



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

Monday, November 29, 2021
WELL WORK PERMIT
Horizontal 6A / New Drill

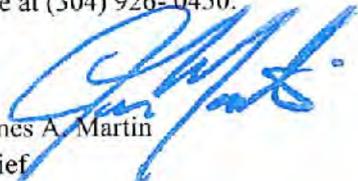
ARSENAL RESOURCES LLC
6031 WALLACE RD. EXTENSION
WEXFORD, PA 15090

Re: Permit approval for 215
47-091-01364-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless 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: 215
Farm Name: ROBERT L & JULIA A ARMSTRONG
U.S. WELL NUMBER: 47-091-01364-00-00
Horizontal 6A New Drill
Date Issued: 11/29/2021

Promoting a healthy environment.

12/03/2021

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

API Number: _____

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

12/03/2021

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

1) Well Operator: Arsenal Resources 494519412 Taylor Court House Grafton
Operator ID County District Quadrangle

2) Operator's Well Number: Armstrong II 215 Well Pad Name: Armstrong II

3) Farm Name/Surface Owner: Robert and Julie Armstong Public Road Access: CR13, CR 36 (Long Run Road) CR36/3

4) Elevation, current ground: 1288 Elevation, proposed post-construction: 1293'

5) Well Type (a) Gas Oil _____ Underground Storage _____
Other _____
(b) If Gas Shallow Deep _____
Horizontal

6) Existing Pad: Yes or No No, Adjacent to existing pad

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation - Marcellus Shale, Top = 7,682ft, Bottom-7,778ft, Anticipated Thickness = 96ft, Associated Pressure 0.5psi/ft

8) Proposed Total Vertical Depth: 7,768 ft

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 21,711.5 ft

11) Proposed Horizontal Leg Length: 13,524.4 ft

12) Approximate Fresh Water Strata Depths: 30', 100', 150', 250', 850'

13) Method to Determine Fresh Water Depths: Offset wells reported water depths (091-01116, 091-00912, 091-01122, 091-01123, 091-01228, 091-00803)

14) Approximate Saltwater Depths: 2040'

15) Approximate Coal Seam Depths: Pittsburgh 48', Bakerstown-477.5', Brush Creek 523', Upper Freeport-693, Lower Freeport-748', Upper Kittanning-813', Middle Kittanning-868', Lower Kittanning-898',

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 None Known

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

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft./CTS)</u>
Conductor	24	New		94	80	80	CTS
Fresh Water	13.375	New	J-55	54.50	950	950 ✓	CTS
Coal							
Intermediate	9.625	New	J-55	40	2,500	2,500	CTS
Production	5.5	New	P-110	20	21,711.5	21,711.5 ✓	TOC@2,250
Tubing							
Liners							

Bryan Ham
10-5-21

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	24	36			0	Class A 3%CaCl2	1.2
Fresh Water	13.375	17.5	0.38	2,730	900	Class A 3%CaCl2	1.2
Coal							
Intermediate	9.625	12.25	0.395	3,950	1,500	Class A 3%CaCl2	1.29
Production	5.5	8.5-8.75	0.361	15,920	11,500 ✓	Class A / 50-60 Poz	1.29/1.34
Tubing					5,000		
Liners					NA		

PACKERS

Kind:				
Sizes:				
Depths Set:				

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.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 7.43

22) Area to be disturbed for well pad only, less access road (acres): 4.96

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 2,600'; there will be no centralizers from 2,600 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 cement and no greater than 3% CaCl (calcium chloride). The 9 5/8" casing will be cemented to surface with Class A cement, & no greater than 3% calcium chloride. The 5 1/2" production string will be cemented back to 2,350' (+/- 150' above the casing shoe for the 9 5/8") with Class A and 50/50 Poz cement retarded (to extend pumpability) cellophane flaked for fluid loss, Bentonite gel as an extender (increased pumpability and fluid loss), a defoaming agent to decrease cement foaming during mixing to insure the cement is of proper weight to placement and possibly gypsum gas blocking additive to aid in blocking/gas migration (in combination with other additive mentioned here, helps cement achieve a "right angle" set) during the plastic phase of the cement set-up.

25) Proposed borehole conditioning procedures:

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

*Note: Attach additional sheets as needed.

CEMENT ADDITIVES		
	Name	Purpose
Additive #1:	Bentonite	Helping fluid loss, reducing free water
Additive #2:	Calcium Chloride	Accelerator for low temp application
Additive #3:	Celloflake	Loss circulation additive
Additive #4:	Gypsum	Used for thixotropic properties
Additive #5:	Lignosulfonate	Low temp cement retarder
Additive #6:	Naphthalene Based Dispersant	Used to improve rheological properties of cement
Additive #7:	Cellulose	Help with fluid loss

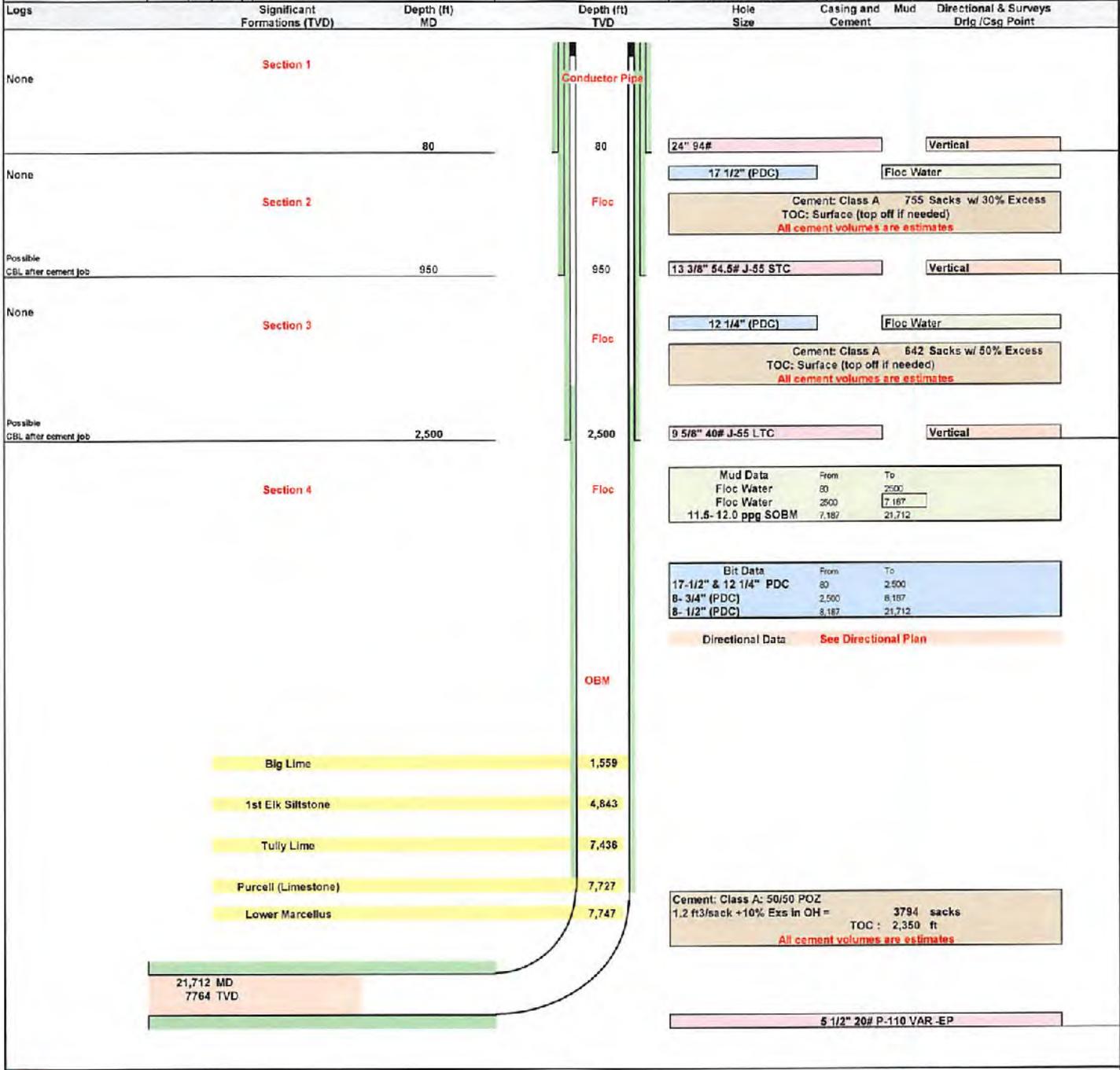
4709101364



Arsenal Resources
 Armstrong II 215
 Casing Design
 Directional Plan # 1 KLX

Other Names:	N/A
Surface Location:	TBD
Bottom Hole Location:	TBD
Total Depth:	21,712 MD (ft) 7,764 TVD (ft)

County:	Taylor	
State:	West Virginia	
AFE #:	XX	API #: XX
RKB:	25	
Ground Level:	1,293	



Revision 1
 Note: Not drawn to scale
 Cement Outside Casing Seal Assembly in Annulus
 Date Last Revised: 4-Sep-21
 Ross Schweitzer

12/03/2021

47_Armstrong II 215 Casing Design_2021_12/03/2021

WW-9
(4/16)

API Number 47 - 091 - 01364
Operator's Well No. Armstrong II 215

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Arsenal Resources OP Code 494519412

Watershed (HUC 10) Tygart Valley Quadrangle Grafton

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number Various)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: Yes, the closed loop system will contain all of the drilling medium and drill cuttings on location and then be taken to a landfill.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Vertical: Freshwater, Horizontal: Oil based mud.

-If oil based, what type? Synthetic, petroleum, etc. Synthetic

Additives to be used in drilling medium? Bentonite, Soap & Polymer Sticks, Soda Ash, Sodium Bicarbonate, Defoamer, Base Oil, Emulsifiers, Lime, Barite

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? Meadowfill Landfill / Waste Management, Apex Landfill, and Wesmoreland Sanitary Landfill

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]

Company Official (Typed Name) Ross Schweitzer

Company Official Title Sr. Director of Drilling, Construction and Permitting

Subscribed and sworn before me this 7th day of October, 2021

Annmarie O'Connor

My commission expires 3/17/2022

Notary Public
 Commonwealth of Pennsylvania - Notary Seal
 Annmarie O'Connor, Notary Public
 Allegheny County
 My commission expires March 17, 2022
 Commission number 131032021
 Member, Pennsylvania Association of Notaries

Arsenal Resources

Proposed Revegetation Treatment: Acres Disturbed 7.46 Prevegetation pH 6.8 Average

Lime 2.67 Tons/acre or to correct to pH 6.4

Fertilizer type 10-20-20

Fertilizer amount 100 lbs/acre

Mulch 2-3 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchard Grass	129	Orchard Grass	129
Rye	93	Rye	93
Clover	24	Clover	24
Timothy	45	Timothy	45

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bryan Hume

Comments: Re-seed and mulch all disturbed areas as soon as reasonably possible per regulation. Upgrade erosion and sediment control measures where needed per the West Virginia Erosion and Sediment Control Field Manual.

Title: Inspector Date: 10-5-21

Field Reviewed? () Yes () No



Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near Arsenal Resources hydraulic fracturing in Taylor County, WV prior to hydraulic fracturing at Armstrong II and Well Number 215.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7,750' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Benson formations (approximately 5,000' TVD).

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

1. Communications with Conventional Operators.

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

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

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

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

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



2. Reporting

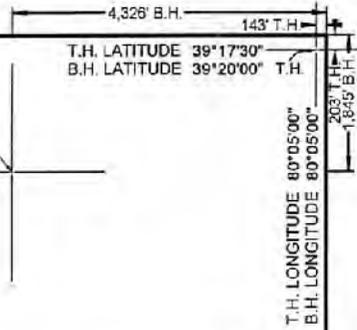
Arsenal Resources will provide information relating to the hydraulic fracturing schedule, communication with conventional operators, and ongoing monitoring of the work upon request of OOG or immediately after any event of any noted abnormalities.

Area of Review Report - **Armstrong II** Pad, **215** Lateral, **Taylor** County, WV

Well Name	API Number	Operator Name / Address	Well Type	Latitude	Longitude	Total Depth	Perforated Formation(s)	Producing Zones not Perforated
Armstrong 1	091-01116	Arsenal Resources LLC	Existing	39.291926	-80.08322	7800	Marcellus	NA
Armstrong 1HM	091-01169	Arsenal Resources LLC	Existing	39.291898	-80.083136	7790	Marcellus	NA
Tygart East Co 8	091-00702	Diversified Resources Inc	Existing	39.305292	-80.089482	4710	Benson	NA
St Board of Control 1	091-00681	Braxton Oil & Gas Corp.	Existing	39.314573	-80.092843	1953	Benson	NA
St Board of Control 2	091-00698	Greylock Opco LLC	Existing	39.221791	-80.207282	2439	Benson	NA
St Comm of Public Inst 2	091-00816	Diversified Resources Inc	Existing	39.324143	-80.095458	4745	Benson	NA
St Comm of Public Inst 4	091-00847	Diversified Resources Inc	Existing	39.328349	-80.097139	4723	Benson	NA

Attachment "A1"

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



ARMSTRONG II- 215			
TAG	SURFACE OWNER	PARCEL	ACRES
A	ROBERT & JULIE ARMSTRONG	5-12-1	65.375
B	ARK LAND LLC	5-9-58	91.45
C	ARK LAND COMPANY	5-12-71.3	27.52
D	COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO.)	5-9-57.1	120
E	ARK LAND COMPANY	5-8-14	17
F	ARK LAND LLC	5-8-19	42.23
G	ARK LAND LLC	5-8-18	73.50
H	STATE OF W. V. INDUSTRIAL SCHOOL FOR BOYS	5-5-15	913.69
I	TIMOTHY R GERARD ET AL.	5-5-14	15.63

(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. 578006.70

LANDING POINT
 NAD'83 S.P.C.(FT) N. 289,459.5 E. 1,803,580.6
 NAD'83 GEO. LAT-(N) 39.293253 LONG-(W) 80.082722
 NAD'83 UTM (M) N. 4,349,721.0 E. 579,100.5

BOTTOM HOLE
 NAD'83 S.P.C.(FT) N. 302,242.4 E. 1,799,164.4
 NAD'83 GEO. LAT-(N) 39.328269 LONG-(W) 80.086626
 NAD'83 UTM (M) N. 4,353,593.3 E. 577,890.2

ADJOINING SURFACE OWNER	PARCEL	ACRES
ROBERT L CARPENTER JR ET AL.	5-12-3	117.94
HARRY V & PATRICIA J JOHNSON	5-12-33.1	89.30
MARIE ELEANOR QUEEN	5-12-35.2	2
DONNA R GOODNOW	5-12-34.1	4.825
ROBERT L & JULIE A ARMSTRONG	5-12-90	5
JOSEPH & LACEY N FREY	5-13-71.2	8.35
TRINA F RAGER ET AL.	5-13-71	22.25
TRINA F RAGER ET AL.	5-8-24	35.56
HAROLD THOMAS & MARY LOU ADKINS	5-8-22	34.77
DAYTON W & RUTH A GREEN C/O ARK LAND LLC	5-8-21	66.95
ARK LAND LLC	5-8-15	106.82
ARK LAND LLC	5-8-20	23
LARRY MCDANIEL (HEIRS) IN C/O MICHAEL E MCDANIEL	5-5-13	4.98
TAYLOR COUNTY FAIR ASSOCIATION	5-5-15.1	54.5
STATE OF WEST VIRGINIA (WV DEPT OF AGRICULTURE)	5-5-15.4	2.84
TAYLOR COUNTY FAIR ASSOCIATION	5-5-15.2	3.2
MARK A CURREY	5-4-15	108.46
ARK LAND LLC	5-9-1	74
COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO)	5-9-57	118
COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO.)	5-9-56	55.75
COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO)	5-9-63.3	85.45
ARK LAND COMPANY	5-9-59	28.50
ARK LAND COMPANY	5-9-61	4
ARK LAND LLC	5-9-60	50.02

REFERENCES



NOTES ON SURVEY

1. 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.
2. WELL SPOT CIRCLE & TOP MARK SCALE ARE 1"=2000'
3. 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.



17 Northern Drive | P.O. Box 190 | Glenville, WV 26030 | 804.462.5834
 1412 Kanawha Boulevard, East | Charleston, WV 25310 | 204.434.8952
 254 East Buckley Byway | Beckley, WV 26001 | 204.255.0308
 www.sls.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. Gregory A Smith
 677



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 DATE SEPTEMBER 26 20 21
 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-Plat15-R002-10909-CFM.ewg
 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 _____ WASTE _____ IF _____
 TYPE: OIL _____ GAS _____ X INJECTION _____ DISPOSAL _____ "GAS" PRODUCTION _____ X STORAGE _____ DEEP _____ SHALLOW _____ X

LOCATION: GROUND = 1291.10'
 ELEVATION PROPOSED = 1293.72' 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 21,712 / TVD 7,754'

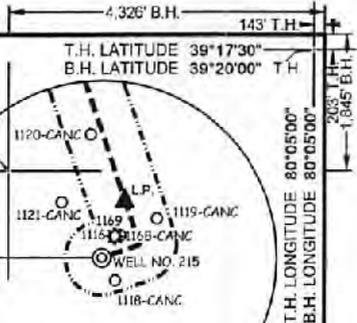
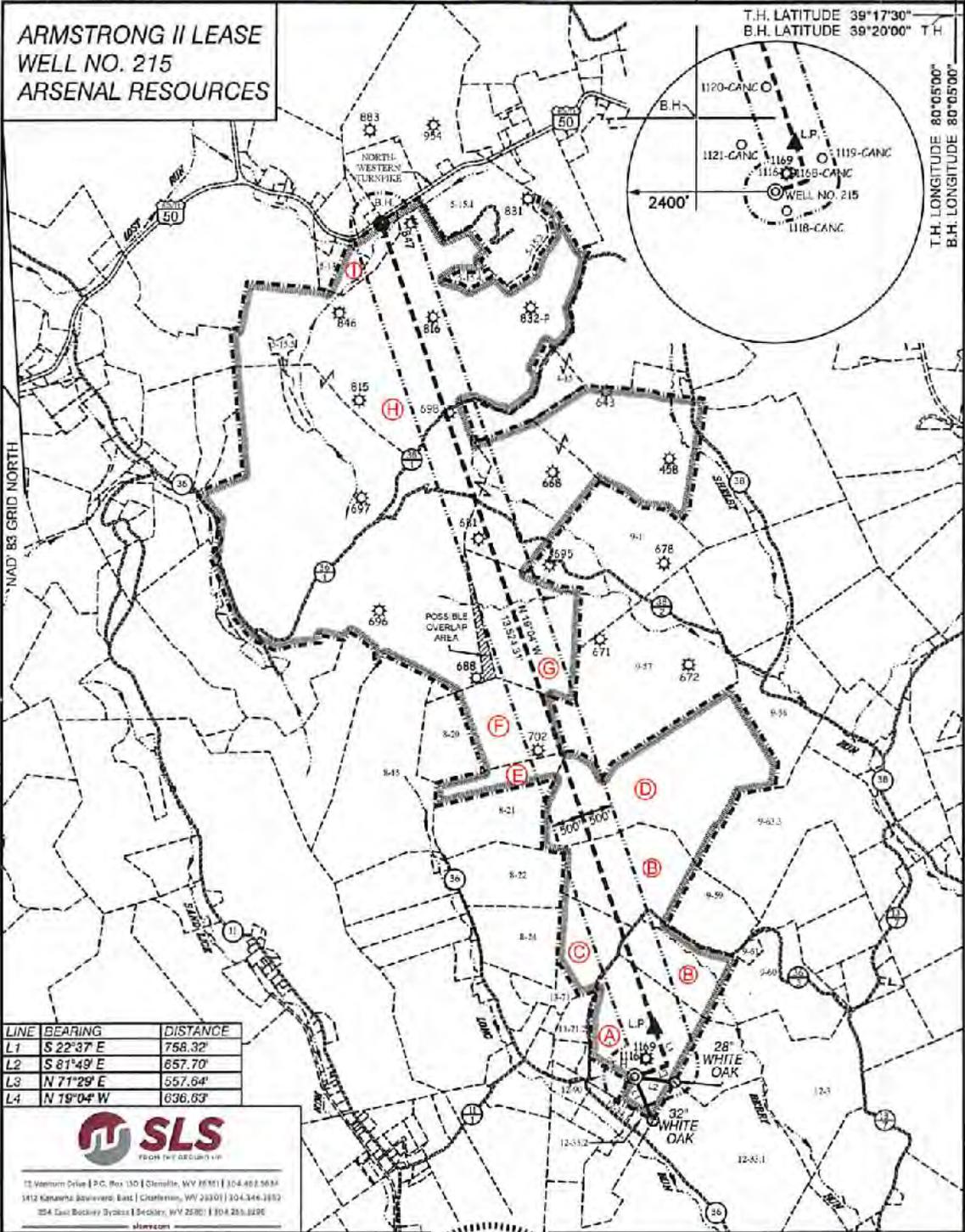
WELL OPERATOR ARSENAL RESOURCES DESIGNATED AGENT GARY SHORT
 ADDRESS 6031 WALLACE RD. EXT. SUITE 300 ADDRESS 633 WEST MAIN STREET
WEXFORD, PA 15090 BRIDGEPORT, WV 26330

12/08/2021

COUNTY NAME
 PERMIT

Attachment "A2"

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



LINE	BEARING	DISTANCE
L1	S 22°37' E	758.32'
L2	S 81°49' E	657.70'
L3	N 71°29' E	557.64'
L4	N 19°04' W	636.63'



11 Western Drive | P.O. Box 130 | Clonville, WV 26031 | 304.483.5634
 1812 Kanawha Boulevard, East | Charleston, WV 25301 | 304.344.1833
 224 East Beckley Drive | Beckley, WV 25801 | 304.255.8296
 sls.com

(S.P.C. NORTH ZONE) (UTM/M) ZONE 17 NORTH			
NAD83 S.P.C.(FT)	N. 285,680.62	E. 1,803,259.89	
NAD83 GEO.	LAT.(N) 39.2911109	LONG.(W) 80.082722	
NAD83 UTM (M)	N. 4,345,482.13	E. 579,000.70	
LANDING POINT			
NAD83 S.P.C.(FT)	N. 289,459.5	E. 1,803,580.8	
NAD83 GEO.	LAT.(N) 39.293253	LONG.(W) 80.082722	
NAD83 UTM (M)	N. 4,345,721.0	E. 579,100.5	
BOTTOM HOLE			
NAD83 S.P.C.(FT)	N. 302,242.4	E. 1,799,164.4	
NAD83 GEO.	LAT.(N) 39.328269	LONG.(W) 80.085278	
NAD83 UTM (M)	N. 4,353,593.3	E. 577,890.2	



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 P.S. 677 *Gregory A. Smith*

SCALE 1" = 2000' FILE NO. 011-Arsenal-0207-Phd215-800-210004-CFM-349
 DATE SEPTEMBER 28, 20 21
 REVISED _____, 20 _____
 OPERATORS WELL NO. 215
 API WELL 47
 NO. STATE COUNTY PERMIT

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

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)	

WELL OPERATOR ARSENAL RESOURCES DESIGNATED AGENT GARY SHORT
 ADDRESS 6031 WALLACE RD. EXT. SUITE 300 ADDRESS 633 WEST MAIN STREET
 WEXFORD, PA 15090 BRIDGEPORT, WV 26330

12/03/2021

Attachment "B"



9/16/2021

Diversified Resources Inc
4150 Belden Village Ave. NW Ste 410
Canton, OH 44718-2253

RE: Armstrong II Well Pad

Dear Sir/Madam,

Arsenal Resources has developed a Marcellus pad, Armstrong II 214, 215 and 216 wells, located in Taylor County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7,800 TVD) and existing conventional natural gas wells included in the attached well list for which you are believed to be the operator.

Arsenal Resources anticipates conducting hydraulic fracturing at the Armstrong, 214, 215 and 216 wells during First Quarter of 2022. We have identified conventional natural gas wells operated by your company within 500' (lateral distance) of our newly planned wells. Plats for each well on this pad are attached.

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

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

Please feel free to contact me at 724-940-1137 with any questions or comments. You may also contact the WV Office of Oil and Gas at 304-926-0449.

Sincerely,

Ross Schweitzer
Sr. Director of Drilling, Construction and Permitting

12/03/2021



ARSENAL
R E S O U R C E S

Arsenal Resources

**Taylor County, West Virginia
Armstong Pad
Armstrong II #215**

Wellbore #1

Plan: Design #1

KLX Well Planning Report

03 September, 2021



12/03/2021

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Armstrong II#215
Company:	Arsenal Resources	TVD Reference:	WELL @ 1318.0usft
Project:	Taylor County, West Virginia	MD Reference:	WELL @ 1318.0usft
Site:	Armstrong Pad	North Reference:	Grid
Well:	Armstrong II #215	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Taylor County, West Virginia		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	West Virginia Northern Zone		

Site	Armstrong Pad				
Site Position:		Northing:	288,680.62 usft	Latitude:	39° 17' 27.993 N
From:	Map	Easting:	1,803,259.68 usft	Longitude:	80° 5' 1.815 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.37 °

Well	Armstrong II #215					
Well Position	+N/-S	0.0 usft	Northing:	288,680.62 usft	Latitude:	39° 17' 27.993 N
	+E/-W	0.0 usft	Easting:	1,803,259.68 usft	Longitude:	80° 5' 1.815 W
Position Uncertainty	0.0 usft		Wellhead Elevation:		Ground Level:	1,293.0 usft

Wellbore	Wellbore #1				
-----------------	-------------	--	--	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2021	9/2/2021	-9.63	65.78	51,638.30000000

Design	Design #1				
---------------	-----------	--	--	--	--

Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	343.20	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,675.3	13.51	71.48	3,669.1	25.2	75.1	2.00	2.00	0.00	71.48	
5,384.4	13.51	71.48	5,330.9	152.0	453.6	0.00	0.00	0.00	0.00	
6,059.7	0.00	360.00	6,000.0	177.1	528.8	2.00	-2.00	0.00	180.00	VP Armstrong II #2
7,187.1	0.00	360.00	7,127.4	177.1	528.8	0.00	0.00	0.00	360.00	
8,187.1	90.00	340.94	7,764.0	778.8	320.9	9.00	9.00	-1.91	340.94	
21,711.5	90.00	340.94	7,764.0	13,561.8	-4,095.3	0.00	0.00	0.00	0.00	PBHL Armstrong II :

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Armstrong II#215
Company:	Arsenal Resources	TVD Reference:	WELL @ 1318.0usft
Project:	Taylor County, West Virginia	MD Reference:	WELL @ 1318.0usft
Site:	Armstrong Pad	North Reference:	Grid
Well:	Armstrong II #215	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 2°/100'									
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	2.00	71.48	3,100.0	0.6	1.7	0.1	2.00	2.00	0.00
3,200.0	4.00	71.48	3,199.8	2.2	6.6	0.2	2.00	2.00	0.00
3,300.0	6.00	71.48	3,299.5	5.0	14.9	0.5	2.00	2.00	0.00
3,400.0	8.00	71.48	3,398.7	8.9	26.4	0.8	2.00	2.00	0.00
3,500.0	10.00	71.48	3,497.5	13.8	41.3	1.3	2.00	2.00	0.00
3,600.0	12.00	71.48	3,595.6	19.9	59.4	1.9	2.00	2.00	0.00
EOB @ 13.51° Inc / 71.48° Azm									
3,675.3	13.51	71.48	3,669.1	25.2	75.1	2.4	2.00	2.00	0.00
3,700.0	13.51	71.48	3,693.1	27.0	80.6	2.5	0.00	0.00	0.00
3,800.0	13.51	71.48	3,790.3	34.4	102.7	3.2	0.00	0.00	0.00
3,900.0	13.51	71.48	3,887.5	41.8	124.9	3.9	0.00	0.00	0.00
4,000.0	13.51	71.48	3,984.8	49.3	147.0	4.6	0.00	0.00	0.00
4,100.0	13.51	71.48	4,082.0	56.7	169.2	5.3	0.00	0.00	0.00
4,200.0	13.51	71.48	4,179.3	64.1	191.3	6.0	0.00	0.00	0.00
4,300.0	13.51	71.48	4,276.5	71.5	213.5	6.7	0.00	0.00	0.00
4,400.0	13.51	71.48	4,373.7	78.9	235.6	7.4	0.00	0.00	0.00
4,500.0	13.51	71.48	4,471.0	86.3	257.8	8.1	0.00	0.00	0.00
4,600.0	13.51	71.48	4,568.2	93.8	279.9	8.8	0.00	0.00	0.00
4,700.0	13.51	71.48	4,665.4	101.2	302.1	9.5	0.00	0.00	0.00
4,800.0	13.51	71.48	4,762.7	108.6	324.2	10.2	0.00	0.00	0.00
4,900.0	13.51	71.48	4,859.9	116.0	346.4	10.9	0.00	0.00	0.00
5,000.0	13.51	71.48	4,957.1	123.4	368.5	11.6	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Armstrong II#215
Company:	Arsenal Resources	TVD Reference:	WELL @ 1318.0usft
Project:	Taylor County, West Virginia	MD Reference:	WELL @ 1318.0usft
Site:	Armstrong Pad	North Reference:	Grid
Well:	Armstrong II #215	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,100.0	13.51	71.48	5,054.4	130.9	390.6	12.3	0.00	0.00	0.00	
5,200.0	13.51	71.48	5,151.6	138.3	412.8	13.0	0.00	0.00	0.00	
5,300.0	13.51	71.48	5,248.8	145.7	434.9	13.7	0.00	0.00	0.00	
Drop 2°/100'										
5,384.4	13.51	71.48	5,330.9	152.0	453.6	14.3	0.00	0.00	0.00	
5,400.0	13.19	71.48	5,346.1	153.1	457.0	14.4	2.00	-2.00	0.00	
5,500.0	11.19	71.48	5,443.8	159.8	477.1	15.1	2.00	-2.00	0.00	
5,600.0	9.19	71.48	5,542.2	165.4	493.9	15.6	2.00	-2.00	0.00	
5,700.0	7.19	71.48	5,641.2	170.0	507.4	16.0	2.00	-2.00	0.00	
5,800.0	5.19	71.48	5,740.6	173.4	517.6	16.4	2.00	-2.00	0.00	
5,900.0	3.19	71.48	5,840.3	175.7	524.5	16.6	2.00	-2.00	0.00	
6,000.0	1.19	71.48	5,940.3	176.9	528.2	16.7	2.00	-2.00	0.00	
EOD @ Vert										
6,059.7	0.00	0.00	6,000.0	177.1	528.8	16.7	2.00	-2.00	-119.64	
6,100.0	0.00	0.00	6,040.3	177.1	528.8	16.7	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,140.3	177.1	528.8	16.7	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,240.3	177.1	528.8	16.7	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,340.3	177.1	528.8	16.7	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,440.3	177.1	528.8	16.7	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,540.3	177.1	528.8	16.7	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,640.3	177.1	528.8	16.7	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,740.3	177.1	528.8	16.7	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,840.3	177.1	528.8	16.7	0.00	0.00	0.00	
7,000.0	0.00	0.00	6,940.3	177.1	528.8	16.7	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,040.3	177.1	528.8	16.7	0.00	0.00	0.00	
Build 9°/100'										
7,187.1	0.00	0.00	7,127.4	177.1	528.8	16.7	0.00	0.00	0.00	
7,200.0	1.16	340.94	7,140.3	177.2	528.7	16.8	9.00	9.00	0.00	
7,250.0	5.66	340.94	7,190.2	180.1	527.7	19.8	9.00	9.00	0.00	
7,300.0	10.16	340.94	7,239.7	186.6	525.5	26.7	9.00	9.00	0.00	
7,350.0	14.66	340.94	7,288.5	196.7	522.0	37.4	9.00	9.00	0.00	
7,400.0	19.16	340.94	7,336.3	210.4	517.2	51.9	9.00	9.00	0.00	
7,450.0	23.66	340.94	7,382.9	227.7	511.3	70.2	9.00	9.00	0.00	
7,500.0	28.16	340.94	7,427.8	248.3	504.2	92.0	9.00	9.00	0.00	
TULLY										
7,546.5	32.34	340.94	7,468.0	270.5	496.5	115.4	9.00	9.00	0.00	
7,550.0	32.66	340.94	7,470.9	272.2	495.9	117.3	9.00	9.00	0.00	
7,600.0	37.16	340.94	7,511.9	299.3	486.6	145.8	9.00	9.00	0.00	
7,650.0	41.66	340.94	7,550.5	329.3	476.2	177.6	9.00	9.00	0.00	
7,700.0	46.16	340.94	7,586.6	362.0	464.9	212.2	9.00	9.00	0.00	
7,750.0	50.66	340.94	7,619.7	397.4	452.7	249.6	9.00	9.00	0.00	
7,800.0	55.16	340.94	7,649.9	435.1	439.6	289.4	9.00	9.00	0.00	
7,850.0	59.66	340.94	7,676.8	474.9	425.9	331.5	9.00	9.00	0.00	
MARCELLUS SHALE										
7,860.4	60.59	340.94	7,682.0	483.4	422.9	340.5	9.00	9.00	0.00	
7,900.0	64.16	340.94	7,700.4	516.5	411.5	375.5	9.00	9.00	0.00	
7,950.0	68.66	340.94	7,720.4	559.8	396.5	421.3	9.00	9.00	0.00	
8,000.0	73.16	340.94	7,736.7	604.5	381.1	468.5	9.00	9.00	0.00	
LOWER MARCELLUS										
8,011.7	74.21	340.94	7,740.0	615.1	377.4	479.7	9.00	9.00	0.00	
8,050.0	77.66	340.94	7,749.3	650.2	365.3	516.9	9.00	9.00	0.00	
8,100.0	82.16	340.94	7,758.1	696.7	349.2	566.0	9.00	9.00	0.00	
8,150.0	86.66	340.94	7,762.9	743.8	333.0	615.7	9.00	9.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Armstrong II#215
Company:	Arsenal Resources	TVD Reference:	WELL @ 1318.0usft
Project:	Taylor County, West Virginia	MD Reference:	WELL @ 1318.0usft
Site:	Armstrong Pad	North Reference:	Grid
Well:	Armstrong II #215	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
EOB @ 90° Inc / 340.94° Azm									
8,187.1	90.00	340.94	7,764.0	778.8	320.9	652.8	9.00	9.00	0.00
8,200.0	90.00	340.94	7,764.0	791.0	316.7	665.7	0.00	0.00	0.00
8,300.0	90.00	340.94	7,764.0	885.5	284.0	765.6	0.00	0.00	0.00
8,400.0	90.00	340.94	7,764.0	980.0	251.4	865.5	0.00	0.00	0.00
8,500.0	90.00	340.94	7,764.0	1,074.6	218.7	965.4	0.00	0.00	0.00
8,600.0	90.00	340.94	7,764.0	1,169.1	186.1	1,065.4	0.00	0.00	0.00
8,700.0	90.00	340.94	7,764.0	1,263.6	153.4	1,165.3	0.00	0.00	0.00
8,800.0	90.00	340.94	7,764.0	1,358.1	120.8	1,265.2	0.00	0.00	0.00
8,900.0	90.00	340.94	7,764.0	1,452.6	88.1	1,365.1	0.00	0.00	0.00
9,000.0	90.00	340.94	7,764.0	1,547.1	55.5	1,465.1	0.00	0.00	0.00
9,100.0	90.00	340.94	7,764.0	1,641.7	22.8	1,565.0	0.00	0.00	0.00
9,200.0	90.00	340.94	7,764.0	1,736.2	-9.9	1,664.9	0.00	0.00	0.00
9,300.0	90.00	340.94	7,764.0	1,830.7	-42.5	1,764.8	0.00	0.00	0.00
9,400.0	90.00	340.94	7,764.0	1,925.2	-75.2	1,864.7	0.00	0.00	0.00
9,500.0	90.00	340.94	7,764.0	2,019.7	-107.8	1,964.7	0.00	0.00	0.00
9,600.0	90.00	340.94	7,764.0	2,114.3	-140.5	2,064.6	0.00	0.00	0.00
9,700.0	90.00	340.94	7,764.0	2,208.8	-173.1	2,164.5	0.00	0.00	0.00
9,800.0	90.00	340.94	7,764.0	2,303.3	-205.8	2,264.4	0.00	0.00	0.00
9,900.0	90.00	340.94	7,764.0	2,397.8	-238.4	2,364.4	0.00	0.00	0.00
10,000.0	90.00	340.94	7,764.0	2,492.3	-271.1	2,464.3	0.00	0.00	0.00
10,100.0	90.00	340.94	7,764.0	2,586.8	-303.7	2,564.2	0.00	0.00	0.00
10,200.0	90.00	340.94	7,764.0	2,681.4	-336.4	2,664.1	0.00	0.00	0.00
10,300.0	90.00	340.94	7,764.0	2,775.9	-369.0	2,764.0	0.00	0.00	0.00
10,400.0	90.00	340.94	7,764.0	2,870.4	-401.7	2,864.0	0.00	0.00	0.00
10,500.0	90.00	340.94	7,764.0	2,964.9	-434.4	2,963.9	0.00	0.00	0.00
10,600.0	90.00	340.94	7,764.0	3,059.4	-467.0	3,063.8	0.00	0.00	0.00
10,700.0	90.00	340.94	7,764.0	3,154.0	-499.7	3,163.7	0.00	0.00	0.00
10,800.0	90.00	340.94	7,764.0	3,248.5	-532.3	3,263.7	0.00	0.00	0.00
10,900.0	90.00	340.94	7,764.0	3,343.0	-565.0	3,363.6	0.00	0.00	0.00
11,000.0	90.00	340.94	7,764.0	3,437.5	-597.6	3,463.5	0.00	0.00	0.00
11,100.0	90.00	340.94	7,764.0	3,532.0	-630.3	3,563.4	0.00	0.00	0.00
11,200.0	90.00	340.94	7,764.0	3,626.5	-662.9	3,663.4	0.00	0.00	0.00
11,300.0	90.00	340.94	7,764.0	3,721.1	-695.6	3,763.3	0.00	0.00	0.00
11,400.0	90.00	340.94	7,764.0	3,815.6	-728.2	3,863.2	0.00	0.00	0.00
11,500.0	90.00	340.94	7,764.0	3,910.1	-760.9	3,963.1	0.00	0.00	0.00
11,600.0	90.00	340.94	7,764.0	4,004.6	-793.5	4,063.0	0.00	0.00	0.00
11,700.0	90.00	340.94	7,764.0	4,099.1	-826.2	4,163.0	0.00	0.00	0.00
11,800.0	90.00	340.94	7,764.0	4,193.7	-858.9	4,262.9	0.00	0.00	0.00
11,900.0	90.00	340.94	7,764.0	4,288.2	-891.5	4,362.8	0.00	0.00	0.00
12,000.0	90.00	340.94	7,764.0	4,382.7	-924.2	4,462.7	0.00	0.00	0.00
12,100.0	90.00	340.94	7,764.0	4,477.2	-956.8	4,562.7	0.00	0.00	0.00
12,200.0	90.00	340.94	7,764.0	4,571.7	-989.5	4,662.6	0.00	0.00	0.00
12,300.0	90.00	340.94	7,764.0	4,666.3	-1,022.1	4,762.5	0.00	0.00	0.00
12,400.0	90.00	340.94	7,764.0	4,760.8	-1,054.8	4,862.4	0.00	0.00	0.00
12,500.0	90.00	340.94	7,764.0	4,855.3	-1,087.4	4,962.3	0.00	0.00	0.00
12,600.0	90.00	340.94	7,764.0	4,949.8	-1,120.1	5,062.3	0.00	0.00	0.00
12,700.0	90.00	340.94	7,764.0	5,044.3	-1,152.7	5,162.2	0.00	0.00	0.00
12,800.0	90.00	340.94	7,764.0	5,138.8	-1,185.4	5,262.1	0.00	0.00	0.00
12,900.0	90.00	340.94	7,764.0	5,233.4	-1,218.0	5,362.0	0.00	0.00	0.00
13,000.0	90.00	340.94	7,764.0	5,327.9	-1,250.7	5,462.0	0.00	0.00	0.00
13,100.0	90.00	340.94	7,764.0	5,422.4	-1,283.4	5,561.9	0.00	0.00	0.00
13,200.0	90.00	340.94	7,764.0	5,516.9	-1,316.0	5,661.8	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Armstrong II#215
Company:	Arsenal Resources	TVD Reference:	WELL @ 1318.0usft
Project:	Taylor County, West Virginia	MD Reference:	WELL @ 1318.0usft
Site:	Armstrong Pad	North Reference:	Grid
Well:	Armstrong II #215	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,300.0	90.00	340.94	7,764.0	5,611.4	-1,348.7	5,761.7	0.00	0.00	0.00
13,400.0	90.00	340.94	7,764.0	5,706.0	-1,381.3	5,861.6	0.00	0.00	0.00
13,500.0	90.00	340.94	7,764.0	5,800.5	-1,414.0	5,961.6	0.00	0.00	0.00
13,600.0	90.00	340.94	7,764.0	5,895.0	-1,446.6	6,061.5	0.00	0.00	0.00
13,700.0	90.00	340.94	7,764.0	5,989.5	-1,479.3	6,161.4	0.00	0.00	0.00
13,800.0	90.00	340.94	7,764.0	6,084.0	-1,511.9	6,261.3	0.00	0.00	0.00
13,900.0	90.00	340.94	7,764.0	6,178.5	-1,544.6	6,361.3	0.00	0.00	0.00
14,000.0	90.00	340.94	7,764.0	6,273.1	-1,577.2	6,461.2	0.00	0.00	0.00
14,100.0	90.00	340.94	7,764.0	6,367.6	-1,609.9	6,561.1	0.00	0.00	0.00
14,200.0	90.00	340.94	7,764.0	6,462.1	-1,642.5	6,661.0	0.00	0.00	0.00
14,300.0	90.00	340.94	7,764.0	6,556.6	-1,675.2	6,761.0	0.00	0.00	0.00
14,400.0	90.00	340.94	7,764.0	6,651.1	-1,707.9	6,860.9	0.00	0.00	0.00
14,500.0	90.00	340.94	7,764.0	6,745.7	-1,740.5	6,960.8	0.00	0.00	0.00
14,600.0	90.00	340.94	7,764.0	6,840.2	-1,773.2	7,060.7	0.00	0.00	0.00
14,700.0	90.00	340.94	7,764.0	6,934.7	-1,805.8	7,160.6	0.00	0.00	0.00
14,800.0	90.00	340.94	7,764.0	7,029.2	-1,838.5	7,260.6	0.00	0.00	0.00
14,900.0	90.00	340.94	7,764.0	7,123.7	-1,871.1	7,360.5	0.00	0.00	0.00
15,000.0	90.00	340.94	7,764.0	7,218.2	-1,903.8	7,460.4	0.00	0.00	0.00
15,100.0	90.00	340.94	7,764.0	7,312.8	-1,936.4	7,560.3	0.00	0.00	0.00
15,200.0	90.00	340.94	7,764.0	7,407.3	-1,969.1	7,660.3	0.00	0.00	0.00
15,300.0	90.00	340.94	7,764.0	7,501.8	-2,001.7	7,760.2	0.00	0.00	0.00
15,400.0	90.00	340.94	7,764.0	7,596.3	-2,034.4	7,860.1	0.00	0.00	0.00
15,500.0	90.00	340.94	7,764.0	7,690.8	-2,067.0	7,960.0	0.00	0.00	0.00
15,600.0	90.00	340.94	7,764.0	7,785.4	-2,099.7	8,059.9	0.00	0.00	0.00
15,700.0	90.00	340.94	7,764.0	7,879.9	-2,132.3	8,159.9	0.00	0.00	0.00
15,800.0	90.00	340.94	7,764.0	7,974.4	-2,165.0	8,259.8	0.00	0.00	0.00
15,900.0	90.00	340.94	7,764.0	8,068.9	-2,197.7	8,359.7	0.00	0.00	0.00
16,000.0	90.00	340.94	7,764.0	8,163.4	-2,230.3	8,459.6	0.00	0.00	0.00
16,100.0	90.00	340.94	7,764.0	8,258.0	-2,263.0	8,559.6	0.00	0.00	0.00
16,200.0	90.00	340.94	7,764.0	8,352.5	-2,295.6	8,659.5	0.00	0.00	0.00
16,300.0	90.00	340.94	7,764.0	8,447.0	-2,328.3	8,759.4	0.00	0.00	0.00
16,400.0	90.00	340.94	7,764.0	8,541.5	-2,360.9	8,859.3	0.00	0.00	0.00
16,500.0	90.00	340.94	7,764.0	8,636.0	-2,393.6	8,959.2	0.00	0.00	0.00
16,600.0	90.00	340.94	7,764.0	8,730.5	-2,426.2	9,059.2	0.00	0.00	0.00
16,700.0	90.00	340.94	7,764.0	8,825.1	-2,458.9	9,159.1	0.00	0.00	0.00
16,800.0	90.00	340.94	7,764.0	8,919.6	-2,491.5	9,259.0	0.00	0.00	0.00
16,900.0	90.00	340.94	7,764.0	9,014.1	-2,524.2	9,358.9	0.00	0.00	0.00
17,000.0	90.00	340.94	7,764.0	9,108.6	-2,556.8	9,458.9	0.00	0.00	0.00
17,100.0	90.00	340.94	7,764.0	9,203.1	-2,589.5	9,558.8	0.00	0.00	0.00
17,200.0	90.00	340.94	7,764.0	9,297.7	-2,622.2	9,658.7	0.00	0.00	0.00
17,300.0	90.00	340.94	7,764.0	9,392.2	-2,654.8	9,758.6	0.00	0.00	0.00
17,400.0	90.00	340.94	7,764.0	9,486.7	-2,687.5	9,858.5	0.00	0.00	0.00
17,500.0	90.00	340.94	7,764.0	9,581.2	-2,720.1	9,958.5	0.00	0.00	0.00
17,600.0	90.00	340.94	7,764.0	9,675.7	-2,752.8	10,058.4	0.00	0.00	0.00
17,700.0	90.00	340.94	7,764.0	9,770.2	-2,785.4	10,158.3	0.00	0.00	0.00
17,800.0	90.00	340.94	7,764.0	9,864.8	-2,818.1	10,258.2	0.00	0.00	0.00
17,900.0	90.00	340.94	7,764.0	9,959.3	-2,850.7	10,358.2	0.00	0.00	0.00
18,000.0	90.00	340.94	7,764.0	10,053.8	-2,883.4	10,458.1	0.00	0.00	0.00
18,100.0	90.00	340.94	7,764.0	10,148.3	-2,916.0	10,558.0	0.00	0.00	0.00
18,200.0	90.00	340.94	7,764.0	10,242.8	-2,948.7	10,657.9	0.00	0.00	0.00
18,300.0	90.00	340.94	7,764.0	10,337.4	-2,981.3	10,757.9	0.00	0.00	0.00
18,400.0	90.00	340.94	7,764.0	10,431.9	-3,014.0	10,857.8	0.00	0.00	0.00
18,500.0	90.00	340.94	7,764.0	10,526.4	-3,046.7	10,957.7	0.00	0.00	0.00
18,600.0	90.00	340.94	7,764.0	10,620.9	-3,079.3	11,057.6	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Armstrong II#215
Company:	Arsenal Resources	TVD Reference:	WELL @ 1318.0usft
Project:	Taylor County, West Virginia	MD Reference:	WELL @ 1318.0usft
Site:	Armstrong Pad	North Reference:	Grid
Well:	Armstrong II #215	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
18,700.0	90.00	340.94	7,764.0	10,715.4	-3,112.0	11,157.5	0.00	0.00	0.00	
18,800.0	90.00	340.94	7,764.0	10,809.9	-3,144.6	11,257.5	0.00	0.00	0.00	
18,900.0	90.00	340.94	7,764.0	10,904.5	-3,177.3	11,357.4	0.00	0.00	0.00	
19,000.0	90.00	340.94	7,764.0	10,999.0	-3,209.9	11,457.3	0.00	0.00	0.00	
19,100.0	90.00	340.94	7,764.0	11,093.5	-3,242.6	11,557.2	0.00	0.00	0.00	
19,200.0	90.00	340.94	7,764.0	11,188.0	-3,275.2	11,657.2	0.00	0.00	0.00	
19,300.0	90.00	340.94	7,764.0	11,282.5	-3,307.9	11,757.1	0.00	0.00	0.00	
19,400.0	90.00	340.94	7,764.0	11,377.1	-3,340.5	11,857.0	0.00	0.00	0.00	
19,500.0	90.00	340.94	7,764.0	11,471.6	-3,373.2	11,956.9	0.00	0.00	0.00	
19,600.0	90.00	340.94	7,764.0	11,566.1	-3,405.8	12,056.8	0.00	0.00	0.00	
19,700.0	90.00	340.94	7,764.0	11,660.6	-3,438.5	12,156.8	0.00	0.00	0.00	
19,800.0	90.00	340.94	7,764.0	11,755.1	-3,471.2	12,256.7	0.00	0.00	0.00	
19,900.0	90.00	340.94	7,764.0	11,849.7	-3,503.8	12,356.6	0.00	0.00	0.00	
20,000.0	90.00	340.94	7,764.0	11,944.2	-3,536.5	12,456.5	0.00	0.00	0.00	
20,100.0	90.00	340.94	7,764.0	12,038.7	-3,569.1	12,556.5	0.00	0.00	0.00	
20,200.0	90.00	340.94	7,764.0	12,133.2	-3,601.8	12,656.4	0.00	0.00	0.00	
20,300.0	90.00	340.94	7,764.0	12,227.7	-3,634.4	12,756.3	0.00	0.00	0.00	
20,400.0	90.00	340.94	7,764.0	12,322.2	-3,667.1	12,856.2	0.00	0.00	0.00	
20,500.0	90.00	340.94	7,764.0	12,416.8	-3,699.7	12,956.1	0.00	0.00	0.00	
20,600.0	90.00	340.94	7,764.0	12,511.3	-3,732.4	13,056.1	0.00	0.00	0.00	
20,700.0	90.00	340.94	7,764.0	12,605.8	-3,765.0	13,156.0	0.00	0.00	0.00	
20,800.0	90.00	340.94	7,764.0	12,700.3	-3,797.7	13,255.9	0.00	0.00	0.00	
20,900.0	90.00	340.94	7,764.0	12,794.8	-3,830.3	13,355.8	0.00	0.00	0.00	
21,000.0	90.00	340.94	7,764.0	12,889.4	-3,863.0	13,455.8	0.00	0.00	0.00	
21,100.0	90.00	340.94	7,764.0	12,983.9	-3,895.7	13,555.7	0.00	0.00	0.00	
21,200.0	90.00	340.94	7,764.0	13,078.4	-3,928.3	13,655.6	0.00	0.00	0.00	
21,300.0	90.00	340.94	7,764.0	13,172.9	-3,961.0	13,755.5	0.00	0.00	0.00	
21,400.0	90.00	340.94	7,764.0	13,267.4	-3,993.6	13,855.4	0.00	0.00	0.00	
21,500.0	90.00	340.94	7,764.0	13,361.9	-4,026.3	13,955.4	0.00	0.00	0.00	
21,600.0	90.00	340.94	7,764.0	13,456.5	-4,058.9	14,055.3	0.00	0.00	0.00	
21,700.0	90.00	340.94	7,764.0	13,551.0	-4,091.6	14,155.2	0.00	0.00	0.00	
TD @ 21712' MD / 7764' TVD										
21,711.5	90.00	340.94	7,764.0	13,561.8	-4,095.3	14,166.7	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
VP Armstrong II #215 - plan hits target center - Point	0.00	360.00	6,000.0	177.1	528.8	288,857.74	1,803,788.44	39° 17' 29.778 N	80° 4' 55.104 W	
PBHL Armstrong II #2 - plan hits target center - Point	0.00	0.00	7,764.0	13,561.8	-4,095.3	302,242.43	1,799,164.36	39° 19' 41.768 N	80° 5' 55.054 W	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Armstrong II#215
Company:	Arsenal Resources	TVD Reference:	WELL @ 1318.0usft
Project:	Taylor County, West Virginia	MD Reference:	WELL @ 1318.0usft
Site:	Armstrong Pad	North Reference:	Grid
Well:	Armstrong II #215	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
7,546.5	7,468.0	TULLY		0.00		
7,860.4	7,682.0	MARCELLUS SHALE		0.00		
8,011.7	7,740.0	LOWER MARCELLUS		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
3,000.0	3,000.0	0.0	0.0	Build 2°/100'	
3,675.3	3,669.1	25.2	75.1	EOB @ 13.51° Inc / 71.48° Azm	
5,384.4	5,330.9	152.0	453.6	Drop 2°/100'	
6,059.7	6,000.0	177.1	528.8	EOD @ Vert	
7,187.1	7,127.4	177.1	528.8	Build 9°/100'	
8,187.1	7,764.0	778.8	320.9	EOB @ 90° Inc / 340.94° Azm	
21,711.5	7,764.0	13,561.8	-4,095.3	TD @ 21712' MD / 7764' TVD	



ARSENAL
R E S O U R C E S

SITE SAFETY PLAN

ARMSTRONG II WELL PAD #215

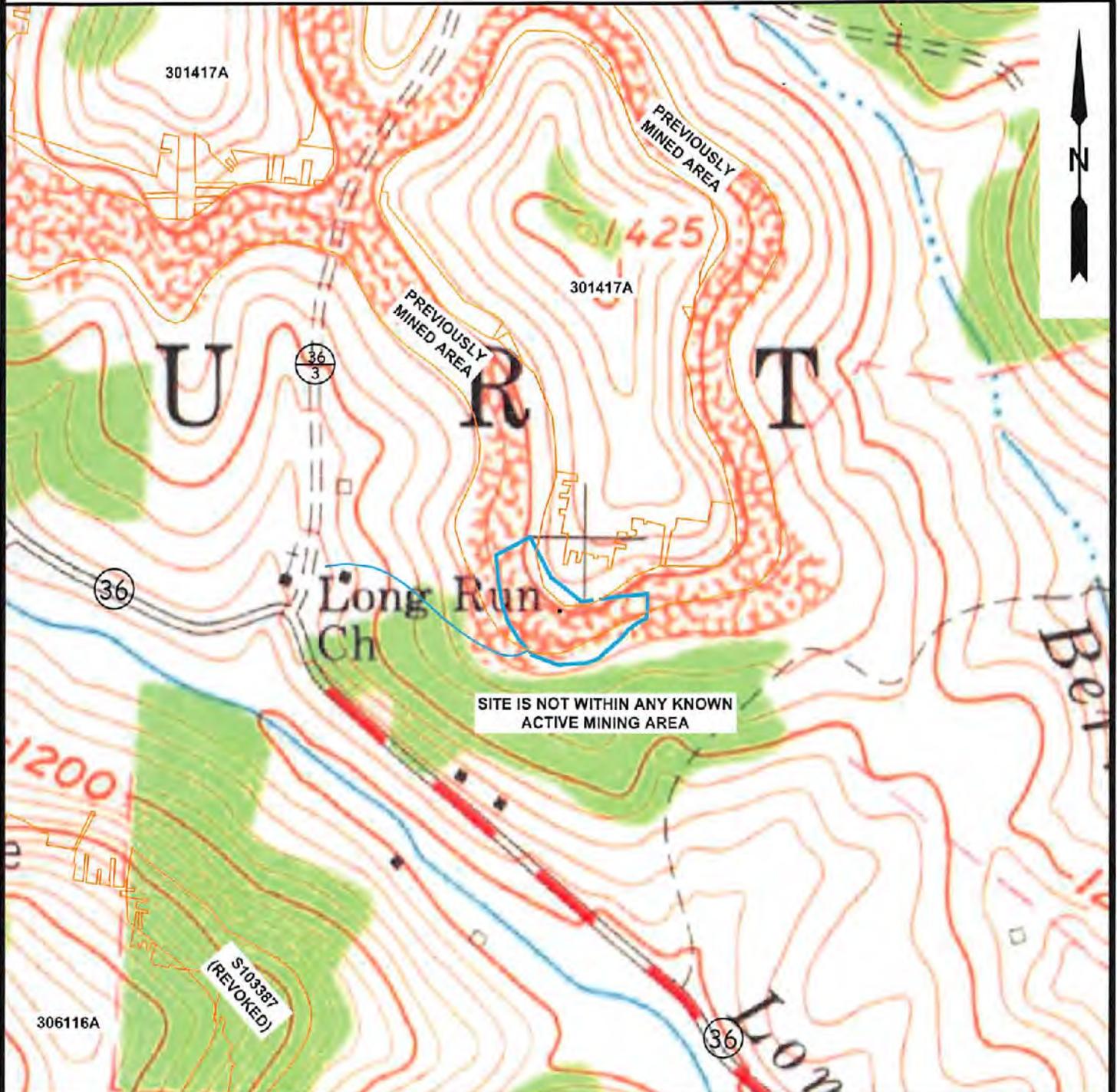
911 Address:

90 Freewill Drive

Flemington, WV 26347

Byron Harris
10-5-21

PROPOSED ARMSTRONG II COAL PERMIT MAP

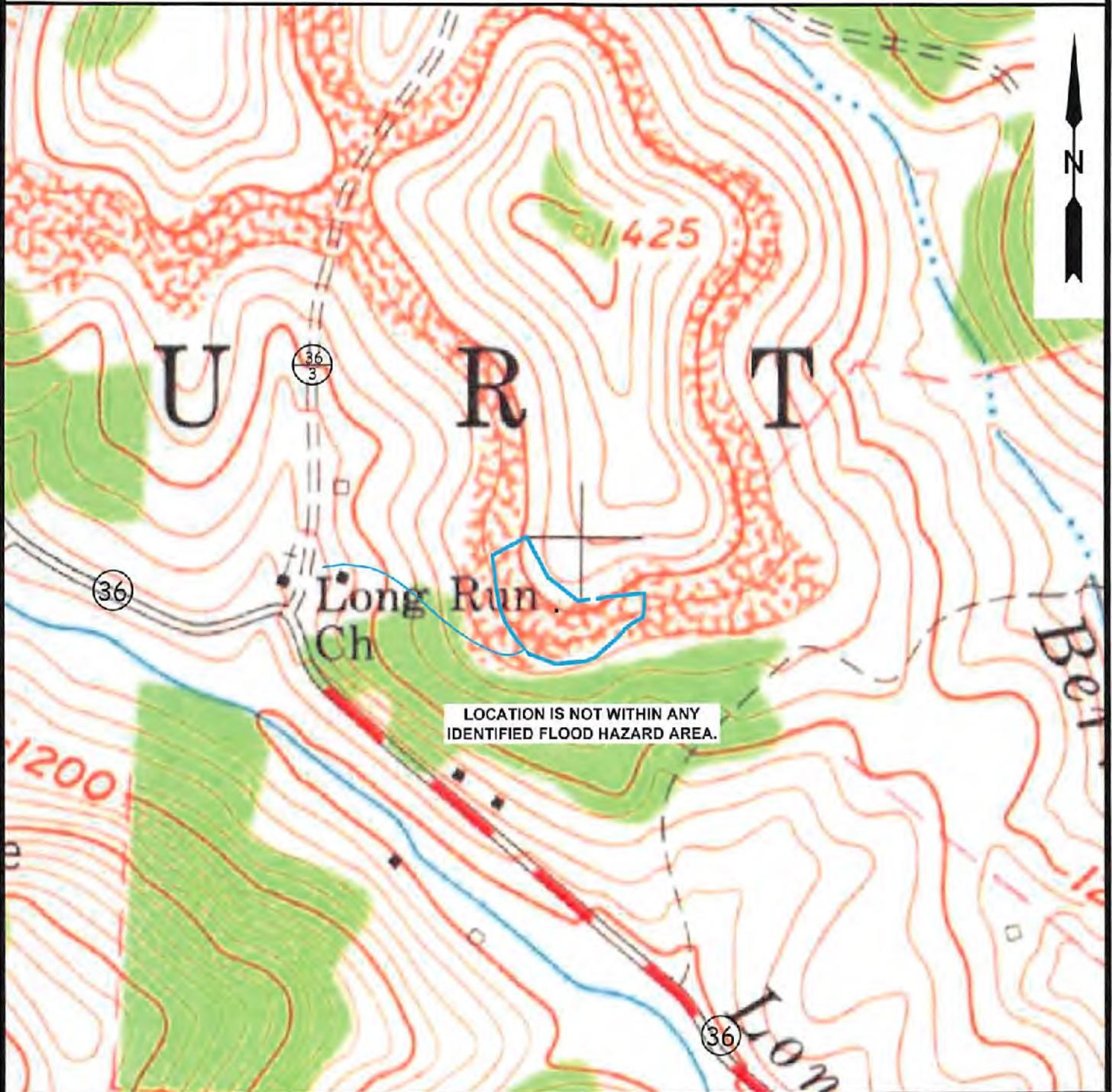


12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5834
 1612 Kanawha Boulevard, East | Charleston, WV 25301 | 304.345.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
 slsw.com

TOPO SECTION:		OPERATOR:	
GRAFTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	ARSENAL RESOURCES	
TAYLOR	COURTHOUSE	6031 WALLACE RD. EXT. SUITE 300 WEXFORD, PA 15090	
DRAWN BY	JOB NO.	DATE	SCALE
C.P.M.	9111	08-11-2021	1" = 500'

12/03/2021

PROPOSED ARMSTRONG II FLOOD HAZARD MAP



LOCATION IS NOT WITHIN ANY IDENTIFIED FLOOD HAZARD AREA.



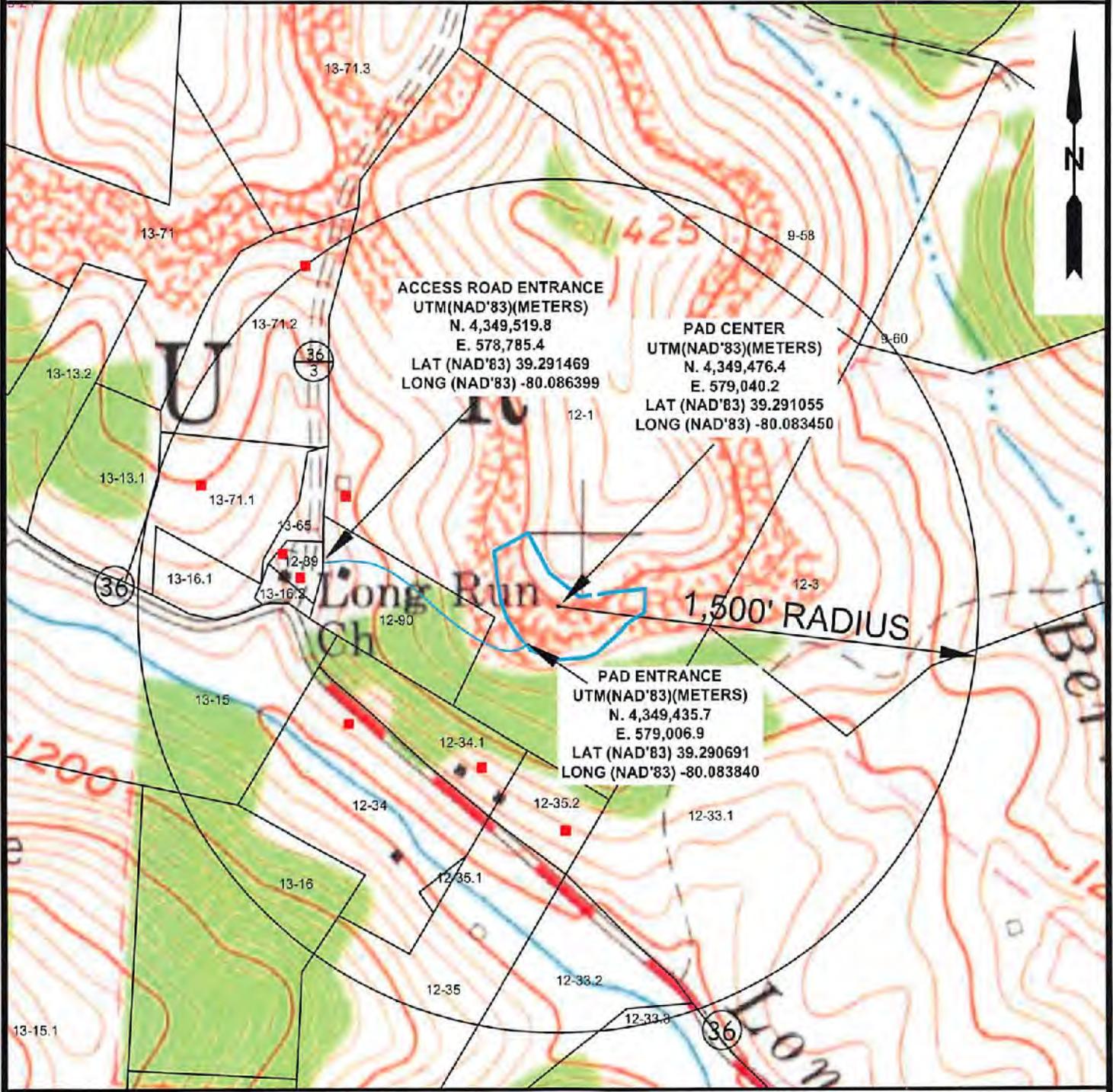

12 Vanhem Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5634
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.345.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5295
 slsv.com

TOPO SECTION:		OPERATOR:	
GRAFTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	ARSENAL RESOURCES	
TAYLOR	COURTHOUSE	6031 WALLACE RD. EXT. SUITE 300 WEXFORD, PA 15090	
DRAWN BY	JOB NO.	DATE	SCALE
C.P.M.	9111	08-11-2021	1" = 500'



12/03/2021

PROPOSED ARMSTRONG II WELLS 214-216



ACCESS ROAD ENTRANCE
 UTM(NAD'83)(METERS)
 N. 4,349,519.8
 E. 578,785.4
 LAT (NAD'83) 39.291469
 LONG (NAD'83) -80.086399

PAD CENTER
 UTM(NAD'83)(METERS)
 N. 4,349,476.4
 E. 579,040.2
 LAT (NAD'83) 39.291055
 LONG (NAD'83) -80.083450

PAD ENTRANCE
 UTM(NAD'83)(METERS)
 N. 4,349,435.7
 E. 579,006.9
 LAT (NAD'83) 39.290691
 LONG (NAD'83) -80.083840

1,500' RADIUS

■ = APPARENT RESIDENCES FROM MAPPING



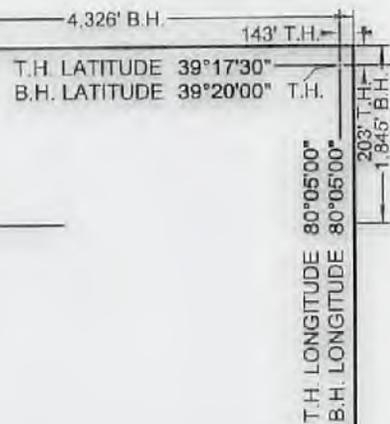
12 Vannors Drive | P.O. Box 153 | Glenville, WV 26031 | 304.462.5634
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
 254 East Buckley Bypass | Beckley, WV 25801 | 304.235.5295
 slsvv.com

TOPO SECTION:		OPERATOR:	
GRAFTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	ARSENAL RESOURCES	
TAYLOR	COURTHOUSE	6031 WALLACE RD. EXT. SUITE 300 WEXFORD, PA 15090	
DRAWN BY	JOB NO.	DATE	SCALE
C.P.M.	9111	08-11-2021	1" = 500'



12/03/2021

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



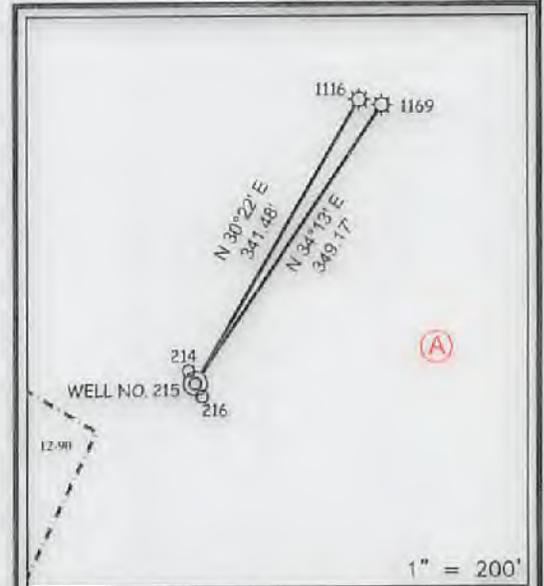
ARMSTRONG II- 215			
TAG	SURFACE OWNER	PARCEL	ACRES
A	ROBERT & JULIE ARMSTRONG	5-12-1	65.375
B	ARK LAND LLC	5-9-58	91.45
C	ARK LAND COMPANY	5-13-71.3	27.52
D	COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO.)	5-9-57.1	120
E	ARK LAND COMPANY	5-8-14	17
F	ARK LAND LLC	5-8-19	42.23
G	ARK LAND LLC	5-8-18	73.50
H	STATE OF W.V. INDUSTRIAL SCHOOL FOR BOYS	5-5-15	913.69
I	TIMOTHY R GERARD ET AL	5-5-14	15.63

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

NAD'83 S.P.C.(FT)	N. 288,680.62	E. 1,803,259.86
NAD'83 GEO.	LAT-(N) 39.291109	LONG-(W) 80.083837
NAD'83 UTM (M)	N. 4,349,482.13	E. 579006.70
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 289,459.5	E. 1,803,580.8
NAD'83 GEO.	LAT-(N) 39.293253	LONG-(W) 80.092722
NAD'83 UTM (M)	N. 4,349,721.0	E. 579,100.5
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 302,242.4	E. 1,799,164.4
NAD'83 GEO.	LAT-(N) 39.328269	LONG-(W) 80.098628
NAD'83 UTM (M)	N. 4,353,593.3	E. 577,690.2

ADJOINING SURFACE OWNER	PARCEL	ACRES
ROBERT L CARPENTER JR ET AL	5-12-3	117.94
HARRY V & PATRICIA J JOHNSON	5-12-33.1	89.30
MARIE ELEANOR QUEEN	5-12-35.2	2
DONNA R GOODNOW	5-12-34.1	4.825
ROBERT L & JULIE A ARMSTRONG	5-12-90	5
JOSEPH & LACEY N FREY	5-13 71.2	8.35
TRINA F RAGER ET AL	5-13-71	22.25
TRINA F RAGER ET AL	5-8-24	35.36
HAROLD THOMAS & MARY LOU ADKINS	5-8-22	34.77
DAYTON W & RUTH A GREEN C/O ARK LAND LLC	5-8-21	66.95
ARK LAND LLC	5-8-15	106.82
ARK LAND LLC	5-8-20	23
LARRY MCDANIEL (HEIRS) IN C/O MICHAEL E MCDANIEL	5-5-13	4.98
TAYLOR COUNTY FAIR ASSOCIATION	5-5-15.1	54.5
STATE OF WEST VIRGINIA (WV DEPT OF AGRICULTURE)	5-5-15.4	2.84
TAYLOR COUNTY FAIR ASSOCIATION	5-5-15.2	3.2
MARK A CURREY	5-4-15	108.46
ARK LAND LLC	5-9-1	74
COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO)	5-9-57	118
COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO)	5-9-56	55.75
COALQUEST DEVELOPMENT LLC (C/O ARK LAND CO)	5-9-63.3	85.45
ARK LAND COMPANY	5-9-59	28.50
ARK LAND COMPANY	5-9-61	4
ARK LAND LLC	5-9-60	50.02

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.
- 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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 1000 Mountain Road, Suite 100, Charleston, WV 25301 | 304.263.1000
 1000 Valley Road, Suite 100, Charleston, WV 25301 | 304.263.1000
 sls.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 SEPTEMBER 28, 20 21
 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-Plat215-R00-210909-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: GROUND = 1291.10' ELEVATION PROPOSED = 1293.72' 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 162.03
 PROPOSED WORK: LEASE NO. SEE WW-6A1

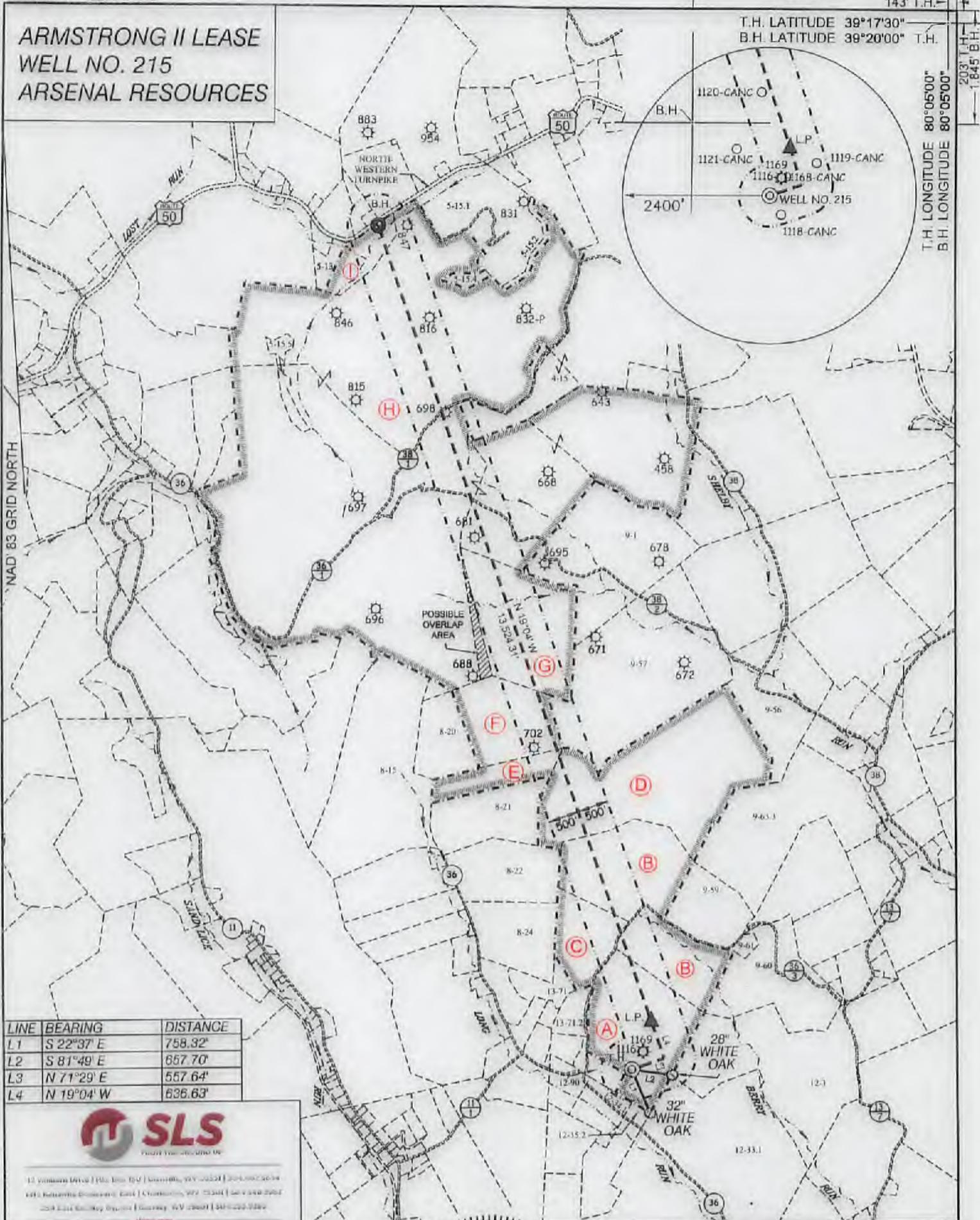
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH TMD 21,712 / TVD 7,764'

WELL OPERATOR ARSENAL RESOURCES DESIGNATED AGENT GARY SHORT
 ADDRESS 6031 WALLACE RD. EXT. SUITE 300 WEXFORD, PA 15090 ADDRESS 633 WEST MAIN STREET BRIDGEPORT, WV 26330

COUNTY NAME
 PERMIT

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



LINE	BEARING	DISTANCE
L1	S 22°37' E	758.32'
L2	S 81°49' E	657.70'
L3	N 71°29' E	557.64'
L4	N 19°04' W	636.63'



11 Yonkers Blvd | P.O. Box 154 | Garrison, NY 10521 | 914.261.2614
 691 Bethesda Boulevard East | Charleston, WV 25301 | 304.248.2982
 254 East Kentucky Avenue | Hurricane, WV 26037 | 304.222.9286
www.sls.com

(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. 679,006.70

LANDING POINT

NAD'83 S.P.C. (FT)	N. 288,459.6	E. 1,803,580.6
NAD'83 GEO.	LAT-(N) 39.293253	LONG-(W) 80.082722
NAD'83 UTM (M)	N. 4,349,721.0	E. 679,100.5

BOTTOM HOLE

NAD'83 S.P.C. (FT)	N. 302,242.4	E. 1,799,164.4
NAD'83 GEO.	LAT-(N) 39.328269	LONG-(W) 80.098628
NAD'83 UTM (M)	N. 4,353,593.3	E. 677,690.2



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

P.S. 677 *Gregory A. Smith*

LEGEND

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

SCALE 1" = 2000' FILE NO. _____

DATE SEPTEMBER 28, 20 21

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

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

WELL OPERATOR ARSENAL RESOURCES
 ADDRESS 6031 WALLACE RD. EXT. SUITE 300
 WEXFORD, PA 15090

COUNTY NAME PERMIT

12/03/2021

WW-6A1
(5/13)

Operator's Well No. Armstrong II 215

**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

RECEIVED
Office of Oil and Gas
OCT 14 2021

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.

WV Department of
Environmental Protection

Well Operator: Arsenal Resources
By: Ross Schweitzer
Its: Sr Director of Drilling, Construction and Permitting

Lease Number	Lessor	Lessee	Lease Royalty	Book/Page	Gross Acres
A 00004370	ROBERT L ARMSTRONG AND JULIE ARMSTRONG HUSBAND AND WIFE PETROLEUM DEVELOPMENT CORPORATION PDC MOUNTAINEER, LLC	PETROLEUM DEVELOPMENT CORPORATION PDC MOUNTAINEER, LLC RIVER RIDGE ENERGY, LLC	0.125	55/708 30/698 8/541	65.375
B 00004475	CHARLES F HUNSINGER AND HATTIE L HUNSINGER H/W PETROLEUM DEVELOPMENT CORPORATION PDC MOUNTAINEER, LLC	PETROLEUM DEVELOPMENT CORPORATION PDC MOUNTAINEER, LLC RIVER RIDGE ENERGY, LLC	0.125	58/19 30/698 8/541	91.45
C 00005202	KIM R ROGERS MARRIED DEALING IN HER SOLE AND SEPARATE PROPERTY PDC MOUNTAINEER, LLC	PDC MOUNTAINEER LLC RIVER RIDGE ENERGY, LLC	0.15	65/103 8/541	53.659
C 00005203	RICHARD A AND CRYSTAL A VINCENT HIS WIFE PDC MOUNTAINEER, LLC	PDC MOUNTAINEER LLC RIVER RIDGE ENERGY, LLC	0.15	65/115 8/541	53.659
C 00005204	RICHARD L DODD PDC MOUNTAINEER, LLC	PDC MOUNTAINEER LLC RIVER RIDGE ENERGY, LLC	0.15	65/112 8/541	53.659
D 00005176	COALQUEST DEVELOPMENT LLC PDC MOUNTAINEER, LLC	PDC MOUNTAINEER LLC RIVER RIDGE ENERGY, LLC	0.125	64/392 8/541	120
E 00008886	I L MORRIS	MAR KEY LLC	0.15	70/246	84.95
F 00003950	ELLADEAN RAILING WIDOW AND ETHEL E RAILING WIDOW PETROLEUM DEVELOPMENT CORPORATION PDC MOUNTAINEER, LLC	PETROLEUM DEVELOPMENT CORPORATION PDC MOUNTAINEER, LLC RIVER RIDGE ENERGY, LLC	0.125	42/200 30/698 8/541	41
G 00008076	DORIS C STOUT IRREVOCABLE TRUST DATED DECEMBER 27, 2012 DANIEL L STOUT TRUSTEE	MAR KEY LLC	0.16	69/126	73.5
H 00008278	DR FLORENCE KUNST HOBACK AND J HOLLAND HOBACK HER HUSBAND EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	EASTERN AMERICAN ENERGY CORPORATION AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC	0.125	40/656 314/429 36/618 37/8	379.21875
H	DR FLORENCE KUNST HOBACK AND J HOLLAND HOBACK HER HUSBAND	EASTERN AMERICAN ENERGY CORPORATION	0.125	37/663	165

Lease Number	Lessor	Lessee	Lease Royalty	Book/Page	Gross Acres
00008290	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H	TYGART EAST COMPANY	EASTERN AMERICAN ENERGY CORPORATION	0.125	38/599	165
00008292	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H	THE BOARD OF TRUSTEES OF DAVIS AND ELKINS COLLEGE	EASTERN AMERICAN ENERGY CORPORATION	0.125	38/616	165
00008293	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H	JESSIE R MASON (WIDOW) AND SAMUEL FRED MASON II (SINGLE)	EASTERN AMERICAN ENERGY CORPORATION	0.125	44/196	126
00008294	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H AND I	RITA M REYNOLDS WIDOW, REBECCA REYNOLDS SINGLE AND JOHN H REYNOLDS AND DIANA L REYNOLDS HIS WIFE	EASTERN AMERICAN ENERGY CORPORATION	0.125	45/56	383
00008343	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H AND I	MILDRED P BAZZLE AND HANSEL BAZZLE HER HUSBAND	EASTERN AMERICAN ENERGY CORPORATION	0.125	45/184	383

Lease Number	Lessor	Lessee	Lease Royalty	Book/Page	Gross Acres
00008344	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H AND I	ALONZO D PETERS AND MARY E PETERS HIS WIFE AND ALONZO D PETERS AS ATTORNEY IN FACT FOR WILDA P MALLOW	EASTERN AMERICAN ENERGY CORPORATION	0.125	45/176	383
00008345	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H AND I	MARY E COYLE WIDOW	EASTERN AMERICAN ENERGY CORPORATION	0.125	45/180	383
00008346	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H AND I	CONSTANCE P FROST UNMARRIED	EASTERN AMERICAN ENERGY CORPORATION	0.125	45/188	383
00008347	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	
H AND I	J STRIDER MOLER SINGLE	EASTERN AMERICAN ENERGY CORPORATION	0.125	45/505	383
00008348	EASTERN AMERICAN ENERGY CORPORATION ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC	ENERGY CORPORATION OF AMERICA GREYLOCK PRODUCTION LLC MAR KEY LLC		314/429 36/618 37/8	

Agreement to Drill, Complete and Operate Oil & Gas Wells

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

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

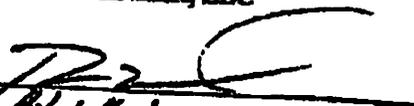
[Signature Page Follows]

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

MOUNTAINEER KEYSTONE LLC

By: 
Name: Robert Keel
Title: CEO

PDC MOUNTAINEER, LLC

By: 
Name: Robert Keel
Title: CEO

PDC MOUNTAINEER HOLDINGS, LLC

By: 
Name: Robert Keel
Title: CEO

Agreement to Drill, Complete and Operate Oil & Gas Wells

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

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

[Signature Page Follows]

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

ARSENAL RESOURCES LLC

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

RIVER RIDGE ENERGY, LLC

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

RIVER RIDGE HOLDINGS, LLC

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

4709101364



People Powered. Asset Strong.

October 1, 2021

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

RE: Ownership of Roadways; Armstrong II 214-216 Wells

Dear Mr. Martin:

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

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

Sincerely,

A handwritten signature in black ink that reads 'Jon Sheldon'. The signature is written in a cursive, flowing style.

Jon Sheldon
Chief Operating Officer

6031 Wallace Road Ext, Suite 300
Wexford, PA 15090
P: 724-940-1100
F: 800-428-0981
www.arsenalresources.com

12/03/2021

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION

Date of Notice Certification: 10-11-2021

API No. 47- 091 - _____
Operator's Well No. Armstrong II 215
Well Pad Name: Armstrong II

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>579006</u>
County: <u>Taylor</u>		Northing: <u>4349482.13</u>
District: <u>Court House</u>	Public Road Access: <u>Long Run - Route 36</u>	
Quadrangle: <u>Grafton</u>	Generally used farm name: <u>Armstrong</u>	
Watershed: <u>Tygart Valley</u>		

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

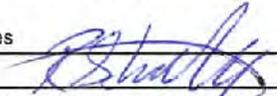
<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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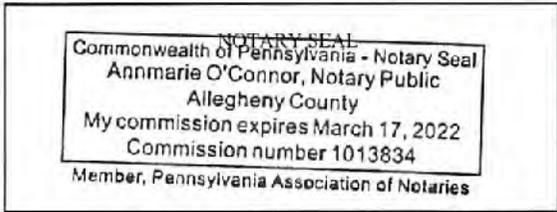
Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

Certification of Notice is hereby given:

THEREFORE, I Ross Schweitzer, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>Arsenal Resources</u>	Address:	<u>6031 Wallace Road Ext. Suite 300</u>
By:	<u>Ross Schweitzer</u> 		<u>Wexford PA 15090</u>
Its:	<u>Sr Director of Drilling, Construction and Permitting</u>	Facsimile:	<u>304-848-9134</u>
Telephone:	<u>724-940-1100</u>	Email:	<u>rschweitzer@arsenalresources.com</u>



Subscribed and sworn before me this 7th day of October 2021
Annmarie O'Connor Notary Public
 My Commission Expires 3/17/2022

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-6A
(9-13)

4709101364
API NO. 47-091 -
OPERATOR WELL NO. Armstrong II 215
Well Pad Name: Armstrong II

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 10-12-2021 Date Permit Application Filed: 10-12-2021

Notice of:

- PERMIT FOR ANY WELL WORK CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE REGISTERED MAIL METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s) ✓
Name: Robert L. Armstrong & Julie Armstrong
Address: 90 Freewill Drive
Flemington, WV 26347
Name: _____
Address: _____

COAL OWNER OR LESSEE ✓
Name: CoalQuest Development, LLC
Address: 100 Tygart Drive
100 Tygart Drive Grafton, West Virginia 26354
 COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance) ✓
Name: Robert L. Armstrong & Julie Armstrong
Address: Flemington, WV 26347
Bridgeport WV 26330
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: See attached
Address: _____

SURFACE OWNER(s) (Impoundments or Pits) ✓
Name: Robert L. Armstrong & Julie Armstrong
Address: Flemington, WV 26347
Bridgeport WV 26330

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

12/03/2021

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

WW-6A
(8-13)

API NO. 47-091 - 01364
OPERATOR WELL NO. Armstrong II 215
Well Pad Name: Armstrong II

Notice is hereby given by:

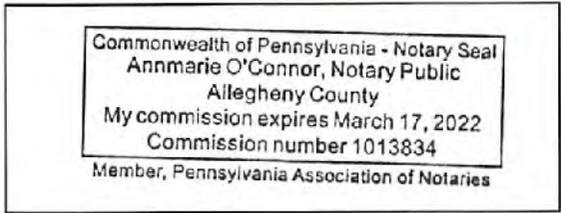
Well Operator: Arsenal Resources
Telephone: 740-584-1192
Email: rschweitzer@arsenalresources.com



Address: 6031 Wallace Road Ext, Suite 300
Wexford PA 15090
Facsimile: 304-848-9134

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



Subscribed and sworn before me this 7th day of October 2021
Annmarie O'Connor Notary Public
My Commission Expires 3/17/2022



Possible Water Purveyors within 1500'

TM 12 P 1 (DWELLING APPARENT)

Robert & Julie Armstrong ✓
90 Freewill Drive
Flemington, WV 26347

TM 12 P 90 ✓
Robert & Julie Armstrong
90 Freewill Drive
Flemington, WV 26347

TM 12 P 3 ✓
Robert & Patricia Carpenter
16 Belmont Drive
Whitehall, WV 26554

TM 12 P 33.1 ✓
Harry & Patricia Johnson
5750 Saltwell Road
Bridgeport, WV 26330

TM 12 P 33.2 ✓
Michael & Marlene Colebank
485 Long Run Road
Flemington, WV 26347

TM 12 P 33.3 ✓
Eugene & Marlee Cross
479 Long Run Road
Flemington, WV 26347

TM 12 P 35 ✓
Regina Rager
Timothy Corrothers
631 Long Run Road
Flemington, WV 26347

TM 12 P 35.1 ✓
Timothy Corrothers
631 Long Run Road
Flemington, WV 26347

TM 12 P 35.2 (DWELLING APPARENT)

Queen Marie Eleanor ✓
618 Long Run Road
Flemington, WV 26347

TM 12 P 34.1 (DWELLING APPARENT)

John Starkey ✓
Donna Goodnow
688 Long Run Road
Flemington, WV 26347

TM 12 P 34 (DWELLING APPARENT)

Timothy Corrothers ✓
631 Long Run Road
Flemington, WV 26347

TM 12 P 16 ✓
Gary Lee Bolyard et al
70 Brains Run Rd
Morgantown, WV 26508

12 Vanhorn Drive, Glenville, WV 26351
1412 Kanawha Boulevard East, Charleston, WV 25301
254 East Beckley Bypass, Beckley, WV 25801
304-462-5634

TM 12 P 15 ✓
Tine Freeze
428 Kerns Road
Flemington, WV 26347

TM 12 P 89 (DWELLING/CHURCH APPARENT) ✓
Long Run Fellowship Church
RR 1 Box 53
Flemington, WV 26347

TM 13 P 16.2 ✓
Long Run Fellowship Church
RR 1 Box 53
Flemington, WV 26347

TM 13 P 65 (DWELLING/CHURCH APPARENT) ✓
Long Run Fellowship Church
RR 1 Box 53
Flemington, WV 26347

TM 13 P 16.1 ✓
Allison Simmons
986 Long Run Road
Flemington, WV 26347

TM 13 P 71.1 (DWELLING APPARENT) ✓
Allison Simmons
986 Long Run Road
Flemington, WV 26347

TM 13 P 71.2 (DWELLING APPARENT) ✓
Joseph & Lacy Frey
1790 Long Run Road
Flemington, WV 26347

TM 13 P 13.1 ✓
Jerry & Marsha Welch
1040 Long Run Road
Flemington, WV 26347

TM 9 P 58 ✓
ARK Land Company
One City Place Dr Ste 300
Saint Louis, MO 63141

TM 9 P 60 ✓
ARK Land Company
One City Place Dr Ste 300
Saint Louis, MO 63141

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

Date of Notice: 6/11/2021 **Date of Planned Entry:** 6/21/2021

Delivery method pursuant to West Virginia Code § 22-6A-10a

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(s) ✓

Name: Robert L. Armstrong & Julia Armstrong

Address: 90 Freewill Drive
Flemington, WV 26347

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE ✓

Name: CoalQuest Development, LLC

Address: 100 Tygart Drive
100 Tygart DriveGrafton, West Virginia 26354

MINERAL OWNER(s)

Name: See Attached

Address: _____

*please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.17.27.23"N, 80.05.00.40"W</u>
County: <u>Taylor</u>	Public Road Access: <u>Long Run - Route 36</u>
District: <u>Court House</u>	Watershed: <u>Tygart Valley</u>
Quadrangle: <u>Grafton</u>	Generally used farm name: <u>Armstrong</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: <u>Arsenal Resources</u>	Address: <u>6031 Wallace Road Ext. Suite 300</u>
Telephone: <u>724-940-1100</u>	<u>Wexford PA 15090</u>
Email: <u>rschweitzer@arsenalresources.com</u>	Facsimile: <u>304-848-9134</u>

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Arsenal Resources
Armstrong II Well Site

WW-6A3 Notice of Entry for Plat Survey – Attachment Page 1 of 1

Drill Site (Surface & AST Site) 47-091-5-12-1

Robert L. Armstrong & Julie Armstrong ✓
90 Freewill Drive
Flemington, WV 26347

Mineral ✓

Robert L. Armstrong & Julie Armstrong
90 Freewill Drive
Flemington, WV 26347

Coal

CoalQuest Development, LLC
Attn: Chuck Duckworth
100 Tygart Drive
Grafton, West Virginia 26354

Surface (Road) 47-091-5-12-90

Robert L. Armstrong & Julie Armstrong ✓
Rt. 1 Box 121
Flemington, WV 26347

Mineral

Kim R. Rogers ✓
1672 Fairmont Avenue
Fairmont, WV 26554

Richard A. Vincent ✓
192 Hines Hill Road
Bridgeport, WV 26330

John Leo Dodd II & Jonathan Ian Dodd ✓
2403 Pace Avenue
Mount Vernon, IL 62864

Coal ✓

CoalQuest Development, LLC
Attn: Chuck Duckworth
100 Tygart Drive
Grafton, West Virginia 26354



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

D. Alan Reed, P.E.
State Highway Engineer

Jimmy Wriston, P. E.
Secretary of Transportation
Commissioner of Highways

October 6, 2021

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

Subject: DOH Permit for the Armstrong II Pad, Taylor County
Armstrong II 215 Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #04-2012-1100 which has been transferred to Arsenal Resources, LLC for access to the State Road for a well site located off Taylor County Route 34 SLS MP 3.4.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a DISTRICT WIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

A handwritten signature in blue ink that reads "Gary K. Clayton".

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

Cc: Ross Schweitzer
Arsenal Resources LLC
CH, OM, D-4
File

FRACTURING ADDITIVES			
	PURPOSE	TRADE NAME	CAS #
Additive #1:	Friction Reducer	WFRA-405	Proprietary
Additive #2:	Scale Inhibitor	SI-1000	7440-21-3
Additive #3:	Biocide	BIOCLEAR 2000	25314-61-8
Additive #4:	Gelling Agent	LGC-15	9000-30-0
Additive #5:	Corrosion Inhibitor	AI-300	111-76-2
Additive #6:	Gel Breaker	AP-One	7727-54-0
Additive #7:	Acid	HCl - 7.5%	7647-01-0

PROJECT INFORMATION

PROJECT NAME: ARMSTRONG II
 SURFACE OWNERS:
 ROBERT & JULIE ARMSTRONG
 24 1/2 CREEK
 COMPTON RESERVE #2
 TAYLOR COUNTY, WV
 TOTAL AREA: 200 ACRES
 DISTURBED AREA: 200 ACRES
 24 1/2 CREEK
 COMPTON RESERVE #2
 TAYLOR COUNTY, WV
 TOTAL PERMITS: 200 ACRES
 DISTURBED AREA: 200 ACRES



ARMSTRONG II FINAL SITE PLAN

ARSENAL RESOURCES

PROPOSED WELL NO.'S 214, 215, & 216.

SITUATE ON THE WATERS OF LONG RUN
 IN COURT HOUSE DISTRICT, TAYLOR COUNTY, WEST VIRGINIA.

SITE LOCATION:
 THE ARMSTRONG II WELL PAD IS LOCATED ON THE EAST SIDE OF TAYLOR COUNTY ROUTE 26 AND 300' AND LONG RUN, HAVING AN ENTRANCE THAT IS APPROXIMATELY 200 FEET NORTH ON COUNTY ROUTE 300 FROM COUNTY ROUTE 26.

PROPERTY DISTURBANCE COMPUTATIONS
 TOTAL DISTURBED AREA: 4.26 ACRES
 TOTAL RESTORED AREA: 4.26 ACRES

LOCATION COORDINATES

PROPOSED WELL PAD:
 LATITUDE: 38.291456 (NAD 83)
 LONGITUDE: 80.08312 (NAD 83)

SITE DISTURBANCE COMPUTATIONS

WELL PAD AREA: 4.26 ACRES
RESTORED AREA: 4.26 ACRES
TOTAL DISTURBED AREA: 4.26 ACRES
TOTAL RESTORED AREA: 4.26 ACRES

ENTRANCE PERMIT

APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL POLYMERIZATION (WVDEP) AND THE COMMISSIONER OF DEPARTMENT OF HEALTH SERVICES.

MISS UTILITY STATEMENT

UTILITY OF ALL UTILITIES HAS BEEN LOCATED AND THE LOCATION OF ALL UTILITIES HAS BEEN RECORDED ON THIS PLAN. THE DEVELOPER SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

FLOODPLAIN NOTE

NO PORTION OF THE WELL PAD OR ENTRANCE IS LOCATED WITHIN THE FLOODPLAIN OF LONG RUN. THE DEVELOPER SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

GEOTECHNICAL NOTE

A GEOTECHNICAL INVESTIGATION WAS PERFORMED ON 7/15/21 BY JAMES R. HARRIS, INC. AND REVEALS THAT THE SOILS ARE CLASSIFIED AS SANDY SILT CLAY. THE DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL POLYMERIZATION (WVDEP) AND THE COMMISSIONER OF DEPARTMENT OF HEALTH SERVICES.

ENVIRONMENTAL NOTE

A QUALITY MANAGEMENT PLAN (QMP) WAS DEVELOPED FOR THIS PROJECT TO MINIMIZE THE IMPACTS OF CONSTRUCTION AND OPERATION ON THE ENVIRONMENT. THE DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL POLYMERIZATION (WVDEP) AND THE COMMISSIONER OF DEPARTMENT OF HEALTH SERVICES.

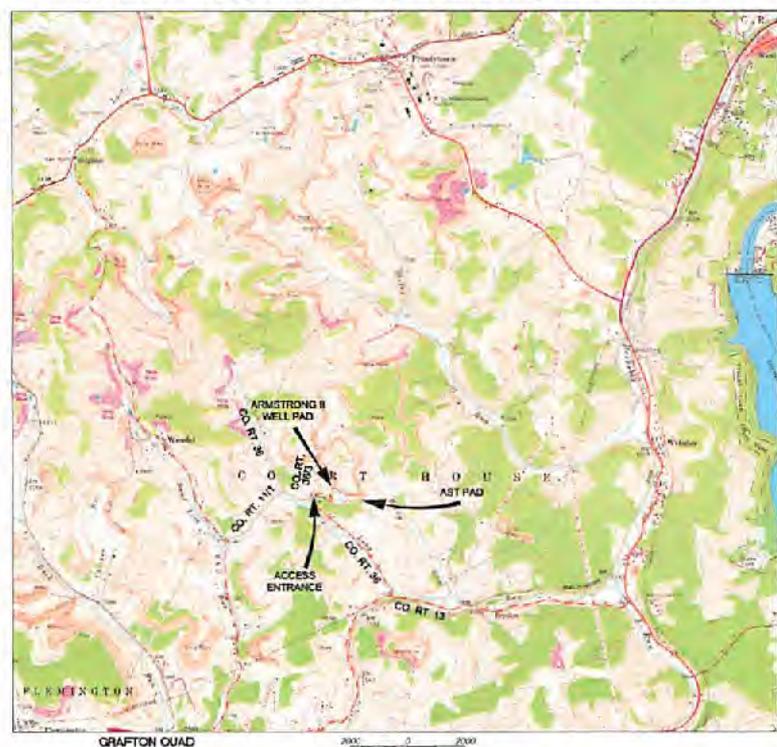
GENERAL DESCRIPTION

THE ARMSTRONG II WELL PAD AND ENTRANCE ARE DESCRIBED HEREIN TO BE USED FOR THE PROPOSED WELL PAD AND ENTRANCE.

RESTRICTIONS NOTES:

1. THERE ARE NO UTILITIES LOCATED WITHIN THE WELL PAD AREA.
2. THERE ARE NO UTILITIES LOCATED WITHIN THE ENTRANCE AREA.
3. THERE ARE NO UTILITIES LOCATED WITHIN THE DISTURBED AREA.
4. THERE ARE NO UTILITIES LOCATED WITHIN THE RESTORED AREA.
5. THERE ARE NO UTILITIES LOCATED WITHIN THE PROPOSED WELL PAD AREA.
6. THERE ARE NO UTILITIES LOCATED WITHIN THE PROPOSED ENTRANCE AREA.
7. THERE ARE NO UTILITIES LOCATED WITHIN THE PROPOSED DISTURBED AREA.
8. THERE ARE NO UTILITIES LOCATED WITHIN THE PROPOSED RESTORED AREA.

OLD NORTH HANCOCK ROAD
 BARRIED BY TAYLOR COUNTY ROAD
 ESTABLISHED BY TOPOGRAHY SURVEY
 DATE: 10/20/20



LIST OF DRAWINGS

- 1 - COVER SHEET
- 2 - NOTES
- 3 - NOTES
- 4 - NOTES
- 5 - ACCESS ROAD, WELL PAD & AST PAD
- 6 - ACCESS ROAD PROFILE
- 7 - ACCESS ROAD SECTIONS
- 8 - WELL PAD, AST PAD, & GROUNDLINE PROFILES
- 9 - RECLAMATION PLAN
- 10 - CONSTRUCTION DETAILS
- 11 - CONSTRUCTION DETAILS
- 12 - CONSTRUCTION DETAILS
- 13 - BID SCHEDULE

MISS Utility of West Virginia
 1-800-245-4848
 West Virginia State Law
 (Section XIV, Chapter 24-0)
 Requires that you call two
 business days before you dig in
 the state of West Virginia.
IT'S THE LAW!

EXISTING	PROPOSED
INDEX CONTOUR	INDEX CONTOUR
INTERMEDIATE CONTOUR	INTERMEDIATE CONTOUR
BOUNDARY LINE	BOUNDARY LINE
ROAD EDGE OF GRAVEL	ROAD EDGE OF GRAVEL
ROAD EDGE OF PAVEMENT	ROAD EDGE OF PAVEMENT
ROAD CENTERLINE	ROAD CENTERLINE
DITCHLINE	DITCHLINE
CULVERT	CULVERT
PARALLEL	PARALLEL
GATE	GATE
OVERHEAD UTILITY	OVERHEAD UTILITY
UNDERGROUND UTILITY	UNDERGROUND UTILITY
POWER POLE	POWER POLE
GPS MARK	GPS MARK
TELEPHONE LINE	TELEPHONE LINE
BOUNDARY LINE	BOUNDARY LINE
WATERLINE	WATERLINE
WATER METER ON SPOT	WATER METER ON SPOT
ONE WELL	ONE WELL
THREE WELLS	THREE WELLS
DELIMITED STREAM	DELIMITED STREAM
DELIMITED WETLAND	DELIMITED WETLAND
BUILDING	BUILDING
10' WETLANDS BUFFER	10' WETLANDS BUFFER
50' BUFFER	50' BUFFER
PROFILE LINE	PROFILE LINE
SECTION AND INDEX	SECTION AND INDEX
SECTION AND INTERMEDIATE	SECTION AND INTERMEDIATE
SECTION AND EXISTING GRADE	SECTION AND EXISTING GRADE
SECTION EXISTING GRADE	SECTION EXISTING GRADE
SPOT ELEVATION	SPOT ELEVATION
SUBGRADE ELEVATION	SUBGRADE ELEVATION
FINISHED GRADE ELEVATION	FINISHED GRADE ELEVATION
PROPOSED GRADE	PROPOSED GRADE
PROPOSED GRADE	PROPOSED GRADE
PROPOSED GRADE	PROPOSED GRADE



COVER SHEET
ARMSTRONG II
 FINAL SITE PLAN
 COURTHOUSE DISTRICT
 TAYLOR COUNTY, WV

DATE: 09-07-2021

SCALE: NOT TO SCALE

DESIGNED BY: C.P.M.

FILE NO: 9111

SHEET 1 OF 13

REV: 11-06-2021

OPERATOR

ARSENAL RESOURCES
 821 WALLACE ROAD EXT.
 SUITE 300
 WEEHOCK, PA 15096
 PHONE: (724) 943-1127

ENGINEER/SURVEYOR

SLS LAND & SURVEY DEVELOPMENT
 12 VANDORF DRIVE
 P.O. BOX 150
 GLENDALE, WV 26035
 PHONE: (201) 462-9524

