



west virginia department of environmental protection

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

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

Thursday, February 27, 2020
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

TUG HILL OPERATING, LLC
380 SOUTHPOINTE BLVD

CANONSBURG, PA 15317

Re: Permit Modification Approval for BURCH RIDGE 7HU
47-051-02194-00-00

Modified Lateral for a TMD of 24,271'.

TUG HILL OPERATING, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926-0450.

A handwritten signature in blue ink, appearing to read 'James A. Martin', is positioned above the printed name and title.

James A. Martin
Chief

Operator's Well Number: BURCH RIDGE 7HU
Farm Name: CONSOL RCPC LLC
U.S. WELL NUMBER: 47-051-02194-00-00
Horizontal 6A New Drill
Date Modification Issued: February 27, 2020

Promoting a healthy environment.



west virginia department of environmental protection

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

Barry K. Lay, Chairman
dep.wv.gov

October 8, 2019

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

RE: Application for Deep Well Permit – API #47-051-02194

COMPANY: Tug Hill Operating, LLC

FARM: Consol RCPC, LLC Burch Ridge S-7HU


COUNTY: Marshall DISTRICT: Franklin QUAD: Powhatan Point

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 288-271 Exception Location Hearing
4. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or unit boundary with the exception of the toe which is 10 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,


Susan Rose
Administrator

** Blake U-7H 47-051-01766, Blake N-9HU 47-051-02203, Blake N-10HU 47-051-02204, Blake N-11HU 47-051-02205, Armstrong 1N-13HU 47-051-02259, Armstrong 1N-14HU 47-051-02260, Armstrong 1S-10HU 47-051-02256, Armstrong 1S-11HU 47-051-02257, Armstrong 1S-12HU 47-051-02258, Hansen N-4HU 47-051-02175, Hansen 1S-8HU 47-051-02177, Simms U-5H 47-051-01731, and Burch Ridge S-6HU 47-051-02193

4705102194

WW-6B
(04/15)

API NO. 47-051 -
OPERATOR WELL NO. Burch Ridge 7HU
Well Pad Name: Burch Ridge

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: Burch Ridge 7HU Well Pad Name: Burch Ridge

3) Farm Name/Surface Owner: CONSOL RCPC, LLC Public Road Access: Burch Ridge Road

4) Elevation, current ground: 1310.39' Elevation, proposed post-construction: 1310.39'

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

(b) If Gas Shallow _____ Deep x
Horizontal x

Handwritten signature and date: 2/4/2020

6) Existing Pad: Yes or No Yes

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

Point Pleasant is the target formation at a depth of 11,279' - 11,159' - thickness of 120' and anticipated pressure of approx. 9500 psi.

8) Proposed Total Vertical Depth: 11,429'

9) Formation at Total Vertical Depth: Trenton, plug back to Reedsville

10) Proposed Total Measured Depth: 24,271'

11) Proposed Horizontal Leg Length: 12,012.58

12) Approximate Fresh Water Strata Depths: 70' ; 901'

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 - 807' ; Pittsburgh Coal - 900'

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 x

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

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WW-6B
(04/15)

API NO. 47059-10000
 OPERATOR WELL NO. Burch Ridge 7HU
 Well Pad Name: Burch Ridge

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120'	259FT^3(CTS)
Fresh Water	20"	NEW	J55	106.5#	1000'	1000'	1,613FT^3(CTS)
Coal	13 3/8"	NEW	J55	54.5#	2751'	2751'	1,940FT^3(CTS)
Intermediate	9 5/8"	NEW	HPP110	47#	10,649'	10,649'	3,472FT^3(CTS)
Production	5 1/2"	NEW	P110	23#	24,271'	24,271'	5,741FT^3(CTS)
Tubing	2 7/8"	NEW	P110	6.5#		11,071'	
Liners							

ju 5/2019

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	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							

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

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WV Department of Environmental Protection

4705102194

WW-6B
(10/14)

API NO. 47-051 -
OPERATOR WELL NO. Burch Ridge 7HU
Well Pad Name: Burch Ridge

2/4/2020

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 (10,571'). 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 30,025,000 lb proppant and 464,208 bbl of water. Max rate = 80 bpm; max psi = 12,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 17.06 acres

22) Area to be disturbed for well pad only, less access road (acres): 3.35 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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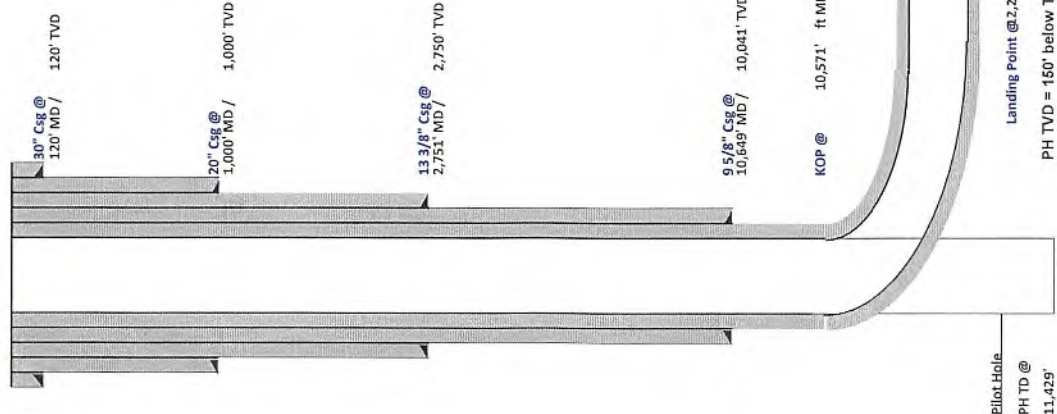
Department of
Environmental Protection

*Note: Attach additional sheets as needed.

4705102194



WELL NAME: Burch Ridge S-7HU COUNTY: Marshall
 STATE: WV DISTRICT: Franklin
 DF Elev: 1,310' GL Elev: 1,310'
 TD: 24,271'
 TH Latitude: 39.75433715
 TH Longitude: -80.80246111
 BH Latitude: 39.732373
 BH Longitude: -80.790471



FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	901'
Sewickley Coal	807'
Pittsburgh Coal	900'
Big Lime	2,060'
Berea	2,602'
Tully	6,402'
Marcellus	6,461'
Onondaga	6,513'
Salina	7,205'
Lockport	8,234'
Utica	10,904'
Point Pleasant	11,159'
Landing Depth	11,209'
Trenton	11,279'
Pilot Hole TD	11,429'

CASING SUMMARY						
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Top of Cement
Conductor	36	30	120'	120'	BW	Surface
Surface	26	20	1,000'	1,000'	106.5	Surface
Intermediate 1	17 1/2	13 3/8	2,751'	2,751'	54.5	Surface
Intermediate 2	12 1/4	9 5/8	10,649'	10,041'	47	Surface
Production	8 1/2	5 1/2	24,271'	11,418'	23	Surface

CEMENT SUMMARY			DRILLING DETAILS		
Sacks	Class	Density	Fluid Type	Centralizer Notes	
338	A	15.6	Air	None	
1,740	A	15.6	Air	3 Centralizers at equal distance	
2,103	A	15	Air	1 Centralizer every other ft	
2,908	A	14.5	Air	1 Centralizer every other ft	
5,091	A	15	Air / SOBM	1 every other joint in lateral; 1 per joint in curve; 1 every other ft to sfc	

See 5/20/19

Lateral TD @ 24,271' ft MD
 11,418' ft TVD

Landing Point @ 2,260' MD / 11,209' TVD
 PH TD = 150' below Trenton Top

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Tug Hill Operating, LLC Casing and Cement Program
Burch Ridge S-7HU

Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	20"	J55	26"	1,000'	CTS
Intermediate 1	13 3/8"	J55	17 1/2"	2,751'	CTS
Intermediate 2	9 5/8"	HPP110	12 1/4"	10,649'	CTS
Production	5 1/2"	HCP110	8 1/2"	24,271'	CTS

Cement

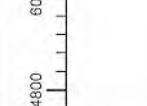
- Surface: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Surface Cement mixed at 15.6 ppg, Y=1.2
- Intermediate 1: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.2
- Intermediate 2: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement 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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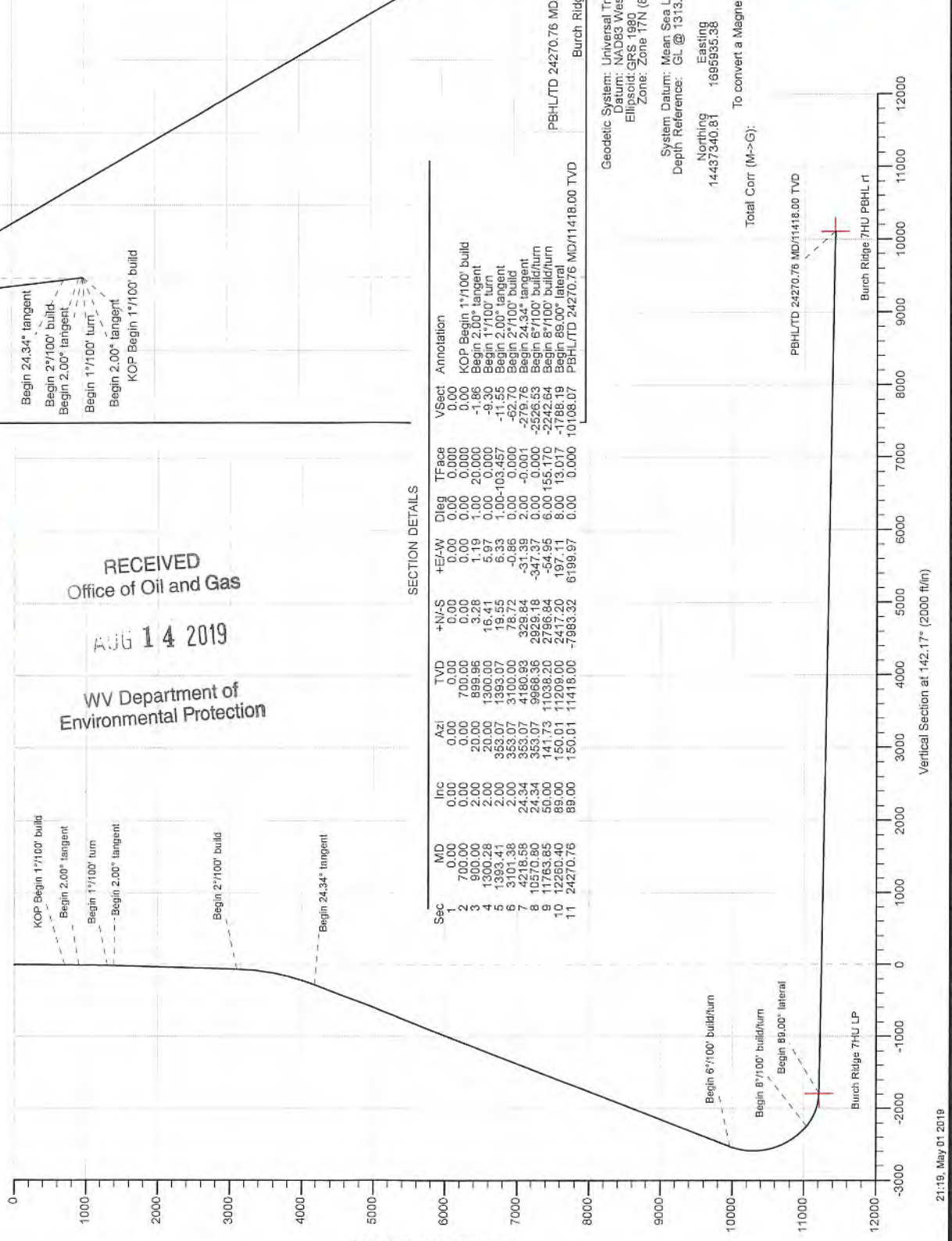
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Well: Burch Ridge 7 HU (slot G)
 Site: Burch Ridge
 Project: Marshall County, West Virginia
 Design: rev1
 Rig:



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SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annulation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
2	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.000	0.00	KOP Begin 1'100' build
3	900.00	2.00	20.00	899.96	3.28	1.19	1.00	20.000	-1.86	Begin 2.00° tangent
4	1300.28	2.00	20.00	1300.00	16.41	5.97	1.00	0.000	-9.30	Begin 1'100' turn
5	1393.41	2.00	353.07	1393.07	19.55	6.33	1.00	-103.457	-11.55	Begin 2.00° tangent
6	3101.38	2.00	353.07	3100.00	78.72	-0.86	0.00	0.000	-62.70	Begin 2'100' build
7	4218.58	24.34	353.07	4180.93	329.84	-31.39	2.00	-0.001	-279.76	Begin 24.34° tangent
8	10570.80	24.34	353.07	9868.36	2829.18	-347.37	2.00	0.000	-2526.53	Begin 6'100' build/turn
9	11763.85	50.00	141.73	11038.20	2796.84	-64.95	6.00	155.170	-2242.64	Begin 8'100' build/turn
10	12250.40	89.00	150.01	11209.00	2417.20	197.11	8.00	13.017	-1788.19	Begin 88.00° lateral
11	24270.76	89.00	150.01	11418.00	-7993.32	6199.97	0.00	0.000	10108.07	PBHLTD 24270.76 MD/11418.00 TVD

Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD83 West Virginia - HARN
 Ellipsoid: GRS 1960
 Zone: Zone 17N (84 W to 78 W)

System Datum: Mean Sea Level
 Depth Reference: GL @ 1313.00ft

Northing: 14437340.81
 Easting: 39.75433715
 Longitude: -80.80236111

Total Corr: (M->G):



Astrinella Is Grid North
 True North: 0.13°
 Magnetic North: -8.78°
 Magnetic Field
 Strength: 51899.75nT
 Dip Angle: 66.82°
 Date: 12/31/2018
 Model: IGRF2015

4705102194



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Burch Ridge 7 HU (slot G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1313.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1313.00ft
Site:	Burch Ridge	North Reference:	Grid
Well:	Burch Ridge 7 HU (slot G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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

Site	Burch Ridge				
Site Position:		Northing:	14,437,347.35 usft	Latitude:	39.75435517
From:	Lat/Long	Easting:	1,695,925.32 usft	Longitude:	-80.80249684
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.126 °

Well	Burch Ridge 7 HU (slot G)					
Well Position	+N/-S	0.00 ft	Northing:	14,437,340.81 usft	Latitude:	39.75433715
	+E/-W	0.00 ft	Easting:	1,695,935.37 usft	Longitude:	-80.80246111
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	1,313.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/31/2018	-8.665	66.815	51,989.69994115

Design	rev1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	142.17

Plan Survey Tool Program	Date	5/1/2019		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	24,270.76 rev1 (Original Hole)	MWD MWD - Standard	

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Environmental Protection



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Burch Ridge 7 HU (slot G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1313.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1313.00ft
Site:	Burch Ridge	North Reference:	Grid
Well:	Burch Ridge 7 HU (slot G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	0.000	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.000	
900.00	2.00	20.00	899.96	3.28	1.19	1.00	1.00	0.00	20.000	
1,300.28	2.00	20.00	1,300.00	16.41	5.97	0.00	0.00	0.00	0.000	
1,393.41	2.00	353.07	1,393.07	19.55	6.33	1.00	0.00	-28.92	-103.457	
3,101.38	2.00	353.07	3,100.00	78.72	-0.86	0.00	0.00	0.00	0.000	
4,218.58	24.34	353.07	4,180.93	329.84	-31.39	2.00	2.00	0.00	-0.001	
10,570.80	24.34	353.07	9,968.36	2,929.18	-347.37	0.00	0.00	0.00	0.000	
11,763.85	50.00	141.73	11,038.20	2,796.84	-54.95	6.00	2.15	12.46	155.170	
12,260.40	89.00	150.01	11,209.01	2,417.20	197.11	8.00	7.85	1.67	13.017	
24,270.76	89.00	150.01	11,418.00	-7,983.32	6,199.98	0.00	0.00	0.00	0.000	Burch Ridge 7HU PBI



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Burch Ridge 7 HU (slot G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1313.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1313.00ft
Site:	Burch Ridge	North Reference:	Grid
Well:	Burch Ridge 7 HU (slot G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	14,437,340.81	1,695,935.37	39.75433715	-80.80246111	
100.00	0.00	0.00	100.00	0.00	0.00	14,437,340.81	1,695,935.37	39.75433715	-80.80246111	
200.00	0.00	0.00	200.00	0.00	0.00	14,437,340.81	1,695,935.37	39.75433715	-80.80246111	
300.00	0.00	0.00	300.00	0.00	0.00	14,437,340.81	1,695,935.37	39.75433715	-80.80246111	
400.00	0.00	0.00	400.00	0.00	0.00	14,437,340.81	1,695,935.37	39.75433715	-80.80246111	
500.00	0.00	0.00	500.00	0.00	0.00	14,437,340.81	1,695,935.37	39.75433715	-80.80246111	
600.00	0.00	0.00	600.00	0.00	0.00	14,437,340.81	1,695,935.37	39.75433715	-80.80246111	
700.00	0.00	0.00	700.00	0.00	0.00	14,437,340.81	1,695,935.37	39.75433715	-80.80246111	
KOP Begin 1°/100' build										
800.00	1.00	20.00	799.99	0.82	0.30	14,437,341.63	1,695,935.67	39.75433940	-80.80246004	
900.00	2.00	20.00	899.96	3.28	1.19	14,437,344.09	1,695,936.57	39.75434615	-80.80245684	
Begin 2.00° tangent										
1,000.00	2.00	20.00	999.90	6.56	2.39	14,437,347.37	1,695,937.76	39.75435515	-80.80245257	
1,100.00	2.00	20.00	1,099.84	9.84	3.58	14,437,350.65	1,695,938.95	39.75436415	-80.80244829	
1,200.00	2.00	20.00	1,199.78	13.12	4.77	14,437,353.93	1,695,940.15	39.75437315	-80.80244402	
1,300.00	2.00	20.00	1,299.72	16.40	5.97	14,437,357.21	1,695,941.34	39.75438215	-80.80243975	
1,300.28	2.00	20.00	1,300.00	16.41	5.97	14,437,357.22	1,695,941.35	39.75438217	-80.80243973	
Begin 1°/100' turn										
1,393.41	2.00	353.07	1,393.07	19.55	6.33	14,437,360.36	1,695,941.70	39.75439080	-80.80243843	
Begin 2.00° tangent										
1,400.00	2.00	353.07	1,399.66	19.78	6.30	14,437,360.59	1,695,941.68	39.75439142	-80.80243853	
1,500.00	2.00	353.07	1,499.60	23.24	5.88	14,437,364.05	1,695,941.26	39.75440094	-80.80244000	
1,600.00	2.00	353.07	1,599.54	26.70	5.46	14,437,367.52	1,695,940.83	39.75441046	-80.80244147	
1,700.00	2.00	353.07	1,699.47	30.17	5.04	14,437,370.98	1,695,940.41	39.75441997	-80.80244294	
1,800.00	2.00	353.07	1,799.41	33.63	4.62	14,437,374.44	1,695,939.99	39.75442949	-80.80244441	
1,900.00	2.00	353.07	1,899.35	37.10	4.20	14,437,377.91	1,695,939.57	39.75443901	-80.80244588	
2,000.00	2.00	353.07	1,999.29	40.56	3.78	14,437,381.37	1,695,939.15	39.75444852	-80.80244735	
2,100.00	2.00	353.07	2,099.23	44.03	3.36	14,437,384.84	1,695,938.73	39.75445804	-80.80244882	
2,200.00	2.00	353.07	2,199.17	47.49	2.93	14,437,388.30	1,695,938.31	39.75446756	-80.80245030	
2,300.00	2.00	353.07	2,299.11	50.96	2.51	14,437,391.77	1,695,937.89	39.75447708	-80.80245177	
2,400.00	2.00	353.07	2,399.05	54.42	2.09	14,437,395.23	1,695,937.47	39.75448659	-80.80245324	
2,500.00	2.00	353.07	2,498.99	57.88	1.67	14,437,398.70	1,695,937.05	39.75449611	-80.80245471	
2,600.00	2.00	353.07	2,598.93	61.35	1.25	14,437,402.16	1,695,936.62	39.75450563	-80.80245618	
2,700.00	2.00	353.07	2,698.86	64.81	0.83	14,437,405.62	1,695,936.20	39.75451514	-80.80245765	
2,800.00	2.00	353.07	2,798.80	68.28	0.41	14,437,409.09	1,695,935.78	39.75452466	-80.80245912	
2,900.00	2.00	353.07	2,898.74	71.74	-0.01	14,437,412.55	1,695,935.36	39.75453418	-80.80246059	
3,000.00	2.00	353.07	2,998.68	75.21	-0.43	14,437,416.02	1,695,934.94	39.75454369	-80.80246206	
3,100.00	2.00	353.07	3,098.62	78.67	-0.85	14,437,419.48	1,695,934.52	39.75455321	-80.80246354	
3,101.38	2.00	353.07	3,100.00	78.72	-0.86	14,437,419.53	1,695,934.51	39.75455334	-80.80246356	
Begin 2°/100' build										
3,200.00	3.97	353.07	3,198.48	83.82	-1.48	14,437,424.63	1,695,933.89	39.75456735	-80.80246572	
3,300.00	5.97	353.07	3,298.10	92.42	-2.53	14,437,433.23	1,695,932.85	39.75459099	-80.80246937	
3,400.00	7.97	353.07	3,397.36	104.47	-3.99	14,437,445.28	1,695,931.38	39.75462409	-80.80247449	
3,500.00	9.97	353.07	3,496.13	119.95	-5.87	14,437,460.76	1,695,929.50	39.75466661	-80.80248107	
3,600.00	11.97	353.07	3,594.29	138.85	-8.17	14,437,479.66	1,695,927.20	39.75471852	-80.80248909	
3,700.00	13.97	353.07	3,691.74	161.13	-10.88	14,437,501.94	1,695,924.49	39.75477973	-80.80249855	
3,800.00	15.97	353.07	3,788.34	186.78	-14.00	14,437,527.59	1,695,921.38	39.75485018	-80.80250944	
3,900.00	17.97	353.07	3,883.98	215.75	-17.52	14,437,556.56	1,695,917.86	39.75492977	-80.80252175	
4,000.00	19.97	353.07	3,978.54	248.02	-21.44	14,437,588.83	1,695,913.93	39.75501843	-80.80253546	
4,100.00	21.97	353.07	4,071.91	283.55	-25.76	14,437,624.36	1,695,909.61	39.75511602	-80.80255054	
4,200.00	23.97	353.07	4,163.97	322.29	-30.47	14,437,663.10	1,695,904.90	39.75522245	-80.80256700	
4,218.58	24.34	353.07	4,180.93	329.84	-31.39	14,437,670.65	1,695,903.99	39.75524318	-80.80257020	
Begin 24.34° tangent										
4,300.00	24.34	353.07	4,255.11	363.16	-35.44	14,437,703.97	1,695,899.94	39.75533471	-80.80258435	



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Burch Ridge 7 HU (slot G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1313.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1313.00ft
Site:	Burch Ridge	North Reference:	Grid
Well:	Burch Ridge 7 HU (slot G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,400.00	24.34	353.07	4,346.22	404.08	-40.41	14,437,744.89	1,695,894.96	39.75544712	-80.80260173	
4,500.00	24.34	353.07	4,437.33	445.00	-45.39	14,437,785.81	1,695,889.99	39.75555952	-80.80261911	
4,600.00	24.34	353.07	4,528.43	485.92	-50.36	14,437,826.73	1,695,885.01	39.75567193	-80.80263649	
4,700.00	24.34	353.07	4,619.54	526.84	-55.34	14,437,867.65	1,695,880.04	39.75578434	-80.80265387	
4,800.00	24.34	353.07	4,710.65	567.76	-60.31	14,437,908.57	1,695,875.06	39.75589675	-80.80267124	
4,900.00	24.34	353.07	4,801.76	608.68	-65.28	14,437,949.49	1,695,870.09	39.75600916	-80.80268862	
5,000.00	24.34	353.07	4,892.87	649.60	-70.26	14,437,990.41	1,695,865.12	39.75612157	-80.80270600	
5,100.00	24.34	353.07	4,983.98	690.52	-75.23	14,438,031.33	1,695,860.14	39.75623398	-80.80272338	
5,200.00	24.34	353.07	5,075.09	731.44	-80.21	14,438,072.25	1,695,855.17	39.75634639	-80.80274076	
5,300.00	24.34	353.07	5,166.19	772.36	-85.18	14,438,113.17	1,695,850.19	39.75645879	-80.80275814	
5,400.00	24.34	353.07	5,257.30	813.28	-90.16	14,438,154.09	1,695,845.22	39.75657120	-80.80277552	
5,500.00	24.34	353.07	5,348.41	854.20	-95.13	14,438,195.01	1,695,840.24	39.75668361	-80.80279290	
5,600.00	24.34	353.07	5,439.52	895.12	-100.10	14,438,235.93	1,695,835.27	39.75679602	-80.80281028	
5,700.00	24.34	353.07	5,530.63	936.04	-105.08	14,438,276.85	1,695,830.29	39.75690843	-80.80282765	
5,800.00	24.34	353.07	5,621.74	976.96	-110.05	14,438,317.77	1,695,825.32	39.75702084	-80.80284503	
5,900.00	24.34	353.07	5,712.85	1,017.88	-115.03	14,438,358.69	1,695,820.35	39.75713325	-80.80286241	
6,000.00	24.34	353.07	5,803.96	1,058.80	-120.00	14,438,399.61	1,695,815.37	39.75724565	-80.80287979	
6,100.00	24.34	353.07	5,895.06	1,099.72	-124.98	14,438,440.53	1,695,810.40	39.75735806	-80.80289717	
6,200.00	24.34	353.07	5,986.17	1,140.64	-129.95	14,438,481.45	1,695,805.42	39.75747047	-80.80291455	
6,300.00	24.34	353.07	6,077.28	1,181.56	-134.92	14,438,522.37	1,695,800.45	39.75758288	-80.80293193	
6,400.00	24.34	353.07	6,168.39	1,222.48	-139.90	14,438,563.29	1,695,795.47	39.75769529	-80.80294931	
6,500.00	24.34	353.07	6,259.50	1,263.40	-144.87	14,438,604.21	1,695,790.50	39.75780770	-80.80296669	
6,600.00	24.34	353.07	6,350.61	1,304.32	-149.85	14,438,645.13	1,695,785.53	39.75792011	-80.80298407	
6,700.00	24.34	353.07	6,441.72	1,345.24	-154.82	14,438,686.05	1,695,780.55	39.75803251	-80.80300145	
6,800.00	24.34	353.07	6,532.83	1,386.16	-159.80	14,438,726.97	1,695,775.58	39.75814492	-80.80301883	
6,900.00	24.34	353.07	6,623.93	1,427.08	-164.77	14,438,767.89	1,695,770.60	39.75825733	-80.80303621	
7,000.00	24.34	353.07	6,715.04	1,468.00	-169.75	14,438,808.81	1,695,765.63	39.75836974	-80.80305359	
7,100.00	24.34	353.07	6,806.15	1,508.92	-174.72	14,438,849.73	1,695,760.65	39.75848215	-80.80307097	
7,200.00	24.34	353.07	6,897.26	1,549.85	-179.69	14,438,890.65	1,695,755.68	39.75859456	-80.80308835	
7,300.00	24.34	353.07	6,988.37	1,590.77	-184.67	14,438,931.57	1,695,750.71	39.75870697	-80.80310573	
7,400.00	24.34	353.07	7,079.48	1,631.69	-189.64	14,438,972.49	1,695,745.73	39.75881937	-80.80312311	
7,500.00	24.34	353.07	7,170.59	1,672.61	-194.62	14,439,013.41	1,695,740.76	39.75893178	-80.80314049	
7,600.00	24.34	353.07	7,261.70	1,713.53	-199.59	14,439,054.33	1,695,735.78	39.75904419	-80.80315787	
7,700.00	24.34	353.07	7,352.80	1,754.45	-204.57	14,439,095.25	1,695,730.81	39.75915660	-80.80317525	
7,800.00	24.34	353.07	7,443.91	1,795.37	-209.54	14,439,136.17	1,695,725.83	39.75926901	-80.80319263	
7,900.00	24.34	353.07	7,535.02	1,836.29	-214.51	14,439,177.09	1,695,720.86	39.75938142	-80.80321001	
8,000.00	24.34	353.07	7,626.13	1,877.21	-219.49	14,439,218.01	1,695,715.88	39.75949383	-80.80322739	
8,100.00	24.34	353.07	7,717.24	1,918.13	-224.46	14,439,258.93	1,695,710.91	39.75960623	-80.80324477	
8,200.00	24.34	353.07	7,808.35	1,959.05	-229.44	14,439,299.85	1,695,705.94	39.75971864	-80.80326215	
8,300.00	24.34	353.07	7,899.46	1,999.97	-234.41	14,439,340.77	1,695,700.96	39.75983105	-80.80327953	
8,400.00	24.34	353.07	7,990.56	2,040.89	-239.39	14,439,381.69	1,695,695.99	39.75994346	-80.80329691	
8,500.00	24.34	353.07	8,081.67	2,081.81	-244.36	14,439,422.61	1,695,691.01	39.76005587	-80.80331429	
8,600.00	24.34	353.07	8,172.78	2,122.73	-249.34	14,439,463.53	1,695,686.04	39.76016828	-80.80333167	
8,700.00	24.34	353.07	8,263.89	2,163.65	-254.31	14,439,504.45	1,695,681.06	39.76028069	-80.80334906	
8,800.00	24.34	353.07	8,355.00	2,204.57	-259.28	14,439,545.37	1,695,676.09	39.76039309	-80.80336644	
8,900.00	24.34	353.07	8,446.11	2,245.49	-264.26	14,439,586.29	1,695,671.12	39.76050550	-80.80338382	
9,000.00	24.34	353.07	8,537.22	2,286.41	-269.23	14,439,627.22	1,695,666.14	39.76061791	-80.80340120	
9,100.00	24.34	353.07	8,628.33	2,327.33	-274.21	14,439,668.14	1,695,661.17	39.76073032	-80.80341858	
9,200.00	24.34	353.07	8,719.43	2,368.25	-279.18	14,439,709.06	1,695,656.19	39.76084273	-80.80343596	
9,300.00	24.34	353.07	8,810.54	2,409.17	-284.16	14,439,749.98	1,695,651.22	39.76095514	-80.80345334	
9,400.00	24.34	353.07	8,901.65	2,450.09	-289.13	14,439,790.90	1,695,646.24	39.76106754	-80.80347072	
9,500.00	24.34	353.07	8,992.76	2,491.01	-294.10	14,439,831.82	1,695,641.27	39.76117995	-80.80348810	
9,600.00	24.34	353.07	9,083.87	2,531.93	-299.08	14,439,872.74	1,695,636.30	39.76129236	-80.80350548	
9,700.00	24.34	353.07	9,174.98	2,572.85	-304.05	14,439,913.66	1,695,631.32	39.76140477	-80.80352287	
9,800.00	24.34	353.07	9,266.09	2,613.77	-309.03	14,439,954.58	1,695,626.35	39.76151718	-80.80354025	

4705102194



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Burch Ridge 7 HU (slot G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1313.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1313.00ft
Site:	Burch Ridge	North Reference:	Grid
Well:	Burch Ridge 7 HU (slot G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,900.00	24.34	353.07	9,357.20	2,654.69	-314.00	14,439,995.50	1,695,621.37	39.76162959	-80.80355763	
10,000.00	24.34	353.07	9,448.30	2,695.61	-318.98	14,440,036.42	1,695,616.40	39.76174200	-80.80357501	
10,100.00	24.34	353.07	9,539.41	2,736.53	-323.95	14,440,077.34	1,695,611.42	39.76185440	-80.80359239	
10,200.00	24.34	353.07	9,630.52	2,777.45	-328.93	14,440,118.26	1,695,606.45	39.76196681	-80.80360977	
10,300.00	24.34	353.07	9,721.63	2,818.37	-333.90	14,440,159.18	1,695,601.47	39.76207922	-80.80362716	
10,400.00	24.34	353.07	9,812.74	2,859.29	-338.87	14,440,200.10	1,695,596.50	39.76219163	-80.80364454	
10,500.00	24.34	353.07	9,903.85	2,900.21	-343.85	14,440,241.02	1,695,591.53	39.76230404	-80.80366192	
10,570.80	24.34	353.07	9,968.35	2,929.18	-347.37	14,440,269.99	1,695,588.00	39.76238362	-80.80367423	
Begin 6°/100' build/turn										
10,600.00	22.77	354.97	9,995.12	2,940.79	-348.59	14,440,281.59	1,695,586.78	39.76241550	-80.80367848	
10,700.00	17.59	3.87	10,088.97	2,975.17	-349.27	14,440,315.98	1,695,586.11	39.76250993	-80.80368062	
10,800.00	13.12	19.16	10,185.41	3,000.99	-344.52	14,440,341.80	1,695,590.85	39.76258082	-80.80366352	
10,900.00	10.29	45.66	10,283.40	3,017.97	-334.40	14,440,358.78	1,695,600.98	39.76262738	-80.80362737	
11,000.00	10.54	79.30	10,381.84	3,025.92	-319.01	14,440,366.72	1,695,616.36	39.76264912	-80.80357256	
11,100.00	13.69	104.02	10,479.66	3,024.75	-298.53	14,440,365.55	1,695,636.84	39.76264578	-80.80349968	
11,200.00	18.30	118.11	10,575.80	3,014.47	-273.18	14,440,355.28	1,695,662.19	39.76261741	-80.80340955	
11,300.00	23.53	126.41	10,669.20	2,995.21	-243.24	14,440,336.01	1,695,692.14	39.76256432	-80.80330315	
11,400.00	29.05	131.76	10,758.83	2,967.16	-209.03	14,440,307.97	1,695,726.35	39.76248709	-80.80318164	
11,500.00	34.72	135.52	10,843.72	2,930.64	-170.93	14,440,271.45	1,695,764.44	39.76238656	-80.80304636	
11,600.00	40.47	138.32	10,922.93	2,886.05	-129.36	14,440,226.85	1,695,806.01	39.76226384	-80.80289879	
11,700.00	46.27	140.53	10,995.59	2,833.87	-84.77	14,440,174.67	1,695,850.60	39.76212027	-80.80274054	
11,763.85	50.00	141.73	11,038.20	2,796.84	-54.95	14,440,137.65	1,695,880.42	39.76201841	-80.80263471	
Begin 8°/100' build/turn										
11,800.00	52.82	142.55	11,060.74	2,774.53	-37.61	14,440,115.34	1,695,897.76	39.76195704	-80.80257319	
11,900.00	60.65	144.53	11,115.56	2,707.31	11.98	14,440,048.11	1,695,947.35	39.76177212	-80.80239723	
12,000.00	68.50	146.23	11,158.46	2,633.02	63.22	14,439,973.83	1,695,998.59	39.76156781	-80.80221550	
12,100.00	76.37	147.75	11,188.62	2,553.13	115.09	14,439,893.94	1,696,050.47	39.76134808	-80.80203153	
12,200.00	84.24	149.17	11,205.45	2,469.18	166.60	14,439,809.99	1,696,101.98	39.76111722	-80.80184890	
12,260.40	89.00	150.01	11,209.01	2,417.20	197.11	14,439,758.00	1,696,132.49	39.76097427	-80.80174074	
Begin 89.00° lateral										
12,300.00	89.00	150.01	11,209.69	2,382.91	216.91	14,439,723.71	1,696,152.28	39.76087998	-80.80167058	
12,400.00	89.00	150.01	11,211.43	2,296.31	266.89	14,439,637.12	1,696,202.26	39.76064185	-80.80149341	
12,500.00	89.00	150.01	11,213.17	2,209.71	316.87	14,439,550.52	1,696,252.24	39.76040373	-80.80131625	
12,600.00	89.00	150.01	11,214.91	2,123.12	366.85	14,439,463.92	1,696,302.22	39.76016561	-80.80113908	
12,700.00	89.00	150.01	11,216.65	2,036.52	416.83	14,439,377.33	1,696,352.20	39.75992749	-80.80096192	
12,800.00	89.00	150.01	11,218.39	1,949.92	466.81	14,439,290.73	1,696,402.18	39.75968936	-80.80078476	
12,900.00	89.00	150.01	11,220.13	1,863.33	516.79	14,439,204.14	1,696,452.16	39.75945124	-80.80060760	
13,000.00	89.00	150.01	11,221.88	1,776.73	566.77	14,439,117.54	1,696,502.14	39.75921312	-80.80043044	
13,100.00	89.00	150.01	11,223.62	1,690.14	616.75	14,439,030.94	1,696,552.12	39.75897499	-80.80025328	
13,200.00	89.00	150.01	11,225.36	1,603.54	666.73	14,438,944.35	1,696,602.10	39.75873687	-80.80007612	
13,300.00	89.00	150.01	11,227.10	1,516.94	716.71	14,438,857.75	1,696,652.09	39.75849874	-80.79989897	
13,400.00	89.00	150.01	11,228.84	1,430.35	766.69	14,438,771.16	1,696,702.07	39.75826062	-80.79972181	
13,500.00	89.00	150.01	11,230.58	1,343.75	816.67	14,438,684.56	1,696,752.05	39.75802249	-80.79954466	
13,600.00	89.00	150.01	11,232.32	1,257.15	866.66	14,438,597.96	1,696,802.03	39.75778437	-80.79936751	
13,700.00	89.00	150.01	11,234.06	1,170.56	916.64	14,438,511.37	1,696,852.01	39.75754624	-80.79919036	
13,800.00	89.00	150.01	11,235.80	1,083.96	966.62	14,438,424.77	1,696,901.99	39.75730812	-80.79901321	
13,900.00	89.00	150.01	11,237.54	997.37	1,016.60	14,438,338.18	1,696,951.97	39.75706999	-80.79883606	
14,000.00	89.00	150.01	11,239.28	910.77	1,066.58	14,438,251.58	1,697,001.95	39.75683187	-80.79865891	
14,100.00	89.00	150.01	11,241.02	824.17	1,116.56	14,438,164.98	1,697,051.93	39.75659374	-80.79848176	
14,200.00	89.00	150.01	11,242.76	737.58	1,166.54	14,438,078.39	1,697,101.91	39.75635561	-80.79830462	
14,300.00	89.00	150.01	11,244.50	650.98	1,216.52	14,437,991.79	1,697,151.89	39.75611749	-80.79812747	
14,400.00	89.00	150.01	11,246.24	564.38	1,266.50	14,437,905.19	1,697,201.87	39.75587936	-80.79795033	
14,500.00	89.00	150.01	11,247.98	477.79	1,316.48	14,437,818.60	1,697,251.85	39.75564123	-80.79777319	
14,600.00	89.00	150.01	11,249.72	391.19	1,366.46	14,437,732.00	1,697,301.83	39.75540310	-80.79759605	



Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Burch Ridge 7 HU (slot G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1313.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1313.00ft
Site:	Burch Ridge	North Reference:	Grid
Well:	Burch Ridge 7 HU (slot G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
14,700.00	89.00	150.01	11,251.46	304.60	1,416.44	14,437,645.41	1,697,351.81	39.75516497	-80.79741891	
14,800.00	89.00	150.01	11,253.20	218.00	1,466.42	14,437,558.81	1,697,401.79	39.75492685	-80.79724177	
14,900.00	89.00	150.01	11,254.94	131.40	1,516.40	14,437,472.21	1,697,451.77	39.75468872	-80.79706464	
15,000.00	89.00	150.01	11,256.68	44.81	1,566.38	14,437,385.62	1,697,501.76	39.75445059	-80.79688750	
15,100.00	89.00	150.01	11,258.42	-41.79	1,616.37	14,437,299.02	1,697,551.74	39.75421246	-80.79671037	
15,200.00	89.00	150.01	11,260.16	-128.39	1,666.35	14,437,212.43	1,697,601.72	39.75397433	-80.79653324	
15,300.00	89.00	150.01	11,261.90	-214.98	1,716.33	14,437,125.83	1,697,651.70	39.75373620	-80.79635610	
15,400.00	89.00	150.01	11,263.64	-301.58	1,766.31	14,437,039.23	1,697,701.68	39.75349807	-80.79617897	
15,500.00	89.00	150.01	11,265.38	-388.17	1,816.29	14,436,952.64	1,697,751.66	39.75325994	-80.79600184	
15,600.00	89.00	150.01	11,267.12	-474.77	1,866.27	14,436,866.04	1,697,801.64	39.75302181	-80.79582472	
15,700.00	89.00	150.01	11,268.86	-561.37	1,916.25	14,436,779.45	1,697,851.62	39.75278368	-80.79564759	
15,800.00	89.00	150.01	11,270.60	-647.96	1,966.23	14,436,692.85	1,697,901.60	39.75254554	-80.79547046	
15,900.00	89.00	150.01	11,272.34	-734.56	2,016.21	14,436,606.25	1,697,951.58	39.75230741	-80.79529334	
16,000.00	89.00	150.01	11,274.08	-821.15	2,066.19	14,436,519.66	1,698,001.56	39.75206928	-80.79511622	
16,100.00	89.00	150.01	11,275.82	-907.75	2,116.17	14,436,433.06	1,698,051.54	39.75183115	-80.79493910	
16,200.00	89.00	150.01	11,277.56	-994.35	2,166.15	14,436,346.47	1,698,101.52	39.75159302	-80.79476197	
16,300.00	89.00	150.01	11,279.30	-1,080.94	2,216.13	14,436,259.87	1,698,151.50	39.75135488	-80.79458485	
16,400.00	89.00	150.01	11,281.04	-1,167.54	2,266.11	14,436,173.27	1,698,201.48	39.75111675	-80.79440774	
16,500.00	89.00	150.01	11,282.78	-1,254.14	2,316.10	14,436,086.68	1,698,251.46	39.75087862	-80.79423062	
16,600.00	89.00	150.01	11,284.52	-1,340.73	2,366.08	14,436,000.08	1,698,301.44	39.75064048	-80.79405350	
16,700.00	89.00	150.01	11,286.26	-1,427.33	2,416.06	14,435,913.49	1,698,351.42	39.75040235	-80.79387639	
16,800.00	89.00	150.01	11,288.00	-1,513.92	2,466.04	14,435,826.89	1,698,401.41	39.75016422	-80.79369928	
16,900.00	89.00	150.01	11,289.74	-1,600.52	2,516.02	14,435,740.29	1,698,451.39	39.74992608	-80.79352216	
17,000.00	89.00	150.01	11,291.48	-1,687.12	2,566.00	14,435,653.70	1,698,501.37	39.74968795	-80.79334505	
17,100.00	89.00	150.01	11,293.22	-1,773.71	2,615.98	14,435,567.10	1,698,551.35	39.74944981	-80.79316794	
17,200.00	89.00	150.01	11,294.96	-1,860.31	2,665.96	14,435,480.51	1,698,601.33	39.74921168	-80.79299083	
17,300.00	89.00	150.01	11,296.70	-1,946.91	2,715.94	14,435,393.91	1,698,651.31	39.74897354	-80.79281373	
17,400.00	89.00	150.01	11,298.44	-2,033.50	2,765.92	14,435,307.31	1,698,701.29	39.74873541	-80.79263662	
17,500.00	89.00	150.01	11,300.18	-2,120.10	2,815.90	14,435,220.72	1,698,751.27	39.74849727	-80.79245952	
17,600.00	89.00	150.01	11,301.92	-2,206.69	2,865.88	14,435,134.12	1,698,801.25	39.74825913	-80.79228241	
17,700.00	89.00	150.01	11,303.66	-2,293.29	2,915.86	14,435,047.53	1,698,851.23	39.74802100	-80.79210531	
17,800.00	89.00	150.01	11,305.40	-2,379.89	2,965.84	14,434,960.93	1,698,901.21	39.74778286	-80.79192821	
17,900.00	89.00	150.01	11,307.14	-2,466.48	3,015.82	14,434,874.33	1,698,951.19	39.74754472	-80.79175111	
18,000.00	89.00	150.01	11,308.88	-2,553.08	3,065.81	14,434,787.74	1,699,001.17	39.74730659	-80.79157401	
18,100.00	89.00	150.01	11,310.62	-2,639.68	3,115.79	14,434,701.14	1,699,051.15	39.74706845	-80.79139691	
18,200.00	89.00	150.01	11,312.36	-2,726.27	3,165.77	14,434,614.55	1,699,101.13	39.74683031	-80.79121982	
18,300.00	89.00	150.01	11,314.10	-2,812.87	3,215.75	14,434,527.95	1,699,151.11	39.74659217	-80.79104272	
18,400.00	89.00	150.01	11,315.84	-2,899.46	3,265.73	14,434,441.35	1,699,201.09	39.74635403	-80.79086563	
18,500.00	89.00	150.01	11,317.58	-2,986.06	3,315.71	14,434,354.76	1,699,251.08	39.74611589	-80.79068854	
18,600.00	89.00	150.01	11,319.32	-3,072.66	3,365.69	14,434,268.16	1,699,301.06	39.74587775	-80.79051144	
18,700.00	89.00	150.01	11,321.06	-3,159.25	3,415.67	14,434,181.57	1,699,351.04	39.74563962	-80.79033435	
18,800.00	89.00	150.01	11,322.80	-3,245.85	3,465.65	14,434,094.97	1,699,401.02	39.74540148	-80.79015727	
18,900.00	89.00	150.01	11,324.54	-3,332.44	3,515.63	14,434,008.37	1,699,451.00	39.74516334	-80.78998018	
19,000.00	89.00	150.01	11,326.28	-3,419.04	3,565.61	14,433,921.78	1,699,500.98	39.74492520	-80.78980309	
19,100.00	89.00	150.01	11,328.02	-3,505.64	3,615.59	14,433,835.18	1,699,550.96	39.74468706	-80.78962601	
19,200.00	89.00	150.01	11,329.76	-3,592.23	3,665.57	14,433,748.58	1,699,600.94	39.74444891	-80.78944892	
19,300.00	89.00	150.01	11,331.50	-3,678.83	3,715.55	14,433,661.99	1,699,650.92	39.74421077	-80.78927184	
19,400.00	89.00	150.01	11,333.24	-3,765.43	3,765.53	14,433,575.39	1,699,700.90	39.74397263	-80.78909476	
19,500.00	89.00	150.01	11,334.98	-3,852.02	3,815.52	14,433,488.80	1,699,750.88	39.74373449	-80.78891768	
19,600.00	89.00	150.01	11,336.72	-3,938.62	3,865.50	14,433,402.20	1,699,800.86	39.74349635	-80.78874060	
19,700.00	89.00	150.01	11,338.46	-4,025.21	3,915.48	14,433,315.60	1,699,850.84	39.74325821	-80.78856352	
19,800.00	89.00	150.01	11,340.20	-4,111.81	3,965.46	14,433,229.01	1,699,900.82	39.74302006	-80.78838644	
19,900.00	89.00	150.01	11,341.94	-4,198.41	4,015.44	14,433,142.41	1,699,950.80	39.74278192	-80.78820937	
20,000.00	89.00	150.01	11,343.68	-4,285.00	4,065.42	14,433,055.82	1,700,000.78	39.74254378	-80.78803229	
20,100.00	89.00	150.01	11,345.42	-4,371.60	4,115.40	14,432,969.22	1,700,050.76	39.74230564	-80.78785522	



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Burch Ridge 7 HU (slot G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1313.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1313.00ft
Site:	Burch Ridge	North Reference:	Grid
Well:	Burch Ridge 7 HU (slot G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
20,200.00	89.00	150.01	11,347.16	-4,458.20	4,165.38	14,432,882.62	1,700,100.75	39.74206749	-80.78767815	
20,300.00	89.00	150.01	11,348.90	-4,544.79	4,215.36	14,432,796.03	1,700,150.73	39.74182935	-80.78750108	
20,400.00	89.00	150.01	11,350.64	-4,631.39	4,265.34	14,432,709.43	1,700,200.71	39.74159120	-80.78732401	
20,500.00	89.00	150.01	11,352.38	-4,717.98	4,315.32	14,432,622.84	1,700,250.69	39.74135306	-80.78714694	
20,600.00	89.00	150.01	11,354.12	-4,804.58	4,365.30	14,432,536.24	1,700,300.67	39.74111492	-80.78696987	
20,700.00	89.00	150.01	11,355.86	-4,891.18	4,415.28	14,432,449.64	1,700,350.65	39.74087677	-80.78679281	
20,800.00	89.00	150.01	11,357.60	-4,977.77	4,465.26	14,432,363.05	1,700,400.63	39.74063863	-80.78661574	
20,900.00	89.00	150.01	11,359.34	-5,064.37	4,515.25	14,432,276.45	1,700,450.61	39.74040048	-80.78643868	
21,000.00	89.00	150.01	11,361.08	-5,150.97	4,565.23	14,432,189.86	1,700,500.59	39.74016233	-80.78626162	
21,100.00	89.00	150.01	11,362.83	-5,237.56	4,615.21	14,432,103.26	1,700,550.57	39.73992419	-80.78608455	
21,200.00	89.00	150.01	11,364.57	-5,324.16	4,665.19	14,432,016.66	1,700,600.55	39.73968604	-80.78590749	
21,300.00	89.00	150.01	11,366.31	-5,410.75	4,715.17	14,431,930.07	1,700,650.53	39.73944790	-80.78573044	
21,400.00	89.00	150.01	11,368.05	-5,497.35	4,765.15	14,431,843.47	1,700,700.51	39.73920975	-80.78555338	
21,500.00	89.00	150.01	11,369.79	-5,583.95	4,815.13	14,431,756.88	1,700,750.49	39.73897160	-80.78537632	
21,600.00	89.00	150.01	11,371.53	-5,670.54	4,865.11	14,431,670.28	1,700,800.47	39.73873345	-80.78519927	
21,700.00	89.00	150.01	11,373.27	-5,757.14	4,915.09	14,431,583.68	1,700,850.45	39.73849531	-80.78502221	
21,800.00	89.00	150.01	11,375.01	-5,843.74	4,965.07	14,431,497.09	1,700,900.43	39.73825716	-80.78484516	
21,900.00	89.00	150.01	11,376.75	-5,930.33	5,015.05	14,431,410.49	1,700,950.42	39.73801901	-80.78466811	
22,000.00	89.00	150.01	11,378.49	-6,016.93	5,065.03	14,431,323.90	1,701,000.40	39.73778086	-80.78449106	
22,100.00	89.00	150.01	11,380.23	-6,103.52	5,115.01	14,431,237.30	1,701,050.38	39.73754271	-80.78431401	
22,200.00	89.00	150.01	11,381.97	-6,190.12	5,164.99	14,431,150.70	1,701,100.36	39.73730456	-80.78413696	
22,300.00	89.00	150.01	11,383.71	-6,276.72	5,214.97	14,431,064.11	1,701,150.34	39.73706641	-80.78395992	
22,400.00	89.00	150.01	11,385.45	-6,363.31	5,264.96	14,430,977.51	1,701,200.32	39.73682827	-80.78378287	
22,500.00	89.00	150.01	11,387.19	-6,449.91	5,314.94	14,430,890.92	1,701,250.30	39.73659012	-80.78360583	
22,600.00	89.00	150.01	11,388.93	-6,536.50	5,364.92	14,430,804.32	1,701,300.28	39.73635197	-80.78342878	
22,700.00	89.00	150.01	11,390.67	-6,623.10	5,414.90	14,430,717.72	1,701,350.26	39.73611381	-80.78325174	
22,800.00	89.00	150.01	11,392.41	-6,709.70	5,464.88	14,430,631.13	1,701,400.24	39.73587566	-80.78307470	
22,900.00	89.00	150.01	11,394.15	-6,796.29	5,514.86	14,430,544.53	1,701,450.22	39.73563751	-80.78289766	
23,000.00	89.00	150.01	11,395.89	-6,882.89	5,564.84	14,430,457.94	1,701,500.20	39.73539936	-80.78272063	
23,100.00	89.00	150.01	11,397.63	-6,969.49	5,614.82	14,430,371.34	1,701,550.18	39.73516121	-80.78254359	
23,200.00	89.00	150.01	11,399.37	-7,056.08	5,664.80	14,430,284.74	1,701,600.16	39.73492306	-80.78236655	
23,300.00	89.00	150.01	11,401.11	-7,142.68	5,714.78	14,430,198.15	1,701,650.14	39.73468491	-80.78218952	
23,400.00	89.00	150.01	11,402.85	-7,229.27	5,764.76	14,430,111.55	1,701,700.12	39.73444675	-80.78201249	
23,500.00	89.00	150.01	11,404.59	-7,315.87	5,814.74	14,430,024.96	1,701,750.10	39.73420860	-80.78183545	
23,600.00	89.00	150.01	11,406.33	-7,402.47	5,864.72	14,429,938.36	1,701,800.09	39.73397045	-80.78165842	
23,700.00	89.00	150.01	11,408.07	-7,489.06	5,914.70	14,429,851.76	1,701,850.07	39.73373230	-80.78148139	
23,800.00	89.00	150.01	11,409.81	-7,575.66	5,964.68	14,429,765.17	1,701,900.05	39.73349414	-80.78130437	
23,900.00	89.00	150.01	11,411.55	-7,662.26	6,014.67	14,429,678.57	1,701,950.03	39.73325599	-80.78112734	
24,000.00	89.00	150.01	11,413.29	-7,748.85	6,064.65	14,429,591.98	1,702,000.01	39.73301783	-80.78095031	
24,100.00	89.00	150.01	11,415.03	-7,835.45	6,114.63	14,429,505.38	1,702,049.99	39.73277968	-80.78077329	
24,200.00	89.00	150.01	11,416.77	-7,922.04	6,164.61	14,429,418.78	1,702,099.97	39.73254153	-80.78059627	
24,270.76	89.00	150.01	11,418.00	-7,983.32	6,199.97	14,429,357.51	1,702,135.33	39.73237301	-80.78047101	

PBHL/TD 24270.76 MD/11418.00 TVD

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WV Department of
Environmental Protection



Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Burch Ridge 7 HU (slot G)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1313.00ft
Project:	Marshall County, West Virginia	MD Reference:	GL @ 1313.00ft
Site:	Burch Ridge	North Reference:	Grid
Well:	Burch Ridge 7 HU (slot G)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Burch Ridge 7HU LP	0.00	0.00	11,209.00	2,417.16	197.09	14,439,757.97	1,696,132.46	39.76097418	-80.80174082
- plan misses target center by 0.04ft at 12260.42ft MD (11209.01 TVD, 2417.18 N, 197.12 E)									
- Point									
Burch Ridge 7HU PBHL	0.00	0.00	11,418.00	-7,983.32	6,199.98	14,429,357.51	1,702,135.34	39.73237300	-80.78047100
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
		(ft)	(ft)	
700.00	700.00	0.00	0.00	KOP Begin 1°/100' build
900.00	899.96	3.28	1.19	Begin 2.00° tangent
1,300.28	1,300.00	16.41	5.97	Begin 1°/100' turn
1,393.41	1,393.07	19.55	6.33	Begin 2.00° tangent
3,101.38	3,100.00	78.72	-0.86	Begin 2°/100' build
4,218.58	4,180.93	329.84	-31.39	Begin 24.34° tangent
10,570.80	9,968.35	2,929.18	-347.37	Begin 6°/100' build/turn
11,763.85	11,038.20	2,796.84	-54.95	Begin 8°/100' build/turn
12,260.40	11,209.01	2,417.20	197.11	Begin 89.00° lateral
24,270.76	11,418.00	-7,983.32	6,199.97	PBHL/TD 24270.76 MD/11418.00 TVD

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WV Department of
Environmental Protection

4705102194



Well Site Safety Plan
Tug Hill Operating, LLC *5/20/19*

Well Name: Burch Ridge 7HU

Pad Location: Burch Ridge

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

NORTHING -4,400,510.28

EASTING -516,922.14

Updated May 2019

RECEIVED
Office of Oil and Gas

AUG 14 2019

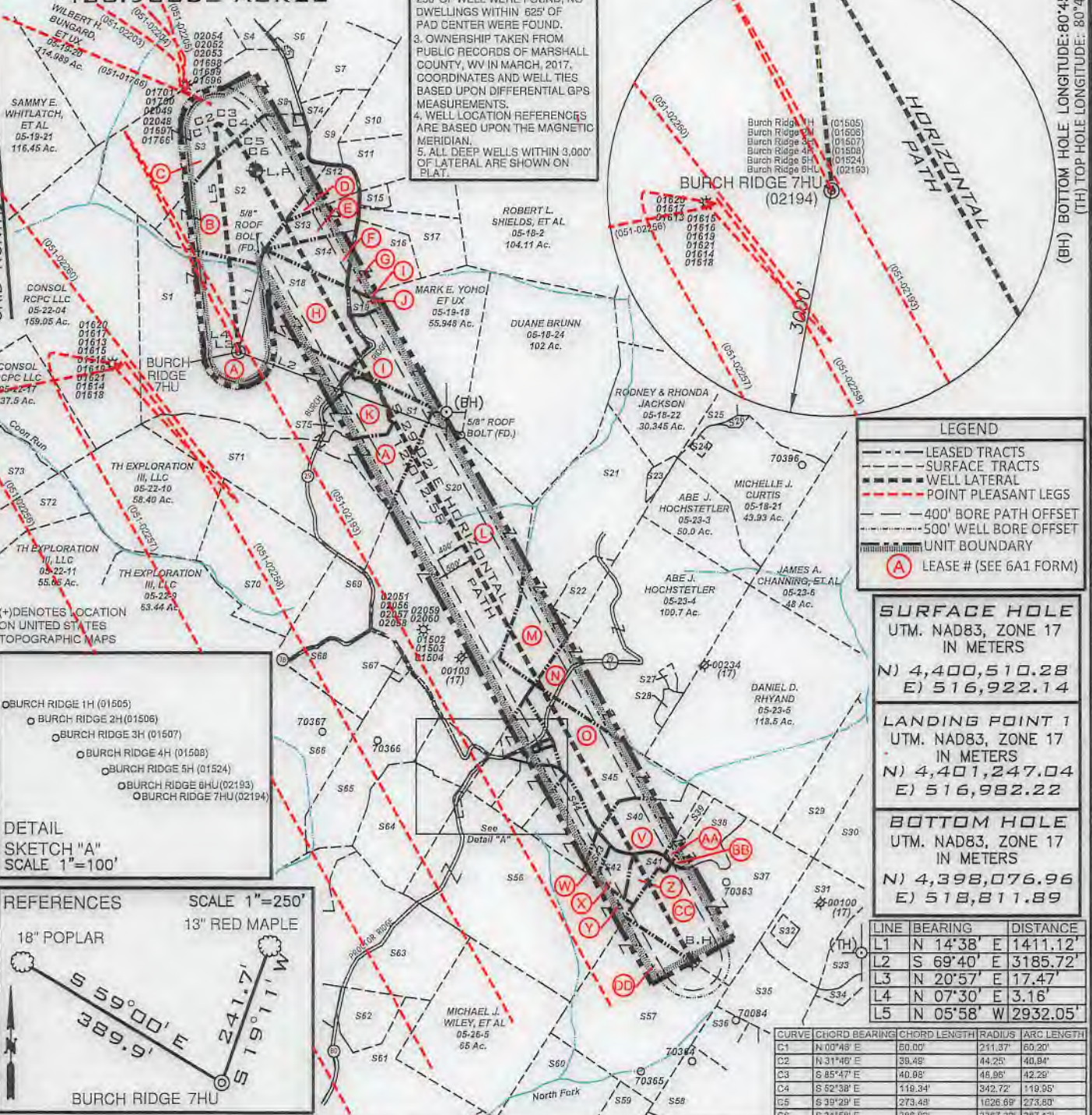
WV Department of
Environmental Protection

BURCH RIDGE LEASE WELL 7HU 426.9305± ACRES

NOTES

1. BORE PATH BASED ON GRID NORTH.
2. NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
3. OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2017. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
4. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
5. ALL DEEP WELLS WITHIN 3,000' OF LATERAL ARE SHOWN ON PLAT.

TOP HOLE LATITUDE: 39°47'30"
BOTTOM HOLE LATITUDE: 39°45'00"



LEGEND

- LEASED TRACTS
- SURFACE TRACTS
- WELL LATERAL
- - - POINT PLEASANT LEGS
- 400' BORE PATH OFFSET
- 500' WELL BORE OFFSET
- UNIT BOUNDARY
- (A) LEASE # (SEE 6A1 FORM)

SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,400,510.28
E) 516,922.14

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,401,247.04
E) 516,982.22

BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,398,076.96
E) 518,811.89

LINE	BEARING	DISTANCE
L1	N 14°38' E	1411.12'
L2	S 69°40' E	3185.72'
L3	N 20°57' E	17.47'
L4	N 07°30' E	3.16'
L5	N 05°58' W	2932.05'

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 00°48' E	80.00'	211.37'	60.20'
C2	N 31°40' E	38.48'	44.25'	40.84'
C3	S 85°47' E	40.98'	48.96'	42.29'
C4	S 52°38' E	118.34'	342.72'	119.36'
C5	S 39°29' E	273.48'	1626.69'	273.80'
C6	S 31°58' E	286.92'	3367.32'	387.13'

DETAIL SKETCH "A"
SCALE 1"=100'

REFERENCES

SCALE 1"=250'
13" RED MAPLE
18" POPLAR

BURCH RIDGE 7HU

FILE NUMBER _____
DRAWING NUMBER: BURCH RIDGE 7HU_Rev 1
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

P.S. 708
David L Jackson



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

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
DATE: MAY 29, 2019
REVISED DATE: AUGUST 13, 2019
OPERATORS WELL NO. BURCH RIDGE 7HU
API WELL NO. 47-051-02194 H6A
STATE COUNTY PERMIT

LOCATION ELEVATION 1310.39' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER
DISTRICT FRANKLIN COUNTY MARSHALL
QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 FORM

SURFACE OWNER CONSOL RCPC LLC ACREAGE 134.425
OIL & GAS ROYALTY OWNER CNX GAS COMPANY LLC LEASE ACREAGE 134.425
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___
PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE (SPECIFY) _____

TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TVD: 11,429' TMD: 24,271'
WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5400 D BIG TYLER ROAD
FORT WORTH, TX 76107 CHARLESTON, WV 25313

(BH) 8,626'

(TH) 3,081'

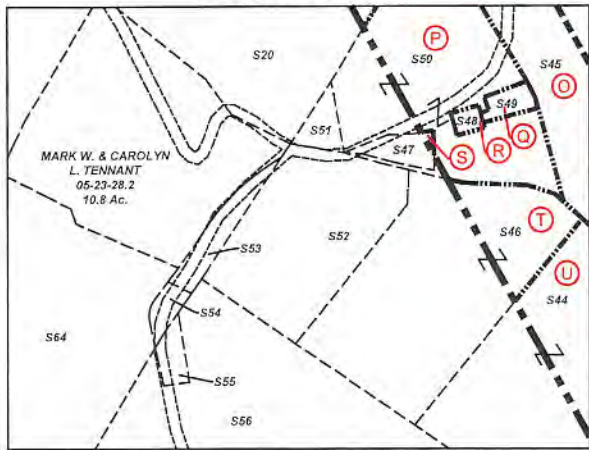
(BH) 6,441'

(TH) 13,623'

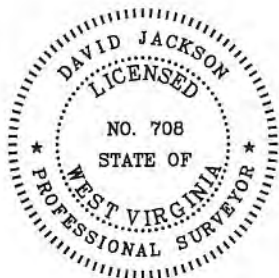
form ww6

**BURCH RIDGE LEASE
WELL 7HU
426.9305± ACRES**

Detail "A"



Number	TAX MAP -PARCEL	SURFACE OWNER	ACRES
S1	A 05-22-05	Consol RCPC LLC.	134.425
S2	B 05-19-28	David E. Yoho & Mark E. Yoho	56.899
S3	C 05-19-19	Russell Blake, et ux	66.4
S4	05-19-09	Penny Elaine Mezendez	10.44
S5	05-19-15	B.J. Herran Revocable Trust	0.72
S6	05-19-29	Ernie L. & Tammy L. Anderson	10.961
S7	05-19-30	Ernie & Tammy Anderson	19.037
S8	05-19-32	Jasper N. Burch, et al - Trustees	0.397
S9	05-19-31	Charles F. & Diana L. Haynes	8.779
S10	05-18-01	Diana Henry Haynes & Carol C. Henry	62.908
S11	05-19-14	James & Sherry Beegle	18.356
S12	D 05-19-27	David E. Yoho & Mark E. Yoho	7.041
S13	E 05-19-26	Roger J. & Beth E. James	9.977
S14	F 05-19-25	David E. Yoho & Mark E. Yoho	9.976
S15	05-19-16.1	Robert L. & Rebecca A. Shields	2.307
S16	G 05-19-24	Mark E. Yoho	15.436
S17	05-19-17	Mark E. Yoho	15.263
S18	H 05-19-18.2	Paul V. & Carol Neely	32.672
S19	J 05-19-18.1	Mark E. Yoho, et ux	2.57
S20	L 05-23-01	Patricia Accettolo, et al	146.66
S21	M 05-23-02	Daniel J. & Danielle D. Lilley	70.0
S22	05-23-2.2	Jessica N. & Andrew L. Jones	7.636
S23	05-23-2.1	William L. & Janice M. Wayne	2.364
S24	05-18-21	David P. Lissan, Life and David P. Lissan II & Julius L. Lissan	1.0
S25	05-18-21.1	Rodney & Rhonda Jackson	5.47
S26	05-18-21.3	T.H. Exploration III, LLC	0.811
S27	05-23-4.2	XCL Midstream Operating, LLC	1.17
S28	05-23-4.1	XCL Midstream Operating, LLC	2.16
S29	05-23-08	Carl David & Suzanne L. Guseman	29.5
S30	05-23-9.3	Linda D. Greathouse	17.5
S31	05-23-9.2	Linda D. Greathouse	25.58
S32	05-23-9.4	Jackson R. Sr. & Deanna L. Davis	2.087
S33	05-23-13	Linda D. Greathouse	14.24
S34	05-23-12	Mark A. Yoho	3.05
S35	05-23-9.1	John W. Van Orden, et ux	23.376
S36	05-26-22	Richard Joseph Otte, et ux	8.3
S37	CC 05-23-14	Dominion Transmission, Inc.	59.5
S38	BB 05-23-15	Henry Virginia Ethel, Est	15.5
S39	AA 05-23-16.1	Donald B. Henry	1.97
S40	V 05-23-16	Roy Friend Yoho, Sr.	18.03
S41	Z 05-23-17.3	William & Katherine Flewelling	5.018
S42	X 05-23-17	Tammy & Thomas E. Brown	4.62
S43	W 05-23-17.4	Tammy D. Meadows	2.605
S44	U 05-23-17.2	Dick Jr. & Carol J. Rowan	14.920
S45	O 05-23-18	Abe J. Hochstetler	35.38
S46	T 05-23-17.1	Curtis E. Hall, et ux	10.051
S47	S 05-23-21	Mark A. Yoho & Mark E. Yoho	0.588
S48	R 05-23-20	Christan Church	0.19
S49	Q 05-23-19	DOTY Cemetery	1.0
S50	P 05-23-18.1	Mark A. Yoho	7.8
S51	05-23-29	James Wiley	0.25
S52	05-23-22	Daniel D. Rhyand & Laurel R. Greene	6.25
S53	05-23-23	Michael J. Wiley, et al	1.0
S54	05-23-24	Michael J. Wiley, et al	0.25
S55	05-23-25	Arthur A. Wiley	0.43
S56	Y 05-23-26	Michael J. Wiley, et al	101.57
S57	DD 05-26-07	Dominion Transmission, Inc.	71.0
S58	05-26-23	Richard Joseph Otte, et ux	11.34
S59	05-26-17	Heartland Forestland Fund VII, LP	82.56
S60	05-26-06	Heartland Forestland Fund VII, LP	36.17
S61	05-26-4.4	Otis F. & Glenda M. Rush	39.436
S62	05-26-4.6	Otis F. Rush, Jr.	12.268
S63	05-26-02	Edwin Booth Anderson & Mark W. Booth	67.5
S64	05-23-27	Michael J. Wiley, et al	33.140
S65	05-23-28	Gregg D. Minor	39.43
S66	05-28-05	T.H. Exploration III, LLC.	105.9
S67	05-23-28.1	Troy W. & Erin M. Thomas	1.0
S68	05-22-07	Patricia Accettolo, et al	25.02
S69	05-22-7.1	T.H. Exploration II, LLC & Atinum Marcellus I, LLC	20.68
S70	05-22-08	T.H. Exploration III, LLC.	48.44
S71	05-22-06	Consol RCPC LLC.	64.70
S72	05-22-12	T.H. Exploration III, LLC.	61.49
S73	05-22-16	Edward R. Toho, Jr.	57.0
S74	05-19-30.1	Eric R. W. & Ashley A. Huggins	2.911
S75	K 05-22-5.1	Williams Ohio Valley Midstream, LLC	12.875



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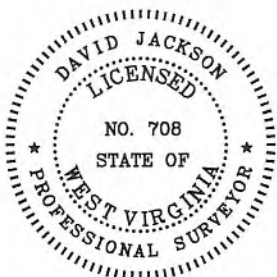
**TUG HILL
OPERATING**

OPERATOR'S
WELL #: Burch Ridge 7HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47-051-02194

WV Department of
Environmental Protection
WELL PLAT
PAGE 2 OF 3
DATE: 05/29/2019
REVISED DATE:
8/13/2019

**BURCH RIDGE LEASE
WELL 7HU
426.9305± ACRES**

Lease ID	Tags	Parcel	Grantor, Lessor, Etc.	Deed Book	Page
10*19529	A	5-22-5	CNX GAS COMPANY LLC	945	175
10*14297	B	5-19-28	MARK E. YOHO AND DAVID E. YOHO	655	547
10*14634	C	5-19-19	RUSSELL BLAKE & MARY BLAKE	773	568
10*14297	D	5-19-27	MARK E. YOHO AND DAVID E. YOHO	655	547
10*14501	E	5-19-26	ROGER J & BETH E JAMES	752	204
10*14297	F	5-19-25	MARK E. YOHO AND DAVID E. YOHO	655	547
10*14295	G	5-19-24	MARK E YOHO AND MARY YOHO HI	655	546
10*14421	H	5-19-18.2	PAUL V NEELY AND CAROL J NEE	728	277
10*14295	I	5-19-18	MARK E YOHO AND MARY YOHO HI	655	546
10*14295	J	5-19-18.1	MARK E YOHO AND MARY YOHO, ET AL	655	546
10*19529	K	5-22-5.1	CNX GAS COMPANY LLC	945	175
10*14129	L	5-23-1	JESSE P. MCHENRY	703	283
10*14022	M	5-23-2	HOWARD N. WAYNE, SR, ET UX	665	384
10*14849	N	5-23-4	DAVID GUSTELY, ET AL	806	265
10*14849	O	5-23-18	DAVID GUSTELY, ET AL	806	265
10*14849	P	5-23-18.1	DAVID GUSTELY, ET AL	806	265
10*14849	Q	5-23-19	DAVID GUSTELY, ET AL	806	265
10*14849	R	5-23-20	DAVID GUSTELY, ET AL	806	265
10*14849	S	5-23-21	DAVID GUSTELY, ET AL	806	265
10*14847	T	5-23-17.1	LETHA RUCKMAN, ET AL	806	270
10*14847	U	5-23-17.2	LETHA RUCKMAN, ET AL	806	270
10*14847	V	5-23-16	LETHA RUCKMAN, ET AL	806	270
10*14847	W	5-23-17.4	LETHA RUCKMAN, ET AL	806	270
10*14847	X	5-23-17	LETHA RUCKMAN, ET AL	806	270
10*14742	Y	5-23-26	SUSAN GORE, ET AL	790	505
10*14847	Z	5-23-17.3	LETHA RUCKMAN, ET AL	806	270
10*14847	AA	5-23-16.1	LETHA RUCKMAN, ET AL	806	270
10*14665	BB	5-23-15	DOROTHY TEDROW, ET AL	781	539
10*18343	CC	5-23-14	DOMINION ENERGY TRANSMISSION INC	936	79
10*18343	DD	5-26-7	DOMINION ENERGY TRANSMISSION INC	936	79



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AUG 14 2019
WV Department of
Environmental Protection



**TUG HILL
OPERATING**

OPERATOR'S
WELL #: Burch Ridge 7HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47-051-02194

WELL PLAT
PAGE 3 OF 3
DATE: 05/29/2019
REVISED DATE:
8/13/2019

WW-6A1
(5/13)

Operator's Well No. Burch Ridge S-7HU

**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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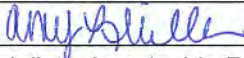
*See attached pages

**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 
 Its: Permitting Specialist - Appalachia Region

WW-6A1 Supplement

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Office of Oil and Gas
AUG 14 2019

WV Department of
Environmental Protection

4705102194

Operator's Well No. Burch Ridge S-7HU

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*19529	A	5-22-5	CNX GAS COMPANY LLC	TH EXPLORATION, LLC	1/8+	945	175	NA	NA	NA	24/39 AB Resources LLC, Chief Exploration & Development LLC, Radler 2000 Limited Partnership and Enerplus Resources (USA) Corp to Gastar Exploration USA Inc and Atrium Marcellus I LLC	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	NA
10*14297	B	5-19-28	MARK E. YOHO AND DAVID E. YOHO	TRIENERGY, INC.	1/8+	655	547	19/623 TriEnergy, Inc to AB Resources, LLC	666/40 AB Resources LLC to Chief Exploration & Development LLC	21/148 TriEnergy, Inc to TriEnergy Holdings LLC	21/520 Chief Exploration & Development LLC and Radler 2000 Limited Partnership to Enerplus Resources (USA) Corp	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atrium Marcellus I LLC to TH Exploration II, LLC
10*14634	C	5-19-19	RUSSELL BLAKE & MARY BLAKE	GASTAR EXPLORATION USA, INC	1/8+	773	568	NA	NA	NA	28/499 Gastar Exploration USA Inc to Atrium Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atrium Marcellus I LLC to TH Exploration II, LLC
10*14297	D	5-19-27	MARK E. YOHO AND DAVID E. YOHO	TRIENERGY, INC.	1/8+	655	547	19/623 TriEnergy Inc to AB Resources LLC	666/40 AB Resources LLC to Chief Exploration & Development LLC	21/148 TriEnergy, Inc to TriEnergy Holdings LLC	21/520 Chief Exploration & Development LLC and Radler 2000 Limited Partnership to Enerplus Resources (USA) Corp	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atrium Marcellus I LLC to TH Exploration II, LLC
10*14501	E	5-19-26	ROGER J & BETH E JAMES	GASTAR EXPLORATION USA, INC	1/8+	752	204	NA	NA	NA	24/39 AB Resources LLC, Chief Exploration & Development LLC, Radler 2000 Limited Partnership, Enerplus Resources (USA) Corp to Gastar Exploration USA Inc and Atrium Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atrium Marcellus I LLC to TH Exploration II, LLC
10*14297	F	5-19-25	MARK E. YOHO AND DAVID E. YOHO	TRIENERGY, INC.	1/8+	655	547	19/623 TriEnergy Inc to AB Resources LLC	666/40 AB Resources LLC to Chief Exploration & Development LLC	21/148 TriEnergy, Inc to TriEnergy Holdings LLC	21/520 Chief Exploration & Development LLC and Radler 2000 Limited Partnership to Enerplus Resources (USA) Corp	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atrium Marcellus I LLC to TH Exploration II, LLC
10*14295	G	5-19-24	MARK E YOHO AND MARY YOHO HI	TRIENERGY, INC.	1/8+	655	546	19/623 TriEnergy Inc to AB Resources LLC	666/40 AB Resources LLC to Chief Exploration & Development LLC	21/148 TriEnergy, Inc to TriEnergy Holdings LLC	21/520 Chief Exploration & Development LLC and Radler 2000 Limited Partnership to Enerplus Resources (USA) Corp	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atrium Marcellus I LLC to TH Exploration II, LLC

4700-134

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*14421	H	5-19-18.2	PAUL V NEELY AND CAROL J NEE	GASTAR EXPLORATION USA, INC	1/8+	728	277	NA	NA	NA	NA	735/263 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14295	I	5-19-18	MARK E YOHO AND MARY YOHO HI	TRIENERGY, INC.	1/8+	655	546	19/623 TriEnergy Inc to AB Resources LLC	666/40 AB Resources LLC to Chief Exploration & Development LLC	21/148 TriEnergy Inc to TriEnergy Holdings LLC	21/520 Chief Exploration & Development LLC and Radler 2000 Limited Partnership to Enerplus Resources (USA) Corp	24/39 AB Resources LLC, Chief Exploration & Development LLC, Radler 2000 Limited Partnership, Enerplus Resources (USA) Corp to Gastar Exploration USA Inc and Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14295	J	5-19-18.1	MARK E YOHO AND MARY YOHO HI	TRIENERGY, INC.	1/8+	655	546	19/623 TriEnergy Inc to AB Resources LLC	666/40 AB Resources LLC to Chief Exploration & Development LLC	21/148 TriEnergy Inc to TriEnergy Holdings LLC	21/520 Chief Exploration & Development LLC and Radler 2000 Limited Partnership to Enerplus Resources (USA) Corp	24/32 AB Resources LLC and Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14296	J	5-19-18.1	DUANE E. BRUNN, SINGLE	TRIENERGY HOLDINGS, LLC	1/8+	705	484	19/623 TriEnergy to AB Resources LLC	666/40 AB Resources LLC to Chief Exploration & Development LLC	21/148 TriEnergy Inc to TriEnergy Holdings LLC	21/520 Chief Exploration & Development LLC and Radler 2000 Limited Partnership to Enerplus Resources (USA) Corp	24/32 AB Resources LLC and Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*19529	K	5-22-5.1	CNX GAS COMPANY LLC	TH EXPLORATION, LLC	1/8+	945	175	NA	NA	NA	NA	NA	NA	NA	NA
10*14129	L	5-23-1	JESSE P. MCHENRY	GASTAR EXPLORATION USA, INC	1/8+	703	283	NA	NA	NA	NA	23/353 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14022	M	5-23-2	HOWARD N. WAYNE, SR. ET UX	GASTAR EXPLORATION USA, INC	1/8+	665	384	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14849	N	5-23-4	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14853	N	5-23-4	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment		
10*14873	O	5-23-18	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14874	O	5-23-18	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14875	O	5-23-18	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14876	O	5-23-18	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14877	O	5-23-18	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14878	O	5-23-18	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14879	O	5-23-18	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14880	O	5-23-18	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14881	O	5-23-18	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14882	O	5-23-18	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14883	O	5-23-18	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14884	O	5-23-18	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14885	O	5-23-18	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14886	O	5-23-18	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14887	O	5-23-18	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC

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10*14868	P	5-23-18.1	WOODROW CAMPBELL JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14869	P	5-23-18.1	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14870	P	5-23-18.1	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14872	P	5-23-18.1	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14873	P	5-23-18.1	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14874	P	5-23-18.1	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14875	P	5-23-18.1	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14876	P	5-23-18.1	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14877	P	5-23-18.1	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14878	P	5-23-18.1	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14879	P	5-23-18.1	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14880	P	5-23-18.1	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14881	P	5-23-18.1	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14882	P	5-23-18.1	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	

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10*14883	P	5-23-18.1	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14884	P	5-23-18.1	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14885	P	5-23-18.1	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14886	P	5-23-18.1	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14887	P	5-23-18.1	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14888	P	5-23-18.1	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14889	P	5-23-18.1	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14890	P	5-23-18.1	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14891	P	5-23-18.1	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14912	P	5-23-18.1	MARK A. YOHO	GASTAR EXPLORATION INC	1/8+	822	268	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*16034	P	5-23-18.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	902	163	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*16648	P	5-23-18.1	USA INC	TH EXPLORATION, LLC	1/8+	894	278	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17147	P	5-23-18.1	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC merger	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC	
10*17148	P	5-23-18.1	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC merger	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC	

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10*14861	Q	5-23-19	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14862	Q	5-23-19	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14864	Q	5-23-19	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14866	Q	5-23-19	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14868	Q	5-23-19	WOODBROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14869	Q	5-23-19	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14870	Q	5-23-19	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14872	Q	5-23-19	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14873	Q	5-23-19	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14874	Q	5-23-19	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14875	Q	5-23-19	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14876	Q	5-23-19	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14877	Q	5-23-19	GARY OBOLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	

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10*24917	Q	5-23-19	WALTER AND CONNIE J STREIGHT	TH EXPLORATION, LLC	1/8+	1027	95	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14849	R	5-23-20	DAVID GUSTEY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14853	R	5-23-20	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14861	R	5-23-20	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14862	R	5-23-20	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14864	R	5-23-20	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14866	R	5-23-20	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14868	R	5-23-20	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14869	R	5-23-20	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14870	R	5-23-20	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14872	R	5-23-20	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14873	R	5-23-20	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC

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10*14874	R	5-23-20	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14875	R	5-23-20	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14876	R	5-23-20	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14877	R	5-23-20	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14878	R	5-23-20	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14879	R	5-23-20	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14880	R	5-23-20	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14881	R	5-23-20	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14882	R	5-23-20	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14883	R	5-23-20	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14884	R	5-23-20	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14885	R	5-23-20	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14886	R	5-23-20	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14887	R	5-23-20	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14888	R	5-23-20	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC

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10*14872	S	5-23-21	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14873	S	5-23-21	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14874	S	5-23-21	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14875	S	5-23-21	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14876	S	5-23-21	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14877	S	5-23-21	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14878	S	5-23-21	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14879	S	5-23-21	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14880	S	5-23-21	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14881	S	5-23-21	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14882	S	5-23-21	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14883	S	5-23-21	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14884	S	5-23-21	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14885	S	5-23-21	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14886	S	5-23-21	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			

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10*14887	S	5-23-21	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14888	S	5-23-21	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14889	S	5-23-21	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14890	S	5-23-21	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14891	S	5-23-21	NANCY F FVE AND STEPHEN M FVE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14912	S	5-23-21	MARK A. YOHO	GASTAR EXPLORATION INC	1/8+	822	268	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*16034	S	5-23-21	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	902	163	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*16648	S	5-23-21	GASTAR EXPLORATION USA INC	TH EXPLORATION, LLC	1/8+	894	278	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17147	S	5-23-21	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	NA	NA	NA	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17148	S	5-23-21	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	NA	NA	NA	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17149	S	5-23-21	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	NA	NA	NA	NA	NA	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17150	S	5-23-21	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	NA	NA	NA	NA	NA	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC

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10*23757	S	5-23-21	DAVID DRAKE	TH EXPLORATION, LLC	1/8+	1012	187	NA	NA	NA	NA	NA	NA	NA	NA
10*23826	S	5-23-21	NANCY C DWYER AND WENDEL MARTINKOVIC	TH EXPLORATION, LLC	1/8+	1017	6	NA	NA	NA	NA	NA	NA	NA	NA
10*23838	S	5-23-21	RONALD DEAN YOHO & VICTORIA LYNN YOHO	TH EXPLORATION, LLC	1/8+	1017	1	NA	NA	NA	NA	NA	NA	NA	NA
10*23883	S	5-23-21	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	TH EXPLORATION, LLC	1/8+	1016	644	NA	NA	NA	NA	NA	NA	NA	NA
10*24274	S	5-23-21	JO ELLEN GUSTELY	TH EXPLORATION, LLC	1/8+	1023	527	NA	NA	NA	NA	NA	NA	NA	NA
10*24483	S	5-23-21	SUSAN AND KEVIN J ALFRED	TH EXPLORATION, LLC	1/8+	1025	401	NA	NA	NA	NA	NA	NA	NA	NA
10*24917	S	5-23-21	WALTER AND CONNIE J STREIGHT	TH EXPLORATION, LLC	1/8+	1027	95	NA	NA	NA	NA	NA	NA	NA	NA
10*14847	T	5-23-17.1	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA	NA	NA	NA
10*14849	T	5-23-17.1	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	NA	NA	NA
10*14853	T	5-23-17.1	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	NA	NA	NA
10*14861	T	5-23-17.1	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	NA	NA	NA
10*14862	T	5-23-17.1	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	NA	NA	NA
10*14864	T	5-23-17.1	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	NA	NA	NA
								31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC				
								31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC				
								31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC				
								31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC				
								31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC				

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10*14866	T	5-23-17.1	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14868	T	5-23-17.1	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14869	T	5-23-17.1	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14870	T	5-23-17.1	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14872	T	5-23-17.1	DMG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14873	T	5-23-17.1	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14874	T	5-23-17.1	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14875	T	5-23-17.1	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14876	T	5-23-17.1	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14877	T	5-23-17.1	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14878	T	5-23-17.1	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14879	T	5-23-17.1	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14880	T	5-23-17.1	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			
10*14881	T	5-23-17.1	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC			

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10*14882	T	5-23-17.1	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14883	T	5-23-17.1	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14884	T	5-23-17.1	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14885	T	5-23-17.1	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14886	T	5-23-17.1	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14887	T	5-23-17.1	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14888	T	5-23-17.1	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14889	T	5-23-17.1	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14890	T	5-23-17.1	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14891	T	5-23-17.1	NANCY F FVE AND STEPHEN M FVE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*16034	T	5-23-17.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	902	163	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*16648	T	5-23-17.1	GASTAR EXPLORATION USA INC	TH EXPLORATION, LLC	1/8+	894	278	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17147	T	5-23-17.1	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	NA	NA	NA	41/238 Statoli Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17148	T	5-23-17.1	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	NA	NA	NA	41/238 Statoli Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC

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10*17965	T	5-23-17.1	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18176	T	5-23-17.1	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18247	T	5-23-17.1	MILDRED S KIRKPATRICK	TH EXPLORATION, LLC	1/8+	917	132	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18320	T	5-23-17.1	SAMUEL F HENRY	TH EXPLORATION, LLC	1/8+	931	246	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18329	T	5-23-17.1	COLLEEN HAGERTY WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18367	T	5-23-17.1	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18368	T	5-23-17.1	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18371	T	5-23-17.1	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18386	T	5-23-17.1	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18598	T	5-23-17.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18795	T	5-23-17.1	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18994	T	5-23-17.1	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19736	T	5-23-17.1	RANDALL C ROGERSON & TRACY LYNN ROGERSON	TH EXPLORATION, LLC	1/8+	949	368	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21084	T	5-23-17.1	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21217	T	5-23-17.1														

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4705102194

WW-6A1 Supplement

Operator's Well No. Burch Ridge S-7HU

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
10*24752	T	5-23-17.1	PATTI KENNEDY	TH EXPLORATION, LLC	1/8+	1027	312	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	NA
10*24917	T	5-23-17.1	WALTER AND CONNIE J STREIGHT	TH EXPLORATION, LLC	1/8+	1027	95	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	NA
10*14847	U	5-23-17.2	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14849	U	5-23-17.2	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14853	U	5-23-17.2	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14861	U	5-23-17.2	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14862	U	5-23-17.2	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14864	U	5-23-17.2	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14866	U	5-23-17.2	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14868	U	5-23-17.2	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14869	U	5-23-17.2	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14870	U	5-23-17.2	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration I, LLC to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC

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10*14872	U	5-23-17.2	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14873	U	5-23-17.2	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14874	U	5-23-17.2	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14875	U	5-23-17.2	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14876	U	5-23-17.2	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14877	U	5-23-17.2	GARY OBLDY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14878	U	5-23-17.2	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14879	U	5-23-17.2	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14880	U	5-23-17.2	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14881	U	5-23-17.2	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14882	U	5-23-17.2	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14883	U	5-23-17.2	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14884	U	5-23-17.2	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14885	U	5-23-17.2	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14886	U	5-23-17.2	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	

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10*22018	U	5-23-17.2	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22026	U	5-23-17.2	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22027	U	5-23-17.2	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22093	U	5-23-17.2	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22102	U	5-23-17.2	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22128	U	5-23-17.2	BETTY PYSSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22142	U	5-23-17.2	CHERYL L HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22143	U	5-23-17.2	WANDA J RIDING AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22144	U	5-23-17.2	VICKY STRAUSS AND DENNIS A STRAUSS	TH EXPLORATION, LLC	1/8+	961	529	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22165	U	5-23-17.2	DEBRA L LYESKI AND GERALD A LYESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22178	U	5-23-17.2	ANGELA HENTHORN AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	972	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22287	U	5-23-17.2	MISSY JONES AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22332	U	5-23-17.2	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22339	U	5-23-17.2	BETTY LEE HOWARD LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22436	U	5-23-17.2	TESSEAN FAMILY REVOCABLE LIVING TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*23727	U	5-23-17.2	USA TUCKER AND FRANCIS TUCKER	TH EXPLORATION, LLC	1/8+	1011	525	NA	NA	NA	NA	NA	NA	NA	NA
10*23756	U	5-23-17.2	KAREN DRAKE AND JEFF DRAKE	TH EXPLORATION, LLC	1/8+	1012	182	NA	NA	NA	NA	NA	NA	NA	NA
10*23757	U	5-23-17.2	DAVID DRAKE	TH EXPLORATION, LLC	1/8+	1012	187	NA	NA	NA	NA	NA	NA	NA	NA
10*23826	U	5-23-17.2	NANCY C DWYER AND WENDEL MARTINKOVIC	TH EXPLORATION, LLC	1/8+	1017	6	NA	NA	NA	NA	NA	NA	NA	NA
10*23838	U	5-23-17.2	RONALD DEAN YOHO & VICTORIA LYNN YOHO	TH EXPLORATION, LLC	1/8+	1017	1	NA	NA	NA	NA	NA	NA	NA	NA
10*23883	U	5-23-17.2	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	TH EXPLORATION, LLC	1/8+	1016	644	NA	NA	NA	NA	NA	NA	NA	NA
10*24274	U	5-23-17.2	JO ELLEN GUSTELY	TH EXPLORATION, LLC	1/8+	1023	527	NA	NA	NA	NA	NA	NA	NA	NA
10*24483	U	5-23-17.2	SUSAN AND KEVIN J ALFRED	TH EXPLORATION, LLC	1/8+	1025	401	NA	NA	NA	NA	NA	NA	NA	NA
10*24751	U	5-23-17.2	WILLIAM D AND KIM TAYLOR	TH EXPLORATION, LLC	1/8+	1027	315	NA	NA	NA	NA	NA	NA	NA	NA
10*24752	U	5-23-17.2	PATTI KENNEDY	TH EXPLORATION, LLC	1/8+	1027	312	NA	NA	NA	NA	NA	NA	NA	NA
10*24917	U	5-23-17.2	WALTER AND CONNIE J STREIGHT	TH EXPLORATION, LLC	1/8+	1027	95	NA	NA	NA	NA	NA	NA	NA	NA
10*14847	V	5-23-16	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA	NA	NA	NA
10*14849	V	5-23-16	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	NA	NA	NA
10*14853	V	5-23-16	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	NA	NA	NA
								31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC				
								31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC				
								31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC				

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10*14861	V	5-23-16	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14862	V	5-23-16	ANN GUSTEY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14864	V	5-23-16	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14866	V	5-23-16	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14868	V	5-23-16	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14869	V	5-23-16	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14870	V	5-23-16	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14872	V	5-23-16	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Athnum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14873	V	5-23-16	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14874	V	5-23-16	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14875	V	5-23-16	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14876	V	5-23-16	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC
10*14877	V	5-23-16	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Athnum Marcellus I LLC to TH Exploration II, LLC

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10*14868	W	5-23-17.4	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14869	W	5-23-17.4	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14870	W	5-23-17.4	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14872	W	5-23-17.4	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14873	W	5-23-17.4	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14874	W	5-23-17.4	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14875	W	5-23-17.4	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14876	W	5-23-17.4	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14877	W	5-23-17.4	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14878	W	5-23-17.4	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14879	W	5-23-17.4	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14880	W	5-23-17.4	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14881	W	5-23-17.4	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		
10*14882	W	5-23-17.4	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC		

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10*21948	W	5-23-17.4	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21949	W	5-23-17.4	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21950	W	5-23-17.4	JUDITH A TAYLOR	TH EXPLORATION, LLC	1/8+	960	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21951	W	5-23-17.4	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21994	W	5-23-17.4	MELISSA L DARRROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22013	W	5-23-17.4	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22014	W	5-23-17.4	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22018	W	5-23-17.4	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22026	W	5-23-17.4	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22027	W	5-23-17.4	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22093	W	5-23-17.4	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22102	W	5-23-17.4	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22128	W	5-23-17.4	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22142	W	5-23-17.4	CHERYL L HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22143	W	5-23-17.4	WANDA J RIDING AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*23398	W	5-23-17.4	ION GUSTELY AND MARILYN NIJE	TH EXPLORATION, LLC	1/8+	1008	12	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23410	W	5-23-17.4	JENNA WADE	TH EXPLORATION, LLC	1/8+	1008	16	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23428	W	5-23-17.4	DAVID L SNYDER	TH EXPLORATION, LLC	1/8+	1008	313	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23444	W	5-23-17.4	JENNIFER CUICHTA AND KEVIN CUICHTA	TH EXPLORATION, LLC	1/8+	1008	310	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23505	W	5-23-17.4	RENEE KELLAR	TH EXPLORATION, LLC	1/8+	971	633	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23756	W	5-23-17.4	KAREN DRAKE AND JEFF DRAKE	TH EXPLORATION, LLC	1/8+	1012	182	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23757	W	5-23-17.4	DAVID DRAKE	TH EXPLORATION, LLC	1/8+	1012	187	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23826	W	5-23-17.4	NANCY C DWYER AND WENDEL MARTINKOVIC	TH EXPLORATION, LLC	1/8+	1017	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23883	W	5-23-17.4	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	TH EXPLORATION, LLC	1/8+	1016	644	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24274	W	5-23-17.4	JO EILEEN GUSTELY	TH EXPLORATION, LLC	1/8+	1023	527	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24483	W	5-23-17.4	SUSAN AND KEVIN J ALFRED	TH EXPLORATION, LLC	1/8+	1025	401	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24751	W	5-23-17.4	WILLIAM D AND KIM TAYLOR	TH EXPLORATION, LLC	1/8+	1027	315	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24752	W	5-23-17.4	PATTI KENNEDY	TH EXPLORATION, LLC	1/8+	1027	312	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24917	W	5-23-17.4	WALTER AND CONNIE J STREIGHT	TH EXPLORATION, LLC	1/8+	1027	95	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*14847	X	5-23-17	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14849	X	5-23-17	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14853	X	5-23-17	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14861	X	5-23-17	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14862	X	5-23-17	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14864	X	5-23-17	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14866	X	5-23-17	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14868	X	5-23-17	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14869	X	5-23-17	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14870	X	5-23-17	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14872	X	5-23-17	DWVG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	31/184 Gatar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gatar Exploration USA Inc to Gatar Exploration Inc	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14873	X	5-23-17	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	36/9 Gatar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC	

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10*14874	X	5-23-17	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14875	X	5-23-17	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14876	X	5-23-17	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14877	X	5-23-17	GARY OBLÓY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14878	X	5-23-17	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14879	X	5-23-17	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14880	X	5-23-17	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14881	X	5-23-17	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14882	X	5-23-17	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14883	X	5-23-17	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14884	X	5-23-17	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14885	X	5-23-17	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14886	X	5-23-17	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14887	X	5-23-17	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14888	X	5-23-17	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/605 Atinum Marcellus I LLC to TH Exploration II, LLC

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10*17715	X	5-23-17	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17719	X	5-23-17	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17720	X	5-23-17	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17775	X	5-23-17	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17776	X	5-23-17	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17824	X	5-23-17	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17901	X	5-23-17	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17965	X	5-23-17	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18176	X	5-23-17	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18247	X	5-23-17	MILDRED S KIRKPATRICK	TH EXPLORATION, LLC	1/8+	917	132	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18320	X	5-23-17	SAMUEL F HENRY	TH EXPLORATION, LLC	1/8+	931	246	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18329	X	5-23-17	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18367	X	5-23-17	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18368	X	5-23-17	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18371	X	5-23-17	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	461	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*22440	X	5-23-17	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22443	X	5-23-17	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22450	X	5-23-17	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22503	X	5-23-17	KENNETH R SHAW AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22504	X	5-23-17	MELVIN FANKHAUSER	TH EXPLORATION, LLC	1/8+	974	351	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22505	X	5-23-17	JAMES D DRAKE AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22509	X	5-23-17	RANDY BERISFORD AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22560	X	5-23-17	RONALD JOE KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22592	X	5-23-17	RUSSELL W ROGERSON AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22593	X	5-23-17	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22594	X	5-23-17	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22609	X	5-23-17	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22613	X	5-23-17	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22779	X	5-23-17	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22809	X	5-23-17	MARGARET C MCMURRY & WILLIAM F MCMURRY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*14745	Y	5-23-26	RALPH B. TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	794	485	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14747	Y	5-23-26	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	564	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17716	Y	5-23-26	MICHAEL J AND BARBARA L WILEY	TH EXPLORATION, LLC	1/8+	919	638	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17777	Y	5-23-26	MICHELLE E AND ROBERT T BAKER	TH EXPLORATION, LLC	1/8+	921	128	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21420	Y	5-23-26	DAVID D BURKETT	TH EXPLORATION, LLC	1/8+	957	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21421	Y	5-23-26	BRYANNA FLYNN RANKIN	TH EXPLORATION, LLC	1/8+	957	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21437	Y	5-23-26	REBECCA MCMILLAN AND ROBERT MCMILLAN	TH EXPLORATION, LLC	1/8+	957	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21821	Y	5-23-26	LINDA K TAYLOR AND RAY P MAGEE	TH EXPLORATION, LLC	1/8+	951	631	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14847	Z	5-23-17.3	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14849	Z	5-23-17.3	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14853	Z	5-23-17.3	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14861	Z	5-23-17.3	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14862	Z	5-23-17.3	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*14864	Z	5-23-17.3	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14866	Z	5-23-17.3	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14868	Z	5-23-17.3	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14869	Z	5-23-17.3	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14870	Z	5-23-17.3	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14872	Z	5-23-17.3	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	31/184 Gaster Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gaster Exploration USA Inc to Gaster Exploration Inc	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14873	Z	5-23-17.3	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14874	Z	5-23-17.3	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14875	Z	5-23-17.3	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14876	Z	5-23-17.3	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14877	Z	5-23-17.3	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14878	Z	5-23-17.3	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	
10*14879	Z	5-23-17.3	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	

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10*17546	Z	5-23-17.3	SAMUEL EARL FRANCIS AND ALICE L FRANCIS	TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17593	Z	5-23-17.3	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17594	Z	5-23-17.3	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17595	Z	5-23-17.3	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17640	Z	5-23-17.3	PATRICIA A GARGAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17679	Z	5-23-17.3	NORMA JASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17680	Z	5-23-17.3	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17681	Z	5-23-17.3	WALTER E LOSEY AND CINDYL LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17682	Z	5-23-17.3	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17683	Z	5-23-17.3	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17684	Z	5-23-17.3	DAVID MCCOY AND LORI MCCOY	TH EXPLORATION, LLC	1/8+	942	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17715	Z	5-23-17.3	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17719	Z	5-23-17.3	ROBERT R DARRROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17720	Z	5-23-17.3	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17775	Z	5-23-17.3	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*21565	Z	5-23-17.3	KORENE SUE LANITZ	TH EXPLORATION, LLC	1/8+	957	462	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21566	Z	5-23-17.3	HERBERT M TAYLOR AND LENDORA E TAYLOR	TH EXPLORATION, LLC	1/8+	958	418	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21615	Z	5-23-17.3	GARY PARSONS AND JOANN J PARSONS	TH EXPLORATION, LLC	1/8+	959	347	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21626	Z	5-23-17.3	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21632	Z	5-23-17.3	JOHN ARLESE EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21655	Z	5-23-17.3	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	965	206	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21656	Z	5-23-17.3	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21657	Z	5-23-17.3	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21774	Z	5-23-17.3	JOYCE KAY BURTON AND SAMUEL C BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21813	Z	5-23-17.3	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21815	Z	5-23-17.3	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21816	Z	5-23-17.3	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21817	Z	5-23-17.3	MARY LOU HLINKA AND RICHARD G HLINKA SR	TH EXPLORATION, LLC	1/8+	959	514	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21819	Z	5-23-17.3	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21820	Z	5-23-17.3	MARION DAVID OTT & JANICE L OTT	TH EXPLORATION, LLC	1/8+	959	506	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*22505	Z	5-23-17.3	JAMES D DRAKE AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
10*22509	Z	5-23-17.3	RANDY BERISFORD AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22560	Z	5-23-17.3	RONALD JOE KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22592	Z	5-23-17.3	RUSSELL W ROGERSON AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22593	Z	5-23-17.3	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22594	Z	5-23-17.3	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22609	Z	5-23-17.3	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22613	Z	5-23-17.3	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22779	Z	5-23-17.3	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22809	Z	5-23-17.3	MARGARET C MCMURRY & WILLIAM F MCMURRY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22811	Z	5-23-17.3	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22812	Z	5-23-17.3	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22813	Z	5-23-17.3	WANDA M. BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23166	Z	5-23-17.3	JAMES DAVID CRANDALL	TH EXPLORATION, LLC	1/8+	984	48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23168	Z	5-23-17.3	JASON WADE	TH EXPLORATION, LLC	1/8+	966	506	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*23368	Z	5-23-17.3	ROSE MARIE CAMPBELL	TH EXPLORATION, LLC	1/8+	988	447	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23369	Z	5-23-17.3	STEFANIE CIRILLI AND MATTHEW CIRILLI	TH EXPLORATION, LLC	1/8+	988	451	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23370	Z	5-23-17.3	DENVER J TAYLOR	TH EXPLORATION, LLC	1/8+	988	454	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23371	Z	5-23-17.3	JONNA MARPLE AND ERIK MARPLE	TH EXPLORATION, LLC	1/8+	988	442	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23398	Z	5-23-17.3	JON GUSTEY AND MARILYN NIJE	TH EXPLORATION, LLC	1/8+	1008	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23410	Z	5-23-17.3	JENNA WADE	TH EXPLORATION, LLC	1/8+	1008	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23428	Z	5-23-17.3	DAVID L SNYDER	TH EXPLORATION, LLC	1/8+	1008	313	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23444	Z	5-23-17.3	JENNIFER CUCHTA AND KEVIN CUCHTA	TH EXPLORATION, LLC	1/8+	1008	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23505	Z	5-23-17.3	RENEE KELLAR	TH EXPLORATION, LLC	1/8+	971	633	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23727	Z	5-23-17.3	USA TUCKER AND FRANCIS TUCKER	TH EXPLORATION, LLC	1/8+	1011	525	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23756	Z	5-23-17.3	KAREN DRAKE AND JEFF DRAKE	TH EXPLORATION, LLC	1/8+	1012	182	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23757	Z	5-23-17.3	DAVID DRAKE	TH EXPLORATION, LLC	1/8+	1012	187	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23826	Z	5-23-17.3	NANCY C DWYER AND WENDEL MARTINKOVIC	TH EXPLORATION, LLC	1/8+	1017	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23838	Z	5-23-17.3	RONALD DEAN YOHO & VICTORIA LYNN YOHO	TH EXPLORATION, LLC	1/8+	1017	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23883	Z	5-23-17.3	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	TH EXPLORATION, LLC	1/8+	1016	644	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*24274	Z	5-23-17.3	JO ELLEN GUSTELY	TH EXPLORATION, LLC	1/8+	1023	527	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24483	Z	5-23-17.3	SUSAN AND KEVIN J ALFRED	TH EXPLORATION, LLC	1/8+	1025	401	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24751	Z	5-23-17.3	WILLIAM D AND KIM TAYLOR	TH EXPLORATION, LLC	1/8+	1027	315	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24752	Z	5-23-17.3	PATTI KENNEDY	TH EXPLORATION, LLC	1/8+	1027	312	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24917	Z	5-23-17.3	WALTER AND CONNIE I STREIGHT	TH EXPLORATION, LLC	1/8+	1027	95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14847	AA	5-23-16.1	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14849	AA	5-23-16.1	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14853	AA	5-23-16.1	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14861	AA	5-23-16.1	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14862	AA	5-23-16.1	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14864	AA	5-23-16.1	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14866	AA	5-23-16.1	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*14868	AA	5-23-16.1	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*14869	AA	5-23-16.1	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14870	AA	5-23-16.1	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14872	AA	5-23-16.1	DWG OIL & GAS ACQUISITIONS LLC	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	31/184 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc to Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14873	AA	5-23-16.1	RAYMOND MILLER	GASTAR EXPLORATION INC	1/8+	821	44	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14874	AA	5-23-16.1	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14875	AA	5-23-16.1	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14876	AA	5-23-16.1	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14877	AA	5-23-16.1	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14878	AA	5-23-16.1	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14879	AA	5-23-16.1	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14880	AA	5-23-16.1	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14881	AA	5-23-16.1	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14882	AA	5-23-16.1	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC
10*14883	AA	5-23-16.1	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC

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10*14884	AA	5-23-16.1	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration I, LLC to TH Exploration II, LLC	43/563 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14885	AA	5-23-16.1	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration I, LLC to TH Exploration II, LLC	43/563 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14886	AA	5-23-16.1	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration I, LLC to TH Exploration II, LLC	43/563 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14887	AA	5-23-16.1	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration I, LLC to TH Exploration II, LLC	43/563 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14888	AA	5-23-16.1	DARLENE BUTTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration I, LLC to TH Exploration II, LLC	43/563 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14889	AA	5-23-16.1	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration I, LLC to TH Exploration II, LLC	43/563 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14890	AA	5-23-16.1	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration I, LLC to TH Exploration II, LLC	43/563 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*14891	AA	5-23-16.1	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	NA	36/9 Gaster Exploration I, LLC to TH Exploration II, LLC	43/563 Atinum Marcellus I, LLC to TH Exploration II, LLC
10*16034	AA	5-23-16.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	902	163	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*16648	AA	5-23-16.1	GASTAR EXPLORATION USA INC	TH EXPLORATION, LLC	1/8+	894	278	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*17147	AA	5-23-16.1	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC merger	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC	
10*17148	AA	5-23-16.1	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC merger	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC	
10*17149	AA	5-23-16.1	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil Onshore Properties Inc to SWN Exchange Titleholder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company LLC merger	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC	

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10*17150	AA	5-23-16.1	IDA L CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil Onshore Properties Inc to SWN Exchange Trieholder LLC	19/624 SWN Exchange Trieholder LLC to SWN Production Company LLC merger	41/238 Statoil Onshore Properties Inc to TH Exploration, LLC	NA
10*17502	AA	5-23-16.1	PATRICIA E GUSTEY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	NA	NA	NA
10*17540	AA	5-23-16.1	MONTY ESTEL	TH EXPLORATION, LLC	1/8+	941	624	NA	NA	NA	NA	NA	NA	NA	NA
10*17541	AA	5-23-16.1	ROBERT D STRAWN AND TAMMY J STRAWN	TH EXPLORATION, LLC	1/8+	942	21	NA	NA	NA	NA	NA	NA	NA	NA
10*17542	AA	5-23-16.1	JEFFREY G HAZEL AND SHEILA M HAZEL	TH EXPLORATION, LLC	1/8+	942	12	NA	NA	NA	NA	NA	NA	NA	NA
10*17543	AA	5-23-16.1	CARL EDWARD MCCOY AND CAROLYN SUE MCCOY	TH EXPLORATION, LLC	1/8+	942	15	NA	NA	NA	NA	NA	NA	NA	NA
10*17544	AA	5-23-16.1	DEBORAH LYNN SCHWING	TH EXPLORATION, LLC	1/8+	942	377	NA	NA	NA	NA	NA	NA	NA	NA
10*17545	AA	5-23-16.1	LINDA SWOPE	TH EXPLORATION, LLC	1/8+	942	24	NA	NA	NA	NA	NA	NA	NA	NA
10*17546	AA	5-23-16.1	SAMUEL EARL FRANCIS AND ALICE L FRANCIS	TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA	NA	NA
10*17593	AA	5-23-16.1	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA	NA	NA
10*17594	AA	5-23-16.1	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA	NA	NA
10*17595	AA	5-23-16.1	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA	NA	NA
10*17640	AA	5-23-16.1	PATRICIA A GARGAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA	NA	NA
10*17679	AA	5-23-16.1	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA	NA	NA

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10*21951	AA	5-23-16.1	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21994	AA	5-23-16.1	MELISSA L DARRROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22013	AA	5-23-16.1	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22014	AA	5-23-16.1	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22018	AA	5-23-16.1	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22026	AA	5-23-16.1	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22027	AA	5-23-16.1	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22093	AA	5-23-16.1	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22102	AA	5-23-16.1	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22128	AA	5-23-16.1	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22142	AA	5-23-16.1	CHERYL L HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22143	AA	5-23-16.1	WANDA J RIDING AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22144	AA	5-23-16.1	VICKY STRAUSS AND DENNIS A STRAUSS	TH EXPLORATION, LLC	1/8+	961	529	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22165	AA	5-23-16.1	DEBRA L LYESKI AND GERALD A LYESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22178	AA	5-23-16.1	ANGELA HENTHORN AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	972	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*22287	AA	5-23-16.1	MISSY JONES AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22332	AA	5-23-16.1	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22339	AA	5-23-16.1	BETTY LEE HOWARD LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22436	AA	5-23-16.1	TESSEAN FAMILY REVOCABLE LIVING TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22437	AA	5-23-16.1	SHERRY L IMRIE AND DANIEL IMRIE JR	TH EXPLORATION, LLC	1/8+	963	631	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22440	AA	5-23-16.1	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22443	AA	5-23-16.1	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22450	AA	5-23-16.1	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22503	AA	5-23-16.1	KENNETH R SHAW AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22504	AA	5-23-16.1	MELVIN FANKHAUSER	TH EXPLORATION, LLC	1/8+	974	351	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22505	AA	5-23-16.1	JAMES D DRAKE AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22509	AA	5-23-16.1	RANDY BERISFORD AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22560	AA	5-23-16.1	RONALD JOE KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22592	AA	5-23-16.1	RUSSELL W ROGERSON AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22593	AA	5-23-16.1	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*22594	AA	5-23-16.1	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22609	AA	5-23-16.1	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22613	AA	5-23-16.1	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22779	AA	5-23-16.1	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22809	AA	5-23-16.1	MARGARET C MCMURRY & WILLIAM F MCMURRY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22811	AA	5-23-16.1	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22812	AA	5-23-16.1	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*22813	AA	5-23-16.1	WANDA M. BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23166	AA	5-23-16.1	JAMES DAVID CRANDALL	TH EXPLORATION, LLC	1/8+	984	48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23168	AA	5-23-16.1	JASON WADE	TH EXPLORATION, LLC	1/8+	966	506	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23368	AA	5-23-16.1	ROSE MARIE CAMPBELL	TH EXPLORATION, LLC	1/8+	988	447	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23369	AA	5-23-16.1	STEFANIE CIRILLI AND MATTHEW CIRILLI	TH EXPLORATION, LLC	1/8+	988	451	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23370	AA	5-23-16.1	DENVER J TAYLOR	TH EXPLORATION, LLC	1/8+	988	454	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23371	AA	5-23-16.1	JONNA MARPLE AND ERIK MARPLE	TH EXPLORATION, LLC	1/8+	988	442	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23398	AA	5-23-16.1	JON GUSTELY AND MARILYN NIJE	TH EXPLORATION, LLC	1/8+	1008	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*23410	AA	5-23-16.1	JENNA WADE	TH EXPLORATION, LLC	1/8+	1008	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23428	AA	5-23-16.1	DAVID L SNYDER	TH EXPLORATION, LLC	1/8+	1008	313	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23444	AA	5-23-16.1	JENNIFER CUCHTA AND KEVIN CUCHTA	TH EXPLORATION, LLC	1/8+	1008	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23505	AA	5-23-16.1	RENEE KELLAR	TH EXPLORATION, LLC	1/8+	971	633	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23727	AA	5-23-16.1	LISA TUCKER AND FRANCIS TUCKER	TH EXPLORATION, LLC	1/8+	1011	525	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23756	AA	5-23-16.1	KAREN DRAKE AND JEFF DRAKE	TH EXPLORATION, LLC	1/8+	1012	182	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23757	AA	5-23-16.1	DAVID DRAKE	TH EXPLORATION, LLC	1/8+	1012	187	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23826	AA	5-23-16.1	NANCY C DWYER AND WENDEL MARTINKOVIC	TH EXPLORATION, LLC	1/8+	1017	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23838	AA	5-23-16.1	RONALD DEAN YOHO & VICTORIA LYNN YOHO	TH EXPLORATION, LLC	1/8+	1017	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*23883	AA	5-23-16.1	VICKI ANN WILLIAMS & WILLIAM J WILLIAMS	TH EXPLORATION, LLC	1/8+	1016	644	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24274	AA	5-23-16.1	JO ELLEN GUSTELY	TH EXPLORATION, LLC	1/8+	1023	527	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24483	AA	5-23-16.1	SUSAN AND KEVIN J ALFRED	TH EXPLORATION, LLC	1/8+	1025	401	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24751	AA	5-23-16.1	WILLIAM D AND KIM TAYLOR	TH EXPLORATION, LLC	1/8+	1027	315	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24752	AA	5-23-16.1	PATTI KENNEDY	TH EXPLORATION, LLC	1/8+	1027	312	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24917	AA	5-23-16.1	WALTER AND CONNIE J STREIGHT	TH EXPLORATION, LLC	1/8+	1027	95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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10*14665	BB	5-23-15	DOROTHY TEDROW	GASTAR EXPLORATION USA, INC	1/8+	781	539	NA	NA	NA	NA	28/499 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	NA
10*14673	BB	5-23-15	DONALD R REYNOLDS	GASTAR EXPLORATION USA, INC	1/8+	787	615	NA	NA	NA	NA	29/157 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	NA
10*14675	BB	5-23-15	CHRISTOPHER HENRY	GASTAR EXPLORATION USA, INC	1/8+	787	592	NA	NA	NA	NA	29/157 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	NA
10*14676	BB	5-23-15	FLOYD ARNOLD HENRY	GASTAR EXPLORATION USA, INC	1/8+	787	625	NA	NA	NA	NA	29/157 Gastar Exploration USA Inc to Atinum Marcellus I LLC	21/41 Gastar Exploration USA Inc and Gastar Exploration Inc	36/9 Gastar Exploration Inc to TH Exploration II, LLC	43/563 Atinum Marcellus I LLC to TH Exploration II, LLC	NA
10*17642	BB	5-23-15	MERCEDES HENRY	TH EXPLORATION, LLC	1/8+	941	231	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18343	BB	5-23-15	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18343	BB	5-23-15	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18682	BB	5-23-15	EUGENE RICHARD HENRY SR	TH EXPLORATION, LLC	1/8+	936	131	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18948	BB	5-23-15	ALICIA A HENRY	TH EXPLORATION, LLC	1/8+	940	127	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18949	BB	5-23-15	CAROLYN WHITE	TH EXPLORATION, LLC	1/8+	940	119	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19427	BB	5-23-15	BOBBY SUE BEDWAY	TH EXPLORATION, LLC	1/8+	940	260	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19495	BB	5-23-15	DAVID HENRY	TH EXPLORATION, LLC	1/8+	941	643	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19496	BB	5-23-15	TAMMY HENRY	TH EXPLORATION, LLC	1/8+	941	641	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Operator's Well No. Burch Ridge S-7HU

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*19497	BB	5-23-15	RONALD HENRY	TH EXPLORATION, LLC	1/8+	941	637	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19498	BB	5-23-15	DONALD HENRY AND EVA HENRY	TH EXPLORATION, LLC	1/8+	941	639	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19644	BB	5-23-15	MINOR GUARDIAN AD LITEM DAVID C WHITE ESQ	TH EXPLORATION, LLC	1/8+	944	114	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19647	BB	5-23-15	HOWARD L HENRY AND SYLVIA L HENRY	TH EXPLORATION, LLC	1/8+	944	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19663	BB	5-23-15	LAWRENCE MICHAEL HENRY	TH EXPLORATION, LLC	1/8+	944	97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*19920	BB	5-23-15	KENNETH HENRY	TH EXPLORATION, LLC	1/8+	945	438	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*21996	BB	5-23-15	VERNA HALL	TH EXPLORATION, LLC	1/8+	953	538	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*24964	BB	5-23-15	GARNET GAS CORP	TH EXPLORATION, LLC	1/8+	1029	492	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18343	CC	5-23-14	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10*18343	DD	5-26-7	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Office of Oil and Gas
AUG 14 2019
WV Department of
Environmental Protection

STATE OF WEST VIRGINIA §
 §
COUNTY OF MARSHALL §

ASSIGNMENT AND CONVEYANCE

THIS ASSIGNMENT AND CONVEYANCE (the "**Assignment**") is made and entered into this 30th day of April, 2019 (the "**Effective Date**"), by and between **Atinum Marcellus I, LLC** (hereinafter "**Assignor**") and **TH Exploration II, LLC**, (hereinafter "**Assignee**" and, together with Assignor, the "**Parties**"). Capitalized terms used but not defined herein shall have the meanings commonly given to such terms in the industry.

WITNESSETH:

WHEREAS, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to one hundred feet (100 ft.) above the formations commonly referred to as the Utica and Point Pleasant Shale formations down to one hundred feet (100 ft.) below the same, in those certain Oil and Gas Leases, or the portions of those certain Oil and Gas Leases, situated in Marshall County, West Virginia, as described in **Exhibit "A-1"** and limited and described in **Exhibit "A-2"**, attached hereto and made a part hereof. It being the Parties intention to assign all of Assignor's interest in each unit as described in Exhibit "A-1", including any changes, revisions, or amendments to the same, now or at any time in the future. (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 one hundred feet (100 ft.) above the formations commonly referred to as the Utica and Point Pleasant Shale formations down to one hundred feet (100 ft.) below the same, in the Leases, and the lands covered thereby, together with all rights incident thereto and appurtenances thereon. It being the Parties intention to assign all of Assignor's interest in each unit as described in Exhibit "A-1", including any changes, revisions, or amendments to the same, now or at any time in the future.

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 permits or easements, rights of way, surface leases and other rights with respect to surface operations that do not materially interfere with, impair or prohibit the operation of the affected Leases, hereinafter "**Permitted Encumbrances**") its interest in the Leases since the time that

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

51-0294
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STATE OF WEST VIRGINIA §
 §
COUNTIES OF MARSHALL AND WETZEL §

ASSIGNMENT AND CONVEYANCE

THIS ASSIGNMENT AND CONVEYANCE (the "**Assignment**") is made and entered into this 30th day of April, 2019 (the "**Effective Date**"), by and between Atinum Marcellus I, LLC (hereinafter "**Assignor**") and TH Exploration II, LLC, (hereinafter "**Assignee**") and, together with Assignor, the "**Parties**"). Capitalized terms used but not defined herein shall have the meanings commonly given to such terms in the industry.

WITNESSETH:

WHEREAS, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to one hundred feet (100 ft.) above the formation commonly referred to as the Marcellus Shale formation down to one hundred feet (100 ft.) below the same, in those certain Oil and Gas Leases, or the portions of those certain Oil and Gas Leases, situated in Marshall and Wetzel Counties, West Virginia, as described in Exhibit "A-1" and limited and described in Exhibit "A-2", attached hereto and made a part hereof. It being the Parties intention to assign all of Assignor's interest in each unit as described in Exhibit "A-1", including any changes, revisions, or amendments to the same, now or at any time in the future. (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 one hundred feet (100 ft.) above the formation commonly referred to as the Marcellus Shale formation down to one hundred feet (100 ft.) below the same, in the Leases, and the lands covered thereby, together with all rights incident thereto and appurtenances thereon. It being the Parties intention to assign all of Assignor's interest in each unit as described in Exhibit "A-1", including any changes, revisions, or amendments to the same, now or at any time in the future.

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 permits or easements, rights of way, surface leases and other rights with respect to surface operations that do not materially interfere with, impair or prohibit the operation of the affected Leases, hereinafter "**Permitted Encumbrances**") its interest in the Leases since the time that Assignor obtained its interests in the Leases. Assignor does covenant, promise and agree, to and with the