

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

WV Department of  
Environmental Protection

API 47-091-01366 County Taylor District Court House  
Quad Grafton Pad Name Armstrong II Field/Pool Name \_\_\_\_\_  
Farm name Robert and Julie Armstong Well Number 216  
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 4,349,478.12 Easting 579,008.90  
Landing Point of Curve Northing 4,349,806.0 Easting 579,612.4  
Bottom Hole Northing 4,353,854.1 Easting 578,123.7

Elevation (ft) 1293.82' 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 03/07/2022 Date drilling commenced 04/15/2022 Date drilling ceased 05/11/2022  
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

**APPROVED**

Reviewed by:  
*Thomas Leopold*  
**03/31/2023**

WR-35  
Rev. 8/23/13

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API 47-091 - 01366

Farm name Robert and Julie Armstong

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Well number 216

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	WV Department of Environmental Protection 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"	980' GL	New	54.5	NA	Y
Coal	NA	NA	NA	NA	NA	NA	N
Intermediate 1	12 1/4"	9 5/8"	2,539' 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"	22,325' GL	New	20.0	NA	Y
Tubing	NA	NA	NA	NA	NA	NA	NA
Packer type and depth set		NA					

Comment Details Cement to surface on Conductor, Surface, Intermediate and Production cement to 2,155'

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	A	168	15.60	1.21	203	Surface	8+
Surface	A	870	15.60	1.2	1004	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	890/3090	13.2/14.5	1.53/1.16	1,361.7/3,584.4	2,155	8+
Tubing	NA	NA	NA	NA	NA	NA	NA

Drillers TD (ft) 22,325'(GL)      Loggers TD (ft) NA

Deepest formation penetrated Marcellus      Plug back to (ft) NA

Plug back procedure NA

Kick off depth (ft) 7,337'(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 - 01366 Farm name Robert and Julie Armstong Well number 216

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus Shale</u>	<u>7711-7826</u>	<u>TVD</u>	<u>8205-22302</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____

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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 hrs

OPEN FLOW Gas 14795 mcfpd Oil 0 bpd NGL 0 bpd Water 645 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 <sub>2</sub> S, ETC)
Sand/Silt*	0	250	0	250	Freshwater @ 30', 100', 150', 250'
Sand/Silt/Coal*	250	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	7429	4598	7782	Sandstone, Siltstone, Shale
Burket	7429	7453	7782	7809	Shale
Tully	7453	7512	7809	7877	Limestone
Mahantango	7512	7674	7877	8109	Shale
Marcellus	7674	7738	8109	8336	Shale
Lower Marcellus	7738	7771**	8336	22383	Shale
Onondaga	7771				**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

03/31/2023



# WR 35 FORM COMPLETIONS INFORMATION

## Well Header

Well Name Armstrong II 216	API/UWI 47-091-01366	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	Spud Date 4/26/2022	Rig Release Date 5/11/2022		
County Taylor	District Simpson	Division Development	Division Code	RECEIVED Office of Oil & Gas		
Lat/Long Datum	Latitude (°) 39° 10' 12" N	Longitude (°) 80° 30' 0" W	UTM Easting (m)	UTM Northing (m)		

## Jobs

Job Category Completion/Workover	Primary Job Type Initial Completion	Start Date 6/16/2022	End Date
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## Perforations

WV Department of Environmental Protection

Date	Top (ftKB)	Btm (ftKB)	Entered Shot Total	Zone
8/4/2022	8,205.0	8,367.0	40	Marcellus Shale, Original Hole
8/3/2022	8,405.0	8,567.0	40	Marcellus Shale, Original Hole
8/3/2022	8,605.0	8,767.0	40	Marcellus Shale, Original Hole
8/3/2022	8,805.0	8,967.0	40	Marcellus Shale, Original Hole
8/2/2022	9,005.0	9,167.0	40	Marcellus Shale, Original Hole
8/2/2022	9,205.0	9,367.0	40	Marcellus Shale, Original Hole
8/2/2022	9,405.0	9,567.0	40	Marcellus Shale, Original Hole
8/1/2022	9,605.0	9,769.0	40	Marcellus Shale, Original Hole
8/2/2022	9,805.0	9,967.0	40	Marcellus Shale, Original Hole
8/1/2022	10,005.0	10,167.0	40	Marcellus Shale, Original Hole
7/31/2022	10,205.0	10,367.0	40	Marcellus Shale, Original Hole
7/31/2022	10,405.0	10,567.0	40	Marcellus Shale, Original Hole
7/30/2022	10,605.0	10,767.0	40	Marcellus Shale, Original Hole
7/30/2022	10,805.0	10,967.0	40	Marcellus Shale, Original Hole
7/30/2022	11,005.0	11,167.0	40	Marcellus Shale, Original Hole
7/29/2022	11,205.0	11,367.0	40	Marcellus Shale, Original Hole
7/29/2022	11,405.0	11,567.0	40	Marcellus Shale, Original Hole
7/29/2022	11,605.0	11,767.0	40	Marcellus Shale, Original Hole
7/28/2022	11,808.0	11,967.0	40	Marcellus Shale, Original Hole
7/28/2022	12,005.0	12,167.0	40	Marcellus Shale, Original Hole
7/28/2022	12,205.0	12,367.0	40	Marcellus Shale, Original Hole
7/27/2022	12,405.0	12,567.0	40	Marcellus Shale, Original Hole
7/27/2022	12,605.0	12,767.0	40	Marcellus Shale, Original Hole
7/26/2022	12,805.0	12,967.0	40	Marcellus Shale, Original Hole
7/26/2022	13,005.0	13,167.0	40	Marcellus Shale, Original Hole
7/25/2022	13,205.0	13,367.0	40	Marcellus Shale, Original Hole
7/23/2022	13,405.0	13,567.0	40	Marcellus Shale, Original Hole
7/23/2022	13,605.0	13,767.0	40	Marcellus Shale, Original Hole
7/22/2022	13,805.0	13,967.0	40	Marcellus Shale, Original Hole
7/22/2022	14,005.0	14,167.0	40	Marcellus Shale, Original Hole
7/22/2022	14,205.0	14,367.0	40	Marcellus Shale, Original Hole
7/21/2022	14,405.0	14,567.0	40	Marcellus Shale, Original Hole
7/20/2022	14,605.0	14,767.0	40	Marcellus Shale, Original Hole
7/20/2022	14,805.0	14,967.0	40	Marcellus Shale, Original Hole
7/19/2022	15,005.0	15,167.0	40	Marcellus Shale, Original Hole
7/19/2022	15,205.0	15,367.0	40	Marcellus Shale, Original Hole
7/19/2022	15,405.0	15,567.0	40	Marcellus Shale, Original Hole
7/18/2022	15,605.0	15,767.0	40	Marcellus Shale, Original Hole
7/18/2022	15,805.0	15,967.0	40	Marcellus Shale, Original Hole
7/17/2022	16,005.0	16,167.0	40	Marcellus Shale, Original Hole
7/17/2022	16,205.0	16,367.0	40	Marcellus Shale, Original Hole
7/16/2022	16,405.0	16,567.0	40	Marcellus Shale, Original Hole
7/16/2022	16,605.0	16,767.0	40	Marcellus Shale, Original Hole
7/15/2022	16,805.0	16,967.0	32	Marcellus Shale, Original Hole
7/15/2022	17,005.0	17,167.0	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	17,205.0	17,367.0	40	Marcellus Shale, Original Hole
7/14/2022	17,405.0	17,567.0	40	Marcellus Shale, Original Hole
7/14/2022	17,605.0	17,767.0	40	Marcellus Shale, Original Hole
7/13/2022	17,805.0	17,967.0	40	Marcellus Shale, Original Hole
7/13/2022	18,005.0	18,167.0	40	Marcellus Shale, Original Hole
7/11/2022	18,205.0	18,367.0	40	Marcellus Shale, Original Hole
7/11/2022	18,405.0	18,567.0	40	Marcellus Shale, Original Hole
7/10/2022	18,605.0	18,767.0	40	Marcellus Shale, Original Hole
7/10/2022	18,805.0	18,967.0	40	Marcellus Shale, Original Hole
7/9/2022	19,005.0	19,167.0	40	Marcellus Shale, Original Hole
7/9/2022	19,205.0	19,367.0	40	Marcellus Shale, Original Hole
7/9/2022	19,405.0	19,567.0	40	Marcellus Shale, Original Hole
7/8/2022	19,605.0	19,767.0	40	Marcellus Shale, Original Hole
7/8/2022	19,805.0	19,967.0	40	Marcellus Shale, Original Hole
7/7/2022	20,005.0	20,167.0	40	Marcellus Shale, Original Hole
7/6/2022	20,205.0	20,367.0	40	Marcellus Shale, Original Hole
7/6/2022	20,405.0	20,567.0	40	Marcellus Shale, Original Hole
7/6/2022	20,605.0	20,767.0	40	Marcellus Shale, Original Hole
7/5/2022	20,803.0	20,967.0	40	Marcellus Shale, Original Hole
7/5/2022	21,005.0	21,167.0	40	Marcellus Shale, Original Hole
7/4/2022	21,208.0	21,367.0	40	Marcellus Shale, Original Hole
7/3/2022	21,405.0	21,567.0	40	Marcellus Shale, Original Hole
7/3/2022	21,605.0	21,765.0	40	Marcellus Shale, Original Hole
7/2/2022	21,805.0	21,967.0	40	Marcellus Shale, Original Hole
7/2/2022	22,005.0	22,167.0	40	Marcellus Shale, Original Hole
7/1/2022	22,205.0	22,302.0	4	Marcellus Shale, Original Hole

## Stimulations Summary

Start Date	Treat Rate Avg (bbl/min)	Treat Pressure Avg (psi)	Proppant Total (lb) 34,829,961.0	Volume Clean Total (bbl) 660,057.00	Frac Gradient Average (psi/ft) 1.25
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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	86.6	9,467.0	6,529.0	5,020.0		7,002.00
2	7/2/2022	85.3	9,036.0	5,922.0	5,020.0		9,168.00
3	7/3/2022	83.3	8,974.0	5,940.0	5,740.0		9,085.00
4	7/3/2022	87.5	9,050.0	6,033.0	5,720.0		9,512.00
5	7/4/2022	83.1	9,266.0	5,952.0	4,519.0		9,464.00
6	7/4/2022	85.1	9,041.0	5,891.0	5,300.0		9,011.00
7	7/5/2022	86.4	8,936.0	5,772.0	6,054.0		9,557.00
8	7/5/2022	84.8	9,043.0	4,785.0	5,192.0		9,464.00
9	7/6/2022	85.9	9,151.0	5,784.0	5,733.0		8,592.00
10	7/6/2022	83.7	9,012.0	6,763.0	6,168.0		9,332.00
11	7/6/2022	86.7	9,048.0	9,992.0	5,828.0		9,127.00
12	7/7/2022	86.5	8,993.0	6,287.0	5,867.0		10,261.00
13	7/8/2022	89	9,009.0	6,245.0	6,042.0		9,478.00
14	7/8/2022	87.2	8,932.0	10,133.0	6,010.0		9,168.00
15	7/9/2022	87.8	8,892.0	6,645.0	4,738.0		9,098.00
16	7/9/2022	85.1	8,957.0	5,460.0	5,119.0		9,309.00
17	7/10/2022	85.1	8,929.0	5,669.0	6,571.0		9,206.00
18	7/10/2022	81.4	8,993.0	9,959.0	4,775.0		9,054.00
19	7/11/2022	87.6	8,868.0	5,312.0	4,894.0		9,292.00
20	7/11/2022	81	9,229.0	4,693.0	4,485.0		9,460.00
21	7/11/2022	80.1	9,660.0	8,110.0	5,795.0		10,685.00
22	7/13/2022	78.1	9,180.0	10,272.0	5,859.0		9,513.00
23	7/13/2022	86	9,602.0	6,777.0	4,725.0		10,221.00

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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)
24	7/14/2022	88.4	9,494.0	7,199.0	6,258.0		9,439.00
25	7/15/2022	85.4	9,512.0	5,546.0	5,831.0		9,471.00
26	7/15/2022	88.5	9,120.0	7,752.0	4,685.0		9,408.00
27	7/15/2022	87.9	9,149.0	6,765.0	4,776.0		9,317.00
28	7/16/2022	87.9	9,427.0	6,765.0	4,692.0		9,427.00
29	7/16/2022	89	9,094.0	7,656.0	4,737.0		9,362.00
30	7/17/2022	89.1	8,925.0	7,088.0	4,925.0		9,379.00
31	7/17/2022	89.2	8,951.0	7,574.0	4,858.0		9,376.00
32	7/18/2022	88.1	9,156.0	7,617.0	4,947.0		9,444.00
33	7/18/2022	87.5	8,938.0	8,023.0	5,123.0		9,341.00
34	7/18/2022	88.3	9,044.0	7,663.0	4,939.0		9,568.00
35	7/19/2022	87.9	8,629.0	7,731.0	4,838.0		9,405.00
36	7/19/2022	84.4	9,247.0	6,568.0	4,771.0		9,426.00
37	7/20/2022	84.7	8,961.0	7,829.0	5,583.0		9,343.00
38	7/20/2022	84.5	8,574.0	8,742.0	4,847.0		9,433.00
39	7/21/2022	86.3	8,591.0	4,888.0	5,569.0		9,460.00
40	7/21/2022	87.2	8,559.0	4,308.0	5,210.0		9,430.00
41	7/22/2022	84.9	8,430.0	6,538.0	6,057.0	RECEIVED Office of Oil & Gas	9,340.00
42	7/22/2022	85.1	8,302.0	10,237.0	6,110.0	NOV 17 2022	9,373.00
43	7/23/2022	84.3	8,608.0	7,312.0	4,699.0		9,437.00
44	7/23/2022	85.2	7,991.0	6,804.0	4,947.0		9,351.00
45	7/23/2022	82.9	8,960.0	6,837.0	4,663.0	WV Department of Environmental Protection	9,366.00
46	7/26/2022	87.2	8,222.0	7,042.0	4,972.0		9,289.00
47	7/26/2022	84.7	8,476.0	6,432.0	5,928.0		9,323.00
48	7/27/2022	84.7	8,257.0	6,803.0	6,425.0		9,372.00
49	7/27/2022	85	8,064.0	6,692.0	5,768.0		9,246.00
50	7/27/2022	84	7,968.0	7,226.0	4,889.0		9,248.00
51	7/28/2022	86.2	8,273.0	7,239.0	5,220.0		9,387.00
52	7/28/2022	85.3	8,461.0	7,213.0	5,750.0		9,248.00
53	7/29/2022	84.7	8,188.0	7,408.0	5,403.0		9,215.00
54	7/29/2022	84.5	8,040.0	7,245.0	4,822.0		9,201.00
55	7/29/2022	85.4	7,863.0	7,057.0	4,934.0		9,381.00
56	7/30/2022	85.3	7,896.0	7,203.0	5,756.0		9,279.00
57	7/30/2022	85.1	8,018.0	7,503.0	6,275.0		9,281.00
58	7/30/2022	85.2	8,231.0	7,493.0	5,127.0		8,212.00
59	7/31/2022	85.2	8,197.0	8,056.0	5,536.0		9,209.00
60	7/31/2022	85.1	8,231.0	8,425.0	6,077.0		9,263.00
61	7/31/2022	83.5	8,478.0	7,310.0	6,186.0		9,184.00
62	8/1/2022	84.5	8,423.0	7,821.0	5,580.0		9,354.00
63	8/1/2022	83.7	8,410.0	7,685.0	5,927.0		9,120.00
64	8/2/2022	83	8,794.0	8,089.0	6,517.0		9,151.00
65	8/2/2022	85	8,705.0	7,101.0	6,333.0		9,481.00
66	8/2/2022	83.7	8,532.0	6,770.0	5,930.0		9,209.00
67	8/3/2022	82.5	8,147.0	6,668.0	5,357.0		9,120.00
68	8/3/2022	82.2	7,657.0	6,655.0	5,153.0		9,055.00
69	8/3/2022	83	7,838.0	6,480.0	6,186.0		9,125.00
70	8/4/2022	80.7	7,981.0	7,886.0	5,479.0		9,071.00
71	8/4/2022	80.2	8,037.0	8,519.0	5,563.0		9,078.00

03/31/2023





Claimant Company	Claimant First Name	Claimant Last Name	Claimant Email	Claimant Phone (nnn-xxx-xxxx)
Moon	Bryan	Schulhoff	bryan@moonchemical.com	405-787-4110
Chemstream	Eric	Fry	eric.fry@chemstream.com	814-706-1426
Chemstream	Eric	Fry	eric.fry@chemstream.com	814-706-1426

RECEIVED  
Office of Oil & Gas  
NOV 17 2022  
WV Department of  
Environmental Protection

**ARMSTRONG II LEASE  
WELL NO. 216  
ARSENAL RESOURCES**

T.H. LATITUDE 39°17'30"  
B.H. LATITUDE 39°20'00"  
B.H. A.D.  
136' T.H. A.D.  
2,895' B.H. A.D.

T.H. LONGITUDE 80°05'00"  
B.H. LONGITUDE 80°05'00"  
216' T.H. A.D.  
1,008' B.H. A.D.

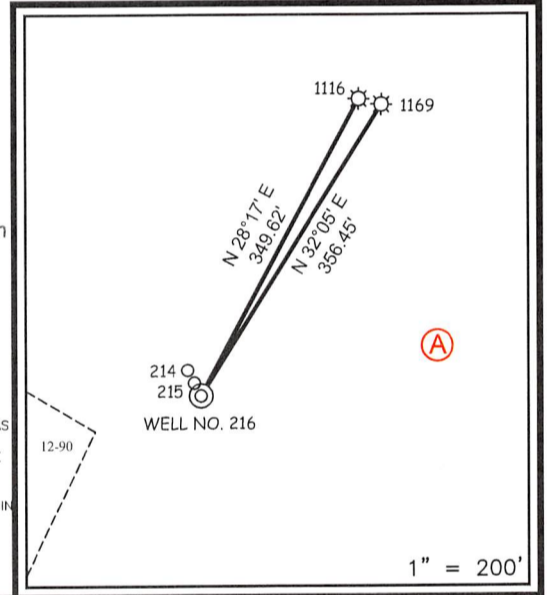
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)  
NAD'83 S.P.C.(FT) N. 288,667.35 E. 1,803,266.67  
NAD'83 GEO. LAT-(N) 39.294703 LONG-(W) 80.083812  
NAD'83 UTM (M) N. 4,349,478.12 E. 579,008.90  
**LANDING POINT**  
NAD'83 S.P.C.(FT) N. 289,999.7 E. 1,805,130.9  
NAD'83 GEO. LAT-(N) 39.294764 LONG-(W) 80.077256  
NAD'83 UTM (M) N. 4,349,893.5 E. 579,570.1  
**BOTTOM HOLE**  
NAD'83 S.P.C.(FT) N. 303,076.7 E. 1,800,605.9  
NAD'83 GEO. LAT-(N) 39.330586 LONG-(W) 80.093550  
NAD'83 UTM (M) N. 4,353,854.8 E. 578,125.2

PARCEL	ADJOINING SURFACE OWNER	ACRES
3-16-61.1	BYRON D. & ELAINE D. GILBERT	6.55
3-16-61.2	NANCY B. BAKER (LF), ET AL	16.29
3-16-62	ERNEST C. HAWKINBERRY (LIFE), ET AL	55.60
3-20-3.2	REBECCA J. BARTLETT	8.40
3-20-4	RALPH & CRYSTAL L. MORRIS	79.65
5-4-15.1	CHAD L. CURREY	7.38
5-4-15.3	JODI DARLENE & WILLIE JOE HAUGHT	1.03
5-4-17	JERRY PAUL ROSS, JR	27.00
5-4-51	GEORGE R. WILLIAMS	168.22
5-4-52	ARK LAND LLC	69.75
5-4-52.1	ARK LAND LLC	2.25
5-5-13	LARRY MCDANIEL (HEIRS)	4.98
5-5-14	TIMOTHY R. & ROSS P. GERARD	15.63
5-5-15.4	STATE OF WEST VIRGINIA (WV DEPT OF AGRICULTRE)	2.84
5-5-15.5	STATE OF WEST VIRGINIA (WV DEPT OF AGRICULTRE)	6.62
5-5-16	LARRY L. REED, ET AL	3.47
5-5-17.1	MATTHEW ALLEN & NORMA JEAN CHENOWETH	21.31
5-8-14	ARK LAND LLC	17.00
5-8-15	ARK LAND LLC	106.82
5-8-17	ARK LAND LLC	1.735
5-8-18	ARK LAND LLC	73.5
5-8-19	ARK LAND LLC	42.23
5-8-20	ARK LAND LLC	23.00
5-8-21	ARK LAND LLC	66.95
5-8-22	HAROLD THOMAS & MARY LOU ADKINS	34.77
5-8-30	RODNEY E. & LINDA S. MCQUAIN	62.54
5-9-2	ARK LAND LLC	33.1
5-9-4	COALQUEST DEVELOPMENT LLC	115.00
5-9-56	COALQUEST DEVELOPMENT LLC	55.75
5-9-62	ROBERT B. MOORE JR. & MARY WOLFE	54.00
5-9-63	COALQUEST DEVELOPMENT LLC	20.00
5-9-66	MARY ELIZABETH MOORE	16.15
5-9-66.1	ROBERT B. MOORE JR. & MARY WOLFE	0.72
5-9-66.3	COALQUEST DEVELOPMENT LLC	2.50
5-9-70	ROBERT F. COLEBANK	2.15
5-9-70.3	ROBERT F. COLEBANK	3.10
5-9-70.4	LOREN L. & DELLA A. KNOTTS	7.52
5-9-70.6	GEORGIA L. POLING	2.19
5-9-71	ARK LAND LLC	54.00
5-9-84	ROBERT F. COLEBANK	24.00
5-12-5	ARK LAND LLC	1.00
5-12-7	RODNEY & DEBORAH A. ANDERSON	138.13
5-12-31	MELISSA HAYS	42.87
5-12-32	ARK LAND LLC	1.25
5-12-33.1	HARRY V. & PATRICIA J. JOHNSON	89.30
5-12-34.1	BOW SMITH	4.825
5-12-35.2	MARIE ELEANORE & KEITH QUEEN (LIFE), ET AL	2.00
5-12-89	LONG RUN FELLOWSHIP CHURCH	0.36
5-12-90	ROBERT L. & JULIE A. ARMSTRONG	5.00
5-13-16.1	ALLISON SIMMONS	1.59
5-13-16.2	TRS OF LONG RUN FREE WILL BAPTIST CHURCH	6372.98 SQ FT
5-13-65	LONG RUN FELLOWSHIP CHURCH	1.341
5-13-71.1	ALLISON SIMMONS	5.00
5-13-71.2	JOSEPH & LACEY N. FREY	8.35

TAG	SURFACE OWNER	PARCEL	ACRES
A	ROBERT L. & JULIE A. ARMSTRONG	5-12-1	65.375
B	ROBERT L. JR. & PATRICIA LYNN CARPENTER	5-12-3	117.94
C	ARK LAND LLC	5-9-60	50.02
D	ARK LAND LLC	5-9-61	4.00
E	ARK LAND LLC	5-9-58	91.45
F	ARK LAND LLC	5-9-59	28.50
G	COALQUEST DEVELOPMENT LLC	5-9-63.3	85.45
H	COALQUEST DEVELOPMENT LLC	5-9-57.1	120.00
I	COALQUEST DEVELOPMENT LLC	5-9-57	118.00
J	ARK LAND LLC	5-9-1	74.00
K	STATE OF W.V. INDUSTRIAL SCHOOL FOR BOYS	5-5-15	913.69
L	MARK A. CURREY	5-4-15	108.46
M	TAYLOR COUNTY FAIR ASSOCIATION	5-5-15.2	3.20
N	TAYLOR COUNTY FAIR ASSOCIATION	5-5-15.1	54.5

**REFERENCES**

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NOV 17 2022  
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**NOTES ON SURVEY**

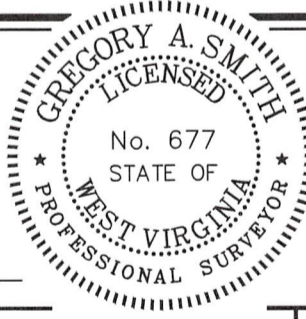
- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS > 2500 \$Q. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
- THERE IS ONE (1) HOUSE TRAILER AND ONE (1) HUNTING CABIN WITHIN 625 FEET. NEITHER STRUCTURE APPEAR TO BE OCCUPIED AND THE HOUSE TRAILER APPEARS TO BE DILAPIDATED.
- AS-DRILLED DATA PROVIDED BY ARSENAL RESOURCES
- PLAT UPDATED TO SHOW AS-DRILLED PATH.



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1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952  
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296  
slsvv.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. 216  
API WELL NO. 47 - 091 - 01366  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9111-Arsenal-SURV-Plat216ad-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 X INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_ IF "GAS" PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X  
LOCATION :  
ELEVATION 1293.82' 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 X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE X 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 22,383 / TVD 7,789'

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

COUNTY NAME  
PERMIT

**ARMSTRONG II LEASE  
WELL NO. 216  
ARSENAL RESOURCES**

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

B.H. A.D.

136' T.H. A.D.  
2,895' B.H. A.D.

T.H. LONGITUDE 80°05'00"  
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216' T.H. A.D.  
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(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'83 S.P.C.(FT)	N. 288,667.35	E. 1,803,266.67
NAD'83 GEO.	LAT-(N) 39.291073	LONG-(W) 80.083812
NAD'83 UTM (M)	N. 4,349,478.12	E. 579,008.90

**LANDING POINT**

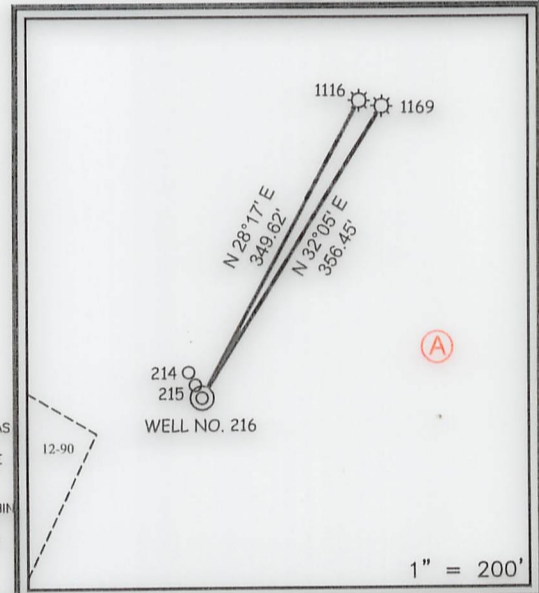
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**BOTTOM HOLE**

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L	MARK A. CURREY	5-4-15	108.46
M	TAYLOR COUNTY FAIR ASSOCIATION	5-5-15.2	3.20
N	TAYLOR COUNTY FAIR ASSOCIATION	5-5-15.1	54.5

**REFERENCES**



**NOTES ON SURVEY**

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- WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
- THERE IS ONE (1) HOUSE TRAILER AND ONE (1) HUNTING CABIN WITHIN WITHIN 625 FEET. NEITHER STRUCTURE APPEAR TO BE OCCUPIED AND THE HOUSE TRAILER APPEARS TO BE DILAPIDATED.
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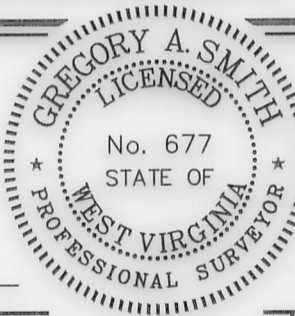


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P.S.  
677

*Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
DATE JULY 14, 20 22  
REVISED \_\_\_\_\_, 20 \_\_\_\_\_  
OPERATORS WELL NO. 216  
API WELL NO. 47 - 091 - 01366  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9111-Arsenal-SURV-Plat216ad-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 X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_ IF "GAS" PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X

LOCATION :  
ELEVATION 1293.82' 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 63/31/2023  
PROPOSED WORK :  
LEASE NO. SEE WW-6A1

DRILL X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE X 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 22,383 / TVD 7,789'

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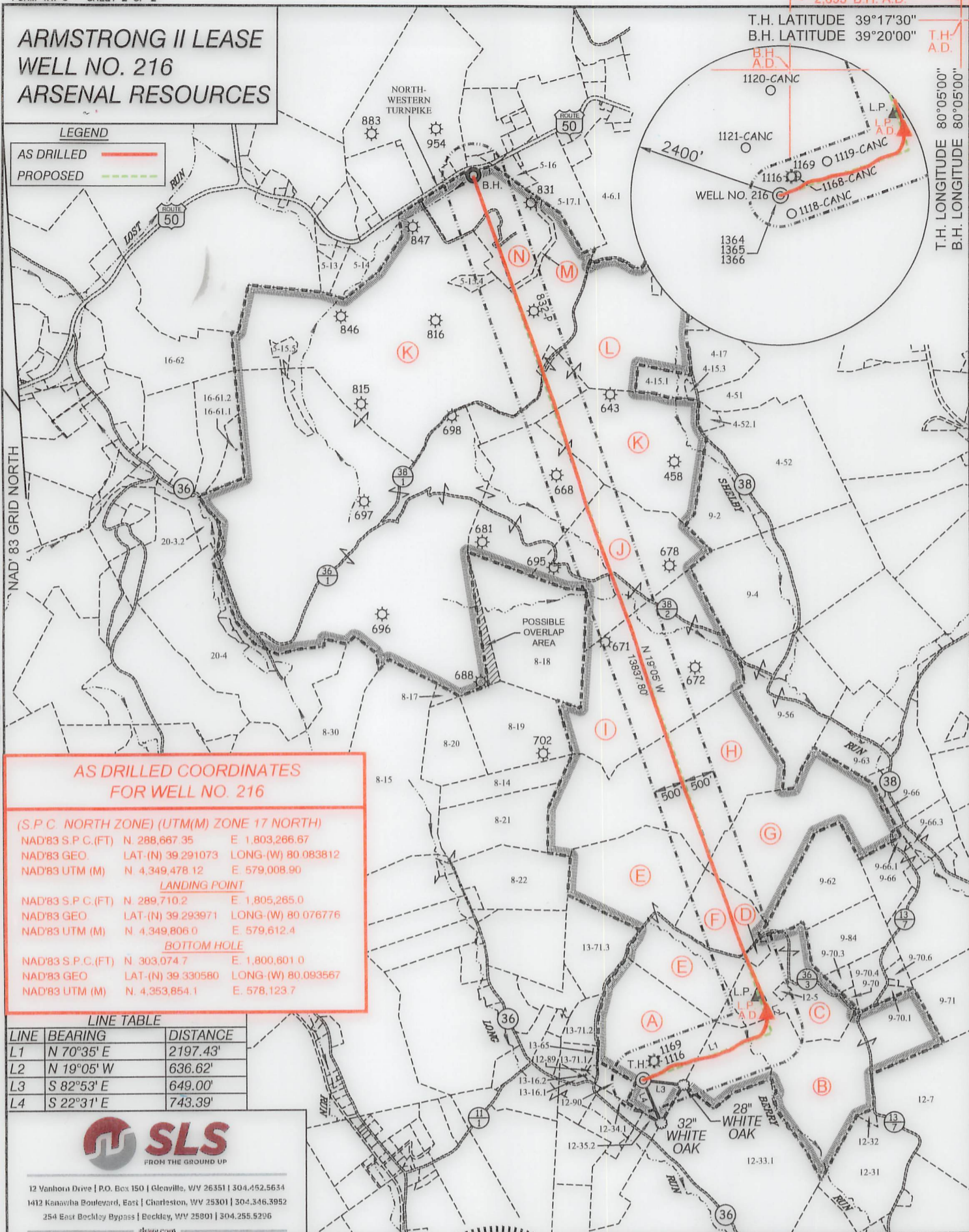
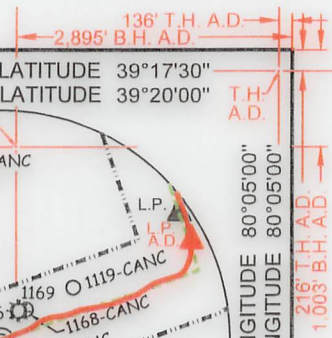
COUNTY NAME  
PERMIT

**ARMSTRONG II LEASE  
WELL NO. 216  
ARSENAL RESOURCES**

**LEGEND**

- AS DRILLED
- PROPOSED

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



**AS DRILLED COORDINATES  
FOR WELL NO. 216**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)  
 NAD'83 S.P.C.(FT) N. 288,667.35 E. 1,803,266.67  
 NAD'83 GEO. LAT.(N) 39.291073 LONG.(W) 80.083812  
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**LANDING POINT**  
 NAD'83 S.P.C.(FT) N. 289,710.2 E. 1,805,265.0  
 NAD'83 GEO. LAT.(N) 39.293971 LONG.(W) 80.076776  
 NAD'83 UTM (M) N. 4,349,806.0 E. 579,612.4  
**BOTTOM HOLE**  
 NAD'83 S.P.C.(FT) N. 303,074.7 E. 1,800,601.0  
 NAD'83 GEO. LAT.(N) 39.330580 LONG.(W) 80.093567  
 NAD'83 UTM (M) N. 4,353,854.1 E. 578,123.7

LINE	BEARING	DISTANCE
L1	N 70°35' E	2197.43'
L2	N 19°05' W	636.62'
L3	S 82°53' E	649.00'
L4	S 22°31' E	743.39'



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 NAD'83 GEO. LAT.(N) 39.330586 LONG.(W) 80.093550  
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

P.S. *Gregory A. Smith*  
 677

**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' FILE NO. 9111-Arsenal-SURV-Plat216ad-R00-220712-CPM.dwg  
 DATE JULY 14, 2022  
 REVISED \_\_\_\_\_, 20\_\_\_\_  
 OPERATORS WELL NO. 216  
 API WELL NO. 47-091-01366  
 STATE COUNTY PERMIT

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

COUNTY NAME \_\_\_\_\_  
 PERMIT \_\_\_\_\_

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

**03/31/2023**