

west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary www.dep.wv.gov

Monday, September 27, 2021 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

#### ARSENAL RESOURCES LLC 6031 WALLACE RD. EXTENSION

WEXFORD, PA 15090

Re: Permit Modification Approval for J OSBORN HSOP16 202 47-033-05950-00-00

Change in Lateral Trajectory/ Lease Line

#### ARSENAL RESOURCES LLC

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

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

James . Martin Chie

Operator's Well Number:<br/>Farm Name:J OSBORN HSOP16 202U.S. WELL NUMBER:<br/>Horizontal 6AJUDY M OSBORN (LE) (JUDY M OSBORN IRREV<br/>47-033-05950-00-00Date Modification Issued:9/27/2021

Promoting a healthy environment.



September 16, 2021

WVDEP Office of Oil and Gas ATTN: Laura Adkins 601 57<sup>th</sup> Street SE Charleston, WV 25304

it the property of the propert

RE: J Osborn HSOP 16 202, API# 47-033-05950 – Expedited modification due to spacing changes.

#### Dear Laura:

Enclosed please find the modification for the J Osborn HSOP 16 202, (API# 47-033-05950). This permit is being modified due to adjusting the well bore spacing and moving it 300' to the west. The well head locations remained the same. This well was originally permitted to 24,052' this well is now permitted to 25,877 due the shift but it's the same leases as well.

Included are the following update forms:

- Plat
- WW-6B, Well Work Permit Application/Casing
- Well Bore Schematic
- WW-6A1, Lease Information
- Roadway Letter
- Site Safety Plan
- AOR

Should you have any questions or need any additional information, please feel free to contact me by phone or email. Thanks!

Sincerely,

Ross Schweitzer Sr. Director of Drilling, Construction and Permitting 1-724-584-1192 mobile rschweitzer@arsenalresources.com RECEIVED Office of Oil and Gas

SEP 2 0 2021



Click or tap to enter a date.

Alliance Petroleum Corporation 4150 Beldon Village Ave. NW Ste 410 Canton, OH 44718-2553

RE: J Osborn HSOP 16 Well Pad

Dear Sir/Madam.

Arsenal Resources has developed a Marcellus pad, J Osborn HSOP16 202 well, located in Harrison County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both. may occur between hydraulically fractured wells in the Marcellus formation (approximately 7,110 TVD) and existing conventional natural gas wells included in the attached well list for which you are believed to be the operator.

Arsenal Resources anticipates conducting hydraulic fracturing at the J Osborn HSOP16 202 well, during the First Quarter of 2022. We have identified conventional natural gas wells operated by your company within 500' (lateral distance) of our newly planned wells. Plats for each well on this pad are attached.

We recommend that conventional well operators conduct the following activities before, during and after fracturing operations:

- Inspect surface equipment, prior to fracturing, to establish integrity and establish well conditions.
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas, or pressure.
- 3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
- 4. Notify the OOG and Arsenal Resources if any changes in water, gas production, pressure or other anomalies are identified.

Please feel free to contact me at 724-940-1218 with any questions or comments. You may also contact the WV Office of Oil and Gas at 304-926-0499.

Sincerely.

Ross Schweitzer Sr. Director of Drilling, Construction and Permitting

> Office of Oil and Gas SEP 2 0 2021

6031 Wallace Road Extension, Suite 300, Wexford, PA 15090 Phone (724) 940-1100 eFax 1-800 HASD981

AUR Attahnent B



#### Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near Arsenal Resources hydraulic fracturing in Harrison County, WV prior to hydraulic fracturing at JOsbornHSOP16 Well Number 202.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7,200' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Benson formations (approximately 4,700' TVD).

The plan is being implemented as an additional safety measure to be utilized in conjunction with best management practices and emergency action plans for this site. These additional measures include pre-notification of conventional well operators of the timing and location of the hydraulic fracturing, establishment of measures conventional well operators should implement, and assurance that the Division of Oil and Gas is notified of the timeline, as well as any issues that may arise during fracturing.

1. Communications with Conventional Operators.

Arsenal Resources, using available data (WV Geological Survey, WVDEP Website, and IHS data service), has identified all known conventional wells and well operators within 500 feet of this pad and the lateral sections. A map showing these wells along with a list of the wells and operators is included in Attachment A.

Upon approval of this plan, Arsenal Resources will notify these operators, via letter, of the hydraulic fracturing schedule for these wells. A copy of this letter is included in Attachment B.

The letter provides recommendations to these conventional operators to 1) increase their monitoring of their wells during that time period, 2) ensure that their well head equipment is sound, and 3) provide immediate notification to Arsenal Resources and the OOG in the event of any changes in their well conditions.

Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

- 1. Inspect their surface equipment prior to fracturing to establish integrity and establish prefrac well conditions.
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure.
- 3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
- 4. Notify the OOG and ARSENAL RESOURCES if any changes in water, gas production, pressure or other anomalies are identified.

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2. Reporting

Arsenal Resources will provide information relating to the hydraulic fracturing schedule, communication with conventional operators, and ongoing monitoring of the work upon request of OOG or immediately after any event of any noted abnormalities.

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6031 Wallace Road Extension, Suite 300, Wexford, PA 15090 Phone (724) 940-1100 eFax 1-800-428-0981

10/01/2021

Well Pad Name: J Osborn HSOP16

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

1) Well Operate	<sub>or:</sub> Arsena	al Resources	6	494519412	Harrison	Simpson	Rosemont
- <b>-</b>				Operator ID	County	District	Quadrangle
2) Operator's V	Vell Numbe	r: JOsborn	HSOP16	202 Well Pa	ad Name: J	Osborn HSOF	216
3) Farm Name/	Surface Ow	vner: Judy M	. Osborn	(LE) Public Ro	ad Access:	77/4 Moss Ru	n (Coplin Run)
4) Elevation, cu	urrent groun	nd: <u>1164</u>	El	evation, proposed	i post-const	ruction: 1164'	
5) Well Type	(a) Gas Other	<u>×</u>	_ Oil	Uno	derground S	torage	
	(b)If Gas	Shallow Horizontal	X X	Deep			
6) Existing Pad	l: Yes or No						
· -	-			ipated Thickness om- 7522 ft, Anticipa	-		ed Pressure- 0.5 psi/ft
8) Proposed To	tal Vertical	Depth: 7,51	10 ft				
9) Formation a			Marcellus	s Shale			
10) Proposed T	otal Measu	red Depth:	25,877 ft				
11) Proposed H	Iorizontal L	eg Length:	17,670 ft				
12) Approxima	te Fresh Wa	ater Strata De	pths:	43 ft, 258 ft, 35	56 ft, 539 ft,	725 ft	
13) Method to	Determine l	Fresh Water I	Depths:	offsetting wells repo	rted water de	pths (033-02179,	033-02507, 033-02975)
14) Approxima	te Saltwate	r Depths: <u>No</u>	one Expe	cted			
15) Approxima	te Coal Sea	m Depths: 💾	flom - 146', Bakerstov	m – 227°, Brush Creek – 326°, Upper Fr	eeport – 399', Lower Freepo	ort - 437°, Uppor Kätznning - 527°, I	Middle Kittanning – 590', Lower Kittanning – 611'
16) Approxima	te Depth to	Possible Voi	d (coal mi	ine, karst, other):	None Kno	wn	
17) Does Propo directly overlyi				ms Yes		No X	
(a) If Yes, pro	ovide Mine	Info: Name	:				
		Depth	•				RECEIVED Office of Oil and Gas
		Seam:					SEP 2 0 2021
		Owner	r:				WV Department of Environmental Protection



API NO. 47-033 - 05950

OPERATOR WELL NO. JOSborn HSOP16 202 Well Pad Name: JOSborn HSOP16

18)

# CASING AND TUBING PROGRAM

ТҮРЕ	<u>Size</u> (in)	<u>New</u> or Used	Grade	<u>Weight per ft.</u> (lb/ft)	<u>FOOTAGE: For</u> <u>Drilling (ft)</u>	INTERVALS: Left in Well (ft)	<u>CEMENT:</u> <u>Fill-up</u> <u>(Cu. Ft.)/CTS</u>
Conductor	26	Used	1.	102.7	80	80 -	CTS
Fresh Water	13.375	New	J-55	54.5	800	800 -	CTS
Coal		100.00					
Intermediate	9.625	New	J-55	40	2,500	2,500 /	CTS
Production	5.5	New	P-110	20	25,877	25,877 -	TOC @ 2,350 -
Tubing							
Liners		-	1				

						SDW 9/14	Izazi
ТҮРЕ	Size (in)	<u>Wellbore</u> Diameter (in)	<u>Wall</u> <u>Thickness</u> <u>(in)</u>	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	<u>Cement</u> <u>Type</u>	<u>Cement</u> <u>Yield</u> (cu. ft./k)
Conductor	26	36			0	Class A, 3% CaCl2	1.2
Fresh Water	13.375	17.5	0.38	2,730	900	Class A, 3% CaCl2	1.2
Coal							
Intermediate	9.625	12.25	0.395	3,950	1,500	Class A, 3% GaCl2	1.29
Production	5.5	8.5-8.75	0.415	14,360	9,500	Class A/50:50 Poz	1.29/1.34
Tubing					5,000		
Liners					N/A		

# PACKERS

Kind:	
Sizes:	
Depths Set:	RECEIVED Office of Oil and G
	SEP 202

WV Department of Environmental Protection

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. .

WW-6B

(04/15)

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

The well will be started with a conductor rig drilling a 36" hole to Conductor programmed depth then running 26" casing and circulate cement back to surface. The conductor rig will move out and the drilling rig will move in and rig up. The drilling rig will then spud a 17  $\frac{1}{2}$ " hole and drill to fresh water casing (Surface) to the programmed depth, Run 13- 3/8" casing and cement to surface. The rig will continue drilling a 12-  $\frac{1}{4}$ " intermediate hole to the programmed depth, run 9- 5/8" casing and cement to surface. The rig with then continue to drill an 8-  $\frac{3}{4}$ " hole to a designed KOP. We will then start drilling the curve and lateral section to the programmed total measured depth, run 5  $\frac{1}{2}$ " casing and cement according to the program.

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

The well will be completed using a plug and perforation method and stimulated with a slickwater and sand slurry. The anticipated maximum rate will be 90 bpm and the maximum pressure will be 9,500 psi.

	Office of Oil and Gas
21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 17.26	SEP 2 0 2021
	SEP ZU ZUZI
22) Area to be disturbed for well pad only, less access road (acres): 6.63	way Department of
	WV Department of Environmental Protection
23) Describe centralizer placement for each casing string:	

26"- No centralizers 13 3/8" – one bow spring centralizer on every other joint 9 5/8" – one bow spring centralizer every third joint from TD to surface 5  $\frac{1}{2}$ " – one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 1,600'; there will be no centralizers from 1,600 to surface.

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

26" will be circulated to surface. The 13 3/8" casing will be cemented to surface with Class A cement and no greater than 3% CaCl (calcium chloride). The 9 5/8" casing will be cemented to surface with Class A cement, & no greater than 3% calcium chloride. The 5 1/2" production string will be cemented back to 1,350' (+/-150' above the casing shoe for the 9 5/8") with Class A and 50/50 Poz cement retarded (to extend pumpability) cellophane flaked for fluid loss, Bentonite gel as an extender (increased pumpability and fluid loss), a defoaming agent to decrease cement foaming during mixing to insure the cement is of proper weight to placement and possibly gypsum gas blocking additive to aid in blocking/gas migration (in combination with other additive mentioned here, helps cement achieve a "right angle" set) during the plastic phase of the cement set-up.

### 25) Proposed borehole conditioning procedures:

Top holes will be drilled with fresh water KOP. At KOP, the wellbore will be loaded with synthetic oil based mud, barite-weighted mud system with such properties as to build a filter-cake on the face of the bore-hole. This will provide lubricity as well as stabilizing the well bore. We will begin rotating the drill string and mud will be circulated upon reaching TD until no further cuttings are observed coming across the shaker screens. Once clean mud is circulated back to surface, we will pull three stands of drill pipe, load the hole, pull three strands and load the hole. The weight indicator on the rig will be monitored for any occurrences of drag and if any are noticed, we will re-run the previous stand of pipe pulled across and circulate 2x bottoms up while watching shakers for signs of cuttings. Once at the base curve, the string will be continuously rotated while pumping 2x bottoms up. We will pull three stands and fill the hole until we reach the vertical section of the well.

\*Note: Attach additional sheets as needed.



4703305950

	ENAL		Arsenal Resourc J. Osborn HSOP 1 Casing Design	6 202
Other Names:	N/A		Directional Plan # 3	County: Harrison
Surface Location: Sottom Hole Location:	TBD TBD			State: West Virginia AFE #: XX API #: XX
otal Depth:	25,877 MD (ft) 7,510 TVD (ft)			RKB: 25
ogs	7,510 TVD (it) Significant	Depth (ft)	Depth (ft)	Ground Level: 1,164 Hole Casing and Mud Directional & Surveys
-9-	Formations (TVD)	MD	TVD	Size Cement Drig /Csg Point
lone	Section 1		Conductor Pipe	
		100	100	26" 102.7# Vertical
one				17 1/2" (PDC) Floc Water
	Section 2		Floc	Cement: Class A 489 Sacks w/ 30% Excess TOC: Surface (top off if needed) All cement volumes are estimates
os sible BL after cement job		850	850	13 3/8" 54,5# J-55 STC
None	Section 3		Floc	12 1/4" (PDC) Floc Water
				Cement: Class A 678 Sacks w/ 50% Excess TOC: Surface (top off if needed) All cement volumes are estimates
ossible 8L after cement job		2,500	2,500	9 5/8" 40# J-55 LTC
	Section 4		Floc	Mud Data         Frem         Te           Floc Water         100         2500           Floc Water         2500         2517           11.5-12.0 ppg SOBM         7,178         25,877
				Bit Data         From         To           17-1/2" & 12 1/4"         PDC         too         2.500           8-3/4" (PDC)         2.500         7.175           8- 1/2" (PDC)         7.178         25.877           Directional Data         See Directional Plan
			ОВМ	
				BE OF IL
	Big Lime		1,323	RECEIVED Office of Oil and Ga
	1st Elk Siltstone		4,658	SEP 2 0 2021
	Tully Lime		7,162	WV Department of Environmental Protect
	Purcell (Limestone) Lower Marcellus		7,422	Environmental Protect           Cement: Class A: 50/50 POZ           1.2 ft3/sack +10% Exs in OH =
				TOC: 2,350 ft All cement volumes are estimates
	25,877 MD 7510 TVD			
				5 1/2" 20# P-110 USS freedom HTQ
evision	1		Note: Not drawn to sca	Le Cement Outside Casing Seal Assembly in Annulus

#### Area of Review Report - \_\_\_J Osborn HSOP 16\_\_\_\_\_ Pad, \_\_\_\_202\_\_\_ Lateral, \_\_\_\_\_ Harrison\_\_\_\_ County, WV

Well Name	API Number	Operator Name / Address	Well Type	Latitude	Longitude	Total Depth	Perforated Formation(s)	Producing Zones not Perforated
Long 1	033-03978	Alliance Petroleum Corporation	Existing	39.218479	-80.202826	4604	Fifth, Riley, Benson	NA
Johnson-Lang 1	033-00458	Delta Drilling	Plugged - 1971	39.226725	-80.208028	2577	Fifth	NA

Office of OII and Gas SEP 2 0, 2021 Environmental Protection



# **SITE SAFETY PLAN**

# J OSBORN HSOP16 WELL PAD, #202

911 Address:

2687 Coplin Run Rd Bridgeport, WV 26330

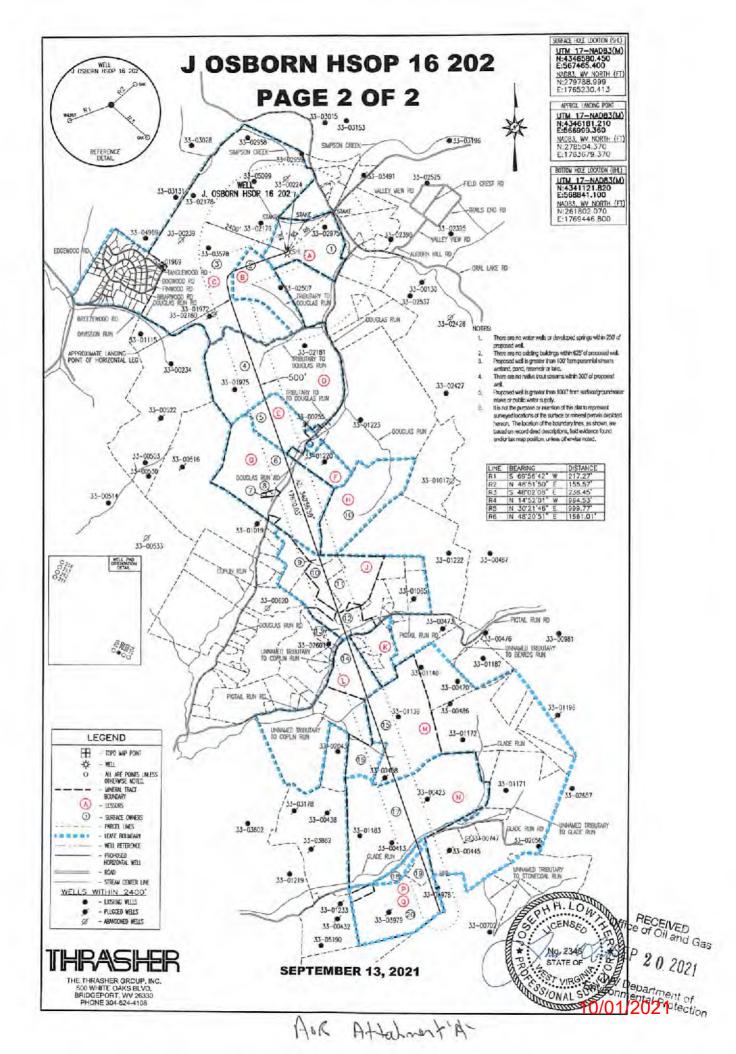
GDW 911412021

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10/01/2021

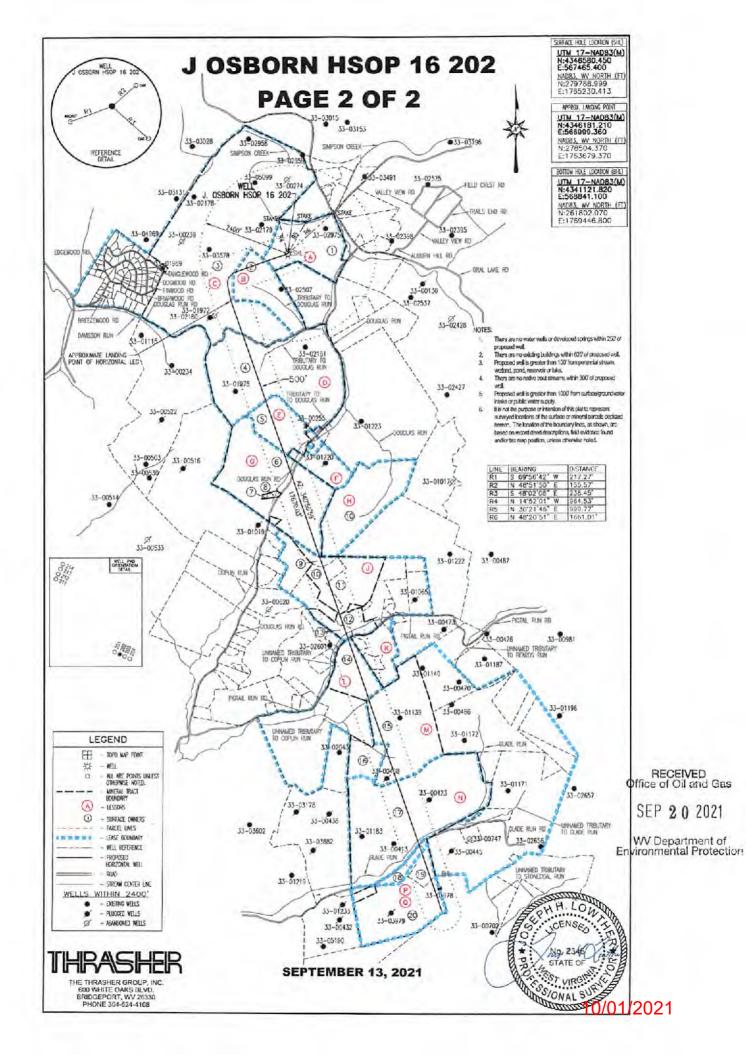
BHL is located on topo map <u>12,173</u> feet south of Latitude: <u>39,15'00</u>" SHL is located on topo map <u>9,370</u> feet south of Latitude: <u>39,17'30</u>" SHE DIST-TM/PAR SURFACE OWNER LESSOR COBEL OSBORN, ET AL GEORGE T. FARIS, ET AL CHARLES THOMAS DAVS, ET UX JOHN B. WEBB, ET AL 15-330/5 15-330/3 15-330/4 15-330/4 15-350/4 15-350/5 15-350/3 JUDY M. OSBORN (LE) 15-330/5 6 5 (JUDY M. OSBORN IRREVOCABLE TRUST) CHARLES THOMAS DAVIS II, ET AL locat MCHAEL A. DSBORN ET UX NORVIL D. LANIZ XTO ENERGY INC. 15-330/4 CAROLYN S. HARRON CHARLES E. REED 1/2 INTEREST 15-330/3 ed 15-350/3 15-350/3 15-350/3.1 15-350/3.3 15-330/25 GERALD W. BURNER ET AL 1/2 INTERES 99 MICHAEL A. & ROBERTA OSBORN GORDON F. OSBORN (LE) 15-350/4 ALDERSON BROADDUS COLLEGE & AM REBECCA A. COMPTON: JAMES MICHA & JENNIFER NOR COMPTON 15-350/6 15-350/16 15-350/16 topo 15-350/3 (BRIAN MATTHEW OSBORN) 15-350/16.4 15-350/16.2 15-350/16.8 15-350/16.5 15-350/25.3 15-350/25.1 15-350/25.2 15-350/25.2 15-350/3.3 GORDON F. OSBORN (LE) map (BRIAN MATTHEW OSBORN) CRAFTON COAL COMPANY GORDON F. & DONNA R. OSBORN 15-350/3.1 8\* (BRIAN MATTHEW OSBORN) 10,221 GORDON F. OSBORN (LE) 15-350/16.1 CLARENCE E. CLEVENGER IRR TRUST 15-350/24 15-370/13 15-370/29 15-371/7.1 (BRIAN MATTHEW OSBORN) DONALD N. & CYNTHIA J. MCHENRY 15-350/16.4 10 15-371/7 15-370/21 P/0 15-370/2 P/0 15-370/2 DONALD N. & CYNTHIA J. MCHENRY 15-350/16.2 11 feet N. D. PARKS ET / CHRISTOPHER L. HUMMEL 15-350/16.5 15-350/16.9 N JOHN JAMES JONES 13 JASON J. POTH CHARLES W. CLEVENGER IRR TRUST west AUDREY U. DAVIS ET UX. 14 15-350/24 15-370/28.1 C/O MARY M. TUCKER CHARLES W. CLEVENGER IRR TRUST 15-370/13 9.9 15-370/12 16 CHARLES W. CLEVENGER IRR TRUST Longitude: Longitude: 15-370/21 SHAWN R. NEWBROUGH 18 JOHN JAMES JONES 15-370/27 ANTHONY JONES C/0 15-370/28.1 CHARLES A. & JOYCE G. MATHENY 19 20 CHARLES A. & JOYCE G. MATHENY 15-370/28 80 SHL 12 30 BHL SURFACE HOLE LOCATION (SHL) APPROX LANUNG POINT BOTTOM HOLE LOCATON (BHL) UTM 17-NAD83(M) N:4346580.450 E:567465.400 UTM 17-NAD83(M) UTM 17-NAD83(M) N:4341121.820 E:558841.100 N:4346181.210 E:566999.360 NAD83, WV NORTH (FT) N:261802.070 NADB3, WY NORTH (FT) N:279788.999 NAD83, WV NORTH (FT) N:278504.370 **I**RAS E:1765230.413 E:1769446.800 E:1763579.370 THE THRASHER GROUP INC. 2 FOR SEE PAGE PLAT DUE TO LENGTH OF LATERAL 600 WHITE OAKS BLVD BRIDGEPORT, WV 26330 PHONE 304-624-4108 I,THE UNDERSIGNED, MY KNOWLE PLAT IS CORRECT TO THE BEST OF MY KNOWLE BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BE LAW AND THE REGULATIONS ISSUED AND PRESCRIBED THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS HAN H. LOWERSIGNED, HEREBY CERTIFY THAT THIS HAN H. LOWERS HAND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BE CONSECUTION ISSUED AND PRESCRIBED BE FILE #: J OSBORN HSOP 16 202 DRAWING #: J OSBORN HSOP 16 202 R\* 1" = 2000 SCALE: No. 2346 MINIMUM DEGREE STATE OF TOT VIRGINIT OF ACCURACY: SSIONAL SUR 1/2500 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81 SIONAL SURS R.P.E L.L.S.: P.S. No. 2346 (+) DENOTES LOCATION OF WELL ON DATE: SEPTEMBER 13, 2021 UNITED STATES TOPOGRAPHIC MAPS WVDEP OPERATOR'S WELL #: J OSBORN HSOP 16 202 OFFICE OF OIL & GAS 601 57TH STREET API WELL #: 47 33 CHARLESTON, WV 25304 STATE COUNTY PERMIT Well Type: Oil Waste Disposal X Production Deep X Gas Liquid Injection X Shallow Storage WATERSHED: SIMPSON CREEK  $1163.30'\pm$ ELEVATION: QUADRANGLE: \_\_\_\_\_ ROSEMONT, WV 7.5" COUNTY/DISTRICT: HARRISON / SIMPSON JUDY M OSBORN (LE) (JUDY M OSBORN IRREVOCABLE TRUST) SURFACE OWNER: ACREAGE: 70.00± OIL & GAS ROYALTY OWNER: GOBEL OSBORN, ET AL ACREAGE: 1324.06± DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): RECEIVED Office of Oil and Gas TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: (LATERAL)TVD: 7,510'± TMD: 25,877'± ARSENAL RESOURCES WELL OPERATOR DESIGNATED AGENT SEP 2 0. 2021 GARY SHORT 5031 WALLACE ROAD EXTENSION, SUITE 300 Address. Address 633 WEST MAIN ST. Tom VV2021 Tom VV2021 Protection City\_WEXFORD State PA Zip Code 15090 City BRIDGEPORT State WV Zip Code 26330

Attalhunt A



SHL					SEF.	
SURFACE OWNER	DIST-TM/PAR 15-330/5	A	LESSOR GOBEL OSBORN, ET AL	0/ST-TM/PAR 15-330/5	5°.0.	
1 JUDY M. OSBORN (LE) (JUDY M. OSBORN IRREVOCABLE TRUST)	15-330/5	8	CHARLES THOMAS DAVIS, ET UX	15-330/3 15-330/4	CODE AND I	
2 CHARLES THOMAS DAVIS II, ET AL	15-330/4	DE	JOHN B. WEBE, ET AL MICHAEL A. OSBORN ET UX	15-330/25 15-350/4	beat	
3 CAROLYN S. HARRON 4 CHARLES E. REED 1/2 INTEREST	15-330/3 15-330/25	F	NORVIL D. LANTZ XTO ENERGY INC.	15-350/5 15-350/3	located	
GERALD W. BURNER ET AL 1/2 INTERES	15-350/4			15-350/3.1 15-350/3.3	90	
6 GORDON F. OSBORN (LE)	15-350/3	H U	ALDERSON BROADDUS COLLECE & AMP FUN REBECCA & COMPTON; JAMES MICHAEL D	0 III, LP 15-350/6 0MPION 15-350/16.1	topo	
(BRIAN MATTHEW OSBORN) 7* CORDON F. OSBORN (LE)	15-350/3.3		& JENNIFER NOR COMPTON	15-350/16.4 15-350/16.2 15-350/16.8		
(ERIAN MATTHEW OSBORN)	1001110		GRAFTON COAL COMPANY	15-350/16.5	dow	
8* GORDON F. & DONNA R. OSBORN (BRIAN MATTHEW OSBORN)	15-350/3.1	ĸ	GRAFION COAL COMPANY	15-350/25.3 15-350/25.1 15-350/25.2	00	
9 GORDON F. OSBORN (LE)	15-350/16.1		CLARENCE E. CLEVENGER IRR TRUST	15-350/24 15-370/13	NO	
(BRIAN MATTHEW OSBORN) 1D DONALD N. & CYNTHIA J. MCHENRY	15-350/16.4			15-370/29	10,221	
11 DONALD N. & CYNTHIA J. MCHENRY	15-350/16.2		N. D. PARKS ET AL	15-371/7 15-370/21	The second se	
12 CHRISTOPHER L. HUMMEL 13 JASON J. POTH	15-350/16.5	P Q	JOHN JAMES JONES JOHN JAMES JONES	P/0 15-370/27 P/0 15-370/27	feet	
14 CHARLES W. CLEVENGER IRR TRUST C/O MARY M. TUCKER	15-350/24		AUDREY U. DAVIS ET UX.	15-370/28.1 15-370/28	west	
15 CHARLES W. CLEVENGER IRR TRUST	15-370/13				t of	
16 CHARLES W. CLEVENGER IRR TRUST 17 SHAWN R. NEWBROUGH	15-370/12					
18 JOHN JAMES JONES	15-370/27				pno	
19 CHARLES A. & JOYCE G. MATHENY	15-370/28.1				Longitude: Longitude:	
20 CHARLES A. & JOYCE G. MATHENY	15-370/28	]			0.0	
					80	
			SH		12	
			11	-	30	
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THE THRASHER GROUP, INC. 500 WHITE CAKS BLVD. BRIDGEPORT, WV 26330 PHONE 304-824-4108	UTM 17-5 N:434650 E:567485 NAD83, W/ N:279789, E:1765236 PAGE 2 FC	NADB3(M) 0.450 400 .999 0.413 DR PLA RSIGNED, H	JTM         17-NADB3(M)           V:4346181.210         N:4341121.82           S:566999.360         N:4341121.82           V:278504.370         E:568841.100           Y:278504.370         E:176346.80           T         DUE         TO           LENGTH         TO	OF LATERAL		
THE THRASHER GROUP, INC. BRIDGEPORT, WV 26330 PHONE 304-624-4108 FILE #: J OSBORN HSOP 16 202 PLAT	UTM 17 N:434550 E:567455. NA033, w1 N:279758, E:1765230 PAGE 2 FC	NADB3(M) 0.450 NORTH (F) 959 0.413 DR PLA RSIGNED, H	JIM         17-NADB3(M)           M-3346181.210         N:33411218           Si56699.360         N:33411218           W023, W         NORTH (FI)           N:278504.370         N:251802.07           E:1763679.370         N:251802.07           T         DUE         TO           LENGTH         LENGTH           EREBY         CERTIFY           QF         MY           KNOWLEDGE         AND	OF LATERAL		
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THE THRASHER BROUP, INC. SOUTHING CARS BLUD. BRIDGEPORT, WY 25330         SEE F         SEE F         DILE #:         J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         BEU       OSBORN 150P 16 202       PLAT         BEU       OSBORN HSOP 16 202       PLAT         BEU       OSBORN HSOP 16 202       PLAT         BEU       OSBORN HSOP 16 202       BEU         WINIMUM DEGREE       OF       Sign         OF ACCURACY: 1/2500       THE MADAS 1498.81       R.P.J         CHARLESTONS WUSSING       COLSTATES TOPOGRAPHIC MAPS       WVDEP         OFFICE OF OIL & GAS       GOI S7TH STREET       CHARLESTON, WV 25304       X         Well Type:       OIL Waste Disposal       X       X<	AND THE UNDER TAGE 2 FC I,THE UNDER T IS CORRECT TO ESTREMENT OF THE UNDER T IS CORRECT TO EF AND SHOWS AND THE REGU DEPARTMENT OF THE UNDER THE UNDER TH	ADDR PLA  ACTION  ACTION ACTION  ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTION ACTI	JIM 17-MADB3(M)         MASAGENEL20         MASAGENEL20 <t< td=""><td>B300 DF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SS/ONAL SUR 2021 202</td><td>RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of</td></t<>	B300 DF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SS/ONAL SUR 2021 202	RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of	
THE THRASHER BROUP, INC. SOUTHING CARS BLUD. BRIDGEPORT, WY 25330         SEE F         SEE F         DILE #:         J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         BEU       OSBORN HSOP 16 202       PLAT         DRAWING #: J OSBORN HSOP 16 202       PLAT         SCALE: 1" = 2000'       THE         MINIMUM DEGREE       OF         OF ACCURACY: 1/2500       R.P.J         R.P.J       R.P.J         CHATES LOCATION OF WELL ON       NUMITED STATES TOPOGRAPHIC MAPS         WVDEP       OFFICE OF OIL & GAS       GOI 57TH STREET         CHARLESTON, WV 25304       X       X         Well Type:       OIL © NUM WSTED DISPOSAL       X         QGAS COUNTY/DISTRICT:       HA	AND THE UNDER TAGE 2 FC I,THE UNDER T IS CORRECT TO ESTREMENT OF THE UNDER T IS CORRECT TO EF AND SHOWS AND THE REGU DEPARTMENT OF THE UNDER THE UNDER TH	DR PLA NORHATS DR PLA RSIGNED, H 0 THE BEST ALL THE IN DILATIONS ISS DF ENVIRON PLA DECEP Decep Shallow QUAD NOCABLE TRUS	JIM 17-MADB3(M)         MASAGENEL 200         <	B300 DF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SS/ONAL SUR 2021 BORN HSOP 16 202 NTY PERMIT 1163.30'± V 7.5' 10.00± 324.06±	RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of	
THE THRASHER GROUP, INC. SOUTHING CARE BLOD BRIDGEPORT, WY 26330         SEE F         SEE F         SEE F         PHONE 304-624-4108         FILE #:       J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         MELAW         MINIMUM DEGREE         OF ACCURACY: 1/2500         PROVEN SOURCE         OF ACCURACY: 1/2500         PROVEN SOURCE         OF ACCURACY: 1/2500         PROVEN SOURCE         OFFICE OF OIL & GAS         OFFICE OF OIL & GAS <td cols<="" td=""><td>AGE 2 FC</td><td>Deep</td><td>JIM 17-NADB3(M)         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA34112182         MA34112182         MA346181_210         MA346181_210         MA346181_210         MA344112182         MA34112182         MA34112182         MA344112182         MA34414111         MA34414111         MA34444         MA34444         MA44444         MA4444         MA4444     <td>B300 DF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SJ/ONAL SUS 2021 20</td><td>RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of</td></td></td>	<td>AGE 2 FC</td> <td>Deep</td> <td>JIM 17-NADB3(M)         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA34112182         MA34112182         MA346181_210         MA346181_210         MA346181_210         MA344112182         MA34112182         MA34112182         MA344112182         MA34414111         MA34414111         MA34444         MA34444         MA44444         MA4444         MA4444     <td>B300 DF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SJ/ONAL SUS 2021 20</td><td>RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of</td></td>	AGE 2 FC	Deep	JIM 17-NADB3(M)         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA346181_210         MA34112182         MA34112182         MA346181_210         MA346181_210         MA346181_210         MA344112182         MA34112182         MA34112182         MA344112182         MA34414111         MA34414111         MA34444         MA34444         MA44444         MA4444         MA4444 <td>B300 DF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SJ/ONAL SUS 2021 20</td> <td>RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of</td>	B300 DF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SJ/ONAL SUS 2021 20	RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of
THE THRASHER GROUP, INC. BRIDGEPORT, W2 26330 BRIDGEPORT, W2 26300 BRIDGEPORT, W2 26300 BRIDEPORT, W2 26	ITHE UNDED     ITHE UNDED     ITHE UNDED     IS CORRECT TO     IF AND SHOWS     AND THE REGU     DEPARTMENT C     IF AND SHOWS     IF AND SHOWS     IF AND SHOWS     IF AND SHOWS     IF AND     IF AND SHOWS     IF AND     IF AND SHOWS     IF AND	DR PLA NOR PLA RSIGNED, H DR PLA RSIGNED, H D THE BEST ALL THE IN ILATIONS ISS DF ENVIRON COLOR C	JIM 17-NADB3(M)         MA346181_210         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA34614_100         MA4112_1	B300 DF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SJ/ONAL SUS 2021 20	RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of	
THE THRASHER GROUP, INC. SOU WHITE CARS BLVD. BRIDGEPORT, WW 26330         SEE F         SEE F         SEE F         SEE T         SEE T         PHONE 304-624-4108         FILE #:       J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         DRAWING #: J OSBORN HSOP 16 202         MELAWING #: J OSBORN HSOP 16 202         MELAWING #: J OSBORN HSOP 16 202         MINIMUM DEGREE         OF ACCURACY: 1/2500         NUNITED STATES TOPOGRAPHIC MAPS         WOLE OF OIL & GAS         OFFICE OF OIL & GAS         OFFICE OF OIL & GAS         OFFICE OF OIL & GAS	ITHE UNDED     ITHE UNDED     ITHE UNDED     IS CORRECT TO     IF AND SHOWS     AND THE REGU     DEPARTMENT C     IF AND SHOWS     IF AND SHOWS     IF AND SHOWS     IF AND SHOWS     IF AND     IF AND SHOWS     IF AND     IF AND SHOWS     IF AND	DR PLA NOR PLA RSIGNED, H DR PLA RSIGNED, H D THE BEST ALL THE IN ILATIONS ISS DF ENVIRON COLOR C	JIM 17-NADB3(M)         MA346181_210         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA34614_100         MA4112_1	B300 DF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL OF LATERAL No. 2346 STATE OF SJ/ONAL SUS 2021 20	RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of	
THE THRASHER GROUP, INC. BOO WHITE CARS BLUD. BRIDGEPORT, WY 26330       SEE         FILE #:       J OSBORN HSOP 16 202       PLAT         DRAWING #:       J OSBORN HSOP 16 202       PLAT         BEU       DRAWING #:       R.P.J         OFACCURACY:       1/2500       PLAT         MINIMUM DEGREE       OF ACCURACY:       1/2500         OFOVEN SOURCE       U.S.G.S. MONUMENT       R.P.J         (+) DENOTES LOCATION OF WELL ON       NUNITED STATES TOPOGRAPHIC MAPS         WYDEP       OFFICE OF OIL & GAS       R.P.J         OFFICE OF OIL & GAS       GOI STTH STREET       CHARLESTON, WV 25304         Well Type:       OII WASTE DISPOSA       X <tr< td=""><td>ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     IS CORRECT TO     ITHE UNDER     IS CORRECT TO     IF AND SHOWS     AND THE REGU     DEPARTMENT CO     IF AND SHOWS     AND THE REGU     DEPARTMENT CO     IFT AL     IFT</td><td></td><td>JIM 17-NADB3(M)         MA346181_210         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA34614_100         MA4112_1</td><td>B3200         OF         LATERAL         OF         OF         OF         CENSED         No. 2346         STATE OF         STATE OF</td><td>RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of</td></tr<>	ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     IS CORRECT TO     ITHE UNDER     IS CORRECT TO     IF AND SHOWS     AND THE REGU     DEPARTMENT CO     IF AND SHOWS     AND THE REGU     DEPARTMENT CO     IFT AL     IFT		JIM 17-NADB3(M)         MA346181_210         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA3461121_B2         MA34614_100         MA4112_1	B3200         OF         LATERAL         OF         OF         OF         CENSED         No. 2346         STATE OF	RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of	
THE THRASHER GROUP, INC. 500 WHTE CARS BLVD. BRIDGEPORT, WY 26330         SEE F         SEE F         FILE #: J OSBORN HSOP 16 202 DRAWING #: J OSBORN HSOP 16 202 DRAWING #: J OSBORN HSOP 16 202 DRAWING #: J OSBORN HSOP 16 202 SCALE: 1" = 2000'       PLAT BEU LAW THE         SOBORN HSOP 16 202 DRAWING #: J OSBORN HSOP 16 202 SCALE: 1" = 2000'         MINIMUM DEGREE OF ACCURACY: 1/2500         OF ACCURACY: 1/2500         OF ACCURACY: 1/2500         PROVEN SOURCE OF ACCURACY: 1/2500         OF ELEVATION: THOMAS 1498.81         OF ELEVATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WYDEP         OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304         Well Type: OIL Waste Disposal X         XIMPSON CREEX         COUNTY/DISTRICT: HARRISON / SIMPSOI         JUDY M OSBORN (LE) (JUI         OIL & GAS ROYALTY OWNER: COBEL (         DRILL X CONVER         DIUG OFF OLD FOR CLEAN OUT & REPI         TARGET FORMATION: MARENUM         WARENUM         OFFICE OF OIL & REPI	ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     IS CORRECT TO     ITHE UNDER     IS CORRECT TO     IF AND SHOWS     AND THE REGU     DEPARTMENT CO     IF AND SHOWS     AND THE REGU     DEPARTMENT CO     IFT AND SHOWS     ITHE POSEDRN, ET AL     IT	DR PLA NOR PLA DR PL	JIM 17-NADB30(M)         MA 172-NADB30(M)         MA 346181_210         MA 3461121_82         MA 34614_10         MA 34614_10 </td <td>B320 DF LATERAL OF LATERAL</td> <td>RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of</td>	B320 DF LATERAL OF LATERAL	RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of	
THE THRASHER GROUP, INC. 500 WHITE CARS BLVD. BRIDGEPORT, WY 26330         SEE F         SEE F         FILE #: J OSBORN HSOP 16 202 DRAWING #: J OSBORN HSOP 16 202 DRAWING #: J OSBORN HSOP 16 202 DRAWING #: J OSBORN HSOP 16 202 SCALE: 1" = 2000'       PLAT BEU WAY         SEE T         OF ACCURACY: 1/2500         PROVEN SOURCE OF ACCURACY: 1/2500         OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81         OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81         OF ELEVATION: U.S.G.S. MONUMENT OF ELEVATION: THOMAS 1498.81         (4) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 S7TH STREET CHARLESTON, WV 25304         Well Type: OIL Waste Disposal X         XIPSON CREEX         COUNTY/DISTRICT: HARRISON / SIMPSO         JUDY M CSBORN (LE) (JUI         OIL & GAS ROYALTY OWNER: COBEL (         DUG OFF OLD FOR CLEAN OUT & REPI         TARGET FORMATION: MRCELUS         WELL OPERATOR ARSENAL RESOURCES         Address 6031 WALLACE ROAD EXTENSION, SUIT	ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     ITHE UNDER     IS CORRECT TO     ITHE UNDER     IS CORRECT TO     IF AND SHOWS     AND THE REGU     DEPARTMENT CO     IF AND SHOWS     AND THE REGU     DEPARTMENT CO     IFT AND SHOWS     ITHE POSEDRN, ET AL     IT	DR PLA NOR PLA DR PL	JIM 17-MADB3(M)         MA 346181.210         MA 354081.210         MA 354081.100         <	B320 DF LATERAL OF LATERAL	RECEIVED Office of Oil and Gas SEP 2 0 2021 WV Department of	

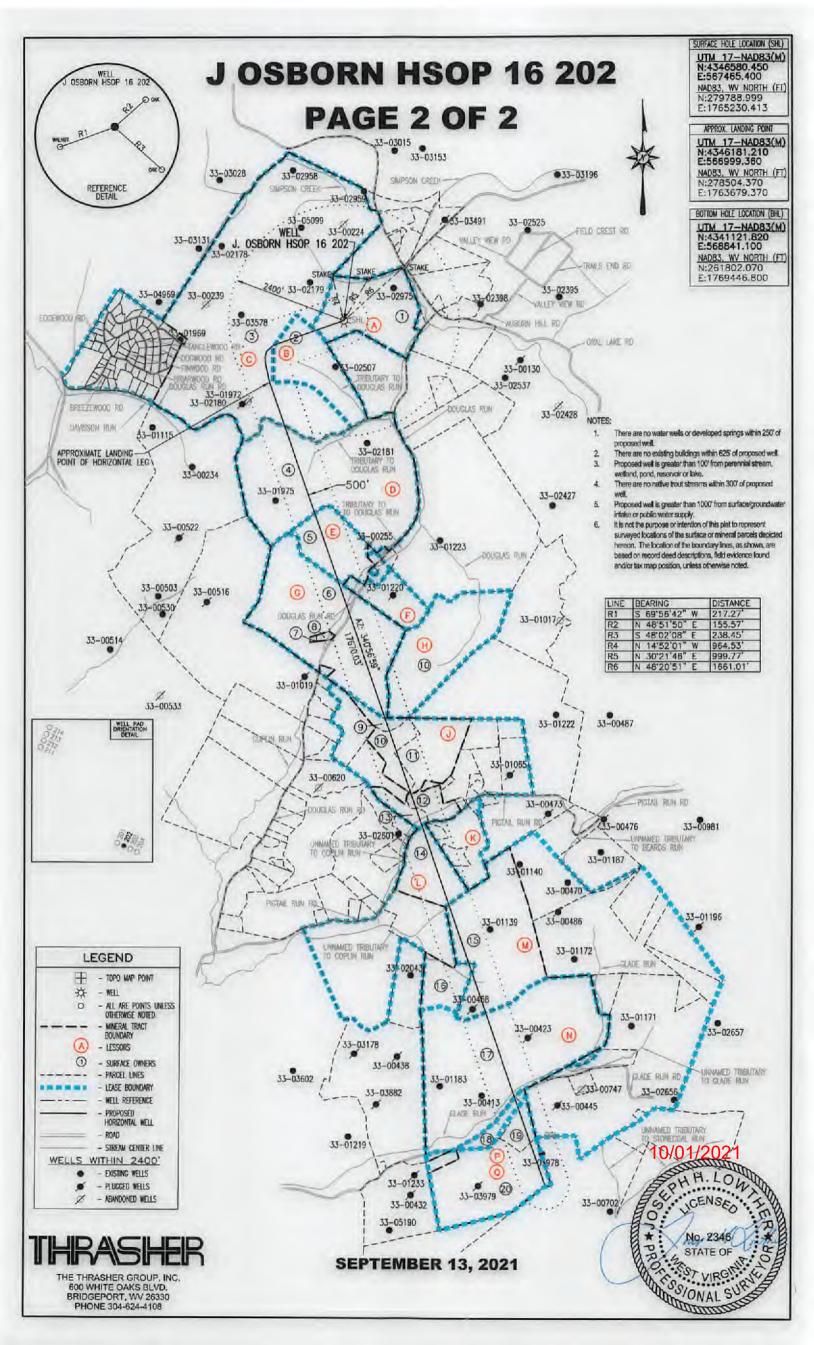
BHL is located on topo map \_12.173\_feet south of Latitude: 39 15 '00 "



BHL is located on topo map <u>12,173</u> feet south of Latitude: <u>39 15 00</u> SHL is located on topo map <u>9,370</u> feet south of Latitude: <u>39 17 30</u>

SURFACE OWNER	DIST-TM/PAR	-	LESSOR	DIST-TM/PAR
1 JUDY M. OSBORN (LE)	15-330/5	AB	GOBEL OSBORN, ET AL GEORGE T. FARIS, ET AL	15-330/5
2 CHARLES THOMAS DAVIS II, ET AL	IST) 15-330/4	C	CHARLES THOMAS DAVIS, ET UX	15-330/4
3 CAROLYN S. HARRON	15-330/3	D	JOHN B. WEBB, ET AL MICHAEL A OSBORN ET UX	15-330/25 15-350/4
4 CHARLES E. REED 1/2 INTEREST	15-330/25	G	NORVIL D. LANTZ XTO ENERGY INC.	15-350/5 15-350/3
GERALD W. BURNER ET AL 1/2 INTE 5 MICHAEL A. & ROBERTA OSBORN				15-350/3.1 15-350/3.3
6 GORDON F. OSBORN (LE)	15-350/4 15-350/3	н	ALDERSON BROADDUS COLLEGE & AMP REBECCA A. COMPTON; JAMES MICHAE	FUND III, LP 15-350/6
(BRIAN MATTHEW OSBORN)	10 000,0		& JENNIFER NOR COMPTON	15-350/15.4
7* GORDON F. OSBORN (LE)	15-350/3.3			15-350/16.2 15-350/16.8
(BRIAN MATTHEW OSBORN) 8* GORDON F. & DONNA R. OSBORN	15-350/3.1	K	GRAFTON COAL COMPANY	15-350/16.5 15-350/25.3
(BRIAN MATTHEW OSBORN)	13-350/3.1	~	CITATION COAL COMPANY	15-350/25.1
9 GORDON F. OSBORN (LE)	15-350/16.1	L	CLARENCE E. CLEVENGER IRR TRUS	15-350/25.2 T 15-350/24
(BRIAN MATTHEW OSBORN)		м	W. R. JOHNSON ET AL	T 15-350/24 15-370/13 15-370/29
10 DONALD N. & CYNTHIA J. MCHENRY	15-350/16.4			15-371/7.1
11 DONALD N. & CYNTHIA J. MCHENRY 12 CHRISTOPHER L. HUMMEL	15-350/16.2	N	N. D. FARKS ET AL	15-371/7 15-370/21
13 JASON J. POTH	15-350/16.9	P	JOHN JAMES JONES JOHN JAMES JONES	P/0 15-370/27 P/0 15-370/27
14 CHARLES W. CLEVENGER IRR TRUST	15-350/24	-	AUDREY U. DAVIS ET UX.	15-370/28.1
C/O MARY M. TUCKER				15-370/28
15 CHARLES W. CLEVENGER IRR TRUST 16 CHARLES W. CLEVENGER IRR TRUST				
17 SHAWN R. NEWBROUGH	15-370/21			
18 JOHN JAMES JONES	15-370/27			1
C/O ANTHONY JONES				
19 CHARLES A. & JOYCE G. MATHENY	15-370/28.1			
20 CHARLES A. & JOYCE G. MATHENY	15-370/28			
			I	SHL
			1	
BRIDGEPORT, WV 26330 PHONE 304-624-4108	NADB3, WV NO N:279788.99 E:1765230.4	R PLA		070
J OSBORN HSOP 16 202			EREBY CERTIFY THAT THIS	JoHH.LOW
			FORMATION REQUIRED B	S JCENSES IV
			UED AND PRESCRIBED	R
ALE: 1" = 2000'	THE DEPARTMENT OF	ENVIRON	MENTAL PROTECTION.	No. 2346 \star
INIMUM DEGREE		1	11/1 11 113	STATE OF STOL
ACCURACY: 1/2500	Signed:	Vnip	- M Jow This of	TOT VIRGIN
OVEN SOURCE	1	/	A A	SIONAL SUP
ELEVATION: THOMAS 1498.81'	R.P.E.:		L.L.S.: P.S. No. 2346	Company of
DENOTES LOCATION OF WELL ON				
VITED STATES TOPOGRAPHIC MAPS	WIATON		DATE: SEPTEMBER 1	3, 2021
VDEP	19		OPERATOR'S WELL #: J	CROPN USOD 16 20
FFICE OF OIL & GAS	臣族北王		UPERATORS WELL #. J (	SBURN HSUP 10 20
1 57TH STREET	. 69.		API WELL #:	- AFRen H
			API WELL #: 47	33 05750 H
				33 05750 PERMIT
IARLESTON, WV 25304	X Production	Deep		33 05750 H
IARLESTON, WV 25304				33 05750 H
ARLESTON, WV 25304 Il Type: Oil Waste Disposal Gas Liquid Injection	Storage X	Shallow	STATE CO	33 05750 PERMIT
ARLESTON, WV 25304 Il Type: Oil Waste Disposal Gas Liquid Injection	Storage X	Shallow		33 05750 PERMIT
ARLESTON, WV 25304	Storage X	Shallow	STATE CO	33 DUNTY DERMIT 1163.30'±
IARLESTON, WV 25304 II Type: Oil Waste Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK UNTY/DISTRICT: HARRISON / SIM	Storage X	Shallow QUAL	STATE CO ELEVATION: DRANGLE: ROSEMONT	33 DUNTY 1163.30'± , WV 7.5'
ARLESTON, WV 25304 HARLESTON, WV 25304 Gas Waste Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK DUNTY/DISTRICT: HARRISON / SIM DRFACE OWNER: JUDY M OSBORN (LE)	Storage X	Shallow QUAL OCABLE TRUS	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE:	33 DUNTY DERMIT 1163.30'± , WV 7.5' 70.00±
HARLESTON, WV 25304 Harleston, WV 25304 Gas Waste Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK DUNTY/DISTRICT: HARRISON / SIM DRFACE OWNER: JUDY M OSBORN (LE)	Storage X	Shallow QUAL OCABLE TRUS	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE:	33 DUNTY DERMIT 1163.30'± , WV 7.5' 70.00±
ARLESTON, WV 25304 Harleston, WV 25304 Gas Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK DUNTY/DISTRICT: HARRISON / SIM RFACE OWNER: JUDY M OSBORN (LE) L & GAS ROYALTY OWNER: GOB	Storage X MPSON (JUDY M OSBORN IRREVO BEL OSBORN, ET AL	Shallow QUAE OCABLE_TRUS	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE: ACREAGE:	33 UNTY PERMIT 1163.30'± . WV 7.5' 70.00± 1324.06± 105750 M PERMIT
ARLESTON, WV 25304 ATTYPE: Oil Waste Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK OUNTY/DISTRICT: HARRISON / SIM RFACE OWNER: JUDY M OSBORN (LE) L & GAS ROYALTY OWNER: GOI DRILL X CON	Storage X MPSON (JUDY M OSBORN IRREVO BEL OSBORN, ET AL IVERT DRILL D	Shallow QUAE QUAE COCABLE TRUS DEEPER	STATE CC ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE: ACREAGE: ACREAGE: REDRILL FRACTU	33         05750           DUNTY         PERMIT           1163.30'±
IARLESTON, WV 25304 II Type: Oil Waste Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK UNTY/DISTRICT: HARRISON / SIM RFACE OWNER: JUDY M OSBORN (LE) L & GAS ROYALTY OWNER: GOM DRILL X CON PLUG OFF OLD 1	Storage X MPSON (JUDY M OSBORN IRREVO BEL OSBORN, ET AL IVERT DRILL D FORMATION P	QUAL QUAL OCABLE TRUS DEEEPER	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE: ACREAGE: REDRILL FRACTU E NEW FORMATION F	33         05750           DUNTY         PERMIT           1163.30'±
HARLESTON, WV 25304 Harleston, WV 25304 Gas Waste Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK OUNTY/DISTRICT: HARRISON / SIM RFACE OWNER: JUDY M OSBORN (LE) L & GAS ROYALTY OWNER: GON DRILL X CON PLUG OFF OLD 1	Storage X MPSON (JUDY M OSBORN IRREVO BEL OSBORN, ET AL IVERT DRILL D	QUAL QUAL OCABLE TRUS DEEEPER	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE: ACREAGE: REDRILL FRACTU E NEW FORMATION F	33         05750           DUNTY         PERMIT           1163.30'±
HARLESTON, WV 25304 Harleston, WV 25304 Gas Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK OUNTY/DISTRICT: HARRISON / SIM DRFACE OWNER: JUDY M OSBORN (LE) L & GAS ROYALTY OWNER: GOI DRILL X CON PLUG OFF OLD I CLEAN OUT & F	Storage X MPSON (JUDY M OSBORN IRREVO BEL OSBORN, ET AL IVERT DRILL D FORMATION P REPLUG OTHER	Shallow QUAL QUAL OCABLE TRUS DEEPER CHANGE	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE: ACREA	33         05750           DUNTY         PERMIT           1163.30'±
IARLESTON, WV 25304 II Type: Oil Waste Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK UNTY/DISTRICT: HARRISON / SIM RFACE OWNER: JUDY M OSBORN (LE) L & GAS ROYALTY OWNER: GOM DRILL X CON PLUG OFF OLD I CLEAN OUT & F RGET FORMATION: MARCELLUS	Storage Storag	QUAL QUAL OCABLE TRUS DEEEPER [ PERFORAT CHANGE _ ESTIMA	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE: A	33       05750 fr         DUNTY       PERMIT         1163.30'±
HARLESTON, WV 25304 ell Type: Oil Waste Disposal Gas Liquid Injection ATERSHED: SIMPSON CREEK DUNTY/DISTRICT: HARRISON / SIM PRFACE OWNER: JUDY M OSBORN (LE) L & GAS ROYALTY OWNER: GOI DRILL CON PLUG OFF OLD I CLEAN OUT & F ARGET FORMATION: MARCELLUS ELL OPERATOR ARSENAL RESOURCES	Storage Storage Storage Storage	QUAL QUAL OCABLE TRUS DEEPER [ PERFORAT CHANGE ESTIMA DESIGN	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE: A	33       05750 H         DUNTY       PERMIT         1163.30'±
X Gas       Liquid Injection         ATERSHED:       SIMPSON CREEK         DUNTY/DISTRICT:       HARRISON / SIM         JRFACE OWNER:       JUDY M OSBORN (LE)         IL & GAS ROYALTY OWNER:       GOB         DRILL X       CON         PLUG OFF OLD I       CLEAN OUT & F         ARGET FORMATION:       MARCELLUS         TELL OPERATOR       ARSENAL RESOURCES         ddress       6031	Storage Storage Storage Storage	QUAL QUAL OCABLE TRUS DEEEPER [ PERFORAT CHANGE _ ESTIMA	STATE CO ELEVATION: DRANGLE: ROSEMONT ST) ACREAGE: A	33       05750 *         PERMIT         1163.30'±         1163.30'±         , WV 7.5'         70.00±         1324.06±         10/01/2021         RE OR STIMULATE [X         LUG & ABANDON [         0'±       TMD: 25,877'±         40RT

BHL is located on topo map <u>10,221</u> feet west of Longitude: <u>80' 10' 00</u>" SHL is located on topo map <u>2,709</u> feet west of Longitude: <u>80' 12' 30</u>"



People Powered. Asset Strong.



September 11, 2021

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

RE: Ownership of Roadways; J Osborn HSOP 16 201 -204 Wells

Dear Mr. Martin:

In preparation of filing a permit application for the above referenced well, Arsenal Resources has conducted a thorough title examination in order to determine the ownership of the oil and gas underlying roadways crossed by the proposed well(s). If owned in fee by the West Virginia Department of Transportation, Division of Highways, a lease covering its interest in the roadway or roadways has been properly obtained and provided in the application materials. If a right of way only, the oil and gas underlying such roadway or roadways is owned by the adjoining landowners and is also covered by the leaseholds provided in the application materials.

If you have any questions, concerns or need further information, please do not hesitate to contact me at the address listed below.

Sincerely,

on Sheldon

Jon Sheldon Chief Operating Officer

Office of Oil and Gas SEP 2 0. 2021

WV Department of Environmental Protection 6031 Wallace Road Ext, Suite 300 Wexford, PA 15090 P: 724-940-1100 F: 800-428-0981 www.arsenairesources.com

10/01/2021

470330 5956

WW-6A1 (5/13) Operator's Well No. J Osborn HSOP 16 202

#### 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

RECEIVED Office of Oil and Gas

SEP 2 0 2021

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

WV Department of Environmental Protection

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:	Arsenal Resources				
By:	Jon Sheldon	Jon Skeldon			
Its:	000				

Page 1 of 10/01/2021

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
A (00003703)	J. Earl Teter, Widower; Irvin D. Teter and Vera Teter, his wife	Petro-Lewis Corp.	12.50%	1062/405	116
	Petro-Lewis Corp.	Partnership Properties Co.		1072/213	
	Partnership Properties Co.	Eastern American Energy Corporation		1124/449	
	Eastern American Energy Corporation	Energy Corporation of America		59/879	
	Energy Corporation of America	Greylock Production, LLC		1603/1121	
	Greylock Production, LLC	Mar Key, LLC		1607/855	
A (00003704)	Gobel Osborn and Audrey Osborn, his wife and Judy Nicholson and Gary Nicholson, her husband	Petroleum Development Corporation	12.50%	1074/420	72
· · · · · · · · · · · · · · · · · · ·	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	· · · · · · · · · · · · · · · · · · ·
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
B (00008352)	George T. Faris and Nell Steele Faris, his wife, Rachel F. Shuttleworth, widow, Florence Faris, single, and Nell Faris Shinn, widow	Delaware Gas Company	12.50%	820/128	1562
	Delaware Gas Company	Union Carbide Corporation		845/221	
	Union Carbide Corporation	Creslenn Oil Company		897/286 898/258	
	Creslenn Oil Company	Deminex Oil Corporation		Delaware Secretary of State	
	Deminex Oll Corporation	Deminex U.S. Oil Company		Delaware Secretary of State	
	Deminex U.S. Oil Company	Southwest Exploration and Acquisition Company		Delaware Secretary of State	
	Southwest Exploration and Acquisition Company	Southwest Royalties		Delaware Secretary of State	
	Southwest Royalties	HG Energy II Appalachia, LLC		1605/194	
	HG Energy II Appalachia, LLC	Mar Key, LLC		1611/595	
(00 <u>9</u> 08233) ♀	Charles Thomas Davis and Deborah A. Davis, husband and wife	NRM Petroleum Corporation	14.00%	1097/75	47
Office of Oil and Gas SEP 20 2021 Service of Coll and Gas SEP 20 2021 C					

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	NRM Petroleum Corporation	Natural Resources Management Corporation		Unrecorded (WV Secretary of State)	
	Natural Resources Management Corporation	Edisto Resources Corporation		Unrecorded (WV Secretary of State)	
	NRM Operating Company, LP, Edisto Resources, NRM 1984-B Income, Ltd., and NRM 1984-D Income, Ltd.	Eastern American Energy Corporation		1216/558	
	Eastern American Energy Corporation	Energy Corporation of America		1441/1003 (also 59/879)	
	Energy Corporation of America	Greylock Production, LLC		1603/1121	
	Greylock Production, LLC	Mar Key, LLC		1607/855	
C (00008232)	G. Lester Douglas and Mariellen Douglas, husband and wife	NRM Petroleum Corporation	12.50%	1097/77	47
	NRM Petroleum Corporation	Natural Resources Management Corporation		Unrecorded (WV Secretary of State)	
	Natural Resources Management Corporation	Edisto Resources Corporation		Unrecorded (WV Secretary of State)	
	NRM Operating Company, LP, Edisto Resources, NRM 1984-B Income, Ltd., and NRM 1984-D Income, Ltd.	Eastern American Energy Corporation		1216/558	
	Eastern American Energy Corporation	Energy Corporation of America		1441/1003 (also 59/879)	
·····	Energy Corporation of America	Greylock Production, LLC		1603/1121	
	Greylock Production, LLC	Mar Key, LLC		1607/855	
D (00008340)	John B. Webb and Tensie Webb, his wife & William W. Webb and Opal Webb, his wife	Delaware Gas Company	13.00%	820/19	188
	Delaware Gas Company	Union Carbide Corporation		845/221	
Office c SEP WV De	Union Carbide Corporation	Creslenn Oil Company		897/286 898/258	
Office of Oil and Gas SEP 2 0 2021 WW Department of wiroInmental Protection					

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	Creslenn Oil Company	Deminex Oil Corporation		Delaware Secretary of State	
	Deminex Oil Corporation	Deminex U.S. Oil Company		Delaware Secretary of State	·
	Deminex U.S. Oil Company	Southwest Exploration and Acquisition Company		Delaware Secretary of State	
	Southwest Exploration and Acquisition Company	Southwest Royalties		Delaware Secretary of State	
	Southwest Royalties	HG Energy II Appalachia, LLC	····	1605/194	
	HG Energy II Appalachia, LLC	Mar Key, LLC		1611/595	
E (00007247)	Michael A. and Roberta Osborn, husband and wife	Mar Key, LLC	14.00%	1579/637	41.03
F (00008141)	Norvil D. Lantz, single 🗸	Mar Key, LLC	12.50%	1609/139	23.75
F (00008130)	Tammy Carson, married 🗸	Mar Key, LLC	12.50%	1609/131	23.75
F (00008131)	Terry J. Kelly, married 🛛 🖊	Mar Key, LLC	12.50%	1609/133	23.75
F (00008142)	Donna Smith, married 🖌	Mar Key, LLC	12.50%	1609/141	23.75
F (00008150)	Michal W. Goforth, widow 🥣	Mar Key, LLC	12.50%	1610/713	23.75
F (00008151)	Clifford Aaron Harris, married 🗸	Mar Key, LLC	12.50%	1610/715	23.75
F (00008152)	Kelly Klepaldo, married	Mar Key, LLC	12.50%	1610/717	23.75
F (00008153)	June Medina, widow 🛛 🦯	Mar Key, LLC	12.50%	1610/719	23.75
F (00008154)	Stanley Moore, married 🦯	Mar Key, LLC	12.50%	1610/721	23.75
F (00008155)	April L. Strickland, married 🦯	Mar Key, LLC	12.50%	1610/723	23.75
F (00038404)	Judy M. Osborn	Mar Key, LLC	12.50%	1621/919	23.75
	Karen Sue Whtye	Mar Key, LLC	12.50%	1624/1091	23.75
F 2 0 2021 pepartment of penental Protection					

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
F (00008474)	Gordon F. Osborn	Mar Key, LLC	12.50%	1624/1094	23.75
F (00008540)	Ernest Osborn	Mar Key, LLC	12.50%	1626/1150	23.75
G (00008601)	XTO Energy, Inc.	Mar Key, LLC	14.50%	1628/983	139
H (00008356)	Trustees of Alderson Broaddus University, f/k/a Alderson Broaddus College	Mar Key, LLC	13.00%	1616/1169	86
H (00006680)	DWG Oil and Gas Acquisitions, LLC	Mar Key, LLC	15.00%	1561/493	86
J (00008178)	Rebecca A. Compton 🗸	Mar Key, LLC	14.00%	1610/832	164.48
J (00008179)	James Michael Compton	Mar Key, LLC	14.00%	1610/834	164.48
ر (00008180)	Jennifer Nora Corton, fka Jennifer Nora Compton	Mar Key, LLC	14.00%	1610/836	164.48
K (00008183)	Grafton Coal Company	Mar Key, LLC	14.00%	1610/838	29
L (00007235)	Charles W. Cleavenger Irrevocable Trust dated July 15, 2015	Mar Key, LLC	14.00%	1578/1072	205.85
M (00004238)	W.R. Johnson and Andra Johnson, his wife and Hursey R. Lang and Hazel M. Lang, his wife	Union Carbide Corporation	12.50%	852/587	466
	Union Carbide Corporation	Creslenn Oil Company		897/286	
	Creslenn Oil Company	Delta Producing Corporation		925/522	
	Delta Producing Corporation	Petroleum Corporation of America		967/575 (977/168)	
	Petroleum Corporation of America	Petroleum Development Corporation		977/153	
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
N (00004299)	ND Parks and Oliva Parks, his wife, James C. Parks and Abbie Y. Parks, Union Carbide Corporation his wife		12.50%	852/563	250
	Union Carbide Corporation	Creslenn Oil Company		897/286	
	Creslenn Oil Company	Delta Producing Corporation		919/740	
	Delta Producing Corporation	Petroleum Corporation of America		967/575 (977/168)	
	Petroleum Corporation of America	Petroleum Development Corporation		977/153	
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
P (00007752)	John James Jones, married	Mar Key, LLC	12.50%	1587/510	5.75
Q (00004070)	Audry U Davis and Lucille P. Davis, his wife	Petroleum Development Corporation	12.50%	1244/556	96.5
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	

RECEIVED Gas Office of Oil and Gas SEP 20 2021 SEP 20 2021 WV Department of WV Department of WV Department of

### West Virginia Secretary of State — Online Data Services

#### **Business and Licensing**

**Online Data Services Help** 

### **Business Organization Detail**

NOTICE: The West Virginia Secretary of State's Office makes every reasonable effort to ensure the accuracy of information. However, we make no representation or warranty as to the correctness or completeness of the information. If information is missing from this page, it is not in the The West Virginia Secretary of State's database.

### **SENECA-UPSHUR PETROLEUM, LLC**

Organization In	formation							
Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason
LLC   Limited Liability Company	2/12/1973		2/12/1973	Domestic	Profit			
Organization In Business Purpose	2111 - Mining Extraction - O	, Quarrying, Oil & il and Gas Extra I Natural Gas Ex	ction -	Capital	Stock			
Charter County				Cont Num		0		
Charter State	w			Excess	Acres	0		
At Will Term	Δ	· · · · · · · · · · · · · · · · · · ·		Memi	ber	MDD	<u></u>	·

At Will Term A	Member <sub>MBR</sub> Managed
At Will Term Years	Par Value
Authorized Shares	Young Not Specified Entrepreneur
	RECEIVED Office of Oil and Gas

		SEP 20 2021
Addresses		WV Department of Environmental Protection
Туре	Address	Environin
Designated Office Address	633 W. MAIN STREET BRIDGEPORT, WV, 26330	
Mailing Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA	
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302	

Principal Office Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Туре	Address

Officers		
Туре	Name/Address	
Member	RIVER RIDGE ENERGY, LLC 6031 WALLACE ROAD EXTENSION, SUITE 300 WEXFORD, PA, 15090	
Organizer	TAMMY J OWEN 300 SUMMERS STREET, STE 1500 PO BOX 2107 CHARLESTON, WV, 25328 USA	
Туре	Name/Address	

DBA			
DBA Name	Description	Effective Date	Termination Date
KEYSPAN PRODUCTION & DEVELOPMENT COMPANY	TRADENAME	6/11/2004	
NATIONAL GRID	TRADENAME	8/17/2007	
NATIONAL GRID PRODUCTION AND DEVELOPMENT	TRADENAME	12/5/2008	5/9/2012
DBA Name	Description	Effective Date	Termination Date

Date	Old Name	RECEIVED Office of Oil and Gas
3/28/201	SENECA-UPSHUR PETROLEUM, INC.	SEP 20 2021
Date	Old Name	SET entment of
		WV Department of Environmental Protection
Date	Amendment	
6/15/201	AMENDMENT FILED CHANGING FROM A MAI MEMBER-MANAGED CO. >> REMOVED ROBE AS MANAGERS & ADDED SOLE MEMBER (C	ERT KOZEL & STEPHEN A. BISHOP
3/28/201	CONVERSION: FROM SENECA-UPSHUR PET PETROLEUM, LLC	ROLEUM, INC. TO SENECA-UPSHUR
7/25/199	MERGER; MERGING LITTLE SWISS DRILLING PALACE VALLEY PETROLEUM COMPANY, A C SENECA-UPSHUR PETROLEUM, INC., A QUA	QUAL WV CORP WITH AND INTO
Date	Amendment	

Annual Reports
Filed For
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Date filed

For more information, please contact the Secretary of State's Office at 304-558-8000.

Saturday, September 11, 2021 - 9:02 PM

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# West Virginia Secretary of State — Online Data Services

#### **Business and Licensing**

**Online Data Services Help** 

#### **Business Organization Detail**

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#### MAR KEY LLC

Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason
LLC   Limited Liability Company	7/11/2011		7/11/2011	Domestic	Profit			

Business Purpose	2111 - Mining, Quarrying, Oil & Gas Extraction - Oil and Gas Extraction - Crude Oil and Natural Gas Extraction	Capital Stock	
Charter County		Control Number	99Q1F
Charter State	WV	Excess Acres	
At Will Term	Α	Member Managed	MBR
At Will Term Years		Par Value	
Authorized Shares		Young Entrepreneur	Not Specified

Addresses	RECEIVED Office of Oil and Gas	
Туре	Address	SEP 20 2021
Designated Office Address	633 W. MAIN STREET BRIDGEPORT, WV, 26330	W Department of Environmental Protection
Mailing Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA	Flixe
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302	

Principal Office Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Туре	Address

Officers			
Туре	Name/Address		
Membe	ARSENAL RESOURCES DEVELOPMENT LLC 6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090		
Organiz	PAUL M HERZING 560 EPSILON DR. PITTSBURGH, PA, 15238 USA		
Туре	Name/Address		

Annual Reports	
Filed For	
2021	
2020	
2019	
2018	
2017	
2016	
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2013	
2012	
Date filed	

For more information, please contact the Secretary of State's Office at 304-558-8000.

Saturday, September 11, 2021 - 9:01 PM

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SEP 20 2021

# Agreement to Drill, Complete and Operate Oil & Gas Wells

This Agreement to Drill, Complete and Operate Oil & Gas Wells (this "Agreement"), by and among Mountaineer Keystone LLC, a West Virginia limited liability company ("Mountaineer Keystone"), PDC Mountaineer, LLC, a Delaware limited liability company ("PDC"), and PDC Mountaineer Holdings, LLC, a Delaware limited liability company ("PDC"), and PDC October 15, 2014. (the "Effective Date") and sets forth the terms pursuant to which Mountaineer Keystone will drill, complete and operate the Wells (as defined below) on behalf of PDC and PDC Holdings. Mountaineer Keystone, PDC, and PDC Holdings are each a "Party" and are collectively the "Terties". In consideration of the foregoing and the respective agreements hereinafter set forth and the mutual benefits to be derived therefrom, the Parties, intending to be legally bound, hereby agree as follows:

- 1. Term: This Agreement is effective from the Effective Date until terminated by Mountaineer Keystone on the one hand or PDC and PDC Holdings on the other hand with 30 days' written notice to the other Party or Parties, as applicable (the "Term").
- 2. Authorization to Operate: PDC and PDC Holdings authorize Mountaineer Keystone to undertake and perform, on PDC and PDC Holdings behalf, all operations, including without limitation permit applications, well pad preparation, drilling and completing wells, and marketing gas, oil and other hydrocarbons therefrom with respect to all oil and gas wells to be drilled on oil Keystone are affiliates with a common parent. Mountaineer Keystone was formed to operate oil Keystone agrees that it shall, in a good and workmanlike manner and in accordance with industry standards as they prevail in the area, drill, complete and operate oil and gas wells on leasehold acreage owned by PDC or PDC Holdings from time to time as directed by PDC or PDC Holdings
- 3. No Third Party Beneficiary: This Agreement is for the benefit of the Parties and is not for the benefit of any third party.
- 4. Counterparts: This Agreement may be simultaneously executed in several counterparts and via facsimile or similar electronic transmittal, each of which shall be deemed to be an original and taken together shall constitute one and the same instrument.

[Signature Page Follows]

RECEIVED Office of Oil and Gas

SEP 20 2021

IN WIINESS WHEREOF, Mountaineer Keystone, PDC, and PDC Holdings have caused their duly authorized representatives to execute this Agreement as of the Effective Date.

MOUNTAINEER KEYSTONE LLC

By: Name: Laker 1 Title: CEO

PDC MOUNTAINERR, LLC

Title: Care

PDC MOUNTAINEER HOLDINGS, LLC

By: Name: Robert Keel

Title: CEO

RECEIVED Office of Oil and Gas SEP 20 2021

# Agreement to Drill, Complete and Operate Oil & Gas Wells

This Agreement to Drill, Complete and Operate Oil & Gas Wells (this "Agreement"), by and among Areenal Resources LLC, a West Virginia limited liability compony ("Arnessal"), River Ridge Energy, LLC, a Delaware limited liability company ("River Ridge "), and River Ridge Energy, Holdings, LLC, a Delaware limited liability company ("River Ridge Heldings"), is effective as of March 1, 2017. (the "Effective Date") and sets forth the terms pursuant to which Arcenel will drill, complete and operate the Wells (as defined below) on behalf of River Ridge and River Ridge Holdings. Arsenal, River Ridge, and River Ridge Holdings are each a "Party" and are collectively the "Parties". In consideration of the foregoing and the respective agreements hereinafter set forth and the mutual benefits to be derived therefrom, the Parties, intending to be legally bound, hereby agree as follows:

- 1. Terms: This Agreement is effective from the Effective Date until terminated by Aresnal on the one hand or River Ridge and River Ridge Holdings on the other hand with 30 days' written notice to the other Party or Parties, as applicable (the "Term").
- 2. Authorization to Operate: River Ridge and River Holdings authorize Argenal to undertake and perform, on River Ridge and River Ridge Holdings behalf, all operations, including without limitation permit applications, well pad preparation, drilling and completing wells, and marketing gas, oil and other hydrocarbons therefrom with respect to all oil and gas wells to be drilled on oil and gas leasehold acreage held by River Ridge or River Ridge Holdings. River Ridge, River Ridge Holdings and gas leasehold acreage held by River Ridge, River Ridge Holdings and certain other affiliates. Amenal spaces that it shall, in a good and workmanilke manner and in accordance with industry standards as they preveil in the area, drill, complete and operate oil and gas wells on by River Ridge or River Ridge Holdings from time to time as directed by River Ridge or River Ridge form time to time as directed by River Ridge or River Ridge or River Ridge or Wells").
- 3. No Third Party Beneficiary: This Agreement is for the benefit of the Parties and is not for the banefit of any third party.
- 4. Counterparts: This Agreement may be simultaneously executed in several counterparts and via facsimile or similar electronic transmittal, each of which shall be deemed to be an original and taken together shall constitute one and the same instrument.

(Signature Page Follows)

•

RECEIVED Office of Oil and Gas SEP 20.2021

WV Department of Environmental Protection

10/01/2021

IN WITNESS WHEREOF, Arsenal, River Ridge, and River Ridge Holdings have caused their duly authorized representatives to execute this Agreement as of the Effective Date.

ARSENAL RESOURCES LLC

By: Name: Joel E. Symonds

Title: Vice President - Land

RIVER RIDGE ENERGY, LLC

By:

Name: Joel E. Symonds Title: Vice President - Land

**RIVER RIDGE HOLDINGS, LLC** 

By: Name: Joel E. Symonds

Title: Vice President - Land

RECEIVED Office of Oil and Gas SEP 20 2021





Stansberry, Wade A <wade.a.stansberry@wv.gov>

# Expedited Modification H6A Horizontal Well Work Permit (API: 47-033-05950)

1 message

**Stansberry, Wade A** <wade.a.stansberry@wv.gov> Wed, Sep 29, 2021 at 8:39 AM To: rschweitzer@arsenalresources.com, Samuel D Ward <samuel.d.ward@wv.gov>, dpalmer@harrisoncountywv.com, mcopeland@harrisoncountywv.com

I have attached a copy of the newly issued well permit number "J OSBORN HSOP16 202", API (47-033-05950). This will serve as your copy.

If you have any questions, then please contact us here at the Office of Oil and Gas.

Thank you,

Wade A. Stansberry

**Environmental Resource Specialist 3** 

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

3 attachments



**47-033-05950 - mod.pdf** 2353K

<sup>™</sup> 33-05950 SSP signed.pdf 1467K