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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, January 23, 2020  
WELL WORK PERMIT  
Horizontal 6A / New Drill

TUG HILL OPERATING, LLC  
380 SOUTHPOINTE BLVD

CANONSBURG, PA 15317

Re: Permit approval for HILLROCK S-12HU  
47-051-02272-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

Operator's Well Number: HILLROCK S-12HU  
Farm Name: TERRY E. & DEBORAH SIMM  
U.S. WELL NUMBER: 47-051-02272-00-00  
Horizontal 6A New Drill  
Date Issued: 1/23/2020

Promoting a healthy environment.

# 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

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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](mailto:DEPOOGNotify@wv.gov).



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west virginia department of environmental protection

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Oil and Gas Conservation Commission  
601 57<sup>th</sup> Street SE, Charleston, WV 25304  
304-926-0499 Ext 1274

Randall M. Albert, Chairman  
dep.wv.gov

December 18, 2019

Department of Environmental Protection  
Office of Oil and Gas  
Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-051-02272

COMPANY: Tug Hill Operating, LLC

FARM: Terry E. and Deborah Simms

Hillrock S-12HU

COUNTY: Marshall

DISTRICT: Franklin

QUAD: New Martinsville

The deep well review of the application for the above company is **Approved to drill to Trenton for Point Pleasant completion.**

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Comments to Notice of Deviation filed? No
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners? Yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells: yes; Docket 291-291 Exception Location Hearing; Hillrock S-15HU 47-051-02263; Hillrock S-14HU 47-051-02262; Hillrock S-13HU 47-051-02273; Corley N-9HU 47-051-01983, Corley N-10HU 47-051-01998; Burch Ridge S-7HU 47-051-02194; Simms U-5H 47-051-01731
4. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

A handwritten signature in blue ink that reads "Susan Rose".

Susan Rose  
Administrator



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

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

2) Operator's Well Number: Hillrock S-12HU      Well Pad Name: Simms

3) Farm Name/Surface Owner: Terry E. and Deborah Simms      Public Road Access: Rines Ridge Road (County Route 76)

4) Elevation, current ground: 1219'      Elevation, proposed post-construction: 1219'

5) Well Type (a) Gas       Oil \_\_\_\_\_      Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_

(b) If Gas Shallow \_\_\_\_\_ Deep   
Horizontal

6) Existing Pad: Yes or No Yes

*Handwritten signature and date: 7/8/19*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):

Point Pleasant is the target formation at a depth of 11,382' - 11,262' - thickness of 120' and anticipated pressure of approx. 9500 psi.

8) Proposed Total Vertical Depth: 11,532'

9) Formation at Total Vertical Depth: Trenton

10) Proposed Total Measured Depth: 22,620'

11) Proposed Horizontal Leg Length: 10,554.70'

12) Approximate Fresh Water Strata Depths: 70' ; 812'

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

14) Approximate Saltwater Depths: 2,167'

15) Approximate Coal Seam Depths: Sewickley Coal - 706' ; Pittsburgh Coal - 806'

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

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

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

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WW-6B  
(04/15)

API NO. 47-051 02272  
 OPERATOR WELL NO. Hillrock S-12HU  
 Well Pad Name: Simms

18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	30"	NEW	BW	BW	120'	120'	259FT^3(CTS)
Fresh Water	20"	NEW	J55	106.5#	920'	920'	1,493FT^3(CTS)
Coal	13 3/8"	NEW	J55	54.5#	2702'	2702'	1,913FT^3(CTS)
Intermediate	9 5/8"	NEW	HPP110	47#	10,334'	10,334'	3,371FT^3(CTS)
Production	5 1/2"	NEW	P110	23#	22,620'	22,620'	5,357FT^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#		10,861'	
Liners							

*Handwritten signature*  
7/8/19

<b>TYPE</b>	<b>Size (in)</b>	<b>Wellbore Diameter (in)</b>	<b>Wall Thickness (in)</b>	<b>Burst Pressure (psi)</b>	<b>Anticipated Max. Internal Pressure (psi)</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	20"	26"	.5	2,410	1,928	SEE # 24	1.2
Coal	13 3/8"	17 1/2"	.38	2,740	2,192	SEE #24	1.2
Intermediate	9 5/8"	12 1/4"	.472	10,730	6,968	SEE #24	1.99
Production	5 1/2"	8 1/2"	.415	16,510	10,864	SEE #24	1.18
Tubing	2 7/8"			11,385	11,624		
Liners							

**PACKERS**

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

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4705102272

WW-6B  
(10/14)

API NO. 47-051 - \_\_\_\_\_

OPERATOR WELL NO. Hillrock S-12HU

Well Pad Name: Simms

*ju*  
*2/8/19*

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

Drill through the Point Pleasant and TD Pilot Hole 150' into the Trenton. 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 26,380,000 lb proppant and 407,854 bbl of water. Max rate = 80 bpm; max psi = 12,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 11.63 acres

22) Area to be disturbed for well pad only, less access road (acres): 3.19 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 third joint. Production casing will have one centralizer every third joint in lateral, one centralizer every joint through curve, one centralizer every third 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](mailto:dducoeur@dpslandservices.com) DPS GIS (4/15/2019) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it as the best publicly available. See attached map he provided.

Request maps for:

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

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

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

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Permit well - Hillrock 15-12HU

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
4705101452	Tug Hill Operating	6584' TVD 11386' MD	Marcellus	Unknown	No, 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.
4705101468	Tug Hill Operating	6599' TVD 12685' MD	Marcellus	Unknown	No, 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.
4705101469	Tug Hill Operating	6631' TVD 12825' MD	Marcellus	Unknown	No, 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.
4705101731	Tug Hill Operating	11492' TVD 16804' MD	Point Pleasant	Unknown	Yes, existing Point Pleasant producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Point Pleasant horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705100104	Manufacturers Light & Heat	2943' TVD	Gordon	Unknown	No, the well is not deep enough to be within the expected fracture propagation from a Marcellus stimulation.	Well was plugged 9/13/1975
4705102064	Tug Hill Operating	n/a	n/a	n/a	No	Permit
4705102066	Tug Hill Operating	n/a	n/a	n/a	No	Permit
4705102063	Tug Hill Operating	n/a	n/a	n/a	No	Permit
4705102062	Tug Hill Operating	n/a	n/a	n/a	No	Permit
4705102061	Tug Hill Operating	n/a	n/a	n/a	No	Permit
4705102055	Tug Hill Operating	n/a	n/a	n/a	No	Permit

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Location Information: Well Name, County, Permit, Location, Date, Status, etc.

System Hole Location Information: Well ID, Date, Depth, etc.

System Information: Well ID, Status, Surface Owner, Well Name, etc.

Completion Information: Well ID, Date, Depth, etc.

Table with columns: Well ID, Date, Depth, etc. for completion data.

Production Gas Information (columns in Mscf): Well ID, Date, Jan, Feb, Mar, etc.

Production Oil Information (columns in bbl): Well ID, Date, Jan, Feb, Mar, etc.

Production Water Information (columns in Gallons): Well ID, Date, Jan, Feb, Mar, etc.

Geological Information: Well ID, Date, Depth, etc.

Location Information: Well Name, County, Permit, Location, Date, Status, etc.

System Hole Location Information: Well ID, Date, Depth, etc.

System Information: Well ID, Status, Surface Owner, Well Name, etc.

Completion Information: Well ID, Date, Depth, etc.

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Production Oil Information (columns in bbl): Well ID, Date, Jan, Feb, Mar, etc.

Production Water Information (columns in Gallons): Well ID, Date, Jan, Feb, Mar, etc.

Geological Information: Well ID, Date, Depth, etc.

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Location Information - View Map
COUNTY PERMIT DISTRICT QUAD 7N QUAD 15 LAT 00 LONG 00 UTM8 UTM8

Bottom Hole Location Information
WELL DEPTH UTM8 UTM8
2314245 1 18 2314245 1 18 2314245 1 18

Owner Information
WELL DEPTH UTM8 UTM8
2314245 1 18 2314245 1 18 2314245 1 18

Completion Information
WELL DEPTH UTM8 UTM8
2314245 1 18 2314245 1 18 2314245 1 18

Table with columns: Well ID, Date, Activity, Product, Section, Depth/Top, etc. Lists various well activities and products.

Production Gas Information (Volumes in MCF)
Table with columns: Well ID, Operator, Prod Year, and monthly production volumes from Jan to Dec.

Production Oil Information (Volumes in Bbl)
Table with columns: Well ID, Operator, Prod Year, and monthly production volumes from Jan to Dec.

Production NGL Information (Volumes in Bbl)
Table with columns: Well ID, Operator, Prod Year, and monthly production volumes from Jan to Dec.

Production Water Information (Volumes in Gallons)
Table with columns: Well ID, Operator, Prod Year, and monthly production volumes from Jan to Dec.

Stratigraphy Information
Table with columns: Well ID, Depth, Lithology, etc. Lists geological layers and their depths.

Location Information - View Map
COUNTY PERMIT DISTRICT QUAD 7S QUAD 15 LAT 00 LONG 00 UTM8 UTM8

Bottom Hole Location Information
WELL DEPTH UTM8 UTM8
2314245 1 18 2314245 1 18 2314245 1 18

Owner Information
WELL DEPTH UTM8 UTM8
2314245 1 18 2314245 1 18 2314245 1 18

Completion Information
WELL DEPTH UTM8 UTM8
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Production Oil Information (Volumes in Bbl)
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Production NGL Information (Volumes in Bbl)
Table with columns: Well ID, Operator, Prod Year, and monthly production volumes from Jan to Dec.

Production Water Information (Volumes in Gallons)
Table with columns: Well ID, Operator, Prod Year, and monthly production volumes from Jan to Dec.

Stratigraphy Information
Table with columns: Well ID, Depth, Lithology, etc. Lists geological layers and their depths.

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Location Information

AS	COUNTY	PERMIT	RA	DISTRICT	GRID_YS	GRID_XS	LAT_DD	LONG_DD	UTM_E	UTM_N
410400104	Wayne	104	Wayne	Wayne	7572447	5074244	7572447	5074244	189324	6162204

There is no Bottom Hole Location data for this well

Owner Information

OP	WELL	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR	AT_COMPLETION	PROP_VO	PROP_TRST	PM_TEN_EST	PR
410400104	14-1401	Complete	8 G Chry	4	3532	Trinity & Waco 3003		Madisonville Gas & Heat Co. Madisonville Gas & Heat Co.						

Completion Information

OP	WELL	PROD	SECT	SECT_ID	SECT	DEPTH_TOP	DEPTH_BOTTOM	INITIAL_CLASS	FINAL_CLASS	TYPE	NOI	COMP	SPHO	YWR	TD	NEW	STG	ROD	CL_BEF	CL_AFT	CL_BEF	CL_AFT	NICK	CL_AFT	P_BEF	P_AFT	HT_AFT
410400104	14-1401	14-1401	14-1401	14-1401	Gas	1254	2254	Development	Development	Dev																	

Ray/Shale/Water Information

OP	WELL	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	DEPTH_BOTTOM	FM_BOT	G_BOT	CL_AFT	CL_AFT	WATER_CONTENT
410400104	14-1401	14-1401	Gas	14-1401	1254	2254					0

There is no Production Gas data for this well

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

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

There is no Production Water data for this well

Stratigraphy Information

OP	WELL	FM	THICKNESS	QUALITY	DEPTH	TOP	DEPTH	QUALITY	THICKNESS	QUALITY	ELEV	DATION
410400104	14-1401	Original Loc	Production	Well	Record	852	Reasonable	4	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	Buff. 35-14 Clay	Well	Record	1102	Reasonable	21	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	Martins	Well	Record	1225	Reasonable	17	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	1st Sat Band	Well	Record	1242	Reasonable	15	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	Mason	Well	Record	1258	Reasonable	16	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	Shawnee Group	Well	Record	1274	Reasonable	16	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	Big Lime	Well	Record	1291	Reasonable	17	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	Big Flat (Pine)	Well	Record	1308	Reasonable	17	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	Dover	Well	Record	1325	Reasonable	17	Reasonable	1210	Ground Level	
410400104	14-1401	Original Loc	Stanton	Well	Record	1342	Reasonable	17	Reasonable	1210	Ground Level	

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

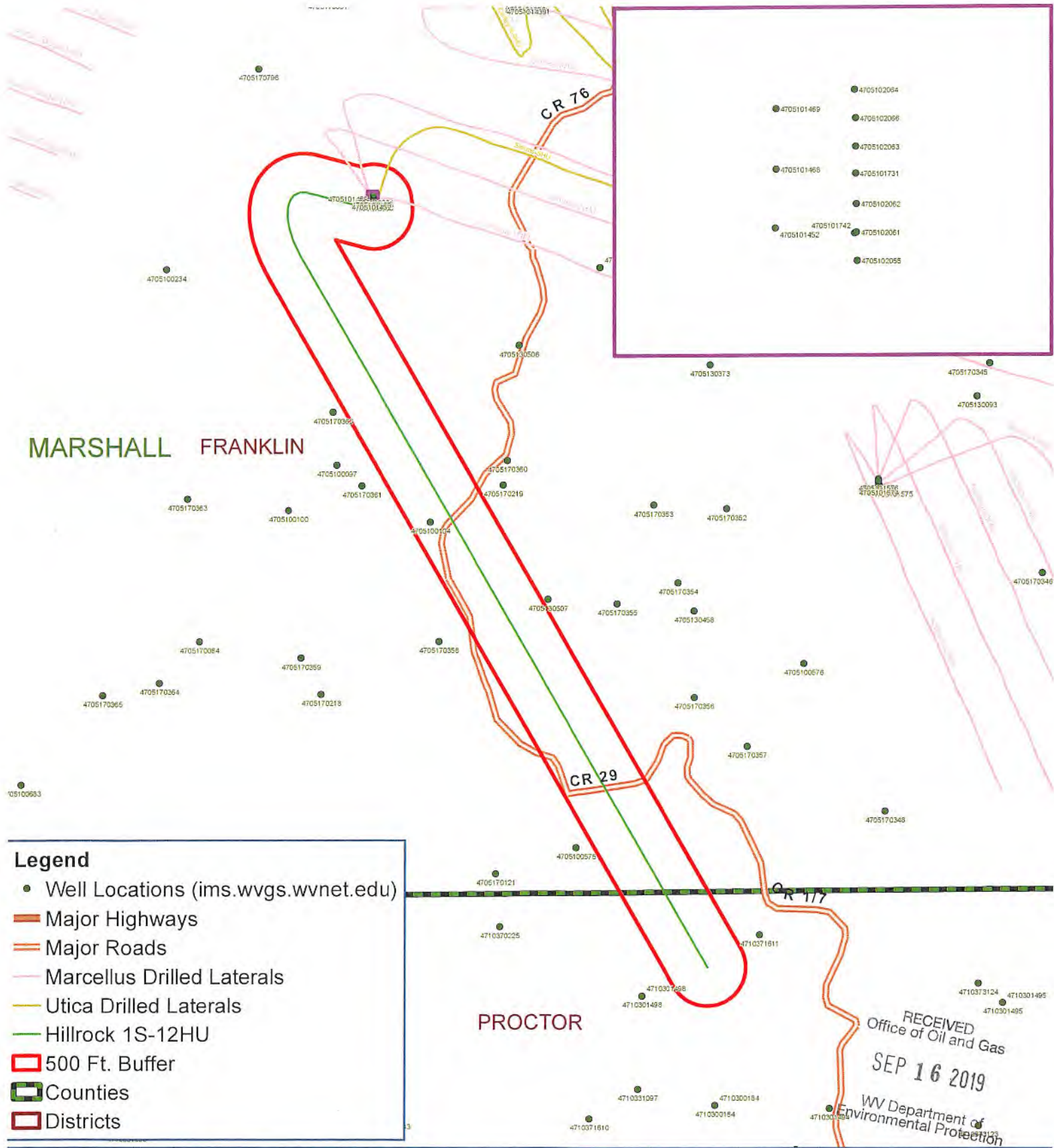
Logging Information

OP	WELL	DEPTH	PER
410400104	14-1401	1254-2254	1

There is no Sample data for this well

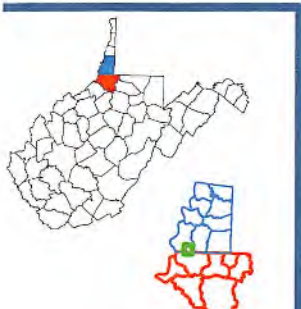
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**Legend**

- Well Locations (ims.wvgs.wvnet.edu)
- Major Highways
- Major Roads
- Marcellus Drilled Laterals
- Utica Drilled Laterals
- Hillrock 1S-12HU
- 500 Ft. Buffer
- Counties
- Districts



Hillrock 1S - 12HU  
 Franklin District  
 Marshall County, WV



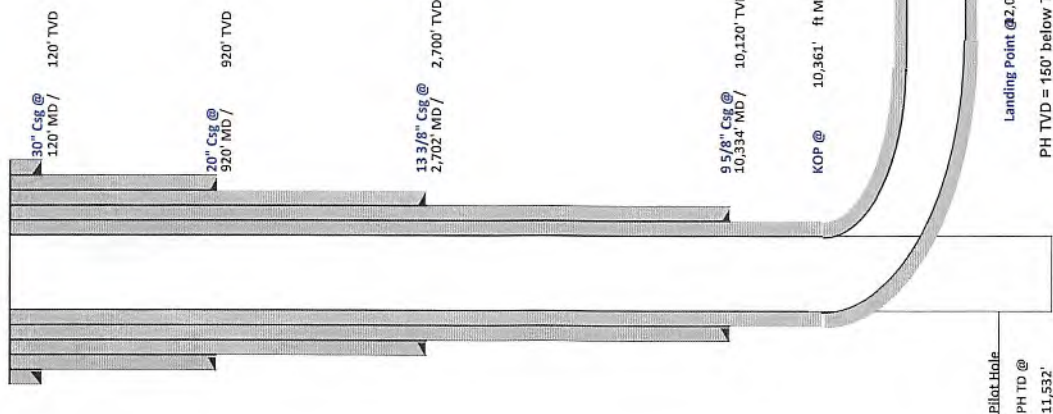
Notes:



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WELL NAME: Hillrock 15-12HU COUNTY: Marshall  
 STATE: WV DISTRICT: Franklin  
 DF Elev: 1,219' GL Elev: 1,219'  
 TD: 22,620'  
 TH Latitude: 39.74573824  
 TH Longitude: -80.7702615  
 BH Latitude: 39.718611  
 BH Longitude: -80.754966



FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	812'
Sewickley Coal	706'
Pittsburgh Coal	806'
Big Lime	1,984'
Berea	2,522'
Tully	6,392'
Marcellus	6,486'
Onondaga	6,520'
Salina	7,240'
Lockport	8,286'
Utica	11,001'
Point Pleasant	11,262'
Landing Depth	11,312'
Trenton	11,382'
Pilot Hole TD	11,532'

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	26	20	920'	920'	106.5	J55	Surface
Intermediate 1	17 1/2	13 3/8	2,702'	2,700'	54.5	J55	Surface
Intermediate 2	12 1/4	9 5/8	10,334'	10,120'	47	HP110	Surface
Production	8 1/2	5 1/2	22,620'	11,478'	23	P110	Surface

CEMENT SUMMARY			DRILLING DETAILS	
Sacks	Class	Density	Fluid Type	Centralizer Notes
338	A	15.6	Air	None
1,611	A	15.6	Air	3 Centralizers at equal distance
2,072	A	15	Air	1 Centralizer every other jt
2,845	A	14.5	Air	1 Centralizer every other jt
4,743	A	15	Air / SOBM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to stc

*Handwritten signature and date: 2/18/19*

Lateral TD @ 22,620' ft MD  
 11,478' ft TVD

Landing Point @ 2,068' MD / 11,312' TVD  
 PH TVD = 150' below Trenton Top

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## Tug Hill Operating, LLC Casing and Cement Program

### Hillrock 1S-12HU

#### Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	20"	J55	26"	920'	CTS
Intermediate 1	13 3/8"	J55	17 1/2"	2,702'	CTS
Intermediate 2	9 5/8"	HP110	12 1/4"	10,334'	CTS
Production	5 1/2"	P110	8 1/2"	22,620'	CTS

#### Cement

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

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

Intermediate 2: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.99

Production: 50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L – Production Cement mixed at 15.2ppg, Y = 1.18

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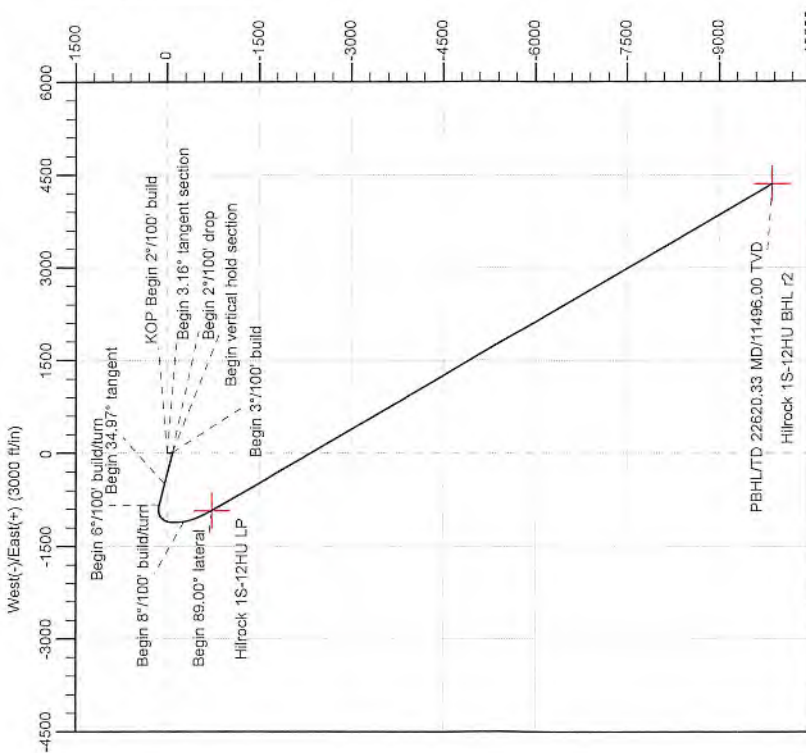
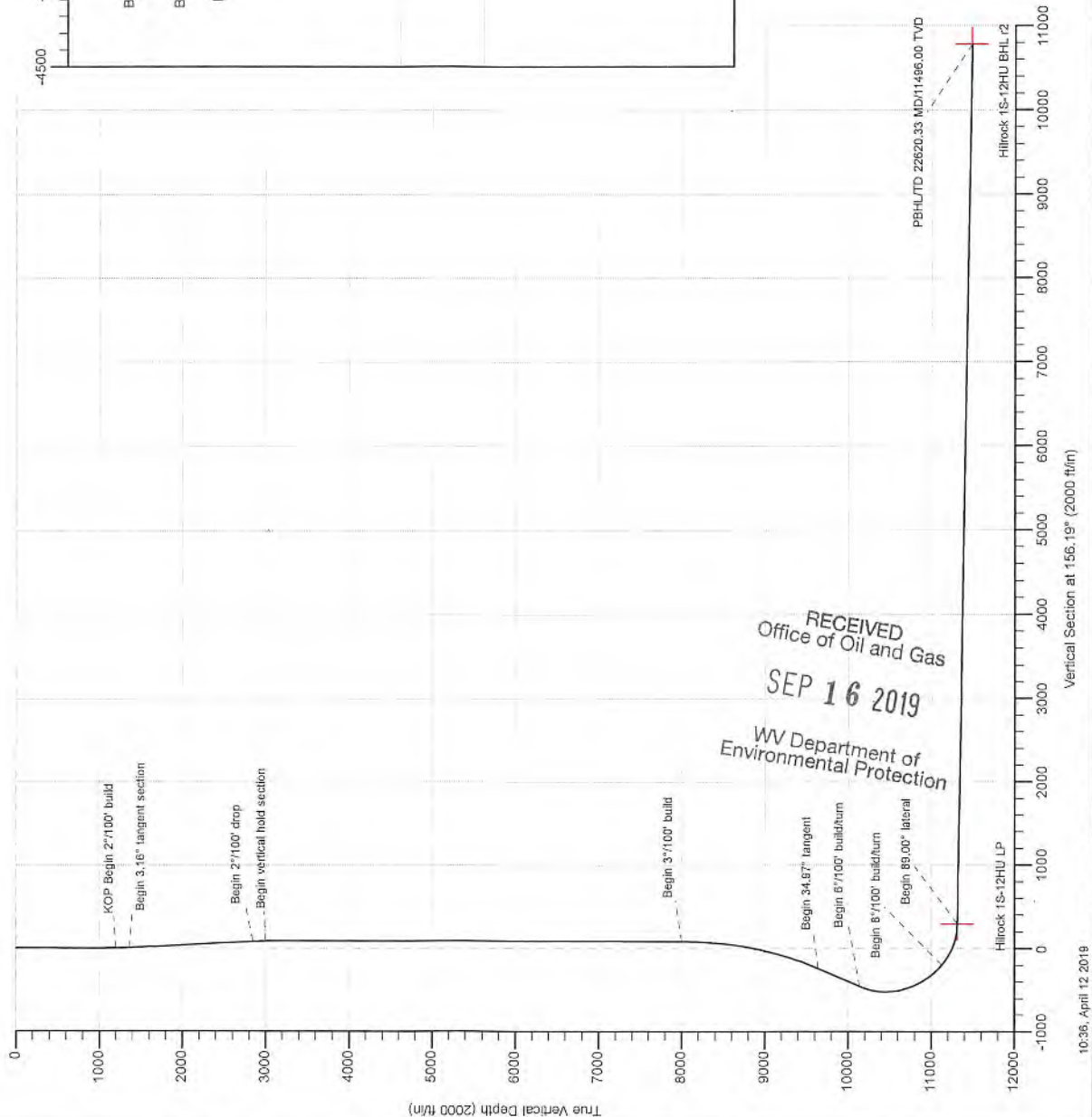




Well: Hillrock 1S-12 HU (D)  
 Site: Hillrock/Simms  
 Project: Marshall County, West Virginia  
 Design: rev2

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	VFace	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
3	1357.82	3.16	173.66	1357.74	0.00	0.00	0.00	0.00	Begin 3.16° tangent section
4	2844.60	3.16	173.66	2842.26	-4.32	0.48	2.00	173.66	Begin 2°/100' drop
5	3002.42	0.00	0.00	3000.00	-85.68	9.52	0.00	82.23	Begin vertical hold section
6	8002.42	0.00	0.00	8000.00	-90.00	10.00	0.00	86.37	Begin 3°/100' build
7	9750.88	34.97	284.78	9641.92	41.96	-490.09	2.00	284.78	Begin 34.97° tangent
8	10361.00	34.97	284.78	10141.88	131.18	-828.20	0.00	0.00	Begin 6°/100' build/hurn
9	11534.98	50.00	168.86	11127.61	-276.91	-1102.00	0.00	0.00	Begin 8°/100' build/hurn
10	12068.71	89.10	150.00	11311.96	-729.72	-920.61	8.00	-133.02	Begin 8°/100' build/hurn
11	22620.03	89.10	150.00	11478.00	-9866.24	4354.50	0.00	0.00	PBHLTD 22620.33 MD/11496.00 TVD



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Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 District: NAD83 West Virginia - HARN  
 Ellipsoid: GRS 1980  
 Zone: Zone 17N (84 W to 78 W)

System Datum: Mean Sea Level  
 Depth Reference: GL @ 1219.00ft

Northing: 14494231.31  
 Easting: 1704993.18  
 Latitude: 39.74573824  
 Longitude: -80.77026150

Total Corr. (M→C): To convert a Magnetic Direction to a Grid Direction, Subtract 8.82'

North  
 Azimuths to Grid North  
 True North: -0.15°  
 Magnetic North: -8.82°

Magnetic Field  
 Strength: 52030.35nT  
 Dip Angle: 66.84°  
 Date: 6/2/2019  
 Model: IGRF2015





Planning Report - Geographic

4705 02272

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Hillrock 1S-12 HU (D)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1219.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1219.00ft
Site:	Hillrock/Simms	North Reference:	Grid
Well:	Hillrock 1S-12 HU (D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

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

<b>Site</b>	Hillrock/Simms				
<b>Site Position:</b>		<b>Northing:</b>	14,434,279.29 usft	<b>Latitude:</b>	39.74587001
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,704,992.60 usft	<b>Longitude:</b>	-80.77026312
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.15 °

<b>Well</b>	Hillrock 1S-12 HU (D)					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,434,231.31 usft	<b>Latitude:</b>	39.74573824
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,704,993.18 usft	<b>Longitude:</b>	-80.77026150
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	1,219.00 ft

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	8/2/2018	-8.67	66.84	52,030.29284732

<b>Design</b>	rev2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	156.19

<b>Plan Survey Tool Program</b>	<b>Date</b>	4/12/2019		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	22,620.00 rev2 (Original Hole)	MWD	
			MWD - Standard	

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Planning Report - Geographic

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Hillrock 1S-12 HU (D)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL @ 1219.00ft
<b>Project:</b>	Marshall County, West Virginia	<b>MD Reference:</b>	GL @ 1219.00ft
<b>Site:</b>	Hillrock/Simms	<b>North Reference:</b>	Grid
<b>Well:</b>	Hillrock 1S-12 HU (D)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev2		

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	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,357.82	3.16	173.66	1,357.74	-4.32	0.48	2.00	2.00	0.00	173.66	
2,844.60	3.16	173.66	2,842.26	-85.68	9.52	0.00	0.00	0.00	0.00	
3,002.42	0.00	0.00	3,000.00	-90.00	10.00	2.00	-2.00	0.00	180.00	
8,002.42	0.00	0.00	8,000.00	-90.00	10.00	0.00	0.00	0.00	0.00	
9,750.88	34.97	284.78	9,641.92	41.96	-490.09	2.00	2.00	0.00	284.78	
10,361.00	34.97	284.78	10,141.88	131.18	-828.20	0.00	0.00	0.00	0.00	
11,534.98	50.00	168.86	11,127.61	-276.91	-1,102.00	6.00	1.28	-9.87	-133.02	
12,068.71	89.10	150.00	11,311.96	-729.72	-920.61	8.00	7.33	-3.53	-28.47	
22,620.03	89.10	150.00	11,478.00	-9,866.24	4,354.50	0.00	0.00	0.00	0.00	Hilrock 1S-12HU BHL

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Planning Report - Geographic

Database: DB\_Jul2216dt\_v14  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia  
 Site: Hillrock/Simms  
 Well: Hillrock 1S-12 HU (D)  
 Wellbore: Original Hole  
 Design: rev2

Local Co-ordinate Reference: Well Hillrock 1S-12 HU (D)  
 TVD Reference: GL @ 1219.00ft  
 MD Reference: GL @ 1219.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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WV Department of  
 Environmental Protection

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	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
100.00	0.00	0.00	100.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
200.00	0.00	0.00	200.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
300.00	0.00	0.00	300.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
400.00	0.00	0.00	400.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
500.00	0.00	0.00	500.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
600.00	0.00	0.00	600.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
700.00	0.00	0.00	700.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
800.00	0.00	0.00	800.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
900.00	0.00	0.00	900.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,434,231.31	1,704,993.18	39.74573824	-80.77026150
<b>KOP Begin 2°/100' build</b>									
1,300.00	2.00	173.66	1,299.98	-1.73	0.19	14,434,229.58	1,704,993.37	39.74573348	-80.77026083
1,357.82	3.16	173.66	1,357.74	-4.32	0.48	14,434,226.99	1,704,993.66	39.74572638	-80.77025983
<b>Begin 3.16° tangent section</b>									
1,400.00	3.16	173.66	1,399.86	-6.63	0.74	14,434,224.68	1,704,993.91	39.74572003	-80.77025894
1,500.00	3.16	173.66	1,499.70	-12.10	1.34	14,434,219.21	1,704,994.52	39.74570500	-80.77025683
1,600.00	3.16	173.66	1,599.55	-17.57	1.95	14,434,213.74	1,704,995.13	39.74568997	-80.77025472
1,700.00	3.16	173.66	1,699.40	-23.04	2.56	14,434,208.27	1,704,995.74	39.74567494	-80.77025260
1,800.00	3.16	173.66	1,799.25	-28.52	3.17	14,434,202.79	1,704,996.34	39.74565990	-80.77025049
1,900.00	3.16	173.66	1,899.10	-33.99	3.78	14,434,197.32	1,704,996.95	39.74564487	-80.77024838
2,000.00	3.16	173.66	1,998.95	-39.46	4.38	14,434,191.85	1,704,997.56	39.74562984	-80.77024626
2,100.00	3.16	173.66	2,098.79	-44.93	4.99	14,434,186.38	1,704,998.17	39.74561480	-80.77024415
2,200.00	3.16	173.66	2,198.64	-50.41	5.60	14,434,180.90	1,704,998.78	39.74559977	-80.77024204
2,300.00	3.16	173.66	2,298.49	-55.88	6.21	14,434,175.43	1,704,999.38	39.74558474	-80.77023992
2,400.00	3.16	173.66	2,398.34	-61.35	6.82	14,434,169.96	1,704,999.99	39.74556971	-80.77023781
2,500.00	3.16	173.66	2,498.19	-66.82	7.42	14,434,164.49	1,705,000.60	39.74555467	-80.77023570
2,600.00	3.16	173.66	2,598.04	-72.30	8.03	14,434,159.02	1,705,001.21	39.74553964	-80.77023358
2,700.00	3.16	173.66	2,697.88	-77.77	8.64	14,434,153.54	1,705,001.82	39.74552461	-80.77023147
2,800.00	3.16	173.66	2,797.73	-83.24	9.25	14,434,148.07	1,705,002.43	39.74550958	-80.77022936
2,844.60	3.16	173.66	2,842.26	-85.68	9.52	14,434,145.63	1,705,002.70	39.74550287	-80.77022841
<b>Begin 2°/100' drop</b>									
2,900.00	2.05	173.66	2,897.61	-88.18	9.80	14,434,143.13	1,705,002.97	39.74549600	-80.77022745
3,000.00	0.05	173.66	2,997.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,002.42	0.00	0.00	3,000.00	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
<b>Begin vertical hold section</b>									
3,100.00	0.00	0.00	3,097.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,200.00	0.00	0.00	3,197.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,300.00	0.00	0.00	3,297.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,400.00	0.00	0.00	3,397.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,500.00	0.00	0.00	3,497.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,600.00	0.00	0.00	3,597.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,700.00	0.00	0.00	3,697.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,800.00	0.00	0.00	3,797.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
3,900.00	0.00	0.00	3,897.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,000.00	0.00	0.00	3,997.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,100.00	0.00	0.00	4,097.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,200.00	0.00	0.00	4,197.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,300.00	0.00	0.00	4,297.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,400.00	0.00	0.00	4,397.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,500.00	0.00	0.00	4,497.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,600.00	0.00	0.00	4,597.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675





Planning Report - Geographic

Database: DB\_Jul2216dt\_v14  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia  
 Site: Hillrock/Simms  
 Well: Hillrock 1S-12 HU (D)  
 Wellbore: Original Hole  
 Design: rev2

Local Co-ordinate Reference: Well Hillrock 1S-12 HU (D)  
 TVD Reference: GL @ 1219.00ft  
 MD Reference: GL @ 1219.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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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	0.00	0.00	4,697.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,800.00	0.00	0.00	4,797.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
4,900.00	0.00	0.00	4,897.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,000.00	0.00	0.00	4,997.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,100.00	0.00	0.00	5,097.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,200.00	0.00	0.00	5,197.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,300.00	0.00	0.00	5,297.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,400.00	0.00	0.00	5,397.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,500.00	0.00	0.00	5,497.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,600.00	0.00	0.00	5,597.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,700.00	0.00	0.00	5,697.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,800.00	0.00	0.00	5,797.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
5,900.00	0.00	0.00	5,897.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,000.00	0.00	0.00	5,997.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,100.00	0.00	0.00	6,097.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,200.00	0.00	0.00	6,197.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,300.00	0.00	0.00	6,297.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,400.00	0.00	0.00	6,397.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,500.00	0.00	0.00	6,497.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,600.00	0.00	0.00	6,597.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,700.00	0.00	0.00	6,697.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,800.00	0.00	0.00	6,797.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
6,900.00	0.00	0.00	6,897.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,000.00	0.00	0.00	6,997.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,100.00	0.00	0.00	7,097.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,200.00	0.00	0.00	7,197.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,300.00	0.00	0.00	7,297.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,400.00	0.00	0.00	7,397.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,500.00	0.00	0.00	7,497.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,600.00	0.00	0.00	7,597.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,700.00	0.00	0.00	7,697.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,800.00	0.00	0.00	7,797.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
7,900.00	0.00	0.00	7,897.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
8,000.00	0.00	0.00	7,997.59	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
8,002.42	0.00	0.00	8,000.00	-90.00	10.00	14,434,141.31	1,705,003.18	39.74549101	-80.77022675
<b>Begin 3°/100' build</b>									
8,100.00	1.95	284.78	8,097.57	-89.58	8.39	14,434,141.73	1,705,001.57	39.74549218	-80.77023246
8,200.00	3.95	284.78	8,197.43	-88.26	3.41	14,434,143.05	1,704,996.59	39.74549582	-80.77025016
8,300.00	5.95	284.78	8,297.05	-86.06	-4.93	14,434,145.25	1,704,988.25	39.74550193	-80.77027983
8,400.00	7.95	284.78	8,396.31	-82.97	-16.63	14,434,148.34	1,704,976.54	39.74551049	-80.77032143
8,500.00	9.95	284.78	8,495.09	-79.00	-31.68	14,434,152.31	1,704,961.50	39.74552150	-80.77037492
8,600.00	11.95	284.78	8,593.26	-74.16	-50.05	14,434,157.16	1,704,943.13	39.74553494	-80.77044022
8,700.00	13.95	284.78	8,690.71	-68.44	-71.72	14,434,162.87	1,704,921.46	39.74555080	-80.77051726
8,800.00	15.95	284.78	8,787.32	-61.85	-96.66	14,434,169.46	1,704,896.52	39.74556905	-80.77060594
8,900.00	17.95	284.78	8,882.97	-54.42	-124.85	14,434,176.90	1,704,868.32	39.74558968	-80.77070617
9,000.00	19.95	284.78	8,977.55	-46.13	-156.25	14,434,185.18	1,704,836.92	39.74561266	-80.77081780
9,100.00	21.95	284.78	9,070.93	-37.01	-190.82	14,434,194.30	1,704,802.35	39.74563795	-80.77094071
9,200.00	23.95	284.78	9,163.01	-27.06	-228.53	14,434,204.25	1,704,764.65	39.74566554	-80.77107475
9,300.00	25.95	284.78	9,253.67	-16.29	-269.31	14,434,215.02	1,704,723.86	39.74569539	-80.77121976
9,400.00	27.95	284.78	9,342.80	-4.73	-313.14	14,434,226.58	1,704,680.04	39.74572745	-80.77137555
9,500.00	29.95	284.78	9,430.30	7.62	-359.94	14,434,238.93	1,704,633.24	39.74576170	-80.77154194
9,600.00	31.95	284.78	9,516.06	20.74	-409.67	14,434,252.05	1,704,583.51	39.74579808	-80.77171873
9,700.00	33.95	284.78	9,599.97	34.62	-462.26	14,434,265.93	1,704,530.92	39.74583656	-80.77190570





Planning Report - Geographic

Database: DB\_Jul2216dt\_v14  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia  
 Site: Hillrock/Simms  
 Well: Hillrock 1S-12 HU (D)  
 Wellbore: Original Hole  
 Design: rev2

Local Co-ordinate Reference: Well Hillrock 1S-12 HU (D)  
 TVD Reference: GL @ 1219.00ft  
 MD Reference: GL @ 1219.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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 WV Department of  
 Environmental Protection

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,750.88	34.97	284.78	9,641.92	41.96	-490.09	14,434,273.28	1,704,503.08	39.74585693	-80.77200467
<b>Begin 34.97° tangent</b>									
9,800.00	34.97	284.78	9,682.17	49.15	-517.31	14,434,280.46	1,704,475.86	39.74587684	-80.77210144
9,900.00	34.97	284.78	9,764.12	63.77	-572.73	14,434,295.08	1,704,420.45	39.74591739	-80.77229846
10,000.00	34.97	284.78	9,846.06	78.39	-628.15	14,434,309.71	1,704,365.03	39.74595794	-80.77249548
10,100.00	34.97	284.78	9,928.01	93.02	-683.56	14,434,324.33	1,704,309.61	39.74599848	-80.77269250
10,200.00	34.97	284.78	10,009.95	107.64	-738.98	14,434,338.95	1,704,254.20	39.74603903	-80.77288951
10,300.00	34.97	284.78	10,091.90	122.27	-794.40	14,434,353.58	1,704,198.78	39.74607958	-80.77308653
10,361.00	34.97	284.78	10,141.89	131.19	-828.20	14,434,362.50	1,704,164.98	39.74610431	-80.77320671
<b>Begin 6°/100' build/turn</b>									
10,400.00	33.41	281.67	10,174.15	136.21	-849.53	14,434,367.52	1,704,143.65	39.74611826	-80.77328253
10,500.00	29.83	272.47	10,259.34	142.86	-901.38	14,434,374.17	1,704,091.79	39.74613688	-80.77346696
10,600.00	27.03	261.30	10,347.33	140.49	-948.74	14,434,371.80	1,704,044.44	39.74613071	-80.77363545
10,700.00	25.28	248.25	10,437.17	129.13	-991.07	14,434,360.45	1,704,002.11	39.74609981	-80.77378614
10,800.00	24.79	234.09	10,527.86	108.91	-1,027.91	14,434,340.22	1,703,965.27	39.74604452	-80.77391739
10,900.00	25.64	220.12	10,618.41	80.04	-1,058.86	14,434,311.35	1,703,934.32	39.74596545	-80.77402775
11,000.00	27.71	207.55	10,707.83	42.84	-1,083.57	14,434,274.15	1,703,909.60	39.74586347	-80.77411802
11,100.00	30.76	196.93	10,795.14	-2.28	-1,101.79	14,434,229.03	1,703,891.39	39.74573968	-80.77418124
11,200.00	34.51	188.24	10,879.38	-54.82	-1,113.31	14,434,176.49	1,703,879.87	39.74559546	-80.77422268
11,300.00	38.77	181.15	10,959.64	-114.22	-1,118.00	14,434,117.09	1,703,875.18	39.74543237	-80.77423990
11,400.00	43.39	175.30	11,035.03	-179.82	-1,115.81	14,434,051.50	1,703,877.37	39.74525221	-80.77423270
11,500.00	48.25	170.40	11,104.72	-250.89	-1,106.77	14,433,980.42	1,703,886.41	39.74505694	-80.77420116
11,534.98	50.00	168.86	11,127.61	-276.91	-1,102.00	14,433,954.40	1,703,891.18	39.74498546	-80.77418444
<b>Begin 8°/100' build/turn</b>									
11,600.00	54.61	165.82	11,167.36	-327.07	-1,090.69	14,433,904.24	1,703,902.49	39.74484762	-80.77414465
11,700.00	61.84	161.77	11,220.00	-408.60	-1,066.87	14,433,822.72	1,703,926.30	39.74462357	-80.77406066
11,800.00	69.16	158.23	11,261.45	-494.00	-1,035.70	14,433,737.31	1,703,957.48	39.74438882	-80.77395053
11,900.00	76.55	155.03	11,290.92	-581.62	-997.78	14,433,649.69	1,703,995.40	39.74414792	-80.77381641
12,000.00	83.98	152.01	11,307.81	-669.76	-953.84	14,433,561.56	1,704,039.33	39.74390557	-80.77366090
12,067.57	89.01	150.03	11,311.94	-728.73	-921.18	14,433,502.58	1,704,072.00	39.74374337	-80.77354523
<b>Begin 89.00° lateral</b>									
12,068.71	89.10	150.00	11,311.96	-729.72	-920.61	14,433,501.59	1,704,072.57	39.74374066	-80.77354322
12,100.00	89.10	150.00	11,312.45	-756.82	-904.97	14,433,474.50	1,704,088.21	39.74366614	-80.77348780
12,200.00	89.10	150.00	11,314.02	-843.41	-854.97	14,433,387.91	1,704,138.21	39.74342798	-80.77331073
12,300.00	89.10	150.00	11,315.60	-930.00	-804.98	14,433,301.31	1,704,188.20	39.74318983	-80.77313365
12,400.00	89.10	150.00	11,317.17	-1,016.59	-754.98	14,433,214.72	1,704,238.19	39.74295168	-80.77295658
12,500.00	89.10	150.00	11,318.74	-1,103.18	-704.99	14,433,128.13	1,704,288.19	39.74271353	-80.77277951
12,600.00	89.10	150.00	11,320.32	-1,189.77	-654.99	14,433,041.54	1,704,338.18	39.74247537	-80.77260243
12,700.00	89.10	150.00	11,321.89	-1,276.36	-605.00	14,432,954.95	1,704,388.18	39.74223722	-80.77242536
12,800.00	89.10	150.00	11,323.47	-1,362.95	-555.00	14,432,868.36	1,704,438.17	39.74199907	-80.77224830
12,900.00	89.10	150.00	11,325.04	-1,449.55	-505.01	14,432,781.77	1,704,488.17	39.74176092	-80.77207123
13,000.00	89.10	150.00	11,326.61	-1,536.14	-455.01	14,432,695.18	1,704,538.16	39.74152276	-80.77189416
13,100.00	89.10	150.00	11,328.19	-1,622.73	-405.02	14,432,608.59	1,704,588.16	39.74128461	-80.77171710
13,200.00	89.10	150.00	11,329.76	-1,709.32	-355.02	14,432,522.00	1,704,638.15	39.74104645	-80.77154003
13,300.00	89.10	150.00	11,331.33	-1,795.91	-305.03	14,432,435.40	1,704,688.15	39.74080830	-80.77136297
13,400.00	89.10	150.00	11,332.91	-1,882.50	-255.03	14,432,348.81	1,704,738.14	39.74057014	-80.77118591
13,500.00	89.10	150.00	11,334.48	-1,969.09	-205.04	14,432,262.22	1,704,788.14	39.74033199	-80.77100885
13,600.00	89.10	150.00	11,336.05	-2,055.68	-155.05	14,432,175.63	1,704,838.13	39.74009383	-80.77083179
13,700.00	89.10	150.00	11,337.63	-2,142.28	-105.05	14,432,089.04	1,704,888.13	39.73985568	-80.77065473
13,800.00	89.10	150.00	11,339.20	-2,228.87	-55.06	14,432,002.45	1,704,938.12	39.73961752	-80.77047767
13,900.00	89.10	150.00	11,340.78	-2,315.46	-5.06	14,431,915.86	1,704,988.12	39.73937936	-80.77030062
14,000.00	89.10	150.00	11,342.35	-2,402.05	44.93	14,431,829.27	1,705,038.11	39.73914121	-80.77012356
14,100.00	89.10	150.00	11,343.92	-2,488.64	94.93	14,431,742.68	1,705,088.11	39.73890305	-80.76994651
14,200.00	89.10	150.00	11,345.50	-2,575.23	144.92	14,431,656.08	1,705,138.10	39.73866489	-80.76976946





Planning Report - Geographic

Database: DB\_Jul2216dt\_v14  
 Company: Tug Hill Operating LLC  
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 Site: Hillrock/Simms  
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 Wellbore: Original Hole  
 Design: rev2

Local Co-ordinate Reference: Well Hillrock 1S-12 HU (D)  
 TVD Reference: GL @ 1219.00ft  
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 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,300.00	89.10	150.00	11,347.07	-2,661.82	194.92	14,431,569.49	1,705,188.09	39.73842674	-80.76959241
14,400.00	89.10	150.00	11,348.64	-2,748.41	244.91	14,431,482.90	1,705,238.09	39.73818858	-80.76941536
14,500.00	89.10	150.00	11,350.22	-2,835.00	294.91	14,431,396.31	1,705,288.08	39.73795042	-80.76923831
14,600.00	89.10	150.00	11,351.79	-2,921.60	344.90	14,431,309.72	1,705,338.08	39.73771226	-80.76906126
14,700.00	89.10	150.00	11,353.36	-3,008.19	394.90	14,431,223.13	1,705,388.07	39.73747410	-80.76888422
14,800.00	89.10	150.00	11,354.94	-3,094.78	444.89	14,431,136.54	1,705,438.07	39.73723594	-80.76870717
14,900.00	89.10	150.00	11,356.51	-3,181.37	494.89	14,431,049.95	1,705,488.06	39.73699779	-80.76853013
15,000.00	89.10	150.00	11,358.09	-3,267.96	544.88	14,430,963.36	1,705,538.06	39.73675963	-80.76835309
15,100.00	89.10	150.00	11,359.66	-3,354.55	594.88	14,430,876.76	1,705,588.05	39.73652147	-80.76817605
15,200.00	89.10	150.00	11,361.23	-3,441.14	644.87	14,430,790.17	1,705,638.05	39.73628331	-80.76799901
15,300.00	89.10	150.00	11,362.81	-3,527.73	694.87	14,430,703.58	1,705,688.04	39.73604515	-80.76782197
15,400.00	89.10	150.00	11,364.38	-3,614.33	744.86	14,430,616.99	1,705,738.04	39.73580699	-80.76764493
15,500.00	89.10	150.00	11,365.95	-3,700.92	794.86	14,430,530.40	1,705,788.03	39.73556882	-80.76746789
15,600.00	89.10	150.00	11,367.53	-3,787.51	844.85	14,430,443.81	1,705,838.03	39.73533066	-80.76729086
15,700.00	89.10	150.00	11,369.10	-3,874.10	894.85	14,430,357.22	1,705,888.02	39.73509250	-80.76711383
15,800.00	89.10	150.00	11,370.68	-3,960.69	944.84	14,430,270.63	1,705,938.02	39.73485434	-80.76693679
15,900.00	89.10	150.00	11,372.25	-4,047.28	994.84	14,430,184.04	1,705,988.01	39.73461618	-80.76675976
16,000.00	89.10	150.00	11,373.82	-4,133.87	1,044.83	14,430,097.45	1,706,038.00	39.73437802	-80.76658273
16,100.00	89.10	150.00	11,375.40	-4,220.46	1,094.83	14,430,010.85	1,706,088.00	39.73413985	-80.76640570
16,200.00	89.10	150.00	11,376.97	-4,307.06	1,144.82	14,429,924.26	1,706,137.99	39.73390169	-80.76622868
16,300.00	89.10	150.00	11,378.54	-4,393.65	1,194.82	14,429,837.67	1,706,187.99	39.73366353	-80.76605165
16,400.00	89.10	150.00	11,380.12	-4,480.24	1,244.81	14,429,751.08	1,706,237.98	39.73342537	-80.76587462
16,500.00	89.10	150.00	11,381.69	-4,566.83	1,294.80	14,429,664.49	1,706,287.98	39.73318720	-80.76569760
16,600.00	89.10	150.00	11,383.26	-4,653.42	1,344.80	14,429,577.90	1,706,337.97	39.73294904	-80.76552058
16,700.00	89.10	150.00	11,384.84	-4,740.01	1,394.79	14,429,491.31	1,706,387.97	39.73271087	-80.76534356
16,800.00	89.10	150.00	11,386.41	-4,826.60	1,444.79	14,429,404.72	1,706,437.96	39.73247271	-80.76516654
16,900.00	89.10	150.00	11,387.99	-4,913.19	1,494.78	14,429,318.13	1,706,487.96	39.73223454	-80.76498952
17,000.00	89.10	150.00	11,389.56	-4,999.79	1,544.78	14,429,231.53	1,706,537.95	39.73199638	-80.76481250
17,100.00	89.10	150.00	11,391.13	-5,086.38	1,594.77	14,429,144.94	1,706,587.95	39.73175821	-80.76463548
17,200.00	89.10	150.00	11,392.71	-5,172.97	1,644.77	14,429,058.35	1,706,637.94	39.73152005	-80.76445845
17,300.00	89.10	150.00	11,394.28	-5,259.56	1,694.76	14,428,971.76	1,706,687.94	39.73128188	-80.76428143
17,400.00	89.10	150.00	11,395.85	-5,346.15	1,744.76	14,428,885.17	1,706,737.93	39.73104372	-80.76410441
17,500.00	89.10	150.00	11,397.43	-5,432.74	1,794.75	14,428,798.58	1,706,787.93	39.73080555	-80.76392743
17,600.00	89.10	150.00	11,399.00	-5,519.33	1,844.75	14,428,711.99	1,706,837.92	39.73056738	-80.76375042
17,700.00	89.10	150.00	11,400.58	-5,605.92	1,894.74	14,428,625.40	1,706,887.92	39.73032922	-80.76357341
17,800.00	89.10	150.00	11,402.15	-5,692.52	1,944.74	14,428,538.81	1,706,937.91	39.73009105	-80.76339640
17,900.00	89.10	150.00	11,403.72	-5,779.11	1,994.73	14,428,452.22	1,706,987.90	39.72985288	-80.76321939
18,000.00	89.10	150.00	11,405.30	-5,865.70	2,044.73	14,428,365.62	1,707,037.90	39.72961472	-80.76304239
18,100.00	89.10	150.00	11,406.87	-5,952.29	2,094.72	14,428,279.03	1,707,087.89	39.72937655	-80.76286538
18,200.00	89.10	150.00	11,408.44	-6,038.88	2,144.72	14,428,192.44	1,707,137.89	39.72913838	-80.76268838
18,300.00	89.10	150.00	11,410.02	-6,125.47	2,194.71	14,428,105.85	1,707,187.88	39.72890021	-80.76251138
18,400.00	89.10	150.00	11,411.59	-6,212.06	2,244.71	14,428,019.26	1,707,237.88	39.72866204	-80.76233438
18,500.00	89.10	150.00	11,413.16	-6,298.65	2,294.70	14,427,932.67	1,707,287.87	39.72842387	-80.76215738
18,600.00	89.10	150.00	11,414.74	-6,385.25	2,344.70	14,427,846.08	1,707,337.87	39.72818570	-80.76198038
18,700.00	89.10	150.00	11,416.31	-6,471.84	2,394.69	14,427,759.49	1,707,387.86	39.72794753	-80.76180338
18,800.00	89.10	150.00	11,417.89	-6,558.43	2,444.69	14,427,672.90	1,707,437.86	39.72770936	-80.76162639
18,900.00	89.10	150.00	11,419.46	-6,645.02	2,494.68	14,427,586.30	1,707,487.85	39.72747119	-80.76144939
19,000.00	89.10	150.00	11,421.03	-6,731.61	2,544.68	14,427,499.71	1,707,537.85	39.72723302	-80.76127240
19,100.00	89.10	150.00	11,422.61	-6,818.20	2,594.67	14,427,413.12	1,707,587.84	39.72699485	-80.76109541
19,200.00	89.10	150.00	11,424.18	-6,904.79	2,644.67	14,427,326.53	1,707,637.84	39.72675668	-80.76091841
19,300.00	89.10	150.00	11,425.75	-6,991.38	2,694.66	14,427,239.94	1,707,687.83	39.72651851	-80.76074142
19,400.00	89.10	150.00	11,427.33	-7,077.97	2,744.65	14,427,153.35	1,707,737.83	39.72628034	-80.76056444
19,500.00	89.10	150.00	11,428.90	-7,164.57	2,794.65	14,427,066.76	1,707,787.82	39.72604217	-80.76038745
19,600.00	89.10	150.00	11,430.47	-7,251.16	2,844.64	14,426,980.17	1,707,837.81	39.72580400	-80.76021046
19,700.00	89.10	150.00	11,432.05	-7,337.75	2,894.64	14,426,893.58	1,707,887.81	39.72556582	-80.76003348





Planning Report - Geographic

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Hillrock 1S-12 HU (D)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL @ 1219.00ft
<b>Project:</b>	Marshall County, West Virginia	<b>MD Reference:</b>	GL @ 1219.00ft
<b>Site:</b>	Hillrock/Simms	<b>North Reference:</b>	Grid
<b>Well:</b>	Hillrock 1S-12 HU (D)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
19,800.00	89.10	150.00	11,433.62	-7,424.34	2,944.63	14,426,806.99	1,707,937.80	39.72532765	-80.75985649
19,900.00	89.10	150.00	11,435.20	-7,510.93	2,994.63	14,426,720.39	1,707,987.80	39.72508948	-80.75967951
20,000.00	89.10	150.00	11,436.77	-7,597.52	3,044.62	14,426,633.80	1,708,037.79	39.72485130	-80.75950253
20,100.00	89.10	150.00	11,438.34	-7,684.11	3,094.62	14,426,547.21	1,708,087.79	39.72461313	-80.75932555
20,200.00	89.10	150.00	11,439.92	-7,770.71	3,144.61	14,426,460.62	1,708,137.78	39.72437496	-80.75914857
20,300.00	89.10	150.00	11,441.49	-7,857.30	3,194.61	14,426,374.03	1,708,187.78	39.72413678	-80.75897159
20,400.00	89.10	150.00	11,443.06	-7,943.89	3,244.60	14,426,287.44	1,708,237.77	39.72389861	-80.75879462
20,500.00	89.10	150.00	11,444.64	-8,030.48	3,294.60	14,426,200.85	1,708,287.77	39.72366043	-80.75861764
20,600.00	89.10	150.00	11,446.21	-8,117.07	3,344.59	14,426,114.26	1,708,337.76	39.72342226	-80.75844067
20,700.00	89.10	150.00	11,447.79	-8,203.66	3,394.59	14,426,027.67	1,708,387.76	39.72318408	-80.75826369
20,800.00	89.10	150.00	11,449.36	-8,290.25	3,444.58	14,425,941.07	1,708,437.75	39.72294591	-80.75808672
20,900.00	89.10	150.00	11,450.93	-8,376.84	3,494.58	14,425,854.48	1,708,487.75	39.72270773	-80.75790975
21,000.00	89.10	150.00	11,452.51	-8,463.44	3,544.57	14,425,767.89	1,708,537.74	39.72246956	-80.75773278
21,100.00	89.10	150.00	11,454.08	-8,550.03	3,594.57	14,425,681.30	1,708,587.74	39.72223138	-80.75755581
21,200.00	89.10	150.00	11,455.65	-8,636.62	3,644.56	14,425,594.71	1,708,637.73	39.72199320	-80.75737885
21,300.00	89.10	150.00	11,457.23	-8,723.21	3,694.56	14,425,508.12	1,708,687.73	39.72175503	-80.75720188
21,400.00	89.10	150.00	11,458.80	-8,809.80	3,744.55	14,425,421.53	1,708,737.72	39.72151685	-80.75702492
21,500.00	89.10	150.00	11,460.37	-8,896.39	3,794.55	14,425,334.94	1,708,787.71	39.72127867	-80.75684795
21,600.00	89.10	150.00	11,461.95	-8,982.98	3,844.54	14,425,248.35	1,708,837.71	39.72104050	-80.75667099
21,700.00	89.10	150.00	11,463.52	-9,069.57	3,894.54	14,425,161.76	1,708,887.70	39.72080232	-80.75649403
21,800.00	89.10	150.00	11,465.10	-9,156.16	3,944.53	14,425,075.16	1,708,937.70	39.72056414	-80.75631707
21,900.00	89.10	150.00	11,466.67	-9,242.76	3,994.53	14,424,988.57	1,708,987.69	39.72032596	-80.75614011
22,000.00	89.10	150.00	11,468.24	-9,329.35	4,044.52	14,424,901.98	1,709,037.69	39.72008778	-80.75596316
22,100.00	89.10	150.00	11,469.82	-9,415.94	4,094.51	14,424,815.39	1,709,087.68	39.71984960	-80.75578620
22,200.00	89.10	150.00	11,471.39	-9,502.53	4,144.51	14,424,728.80	1,709,137.68	39.71961142	-80.75560925
22,300.00	89.10	150.00	11,472.96	-9,589.12	4,194.50	14,424,642.21	1,709,187.67	39.71937324	-80.75543229
22,400.00	89.10	150.00	11,474.54	-9,675.71	4,244.50	14,424,555.62	1,709,237.67	39.71913506	-80.75525534
22,500.00	89.10	150.00	11,476.11	-9,762.30	4,294.49	14,424,469.03	1,709,287.66	39.71889688	-80.75507839
22,600.00	89.10	150.00	11,477.69	-9,848.89	4,344.49	14,424,382.44	1,709,337.66	39.71865870	-80.75490144
22,620.03	89.10	150.00	11,478.00	-9,866.24	4,354.50	14,424,365.09	1,709,347.67	39.71861100	-80.75486800

PBHL/TD 22620.33 MD/11496.00 TVD

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Hilrock 1S-12HU LP - hit/miss target center by 0.23ft at 12067.54ft MD (11311.94 TVD, -728.71 N, -921.19 E) - Point	0.00	0.00	11,312.00	-728.60	-921.00	14,433,502.71	1,704,072.18	39.74374374	-80.77354459
Hilrock 1S-12HU BHL r2 - plan hits target center - Point	0.00	0.00	11,478.00	-9,866.24	4,354.50	14,424,365.09	1,709,347.67	39.71861100	-80.75486600

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Planning Report - Geographic

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Hillrock 1S-12 HU (D)
<b>Company:</b>	Tug Hill Operating LLC	<b>TVD Reference:</b>	GL @ 1219.00ft
<b>Project:</b>	Marshall County, West Virginia	<b>MD Reference:</b>	GL @ 1219.00ft
<b>Site:</b>	Hillrock/Simms	<b>North Reference:</b>	Grid
<b>Well:</b>	Hillrock 1S-12 HU (D)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev2		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,200.00	1,200.00	0.00	0.00	KOP Begin 2°/100' build
1,357.82	1,357.74	-4.32	0.48	Begin 3.16° tangent section
2,844.60	2,842.26	-85.68	9.52	Begin 2°/100' drop
3,002.42	3,000.00	-90.00	10.00	Begin vertical hold section
8,002.42	8,000.00	-90.00	10.00	Begin 3°/100' build
9,750.88	9,641.92	41.96	-490.09	Begin 34.97° tangent
10,361.00	10,141.89	131.19	-828.20	Begin 6°/100' build/turn
11,534.98	11,127.61	-276.91	-1,102.00	Begin 8°/100' build/turn
12,067.57	11,311.94	-728.73	-921.18	Begin 89.00° lateral
22,620.03	11,478.00	-9,866.24	4,354.50	PBHL/TD 22620.33 MD/11496.00 TVD

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WW-9  
(4/16)

API Number 47 - 051 - \_\_\_\_\_  
Operator's Well No. Hillrock S-12HU

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<sup>+</sup>

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 EC#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.

Company Official Signature Jim Pancake

Company Official (Typed Name) Jim Pancake

Company Official Title Vice President - Geoscience

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Office of Oil and Gas

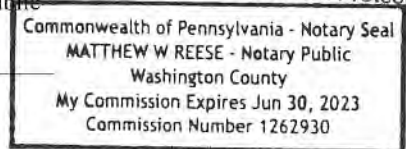
Subscribed and sworn before me this 3 day of July, 20 19

SEP 16 2019

[Signature] Notary Public

WV Department of Environmental Protection

My commission expires 6-30-2023





4705-02272

Form WW-9

Operator's Well No. Hillrock S-12HU

Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 11.63 Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

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

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

*Jan Nicholas*

Comments:

Title: Oil and Gas Inspector

Date:

7/8/19

Field Reviewed?

Yes

No

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WW-9

# PROPOSED HILLROCK S-12HU

SUPPLEMENT PG 1

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

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

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

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

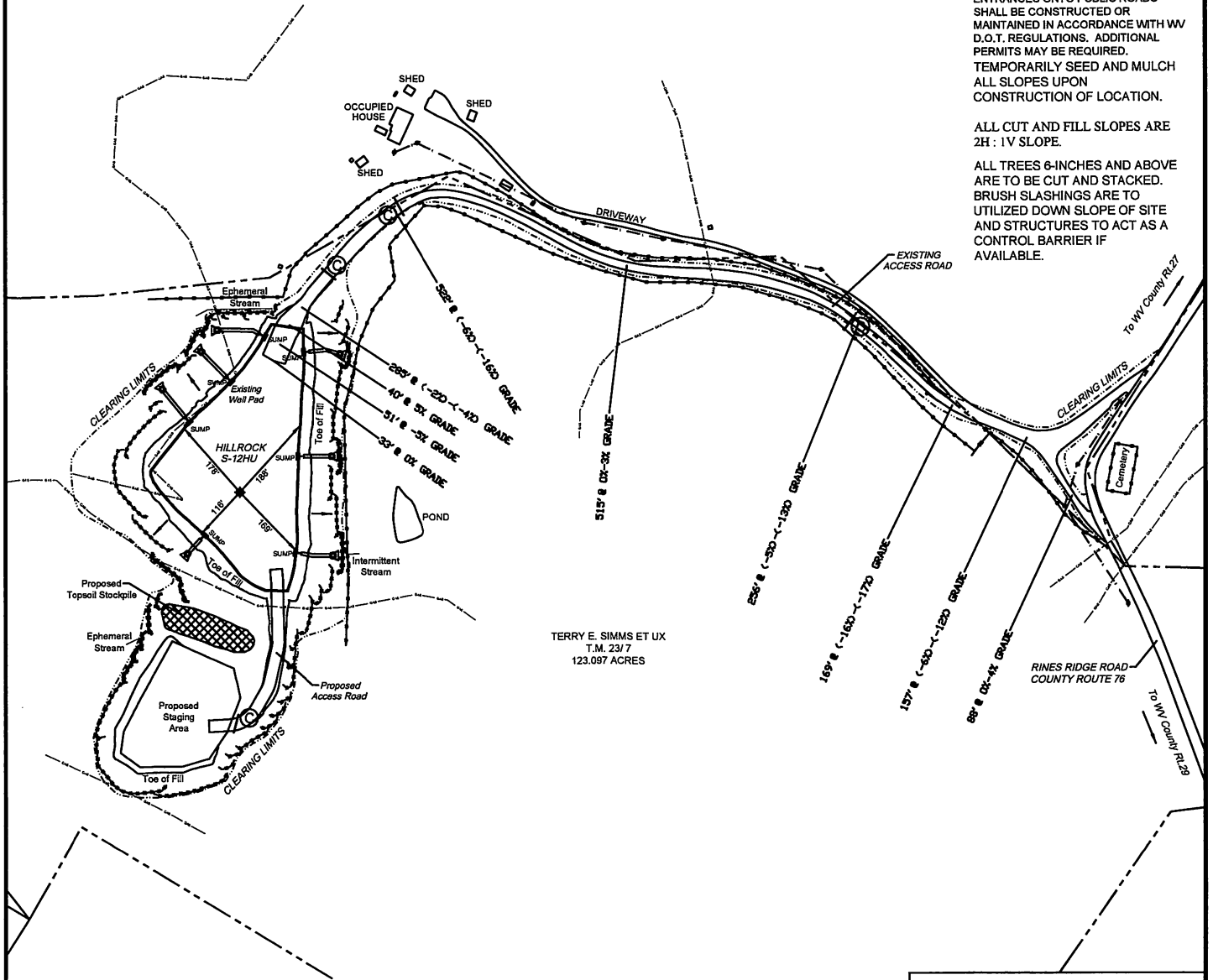
ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.

KENNETH N. CORLEY et ux.  
T.M. 17/11  
120 Acres

TERRY E. SIMMS ET UX  
T.M. 23/7  
123.087 ACRES

WILLIAM & VIRGINIA ROUPE  
T.M. 23/8.1  
34 Acres

DRAWING NOT TO SCALE



**LEGEND**

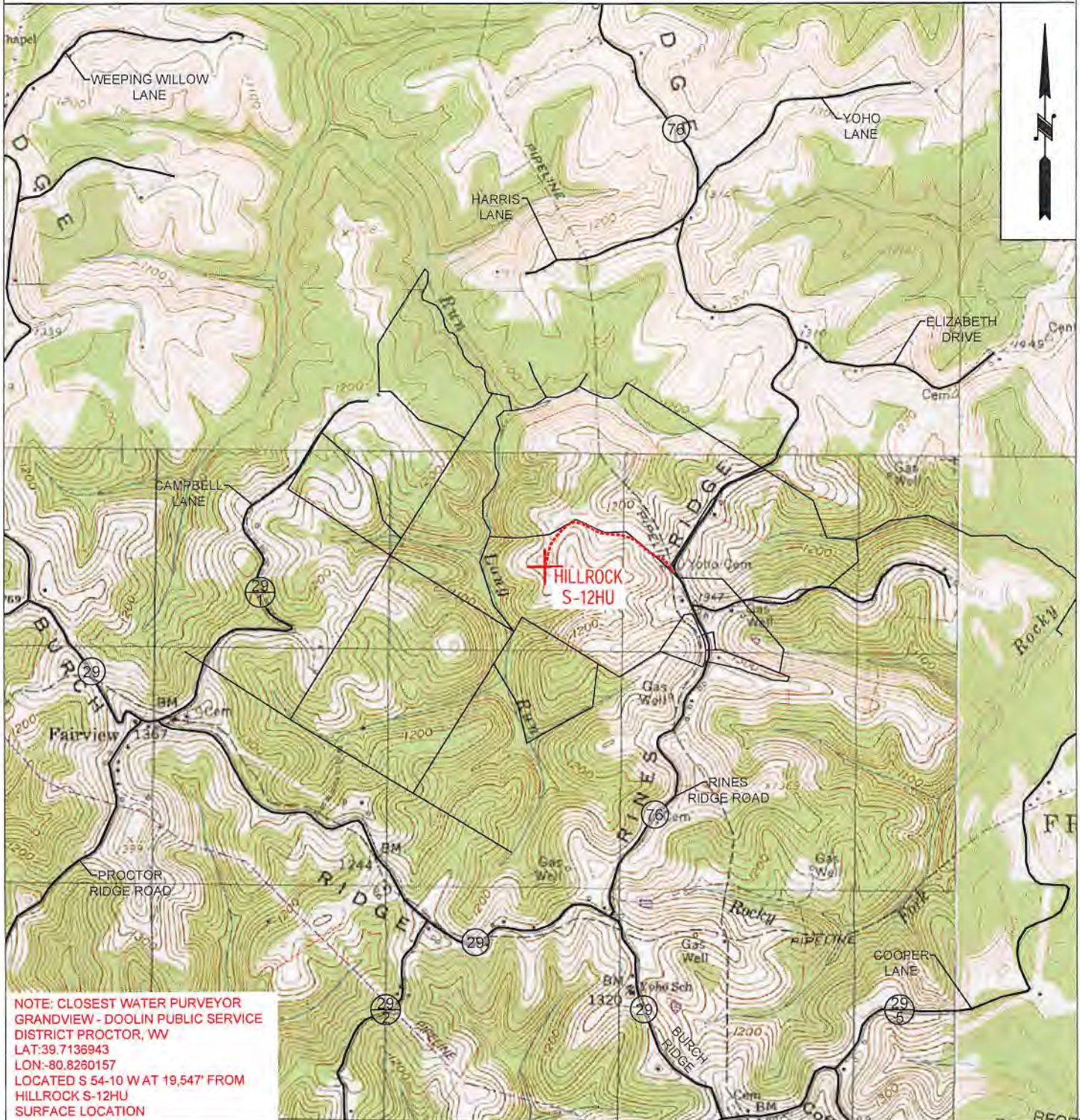
Note:  
 (C) — Denotes existing culvert with appropriate sediment outlet control (Rip Rap splash pad).  
 - - - - - Silt Fence and or Sediment and Erosion Control Measure.  
 - - - - - Surface Boundary



WW-9

# PROPOSED HILLROCK S-12HU

SUPPLEMENT PG 2



NOTE: CLOSEST WATER PURVEYOR  
GRANDVIEW - DOOLIN PUBLIC SERVICE  
DISTRICT PROCTOR, WV  
LAT:39.7136943  
LON:-80.8260157  
LOCATED S 54-10 WAT 19,547' FROM  
HILLROCK S-12HU  
SURFACE LOCATION



**OPERATOR** 494510851  
TUG HILL OPERATING, LLC  
380 SOUTHPOINTE BLVD  
SUITE 200  
CANONSBURG, PA 15317

**TOPO SECTION**  
NEW MARTINSVILLE 7.5'  
**SCALE:**  
1" = 2000'

**LEASE NAME**  
HILLROCK  
**DATE:**  
DATE: 03-13-2019

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4705 102272



# Well Site Safety Plan

## Tug Hill Operating, LLC

*mu*  
*7/8/19*

Well Name: Hillrock S-12HU

Pad Location: Simms

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

NORTHING -4,399,569.81

EASTING -519,682.87

July 2019

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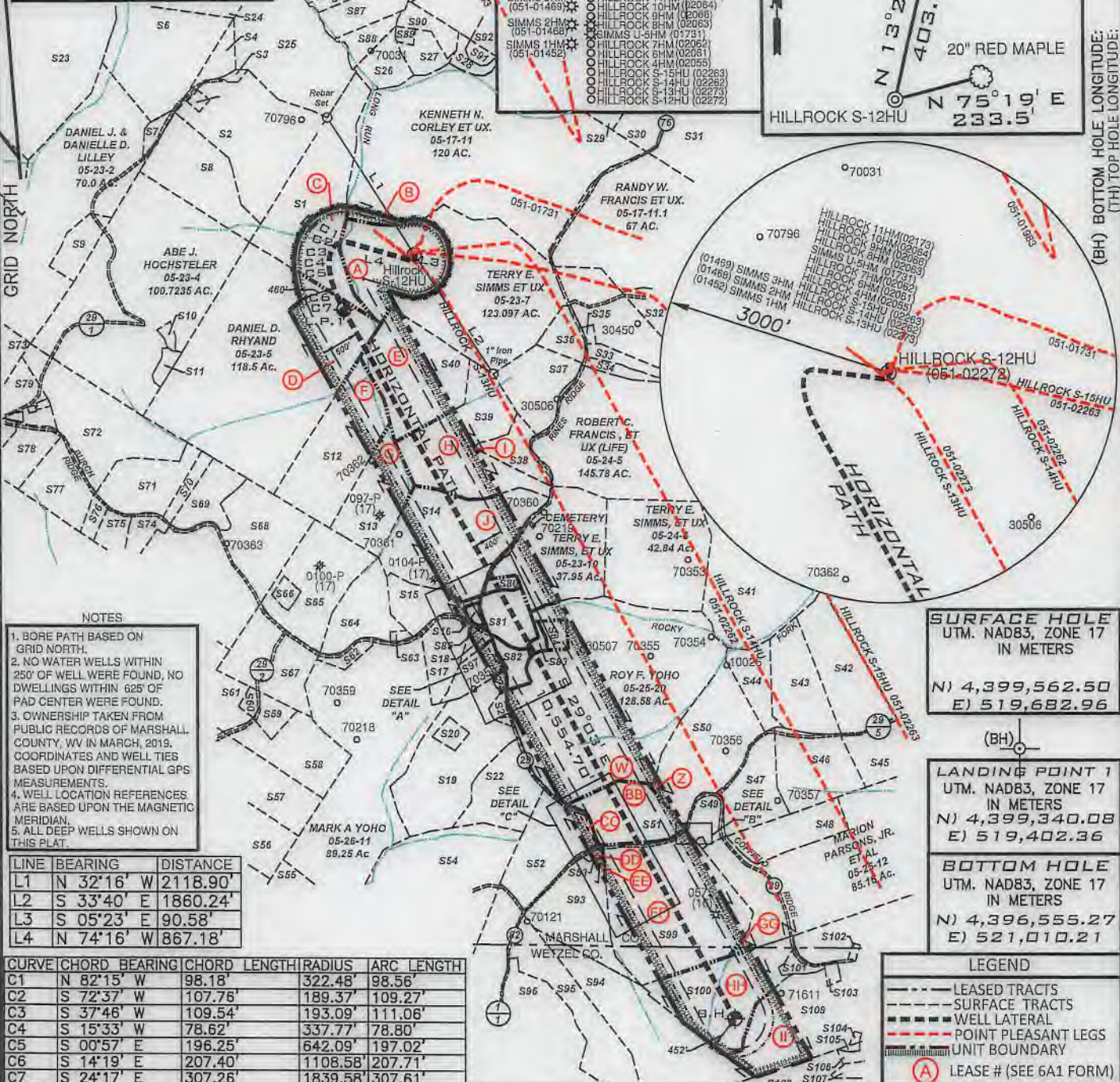
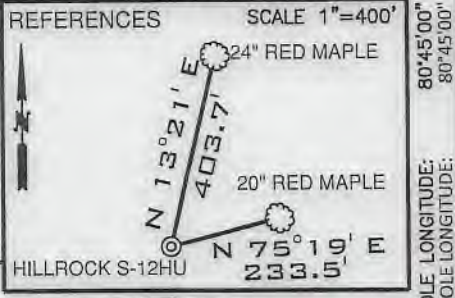
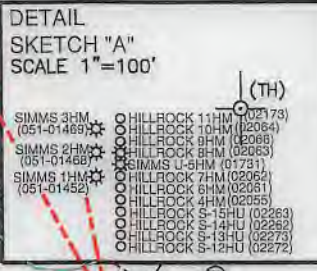


form ww6

**HILLROCK LEASE**

**WELL S-12HU** (+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS  
**371.8352 ± ACRES**

--- 400' BORE PATH OFFSET  
 - - - - 500' WELL BORE OFFSET



- NOTES**
- BORE PATH BASED ON GRID NORTH.
  - NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
  - OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2019. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
  - WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
  - ALL DEEP WELLS SHOWN ON THIS PLAT.

LINE	BEARING	DISTANCE
L1	N 32°16' W	2118.90'
L2	S 33°40' E	1860.24'
L3	S 05°23' E	90.58'
L4	N 74°16' W	867.18'

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 82°15' W	98.18'	322.48'	98.56'
C2	S 72°37' W	107.76'	189.37'	109.27'
C3	S 37°46' W	109.54'	193.09'	111.06'
C4	S 15°33' W	78.62'	337.77'	78.80'
C5	S 00°57' E	196.25'	642.09'	197.02'
C6	S 14°19' E	207.40'	1108.58'	207.71'
C7	S 24°17' E	307.26'	1839.58'	307.61'

**SURFACE HOLE**  
 UTM. NAD83, ZONE 17  
 IN METERS  
 N) 4,399,562.50  
 E) 519,682.96

**LANDING POINT 1**  
 UTM. NAD83, ZONE 17  
 IN METERS  
 N) 4,399,340.08  
 E) 519,402.36

**BOTTOM HOLE**  
 UTM. NAD83, ZONE 17  
 IN METERS  
 N) 4,396,555.27  
 E) 521,010.21

**LEGEND**

- LEASE TRACTS
- - - SURFACE TRACTS
- - - WELL LATERAL
- - - POINT PLEASANT LEGS
- - - UNIT BOUNDARY
- (A) LEASE # (SEE 6A1 FORM)

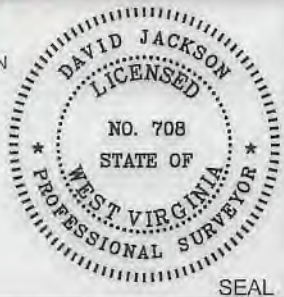
FILE NUMBER \_\_\_\_\_  
 DRAWING NUMBER: **HILLROCK S-12HU\_REV 2**  
 SCALE **1" = 2000'**  
 MINIMUM DEGREE OF ACCURACY **1/200**  
 PROVEN SOURCE OF ELEVATION **SUBMETER MAPPING GRADE GPS**

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



*David L Jackson*

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



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

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION  STORAGE \_\_\_ DEEP  SHALLOW \_\_\_  
 LOCATION ELEVATION **1219.5'** WATERSHED (HUC 10) **FISH CREEK**  
 DISTRICT **FRANKLIN** COUNTY **MARSHALL**  
 QUADRANGLE **NEW MARTINSVILLE 7.5'** LEASE NUMBER **SEE WW-6A1 Form**

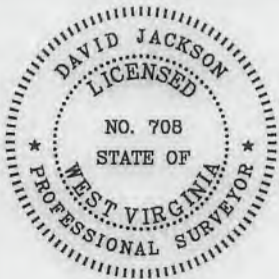
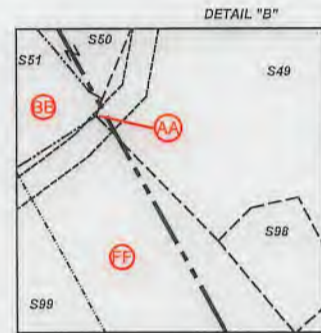
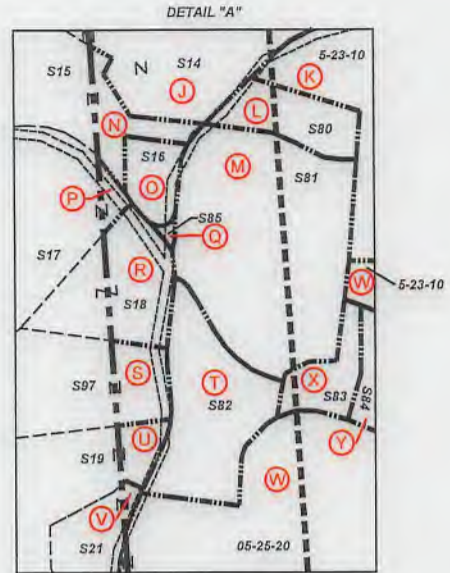
SURFACE OWNER **TERRY E. & DEBORAH SIMMS** ACREAGE **123.09**  
 OIL & GAS ROYALTY OWNER **TERRY E. & DEBORAH L. SIMMS, ET AL** LEASE ACREAGE **123.09**  
 PROPOSED WORK: DRILL  CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION \_\_\_  
 PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE (SPECIFY) \_\_\_\_\_  
 TARGET FORMATION **POINT PLEASANT** PLUG & ABANDON \_\_\_ CLEAN OUT & REPLUG \_\_\_  
 ESTIMATED DEPTH TVD: **11,532'** TMD: **22,620'**  
 WELL OPERATOR **TUG HILL OPERATING, LLC** DESIGNATED AGENT **DIANNA STAMPER CT CORPORATION SYSTEM**  
 ADDRESS **1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107** ADDRESS **5400 D BIG TYLER ROAD CHARLESTON, WV 25313**

COUNTY NAME  
 PERMIT



**HILLROCK LEASE  
WELL S-12HU  
371.8352± ACRES**

Number	TAX MAP-PARCEL	SURFACE OWNER	ACRES
S1	C 05-23-06	James A. Channing, et al	48.0
S2	05-18-21	Curtis E. & Michelle J. Hall	43.119
S3	05-18-21.3	XCL Midstream Operation, LLC	0.811
S4	05-18-21.1	Rodney & Rhonda Jackson	5.47
S5	05-18-21.2	David P. Lassan, Sr. (Life), David P. Lassan II & Julius L. Lassan	1.0
S6	05-18-22	Rodney & Rhonda Jackson	30.345
S7	05-23-2.1	William L. & Janice M. Wayne	2.364
S8	05-23-03	Abe J. Hochstetler	50.0
S9	05-23-2.2	Jessica N. & Andrew L. Jones	7.636
S10	05-23-4.2	XCL Midstream Operation, LLC	1.169
S11	05-23-4.1	XCL Midstream Operation, LLC	2.1575
S12	F 05-23-08	Carl David & Suzanne L. Guseman	29.5
S13	G 05-23-9.3	Linda D. Greathouse	17.5
S14	J 05-23-11.1	John H. & Sonya D. Holliday	46.482
S15	N 05-23-11.4	Evelyn L. Hudson	10.879
S16	O 05-23-11.2	Evelyn Hudson	1.154
S17	P 05-23-11.3	Colin R. Yoho	11.29
S18	R 05-23-11.5	Roy F. Yoho	2.25
S19	U 05-25-18	Joseph Johnson, et ux (Life)	37.746
S20	05-25-18.1	Pamela Joan Ferrell, et vir	2.491
S21	V 05-25-19	Joseph Johnson, et ux (Life)	1.973
S22	05-25-17	Craig R. & Ashley Ferrell	22.790
S23	05-18-24	Duane Brunn	102.0
S24	05-18-23	XCL Midstream Operation, LLC	110.0
S25	05-18-20	Wayne E. Channing, et al	75.60
S26	05-18-31	Kenneth E. Rastall	6.94
S27	05-18-32	Kenneth E. Rastall	5.335
S28	05-17-12	James A. & Jill C. Corley	3.33
S29	05-17-10	James A. Corley, et al	92.61
S30	05-17-9.3	James A. Corley, et ux	12.478
S31	05-17-9.4	Vicki L. Bowen	60.3
S32	05-24-01	Linda L. Hendrickson	175.0
S33	05-24-5.1	James D. Watkins, et ux	4.60
S34	05-24-5.2	James D. Watkins, et ux	3.151
S35	05-23-7.1	Lisa Ann Nelson	0.549
S36	05-23-7.2	Lisa Ann Nelson	6.354
S37	05-24-5.5	Linda Lou Tagg	17.194
S38	I 05-24-5.3	Thomas V. Tuttle, et ux	8.543
S39	H 05-24-5.4	Thomas V. Tuttle, et ux	38.224
S40	E 05-23-8.1	William & Virginia Roupe	34.0
S41	05-24-04	Terry E. Simms, et ux	84.05
S42	05-25-1.3	Michael E. & Annie A. Chapman	26.20
S43	05-25-1.2	William Jr. & Andrea J. Dubiel	20.10
S44	05-25-1.1	Ryan A. & Jacqueline E. Layman	9.79
S45	05-25-13.3	William M. Sr. & Cynthia A. Ferda	17.21
S46	05-25-1.5	Ryan J. Bratton	21.35
S47	05-25-13	William M. Ferda, Jr. & Stephanie L. Palicka	16.014
S48	05-25-12.1	Kent & Betty Mason	15.0
S49	AA 05-25-13.2	David A. Klug	5.89
S50	Z 05-25-01	Michael L. Mason	35.43
S51	BB 05-25-14	Roy F. Yoho	23.0
S52	CC 05-25-16	Craig R. & Ashley Ferrell	25.0
S53	DD 05-25-16.2	Rodney J. Loy	1.087
S54	05-26-12	Marjorie Ann Stoneking (Life)	153.969
S55	05-26-13	Marjorie Ann Stoneking (Life)	40.0
S56	05-26-10	Theresa H. Walton, as Trustee of Robert D. & Bonnie L. Oliver Family Trust	24.94
S57	05-26-09	Theresa H. Walton, as Trustee of Robert D. & Bonnie L. Oliver Family Trust	21.75



P.S.  
708

*David L Jackson*

47-051-02772 H6A



**TUG HILL  
OPERATING**

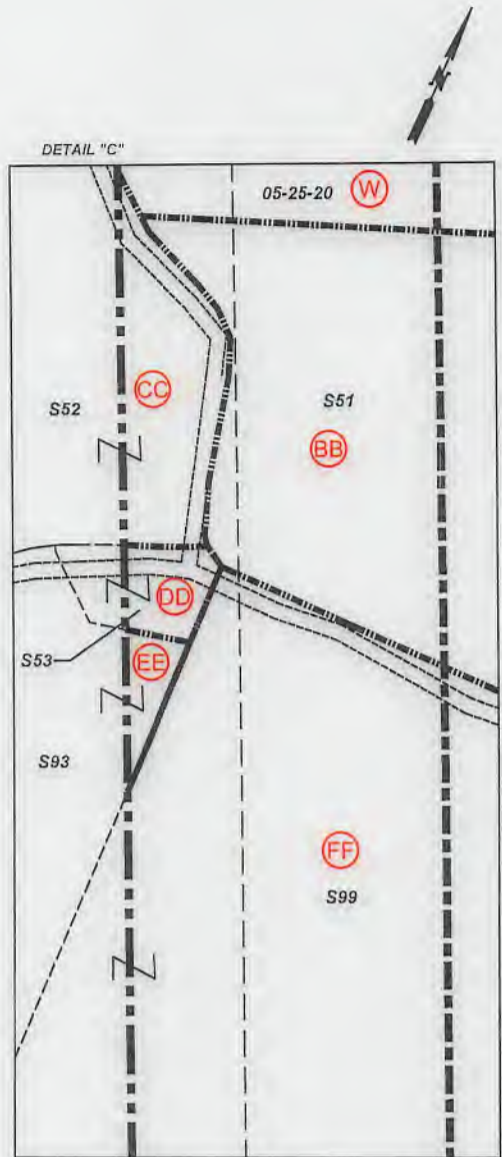
OPERATOR'S  
WELL #: HILLROCK S-12HU  
DISTRICT: Franklin  
COUNTY: Marshall  
STATE: WV  
API#: 047-051-02272

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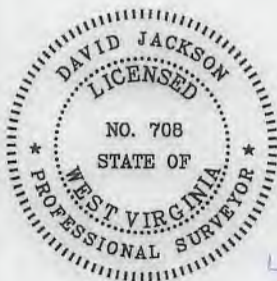


**HILLROCK LEASE  
WELL S-12HU  
371.8352± ACRES**

Number	TAX MAP-PARCEL	SURFACE OWNER	ACRES
S58	05-26-08	Richard Joseph Otte, et ux	18.27
S59	05-26-20	Donald Lee Anderson	4.2
S60	05-26-21	Richard Joseph Otte, et ux	1.25
S61	05-26-22	Richard Joseph Otte, et ux	8.3
S62	05-23-12	Mark A. Yoho	3.05
S63	05-23-13.1	James R. & Pamela J. Ferrell	0.7625
S64	05-23-13	Linda D. Greathouse	14.24
S65	05-23-9.2	Linda D. Greathouse	25.58
S66	05-23-9.4	Jackson R. Sr. & Deanna L. Davis	2.087
S67	05-23-9.1	John W. Van Orden, et ux	23.376
S68	05-23-14	Dominion Transmission, Inc.	59.5
S69	05-23-15	Virginia Ethel Henry Est.	15.5
S70	05-23-16.1	Donald B. Henry	1.97
S71	05-23-16	Roy Friend Yoho Sr.	18.03
S72	05-23-18	Abe J. Hochstetler	35.382
S73	05-23-01	Patricia Accettolo, et al	146.66
S74	05-23-17.3	William & Katherine Flewelling	5.018
S75	05-23-17	Tammy & Thomas E. Brown	4.62
S76	05-23-17.4	Tammy D. Meadows	2.605
S77	05-23-17.2	Dick Jr. & Carol J. Rowan	14.920
S78	05-23-17.1	Curtis E. Hall, et ux	10.051
S79	05-23-18.1	Mark A. Yoho	7.80
S80 L	05-23-11.7	Bryan L. Huggins	1.835
S81 M	05-23-11	Roy F. Yoho	9.475
S82 T	05-25-20.3	James A. & Jo C. Estep	4.49
S83 X	05-25-20.2	James M. Zombotti	1.347
S84 Y	05-25-20.1	James M. Zombotti	2.746
S85 Q	05-23-11.6	T.H. Exploration II, LLC & Atinum Marcellus I, LLC	0.094
S86	05-18-30	Jon Schmidt, et al	5.46
S87	05-18-13.10	Carl Berg	10.88
S88	05-18-29	Carl B. Berg	5.319
S89	05-18-32.1	Lori D. Carpenter	1.165
S90	05-18-13.8	Lori D. Carpenter	5.545
S91	05-17-12.1	Williams Ohio Valley Midstream, LLC	1.67
S92	05-17-10.5	Williams Ohio Valley Midstream, LLC	4.24
S93 EE	05-25-16.1	David L. Cunningham	6.34
S94	12-02-14	David L. Cunningham	56.23
S95	12-02-14.2	John G. Jr. & Geraldine M. Rogers	25.1
S96	12-02-14.1	Sammy J. Greathouse, Sr. (Life) and Sammy J. Greathouse, Jr.	18.67
S97 S	05-23-11.8	Zachary R. Stevey	7.00
S98	05-25-13.4	Parsons Cemetery	0.38
S99 FF	05-25-14.1	Judith L. Weigand	65.0
S100 HH	05-25-11.4	Edward W. Klug et ux	32.787
S101	05-25-11.1	Edward W. Klug & Dianna Klug	2.343
S102	12-03-47	Wetzel County Emergency Ambulance	0.50
S103	12-03-44	James A. & Jo C. Estep	1.10
S104	12-03-01	James W. Klug	0.375
S105	12-03-4.5	Hazel M. Blair	0.451
S106	12-03-4.6	Steven P. Wayman	1.009
S107	12-03-4.3	Joseph P. & Barbara A. Cain	3.619
S108	12-03-4.7	Joseph P. & Barbara A. Cain	67.3
S109 II	05-25-11.2	James W. Klug	114.305



Lease ID	Tags	Parcel	Grantor, Lessor, Etc.	Book	Page
10*14140	A	5-23-7	TERRY E SIMMS AND DEBORAH L SIMMS	666	529
10*14728	AA	5-25-13.2	IRIS K MOELLENDICK, ET AL	839	509
10*14126	B	5-17-11	SHARON MIDCAP	697	152
10*19727	BB	5-25-14	S RICHARD MELLON, ET AL	944	465
10*17186	C	5-23-6	ROBERT J HENRY	708	51
10*27898	CC	5-25-16	PAUL G FOX AND CYNTHIA G FOX, ET AL	1064	145
10*14847	D	5-23-5	LETHA RUCKMAN, ET AL	806	270
10*27898	DD	5-25-16.2	PAUL G FOX AND CYNTHIA G FOX, ET AL	1064	145
10*17191	E	5-23-8.1	ROBERT J HENRY, ET AL	715	463
10*27898	EE	5-25-16.1	PAUL G FOX AND CYNTHIA G FOX, ET AL	1064	145
10*17192	F	5-23-8	ROBERT J HENRY, ET AL	716	193
10*19727	FF	5-25-14.1	S RICHARD MELLON, ET AL	944	465
10*17189	G	5-23-9.3	ROBERT J HENRY	716	197
10*14926	GG	5-25-12	NILA JUNE MASON, ET AL	842	394
10*14797	H	5-24-5.4	ORVILLE YOUNG, ET AL	800	598
10*22494	HH	5-25-11.4	EDWARD W KLUG & DIANNA KLUG	920	109
10*14797	I	5-24-5.3	ORVILLE YOUNG, ET AL	800	598
10*22496	II	5-25-11.2	JAMES W KLUG	923	543
10*14786	J	5-23-11.1	TWILA O WHIPKEY, ET AL	799	61
10*14786	K	5-23-10	TWILA O WHIPKEY, ET AL	799	61
10*14786	L	5-23-11.7	TWILA O WHIPKEY, ET AL	799	61
10*14786	M	5-23-11	TWILA O WHIPKEY, ET AL	799	61
10*14786	N	5-23-11.4	TWILA O WHIPKEY, ET AL	799	61
10*14786	O	5-23-11.2	TWILA O WHIPKEY, ET AL	799	61
10*14786	P	5-23-11.3	TWILA O WHIPKEY, ET AL	799	61
10*17195	Q	5-23-11.6	PATRICIA HARTMAN, ET AL	695	317
10*14786	R	5-23-11.5	TWILA O WHIPKEY, ET AL	799	61
10*14786	S	5-23-11.8	TWILA O WHIPKEY, ET AL	799	61
10*14786	T	5-25-20.3	TWILA O WHIPKEY, ET AL	799	61
10*14786	U	5-25-18	TWILA O WHIPKEY, ET AL	799	61
10*14786	V	5-25-19	TWILA O WHIPKEY, ET AL	799	61
10*14786	W	5-25-20	TWILA O WHIPKEY, ET AL	799	61
10*14786	X	5-25-20.2	TWILA O WHIPKEY, ET AL	799	61
10*14786	Y	5-25-20.1	TWILA O WHIPKEY, ET AL	799	61
10*14728	Z	5-25-1	IRIS K MOELLENDICK, ET AL	839	509



47-051-02272 H6A

P.S. 708

*David L Jackson*



**TUG HILL  
OPERATING**

OPERATOR'S  
WELL #: HILLROCK S-12HU  
DISTRICT: Franklin  
COUNTY: Marshall  
STATE: WV  
API#: 047-051-02272

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WW-6A1  
(5/13)

Operator's Well No. Hillrock S-12HU

**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
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\*See attached pages

\*Co-tenancy utilization – At least 7 mineral owners in tract. At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act.

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

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

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

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

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









10*17186	C	5-23-6	ROBERT J HENRY PAUL G FOX AND CYNTHIA G	CHEESAPEAKE APPALACHIA LLC	1/8+	708	51	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statcoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC	850/397 Statcoil USA Onshore Properties Inc and SWN Production Company LLC agreement	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statcoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*27898	CC	5-25-16	FOX CAROL VASS *	TH EXPLORATION, LLC	1/8+	1064	145	NA	NA	NA	NA	NA	NA	NA	NA
10*27897	CC	5-25-16	MELISSA PAINTER AND SHAUN PAINTER	TH EXPLORATION, LLC	1/8+	1063	605	NA	NA	NA	NA	NA	NA	NA	NA
10*18205	CC	5-25-16	BRUCE EDWARD BAILEY JR	TH EXPLORATION, LLC	1/8+	927	639	NA	NA	NA	NA	NA	NA	NA	NA
10*18216	CC	5-25-16	AND DARA BAILEY	TH EXPLORATION, LLC	1/8+	929	99	NA	NA	NA	NA	NA	NA	NA	NA
10*19484	CC	5-25-16	FREDRIC & BETTY RICHTER	TH EXPLORATION, LLC	1/8+	941	235	NA	NA	NA	NA	NA	NA	NA	NA
10*19485	CC	5-25-16	ELIZABETH A HARTLE	TH EXPLORATION, LLC	1/8+	135A	164	NA	NA	NA	NA	NA	NA	NA	NA
10*19643	CC	5-25-16	PATRICIA LOUISE CROW AND HOY GLENN CROW	TH EXPLORATION, LLC	1/8+	944	101	NA	NA	NA	NA	NA	NA	NA	NA
10*23349	CC	5-25-16	LYNN ELEN BARCUS AND PAUL E BARCUS JR	TH EXPLORATION, LLC	1/8+	988	439	NA	NA	NA	NA	NA	NA	NA	NA
10*23403	CC	5-25-16	JANI LEA O'DONNELL AND KELLY O'DONNELL	TH EXPLORATION, LLC	1/8+	988	436	NA	NA	NA	NA	NA	NA	NA	NA
10*23426	CC	5-25-16	STEVEN L & CAROL J NEWMAN	TH EXPLORATION, LLC	1/8+	212A	32	NA	NA	NA	NA	NA	NA	NA	NA
10*23702	CC	5-25-16	BRAD EYNON	TH EXPLORATION, LLC	1/8+	1015	152	NA	NA	NA	NA	NA	NA	NA	NA
10*23836	CC	5-25-16	ION & SUSAN NEWMAN	TH EXPLORATION, LLC	1/8+	214A	315	NA	NA	NA	NA	NA	NA	NA	NA
10*27186	CC	5-25-16	LAURA EYNON MAY ROBERT M AND NANCY RAE	TH EXPLORATION, LLC	1/8+	1057	339	NA	NA	NA	NA	NA	NA	NA	NA
10*27298	CC	5-25-16	MCCARDLE	TH EXPLORATION, LLC	1/8+	1057	337	NA	NA	NA	NA	NA	NA	NA	NA
10*27435	CC	5-25-16	ROHN J MARTIN BOWERS	TH EXPLORATION, LLC	1/8+	1058	568	NA	NA	NA	NA	NA	NA	NA	NA
10*27439	CC	5-25-16	GERALD H COOPER	TH EXPLORATION, LLC	1/8+	1058	570	NA	NA	NA	NA	NA	NA	NA	NA
10*27444	CC	5-25-16	GREGORY T COOPER	TH EXPLORATION, LLC	1/8+	1058	572	NA	NA	NA	NA	NA	NA	NA	NA
10*27521	CC	5-25-16	GASPAR E INGRASSELLINO	TH EXPLORATION, LLC	1/8+	1060	238	NA	NA	NA	NA	NA	NA	NA	NA
10*27569	CC	5-25-16	ROBERT NEIL LOHR	TH EXPLORATION, LLC	1/8+	1060	484	NA	NA	NA	NA	NA	NA	NA	NA
10*14847	D	5-23-5	LETHA RUCKMAN	GASTAR EXPLORATION USA INC	1/8+	806	270	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	31/184 Gastar Exploration Inc to Athinum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II, LLC
10*14849	D	5-23-5	DAVID GUSTEY	GASTAR EXPLORATION USA INC	1/8+	806	265	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	31/184 Gastar Exploration Inc to Athinum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II, LLC
10*14853	D	5-23-5	DURWOOD WRIGHT BY CATHERINE HUMMEL AIF	GASTAR EXPLORATION USA INC	1/8+	809	507	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	31/184 Gastar Exploration Inc to Athinum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II, LLC
10*14861	D	5-23-5	NANCY WHITLATCH	GASTAR EXPLORATION USA INC	1/8+	809	526	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	31/184 Gastar Exploration Inc to Athinum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II, LLC
10*14862	D	5-23-5	ANN GUSTEY	GASTAR EXPLORATION USA INC	1/8+	809	568	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	31/184 Gastar Exploration Inc to Athinum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II, LLC

10*14864	D	5-23-5	CAROLYN DURWAY	GASTAR EXPLORATION USA INC	1/8+	810	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	31/184 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14866	D	5-23-5	GARY CARMICHAEL	GASTAR EXPLORATION USA INC	1/8+	810	316	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	31/184 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14868	D	5-23-5	WOODROW CAMPBELL JR	GASTAR EXPLORATION USA INC	1/8+	813	454	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	31/184 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14869	D	5-23-5	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA INC	1/8+	813	561	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	31/184 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14870	D	5-23-5	DAVID CARMICHAEL	GASTAR EXPLORATION USA INC	1/8+	816	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	31/184 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14872	D	5-23-5	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA INC	1/8+	817	312	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	31/184 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14873	D	5-23-5	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32/428 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14874	D	5-23-5	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32/428 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14876	D	5-23-5	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32/428 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14877	D	5-23-5	GARY F OBLLOY AND DENISE I OBLLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32/428 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14878	D	5-23-5	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33/308 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14879	D	5-23-5	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33/308 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14880	D	5-23-5	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34/302 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC



10*14881	D	5-23-5	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	34/302 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14882	D	5-23-5	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	34/302 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14884	D	5-23-5	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	35/119 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14885	D	5-23-5	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	35/119 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14886	D	5-23-5	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	35/119 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14887	D	5-23-5	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	35/119 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14888	D	5-23-5	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	35/119 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14889	D	5-23-5	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	35/119 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14890	D	5-23-5	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	35/575 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*14891	D	5-23-5	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	35/575 Gaster Exploration Inc to Athum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II, LLC
10*17145	D	5-23-5	JAMES J. CAMPBELL AND BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17146	D	5-23-5	CAROLYN CAMPBELL BRITTON AND ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17147	D	5-23-5	JOANN J. PARSONS AND GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia LLC to Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company	33/424 Statoll USA Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC

























10*14818	H	5-24-5.4	DEWEY A MILICIA AND ROBIN MILICIA	GASTAR EXPLORATION INC	1/8+	875	591	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14819	H	5-24-5.4	NICOLETTA MILICIA BLOODWORTH	GASTAR EXPLORATION INC	1/8+	875	593	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14820	H	5-24-5.4	DANA MILICIA HUMPHREYS	GASTAR EXPLORATION INC	1/8+	875	595	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14821	H	5-24-5.4	JANICE N HAUDENSCHILT	GASTAR EXPLORATION INC	1/8+	875	597	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14822	H	5-24-5.4	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14823	H	5-24-5.4	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*17181	H	5-24-5.4	PAUL F HAMMERS	CHESAPEAKE APPALACHIA LLC	1/8+	705	593	NA	NA	NA	NA	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17182	H	5-24-5.4	TWILA ORA WHIPKEY	CHESAPEAKE APPALACHIA LLC	1/8+	715	505	NA	NA	NA	NA	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17195	H	5-24-5.4	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	NA	NA	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17196	H	5-24-5.4	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	NA	NA	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	H	5-24-5.4	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	NA	NA	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC



10*17199	H	5-24-5-4	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7/311 Gaster Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17200	H	5-24-5-4	STEPHANIE L HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7/311 Gaster Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17201	H	5-24-5-4	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7/311 Gaster Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17202	H	5-24-5-4	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7/311 Gaster Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	H	5-24-5-4	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7/311 Gaster Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	H	5-24-5-4	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7/311 Gaster Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	H	5-24-5-4	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7/311 Gaster Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	H	5-24-5-4	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7/311 Gaster Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*17210	H	5-24-5-4	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	Exploration USA Inc to Athinum Marcellus I LLC	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	27/311 GASTAR	Exploration USA Inc and Athinum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	H	5-24-5-4	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17212	H	5-24-5-4	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*12213	H	5-24-5-4	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*18273	H	5-24-5-4	BETTY JEAN NEELY MARY LOU WILSON AND STANLEY D WILSON	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	
10*18366	H	5-24-5-4	MICHAEL WILSON	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18369	H	5-24-5-4	CRAIG ALAN YOHO AND ATTORNEY IN FACT	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	H	5-24-5-4	DONNA M YOHO	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18379	H	5-24-5-4	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	NA	NA	NA
10*19540	H	5-24-5-4	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	H	5-24-5-4	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21183	H	5-24-5-4	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	952	205	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*23325	H	5-24-5-4	BRADLEY W YOHO	TH EXPLORATION, LLC	1/8+	966	482	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	H	5-24-5-4	CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	H	5-24-5-4	CECILIA D NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		



10*27085	H	5-24-5.4	DAPHNE HUFFMAN AND CHARLES HUFFMAN	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*22494	HH	5-25-11.4	EDWARD W KLUG & DIANNA KLUG	AMERICAN PETROLEUM PARTNERS LLC	1/8+	920	109	NA	NA	NA	NA	NA	NA	42/109 American Petroleum Partners LLC to TH Exploration, LLC	
10*14797	I	5-24-5.3	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	NA	NA	806/1 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14817	I	5-24-5.3	DONNA V YOHO	GASTAR EXPLORATION USA INC	1/8+	874	351	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14818	I	5-24-5.3	DEWEY A MILICIA AND ROBIN MILICIA	GASTAR EXPLORATION USA INC	1/8+	875	591	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14819	I	5-24-5.3	NICOLETTA MILICIA BLOODWORTH	GASTAR EXPLORATION USA INC	1/8+	875	593	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14820	I	5-24-5.3	DANA MILICIA HUMPHREYS	GASTAR EXPLORATION USA INC	1/8+	875	595	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14821	I	5-24-5.3	JANICE N HAUDENSCHILT	GASTAR EXPLORATION USA INC	1/8+	875	597	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14822	I	5-24-5.3	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION USA INC	1/8+	876	463	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14823	I	5-24-5.3	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION USA INC	1/8+	876	459	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*17181	I	5-24-5.3	PAUL F HAMMERS	CHESAPEAKE APPALACHIA LLC	1/8+	705	593	NA	NA	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17182	I	5-24-5.3	TWILA ORA WHIRKEY	CHESAPEAKE APPALACHIA LLC	1/8+	715	505	NA	NA	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*17195	1	5-24-5.3	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17196	1	5-24-5.3	DEIBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	1	5-24-5.3	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17199	1	5-24-5.3	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17200	1	5-24-5.3	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17201	1	5-24-5.3	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17202	1	5-24-5.3	JANNE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	1	5-24-5.3	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC









10*17196	J	5-23-11.1	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	z7/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc z7/311 GASTAR	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titheholder LLC	19/624 SWN Exchange Titheholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	J	5-23-11.1	GIORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	z7/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc z7/311 GASTAR	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titheholder LLC	19/624 SWN Exchange Titheholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17199	J	5-23-11.1	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	z7/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc z7/311 GASTAR	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titheholder LLC	19/624 SWN Exchange Titheholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17200	J	5-23-11.1	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	z7/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc z7/311 GASTAR	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titheholder LLC	19/624 SWN Exchange Titheholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17201	J	5-23-11.1	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	z7/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc z7/311 GASTAR	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titheholder LLC	19/624 SWN Exchange Titheholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17202	J	5-23-11.1	JANIE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	z7/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc z7/311 GASTAR	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titheholder LLC	19/624 SWN Exchange Titheholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	J	5-23-11.1	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	z7/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc z7/311 GASTAR	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titheholder LLC	19/624 SWN Exchange Titheholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	J	5-23-11.1	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	z7/311 GASTAR Exploration USA Inc and Athinum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc z7/311 GASTAR	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titheholder LLC	19/624 SWN Exchange Titheholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC







10*17195	K	5-23-10	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	23/353 Gaster Exploration USA Inc to Atrium Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Atrium 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17196	K	5-23-10	DEIBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	23/353 Gaster Exploration USA Inc to Atrium Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Atrium 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	K	5-23-10	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	23/353 Gaster Exploration USA Inc to Atrium Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Atrium 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17199	K	5-23-10	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	23/353 Gaster Exploration USA Inc to Atrium Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Atrium 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17200	K	5-23-10	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	23/353 Gaster Exploration USA Inc to Atrium Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Atrium 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17201	K	5-23-10	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gaster Exploration USA Inc to Atrium Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Atrium 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17202	K	5-23-10	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gaster Exploration USA Inc to Atrium Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Atrium 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	K	5-23-10	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gaster Exploration USA Inc to Atrium Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Atrium 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	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*14823	L	5-23-11.7	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA 27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration II Inc to TH Exploration II LLC
10*17195	L	5-23-11.7	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17196	L	5-23-11.7	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17197	L	5-23-11.7	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17199	L	5-23-11.7	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17200	L	5-23-11.7	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17201	L	5-23-11.7	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17202	L	5-23-11.7	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	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*14797	M	5-23-11	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	806/1 Gaster Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC	
10*14822	M	5-23-11	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC	
10*14823	M	5-23-11	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC	
10*17195	M	5-23-11	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17196	M	5-23-11	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	M	5-23-11	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17199	M	5-23-11	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17200	M	5-23-11	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17201	M	5-23-11	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*17202	M	5-23-11	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	M	5-23-11	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	M	5-23-11	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	M	5-23-11	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	M	5-23-11	DEBORAH K. KUMASZEWSKI FRANK KUMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	M	5-23-11	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	M	5-23-11	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17212	M	5-23-11	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	

10*17213	M	5-23-11	CAROL DEEN GARDNER	GASTAR EXPLORATION USA	1/8+	697	154	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*18273	M	5-23-11	BETTY JEAN NEELY MARY LOU WILSON AND STANLEY D WILSON MICHAEL WILSON	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA	NA
10*18366	M	5-23-11	CRAIG ALAN YOHO AND ATTORNEY IN FACT	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA
10*18369	M	5-23-11	DONNA M YOHO	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	M	5-23-11	SAMUEL D YOHO 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	NA
10*18379	M	5-23-11	LIVING TRUST	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA
10*19540	M	5-23-11	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	108	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	M	5-23-11	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA
10*19662	M	5-23-11	CHESTNUT HOLDINGS INC	TH EXPLORATION, LLC	1/8+	949	311	NA	NA	NA	NA	NA	NA	NA	NA
10*19903	M	5-23-11	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA
10*20008	M	5-23-11	COLIN R YOHO AND NORMA LYOHO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA
10*20025	M	5-23-11	MARK EUGENE YOHO & MARY YOHO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	M	5-23-11	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	M	5-23-11	APRIL ROSE POSTLETHWAT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	M	5-23-11	DONNA V YOHO	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	M	5-23-11	DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA
10*23373	M	5-23-11	DANA MILICIA HUMPHREYS	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	M	5-23-11	NICOLETTA MILICIA	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	M	5-23-11	BLOODWORTH CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	M	5-23-11	CECILIA D NEWLAND	GASTAR EXPLORATION USA	1/8+	697	381	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*27085	M	5-23-11	DAPHNE HUFMAN AND CHARLES HUFMAN	GASTAR EXPLORATION USA	1/8+	697	383	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*27086	M	5-23-11	DONALD R NEWLAND AND SILZANNE NEWLAND	GASTAR EXPLORATION USA	1/8+	698	639	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC



10*14786	N	5-23-11.4	TWILA O WHIPKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14792	N	5-23-11.4	TIMOTHY YOHO	GASTAR EXPLORATION USA INC	1/8+	799	536	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14797	N	5-23-11.4	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	806/1 Gaster Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14822	N	5-23-11.4	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14823	N	5-23-11.4	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*17195	N	5-23-11.4	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17196	N	5-23-11.4	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	N	5-23-11.4	GLORIA L SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17199	N	5-23-11.4	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17200	N	5-23-11.4	STEPHANIE L HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*17201	N	5-23-11.4	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17202	N	5-23-11.4	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	N	5-23-11.4	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	N	5-23-11.4	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17205	N	5-23-11.4	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	N	5-23-11.4	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	N	5-23-11.4	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	N	5-23-11.4	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	29/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*17212	N	5-23-11.4	DARREL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	2/7/311 Gastar Exploration USA Inc and Athium Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/825 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17213	N	5-23-11.4	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	29/825 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 Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*18275	N	5-23-11.4	BETTY JEAN NEELY MARYLOU WILSON AND STANLEY D WILSON			929	60	NA	NA	NA	NA	NA	NA	NA	NA
10*18366	N	5-23-11.4	MICHAEL WILSON ATTORNEY IN FACT	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA
10*18369	N	5-23-11.4	GRAIG ALAN YOHIO AND DONNA M YOHIO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	N	5-23-11.4	DAVID N DEVICK TRUSTEE OF THE TONI JO MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA
10*18379	N	5-23-11.4	LIVING TRUST	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA
10*19340	N	5-23-11.4	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	N	5-23-11.4	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA
10*19903	N	5-23-11.4	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA
10*22008	N	5-23-11.4	COLIN R YOHIO AND NORMA L YOHIO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA
10*22025	N	5-23-11.4	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	N	5-23-11.4	JAVICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	N	5-23-11.4	APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	N	5-23-11.4	DONNA V YOHIO	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	N	5-23-11.4	DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA
10*23373	N	5-23-11.4	DANA MILICIA HUMPHREYS	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	N	5-23-11.4	NICOLETTA MILICIA BLOODWORTH	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	N	5-23-11.4	CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA
10*27086	N	5-23-11.4	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	698	639	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	29/825 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 Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*14786	O	5-23-11.2	TWILA O WHIPKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	806/1 Gastar Exploration USA Inc to Athium Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	36/9 Gastar Exploration Inc to TH Exploration II LLC	



10*14797	O	5-23-11.2	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14822	O	5-23-11.2	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14823	O	5-23-11.2	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*17193	O	5-23-11.2	PATRIGIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17196	O	5-23-11.2	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	O	5-23-11.2	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17199	O	5-23-11.2	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17200	O	5-23-11.2	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17201	O	5-23-11.2	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*17202	O	5-23-11.2	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	O	5-23-11.2	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	O	5-23-11.2	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	O	5-23-11.2	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	O	5-23-11.2	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	O	5-23-11.2	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	O	5-23-11.2	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Athnum 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	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17212	O	5-23-11.2	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Z7/311 GASTAR Exploration USA Inc and Athnum 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	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	

10*17213	O	5-23-11.2	CAROL DEBN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc	41/256 SWN Production Company LLC to TH Exploration LLC
10*18275	O	5-23-11.2	BETTY JEAN NEELY MARY LOU WILSON AND STANLEY D WILSON MICHAEL WILSON	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA	NA
10*18366	O	5-23-11.2	ATTORNEY IN FACT GRANG ALAN YOHIO AND DONNA M YOHIO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	O	5-23-11.2	SAMUEL D YOHIO DAVID N DEVIK TRUSTEE OF THE TONI JO MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA
10*18379	O	5-23-11.2	LIVING TRUST ERICA M MASON	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA
10*19540	O	5-23-11.2	JACK R HAMMERS PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA
10*19903	O	5-23-11.2	COLIN R YOHIO AND NORMA L YOHIO	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA
10*22008	O	5-23-11.2	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA
10*22025	O	5-23-11.2	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	O	5-23-11.2	APRIL ROSE ROSTLEHWART	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	O	5-23-11.2	DONNA V YOHIO	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	O	5-23-11.2	DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	O	5-23-11.2	DANA MILICIA HUMPHREYS NICOLETTA MILICIA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA
10*23373	O	5-23-11.2	BLOODWORTH CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	O	5-23-11.2	CECILIA D NEWLAND	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	O	5-23-11.2	DAPHNE HUFFMAN AND CHARLES HUFFMAN	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	O	5-23-11.2	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc	41/256 SWN Production Company LLC to TH Exploration LLC
10*27085	O	5-23-11.2	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	29/325 Chesapeake Appalachia LLC and Statoil USA Onshore Properties	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc	41/256 SWN Production Company LLC to TH Exploration LLC
10*27086	O	5-23-11.2	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	698	639	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	23/353 Gastar Exploration USA Inc to Athium Marcellus I LLC	29/325 Chesapeake Appalachia LLC and Statoil USA Onshore Properties	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc	41/256 SWN Production Company LLC to TH Exploration LLC



10*14786	P	5-23-11.3	TWILA O WHIRKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	806/1 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc and Gatar Exploration Inc merger	36/9 Gatar Exploration Inc to TH Exploration II LLC
10*14797	P	5-23-11.3	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	NA	806/1 Gatar Exploration USA Inc and Gatar Marcellus I LLC	21/41 Gatar Exploration USA Inc and Gatar Exploration Inc merger	36/9 Gatar Exploration Inc to TH Exploration II LLC
10*14822	P	5-23-11.3	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	NA	35/144 Gatar Exploration Inc to Atinum Marcellus I LLC	36/9 Gatar Exploration Inc to TH Exploration II LLC
10*14823	P	5-23-11.3	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	35/144 Gatar Exploration Inc to Atinum Marcellus I LLC	36/9 Gatar Exploration Inc to TH Exploration II LLC
10*17195	P	5-23-11.3	PATRIGIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17196	P	5-23-11.3	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	P	5-23-11.3	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17199	P	5-23-11.3	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17200	P	5-23-11.3	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	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	P	5-23-11.3	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	23/353 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17202	P	5-23-11.3	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	23/353 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	P	5-23-11.3	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	23/353 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	P	5-23-11.3	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	23/353 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17205	P	5-23-11.3	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	23/353 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	P	5-23-11.3	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	23/353 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	P	5-23-11.3	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	23/353 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	P	5-23-11.3	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	23/353 Gastar Exploration USA Inc and Athnum 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	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	

10*12212	P	5-23-11.3	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	138	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7311 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17213	P	5-23-11.3	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	134	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*18275	P	5-23-11.3	BETTY JEAN NEELY MARYLOU WILSON AND STANLEY D WILSON MICHAEL WILSON	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA	NA
10*18366	P	5-23-11.3	ATTORNEY IN FACT CRAIG ALAN YOHO AND SAMUEL D YOHO DAVID N DEVICK TRUSTEE OF THE TOM JO MASON	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA
10*18369	P	5-23-11.3	DONNA M YOHO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	P	5-23-11.3	SAMUEL D YOHO DAVID N DEVICK TRUSTEE OF THE TOM JO MASON	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA
10*18379	P	5-23-11.3	LIVING TRUST ERICA M MASON	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA
10*19540	P	5-23-11.3	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	P	5-23-11.3	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA
10*19903	P	5-23-11.3	COLIN R YOHO AND NGRMA LYHO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA
10*22008	P	5-23-11.3	MARK EUGENE YOHO & MARY YOHO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA
10*22025	P	5-23-11.3	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	P	5-23-11.3	APRIL ROSE POSTLETHWAIT DENVA V YOHO	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	P	5-23-11.3	DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	P	5-23-11.3	DANA MILICIA HUMPHREYS NICOLETTA MILICIA	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA
10*23373	P	5-23-11.3	BLOODWORTH	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	P	5-23-11.3	CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	P	5-23-11.3	CECILIA D NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7311 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*27078	P	5-23-11.3	CHARLES HUFMAN AND DAPHNE HUFMAN	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Z/7311 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC



10*27086	P	5-23-11.3	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	698	639	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athium Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17195	Q	5-23-11.6	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athium 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17196	Q	5-23-11.6	DEBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athium 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17197	Q	5-23-11.6	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athium 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17199	Q	5-23-11.6	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athium 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17200	Q	5-23-11.6	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athium 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17201	Q	5-23-11.6	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athium 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17202	Q	5-23-11.6	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athium 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	

10*17203	Q	5-23-11.6	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	Q	5-23-11.6	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	Q	5-23-11.6	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	Q	5-23-11.6	DEBORAH K KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	Q	5-23-11.6	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum 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 to SWN Exchange Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	Q	5-23-11.6	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17212	Q	5-23-11.6	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17213	Q	5-23-11.6	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titlholder LLC	19/624 SWN Exchange Titlholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*14786	Q	5-23-11.6	TWILA O WHIRKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	806/1 Gastar Exploration USA Inc to Athum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14822	Q	5-23-11.6	ONVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	806/1 Gastar Exploration USA Inc to Athum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14823	Q	5-23-11.6	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC	
10*18275	Q	5-23-11.6	BETTY JEAN NEELY TRUSTEE MARY LOU WILSON AND STANLEY D WILSON MICHAEL WILSON	GASTAR EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athum Marcellus I LLC		
10*18366	Q	5-23-11.6	ATTORNEY IN FACT CRAIG ALAN YOHO AND DONNA M YOHO	THE EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*18369	Q	5-23-11.6	DAVID N DEVICK TRUSTEE OF THE TONI JO MASON	THE EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*18370	Q	5-23-11.6	MARK EUGENE YOHO & MARY YOHO	THE EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*18379	Q	5-23-11.6	LIVING TRUST	THE EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*19540	Q	5-23-11.6	ERICA M MASON	THE EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*19652	Q	5-23-11.6	JACK R HAMMERS	THE EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*19903	Q	5-23-11.6	PAUL F HAMMERS	THE EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*22008	Q	5-23-11.6	COLIN R YOHO AND NORMA L YOHO	THE EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*22025	Q	5-23-11.6	MARY YOHO	THE EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*22129	Q	5-23-11.6	JANICE N HAUDENSCHILT	THE EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*22441	Q	5-23-11.6	APRIL ROSE POSTLETHWAIT	THE EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*22510	Q	5-23-11.6	DONNA V YOHO	THE EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*23372	Q	5-23-11.6	DEWEY A MILICIA AND ROBIN MILICIA	THE EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*23373	Q	5-23-11.6	DANA MILICIA HUMPHREYS NICOLETTA MILICIA	THE EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*23446	Q	5-23-11.6	BLOODWORTH	THE EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*25627	Q	5-23-11.6	CHESTNUT HOLDINGS LLC	THE EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
10*14786	R	5-23-11.5	TWILA O WHIRKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	806/1 Gastar Exploration USA Inc to Athum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14797	R	5-23-11.5	ONVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	806/1 Gastar Exploration USA Inc to Athum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	36/9 Gastar Exploration Inc to TH Exploration II LLC



10*14822	R	5-23-11.5	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14823	R	5-23-11.5	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*17195	R	5-23-11.5	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc Z7/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17196	R	5-23-11.5	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc Z7/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17197	R	5-23-11.5	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc Z7/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17199	R	5-23-11.5	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc Z7/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17200	R	5-23-11.5	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc Z7/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17201	R	5-23-11.5	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc Z7/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17202	R	5-23-11.5	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc Z7/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	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*18866	R	5-23-11.5	MARYLOU WILSON AND STANLEY D WILSON MICHAEL WILSON ATTORNEY IN FACT	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18869	R	5-23-11.5	GRAIG ALAN YOHIO AND DONNA M YOHIO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18870	R	5-23-11.5	DAVID N DEWICK TRUSTEE OF THE TONI JO MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18879	R	5-23-11.5	LIVING TRUST	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19340	R	5-23-11.5	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	R	5-23-11.5	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19903	R	5-23-11.5	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*20008	R	5-23-11.5	COLIN R YOHIO AND NORMA L YOHIO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*20205	R	5-23-11.5	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	R	5-23-11.5	JANICE N HAUDENSCHULT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	R	5-23-11.5	APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	R	5-23-11.5	DONNA V YOHIO	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	R	5-23-11.5	DEWEYA MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23373	R	5-23-11.5	DANA MILICIA HUMPHREYS	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	R	5-23-11.5	NICOLETTA MILICIA	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	R	5-23-11.5	BLOODWORTH CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	R	5-23-11.5	CECILIA D NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	Exploration USA Inc and Athium Marcellus I LLC	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc	19/624 SWN Exchange Tritelholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*27085	R	5-23-11.5	DAPHNE HUFFMAN AND CHARLES HUFFMAN	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	Exploration USA Inc and Athium Marcellus I LLC	29/325 Chesapeake Appalachia LLC and Statoil USA Onshore Properties 27/311 Gaster	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc	19/624 SWN Exchange Tritelholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*27086	R	5-23-11.5	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	698	639	23/353 Gaster Exploration USA Inc to Athium Marcellus I LLC	Exploration USA Inc and Athium Marcellus I LLC	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties	33/424 Statoil USA Onshore Properties Inc	19/624 SWN Exchange Tritelholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC					
10*14786	S	5-23-11.8	TWILA O WHIPKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	806/1 Gaster Exploration USA Inc to Athium Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC					
10*14797	S	5-23-11.8	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	NA	806/1 Gaster Exploration USA Inc to Athium Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC					



10*14822	S	5-23-11.8	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14823	S	5-23-11.8	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*17195	S	5-23-11.8	PATRICIA HARTMAN	GASTAR EXPLORATION INC	1/8+	695	317	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	23/353 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17196	S	5-23-11.8	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	23/353 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17197	S	5-23-11.8	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	23/353 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17199	S	5-23-11.8	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	23/353 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17200	S	5-23-11.8	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	23/353 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17201	S	5-23-11.8	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	23/353 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17202	S	5-23-11.8	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	23/353 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	







10*14822	T	5-25-20.3	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14823	T	5-25-20.3	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC	
10*17195	T	5-25-20.3	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/511 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoll USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoll USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17196	T	5-25-20.3	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/511 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoll USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoll USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17197	T	5-25-20.3	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/511 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoll USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoll USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17199	T	5-25-20.3	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/511 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoll USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoll USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17200	T	5-25-20.3	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/511 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoll USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoll USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17201	T	5-25-20.3	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/511 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoll USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoll USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17202	T	5-25-20.3	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/511 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoll USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoll USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoll USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				

10*17203	T	5-25-20.3	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	T	5-25-20.3	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	T	5-25-20.3	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	T	5-25-20.3	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	T	5-25-20.3	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	T	5-25-20.3	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17212	T	5-25-20.3	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17213	T	5-25-20.3	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum 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 to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*18275	T	5-25-20.3	BETTY JEAN NEELY	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Titledholder LLC	19/624 SWN Exchange Titledholder LLC and SWN Production Company LLC merger	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*18366	T	5-25-20.3	MARYTOD WILSON AND STANLEY D WILSON MICHAEL WILSON ATTORNEY IN FACT	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18369	T	5-25-20.3	CRAIG ALAN YOHO AND DONNA M YOHO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	T	5-25-20.3	SAMUEL D YOHO DAVID N DEVICK TRUSTEE OF THE TOM JO MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18379	T	5-25-20.3	LIVING TRUST	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19540	T	5-25-20.3	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	T	5-25-20.3	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19903	T	5-25-20.3	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22008	T	5-25-20.3	COLIN R YOHO AND NORMA L YOHO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22025	T	5-25-20.3	MARK EUGENE YOHO & MARY YOHO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	T	5-25-20.3	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	T	5-25-20.3	APRIL ROSE POSTLETHWAMT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	T	5-25-20.3	DONNA V YOHO	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	T	5-25-20.3	DEWEY A MILUGA AND ROBIN MILUGA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23373	T	5-25-20.3	DANA MILUGA HUMPHREYS NICOLETTA MILUGA	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	T	5-25-20.3	BLOODWORTH	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	T	5-25-20.3	CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	T	5-25-20.3	CECILIA D NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gaster Exploration USA Inc to Athlum Marcellus I LLC	Exploration USA Inc and Athlum Marcellus I LLC to Chesapeake Appalachia LLC and Staroil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Staroil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Staroil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Staroil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*27085	T	5-25-20.3	DAPHNE HUFEMAN AND CHARLES HUFEMAN	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gaster Exploration USA Inc to Athlum Marcellus I LLC	Exploration USA Inc and Athlum Marcellus I LLC to Chesapeake Appalachia LLC and Staroil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Staroil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Staroil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Staroil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*27086	T	5-25-20.3	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	698	639	23/353 Gaster Exploration USA Inc to Athlum Marcellus I LLC	Exploration USA Inc and Athlum Marcellus I LLC to Chesapeake Appalachia LLC and Staroil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Staroil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Staroil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Staroil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*14786	U	5-25-18	TWILLA O WHIRKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	NA	806/1 Gaster Exploration USA Inc to Athlum Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC				
10*14797	U	5-25-18	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	NA	NA	806/1 Gaster Exploration USA Inc to Athlum Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC				

10*14822	U	5-25-18	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14823	U	5-25-18	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*17195	U	5-25-18	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	23/353 Gastar Exploration USA Inc to Athum Marcellus I LLC	Exploration USA Inc and Athum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17196	U	5-25-18	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	23/353 Gastar Exploration USA Inc to Athum Marcellus I LLC	Exploration USA Inc and Athum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17197	U	5-25-18	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	23/353 Gastar Exploration USA Inc to Athum Marcellus I LLC	Exploration USA Inc and Athum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17199	U	5-25-18	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	23/353 Gastar Exploration USA Inc to Athum Marcellus I LLC	Exploration USA Inc and Athum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17200	U	5-25-18	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	23/353 Gastar Exploration USA Inc to Athum Marcellus I LLC	Exploration USA Inc and Athum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17201	U	5-25-18	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gastar Exploration USA Inc to Athum Marcellus I LLC	Exploration USA Inc and Athum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				
10*17202	U	5-25-18	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gastar Exploration USA Inc to Athum Marcellus I LLC	Exploration USA Inc and Athum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC				



10*17203	U	5-25-18	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	U	5-25-18	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	U	5-25-18	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	U	5-25-18	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	U	5-25-18	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	U	5-25-18	GARY WANNIE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17212	U	5-25-18	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17213	U	5-25-18	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*18275	U	5-25-18	BETTY JEAN NEELY	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC



WW-6A1 Supplement

Operator's Well No. Hillrock S 12HU

10*14822	V	5-25-19	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14823	V	5-25-19	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	NA	NA	NA	NA	35/144 Gastar Exploration Inc to Athnum Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*17195	V	5-25-19	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17196	V	5-25-19	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17197	V	5-25-19	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17199	V	5-25-19	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17200	V	5-25-19	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17201	V	5-25-19	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		
10*17202	V	5-25-19	JANIE GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc 27/311 GASTAR	33/424 Statoil USA Onshore Properties to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC		





		MARYTOD WILSON AND STANLEY D WILSON MICHAEL WILSON ATTORNEY IN FACT	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18366	V	5-25-19	CRAIG ALAN YOHO AND DONNA M YOHO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18369	V	5-25-19	SAMUEL D YOHO	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	V	5-25-19	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	NA	NA	NA	NA	NA	NA
10*18379	V	5-25-19	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18540	V	5-25-19	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18962	V	5-25-19	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18903	V	5-25-19	COLIN R YOHO AND NORMA L YOHO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22008	V	5-25-19	MARK EUGENE YOHO & MARY YOHO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22025	V	5-25-19	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	V	5-25-19	APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	V	5-25-19	DONNA V YOHO	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	V	5-25-19	DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	V	5-25-19	DANA MILICIA HUMPHREYS	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23373	V	5-25-19	NICOLETTA MILICIA	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	V	5-25-19	BLOODWORTH	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	V	5-25-19	CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	V	5-25-19	CECILIA D NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	29/325 Chesapeake Appalachia LLC and Statoil USA Onshore Properties	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC						
10*27085	V	5-25-19	DAPHNE HUFFMAN AND CHARLES HUFFMAN	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC						
10*27086	V	5-25-19	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	698	639	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC						
10*14786	W	5-25-20	TWILA O WHIRKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	806/1 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc merger	36/9 Gastar Exploration Inc to TH Exploration II LLC						



10*17202	W	5-25-20	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	W	5-25-20	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	W	5-25-20	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	W	5-25-20	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	W	5-25-20	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	W	5-25-20	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	W	5-25-20	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17212	W	5-25-20	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gastar Exploration USA Inc and Athnum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	

10*121213	W	5-25-20	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/7511 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*182775	W	5-25-20	BETTY JEAN NEELY MARYLOU WILSON STANLEY D WILSON MICHAEL WILSON	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA	NA
10*18366	W	5-25-20	CRAIG ALAN YOHIO AND DONNA M YOHIO	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA
10*18369	W	5-25-20	DONNA M YOHIO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	W	5-25-20	SAMUEL D YOHIO DAVID N DEVICK TRUSTEE OF THE TONI JO MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA
10*18379	W	5-25-20	LIVING TRUST	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA
10*18540	W	5-25-20	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	W	5-25-20	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA
10*19903	W	5-25-20	PAUL F HAMMERS COLIN R YOHIO AND NORMA L YOHIO	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA
10*22008	W	5-25-20	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA
10*22025	W	5-25-20	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	W	5-25-20	APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	W	5-25-20	DONNA V YOHIO	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	W	5-25-20	DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	W	5-25-20	DANA MILICIA HUMPHREYS NICOLETTA MILICIA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	W	5-25-20	BLOODWORTH	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	W	5-25-20	CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	W	5-25-20	CECILIA D NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/7511 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*27085	W	5-25-20	DAPHNE HUFNMAN AND CHARLES HUFNMAN	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/7511 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*27086	W	5-25-20	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	698	639	23/353 Gastar Exploration USA Inc to Athnum Marcellus I LLC	27/7511 Gastar Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC



WW-6A1 Supplement

Operator's Well No. Hillrock S 12HU

10*14786	X	5-25-20.2	TWILA O WHIRKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	NA	NA	NA	806/1 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14797	X	5-25-20.2	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	NA	NA	806/1 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC	
10*14822	X	5-25-20.2	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Atinum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC	
10*14823	X	5-25-20.2	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	35/144 Gaster Exploration Inc to Atinum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC	
10*17195	X	5-25-20.2	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17196	X	5-25-20.2	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17197	X	5-25-20.2	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17199	X	5-25-20.2	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	
10*17200	X	5-25-20.2	STEPHANIE L. HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	NA	NA	NA	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	

10*17201	X	5-25-20.2	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gaster Exploration USA Inc to Athinum Marcellus I LLC	27/311 Gaster Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17202	X	5-25-20.2	JANE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gaster Exploration USA Inc to Athinum Marcellus I LLC	27/311 Gaster Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	X	5-25-20.2	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gaster Exploration USA Inc to Athinum Marcellus I LLC	27/311 Gaster Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	X	5-25-20.2	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gaster Exploration USA Inc to Athinum Marcellus I LLC	27/311 Gaster Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	X	5-25-20.2	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gaster Exploration USA Inc to Athinum Marcellus I LLC	27/311 Gaster Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	X	5-25-20.2	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gaster Exploration USA Inc to Athinum Marcellus I LLC	27/311 Gaster Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	X	5-25-20.2	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gaster Exploration USA Inc to Athinum Marcellus I LLC	27/311 Gaster Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17211	X	5-25-20.2	GARY WAYNE ZESIGER & VICKIE ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	397	23/353 Gaster Exploration USA Inc to Athinum Marcellus I LLC	27/311 Gaster Athinum 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 Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC	

10*17212	X	5-25-20.2	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gaster Exploration USA Inc to Statcoi Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statcoi USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statcoi USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWM Production Company LLC	33/424 Statcoi USA Onshore Properties Inc	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statcoi USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17213	X	5-25-20.2	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	23/353 Gaster Exploration USA Inc to Statcoi Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statcoi USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statcoi USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWM Production Company LLC	33/424 Statcoi USA Onshore Properties Inc	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statcoi USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*18275	X	5-25-20.2	BETTY JEAN NEELY MARY LOU WILSON AND STANLEY D WILSON MICHAEL WILSON	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA	NA
10*18366	X	5-25-20.2	ATTORNEY IN FACT CRAIG ALAN YOHIO AND DONNA M YOHIO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	X	5-25-20.2	SAMUEL D YOHIO DAVID N DEVICK TRUSTEE OF THE TONI JO MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA
10*18379	X	5-25-20.2	LIVING TRUST ERICA M MASON	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA
10*19540	X	5-25-20.2	JACK R HAMMERS PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	X	5-25-20.2	COLIN R YOHIO AND NORMA L YOHIO	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA
10*22008	X	5-25-20.2	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA
10*22025	X	5-25-20.2	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	X	5-25-20.2	APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	X	5-25-20.2	DONNA V YOHIO DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	X	5-25-20.2	DANA MILICIA HUMPHREYS NICOLETTA MILICIA	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA
10*23372	X	5-25-20.2	CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA
10*23373	X	5-25-20.2	CECILIA D NEWLAND	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	X	5-25-20.2	GASTAR EXPLORATION USA INC	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	X	5-25-20.2	GASTAR EXPLORATION USA INC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	X	5-25-20.2	DAPHNE HUFFMAN AND CHARLES HUFFMAN	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statcoi USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statcoi USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWM Production Company LLC	33/424 Statcoi USA Onshore Properties Inc	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statcoi USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*27085	X	5-25-20.2	DAPHNE HUFFMAN AND CHARLES HUFFMAN	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 GASTAR Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statcoi USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statcoi USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWM Production Company LLC	33/424 Statcoi USA Onshore Properties Inc	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statcoi USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*14786	Y	5-25-20.1	TWILA O WHIRKEY	GASTAR EXPLORATION USA INC	1/8+	799	61	NA	NA	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	806/1 Gaster Exploration USA Inc and Athnum Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14797	Y	5-25-20.1	ORVILLE YOUNG	GASTAR EXPLORATION USA INC	1/8+	800	598	NA	NA	29/325 Chesapeake Appalachia LLC and Athnum Marcellus I LLC	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	806/1 Gaster Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gaster Exploration USA Inc and Gaster Exploration Inc merger	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14822	Y	5-25-20.1	ONWARD E BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*14823	Y	5-25-20.1	SARAH L BURGE TRUST STEPHEN W BURGE AS TRUSTEE	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	27/311 Gaster Exploration USA Inc and Athnum Marcellus I LLC	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	NA	35/144 Gaster Exploration Inc to Athnum Marcellus I LLC	36/9 Gaster Exploration Inc to TH Exploration II LLC
10*17195	Y	5-25-20.1	PATRICIA HARTMAN	GASTAR EXPLORATION USA INC	1/8+	695	317	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17196	Y	5-25-20.1	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA INC	1/8+	695	311	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17197	Y	5-25-20.1	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA INC	1/8+	695	313	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17199	Y	5-25-20.1	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA INC	1/8+	695	315	NA	NA	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC



10*17200	Y	5-25-20.1	STEPHANIE L HALL	GASTAR EXPLORATION USA INC	1/8+	697	156	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	Z7/511 Gastar Exploration USA Inc and Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17201	Y	5-25-20.1	DENISE A GALE	GASTAR EXPLORATION USA INC	1/8+	697	395	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	Z7/511 Gastar Exploration USA Inc and Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17202	Y	5-25-20.1	JANIE GALE	GASTAR EXPLORATION USA INC	1/8+	697	385	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	Z7/511 Gastar Exploration USA Inc and Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17203	Y	5-25-20.1	BARRY RAY MOORE	GASTAR EXPLORATION USA INC	1/8+	697	387	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	Z7/511 Gastar Exploration USA Inc and Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17204	Y	5-25-20.1	CLARENCE RICHARD ZESIGER & MARY ZESIGER	GASTAR EXPLORATION USA INC	1/8+	697	391	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	Z7/511 Gastar Exploration USA Inc and Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17206	Y	5-25-20.1	M VIRGINIA & EDWARD C MARSH	GASTAR EXPLORATION USA INC	1/8+	697	399	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	Z7/511 Gastar Exploration USA Inc and Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17207	Y	5-25-20.1	DEBORAH K. KLIMASZEWSKI FRANK KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA INC	1/8+	697	389	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	Z7/511 Gastar Exploration USA Inc and Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17210	Y	5-25-20.1	MARILYN NOEL	GASTAR EXPLORATION USA INC	1/8+	697	393	NA	23/353 Gastar Exploration USA Inc to Athinum Marcellus I LLC	Z7/511 Gastar Exploration USA Inc and Athinum 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 to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

WW-6A1 Supplement

Operator's Well No. Hillrock S 12HU

10*17211	Y	5-25-20.1	GARY WAYNE ZESIGER & VICKIE ZESIGER	INC	1/8+	697	397	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17212	Y	5-25-20.1	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	158	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*17213	Y	5-25-20.1	CAROL DEEN GARDNER	GASTAR EXPLORATION USA INC	1/8+	697	154	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	29/325 Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*18275	Y	5-25-20.1	BETTY JEAN NEELY MARY LOU WILSON AND STANLEY D WILSON MICHAEL WILSON	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA	NA
10*18366	Y	5-25-20.1	ATTORNEY IN FACT CRAIG ALAN YOHIO AND DONNA M YOHIO	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA	NA
10*18369	Y	5-25-20.1	DAVID N DEVICK TRUSTEE OF THE TONI JO MASON	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA	NA
10*18370	Y	5-25-20.1	LIVING TRUST ERICA M MASON JACK R HAMMERS PAUL F HAMMERS COLIN R YOHIO AND NORMA L YOHIO	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA	NA
10*18379	Y	5-25-20.1	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA	NA
10*19540	Y	5-25-20.1	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA	NA
10*19652	Y	5-25-20.1	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA	NA
10*19903	Y	5-25-20.1	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA	NA
10*22008	Y	5-25-20.1	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA	NA
10*22025	Y	5-25-20.1	MARK EUGENE YOHIO & MARY YOHIO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA	NA
10*22129	Y	5-25-20.1	JANICE N HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA	NA
10*22441	Y	5-25-20.1	APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	NA	NA	NA	NA	NA
10*22510	Y	5-25-20.1	DONNA V YOHIO DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA	NA
10*23972	Y	5-25-20.1	DONNA V YOHIO DEWEY A MILICIA AND ROBIN MILICIA	TH EXPLORATION, LLC	1/8+	1008	320	NA	NA	NA	NA	NA	NA	NA	NA
10*23973	Y	5-25-20.1	DANA MILICIA HUMPHREYS NICOLETTA MILICIA BLOODWORTH CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	988	429	NA	NA	NA	NA	NA	NA	NA	NA
10*23446	Y	5-25-20.1	DANA MILICIA HUMPHREYS NICOLETTA MILICIA BLOODWORTH CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1008	316	NA	NA	NA	NA	NA	NA	NA	NA
10*25627	Y	5-25-20.1	DANA MILICIA HUMPHREYS NICOLETTA MILICIA BLOODWORTH CHESTNUT HOLDINGS LLC	TH EXPLORATION, LLC	1/8+	1034	548	NA	NA	NA	NA	NA	NA	NA	NA
10*27078	Y	5-25-20.1	CECILIA D NEWLAND	GASTAR EXPLORATION USA INC	1/8+	697	381	23/353 Gaster Exploration USA Inc to Athnum Marcellus I LLC	27/311 Gaster Exploration USA Inc and Athnum Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC

10*27085	Y	5-25-20.1	DAPHNE HUFFMAN AND CHARLES HUFFMAN	GASTAR EXPLORATION USA INC	1/8+	697	383	23/353 Gastar Exploration USA Inc to Atrium Marcellus I LLC	27/311 Gastar Exploration USA Inc and Atrium Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*27086	Y	5-25-20.1	DONALD R NEWLAND AND SUZANNE NEWLAND	GASTAR EXPLORATION USA INC	1/8+	698	639	23/353 Gastar Exploration USA Inc to Atrium Marcellus I LLC	27/311 Gastar Exploration USA Inc and Atrium Marcellus I LLC to Chesapeake Appalachia LLC and Statoil USA Onshore Properties Inc	29/325 Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia LLC to SWN Production Company LLC	33/424 Statoil USA Onshore Properties Inc to SWN Titleholder LLC	19/624 SWN Exchange Titleholder LLC and SWN Production Company LLC merger	41/238 Statoil USA Onshore Properties Inc to TH Exploration LLC	41/256 SWN Production Company LLC to TH Exploration LLC
10*14728	Z	5-25-1	IRIS K MOELLENDICK	GASTAR EXPLORATION USA INC	1/8+	839	509	NA	NA	NA	NA	NA	NA	33/308 Gastar Exploration Inc to Atrium Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14729	Z	5-25-1	BONNIE S SHANNON, INDIVIDUALLY	GASTAR EXPLORATION USA INC	1/8+	839	511	NA	NA	NA	NA	NA	NA	33/308 Gastar Exploration Inc to Atrium Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14730	Z	5-25-1	CATHIE K LAKE	GASTAR EXPLORATION USA INC	1/8+	839	513	NA	NA	NA	NA	NA	NA	33/308 Gastar Exploration Inc to Atrium Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14731	Z	5-25-1	RICHARD KLUG	GASTAR EXPLORATION USA INC	1/8+	839	515	NA	NA	NA	NA	NA	NA	33/308 Gastar Exploration Inc to Atrium Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14734	Z	5-25-1	CLARENCE BAXTER BY RODNEY C BAXTER, AGENT AND AIF	GASTAR EXPLORATION USA INC	1/8+	842	376	NA	NA	NA	NA	NA	NA	33/308 Gastar Exploration Inc to Atrium Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14735	Z	5-25-1	GLENNALEE COZART	GASTAR EXPLORATION USA INC	1/8+	842	378	NA	NA	NA	NA	NA	NA	33/308 Gastar Exploration Inc to Atrium Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*14737	Z	5-25-1	MARION PARSONS JR	GASTAR EXPLORATION USA INC	1/8+	844	83	NA	NA	NA	NA	NA	NA	33/308 Gastar Exploration Inc to Atrium Marcellus I LLC	36/9 Gastar Exploration Inc to TH Exploration II LLC
10*19914	Z	5-25-1	MICHAEL L MASON	TH EXPLORATION, LLC	1/8+	945	436	NA	NA	NA	NA	NA	NA	NA	NA

\* Co-tenancy utilization - At least 7 mineral owners in tract. At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act.





4705 02272

**ASSIGNMENT OF OIL AND GAS LEASES**

This ASSIGNMENT OF OIL AND GAS LEASES (the "Assignment") is made and entered into this 29th day of November, 2017 (the "Effective Date"), from TH Exploration II, LLC, a Texas limited liability company, having an address at 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (hereinafter "Assignor"), and TH Exploration, LLC, a Texas limited liability company, having an address at 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (hereinafter "Assignee").

**WITNESSETH:**

**WHEREAS**, Assignor is the owner of the right, title, and interest in those certain Oil and Gas Leases situated in Marshall County, West Virginia, which are described in Exhibit "A" and Exhibit "A-1" attached hereto and made a part hereof (hereinafter the "Leases"); and

**WHEREAS**, subject to the exceptions and reservations herein contained, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to the Leases.

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and subject to the limited warranties, restrictions and conditions hereinafter mentioned, the parties hereto, intending to be legally bound, do covenant and agree as follows:

1. **Assignment**. Assignor does hereby grant, bargain, sell, convey, deliver, assign, set over and transfer, as of the Effective Date, to Assignee, its respective successors and assigns, forever, subject to the terms, reservations, waivers and provisions as hereinafter set forth, an undivided interest of all of Assignor's right, title and interest in and to the Leases and all oil, natural gas, natural gas liquids, condensate, casinghead gas and other liquefied or gaseous hydrocarbons or products ("Hydrocarbons") thereby held, in any and all depths and formations ("Assigned Formations"), together with any and all other rights that are reasonably necessary or convenient to explore for and produce Hydrocarbons from the Assigned Formations, including, but not limited to, the right of surface access, use and occupancy, the right of ingress and egress, the right to conduct geophysical and other exploratory activities, the right to lay pipeline, the right to drill through, but not perforate or stimulate, all other depths and formations necessary for the purpose of reaching the Assigned Formations and to conduct operations therein.

**TO HAVE AND TO HOLD** such right, title and interest in and to the Leases unto Assignees or their designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

2. **Representations and Warranties**. Assignor represents and warrants that such Assignor has not conveyed or otherwise encumbered its interest in the Leases since the time that Assignor obtained its interests in the Leases.

Assignor represents and warrants that, as to its interests in the Leases, Assignor has paid all royalties, overriding royalties, and other payments required by the Leases which were due for the period in which Assignor held its interests in the Leases, including, but not limited to, the interests assigned hereunder, and that Assignor has fully performed all conditions necessary to maintain the Leases in full force and effect during such period.

Assignor represents and warrants that, as to its interests in the Leases, Assignor shall not, by virtue of this Assignment or otherwise, retain any interest in the Assigned Formations, including, without limitation, any overriding royalty interest or working interest therein or with respect thereto.

3. **Successors and Assigns**. The terms of this Assignment shall be binding upon and inure to the benefit of the parties hereto and each of their respective successors

DPS LAND SERVICES CORP-JESSICA LEMON  
6000 TOWN CENTER BLVD STE 145  
CANONSBURG PA 15317-5870

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**ASSIGNMENT AND CONVEYANCE**

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

**ARTICLE 1  
ASSIGNMENT OF ASSETS**

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

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

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

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

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

**Section 2.2 Disclaimers of Warranties and Representations.**

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

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Environmental Protection



ASHLEY FAVINGER  
AMERICAN PETROLEUM PARTNERS OPERATING LLC.  
4600 J BARRY COURT STE 310  
CANDONSBURG PA 15317-5854

4705 02272

BOOK 0042 PAGE 0109

STATE OF WEST VIRGINIA §  
§  
COUNTY OF MARSHALL §

ASSIGNMENT AND CONVEYANCE

**THIS ASSIGNMENT AND CONVEYANCE** (the "Assignment") is made and entered into this 18th day of May, 2018, and made effective December 12, 2017 (the "Effective Date"), by and between AMERICAN PETROLEUM PARTNERS OPERATING, LLC, (hereinafter "Assignor") and TH EXPLORATION, LLC (hereinafter "Assignee") pursuant to the terms of that certain Acreage Trade Agreement between the Assignor and the Assignee dated December 12, 2017 (the "Acreage Trade Agreement"). Capitalized terms used but not defined herein and defined in the Acreage Trade Agreement shall have the meanings given to such terms in the Acreage Trade Agreement.

WITNESSETH:

**WHEREAS**, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to those certain Oil and Gas Leases situated in Marshall County, West Virginia, as described in Exhibit "A", attached hereto and made a part hereof (hereinafter the "Leases"); and

**WHEREAS**, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to the Leases as described below.

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and subject to the limited warranties, restrictions and conditions hereinafter mentioned, the parties hereto, intending to be legally bound, do covenant and agree as follows:

1. Assignment. Assignor does hereby grant, bargain, sell, convey, deliver, assign, set over and transfer, as of the Effective Date, to Assignee, its respective successors and assigns, forever, all of Assignor's right, title and interest in and to the Leases, and the lands covered thereby, together with all rights incident thereto and appurtenances thereon.

**TO HAVE AND TO HOLD** such right, title and interest in and to the Leases unto Assignee or its designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

2. Special Warranty. Assignor represents and warrants that Assignor has not conveyed or otherwise encumbered (other than Permitted Encumbrances) its interest in the

Marshall County  
Jan Pest, Clerk  
Instrument 1440860  
05/25/2018 @ 02:36:09 PM  
ASSIGNMENTS  
Book 42 @ Page 109  
Pages Recorded 9  
Recording Cost \$ 15.00

RECEIVED  
Office of Oil and Gas

SEP 16 2019

WV Department of  
Environmental Protection

WI-AGIR-0009





September 13, 2019

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

RE: Hillrock S-12HU

Subject: 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 Routes 75 and 29 in the area reflected on the Hillrock S-12HU well plat. THO has conducted a full title search in the relevant Court House to confirm its ownership under said County Routes and is not currently aware of any recorded document that would suggest an ownership other than THO.

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

Sincerely,

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

Amy Miller  
Permit Specialist – Appalachia Region  
Cell 304-376-0111  
Email: [amiller@tug-hilop.com](mailto:amiller@tug-hilop.com)

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WV Department of  
Environmental Protection

WW-6AC  
(1/12)

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

Date of Notice Certification: 09/13/2019

API No. 47- 051 -

Operator's Well No. Hillrock S-13HU

Well Pad Name: Simms

**Notice has been given:**

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>519,682.92</u>
County:	<u>Marshall</u>		Northing:	<u>4,399,566.16</u>
District:	<u>Franklin</u>	Public Road Access:		<u>Rines Ridge Road (County Route 76)</u>
Quadrangle:	<u>New Martinsville 7.5'</u>	Generally used farm name:		<u>Terry E. and Deborah Simms</u>
Watershed:	<u>Fish Creek (HUC 10)</u>			

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p align="center"><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p align="right">RECEIVED Office of Oil and Gas <b>SEP 16 2019</b> Department of Environmental Protection</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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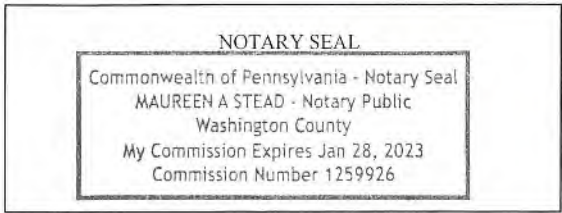
**Required Attachments:**

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

**Certification of Notice is hereby given:**

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

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



Subscribed and sworn before me this 13 day of SEPT., 2019.  
*Maureen A Stead* Notary Public  
 My Commission Expires 1/28/23

**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](mailto:depprivacyofficer@wv.gov).

WW-6A  
(9-13)

API NO. 47- 051 **4705 02272**  
OPERATOR WELL NO. Hillrock S-12HU  
Well Pad Name: Simms

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

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

**Date of Notice:** 9/10/2019 **Date Permit Application Filed:** 9/13/2019

**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: Terry and Deborah Simms (Access Road and Well Pad)  
Address: 7175 Rines Ridge Road  
Proctor, WV 26055

Name: Kenneth and Nadine Corley (Access Road)  
Address: 7069 Rines Ridge Road  
Proctor, WV 26055

SURFACE OWNER(s) (Road and/or Other Disturbance)  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
Name: CNX Land Attn: Casey Saunders  
Address: 1000 CONSOL Energy Drive  
Canonsburg, PA 15317

COAL OPERATOR  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

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

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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WV Department of  
Environmental Protection



**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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**Well Location Restrictions**

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

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(8-13)

API NO. 47-051 -  
OPERATOR WELL NO. Hillrock S-12HU  
Well Pad Name: Simms

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 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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

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**Time Limits and Methods for Filing Comments.**

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

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WW-6A  
(8-13)

API NO. 47- 051 -  
OPERATOR WELL NO. Hillrock S-12HU  
Well Pad Name: Simms

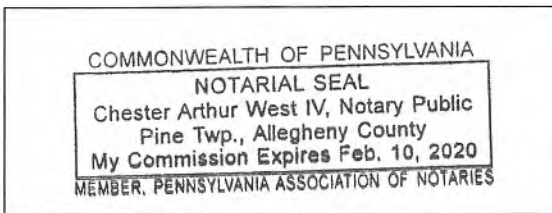
**Notice is hereby given by:**

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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).



Subscribed and sworn before me this 10<sup>th</sup> day of Sept. 2019.

*[Signature]*  
\_\_\_\_\_  
Notary Public

My Commission Expires 2-10-2020

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WV Department of  
Environmental Protection



WW-6A

Supplement Pg. 1A

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

### WATER WELL REPORT

Well: HILLROCK S-12HU  
 District: Franklin  
 County: Marshall  
 State: WV

There appears to be Four ( 4 ) possible water sources within 2,000 feet of the above referenced well location.

Topo Spot #1 TM 17 Par.11 Kenneth N. Corley et ux 304-455-4983 7069 Rines Ridge Rd. Proctor, WV 26055	Topo spot #2 TM 17 Par.11 Kenneth N. & Deborah Corley 304-455-5670(H), 304-455-3844(C) 7069 Rines Ridge Rd. Proctor, WV 26055	Topo spot #3 TM 23 Par.7 Terry E. & Deborah Simms 304-455-1439 7175 Rines Ridge Rd. Proctor, WV 26055
Topo Spot #4 TM 23 Par.6 James A. Channing, et al 304-797-0119 c/o James Channing 3954 Clarimont Pl. Weirton, WV 26026		

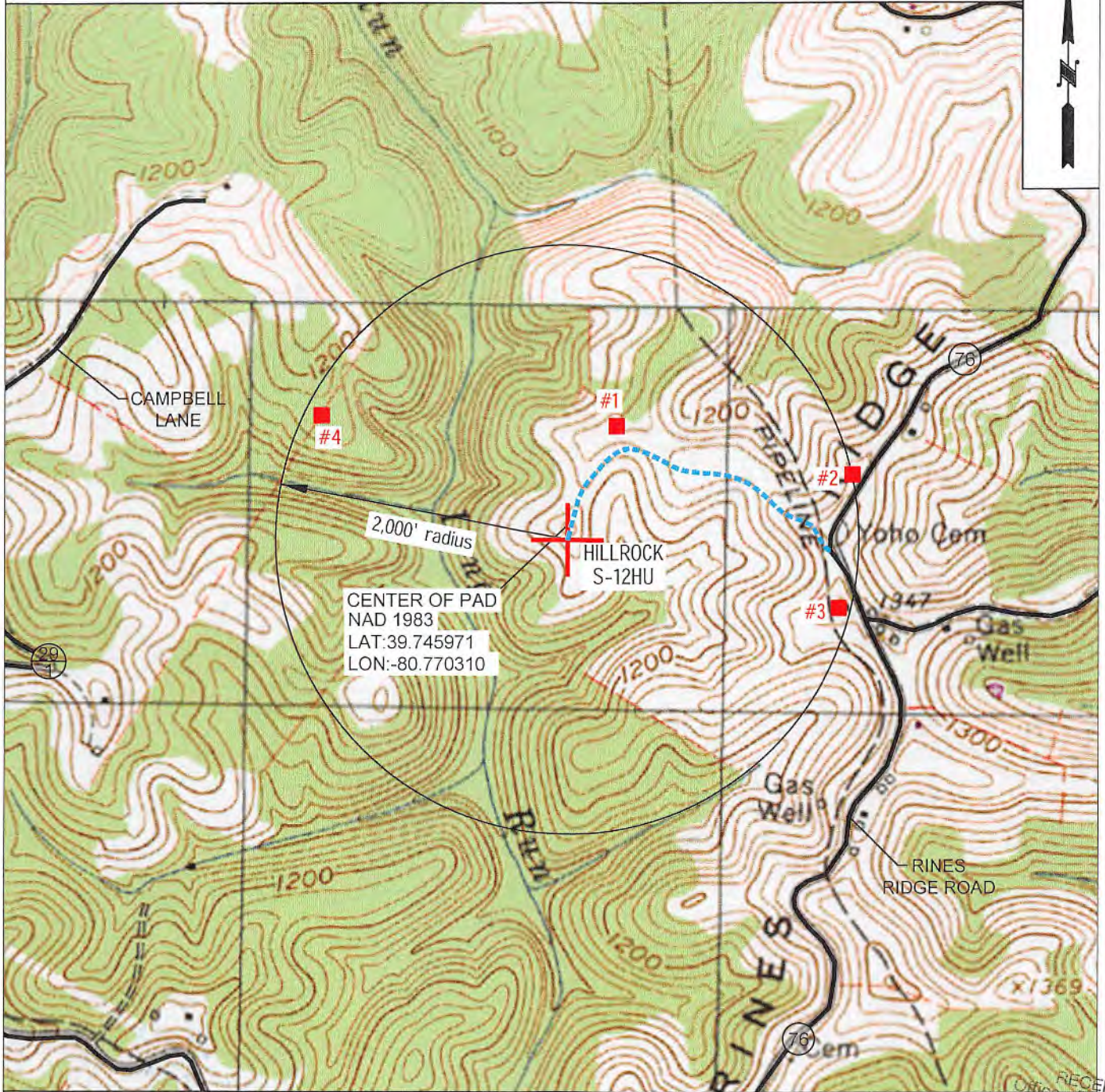


WW-6A

# PROPOSED HILLROCK S-12HU

SUPPLEMENT PG 1

There appears to be Four ( 4 ) possible water sources within 2,000'.



CENTER OF PAD  
NAD 1983  
LAT:39.745971  
LON:-80.770310

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WV Department of  
Environmental Protection

 <b>TUG HILL OPERATING</b>	<b>OPERATOR</b> 494510851 TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	<b>TOPO SECTION</b> NEW MARTINSVILLE 7.5' <b>SCALE:</b> 1" = 1000'	<b>LEASE NAME</b> HILLROCK <b>DATE:</b> 03-13-2019
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WW-6A3  
(1/12)

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

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

**Date of Notice:** 1/8/2018      **Date of Planned Entry:** 1/15/2018

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

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

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

**Notice is hereby provided to:**

SURFACE OWNER(s)  
 Name: Kenneth and Nadine Corley (Access Road)  
 Address: 7069 Rines Ridge Road  
Proctor, WV 26055  
 Name: Terry and Deborah Simms (Access Road and Well Pad)  
 Address: 7175 Rines Ridge Road  
Proctor, WV 26055  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
 Name: CNX Land Attn: Casey Saunders  
 Address: 1000 CONSOL Energy Drive  
Canonsburg, PA 15317

MINERAL OWNER(s)  
 Name: Terry and Deborah L. Simms  
 Address: 7175 Rines Ridge Road  
Proctor, WV 26055  
 \*please attach additional forms if necessary

**Notice is hereby given:**

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.7459021; -80.7702658</u>
County: <u>Marshall</u>	Public Road Access: <u>Rines Ridge Road (County Route 76)</u>
District: <u>Franklin</u>	Watershed: <u>Fish Creek (HUC 10)</u>
Quadrangle: <u>New Martinsville 7.5'</u>	Generally used farm name: <u>Simms, Terry E. and Deborah</u>

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

**Notice is hereby given by:**

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

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

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 WV Department of  
 Environmental Protection

**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](mailto:depprivacyofficer@wv.gov).



WW-6A5  
(1/12)

Operator Well No. Hillrock S-12HU

**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:** 09/11/2019      **Date Permit Application Filed:** 09/13/2019

**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: Terry and Deborah Simms (Access Road and Well Pad)  
Address: 7175 Rines Ridge Road  
Proctor, WV 26055

Name: Kenneth and Nadine Corley (Access Road)  
Address: 7069 Rines Ridge Road  
Proctor, WV 26055

**Notice is hereby given:**

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>519,682.96</u>
County:	<u>Marshall</u>		Northing:	<u>4,399,562.50</u>
District:	<u>Franklin</u>	Public Road Access:	<u>Rines Ridge Road (County Route 76)</u>	
Quadrangle:	<u>New Martinsville 7.5'</u>	Generally used farm name:	<u>Simms, Terry E. and Deborah</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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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

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

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Environmental Protection

**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](mailto:depprivacyofficer@wv.gov).





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

January 11, 2019

Jill M. Newman  
 Deputy Commissioner

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

Subject: DOH Permits for the Simms Well Pad, Marshall County  
 Hillrock 12HU Well

Dear Mr. Martin,

This well site will be accessed from Permit #06-2011-0123 transferred to Tug Hill Operating for access to the State Road for a well site located off of Marshall County Route 76 SLS.

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

Very Truly Yours,

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

Cc: Amy Miller  
 Tug Hill Operating  
 CH, OM, D-6  
 File

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**PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION**

Well No. Hillrock S-12HU

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



**NOTE:**  
 All surface boundaries shown herein are based on boundary  
 evidence collected on mapping dated 07/25/2018.

Date: 03/24/2018  
 Scale: As Shown  
 Designed by: ZS  
 File No:  
 Sheet 10 of 13

**Site Plan**  
**Simms Well Site**  
 Franklin District  
 Marshall County, WV



THIS DOCUMENT  
 PREPARED FOR  
**TUG HILL  
 OPERATING**



**TUG HILL  
 OPERATING**

Date	Revision
05-24-2018	Design
07-02-2018	Design: WVDEP Corrections