west virginia department of environmental protection

Office of Oil and Gas $60157^{\text {th }}$ Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Wednesday, November 15, 2017
WELL WORK PERMIT
Horizontal 6A / New Drill
ARSENAL RESOURCES LLC
6031 WALLACE ROAD EXTENSION SUITE 300
WEXFORD, PA 15090
Re: Permit approval for PRITT SOUTH 202
47-033-05901-00-00
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.


Operator's Well Number: PRITT SOVTH 202
Farm Name: IRA \& LAURA PRIPT
U.S. WELL NUMBER:47-033-05901-00-00

Horizontal 6A / New Drill
Date Issued: 11/15/2017
Promoting a healthy environment.

## 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 $\S 22-6 \mathrm{~A}-8 \mathrm{~g}(6)(\mathrm{B})$ 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.

## 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.

## STATE OF WEST VIRGINIA

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

6) Existing Pad: Yes or No No
7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s): Marcellus Shale, 7790.0 ff (TVD Heel) - 7790.0 ff (TVD Toee), 100ft, 0.5 psi/t Bese of Marcellus Shale, 7890.0 ff (TVD Heel) - 7890.0 f (TVD Toe)
8) Proposed Total Vertical Depth: $7,874 \mathrm{ft}$
9) Formation at Total Vertical Depth: Marcellus shale
10) Proposed Total Measured Depth: $13,746 \mathrm{ft}$
11) Proposed Horizontal Leg Length: $5,382.88 \mathrm{ft}$
12) Approximate Fresh Water Strata Depths: 400 ft

14) Approximate Saltwater Depths: 1400

16) Approximate Depth to Possible Void (coal mine, karst, other): None
17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine?

Yes $\qquad$ No X
(a) If Yes, provide Mine Info: Name:

Depth:
$\qquad$
Seam:
$\qquad$

Owner: $\qquad$

API NO. 47-033
OPERATOR WELL NO. Pritt South 202 Well Pad Name:

CASING AND TUBING PROGRAM

| TYPE | $\frac{\text { Size }}{(\text { in) }}$ | $\begin{aligned} & \frac{\text { New }}{} \\ & \underline{\text { or }} \\ & \text { Used } \end{aligned}$ | Grade | $\frac{\text { Weight per } \mathrm{ft}}{(\mathrm{lb} / \mathrm{ft})}$ | $\frac{\text { FOOTAGE: For }}{\underline{\text { Drilling (ft) }}}$ | $\frac{\text { INTERVALS: }}{\frac{\text { Left in Well }}{(\mathrm{ft})}}$ | $\begin{aligned} & \text { CEMENT: } \\ & \text { (Cu. Ft. }) / \mathrm{CTS} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conductor | 24 " | New | H-40 | 94\# | $80^{\prime}$ | $80^{\prime}$ | CTS |
| Fresh Water | 13.375" | New | J-55 | 54.5\# | 450' | 450' | CTS |
| Coal |  |  |  |  |  |  |  |
| Intermediate | 9.625" | New | J-55 | 40\# | 1500' | 1500' | CTS |
| Production | 5.5 " | New | P-110 | 20\# | 13,746' | 13,746' | TOC @ 1,350'MD |
| Tubing |  |  |  |  |  |  |  |
| Liners |  |  |  |  |  |  |  |


| TYPE | $\underline{\text { Size (in) }}$ | Wellbore Diameter (in) | $\frac{$ Wall  <br>  Thickness  <br>  (in) }{ n } | $\frac{\text { Burst Pressure }}{(\mathrm{psi})}$ | Anticipated Max. Internal Pressure (psi) | $\frac{\text { Cement }}{\text { Type }}$ | $\begin{aligned} & \frac{\text { Cement }}{\text { Yield }} \\ & \text { (cu. ft./k) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conductor | 24 " | $36^{\prime \prime}$ |  |  | 0 | T,peo $13 \times 4$ cancum | 1.20 |
| Fresh Water | 13.375" | 17.5" | 0.38" | 2730 | 900 | Class $4,3 \%$ cacic | 1.20 |
| Coal |  |  |  |  | 0 |  |  |
| Intermediate | 9.625" | 12.25" | $0.395^{\prime \prime}$ | 3950psi | 1500 |  | 1.29 |
| Production | 5.5" | 8.5-8.75 | $0.361^{\prime \prime}$ | 12,640psi | 9500 | Type 1 | 1.64/1.32 |
| Tubing |  |  |  |  | 5000 |  |  |
| Liners |  |  |  |  | N/A |  |  |

## PACKERS

| Kind: |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Sizes: |  |  |  | RECENED Gas |
| Depths Set: |  |  |  | Otnco OU and |

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 $36^{\prime \prime}$ hole to Conductor programmed depth then running $24^{\prime \prime}$ casing and grout 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 $171 / 2^{\prime \prime}$ hole and drill to fresh water casing (Surface) to the programmed depth, Run $13-3 / 8^{\prime \prime}$ casing and cement to surface. The rig will continue drilling a $12-1 / /^{\prime \prime}$ intermediate hole to the programmed depth, run $9-$ $5 / 8^{n \prime}$ casing and cement to surface. The rig with then continue to drill a $8-3 / 4^{\prime \prime}$ hole to a designed Pilot Hole Depth, log the well, and then set a cement kick-off plug from Pilot hole TD to designed kick-off point. Once the plug has cured, the plan is to then start drilling the curve and lateral section to the programmed total measured depth, run $51 / 2^{\prime \prime}$ 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 9,500 psi.
21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 29.78
22) Area to be disturbed for well pad only, less access road (acres): 9.15
23) Describe centralizer placement for each casing string:

24 "- No centralizers $133 / 8^{\prime \prime}$ - one bow spring centralizer on every other joint $95 / 8^{\prime \prime}$ - one bow spring centralizer every third joint from TD to surface $51 / 2^{\prime \prime}$ - one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 1,400'; there will be no centralizers from $1,400^{\prime}$ to surface.

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

$24^{\prime \prime}$ will be grouted from surface. The $13-3 / 8^{\prime \prime}$ casing will be cemented to surface with Class A cement and no greater than $3 \% \mathrm{CaCl}$ ( calcium chloride). The $9-5 / 8^{\prime \prime}$ casing will be cemented to surface with Type 1 cement, \& no greater than $3 \%$ calcium chloride. The 5-1/2" production string will be cemented back to $1,150^{\prime}\left(+/-200^{\prime}\right.$ above the casing shoe for the $9-5 / 8^{\prime \prime}$ ) with Type 1 or Class A cement retarder (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 a 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 to 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 to 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 stapefs of drill pipe, load the hole, pull three stands and load the hole. The weight indicator on the rig will be monitored for any PECEN Oil and gas occurrences of drag and if any are notices, we will re-run the previous stand of pipe pulled across and circulate $2 \times \mathrm{d}$ 据foffs up while watching the shakers for signs of cuttings. Once at the base of the curve, the string will be continuously rotated while 282017 pumping 2 X bottoms up. We will pull three stands and fill the hole until we reach the vertical section of the well.


## 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 Harrison County, WV prior to hydraulic fracturing at the following Arsenal Resources wells on the Pritt South 202 Pad.

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 $7,900^{\prime}$ TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Benson formation (approximately 4,500' 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 prefrac 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 $3,000 \mathrm{psi}$ or other necessary equipment for wellhead integrity.
4. Notify the OOG and Arsenal Resources if any changes in water, gas production, presfiffecoof Oil and Gas 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.

Click or tap to enter a date.
Alliance Petroleum Corporation
Address
State
RE: Click or tap here to enter text
Dear Sir/Madam,
Arsenal Resources has developed a Marcellus pad Pritt South 201 Pad, located in Harrison 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 $7,900^{\prime}$ 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 Pritt South 201 Pad during the Quarter of 2017. We have identified conventional natural gas wells operated by your company within $500^{\prime}$ (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 $3,000 \mathrm{psi}$ 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 724-940-1218 with any questions or comments. You may also contact the WV Office of Oil and Gas at 304-926-0499.

Sincerely,

Kelly Davis
Permitting Specialist
$\angle 1028$ g 9nv


## DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

## FLUIDS/ CUTTINGS DISPOSAL \& RECLAMATION PLAN

Operator Name Arsenal Resources
OP Code 494519412
Watershed (HUC 10) Beards Run \& Pigtail Run
Quadrangle Brownton
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes $\square$ No $\square$ Will a pit be used? Yes $\boxed{\square}$ No $\square$

If so, please describe anticipated pit waste: Produced Water
Will a synthetic liner be used in the pit? Yes $\square$ No $\square$ If so, what ml .? 60 ml
Proposed Disposal Method For Treated Pit Wastes:
Land Application
$\square$
$\square$
$\square$

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 drill ni 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. $\qquad$
-If oil based, what type? Synthetic, petroleum, etc. Synthetic
Additives to be used in drilling medium? Bentonite, Soap and Polymer sticks, Soda Ash, Sodium Bicarbonate, Defoarmer, 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? Advanced Disposal Services, Chestnut Valley 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.


My commission expires


## Arsenal Resources



## Seed Mixtures

## Temporary

Seed Type lbs/acre
Annual Rye 40
Field Bromegrass 40

| Winter Rye | 168 |
| :--- | :--- |
| Winter Wheat | 180 |

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 ( $L \times W \times D$ ) of the pit, and dimensions ( $L \times W$ ), and area in acreage, of the land application area.

Photocopied section of involved $7.5^{\prime}$ topographic sheet.

Plan Approved by:


Comments: Pre-seed / mulch all disturbed areas as soon as reasonably possible per regulation. Upgrade E\&S where needed per WV DEP E\&S manual, if

## necessary.



Title:OOG Inspector Field Reviewed? Yes $\qquad$ Date: $8 / 24 / 2017$
$\qquad$ No

# SITE SAFETY PLAN 

## Pritt South \#202 WELL PAD

## 911 Address:

3460 Green Valley Road
Bridgeport, WV 26330 SDCN
8/24/2017



## 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:

## * See Attached

AUG 282017

## Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.


Page 1 of 10


| $\stackrel{\text { G }}{\text { [Lease } 00003555 \text { (WVL00103.000)] }}$ | Lydia Drainer, widow | Union Carbide Corporation | 12.50\% | 853/91 | 380 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Union Carbide Corporation | Creslenn Oill Company |  | 897/286 |  |
|  | Creslenn Oill Company | Delta Producing Corporation |  | 925/629 |  |
|  | Delta Producing Corporation | Petroleum Corporation of America |  | $\begin{aligned} & 967 / 575 \\ & 977 / 168 \\ & \hline \end{aligned}$ |  |
|  | Petroleum Corporation of America | Petroleum Development Corporation |  | 977/153 |  |
|  | Petroleum Development Corporation | PDC Mountaineer, LLC |  | 1440/364 |  |
|  | PDC Mountaineer, LLC | River Ridge Energy, LLC |  | 59/1263 |  |
| H [Lease 00005712 (WVL002221.000) ] | John Stewart, Blanche Stewart, Hollie Stewart | Union Drilling, Inc. and Allerton Miller | 12.50\% | 1101/790 (Harrison) 71/432 (Barbour) | 100 |
|  | Allerton Miller | Union Drilling, Inc. |  | $\begin{gathered} \text { 98/11 (Barbour) } \\ 1107 / 1040 \text { (Harrison) } \\ 88 / 259 \text { (Barbour) } \end{gathered}$ |  |
|  | Union Drilling, Inc. | Equitable Resources Exploration, Inc. |  | $\begin{gathered} \text { 1189/1209 (Harrison) } \\ \text { 325/171 (Barbour) } \\ \hline \end{gathered}$ |  |
|  | Equitable Resources Exploration, Inc. | Equitable Resources Energy Company |  | 1199/642 (Harrison) 328/171 (Barbour) |  |
|  | Equitable Resources Energy Company | Fuel Resources Production and Development, Inc. |  | 116/81 (Barbour) |  |
|  | Fuel Resources Production and Development Company, Inc. | The Houston Exploration Company |  | 136/162 (Barbour) <br> 383/187 (Barbour) |  |
|  | The Houston Exploration Company | Keyspan Natural Fuel, LLC. |  | 1289/821 |  |
|  | Keyspan Natural Fuel, LLC. | The Houston Exploration Company |  | 1351/1260 (Harrison) |  |
|  | The Houston Exploration Company | Seneca-Upshur Petroleum, Inc. |  | 1367/1084 (Harrison) 404/381 (Barbour) 139/48 (Barbour) |  |
|  | Seneca-Upshur Petroleum, Inc. | Seneca-Upshur Petroleum, LLC |  | 1467/119 (Harrison) 59/1032 (Harrison) 447/129 (Barbour) 16/637 (Barbour) |  |
| [Lease 00003777 (WVL00260.000)] | James W. Thompson and Betty L. Thompson, his wife | Delta Producing Corporation | 12.5 | 949/548 | 51 |
|  | Delta Producing Corporation | Petroleum Corporation of America |  | 977/168 |  |
| . | Petroleum Corporation of America | Petroleum Development Corporation |  | 977/153 |  |
|  | Petroleum Developmef Corporation | PDC Mountaineer, LLC |  | 1440/364 |  |
|  | PDC Mountaingesp LiC | O River Ridge Energy, LLC |  | 59/1263 |  |
|  |  |  |  |  |  |

## 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 $\mathbf{3 0}$ 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 markeiing 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]

$$
\begin{aligned}
& \text { Office of Oil and Gas } \\
& \text { AUG } 282017 \\
& \text { Environmenartment of Protection }
\end{aligned}
$$

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: frul 7, hoperouf
Name: Joel E. Symơnds
Title: Vice President - Land

## RIVER RIDGE ENERGY, LLC

By:forl $\{$, Nams
Name: Joel E. Symonds
Title: Vice President - Land

## RIVER RIDGE HOLDINGS, LLC



## 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 ("Monntaineer 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 and gas leasehfliates with a common parent. Mountaineer Keystone was formed to operate oil Keystone agrees that it shall, in by PD, PDC Holdings and certain other affiliates. Mountaineer standards as they prevail in the area, drill complete and manner and in accordance with industry acreage owned by PDC or PDC Holdings from time to time os directed by gas wells on leasehold (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 simultaneonsly 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.


## I, Natalie E. Tennant, Secretary of State of the State of West Virginia, hereby certify that

an original or certified copy of an original of the Articles of Amendment to the Articles of Organization of

## SENECA-UPSHUR PETROLEUM, LLC

is filed in my office, signed and verified, as required by the provisions of West Virginia Code §31B-2-204 and conforms to law.

Therefore, I issue this

## CERTIFICATE OF AMENDMENT TO THE ARTICLES OF ORGANIZATION



Given under my hand and the Great Seal of the State of West Virginia on this day of

June 15, 2016


Secretary of State

## FILED

Natalie E. Tennant Secretary of State 1900 Kanawha Blvd E Bldg 1, Suite 157-K

Charleston, WV 25305
FILE ONE ORIGINAL
(Two if you want a filed stamped copy returned to you) FEE: $\mathbf{\$ 2 5 . 0 0}$
,


## WEST VIRGINIA

 ARTICLES OF AMENDMENT TO ARTICLES OF ORGANIZATION$* * * *$ In accordance with $\$ 31 \mathrm{~B}-2-204$ of the Code of West Virginia, the undersigned organization ${ }^{* * * *}$
adopts the following Articles of Amendment to its Articles of Organization:

1. The name of the organization is: Seneca-Upshur Petroleum, LLC
2. Date of filing original Articles of Organization with the WV Secretary of State:

## 2/12/1973

3. Change of Name Information or Text of Amendment:

Change of Name From:
To:
Other amendment(s) (attach additional pages to this application, if necessary)
Paragraph 9 of the Articles of Organization shall be amended to indicate the Company is "member-managed".
The sole managing member is PDC Mountaineer, LLC, 6031 Wallace Road Extension, Suite 300,
Wexford, PA 15090.
4. Contact name and number of person to reach in case of a problem with filing: (Optional, however, listing one may help to avoid a return or rejection of filing if there is a problem with the document.)
Name: Annmarie O'Connor
Business e-mail address, if any: aoconnor@mkeystone.com


Capacity in which he/she is signing
(example: President, Chairman, etc.)
*Important Legal Notice Regarding Signature: Per West Virginia Code $\$ 31$ B-2-209, Liability for false statement in filed
recird. If a record authorized or required to be filed under this chapter contains a false statement, one who suffers loss by
reliance on the statement may recover damages for the loss from a person who signed the record or caused another to sign it on
the person's behalf and knew the statement to be false at the time the record was signed.
Important Note: This form is a public document. Please do NOT provide any personal identifiable information on this form such as social security number, bank account numbers, credit card numbers, tax identification or driver's lieense numbers.


## I, Natalie E. Tennant, Secretary of State of the State of West Virginia, hereby certify that

the attached true and exact copy of the Articles of Amendment to the Articles of Organization of PDC MOUNTAINEER, LLC
are filed in my office, signed and verified, as required by the provisions of West Virginia Code §31B-2-204 and conform to law. Therefore, I issue this

## CERTIFICATE OF AMENDMENT TO THE CERTIFICATE OF AUTHORITY

changing the name of the limited liability company to
RIVER RIDGE ENERGY, LLC


Given under my hand and the
Great Seal of the State of West Virginia on this day of January 12, 2017


Secretary of State

## FILED

Penney Barker, Manager Corporations Division Tel: (304)558-8000 Fax: (304)558-8381 Website: way woos. com
Natalie F. Pennant Secretary of State 1900 Kanawha Blvd EIN THE OFFICE OF


Bldg 1, Suite 157 -KS
Charleston, WV 25305
file one original
fro if you wait a a filed stamped copy returned to you) FEE: $\$ 25.00$
WV APPLICATION FOR AMENDED CERTIFICATE OF AUTHORITY OF A LIMITED LIABILITY COMPANY
**n* In accordance with the provisions of the WV Cole, hereby applies for an Amended of the WV Code, the undersigned limited liability company **** hereby applies for in Amended Certificate of Authority and submits the following statement:

1. Name under which the limited liability company was authorized to transact business in WV:

PDC Mountaineer, LLC
2. Date Certificate of Authority was issued in West Virginia: $\qquad$
3. Change of Name Information t or Text of Amendment: (tl changing business name, you must attach one Certified Copy of the Name Change as filed in the home State of original organization.)
Change of Name From: PDC Mountaineer, LLC

River Ridge Energy, LL.C.

Name the organization elects to use in WV: River Ridge Energy, LLC
(Due to home State name not being available)
Other amendment (Attach additional pages if necessary.):
$\qquad$
$\qquad$
4. Contact information. (This is optional, however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)
Om Panda
Contact Name
(713) 546-7519

Phone Number
Business c-mail address: ${ }^{\text {om.pandya@lw.com }}$

## S. Signature information (See below "Important Legal Notice Regarding Signature):


 record authorized or required to be filed under this chapter contains a false statement, one who suffers loss by reliance on the statement may recover damages for the loss from a person who signed the record or caused mother to sign it on the person's behalf and knew the slatencmit
a nc cora was signed

Important Note: This form is a public document. Please $1 \mathbf{D O}$ NOI provide any personal identifiable information on this form such as social security number, bank account numbers, credit curd numbers, tax identification or driver's license numbers.

Perm LLI:-4

# Delaware 

Page 1
The First State

I, JEFFREY W. EULLOCK, SECRETARY OF STATE OF the State of DELAWARE, DO HEREBY CERTIEY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "PDC MOUNTAINEER, LLC", CHANGING ITS NAME FROM "PDC MOUNTAINEER, LLC" TO "RIVER RIDGE InNergy, LLC", FILDD in this office on the first day of DECEMBER, A.D. 2016, AT 1:35 $0^{\circ}$ CLOCK P.M.


[^0]CERTIPICATE OF AMENDMENT<br>TO<br>CERTIFICATE OR FORMATION<br>OF<br>PDC MOUNTAINEBR, LLC

THIS Certificate of Amendment to Certificate of Formation of PDC Mountaineer, LLC, a Delaware limited liability company (the "Company"), dated as of November30, 2016, has been duly executed and is being filed by the undersigned, as an authorized person of tho Company, in accordance with the provisions of 6 Del. C. 8\& 18-202 and 18-204, to amend the original Certificate of Formation of the Company, which was filed in the office of the Secretary of State of the State of Delaware on October 26, 2009 (the "Certificate").

FIRST. The name of the limited liability company is PDC Mountaineer, LLC.
SECOND. Article 1 of the Certificate is hereby deleted in its entirety and amended to read in full as follows:
"1. The name of the limited liability company is River Ridge Energy,
LLC."
IN WITNESS WHEREOF, the undersigned has duly executed this Certificate of Amendment to Certificate of Formation as of the date first-above written.


Name: David M, Wood
Title: Chief Executive Officer

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

## MOUNTAINEER KEYSTONE LLC



PDC MOUNTAINEER, LLC

By: Name? RLut Ral
Title: C60

## PDC MOUNTAINEER HOLDINGS, LLC

By:
Name: 'Rhort Korl
Title: caro


May 18, 2017

Mr. James Martin, Chief of Oil and Gas
West Virginia Department of Environmental Protection
$60157^{\text {th }}$ Street, SE
Charleston, WV 25304

RE: Ownership of Roadways; Pritt South Pad

Mr. Martin:

In preparation of filing a permit application for the above referenced well, the Title Department of Arsenal Resources has conducted a thorough title examination in order to determine the ownership of the oil and gas underlying all roadways crossed by the proposed wells. The findings of the title examinations show that the roadways crossed by the proposed wells are right of ways, with the oil and gas being owned and covered by the leaseholds identified on the plat for the proposed wells.

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

Sincerely,


Coty Brandon
Senior Title Attorney


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

## Date of Notice Certification:

API No. 47- 033 -
Operator's Well No. Prith South 202
Well Pad Name: Pritt South

## 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: | West Virginia |  | Easting: | 570,151.35 |
| :---: | :---: | :---: | :---: | :---: |
| County: | Harrison |  | Northing: | 4,344,361.17 |
| District: | Simpson | blic Road A |  | County Route 17 |
| Quadrangle: | Brownton | Generally used | rm name: | Ira Pritt |

Watershed
Beards Run \& Pigtail Run

Pursuant to West Virginia Code $\S 22-6 A-7(b)$, 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 $\S 22-6 \mathrm{~A}-11$ (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.

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:

OOG OFFICE USE ONLY

1. NOTICE OF SEISMIC ACTIVITY
or SEISMIC ACTIVITY WAS CONDUCTED
2. NOTICE OF ENTRY FOR PLAT SURVEY or $\quad$ NO PLAT SURVEY WAS CONDUCTED3. NOTICE OF INTENT TO DRILL or

## NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or

WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)

RECEIVED
Office of Cil and Gas
AUG 282017
WV Department of Environmental Protection

RECEIVED/ NOT REQUIRED

RECEIVED/ NOT REQUIRED


## 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 $W / L L A M$ VEIGEL, have read and understand the notice requirements within West Virginia Code $\S 22-$ 6A. I certify that as required under West Virginia Code $\S 22-6 A$, 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:
By:
Its:
Telephone:




## 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.

## 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: $8 / 25 / 17$ Date Permit Application Filed: $8 / 25 / 17$
Notice of:

(7) PERMIT FOR ANY<br>WELL WORK

## CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

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

## $\square$ PERSONAL $\square$ REGISTERED $\square$ METHOD OF DELIVERY THAT REQUIRES A SERVICE MAIL 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 crosion 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.
$\square$ Application Notice $\square$ WSSP Notice 旬E\&S Plan Notice $\square$ Well Plat Notice is hereby provided to:
$\square$ SURFACE OWNER(s)
Name: IraH. Pritt \& Laura E Pritt
Address: 3444 Green Valley Road
Bridgeport, WV 26330
Name:
Address:
$\square$ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: See Attached List
Address:

## Name:

Address:
Q SURFACE OWNER(s) (Impoundments or Pits)
Name: Oran Lee Warder
Address: 2381 Silverado Drive
Weatherford. TX 76087
$\square$ COAL OWNER OR LESSEE
Name: See Attached List
Address:

| COAL OPERATOR |  | RECEIVED <br> Name: <br> Address: |
| :--- | :--- | :--- |
| Office of Oil and Gas |  |  |

## Notice is hereby given:

WV Department of Environmental Protection
Pursuant to West Virginia Code $\$ 22-6 A-10(b)$, 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 $\$ 22-6 \mathrm{~A}-10$ (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 $60157^{\text {th }}$ Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/payes/defauli.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) Norwithstanding the forcgoing 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 sel 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 eflective date of this article. (e) The sectetary 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 divelling 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 $\S 22-6 \mathrm{~A}-10$ (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 comsemiscof vep location or construction of the applicant's proposed well work to the Secretary at:
Chief, Office of Oil and Gas
Department of Environmental Protection
$60157^{\text {th }}$ St. SE
WV Department of
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 $\$ 22-6 \mathrm{~A}-10(\mathrm{~g})$, 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.

Office RECEIVED

AUG 282017
WV Department of Environmental Protection

WW-6A
(8-13)

API NO. 47-033
OPERATOR WELL NO. Frit South 202
Well Pad Name: Frit South

Notice is hereby given by:
Well Operator: Arsenal Resources
Telephone: 724-940-1218
Email: keddy@arsenalresources.com


Address: 6031 Wallace Road Extension, 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.


## Arsenal Resources Pritt South Well Pad WW-6A Notice of Application (Attachment)

## Surface Owner(s) by (Road and/or Other Disturbance):

Ira H. Pritt \& Laura E. Pritt (Drill Site \& Access Road)
3444 Green Valley Road
Bridgeport, WV 26330
Della R. Riffle (Access Road)
11 Crim Lane
Bridgeport, WV 26330
Julia Crim (Access Road)
75 Crim Lane
Bridgeport, WV 26330
Sandy Crim (Access Road)
75 Crim Lane
Bridgeport, WV 26330

## Coal Owner, Operator or Lessee:

Heirs of Virginia A. Tetrick Estate $\mathrm{d} / \mathrm{b} / \mathrm{a}$, Tetrick Mineral Properties, J J .
$9216^{\text {th }}$ Street
Wheeling, WV 26003
I.L. Morris
P.O. Box 397

Glenville, WV 26351
Edith Gans Burns

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## Coal Owner, Operator or Lessee, continued:

Rebecca Turner, William \& Robert Snyder /<br>Title Building, Suite 400<br>110 Saint Paul Street<br>Baltimore, MD 21202<br>Mike Ross, Inc.<br>P.O. Box 219<br>Coalton, WV 26257<br>Spartan Exploration Company/<br>P.O. Box 316<br>Mt. Pleasant, MI 48858<br>Ryan C. Radtka<br>205 Mystic Drive<br>Morgantown, WV 26508<br>Helen M. Burton ,<br>P.O. Box 8179<br>Nutter Fort, WV 26301<br>CoalQuest Development, LLC<br>100 Tygart Drive<br>Grafton, WV 26354

## Water Purveyors:

## Kevin McNemar

1048 Indiana Ave.
Stonewood, WV 26301
Lucas Johnson etal C/O Thomas Johnson
RR 4 Box 560
Bridgeport, WV 26330

## Ira \& Laura Pritt

3444 Green Valley Road

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## Water Purveyors, continued:

Oran Warder etal
2381 Silverado Drive Weatherford, TX 76087

Renee Johnson
511 Beards Run Road
Bridgeport, WV 26330

Ronald \& Jody Crim
2825 Green Valley Road
Bridgeport, WV 26330

Julia Crim
75 Crim Lane
Bridgeport, WV 26330
Sandy Crim
75 Crim Lane


Bridgeport, WV 26330

Della R. Riffle
11 Crim Lane
Bridgeport, WV 26330
Ecosystem Investment
Partners III, LLC
2002 Clipper Park Road, Suite 201
Baltimore, MD 21211
John \& Cynthia Snider /
95 Beards Run Road
Bridgeport, WV 26330
Joyce Bailey etal
PO Box 4
Rosemont, WV 26424
Joshua Thompson /
143 Beards Run Road
Bridgeport, WV 26330

Protection

# STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL 

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.
Date of Notice: $8 / 25 / 17$ Date Permit Application Filed: $8 / 25 / 17^{8}$
Delivery method pursuant to West Virginia Code § 22-6A-16(b)
HAND
回 CERTIFIED MAIL
DELIVERY
RETURN RECEIPT REQUESTED
Pursuant to W. Va. Code $\& 22-6 \mathrm{~A}-16$ (b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: Provided, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: Provided, however, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):
Name: Ira H. Pritt \& Laura E. Pritt
Address: 3444 Green Valley Road
Eridgeport, WV 26330

Name:
Address:
Bridgeport, WV 26330

## Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

| State: | West Virginia | UTM NAD 83 | Easting: | 570,151.35 |
| :---: | :---: | :---: | :---: | :---: |
| County: | Harrison |  | Northing; | 4,344,361.17 |
| District: | Simpson | Public Road Ac |  | County Route 17 |
| Quadrangle: | Brownton | Generally used | m name: | Ira Pritt |

## This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at $60157^{\text {th }}$ Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

| Well Operator: | Arsenal Resources |
| :---: | :---: |
| Address: | 6031 Wallace Road Extension, Suite 300 |
| Wexford, PA 15090 |  |
| Telephone: | 724-940-1218 |
| Email: | keddy@arsenalresources.com |
| Facsimile: | 304-848-9134 |


| Authorized Representative: | William Veigel |  |
| :---: | :---: | :---: |
| Address: | 65 Professional Place, Suite 200 | RECEIVED |
| Bridgeport, WV 26330 |  | Office of Oil and Gas |
| Telephone: | 724-940-1218 | AUG 282017 |
| Email: | keddy(1)arsenalresources.com |  |
| Facsimile: | 304-848-9134 | WV Department of vironmental Protection |

## 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.

# STATE OF WEST VIRGINIA <br> DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION 

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: $8 / 25 / 17$ Date Permit Application Filed: $8 / 25 / 17$

## Delivery method pursuant to West Virginia Code § 22-6A-16(c)

回 CERTIFIED MAIL RETURN RECEIPT REQUESTED

HAND<br>DELIVERY

Pursuant to W. Va. Code $\S 22-6 A-16$ (c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter.
(d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

## Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):


## Notice is hereby given:

Pursuant to West Virginia Code $\S 22-6 \mathrm{~A}-16$ (c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

| State: | West Virginia |  | Easting: | 570,151.35 |
| :---: | :---: | :---: | :---: | :---: |
| County: | Harrison |  | Northing: | 4,344,367.17 |
| District: | Simpson | Public Road Ac |  | County Route 17 |
| Quadrangle: | Brownton | Generally use | m name: | Ira Pritt |

Watershed
Beards Run \& Pigtail Run

## This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by W. Va. Code $\S 22-6 \mathrm{~A}-10(\mathrm{~b})$ to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at $60157^{\text {th }}$ Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-andgas/pages/default.aspx.

| Well Operator: | Arsenal Resources |
| :--- | :--- |
| Telephone: | $\frac{724-940-1218}{\text { keddy@arsenalresources.com }}$ |
| Email: |  |

Address: 6031 Wallace Road Extension, 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(awv.gov.

## STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS VOLUNTARY STATEMENT OF NO OBJECTION

## Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

## Comment and Waiver Provisions

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: Provided, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return recejpt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

## VOLUNTARY STATEMENT OF NO OBJECTION

I, doyce Banloy etal Whana suter , hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through $\qquad$ , including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

| State: | Wast Viphe | UTM NAD 83 | Easting: | 8eo Attrathed |
| :---: | :---: | :---: | :---: | :---: |
| County: | Hemisan |  | Northing: | Bes Armathod |
| District: | 8 mpaen | Public Road Acc |  | County Rectio 17 |
| Quadrangle: | Browiton | Generally used | rm name: | maprot |

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

```
*Please check the box that applies
    SURFACE OWNER
\square SURFACE OWNER (Road and/or Other Disturbance)
\square SURFACE OWNER (Impoundments/Pits)
\square COAL OWNER OR LESSEE
\square COAL OPERATOR
⿴囗 WATER PURVEYOR
\square OPERATOR OF ANY NATURAL GAS STORAGE FIELD
```


## On 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 depprivgcyofficer@wv.gov.

# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION Division of Highways 

Jim Justice Governor

October 31, 2017
James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
$60157^{\text {th }}$ Street, SE
Charleston, WV 25304
Subject: DOH Permit for the Ira Pritt Well Pad, Harrison County
Pritt South 202
Dear Mr. Martin,
This well site will be accessed from a Permit \#04-2015-0617 transferred to Arsenal Resources for access to the State Road for a well site located off of Harrison County Route 77/6 SLS.

The 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 January 3, 2012.


Cc: Kelly Davis
ARSENAL Resources
CH, OM, D-4
File

| Pritt South 202 |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | 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 | Al-300 | $111-76-2$ |  |
| Additive \#6: | Gel Breaker | AP-One | $7727-54-0$ |  |
| Additive \#7: | Acid | HCI $-7.5 \%$ | $7647-01-0$ |  |



$947-933-95901$



## Office of Oil \& Gas

601 57th Street SE
Charleston, WV 25304-2345

## Permit Associated Impoundment / Pit Registration

Instruction: This form is to be used to register impoundments or waste pits, greater than $5,000 \mathrm{bbls}$, that are associated with a WVDEP, Office of Oil and Gas, well drilling permit. An associated impoundment or pit means it has been designed and included in the well drilling permit application, will follow the reclamation time frame of well work permit, and will be approved in conjunction with the well work permit. An impoundment ID number will be assigned by WVDEP, Office of Oil and Gas, to all impoundments and pits. This impoundment ID number will be sent to the applicant following receipt of this form by WVDEP. Please reference this impoundment ID number with all future correspondence and reference to this impoundment. Conditions as described in W.Va. State Rule §35-421 will be followed as it relates to impoundments and pits.

## Section 1 - Operator Information

| Operator Name: Arsenal Resources |  |  |
| :---: | :---: | :---: |
| Operator ID: 494519412 |  |  |
| Address: Street 65 Professional Place Suite 200 |  |  |
| City: Bridgeport | State: WV | Zip: 26330 |
| Contact Name: Larry "Eddie" Carder | Contact Title: | Regulatory Affairs Manager |
| Contact Phone: 304-629-6309 | Contact Email: | ecarder@arsenalresources.com |

## Section 2 - Engineering / Design Contractor Information

| Design will be contracted $\triangle$ Designed in-house $\square$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Company Name: Smith Land Surveying, Inc. \& Larson Design Group |  |  |  |  |
| Address: Street 12 Vanhorn Dr. |  |  |  |  |
| City: Glenville |  | State: WV | Zip: 26351 |  |
| Contact Name: Chris Moyers |  | Contact Title: | Sr. Design Coordinator |  |
| Contact Phone: 304-462-5634 |  | Contact Email: | cmoyers@slssurveys.com | RECEI |
| Certifying Professional Engineer: Bryan Pau | ling |  |  | - |
| Professional Engineer Registration Number: | 20057 |  |  | AUG 28 |

## Section 3 - Impoundment / Pit Information



047-033-05904
$047-033-059$
Office of Oil and Gas

Section 4 - Associated Well Numbers and API Numbers. List associated well numbers and API number. API numbers may not be assigned at time of registering this impoundment, if so list as pending.

| Well Number(s): | API Number(s) - If issued: |
| :--- | :--- |
| See Attached |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Section 5 - Required Information Checklist To Register Permit Associated

Impoundments or Pits. Include the following information and plans with application.
® Engineered Construction Plans, certified by WV Registered P.E.
© Erosion and Sediment Control Plan, certified by WV Registered P.E.
■ Reclamation Plan, certified by WV Registered P.E.

## Section 6 - Dam Standard Qualifying Evaluation

® The design of this structure has been evaluated by the applicant to determine it does NOT qualify to be defined as a dam, under W.Va Rule §47-34. If the design of this structure qualifies it to be defined as a dam, all permits regulating dams will be required prior to registering the structure with the Office of Oil and Gas. The dam standard, from the WVDEP, Div. Of Water and Waste, is available for review at: http://www.dep.wv.gov/WWE/ee/ds/Pages/default.aspx

Section 7 -Comments - Provide any additional comments concerning this project

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Office of Oil and Gas

## Section 8 - Application Certification

1 hereby certify that the information listed above is true and accurate. I understand that this pit/impoundment is to be constructed only in a location appropriate for the storage of water, including wastewater, and will be constructed in accordance with plans designed and certified by a West Virginia registered professional engineer. I further recognize that all required plans have been submitted to the Office of Oil and Gas. I understand that after construction, and prior to any fluid being placed in the pit/impoundment, it shall be inspected by a West Virginia registered professional engineer to ensure compliance with the certified design and construction plan, and that the professional engineer shall certify that this structure was constructed in accordance with design and construction plans. I understand that such certification shall be in writing to the Chief and that no fluids may be placed in the pit/impoundment until the certification has been filed with the chief. I agree that this pit/impoundment shall be constructed, maintained, operated and closed in accordance with all applicable laws and rules, including the requirements of W. Va. Code R § 35-4-2 .


Notary Seal:

## Section 9. Submittal Instructions

Submit original paper copy of application to:
West Virginia Department of Environmental Protection
Office of Oil and Gas
Impoundment Registration
$60157^{\text {th }}$ Street, SE
Charleston WW 25304

> COMMONWEALTH OF PENNSYLVANIA | NOTARIALSEAL |
| :---: |
| Kristen Ann Campbell, Notary Public |
| Armstrong Twp.. Lycoming County |
| My Commission Expires April 18, 2021 |
| MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES |

\[\)|  West Virginia Department of Environmental Protection  |
| :---: |
|  Office of Oil and Gas  |
|  Impoundment Registration  |
| $60157^{\text {th }} \text { Street, SE }$ |
|  Charleston WW 25304  |

\]

Email PDF file format of this application and all related engineering Plans to :
Depimpoundments@Wv.gov

IMP 1A - Section 4 - Associated Well Numbers and API Numbers

## Well Numbers

Pritt 201
Pritt 202
Pritt 203
Pritt 204
Pritt 205
Pritt 206
Pritt 207
Pritt 301
Pritt 211
Pritt 212
Pritt 213

Pritt 214

## Pritt 215

Pritt 216
Pritt 217
Pritt 311
API Numbers
Not Yet Assigned by the WV DEP


[^0]:    Sate of Dedanze
    seretary of Slato Dtrtion of Corporitions Dellemed 0133 Pal 12012016 FILED 01:35 PM 12012016 SR 2016636234 - FBENumber 4746039

