

west virginia department of environmental protection

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

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

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

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

Re: Permit approval for EVAD 5HM 47-051-02051-00-00

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

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

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

James A. Martin Chief Operator's Well Number: EVAD 5HM Farm Name: ACCETTOLO, PATRICIA & LC U.S. WELL NUMBER: 47-051-02051-00-00 Horizontal 6A New Drill Date Issued: 8/29/2018

Promoting a healthy environment.

WW-6B (04/15)

API NO. 47-051 -	
API NO. 47-051 OPERATOR WED NO. 0 2HM	
Well Pad Name: Accettolo) 1

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

1) Well Operator: Tu	ug Hill Oper	ating, LLC	494510851	Marshall	Franklin	Glen Easton 7.5'
			Operator ID	County	District	Quadrangle
2) Operator's Well N	umber: Evac	5HM	Well H	ad Name: Acc	ettolo	
3) Farm Name/Surfac	e Owner: A	ccettolo, Patrici	a & Louis Public R	oad Access: Bu	urch Ridge Ro	ad - County Route 29
4) Elevation, current	ground: 1	290'	Elevation, propose	d post-construc	ction: 1290'	
5) Well Type (a) G Other		Oil	Ur	nderground Stor	age	
(b)If	Gas Shalle	ow <u>x</u>	Deep			
	Horiz	ontal X			ne	125/18
6) Existing Pad: Yes	or No Yes			_	5	1
7) Proposed Target Fo						
Marcellus is the targe	et formation at	a depth of 65	11 - 6 <mark>562'</mark> thickness	of 51' and anticip	ated pressure	of approx. 3800 psi
8) Proposed Total Ve	rtical Depth:	6,662'				
9) Formation at Total	Vertical Dep	oth: Ononda	aga			
10) Proposed Total M	leasured Dep	th: 15,635				
11) Proposed Horizor	ntal Leg Leng	th: 8,248'				
12) Approximate Fres	sh Water Stra	ta Depths:	70', 877'			
13) Method to Detern	nine Fresh W	ater Depths:	Use shallow offset wells to determine d	eopest freshwater. Or determine us	sing prednil tests, testing while	drilling or petrophysical evaluation of resistivity.
14) Approximate Salt	water Depths	s: 2,167'				
15) Approximate Coa	l Seam Dept	hs: Sewickly	/ Coal - 771' and	Pittsburgh Coa	al - 871'	
16) Approximate Dep	oth to Possibl	e Void (coal	mine, karst, other)	None anticip	ated	
17) Does Proposed we directly overlying or a				N	lo X	
(a) If Yes, provide N	Aine Info: 1	Name:				
]	Depth:				
		Seam:				
	(Owner:				

WW-6B (04/15)

CASING AND TUBING PROGRAM

ТҮРЕ	Size (in)	<u>New</u> <u>or</u> <u>Used</u>	Grade	Weight per ft. (lb/ft)	<u>FOOTAGE: For</u> <u>Drilling (ft)</u>	INTERVALS: Left in Well (ft)	<u>CEMENT:</u> <u>Fill-up</u> (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120'	259FT^3(CTS)
Fresh Water	13 3/8"	NEW	H40	48#	980'	980'	1031ft^3(CTS)
Coal	13 3/8"	NEW	H40	48#	980'	980'	1031ft^3(CTS)
Intermediate	9 5/8"	NEW	J55	36#	2,800'	2,800'	932ft^3(CTS)
Production	5 1/2"	NEW	P110	20#	15,635'	15,635'	3996ft^3(CTS)
Tubing	2 3/8"	NEW	N80	4.7#		7,361'	
Liners			1				
						5/25/15	2

TYPE	Size (in)	Wellbore Diameter (in)	<u>Wall</u> <u>Thickness</u> (in)	<u>Burst Pressure</u> (psi)	<u>Anticipated</u> <u>Max. Internal</u> Pressure (psi)	<u>Cement</u> <u>Type</u>	<u>Cement</u> <u>Yield</u> (cu. ft./k)
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	13 3/8"	17 1/2"	.33	1,730	1,384	SEE #24	1.2
Coal	13 3/8"	17 1/2"	.33	1,730	1,384	SEE#24	1.2
Intermediate	9 5/8"	12 1/4"	.352	3,520	2,816	SEE#24	1.19
Production	5 1/2"	8 7/8 8 3/4	.361	12,640	9,000	SEE#24	1.17/1.19
Tubing	2 3/8"		.19	11,200	8,960		
Liners							

PACKERS

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

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API NO. 47-051 OPERATOR WED NO. 0-2HO 5

Well Pad Name: Accettolo

1

18)

WW-6B (10/14)

APING 47-015 -9 02 OPERATOR WELL NO. Evad 5H Well Pad Name: Accettolo

Ju 125/18

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

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

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

Well to be completed with approximately 20,620,000 lb proppant and 318,800 bbl of water. Max rate = 80 bpm; max psi = 9,000#.

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

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

23) Describe centralizer placement for each casing string:

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

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

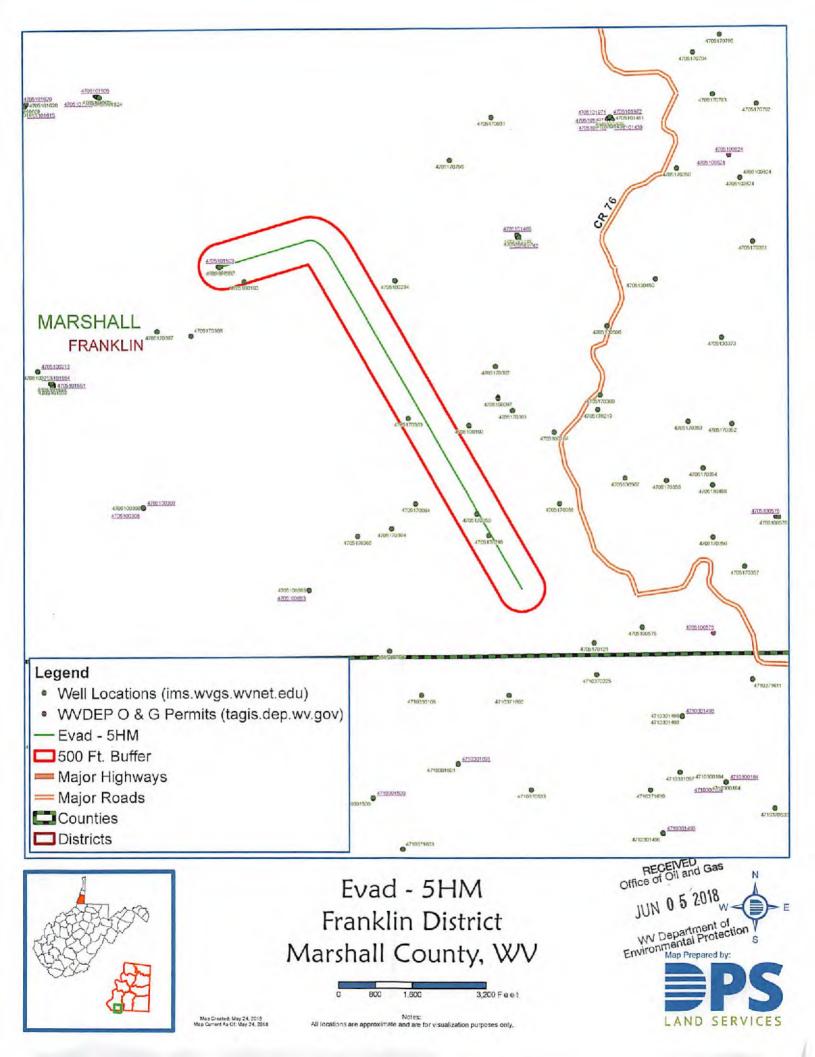
*See Attachment

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.



Area of Review

Sources of information to Support 35CSR8 - 5.11: 9.3 et seq.

Description of process to identify potential pathways for well communication during hydraulic fracturing activities.

Data Sources Reviewed:

1. IHS Well Data service: Public nationwide data service that pulls directly from State agency Oil and Gas databases

- 2. Farm Maps
- 3. Topo Maps: Recent and older (contact WVGES)
- 4. Check with DPS

Contacted Devin Ducoeur 724-705-0444, <u>dducoeur@dpslandservices.com</u> DPS GIS (05/24/2018) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it as the best publicly available. See attached map he provided.

Request maps for:

1. Wellbore with IHS All Wells Layer

2. Map with Farm lines overlain and any well spots identified on Farm Maps

3. More recent (1970s vintage) topos and older topos

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

- WVGES has plotted every well spot they have access to and are aware of with that contains a coordinate. 30000, 70000, and 90000 series wells are available via the WVGES online map. Some locations aren't great due to vintage and manipulation of maps through time
- 30000 series any well drilled prior to 1929 APIs were not assigned to original wells
- 70000 series Well spots pulled from old Farm line maps that the WVGES has access to
- 90000 series Any sources that the WVGES has access that shows a well spot but has no
 additional supporting information. DEP does not have 90000 series on their maps.
- There can be duplication between wells in the 3 series
- Phil indicated that other Operators are providing a screenshot of the WVGES map with their planned well and using that for permits
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Permit well - Evad 5HM

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

.PI Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705101502	Tug Hill Operating	6570' TVD 12433' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101503	Tug Hill Operating	6557' TVD 11319' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101504	Tug Hill Operating	6553' TVD 12000' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
	Tug Hill Operating	6608' TVD 13102' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
4705101507	Tug Hill Operating	6602' TVD 12348' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
	Tug Hill Operating	6596' TVD 12543' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well, A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.
		Linkasura		University	Uknown but unlikley. The well likley represents an old shallow well that is too shallow to be effected by fracturing in the planned Marcellus well	State records are incomplete
4705100103 4705170363		Unknown Unknown	Unknown Unknown	Unknown	Marcellus well. Uknown but unlikley. The well likley represents an old shallow well that is too shallow to be effected by fracturing in the planned Marcellus well.	State records are incomplete
4705170359	Unknown	Unknown	Unknown	Unknown	Uknown but unlikley. The well likley represents an old shallow well that is too shallow to be effected by Uknown but unlikley. The well	State records are incomplete
4705170218	Unknown	Unknown	Unknown	Unknown	likley represents an old shallow well that is too shallow to be effected by	State records are inconfice EVED Office Fill and JUN 052

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

PI Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000" is max limit I would assign to wells that might be within in range of fracture propagation	Comments	
4705101502	Tug Hill Operating	6570' TVD 12433' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and It was found producing at the location shown on the well plat.	
4705101503	Tug Hill Operating	6557' TVD 11319' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.	
	Tug Hill Operating	6553' TVD 12000' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.	
	Tug Hill Operating	5608' TVD 13102' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.	
	Tug Hill Operating	6602' TVD 12348' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.	
-	Tug Hill Operating	6596' TVD 12543' MD	Marcellus	Unknown	Yes, existing Marcellus producer. Proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore	Producing Marcellus horizontal well. A field survey was conducted to locate this well and it was found producing at the location shown on the well plat.	
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WV Department of Environmental Protection Page 6 of 7

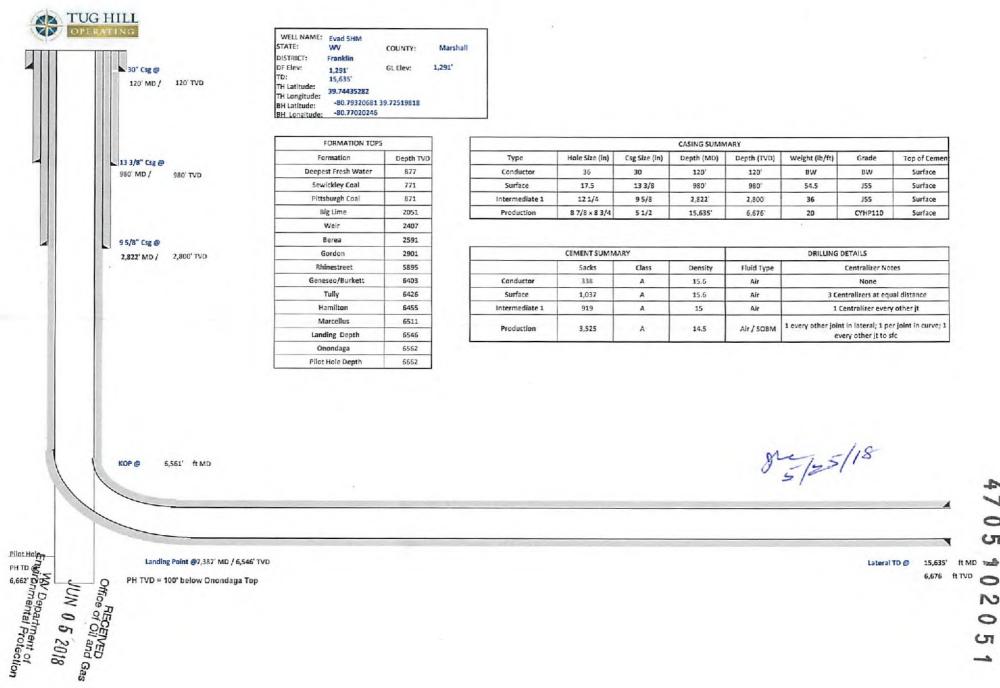


Tug Hill Operating, LLC Casing and Cement Program

Evad 5HM

		Ca	sing		
Conductor Surface Intermediate Production	String 30" 13 3/8" 9 5/8" 5 1/2"	Grade BW J55 J55 CYHP110	Bit Size 36" 17 1/2" 12 1/4" 8 7/8 x 8 3/4	Depth (Measured) 120' 980' 2,822' 15,635'	Cement Fill Up CTS CTS CTS CTS
		Ce	ment	V = 25	// S
Conductor:	Premium NE-1 + 2%	bwoc CaC12 + 46.5%	Fresh Water - Cond	uctor Cement mixed at 1	5.6 ppg, Y=1.2
Surface:	Premium NE-1 + 2%	bwoc CaC12 + 46.5%	Fresh Water – Surfa	ce Cement mixed at 15.6	6 ppg, Y=1.2
Intermediate:	Premium NE-1 + 1%	bwoc CaC12 + 46.5%	Fresh Water – Intern	nediate Cement mixed at	t 15.6 ppg, Y=1.19
Kick Off Plug:	Class H Cement + 11	% CD-32 + .7% Sodiur	n Metasilicate + .1% F	R-3 + .75 gal/100sk FP-1	3L - KOP Plug
Production:				-1 + .35% bwoc BA-10A luction Cement mixed at	

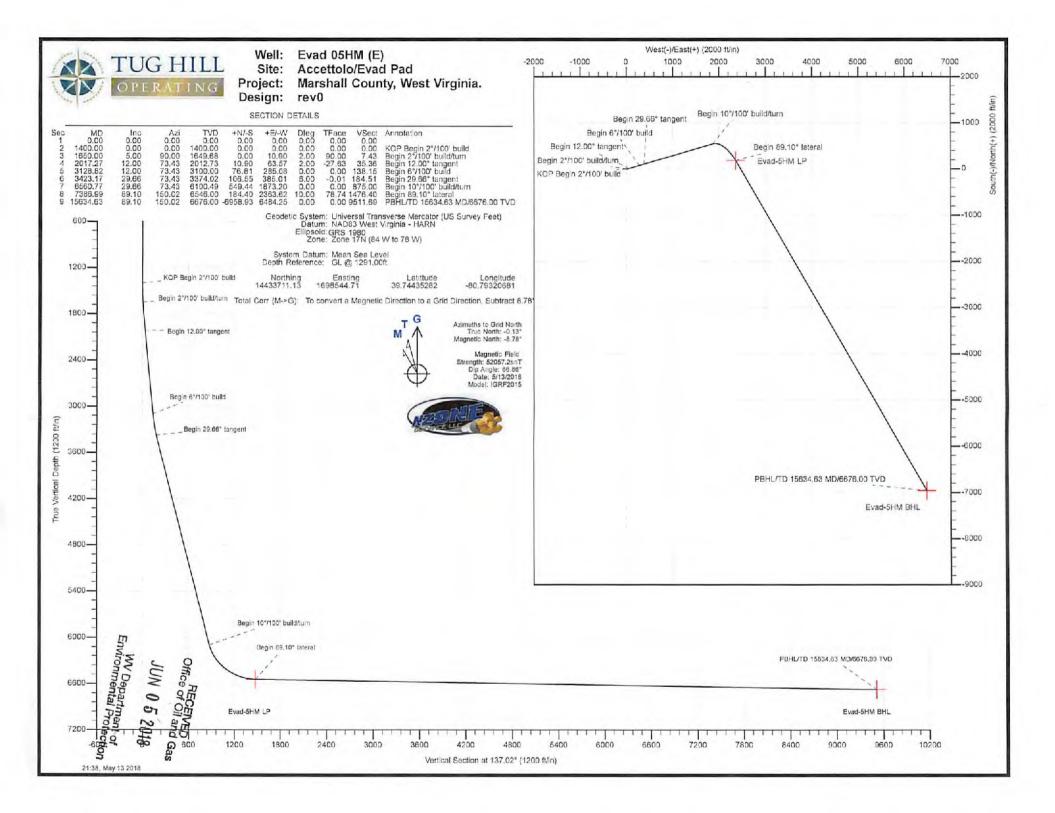
Office of Oil and Gas JUN 05 2018 WV Department of Environmental Protection



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4705 102051

WW-9	
(4/16)	

(4/16)	API Number 47		
	Operator's Well No. Evad 5HM		
	TATE OF WEST VIRGINIA		
	FOF ENVIRONMENTAL PROTECTION		
0	OFFICE OF OIL AND GAS		
FLUIDS/ CUTTI	NGS DISPOSAL & RECLAMATION PLAN		
Operator Name Tug Hill Operating, LLC	OP Code _494510851		
Watershed (HUC 10) Fish Creek	Quadrangle New Martinsville 7.5		
Do you anticipate using more than 5,000 bbls of wat Will a pit be used? Yes No If so, please describe anticipated pit waste:	AST Tanks with proper containment will be used for staging fresh water for free and flow back water		
Will a synthetic liner be used in the pit? Ye			
Proposed Disposal Method For Treated Pit	Wastes:		
Land Application			
Underground Injection (UIC Permit Number_UIC 2459, UIC 965, UIC 359, UIC 2D0732540, UIC 2D0732523)		
Reuse (at API Number)		
Off Site Disposal (Suppl	y form WW-9 for disposal location)		
Other (Explain			
	An Ear Victical and Llavinantal Drilling		
Will closed loop system be used? If so, describe: Y	es - For vertual and Honzontal Dhilling		
	11		

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

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

Additives to be used in drilling medium? Barite for weight

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

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

-Landfill or offsite name/permit number? World County Sanitary Landfil (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP EC#1386428)

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

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

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

Company Official Signature		Of RECEIVED
Company Official (Typed Name) Jim Pancake		Office of Oil and Gas
Company Official Title Vice President Geoscience		JUN 0 5 2018
Subscribed and sworn before me this 25 day of May	. 20 18 Erry	WV Department of Tronmental Protection
Subscribed and sworn before me tins_23_ day of	Not COMMONWEALTH OF	PENNSYLVANIA
My commission expires 10/12/2014	NOTARIAL Sean Cotter, Not City of Pittsburgh, All My Commission Expire	ary Public egheny County

4705 #02051

Form V	WW.	-9
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Operator's Well No. Evad 5HM

Tug Hill Operating, LL0	2		
roposed Revegetation Treatment	: Acres Disturbed 8.45	Prevegetation pH	6.0
Lime 3	Tons/acre or to correct to pH	6.5	
Fertilizer type 10-20-2	0		
Fertilizer amount 500	Ib	s/acre	
Mulch 2.5	Tons/a	acre	
	See	<u>d Mixtures</u>	
Тетро	rary	Perma	nent
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Orchard Grass	12
Spring Oats	96	Ladino	3
		White Clover	2

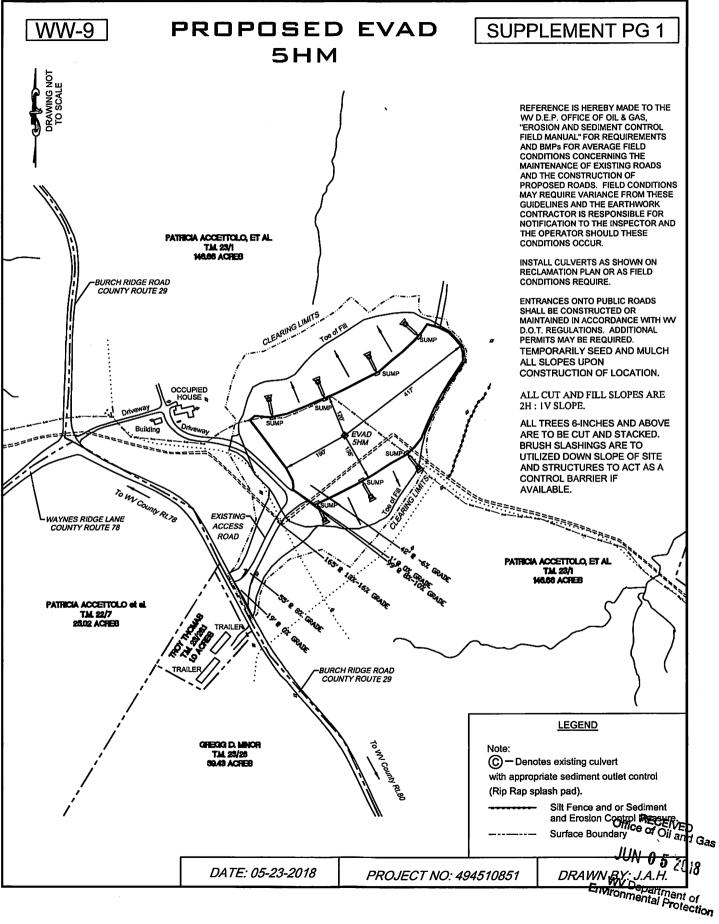
Attach:

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

Photocopied section of involved 7.5' topographic sheet.

an Approved by: fine Unlotan	
imments:	
tle: Oil and Gas Inspector Date: 5	25/18 Office of Oil an
	/25/18 Office of Oil an JUN 052
eld Reviewed? () Yes () No	March

WV Department of Environmental Protection



4705 * 02051



Well Site Safety Plan Martin Tug Hill Operating, LLC

Well Name:Evad 5HM

Pad Location: Accetollo Pad

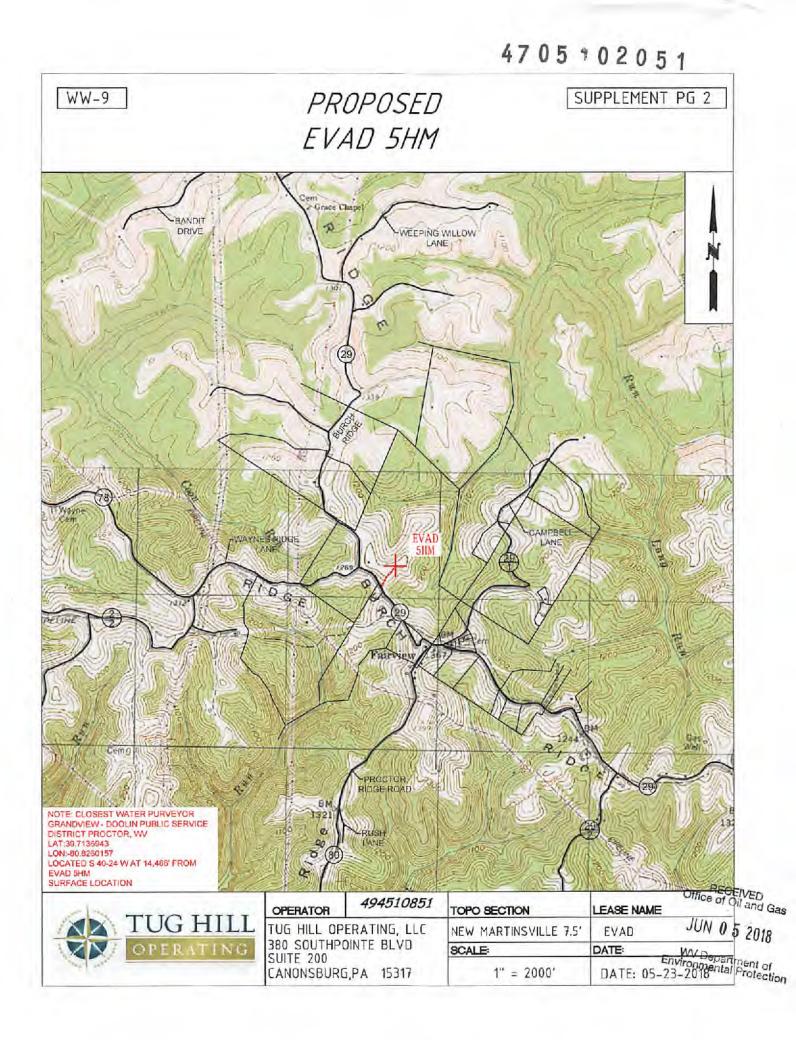
Marshall County, West Virginia

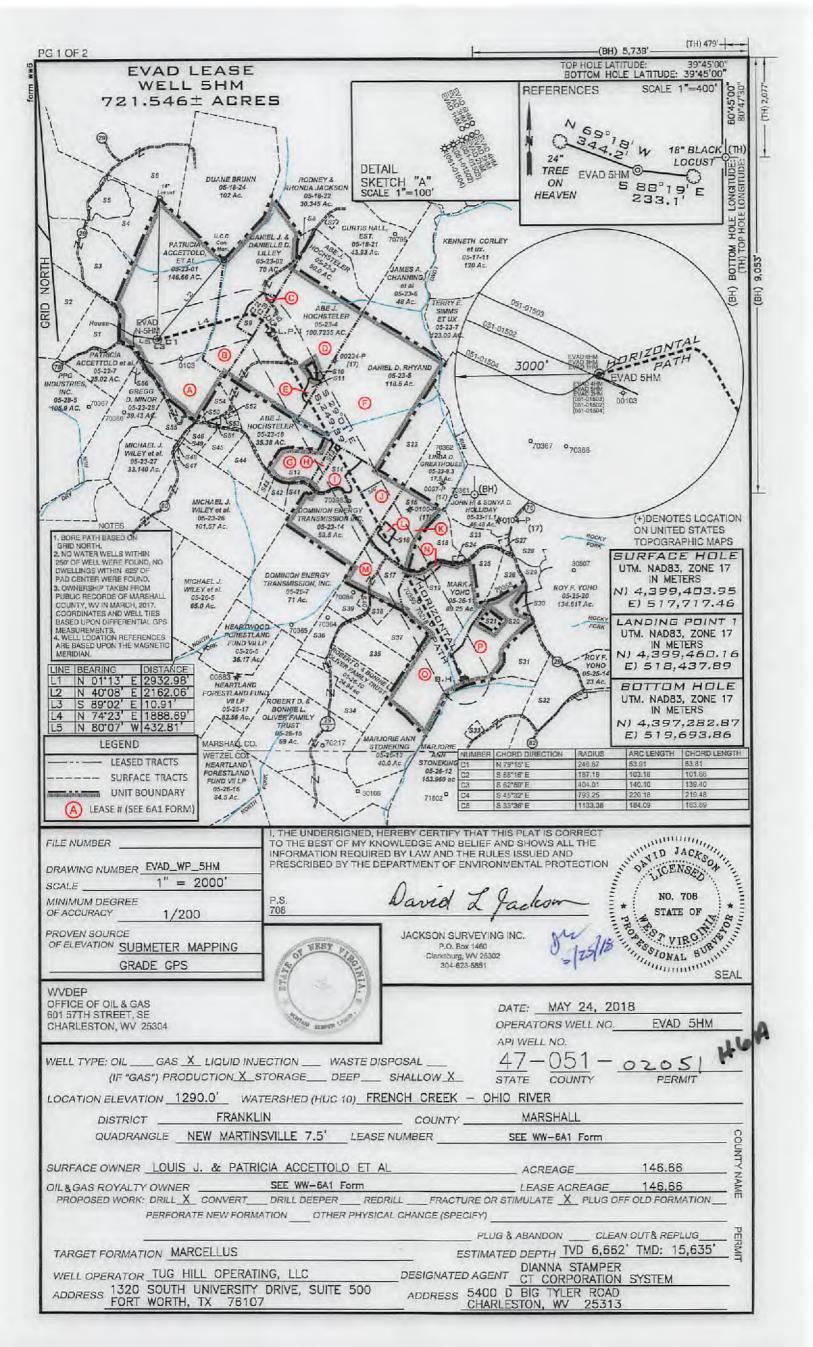
UTM (meters), NAD83, Zone 17: Northing: 4,399,403.95 Easting: 517,717.46

> May 20188 RECEIVED Office of Oil and Gas

JUN 0 5 2018

WV Department of Environmental Protection





PG2OF2 EVAD LEASE WELL 5HM 721.546± ACRES

WWB

form v

Number	TAX MAP -PARCEL	ADJOINER OWNER	ACRES
S 1	05-22-7.1	The Exploration II LLC & Antinum Marcellus I LLC	20.68
S2	05-22-8	PPG Industries Inc.	48.44
S3	05-22-6	CNX RCPC LLC	64.7
S4	05-22-5	CNX RCPC LLC	134.425
S5	05-22-5.1	Williams Ohio Valley Midstream LLC	12.875
S6	05-19-18	Mark E. Yoho Et Ux	55.948
S7	05-18-21.2	David P. Lassan Et Ux - Life	1.0
S8	05-23-2.1	William L. & Janice M. Wayne	2.364
S9	05-23-2.2	Jessica N. & Andrew L. Jones	7.636
510	05-23-4.2	James S. & Jeanne B. Hall	1.169
S11	05-23-4.1	James S. & Jeanna B. Hall	2.1575
S12	05-23-16	Roy Friend Yoho Sr.	18.03
S12	05-23-16.1	Doanld B. Henry	1.97
S14	05-23-15	Henry Virginia Ethel Est.	15.5
S15	05-23-9.2	Linda D. Greathouse	25.58
S16	05-23-9.4	Jackson R. Davis Sr. & Deanna L. Davis	2.087
		John W. Van Orden Et Ux	23.376
S17	05-23-9.1	Linda D. Greathouse	14.24
518	05-23-13		3.05
S19	05-23-12	Mark A. Yoho	37.746
520	05-25-18	Joseph Johnson Et Ux - Life	2.491
S21	05-25-18.1	Pamela Joan Ferrel Et Vir	29.5
S22	05-23-8	Carl David & Suzanne L. Guseman	
S23	05-23-18	Abe J. Hochsteller	35.382
S24	05-23-13.1	James R. & Pamela J. Ferrel	0.7625
S25	05-23-11.3	Colin R. Yoho	11.29
S26	05-23-11.5	Zachary R. Stevey	9.25
S27	05-23-11.2	Evelyn Hudson	1.154
S28	05-23-11	Roy F. Yoho	5.28
S29	05-25-20.3	James A. & Jo C. Estep	4.49
S30	05-25-19	Joseph Johnson Et Ux - Life	1.973
S31	05-25-17	Emily Jones Irrevocable Trust	22.79
532	05-25-16	Emily Jones Irrevocable Trust	23.5
S33	05-26-12.1	Alvin F. Stoneking Jr. & Kristen R. Stoneking	2.011
S34	05-26-14	Robert D. & Bonnie L. Oliver Family Trust	27.56
S35	05-26-9	Robert D. & Bonnie L. Oliver Family Trust	21.75
S36	05-26-23	Richard Joseph Otte Et Ux	11.34
S37	05-26-8	Richard Joseph Otte Et Ux	18.27
S38	05-26-20	Doanld Lee Anderson Et Al	4.2
S39	05-26-22	Richard Joseph Otte Et Ux	8.3
S40	05-26-21	Richard Jospeh Otte Et Ux	1.25
S41	05-23-17.3	William & Catherine Flewelling	5.01
S42	05-23-17	Thomas E. & Tammy Brown	4.62
S43	05-23-17.4	Tammy D. Meadows	2.605
544	05-23-17.2		14.92
S45	05-23-17.1	Curtis E. Hall Et Ux	10.05
S46	05-23-22	Daniel D. Rhyand & Laurel R. Greene	6.25
S47	05-23-25	Arthur A. Wiley	0.43
S48	05-23-24	Michael J. Wiley Et Al	0.25
S49	05-23-23	Michael J. Wiley Et Al	1.0
S50	05-23-29	James Wiley	0.25
S51	05-23-21	Mark A. & Mark E. Yoho	0.588
S52	05-23-20	Christian Church	0.17
	05-23-19	Doty Cemetery	1.0
S53	05-23-19		7.8
S54	the second se		10.8
S55	05-23-28.2	man w. a outoryment or date	1.0

NO. 708 * STATE OF STONAL SUR

P.S. David I Jacksom



ERATOR'	S	WELL
ELL #:	EVAD 5HM	_
TRICT:	Franklin	PAGE
UNTY:	Marshall	DATE:
ATE: <u>W</u>	/	-

ELL PLAT AGE 2 OF 2 ATE: 05/24/2018 WW-6A1 (5/13) Operator's Well No. 4705 10205 1

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

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

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

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

*See attached pages

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
Office of Oil and Itais	Amy L. Miller any Sulle
JUN 0 5 2018	Permitting Specialist
Environmental Protection	
Protection	Page 1 of

Operator's Well No. <u>Evad - 5HM</u>

WW-6A	Operator's Well No. Eval - Understand Operator's Well No. Eval - Lesser Lesser Royalty Book Page Assignment Colspan="6">Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan=""6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colspan="6"Colsp													
Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Casteriment	Assignment	Assignment	Assignment
	A	5-23-1	LOUIS J ACCETTOLO AND PATRICIA	GASTAR EXPLORATION USA, INC	1/8+	703	283	NA	NA	NA	Machice IIN Street	or stor see	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0 10*14022	в	5-23-2	HOWARD N WAYNE SR AND WIFE	GASTAR EXPLORATION USA, INC	1/8+	665	384	NA	NA	NA	NA WOOMB	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0°14022	c	5-23-2.2	HOWARD N WAYNE SR AND WIFE	GASTAR EXPLORATION USA, INC	1/8+	665	384	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
S O 10*14849	D	5-23-4	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14853	D	5-23-4	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14861	D	5-23-4	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14862	D	5-23-4	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14863	D	5-23-4	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14864	D	5-23-4	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA inc to Gastar Exploration, inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14866	D	5-23-4	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14868	D	5-23-4	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14869		5-23-4	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14870		5-23-4	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14871	D	5-23-4	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
										NA	NA		21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14872	D	5-23-4	DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA		NA	NA	Exploration, Inc 21/41 Gastar Exploration USA Inc to Gastar	to TH Exploration II, LLC 36/9 Gastar Exploration, Inc.
10*14873	D	5-23-4	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
			RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14874	D	5-23-4		GASTAR EXPLORATION INC	1/8+	822	260							to in exploration if, Lee
10*14875	D	5-23-4	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
10*14876	D	5-23-4	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
														36/9 Gastar Exploration, Inc.
10*14877	D	5-23-4	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
10*14878	D	5-23-4	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
10*14879	D	5-23-4	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
10*14880	D	5-23-4	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
10 14000		5-254											-	
			MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	INA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14881		5-23-4		GASTAR EXPLORATION INC	1/0+			<u></u>						
														36/9 Gastar Exploration, Inc.
10*14882	D	5-23-4	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
														36/9 Gastar Exploration, Inc.
10*14883	D	5-23-4	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
														36/9 Gastar Exploration, Inc.
10*14884	D	5-23-4	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
10*14885	D	5-23-4	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

Lease No.	T20-	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
Cease No.	6451	Faiter						· · · · · · · · · · · · · · · · · · ·				Carl Assignments	S rion	
0*14886	D	5-23-4	JODI YOHO	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	Con Con Allo	NA NA	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
												M. Souther		36/9 Gastar Exploration, Inc
0*14887	D	5-23-4	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	JUN Deriver	NA	to TH Exploration II, LLC
		c 4	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0*14888		5-23-4	DARLENE BOTLER	GASTAR EAPLORATION INC	1/04	00/								
0*14889	D	5-23-4	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
														36/9 Gastar Exploration, Inc.
0*14890	Þ	5-23-4	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
			NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14891	†°	5-23-4	NANCE F FTE AND STEPHEN WIFTE	GASTAR EXPLORATION INC	1/04	663					10		23/127 Chesapeake Appalachia, LLC to Statoil	41/238 Statoil USA Onshore
10*17145	D	5-23-4	JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	NA	NA	NA	USA Onshore Properties, Inc 23/127 Chesapeake	Properties Inc. to TH Exploration, LLC
			CAROLYN CAMPBELL BRITTON ROBERT C.		1/8+	685	464	NA	NA	NA	NA	NA	Appalachia, LLC to Statoil USA Onshore Properties,	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17146		5-23-4		CHESAPEAKE APPALACHIA LLC	1/04		404						23/127 Chesapeake Appalachia, LLC to Statoil	41/238 Statoil USA Onshore
10*17147	D	5-23-4	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	NA	USA Onshore Properties, Inc	Properties Inc. to TH Exploration, LLC
													23/127 Chesapeake Appalachia, LLC to Statoll USA Onshore Properties,	41/238 Statoil USA Onshore Properties inc. to TH
10*17148	D	5-23-4	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA		Inc 23/127 Chesapeake Appalachia, LLC to Statoil	Exploration, LLC 41/238 Statoil USA Onshore
10*17149	D	5-23-4	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	NA	NA	NA	USA Onshore Properties, Inc	Properties Inc. to TH Exploration, LLC
													23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties,	41/238 Statoil USA Onshore Properties Inc. to TH
10*17150	D	5-23-4	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	NA	NA	NA	Inc	Exploration, LLC
10816024		5-23-4	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA
10*16034	+	3-23-4												
10*21415		5-23-4	ABE J. HOCHSTETLER	TH EXPLORATION, LLC	1/8+	957	7	NA	NA	NA	NA	NA	NA	NA

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Astronent O	Assignment	Assignment		
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10*17502	D	5-23-4	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA CO	NA	NA		
10*17532	D	5-23-4	DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	LEN ^{MU}	NA	NA		
10*17535	D	5-23-4	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA	NA		
10*17539	D	5-23-4	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA	NA		
10*17593	D	5-23-4	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA	NA		
10*17594	D	5-23-4	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA	NA		
10*17595	D	5-23-4	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA	NA		
10*17640	D	5-23-4	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA	NA		
10*17679	D	5-23-4	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA	NA		
10*17680	D	5-23-4	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA	NA		
10*17681	D	5-23-4	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA	NA		
10*17682	D	5-23-4	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA	NA		
10*17683	D	5-23-4	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA	NA		
10*17715	D	5-23-4	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA	NA		

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$y_1y_1y_2$ b b_1	Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Bcok	Page	Assignment	Assignment	Assignment	Assignment	C Assignment	Assignment	Assignment
$y_1y_1y_2$ b b_1													O. M. Barr	ier. I	
17779 10	10*17719	D	5-23-4	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA NY CITE	NA	NA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$													Enviro		
μ_{TTYRE} μ_{S} μ_{STREP} μ_{SREP}	10*17720	D	5-23-4	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA	NA	NA	NA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$						1/0.	043	770						NA	NA
μ_{1} μ_{2} μ_{2} μ_{2} μ_{1} μ_{2} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{2} μ_{1} μ_{2} <	10*17775	D	5-23-4	HAGERIT	TH EXPLORATION, LEC	1/8+	942	370	INA	NA		NA .			
μ_{1} μ_{2} μ_{2} μ_{2} μ_{1} μ_{2} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{1} μ_{2} μ_{2} μ_{1} μ_{2} <	10+17776		E 22 4	IAMES GARCAR AND MELISSA GARCAR		1/8+	941	627	NA	NA	NA	NA	NA	NA	NA
a_{1} a_{2} <	10-17776	<u> </u>	5-23-4		In Excession, Le			027							
	10+17824		5.73.4	SARA FULTON	TH EXPLORATION. LLC	1/8+	942	384	NA	NA	NA	NA	NA	NA	NA
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OCCUP O D <thd< th=""> D <thd< th=""> <thd< th=""></thd<></thd<></thd<>				200V/1140507/		1 (0.	074						NA	NA	
10 5-2-0 RARGS IN DSPLORATION, LC 1/9 9/2 366 NA	10*17901		5-23-4		TH EXPLORATION, LLC	1/8+	924	602		NA		NA	NA		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	10*17965	D	5-23-4		TH EXPLORATION, LLC	1/8+	942	366	NA	NA	NA	NA	NA	NA	NA
In 18176 In S 23.4 CRYSTAL M HOOKER AND JAMES HOOKER In Exploration, LLC 1/8+ 929 568 NA NA NA NA NA NA NA 10°18376 In S 23.4 CRYSTAL M HOOKER AND JAMES HOOKER In Exploration, LLC 1/8+ 929 568 NA	10*18042	D	5-23-4	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA	NA	NA	NA	NA
In 18176 In S 23.4 CRYSTAL M HOOKER AND JAMES HOOKER In Exploration, LLC 1/8+ 929 568 NA NA NA NA NA NA NA 10°18376 In S 23.4 CRYSTAL M HOOKER AND JAMES HOOKER In Exploration, LLC 1/8+ 929 568 NA						1/8.	027	105	NA	NA	NA	NA	Na	NA	NA
Lo ¹ 18329 0 5-23-4 COLLEEN HAGERTY TH EXPLORATION, LLC 1/8+ 929 560 NA.	10*18043		5-23-4	JANES M ONORE AND CIND I'L ONORE		1/01				1994					
Intersection Intersection <th< td=""><td>10*18176</td><td>D</td><td>5-23-4</td><td>CRYSTAL M HOOKER AND JAMES HOOKER</td><td>TH EXPLORATION, LLC</td><td>1/8+</td><td>929</td><td>568</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td></th<>	10*18176	D	5-23-4	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA	NA
Intersection Intersection <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>															
10 5-23-4 SCHUBERT TH EXPLORATION, LLC 1/8+ 931 377 NA NA NA NA NA NA 10*18367 D 5-23-4 SCHUBERT TH EXPLORATION, LLC 1/8+ 931 377 NA NA<	10*18329	P	5-23-4	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA		INA		
10°18368 D 5-23-4 ROBERTA K MILLER TH EXPLORATION, LLC 1/8+ 931 457 NA	10\$19267		6.33-4			1/8+	931	377	NA	NA	NA	NA	NA	NA	NA
	10.10301		5-23-4			40.									
	10*18368	D	5-23-4	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA	NA
	10*18386	0	5-23-4	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA	NA	NA	NA

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment						
10*18598	D	5-23-4	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA						
		1												
													NA	NA
10*18795	D	5-23-4	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	[NA	NA	NA		
10*18994	D	5-23-4	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA						
		1												
10*19736	D	5-23-4	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA						
10*21217	P.	5-23-4	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA						
10*21222	L D	5-23-4	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA						
							-							
			ABE J HOCHSTETLER AND ANNA E											
10*21415	D	5-23-4		TH EXPLORATION, LLC	1/8+	957	7	NA						
	1													
10*21425	P	5-23-4	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA		NA	NA	NA	NA
10*21428	Ь	5-23-4	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA						
	1								n = -					
10*21434	D	5-23-4		TH EXPLORATION, LLC	1/8+	957	33	NA						
													NA	NA
10*21451	D	5-23-4	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA		
10*21452	0	5-23-4	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA						
			WARREN L COULTER AND ROSLINA A											
10*21457	D	5-23-4		TH EXPLORATION, LLC	1/8+	954	249	NA						
10°21458	D_	5-23-4	HUSTON A SMITH IR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA	NA	INA	NA

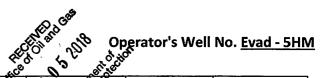
Operator's Well No. <u>Evad - 5HM</u>

WW-6A	\1 Sı	upplei	nent								Assignment office U	Di case 0	perator's Wel	l No. <u>Evad - 5HI</u>
Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Bock	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*21459	D	5-23-4	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA Office JU	NA	NA	NA
10*21498	D	5-23-4	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA OF	NA	NA
10*21500	D	5-23-4	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA	NA
10*21501	D	5-23-4	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA	NA
10*21502	D	5-23-4	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA	NA
10*21503	D	5-23-4	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	NA	NA	NA
10*21626	D	5-23-4	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA	NA	NA	NA
10*21631	D	5-23-4	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA	NA	NA	NA	NA	NA	NA
10*21632	D	5-23-4	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA	NA	NA	NA
10*21655	D	5-23-4	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	959	335	NA	NA	NA	NA	NA	NA	NA
10*21656	D	5-23-4	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	NA	NA	NA	NA	NA
10*21657	D	5-23-4	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	NA	NA	NA	NA	NA
10*21774	D	5-23-4	JOYCE KAY BURTON AND SAMUEL C BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA	NA	NA	NA
10*21813	D	5-23-4	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA	NA	NA	NA

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21815	D	5-23-4	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA	NA	NA	NA	NA A A A A	NA	
												NA D CONTRACTOR		
*21816	D	5-23-4	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA	NA	NA	NA	HE MA DE CARANTER	NA	NA
												KINIO		
			MARY LOU HLINKA AND RICHARD G HLINKA		1/8+	959	514		NA	814	NA	NA	NA	NA
21817	<u> </u>	5-23-4	SR	TH EXPLORATION, LLC	1/8+		- 514	NA						
				1										
•21819	D	5-23-4	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA	NA	NA	NA	NA	NA	NA
•21820		5-23-4	MARION DAVID AND JANICE L OTT	TH EXPLORATION, LLC	1/8+	959	506	NA	NA	NA	NA	NA	NA	NA
*21832	D	5-23-4	MARQUITA CLYBURN	TH EXPLORATION, LLC	1/8+	959	510	NA	NA	NA	NA	NA	NA	NA
					i i									
•21948	D	5-23-4	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA	NA	NA	NA	NA	NA
													[
*21949	D	5-23-4	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA	NA		NA		NA
°21951	D	5-23-4	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA	NA
							[
•21994		5-23-4	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA	NA
21334		5-25-4			2/01									•
							1							
*22013	D	5-23-4	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA
*22014	Ь	5-23-4	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA
														
*22018		5-23-4	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA
*22026	D	5-23-4	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assigment	Assignment	Assignment
10*22027	D	5-23-4	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA LINICOLO	NA	NA
10*220 <u>9</u> 3	D	5-23-4	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	LIN ^{NN} NA	NA	NA
10*22102	D	5-23-4	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA	NA
10*22128	D	5-23-4	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA	NA
10*22144	D	5-23-4	VICKY AND DENNIS STRAUSS	TH EXPLORATION, LLC	1/8+	961	429	NA	NA	NA	NA	NA	NA	NA
10*22165	D	5-23-4	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA	NA
10*22178	D	5-23-4	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA	NA
10*22180	D	5-23-4	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA	NA
10*22181	D	5-23-4	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA	NA
10*22332	D	5-23-4	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA	NA
10*22339	D	5-23-4	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA	NA
10*22436	D	5-23-4	TESSEAN FAMILY REVOCABLE TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA	NA
10*22443	D	5-23-4	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA	NA
10°22503	D	5-23-4	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA	NA



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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment O	Assignment	Assignment	Assignment
10*22505		5-23-4	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA WIGHT	NA	NA
10*22505		5-23-4	JAMES D AND DOMINA & DIVARE		1/0+	- 304						47m		
							1					· ·		
10*22594		5-23-4	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA
10*22554	<u>ٿ</u>	3-23-4			2/0.									
		1					1							
10*22609		5-23-4	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA
10*22613	D	5-23-4	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA
		1												
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc
10*14784	D	5-23-4	ABE J. HOCHSTETLER	GASTAR EXPLORATION USA, INC	1/8+	797	184	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
		Γ											21/41 Gastar Exploration	
													USA Inc to Gastar	36/9 Gastar Exploration, Inc
10*14846	D	5-23-4	FAYE CAMPBELL	GASTAR EXPLORATION USA, INC	1/8+	805	91	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
					1								21/41 Gastar Exploration	
													USA Inc to Gastar	36/9 Gastar Exploration, Inc
10*14850	D	5-23-4	CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Gastar Exploration	
						1							USA Inc to Gastar	36/9 Gastar Exploration, Inc
10*14851	P	5-23-4	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
					1								21/41 Gastar Exploration	
		1											USA Inc to Gastar	36/9 Gastar Exploration, Inc
10*14852	D	5-23-4	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	806	259	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Gastar Exploration	
10*14854		5-23-4	CATHERINE HUMMEL	GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	NA	NA	NA	NA	USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
10*14854	<u>├</u>	5-23-4		GASTAR EXPLORATION 034, INC	1,0,		512							
					1								21/41 Gastar Exploration	36/0 Castas Evaluation las
10*14855		5-23-4	JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/8+	808	445	NA	NA .	NA	NA	NA	USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
	1	1			1									
	1	1											21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc
10*14856	D	5-23-4	GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
		1												
		ļ											21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc
10*14860	D	5-23-4	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/A1 Gastar Fundaration	
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14865	D	5-23-4	VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
												Office UN Office		
10*22779	D	5-23-4	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA NOR		NA
10*22809	D	5-23-4	MARGARET AND WILLIAM MCMURRY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA UP OF CONTRACT	NA	NA
10*22812	D	5-23-4	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA	NA
10-22812	<u> </u>	5-23-4		TH EAFLORATION, LLC	1/01	506	420							
												NA	NA	NA
10&22813	D	5-23-4	WANDA M. BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA			
10*22861	D	5-23-4	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA	NA	NA	NA	NA
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14849	E	5-23-4.1	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10*14853	E	5-23-4.1	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
	_												21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14861	E	5-23-4.1	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10*14862	E	5.22.4.1	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA inc to Gastar Exploration, inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10_14602		5-25-4.1		CASTAL CALCULATION ON, INC.	40.		500						21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14863	F	5-23-4.1	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
											NA	Na	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14864	<u> </u> _≞_	5-23-4.1	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA				
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14866	E	5-23-4.1	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA		Exploration, Inc	
											NA	810	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14868	E	5-23-4.1	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA		NA	Copiological inc	
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14869	E	5-23-4.1	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC

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												N NOT	21/41 Gastar Exploration	
												LEN .	USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14870	E	5-23-4.1	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA		Exploration, Inc	to TH Exploration II, LLC
						ļ							21/41 Gastar Exploration	
													USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14871	F	5-23-4.1	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10 140/1	-	5-25 4.2												
													21/41 Gastar Exploration	
							ł						USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14872	E	5-23-4.1	DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Gastar Exploration	
												4	USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14873	ε	5.23.4 1	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10 140/3	<u> </u>	5 13 4.1												
		1												
														36/9 Gastar Exploration, Inc.
10*14874	E	5-23-4.1	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
						ļ								
	l													36/9 Gastar Exploration, Inc.
10*14875	E	5.23.4 1	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
10 14075	<u> </u>	1 23 4.4												
					1									
														36/9 Gastar Exploration, Inc.
10*14876	E	5-23-4.1	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
		1												
												1		36/9 Gastar Exploration, Inc.
10°14877	E	5.73.4 1	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
10 140/7	<u>۲</u>	5-23-4.2												
ł														
l														36/9 Gastar Exploration, Inc.
10*14878	E	5-23-4.1	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
									1					36/9 Gastar Exploration, Inc.
10*14879	F	5-23-4.1	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
							<u> </u>							
														36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14880	E	5-23-4.1	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA		NA	to the Exploration II, LC
					1									36/9 Gastar Exploration, Inc.
10*14881	E	5-23-4.1	MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
	Ē	1												
		1												
					1				1				l	36/9 Gastar Exploration, Inc.
10*14882	E	5-23-4.1	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
l		1			1									
														36/9 Gastar Exploration, Inc.
10*14883	6	5.22.4.1	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC



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10*14884	E	5-23-4.1	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA CAR		NA	to TH Exploration II, LLC
10*14885	E	5-23-4.1	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14886	E	5-23-4.1	юрі уоно	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14887	E	5-23-4.1	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10°14888	E	5-23-4.1	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14889	ε	5-23-4.1	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14890	E	5-23-4.1	HENRY MALONE IR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14891	E	5-23-4.1	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*16034	E	5-23-4.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA
10*17145			JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
			CAROLYN CAMPBELL BRITTON ROBERT C.								NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17146			BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464		<u>NA</u>	NA			23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties,	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17147			JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470		NA		NA	NA	Inc 23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties,	41/238 Statoil USA Onshore Properties Inc. to TH
10*17148 10*17149			DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	NA	inc 23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	Exploration, LLC 41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC

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10*17150			IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	NA	NA JUN BO	NA NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*22813	Ε	5-23-4.1	WANDA M. BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA YOUT	NA	NA	NA
10*17502	E	5-23-4.1	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	NA	NA
10*17532	Ε	5-23-4.1	DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA	NA
10*17535	E	5-23-4.1	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA	NA
10*17539	E	5-23-4.1	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA	NA
10*17593	E	5-23-4.1	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	<u>NA</u>	NA	NA
10*17594	E	5-23-4.1	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA	NA
10*17595	E	5-23-4.1	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA	NA
10*17640	E	5-23-4.1	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA	NA
10*17679	E	5-23-4.1	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA	NA
10°17680	E	5-23-4.1	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA	NA
10*17681	E	5-23-4.1	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA	NA
10*17682	E	5-23-4.1	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA	NA

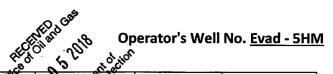
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10*17683	E	5-23-4.1	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA	NA
10*17715	E	5-23-4.1	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	HUT.	NA	NA
10 * 17719	F	5-73-4 1	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA	NA	NA	NA
10 1//15		5-25-4.2												
100177700		5 77 4 1	WILLIAM KOTSON AND DEBRA KOTSON		1/9.	029	507	A 1A	NA	NA	NA	NA	NA	NA
10*17720	<u> </u>	5-23-4.1	HAROLD H HAGERTY AND DEBORAH M	TH EXPLORATION, LLC	1/8+	938	507	NA	1944 		<u></u>			
10*17775	E	5-23-4.1	HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	NA	NA	NA	NA
10*17776	E	5-23-4.1	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA	NA	NA	NA	NA
							204				NA		NA	NA
10*17824	E	5-23-4.1	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA		NA		
10*17901	E	5-23-4.1	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA	NA	NA	NA	NA
10*17965		5-23-4.1	ROBERT DAVID BARNES AND RHONDA	TH EXPLORATION, LLC	1/8+	942		NA	NA	NA	NA	NA	NA	NA
10*18042	<u>⊢ </u>	5-23-4.1	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA				
10*18043	E	5-23-4.1	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA	NA	NA	NA	NA	NA	NA
10*18176	E	5-23-4.1	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA	NA
10*18329	Ε	5-23-4.1	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	NA	NA	NA	NA	NA
			WALTER C SCHUBERT AND BARBARA A											
10*18367	E	5-23-4.1	SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	NA	NA

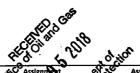
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10*18368	E	5-23-4.1	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA U OPAR			NA
10*18386	E	5-23-4.1	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA CONTONTION	NA	NA	NA
											v			
10*18598	E	5-23-4.1	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA	NA	NA	NA	NA
10*18795	E	5-23-4.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA
10*18994	E	5-23-4.1	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	NA	NA	NA	NA
10*19736	F	5-23-4 1	DOROTHY HUNKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	NA	NA	NA	NA
	<u> </u>													
10*21217	ε	5-23-4.1	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	NA	NA	NA	NA	NA
10*21222		5.73.4 1	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA	NA	NA	NA	NA
10 21222		5-15-4.1												
10*21425	E	5-23-4.1	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA	NA	NA	NA	NA	NA
10*21428	E	5-23-4.1	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	NA	NA	NA	
10*21434	ε	5-23-4.1		TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	NA	NA	NA	NA
10*21451	E	5-23-4.1	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA	NA	NA
10*21452	E	5-23-4.1	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA	NA	NA	NA
10*21457	E	5-23-4.1	WARREN L COULTER AND ROSLINA A	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	NA	NA	NA	NA



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10*21458	E	5-23-4.1	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA JUT	Departie Pr	NA	NA
											4	anto		
10*21459	E	5-23-4.1	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA	NA
10*21498	E	5-23-4.1	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA	NA	NA
10*21500	E	5-23-4.1	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA	NA
10*21501	E	5-23-4.1	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA	NA
10*21502	E	5-23-4.1	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA	NA
10*21503	E	5-23-4.1	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	NA	NA	NA
		5-23-4.1	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA	NA	NA	NA
10*21626	- E	3-23-4.1												
10*21631	E	5-23-4.1	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA	NA	NA	NA	NA	NA	NA
10*21632	Е	5-23-4.1	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	_NA	NA	NA	NA	NA	NA
10*21655	E	5-23-4.1	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	959	335	NA	NA	NA	NA	NA	NA	NA
10*21656	E	5-23-4.1	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	NA	NA	NA	NA	NA
10*21657	F	5-23-4.1	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	NA	NA	NA	NA	NA
10*21774		5-23-4.1	JOYCE KAY BURTON AND SAMUEL C	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA	NA	NA	NA



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$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	10*21813	E	5-23-4.1	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA	NAV O	NA	NA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$						1/2.	oro.						1		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	10*21815	E	5-23-4.1	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA			NA		INA	NA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$								256							
y2137 is 52 4/2 is	10*21816	E	5-23-4.1	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA		NA				
r_{2135} r_{c} s_{244} r_{M} r_{M} r_{25} r_{M}	10931017	E				1/8+	959	514	NA	NA	NA	NA	NA	NA	NA
1 <td>10-21817</td> <td>-</td> <td>5-23-4.1</td> <td></td> <td></td> <td>40</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	10-21817	-	5-23-4.1			40									
1 <td>10871010</td> <td></td> <td>5.72.4 1</td> <td>MARY CATHERINE THOMS OT</td> <td></td> <td>1/8+</td> <td>958</td> <td>360</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td>	10871010		5.72.4 1	MARY CATHERINE THOMS OT		1/8+	958	360	NA	NA	NA	NA	NA	NA	NA
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	10 21019	┝╴	5-23-4.1			-,									
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $								505					NA		
	10*21820	E	5-23-4.1	MARION DAVID AND JANICE COTT	TH EXPLORATION, LLC	1/8+	323	506	NA	NA					
	10831033		5.22.4.1			1/8+	959	510	NA	NA	NA	NA	NA	NA	INA
	10-21832		5-23-4.1												
0°21951 E 5-23-4.1 CHARLES DOUGLAS LANE TH EXPLORATION, LLC 1/8+ 960 77 NA NA <td>10*21948</td> <td>E</td> <td>5-23-4.1</td> <td>BARBARA H COAKLEY</td> <td>TH EXPLORATION, LLC</td> <td>1/8+</td> <td>960</td> <td>66</td> <td>NA</td> <td>NA</td> <td>NA</td> <td></td> <td></td> <td>NA</td> <td>NA</td>	10*21948	E	5-23-4.1	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA	NA			NA	NA
0°21951 E 5-23-4.1 CHARLES DOUGLAS LANE TH EXPLORATION, LLC 1/8+ 960 77 NA NA <td></td>															
0*2194 k 5-23-4.1 MELISSA L DARROW TH EXPLORATION, LLC 1/8+ 954 328 NA	10*21949	E	5-23-4.1	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	/0	NA	NA	NA	NA	INA	NA	
0*2194 k 5-23-4.1 MELISSA L DARROW TH EXPLORATION, LLC 1/8+ 954 328 NA															
0*22013 E 5-23-4.1 CHARLES J KNOX TH EXPLORATION, LLC 1/8+ 966 112 NA	10*21951	L E	5-23-4.1	CHARLES DUUGLAS LANE	TH EXPLORATION, LLC	1/8+	960								1964
0*22013 E 5-23-4.1 CHARLES J KNOX TH EXPLORATION, LLC 1/8+ 966 112 NA															
0*22014 E 5-23-4.1 SHERMAN E KNOX JR TH EXPLORATION, LLC 1/8+ 966 108 NA	10*21994	E	5-23-4.1	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA		NA	NA	INA	INA	INA
0*22014 E 5-23-4.1 SHERMAN E KNOX JR TH EXPLORATION, LLC 1/8+ 966 108 NA															
	10*22013	E	5-23-4.1	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA			NA	
0°22018 E 5-23-4.1 KATHLEEN ROBERTSON TH EXPLORATION, LLC 1/8+ 960 539 NA NA NA NA NA NA NA NA	10*22014	E	5-23-4.1	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	INA	NA
0°22018 E 5-23-4.1 KATHLEEN ROBERTSON TH EXPLORATION, LLC 1/8+ 960 539 NA NA NA NA NA NA NA															
	10*22018	E	5-23-4.1	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA



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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment o	Assignment	Assignment	Assignment
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10*22026	E	5-23-4.1	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA WORL	NA	NA	NA
10*22027		5.73.4 1	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	Line.	NA	NA	NA
10 22027		3-23-4.1			4/01	3.54								
1000000			JAMES S HALL AND JEANNE B HALL		1/0.	051			NA	NA	NA	NA	NA	NA
10*22030	<u> </u>	5-23-4.1	JAMES S HALL AND JEANNE B HALL	TH EXPLORATION, LLC	1/8+	961	463	NA						
10*22093	 	5-23-4.1	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA
10-22095	E	5-23-4.1	TODD LEARN AND RENDA LEARN	IN EXPLORATION, LLC	1/8+	934	514							
10122102					1/0.	054						NA	NA	NA
10*22102	E	5-23-4.1	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA		NA	
10*22128	E	5-23-4.1	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA	NA
10*22144	E	5-23-4.1	VICKY AND DENNIS STRAUSS	TH EXPLORATION, LLC	1/8+	961	429	NA	NA	NA	NA	NA	NA	
10*22165	E	5-23-4.1	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA	NA
10*22178	E	5-23-4.1	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA	NA
10*22180	E_	5-23-4.1	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA	NA
10*22181	E	5-23-4.1	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA	NA
10*22332	E	5-23-4.1	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA	NA
10*22339	E	5-23-4.1	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA	NA
10°22436	E	5-23-4.1	TESSEAN FAMILY REVOCABLE TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA	NA

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10°22443			GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA		NACOTO	NA	NA
10*22503	F	5-23-4.1	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA 500	NOTITION NA	NA	NA
					1/0.		435	NA	NA	NA	NA	NA		NA
10*22505	E	5-23-4.1	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA			184	NA		NA
10*22594	E	5-23-4.1	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA
10*22609	E	5-23-4.1	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA
10*22613	E	5-23-4.1	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA
10*14846	E	5-23-4.1	FAYE CAMPBELL	GASTAR EXPLORATION USA, INC	1/8+	805	91	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14850	E	5-23-4.1	CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14851			JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14852	ε	5-23-4.1	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	806	259	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14854			CATHERINE HUMMEL	GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14855			JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/8+	808	445	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14856			GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14860				GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*14865	E	5-23-4.1	VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10°2277 9			STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA	NA
	E	5 32 4 1	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	INA	NA
10*22809	<u> </u>													
10*22812	E	5-23-4.1	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	<u>NA</u>		NA			NA	NA
10*22861	Ε	5-23-4.1	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA	NA	NA		NA
10*14843	F	5-23-5	GARY PARSONS	GASTAR EXPLORATION USA, INC	1/8+	805	74	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10°14844	F	5-23-5	WANDA RIDING	GASTAR EXPLORATION USA, INC	1/8+	805	86	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14847	F	5-23-5	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14848		5-23-5	NEVA KELLER	GASTAR EXPLORATION USA, INC	1/8+	806	268	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14849	F	5-23-5	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14853	F	5-23-5		GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14857		5-23-5	CHERYL HILL	GASTAR EXPLORATION USA, INC	1/8+	808	493	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
			EUGENE FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	483	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14858		5-23-5	MELVIN FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	495	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignmente	Assignment	Assignment	Assignment
10*14861		5-23-5	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	Assignments Office NA UN NA Entre	anti-protection	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14862	F	5-23-5	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA Grint	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14863	F	5-23-5	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14864	F	5-23-5	CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10°14866	F	5-23-5	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14868	F	5-23-5	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14869	F	5-23-5	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14870	F	5-23-5	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14871	F	5-23-5	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, inc. to TH Exploration II, LLC
10*14872		5-23-5	DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14873		5-23-5	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14874		5-23-5	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14875		5-23-5	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14876	F	5-23-5	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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Operator's Well No. Evad - 5HM
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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	N Comment	Assignment	Assignment
10°14877			GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA Office J	0 5 Lo netion	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10°14878	F	5-23-5	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	Na articlost	NA	36/9 Gastar Exploration, Inc. to TH Exploration I), LLC
10°14879	F	5-23-5	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14880	F	5-23-5	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14881	F	5-23-5	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
10°14882	F	5-23-5	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14883	F	5-23-5	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14884	F	5-23-5	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14885	F	5-23-5	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14886	F	5-23-5	ионо чоно	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14887	F	5-23-5	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14888	F_	5-23-5	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14889	F	5-23-5	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14890	F	5-23-5	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	And any and AUTY	Assignment	Assignment	Assignment
10*14891	F	5-23-5	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	Assignmente of	NA OPTOFIC	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
												N ¹ Ornerie		
10*16034 10*17145		5-23-5 5-23-5	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959 685	502 458	NA	NA	NA	NA 🎸		NA 23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	NA 41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17146	F	5-23-5	CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	NA .	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17147	F	5-23-5	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17148	F	5-23-5	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17149	F	5-23-5	WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17150	F	5-23-5	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17502	F.	5-23-5	PATRICIA E GUSTELY DONALD S BOBOVNIK AND DOLORES J	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA		NA
10*17532	F	5-23-5	BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA	NA
10*17535	F	5-23-5	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA	NA
10*17539	F	5-23-5	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA	NA
10*17540	F	5-23-5	MONTY ESTEL	TH EXPLORATION, LLC	1/8+	941	624	NA	NA	NA	NA	NA	NA	NA
10*17541	F	5-23-5	ROBERT D STRAWN AND TAMMY J STRAWN	TH EXPLORATION, LLC	1/8+	942	21	NA	NA	NA	NA	NA	NA	NA



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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment 6	Assignment	Assignment	Assignment
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•17542	F	5-23-5	JEFFREY G HAZEL AND SHEILA M HAZEL	TH EXPLORATION, LLC	1/8+	942	12	NA	NA	NA	NA	NA A A	NA	NA
		1										Louion Louis		
		1	CARL EDWARD MCCOY AND CAROLYN SUE									* *		
0*17543	F	5-23-5	MCCOY	TH EXPLORATION, LLC	1/8+	942	15	NA	NA	NA	NA		NA	NA
					ļ									
		C - 22 E	DEBORAH LYNN SCHWING	TH EXPLORATION, LLC	1/8+	942	377	NA	NA	NA	NA	NA	NA	NA
•17544		5-23-5	DEBOILON EININ SEITINING		2,01		<u> </u>							
D*17545	F	5-23-5	LINDA SWOPE	TH EXPLORATION, LLC	1/8+	942	24	NA	NA	NA	NA	NA	NA	NA
			SAMUEL EARL FRANCIS AND ALICE L											
0*17546	F	5-23-5		TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA	NA
								1						
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0*17593	F	5-23-5	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA	NA
0*17594	F	5-23-5	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA	NA
									NA	NA	NA			
0*17595	F	5-23-5	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA .			NA	NA
0*17640		5-23-5	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA	NA
J-17640	<u> </u>	5-23-3					-							
	1.													
0*17679	F	5-23-5	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA	NA
0°17680	F	5-23-5	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA	NA
		1												
0*17681	F	5-23-5	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA	NA
		1												
0*17682	F	5-23-5	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA	NA
									NA		NA			
0*17683	F	5-23-5	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA				paa	NA	NA

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment						
10*17684	F	5-23-5	DAVID MCCOY AND LORI MCCOY	TH EXPLORATION, LLC	1/8+	942	18	NA						
10*17715		5-23-5	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA						
10 1//15	L.	5255												
10*17719	F	5-23-5	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA						
10*17720	F	5-23-5	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507		NA	NA	NA	NA	NA	NA
10*17775	F	5-23-5	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA						
	1													
10*17776	F	5-23-5	JAMES GARCAR AND MEUSSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA						
		5-23-5	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA						
10*17824	 	5-23-5	SARAFOLION		1,0.									
10*17901	F	5-23-5	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA						
		1												
			ROBERT DAVID BARNES AND RHONDA											
10*17965	F	5-23-5	BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA						
10*18042	F	5-23-5	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA						
10*18043	F	5-23-5	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA						
	1													
10818044	_	5 22 5	TRACEY ESTEL	TH EXPLORATION, LLC	1/8+	927	109	NA						
10*18044	+	5-23-5			1/01	321	103			<u></u>				
10*18176	F	5-23-5	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA						
10*18329	F	5-23-5	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA	NA	INA	NA	INA	INA	NA

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment						
			WALTER C SCHUBERT AND BARBARA A											
10*18367	F	5-23-5	SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA						
													i .	
10*18368	F	5-23-5	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA						
10*18371	F	5-23-5	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	461	NA						
		5-23-5	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA						
10*18386	<u> </u>	3-23-3	JOSEPH N MINE AND JUNNIE EN OF MINE			552				<u></u>				
10*18598	F	5-23-5	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA						
10*18795	F	5-23-5	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA						
	T													
	1													
10*18994	F	5-23-5	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA						
	1													
10*19656	F	5-23-5	DEBRA ROUDEBUSH	TH EXPLORATION, LLC	1/8+	944	105		NA	NA	NA	NA	NA	NA
10010735	_	E 12 E	DOROTHY HLINKA	TH EXPLORATION, LLC	1/8+	944	571	NA						
10*19736	<u> </u>	5-23-5		In Exclosed on the second										
												1		
10*19999	F	5-23-5	MELISSA ANN BRAUN AND RAYMOND BRAUN	TH EXPLORATION, LLC	1/8+	951	627	NA						
-		1												
1			RANDALL C ROGERSON & TRACY LYNN											
10*21084	F	5-23-5	ROGERSON	TH EXPLORATION, LLC	1/8+	949	368	NA						
	1	1												
10*21217	F	5-23-5	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA						
											NA		NA	NA
10*21222	F	5-23-5	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA		NA	•	NA
1														
10821425	.	5-23-5	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA						
10*21425	1 1	12-22-2	Tonic in 100mg And Dennic A 100Mg	In the townow, the	1 10									

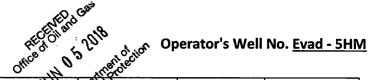
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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignmen	Assterneitte	Assignment	Assignment
10*21428	F	5-23-5	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	NA	Norrental 1	NA	NA
											<	Chine Chine		
10*21434	F	5-23-5		TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	NA	NA	NA	NA
10*21451	F	5-23-5	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA	NA	NA
10°21452	F	5-23-5		TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA	NA	NA	NA
10*21457	F	5-23-5	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	NA	NA	NA	NA
10*21458	F	5-23-5	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA	NA	NA	NA
10*21459	F	5-23-5	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA	NA
10*21498	F	5-23-5	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA	NA	NA
10*21500	F	5-23-5	MATTHEW COULTER AND SIMONE COULTER	R TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA	NA
					1/8+	954	241	NA	NA	NA	No	NA	NA	NA
10*21501			EUGENIA E HOUSER	TH EXPLORATION, LLC										
10*21502	F	5-23-5	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA	NA
10*21503	F	5-23-5	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	NA	NA	NA
10*21562	F	5-23-5	MARY ETTA TAYLOR AND GARY W TAYLOR	TH EXPLORATION, LLC	1/8+	958	414	NA	NA	NA	NA	NA	NA	NA
10*21563	F	5-23-5	DAVID R TAYLOR AND MARIA TAYLOR	TH EXPLORATION, LLC	1/8+	958	422	NA	NA	NA	NA	NA	NA	NA

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										NA	Assignment of the Assignment o		
10°21565	F	5-23-5	KORENE SUE LANTZ	TH EXPLORATION, LLC	1/8+	957	462	NA	NA		NA UI GAG	NA	
10°21566	F	5-23-5	HERBERT M TAYLOR AND LENORA E TAYLOR	TH EXPLORATION, LLC	1/8+	958	418	<u>NA</u>	NA	NA	NA	NA	NA
10*21615	F	5-23-5	GARY PARSONS AND JOANN J PARSONS	TH EXPLORATION, LLC	1/8+	959	347	NA	NA	NA	NA NA	NA	NA
10*21626	F	5-23-5	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA NA	NA	NA
10*21631	F	5-23-5	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA	NA	NA	NA NA	NA	NA
10*21632	F	5-23-5	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA NA	NA	NA
10*21655	F	5-23-5	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	959	335	NA	NA	NA	NA NA	NA	NA
10*21656	F	5-23-5	JOHN OBLOY AND JANET LOBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA	NA	NA	NA NA	NA	NA
<u>10*21657</u>	F	5-23-5	RONALD J SALKOVICK JR & SANDRA SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	NA	NA NA	NA	NA
10*21774	F	5-23-5	JOYCE KAY BURTON AND SAMUEL C BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA NA	NA	NA
10*21813	F	5-23-5	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA NA	NA	NA
10*21815	F	5-23-5	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA	NA	NA	NA	NA	NA
		5-23-5	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA	NA	NA	NA NA	NA	NA
10*21816		5-23-5	MARY LOU HLINKA AND RICHARD G HLINKA		1/8+	959	514	NA	NA		NA NA	NA	

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10*21819	F	5-23-5	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA	NA	NA	Departal		NA	
											WNNnm			
10*21820	F	5-23-5	MARION DAVID AND JANICE LOTT	TH EXPLORATION, LLC	1/8+	959	506	NA	NA	NA	NA ENV.	NA	NA	NA
	_	r r	MARQUITA CLYBURN	TH EXPLORATION, LLC	1/8+	959	510	NA	NA	NA	NA	NA	NA	NA
10*21832	F	5-23-5	MARQUITA CETBORN	IN EXPLORATION, LLC	1/01									
	ļ													
10*21948	F	5-23-5	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA	NA	NA	NA	NA	NA
10*21949	F	5-23-5	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA	NA	NA	NA	NA	NA
10 110 10	<u> </u>													
10*21950	F	5-23-5	JUDITH A TAYLOR	TH EXPLORATION, LLC	1/8+	960	74	NA	NA	NA	NA	NA	NA	NA
10°21951	F	5-23-5	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA	NA
					1/8+	954	328	NA	NA	NA	NA	NA	NA	NA
10*21994	F	5-23-5	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	526	NA						
10*22013	F	5-23-5	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA
10*22014	F	5-23-5	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA
10 11014														
10*22018	F	5-23-5	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA
						Į								
10°22026	F	5-23-5	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA
					1/0	054		NA	NA	NA	NA	NA	NA	NA
10*22027	F	5-23-5	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	µм. 						
10*22093	F	5-23-5	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA



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10*22102	F	5-23-5	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA KI	NA	NA	NA
				1	1									
10*22128	F	5-23-5	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	NA	NA	NA	NA	NA
	<u>† </u>													
	-			TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA	NA	NA	NA	NA
10*22142		5-23-5	CHERYL HILL		40	301				1				
10*22143	F	5-23-5	WANDA J AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA	NA
		1												
10*22144	F	5-23-5	VICKY AND DENNIS STRAUSS	TH EXPLORATION, LLC	1/8+	961	429	NA	NA	NA	NA	NA	NA	NA
	ļ	1												
10*22165	F	5-23-5	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA	NA
10*22178	6	5-23-5	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA	NA
10 22170	+	5-25-5												
					1/0.		186	NA	NA	NA	NA	NA	NA	NA
10*22180	F F	5-23-5	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	100		100					
					Í		1							
		1		1										
10*22181	F	5-23-5	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA		NA
10*22287	F	5-23-5	MISSY AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA	NA
		1												
10*22332	F	5-23-5	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA	NA
10*22339	F	5-23-5	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA	NA
	+ -	1			1									
											1			
	_		LODETTA MAND DAVED DOUGUEDE		1/0.	054	516	NA	NA	NA	NA	NA	NA	NA
10*22354	F	5-23-5	LORETTA M AND DAVID DOUGHERTY	TH EXPLORATION, LLC	1/8+	964	310	NA						
				1					1	1			1	
			1										L	
10*22436	F	5-23-5	TESSEAN FAMILY REVOCABLE TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	INA	INA	INA	NA	NA	NA

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignifient	Antigeottent	Assignment	Assignment
10°22437	F	5-23-5	SHERRY L AND DANIEL IMRIE	TH EXPLORATION, LLC	1/8+	963	631	NA	NA	NA	NA NA	Last C	NA	NA
10°22440	F	5-23-5	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA	NA	NA	NA Erwi	NA	NA	NA
10*22443	F	5-23-5	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	NA	NA	NA
10*22450	F	5-23-5	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA	NA	NA	NA
10*22503	F	5-23-5	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA	NA
10*22504	F	5-23-5	MELVIN FANKHAUSER	TH EXPLORATION, LLC	1/8+	974	351	NA	NA	NA	NA	NA	NA	NA
10*22505	F	5-23-5	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA	NA
10*22509	F_	5-23-5	RANDY AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA	NA
10*22560	F	5-23-5	RONALD J KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA	NA
10*22592	F	5-23-5	RUSSELL W AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA	NA
10*22593	F	5-23-5	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA	NA
<u>10*22594</u>	F	5-23-5	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA
10°22609	F	5-23-5	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA
10*22613	F	5-23-5	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA

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10*22644	F	5-23-5	RICHARD EUGENE KELLER	TH EXPLORATION, LLC	1/8+	968	214	NA	NA	NA	Assembled NA FEIGUIDINA TUB	A SECT	NA	NA
											NA PERSON A LUNA CONTRACTOR		21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14846	F	5-23-5	FAYE CAMPBELL	GASTAR EXPLORATION USA, INC	1/8+	805	91	NA	NA	NA	NA De dir	NA	Exploration, Inc	to TH Exploration II, LLC
			CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	NA	NA	NA EFRANCE	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14850	F	5-23-5		GASTAR EAFLORATION OSA, INC	1,0+									
10*14851	F	5-23-5	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14852	F	5-23-5	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	259	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14854	F	5-23-5	CATHERINE HUMMEL	GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
					1/8+	808	445	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14855	F	5-23-5	JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/0+	000	445	<u>na</u>					21/41 Gastar Exploration	
10814855	F	5-23-5	GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	NA	NA	NA	USA Inc to Gastar	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14856	<u> </u>	3-23-3			2,01								21/41 Gastar Exploration	
													USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14860	F	5-23-5	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
						810	325	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14865	F	5-23-5	VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	323							
10*22779	F	5-23-5	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA	NA
1000000		5-23-5	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA	NA
10*22809		3-23-3	MONGONEL AND THICHMONGHONDAL		10.	512								
10*22811		5-23-5	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA	NA
10 22011													1	
10*22812	F	5-23-5	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA	NA

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0*22813	F	5-23-5	WANDA M BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	ALL IN ALLENON	NA	NA	NA
	<u> </u>										N. Atal.			
											NIM			
10*22861	F	5-23-5	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA	NA NOT	NA	NA	NA
											1 Ere		21 (41 Contro Evaluation	
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14843	G	5-23-16	GARY PARSONS	GASTAR EXPLORATION USA, INC	1/8+	805	74	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14844	G	5-23-16	WANDA RIDING	GASTAR EXPLORATION USA, INC	1/8+	805	86	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10 14044	<u> </u>	1												
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14847	6	5-23-16	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10 14847	-	5-25-20												
													21/41 Gastar Exploration USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14848		6.72.16	NEVA KELLER	GASTAR EXPLORATION USA, INC	1/8+	806	268	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10.14040		5-23-10												
													21/41 Gastar Exploration USA Inc to Gastar	26/0 Gastas Evaluation Jac
		5 33 16	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14849	<u> </u>	5-25-10										1		
													21/41 Gastar Exploration	
	G	5-23-16	DURWOOD WRIGHT	GASTAR EXPLORATION USA, INC	1/8+	809	507	NA	NA	NA	NA	NA	USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14853		5-25-10			2/01									
													21/41 Gastar Exploration	
			CHERYL HILL	GASTAR EXPLORATION USA, INC	1/8+	808	493	NA	NA	NA	NA	NA	USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14857	G	5-23-16	CREKTE HILL	GASTAR EXPLORATION USA, INC.	10+	000	455							
													21/41 Gastar Exploration	
				CARTAR EVOLOPATION LICA INC.	1/0,	808	483	NA	NA	NA	NA	NA	USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14858	G	5-23-16	EUGENE FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	463							
													21/41 Gastar Exploration	
					1/0.	000	495	NA	NA	NA	NA	NA	USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14859	G	5-23-16	MELVIN FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	495							
													21/41 Gastar Exploration	
											NA		USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14861	- G	5-23-16	NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA		NA		
	1												21/41 Gastar Exploration	
							1						USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14862	G	5-23-16	ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Gastar Exploration	
											1		USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14863	G	5-23-16	WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	INA		NA	NA	Exploration, Inc	to TH Exploration II, LLC

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10*14864			CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	O' IN ST	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14866	G	5-23-16	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA JU OFT	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14867	G	5-23-16	RANDY BERISFORD	GASTAR EXPLORATION USA, INC	1/8+	810	319	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14868	G	5-23-16	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14869	G	5-23-16	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	813	561	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14870	G	5-23-16	DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14871			BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
			DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14872									NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14873	G	5-23-16	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA						36/9 Gastar Exploration, Inc.
10*14874	G	5-23-16		GASTAR EXPLORATION INC	1/8+	822	260	NA	NA		NA	NA		to TH Exploration II, LLC 36/9 Gastar Exploration, Inc.
10*14875	G	5-23-16	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC 36/9 Gastar Exploration, Inc.
10*14876	G	5-23-16	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
10*14877	G	5-23-16	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
10*14878	G	5-23-16	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TR Exploration II, LLC

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10*14879		5-23-16	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA WOOME	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14880	G	5-23-16	IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	Kr ^N	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14881	G	5-23-16	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
10*14882	G	5-23-16	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14883	G	5-23-16	PAUL WISE	GASTAR EXPLORATION INC	1/8+	852	252	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14884	G	5-23-16	RENEE HAGERTY	GASTAR EXPLORATION INC	1/8+	852	255	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14885	G	5-23-16	HOWARD RINE	GASTAR EXPLORATION INC	1/8+	854	601	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10°14886	G	5-23-16	IODI YOHO	GASTAR EXPLORATION INC		854	604	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14887	G	5-23-16	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14888	G	5-23-16	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA		NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14889	G	5-23-16	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14890	G	5-23-16	HENRY MALONE IR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14891	G	5-23-16	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14897	G	5-23-16	CLARA YOHO	GASTAR EXPLORATION USA, INC	1/8+	810	314	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

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10*16034			GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	Association of the second of t	All Projection	NA	NA
10*17145			JAMES J. CAMPBELL BETTY J. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	NA	NA JU DE VN	NA	USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17146			CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	CHESAPEAKE APPALACHIA LLC	1/8+	685	464	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17147			JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17148				CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
			WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17149										NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties,	41/238 Statoil USA Onshore Properties Inc. to TH
10*17150	G	5-23-16	IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA					Exploration, LLC
10*17502	G	5-23-16	PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	NA	NA
10*17532	G	5-23-16	DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA	NA
10*17535	G	5-23-16	RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA	NA
10*17539	G	5-23-16	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA	NA
10*17540	6	5-23-16	MONTY ESTEL	TH EXPLORATION, LLC	1/8+	941	624	NA	NA	NA	NA	NA	NA	NA
								NA	NA	NA	NA	NA	NA	NA
10*17541	G	5-23-16	ROBERT D STRAWN AND TAMMY J STRAWN	TH EXPLORATION, LLC	1/8+	942	21	NA					1104 	
10*17542	G	5-23-16	JEFFREY G HAZEL AND SHEILA M HAZEL	TH EXPLORATION, LLC	1/8+	942	12	NA	NA	NA	NA	NA	NA	NA

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10*17543	G		CARL EDWARD MCCOY AND CAROLYN SUE MCCOY	TH EXPLORATION, LLC	1/8+	942	15	NA	NA	NA	NA JUN	Assistered Assistered	NA	NA
											WN Envir	STATIC		
10*17544	G	5-23-16	DEBORAH LYNN SCHWING	TH EXPLORATION, LLC	1/8+	942	377	NA	NA				NA	NA
10*17545	G	5-23-16	LINDA SWOPE	TH EXPLORATION, LLC	1/8+	942	24	NA	NA	NA	NA	NA	NA	NA
10*17546	G		SAMUEL EARL FRANCIS AND ALICE L	TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA	NA
10*17593		5-23-16	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA	NA
10-17593	0	5-25-16			1/0.									
10*17594	G	5-23-16	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA	NA
<u>10*17595</u>	G	5-23-16	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA	NA
10°17640	G	5-23-16	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA	NA
10*17679	G	5-23-16	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA	NA
												NA		
10*17680	G	5-23-16	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA			
10*17681	G	5-23-16	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA	NA
10*17682	G	5-23-16	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA	NA
10*17683	G	5-23-16	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA	NA
10*17584	G	5-23-16	DAVID MCCOY AND LORI MCCOY	TH EXPLORATION, LLC	1/8+	942	18	NA	NA	NA	NA	NA	NA	NA

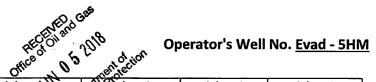
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10*17715	G	5-23-16	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA			NA		NA	NA
	1 1													
10*17719	G	5-23-16	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA						
10*17720	G	5-23-16	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA		NA	NA
10*17775	G	5-23-16	HAROLD H HAGERTY AND DEBORAH M HAGERTY	TH EXPLORATION, LLC	1/8+	942	370	NA						
10*17776	G	5-23-16	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA						
10*17824	G	5-23-16	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA						
10*17901	G	5-23-16	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA						
10°17965	G	5-23-16	ROBERT DAVID BARNES AND RHONDA BARNES	TH EXPLORATION, LLC	1/8+	942	366	NA						
10*18042	G	5-23-16	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA						
10°18043	G	5-23-16	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA						
	ļ													
10*18044	G	5-23-16	TRACEY ESTEL	TH EXPLORATION, LLC	1/8+	927	109	NA						
10*18176	G	5-23-16	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA						
10*18329	G	5-23-16	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560	NA						
10*18367	G	5-23-16	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA						



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10*18368	G	5-23-16	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA NO	NA	NA	NA
							451			NA	NA KA	NA	NA	NA
10*18371	G	5-23-16	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	461	NA	NA	NA	NA		NA	
			JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA	NA	NA	NA
10*18386	6	5-23-10	JOSEFFI R RINE AND JENNINE COMME	In Exclorention, tee										
10110500		c 22.16	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA	NA	NA	NA	NA
10*18598	6	5-23-10	MARK E GOSTELT	In EARLONATION, LEC										
10*18795		6 12 16	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA
10.18/95		5-23-10			-70-									
					1/0.	940	137	NA	NA	NA	NA	NA	NA	NA
10*18994	G	5-23-16	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	340	137							
					1/8+	944	105	NA	NA	NA	NA	NA	NA	NA
10*19656	- G	5-23-16	DEBRA ROUDEBUSH		1/64		105							
										NA	NA	NA	NA	NA
10*19736	G	5-23-16	DOROTHY HUNKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA					<u></u>
10*19999	6	5-23-16	MELISSA ANN BRAUN AND RAYMOND BRAUN	TH EXPLORATION, LLC	1/8+	951	627	NA	NA	NA	NA	NA	NA	NA
10 13333	Ť	5 15 10												
10*21084	G	5-23-16	RANDALL C ROGERSON & TRACY LYNN ROGERSON	TH EXPLORATION, LLC	1/8+	949	368	NA	NA	NA	NA	NA	NA	NA
<u> </u>	1	1												
10821217		5. 22. 16	KEITH JAY FISCHER AND DAWN M FISCHER		1/8+	952	643	NA	NA	NA	NA	NA	NA	NA
10*21217	+	5-25-10			1								1	1
10*21222	6	5-22-16	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA	NA	NA	NA	NA
10*21222	+	5-23-10			1							-		1
					1/8+	957	29	NA	NA	NA	NA	NA	NA	NA
10*21425	G	5-23-16	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/67						1	····		1
10*21428	G	5-23-16	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	INA	ma	INA	hua	INA



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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assigning of the second	Assignment	Assignment	Assignment
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10*21434	G	5-23-16	CATHERINE HUMMEL	TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	NA GON	NA	NA	NA
10*21451	G	5-23-16	RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	NA	NA	NA	NA
10*21452	G	5-23-16	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA	NA	NA	NA
	1													
10*21457	G	5-23-16	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	NA	NA	NA	NA
	1													
10*21458	6	5-23-16	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA	NA	NA	NA
10 11:00	<u> </u>	<u> </u>	······											
		1			1					1				
10*21459	G	5-23-16	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA	NA
	<u>†</u>													
			MABEL SHILLINGBURG AND CLIFFORD											
10*21498	G	5-23-16		TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA	NA	NA
		1					1							
10*21500	G	5-23-16	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA	NA
10*21501	G	5-23-16	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA	NA
10*21502	G	5-23-16	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA	NA
	1													
10*21503	G	5-23-16	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA		NA	NA	NA	
					1									
	1													
10*21562	G	5-23-16	MARY ETTA TAYLOR AND GARY W TAYLOR	TH EXPLORATION, LLC	1/8+	958	414	NA	NA	NA	NA	NA		
]
	1								NA	NA	NA	NA	NA	NA
10*21563	G	5-23-16	DAVID R TAYLOR AND MARIA TAYLOR	TH EXPLORATION, LLC	1/8+	958	422	NA	<u></u>					
	1													
					1/8+	957	462	NA	NA	NA	NA	NA	NA	NA
10*21565	G	15-23-16	KORENE SUE LANTZ	TH EXPLORATION, LLC	1/01	357	402		<u>110</u>	105		[107		100



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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Bock	Page	Assignment	Assignment	Assignment	Assignment 1	Assignment	Assignment	Assignment
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0*21566	G	5-23-16	HERBERT M TAYLOR AND LENORA E TAYLOR	TH EXPLORATION, LLC	1/8+	958	418	NA	NA	NA	NA GOV	NA	NA	NA
											•			
0*21615	G	5-23-16	GARY PARSONS AND JOANN J PARSONS	TH EXPLORATION, LLC	1/8+	959	347	NA	NA	NA	NA	NA	NA	NA
			CLARENCE RANDALL EMERY AND PAULA											
10°21626	G			TH EXPLORATION, LLC	1/8+	958	344	NA	NA	NA	NA	NA	NA	NA
					1									
10*21631	6	5.23.16	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA	NA	NA	NA	NA	NA	NA
10.51021		5-25-10												
		r r	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA	NA	NA	NA
10*21632	- °	5-23-10												
			STANIEV GUSTELY	TH EXPLORATION, LLC	1/8+	959	335	NA	NA	NA	NA	NA	NA	NA
10*21655	6	5-23-16	STANLEY GUSTELY	In Exclosinon, dec										
			LOUIS ON AND MARTI OPLOY		1/8+	959	331	NA	NA	NA	NA	NA	NA	NA
10*21656	G	5-23-16	JOHN OBLOY AND JANET L OBLOY	TH EXPLORATION, LLC	1/0+	- 333	351				00			
	1		RONALD J SALKOVICK JR & SANDRA						NA	NA	NA	NA	NA	NA
10*21657	G	5-23-16	SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA	NA	ina	NA	NA		
			JOYCE KAY BURTON AND SAMUEL C											
10*21774	G	5-23-16	BURTON	TH EXPLORATION, LLC	1/8+	957	467	NA	NA	NA	NA	NA	NA	NA
	1													
10*21813	G	5-23-16	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA	NA	NA	NA	NA	NA	NA
10*21815	G	5-23-16	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA	NA	NA	NA	NA	NA	NA
ļ	1													
10*21816	G	5-23-16	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA	NA	NA	NA	NA	NA	NA
		l												
			MARY LOU HLINKA AND RICHARD G HLINKA											
10*21817	G	5-23-16	SR	TH EXPLORATION, LLC	1/8+	959	514	NA	NA	NA	NA	NA	NA	NA
					1									
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10*21819	G	5-23-16	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA	NA	NA	NA	NA	NA	NA



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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Bcok	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*21820		5-23-16	MARION DAVID AND JANICE L OTT	TH EXPLORATION, LLC	1/8+	959	506	NA	NA	NA	NA O' JUN	nd 2008	NA	NA
10*21832	G	5-23-16	MARQUITA CLYBURN	TH EXPLORATION, LLC	1/8+	959	510	NA	NA	NA	NA EF	NA	NA	NA
10*21948	G	5-23-16	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA	NA	NA	NA	NA	NA
10*21949	G	5-23-16	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA	NA	NA	NA	NA	NA
10*21950	G	5-23-16	JUDITH A TAYLOR	TH EXPLORATION, LLC	1/8+	960	74	NA	NA	NA	NA	NA	NA	NA
10*21951	G	5-23-16	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA	NA
10*21994	G	5-23-16	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA	NA
10*22013	G	5-23-16	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA
10*22014	G	5-23-16	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA
10*22018	G	5-23-16	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA
10*22026	G	5-23-16	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA
10*22027	G	5-23-16	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA	NA
10*22093	G	5-23-16	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA
10*22102	G	5-23-16	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA	NA

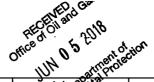
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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*22128	G	5-23-16	ВЕТТҮ РҮЗЕЦ	TH EXPLORATION, LLC	1/8+	961	433	NA	NA	y.	epartal	NA	NA	NA
10*22142	G	5-23-16	CHERYL HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA KA	NA	NA	NA	NA
10*22143	G	5-23-16	WANDA J AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA	NA	NA	NA
10*22144	G	5-23-16	VICKY AND DENNIS STRAUSS	TH EXPLORATION, LLC	1/8+	961	429	NA	NA	NA	NA	NA	NA	NA
10°22165	G	5-23-16	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NĄ	NA
10*22178	G	5-23-16	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA	NA
10*22180	G	5-23-16	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA	NA
10°22181	G	5-23-16	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA	NA
10°22287	G	5-23-16	MISSY AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA	NA
10*22332	G	5-23-16	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA	NA
10*22339	G	5-23-16	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA	NA
10*22354	G	5-23-16	LORETTA M AND DAVID DOUGHERTY	TH EXPLORATION, LLC	1/8+	964	516	NA	NA	NA	NA	NA	NA	NA
10*22436 10*22437		5-23-16	TESSEAN FAMILY REVOCABLE TRUST	TH EXPLORATION, LLC	1/8+	963 963	626	NA	NA	NA	NA	NA	NA	NA

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Operator's Well No. Evad - 5HM
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10*22440	G	5-23-16	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA			NA 33	CePata C		NA
		ĺ										Wonner		
10*22443	G	5-23-16	GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA	MARC	NA	NA
		5 72 16	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA	NA	NA	NA
10*22450		5-23-10	JODT PRIM MERCEN											
10*22503	G	5- <u>23-16</u>	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA	NA
10°22504	G	5-23-16	MELVIN FANKHAUSER	TH EXPLORATION, LLC	1/8+	974	351	NA	NA	NA	NA	NA	NA	NA
								.						
10*22505	G	5-23-16	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA	NA
10*22509	G	5-23-16	RANDY AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA	NA
			RONALD J KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA	NA
10*22560		5-23-16	NORALD J RELLER		1/01									<u>10</u>
												}		
10*22592	G	5-23-16	RUSSELL W AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA	NA
10*22593	G	5-23-16	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA	NA
10*22594	G	5-23-16	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA
10*22609	G	5-23-16	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA
						1								
			JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA
10*22613	+ G	5-23-16			1/07	300	310							
1														
10*22644	G	5-23-16	RICHARD EUGENE KELLER	TH EXPLORATION, LLC	1/8+	968	214	NA	NA	NA	NA	NA	NA	NA

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	distepment	Assignment	Assignment
10*14846	G	5-23-16	FAYE CAMPBELL	GASTAR EXPLORATION USA, INC	1/8+	805	91	NA	NA	NA	NA W	Departa Pro.	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14850	G	5-23-16	CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	NA	NA	NA LENNT	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14851	G	5-23-16	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14852	G	5-23-16	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	806	259	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14854	G	5-23-16		GASTAR EXPLORATION USA, INC	1/8+	809	512	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14855	G	5-23-16	JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/8+	808	445	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14856	G	5-23-16	GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14860	G	5-23-16	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14865			VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*22779	G	5-23-16	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA	NA	NA	NA	NA	NA	NA
10*22809	G	5-23-16	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA	NA
10*22811		5-23-16	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA	NA
10*22812		5-23-16	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA	NA
10*22812		5-23-16		TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA	NA	NA	NA

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10*22861			LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	Assignment Offe	Keskiment of the	NA	NA	NA
10*14843	н	5-23-16.1	GARY PARSONS	GASTAR EXPLORATION USA, INC	1/8+	805	74	NA	NA	NA	NA NO BORTA FOL	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14844	н	5-23-16.1	WANDA RIDING	GASTAR EXPLORATION USA, INC	1/8+	805	86	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA inc to Gastar Exploration, inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14847	н	5-23-16.1	LETHA RUCKMAN	GASTAR EXPLORATION USA, INC	1/8+	806	270	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14848	н	5-23-16.1	NEVA KELLER	GASTAR EXPLORATION USA, INC	1/8+	806	268	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14849	н	5-23-16.1	DAVID GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	806	265	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14853	н	5-23-16.1		GASTAR EXPLORATION USA, INC	1/8+	80 9	507	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14857	н	5-23-16.1		GASTAR EXPLORATION USA, INC	1/8+	808	493	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14858			EUGENE FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	483	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10°14859	н	5-23-16.1	MELVIN FANKHAUSER	GASTAR EXPLORATION USA, INC	1/8+	808	495	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14861			NANCY WHITLATCH	GASTAR EXPLORATION USA, INC	1/8+	809	526	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14862			ANN GUSTELY	GASTAR EXPLORATION USA, INC	1/8+	809	568	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14863			WILLIAM DAVIS CULLUM	GASTAR EXPLORATION USA, INC	1/8+	809	561	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14864	н		CAROLYN DURWAY	GASTAR EXPLORATION USA, INC	1/8+	810	330	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC



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1											N ^N roni.		21/41 Gastar Exploration	
	i i										Envi		USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14866	н	5-23-16.1	GARY CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	810	316	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
											1		21/41 Gastar Exploration	
													USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14867	н	5-23-16.1	RANDY BERISFORD	GASTAR EXPLORATION USA, INC	1/8+	810	319	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Gastar Exploration	
									l				USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14868	н	5-23-16.1	WOODROW CAMPBELL, JR.	GASTAR EXPLORATION USA, INC	1/8+	813	454	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Carta Curtantin	
													21/41 Gastar Exploration USA Inc to Gastar	
					1/0.	813	561	NA	NA	NA	NA	NA	Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10°14869	н	5-23-16.1	RALPH VAUGHN TAYLOR	GASTAR EXPLORATION USA, INC	1/8+	- 012	201							
													21/41 Gastar Exploration	
													USA Inc to Gastar	36/9 Gastar Exploration, Inc.
			DAVID CARMICHAEL	GASTAR EXPLORATION USA, INC	1/8+	816	16	NA	INA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10*14870	н	5-23-16.1	DAVID CARINICHAEL	GASTAN EXPLORATION USA, INC	401									
													21/41 Gastar Exploration	
													USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14871	н	5-22-16 1	BETTY PYSELL	GASTAR EXPLORATION USA, INC	1/8+	816	348	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10 140/1	<u> </u>	J-2J-10.1						1					- · · · · · · · · · · · · · · · · · · ·	
					1		1						21/41 Gastar Exploration	1
			1										USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14872	н	5-23-16.1	DWG OIL AND GAS ACQUISITIONS,	GASTAR EXPLORATION USA, INC	1/8+	817	312	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
													21/41 Gastar Exploration	
					1						1		USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14873	н	5-23-16.1	RAYMOND MILLER	GASTAR EXPLORATION USA, INC	1/8+	821	44	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
	1			Ì										
]													36/9 Gastar Exploration, Inc.
10*14874	н	5-23-16.1	RICHARD MILLER	GASTAR EXPLORATION INC	1/8+	822	260	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
	I					1								
					1									
														36/9 Gastar Exploration, Inc.
10*14875	н	5-23-16.1	DAVID DRAKE	GASTAR EXPLORATION INC	1/8+	827	273	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
1														
											1			36/9 Gastar Exploration, Inc.
10*14876	l	5 72 16 1	SHIRLEY LARGENT	GASTAR EXPLORATION INC	1/8+	827	228	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
10-14876	н	5-23-16.1	SHINLET DANGENT	GASTAN EXPECTATION INC		027								
		1			1				ł		1			
1		1		1	1	ł					1			36/9 Gastar Exploration, Inc.
10*14877	Ιн	5-23-16.1	GARY OBLOY	GASTAR EXPLORATION INC	1/8+	836	112	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
	+				1									
							1				1			
	1	1			1		1				1			36/9 Gastar Exploration, Inc.
10*14878	н	5-23-16.1	ARTHUR BRUCE COULTER	GASTAR EXPLORATION INC	1/8+	839	519	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
	1	1												
1	1	1		1			1		1		1			
1	1										1		1	36/9 Gastar Exploration, Inc.
10*14879	L H	5-23-161	THERESA RINE	GASTAR EXPLORATION INC	1/8+	840	162	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC

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0*14880			IRIS LUCAS	GASTAR EXPLORATION INC	1/8+	849	545	NA	NA	NA	MA Office NOS	Blo Mentoletion	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0*14881			MARY WHITLATCH	GASTAR EXPLORATION INC	1/8+	849	548	NA	NA	NA	Assignment and REGION DE NA ONICE JUNDE NA UNICE		NA	36/9 Gastar Exploration, inc to TH Exploration II, LLC
0*14882	н	5-23-16.1	GARY RINE	GASTAR EXPLORATION INC	1/8+	849	551	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0*14883	н	5-23-16.1		GASTAR EXPLORATION INC	1/8+	852	252	NA	NA		NA	ма	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0°14884	н	5-23-16.1	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
0*14885	н	5-23-16.1	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
0*14886	н	5-23-16.1	юрі хоно	GASTAR EXPLORATION INC	1/8+	854	604	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0*14887	н	5-23-16.1	CHRISTINA ROBERTS	GASTAR EXPLORATION INC	1/8+	867	392	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0*14888	н	5-23-16.1	DARLENE BUTLER	GASTAR EXPLORATION INC	1/8+	867	395	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14889	н	5-23-16.1	HAROLD YOHO	GASTAR EXPLORATION INC	1/8+	870	37	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14890	н	5-23-16.1	HENRY MALONE JR	GASTAR EXPLORATION INC	1/8+	870	40	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14891	н	5-23-16.1	NANCY F FYE AND STEPHEN M FYE	GASTAR EXPLORATION INC	1/8+	885	606	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14910	н	5-23-16.1	DONALD HENRY	GASTAR EXPLORATION USA, INC	1/8+	819	311	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*16034	н	5-23-16.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA

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10*17145				CHESAPEAKE APPALACHIA LLC	1/8+	685	458	NA	NA	NA	NA LINIONDAL	NA NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17146	н	5-23-16.1	CAROLYN CAMPBELL BRITTON ROBERT C. BRITTON	СНЕЅАРЕАКЕ АРРАЈАСНІА ЦС	1/8+	685	464	NA	NA	NA	NA ENHOPIT	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17147	н	5-23-16.1	JOANN J. PARSONS GARY D. PARSONS	CHESAPEAKE APPALACHIA LLC	1/8+	685	470	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17148	н	5-23-16.1	DONALD E. CAMPBELL JUNE L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	476	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17149			WANDA M. BLAKE	CHESAPEAKE APPALACHIA LLC	1/8+	685	482	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
			IDA L. CAMPBELL	CHESAPEAKE APPALACHIA LLC	1/8+	685	488	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10°17150			PATRICIA E GUSTELY	TH EXPLORATION, LLC	1/8+	942	334	NA	NA	NA	NA	NA	23/127 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17532			DONALD S BOBOVNIK AND DOLORES J BOBOVNIK	TH EXPLORATION, LLC	1/8+	942	346	NA	NA	NA	NA	NA	NA	NA
10*17535			RONALD L MAYER AND DEBRA A MAYER	TH EXPLORATION, LLC	1/8+	929	580	NA	NA	NA	NA	NA	NA	NA
10*17539	н	5-23-16.1	JOANN HAGERTY	TH EXPLORATION, LLC	1/8+	942	342	NA	NA	NA	NA	NA	NA	NA
10*17540	н	5-23-16.1	MONTY ESTEL	TH EXPLORATION, LLC	1/8+	941	624	NA	NA	NA	NA	NA	NA	NA
10*17541			ROBERT D STRAWN AND TAMMY J STRAWN		1/8+	942	21	NA	NA	NA	NA	NA	NA	NA
10*17542	н	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
10*17543	н	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

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10*17544			DEBORAH LYNN SCHWING	TH EXPLORATION, LLC	1/8+	942	377	NA	NA	NA	A Departmercou	NA	NA	NA
10*17545	н	5-23-16.1	LINDA SWOPE	TH EXPLORATION, LLC	1/8+	942	24	NA	NA	NA	NA	NA	NA	NA
10°17546	н	5-23-16.1	SAMUEL EARL FRANCIS AND ALICE L FRANCIS	TH EXPLORATION, LLC	1/8+	942	374	NA	NA	NA	NA	NA	NA	NA
10*17593	н	5-23-16.1	REBECCA HAGERTY	TH EXPLORATION, LLC	1/8+	942	350	NA	NA	NA	NA	NA	NA	NA
10*17594	н	5-23-16.1	MEGAN HAGERTY	TH EXPLORATION, LLC	1/8+	942	362	NA	NA	NA	NA	NA	NA	NA
10*17595	н	5-23-16.1	THOMAS E RINE AND MARY P RINE	TH EXPLORATION, LLC	1/8+	929	572	NA	NA	NA	NA	NA	NA	NA
10*17640	н	5-23-16.1	PATRICIA A GARCAR	TH EXPLORATION, LLC	1/8+	942	8	NA	NA	NA	NA	NA	NA	NA
10*17679	н	5-23-16.1	NORMA J ASH	TH EXPLORATION, LLC	1/8+	944	130	NA	NA	NA	NA	NA	NA	NA
10*17680	н	5-23-16.1	DAVID E CHURCH	TH EXPLORATION, LLC	1/8+	932	424	NA	NA	NA	NA	NA	NA	NA
10*17681	н	5-23-16.1	WALTER E LOSEY AND CINDY L LOSEY	TH EXPLORATION, LLC	1/8+	942	338	NA	NA	NA	NA	NA	NA	NA
10*17682	н	5-23-16.1	JAMES E GARLOCH AND MARY K GARLOCH	TH EXPLORATION, LLC	1/8+	935	68	NA	NA	NA	NA	NA	NA	NA
10*17683	н	5-23-16.1	PATRICK HAGERTY AND DALANE HAGERTY	TH EXPLORATION, LLC	1/8+	942	358	NA	NA	NA	NA	NA	NA	NA
10*17684	н	5-23-16.1	DAVID MCCOY AND LORI MCCOY	TH EXPLORATION, LLC	1/8+	942	18	NA	NA	NA	NA	NA	NA	NA
10*17715	н	5-23-16.1	ROBERT A SANDS AND JOYCE A SANDS	TH EXPLORATION, LLC	1/8+	942	354	NA	NA	NA	NA	NA	NA	NA

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0*17719	н	5-23-16.1	ROBERT R DARROW	TH EXPLORATION, LLC	1/8+	942	380	NA	NA	NA	NA OPTIC U	We de	NA	NA
											JUI CO			
0*17720	н	5-23-16.1	WILLIAM KOTSON AND DEBRA KOTSON	TH EXPLORATION, LLC	1/8+	938	507	NA	NA	NA	NA VY OF	NA	NA	NA
		5-23-16.1	HAROLD H HAGERTY AND DEBORAH M	TH EXPLORATION, LLC	1/8+	942	370	NA	NA	NA	¥۲. NA	NA	NA	NA
0*17775	<u> </u>	5-25-10.1	HAGERIT	TH EAFLORATION, LLC	1/6+									
0*17776	н	5-23-16.1	JAMES GARCAR AND MELISSA GARCAR	TH EXPLORATION, LLC	1/8+	941	627	NA	NA	NA	NA	NA	NA	NA
0*17824	н	5-23-16.1	SARA FULTON	TH EXPLORATION, LLC	1/8+	942	384	NA	NA	NA	NA	NA	NA	NA
0*17901	н	5-23-16.1	ROBYN HAGERTY	TH EXPLORATION, LLC	1/8+	924	602	NA	NA	NA	NA	NA	NA	NA
		ļ												
		5-23-16.1	ROBERT DAVID BARNES AND RHONDA	TH EVELOPATION LLC	1/8+	942	366	NA	NA	NA	NA	NA	NA	NA
0*17965	н	5-23-16.1		TH EXPLORATION, LLC	1/8*	- 542	300							
0*18042	н	5-23-16.1	JOSEPH J ONORE	TH EXPLORATION, LLC	1/8+	927	101	NA	NA	NA	NA	NA	NA	NA
10*18043	H H	5-23-16.1	JAMES M ONORE AND CINDY L ONORE	TH EXPLORATION, LLC	1/8+	927	105	NA	NA	NA	NA	NA	NA	NA
10*18044	н	5-23-16.1	TRACEY ESTEL	TH EXPLORATION, LLC	1/8+	927	109	NA	NA	NA	NA	NA	NA	NA
l0*18176	н	5-23-16.1	CRYSTAL M HOOKER AND JAMES HOOKER	TH EXPLORATION, LLC	1/8+	929	568	NA	NA	NA	NA	NA	NA	NA
10*18329	н	5-23-16.1	COLLEEN HAGERTY	TH EXPLORATION, LLC	1/8+	929	560		NA	NA	NA	NA	nA	NA
10*18367		5.73.16 1	WALTER C SCHUBERT AND BARBARA A SCHUBERT	TH EXPLORATION, LLC	1/8+	931	377	NA	NA	NA	NA	NA	NA	NA
10 1030/	+ "	-23-10.1					<u> </u>					-		
10*18368	н	5-23-16.1	ROBERTA K MILLER	TH EXPLORATION, LLC	1/8+	931	457	NA	NA	NA	NA	NA	NA	NA

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10*18371	۱.	5-73-16 1	HERMAN D ESTEL	TH EXPLORATION, LLC	1/8+	931	461	NA	NA	NA	N			I 1
10 100/1	1	5 15 10.1			-,						NA NIO			NA
											6 .			
10*18386	н	5-23-16.1	JOSEPH R RINE AND JENNIFER M RINE	TH EXPLORATION, LLC	1/8+	932	492	NA	NA	NA	NA	NA	NA	NA
		-												
			MARK CONSTRUCT											
10*18598	Н	5-23-16.1	MARK E GUSTELY	TH EXPLORATION, LLC	1/8+	935	52	NA	NA	NA	NA	NA	NA	NA
10*18795	н	5-23-16.1	GASTON FAMILY INVESTMENTS LLC	TH EXPLORATION, LLC	1/8+	959	502	NA	NA	NA	NA	NA	NA	NA
10*18994	н	5-23-16.1	SHIRLEY ANN DRAKE	TH EXPLORATION, LLC	1/8+	940	137	NA	NA	NA	NA	NA	NA	NA
10*19656	н	5-23-16.1	DEBRA ROUDEBUSH	TH EXPLORATION, LLC	1/8+	944	105	NA	NA	NA	NA	NA	NA	NA
														1
10*19736	н	5-23-16.1	DOROTHY HUNKA	TH EXPLORATION, LLC	1/8+	944	571	NA	NA	NA	NA	NA	NA	NA
10*19999	 	5-23-16.1	MELISSA ANN BRAUN AND RAYMOND	TH EXPLORATION, LLC	1/8+	951	627	NA	NA		NA			
10 13333	<u> ^</u>	3-23-10.1			1/6*	551	027				NA	NA	NA	NA
			RANDALL C ROGERSON & TRACY LYNN											
10°21084	н	5-23-16.1	ROGERSON	TH EXPLORATION, LLC	1/8+	949	368	NA	NA	NA	NA	NA	NA	NA
10*21217	<u> </u>	5-23-16.1	KEITH JAY FISCHER AND DAWN M FISCHER	TH EXPLORATION, LLC	1/8+	952	643	NA	NA	NA	NA	NA	NA	NA
10*21222	н	5-23-16.1	PATRICIA J SHAW KELLER	TH EXPLORATION, LLC	1/8+	946	43	NA	NA	NA	NA	NA	NA	NA
														<u> </u>
10*21425	н	5-23-16.1	ORIE N YOUNG AND BERNIE A YOUNG	TH EXPLORATION, LLC	1/8+	957	29	NA	NA	NA	NA	NA	NA	NA
10*21428	L	5-73-16 1	FRANCIS R SMITH AND ANNA M SMITH	TH EXPLORATION, LLC	1/8+	957	37	NA	NA	NA	NA	NA		
					- <u>-</u>								NA	NA
10*21434	н	5-23-16.1	CATHERINE HUMMEL	TH EXPLORATION, LLC	1/8+	957	33	NA	NA	NA	NA	NA	NA	NA

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10*21451			RICHARD RICH AND KAREN RICH	TH EXPLORATION, LLC	1/8+	954	254	NA	NA	NA	O. JIM	Catribro.	NA	NA
10*21452	н	5-23-16.1	KIMBERLY COX	TH EXPLORATION, LLC	1/8+	954	262	NA	NA	NA	NA UNIC	NA	NA	NA
10*21457	н	5-23-16.1	WARREN L COULTER AND ROSLINA A COULTER	TH EXPLORATION, LLC	1/8+	954	249	NA	NA	NA	NA	NA	NA	NA
10*21458	н	5-23-16.1	HUSTON A SMITH JR AND ANN C SMITH	TH EXPLORATION, LLC	1/8+	957	45	NA	NA	NA	NA	NA	NA	NA
10*21459	н	5-23-16.1	JAMES L CHURCH	TH EXPLORATION, LLC	1/8+	957	41	NA	NA	NA	NA	NA	NA	NA
10*21498	н	5-23-16.1	MABEL SHILLINGBURG AND CLIFFORD SHILLINGBURG	TH EXPLORATION, LLC	1/8+	954	258	NA	NA	NA	NA	NA	NA	NA
10*21500	н	5-23-16.1	MATTHEW COULTER AND SIMONE COULTER	TH EXPLORATION, LLC	1/8+	954	245	NA	NA	NA	NA	NA	NA	NA
10*21501	н	5-23-16.1	EUGENIA E HOUSER	TH EXPLORATION, LLC	1/8+	954	241	NA	NA	NA	NA	NA	NA	NA
10*21502	н	5-23-16.1	DEBRA MURIN	TH EXPLORATION, LLC	1/8+	954	237	NA	NA	NA	NA	NA	NA	NA
10*21503	<u>н</u>	5-23-16.1	DARLENE M DAVIS	TH EXPLORATION, LLC	1/8+	954	233	NA	NA	NA	NA	NA	NA	NA
10*21562	<u>н</u>	5-23-16.1	MARY ETTA TAYLOR AND GARY W TAYLOR	TH EXPLORATION, LLC	1/8+	958	414	NA	NA	NA	NA	NA	NA	NA
10*21563	н	5-23-16.1	DAVID R TAYLOR AND MARIA TAYLOR	TH EXPLORATION, LLC	1/8+	958	422	NA	NA	NA	NA	NA	NA	NA
10*21565	н	5-23-16.1	KORENE SUE LANTZ	TH EXPLORATION, LLC	1/8+	957	462	NA	NA	NA	NA	NA	NA	NA
10*21566	н	5-23-16.1	HERBERT M TAYLOR AND LENORA E TAYLOR	TH EXPLORATION, LLC	1/8+	958	418	NA	NA	NA	NA	NA	NA	NA

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		1												
10*21615	н	5-23-16.1	GARY PARSONS AND JOANN J PARSONS	TH EXPLORATION, LLC	1/8+	959	347	NA	NA	NA		NA	NA	NA
10*21626		5.22.16.1	CLARENCE RANDALL EMERY AND PAULA JEAN EMERY	TH EXPLORATION, LLC	1/8+	958	344	NA						
10 21020		5-25-10.1			1/01		244							
10*21631	н	5-23-16.1	FAYE CAMPBELL	TH EXPLORATION, LLC	1/8+	959	343	NA						
10°21632	н	5-23-16.1	JOHN ARLES EMERY	TH EXPLORATION, LLC	1/8+	959	339	NA	NA	NA	NA	NA		NA
10*21655	1.	5-72-16 1	STANLEY GUSTELY	TH EXPLORATION, LLC	1/8+	959	335	NA						
10 21055	<u> "</u>	5-23-10.1			1/07									
10*21656	н	5-23-16.1	JOHN OBLOY AND JANET & OBLOY	TH EXPLORATION, LLC	1/8+	959	331	NA						
			RONALD J SALKOVICK JR & SANDRA											
10*21657	н	5-23-16.1	SALKOVICK	TH EXPLORATION, LLC	1/8+	958	373	NA						
10*21774		5-23-16.1	JOYCE KAY BURTON AND SAMUEL C	TH EXPLORATION, LLC	1/8+	957	467	NA						
10 21//4	<u> "</u>	5-23-10.1		In Exclored on, Lee	1/07		407							
								-						
10*21813	н	5-23-16.1	STUART WHITE AND BETTY WHITE	TH EXPLORATION, LLC	1/8+	958	352	NA						
10*21815	н	5-23-16.1	JAMES NEAL EMERY AND RENEE R EMERY	TH EXPLORATION, LLC	1/8+	958	348	NA						
10*21816	L	5-23-16 1	CINDY GREEN AND LARRY GREEN	TH EXPLORATION, LLC	1/8+	958	356	NA						
20 22020	1													
			MARY LOU HLINKA AND RICHARD G HLINKA											1
10*21817	н	5-23-16.1		TH EXPLORATION, LLC	1/8+	959	514	NA						
10*21819	н_	5-23-16.1	MARY CATHERINE THOMS OTT	TH EXPLORATION, LLC	1/8+	958	360	NA						
10*21820	L	5.23.161	MARION DAVID AND JANICE L OTT	TH EXPLORATION, LLC	1/8+	959	506	NA						
10 21020		17.52.10'1	PRESIDENT DATE AND AND AND CELOT	I'M EAPLORATION, LLC	1/87	303	300				<u></u>			

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*21832			MARQUITA CLYBURN	TH EXPLORATION, LLC	1/8+	959	510	NA	NA	NA	Assignment North	Nast Terotection	NA	NA
												evente Interite		NA
10*21948	н	5-23-16.1	BARBARA H COAKLEY	TH EXPLORATION, LLC	1/8+	960	66	NA	NA		NA GA			NA
10*21949	н	5-23-16.1	ROBIN ADAIR GUMP AND LOUIS M GUMP	TH EXPLORATION, LLC	1/8+	960	70	NA	NA	NA	NA	NA	NA	NA
10*21950	н	5-23-16.1	JUDITH A TAYLOR	TH EXPLORATION, LLC	1/8+	960	74	NA	NA	NA	NA	NA	NA	NA
10*21951	н	5-23-16.1	CHARLES DOUGLAS LANE	TH EXPLORATION, LLC	1/8+	960	77	NA	NA	NA	NA	NA	NA	NA
10*21994	н	5-23-16.1	MELISSA L DARROW	TH EXPLORATION, LLC	1/8+	954	328	NA	NA	NA	NA	NA	NA	NA
10*22013	н	5-23-16.1	CHARLES J KNOX	TH EXPLORATION, LLC	1/8+	966	112	NA	NA	NA	NA	NA	NA	NA
10*22014	н	5-23-16.1	SHERMAN E KNOX JR	TH EXPLORATION, LLC	1/8+	966	108	NA	NA	NA	NA	NA	NA	NA
10*22018	н	5-23-16.1	KATHLEEN ROBERTSON	TH EXPLORATION, LLC	1/8+	960	539	NA	NA	NA	NA	NA	NA	NA
10*22026	н	5-23-16.1	KEVIN D CHURCH	TH EXPLORATION, LLC	1/8+	957	49	NA	NA	NA	NA	NA	NA	NA
10°22027	н	5-23-16.1	STEPHEN C EMERY AND CATHY J EMERY	TH EXPLORATION, LLC	1/8+	954	310	NA	NA	NA	NA	NA	NA	NA
10*22093	н	5-23-16.1	TODD LEARN AND KENDA LEARN	TH EXPLORATION, LLC	1/8+	954	314	NA	NA	NA	NA	NA	NA	NA
10*22102	н	5-23-16.1	BONNIE LOU GRUBER	TH EXPLORATION, LLC	1/8+	954	302	NA	NA	NA	NA	NA	NA	NA
10*22128	H	5-23-16 1	BETTY PYSELL	TH EXPLORATION, LLC	1/8+	96 1	433	NA	NA	NA	NA	NA	NA	NA

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Bock	Page	Assignment	Assignment	Assignment	Assignments	Assignment	Assignment	Assignment
10*22142			CHERYL HILL	TH EXPLORATION, LLC	1/8+	961	423	NA	NA	NA	Assignation Office	and the state of t	NA	NA
10*22143	н	5-23-16.1	WANDA J AND GERALD R RIDING	TH EXPLORATION, LLC	1/8+	961	426	NA	NA	NA	NA JO WNO NA ENVIOR	NA	NA	NA
10*22144	н	5-23-16.1	VICKY AND DENNIS STRAUSS	TH EXPLORATION, LLC	1/8+	961	429	NA	NA	NA	NA	NA	NA	NA
10*22165	н	5-23-16.1	DEBRA L LYSESKI AND GERALD A LYSESKI	TH EXPLORATION, LLC	1/8+	954	306	NA	NA	NA	NA	NA	NA	NA
10*22178	н	5-23-16.1	ANGELA AND WILLIAM R HENTHORN	TH EXPLORATION, LLC	1/8+	949	196	NA	NA	NA	NA	NA	NA	NA
10°22180	н	5-23-16.1	ANTHONY M AND CHANDRA TAYLOR	TH EXPLORATION, LLC	1/8+	949	186	NA	NA	NA	NA	NA	NA	NA
10*22181	н	5-23-16.1	BRIAN S AND CAROLYN SUE TAYLOR	TH EXPLORATION, LLC	1/8+	949	191	NA	NA	NA	NA	NA	NA	NA
10*22287	н	5-23-16.1	MISSY AND MICHAEL JONES	TH EXPLORATION, LLC	1/8+	962	195	NA	NA	NA	NA	NA	NA	NA
10*22332	н	5-23-16.1	DORIS WEST AND ROBERT WEST	TH EXPLORATION, LLC	1/8+	962	542	NA	NA	NA	NA	NA	NA	NA
10*22339	н	5-23-16.1	BETTY L LOY	TH EXPLORATION, LLC	1/8+	963	392	NA	NA	NA	NA	NA	NA	NA
10*22354	н	5-23-16.1	LORETTA M AND DAVID DOUGHERTY	TH EXPLORATION, LLC	1/8+	964	516	NA	NA	NA	NA	NA	NA	NA
10*22436	н	5-23-16.1	TESSEAN FAMILY REVOCABLE TRUST	TH EXPLORATION, LLC	1/8+	963	626	NA	NA	NA	NA	NA	NA	NA
10*22437	н	5-23-16.1	SHERRY L AND DANIEL IMRIE	TH EXPLORATION, LLC	1/8+	963	631	NA	NA	NA	NA	NA	NA	NA
10*22440	н	5-23-16.1	EUGENE FANKHAUSER	TH EXPLORATION, LLC	1/8+	963	153	NA	NA	NA	NA	NA	NA	NA

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10*22443			GATHA CHAMBERS	TH EXPLORATION, LLC	1/8+	963	622	NA	NA	NA	NA JUN	entrient of the section	NA	NA
10*22450	н	5-23-16.1	JUDY ANN MERCER	TH EXPLORATION, LLC	1/8+	963	634	NA	NA	NA	NA ENVIRON	NA	NA	NA
10*22503	н_	5-23-16.1	KENNETH R AND DONNA K SHAW	TH EXPLORATION, LLC	1/8+	966	518	NA	NA	NA	NA	NA	NA	NA
10*22504	н	5-23-16.1		TH EXPLORATION, LLC	1/8+	974	351	NA	NA	NA	NA	NA	NA	NA
10*22505	н	5-23-16.1	JAMES D AND DONNA K DRAKE	TH EXPLORATION, LLC	1/8+	964	425	NA	NA	NA	NA	NA	NA	NA
10*22509	н_	5-23-16.1	RANDY AND LINDA JO BERISFORD	TH EXPLORATION, LLC	1/8+	964	429	NA	NA	NA	NA	NA	NA	NA
10*22560	н	5-23-16.1	RONALD J KELLER	TH EXPLORATION, LLC	1/8+	965	485	NA	NA	NA	NA	NA	NA	NA
10*22592	н	5-23-16.1	RUSSELL W AND SUSAN ROGERSON	TH EXPLORATION, LLC	1/8+	966	119	NA	NA	NA	NA	NA	NA	NA
10*22593	н	5-23-16.1	RONALD E ROGERSON	TH EXPLORATION, LLC	1/8+	966	116	NA	NA	NA	NA	NA	NA	NA
10*22594	н	5-23-16.1	JAMES WADE	TH EXPLORATION, LLC	1/8+	965	481	NA	NA	NA	NA	NA	NA	NA
10*22609	н	5-23-16.1	KATHY JO CULLUM	TH EXPLORATION, LLC	1/8+	966	514	NA	NA	NA	NA	NA	NA	NA
10*22613	н	5-23-16.1	JEWEL L CAMPBELL	TH EXPLORATION, LLC	1/8+	966	510	NA	NA	NA	NA	NA	NA	NA
10*22644	н	5-23-16.1	RICHARD EUGENE KELLER	TH EXPLORATION, LLC	1/8+	968	214	NA	NA	NA	NA	NA	NA 21/41 Gastar Exploration	NA

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Bock	Page	Assignment	Assignment	Assignment	Asperiment	Assignment	Assignment	Assignment
10*14850			CLARENCE EMERY	GASTAR EXPLORATION USA, INC	1/8+	805	94	NA	NA	NA	NA Environmental	ent of tion	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14851	н	5-23-16.1	JOHN OBLOY	GASTAR EXPLORATION USA, INC	1/8+	806	262	NA	NA	NA	W Doenta. NA Environmenta.	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14852	н	5-23-16.1	JOHN A. EMERY	GASTAR EXPLORATION USA, INC	1/8+	806	259	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14854	н	5-23-16.1		GASTAR EXPLORATION USA, INC	1/8+	80 9	512	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14855	н	5-23-16.1	JAMES D. DRAKE	GASTAR EXPLORATION USA, INC	1/8+	808	445	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14856	н	5-23-16.1	GATHA CHAMBERS	GASTAR EXPLORATION USA, INC	1/8+	808	454	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14860	н	5-23-16.1	KATHLEEN ROBERTSON	GASTAR EXPLORATION USA, INC	1/8+	809	522	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14865			VICKY STRAUSS	GASTAR EXPLORATION USA, INC	1/8+	810	325	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
												NA	NA	NA
10*22779	н.	5-23-16.1	STEVEN WADE	TH EXPLORATION, LLC	1/8+	968	424	NA		NA		144		
10*22809	н	5-23-16.1	MARGARET AND WILLIAM MCMURRAY	TH EXPLORATION, LLC	1/8+	972	54	NA	NA	NA	NA	NA	NA	NA
10*22811	н	5-23-16.1	ROBERT E ROGERSON	TH EXPLORATION, LLC	1/8+	972	64	NA	NA	NA	NA	NA	NA	NA
10*22812	н	5-23-16.1	JOSEPH F GOBLOWSKY	TH EXPLORATION, LLC	1/8+	968	428	NA	NA	NA	NA	NA	NA	NA
10*22813	н	5-23-16.1	WANDA M BLAKE	TH EXPLORATION, LLC	1/8+	974	171	NA	NA	NA	NA	NA	NA	NA
10*22861	н	5-23-16.1	LAURINE C AND EDGAR A CURTIS	TH EXPLORATION, LLC	1/8+	976	147	NA	NA	NA	NA	NA	NA	NA

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D*14673			CAROL CLEMENS	GASTAR EXPLORATION USA, INC	1/8+	787	615	NA	NA	Offi	AEOFINED Gas Se of Oil Assignment Se of Oil Assignment AUN 05 2018 AUN Department of NV Department of NV Department of Protection	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
0*14675			CHRISTOPHER HENRY	GASTAR EXPLORATION USA, INC	1/8+	787	592	NA	NA	NA	WN Departin Prote-	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
0*14676		5-23-15	FLOYD ARNOLD HENRY	GASTAR EXPLORATION USA, INC	1/8+	787	625	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc to TH Exploration II, LLC
.0*14678		5-23-15	TIMOTHY HENRY	GASTAR EXPLORATION USA, INC	1/8+	787	568	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, inc. to TH Exploration II, LLC
0*14681		5-23-15	ELZIE HENRY	GASTAR EXPLORATION USA, INC	1/8+	789	573	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14683		5-23-15	LAWRENCE EDGAR HENRY JR.	GASTAR EXPLORATION USA, INC	1/8+	792	106	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
_				GASTAR EXPLORATION USA, INC	1/8+	794	481	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14684		5-23-15	VERNA HALL							NA		NA	NA	NA
10*18343		5-23-15	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79		NA					
10*18682		5-23-15	EUGENE RICHARD HENRY SR	TH EXPLORATION, LLC	1/8+	936	131	NA	NA	NA	NA	NA	NA	
10*18948	<u> </u>	5-23-15	ALICIA A HENRY	TH EXPLORATION, LLC	1/8+	940	127	NA	NA	NA	NA	NA	NA	NA
10*18949		5-23-15	CAROLYN WHITE	TH EXPLORATION, LLC	1/8+	940	119	NA	NA	NA	NA	NA	NA	NA
10*19427	1	5-23-15	BOBBY SUE BEDWAY	TH EXPLORATION, LLC	1/8+	940	260	NA	NA	NA	NA	NA	NA	NA
10*19495	<u> </u>	5-23-15	DAVID HENRY	TH EXPLORATION, LLC	1/8+	941	643	NA	NA	NA	NA	NA	NA	NA
10*19496		5-23-15	TAMMY HENRY	TH EXPLORATION, LLC	1/8+	941	641	NA	NA	NA	NA	NA	NA	NA

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0*19497	1	5-23-15	RONALD HENRY	TH EXPLORATION, LLC	1/8+	941	637	NA	NA		NA, 05 LT	NA	NA	NA
0410409		5-23-15	DONALD HENRY AND EVA HENRY	TH EXPLORATION, LLC	1/8+	941	639	NA	NA	NA	WN Department of the protection	NA	NA	NA
0*19498		3-23-13									wironit			
0*19644		5-23-15	ALEXIS HENRY, A MINOR GUARDIAN AD LITEM DAVID C WHITE ESQ	TH EXPLORATION, LLC	1/8+	944	114	NA	NA	NA	NA	NA	NA	NA
	<u> </u>													
l0*19647	1	5-23-15	HOWARD L HENRY AND SYLVIA L HENRY	TH EXPLORATION, LLC	1/8+	944	118	NA	NA	NA	NA	NA	NA	NA
			LAWRENCE MICHAEL HENRY	TH EXPLORATION, LLC	1/8+	944	97	NA	NA	NA	NA	NA	NA	
10*19663	+ '	5-23-15		IN EXPLORATION, LLC	1/84		3/							
	1													
10*19920	1	5-23-15	KENNETH HENRY	TH EXPLORATION, LLC	1/8+	945	438	NA	NA	NA	NA	NA	NA	NA
10*21996	<u> </u>	5-23-15	VERNA HALL	TH EXPLORATION, LLC	1/8+	953	538	NA	NA	NA	NA	INA	NA	NA
														36/9 Gastar Exploration, Inc
10*14665	<u> '</u>	5-23-15	DOROTHY TEDROW	GASTAR EXPLORATION USA, INC	1/8+	781	539	NA	NA	NA		NA	Exploration, Inc	to TH Exploration II, LLC
														36/9 Gastar Exploration, In
10*14669	<u> </u>	5-23-15	ROBERT HENRY JR	GASTAR EXPLORATION USA, INC	1/8+	787	621	NA			NA	NA	Exploration, Inc	to TH Exploration II, LLC
10*18343		5-23-14	DOMINION ENERGY TRANSMISSION INC	TH EXPLORATION, LLC	1/8+	936	79	NA	NA	NA	NA	NA	NA	NA
											29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties	33/110 Chesapeake Appalachia, LLC to SWN	41/238 Statoil USA Onshore Properties Inc to	41/256 SWN Production Company, LLC to TH
10*17189	ĸ	5-23-9.2	ROBERT J HENRY	CHESAPEAKE APPALACHIA LLC	1/8+	716	197	NA	NA	NA	Inc	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
											29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties	Appalachia, LLC to SWN		41/256 SWN Production Company, LLC to TH
10*17189	L	5-23-9.4	ROBERT J HENRY	CHESAPEAKE APPALACHIA LLC	1/8+	716	197	NA		NA	liuc	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
					1/0.		107		NA	NA	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17189	<u> </u>	5-23-9.1	ROBERT J HENRY	CHESAPEAKE APPALACHIA LLC	1/8+	716	197	NA				roution company, LLC	In capioration, LC	Exploration, LLC
														26/0 Gastar Fundametics
10*14969		5-23-12	REBECCA S WORD	GASTAR EXPLORATION INC	1/8+	872	219	NA	NA	NA	NA	NA		36/9 Gastar Exploration, Inc to TH Exploration II, LLC



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										Enviro	h			
					1					L.				36/9 Gastar Exploration, Inc.
10*14970	N	5-23-12	GRACE EXLINE	GASTAR EXPLORATION INC	1/8+	872	623	NA	NA	NA	NA	NA	NA	to TH Exploration II, LLC
									27/311 Gastar Exploration USA, Inc and					
					1 1				Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
									Appalachia, LLC and Statoil USA	LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN		Company, LLC to TH
10*17195	N	5-23-12	PATRICIA HARTMAN	GASTAR EXPLORATION USA, INC	1/8+	695	317	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
l									27/311 Gastar Exploration USA, Inc and			to (coa chim cusha	41 /000 0000	
	i i	ĺ			1				Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia, LLC to SWN Production	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoll USA	41/256 SWN Production
	1 1								Appalachia, LLC and Statoil USA Onshore Properties Inc	Company, LLC	Properties Inc to SWN Exchange Title Holder LLC	Titleholder LLC to SWN Production Company, LLC		Company, LLC to TH Exploration, LLC
10*17196	N	5-23-12	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA, INC	1/8+	695	311	to Atinum Marcellus I, LLC		Company, LLC	The Holder LLC	Production Company, LLC	TH Exploration, LLC	exploration, LLC
									27/311 Gastar Exploration USA, Inc and			10/COA CHAN Fuchanas	41 /000 00-0-10 0004	
									Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoll USA Onshore	19/624 SWN Exchange	41/238 Statoll USA	41/256 SWN Production
						60F			Appalachia, LLC and Statoil USA Onshore Properties Inc	LLC to SWN Production Company, LLC	Properties Inc to SWN Exchange Title Holder LLC	Titleholder LLC to SWN Production Company, LLC	Onshore Properties Inc to TH Exploration, LLC	Company, LLC to TH Exploration, LLC
10*17197	N	5-23-12	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA, INC	1/8+	695	313	to Atlnum Marceilus I, LLC		company, ccc		Production Company, EC	TH Exploration, Lee	Exploration, LLC
1									27/311 Gastar Exploration USA, Inc and	22/110 Charansaka Annalaskia	33/434 Statell USA Orchard	10/674 SWN Evelope	41/239 Statel U.S.A	AT JOEC CWIN Dead unter
	1			1				22/252 Castar Evaluation 1154 too	Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia, LLC to SWN Production	33/424 Statoil USA Onshore Properties Inc to SWN Exchange	19/624 SWN Exchange Titleholder LLC to SWN	41/238 Statoil USA	41/256 SWN Production
1	1				1/0.	<i></i>		23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	Appalachia, LLC and Statoil USA Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	Onshore Properties Inc to TH Exploration, LLC	Company, LLC to TH Exploration, LLC
10*17199	N	5-23-12	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA, INC	1/8+	695	315	to Athum Marcelus I, LLC	·	Company, LCC		Production Company, EC	TH Exploration, LEC	Exploration, LLC
1	1								27/311 Gastar Exploration USA, Inc and		22/424 (22.2.1)	10/C24 Cityle Cushanan	41 /220 64-4-11 1164	
				1				12/252 Contra Evaluation LIEA Inc	Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia, LLC to SWN Production	33/424 Statoil USA Onshore Properties Inc to SWN Exchange	19/624 SWN Exchange Titleholder LLC to SWN	41/238 Statoil USA	41/256 SWN Production
						607		23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	Onshore Properties Inc to TH Exploration, LLC	Company, LLC to TH Exploration, LLC
10*17200	N	5-23-12	STEPHANIE L. HALL	GASTAR EXPLORATION USA, INC	1/8+	697	156	to Attributi Warcends I, EEC		company, Ecc	nue noider LLC	Frouderion company, Lee	Th Exploration, LCC	Exploration, ECC
1	1								27/311 Gastar Exploration USA, Inc and	22/110 Channaka Asasiashia		10/624 SWAI Suchanne	43 /030 60000/11/064	
	1	1						23/353 Gastar Exploration USA Inc	Atlnum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia, LLC to SWN Production	33/424 Statoil USA Onshore Properties Inc to SWN Exchange	19/624 SWN Exchange Titleholder LLC to SWN	41/238 Statoil USA Onshore Properties Inc to	41/256 SWN Production Company, LLC to TH
						607	205	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
10*17201	N	5-23-12	DENISE A GALE	GASTAR EXPLORATION USA, INC	1/8+	6 9 7	395	to Athum Marcenus I, LLC		Company, EEC	The Holder LEC	Froduction Company, 200	TH CAPIOIALION, LCC	Exploration, etc
									27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
								23/353 Gastar Exploration USA Inc		LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Onshore Properties Inc to	Company, LLC to TH
l.					1/8+	697	385	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
10*17202	N	5-23-12	JANE GALE	GASTAR EXPLORATION USA, INC	1/8+	697	365	to Attribute Wartenins I, LEC		company, ccc		Troduction company, Lee		
ł									27/311 Gastar Exploration USA, Inc and	23/110 Charanaska Appalachia	33/424 Statoll USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
								23/353 Gastar Exploration USA Inc	Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia, LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN		Company, LLC to TH
	1		DEBORAH K. KLIMASZEWSKI FRANK	CASTAR SYRLODATION USA INC	1/0.	697	389	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
10*17207	N	5-23-12	KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA, INC	1/8+	097	367		27/311 Gastar Exploration USA, Inc and			i Tousetten company, Lee		
									Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
								23/353 Gastar Exploration USA Inc		LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN		Company, LLC to TH
			DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA, INC	1/8+	697	158	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
10*17212	N	5-23-12	DARRELL NEWLAND LIDIA NEWDAND	GASTAR EXPLORATION 034, INC	1/0+	037	130		27/311 Gastar Exploration USA, Inc and			·····		
									Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoll USA	41/256 SWN Production
								23/353 Gastar Exploration USA Inc	Appalachia, LLC and Statoil USA	LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Onshore Properties Inc to	Company, LLC to TH
		5-23-12	CAROL DEEN GARDNER	GASTAR EXPLORATION USA, INC	1/8+	697	154	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
10*17213		5-25-12	CAROE DEEN GARDAEN	dasina ca contaiton ost, inc					· · · · · ·			h h		. ,
1														
10*18541	N	5-23-12	PATRICK P MCHENRY	TH EXPLORATION, LLC	1/8+	933	649	NA	NA	NA	NA	NA	NA	NA
10 10341	+	-23-12								İ.		·····		
1		1			1				1					
	1										1			
10*18818		5-23-12	LUCILLE R MCHENRY	TH EXPLORATION, LLC	1/8+	937	624	NA	NA	NA	INA	NA	NA	NA
10.19919		3-23-12												
1		1	1		1						1		,	
	1													
		5-23-12	CARL M MCHENRY AND PAMELA MCHENR		1/8+	944	469	NA	NA	NA	NA	NA	NA	NA
10*19732	N	13-23-12	Grane in another in the trained interaction		1			····	•	······				

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Bcok	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
10*19996			CHARLES D WOOD	TH EXPLORATION, LLC	1/8+	947	589	NA	NA	NA S	VN Department of protection	NA	NA	NA
10*21073	N	5-23-12	ARDITH R ROSE AND TOMMY E ROSE	TH EXPLORATION, LLC	1/8+	951	608	NA	NA	E NA	NA	NA	NA	NA
10*21074	N	5-23-12	MALCOLM E WOOD AND JOAN J WOOD	TH EXPLORATION, LLC	1/8+	951	610	NA	NA	NA	NA	NA	NA	NA
10*21174	N	5-23-12	SHAWN M WOOD	TH EXPLORATION, LLC	1/8+	952	190	NA	NA	NA	NA	NA	NA	NA
10*21944	N	5-23-12	JILL A BECK	TH EXPLORATION, LLC	1/8+	960	101	NA	NA	NA	NA	NA	NA	NA
10*22434	N	5-23-12	EDWIN NELSON WOOD	TH EXPLORATION, LLC	1/8+	963	637	NA	NA	NA	NA	NA	NA	NA
10*22585	N	5-23-12	CYNTHIA L CHICK	TH EXPLORATION, LLC	1/8+	966	102	NA	NA	NA	NA	NA	NA	NA
10*14785	0	5-26-11	DAVID W. STRAUCH	GASTAR EXPLORATION USA, INC	1/8+	799	64	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14786	0	5-26-11	TWILA ORA WHIPKEY	GASTAR EXPLORATION USA, INC	1/8+	799	61	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14792	0	5-26-11	тімотну уоно	GASTAR EXPLORATION USA, INC	1/8+	799	536	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14797	o	5-26-11	ORVILLE YOUNG	GASTAR EXPLORATION USA, INC	1/8+	800	598	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14808	0	5-26-11	DANA MILICIA HUMPHREYS	GASTAR EXPLORATION USA, INC	1/8+	809	552	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration 11, LLC
10*14809	0	5-26-11	DEWEY A. MILICIA	GASTAR EXPLORATION USA, INC	1/8+	809	549	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14810	0	5-26-11	NICOLETTA MILICIA BLOODWORTH	GASTAR EXPLORATION USA, INC	1/8+	809	546	NA	NA	NA	NA	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC

WW-6A	\1 Sı	uppleı	nent							- 15 C	ECEIVED Gas of Oil and Gas	O	perator's Well	No. <u>Evad - 5HN</u>
Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment U	Assignment	Assignment	Assignment	Assignment
10*14812			DENISE ANN GALE	GASTAR EXPLORATION USA, INC	1/8+	815	224	NA	NA	NA	UN 0 Fasterhient UN 0 Fasterhient UN Department of WN Departmental Protection	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14813	0	5-26-11	DEBRA JANE GALE	GASTAR EXPLORATION USA, INC	1/8+	818	568	NA	NA	NA E		NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14814	•	5-26-11	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	537	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14815	0	5-26-11	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	535	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14822	0	5-26-11	ONWARD E BURGE TRUST	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14823	0	5-26-11	SARAH L BURGE TRUST	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14969	0	5-26-11	REBECCA S WORD	GASTAR EXPLORATION INC	1/8+	872	219	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14970	0	5-26-11	GRACE EXLINE	GASTAR EXPLORATION INC	1/8+	872	623	NA	NA 27/311 Gastar Exploration USA, Inc and	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*17195	0	5-26-11	PATRICIA HARTMAN	GASTAR EXPLORATION USA, INC	1/8+	695	317	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17196	0	5-26-11	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA, INC	1/8+	695	311	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17197	0	5-26-11	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA, INC	1/8+	695	313	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17200	0	5-26-11	STEPHANIE L. HALL	GASTAR EXPLORATION USA, INC	1/8+	697	156	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc		33/424 Statoll USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17201	0	5-26-11	DENISE A GALE	GASTAR EXPLORATION USA, INC	1/8+	697	395	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17202		5-26-11		GASTAR EXPLORATION USA, INC	1/8+	697	385	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chosapeake Appalachia, LLC and Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoll USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
									27/311 Gastar Exploration USA, Inc and					
1	.								Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoll USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
	.		DEBORAH K. KLIMASZEWSKI FRANK						Appalachia, LLC and Statoil USA	LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Onshore Properties Inc to	Company, LLC to TH
10*17207	0	5-26-11	KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA, INC	1/8+	697	389	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
									27/311 Gastar Exploration USA, Inc and					
	.								Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
	, I							23/353 Gastar Exploration USA Inc	Appalachia, LLC and Statoil USA	LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Onshore Properties Inc to	Company, LLC to TH
10*17212	0	5-26-11	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA, INC	1/8+	697	158		Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
10-1/212	Hب	3-20-11							27/311 Gastar Exploration USA, Inc and					
	, I								Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
	1							23/353 Gastar Exploration USA Inc		LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Onshore Properties Inc to	Company, LLC to TH
	1 - 1			GASTAR EXPLORATION USA, INC	1/8+	697	154			Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
10*17213	0	5-26-11	CAROL DEEN GARDNER	GASTAR EXPLORATION USA, INC	1/07		134	to Automit Marcellas I, Ecc						
	1 1	1			1 1									1
	1 1										1			
	1 1													
10*17822	0	5-26-11	ANTOINE E GERAUD	TH EXPLORATION, LLC	1/8+	943	530	NA	NA	NA	NA	NA	NA	NA
	1 1													
	1 1											ENEL Gas		
10*18114	1 0 '	5-26-11	DARRELL NEWLAND	TH EXPLORATION, LLC	1/8+	927	66	NA	NA	NA	NA	PCE and	NA	NA
												CENED Gas		
	1 1				! I						Offic Offic	$\sigma/\Omega_{\rm C} > 1$		
	1 7	1	DONALD R NEWLAND AND SUZANNE		1 1						Ũ	. 02 6		1
10*18115	0	5-26-11		TH EXPLORATION, LLC	1/8+	927	73	NA	NA	NA	NA	in Mu	NA	NA
10-18112	<u> </u>	5-20-11										WV Department of WV Departmental Protection	φ ρ	
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	1.'	L			1/0.	070	60	NA	NA	NA	NA	WYONTHU	NA	NA
10*18275		5-26-11	BETTY JEAN NEELY	TH EXPLORATION, LLC	1/8+	929	80		NA	114	E	Altern -		
	1 '	ļ			1 1						-			
	1 '												1	
	1 '		MARY LOU WILSON AND STANLEY D											
10*18366	0	5-26-11	WILSON	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA
					1 1									
	1 '				1 1									
	1				1									
10*18369	0	5-26-11	CRAIG ALAN YOHO AND DONNA M YOHO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA
1														
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10*18370	0	5-26-11	SAMUEL D YOHO	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA
	Ť	1		1										
	1		1											
	1		DAVID N DEVICK TRUSTEE OF THE TONI JO									1		
10*18379		5-26-11	MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA
10.103/3	⊢⊸	15-20-11			-,-:					-		1	İ	i
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			DATENEY & MOUSHINY	TH FYRIORATION ISC	1/8+	933	649	NA	NA	NA	NA	NA	NA	NA
10*18541	+	5-26-11	PATRICK P MCHENRY	TH EXPLORATION, LLC	1/8+	- 355	049							
1	1		1					1					1	
	1	1					1	1						
	1	1						1		1				
10*18818	_0	5-26-11	LUCILLE R MCHENRY	TH EXPLORATION, LLC	1/8+	937	624	NA	NA	NA	NA	NA	NA	NA
								1						
	1		1		1			1			1		1	
	1		1											1
10*19486	0	5-26-11	BARBARA ANN MAYNARD	TH EXPLORATION, LLC	1/8+	941	229	NA	NA	NA	NA	NA	NA	NA
.0 19460	ᅳ	12-20-11	Terrane and the second se		L				· · · · · · · · · · · · · · · · · · ·				•	• • • • • • • • • • • • • • • • • • • •

ase No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment Q	Assignment	Assignment	Assignment
				TH EXPLORATION, LLC	1/8+	942		NA	NA	NA	RECEIVED Office of Assignments MAJUN 05 2010	S	NA	NA
9540	°	5-26-11	ERICA M MASON	TH EAPLORATION, LC		3-12					W Department of W Department of W Departmental Protection			
9543	0	5-26-11	ROBERT I BONAR SR	TH EXPLORATION, LLC	1/8+	942	61	NA	NA	NA	N£"	NA	NA	NA
19640	0	5-26-11	MARGARET F RICHMOND	TH EXPLORATION, LLC	1/8+	944	120	NA	NA	NA	NA	NA	NA	NA
19641		5-26-11	BRADFORD D LOWERY & DEBORAH BRADFORD	TH EXPLORATION, LLC	1/8+	944	122	NA	NA	NA	NA	NA	NA	NA
19041	Ť	5-20-11												
19650	0	5-26-11	CLAUDIA LOWERY MALLOY	TH EXPLORATION, LLC	1/8+	944	99	NA	NA	NA	NA	NA	NA	NA
19652	0	5-26-11	JACK R HAMMERS	TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA
19657		5-26-11	JANET LEE SPARKS	TH EXPLORATION, LLC	1/8+	944	111	NA	NA	NA	NA	NA	NA	NA
15057	†°													
19662	•	5-26-11	CHESTNUT HOLDINGS INC	TH EXPLORATION, LLC	1/8+	949	311	NA	NA	NA	NA	NA	NA	NA
•19732	0	5-26-11	CARL M MCHENRY AND PAMELA MCHENRY	TH EXPLORATION, LLC	1/8+	944	469	NA	NA	NA	NA	NA	NA	NA
				TH EXPLORATION, LLC	1/8+	945	442	NA	NA	NA	NA	NA	NA	NA
*19858	<u> </u>	5-26-11		TH EARLONATION, LLC										
•19903		5-26-11	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA	NA	NA	NA	NA	NA
*19996	0	5-26-11	CHARLES D WOOD	TH EXPLORATION, LLC	1/8+	947	589	NA	NA	NA	NA	NA	NA	NA
•21073	0	5-26-11	ARDITH R ROSE AND TOMMY E ROSE	TH EXPLORATION, LLC	1/8+	951	608	NA	NA	NA	NA	NA	NA	NA
0*21074			MALCOLM E WOOD AND JOAN J WOOD	TH EXPLORATION, LLC	1/8+	951	610	NA	NA	NA	NA	NA	NA	NA

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Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Chice Of Assignment 18	Assignment	Assignment	Assignment
											RECEIVED Gas Office of Assignment 18 NA JUN 0 5 (14) NA JUN Department of WV Department of NA Environmental Protect		1	
											IUN	ion		
0*21174	0	5-26-11	SHAWN M WOOD	TH EXPLORATION, LLC	1/8+	952	190	NA	NA	NA	NA SOBULITICOLEU	NA	NA	NA
									}		WV mentai			
			DAPHNE HUFFMAN AND CHARLES								Environ			
0*21419	0	5-26-11	HUFFMAN	TH EXPLORATION, LLC	1/8+	957	59	NA	NA	NA	NA	NA	NA	NA
0°21431	0	5-26-11	GARY WAYNE ZESIGER & VICKIE ZESIGER	TH EXPLORATION, LLC	1/8+	957	57	NA	NA	NA	NA	NA	NA	NA
					1						1			
0°21436		5-26-11	CECILLA D NEWLAND	TH EXPLORATION, LLC	1/8+	957	55	NA	NA	NA	NA	NA	NA	NA
	Ť													
		1												
0*21439		5.26.11	M VIRGINIA & EDWARD C MARSH	TH EXPLORATION, LLC	1/8+	957	53	NA	NA	NA	NA	NA	NA	NA
0 21435	Ť	3-20-11												
			KIMBERLY S DENNY AND JAMES E DENNY	TH EXPLORATION, LLC	1/8+	957	244	NA	NA	NA	NA	NA	NA	NA
0*21469	1.0	5-26-11	KIMBERET S DERNIT AND JAMES E DERNI	TH EAPLONATION, LLC	1/87		244							
											NA	NA	NA	NA
0*21471	<u> </u>	5-26-11	RICHARD ROSS WILSON	TH EXPLORATION, LLC	1/8+	960	190	NA	INA					
														[
			ROBERT CRAIG MONTGOMERY AND											
0*21620	0	5-26-11	CYNTHIA R MONTGOMERY	TH EXPLORATION, LLC	1/8+	959	496	NA	NA	NA	NA	NA	NA	NA
0*21621	- •	5-26-11	MARILYN NOEL	TH EXPLORATION, LLC	1/8+	959	494	NA	NA	NA	NA	NA	NA	NA
			CLARENCE RICHARD ZESIGER & MARY								1			
0*21658	0	5-26-11	ZESIGER	TH EXPLORATION, LLC	1/8+	959	490	NA	NA	NA	NA	NA	NA	NA
											1			
l0*21659	0	5-26-11	DEBORAH BLOUGH	TH EXPLORATION, LLC	1/8+	958	392	NA	NA	NA	NA	NA	NA	NA
10*21660	0	5-26-11	PAMELA L DRAZIC AND JEFFREY DRAZIC	TH EXPLORATION, LLC	1/8+	958	390	NA	NA	NA	NA	NA	NA	NA
]						
10*21830	0	5-26-11	MARISSA MASON	TH EXPLORATION, LLC	1/8+	960	200	NA	NA	NA	NA	NA	NA	NA
10°21831			MATTHEW MASON	TH EXPLORATION, LLC	1/8+	966	122	NA	NA	NA	NA	NA	NA	NA

WW-6A	1 Su	uppler	nent							-FC	ENED Gas	0	perator's We	l No. <u>Evad - 5H</u>
Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	risenment	Assignment	Assignment	Assignment
			GEORGE DANIEL KRUGER	TH EXPLORATION, LLC	1/8+	960	204	NA	NA	Office JUN	EVED Gas Calibration NA NA NA NA Department of NO beatment of NO beatment of NO beatment of NO beatment of NA NA NA NA	NA	NA	NA
10°21834										N Envi	N Deparat Pro-			
10°21944	0	5-26-11	JILL A BECK	TH EXPLORATION, LLC	1/8+	960	101	NA	NA		NA			NA
10*21947	0	5-26-11	WALLACE LYNN WENDEL	TH EXPLORATION, LLC	1/8+	965	59	NA	NA	NA	NA	NA	NA	NA
10*22007	0	5-26-11	DEBORAH K KLIMASZEWSI AND FRANK KLIMASZEWSKI	TH EXPLORATION, LLC	1/8+	959	492	NA	NA	NA	NA	NA	NA	NA
10*22008	o	5-26-11		TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA
10*22025	0	5-26-11	MARK & MARY YOHO	TH EXPLORATION, LLC	1/8+	960	544	NA	NA	NA	NA	NA	NA	NA
10*22031	0	5-26-11	PHILLIP AND PATRICIA YOHO	TH EXPLORATION, LLC	1/8+	960	535	NA	NA	_NA	NA	NA	NA	NA
10122022			JOANNE E RAY	TH EXPLORATION, LLC	1/8+	960	537	NA	NA	NA	NA	NA	NA	NA
10*22032														
10*22106	0	5-26-11	BARRY RAY MOORE	TH EXPLORATION, LLC	1/8+	954	643	NA	NA	NA	NA	NA	NA	NA
10*22129	0	5-26-11	JANICE HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA	NA	NA	NA
10*22137	0	5-26-11		TH EXPLORATION, LLC	1/8+	961	466	NA	NA	NA	NA	NA	NA	NA
10*22285	0	5-26-11	DONALD J AND SANDY L WILSON	TH EXPLORATION, LLC	1/8+	962	193	NA	NA	NA	NA	NA	NA	NA
10*22334	0	5-2 6 -11	JOHN BRYANT	TH EXPLORATION, LLC	1/8+	962	540	NA	NA	NA	NA	NA	NA	NA
10*22434			EDWIN NELSON WOOD	TH EXPLORATION, LLC	1/8+	963	637	NA	NA	NA	NA	NA	NA	NA

WW-6A	1 Su	ıppler	nent							of	RECEIVED Gas ice of Oil and Gas JUN Orstenment	O	perator's Wel	No. <u>Evad - 5HN</u>
Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Astignment	Assignment	Assignment	Assignment
10*22441			APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA	NA	JUN Contract of International Protection	NA	NA	NA
10*22510	0	5-26-11	DONNA YOHO	TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA	NA	NA	NA
10*22561	0	5-26-11	MARY ROSE YOHO	TH EXPLORATION, LLC	1/8+	968	200	NA	NA	NA	NA	NA	NA	NA
10*22562	0	5-26-11	HAROLD C SIMMONS	TH EXPLORATION, LLC	1/8+	966	100	NA	NA	NA	NA	NA	NA	NA
10*22563	0	5-26-11	KIMBERLY D STRAUCH	TH EXPLORATION, LLC	1/8+	966	522	NA	NA	NA	NA	NA	NA	NA
10*22585	0	5-26-11	CYNTHIA L CHICK	TH EXPLORATION, LLC	1/8+	966	102	NA	NA	NA	NA	NA	NA	NA
10*22718	0	5-26-11	WILLIAM R AND CONNIE RICHMOND	TH EXPLORATION, LLC	1/8+	963	389	NA	NA	NA	NA	NA	NA	NA
10*19903	р	5-25-18	PAUL F HAMMERS	TH EXPLORATION, LLC	1/8+	948	236	NA	NA 27/311 Gastar Exploration USA, Inc and	NA	NA	NA	NA	NA
10*17195	Р	5-25-18	PATRICIA HARTMAN	GASTAR EXPLORATION USA, INC	1/8+	695	317	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17196	Р	5-25-18	DELBERT R. MONTGOMERY	GASTAR EXPLORATION USA, INC	1/8+	695	311	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17197		5-25-18	GLORIA J. SIMMONS HAROLD SIMMONS	GASTAR EXPLORATION USA, INC	1/8+	695	313	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc		33/424 Statoll USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17199	P	5-25-18	PAMELA L DRAZIC AND JEFFREY DRAZIC	GASTAR EXPLORATION USA, INC	1/8+	695	315	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC	41/238 Statoil USA Onshore Properties Inc. to TH Exploration, LLC
10*17200	P	5-25-18	STEPHANIE L. HALL	GASTAR EXPLORATION USA, INC	1/8+	697	156	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc	33/110 Chesapeake Appalachia, LLC to SWN Production Company, LLC	33/424 Statoil USA Onshore Properties Inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC
10*17201	Р	5-25-18	DENISE A GALE	GASTAR EXPLORATION USA, INC	1/8+	697	395	23/353 Gastar Exploration USA Inc to Atinum Marcellus I, LLC	27/311 Gastar Exploration USA, Inc and Atinum Marcellus I, LLC to Chesapeake Appalachia, LLC and Statoil USA Onshore Properties Inc		33/424 Statoil USA Onshore Properties inc to SWN Exchange Title Holder LLC	19/624 SWN Exchange Titleholder LLC to SWN Production Company, LLC	41/238 Statoil USA Onshore Properties Inc to TH Exploration, LLC	41/256 SWN Production Company, LLC to TH Exploration, LLC

Lease No.	Tags	Parcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
									27/311 Gastar Exploration USA, Inc and			1		
										33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoll USA	41/256 SWN Production
					1 1				Appalachia, LLC and Statoil USA	LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Onshore Properties Inc to	Company, LLC to TH
10*17202	Р	5-25-18	JANE GALE	GASTAR EXPLORATION USA, INC	1/8+	697	385	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
					1				27/311 Gastar Exploration USA, Inc and					
									Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
			DEBORAH K. KLIMASZEWSKI FRANK						Appalachia, LLC and Statoil USA	LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Onshore Properties Inc to	Company, LLC to TH
10*17207	P	5-25-18	KLIMASZEWSKI, SR.	GASTAR EXPLORATION USA, INC	1/8+	697	389	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
									27/311 Gastar Exploration USA, Inc and					
									Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/256 SWN Production	41/238 Statoil USA Onshore
					1 [23/353 Gastar Exploration USA Inc	Appalachia, LLC and Statoil USA	LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Company, LLC to TH	Properties Inc. to TH
10*17212		5-25-18	DARRELL NEWLAND LYDIA NEWLAND	GASTAR EXPLORATION USA, INC	1/8+	697	158	to Atinum Marcellus I, LLC	Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	Exploration, LLC	Exploration, LLC
10 1/212	<u> </u>	5-23-10							27/311 Gastar Exploration USA, Inc and					
									Atinum Marcellus I, LLC to Chesapeake	33/110 Chesapeake Appalachia,	33/424 Statoil USA Onshore	19/624 SWN Exchange	41/238 Statoil USA	41/256 SWN Production
		l I			l 1			23/353 Gastar Exploration USA Inc		LLC to SWN Production	Properties Inc to SWN Exchange	Titleholder LLC to SWN	Onshore Properties Inc to	Company, LLC to TH
			CAROL DEEN GARDNER	GASTAR EXPLORATION USA, INC	1/8+	697	154		Onshore Properties Inc	Company, LLC	Title Holder LLC	Production Company, LLC	TH Exploration, LLC	Exploration, LLC
10*17213	P	5-25-18	CAROL DEEN GARDNER	GASTAR EAFLORATION 034, INC	1/0+	057	1.54					·····		
	l												31/41 Gastas Evaloration	
													21/41 Gastar Exploration	
	1	1											USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14806	P	5-25-18	DONNA VIVIAN YOHO	GASTAR EXPLORATION USA, INC	1/8+	809	558	NA	NA	NA	NA		Exploration, Inc	to TH Exploration II, LLC
	ł										- CIVE	1 Gas		
					Į –						aeceila	AC	21/41 Gastar Exploration	
											1 noi0"	Pro 1	USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14807	P	5-25-18	JANICE N HAUDENSCHILT	GASTAR EXPLORATION USA, INC	1/8+	809	555	NA	NA	NA	NA OFFICE	10 NA (10	Exploration, Inc	to TH Exploration II, LLC
	1										NA Office of Oil a	3		
	1											not on	21/41 Gastar Exploration	
		1			1						1 201	+ment ection	USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14808	P	5-25-18	DANA MILICIA HUMPHREYS	GASTAR EXPLORATION USA, INC	1/8+	809	552	NA	NA	NA	INA OPT	air Proce	Exploration, Inc	to TH Exploration II, LLC
10 14000	<u> </u>									1		atment of tion		
											vi onn.	1	21/41 Gastar Exploration	
		1									Envi		USA Inc to Gastar	36/9 Gastar Exploration, Inc.
		5-25-18	DEWEY A. MILICIA	GASTAR EXPLORATION USA, INC	1/8+	809	549	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10*14809	<u>۴</u>	3-23-18	DEWELAL MIDCIA	CASIAN EXPEDIATION COA, INC									<u> · · · · · · · · · · · · · · · · · · ·</u>	1
	1				1								21/41 Gastar Exploration	
													USA Inc to Gastar	36/9 Gastar Exploration, Inc.
				CASTAR EVELOPATION LICA INC.	1/8+	809	546	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
10*14810	Р	5-25-18	NICOLETTA MILICIA BLOODWORTH	GASTAR EXPLORATION USA, INC	1/8+	809	546	NA	<u></u>			110		
													21/41 Gastar Exploration	
												.	USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14811	P	5-25-18	MARK YOHO AND MARY YOHO	GASTAR EXPLORATION USA, INC	1/8+	809	543	NA	NA	NA	NA	INA	Exploration, Inc	to TH Exploration II, LLC
l	1									1			21/41 Gastar Exploration	
		1											USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14786	P	5-25-18	TWILA ORA WHIPKEY	GASTAR EXPLORATION USA, INC	1/8+	799	61	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
	1	1												
	1							1					21/41 Gastar Exploration	
	1				1								USA Inc to Gastar	36/9 Gastar Exploration, Inc.
10*14796	P	5-25-18	KIMBERLY S. DENNY	GASTAR EXPLORATION USA, INC	1/8+	799	540	NA	NA	NA	NA	NA	Exploration, Inc	to TH Exploration II, LLC
	+	1												
1	1				1			1						
1	1				1		1							
10*22008		5-25-18	COLIN R YOHO	TH EXPLORATION, LLC	1/8+	953	304	NA	NA	NA	NA	NA	NA	NA
10-22008	+ ^r	3-23-18			-	<u> </u>	1			1		1		
1	1	1	1				1	1		1		1		
	1							1						
					1 10	050	544	Na	N A	NA	NA	NA	NA	NA
10*22025	P	5-25-18	MARK & MARY YOHO	TH EXPLORATION, LLC	1/8+	960	344	100 ·····		201		1970		1990

	Tons	Barcal	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment CEIVE	A Gab Assignment	Assignment	Assignment
Lease No.	Tags	Parcel	Lesson	Laset	moyany		1080				Office of Oil at	3018	•••••	
10*22129	Р	5-25-18	JANICE HAUDENSCHILT	TH EXPLORATION, LLC	1/8+	961	459	NA	NA	NA	NA NO 2	NA .	NA	NA
10*14785			DAVID W. STRAUCH	GASTAR EXPLORATION USA, INC	1/8+	799	64	NA	NA	NA	NA WV Dep	d Gas Assignment 2018 NA Atment of tal Protection NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14797	P	5-25-18	ORVILLE YOUNG	GASTAR EXPLORATION USA, INC	1/8+	800	598	NA	NA	NA	NA EI	NA	21/41 Gastar Exploration USA Inc to Gastar Exploration, Inc	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14814	Р	5-25-18	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	537	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14815	Р	5-25-18	CHESTNUT HOLDINGS INC	GASTAR EXPLORATION INC	1/8+	827	535	NA	NA	NA	NA	NA	_ NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14822	Р	5-25-18	ONWARD E BURGE TRUST	GASTAR EXPLORATION INC	1/8+	876	463	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*14823	P	5-25-18	SARAH L BURGE TRUST	GASTAR EXPLORATION INC	1/8+	876	459	NA	NA	NA	NA	NA	NA	36/9 Gastar Exploration, Inc. to TH Exploration II, LLC
10*18275	P	5-25-18	BETTY JEAN NEELY	TH EXPLORATION, LLC	1/8+	929	60	NA	NA	NA	NA	NA	NA	NA
10*18366	Р	5-25-18	MARY LOU WILSON AND STANLEY D WILSON	TH EXPLORATION, LLC	1/8+	931	311	NA	NA	NA	NA	NA	NA	NA
10*18369	Р	5-25-18	CRAIG ALAN YOHO AND DONNA M YOHO	TH EXPLORATION, LLC	1/8+	931	303	NA	NA	NA	NA	NA	NA	NA
10*18370	Р	5-25-18	SAMUEL D YOHO	TH EXPLORATION, LLC	1/8+	931	300	NA	NA	NA	NA	NA	NA	NA
10*18379	P	5-25-18	DAVID N DEVICK TRUSTEE OF THE TONI JO MASON LIVING TRUST	TH EXPLORATION, LLC	1/8+	932	439	NA	NA	NA	NA	NA	NA	NA
10*19540		5-25-18	ERICA M MASON	TH EXPLORATION, LLC	1/8+	942	53	NA	NA	NA	NA	NA	NA	NA
10 19340		5-25-18		TH EXPLORATION, LLC	1/8+	944	108	NA	NA	NA	NA	NA	NA	NA

Lease No.	Tage	Darcel	Lessor	Lessee	Royalty	Book	Page	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment
Lease no.	1082	1 0.000												
		1												
												814	NA	MA
10*22441	Р	5-25-18	APRIL ROSE POSTLETHWAIT	TH EXPLORATION, LLC	1/8+	963	646	NA	NA					
					1									
			1	1								TED		
				TH EXPLORATION, LLC	1/8+	964	432	NA	NA	NA	NA DECE	Nand Gas	NA	NA
10°22510	<u> </u>	5-25-18	DONNA YOHO	TH EXPLORATION, LLC	1/0+	504	452		1		10 of 0			•
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GASTAR EXPLORATION LTD. 331 LAMAR, SUITE 650 HOUSTON TX 77010

RATIFICATION AND CONSENT TO WELL LOCATION AND ACCESS ROADS Jan Fest

STATE OF WEST VIRGINIA § COUNTY OF MARSHALL § MARSHALL County 12:23:57 PM Instrument No 1308213 Date Recorded 07/21/2011 Document Type D&G Pages Recorded 3 Book-Page 739-70 Recording Fee \$5.00 Additional \$6.00

Lessor: Louis J. Accettolo and Patricia Accettolo, husband and wife, whose address is 300 Rockdale Road, Follansbee, WV 26037

Lessee: Gastar Exploration USA, Inc., whose address is 1331 Lamar Street, Suite 650, Houston, TX 77010.

Effective Date: June 14, 2011

Lessor, named above, is the owner of the surface of the lands described below (the "Lands"). The Lands are subject to and covered by an Oil and Gas Lease (the "Lease") dated June 10, 2010, recorded in Volume 703, Page 283 of the Official Records of the county and state named above. The Lands owned by Lessor and subject to the Lease are described as follows:

146.66 acres, more or less, located in the Franklin District, Marshall County, West Virginia and being more particularly described in that certain deed dated September 28, 1985 from Patricia Accettolo & Louis J. Accettolo, her husband to Patricia Accettolo & Louis J. Accettolo, her husband; recorded at deed book 521, page 570 of the deed records in said county and state. (Land is further identified to contain all or a portion of Tax Map 23, Parcel 1)

WHEREAS, it is the desire of Lessor to agree to Lessee locating and drilling a well at the approximate location depicted on the well location plat attached hereto as Exhibit "A". Lessor further agrees that Lessee shall not need the ongoing consent of Lessor for any additional/offsetting wells that are proposed and drilled from the same well pad site.

WHEREAS, it is the desire of Lessor to agree to Lessee locating and constructing an entry road to the Lessee's proposed well site location at the approximate location depicted on the plat attached hereto as Exhibit "A".

WHEREAS, it is the desire of Lessor to CONFIRM and RATIFY all terms of the Lease.

NOW THEREFORE, for adequate consideration, the receipt and sufficiency of which is acknowledged by Lessor, Lessor hereby approves and agrees to the proposed well location and entry road, and confirms and ratifies the Lease in its entirety. Lessor agrees that all delay rentals accruing under the lease to-date, have been paid in full and shall be deemed the consideration for this Agreement.

It is agreed that the said Lease, in all of its terms and provisions, is binding on the undersigned and is a valid and subsisting Oil and Gas Lease and that this instrument shall be binding upon the Lessor and their respective heirs, executors, administrators, successors or assigns.

For the consideration received, Lessor agrees to execute any additional consents, ratifications, and writings which the Lessee (present or future) of the Lease may request to give full effect to Lessor's consent and ratification herein.

RECEIVED Office of Oil and Gas

JUN 0 5 2018

WV Department of Environmental Protection ' This' Agreement is signed by Lessor as of the date of their acknowledgments below, but shall be effective as of the Effective Date stated above.

Lessor

•_

four f. Jacettolo

atricia Accettolo

Patricia Accettolo

ACKNOWLEDGEMENTS

STATE OF West VIRGINIA) COUNTY OF Brooke (

TO-WIT:

The foregoing instrument was acknowledged before me this $\frac{21}{2}$ day of $\frac{3}{2}$ day of $\frac{3}{2}$

2011, by Louis J. Accettolo and Patricia Accettolo.

Notary Public in and for the State of West Tracing

(NOTARIAL SEAL)

My Commission Expires: _//-23-2014



RECEIVED Office of Oil and Gas JUN 0 5 2018

WV Department of Environmental Protection

This Instrument was prepared by Gastar Exploration USA, Inc. after recording please return to Gastar Exploration USA, Inc., 1331 Lamar Street, Suite 650, Houston, TX 77010.

GASTAR EXPLORATION LTD. 1331 LAMAR, SUITE 650 HOUSTON TX 77010

BOOK 739 PAGE 073

RATIFICATION AND CONSENT TO WELL LOCATION AND ACCESS ROADS

STATE OF WEST VIRGINIA § COUNTY OF MARSHALL §

Jan Pest MARSHALL County 12:24:46 PH Instrument No 1308214 Date Recorded 07/21/2011 Document Type 085 Pages Recorded 3 Book-Page 739-73 Recording Fee \$5.00 Additional \$6.00

Lessor: Jesse P. McHenry, a married man dealing in his sole and separate property, whose address is 12 Cedarcrest Drive, Wheeling, WV 26003

Lessee: Gastar Exploration USA, Inc., whose address is 1331 Lamar Street, Suite 650, Houston, TX 77010.

Effective Date: June 14, 2011

Lessor, named above, is the owner of the surface of the lands described below (the "Lands"). The Lands are subject to and covered by an Oil and Gas Lease (the "Lease") dated June 10, 2010, recorded in Volume 703, Page 283 of the Official Records of the county and state named above. The Lands owned by Lessor and subject to the Lease are described as follows:

146.66 acres, more or less, located in the Franklin District, Marshall County, West Virginia and being more particularly described in that certain deed dated September 28, 1985 from Patricia Accettolo & Louis J. Accettolo, her husband to Patricia Accettolo & Louis J. Accettolo, her husband; recorded at deed book 521, page 570 of the deed records in said county and state. (Land is further identified to contain all or a portion of Tax Map 23, Parcel 1)

WHEREAS, it is the desire of Lessor to agree to Lessee locating and drilling a well at the approximate location depicted on the well location plat attached hereto as Exhibit "A". Lessor further agrees that Lessee shall not need the ongoing consent of Lessor for any additional/offsetting wells that are proposed and drilled from the same well pad site.

WHEREAS, it is the desire of Lessor to agree to Lessee locating and constructing an entry road to the Lessee's proposed well site location at the approximate location depicted on the plat attached hereto as Exhibit "A".

WHEREAS, it is the desire of Lessor to CONFIRM and RATIFY all terms of the Lease.

NOW THEREFORE, for adequate consideration, the receipt and sufficiency of which is acknowledged by Lessor, Lessor hereby approves and agrees to the proposed well location and entry road, and confirms and ratifies the Lease in its entirety. Lessor agrees that all delay rentals accruing under the lease to-date, have been paid in full and shall be deemed the consideration for this Agreement.

It is agreed that the said Lease, in all of its terms and provisions, is binding on the undersigned and is a valid and subsisting Oil and Gas Lease and that this instrument shall be binding upon the Lessor and their respective heirs, executors, administrators, successors or assigns.

For the consideration received, Lessor agrees to execute any additional consents, ratifications, and writings which the Lessee (present or future) of the Lease may request to give full effect to Lessor's consent and ratification herein.

RECEIVED Office of Oil and Gas

JUN 0 5 2018

WV Department of Environmental Protection

RATIFICATION AND CONSENT TO WELL LOCATION AND ACCESS ROADS

STATE OF WEST VIRGINIA § COUNTY OF MARSHALL §

Lessor: Wilbur Lloyd McHenry, a married man dealing in his sole and separate property, whose address is 13820 Metcalf Ave. #11313, Overland Park, KS 66223

<u>Lessee:</u> Gastar Exploration USA, Inc., whose address is 1331 Lamar Street, Suite 650, Houston, TX 77010.

Effective Date: June 14, 2011

Lessor, named above, is the owner of the surface of the lands described below (the "Lands"). The Lands are subject to and covered by an Oil and Gas Lease (the "Lease") dated June 10, 2010, recorded in Volume 703, Page 283 of the Official Records of the county and state named above. The Lands owned by Lessor and subject to the Lease are described as follows:

146.66 acres, more or less, located in the Franklin District, Marshall County, West Virginia and being more particularly described in that certain deed dated September 28, 1985 from Patricia Accettolo & Louis J. Accettolo, her husband to Patricia Accettolo & Louis J. Accettolo, her husband; recorded at deed book 521, page 570 of the deed records in said county and state. (Land is further identified to contain all or a portion of Tax Map 23, Parcel 1)

WHEREAS, it is the desire of Lessor to agree to Lessee locating and drilling a well at the approximate location depicted on the well location plat attached hereto as Exhibit "A". Lessor further agrees that Lessee shall not need the ongoing consent of Lessor for any additional/offsetting wells that are proposed and drilled from the same well pad site.

WHEREAS, it is the desire of Lessor to agree to Lessee locating and constructing an entry road to the Lessee's proposed well site location at the approximate location depicted on the plat attached hereto as Exhibit "A".

WHEREAS, it is the desire of Lessor to CONFIRM and RATIFY all terms of the Lease.

NOW THEREFORE, for adequate consideration, the receipt and sufficiency of which is acknowledged by Lessor, Lessor hereby approves and agrees to the proposed well location and entry road, and confirms and ratifies the Lease in its entirety. Lessor agrees that all delay rentals accruing under the lease to-date, have been paid in full and shall be deemed the consideration for this Agreement.

It is agreed that the said Lease, in all of its terms and provisions, is binding on the undersigned and is a valid and subsisting Oil and Gas Lease and that this instrument shall be binding upon the Lessor and their respective heirs, executors, administrators, successors or assigns.

For the consideration received, Lessor agrees to execute any additional consents, ratifications, and writings which the Lessee (present or future) of the Lease may request to give full effect to Lessor's consent and ratification herein.

USETAR EXPLORATION ATTN¹: LINNEED Gass 1331 LANK 850 Office of Coil and Gass JUN 0 5 2018

WV Department of Environmental Protection

-100K739 PAGE077

This Agreement is signed by Lessor as of the date of their acknowledgments below, but shall be effective as of the Effective Date stated above.

Lessor

Wilbur Lloyd McHenry

ACKNOWLEDGEMENTS

(

STATE OF Kansas COUNTY OF Johnson

TO-WIT:

The foregoing instrument was acknowledged before me this 23 day of June

_____, 2011, by Wilbur Lloyd McHenry.

NOTARY PUBLIC - State of Kansas CARA N. FREED My Appt. Expires

(NOTARIAL SEAL)

Cauch freed

Notary Public in and for the State of

My Commission Expires: 7.24.201)

Jan Pest MARSHALL County 12:25:36 PM Instrument No 1308215 Date Recorded 07/21/2011 Document Type D&G Pages Recorded 3 Book-Page 739-76 Recording Fee \$5.00 Additional \$6.00

> RECEIVED Office of Oil and Gas

JUN 0 5 2018

WV Department of Environmental Protection

This Instrument was prepared by Gastar Exploration USA, Inc. after recording please return to Gastar Exploration USA, Inc., 1331 Lamar Street, Suite 650, Houston, TX 77010.



June 1, 2018

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

RE: Evad 5HM

Subject: Road Crossing Letter

Dear Laura:

Tug Hill Operating, LLC will not be drilling, extracting or producing any minerals under any WV County or State Routes in the area reflected on the Evad 5HM well plat.

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

Sincerely,

any Sulle

Amy L. Miller Permitting Specialist – Appalachia Region



4/U5 902051 STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE CERTIFICATION</u>

Date of Notice Certification: 06/01/2018

API No. 47- 051	
Operator's Well N	O. Evad 5HM
Well Pad Name: _	Accettolo

Notice has been given:

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

State:	West Virginia	UTM NAD 83	Easting:	517,717.46		
County:	County: Marshall		Northing:	4,399,403.95		
District:	Franklin	Public Road Access:		Burch Ridge Road - County Route 29		
Quadrangle:	New Martinsville 7.5'	Generally used farm name:		Accettolo, Patricia & Louis		
Watershed:	French Creek - Ohio River (HUC 10)					

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

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

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been proved to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the pass II 1990 Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22.6A. Pursuant to West Virginia Code § 22.6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

Certification of Notice is hereby given:

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

Well Operator:	Tug Hill Operating, LLC	Address:	380 Southpointe Boulevard, Plaza II, Suite 200 Canonsburg, PA 15317			
By:	Amy L. Miller any Sulle	~				
Its:	Permitting Specialist	Facsimile:	724-338-2030			
Telephone:	724-749-8388	Email:	amiller@tug-hillop.com			
	DMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL MAUREEN A STEAD Notary Public ECIL TWP, WASHINGTON COUNTY	Subscribed and swo	en A Stead Notary Public			

Oil and Gas Privacy Notice:

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



4705 102051

WW-6A	
(9-13)	

API NO. 47-051	-	
OPERATOR WE	ELL NO.	Evad 5HM
Well Pad Name:	Accettolo	

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE OF APPLICATION</u>

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

Date of Notice: 6/1/2018		Date Permit Application Filed: 6/1/2018
Not	ice of:	
\square	PERMIT FOR ANY	CERTIFICATE OF APPROVAL FOR THE
	WELL WORK	CONSTRUCTION OF AN IMPOUNDMENT OR PIT

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

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

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

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

☑ SURFACE OWNER(s)	COAL OWNER OR LESSEE
Name: Louis J. and Patricia Accettolo (Access Road and Well Pad)	Name: Appalachian Power Company
Address: 1103 Traubert Place	Address: 1068 US-60
Folansbee, WV 26037	Milton, WV 25541
Name: Jesse P. McHenry (Access Road and Well Pad)	COAL OPERATOR
Address: 12 Cedarcrest Drive	Name:
Wheeling, WV 26003	Address:Omena
SURFACE OWNER(s) (Road and/or Other Disturbance)	of Chren
Name: Wilbur L. McHenry	SURFACE OWNER OF WATER WELL JUN 0 5 2018 AND/OR WATER PURVEYOR(s) Name: See attached list
Address: 13820 Mtcalf Avenue #11313	AND/OR WATER PURVEYOR(s)
Overland Park, KS 66223	AND/OR WATER PURVEYOR(s) Environmental See attached list
Name:	Address:
Address:	
	OPERATOR OF ANY NATURAL GAS STORAGE FIEL
SURFACE OWNER(s) (Impoundments or Pits)	Name:
Name:	Address:
Address:	
	*Please attach additional forms if necessary

API NO. 47- 051 OPERATOR WELL NO. Evad 5HM Well Pad Name: Accettolo

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.govorf, vep JUN n -JUN 0 5 2018

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



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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

iys atc. comments as Office of Oil and Gas JUN 0 5 2018 Environmental Protection -lified

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

WW-6A (8-13) API NO. 47-051 -OPERATOR WELL NO. Evad 5HM Well Pad Name: Accettolo

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-

<u>Permits/Pages/default.aspx</u> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

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

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

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

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

Office RECEIVED JUN 0 5 2018 Environmental Protection

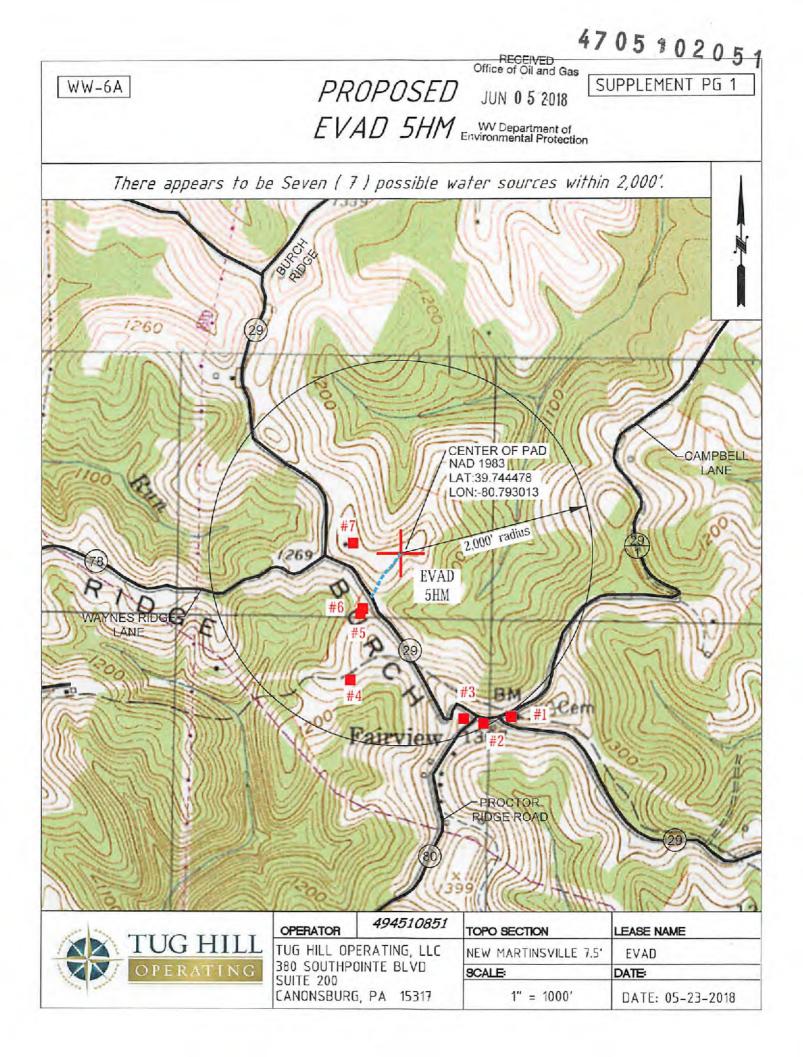
WW-6A	API NO. 47 05 D D D D D D D D D D D D D D D D D D	
(8-13)	OPERATOR WELL NO. Enader OF	
	Well Pad Name: Accettolo	
Notice is hereby given by:		
Well Operator: Tug Hill Operating, LLC	Address: 380 Southpointe Boulevard, Plaza II, Suite 200	
Telephone: 724-749-8388	Canonsburg, PA 15317	
Email: amiller@tug-hillop.com any hele	Facsimile: 724-338-2030	

Oil and Gas Privacy Notice:

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

COMMONWEALTH OF PENNSYLVANIA	Subscribed and sworn before me this	day of JUNE 2018
NOTARIAL SEAL MAUREEN A STEAD Notary Public CECIL TWP, WASHINGTON COUNTY My Commission Expires Jan 28, 2019	Murelli A Stead My Commission Expires 1/20/19	Notary Public

Office RECEIVED JUN 0 5 2018 Environmental Protection



WW-6A

Supplement Pg. 1A

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

WATER WELL REPORT

Well:EVAD 5HMDistrict:FranklinCounty:MarshallState:WV

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

Topo Spot #1 TM 23 Par.21	Topo Spot #2 TM 23 Par. 22 (Abandoned House)	Topo Spot #3 TM 23 Par.28.2	
Mark A. Yoho & Mark E. Yoho 304-455-4282(H)	Daniel D. Rhyand & Laurel R. Greene	Mark W. & Carolyn L. Tennant 304-337-9844(H)	
3998 Burch Ridge Rd. Proctor, WV 26055	216-906-1717 <i>(</i> 6145 Denison Blvd. Parma Heights, OH 44130	13 Proctor Ridge Rd. Proctor, WV 26055	
Topo Spot #4 TM 23 Par.28 Gregg D. Minor 304-455-6159(H) 5257 Burch Ridge Rd. / Proctor, WV 26055	Topo spot #5 TM 23 Par.28.1 (Trailer) Troy W. & Erin M. Thomas 304-455-2729(H) 5123 Burch Ridge Rd. Proctor, WV 26055	Topo spot #6 TM 23 Par.28.1 (Trailer) Troy W. & Erin M. Thomas 304-455-2729(H) 5123 Burch Ridge Rd. Proctor, WV 26055	
Topo spot #7 TM 23 Par.1 Patricia Accettolo, et al 304-527-0428(H) 1103 Traubert Pl. Follansbee, WV 26037	BECEIVED Office of Oil and Gas JUN 0 5 2018 WV Department of Environmental Protection		

WW-6A3 (1/12)

Notice Time Requirement: Notice shall be provided at least SEVEN (7) days but no more than FORTY-FIVE (45) days prior to				
entry				
Date of Notice: 5/2/2018	Date of Planned Entry: 5/9/2018			

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

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

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

Notice is hereby provided to:

■ SURFACE OWNER(s)

Name: Lo	uls J. and Patricia Accettolo (Access Road and Well Pad)
Address:	1103 Traubert Place
Folansbee, V	V 26037
Name: Je	sse P. McHenry (Access Road and Well Pad)
Address:	12 Cedarcrest Drive
Wheeling, W	V 26003
Name: Wi	Ibur L. McHenry
Address:	13820 Mtcalf Avenue #11313
Overland Par	k, KS 66223

11	COAL	OWNER	OR	LESSEE
_	Sound	C	2.4.2	THE REAL PROPERTY.

Name: Ap	opalachian Power Company
Address:	1068 US-60
Milton, WV 2	25541

Operator Well No. Evad 5HM 902051

MINERAL OWNER(s)

Address:	1103 Traubert Place
Folansbee, W	V 26037

Notice is hereby given:

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

State:	West Virginia	Approx. Latitude & Longitude:	39.7443056; -80.7933469	-
County:	Marshall	Public Road Access:	Burch Ridge Road (County Route 29)	
District:	Franklin	Watershed:	Fish Creek (HUC 10)	
Quadrangle:	New Martinsville 7.5'	Generally used farm name:	Acceltolo, Patricia and Lous J.	

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

States and States	a second s			annea an gu anna anna
Notice is here		4.11		JUN 0 5 2018
well Operator:	Tug Hill Operating, LLC	Address:	380 Southpointe Boulevard, Plaza II, Suite 200	0011 0 0 2010
Telephone:	724-749-8388		Canonsburg, PA 15317	WV Department of
Email:	amilier@tug-hillop.com	Facsimile:	724-338-2030	Environmental Protection

Oil and Gas Privacy Notice:

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

4705 102051

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

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

Additional Mineral Owners Jesse P. McHenry 12 Cedarcrest Drive Wheeling, WV 26003

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

> RECEIVED Office of Oil and Gas

JUN 0 5 2018

WV Department of Environmental Protection

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 06/01/2018 Date Permit Application Filed: 05/01/2018

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

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

HAND DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Louis J. and Patricia Accettolo	Name: Jesse P. McHenry
Address: 1103 Traubert Place	Address: 12 Cedarcrest Drive
Folansbee, WV 26037	Wheeling, WV 26003

Notice is hereby given:

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

State:	West Virginia	LITEMAN AND 82	Easting:	517,717.46	
County:	Marshall	UTM NAD 83	Northing:	4,399,403.95	
District:	Franklin	Public Road Acce	SS:	Burch Ridge Road (County Route 29)	
Quadrangle:	New Martinsville 7.5	Generally used far	rm name:	Accettolo, Patricia and Louis J.	
Watershed:	Fish Creek (HUC 10)				

This Notice Shall Include:

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

Well Operator:	Tug Hill Operating, LLC	Address:	380 Southpointe Boulevard, Plaza II, Suite 200	JUN 0 5 2018
Telephone:	724-749-8388		Canonsburg, PA 15317	JUN 0 0 2010
Email:	amiller@tug-hillop.com	Facsimile:	724-338-2030	WV Department of
			E	WV Department of nvironmental Protection

Oil and Gas Privacy Notice:

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



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION Division of Highways

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

May 7, 2018

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

> .Iill M. Newman Deputy Commissioner

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

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

Evad 5HM

Dear Mr. Martin,

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

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

Very Truly Yours,

Garry K. Clayton

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

RECEIVED Office of Oil and Gas

JUN 0 5 2018

WV Department of Environmental Protection

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



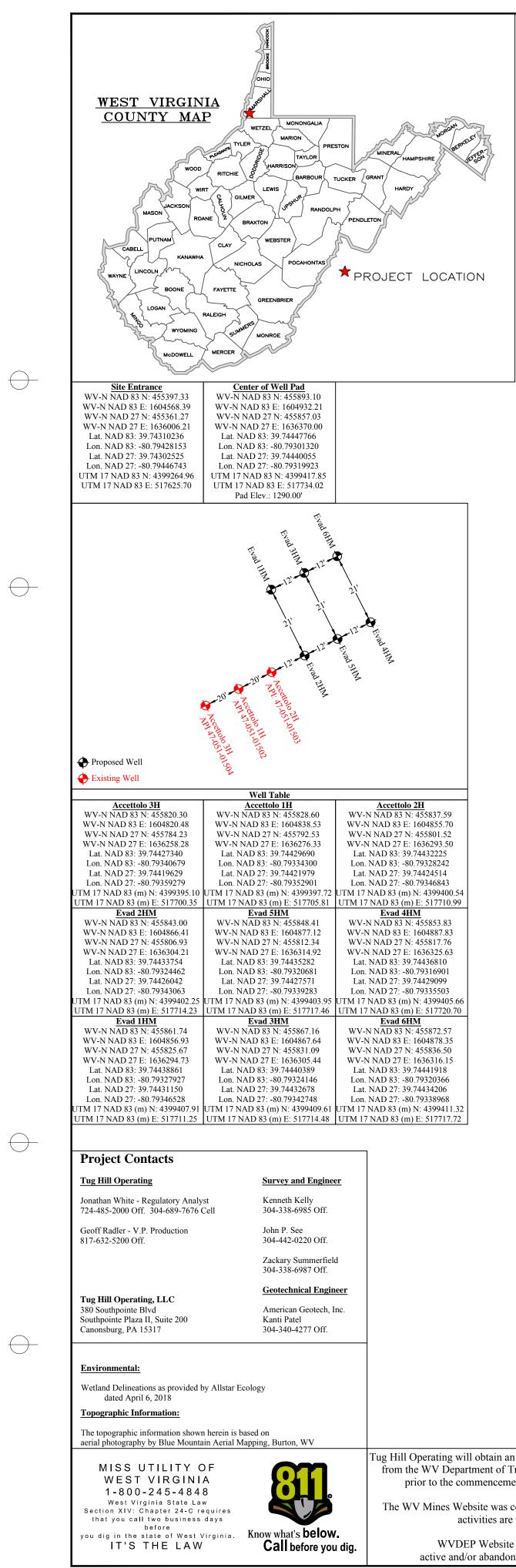
PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Well No. Evad 5HM			
PRODUCT NAME:	CHEMICAL DESCRIPTION:	PRODUCT USE:	HAZARDOUS COMPONENT:
GBW-20C	Hemicellulase Breaker	Breaker - Water	None
ALPHA 1427		Biocide	Glutaraldehyde – CAS#000111-30-8 Quatemary ammonium chloride CAS# 007173-51-5 Alky dimethyl benzyl ammonium Chloride (C12-16) – CAS#068424-85-1 Ethanol – CAS# 000064-17-5 Water – CAS# 007732-18-5
FRAC SAND	Silica Sand (various Mesh sizes)	Proppant	Crystalline silica (quartz) CAS# 14808-60-7
S-8C, Sand	Silica Sand (100 mesh)	Sand	Silica – CAS# 14808-60-7
GW-3LDF		Gellant - Water	Petroleum Distillate Blend – Proprietary, (Not Associated with Diesel Fuel) Guar gum – CAS# 009000-30-0
FRW-18		Friction Reducer	Hydrotreated light distillate CAS# 064742-47-8
Scaletrol		Scale Inhibitor	Ethylene glycol – CAS# 000107-21-1 Diethylene glycol – CAS# 000111-46-6

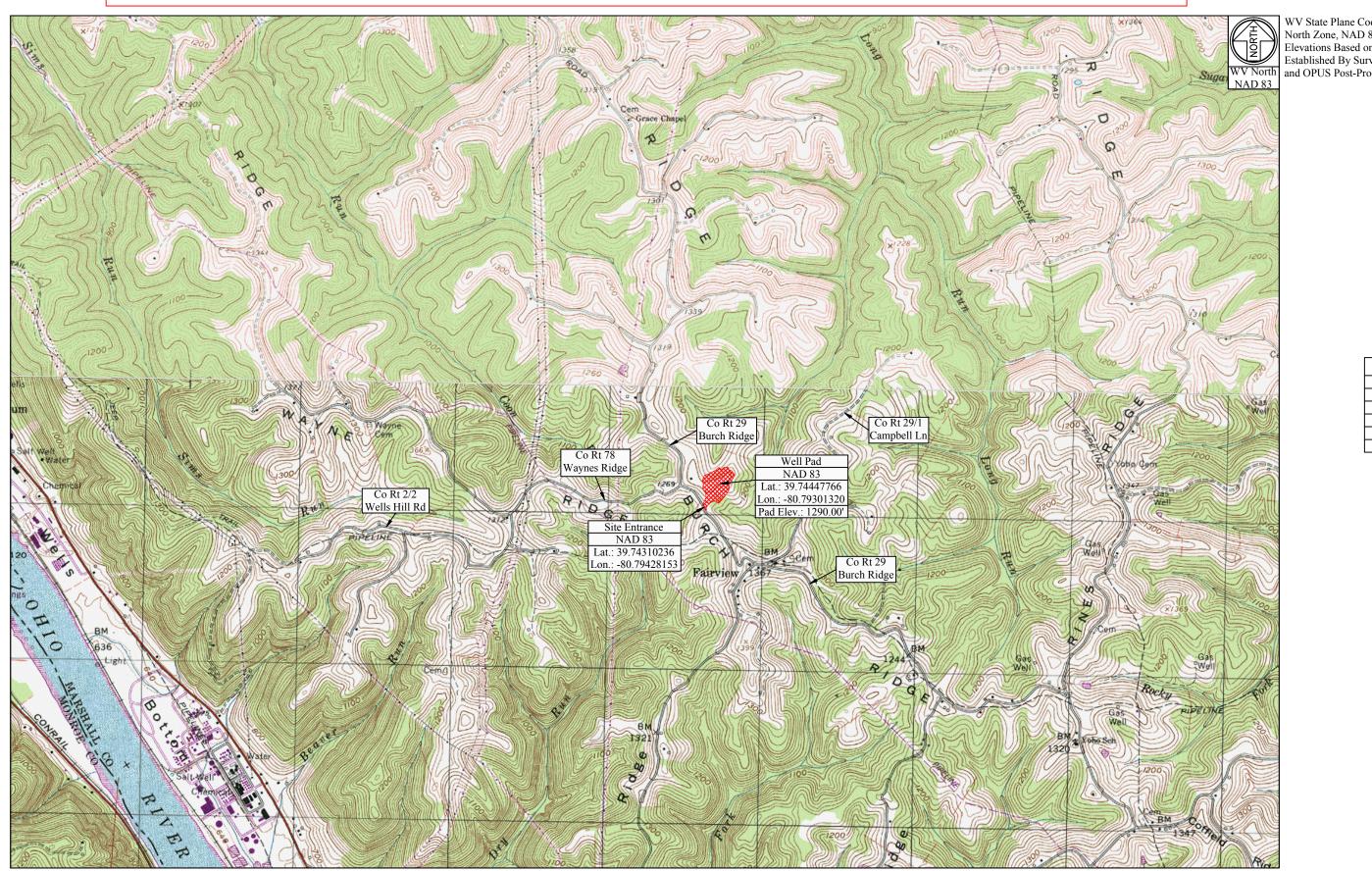
RECEIVED Office of Oil and Gas

JUN 0 5 2018

WV Department of Environmental Protection







Approach Routes: From the intersection of OH Rt 7 and WV Rt 2 near New Martinsville, WV. Travel North on WV Rt 2 for 6.1 mi. Turn Right onto Co Rt 2/2 (Wells Hill Rd). Follow Co Rt 2/2 for 2.3 mi. Turn Right onto Co Rt 78 (Waynes Ridge). Follow Co Rt 78 for 0.8 mi. Turn Right onto Co Rt 29 (Burch Ridge). Follow Co Rt 29 for 0.1 mi. The site entrance will be on the Left (Northeast) side of the road.

Flood Hazard Zone

HEC-RAS Study completed

loodplain shown on drawings

FIRM Map Number(s) for site

Floodplain Conditions

54051C 0210E

N/A

Do site construction activities take place in a floodplain: Permit needed from county floodplain coordinator:

ction in floodplair

 Fug Hill Operating will obtain an Encroachment Permit (Form MM-109)

 from the WV Department of Transportation, Division of Highways, prior to the commencement of any construction activities

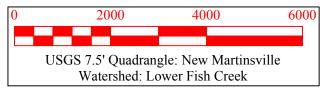
The WV Mines Website was consulted. Previous (Current) mining activities are not within the AOI.

> WVDEP Website files show that there are active and/or abandoned gas wells within the AOI

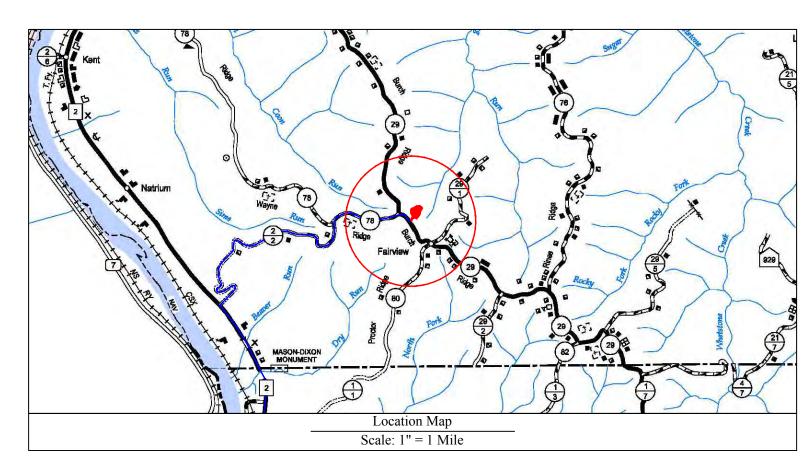
Accettolo Well Site

Site Design, Construction Plan, & **Erosion and Sediment Control Plans** Tug Hill Operating Marshall County Franklin District Latitude 39.74447766° Longitude -80.79301320° Lower Fish Creek Watershed

Exhibit A: Final Design: Issue for Permitting



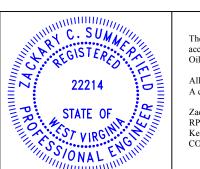
Site Locations (NAD 27)			Site Location	ons (NAD 83)	
Structure	Latitude (DD)	Longitude (DD)	Structure	Latitude (DD)	Longitude (DD)
Site Entrance	39.74302525	-80.79446743	Site Entrance	39.74310236	-80.79428153
Center of Well Pad	39.74440055	-80.79319923	Center of Well Pad	39.74447766	-80.79301320



Well Location Restrictions

All Pad construction complies with the following restrictions. *250' from an existing well or developed spring used for human or domestic animals *625' from an occupied dwelling or barn greater than 2,500 SF used for po measured from the center of the pad.

*300' from the edge of disturbance to a naturally reproducing trout stream. *1,000' of a surface or ground water intake to a public water supply (Well Location Restrictions of WV Code 22-6A-12)





Kelly Surveying PLLC COA: C04232-00

Pertinent Site Information Accettolo Well Site Emergency Number: 304-845-1920 Franklin District, Marshall County, WV Watershed: Lower Fish Creek Watershed Tug Hill Contact Number: 1-817-632-3400

Property Owner Information - Accettolo Well Site								
	Franklin Distr	ict - Marsh	all County					
Owner	TM - Parcel	Well Pad	Access Road	Add. Clearing	Total Disturbed			
Patricia Accettolo	23-1	5.91	0.70	1.84	8.45			
	Site Totals (Ac)	5.91	0.70	1.84	8.45			

WV State Plane Coordinate System North Zone, NAD 83

Elevations Based on NAV88 Established By Survey Grade GPS

vey	Ulaue	Ur	D
oces	sing		

Access Road						
Surface Owner	TM - Parcel	Road Length	Туре			
Patricia Accettolo	23-1	380.59'	Well Pad Access Road			
Patricia Accettolo	23-1	60.16'	Access Road Tie			

Disturbed Area	
Well Pad Construction	5.91 Ac
Access Road Construction	0.70 Ac
Additional Clearing	1.84 Ac
Total Disturbed Area	8.45 Ac
Additional Informati	ion
Total Wooded Acres Disturbed	0.00 Ac
Total Linear Feet of Access Road	440.75'
Total Wooded Acres Disturbed	0.00 Ac

Accettolo Well Site Quantities								
Description	Cut (CY)	Fill (CY)	Spoil (CY)	Borrow (CY)	Max. Slope	Length of Slope		
Well Pad Grading	2,801.70	576.04	2,225.66		N/A	N/A		
Well Pad Berm	0.00	2,000.00		2,000.00	N/A	N/A		
Access Road Mountable Berm	0.00	176.97		176.97	N/A	N/A		
Tie Road Mountable Berm	0.00	26.67		26.67	N/A	N/A		
Totals	2,801.70	2,779.68	2,225.66	2,203.64				
	Total Spoil (C	CY) =	22.02	(Additi	onal Berm M	aterial)		

J A T	Date	
J T		Revision
	05-24-2018	Design
	07-06-2018	Design: WVDEP Comments
S DOCUMENT EPARED FOR	ATING	

Date: 05/24/2018

Scale: As Shown

Designed By: ZS File No.

Sheet 1 of 11

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oultry or dairy	

Design Certification The drawings, construction notes and reference diagrams attached hereto have been prepared in

All Plans, Sheets, and/or Reference Diagrams included in this design constitutes a complete set of plans.

Date: 07-06-2018

Sheet	Description
1	Cover Sheet
V1	Schedule of Quantities
N1-N4	Site Notes
2	Pre-Construction Site Conditions
3 4 5	Site Soil Map
4	Clearing Exhibit
5	Overall Plan View
6	E&S Plan View
7	Toe Key Exhibit
8	Plan View
9-10	Cross Sections - Well Pad
11	Cross Sections - Access Road
G1-G2	Geotechnical Exhibit
L1	Landowner Disturbed Area Exhibit
S 1	Site Reclamation
M1-M3	
D1-D2	Erosion and Sediment Control Details
R1	Access Road Details
P1	Pad Details

