

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

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

Wednesday, April 9, 2025 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

ARSENAL RESOURCES LLC 6031 WALLACE RD EXT., SUITE 101

WEXFORD, PA 15090

Permit Modification Approval for J Osborn 212 Re:

47-033-06085-00-00

Extending to Lateral Landing Point

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 A. Martin

Operator's Well Number: J Osborn 212

Farm Name: Judy M Osborn (LE) (Judy M Osborn Irrevocable Trus

U.S. WELL NUMBER: 47-033-06085-00-00

Horizontal 6A New Drill Date Modification Issued: 4/9/2025

Promoting a healthy environment.

WW-6B (04/15)

4703306085 OPERATOR WELL NO. 212

Well Pad Name: J Osborn

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

1) Well Operate	or: Arsenal Re	sources	494519412	Harrison	Simpson	Rosemont
	0		Operator ID	County	District	Quadrangle
2) Operator's V	Vell Number:212	2	Well Pad	Name: J Osb	orn	
3) Farm Name/	Surface Owner:	Judy M Osborn	(LE) Public Road	d Access: <u>77/4</u>	Moss Rur	n (Coplin Run)
4) Elevation, cu	irrent ground:	1164 El	evation, proposed p	ost-construction	on: 1164	
5) Well Type	(a) Gas X	Oil _	Unde	rground Storag	e	
	Other					
	(b)If Gas Sha	ıllow X	Deep			
	Но	rizontal X				
6) Existing Pad	: Yes or No Yes	S				
	•		ipated Thickness at pated Thickness 10		1 Page 1	5 psi/ft
8) Proposed To	tal Vertical Dept	h: 7220 ft				
	Total Vertical D		Shale			
10) Proposed T	otal Measured D	epth: 8181 ft				
11) Proposed H	orizontal Leg Le	ength: 0 ft				
12) Approxima	te Fresh Water S	trata Depths:	174', 232', 260',	372', 488', 609	9', 680'	
13) Method to	Determine Fresh	Water Depths:	Offsetting well reported v	vater depths (033-	5931, 033-059	941, 033-5949, 033-5950)
14) Approxima	te Saltwater Dep	ths: None expec	cted			
15) Approxima	te Coal Seam De	epths: Bakerstown - 226',	Brush Creek - 326', U Freeport -	401', L Freeport - 441', U	Kittanning - 531', M	Kittanning - 596', L Kittanning - 616'
16) Approxima	te Depth to Possi	ible Void (coal m	ine, karst, other):	None Known		
		n contain coal sear an active mine?	ms Yes	No	X	
(a) If Yes, pro	vide Mine Info:	Name:				
		Depth:				
RECEIVED and	Gas	Seam:				
RECOII and	ากร	Owner:				
Office Of Oil and APR 12))LJ					
n nepartm	ent or Protection					
APR WV Departm Environmental						

Kenny Willett

3/25/25

Page 1 1/2025

WW-6B	
(04/15)	

API NO. 447 0 3 3 0 6 0 8 5

OPERATOR WELL NO. 212 Well Pad Name: JOsborn

18)

CASING AND TUBING PROGRAM

ТҮРЕ	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	24	New	H-40	102.7	80	80	CTS
Fresh Water	13.375	New	J-55	54.5	800	800	CTS
Coal					-		_
Intermediate	9.625	New	J-55	40	1,500	1,500	CTS
Production	5.5	New	P-110	23	8,181	8,181	TOC @ 1,350
Tubing					 .		
Liners						_	

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	24	36	-		0	Class A/L, 3% CaCi2	1.2
Fresh Water	13.375	17.5	0.38	2,730	900	Class A/L, 3% CaCl2	1.2
Coal			-				
Intermediate	9.625	12.25	0.395	3,950	1,500	Cleas A/L, 3% CaCl2	 1.29
Production	5.5	8.5-8.75	0.415	14,520	9,500	Class A/L, Poz	1.29/1.34
Tubing					5,000		_
Liners					-,	-	

PACKERS

Kind:		
Sizes:		
Depths Set:		

Office Of O	il and Gas
ΔPR	1 2025
MA Det	partment of ental Prote ction
Environme	mai .

n Kenny Willett 3/25/25

Page **2** of **3** 04/11/2025

API NO. 47-	0	3	3	0	6	0	8	5
API NO. 47-	-							

OPERATOR WELL NO. 212
Well Pad Name: JOSborn

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 24" 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- $\frac{3}{8}$ " casing and cement to surface. The rig will continue drilling a $\frac{12-\frac{1}{4}}{12}$ " intermediate hole to the programmed depth, run 9- $\frac{5}{8}$ " casing and cement to surface. The rig with then continue to drill an $\frac{8-\frac{3}{4}}{12}$ " hole to a designed KOP. We will then start drilling the curve and lateral section to the programmed total measured depth, run $\frac{5}{2}$ " 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 11,500 psi.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 17.26
- 22) Area to be disturbed for well pad only, less access road (acres): 6.63
- 23) Describe centralizer placement for each casing string:
- 24"- 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 2,700'; there will be no centralizers from 2,700' to surface.

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

24" will be circulated to surface. The 13 3/8" casing will be cemented to surface with Class A/L cement and no greater than 3% CaCl2 (calcium chloride). The 9 5/8" casing will be cemented to surface with Class A/L cement, & no greater than 3% calcium chloride. The 5 1/2" production string will be cemented back to 2,450" (+/- 150" above the casing shoe for the 9 5/8") with Class A/L 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.

Kenny Willett

3/25/25

Page **3** of **3** 04/11/2025

Vertical Section at 340.98° (5250 usft/in)

04/11/2025

WW-6A1 (5/13)

Operator's Well No.

J Osborn 212

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



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:	2015
By:	Dave Boyer
Its:	Director of Geology & Development Planning

4703306085

	Attachmen	t to WW-6A1, J OSBORN HSOP 212			
Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
1 (00003703)	J. Earl Teter, Widower; Irvin D. Teter and Vera Teter, his wife	Petro-Lewis Corp.	12.5+%	1062/405	116
, ,	Petro-Lewis Corp.	Partnership Properties Co.		1072/213	
	Partnership Properties Co.	Eastern American Energy Corporation		1124/449	
	Eastern American Energy Corporation	Petroleum Development Corporation		1134/83	
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
1 (00003704)	Gobel Osborn and Audrey Osborn, his wife and Judy Nicholson and Gary Nicholson, her husband	Petroleum Development Corporation	12.5+%	1074/420	72
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
2 (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	12.5+%	820/128	1562
	Delaware Gas Company	Union Carbide Corporation		845/221	
Office Of	Union Carbide Corporation	Creslenn Oil Company		897/286 898/258	
OFFICE OFFI	Creslenn Oil Company	Deminex Oil Corporation		Delaware Secretary of State	
ag D	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	

WV Department (

1607/855

	Attachment to WW-6A1, J OSBORN HSOP 212								
Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage				
3 (00008233)	Charles Thomas Davis and Deborah A. Davis, husband and wife	NRM Petroleum Corporation	12.5+%	1097/75	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	-				
3 (00008232)	G. Lester Douglas and Mariellen Douglas, husband and wife	NRM Petroleum Corporation	12.5+%	1097/77	47				
	NRM Petroleum Corporation	Natural Resources Management Corporation		Unrecorded (WV Secretary of State)					
<u>و</u>	Natural Resources Management Corporation	Edisto Resources Corporation		Unrecorded (WV Secretary of State)					
RECEIVED Se Of Oil and Gas APR 1 2025	NRM Operating Company, LP, Edisto Resources, NRM 1984-B Income, Ltd., and NRM 1984-D Income, Ltd.	Eastern American Energy Corporation		1216/558					
025	Eastern American Energy Corporation	Energy Corporation of America		1441/1003 (also 59/879)					
· · · · · · · · · · · · · · · · · · ·	Energy Corporation of America	Greylock Production, LLC		1603/1121					
التسايليسين المحاديات	Convinces Decelulation 110	14 14 140		1	· · · · · · · · · · · · · · · · · · ·				

Mar Key, LLC

Greylock Production, LLC

Area of Review Report - J Osborn Pad, 212 to LP, Harrison County, WV

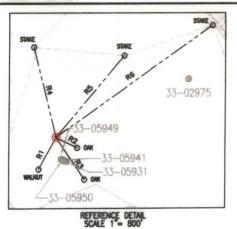
Well Name	API Number	Operator Name / Address	Well Type	Latitude	Longitude	Total Depth	Perforated Formation(s)	Producing Zones not Perforated
J Osborn HSOP 16 204	033-05931	Arsenal Resources, LLC	Existing	39.265907	-80.217852	24662	Marcellus Shale	NA NA
J Osborn H5OP 16 203	033-05941	Arsenal Resources, LLC	Existing	39.265924	-80.2179	24873	Marcellus Shale	NA.
J Osborn HSOP 16 201	033-05949	Arsenal Resources, LLC	Existing	39.265958	-80.217997	25871	Marcellus Shale	NA NA
J Osborn HSOP 16 202	033-05950	Arsenal Resources, LLC	Existing	39.265941	-80.217949	25505	Marcellus Shale	NA.
C. S. Harron 40	033-05426	Petroleum Development Corp	Cancelled	39.263556	-80.223861	NA	NA	NA.
V. Guckes 37	033-03578	Diversified Production, LLC	Existing	39.266235	-80.225491	4552	Benson	NA NA

APR 1 2025

wv Department of Environmental Protection

RECEIVED Office Of Oil and Gas

G



LINE	BEARING	DISTANCE
R1	S 28'35'29" W	301.79
R2	S 63'30'29" E	197.59
R3	S 34'06'25" E	422.61
R4	N 14'12'27" W	765.17
R5	N 40'03'03" E	878.11
R6	N 54'39'54" E	1591.16

	J OSBORN HSOP 16 212	
	SURFACE HOLE LOCATION (SHL)	MASSES PROPERTY.
UTM 17-NAD83 (M):	NAD83, WV NORTH (FT)	NAD83, GEOGRAPHIC
NORTHING: 4346638.178	NORTHING: 279979.477	LAT-(N) 39.266463
EASTING: 567446.254	EASTING: 1765170.737	LONG-(W) 80.218165
	BOTTOM HOLE LOCATION (BHL)	
UTM 17-NAD83 (M):	NAD83, WV NORTH (FT)	NAD83, GEOGRAPHIC
NORTHING: 4346527.340	NORTHING: 279657.788	LAT-(N) 39.265523
EASTING: 566676.475	EASTING: 1762638.749	LONG-(W) 80.227098

NOTES:

- There are no water wells or developed springs within 250' of proposed well.

 There are no existing buildings within 625' of proposed well.

 Proposed well is greater than 100' from perennial stream, welland, pond, reservoir of there are no native trout streams within 300' of proposed well.

 Proposed well is greater than 1000' from surface/groundwater intake or public water supply. 4.
- supply. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

 Topo Mark Scale is 1"=2000". 6.



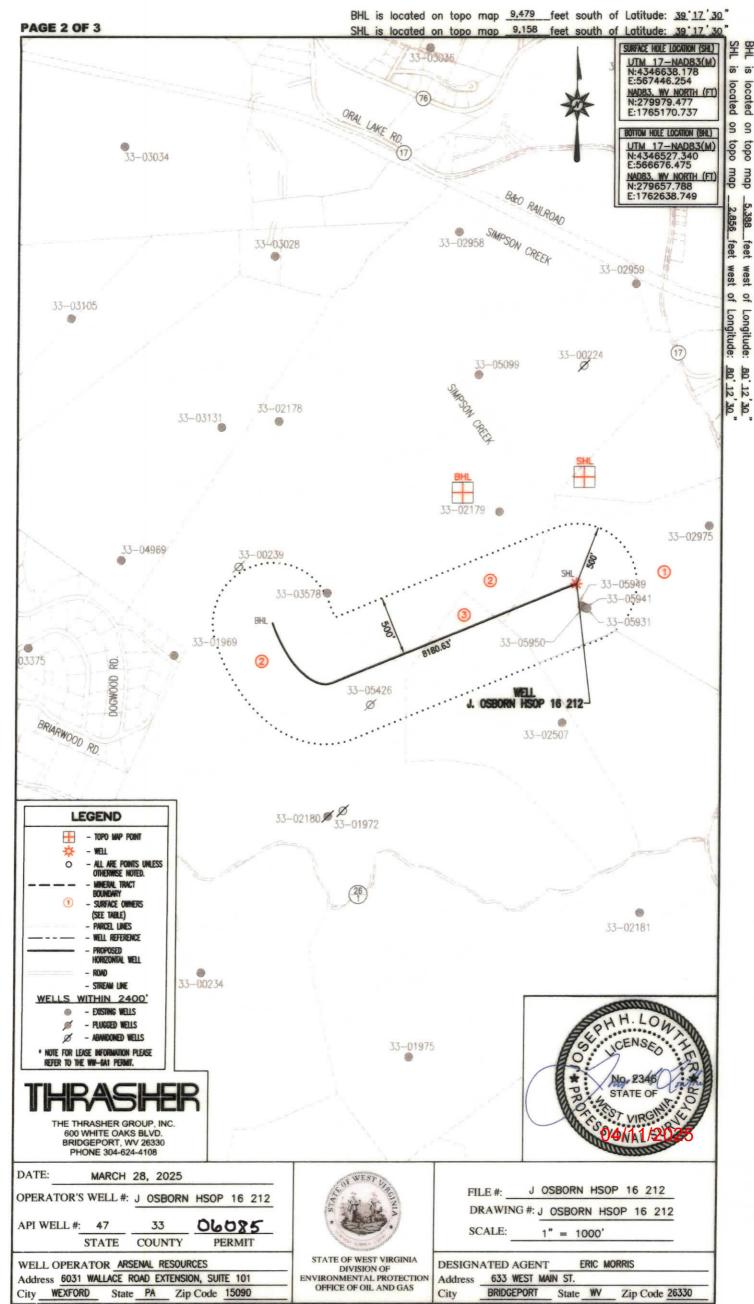


THE THRASHER GROUP, INC. 600 WHITE OAKS BLVD. BRIDGEPORT, WV 26330 PHONE 304-624-4108

SEE PAGE 2 FOR PLAT

SEE PAGE 3 FOR SURFACE OWNER TABLE

	LTUE LINDS	DOICHED HE	REBY CERTIFY TH	I SILIT TA	ALDO I LEED
FILE#: J OSBORN HSOP 16 212	PLAT IS CORRECT TO				TOWN TOWN
	BELIEF AND SHOWS				St. JCENSED . I
DRAWING #: J OSBORN HSOP 16 212	LAW AND THE REGU				D
SCALE: AS SHOWN	THE DEPARTMENT (OF ENVIRONI	MENTAL PROTECTI	ON.	No. 2346
MINIMUM DEGREE		</td <td>1110/11</td> <td>Wa-</td> <td>STATE OF</td>	1110/11	Wa-	STATE OF
OF ACCURACY: 1/2500	Signed:	Vous	L PG Jowth	7 10	TO VIRGIN VI
PROVEN SOURCE		/			SIONAL SUF
OF ELEVATION: U.S.G.S. MONOMENT	R.P.E.:		L.L.S.: P.S. No.	2346	Minimus .
(+) DENOTES LOCATION OF WELL ON			DATE: MAN	2011 28 2	2025
UNITED STATES TOPOGRAPHIC MAPS	OF WEST L	,	DATE: MAI	KCH 20, 2	2025
WVDEP	E ST TO E		OPERATOR'S WEI	LL#: J 05	BORN HSOP 16 212
OFFICE OF OIL & GAS	4	*	ADIWELL #.		
601 57TH STREET	A STATE OF THE PARTY OF THE PAR	,	API WELL#: 47	3.	3 D6085
CHARLESTON, WV 25304	Total Constitution of the		STA	TE COU	NTY PERMIT
Well Type: Oil Waste Disposal	X Production	Deep			
☐ Gas ☐ Liquid Injection	Storage	X Shallow			
WATERSHED: SIMPSON CREEK ELEVATION: 1163.99'±					1163.99'±
COUNTY/DISTRICT: HARRISON / S	SIMPSON	OLIADI	RANGLE.	ROSEMONT, I	W 7.5'
COUNTY/DISTRICT:	- /	QCADI	n		70.004
SURFACE OWNER: JUDY M OSBORN (L	E) (JUDY M OSBORN IRRE	EVOCABLE IRUS	AC.	REAGE:	70.001
OIL & GAS ROYALTY OWNER:	OBEL OSBORN, ET AL		AC	REAGE: _	1.0945/11/2025
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):					
TARGET FORMATION: MARCELL					
WELL OPERATORARSENAL RESOURCE	ES	DESIGNA	ATED AGENT	ERIC MORI	RIS
Address 6031 WALLACE ROAD EXTENSION,	SUITE 101	Address	633 WEST MAIN ST	C. MAZ	7:- 0-1- 26330
City WEXFORD State PA	Zip Code 15090	City	BRIDGEPORT	State_WV	Zip Code <u>26330</u>



<u>s</u>. <u>s</u>.

9 9

J OSBORN WELL 212			
ID	SURFACE OWNER	DIST-TM-PAR	ACREAGE
1	OSBORN JUDY M (LE) (JUDY M OSBORN IRREVOCABLE	15-0330-0005	56.67
2	HARRON CAROLYN S	15-0330-0003	355.02
3	DAVIS CHARLES THOMAS II	15-0330-0004	41.84
2	HARRON CAROLYN S	15-0330-0003	355.02



THE THRASHER GROUP, INC.
600 WHITE OAK BELVI 1/2025
BRIDGEPORT, W 26330
PHONE 304-624-4108

DATE:	MARCH	28,	2025

OPERATOR'S WELL#: J OSBORN HSOP 16 212

API WELL#: 47

33

D6085 PERMIT

STATE COUNTY

WELL OPERATOR ARSENAL RESOURCES

Address 6031 WALLACE ROAD EXTENSION, SUITE 101

City WEXFORD State PA Zip Code 15090



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

FILE #: J OSBORN HSOP 16 212 DRAWING #: J OSBORN HSOP 16 212

SCALE: N/A

DESIGNATED AGENT

 Address
 633 WEST MAIN ST.

 City
 BRIDGEPORT
 State
 WV
 Zip Code
 26330
 LOSBORN HSOP 16 212