

05/31/2019



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
www.dep.wv.gov

Tuesday, May 28, 2019
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

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

Re: Permit Modification Approval for FIBER TFP22 201
47-091-01347-00-00

Extend lateral from 10324.79' to 13148.1' with lease updates

ARSENAL RESOURCES LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before 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 201
Farm Name: CFS FARMS LLC
U.S. WELL NUMBER: 47-091-01347-00-00
Horizontal 6A New Drill
Date Modification Issued: 05/28/2019

Promoting a healthy environment.

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

1) Well Operator: Arsenal Resources 494519412 Taylor Fleming Rosemont
Operator ID County District Quadrangle

2) Operator's Well Number: Fiber TFP22 201 Well Pad Name: Fiber TFP22

3) Farm Name/Surface Owner: CFS Farms LLC Public Road Access: CR 3/13

4) Elevation, current ground: 1,252.0' Elevation, proposed post-construction: 1,240.5'

5) Well Type (a) Gas Oil Underground Storage

Other

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus Shale, Top- 7,684.0ft, Bottom- 7,773.0ft, Anticipated Thickness- 89ft, Associated Pressure- 0.5 psi/ft

8) Proposed Total Vertical Depth: 7,758.5 ft

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 21,822.8 ft

11) Proposed Horizontal Leg Length: 13,148.1 ft

12) Approximate Fresh Water Strata Depths: 20', 40', 55', 110'

13) Method to Determine Fresh Water Depths: Offsetting wells reported water depths (091-00220, 091-00221, 091-00222)

14) Approximate Saltwater Depths: 1,110 ft

15) Approximate Coal Seam Depths: Harlem - 408', Bakerstown - 498', Brush Creek - 588', Upper Freeport - 628', Lower Freeport - 650', Upper Kittanning - 764', Middle Kittanning - 808', Lower Kittanning - 835', Clarion - 881'

16) Approximate Depth to Possible Void (coal mine, karst, other): None Known

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No None Known

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(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____
WV Department of Environmental Protection

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	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	21,822	21,822	TOC @1,350
Tubing							
Liners							

Conrad L. Lippert
3-5-19

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	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

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Kind:				MAY 1 2019
Sizes:				WV Department of Environmental Protection
Depths Set:				

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

The well will be started with a conductor rig drilling a 36" hole to Conductor programmed depth then running 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 will then continue to drill an 8- 3/4" hole to a designed KOP. We will then start drilling the curve and lateral section to the programmed total measured depth, run 5 1/2" casing and cement according to the program.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

The well will be completed using a plug and perforation method and stimulated with a slickwater and sand slurry. The anticipated maximum rate will be 90 bpm and the maximum pressure will be 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 1/2" – one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 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 cement to set a "right angle" set) during the plastic phase of the cement set-up.

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25) Proposed borehole conditioning procedures:

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

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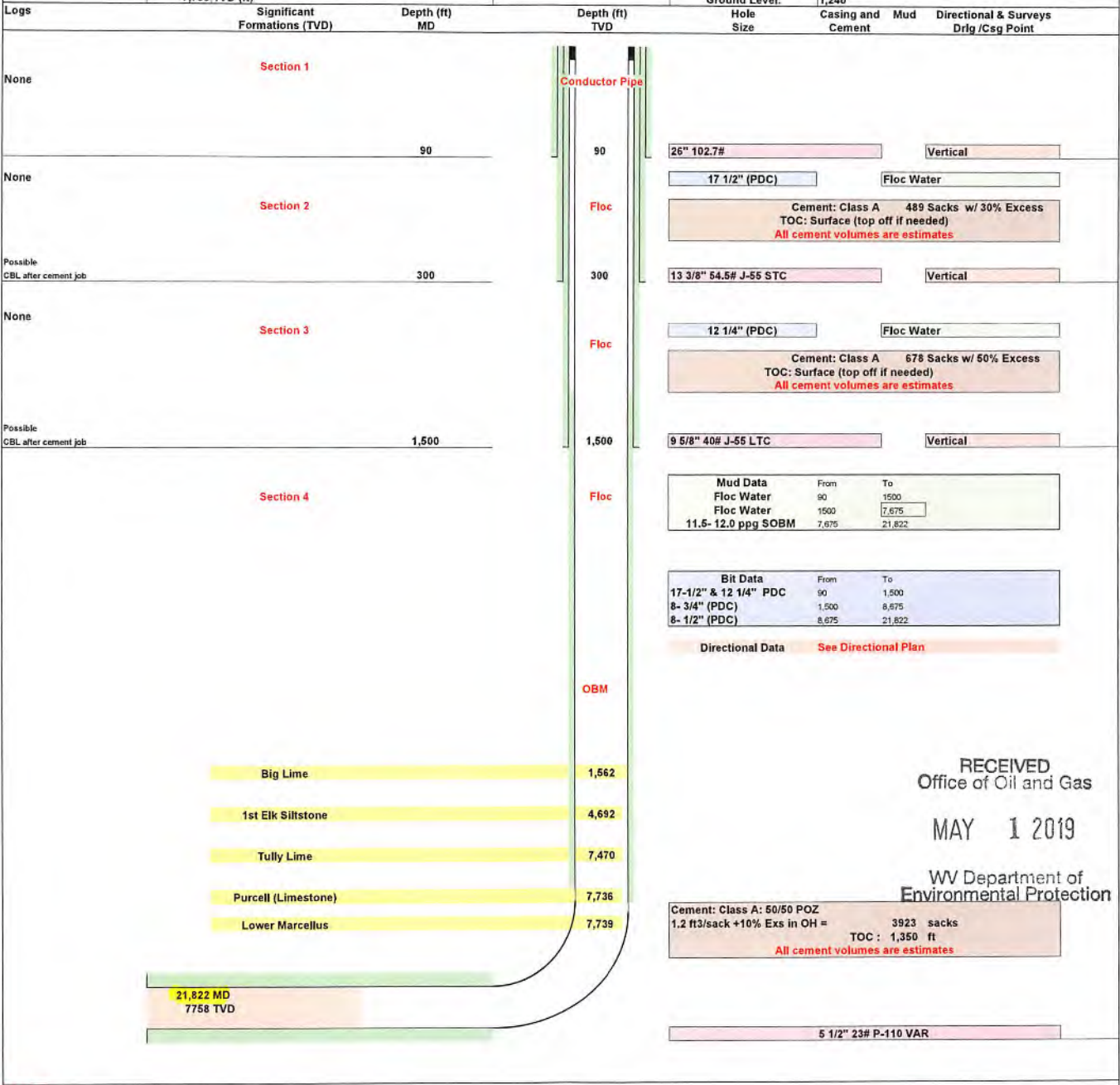
*Note: Attach additional sheets as needed.



Arsenal Resources
Fiber TFP22 201
Casing Design
Directional Plan #1 QES

Other Names:	N/A
Surface Location:	TBD
Bottom Hole Location:	TBD
Total Depth:	21,822 MD (ft) 7,758 TVD (ft)

County:	Taylor		
State:	West Virginia		
AFE #:	XX	API #:	XX
RKB:	27		
Ground Level:	1,240		



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Cement: Class A: 50/50 POZ
1.2 ft3/sack +10% Exs in OH = 3923 sacks
TOC : 1,350 ft
All cement volumes are estimates



Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near Arsenal Resources hydraulic fracturing in Taylor County, WV prior to hydraulic fracturing at the Fiber TFP22 Pad, well #201.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7,800' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Benson formations (approximately 4,800' TVD).

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

1. Communications with Conventional Operators.

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

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

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

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

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

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2. Reporting

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

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Area of Review Report - **Fiber TFP22** Pad, **201** Lateral, **Taylor** County, WV

Well Name	API Number	Operator Name / Address	Well Type	Latitude	Longitude	Total Depth	Perforated Formation(s)	Producing Zones not Perforated
172-CH	001-00389	Diversified	Existing/Active	39.230358	-80.146153	4788	Riley, Benson	NA
Coalquest 14	091-01090	CDX Gas, LLC	Cancelled	39.248498	-80.1539	Cancelled	Cancelled	NA
1645	091-00214	Diversified	Existing/Active	39.249223	-80.155206	4765	Big Injun (Grnbr), Riley, Benson	NA
Coalquest 14A	091-01091	CDX Gas, LLC	Cancelled	39.249368	-80.15446	Cancelled	Cancelled	NA
Coalquest 15	091-01092	CDX Gas, LLC	Cancelled	39.250056	-80.154075	Cancelled	Cancelled	NA
Zuk 1	091-00177	Braxton Oil & Gas Corp.	Existing/Active	39.240961	-80.151564	4529	Big Injun (Grnbr), Riley, Benson	NA
260-CH	001-00569	Diversified	Existing/Active	39.224211	-80.141393	4698	Riley, Benson	NA
254-CH 2	001-00563	Diversified	Existing/Active	39.218516	-80.141191	4521	Riley, Benson	NA
Coal Quest 8	001-02829	ARP Mountaineer Production, LLC	Existing	39.214275	-80.1386	915	Lo Kittanning Coal	NA
292-CH	001-00622	Union Drilling, Inc.	Plugged 4/20/1985	39.215055	-80.137583	4727	Riley, Benson	NA

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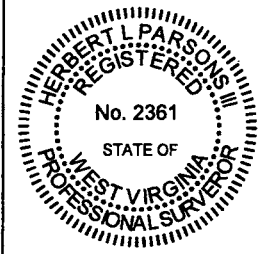
SURFACE PARCEL OWNER INFORMATION			ADJOINER PARCEL OWNER INFORMATION		
ID#	PARCEL NUMBER	OWNER NAME	ID#	PARCEL NUMBER	OWNER NAME
1	091-04-11-1	CFS FARMS LIMITED LIABILITY CO	3	093-15-351-13	GRAFTON COAL CO
2	001-09-9-2	STEWART FARM LLC	4	093-15-351-12	GRAFTON COAL CO
21	091-04-11-5.5	BECKWITH LUMBER COMPANY	5	093-15-331-27	JOHNSON RENEE
26	091-04-11-5.1	RAVIS THOMAS E	6	091-04-9-22	GRIPPIN JAMES S & ELAINE M
43	001-09-9-22	WOLFE LARRY, ROBERT WOLFE & STANLEY WOLFE ET LXES,	7	091-04-9-23	GRAY RANDALL & RITA
49	001-09-12-4.2	KNOTTS TERRY & DONETTA	8	091-04-9-35	MARKS BETTY P
51	001-09-12-10	WOLFE LARRY M & ELLEN S HWS	9	091-04-9-29	COAQUEST DEVELOPMENT LLC
64	001-09-12-51.2	BECKWITH LUMBER CO	10	091-04-9-105	BLOSSER PATRICK B ETAL
			11	091-04-9-81	SIMMONS HUNTER
			12	091-04-9-83	STEWART BARBARA JEAN
			13	091-04-9-84	STEWART BARBARA JEAN
			14	091-04-9-90.1	SINSEL FRANCES E
			15	091-04-9-37.1	FELTON MICHAEL B & TARA L
			16	091-04-11-19	BARTLETT HILDA & MILTON D
			17	091-04-11-17	HOWARD CYNTHIA D
			18	091-04-11-1.1	ANDERSON DAHIEL & KAREN
			19	091-04-11-17.3	SIMPSON JOHN E
			20	091-04-11-9	WATRINS DOUGLAS R & ANNA M
			22	091-04-11-5.2, 5.6 & 5.7	SMITH ROBIN M
			23	091-04-11-8	ASTOR CEMETERY
			24	091-04-11-7.5	NELSON HELEN L HURST MARY M
			25	091-04-11-6	RAVIS THOMAS E
			27	091-04-11-3	PROBST PAUL
			28	091-04-11-5.3	CRUM JOAN LF & BRENDA KAY
			30	091-04-11-2	PROBST PAUL
			31	001-09-9-8	CLEAVENGER LEONARD D
			32	001-09-9-8.2	CLEAVENGER LEONARD D
			33	001-09-9-7	CROUSE ORLAN, JR
			34	001-09-9-6	STEWART FARM LLC
			36	001-09-9-4	STEWART FARM LLC
			39	001-09-9-1	STEWART FARM LLC
			40	001-09-9-20	SEESE ROBERT & BRENDA HWS
			42	001-09-11-1	POLINO ENTERPRISES INC.
			44	001-09-9-17.1	MADDIX MICHAEL R ET UX
			45	001-09-9-11	SALTIS STEVE JR & AMY HWS
			46	001-09-9-12	SALTIS STEVE JR & AMY R HWS
			47	001-09-9-13	MURPHY GEORGE H JR & TAMELA J, HWS
			48	001-09-9-22.2	WOLFE MICHAEL B
			50	001-09-12-14	MOSSOSO JOHN A TRUST
			51	001-09-9-22.3	KRIZNER FRANK A & RENEE B HWS
			52		CLEAVENGER PLAT
			57	001-09-12-11	EDWARD HENLINE
			59	001-09-12-4.5	NEWMAN JERRY & JENNIFER WROS
			60		BEAR MOUNTAIN SUBDIVISION NO. 1
			62	001-09-12B-46.2	CASTO DANNIE EUGENE
			63	001-09-12-52	MONTGOMERY BRADFORD EUGENE & GEORGIA, HWS
			65	001-09-12-52.1	MARTIN EVELYN
			66	001-09-12-8.1	MYER JON E SR & ANTHONY (MS)
			67	001-09-12-8	GOFF ROBERT H III & TINA M & HWS
			71	001-09-12-59	BECKWITH LUMBER CO INC
			72	001-09-12-7.1	SMINK JEANNETTE REBECCA

REFERENCE NOTES

- Property lines as shown taken from deeds, tax maps, and field locations. A full boundary survey is not expressed or implied. All bearings are based on grid North. Ownership taken from public records Taylor & Barbour County, West Virginia Date 2018.
- State Plane Coordinates & NAD83 Lat/Long by differential submeter mapping grade GPS.
- There are no railroads, dwellings, or agricultural buildings within 625 feet of center of pad.
- No water wells found within 250' of the center of well pad.

LEGEND

- PROPOSED WELL LATERAL
- PROPOSED WELL TIE LINE
- STREAM
- EXISTING ROAD
- BUFFER
- PROPERTY LINE
- SURVEYED SURFACE TRACT LINE
- MINERAL TRACT BOUNDARY
- COUNTY BOUNDARY LINE
- PROPOSED WELL HEAD
- ⊙/H EXISTING WELL HEAD (active)
- ⊕ EXISTING WELL HEAD (plugged)
- ⊕ EXISTING WELL HEAD (abandoned)
- ⊕ EXISTING WELL HEAD (never Drilled)
- LANDING POINT/BOTTOM HOLE
- ⊙ SURFACE OWNER

<p>FILE#: <u>17078-008</u></p> <p>SHEET#: <u>2 of 2</u></p> <p>SCALE: <u>1" = 3000'</u></p> <p>TICK SCALE: <u>1" = 2000'</u></p> <p>MINIMUM DEGREE OF ACCURACY: <u>1/200</u></p> <p>PROVEN SOURCE OF ELEVATION: <u>WV-RTN CORS STATION</u></p>	<p>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.</p> <p>Signed: <u>Herbert L. Parsons, III</u> 4-25-19</p> <p>P.S. #2361: Herbert L. Parsons, III P.S.</p>	
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<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP</p> <p>OFFICE OF OIL & GAS</p> <p>601 57TH STREET</p> <p>CHARLESTON, WV 25304</p> <p>Well Type: <input type="checkbox"/> Oil <input type="checkbox"/> Waste Disposal <input checked="" type="checkbox"/> Production <input type="checkbox"/> Deep <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Liquid Injection <input type="checkbox"/> Storage <input checked="" type="checkbox"/> Shallow</p> <p>WATERSHED: <u>SIMPSON CREEK</u></p> <p>COUNTY / DISTRICT: <u>TAYLOR CO. FLEMINGTON DISTRICT</u></p> <p>SURFACE OWNER: <u>CFS FARMS LLC</u></p> <p>OIL & GAS ROYALTY OWNER: <u>HERS AND/OR SUCCESSORS OF THOMAS W BROHARD, JR., JOSEPH L RIDER, AND NORTH CENTRAL BANK TRUSTEES OF THE ALMA MUIR TESTAMENTARY TRUST, MICHAEL C. COLEBANK, VICTA FLEMING HAWKINS, HEIRS AND/OR SUCCESSORS OF A. BROOKS FLEMING, ROBERT CHESTER SINSEL, PATRICIA AIN GATIS, SANDRA PETTIT, CHARLES E. PIVOR</u></p> <p><input checked="" type="checkbox"/> DRILL <input type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input checked="" type="checkbox"/> FRACTURE OR STIMULATE</p> <p><input type="checkbox"/> PLUG OFF FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> PLUG & ABANDON</p> <p><input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE SPECIFY: _____</p> <p>TARGET FORMATION: <u>MARCELLUS</u></p> <p>WELL OPERATOR: <u>ARSENAL RESOURCES</u></p> <p>ADDRESS: <u>6031 WALLACE ROAD EXTENSION # 300</u></p> <p>CITY: <u>WEXFORD</u> STATE: <u>PA</u> ZIP: <u>15090</u></p>	<p>DATE: <u>APRIL 25, 2019</u></p> <p style="text-align: right;">FIBER TFP22</p> <p>OPERATOR'S WELL #: <u># 201</u></p> <p>API WELL #: <u>47</u> <u>091</u></p> <p style="text-align: right;">STATE COUNTY PERMIT</p> <p>ELEVATION: <u>1,240.5'</u></p> <p>QUADRANGLE: <u>ROSEMONT, WV</u></p> <p>ACREAGE: <u>905 ±</u></p> <p>ACREAGE: <u>1,080 ±</u></p> <p>ESTIMATED DEPTH: <u>TVD: 7,758.5' TMD: 21,822.8'</u></p> <p>DESIGNATED AGENT: <u>WILLIAM VEIGEL</u></p> <p>ADDRESS: <u>65 PROFESSIONAL PLACE SUITE 200</u></p> <p>CITY: <u>BRIDGEPORT</u> STATE: <u>WV</u> ZIP: <u>26330</u></p>
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05/31/2019

Click or tap to enter a date.

Braxton Oil & Gas, Inc.

Address

State

RE: Fiber TFP 22 Pad

Dear Sir/Madam,

Arsenal Resources has developed a Marcellus pad Fiber TFP22 201, located in Taylor County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

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

Arsenal Resources anticipates conducting hydraulic fracturing at the Fiber TFP22 201 Pad during the Quarter of 2019. We have identified conventional natural gas wells operated by your company within 500' (lateral distance) of our newly planned wells. Plats for each well on this pad are attached.

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

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

Please feel free to contact me at 724-940-1218 with any questions or comments. You may also contact the WV Office of Oil and Gas at 304-926-0499.

Sincerely,

Kelly Davis
Permitting Specialist

AOR - Attachment "B"

4709101347 05/31/2019



ARSENAL

R E S O U R C E S

SITE SAFETY PLAN

FIBER TFP22 PAD, WELL #201

911 Address:

Ernest L. Keyser

3-5-19

1232 Sinsel Hollow Rd
Flemington, WV 26347

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SURFACE HOLE SURVEYED 39° 17' 30" (NAD27)
 BOTTOM HOLE SURVEYED 39° 15' 00" (NAD27)

Latitude: (NAD27)

(NAD83-WVN) US SURVEY FT.

TOP HOLE
 N) 274893.303
 E) 1785190.715
 LANDING POINT
 N) 273596.493
 E) 1783473.680
 BOTTOM HOLE
 N) 261168.234
 E) 1787764.663

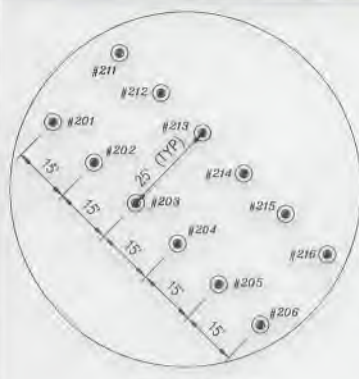
(NAD83-LAT/LONG) DECIMAL

TOP HOLE
 N) 39.252916463
 E) -80.147326555
 LANDING POINT
 N) 39.249321958
 E) -80.153356565
 BOTTOM HOLE
 N) 39.215285000
 E) -80.137893346

(UTM, NAD83) METER

TOP HOLE
 N) 4345190.012
 E) 573571.450
 LANDING POINT
 N) 4344786.218
 E) 573054.892
 BOTTOM HOLE
 N) 4341021.454
 E) 574425.147

05/31/2019



REFERENCE NOTES
 1. Property lines as shown taken from deeds, tax maps, and field locations. A full boundary survey is not expressed or implied. All bearings are based on grid North. Ownership taken from public records Taylor & Barbour County, West Virginia Date 2019.
 2. State Plane Coordinates & NAD83 Lat/Long by differential submeter mapping grade GPS.
 3. There are no railroads, dwellings, or agricultural buildings within 825 feet of center of pad.
 4. No water wells found within 250' of the center of well pad.

LEGEND

	PROPOSED WELL LATERAL
	PROPOSED WELL TIE LINE
	STREAM
	EXISTING ROAD
	BUFFER
	PROPERTY LINE
	SURVEYED SURFACE TRACT LINE
	MINERAL TRACT BOUNDARY
	COUNTY BOUNDARY LINE
	PROPOSED WELL HEAD
	EXISTING WELL HEAD (Active)
	EXISTING WELL HEAD (Plugged)
	EXISTING WELL HEAD (Abandoned)
	EXISTING WELL HEAD (Never Drilled)
	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.
 Signed: *Herbert L. Parsons, III* 4-25-19
 P.S. #2361: Herbert L. Parsons, III P.S.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

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. BROHARD, JR., JOSEPH L. RIDER, AND NORTH CENTRAL BANK TRUSTEES OF THE ALMA MUIR TESTAMENTARY TRUST, MICHAEL C. COLEBAM, WETTA FLEMING HAWKINS, HEIRS AND/OR SUCCESSORS OF A. BROOKS FLEMING, ROBERT CHESTER SINSEL, PATRICIA ANN SALTIS, SANDRA PETTIT, CHARLES E. PIRYOR

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE SPECIFY: _____

TARGET FORMATION: MARCELLUS

WELL OPERATOR: ARSENAL RESOURCES
 ADDRESS: 6031 WALLACE ROAD EXTENSION # 300
 CITY: WEXFORD STATE: PA ZIP: 15090



DATE: APRIL 25, 2019
 FIBER TFP22
 OPERATOR'S WELL #: # 201
 API WELL #: 47 091 **61347**
 STATE COUNTY PERMIT
 ELEVATION: 1,240.5'
 QUADRANGLE: ROSEMONT, WV
 ACREAGE: 905 ±
 ACREAGE: 1,080 ±
 ESTIMATED DEPTH: TVD: 7,758.5' TMD: 21,822.8'
 DESIGNATED AGENT: WILLIAM VEIGEL
 ADDRESS: 65 PROFESSIONAL PLACE SUITE 200
 CITY: BRIDGEPORT STATE: WV ZIP: 26330

Longitude: (NAD27) 12.652' 14.102' BOTTOM HOLE SURVEYED 80° 07' 30" (NAD27) SURFACE HOLE SURVEYED 80° 07' 30" (NAD27)

SURFACE PARCEL OWNER INFORMATION

ID#	PARCEL NUMBER	OWNER NAME
1	091-04-11-1	CFS FARMS LIMITED LIABILITY CO
2	001-09-9-2	STEWART FARM LLC
21	091-04-11-5.5	BECKWITH LUMBER COMPANY
26	091-04-11-5.1	RAVIS THOMAS E
43	001-09-9-22	WOLFE LARRY, ROBERT WOLFE & STANLEY WOLFE ET UXES,
49	001-09-12-4.2	KNOTTS TERRY & DONETTA
61	001-09-12-10	WOLFE LARRY M & ELLEN S HWS
64	001-09-12-51.2	BECKWITH LUMBER CO

ADJOINER PARCEL OWNER INFORMATION

ID#	PARCEL NUMBER	OWNER NAME
3	033-15-351-13	GRAFTON COAL CO
4	033-15-351-12	GRAFTON COAL CO
5	033-15-331-27	JOHNSON RENEE
6	091-04-8-22	GRIPPIN JAMES S & ELAINE M
7	091-04-8-23	GRAY RANDALL & RITA
8	091-04-8-35	MARKS BETTY P
9	091-04-8-29	COALQUEST DEVELOPMENT LLC
10	091-04-8-105	BLOSSER PATRICK B ETAL
11	091-04-8-81	SIMMONS HUNTER
12	091-04-8-83	STEWART BARBARA JEAN
13	091-04-8-84	STEWART BARBARA JEAN
14	091-04-8-90.1	SINSEL FRANCES E
15	091-04-9-37.1	FELTON MICHAEL B & TARA L
16	091-04-11-19	BARTLETT HILDA & MILTON D
17	091-04-11-17	HOWARD CYNTHIA D
18	091-04-11-1.1	ANDERSON DANIEL & KAREN
19	091-04-11-17.3	SIMPSON JOHN E
20	091-04-11-9	WATKINS DOUGLAS R & ANNA M
22	091-04-11-5.2, 5.6 & 5.7	SMITH ROBIN M
23	091-04-11-8	ASTOR CEMETERY
24	091-04-11-7.5	NELSON HELEN L HURST MARY M
25	091-04-11-6	RAVIS THOMAS E
27	091-04-11-3	PROPT PAUL
28	091-04-11-5.3	CRIM JOAN LF & BRENDA KAY
30	091-04-11-2	PROPT PAUL
31	001-09-9-8	CLEAVENGER LEONARD D
32	001-09-9-8.2	CLEAVENGER LEONARD D
33	001-09-9-7	CROUSE ORLAN, JR
34	001-09-9-6	STEWART FARM LLC
36	001-09-9-4	STEWART FARM LLC
39	001-09-9-1	STEWART FARM LLC
40	001-09-9-20	SEESE ROBERT & BRENDA HWS
42	001-09-11-1	POLINO ENTERPRISES INC.
44	001-09-9-17.1	MADDIX MICHAEL R ET UX
45	001-09-9-11	SALTIS STEVE JR & AMY HWS
46	001-09-9-12	SALTIS STEVE JR & AMY R HWS
47	001-09-9-13	MURPHY GEORGE H JR & TAMELA J, HWS
48	001-09-9-22.2	WOLFE MICHAEL B
50	001-09-12-14	MOSESJO JOHN A TRUST
51	001-09-9-22.3	KRIZNER FRANK A & RENEE B HWS
52		CLEAVENGER PLAT
57	001-09-12-11	EDWARD HENLINE
59	001-09-12-4.5	NEWMAN JERRY & JENNIFER WROS
60		BEAR MOUNTAIN SUBDIVISION NO. 1
62	001-09-12B-46.2	CASTO DANNIE EUGENE
63	001-09-12-52	MONTGOMERY BRADFORD EUGENE & GEORGIA, HWS
65	001-09-12-52.1	MARTIN EVELYN
66	001-09-12-9.1	MYER JON E SR & ANTHONY (WS)
67	001-09-12-8	GOFF ROBERT H III & TINA M & HWS
71	001-09-12-59	BECKWITH LUMBER CO INC
72	001-09-12-7.1	SMINK JEANNETTE REBECCA

05/31/2019

REFERENCE NOTES

- Property lines as shown taken from deeds, tax maps, and field locations. A full boundary survey is not expressed or implied. All bearings are based on grid North. Ownership taken from public records Taylor & Barbour County, West Virginia Date 2019.
- State Plane Coordinates & NAD83 Lat/Long by differential submeter mapping grade GPS.
- There are no railroads, dwellings, or agricultural buildings within 625 feet of center of pad.
- No water wells found within 250' of the center of well pad.

LEGEND

	PROPOSED WELL LATERAL
	PROPOSED WELL TIE LINE
	STREAM
	EXISTING ROAD
	BUFFER
	PROPERTY LINE
	SURVEYED SURFACE TRACT LINE
	MINERAL TRACT BOUNDARY
	COUNTY BOUNDARY LINE
	PROPOSED WELL HEAD
	EXISTING WELL HEAD (Active)
	EXISTING WELL HEAD (Plugged)
	EXISTING WELL HEAD (Abandoned)
	EXISTING WELL HEAD (Never Drilled)
	LANDING POINT/BOTTOM HOLE
	SURFACE OWNER

FILE#: 17078-008
 SHEET#: 2 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.
 Signed: *Herbert L. Parsons, III* 4-25-19
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: APRIL 25, 2019
 FIBER TFP22
 OPERATOR'S WELL #: # 201
 API WELL #: 47 091 01347
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow
 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. BROHARD, JR., JOSEPH L. RIDER, AND NORTH CENTRAL BANK, TRUSTEES OF THE ALMA MUIR TESTAMENTARY TRUST, MICHAEL C. COLEBANK, VETTA FLEMING HAWKINS, HEIRS AND/OR SUCCESSORS OF A. BROOKS FLEMING, ROBERT CHESTER SINSEL, PATRICIA ANN SALTIS, SANDRA PETTIT, CHARLES E. PRYOR
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE SPECIFY: _____
 TARGET FORMATION: MARCELLUS

WELL OPERATOR: ARSENAL RESOURCES
 ADDRESS: 6031 WALLACE ROAD EXTENSION # 300
 CITY: WEXFORD STATE: PA ZIP: 15090

DESIGNATED AGENT: WILLIAM VEIGEL
 ADDRESS: 65 PROFESSIONAL PLACE SUITE 200
 CITY: BRIDGEPORT STATE: WV ZIP: 26330

ELEVATION: 1,240.5'
 QUADRANGLE: ROSEMONT, WV
 ACREAGE: 905 ±
 ACREAGE: 1,080 ±
 ESTIMATED DEPTH: TVD: 7,758.5' TMD: 21,822.8'

WW-6A1
(5/13)

Operator's Well No. Fiber TFP22 201

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
----------------------	-----------------------	-----------------------	---------	-----------

See Attached


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

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

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

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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

09101347

Attachment to WW-6A1, Fiber TFP 22 201

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
1 (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	
2 (00008235)	John F. Stewart, widower	Petro-Lewis Corporation	12.50%	75/154	200
	Petro-Lewis Corporation	Partnership Properties Company		77/226	
	Partnership Properties Company	Eastern American Energy Corporation		95/112	
	Eastern American Energy Corporation	Energy Corporation of America		438/429	
	Energy Corporation of America	Greylock Production LLC		178/401	
	Greylock Production LLC	Mar Key LLC		179/96	
	21, 26 (00008265)	Ethel A Tomblyn, single and Bessie T Knight, widow	Petro-Lewis Corporation	12.50%	33/254
Petro-Lewis Corporation	Partnership Properties Company		77/226		
Partnership Properties Company	Eastern American Energy Corporation		95/112		
Eastern American Energy Corporation	Energy Corporation of America		438/429		
Energy Corporation of America	Greylock Production LLC		36/618		
Greylock Production LLC	Mar Key LLC		179/96		
43 (00005950)	Lillian Wilson Post, widow	Cumberland & Allegheny Gas Company	12.50%	40/242	400
	Cumberland & Allegheny Gas Company	Union Drilling Inc & Allerton Miller		46/347	
	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	

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Attachment to WW-6A1, Fiber TFP 22 201

	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	
43 (00005894)	Virginia C McDonald, single	Union Drilling Inc & Allerton Miller	12.50%	47/434	177
	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	
43, 49, 61 (00005895)	George C Law, single; Guy W Law and Lura M Law, his wife; Edison O Law and Betsy Law, his wife; Zella W Bond and B R Bond, her husband; Thomas A Helmick, single; Oris L Helmick and Wanda Helmick, his wife	Cumberland & Allegheny Gas Company	12.50%	40/242	313
	Cumberland & Allegheny Gas Company	Union Drilling Inc & Allerton Miller		46/347	
	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	
64 (00005696)	Mabel Cleavenger, single	Cumberland & Allegheny Gas Company	12.50%	46/405	100

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4709101347

Attachment to WW-6A1, Fiber TFP 22 201

	Cumberland & Allegheny Gas Company	Union Drilling Inc & Allerton Miller		46/347	
	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	

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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

Organization Information									
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				

Organization Information										
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	WV					Excess Acres				
At Will Term	A					Member Managed	MBR			
At Will Term Years					Par Value					

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WV Department of Environmental Protection

Authorized Shares

Addresses	
Type	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
Type	Address

Officers	
Type	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
Type	Name/Address

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Environmental Protection

Annual Reports
Date filed

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

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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WV Department of
Environmental Protection

Agreement to Drill, Complete and Operate Oil & Gas Wells

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

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

[Signature Page Follows]

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Environmental Protection

05/31/2019

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

ARSENAL RESOURCES LLC

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

RIVER RIDGE ENERGY, LLC

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

RIVER RIDGE HOLDINGS, LLC

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

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Online Data Services Help

Business Organization Detail

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SENECA-UPSHUR PETROLEUM, LLC

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			

Organization Information			
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	WV	Excess Acres	0
At Will Term	A	Member Managed	MBR
At Will Term Years		Par Value	
Authorized Shares			RECEIVED Office of Oil and Gas MAY 1 2019 WV Department of Environmental Protection

Addresses

Type	Address
Designated Office Address	65 PROFESSIONAL PLACE SUITE 200 BRIDGEPORT, WV, 26330
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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
Type	Address

Officers

Type	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
Type	Name/Address

DBA

DBA Name	Description	Effective Date	Termination Date
KEYSPAN PRODUCTION & DEVELOPMENT COMPANY	TRADENAME	6/11/2004	Office of Oil and Gas RECEIVED MAY 1 2019
NATIONAL GRID	TRADENAME	8/17/2007	WV Department of Environmental Protection
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	
2017	
2016	
2015	
2014	
2013	
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2008	
2007	RECEIVED Office of Oil and Gas
2006	MAY 1 2019
2005	WV Department of Environmental Protection
2004	
2003	
2002	
2001	
2000	

1999
1998
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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WV Department of
Environmental Protection

05/31/2019



People Powered. Asset Strong.

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,

A handwritten signature in black ink that reads 'Coty Brandon'.

Coty Brandon
Title Manager

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Office of Oil and Gas

MAY 1 2019

WV Department of
Environmental Protection

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

05/31/2019



April 30, 2019

WVDEP
Office of Oil and Gas
ATTN: Laura Adkins
601 57th Street SE
Charleston, WV 25304

RE: Fiber TFP 22 201, API# 47-091-01347 – Modification due to additional leasing to extend lateral

Dear Laura:

Enclosed please find the modification for the Fiber TFP 22 201, (API# 47-091-01347). This permit is being modified due to acquiring additional leases to extend the lateral. This well was originally permitted to 10,324.79'. We have obtained additional leasing for this site and are requesting to extend the lateral further. We would like to extend the lateral 2,823.37' for a total of 13,148.16'. Included are the following:

- Plat
- WW-6B, Well Work Permit Application/Casing
- Well Bore Schematic
- WW-6A1, Lease Information
- Roadway Letter
- Site Safety Plan
- AOR
- WMP

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Environmental Protection

The WMP is being modified due to adding and removing water sources. Please see the attached cover sheet with the WMP indicating all the changes in the WMP.

Should you have any questions or need any additional information, please feel free to contact me by phone or email. Thank you!

Sincerely,

A handwritten signature in blue ink that reads 'Kelly Davis'.

Kelly Davis
Permitting Specialist
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1-724-940-1218 office
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