department of Environmental Protection	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	5-23-16	RANDY BERISFORD	GASTAR EXPLORATION USA, INC	1/8+	810	319	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010 WV Department of Environmental Protection	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	5-23-16	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010 WV Department of Environmental Protection	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	5-23-16	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010 WV Department of Environmental Protection	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	5-23-16	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010 WV Department of Environmental Protection	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	5-23-16	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010 WV Department of Environmental Protection	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*14872	E	5-23-16	DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14873	E	5-23-16	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	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	5-23-16	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14875	E	5-23-16	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14876	E	5-23-16	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14877	E	5-23-16	GARY OBOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14878	E	5-23-16	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14879	E	5-23-16	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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10*14880	E	5-23-16	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	RECEIVED Office of Oil and Gas 1/18/18	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14881	E	5-23-16	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NY Department of Environmental Protection	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14882	E	5-23-16	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14883	E	5-23-16	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14884	E	5-23-16	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14885	E	5-23-16	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14886	E	5-23-16	JODI YOHO	GASTAR EXPLORATION INC		854	604	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14887	E	5-23-16	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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10*14888	E	5-23-16	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	RECEIVED Office of Oil and Gas JUN 18 WV Department of Environmental Protection	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14889	E	5-23-16	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14890	E	5-23-16	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14891	E	5-23-16	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14897	E	5-23-16	CLARA YOHO	GASTAR EXPLORATION USA, INC	1/8+	810	314	NA	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*16034	E	5-23-16	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA
10*17145	E	5-23-16	JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	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	5-23-16	CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	NA	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

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10*17147	E	5-23-16	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	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	5-23-16	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	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	5-23-16	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	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	5-23-16	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	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	5-23-16	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	NA	NA	NA
10*17532	E	5-23-16	DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA	NA	NA
10*17535	E	5-23-16	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA	NA	NA
10*17539	E	5-23-16	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA	NA	NA

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10*17540	E	5-23-16	MONTY ESTEL	TH EXPLORATION, LLC	1/8+	941	624	NA	NA	NA	NA	NA	NA
10*17541	E	5-23-16	ROBERT D STRAWN AND TAMMY J STRAWN	TH EXPLORATION, LLC	1/8+	942	21	NA	NA	RECEIVED Office of Oil and Gas NA	JUN 18 2018 WV Department of Environmental Protection	NA	NA
10*17542	E	5-23-16	JEFFREY G HAZEL AND SHEILA M HAZEL	TH EXPLORATION, LLC	1/8+	942	12	NA	NA	NA	NA	NA	NA
10*17543	E	5-23-16	CARL EDWARD MCCOY AND CAROLYN SUE MCCOY	TH EXPLORATION, LLC	1/8+	942	15	NA	NA	NA	NA	NA	NA
10*17544	E	5-23-16	DEBORAH LYNN SCHWING	TH EXPLORATION, LLC	1/8+	942	377	NA	NA	NA	NA	NA	NA
10*17545	E	5-23-16	LINDA SWOPE	TH EXPLORATION, LLC	1/8+	942	24	NA	NA	NA	NA	NA	NA
10*17546	E	5-23-16	SAMUEL EARL FRANCIS AND ALICE L FRANCIS	TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA
10*17593	E	5-23-16	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA

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10*17594	E	5-23-16	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	RECEIVED Offices of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA
10*17595	E	5-23-16	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA
10*17640	E	5-23-16	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA
10*17679	E	5-23-16	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA
10*17680	E	5-23-16	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA
10*17681	E	5-23-16	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA
10*17682	E	5-23-16	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA
10*17683	E	5-23-16	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA

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10*17684	E	5-23-16	DAVID MCCOY AND LORI MCCOY	TH EXPLORATION, LLC	1/8+	942	18	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*17715	E	5-23-16	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*17719	E	5-23-16	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA	NA
10*17720	E	5-23-16	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA	NA	NA
10*17775	E	5-23-16	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	NA	NA	NA
10*17776	E	5-23-16	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA	NA	NA	NA
10*17824	E	5-23-16	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA	NA	NA	NA
10*17901	E	5-23-16	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA	NA	NA	NA

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10*17965	E	5-23-16	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 NY Department of Environmental Protection	NA	NA	NA
10*18042	E	5-23-16	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA	NA	NA	NA
10*18043	E	5-23-16	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA	NA	NA	NA	NA	NA
10*18044	E	5-23-16	TRACEY ESTEL	TH EXPLORATION, LLC	1/8+	927	109	NA	NA	NA	NA	NA	NA
10*18176	E	5-23-16	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA
10*18329	E	5-23-16	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA	NA	NA	NA
10*18367	E	5-23-16	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	NA
10*18368	E	5-23-16	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA

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10*18371	E	5-23-16	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	461	NA	NA	NA	NA	NA	NA
10*18386	E	5-23-16	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*18598	E	5-23-16	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*18795	E	5-23-16	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA
10*18994	E	5-23-16	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	NA	NA	NA
10*19656	E	5-23-16	DEBRA ROUDEBUSH	TH EXPLORATION, LLC	1/8+	944	105	NA	NA	NA	NA	NA	NA
10*19736	E	5-23-16	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	NA	NA	NA
10*19999	E	5-23-16	MELISSA ANN BRAUN AND RAYMOND BRAUN	TH EXPLORATION, LLC	1/8+	951	627	NA	NA	NA	NA	NA	NA

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10*21084	E	5-23-16	RANDALL C ROGERSON & TRACY LYNN ROGERSON	TH EXPLORATION, LLC	1/8+	949	368	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 '18	NA	NA	NA
10*21217	E	5-23-16	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21222	E	5-23-16	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21425	E	5-23-16	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21428	E	5-23-16	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21434	E	5-23-16	CATHERINE HUMMEL	TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21451	E	5-23-16	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21452	E	5-23-16	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA

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10*21457	E	5-23-16	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA
10*21458	E	5-23-16	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	WV Department of Environmental Protection	NA	NA
10*21459	E	5-23-16	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA
10*21498	E	5-23-16	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA	NA
10*21500	E	5-23-16	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA
10*21501	E	5-23-16	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA
10*21502	E	5-23-16	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA
10*21503	E	5-23-16	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	NA	NA

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10*21655	E	5-23-16	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	959	335	NA	NA	NA	NA	NA	NA
10*21656	E	5-23-16	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*21657	E	5-23-16	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21774	E	5-23-16	JOYCE KAY BURTON AND SAMUEL C BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA	NA	NA
10*21813	E	5-23-16	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA	NA	NA
10*21815	E	5-23-16	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA	NA	NA	NA	NA	NA
10*21816	E	5-23-16	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA	NA	NA	NA	NA	NA
10*21817	E	5-23-16	MARY LOU HLINKA AND RICHARD G HLINKA SR	TH EXPLORATION, LLC	1/8+	959	514	NA	NA	NA	NA	NA	NA

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10*21819	E	5-23-16	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA	NA
10*21820	E	5-23-16	MARION DAVID AND JANICE L OTT	TH EXPLORATION, LLC	1/8+	959	506	NA	NA		NA	NA	NA	NA
10*21832	E	5-23-16	MARQUITA CLYBURN	TH EXPLORATION, LLC	1/8+	959	510	NA	NA		NA	NA	NA	NA
10*21948	E	5-23-16	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA		NA	NA	NA	NA
10*21949	E	5-23-16	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA		NA	NA	NA	NA
10*21950	E	5-23-16	JUDITH A TAYLOR	TH EXPLORATION, LLC	1/8+	960	74	NA	NA		NA	NA	NA	NA
10*21951	E	5-23-16	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA		NA	NA	NA	NA
10*21994	E	5-23-16	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA		NA	NA	NA	NA

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10*22013	E	5-23-16	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA
10*22014	E	5-23-16	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*22018	E	5-23-16	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*22026	E	5-23-16	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA
10*22027	E	5-23-16	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA
10*22093	E	5-23-16	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA
10*22102	E	5-23-16	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA
10*22128	E	5-23-16	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA

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10*22142	E	5-23-16	CHERYL HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*22143	E	5-23-16	WANDA J AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA
10*22144	E	5-23-16	VICKY AND DENNIS STRAUSS	TH EXPLORATION, LLC	1/8+	961	429	NA	NA	NA	NA	NA	NA
10*22165	E	5-23-16	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA
10*22178	E	5-23-16	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA
10*22180	E	5-23-16	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA
10*22181	E	5-23-16	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA
10*22287	E	5-23-16	MISSY AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA

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10*22332	E	5-23-16	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*22339	E	5-23-16	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	PA Department of Environmental Protection	NA	NA	NA
10*22354	E	5-23-16	LORETTA M AND DAVID DOUGHERTY	TH EXPLORATION, LLC	1/8+	964	516	NA	NA	NA	NA	NA	NA
10*22436	E	5-23-16	TESSEAN FAMILY REVOCABLE TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA
10*22437	E	5-23-16	SHERRY L AND DANIEL IMRIE	TH EXPLORATION, LLC	1/8+	963	631	NA	NA	NA	NA	NA	NA
10*22440	E	5-23-16	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA	NA	NA	NA	NA	NA
10*22443	E	5-23-16	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA
10*22450	E	5-23-16	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA	NA	NA

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10*22503	E	5-23-16	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA	NA
10*22504	E	5-23-16	MELVIN FANKHAUSER	TH EXPLORATION, LLC	1/8+	974	351	NA	NA	WV Department of Environmental Protection	NA	NA	NA	NA
10*22505	E	5-23-16	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA	NA
10*22509	E	5-23-16	RANDY AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA	NA
10*22560	E	5-23-16	RONALD J KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA	NA
10*22592	E	5-23-16	RUSSELL W AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA	NA
10*22593	E	5-23-16	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA	NA
10*22594	E	5-23-16	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA

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10*22609	E	5-23-16	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA
10*22613	E	5-23-16	JEWELL CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA
10*22644	E	5-23-16	RICHARD EUGENE KELLER	TH EXPLORATION, LLC	1/8+	968	214	NA	NA	NA	NA	NA	NA
10*22779	E	5-23-16	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA
10*22809	E	5-23-16	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA
10*22811	E	5-23-16	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA
10*22812	E	5-23-16	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA
10*22813	E	5-23-16	WANDA M BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA	NA	NA

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10*22861	E	5-23-16	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 NY Department of Environmental Protection	NA	NA	NA	NA
10*14843	F	5-23-16.1	GARY PARSONS	GASTAR EXPLORATION USA, INC	1/8+	805	74	NA	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	F	5-23-16.1	WANDA RIDING	GASTAR EXPLORATION USA, INC	1/8+	805	86	NA	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	F	5-23-16.1	FAYE CAMPBELL	GASTAR EXPLORATION USA, INC	1/8+	805	91	NA	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	F	5-23-16.1	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	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	F	5-23-16.1	NEVA KELLER	GASTAR EXPLORATION USA, INC	1/8+	806	268	NA	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	F	5-23-16.1	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	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	F	5-23-16.1	CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	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*14851	F	S-23-16.1	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	RECEIVED Office of Oil and Gas WV Department of Environmental Protection 14JUN 18 2018	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14852	F	S-23-16.1	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	
10*14853	F	S-23-16.1	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	F	S-23-16.1	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	F	S-23-16.1	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	F	S-23-16.1	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	F	S-23-16.1	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	F	S-23-16.1	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	

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10*14859	F	5-23-16.1	MELVIN FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	495	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14860	F	5-23-16.1	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14861	F	5-23-16.1	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14862	F	5-23-16.1	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14863	F	5-23-16.1	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14864	F	5-23-16.1	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14865	F	5-23-16.1	VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14866	F	5-23-16.1	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC

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10*14867	F	5-23-16.1	RANDY BERISFORD	GASTAR EXPLORATION USA, INC	1/8+	810	319	NA	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14868	F	5-23-16.1	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	WV Department of Environmental Protection	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14869	F	5-23-16.1	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 to TH Exploration II, LLC
10*14870	F	5-23-16.1	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA		21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14871	F	5-23-16.1	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	NA	NA		21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14872	F	5-23-16.1	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 to TH Exploration II, LLC
10*14873	F	5-23-16.1	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	NA	NA	NA		21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14874	F	5-23-16.1	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA		36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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10*14875	F	5-23-16.1	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14876	F	5-23-16.1	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14877	F	5-23-16.1	GARY OBLAY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14878	F	5-23-16.1	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14879	F	5-23-16.1	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14880	F	5-23-16.1	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14881	F	5-23-16.1	MARY WHITALATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14882	F	5-23-16.1	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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10*14883	F	5-23-16.1	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	F	5-23-16.1	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	F	5-23-16.1	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	F	5-23-16.1	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	F	5-23-16.1	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	F	5-23-16.1	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	F	5-23-16.1	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	F	5-23-16.1	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

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10*14891	F	5-23-16.1	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	RECEIVED Office of Oil and Gas WV Department of Environmental Protection JUN 18 2018	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14910	F	5-23-16.1	DONALD HENRY	GASTAR EXPLORATION USA, INC	1/8+	819	311	NA	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	F	5-23-16.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA
10*17145	F	5-23-16.1	JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	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	F	5-23-16.1	CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	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	F	5-23-16.1	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	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	F	5-23-16.1	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	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	F	5-23-16.1	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	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

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10*17150	F	5-23-16.1	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	RECEIVED Office of Oil and Gas JUN 16 2016 WV Department of Environmental Protection	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17502	F	5-23-16.1	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17532	F	5-23-16.1	DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA
10*17535	F	5-23-16.1	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA
10*17539	F	5-23-16.1	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA
10*17540	F	5-23-16.1	MONTY ESTEL	TH EXPLORATION, LLC	1/8+	941	624	NA	NA	NA	NA	NA	NA
10*17541	F	5-23-16.1	ROBERT D STRAWN AND TAMMY J STRAWN	TH EXPLORATION, LLC	1/8+	942	21	NA	NA	NA	NA	NA	NA
10*17542	F	5-23-16.1	JEFFREY G HAZEL AND SHEILA M HAZEL	TH EXPLORATION, LLC	1/8+	942	12	NA	NA	NA	NA	NA	NA

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10*17543	F	5-23-16.1	CARL EDWARD MCCOY AND CAROLYN SUE MCCOY	TH EXPLORATION, LLC	1/8+	942	15	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA
10*17544	F	5-23-16.1	DEBORAH LYNN SCHWING	TH EXPLORATION, LLC	1/8+	942	377	NA	NA	NA	NA	NA	NA	NA
10*17545	F	5-23-16.1	LINDA SWOPE	TH EXPLORATION, LLC	1/8+	942	24	NA	NA	NA	NA	NA	NA	NA
10*17546	F	5-23-16.1	SAMUEL EARL FRANCIS AND ALICE L FRANCIS	TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA	NA
10*17593	F	5-23-16.1	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA	NA
10*17594	F	5-23-16.1	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA	NA
10*17595	F	5-23-16.1	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA	NA
10*17640	F	5-23-16.1	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA	NA

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10*17679	F	5-23-16.1	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*17680	F	5-23-16.1	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA
10*17681	F	5-23-16.1	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA
10*17682	F	5-23-16.1	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA
10*17683	F	5-23-16.1	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA
10*17684	F	5-23-16.1	DAVID MCCOY AND LORI MCCOY	TH EXPLORATION, LLC	1/8+	942	18	NA	NA	NA	NA	NA	NA
10*17715	F	5-23-16.1	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA
10*17719	F	5-23-16.1	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA	NA

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10*17720	F	5-23-16.1	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*17775	F	5-23-16.1	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*17776	F	5-23-16.1	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA		NA	NA	NA
10*17824	F	5-23-16.1	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA		NA	NA	NA
10*17901	F	5-23-16.1	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA		NA	NA	NA
10*17965	F	5-23-16.1	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA	NA	NA		NA	NA	NA
10*18042	F	5-23-16.1	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA		NA	NA	NA
10*18043	F	5-23-16.1	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA	NA	NA		NA	NA	NA

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10*18044	F	5-23-16.1	TRACEY ESTEL	TH EXPLORATION, LLC	1/8+	927	109	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA
10*18176	F	5-23-16.1	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	WV Department of Environmental Protection	NA	NA
10*18329	F	5-23-16.1	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA		NA	NA
10*18367	F	5-23-16.1	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA		NA	NA
10*18368	F	5-23-16.1	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA		NA	NA
10*18371	F	5-23-16.1	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	461	NA	NA	NA		NA	NA
10*18386	F	5-23-16.1	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA		NA	NA
10*18598	F	5-23-16.1	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA		NA	NA

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10*18795	F	5-23-16.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*18994	F	5-23-16.1	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	WV Department of Environmental Protection	NA	NA
10*19656	F	5-23-16.1	DEBRA ROUDEBUSH	TH EXPLORATION, LLC	1/8+	944	105	NA	NA	NA	NA	NA	NA
10*19736	F	5-23-16.1	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	NA	NA	NA
10*19999	F	5-23-16.1	MELISSA ANN BRAUN AND RAYMOND BRAUN	TH EXPLORATION, LLC	1/8+	951	627	NA	NA	NA	NA	NA	NA
10*21084	F	5-23-16.1	RANDALL C ROGERSON & TRACY LYNN ROGERSON	TH EXPLORATION, LLC	1/8+	949	368	NA	NA	NA	NA	NA	NA
10*21217	F	5-23-16.1	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	NA	NA	NA	NA
10*21222	F	5-23-16.1	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA	NA	NA	NA

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10*21425	F	5-23-16.1	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA
10*21428	F	5-23-16.1	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	NA	NA	NA
10*21434	F	5-23-16.1	CATHERINE HUMMEL	TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	NA	NA	NA
10*21451	F	5-23-16.1	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA	NA
10*21452	F	5-23-16.1	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA	NA	NA
10*21457	F	5-23-16.1	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	NA	NA	NA
10*21458	F	5-23-16.1	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA	NA	NA
10*21459	F	5-23-16.1	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA

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10*21498	F	5-23-16.1	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	4705102059
10*21500	F	5-23-16.1	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*21501	F	5-23-16.1	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA	NA
10*21502	F	5-23-16.1	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA	NA
10*21503	F	5-23-16.1	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	NA	NA	NA
10*21562	F	5-23-16.1	MARY ETTE TAYLOR AND GARY W TAYLOR	TH EXPLORATION, LLC	1/8+	958	414	NA	NA	NA	NA	NA	NA	NA
10*21563	F	5-23-16.1	DAVID R TAYLOR AND MARIA TAYLOR	TH EXPLORATION, LLC	1/8+	958	422	NA	NA	NA	NA	NA	NA	NA
10*21565	F	5-23-16.1	KORENE SUE LANTZ	TH EXPLORATION, LLC	1/8+	957	462	NA	NA	NA	NA	NA	NA	NA

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10*21566	F	5-23-16.1	HERBERT M TAYLOR AND LENORA E TAYLOR	TH EXPLORATION, LLC	1/8+	958	418	NA	NA	NA	NA	NA	NA	NA
10*21615	F	5-23-16.1	GARY PARSONS AND JOANN J PARSONS	TH EXPLORATION, LLC	1/8+	959	347	NA	NA	NA	NA	NA	NA	NA
10*21626	F	5-23-16.1	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA	NA	NA	NA
10*21631	F	5-23-16.1	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA	NA	NA	NA	NA	NA	NA
10*21632	F	5-23-16.1	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA	NA	NA	NA
10*21655	F	5-23-16.1	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	959	335	NA	NA	NA	NA	NA	NA	NA
10*21656	F	5-23-16.1	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	NA	NA	NA	NA	NA
10*21657	F	5-23-16.1	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	NA	NA	NA	NA	NA

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10*21774	F	5-23-16.1	JOYCE KAY BURTON AND SAMUEL C BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	RECEIVED Office of Oil and Gas WV Department of Environmental Protection JUN 18 2018	NA	NA	NA	NA
10*21813	F	5-23-16.1	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA	NA	NA	NA
10*21815	F	5-23-16.1	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA	NA	NA	NA	NA	NA	NA
10*21816	F	5-23-16.1	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA	NA	NA	NA	NA	NA	NA
10*21817	F	5-23-16.1	MARY LOU HLINKA AND RICHARD G HLINKA SR	TH EXPLORATION, LLC	1/8+	959	514	NA	NA	NA	NA	NA	NA	NA
10*21819	F	5-23-16.1	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA	NA	NA	NA	NA	NA	NA
10*21820	F	5-23-16.1	MARION DAVID AND JANICE L OTT	TH EXPLORATION, LLC	1/8+	959	506	NA	NA	NA	NA	NA	NA	NA
10*21832	F	5-23-16.1	MARQUITA CLYBURN	TH EXPLORATION, LLC	1/8+	959	510	NA	NA	NA	NA	NA	NA	NA

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10*21948	F	5-23-16.1	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA	NA
10*21949	F	5-23-16.1	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA	NA	NA	NA	NA	NA
10*21950	F	5-23-16.1	JUDITH A TAYLOR	TH EXPLORATION, LLC	1/8+	960	74	NA	NA	NA	NA	NA	NA	NA
10*21951	F	5-23-16.1	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA	NA
10*21994	F	5-23-16.1	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA	NA
10*22013	F	5-23-16.1	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA
10*22014	F	5-23-16.1	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA
10*22018	F	5-23-16.1	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA

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10*22026	F	5-23-16.1	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA	NA
10*22027	F	5-23-16.1	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA	NA
10*22093	F	5-23-16.1	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA
10*22102	F	5-23-16.1	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA	NA
10*22128	F	5-23-16.1	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA	NA
10*22142	F	5-23-16.1	CHERYL HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA	NA	NA	NA	NA
10*22143	F	5-23-16.1	WANDA J AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA	NA
10*22144	F	5-23-16.1	VICKY AND DENNIS STRAUSS	TH EXPLORATION, LLC	1/8+	961	429	NA	NA	NA	NA	NA	NA	NA

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10*22165	F	5-23-16.1	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA	NA
10*22178	F	5-23-16.1	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA	NA
10*22180	F	5-23-16.1	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA	NA
10*22181	F	5-23-16.1	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA	NA
10*22287	F	5-23-16.1	MISSY AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA	NA
10*22332	F	5-23-16.1	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA	NA
10*22339	F	5-23-16.1	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA	NA
10*22354	F	5-23-16.1	LORETTA M AND DAVID DOUGHERTY	TH EXPLORATION, LLC	1/8+	964	516	NA	NA	NA	NA	NA	NA	NA

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10*22436	F	5-23-16.1	TESSEAN FAMILY REVOCABLE TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA	NA	NA
10*22437	F	5-23-16.1	SHERRY L AND DANIEL IMRIE	TH EXPLORATION, LLC	1/8+	963	631	NA	NA	NA	NA	NA	NA	NA
10*22440	F	5-23-16.1	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA	NA	NA	NA	NA	NA	NA
10*22443	F	5-23-16.1	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA	NA
10*22450	F	5-23-16.1	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA	NA	NA	NA
10*22503	F	5-23-16.1	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA	NA
10*22504	F	5-23-16.1	MELVIN FANKHAUSER	TH EXPLORATION, LLC	1/8+	974	351	NA	NA	NA	NA	NA	NA	NA
10*22505	F	5-23-16.1	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA	NA

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10*22509	F	5-23-16.1	RANDY AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA	NA	NA
10*22560	F	5-23-16.1	RONALD J KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA	NA	NA
10*22592	F	5-23-16.1	RUSSELL W AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA	NA	NA
10*22593	F	5-23-16.1	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA	NA	NA
10*22594	F	5-23-16.1	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA	NA
10*22609	F	5-23-16.1	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA	NA
10*22613	F	5-23-16.1	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA	NA
10*22644	F	5-23-16.1	RICHARD EUGENE KELLER	TH EXPLORATION, LLC	1/8+	968	214	NA	NA	NA	NA	NA	NA	NA	NA

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10*22779	F	5-23-16.1	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA
10*22809	F	5-23-16.1	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA
10*22811	F	5-23-16.1	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA
10*22812	F	5-23-16.1	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA
10*22813	F	5-23-16.1	WANDA M BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA	NA	NA
10*22861	F	5-23-16.1	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA	NA	NA	NA
10*14665	G	5-23-15	DOROTHY TEDROW	GASTAR EXPLORATION USA, INC	1/8+	781	539	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC	
10*14669	G	5-23-15	ROBERT HENRY JR	GASTAR EXPLORATION USA, INC	1/8+	787	621	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*14673	G	S-23-15	CAROL CLEMENS	GASTAR EXPLORATION USA, INC	1/8+	787	615	NA	RECEIVED NA Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14675	G	S-23-15	CHRISTOPHER HENRY	GASTAR EXPLORATION USA, INC	1/8+	787	592	NA	NA	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*14676	G	S-23-15	FLOYD ARNOLD HENRY	GASTAR EXPLORATION USA, INC	1/8+	787	625	NA	NA	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*14678	G	S-23-15	TIMOTHY HENRY	GASTAR EXPLORATION USA, INC	1/8+	787	568	NA	NA	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*14681	G	S-23-15	ELZIE HENRY	GASTAR EXPLORATION USA, INC	1/8+	789	573	NA	NA	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*14683	G	S-23-15	LAWRENCE EDGAR HENRY JR.	GASTAR EXPLORATION USA, INC	1/8+	792	106	NA	NA	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*18343	G	S-23-15	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79	NA	NA	NA	NA	NA	NA	NA	NA
10*18682	G	S-23-15	EUGENE RICHARD HENRY SR	TH EXPLORATION, LLC	1/8+	936	131	NA	NA	NA	NA	NA	NA	NA	NA

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10*18948	G	5-23-15	ALICIA A HENRY	TH EXPLORATION, LLC	1/8+	940	127	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA	NA
10*18949	G	5-23-15	CAROLYN WHITE	TH EXPLORATION, LLC	1/8+	940	119	NA	NA	WV Department of Environmental Protection NA	NA	NA	NA	NA
10*19427	G	5-23-15	BOBBY SUE BEDWAY	TH EXPLORATION, LLC	1/8+	940	260	NA	NA	NA	NA	NA	NA	NA
10*19495	G	5-23-15	DAVID HENRY	TH EXPLORATION, LLC	1/8+	941	643	NA	NA	NA	NA	NA	NA	NA
10*19496	G	5-23-15	TAMMY HENRY	TH EXPLORATION, LLC	1/8+	941	641	NA	NA	NA	NA	NA	NA	NA
10*19497	G	5-23-15	RONALD HENRY	TH EXPLORATION, LLC	1/8+	941	637	NA	NA	NA	NA	NA	NA	NA
10*19498	G	5-23-15	DONALD HENRY AND EVA HENRY	TH EXPLORATION, LLC	1/8+	941	639	NA	NA	NA	NA	NA	NA	NA
10*19644	G	5-23-15	ALEXIS HENRY, A MINOR GUARDIAN AD LITEM DAVID C WHITE ESQ	TH EXPLORATION, LLC	1/8+	944	114	NA	NA	NA	NA	NA	NA	NA

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10*19647	G	5-23-15	HOWARD L HENRY AND SYLVIA L HENRY	TH EXPLORATION, LLC	1/8+	944	118	NA	NA	NA	NA	NA	NA	NA
10*19663	G	5-23-15	LAWRENCE MICHAEL HENRY	TH EXPLORATION, LLC	1/8+	944	97	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA	NA
10*19920	G	5-23-15	KENNETH HENRY	TH EXPLORATION, LLC	1/8+	945	438	NA	NA	WV Department of Environmental Protection	NA	NA	NA	NA
10*21996	G	5-23-15	VERNA HALL	TH EXPLORATION, LLC	1/8+	953	538	NA	NA	NA	NA	NA	NA	NA
10*18343	H	5-23-14	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79	NA	NA	NA	NA	NA	NA	NA
10*17189	I	5-23-9.1	ROBERT J HENRY	CHESAPEAKE APPALACHIA LLC	1/8+	716	197	NA	NA	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC	
10*14722	J	5-26-20	HERBERT D MINOR	TRIENERGY HOLDINGS LLC	1/8+	724	200	NA	NA	25/463 TriEnergy Holdings, LLC to NPAR, LLC	26/269 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	J	5-26-20	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	

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10*14816	J	5-26-20	DWG OIL AND GAS ACQUISITIONS L	STONE ENERGY CORPORATION	1/8+	787	49	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	31/113 Stone Energy Corporation to Gastar Exploration Inc
10*17779	J	5-26-20	GARY DOBBS AND SUSAN DOBBS	TH EXPLORATION, LLC	1/8+	938	3	NA	NA	WV Department of Environmental Protection	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*18681	J	5-26-20	RICHARD WHITE II & GLORIA J WHITE	TH EXPLORATION, LLC	1/8+	936	133	NA	NA	NA	NA	NA	NA
10*18757	J	5-26-20	CLAUDIA R SCHEEHLE	TH EXPLORATION, LLC	1/8+	938	464	NA	NA	NA	NA	NA	NA
10*18758	J	5-26-20	SHIRLEY M DORSEY AND WILLIAM DORSEY	TH EXPLORATION, LLC	1/8+	938	468	NA	NA	NA	NA	NA	NA
10*18759	J	5-26-20	SHARON E YOHO	TH EXPLORATION, LLC	1/8+	938	472	NA	NA	NA	NA	NA	NA
10*18947	J	5-26-20	CHARLES ROBERT MYERS	TH EXPLORATION, LLC	1/8+	940	129	NA	NA	NA	NA	NA	NA
10*19719	J	5-26-20	SHIRLEY K WHITE	TH EXPLORATION, LLC	1/8+	944	581	NA	NA	NA	NA	NA	NA

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10*22410	J	5-26-20	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	TBR	TBR	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA	NA
10*22735	J	5-26-20	CHESTNUT HOLDINGS INC	TH EXPLORATION, LLC	1/8+	974	169	NA	NA	NA	NA	NA	NA	NA
10*14722	K	5-26-8	HERBERT D MINOR	TRIENERGY HOLDINGS LLC	1/8+	724	200	NA	NA	NA	25/463 TriEnergy Holdings, LLC	26/269 NPAR, LLC to Chevron	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	K	5-26-8	ORVILLE YOUNG	GASTAR EXPLORATION USA, INC	1/8+	800	598	NA	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	K	5-26-8	DWG OIL AND GAS ACQUISITIONS I	STONE ENERGY CORPORATION	1/8+	787	49	NA	NA	NA	NA	NA	31/113 Stone Energy Corporation to Gastar Exploration Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*17779	K	5-26-8	GARY DOBBS AND SUSAN DOBBS	TH EXPLORATION, LLC	1/8+	938	3	NA	NA	NA	NA	NA	NA	NA
10*18681	K	5-26-8	RICHARD WHITE II & GLORIA J WHITE	TH EXPLORATION, LLC	1/8+	936	133	NA	NA	NA	NA	NA	NA	NA
10*18757	K	5-26-8	CLAUDIA R SCHEEHL	TH EXPLORATION, LLC	1/8+	938	464	NA	NA	NA	NA	NA	NA	NA

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10*18758	K	5-26-8	SHIRLEY M DORSEY AND WILLIAM DORSEY	TH EXPLORATION, LLC	1/8+	938	468	NA	RECEIVED Office of Oil and Gas JUN 13 2018	WV Department of Environmental Protection	NA	NA	NA	NA
10*18759	K	5-26-8	SHARON E YOHO	TH EXPLORATION, LLC	1/8+	938	472	NA	NA	NA	NA	NA	NA	NA
10*18947	K	5-26-8	CHARLES ROBERT MYERS	TH EXPLORATION, LLC	1/8+	940	129	NA	NA	NA	NA	NA	NA	NA
10*19719	K	5-26-8	SHIRLEY K WHITE	TH EXPLORATION, LLC	1/8+	944	581	NA	NA	NA	NA	NA	NA	NA
10*22410	K	5-26-8	STONE HILL MINERALS HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	TBR	TBR	NA	NA	NA	NA	NA	NA	NA
10*22735	K	5-26-8	CHESTNUT HOLDINGS INC	TH EXPLORATION, LLC	1/8+	974	169	NA	NA	NA	NA	NA	NA	NA
10*14785	L	5-26-11	DAVID W. STRAUCH	GASTAR EXPLORATION USA, INC	1/8+	799	64	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*14786	L	5-26-11	TWILA ORA WHIPKEY	GASTAR EXPLORATION USA, INC	1/8+	799	61	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*14792	L	5-26-11	TIMOTHY YOHO	GASTAR EXPLORATION USA, INC	1/8+	799	536	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14797	L	5-26-11	ORVILLE YOUNG	GASTAR EXPLORATION USA, INC	1/8+	800	598	NA	NA			NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14808	L	5-26-11	DANA MILICIA HUMPHREYS	GASTAR EXPLORATION USA, INC	1/8+	809	552	NA	NA			NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14809	L	5-26-11	DEWEY A. MILICIA	GASTAR EXPLORATION USA, INC	1/8+	809	549	NA	NA			NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14810	L	5-26-11	NICOLETTA MILICIA BLOODWORTH	GASTAR EXPLORATION USA, INC	1/8+	809	546	NA	NA			NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc to TH Exploration II, LLC
10*14812	L	5-26-11	DENISE ANN GALE	GASTAR EXPLORATION USA, INC	1/8+	815	224	NA	NA			NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14813	L	5-26-11	DEBRA JANE GALE	GASTAR EXPLORATION USA, INC	1/8+	818	568	NA	NA			NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14815	L	5-26-11	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	535	NA	NA			NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC

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10*14822	L	5-26-11	ONWARD E BURGE TRUST	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14823	L	5-26-11	SARAH L BURGE TRUST	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14959	L	5-26-11	REBECCA S WORD	GASTAR EXPLORATION INC	1/8+	872	219	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14970	L	5-26-11	GRACE EXLINE	GASTAR EXPLORATION INC	1/8+	872	623	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*17195	L	5-26-11	PATRICIA HARTMAN	GASTAR EXPLORATION USA, INC	1/8+	695	317	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17196	L	5-26-11	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA, INC	1/8+	695	311	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17197	L	5-26-11	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA, INC	1/8+	695	313	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17200	L	5-26-11	STEPHANIE L. HALL	GASTAR EXPLORATION USA, INC	1/8+	697	156	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC

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10*17201	L	S-26-11	DENISE A GALE	GASTAR EXPLORATION USA, INC	1/8+	697	395	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17202	L	S-26-11	JANE GALE	GASTAR EXPLORATION USA, INC	1/8+	697	385	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17207	L	S-26-11	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA, INC	1/8+	697	389	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17212	L	S-26-11	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA, INC	1/8+	697	158	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17213	L	S-26-11	CAROL DEEN GARDNER	GASTAR EXPLORATION USA, INC	1/8+	697	154	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and 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 Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17822	L	S-26-11	ANTOINE E GERAUD	TH EXPLORATION, LLC	1/8+	943	530	NA	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA
10*18114	L	S-26-11	DARRELL NEWLAND	TH EXPLORATION, LLC	1/8+	927	66	NA	NA	NA	WV Department of Environmental Protection	NA	NA	NA
10*18115	L	S-26-11	DONALD R NEWLAND AND SUZANNE NEWLAND	TH EXPLORATION, LLC	1/8+	927	73	NA	NA	NA	NA	NA	NA	NA

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10*18275	L	5-26-11	BETTY JEAN NEELY	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA	NA
10*18366	L	5-26-11	MARY LOU WILSON AND STANLEY D WILSON	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA
10*18369	L	5-26-11	CRAIG ALAN YOHO AND DONNA M YOHO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA
10*18370	L	5-26-11	SAMUEL D YOHO	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA
10*18379	L	5-26-11	DAVID N DEVICK TRUSTEE OF THE TONI JO MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA
10*18541	L	5-26-11	PATRICK P MCHENRY	TH EXPLORATION, LLC	1/8+	933	649	NA	NA	NA	NA	NA	NA	NA
10*18818	L	5-26-11	LUCILLE R MCHENRY	TH EXPLORATION, LLC	1/8+	937	624	NA	NA	NA	NA	NA	NA	NA
10*19486	L	5-26-11	BARBARA ANN MAYNARD	TH EXPLORATION, LLC	1/8+	941	229	NA	NA	NA	NA	NA	NA	NA

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Operator's Well No. Evad - 4HM

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10*19540	L	5-26-11	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	53	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA	NA
10*19543	L	5-26-11	ROBERT I BONAR SR	TH EXPLORATION, LLC	1/8+	942	61	NA	WV Department of Environmental Protection	NA	NA	NA	NA
10*19640	L	5-26-11	MARGARET F RICHMOND	TH EXPLORATION, LLC	1/8+	944	120	NA	NA	NA	NA	NA	NA
10*19641	L	5-26-11	BRADFORD D LOWERY & DEBORAH BRADFORD	TH EXPLORATION, LLC	1/8+	944	122	NA	NA	NA	NA	NA	NA
10*19650	L	5-26-11	CLAUDIA LOWERY MALLOY	TH EXPLORATION, LLC	1/8+	944	99	NA	NA	NA	NA	NA	NA
10*19652	L	5-26-11	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA
10*19657	L	5-26-11	JANET LEE SPARKS	TH EXPLORATION, LLC	1/8+	944	111	NA	NA	NA	NA	NA	NA
10*19662	L	5-26-11	CHESTNUT HOLDINGS INC	TH EXPLORATION, LLC	1/8+	949	311	NA	NA	NA	NA	NA	NA

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10*19732	L	5-26-11	CARL M MCHENRY AND PAMELA MCHENRY	TH EXPLORATION, LLC	1/8+	944	469	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2010	NA	NA	NA	NA
10*19858	L	5-26-11	JAMES MICHAEL YOHO	TH EXPLORATION, LLC	1/8+	945	442	NA	NA	WV Department of Environmental Protection	NA	NA	NA	NA
10*19903	L	5-26-11	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA
10*19996	L	5-26-11	CHARLES D WOOD	TH EXPLORATION, LLC	1/8+	947	589	NA	NA	NA	NA	NA	NA	NA
10*21073	L	5-26-11	ARDITH R ROSE AND TOMMY E ROSE	TH EXPLORATION, LLC	1/8+	951	608	NA	NA	NA	NA	NA	NA	NA
10*21074	L	5-26-11	MALCOLM E WOOD AND JOAN J WOOD	TH EXPLORATION, LLC	1/8+	951	610	NA	NA	NA	NA	NA	NA	NA
10*21174	L	5-26-11	SHAWN M WOOD	TH EXPLORATION, LLC	1/8+	952	190	NA	NA	NA	NA	NA	NA	NA
10*21419	L	5-26-11	DAPHNE HUFFMAN AND CHARLES HUFFMAN	TH EXPLORATION, LLC	1/8+	957	59	NA	NA	NA	NA	NA	NA	NA

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470510205

10*21431	L	5-26-11	GARY WAYNE ZESIGER & VICKIE ZESIGER	TH EXPLORATION, LLC	1/8+	957	57	NA	RECEIVED Office of Oil and Gas JUN 18 2018	WV Department of Environmental Protection	NA	NA	NA	NA
10*21436	L	5-26-11	CECILIA D NEWLAND	TH EXPLORATION, LLC	1/8+	957	55	NA	NA	NA	NA	NA	NA	NA
10*21439	L	5-26-11	M VIRGINIA & EDWARD C MARSH	TH EXPLORATION, LLC	1/8+	957	53	NA	NA	NA	NA	NA	NA	NA
10*21469	L	5-26-11	KIMBERLY S DENNY AND JAMES E DENNY	TH EXPLORATION, LLC	1/8+	957	244	NA	NA	NA	NA	NA	NA	NA
10*21471	L	5-26-11	RICHARD ROSS WILSON	TH EXPLORATION, LLC	1/8+	960	190	NA	NA	NA	NA	NA	NA	NA
10*21620	L	5-26-11	ROBERT CRAIG MONTGOMERY AND CYNTHIA R MONTGOMERY	TH EXPLORATION, LLC	1/8+	959	496	NA	NA	NA	NA	NA	NA	NA
10*21621	L	5-26-11	MARILYN NOEL	TH EXPLORATION, LLC	1/8+	959	494	NA	NA	NA	NA	NA	NA	NA
10*21658	L	5-26-11	CLARENCE RICHARD ZESIGER & MARY ZESIGER	TH EXPLORATION, LLC	1/8+	959	490	NA	NA	NA	NA	NA	NA	NA

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														4705102059
10*21659	L	5-26-11	DEBORAH BLOUGH	TH EXPLORATION, LLC	1/8+	958	392	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA	NA
10*21660	L	5-26-11	PAMELA L DRAZIC AND JEFFREY DRAZIC	TH EXPLORATION, LLC	1/8+	958	390	NA	NA	NA	NA	NA	NA	NA
10*21830	L	5-26-11	MARISSA MASON	TH EXPLORATION, LLC	1/8+	960	200	NA	NA	NA	NA	NA	NA	NA
10*21831	L	5-26-11	MATTHEW MASON	TH EXPLORATION, LLC	1/8+	966	122	NA	NA	NA	NA	NA	NA	NA
10*21834	L	5-26-11	GEORGE DANIEL KRUGER	TH EXPLORATION, LLC	1/8+	960	204	NA	NA	NA	NA	NA	NA	NA
10*21944	L	5-26-11	JILL A BECK	TH EXPLORATION, LLC	1/8+	960	101	NA	NA	NA	NA	NA	NA	NA
10*21947	L	5-26-11	WALLACE LYNN WENDEL	TH EXPLORATION, LLC	1/8+	965	59	NA	NA	NA	NA	NA	NA	NA
10*22007	L	5-26-11	DEBORAH K KLIMASZEWSKI AND FRANK KLIMASZEWSKI	TH EXPLORATION, LLC	1/8+	959	492	NA	NA	NA	NA	NA	NA	NA

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														4705102059
10*22008	L	5-26-11	COLIN R YOHO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA	NA
10*22025	L	5-26-11	MARK & MARY YOHO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA
10*22031	L	5-26-11	PHILLIP AND PATRICIA YOHO	TH EXPLORATION, LLC	1/8+	960	535	NA	NA	NA	NA	NA	NA	NA
10*22032	L	5-26-11	JOANNE E RAY	TH EXPLORATION, LLC	1/8+	960	537	NA	NA	NA	NA	NA	NA	NA
10*22106	L	5-26-11	BARRY RAY MOORE	TH EXPLORATION, LLC	1/8+	954	643	NA	NA	NA	NA	NA	NA	NA
10*22129	L	5-26-11	JANICE HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA
10*22137	L	5-26-11	CONNIE L NEELY	TH EXPLORATION, LLC	1/8+	961	466	NA	NA	NA	NA	NA	NA	NA
10*22285	L	5-26-11	DONALD J AND SANDY L WILSON	TH EXPLORATION, LLC	1/8+	962	193	NA	NA	NA	NA	NA	NA	NA

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10*22334	L	5-26-11	JOHN BRYANT	TH EXPLORATION, LLC	1/8+	962	540	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018	NA	NA	NA	NA
10*22434	L	5-26-11	EDWIN NELSON WOOD	TH EXPLORATION, LLC	1/8+	963	637	NA	NA	WV Department of Environmental Protection	NA	NA	NA	NA
10*22441	L	5-26-11	APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA
10*22510	L	5-26-11	DONNA YOHO	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA
10*22561	L	5-26-11	MARY ROSE YOHO	TH EXPLORATION, LLC	1/8+	968	200	NA	NA	NA	NA	NA	NA	NA
10*22562	L	5-26-11	HAROLD C SIMMONS	TH EXPLORATION, LLC	1/8+	966	100	NA	NA	NA	NA	NA	NA	NA
10*22563	L	5-26-11	KIMBERLY D STRAUCH	TH EXPLORATION, LLC	1/8+	966	522	NA	NA	NA	NA	NA	NA	NA
10*22585	L	5-26-11	CYNTHIA L CHICK	TH EXPLORATION, LLC	1/8+	966	102	NA	NA	NA	NA	NA	NA	NA

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Operator's Well No. Evad - 4HM

												4705102059			
10*22718	L	5-26-11	WILLIAM R AND CONNIE RICHMOND	TH EXPLORATION, LLC	1/8+	963	389	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA	NA	NA
10*23042	L	5-26-11	MARK A YOHO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	RECEIVED Office of Oil and Gas JUN 18 2018 WV Department of Environmental Protection	NA	NA	NA	NA	NA

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COPY

AFFIDAVIT

STATE OF TEXAS §
 § SS
 COUNTY OF TARRANT §

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JUN 18 2018

WV Department of
Environmental Protection

On this 18th day of October, 2016, before me, the undersigned authority,
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;
4. Tug Hill Operating, LLC is authorized to operate and maintain the assets owned by THQ Appalachia I, LLC, including, as referenced above, TH Exploration, LLC, TH Exploration II, LLC, and TH Exploration III, LLC, including oil and gas leases, wells, pipelines, surface facilities, and other all other assets that support the business of THQ Appalachia I, LLC, and;
4. Specifically, Tug Hill Operating, LLC is authorized to submit and obtain well work permits and carry out all activities pursuant to such work permits for assets owned by TH Exploration, LLC, TH Exploration II, LLC, TH Exploration III, LLC.

FURTHER, AFFIANT SAITH NOT.

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

David D. Kalish
Affiant: David D. Kalish

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 \$5.00

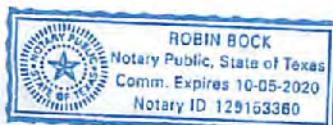
Sworn and subscribed to (or affirmed) before me on this, the 18th day of October, 2016, by David D. Kalish.

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



Jan 4705102059
MARSHALL County 01:22:38 PM
Instrument No 1403489
Date Recorded 04/27/2016
Document Type ABN
Pages Recorded 77
Book-Page 36-9
Recording Fee \$77.00
Additional. \$13.00

WHEN RECORDED RETURN TO:
TH Exploration II, LLC
1320 South University Drive, Suite 500
Fort Worth, Texas 76107
Attn: David Kalish

Execution Version

ASSIGNMENT AND BILL OF SALE

STATE OF WV

§
§
§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF MARSHALL

THIS ASSIGNMENT AND BILL OF SALE (this "*Assignment*"), dated April 7, 2016, but effective as of 7:00 A.M. Houston time on January 1, 2016 (the "*Effective Time*"), is between Gastar Exploration Inc., a Delaware corporation, whose address is 1331 Lamar Street, Suite 650 Houston, Texas 77010 ("*Assignor*"), and TH Exploration II, LLC, a Texas limited liability company, whose address is 1320 South University Drive, Suite 500, Fort Worth, Texas 76107 ("*Assignee*"). Assignor and Assignee are each, individually, referred to herein as a "*Party*" and, collectively, as the "*Parties*".

Capitalized terms used but not defined herein shall have the respective meanings set forth in that certain Purchase and Sale Agreement (the "*Purchase Agreement*"), dated as of February 19, 2016, by and between Assignor and Assignee (as successor-in-interest).

Section 1. Assignment. The conveyance and assignment herein shall be deemed effective as of the Effective Time.

For Ten Dollars (\$10.00) and other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged), Assignor does hereby forever GRANT, BARGAIN, SELL, CONVEY, ASSIGN, TRANSFER, SET OVER AND DELIVER unto Assignee, all of Assignor's right, title and interest in and to the following interests and properties (such right, title and interest described in subsections (a) through (k) of this Section 1, less and except the Excluded Assets, collectively, the "*Conveyed Interests*");

(a) all oil, gas and/or mineral leases of Assignor, together with any and all other right, title and interest of Assignor in and to the leasehold estates created thereby, including subleases, royalties, overriding royalties, net profits interest, carried interests or similar rights or interests in such leases, and together with all rights, privileges, benefits and powers conferred upon Assignor with respect to the use and occupation of the lands covered thereby that may be necessary, convenient or incidental to the possession and enjoyment of such leases, located in Marshall, Wetzel, Doddridge, Harrison, Lewis, Marion, and Monongalia Counties, West Virginia and Greene, Butler, Fayette, Somerset, and Clearfield Counties, Pennsylvania, including those described on Exhibit A—Part 1 attached hereto (subject to any reservations, limitations or depth restrictions described on Exhibit A—Part 1), (Assignor's interest in such leases and other right, title and interest as so limited, the "*Leases*");

(b) all rights and interests in, under or derived from all unitization agreements in effect with respect to any of the Leases and the units created thereby, including those *RECEIVED
Office of Oil and Gas
WV Department of Environmental Protection*

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") INSO FAR AND ONLY INSO FAR 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 ACREEAGE TRADE AGREEMENT OR THIS ASSIGNMENT, ASSIGNOR MAKES NO, AND HEREBY EXPRESSLY DISCLAIMS, ANY REPRESENTATION

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JUN 18 2018
WV Department of
Environmental Protection



TUG HILL

4705102059

June 14, 2018

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

RE: Evad 4HM

Subject: Marshall County Route 29/2, 29/1 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, 29/1 and 29 in the area reflected on the Evad 4HM well plat. THO has conducted a full title search in the relevant Court House to confirm its ownership under said County Routes and is not currently aware of any recorded document that would suggest an ownership other than THO.

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

Sincerely,

Amy L. Miller
Permitting Specialist – Appalachia Region

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

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

Date of Notice Certification: 06/07/2018

API No. 47- 051 -
Operator's Well No. Evad 4HM
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: 517,720.70
Northing: 4,399,405.66
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: (i) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:

*PLEASE CHECK ALL THAT APPLY

1. NOTICE OF SEISMIC ACTIVITY or NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED
2. NOTICE OF ENTRY FOR PLAT SURVEY or NO PLAT SURVEY WAS CONDUCTED
3. NOTICE OF INTENT TO DRILL or NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or
 WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)
4. NOTICE OF PLANNED OPERATION
5. PUBLIC NOTICE
6. NOTICE OF APPLICATION

OOG OFFICE USE ONLY

- RECEIVED/
NOT REQUIRED
- RECEIVED
- RECEIVED/
NOT REQUIRED
- RECEIVED
- RECEIVED
- RECEIVED

Required Attachments:

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

JUN 18 2018

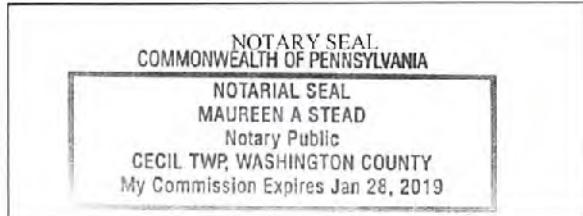
4705102059

Certification of Notice is hereby given:

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

Well Operator: Tug Hill Operating, LLC
By: Amy L. Miller Amy L. Miller
Its: Permitting Specialist
Telephone: 724-749-8388

Address: 380 Southpointe Boulevard, Plaza II, Suite 200
Canonsburg, PA 15317
Facsimile: 724-338-2030
Email: amiller@tug-hillop.com



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 depprivacyofficer@wv.gov.

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JUN 18 2018
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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

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: Wilbur L. McHenryAddress: 13820 Mtcalf Avenue #11313

Overland Park, KS 66223

Name: _____

Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: Appalachian Power CompanyAddress: 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

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

Notice is hereby given:

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

This Notice Shall Include:

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

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

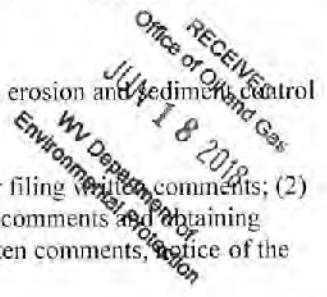
Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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

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

Well Location Restrictions

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



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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

WV Department of
Environmental Protection

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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JUN 18 2018
WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 4705102059
OPERATOR WELL NO. Read MM
Well Pad Name: Accettola

Notice is hereby given by:

Well Operator: Tug Hill Operating, LLC

Telephone: 724-749-8388

Email: amiller@tug-hillop.com

amy miller

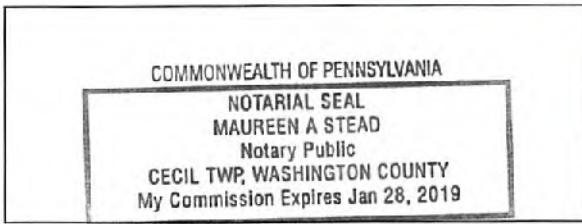
Address: 380 Southpointe Boulevard, Plaza II, Suite 200

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

Supplement Pg. 1A

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

WATER WELL REPORT

Well: EVAD 4HM
 District: Franklin
 County: Marshall
 State: WV

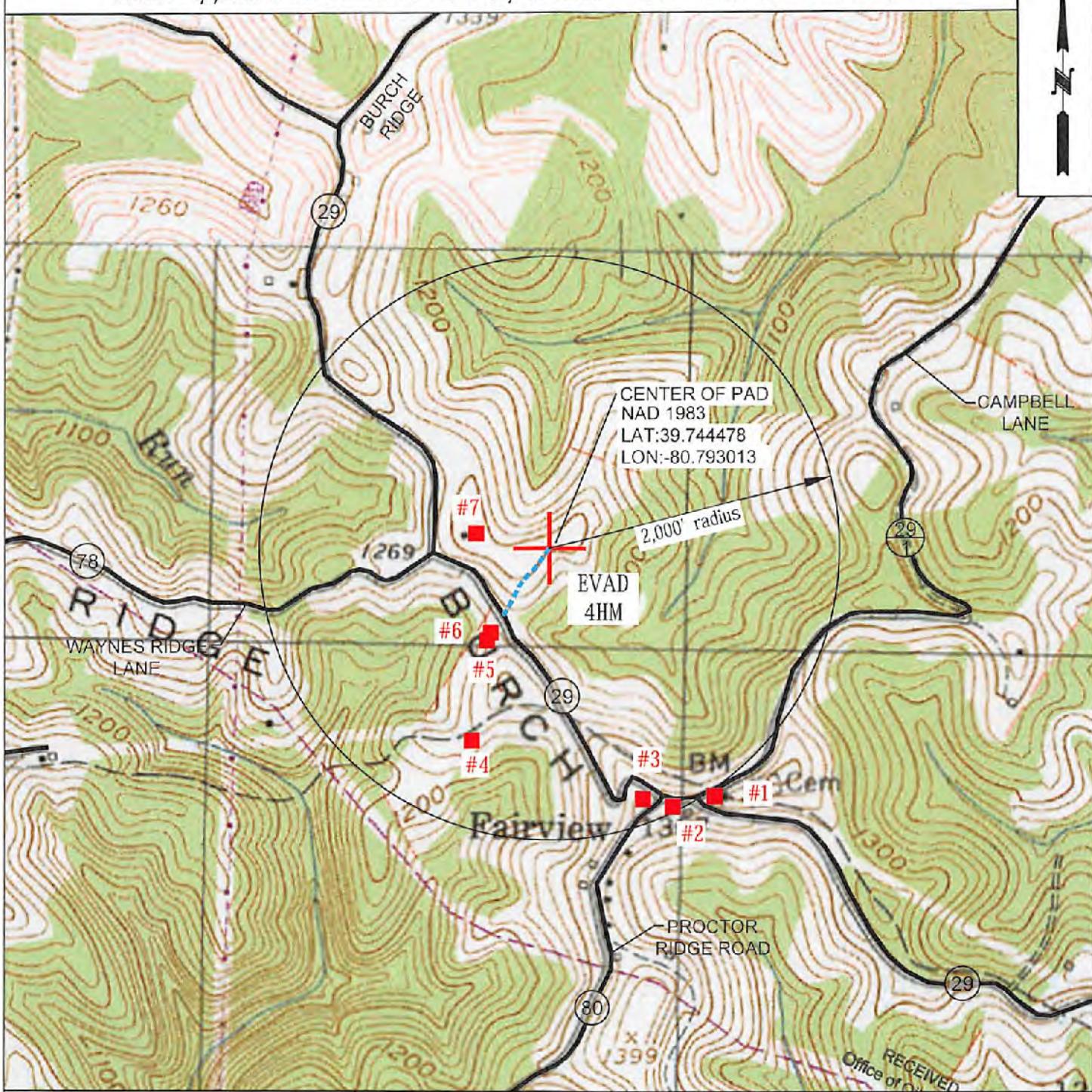
There appears to be Seven (7) possible water sources within 2,000 feet of the above referenced well location.

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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JUN 18 2010
WV Department of
Environmental Protection

*PROPOSED
EVAD 4HM*

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



**TUG HILL
OPERATING**

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

4705102059

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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WV Department of
Environmental Protection

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: 06/07/2018Date Permit Application Filed: 06/08/2018**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 AccettoloName: Jesse P. McHenry (See attachment)Address: 1103 Traubert PlaceAddress: 12 Cedarcrest Drive

Folansbee, WV 26037

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>	Easting:	<u>517,720.70</u>
County:	<u>Marshall</u>	Northing:	<u>4,399,405.66</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>Accettolo, 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: 380 Southpointe Boulevard, Plaza II, Suite 200
Canonsburg, PA 15317
Facsimile: 724-338-2030

Oil and Gas Privacy Notice:

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

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4705102059

WW-6A5 Notice of Planned Operation

Additional Landowner

Wilbur L. McHenry
13820 Mtcalf Avenue #11313
Overland Park, KS 66223

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WV Department of
Environmental Protection

4705102059

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

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

May 7, 2018

Jill M. Newman
Deputy Commissioner

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

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

Evad 4HM

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,

Gary K. Clayton

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

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

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Office of Oil and Gas

JUN 18 2018

WV Department of
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TUG HILL

47051020

PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Well No. Evad 4HM

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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JUN 18 2018

WV Department of
Environmental Protection

Accettolo Well Site

Tug Hill Operating

Exhibit A. Final Design: Issue for Permitting



Kelly Surveying
M. J. Kelly Survey
Washington, D.C. 20004

“DRAFTS”

Acetato Well Site
Franklin District
Marshall County, WY

APPROVED
WVDEP 000

8/23/2018

— 1 —

176-0008

Property Owner Information - Acworth Well Site
Fresno District - Marshall County
TAX Period - Well Site - Acworth Road - ADD 1
SCE - 801 - 000 - 000 - 000

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Third
With all the
Second time
Additional
the Home
Additions
Total Number

Verbal Area	
Sensory	1
Motor	1
Speech	1
Total Area	3

100

Progress
Design
Field Day
Field Day
Landscape
Engineering
Program

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—	Super
—	Unit
—	Area
—	Brian
—	Farm
—	Farm

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Volume 3
Number 1
January 1990

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