



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

Friday, August 22, 2025
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ARSENAL RESOURCES LLC
6031 WALLACE RD EXT., SUITE 101

WEXFORD, PA 15090

Re: Permit Modification Approval for J Osborn 214
47-033-06087-00-00

Lateral Extension with Forced Pooling

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
Chief

Operator's Well Number: J Osborn 214
Farm Name: Judy M Osborn (LE) (Judy M Osborn Irrevocable Trust)
U.S. WELL NUMBER: 47-033-06087-00-00
Horizontal 6A New Drill
Date Modification Issued: 08/22/2025

Promoting a healthy environment.

08/22/2025

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

1) Well Operator: Arsenal Resources 494519412 Harrison Simpson Rosemont
Operator ID County District Quadrangle

2) Operator's Well Number: 214 Well Pad Name: J Osborn

3) Farm Name/Surface Owner: Judy M Osborn (LE) Public Road Access: 77/4 Moss Run (Coplin Run)

4) Elevation, current ground: 1164 ft Elevation, proposed post-construction: 1164 ft

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

(b) If Gas Shallow X Deep _____
Horizontal X

6) Existing Pad: Yes or No Yes

CK#0000203987
CK\$ 7,500.00

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale, Top 7130ft, Base 7230 ft, Anticipated Thickness 100 ft, Associated Pressure 0.5 psi/ft

8) Proposed Total Vertical Depth: 7,220 ft

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 20,000 ft

11) Proposed Horizontal Leg Length: 12,407.6 ft

12) Approximate Fresh Water Strata Depths: 174', 232', 260', 372', 488', 609', 680'

13) Method to Determine Fresh Water Depths: Offsetting well reported water depths (033-05931, 033-05941, 033-5949, 033-05950)

14) Approximate Saltwater Depths: None expected

15) Approximate Coal Seam Depths: Bakerstown - 226', Brush Creek - 326', U Freeport - 401', L Freeport - 441', U Kittanning - 531', M Kittanning - 596', L Kittanning - 616'

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

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

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

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WW-6B
(04/15)

4703306087

API NO. 47- _____
 OPERATOR WELL NO. 214
 Well Pad Name: J Osborn

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	24	New	H-40	94	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	20,000	20,000 ✓	TOC @ 1,350 ✓
Tubing							
Liners							

Jeff A Propat ✓ 6/16/2025

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% CaCl ₂ ✓	1.2
Fresh Water	13.375	17.5	0.38	2,730	900	Class A/L, 3% CaCl ₂	1.2
Coal							
Intermediate	9.625	12.25	0.395	3,950	1,500	Class A/L, 3% CaCl ₂	1.29
Production	5.5	8.5-8.75	0.415	14,520 ✓	9,500	Class A/L, Poz	1.29/1.34
Tubing							
Liners							

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PACKERS

Kind:				
Sizes:				
Depths Set:				

Jeff A Propat 6/16/2025

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 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- 1/4" intermediate hole to the programmed depth, run 9- 5/8" casing and cement to surface. The rig will then continue to drill an 8- 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 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 11,500 psi.

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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 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 1,700'; there will be no centralizers from 1,700' 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 1,350' (+/- 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 wellbore. 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 stands 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.

Jeff A Propat 6/16/2025

Well Location Plat

Page 4 Cross Section

Arsenal Resources
Applicant / Well Operator Name

DEP ID#

J Osborn HSOP 16 Pad
Harrison County, WV
GL 1164' & 27' KB @ 1191.00usft

Well #
214



WELL PLAN

Operator Name: **Arsenal Resources**
Well/Farm Name: **J Osborn HSOP 16 Pad**

DEP
Use
Only

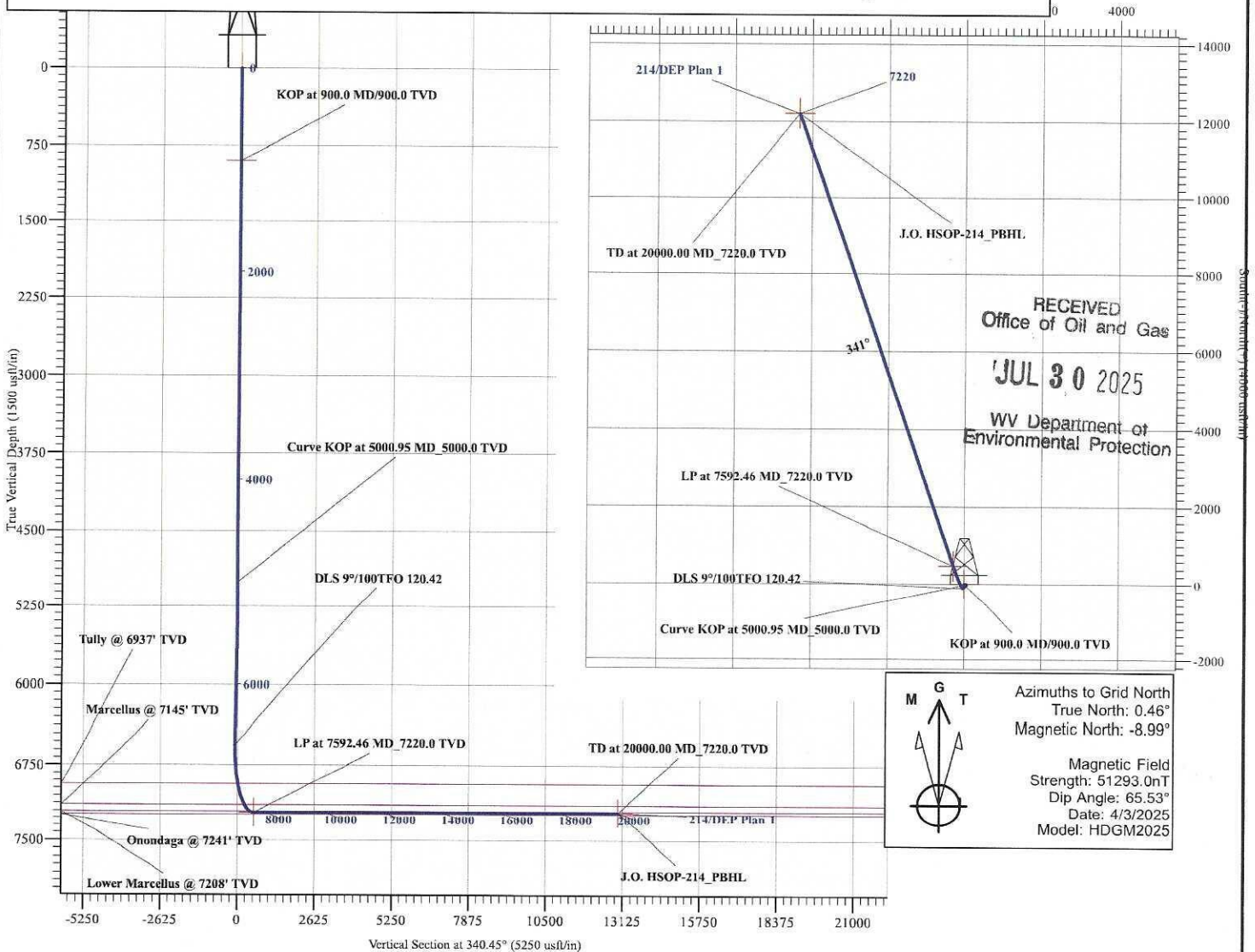
Permit #

Name	TVD	Latitude	Longitude	TMD
J.O. HSOP-214_SHL	0.00	39.266427	-80.218069	0.00
J.O. HSOP-214_KOP	900.00	39.266427	-80.218069	900.00
J.O. HSOP-214_LP	7220.00	39.267720	-80.219102	7592.46
J.O. HSOP-214_PBHL	7220.00	39.299834	-80.233724	20000.00

NOTES:

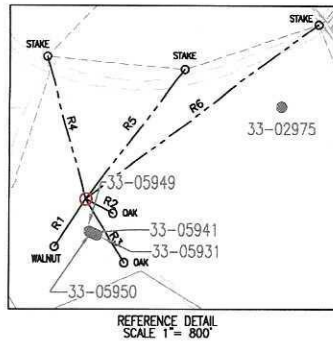
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	KOP at 900.0 MD/900.0 TVD
1000.00	2.00	100.00	999.98	-0.30	1.72	2.00	100.00	-0.86	
2500.93	2.00	100.00	2500.00	-9.40	53.30	0.00	0.00	-26.69	
2600.93	0.00	0.00	2599.98	-9.70	55.02	2.00	180.00	-27.55	
5000.95	0.00	0.00	5000.00	-9.70	55.02	0.00	0.00	-27.55	Curve KOP at 5000.95 MD_5000.0 TVD
5267.16	5.32	220.45	5265.82	-19.11	47.00	2.00	220.45	-33.73	
6562.44	5.32	220.45	6555.51	-110.57	-30.97	0.00	0.00	-93.83	DLS 9°/100TFO 120.42
7592.46	90.00	340.98	7220.00	473.23	-288.67	9.00	120.42	542.54	LP at 7592.46 MD_7220.0 TVD
20000.00	90.00	340.98	7220.00	12203.21	-4332.77	0.00	0.00	12949.57	TD at 20000.00 MD_7220.0 TVD



08/22/2025

BHL is located on topo map 12,200 feet south of Latitude: 39°20'00"
 SHL is located on topo map 9,171 feet south of Latitude: 39°17'30"



LINE	BEARING	DISTANCE
R1	S 34°14'18" W	304.59'
R2	S 63°25'52" E	167.59'
R3	S 31°57'07" E	396.87'
R4	N 15°52'44" W	784.89'
R5	N 38°08'10" E	871.34'
R6	N 53°42'29" E	1577.02'

J OSBORN HSOP 16 214		
SURFACE HOLE LOCATION (SHL)		
UTM 17-NAD83 (M):	NAD83, WV NORTH (FT)	NAD83, GEOGRAPHIC
NORTHING: 4346634.299	NORTHING: 279966.297	LAT (N) 39.266427
EASTING: 567454.531	EASTING: 1765197.687	LONG (W) 80.218069
LANDING POINT LOCATION (LPL)		
UTM 17-NAD83 (M):	NAD83, WV NORTH (FT)	NAD83, GEOGRAPHIC
NORTHING: 4346777.132	NORTHING: 280439.927	LAT (N) 39.267721
EASTING: 567363.981	EASTING: 1764908.351	LONG (W) 80.219104
BOTTOM HOLE LOCATION (BHL)		
UTM 17-NAD83 (M):	NAD83, WV NORTH (FT)	NAD83, GEOGRAPHIC
NORTHING: 4350330.237	NORTHING: 292169.490	LAT (N) 39.299834
EASTING: 566072.734	EASTING: 1760865.250	LONG (W) 80.233723

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, wetland, pond, reservoir or lake.
- 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.
- 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.
- Well Spot Circle & Topo Mark Scale is 1"=2000'.

THRASHER

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



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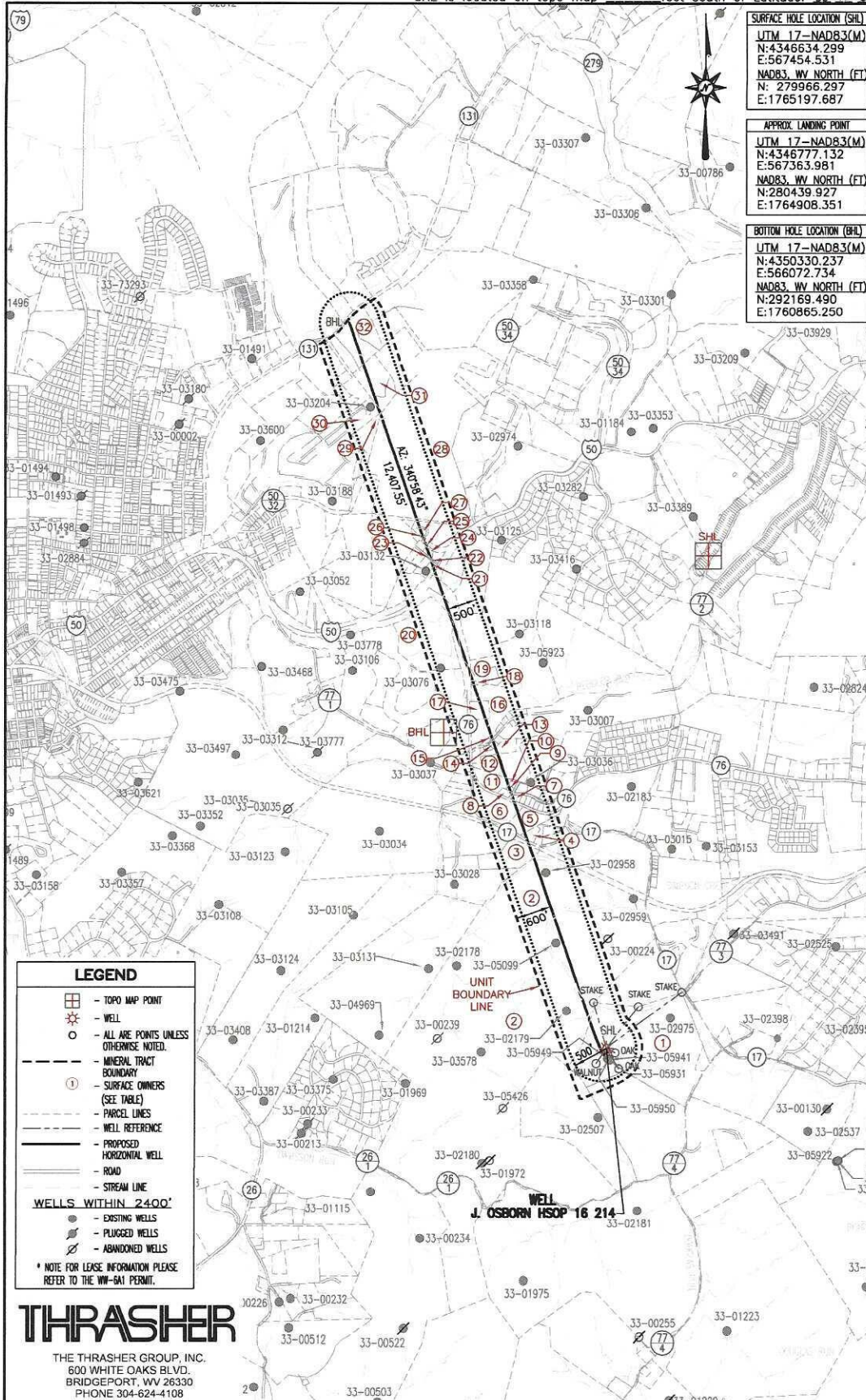
SEE PAGE 2 FOR PLAT

SEE PAGE 3 FOR SURFACE OWNER TABLE

FILE #: J OSBORN HSOP 16 214		I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. Signed: <i>Joseph H. Lowther</i> R.P.E.: _____ L.L.S.: P.S. No. 2346		
DRAWING #: J OSBORN HSOP 16 214				
SCALE: AS SHOWN				
MINIMUM DEGREE OF ACCURACY: 1/2500		(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304		
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'				
WELL TYPE: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep ☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow		DATE: JULY 22, 2025 OPERATOR'S WELL #: J OSBORN HSOP 16 214 API WELL #: 47 33 06087 STATE COUNTY PERMIT		
WATERSHED: SIMPSON CREEK ELEVATION: 1163.87'±		COUNTY/DISTRICT: HARRISON / SIMPSON QUADRANGLE: ROSEMONT, WV 7.5' SURFACE OWNER: JUDY M OSBORN (LE) (JUDY M OSBORN IRREVOCABLE TRUST) ACREAGE: 70.00± OIL & GAS ROYALTY OWNER: GOBEL OSBORN, ET AL ACREAGE: 1,399.52± DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY): _____		
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7220'± TWD / 20,000' TMD		WELL OPERATOR ARSENAL RESOURCES DESIGNATED AGENT ERIC MORRIS Address 6031 WALLACE ROAD EXTENSION, SUITE 200 Address 633 WEST MAIN ST. City WEXFORD State PA Zip Code 15090 City BRIDGEPORT State WV Zip Code 26330		

08/22/2025

BHL is located on topo map 12,200 feet south of Latitude: 39°20'00"
 SHL is located on topo map 9,171 feet south of Latitude: 39°17'30"



BHL is located on topo map 7,185 feet west of Longitude: 80°12'30"
 SHL is located on topo map 2,829 feet west of Longitude: 80°12'30"

SURFACE HOLE LOCATION (SHL)	
UTM 17-NAD83(M)	N:4346634.299
	E:567454.531
NAD83, WV NORTH (FT)	N: 279966.297
	E:1765197.687
APPROX. LANDING POINT	
UTM 17-NAD83(M)	N:4346777.132
	E:567363.981
NAD83, WV NORTH (FT)	N:280439.927
	E:1764908.351
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	E:1760865.250

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WV Department of
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DATE: JULY 22, 2025

OPERATOR'S WELL #: J OSBORN HSOP 16 214

API WELL #: 47 33 **D6087**
 STATE COUNTY PERMIT

WELL OPERATOR ARSENAL RESOURCES

Address 6031 WALLACE ROAD EXTENSION, SUITE 200

City WEXFORD State PA Zip Code 15090



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

FILE #: J OSBORN HSOP 16 214

DRAWING #: J OSBORN HSOP 16 214

SCALE: 1" = 2000'

DESIGNATED AGENT ERIC MORRIS

Address 633 WEST MAIN ST.

City BRIDGEPORT State WV Zip Code 26330

J OSBORN HSOP 16 214

08/22/2025

J OSBORN WELL 214			
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	BENZAKEIN MARY ANN	15-0310-0063	7.35
RXR	CSX RAILROAD	N/A	N/A
4	ODELL LONNA J	15-0310-0047	0.86
5	WINDON CHARLES B	15-0310-0046	3.92
6	RICA DEVELOPERS LLC	15-0310-0044	7.15
ROAD	WV STATE ROUTE 76	N/A	N/A
7	VALLARTA KRISTINE	15-2321-0022	0.34
ROAD	LAKELAND PARK DRIVE	N/A	N/A
8	SIGLEY BARBARA L	15-2321-0001	0.51
9	KINTZ MARCUS & LORI S	15-2321-0002	0.22
10	WATSON MATTHEW L	15-2321-0003	0.27
11	ROBERTSON GREGORY D & SHELIA R	15-0310-0045	3.75
12	ROBERTSON GREGORY D & SHELIA R	15-0310-0024	7.14
13	ROBERTSON GREGORY D & SHELIA R	15-0310-0023	2.80
14	ROME JENNIFER E	15-0310-0080	0.29
ROAD	PEDDLER RUN ROAD	N/A	N/A
15	DEMARCO WILLIAM J & JANELLE M	15-0310-0073	0.31
16	G A L TOOL COMPANY	15-0310-0005-0001	6.00
17	G A L TOOL COMPANY	15-0310-0005-0013	2.21
16	G A L TOOL COMPANY	15-0310-0005-0001	6.00
18	ENERGY PLAZA PARTNERS LLC	15-0310-0005-0025	0.40
19	ENERGY PLAZA PARTNERS LLC	15-0310-0005-0002	7.41
ROAD	WV STATE ROUTE 76	N/A	N/A
20	ROUTE 76 ASSOCIATES	15-0310-0005	22.05
ROAD	WV STATE ROUTE 76	N/A	N/A
ROAD	US ROUTE 50	N/A	N/A
21	SPENCER TIMOTHY R	15-0310-0005-0019	0.69
22	CITY OF BRIDGEPORT	15-0310-0005-0022	0.01
23	HUFFMAN BETTY J	15-0310-0005-0014	0.50
24	BRIDGEPORT STORAGE LLC	15-0310-0005-0015	0.41
25	MAR KEY LLC	15-0310-0005-0016	0.59
26	CALLISON BEATRICE J	15-0290-0047-0001	0.21
27	CALLISON BEATRICE J	15-0290-0047	7.25
28	BENEDUM AIRPORT AUTHORITY	16-0290-0033	101.08
29	BENEDUM AIRPORT AUTHORITY	16-0290-0029-0004	2.93
30	BELASCO MOBILE HOME SALES	15-0290-0029	54.25
31	BENEDUM AIRPORT AUTHORITY	16-0290-0031	6.66
32	BENEDUM AIRPORT AUTHORITY	16-0290-0019	11.45

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PHONE 304-624-4108

DATE: JULY 22, 2025
OPERATOR'S WELL #: J OSBORN HSOP 16 214
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STATE COUNTY PERMIT



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

FILE #: J OSBORN HSOP 16 214
DRAWING #: J OSBORN HSOP 16 214
SCALE: N/A

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Address 633 WEST MAIN ST.
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J OSBORN HSOP 16 214

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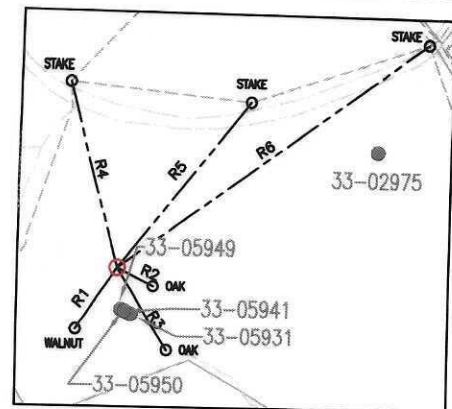
Area of Review Report - J Osborn Pad, 214 Lateral, Harrison County, WV

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
J Osborn HSOP 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
J Osborn HSOP 16 202	033-05950	Arsenal Resources, LLC	Existing	39.265941	-80.217949	25505	Marcellus Shale	NA
G. T. Faris 13	033-02179	Diversified Production, LLC	Existing	39.2681	-80.220462	4393	Benson	NA
Carolyn S Harron 38	033-05099	Diversified Production, LLC	Existing	39.271165	-80.220828	4298	Benson	NA
George Faris Heirs 20	033-02958	Diversified Production, LLC	Existing	39.2745	-80.221761	4202	Benson	Big Injun, Fifth
Lakeland Dev Co 1	033-03036	Diversified Production, LLC	Existing	39.278706	-80.222695	4445	Benson	NA
Rt 76 Associates 2	033-03076	Diversified Production, LLC	Existing	39.283926	-80.228107	4408	Benson	NA
M & S Wholesale 1	033-03132	Diversified Production, LLC	Existing	39.288421	-80.229041	4375	Benson	NA
Belasco Mobile Home 2	033-03204	Diversified Production, LLC	Existing	39.296009	-80.232403	4462	Benson	NA

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4703306087

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600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108



SEE PAGE 2 FOR PLAT

SEE PAGE 3 FOR SURFACE OWNER TABLE

FILE #: J OSBORN HSOP 16 214
DRAWING #: J OSBORN HSOP 16 214
SCALE: AS SHOWN
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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

Signed: Joseph H. Lowther
R.P.E.: _____ L.L.S.: P.S. No. 2346



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: JULY 22, 2025

OPERATOR'S WELL #: J OSBORN HSOP 16 214

API WELL #: 47 33 06087
STATE COUNTY PERMIT

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: SIMPSON CREEK

ELEVATION: 1163.87'±

COUNTY/DISTRICT: HARRISON / SIMPSON QUADRANGLE: ROSEMONT, WV 7.5'

SURFACE OWNER: JUDY M OSBORN (LE) (JUDY M OSBORN IRREVOCABLE TRUST) ACREAGE: 70.00±

OIL & GAS ROYALTY OWNER: GOBEL OSBORN, ET AL ACREAGE: 1,399.52±

DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒
PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☐
CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY): _____

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7220'± TMD / 20,000' TMD

WELL OPERATOR ARSENAL RESOURCES DESIGNATED AGENT ERIC MORRIS

Address 6031 WALLACE ROAD EXTENSION, SUITE 200 Address 633 WEST MAIN ST.

City WEXFORD State PA Zip Code 15090 City BRIDGEPORT State WV Zip Code 26330

BHL is located on topo map 7,185 feet west of Longitude: 80°12'30"
SHL is located on topo map 2,829 feet west of Longitude: 80°12'30"

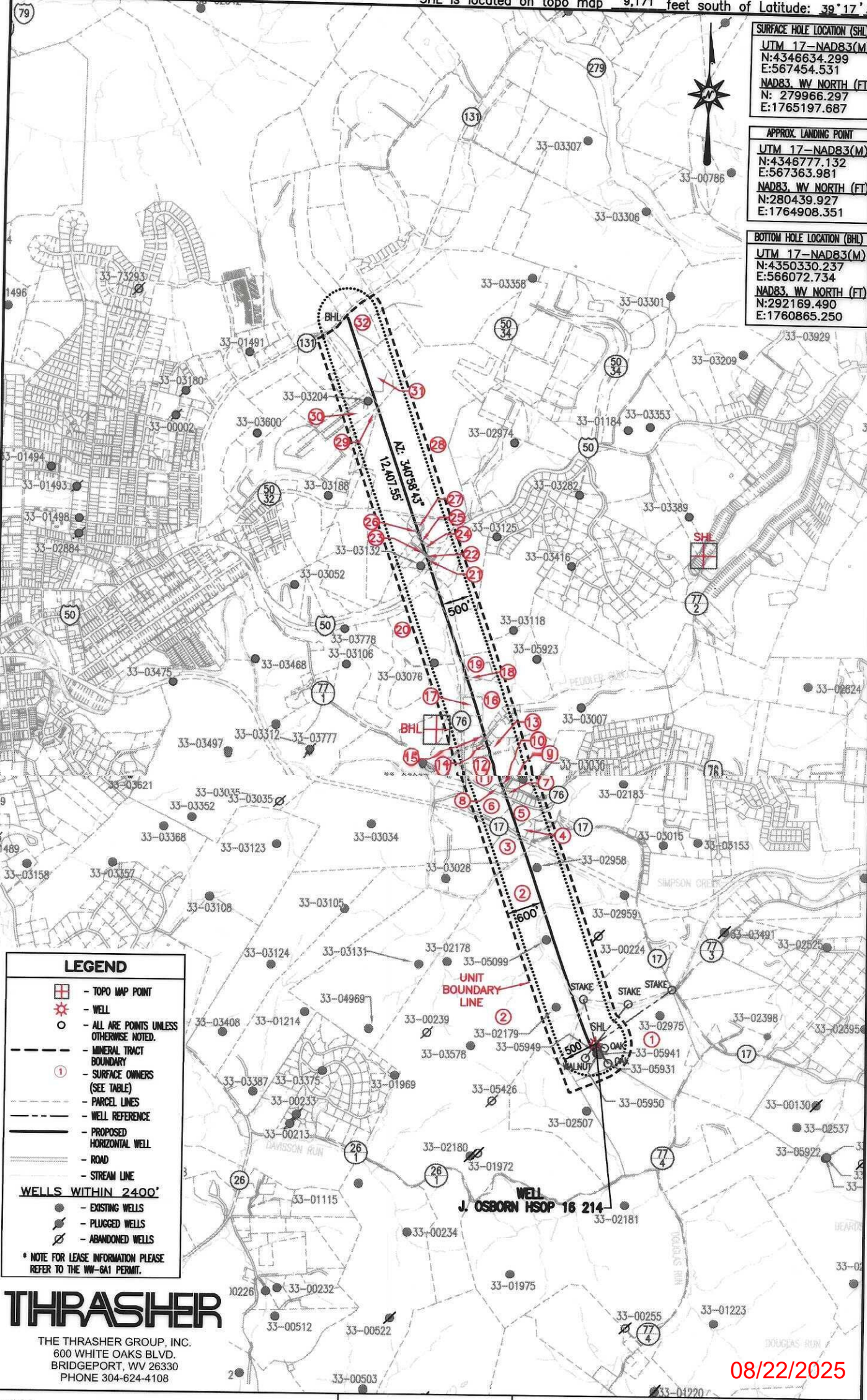
BHL is located on topo map 12,200 feet south of Latitude: 39°20'00"
SHL is located on topo map 9,171 feet south of Latitude: 39°17'30"

BHL is located on topo map 7,185 feet west of Longitude: 80°12'30."
SHL is located on topo map 2,829 feet west of Longitude: 80°12'30."

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4346634.299
E:567454.531
NAD83, WV NORTH (FT)
N: 279966.297
E:1765197.687

APPROX. LANDING POINT
UTM 17-NAD83(M)
N:4346777.132
E:567363.981
NAD83, WV NORTH (FT)
N:280439.927
E:1764908.351

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4350330.237
E:566072.734
NAD83, WV NORTH (FT)
N:292169.490
E:1760865.250



LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- SURFACE OWNERS (SEE TABLE)
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM LINE

WELLS WITHIN 2400'

- EXISTING WELLS
- PLUGGED WELLS
- ABANDONED WELLS

* NOTE FOR LEASE INFORMATION PLEASE REFER TO THE WV-6A1 PERMIT.

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

08/22/2025

DATE: JULY 22, 2025		FILE #: J OSBORN HSOP 16 214
OPERATOR'S WELL #: J OSBORN HSOP 16 214		DRAWING #: J OSBORN HSOP 16 214
API WELL #: 47 33 06087		SCALE: 1" = 2000'
STATE COUNTY PERMIT	DESIGNATED AGENT ERIC MORRIS	Address 633 WEST MAIN ST.
WELL OPERATOR ARSENAL RESOURCES	Address 633 WEST MAIN ST.	City BRIDGEPORT State WV Zip Code 26330
Address 6031 WALLACE ROAD EXTENSION, SUITE 200	City BRIDGEPORT State WV Zip Code 26330	
City WEXFORD State PA Zip Code 15090		

J OSBORN WELL 214			
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	BENZAKEIN MARY ANN	15-0310-0063	7.35
RXR	CSX RAILROAD	N/A	N/A
4	ODELL LONNA J	15-0310-0047	0.86
5	WINDON CHARLES B	15-0310-0046	3.92
6	RICA DEVELOPERS LLC	15-0310-0044	7.15
ROAD	WV STATE ROUTE 76	N/A	N/A
7	VALLARTA KRISTINE	15-2321-0022	0.34
ROAD	LAKELAND PARK DRIVE	N/A	N/A
8	SIGLEY BARBARA L	15-2321-0001	0.51
9	KINTZ MARCUS & LORI S	15-2321-0002	0.22
10	WATSON MATTHEW L	15-2321-0003	0.27
11	ROBERTSON GREGORY D & SHELIA R	15-0310-0045	3.75
12	ROBERTSON GREGORY D & SHELIA R	15-0310-0024	7.14
13	ROBERTSON GREGORY D & SHELIA R	15-0310-0023	2.80
14	ROME JENNIFER E	15-0310-0080	0.29
ROAD	PEDDLER RUN ROAD	N/A	N/A
15	DEMARCO WILLIAM J & JANELLE M	15-0310-0073	0.31
16	G A L TOOL COMPANY	15-0310-0005-0001	6.00
17	G A L TOOL COMPANY	15-0310-0005-0013	2.21
16	G A L TOOL COMPANY	15-0310-0005-0001	6.00
18	ENERGY PLAZA PARTNERS LLC	15-0310-0005-0025	0.40
19	ENERGY PLAZA PARTNERS LLC	15-0310-0005-0002	7.41
ROAD	WV STATE ROUTE 76	N/A	N/A
20	ROUTE 76 ASSOCIATES	15-0310-0005	22.05
ROAD	WV STATE ROUTE 76	N/A	N/A
ROAD	US ROUTE 50	N/A	N/A
21	SPENCER TIMOTHY R	15-0310-0005-0019	0.69
22	CITY OF BRIDGEPORT	15-0310-0005-0022	0.01
23	HUFFMAN BETTY J	15-0310-0005-0014	0.50
24	BRIDGEPORT STORAGE LLC	15-0310-0005-0015	0.41
25	MAR KEY LLC	15-0310-0005-0016	0.59
26	CALLISON BEATRICE J	15-0290-0047-0001	0.21
27	CALLISON BEATRICE J	15-0290-0047	7.25
28	BENEDUM AIRPORT AUTHORITY	16-0290-0033	101.08
29	BENEDUM AIRPORT AUTHORITY	16-0290-0029-0004	2.93
30	BELASCO MOBILE HOME SALES	15-0290-0029	54.25
31	BENEDUM AIRPORT AUTHORITY	16-0290-0031	6.66
32	BENEDUM AIRPORT AUTHORITY	16-0290-0019	11.45

THRASHER

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

08/22/2025

DATE: JULY 22, 2025
OPERATOR'S WELL #: J OSBORN HSOP 16 214
API WELL #: 47 33 06087
STATE COUNTY PERMIT

WELL OPERATOR ARSENAL RESOURCES
Address 6031 WALLACE ROAD EXTENSION, SUITE 200
City WEXFORD State PA Zip Code 15090



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

FILE #: J OSBORN HSOP 16 214
DRAWING #: J OSBORN HSOP 16 214
SCALE: N/A

DESIGNATED AGENT ERIC MORRIS
Address 633 WEST MAIN ST.
City BRIDGEPORT State WV Zip Code 26330

WW-6A1
(5/13)

Operator's Well No. J Osborn 214

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

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

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

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

**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:

By:

Dave Boyer

Its:

Director of Geology & Development Planning

4703306087

Attachment to WW-6A1, J OSBORN HSOP 214					
Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
1 47-033-15-330-5 (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	Energy Corporation of America		59/879	
	Energy Corporation of America	Greylock Production, LLC		1603/1121	
	Greylock Production, LLC	Mar Key, LLC		1607/855	
1 47-033-15-330-5 (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 47-033-15-330-3 (00008352)	GEORGE T FARIS ET AL	DELAWARE GAS COMPANY	12.5+%	820/128	1528.9
	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 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	
3 47-033-15-310-63 (00009370)	BRADLEY MORRIS & LACIE MORRIS	MAR KEY	12.5+%	1789/67	19

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Office of Oil and Gas
JUL 30 2025
WV Department of
Environmental Protection

Attachment to WW-6A1, J OSBORN HSOP 214					
Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
RXR (00009426)	CSX TRANSPORTATION INC	MAR KEY	12.5+%	1794/1330	22.8
4 47-033-15-310-47 (UNLEASED)	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA
5 47-033-15-310-46 (00009000)	CHARLES B WINDON	MAR KEY	12.5+%	1751/176	4.77
6 47-033-15-310-44 (00008149)	CLAUDE J RYAN III & CRYSTAL A RYAN	MAR KEY LLC	12.5+%	1610/711	7.51
7 47-033-15-2321-22 (UNLEASED)	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA
8 47-033-15-2321-1 (UNLEASED)	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA
9 47-033-15-2321-2 (00009001)	MARCUS KINTZ AND LORI S KINTZ	MAR KEY	12.5+%	1751/178	0.22
10 47-033-15-2321-3 (UNLEASED)	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA
11 47-033-15-310-45 (UNLEASED)	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA
12 47-033-15-310-24 UNLEASED SOUTH PORTION	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA

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Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
12 47-033-15-310-24 NORTH PORTION (00003828)	LAKELAND DEVELOPMENT COMPANY	PETROLEUM DEVELOPMENT CORPORATION	12.5+%	1136/53	61.3
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
13 47-033-15-310-23 (00003828)	LAKELAND DEVELOPMENT COMPANY	PETROLEUM DEVELOPMENT CORPORATION	12.5+%	1136/53	61.3
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
14 47-033-15-310-80 (UNLEASED)	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA
15 47-033-15-310-73 (UNLEASED)	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA
16, 17, 18, 19 47-033-15-310-5.1, 5.13, 5.1 5.25, SOUTH PORTION OF 5.2 (00004183)	FLORA O CORPENING BY UNION BANK OF WV	Petroleum Development Corporation	12.5+%	1135/417	16.53
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
20 47-033-15-310-5 (00003833)	ROUTE 76 ASSOCIATES	Petroleum Development Corporation	12.5+%	1135/111	56.7
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
21 47-033-15-310-5.19	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA

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Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
21, 22, 23, 24 47-033-15-310-5.19, 5.22, 5.14, 5.15 (00004183)	FLORA O CORPENING BY UNION BANK OF WV	Petroleum Development Corporation	12.5+%	1135/417	16.53
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
25 47-033-15-310-5.16 (00008012)	BENEDUM AIRPORT AUTHORITY	MAR KEY	12.5+%	1608/1126	196.52
26, 27 47-033-15-290-47, 47.1	ROYALTY OWNER SUBJECT TO	UNITIZATION FILING	NA	NA	NA
28, 29, 31, 32 47-033-16-290-33 & 29.4 & 31 & 19 (00008941)	CHRISTOPHER CORDER HULL	MAR KEY	12.5+%	1744/986	101.08
28, 29, 31, 32 47-033-16-290-33 & 29.4 & 31 & 19 (00008942)	KIMBERLY D IZOLD	MAR KEY	12.5+%	1744/984	101.08
29 47-033-16-290-29.4, 31, (00008012)	BENEDUM AIRPORT AUTHORITY	MAR KEY	12.5+%	1608/1126	196.52
30 47-033-16-290-29	BELASCO MOBILE HOME SALES	Petroleum Development Corporation	12.5+%	1146/397	69.05
	Petroleum Development Corporation	PDC Mountaineer, LLC		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	

*Horizontal well unit utilization - Subject to unitization filing with the West Virginia Oil and Gas Commission

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Office of Oil and Gas
JUL 30 2025
WV Department of
Environmental Protection

4703306087



People Powered. Asset Strong.

July 28, 2025

West Virginia Department of Environmental Protection
Office of Oil and Gas
ATTN: Taylor Brewer
601 57th Street SE
Charleston, WV 25304

RE: J. Osborn #214 (47-033-06087) - Expedited Modification Due to Well Extension

Dear Mr. Brewer,

Enclosed please find the permit modification for the J. Osborn #214 (47-033-06087).

The wellhead location remains the same as the current permit. The well is being extended to the planned lateral length of 12,408 feet.

Revised documents attached include the revised WW-6B, wellbore schematic with plan, plat, WW-6A1, and area of review. The expedited modification review fee is also included.

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

Sincerely,

A handwritten signature in blue ink that reads 'Emily Glick'.

Emily Glick
Geologist & Permitting Specialist
(c) 724-759-9612
(e) eglick@arsenalresources.com

RECEIVED
Office of Oil and Gas

JUL 30 2025

WV Department of
Environmental Protection

6031 Wallace Road Ext., Suite 200
Wexford, PA 15090
P - 724-940-1100
F - 800-428-0981
www.arsenalresources.com

08/22/2025