

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

Austin Caperton, Cabinet Secretary <u>www.dep.wv.gov</u>

Friday, June 14, 2019 WELL WORK PERMIT Horizontal 6A / New Drill

ARSENAL RESOURCES LLC 6031 WALLACE ROAD EXTENSION SUITE 603 WEXFORD, PA 15090

Re: Permit approval for FIBER TFP22 205 47-091-01360-00-00

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: FIBER TFP22 205

Farm Name: CFS FARMS LLC

U.S. WELL NUMBER: 47-091-01360-00-00

Horizontal 6A New Drill Date Issued: 6/14/2019

API Number: 47 091 01360

06/14/2019

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

- 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: 4709 01360 06/14/2019

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, cessation of drilling, sending an email to DEPOOGNotify@wv.gov.



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 Austin Caperton, Cabinet Secretary dep.wv.gov

ORDER ISSUED UNDER WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A

TO: Arsenal Resources 6031 Wallace Road Extension Suite 603

Wexford, Pa 15090

DATE: October 22, 2018 ORDER NO.: 2018-W-10

INTRODUCTION

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 et seq. to Arsenal Resources (hereinafter "Arsenal" or "Operator"), collectively the "Parties."

FINDINGS OF THE CHIEF

In support of this Order, the Chief hereby finds the following:

- 1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 et seq., and the rules and regulations promulgated thereunder.
- 2. Arsenal is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 6031 Wallace Road Extension Suite 603, Wexford, PA 15090.
- On July 20, 2018 Arsenal submitted a well work permit application identified as API# 47-091-01347. The proposed well is to be located on the Fiber TFP22 Pad in District 4 of Taylor County, West Virginia.
- 4. On July 20, 2018 Arsenal requested a waiver for Stream 7, Wetlands F, G, H and I outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-091-01347.

CONCLUSIONS OF LAW

- 1. West Virginia Code §22-1-6(d) requires, in part, that "in addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to...(3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing."
- 2. West Virginia Code §22-6A-2(a)(6) requires, in part, that "Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter."
- 3. West Virginia Code §22-6A-12(b) requires, in part, that "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 Office of Oil and Gas 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 Office of Oil and Gas 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."

ORDER

West Virginia Code §22-6A-12(b) requires, in part, that "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. The Office of Oil and Gas grants the request for a waiver for Stream 7, and Wetlands F, G, H and I from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-091-01347. The Office of Oil and Gas hereby ORDERS that Arsenal shall meet the following site construction and operational requirements for the Fiber TFP22 Well Pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24") in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Stream 7 shall be protected by diversion ditches and compost filter sock. This along with riprap aprons, temporary and permanent vegetative cover will prevent sediment from reaching the stream;
- d. Wetland F, G, H and I shall be protected by both silt fence and super silt fence. This along temporary and permanent vegetative cover will prevent sediment from reaching the wetlands;
- e. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- f. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- g. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- h. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- i. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- j. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½") rain within any twenty-four (24) hour period;
- k. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- 1. All records from inspections shall be maintained on site for the life of the project and be available upon request.

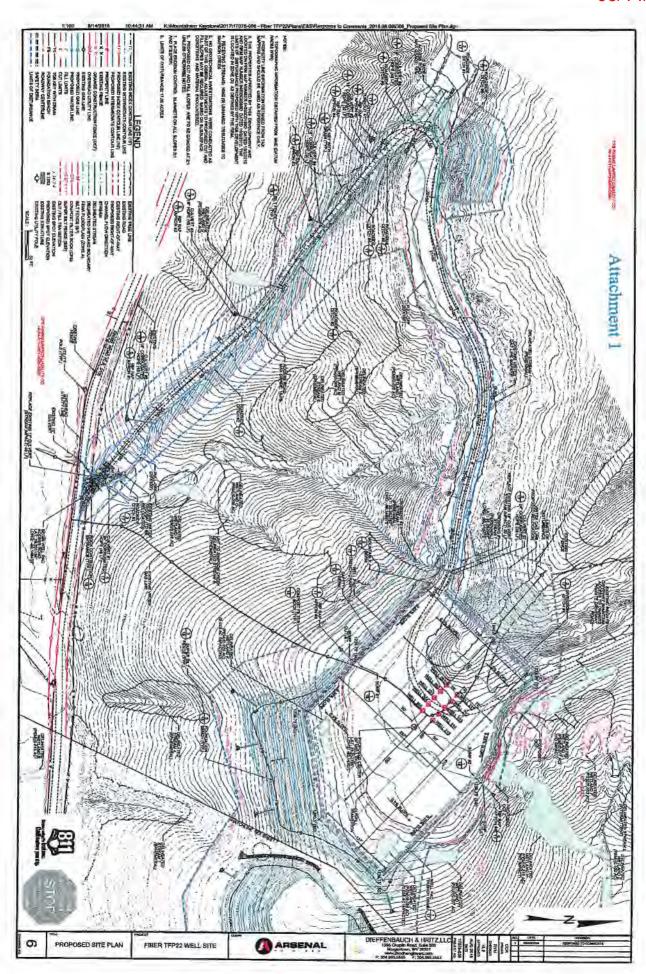
Thus ORDERED, the 22th day of October, 2018.

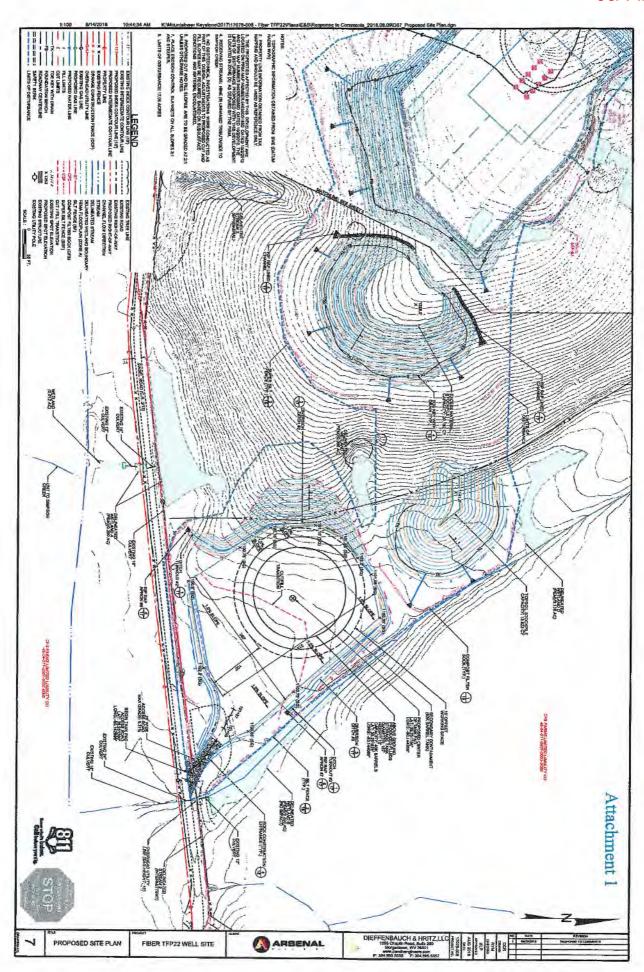
IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

JANES A MARIENI CHI







4709101347

11/3/14
Wetland and Perennial Stream Waiver Request

API Number: 40-091-

Operator's Well Number: Fiber TFP22 201

Well Operator:	Arsenal Resources	
Well Number:	Fiber TFP22 201	Well Pad Name: Fiber TFP22 Well Site
		Taylor Co, District 4, Rosemont WV 7.5 min Quad

Answer the questions below to request a waiver from West Virginia Department of Environmental Protection for any wetlands or perennial streams which lie within one hundred feet of proposed project Limit of Disturbance (LOD), which includes any erosion and sediment control devices to be used.

This waiver shall be requested pursuant to Chapter 22 Article 6A Section 12 of West Virginia Code, which states:

§22-6A-12(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.

§22-6A-12(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.

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11/3/14
Wetland and Perennial Stream Waiver Request

API Number: 40-091-

Operator's Well Number: Fiber TFP22 201

Answer in the space provided, or use additional pages as necessary to fully answer the questions below:

1. Describe the proposed project location, including unique identifying names of all wetlands, and the names of perennial streams for which the waiver is sought.

See the attached Stream and Wetland Report for stream/wetland names and locations. Waivers are being sought for Stream 7, Wetland F, Wetland G, Wetland H, and Wetland I.

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- 2. Justify the proposed activity by describing alternatives to this project that were considered.
 - a. Include a No-Action Alternative as to show "the future without the project"
 - b. Location Alternatives must be shown
 - c. Must demonstrate why a one hundred foot buffer cannot be maintained
 - d. Describe how the proposed project is the least environmentally damaging practicable alternative
 - a. A No-Action Alternative would eliminate this multi-well pad for Arsenal Resources and the reserves underground for the company in this area. Thus ultimately lowering the company's overall reserves, borrowing based ability and revenue stream, along with the landowners royalties and revenue.
 - b. There is no feasible alternatives for this site due to topographic and environmental constraints. The current design layout maximizes distance from streams & wetlands while maintaining minimum operation dimensions.
 - c. Due to topographic and environmental constraints the Access Road, Tank Pad, Well Pad, Excess Material Stockpiles, and Topsoil Stockpiles could not be moved to another location that was flat enough to provide the necessary soil capacity. Stream 7 and wetland F, G, H, and I occupy a high position along the ridge top. Therefore, it is not possible to avoid encroachment of the 100 foot setback. The current access road profile is a 15.0% grade and making it more steep would cause it to be unsafe for truck traffic.
 - d. The current design configuration is the least environmentally damaging, practicable alternative. Alternative pad configurations & locations explored result in more disturbance, more tree clearing and further the encroachments to streams & wetlands.

11/3/14
Wetland and Perennial Stream Waiver Request

API Number: 40-091-

Operator's Well Number: Fiber TFP22 201

3. Identify sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. This description should include all additional erosion and sediment control measures and devices that will be used.

The Fiber TFP22 Well Site limits of disturbance will be protected by Erosion & Sediment Control covering the entire perimeter of the site. E&S measures will be in place prior to commencement of construction and remain in place until greater than 70% vegetative cover is established. The streams and wetlands located within 100 feet of the LOD will be protected by utilizing the following controls:

Stream 7: Compost Filter Sock, Rip-Rap Aprons, and Temporary and Permanent Vegetative Cover will be located above the stream. The existing culvert across the access road is to be replaced with a larger diameter culvert, to help promote the flow thought the stream's culvert-ed section.

Wetland F: Silt Fence and Temporary and Permanent Vegetative Cover will be located above the wetland to protect from sediment flow during the initial top soil stripping phase.

Wetland G: Silt Fence, Orange Construction Fence, and Temporary and Permanent Vegetative Cover will be located above the wetland.

Wetland H: Silt Fence, Orange Construction Fence, and Temporary and Permanent Vegetative Cover will be located above the wetland.

- 4. Provide mapping, plans, specifications and design analysis for the preferred alternative to the project.
 - a. Specify in writing what additional controls, measures, devices, monitoring, etc. will be used to protect these wetlands and/or perennial streams for which the waiver is sought.

Additional E&S Controls that may be used during the construction of this site include:

Compost Filter Sock
Silt Fence
Super Silt Fence
Rip-Rap Lined Channels
Rip-Rap Aprons
Rock Construction Entrance
Roadway Ditches
Roadway Culverts
Temporary and Permanent Seeding & Mulching

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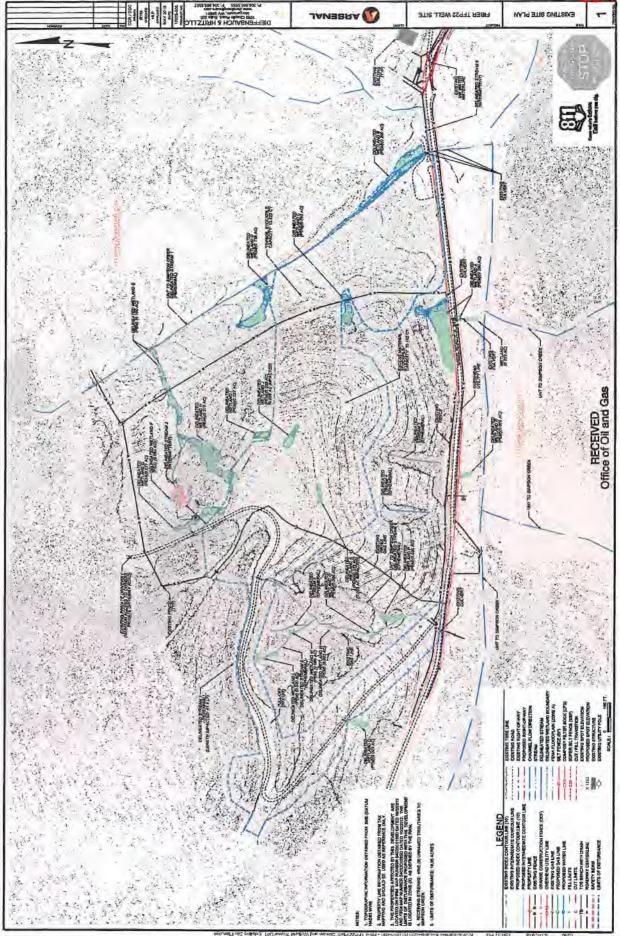
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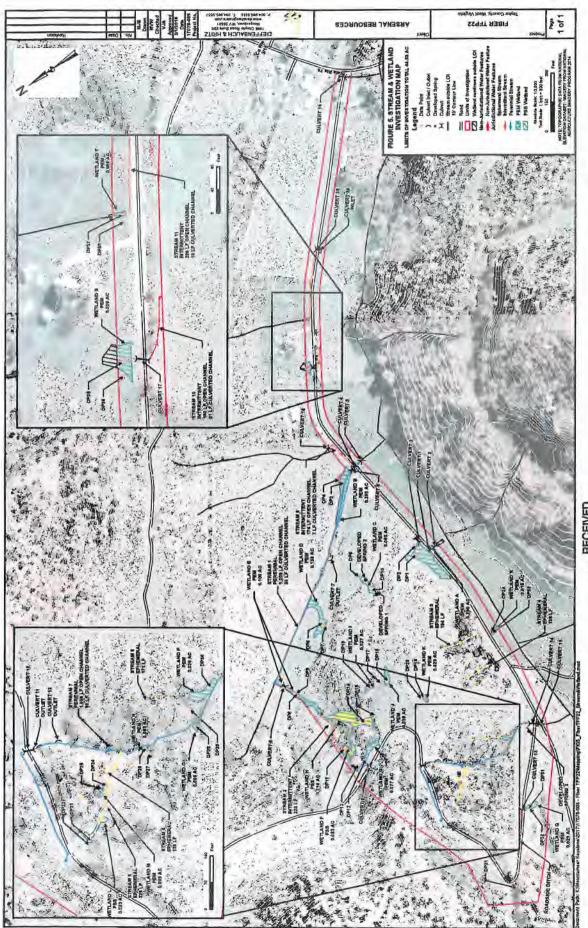
WV Department of Environmental Protection

All disturbed areas are to be seeded as soon as possible.

Specific implementation of these controls can be found in the Erosion and Sedimentation Control Plan submitted with the permit application.

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JUL 2 0 2018
WV Department of Environmental Protection

WW-6B (04/15)

4709 101360

API NO. 47-091 - 06/14/2019

OPERATOR WELL NO. Fiber TFP22 205 Well Pad Name: Fiber TFP22

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

1) Well Operator:	Arsenal Reso	urces	494519412	Taylor	Fleming	Rosemont
			Operator ID	County	District	Quadrangle
2) Operator's Well	Number: Fiber	r TFP22 205	Well Pad	Name: Fiber	TFP22	
3) Farm Name/Surf	ace Owner: C	FS Farms LLC	Public Road	Access: CR	3/13	
4) Elevation, curren	at ground: 12	252.0' Ele	vation, proposed p	ost-constructio	n: 1240.5	•
5) Well Type (a)	Gas X		Unde			
Oth	ier					
(b)I	f Gas Shallo	ow X	Deep			
	Horize	ontal X				
6) Existing Pad: Yes	s or No No					
7) Proposed Target Target Formation- N						ed Pressure- 0.5 psi/ft
8) Proposed Total V	ertical Depth:	7,756.5 ft.				
9) Formation at Total	al Vertical Dep	th: Marcellus	Shale			
10) Proposed Total	Measured Dept	th: 21,866.9 f	t.			
11) Proposed Horizo	ontal Leg Leng	th: 13,481.9 f	t.			
12) Approximate Fr	esh Water Stra	ta Depths:	20', 40', 55', 110'			
13) Method to Deter	rmine Fresh Wa	ater Depths: Of	fsetting wells reporte	d water depths (0	91-00220, 0	91-00221, 091-00222)
14) Approximate Sa	ltwater Depths	: 1,110'				
15) Approximate Co	oal Seam Depth	1S: Harlem - 408', Bakerstown - 4	98', Brush Creek – 588', Upper Freeport – 628	, Lower Freeport – 690', Upper Kittan	ning – 764', Middle Kittannin	g – 808', Lower Kittanning – 835', Clarion – 881'
16) Approximate De	epth to Possible	e Void (coal min	e, karst, other): N	one Known		
17) Does Proposed v	well location co	ontain coal seam	.S			
directly overlying or			Yes	No	None Kno	wn
(a) If Yes, provide	Mine Info: N	Name:				
	Γ	Depth:				
	S	leam:				Office of Oil and Gas
	C	Owner:				MAY 1 2010
					-	WV Departs
					Er	WV Department of vironmental Protection

WW-6B (04/15)

API NO. 47-091 - 06/14/2019

OPERATOR WELL NO. Fiber TFP22 205

Well Pad Name: Fiber TFP22

18)

CASING AND TUBING PROGRAM

ТҮРЕ	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	26	Used		102.7	90	90	CTS
Fresh Water	13.375	New	J-55	54.5	300	300	CTS
Coal							
Intermediate	9.625	New	J-55	40	1,500	1,500	CTS
Production	5.5	New	P-110	23	21,866	21,866	TOC @ 1,350
Tubing							
Liners							

Smit 1 Shayold 3-5-19

ТҮРЕ	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	26	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	0.451	14,520	9,500	Class A/50:50 Poz	1.29/1.34
Tubing					5,000		
Liners					N/A		

PACKERS

Kind:		
Sizes:		
Depths Set:		

WW-6B (10/14) 4709 101360

OPERATOR WELL NO. Fiber TFP22 205

Well Pad Name: Fiber TFP22

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 26" 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 with 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 ½" 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): 17.050
- 22) Area to be disturbed for well pad only, less access road (acres): 5.389
- 23) Describe centralizer placement for each casing string:

26"- 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 ½" - one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 1,700'; there will be no centralizers from 1,700 to surface.

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

26" 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 1,350' (+/-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 parent achieve a "right angle" set) during the plastic phase of the cement set-up.

Office of Oil and Gas

25) Proposed borehole conditioning procedures:

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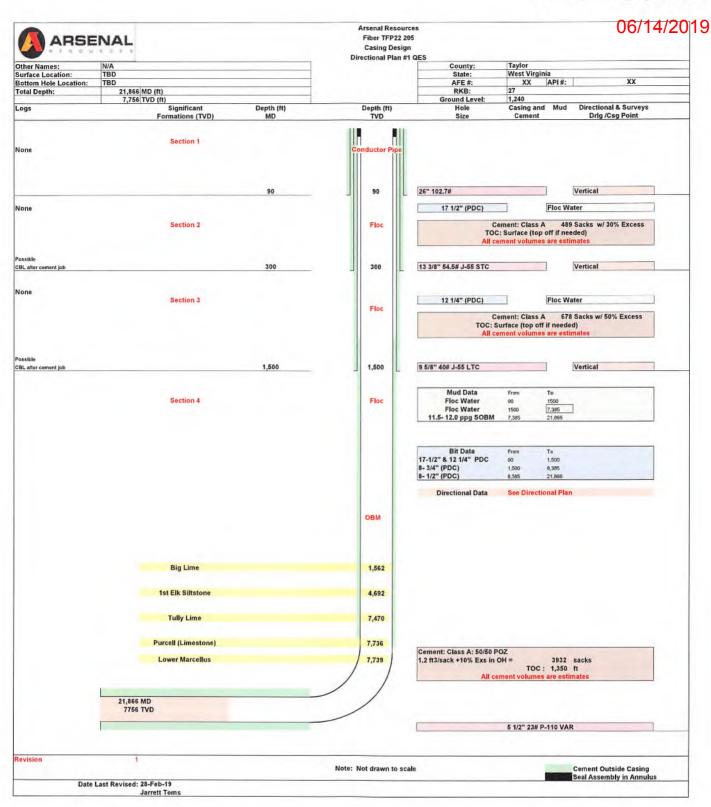
Top holes will be drilled with fresh water KOP. At KOP, the wellbore will be loaded with synthetic oil based with mental provide rotection barite-weighted mud system with such properties as to build a filter-cake on the face of the bore-hole. This will provide rotection lubricity as well as stabilizing 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.

	Well N	lame # Fiber TFP22 205
	CE	EMENT 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	Used to improve rheological properties of cement
	Dispersant	
Additive #7:	Cellulose	Help with fluid loss

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WW Department of Environmental Protection

WW-9 (4/16)

API Number 47 - 091 - Operator's Well No. Fiber TFP22 205

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) Simpson Creek	Quadrangle Rosemont
Do you anticipate using more than 5,000 bbls of water to co	omplete the proposed well work? Yes V No
Will a pit be used? Yes No V	
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	s:
Land Application	
Underground Injection (UIC Pe	ermit Number
Reuse (at API Number Various Off Site Disposal (Supply form	WW-9 for disposal location)
Other (Explain	The production of the producti
Will closed loop system be used? If so, describe: Yes, the close	ed 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 horiz	zontal)? 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 & Po	olymer Sticks, Soda Ash, Sodium Bicarbonate, Defoamer, Base Oil, Emulsifiers, Lime, Barite
Drill cuttings disposal method? Leave in pit, landfill, remo	
-If left in pit and plan to solidify what medium wil	
	fill Landfill/Wastemanagement, Westmoreland Sanitary Landfill, Apex Landfill
	nd Gas of any load of drill cuttings or associated waste rejected at any ided within 24 hours of rejection and the permittee shall also disclose
on August 1, 2005, by the Office of Oil and Gas of the West provisions of the permit are enforceable by law. Violation law or regulation can lead to enforcement action. I certify under penalty of law that I have person application form and all attachments thereto and that, but the second second control of the second control of	and conditions of the GENERAL WATER POLLUTION PERMIT issued at Virginia Department of Environmental Protection. I understand that the many of any term or condition of the general permit and/or other applicable and permit and and am familiar with the information submitted on this passed on my inquiry of those individuals immediately responsible for its true, accurate, and complete. I am aware that there are significant assibility of fine or imprisonment. RECEIVED Office of Oil and Gas
Company Official (Typed Name) William Veigel	
Company Official Title Designated Agent	MAY 1 2019
	WV Department of Environmental Protectio
Subscribed and sworn before me this 4th day o	
2000 · 0 100 ·	
My commission expires September 1	Notary Public OFFICIAL SEAL Notary Public, State Of West Virginia KELLY A DAVIS 2142 Elk City Road Jane Lew, WV 26378 My Commission Engines September 18, 2022

Operator's Well No. Fiber TFP22 205

	4 A Discoule d 17 050	Duamagatation m	6.8 Average
	nent: Acres Disturbed 17.050		on one one of the one
Lime 2.67	Tons/acre or to correct to pH	0.4	
Fertilizer type 10-2			
Fertilizer amount 10	000lb	s/acre	
Mulch 3-4	Tons/a	acre	
	Seed	d Mixtures	
Ter	nporary	Perm	anent
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 provided). If water from the p acreage, of the land application	it will be land applied, include di on area.	eation (unless engineered plans inclumensions (L x W x D) of the pit, an	uding this info have been nd dimensions (L x W), and
Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involve	oit will be land applied, include dispersion area. Treed 7.5' topographic sheet.	mensions (L x W x D) of the pit, an	uding this info have been and dimensions (L x W), and
Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involve Plan Approved by:	oit will be land applied, include dison area. The red 7.5' topographic sheet. The red 2.5' topographic sheet.	mensions (L x W x D) of the pit, an	nd dimensions (L x W), and
Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involv Plan Approved by: Re-seed a	it will be land applied, include dison area. red 7.5' topographic sheet. Augustic and mulch all disturbed	mensions (L x W x D) of the pit, an	asonably possible
Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involv Plan Approved by: Comments: Re-seed a per regulation. Up	it will be land applied, include disposarea. red 7.5' topographic sheet. Augustian and mulch all disturbed agrade erosion and se	d areas as soon as readiment control measur	asonably possible
Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involv Plan Approved by: Comments: Re-seed a per regulation. Up	it will be land applied, include disposarea. red 7.5' topographic sheet. Augustian and mulch all disturbed agrade erosion and se	mensions (L x W x D) of the pit, and the pit and the pit and the pit are as as soon as reason as	asonably possible
Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involv Plan Approved by: Comments: Re-seed a per regulation. Up	it will be land applied, include disposarea. red 7.5' topographic sheet. Augustian and mulch all disturbed agrade erosion and se	d areas as soon as readiment control measur	asonably possible
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Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involv Plan Approved by: Comments: Re-seed a per regulation. Up	it will be land applied, include disposarea. red 7.5' topographic sheet. Augustian and mulch all disturbed agrade erosion and se	d areas as soon as readiment control measur	asonably possible
Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involv Plan Approved by: Comments: Re-seed a per regulation. Up	it will be land applied, include disposarea. red 7.5' topographic sheet. Augustian and mulch all disturbed agrade erosion and se	d areas as soon as readiment control measur	asonably possible res where needed lanual.
Attach: Maps(s) of road, location, pit provided). If water from the p acreage, of the land application Photocopied section of involve Plan Approved by: Re-seed a per regulation. Up per the West Virginal	it will be land applied, include disposarea. red 7.5' topographic sheet. Augustian and mulch all disturbed agrade erosion and se	d areas as soon as readiment control measur	asonably possible



SITE SAFETY PLAN

FIBER TFP22 PAD, WELL #205

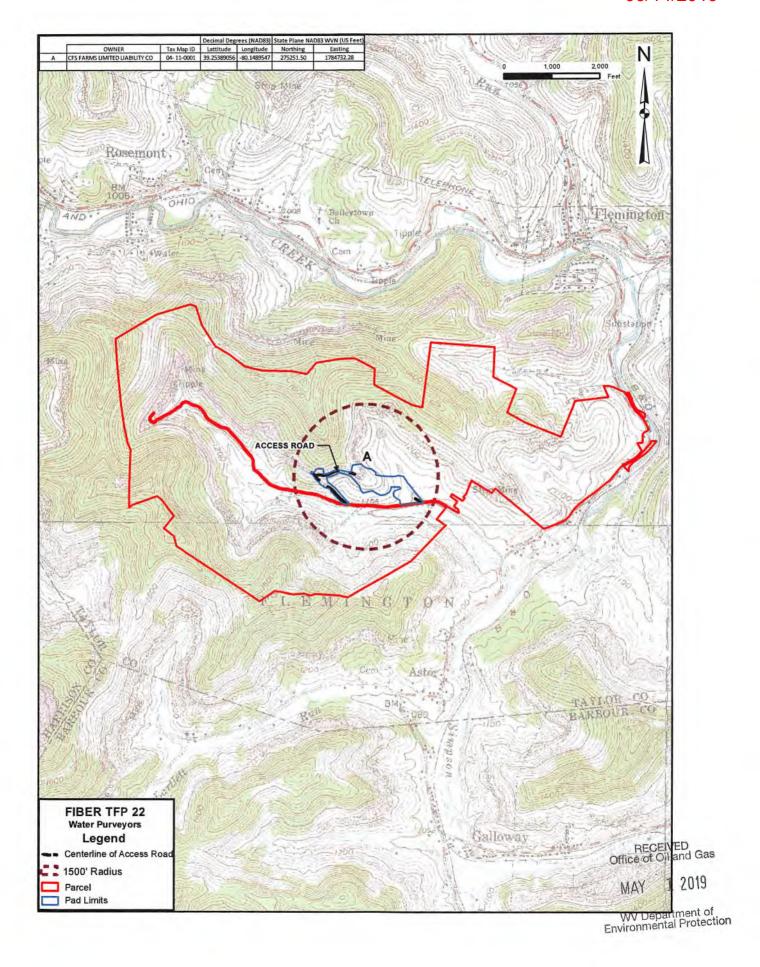
911 Address:

1232 Sinsel Hollow Rd 3-5-19

Flemington, WV 26347

RECEIVED Office of Oil and Gas

MAY 1 2019



Latitude: (NAD27)

REFERENCES TO PROPOSED HORIZONTAL ELL SURFACE LOCATION NTS

(14)

TOP HOLE

(NAD83-WVN) US SURVEY FT.

BOTTOM HOLE E) 1791109.874

(NAD83-LAT/LONG) DECIMAL TO 06/14/2019

E) -80,147171239

LANDING POINT

BOTTOM HOLE N) 39.217379429 E) -80.126105218

(UTM, NAD83 ZONE 17) METER

Longitude: (NAD27

TOP HOLE

LANDING POINT N) 4345123.967 E) 574035.529

BOTTOM HOLE N) 4341263.635

E) 575440.583

REFERENCE NOTES

(#)

FERENCE NOTES
Property lines as shown taken from deeds, tax maps, a field locations. A full boundary survey is not expressed implied. All bearings are based on grid North. Owners taken from public records Taylor & Barbour County. W Virginia Date 2019.
State Plane Coordinates & NAD83 LatiLong by differential submoter mapping grade GPS. There are no rainroads, dwellings, or agricultural buildin within 625 feet of center of pad.
No water wells found within 250 of the center of well pa

LEGEND

PROPOSED WELL LATERAL PROPOSED WELL TIE LINE STREAM EXISTING ROAD

SURVEYED SURFACE TRACT LINE

MINERAL TRACT BOUNDARY COUNTY BOUNDARY LINE PROPOSED WELL HEAD EXISTING WELL HEAD (Active M

EXISTING WELL HEAD (Plugger) EXISTING WELL HEAD (Abando) EXISTING WELL HEAD (Never D LANDING POINT/BOTTOM HOLE SURFACE OWNER

FILE#: 17078-008 SHEET#: 1 of 2

SCALE: 1" = 3000' TICK SCALE: 1" = 2000"

MINIMUM DEGREE

OF ACCURACY: 1/200

PROVEN SOURCE OF

ELEVATION: WV-RTN CORS STATION

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

#205

Herland B-Signed: EnNo. 232 SIONALSU

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

WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304



P.S. #2361: Herbert L. Parsons, III P.S.

DATE: MAY 31, 2019

FIBER TFP22 OPERATOR'S WELL #: # 205

API WELL #: 47 STATE

ELEVATION:

ACREAGE:

091 COUNTY

01360 64 PERMIT

Well Type: ☐ Oil ☐ Waste Disposal X Production ☐ Deep Storage WATERSHED: SIMPSON CREEK

COUNTY / DISTRICT: TAYLOR CO. FLEMINGTON DISTRICT

SURFACE OWNER: CFS FARMS LLC

OIL & GAS ROYALTY OWNER, HEIRS AND/OR SUCCESSORS OF THOMAS W. DRUDGERS OF THE ALMA MUIR TESTAMENT.

GOLEBANK, VIETTA FLEMING HAWKINS, HEIRS MIDDOR SUCC ACREAGE: TRUST, MICHAEL C. BORS OF A BROOKS FLEMI

REDRILL X FRACTURE OR STIMULATE X DRILL CONVERT DRILL DEEPER ☐ PLUG OFF FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON

☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE SPECIFY: TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 7,756.5' TMD: 21,866.9'

WELL OPERATOR: ARSENAL RESOURCES ADDRESS: 6031 WALLACE ROAD EXTENSION # 300 CITY: WEXFORD STATE: PA ZIP:

DESIGNATED AGENT: WILLIAM VEIGEL

ADDRESS: 65 PROFESSIONAL PLACE SUITE 200 CITY: BRIDGEPORT STATE: WV ZIP: 26330

1,240.5

QUADRANGLE: ROSEMONT, WV

905 ±

1.080 ±

BOTTOM HOLE SURVEYED 80° 07' 3 SURFACE HOLE SURVEYED 80° 07'

	OWNER INFORMATION			R PARCEL OWNER IN	
ID# PARCEL NUMBER 1 091-04-11-1 19 091-04-11-17.3 131 091-04-11-29 96 091-04-11-13 93 091-04-11-25 86 001-09-17-2 82 84 001-09-8-1 71 001-09-12-59 70 001-09-12-8	OWNER NAME CFS FARMS LIMITED LIABILITY CO SIMPSON JOHN E SIMPSON JOHN E RIFFLE JERALD L & LINDA SUR & SURV BECKWITH LUMBER CO WILFONG DENVER S JR & BRENDA S GALLOWAY SUBDIVISION BECKWITH LUMBER CO BECKWITH LUMBER CO INC GOFF ROBERT H JII & TINA M & HWS	1D# 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 21 29 41 53 58 61 66 68 69 72 73	PARCEL NUMBER 001-09-9-2 033-15-351-13 033-15-351-12 033-15-331-27 091-04-8-22 091-04-8-35 091-04-8-35 091-04-8-105 091-04-8-81 091-04-8-81 091-04-8-90.1 091-04-9-37.1 091-04-11-17 091-04-11-17 091-04-11-5.5 RIGHT-OF-WAY 001-09-13-5 001-09-12-10 001-09-12-9 001-09-12-9 001-09-12-9 001-09-12-7.1	STEWART FARM LI GRAFTON COAL C GRAFTON COAL C JOHNSON RENEE GRIPPIN JAMES S GRAY RANDALL & MARKS BETTY P COALQUEST DEVE BLOSSER PATRICK SIMMONS HUNTE STEWART BARBAF STEWART BARBAF SINSEL FRANCES E FELTON MICHAEL BARTLETT HILDA HOWARD CYNTHI ANDERSON DANIE WATKINS DOUGLA BECKWITH LUMBE COUNTY ROUTE 76 MORGAN DELORE COLLINS RONALD GALLOWAY SUBDI WOLFE LARRY M 8 MYER JON E SR & ALBERTA MCCAUL SLOGAR LORENA SMINK JEANNETTI SMINK JEANNETTI	OWNER NAME LC OO O & ELAINE M RITA LOPMENT LLC B ETAL R RA JEAN RA
REFERENCE NOTES 1. Property lines as shown taken from deeds, ta field locations. A full boundary survey is not implied. All bearings are based on grid North taken from public records Taylor & Barbour O Virginia Date 2019. 2. State Plane Coordinates & NAD83 LattLong differential submeter mapping grade GPS. 3. There are no railroads, dwellings, or agricult, within 625 feet of center of pad. 4. No water wells found within 250° of the center PROPOSED WELL LATE PROPOSED WELL LATE PROPOSED WELL TIE ESTREAM EXISTING ROAD. BUFFER PROPERTY LINE SURVEYED SURFACE MINERAL TRACT BOUN COUNTY BOUNDARY L. © ## PROPOSED WELL HEAD. EXISTING WELL HEAD. EXISTING WELL HEAD. EXISTING WELL HEAD. EXISTING WELL HEAD. A EXISTING WELL HEAD. EXISTING WELL HEAD. A EXISTING WELL HEAD. B EXISTING WELL HEAD. A EXISTING WELL HEAD. B EXISTING WELL HEAD. C LANDING POINTBOTTC.	expressed or Ownership County, West by Prai buildings of well pad FRACT LINE DARY NE DARY NE DARY NE N	777 79 83 85 87 92 94 95 97 98 100 102 104 110 111	001-09-12-7 001-09-12-5 001-09-9A-17 001-09-13-2 001-09-14 091-04-11-11 091-04-11-24 091-04-11-13.1 091-04-11-17.2 091-04-11-17.2 091-04-11-18 091-04-11-28 091-04-11-10	DRAINER CLINTON DUNN JOHN B & R RIFFLE BRANDON MCKINNEY THOM. SIMPSON JOHN E RADTKA RYAN C	DETERY RS) DOBBINS LOETTA BROWN JR GARY M & SURV & CANDACE IRREV TRUST JOSS A MATTHEW AS R JR & LINDA L NEIL(LF) ERIC S & TEPHABOCK KEVIN R TION INC.
FILE#: 17078-000 SHEET#: 2 of 2 SCALE: 1" = 3000 TICK SCALE: 1" = 2 MINIMUM DEGREE	THIS PLAT I KNOWLEDG INFORMATIO REGULATIO THE DEPAR PROTECTIO	S CORRECT SE AND BE ON REQUII ONS ISSUE ON. ON.	HEREBY CERTOTHE BEST TO THE BEST LIEF AND SHOWN AND PRESCRETE ENVIRONMENT PARSONS, III P.S.	T OF MY WS ALL THE ND THE RIBED BY ITAL	No. 2361 STATE OF SONAL SURINING
(+) DENOTES LOCATION UNITED STATES TOPO WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304		OF WEST	A PARTIE AND A PAR	OPERATOR'S WI	FIBER TFP22 ELL #: # 205
Well Type: Oil Wa X Gas Diq WATERSHED: SIMPSO COUNTY / DISTRICT: T SURFACE OWNER: CF OIL & GAS ROYALTY O	ON CREEK AYLOR CO. FLEMINGT(S FARMS LLC WNER. HEIRS ANDIOR SUCCESSORS OF THOM COLFRANK WETTA FLEMING HAWKING ROBERT CHESTER SINSEL, PATRICIA A DRILL CONVERT DRIL PLUG OFF FORMATION P CLEAN OUT & REPLUG C	AS W BROHARD, JR. J. MA MUIR TESTAMENTA. HERRS ANDORS SUCCES INN SALTIS, SANDRA PELL DEEPER ERFORATE N	OW CT GA GOSEPH L RIDER, AND NORTH A RY TRUST, MICHAEL C. SESSIORS OF A BROOKE FLEMING. CITIT, CHARLES E PRYOR REDRILL X FI NEW FORMATION [STATE LEVATION: 1 DUADRANGLE: 6 CREAGE: 90	,240.5' ROSEMONT, WV 5 ± 080 ±
WELL OPERATOR: ARSE ADDRESS: 6031 WALLAC	NAL RESOURCES E ROAD EXTENSION # 300 STATE: PA ZIP: 15090		DESIGNAT ADDRESS:	ED AGENT: WILLIA 65 PROFESSIONA	,756.5' TMD: 21,866.9' M VEIGEL L PLACE SUITE 200 TATE: WV ZIP: 26330

Potential Water Purveyor's

Project:

Fiber TFP22

County:

Taylor

State:

West Virginia

The following surface owners may have water supplies within 1,500 feet of the

Fiber TFP22 well pad location:

	Name	Tax Map ID	Address
Α	CFS FARMS LIMITED LIABILITY CO	04- 11-0001	PO Box 297, Flemington, WV 26347

RECEIVED Office of Oil and Gas

MAY 1 2019

WW-6A1 (5/13)

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
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	BOOK/F age

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

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

Well Operator: Arsenal Resources

By: William Veigel

Its: **Designated Agent**

06/14/2019

	Attach	Attachment to WW-6A1, Fiber TFP 205			
Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
(00005213)	Chester Sinsel and Frances Sinsel, His Wife	Union Drilling Inc	12.50%	35/488	1,080
	Union Drilling Inc	Equitable Resources Exploration Inc		9/427	
	Equitable Resources Exploration Inc	Equitable Resources Energy Company		10/79	
	Equitable Resources Energy Company	Enervest East Limited Partnership		22/181	
	Enervest East Limited Partnership	The Houston Exploration Company		27/99	
	The Houston Exploration Company	Seneca-Upshur Petroleum Inc		27/426	
	Seneca-Upshur Petroleum Inc	Seneca-Upshur Petroleum LLC		31/427	
19 (00003929)	Evelyn H Bailey, widow	Eastern American Energy Corporation	12.50%	40/547	127
	Eastern American Energy Corporation	Petroleum Development Corp		909/6	
	Petroleum Development Corp	PDC Mountaineer LLC		30/698	
	PDC Mountaineer LLC	River Ridge Energy, LLC		8/554	
19 (00003930)	Ruth Bailey, widow	Eastern American Energy Corporation	12.50%	40/566	127
	Eastern American Energy Corporation	Petroleum Development Corp		909/6	
	Petroleum Development Corp	PDC Mountaineer LLC		369/08	
	PDC Mountaineer LLC	River Ridge Energy, LLC		8/554	
19 (00003931)	Leone Casseday, widow	Eastern American Energy Corporation	12.50%	40/562	127
	Eastern American Energy Corporation	Petroleum Development Corp		909/6	
	Petroleum Development Corp	PDC Mountaineer LLC		30/698	
	PDC Mountaineer LLC	River Ridge Energy, LLC		8/554	
$131 \\ (00008187)_{\widetilde{S}}^{\widetilde{M}}$	John Simpson	Mar Key LLC	12.50%	69/190	12.11
(2) (2) (3) (4) (5) (5) (6) (7) (7) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9	Flo Ann Mayle, a married woman dealing in her sole and separate property	Mar Key LLC	12.50%	69/590	27.99
TOTAL PROPERTY OF A STATE OF A ST	<i>F</i> o.				

06/14/2019

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	62						400									250							
	33/252	3/176	4/381	16/488	36/618	37/8	40/242	46/347	98/11	325/219	328/171	116/81	383/187	404/381	447/129	45/443	46/347	98/11	325/219	328/171	116/81	383/187	
	12.50%						12.50%									12.50%							
Attachment to WW-6A1, Fiber TFP 205	Petro-Lewis Corporation	Partnership Properties Company	Eastern American Energy Corporation	Energy Corporation of America	Greylock Production LLC	Mar Key LLC	Cumberland & Allegheny Gas Company	Union Drilling Inc & Allerton Miller	Union Drilling Inc	Equitable Resources Exploration Inc	Equitable Resources Energy Company	Fuel Resources Production & Develop Company	The Houston Exploration Company	Seneca-Upshur Petroleum Inc	Seneca-Upshur Petroleum LLC	Cumberland and Allegheny Gas Company	Union Drilling Inc & Allerton Miller	Union Drilling Inc	Equitable Resources Exploration Inc	Equitable Resources Energy Company	Fuel Resources Production & Develop Company	The Houston Exploration Company	
Attach	Ethel A Tomblyn, single and Bessie T Knight, widow	Petro-Lewis Corporation	Partnership Properties Company	Eastern American Energy Corporation	Energy Corporation of America	Greylock Production LLC	Lillian Wilson Post, widow	Cumberland & Allegheny Gas Company	Allerton Miller	Union Drilling Inc	Equitable Resources Exploration Inc	Equitable Resources Energy Company	Fuel Resources Production & Develop Company	The Houston Exploration Company	Seneca-Upshur Petroleum Inc	Ada M Cleavenger and Gerald Cleavenger, her husband	Cumberland and Allegheny Gas Company	Allerton Miller	Union Drilling Inc	Equitable Resources Exploration Inc	Equitable Resources Energy Company	Fuel Resources Production & Develop Company	
	93 (00008288)						86, 82 (00005950)									82, 84 (00005920)					Enviro	Office MAY V Depara	PECEINA or Oil ar 1 20 rtment o

06/14/2019

	Attacl	Attachment to WW-6A1, Fiber TFP 205			
	The Houston Exploration Company	Seneca-Upshur Petroleum Inc		404/381	
	Seneca-Upshur Petroleum Inc	Seneca-Upshur Petroleum LLC		447/129	
71 (00005939)	Dow J Lewis and Dilla Elsie Lewis, his wife; E W Lewis and Erma G Lewis, his wife; Jessie L Van Hoose, widow; Lewis Eugene Van Hoose nad Marjorie Van Hoose, and Clarice L Trent, widow	Union Drilling Inc & Allerton Miller	12.50%	65/228	76
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration Inc		325/219	
	Equitable Resources Exploration Inc	Equitable Resources Energy Company		328/171	
	Equitable Resources Energy Company	Fuel Resources Production & Develop Company		116/81	
	Fuel Resources Production & Develop Company	The Houston Exploration Company		383/187	
	The Houston Exploration Company	Seneca-Upshur Petroleum Inc		404/381	
	Seneca-Upshur Petroleum Inc	Seneca-Upshur Petroleum LLC		447/129	
70 (00005886)	Charles F Hoffman & Lina B Hoffman	Union Drilling Inc & Allerton Miller	12.50%	47/107	81
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration Inc		325/219	
	Equitable Resources Exploration Inc	Equitable Resources Energy Company		328/171	
	Equitable Resources Energy Company	Fuel Resources Production & Develop Company		116/81	
	Fuel Resources Production & Develop Company	The Houston Exploration Company		383/187	
£	The Houston Exploration Company	Seneca-Upshur Petroleum Inc		404/381	
	Seneca-Upshur Petroleum Inc	Seneca-Upshur Petroleum LLC		447/129	
(518/0000) A Defension (518/00000) A Defension (518/000000) A Defension (518/00000) A Defension (518/000000) A Defension (518/00000) A Defension (518/000000) A Defension (518/000000) A Defensi	Martin Kaufman, single, by Barbar Hagan, Attorney in Fact	Mar Key LLC	12.50%	177/581	78.73
ľ					

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OF OF OIL AND Gas

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W Department of tal Protection

West Virginia Secretary of State — Online Data Services

Business and Licensing

Online Data Services Help

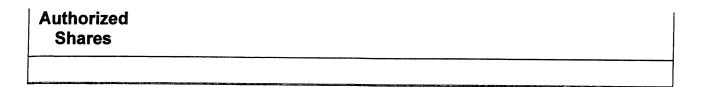
Business Organization Detail

NOTICE: The West Virginia Secretary of State's Office makes every reasonable effort to ensure the accuracy of information. However, we make no representation or warranty as to the correctness or completeness of the information. If information is missing from this page, it is not in the The West Virginia Secretary of State's database.

MAR KEY LLC

Organiza	ation Info	rmation						
Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason
LLC Limited Liability Company	7/11/2011		7/11/2011	Domestic	Profit			

Business Purpose	2111 - Mining, Quarrying, Oil & Gas Extraction - Oil and Gas Extraction - Crude Oil and Natural Gas Extraction	Capital Stock	
Charter County		Control Number	99Q1F
Charter State	W	Excess Acres	
At Will Term	Α	Member Managed	MBR
At Will Term Years		Par Value	



Addresses		
Туре	Address	
Designated Office Address	65 PROFESSIONAL PLACE SUITE 200 BRIDGEPORT, WV, 26330	
Mailing Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA	
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302	
Principal Office Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA	
Туре	Address	

Officers	
Туре	Name/Address
Member	ARSENAL RESOURCES ENERGY LLC 6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090
Organizer	PAUL M HERZING 560 EPSILON DR. PITTSBURGH, PA, 15238 USA
Туре	Name/Address

Annual Reports	Office Of Oil and Gas
Date filed	1 204
	Environmental Protection

Date filed	
5/8/2012	
6/28/2013	
4/28/2014	
6/30/2015	
6/20/2016	
3/30/2017	

For more information, please contact the Secretary of State's Office at 304-558-8000.

Tuesday, November 28, 2017 — 9:44 AM

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West Virginia Secretary of State — Online Data Services

Business and Licensing

Online Data Services Help

Business Organization Detail

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SENECA-UPSHUR PETROLEUM, LLC

Organization	Organization Information								
Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason	
LLC Limited Liability Company	2/12/1973		2/12/1973	Domestic	Profit				

Business Purpose	2111 - Mining, Quarrying, Oil & Gas Extraction - Oil and Gas Extraction - Crude Oil and Natural Gas Extraction	Capital Stock		
Charter County		Control Number	0	
Charter State	W	Excess Acres	0	
At Will Term	Α	Member Managed	MBR	
At Will Term Years		Par Value		
Authorized Shares				Office RECEI MAY
				Favironmental Prote

Addresses		
Туре	Address	
Designated Office Address	65 PROFESSIONAL PLACE SUITE 200 BRIDGEPORT, WV, 26330	
Mailing Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA	
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302	
Principal Office Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA	
Туре	Address	

Officers	
Туре	Name/Address
Member	RIVER RIDGE ENERGY, LLC 6031 WALLACE ROAD EXTENSION, SUITE 300 WEXFORD, PA, 15090
Organizer	TAMMY J OWEN 300 SUMMERS STREET, STE 1500 PO BOX 2107 CHARLESTON, WV, 25328 USA
Туре	Name/Address

DBA			
DBA Name	Description	Effective Date	Termination Date
KEYSPAN PRODUCTION & DEVELOPMENT COMPANY	TRADENAME	6/11/2004	
NATIONAL GRID	TRADENAME	8/17/2007	
NATIONAL GRID PRODUCTION AND DEVELOPMENT	TRADENAME	12/5/2008	5/9/2012
DBA Name	Description	Effective Date	Termination Date

Name Changes

Date		Old Name
	3/28/2011	SENECA-UPSHUR PETROLEUM, INC.
Date		Old Name

Date	Amendment
6/15/2016	AMENDMENT FILED CHANGING FROM A MANAGER-MANAGED CO. TO A MEMBER-MANAGED CO. >> REMOVED ROBERT KOZEL & STEPHEN A. BISHOP AS MANAGERS & ADDED SOLE MEMBER (C IMAGE).
3/28/2011	CONVERSION: FROM SENECA-UPSHUR PETROLEUM, INC. TO SENECA-UPSHUR PETROLEUM, LLC
7/25/1997	MERGER; MERGING LITTLE SWISS DRILLING COMPANY, A QUAL WV CORP AND PALACE VALLEY PETROLEUM COMPANY, A QUAL WV CORP WITH AND INTO SENECA-UPSHUR PETROLEUM, INC., A QUAL WV CORP, THE SURVIVOR.
Date	Amendment

Annual Reports	
Filed For	
2018	
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Date filed		

For more information, please contact the Secretary of State's Office at 304-558-8000.

Wednesday, July 18, 2018 — 1:13 PM

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Office of Oil and Gas

MAY 1 2019

WW Department of Protection 4/4

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 Holdings"), 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").
- 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

Name: Joel E. Symonds

Title: Vice President - Land

RIVER RIDGE ENERGY, LLC

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

RIVER RIDGE HOLDINGS, LLC

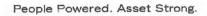
Name: Joel E. Symonds

Title: Vice President - Land

Office of Oil and Gas

MAY 1 2019

Environmental Protection





January 24, 2019

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; Fiber TFP-22 Unit

Dear 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 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,

Coty Brandon Title Manager

☐ RECEIVED

RECEIVED

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

		Operator's Well N	
	Contraction of the Contraction o	Well Pad Name:	Fiber 1FP22
Notice has	been given:	S 22 (A she Occuption has associated the required no	rtics with the Notice Forms liste
	tract of land as follows:	§ 22-6A, the Operator has provided the required pa	tiles with the Notice Politis lister
State:	West Virginia	HTMANAD 02 Easting: 573584.9	77
County:	Taylor	UTM NAD 83 Northing: 4345177.	
District:	Flemington	Public Road Access: CR 3/13	
Quadrangle:	Rosemont	Generally used farm name: Fiber	
Watershed:	Simpson Creek		
requirements Virginia Cod of this article	of subsection (b), section sixteen le § 22-6A-11(b), the applicant shall have been completed by the applicant		nce owner; and Pursuant to We notice requirements of section te
that the Ope	West Virginia Code § 22-6A, the O erator has properly served the require ECK ALL THAT APPLY	perator has attached proof to this Notice Certificatived parties with the following:	OOG OFFICE USE ONLY
☐ 1. NO	TICE OF SEISMIC ACTIVITY of	NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	RECEIVED/ NOT REQUIRED
■ 2. NO	TICE OF ENTRY FOR PLAT SUR	VEY or NO PLAT SURVEY WAS CONDUC	TED RECEIVED
☐ 3. NO	TICE OF INTENT TO DRILL or		
		NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or	RECEIVED/ NOT REQUIRED
		[1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	NOT REQUIRED

Required Attachments:

■ 5. PUBLIC NOTICE

■ 6. NOTICE OF APPLICATION

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.

Telephone:

Certification of Notice is hereby given:

THEREFORE, I William Veigel , 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: Arsenal Resources
By: William Veigel
Its: Designated Agent

Wexford, PA 15090 Facsimile: 304-848-9134

Email:

Address:

kdavis@arsenalresources.com

6031 Wallace Road Extension, Suite 300

NOTARY SEAL

724-940-1218

OFFICIAL SEAL
Notary Public, State Of West Virginia
KELLY A DAVIS
2142 Elk City Road
Jane Lew, WV 26378
ly Commission Expires September 18, 2023

Subscribed and sworn before me this 29th day of April

Notary Public

My Commission Expires_

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 deprivacyofficer@wv.gov.

Office of Oil and Gas

MAY 1 2019

Environmental Protection

WW-6A (9-13) API NO. 47- 091 - 06/14/2019
OPERATOR WELL NO. Fiber 1FP22
Well Pad Name: Fiber 1FP22

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 ming date of permit application.
Date of Notice: 4-29-19 Date Permit Application Filed: 4- Notice of:	30-19
☑ PERMIT FOR ANY ☐ CERTIFICATE OF APPL	ROVAL FOR THE
	N IMPOUNDMENT OR PIT
Delivery method pursuant to West Virginia Code § 22-6A-10	(b)
실기가 되었습니다. 이번 시간 시간 시간 사람들이 없었다.	
· 프로그램 경영 경영 시간 시간 시간 시간 시간 기업	OD OF DELIVERY THAT REQUIRES A
SERVICE MAIL RECEI	PT OR SIGNATURE CONFIRMATION
the surface of the tract on which the well is or is proposed to be located oil and gas leasehold being developed by the proposed well work, if described in the erosion and sediment control plan submitted pursual operator or lessee, in the event the tract of land on which the well proposed well work, if the surface tract is to be used for the placement, construint impoundment or pit as described in section nine of this article; (5) A have a water well, spring or water supply source located within one provide water for consumption by humans or domestic animals; and proposed well work activity is to take place. (c)(1) If more than three subsection (b) of this section hold interests in the lands, the applicant records of the sheriff required to be maintained pursuant to section eprovision of this article to the contrary, notice to a lien holder is not	r signature confirmation, copies of the application, the erosion and ne well plat to each of the following persons: (1) The owners of record of ted; (2) The owners of record of the surface tract or tracts overlying the the surface tract is to be used for roads or other land disturbance as int to subsection (c), section seven of this article; (3) The coal owner, oposed to be drilled is located [sic] is known to be underlain by one or cts overlying the oil and gas leasehold being developed by the proposed action, enlargement, alteration, repair, removal or abandonment of any any surface owner or water purveyor who is known to the applicant to thousand five hundred feet of the center of the well pad which is used to (6) The operator of any natural gas storage field within which the elements in common or other co-owners of interests described in the sight, article one, chapter eleven-a of this code. (2) Notwithstanding any notice to a landowner, unless the lien holder is the landowner. W. Va. rovide the Well Site Safety Plan ("WSSP") to the surface owner and any
☐ Application Notice ☐ WSSP Notice ☐ E&S Plan Notice	☑ Well Plat Notice is hereby provided to:
☑ SURFACE OWNER(s)	☑ COAL OWNER OR LESSEE
Name: CFS Farms LLC	Name: See Attached
Address: P.O. Box 297	Address:
Flemington, WV 26347	
Name:	□ COAL OPERATOR
Address:	Name:
	Address:
☐ SURFACE OWNER(s) (Road and/or Other Disturbance)	= CLIDE LOE OVALED OF WATER WELL
Name: CFS Farms LLC	SURFACE OWNER OF WATER WELL
Address: P.O. Box 297	AND/OR WATER PURVEYOR(s)
Flemington, WV 26347	Name: CFS Farms LLC Address: P.O. Box 297
Name:	Flemington, WV 26347
Address:	□ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
☐ SURFACE OWNER(s) (Impoundments or Pits)	
Name:	Name: Address:
Address:	12001.
2000,5554	*Please attach additional forms if necessary

OPERATOR WELL NO. Fibe 16/22 205

Well Pad Name: Fiber TFP22

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/oiland-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 control that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the terms

Environmental Protection

API NO. 47-091 OPERATOR WELL NO. Fiber 1FP22 205

Well Pad Name: Fiber TFP22

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 to 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 and Gas Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written 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

WV Department of Environmental Protection

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.

WW-6A (8-13) API NO. 47-091 - OPERATOR WELL NO. Fibe 06/21/4/2019
Well Pad Name: Fiber TFP22

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.

Office of Oil and Gas

MAY 1 2019

WW Department of Environmental Protection

WW-6A (8-13) API NO. 47- 091 - 06/14/2019
OPERATOR WELL NO. Fiber 17922 205
Well Pad Name: Fiber TFP22

Notice is hereby given by:

Well Operator: Arsenal Resources

Telephone: 724-940-1218

Email: kdavis@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 deprivacyofficer@wv.gov.

OFFICIAL SEAL
Notary Public, State Of West Virginia
KELLY A DAVIS
2142 Elk City Road
Jane Lew, WV 26378
My Commission Expires September 18, 2023

Wille SI

Subscribed and sworn before me this 29th day of April 2019.

Notary Public

My Commission Expires September 18, 2023

Office of Oil and Gas

Arsenal Resources Fiber TFP 22 205 WW-6A – Notice of Application, Attachment

Coal Owner or Lessee:

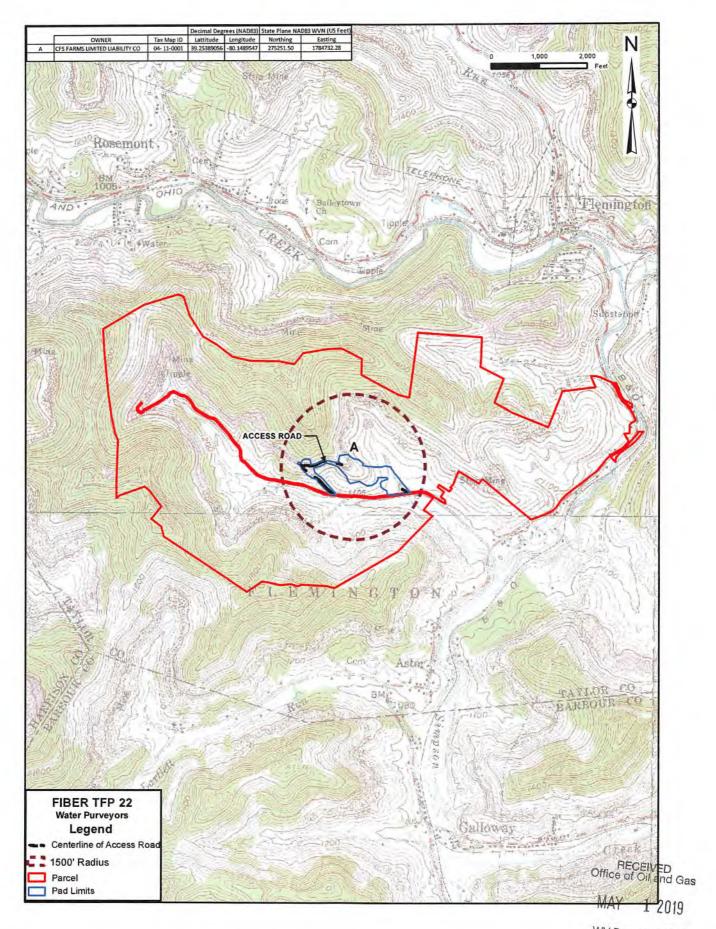
CoalQuest Development, LLC Attn: Chuck Duckworth 100 Tygart Drive \ Grafton, West Virginia 26354

Martha J. Bobella 10 Howard Street, Apt A. Grafton, WV 26354

OCMAHRR LLC 4620 Simpson Rd Grafton, WV 26354

Office of Oil and Gas

MAY 1 2019



Potential Water Purveyor's

Project:

Fiber TFP22

County:

Taylor

State:

West Virginia

The following surface owners may have water supplies within 1,500 feet of the

Fiber TFP22 well pad location:

	Name	Tax Map ID	Address
Α	CFS FARMS LIMITED LIABILITY CO	04- 11-0001	PO Box 297, Flemington, WV 26347

RECEIVED
Office of Oil and Gas

MAY 1 2019

WW-6A3 (1/12) Operator Well No. Fiber TFP22-205 4/2019

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

or on them o	requirement. Notice shall be pro	ovided at least SEVEN (7) days but no more than FORTY-FIVE (45) days prior to
entry Date of Notic	e: 11/15/2017 Date of Pl	anned Entry: 11/22/2017
Delivery met	hod pursuant to West Virginia	Code § 22-6A-10a
☐ PERSON	NAL	■ METHOD OF DELIVERY THAT REQUIRES A
SERVIC		RECEIPT OR SIGNATURE CONFIRMATION
on to the surfa but no more the beneath such to owner of mine and Sediment Secretary, when able the sur	ace tract to conduct any plat surver han forty-five days prior to such e tract that has filed a declaration pre- erals underlying such tract in the of Control Manual and the statutes a ich statement shall include contact face owner to obtain copies from	Prior to filing a permit application, the operator shall provide notice of planned entry ys required pursuant to this article. Such notice shall be provided at least seven days ntry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams arsuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any county tax records. The notice shall include a statement that copies of the state Erosion and rules related to oil and gas exploration and production may be obtained from the t information, including the address for a web page on the Secretary's web site, to the secretary.
	eby provided to:	E COM OWNER OF LEGGER
	CE OWNER(s)	COAL OWNER OR LESSEE
Name: CFS Far	ms LLC	Name: See Attachment
Flemington, WV 26	30x 297	Address:
	347	
Address:		MINERAL OWNER(s)
		Name: See Attachment
Name:		Address:
Address:		
Address:		*please attach additional forms if necessary
Notice is her Pursuant to W a plat survey of State: County:	reby given: /est Virginia Code § 22-6A-10(a) on the tract of land as follows: West Virginia Taylor	notice is hereby given that the undersigned well operator is planning entry to conduct Approx. Latitude & Longitude: 39.252738 & -80.146991 Public Road Access: County Route 3/13 to SR 76
Notice is her Pursuant to Wa plat survey of State: County: District:	reby given: Vest Virginia Code § 22-6A-10(a) on the tract of land as follows: West Virginia	notice is hereby given that the undersigned well operator is planning entry to conduct Approx. Latitude & Longitude: 39.252738 & -80.146991 Public Road Access: County Route 3/13 to SR 76 Watershed: West Fork
Notice is her Pursuant to Wa plat survey of State: County: District: Quadrangle: Copies of the may be obtain Charleston, W	reby given: //est Virginia Code § 22-6A-10(a) on the tract of land as follows: West Virginia Taylor Flemington Rosemont state Erosion and Sediment Contract from the Secretary, at the WV/V 25304 (304-926-0450). Copin	Approx. Latitude & Longitude: Public Road Access: Watershed: Generally used farm name: Ol Manual and the statutes and rules related to oil and gas exploration and production Department of Environmental Protection headquarters, located at 601 57 th Street, SE, es of such documents or additional information related to horizontal drilling may be
Notice is her Pursuant to W a plat survey of State: County: District: Quadrangle: Copies of the may be obtain Charleston, W obtained from	reby given: Vest Virginia Code § 22-6A-10(a) on the tract of land as follows: West Virginia Taylor Flemington Rosemont state Erosion and Sediment Contract of the Secretary, at the WV/V 25304 (304-926-0450). Coping the Secretary by visiting www.d	notice is hereby given that the undersigned well operator is planning entry to conduct Approx. Latitude & Longitude: 39.252738 & -80.146991 Public Road Access: County Route 3/13 to SR 76 Watershed: West Fork Generally used farm name: Fiber Tol Manual and the statutes and rules related to oil and gas exploration and production Department of Environmental Protection headquarters, located at 601 57th Street, SE,
Notice is her Pursuant to W a plat survey of State: County: District: Quadrangle: Copies of the may be obtain Charleston, W obtained from Notice is her	reby given: Vest Virginia Code § 22-6A-10(a) on the tract of land as follows: West Virginia Taylor Flemington Rosemont state Erosion and Sediment Contract from the Secretary, at the WV/V 25304 (304-926-0450). Copin the Secretary by visiting www.dereby given by:	Approx. Latitude & Longitude: Public Road Access: Watershed: Generally used farm name: Tol Manual and the statutes and rules related to oil and gas exploration and production Department of Environmental Protection headquarters, located at 601 57th Street, SE, es of such documents or additional information related to horizontal drilling may be ep.wv.gov/oil-and-gas/pages/default.aspx.
Notice is her Pursuant to W a plat survey of State: County: District: Quadrangle: Copies of the may be obtain Charleston, W obtained from Notice is her Well Operator	reby given: Vest Virginia Code § 22-6A-10(a) on the tract of land as follows: West Virginia Taylor Flemington Rosemont state Erosion and Sediment Contract from the Secretary, at the WV/V 25304 (304-926-0450). Copin the Secretary by visiting www.dereby given by: T: Arsenal Resources	Approx. Latitude & Longitude: Public Road Access: Watershed: Generally used farm name: Tol Manual and the statutes and rules related to oil and gas exploration and production Department of Environmental Protection headquarters, located at 601 57th Street, SE, es of such documents or additional information related to horizontal drilling may be Address: Address: 6031 Wallace Road Extension, Suite 300
Notice is her Pursuant to W a plat survey of State: County: District: Quadrangle: Copies of the may be obtain Charleston, W obtained from Notice is her	reby given: Vest Virginia Code § 22-6A-10(a) on the tract of land as follows: West Virginia Taylor Flemington Rosemont state Erosion and Sediment Contract from the Secretary, at the WV/V 25304 (304-926-0450). Copin the Secretary by visiting www.dereby given by:	Approx. Latitude & Longitude: Public Road Access: Watershed: Generally used farm name: Tol Manual and the statutes and rules related to oil and gas exploration and production Department of Environmental Protection headquarters, located at 601 57th Street, SE, es of such documents or additional information related to horizontal drilling may be ep.wv.gov/oil-and-gas/pages/default.aspx.

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 office of Gas 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 containing DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Arsenal Resources Fiber TFP22 205

WW-6A3 - Notice of Entry for Plat Survey, Attachment Page 1 of 2

Mineral Owner(s):

Robert Sinsel
32 Countryside Dr.
Hendersonville, NC 28792

Patricia Ann Saltis 649 Easy St. Bridgeport, WV 26330

Sandra Sinsel 450 Cherry St. Bridgeport, WV 26330

Charles E. Pryor 606 Stout St. Bridgeport, WV 26630

Thomas W. Brohard Jr. Heirs:

- % Charlotte McGinnis, 259 Littletown Quarter Wiliamsburg, VA 23185
- % Thomas W. Brohard III 81905 Mountain View Lane LaQuinta, CA 92253

Alma Muir Testamentary Trust

Alma May Brohard Muir C/O Woodlands Bank, 2450 Third St Williamsport, PA 17701

Michael C. Colebank Michael C. & Marlene Colebank 592 Black Cherry Dr Fairmont, WV 26554

Vietta Fleming Hawkins

Vietta Fleming & Frank Hawkins 613 Worthington Dr Bridgeport, WV 26330

Office of Oil and Gas

Arsenal Resources Fiber TFP22 205

WW-6A3 - Notice of Entry for Plat Survey, Attachment Page 2 of 2

Mineral Owner(s) continued:

A. Brooks Fleming Heirs:

- 1. % Verr M. Hinkle P.O. Box 2121 Buckhannon, WV 26201
- 2. % Jeffrey C. Hinkle P.O. Box 2663 Buckhannon, WV 26201
- 3.) % Judy Mae Rodgers 436 Clemens Road Anacoco, LA 71403-8406
- 4.) % Mark Lee Waldo 10 Gum Street Buckhannon, WV 26201
- 5.) % Michael Max Waldo 857 Fishing Camp Road Buckhannon, WV 26201

Coal Owner or Lessee:

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

Martha J. Bobella 10 Howard Street, Apt A. Grafton, WV 26354

OCMAHRR LLC 4620 Simpson Rd Grafton, WV 26354

Office of Oil and Gas

MAY 1 2019

Operator Well No. Fiber TFP22 205

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

and ded as later than the filling date of normit application

Delivery met	hod pursuant to West Virginia Coo	de § 22-6A-16(c)		
■ CERTI	FIED MAIL	☐ HAND		
	N RECEIPT REQUESTED	DELIVERY		
return receipt the planned of required to be drilling of a lidamages to the (d) The notice of notice.	requested or hand delivery, give the peration. The notice required by the provided by subsection (b), section norizontal well; and (3) A proposed the surface affected by oil and gas opens required by this section shall be given by the section of the provided by the section shall be given by the section of the provided by the section shall be given by the section of the provided by the provided by the provided by the section of the provided by the	surface owner whose land his subsection shall inclu- ten of this article to a surf- surface use and compen- erations to the extent the da- iven to the surface owner a	I will be used for de: (1) A copy ace owner whos sation agreemen amages are com	cation, an operator shall, by certified mail or the drilling of a horizontal well notice of of this code section; (2) The information see land will be used in conjunction with the at containing an offer of compensation for pensable under article six-b of this chapter, sted in the records of the sheriff at the time
	eby provided to the SURFACE OV			
(at the addres	s listed in the records of the sheriff at			
	110	XT.		
Name: CFS Far		Name:		
Name: CFS Far Address: P.O. Flemington, WV	Box 297 66347 Peby given:	Addres	S;	avell operator has developed a planned
Name: CFS Far Address: P.O. Flemington, WV : Notice is her Pursuant to Woperation on	Box 297 66347 Peby given:	Addres otice is hereby given that toose of drilling a horizonta	ne undersigned valued to the tra	well operator has developed a planned act of land as follows:
Name: CFS Far Address: P.O. Flemington, WV: Notice is her Pursuant to Woperation on State:	eby given: Yest Virginia Code § 22-6A-16(c), not the surface owner's land for the purp	Addres	ne undersigned valued to the tra	ect of land as follows:
Name: CFS Far Address: P.O. Flemington, WV : Notice is her Pursuant to W operation on State: County:	eby given: Vest Virginia Code § 22-6A-16(c), no the surface owner's land for the purp West Virginia	Addres otice is hereby given that toose of drilling a horizonta	ne undersigned valued on the tra Easting:	ct of land as follows: 573584.977
Name: CFS Far Address: P.O. Flemington, WV: Notice is her Pursuant to W	Box 297 26347 2654	Addres otice is hereby given that the state of drilling a horizonta of the UTM NAD 8 Public Road	ne undersigned valued on the tra Easting:	oct of land as follows: 573584.977 4345177.712
Name: CFS Far Address: P.O. Flemington, WV: Notice is her Pursuant to W operation on State: County: District:	Box 297 26347 2654	Addres otice is hereby given that the state of drilling a horizonta of the UTM NAD 8 Public Road	ne undersigned of well on the traces Northing:	oct of land as follows: 573584.977 4345177.712 CR 3/13
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Name: CFS Far Address: P.O. Flemington, WV 3 Notice is her Pursuant to W operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W to be provide horizontal we surface affect information r headquarters, gas/pages/def	eby given: Vest Virginia Code § 22-6A-16(c), not the surface owner's land for the purpose West Virginia Taylor Flemington Rosemont Simpson Creek Shall Include: Vest Virginia Code § 22-6A-16(c), the down W. Va. Code § 22-6A-10(b) the lil; and (3) A proposed surface use an ed by oil and gas operations to the elated to horizontal drilling may be located at 601 57th Street, SE, cault.aspx.	Addres otice is hereby given that toose of drilling a horizonta UTM NAD 8 Public Road Generally use his notice shall include: (1 to a surface owner whose and compensation agreeme extent the damages are contained from the Secret Charleston, WV 25304	ne undersigned valuell on the transition in Easting: Northing: Access: and farm name: Accepy of this are land will be understand in the containing are compensable underly, at the WV (304-926-0450)	code section; (2) The information required used in conjunction with the drilling of an offer of compensation for damages to the der article six-b of this chapter. Additional Department of Environmental Protection or by visiting www.dep.wv.gov/oil-and-extension . Suite 300

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.

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MAY 1 2019



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

July 18, 2018

Thomas J. Smith, P. E. Secretary of Transportation/ Commissioner of Highways

Jill M. Newman
Deputy Commissioner

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 Fiber TFP 22 Pad, Taylor County

Fiber TFP 22 205 Well Site

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permits #04-2018-0687 & 04-2018-0686 for the subject site to ARSENAL Resources for access to the State Road for the well site located off of Taylor County route 3/13 SLS.

The operator has signed a DISTRICT WIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT for DOH District 4 and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018.

Very Truly Yours,

Dary K. Clayton

Gary K. Clayton

Regional Maintenance Engineer Central Office Oil &Gas Coordinator

Central Office Oil &Gas Coord

Cc: Kelly Davis

ARSENAL Resources

CH, OM, D-4

File

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Office of Oil and Gas

MAY 1 2019

06/14/2019

WellName # Fiber TFP22 205					
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		

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Office of Oil and Gas

MAY 1 2019

EROSION & SEDIMENT CONTROL PLAN

FIBER TFP22 WELL SITE

TAYLOR COUNTY, WEST VIRGINIA FOR







THE PAD AND LOD (INCLUDING EAS CONTROL FEATURES) IS WITHIN 100 FEET OF A PERENNIA, STREAM OR WETLAND.

THE PAD AND LOD (INCLUDING ESS CONTROL FEATURES) IS NOT WITHIN 300 FEET TO A NATURALLY PRODUCING TROUT STREAM.

FEET TO A GROUNDWATER INTAKE OR PUBLIC WATER SLIPPLY.
THE WELL IS NOT WITHIN 250 FEET TO AN EXISTING WATER WELL OR DEVELOPE.
SPRING.

THE CENTER OF THE PAD IS AT LEAST 625 FEET FROM AN OCCUPIED DWELLING STRUCTURE.

THE CENTER OF THE PAD IS AT LEAST 625 FEET FROM AGRICULTUR BUILDINGS LARGER THAN 2500 SQUARE FEET.

ACCESS ROAD	4,528
WELLPAD	5,389
TANK PAD	3,135
STOCKPILE	3,998
TOTAL	17 0%





PROJECT NO. 17078-008 AUGUST 2018

DIEFFENBAUCH & HRITZ, LLC



	INDEX				
DRAWING NO.	TITLE				
1	TITLE SHEET				
2	GENERAL NOTES				
3	EXISTING SITE PLAN				
4	SOILS PLAN				
5	OVERALL SITE PLAN				
6-7	PROPOSED SITE PLAN				
6	ACCESS ROAD PROFILES				
9-10	WELL PAD ACCESS ROAD CROSS - SECTIONS				
11	TANK PAD ACCESS ROAD CROSS - SECTIONS				
12	WELL PAD CROSS - SECTIONS				
13	TANK PAD CROSS - SECTIONS				
13A	STOCKPILE CROSS - SECTIONS				
14	REVEGETATION PLAN				
15	SITE RESTORATION PLAN				
16-18	E&S DETAILS				
19	QUANTITIES				





MAY 1 2019

1

