

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

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Office of Oil & Gas

NOV 17 2022

API 47 - 091 - 01364 County Taylor District Court House WV Department of Environmental Protection
Quad Grafton Pad Name Armstrong II Field/Pool Name _____
Farm name Robert and Julie Armstong Well Number 215
Operator (as registered with the OOG) Arsenal Resources
Address 6031 Wallace Rd Ext, Ste 101 City Wexford State PA Zip 15090

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,349,482.13 Easting 579,006.70
Landing Point of Curve Northing 4,349,743.7 Easting 579,234.7
Bottom Hole Northing 4,353,969.8 Easting 577,698.5

Elevation (ft) 1293.80' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
Synthetic Oil Based

Date permit issued 11/29/2021 Date drilling commenced 5/12 04/15/2022 Date drilling ceased 05/25/2022
Date completion activities began 6/20/2022 Date completion activities ceased 9/27/2022
Verbal plugging (Y/N) N Date permission granted NA Granted by NA

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 30', 100', 150', 250' Open mine(s) (Y/N) depths N
Salt water depth(s) ft none reported Void(s) encountered (Y/N) depths N
Coal depth(s) ft 400', 1030' (from 4709101116) Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

Amel Gaydos

2023/11/2023

APPROVED

API 47- 091 - 01364 Farm name Robert and Julie Armstong Well number 215

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	30"	24"	80' GL	New	94	NA	Y
Surface	17 1/2"	13 3/8"	905' GL	New	54.5	NA	Y
Coal	NA	NA	NA	NA	NA	NA	N
Intermediate 1	12 1/4"	9 5/8"	2,530' GL	New	40.0	NA	Y
Intermediate 2	NA	NA	NA	NA	NA	NA	NA
Intermediate 3	NA	NA	NA	NA	NA	NA	NA
Production	8 1/2"	5 1/2"	22,781' GL	New	20.0	NA	Y
Tubing	NA	NA	NA	NA	NA	NA	NA
Packer type and depth set		NA					

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Comment Details Cement to surface on Conductor, Surface, Intermediate and Production

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CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	WV Department of Environmental Protection	
						Cement Top (MD)	WOC (hrs)
Conductor	A	168	15.60	1.21	203	Surface	8+
Surface	A	830	15.60	1.2	996	Surface	8+
Coal	NA	NA	NA	NA	NA	NA	NA
Intermediate 1	A	840	15.60	1.19	999.6	Surface	8+
Intermediate 2	NA	NA	NA	NA	NA	NA	NA
Intermediate 3	NA	NA	NA	NA	NA	NA	NA
Production	A	845/3225	13.2/14.5	1.53/1.16	1,293/3,741	Surface	8+
Tubing	NA	NA	NA	NA	NA	NA	NA

Drillers TD (ft) 22,803'(GL) Loggers TD (ft) NA

Deepest formation penetrated Marcellus Plug back to (ft) NA

Plug back procedure NA

Kick off depth (ft) 7,189'(GL)

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING 24"- No centralizers, 13 3/8" & 9-5/8"- one bow spring centralizer on every other joint, 5.5"- 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 2,400'; there will be no centralizers from 2,400' to surface

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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API 47- 091 - 01364 Farm name Robert and Julie Armstong Well number 215

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
Marcellus Shale	7699 - 7791	TVD	8064-22758 MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST 24 **NOV 17 2022** hrs

OPEN FLOW Gas 15082 mcfpd Oil 0 bpd NGL 0 bpd Water 652 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
Sand/Silt*	0	250	0	250	Freshwater @ 30', 100', 150', 250'
Sand/Silt/Coal*		1580	250	1580	Coal @ 400' & 1030' *based on 091-01116
Big Lime*	1580	1760	1580	1760	Limestone
Sand/Silt/Shale*	1760	2540	1760	2540	Sandstone, Siltstone, Shale
4th Sand*	2540	2596	2540	2596	Sandstone
Sand/Silt/Shale*	2596	4516	2596	4516	Sandstone, Siltstone, Shale
Benson*	4516	4598	4516	4598	Siltstone
Sand/Silt/Shale*	4598	7413	4598	7501	Sandstone, Siltstone, Shale
Burket	7413	7437	7501	7530	Shale
Tully	7437	7495	7530	7605	Limestone
Mahantango	7495	7652	7605	7871	Shale
Marcellus	7652	7713	7871	8031	Shale
Lower Marcellus	7713	7746**	8031	22971.5	Shale
Onondaga	7746**				**Onondaga not penetrated - est based on 091-01116

Please insert additional pages as applicable.

Drilling Contractor Patterson- UTI Drilling
Address 10713 West Sam Houston Parkway North City Houston State TX Zip 77064

Logging Company NA
Address _____ City _____ State _____ Zip _____

Cementing Company Nextier Oilfield Services
Address 3990 Rogerdale City Houston State TX Zip 77042

Stimulating Company Stingray - Mammoth Energy Services INC
Address 14201 Caliber Drive Suite 300 City Oklahoma City State OK Zip 73134

Please insert additional pages as applicable.

Completed by Arsenal Resources Telephone 724-940-1100
Signature [Signature] Title Director of Geology & Dev Planning Date 11/14/22

Submission of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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WR 35 FORM COMPLETIONS INFORMATION

Well Header

Well Name Armstrong II 215	API/UWI 47-091-01364	Lease	Pad Name Armstrong II	Operator Arsenal Resources	Well Type Development	Well Subtype
Original KB Elevation (ft) 1,319.00	Water Depth (ft)	Well License Date 3/7/2021	Spud Date 5/11/2022	Rig Release Date 5/25/2022		
County Taylor	District Simpson	Division Development	Division Code	RECEIVED Office of Oil & Gas NOV 17 2022		
Lat/Long Datum	Latitude (°) 39° 10' 12" N	Longitude (°) 80° 30' 0"	UTM Easting (m)	UTM Northing (m)		

Jobs

Job Category Completion/Workover	Primary Job Type Initial Completion	Start Date 9/16/2022	End Date
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Perforations

Date	Top (ftKB)	Btm (ftKB)	Entered Shot Total	Zone
8/4/2022	8,064.0	8,223.0	40	Marcellus Shale, Original Hole
8/4/2022	8,261.0	8,421.0	40	Marcellus Shale, Original Hole
8/3/2022	8,461.0	8,623.0	40	Marcellus Shale, Original Hole
8/3/2022	8,663.0	8,821.0	40	Marcellus Shale, Original Hole
8/3/2022	8,861.0	9,023.0	40	Marcellus Shale, Original Hole
8/2/2022	9,061.0	9,223.0	40	Marcellus Shale, Original Hole
8/2/2022	9,261.0	9,423.0	40	Marcellus Shale, Original Hole
8/2/2022	9,461.0	9,623.0	40	Marcellus Shale, Original Hole
8/1/2022	9,661.0	9,823.0	40	Marcellus Shale, Original Hole
8/1/2022	9,861.0	10,023.0	40	Marcellus Shale, Original Hole
7/31/2022	10,061.0	10,223.0	40	Marcellus Shale, Original Hole
7/31/2022	10,261.0	10,423.0	40	Marcellus Shale, Original Hole
7/31/2022	10,461.0	10,623.0	40	Marcellus Shale, Original Hole
7/30/2022	10,661.0	10,823.0	40	Marcellus Shale, Original Hole
7/30/2022	10,861.0	11,023.0	40	Marcellus Shale, Original Hole
7/30/2022	11,061.0	11,223.0	40	Marcellus Shale, Original Hole
7/29/2022	11,261.0	11,423.0	40	Marcellus Shale, Original Hole
7/29/2022	11,461.0	11,623.0	40	Marcellus Shale, Original Hole
7/29/2022	11,661.0	11,823.0	40	Marcellus Shale, Original Hole
7/28/2022	11,861.0	12,023.0	40	Marcellus Shale, Original Hole
7/28/2022	12,061.0	12,223.0	40	Marcellus Shale, Original Hole
7/27/2022	12,261.0	12,423.0	40	Marcellus Shale, Original Hole
7/27/2022	12,461.0	12,623.0	40	Marcellus Shale, Original Hole
7/27/2022	12,661.0	12,823.0	40	Marcellus Shale, Original Hole
7/26/2022	12,861.0	13,023.0	40	Marcellus Shale, Original Hole
7/26/2022	13,061.0	13,223.0	40	Marcellus Shale, Original Hole
7/25/2022	13,261.0	13,423.0	40	Marcellus Shale, Original Hole
7/23/2022	13,461.0	13,623.0	40	Marcellus Shale, Original Hole
7/23/2022	13,661.0	13,823.0	40	Marcellus Shale, Original Hole
7/22/2022	13,861.0	14,023.0	40	Marcellus Shale, Original Hole
7/22/2022	14,061.0	14,223.0	40	Marcellus Shale, Original Hole
7/21/2022	14,261.0	14,423.0	40	Marcellus Shale, Original Hole
7/21/2022	14,461.0	14,623.0	40	Marcellus Shale, Original Hole
7/20/2022	14,661.0	14,823.0	40	Marcellus Shale, Original Hole
7/20/2022	14,861.0	15,023.0	40	Marcellus Shale, Original Hole
7/19/2022	15,061.0	15,223.0	40	Marcellus Shale, Original Hole
7/19/2022	15,261.0	15,423.0	40	Marcellus Shale, Original Hole
7/18/2022	15,461.0	15,623.0	40	Marcellus Shale, Original Hole
7/18/2022	15,661.0	15,823.0	40	Marcellus Shale, Original Hole
7/17/2022	15,861.0	16,023.0	40	Marcellus Shale, Original Hole
7/17/2022	16,061.0	16,223.0	40	Marcellus Shale, Original Hole
7/17/2022	16,261.0	16,423.0	40	Marcellus Shale, Original Hole
7/16/2022	16,461.0	16,623.0	40	Marcellus Shale, Original Hole
7/16/2022	16,661.0	16,823.0	40	Marcellus Shale, Original Hole
7/15/2022	16,861.0	17,023.0	40	Marcellus Shale, Original Hole

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WR 35 FORM COMPLETIONS INFORMATION

Perforations

Date	Top (ftKB)	Btm (ftKB)	Entered Shot Total	Zone
7/15/2022	17,061.0	17,223.0	40	Marcellus Shale, Original Hole
7/14/2022	17,261.0	17,423.0	40	Marcellus Shale, Original Hole
7/14/2022	17,461.0	17,623.0	40	Marcellus Shale, Original Hole
7/14/2022	17,661.0	17,823.0	40	Marcellus Shale, Original Hole
7/13/2022	17,861.0	18,023.0	40	Marcellus Shale, Original Hole
7/12/2022	18,061.0	18,223.0	40	Marcellus Shale, Original Hole
7/11/2022	18,261.0	18,423.0	40	Marcellus Shale, Original Hole
7/11/2022	18,461.0	18,623.0	40	Marcellus Shale, Original Hole
7/10/2022	18,661.0	18,823.0	40	Marcellus Shale, Original Hole
7/10/2022	18,861.0	19,023.0	40	Marcellus Shale, Original Hole
7/10/2022	19,061.0	19,223.0	40	Marcellus Shale, Original Hole
7/10/2022	19,261.0	19,423.0	40	Marcellus Shale, Original Hole
7/9/2022	19,461.0	19,623.0	40	Marcellus Shale, Original Hole
7/9/2022	19,661.0	19,823.0	40	Marcellus Shale, Original Hole
7/9/2022	19,861.0	20,023.0	40	Marcellus Shale, Original Hole
7/8/2022	20,061.0	20,223.0	40	Marcellus Shale, Original Hole
7/8/2022	20,261.0	20,423.0	40	Marcellus Shale, Original Hole
7/7/2022	20,461.0	20,623.0	40	Marcellus Shale, Original Hole
7/7/2022	20,661.0	20,823.0	38	Marcellus Shale, Original Hole
7/6/2022	20,861.0	21,023.0	40	Marcellus Shale, Original Hole
7/6/2022	21,061.0	21,223.0	40	Marcellus Shale, Original Hole
7/5/2022	21,261.0	21,423.0	40	Marcellus Shale, Original Hole
7/4/2022	21,461.0	21,623.0	40	Marcellus Shale, Original Hole
7/4/2022	21,661.0	21,823.0	40	Marcellus Shale, Original Hole
7/3/2022	21,861.0	22,023.0	40	Marcellus Shale, Original Hole
7/3/2022	22,061.0	22,223.0	40	Marcellus Shale, Original Hole
7/2/2022	22,261.0	22,422.0	40	Marcellus Shale, Original Hole
7/1/2022	22,461.0	22,623.0	40	Marcellus Shale, Original Hole
7/1/2022	22,661.0	22,758.0	4	Marcellus Shale, Original Hole

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Stimulations Summary

Start Date	Treat Rate Avg (bbl/min)	Treat Pressure Avg (psi)	Proppant Total (lb) 36,557,554.0	Volume Clean Total (bbl) 706,192.00	Frac Gradient Average (psi/ft) 1.26
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Stimulation Intervals

Interval Number	Start Date	Slurry Rate Avg (bbl/min)	P Treat Avg (psi)	P Breakdown (psi)	ISIP (psi)	Proppant Total OR (lb)	Vol Clean Total (bbl)
1	7/1/2022	85.8	9,100.0	11,357.0	4,790.0		6,229.00
2	7/1/2022	83.8	8,929.0	6,130.0	5,183.0		9,686.00
3	7/2/2022	84	9,149.0	6,047.0	5,947.0		9,429.00
4	7/3/2022	80.3	8,530.0	5,661.0	5,120.0		9,506.00
5	7/3/2022	82.3	9,003.0	6,068.0	5,823.0		9,955.00
6	7/4/2022	87.3	8,887.0	5,672.0	4,600.0		10,294.00
7	7/4/2022	85.6	8,773.0	5,914.0	6,133.0		9,624.00
8	7/5/2022	87.8	8,981.0	6,561.0	4,895.0		9,765.00
9	7/6/2022	84.7	8,677.0	5,904.0	4,780.0		9,262.00
10	7/6/2022	82.9	8,570.0	10,396.0	5,808.0		10,105.00
11	7/7/2022	85.2	8,665.0	5,951.0	5,793.0		9,390.00
12	7/8/2022	87.2	8,900.0	5,713.0	5,336.0		9,079.00
13	7/8/2022	85.5	8,815.0	5,345.0	5,336.0		9,243.00
14	7/8/2022	85.9	9,006.0	9,766.0	6,051.0		11,058.00
15	7/9/2022	84.5	8,586.0	5,846.0	5,812.0		9,242.00
16	7/9/2022	84	9,080.0	5,528.0	5,404.0		11,526.00
17	7/9/2022	78.1	8,996.0	7,853.0	5,649.0		10,529.00
18	7/10/2022	85.3	8,811.0	5,328.0	5,029.0		9,149.00
19	7/10/2022	84.9	8,840.0	5,445.0	4,482.0		9,181.00
20	7/10/2022	56.5	10,093.0	5,732.0	5,926.0		10,220.00

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WR 35 FORM COMPLETIONS INFORMATION

Stimulation Intervals

Interval Number	Start Date	Slurry Rate Avg (bbl/min)	P Treat Avg (psi)	P Breakdown (psi)	ISIP (psi)	Proppant Total OR (lb)	Vol Clean Total (bbl)
21	7/11/2022	79.9	8,340.0	9,081.0	4,327.0		9,196.00
22	7/11/2022	83	9,209.0	6,505.0	4,748.0		11,148.00
23	7/12/2022	84.3	9,535.0	6,054.0	5,956.0		9,175.00
24	7/12/2022	80.2	8,731.0	8,629.0	5,687.0		9,032.00
25	7/12/2022	88	8,992.0	5,958.0	4,990.0		9,541.00
26	7/14/2022	88.7	8,831.0	5,906.0	4,939.0		11,356.00
27	7/14/2022	88	8,832.0	4,869.0	5,216.0		9,373.00
28	7/15/2022	84.1	9,404.0	6,374.0	5,841.0		9,683.00
29	7/15/2022	87.8	8,863.0	6,722.0	5,750.0		11,102.00
30	7/16/2022	88.1	8,833.0	6,406.0	4,880.0		9,337.00
31	7/16/2022	87.3	8,712.0	7,157.0	5,159.0		9,244.00
32	7/17/2022	88.1	8,818.0	5,538.0	5,348.0		9,338.00
33	7/17/2022	85	8,663.0	5,752.0	4,676.0		9,282.00
34	7/17/2022	87.5	8,581.0	6,463.0	4,793.0		9,409.00
35	7/18/2022	88.4	8,706.0	6,960.0	4,815.0		9,384.00
36	7/18/2022	88.8	8,834.0	6,838.0	5,022.0		9,429.00
37	7/19/2022	88.4	8,843.0	5,844.0	5,027.0		9,471.00
38	7/19/2022	87.2	9,303.0	6,848.0	5,087.0		9,397.00
39	7/20/2022	87.9	8,822.0	11,093.0	7,033.0		9,311.00
40	7/20/2022	85.4	8,409.0	6,375.0	5,361.0		10,498.00
41	7/21/2022	88.2	8,834.0	5,493.0	5,929.0		10,195.00
42	7/21/2022	87.3	8,735.0	7,316.0	6,350.0		9,521.00
43	7/22/2022	85.5	8,720.0	5,498.0	5,404.0		9,361.00
44	7/22/2022	85.1	8,713.0	7,927.0	5,539.0		9,410.00
45	7/22/2022	85.3	8,770.0	4,205.0	5,157.0		9,454.00
46	7/23/2022	85	8,666.0	5,801.0	5,543.0		9,456.00
47	7/23/2022	85.4	9,053.0	6,207.0	5,130.0		10,133.00
48	7/26/2022	85.8	8,729.0	7,387.0	4,679.0		9,226.00
49	7/26/2022	84.7	8,650.0	7,874.0	4,978.0		9,357.00
50	7/27/2022	85	8,760.0	7,683.0	5,007.0		10,169.00
51	7/27/2022	85.3	8,613.0	7,553.0	5,600.0		9,264.00
52	7/27/2022	85.1	8,460.0	7,938.0	4,906.0		9,279.00
53	7/28/2022	84.6	8,052.0	7,934.0	4,701.0		9,296.00
54	7/28/2022	85.1	7,959.0	7,068.0	4,501.0		9,728.00
55	7/28/2022	85.1	8,032.0	7,316.0	4,956.0		9,285.00
56	7/29/2022	85	8,137.0	7,137.0	4,586.0		9,126.00
57	7/29/2022	85.2	7,912.0	6,819.0	5,654.0		9,237.00
58	7/29/2022	85.1	7,972.0	7,226.0	4,926.0		9,291.00
59	7/30/2022	85.4	8,215.0	7,581.0	4,902.0		9,156.00
60	7/30/2022	84.1	8,147.0	6,940.0	5,006.0		9,230.00
61	7/30/2022	84.7	8,081.0	6,724.0	5,163.0		9,203.00
62	7/31/2022	84.8	7,641.0	7,173.0	4,639.0		9,139.00
63	7/31/2022	83.1	8,180.0	6,904.0	4,968.0		9,923.00
64	8/1/2022	84	8,125.0	6,983.0	5,551.0		9,146.00
65	8/1/2022	84.2	7,962.0	7,233.0	5,798.0		9,161.00
66	8/1/2022	82.6	8,066.0	6,774.0	5,007.0		9,163.00
67	8/2/2022	82.6	7,910.0	6,556.0	5,024.0		9,511.00
68	8/2/2022	82.6	8,272.0	7,098.0	5,615.0		8,940.00
69	8/2/2022	83.6	7,818.0	7,094.0	5,798.0		9,221.00
70	8/3/2022	81.2	7,484.0	6,124.0	5,345.0		9,251.00
71	8/3/2022	80.5	7,511.0	7,208.0	5,740.0		9,073.00
72	8/3/2022	83.5	7,684.0	6,874.0	5,492.0		9,108.00
73	8/4/2022	80.3	7,497.0	6,492.0	5,527.0		8,991.00
74	8/4/2022	79.5	7,567.0	6,876.0	5,230.0		11,010.00

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Office of Oil & Gas
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WV Department of
Environmental Protection

03/31/2023

Claimant Company	Claimant First Name	Claimant Last Name	Claimant Email	Claimant Phone (nnn-xxx-xxxx)
Moon	Bryan	Schulthof	bryan@moonchemical.com	405-787-4110
Chemstream	Eric	Fry	eric.fry@chemstream.com	814-706-1426
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RECEIVED
Office of Oil & Gas
NOV 17 2022
WV Department of
Environmental Protection

**ARMSTRONG II LEASE
WELL NO. 215
ARSENAL RESOURCES**

4,286' B.H. A.D. 143' T.H. A.D.
B.H. A.D. T.H. LATITUDE 39°17'30"
B.H. LATITUDE 39°20'00" T.H. A.D.
203' T.H. A.D. 00°50'08"
610' B.H. A.D. 80°05'00"
T.H. LONGITUDE 80°05'00"
B.H. LONGITUDE

RECEIVED
Office of Oil & Gas

NOV 17 2022

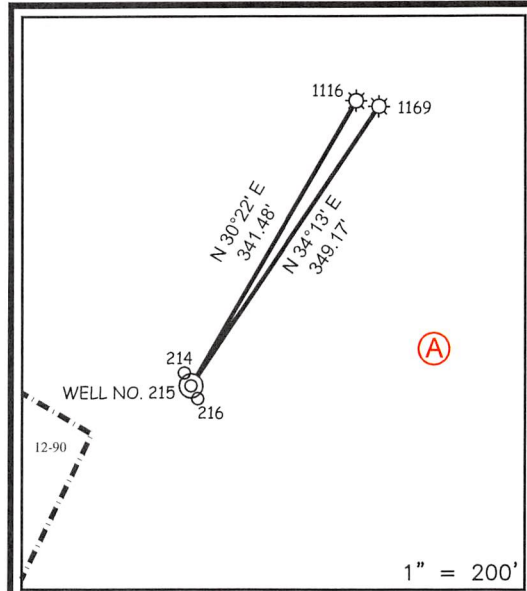
WV Department of
Environmental Protection

ARMSTRONG II- 215			
TAG	SURFACE OWNER	PARCEL	ACRES
A	ROBERT & JULIE ARMSTRONG	5-12-1	65.375
B	ROBERT L. JR. & PATRICIA LYNN CARPENTER	5-12-3	117.94
C	ARK LAND LLC	5-9-58	91.45
D	COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO.)	5-9-57.1	120
E	COALQUEST DEVELOPMENT LLC	5-9-57	118.00
F	ARK LAND LLC	5-8-18	73.50
G	ARK LAND LLC	5-9-1	74.00
H	STATE OF W.V. INDUSTRIAL SCHOOL FOR BOYS	5-5-15	913.69
I	MARK A. CURREY	5-4-15	108.46
J	STATE OF W.V. (NORTHWESTERN TURNPIKE)	N/A	N/A
K	MARK A. CURREY ET AL	3-16-38	18.50

PARCEL	ADJOINING SURFACE OWNER	ACRES
5-12-33.1	HARRY V & PATRICIA J JOHNSON	89.30
5-12-35.2	MARIE ELEANOR QUEEN	2
5-12-34.1	DONNA R GOODNOW	4.825
5-12-90	ROBERT L & JULIE A ARMSTRONG	5
5-13.71.2	JOSEPH & LACEY N FREY	8.35
5-13.71.3	ARK LAND LLC	27.52
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5-8-15	ARK LAND LLC	106.82
5-8-19	ARK LAND LLC	42.23
5-8-20	ARK LAND LLC	23
5-5-13	LARRY MCDANIEL (HEIRS) IN C/O MICHAEL E MCDANIEL	4.98
5-5-14	TIMOTHY R. & ROSS P. GERARD	15.63
3-16-36	JASON KNOTT'S	4.80
3-16-37	ARK LAND LLC	1.00
3-16-33	MARK A. CURREY, ET AL	35.00
3-16-39	NORA REYNOLDS, ET AL	1
3-16-40	JOHN WHITESCARVER	176.75
5-5-15.1	TAYLOR COUNTY FAIR ASSOCIATION	54.5
5-5-15.4	STATE OF WEST VIRGINIA (WV DEPT OF AGRICULTURE)	2.84
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5-9-4	COALQUEST DEVELOPMENT LLC	115.00
5-9-56	COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO.)	55.75
5-9-63.3	COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO.)	85.45
5-9-59	ARK LAND COMPANY	28.50
5-9-61	ARK LAND COMPANY	4
5-9-60	ARK LAND LLC	50.02

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'83 S.P.C.(FT) N. 288,680.62 E. 1,803,259.68
 NAD'83 GEO. LAT-(N) 39.291109 LONG-(W) 80.083837
 NAD'83 UTM (M) N. 4,349,482.13 E. 579,006.70
LANDING POINT
 NAD'83 S.P.C.(FT) N. 289,607.7 E. 1,803,996.4
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BOTTOM HOLE
 NAD'83 S.P.C.(FT) N. 303,477.6 E. 1,799,197.4
 NAD'83 GEO. LAT-(N) 39.331661 LONG-(W) 80.098538
 NAD'83 UTM (M) N. 4,353,969.8 E. 577,694.0

REFERENCES



NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS > 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
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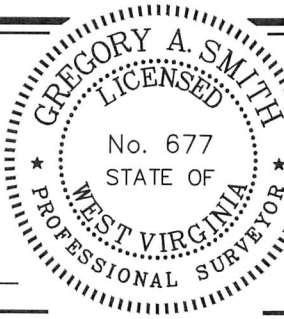


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 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
 slswv.com

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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677

Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

DATE JULY 14, 20 22

REVISED _____, 20 _____

OPERATORS WELL NO. 215

API WELL NO. 47 - 091 - 01364
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9111-Arsenal-SURV-Plat215ad-R00-220712-CPM.dwg

HORIZONTAL & VERTICAL CONTROL DETERMINED BY: DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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



WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1293.80' WATERSHED LONG RUN

DISTRICT COURTHOUSE COUNTY TAYLOR QUADRANGLE GRAFTON

SURFACE OWNER ROBERT L. & JULIE A. ARMSTRONG ACREAGE 65.375±

ROYALTY OWNER ROBERT L. & JULIE A. ARMSTRONG ET AL ACREAGE 65.375

PROPOSED WORK: LEASE NO. SEE WW-6A1

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH TMD 22,971.5 / TVD 7,789'

WELL OPERATOR ARSENAL RESOURCES
 ADDRESS 6031 WALLACE RD. EXT. SUITE 101 WEXFORD, PA 15090

DESIGNATED AGENT GARY SHORT
 ADDRESS 633 WEST MAIN STREET BRIDGEPORT, WV 26330

COUNTY NAME

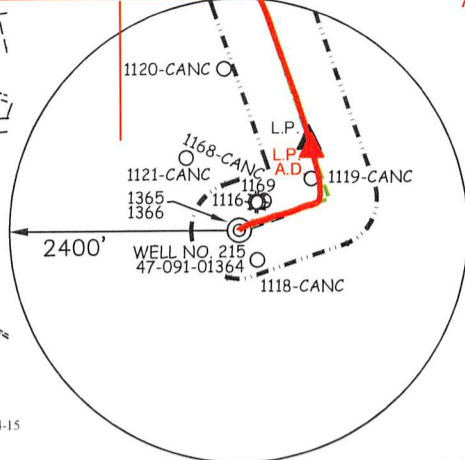
PERMIT

**ARMSTRONG II LEASE
WELL NO. 215
ARSENAL RESOURCES**

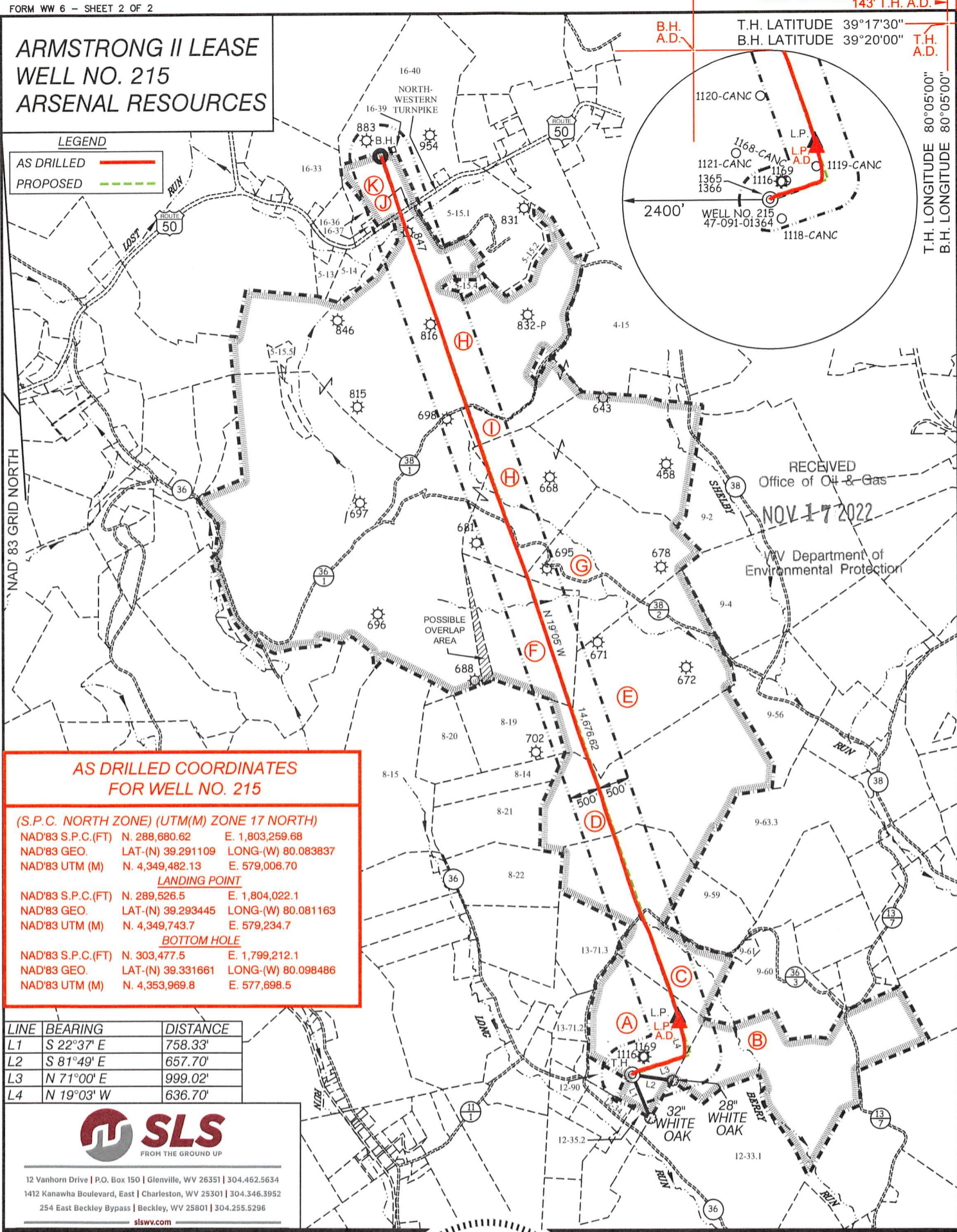
LEGEND

- AS DRILLED
- PROPOSED

4,286' B.H. A.D. 143' T.H. A.D.
T.H. LATITUDE 39°17'30"
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T.H. LONGITUDE 80°05'00"
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203' T.H. A.D.
610' B.H. A.D.



NAD'83 GRID NORTH



**AS DRILLED COORDINATES
FOR WELL NO. 215**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'83 S.P.C.(FT) N. 288,680.62 E. 1,803,259.68
 NAD'83 GEO. LAT-(N) 39.291109 LONG-(W) 80.083837
 NAD'83 UTM (M) N. 4,349,482.13 E. 579,006.70
LANDING POINT
 NAD'83 S.P.C.(FT) N. 289,526.5 E. 1,804,022.1
 NAD'83 GEO. LAT-(N) 39.293445 LONG-(W) 80.081163
 NAD'83 UTM (M) N. 4,349,743.7 E. 579,234.7
BOTTOM HOLE
 NAD'83 S.P.C.(FT) N. 303,477.5 E. 1,799,212.1
 NAD'83 GEO. LAT-(N) 39.331661 LONG-(W) 80.098486
 NAD'83 UTM (M) N. 4,353,969.8 E. 577,698.5

LINE	BEARING	DISTANCE
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L2	S 81°49' E	657.70'
L3	N 71°00' E	999.02'
L4	N 19°03' W	636.70'



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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

P.S. 677 *Gregory A. Smith*

- LEGEND**
- LEASE LINE
 - SURFACE LINE
 - WELL LATERAL
 - OFFSET LINE
 - TIE LINE
 - CREEK
 - ROAD
 - COUNTY ROUTE
 - PROPOSED WELL
 - EXISTING WELL
 - PERMITTED WELL
 - TAX MAP-PARCEL
 - SURFACE OWNER (SEE TABLE)
 - LEASE # (SEE WW-6A1)

SCALE 1" = 2000' 9111-Arsenal-SURV-Plat215ad-R00-220712-CPM.dwg
 FILE NO. _____
 DATE JULY 14, 2022
 REVISED _____, 20____
 OPERATORS WELL NO. 215
 API WELL NO. 47-091-01364
 STATE COUNTY PERMIT

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

WELL OPERATOR ARSENAL RESOURCES DESIGNATED AGENT GARY SHORT
 ADDRESS 6031 WALLACE RD. EXT. SUITE 101 ADDRESS 633 WEST MAIN STREET
 WEXFORD, PA 15090 BRIDGEPORT, WV 26330

COUNTY NAME
 PERMIT

03/31/2023

**ARMSTRONG II LEASE
WELL NO. 215
ARSENAL RESOURCES**

B.H. A.D.

T.H. LATITUDE 39°17'30"
B.H. LATITUDE 39°20'00"

T.H. A.D.

4,286' B.H. A.D.

143' T.H. A.D.

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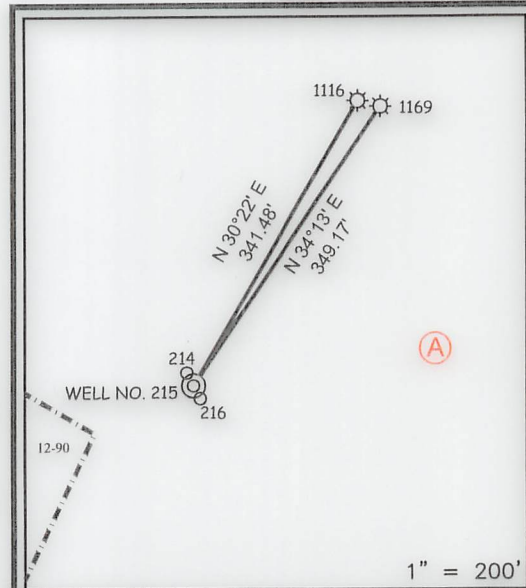
PARCEL	ADJOINING SURFACE OWNER	ACRES
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5-12-35.2	MARIE ELEANOR QUEEN	2
5-12-34.1	DONNA R GOODNOW	4.825
5-12-90	ROBERT L & JULIE A ARMSTRONG	5
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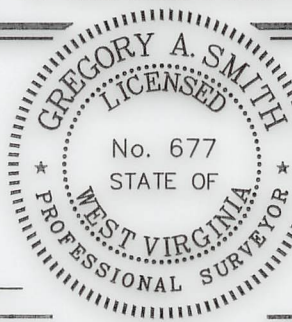
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P.S. Gregory A. Smith
 677



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

DATE JULY 14, 2022

REVISED _____, 20____

OPERATORS WELL NO. 215

API WELL NO. 47 — 091 — 01364
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9111-Arsenal-SURV-Plat215ad-R00-220712-CPM.dwg

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SURFACE OWNER ROBERT L. & JULIE A. ARMSTRONG ACREAGE 65.375±

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PROPOSED WORK: LEASE NO. SEE WW-6A1

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD

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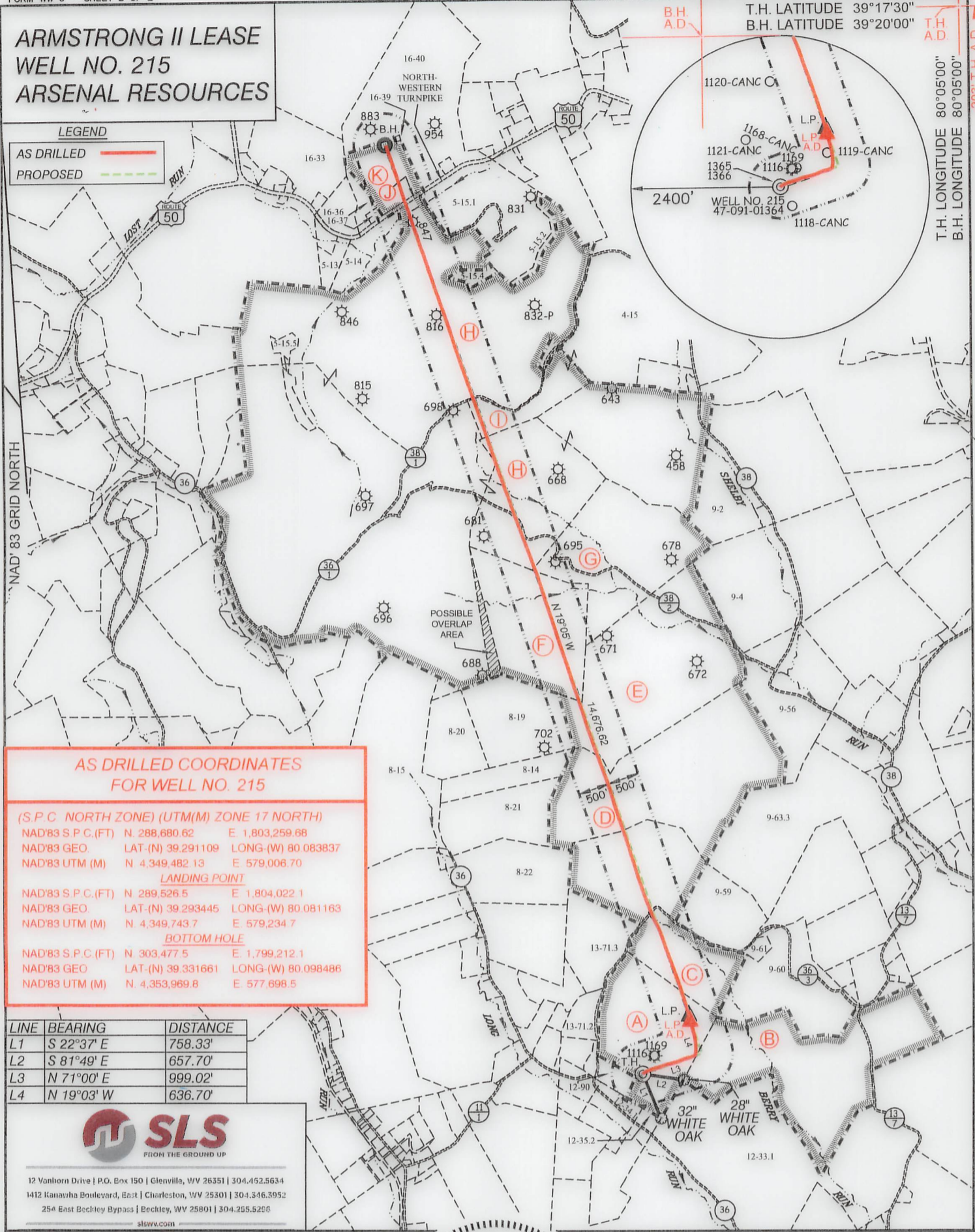
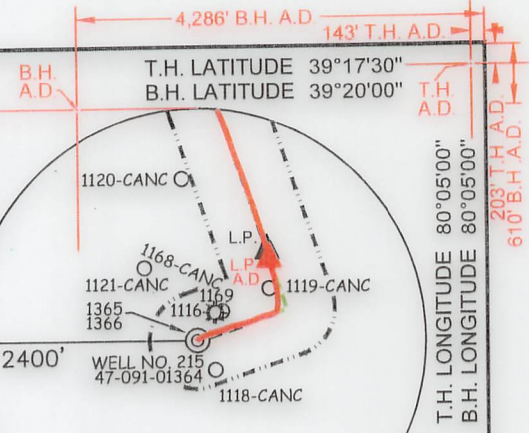
COUNTY NAME

PERMIT

ARMSTRONG II LEASE WELL NO. 215 ARSENAL RESOURCES

LEGEND

- AS DRILLED —
- PROPOSED - - -



**AS DRILLED COORDINATES
FOR WELL NO. 215**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'83 S.P.C.(FT)	N. 288,680.62	E. 1,803,259.68
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BOTTOM HOLE

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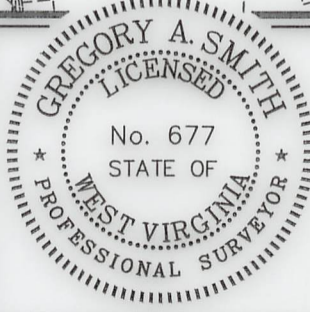
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

P.S. 677 *Gregory A. Smith*

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 - SURFACE OWNER (SEE TABLE)
 - LEASE # (SEE WW-6A1)

SCALE 1" = 2000' FILE NO. 9111-Arsenal-SURV-Plat215ad-R00-220712-CPM.dwg

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REVISED _____, 20__

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DESIGNATED AGENT GARY SHORT ADDRESS 633 WEST MAIN STREET BRIDGEPORT, WV 26330

COUNTY NAME _____ PERMIT _____

03/31/2023