

#### 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

Friday, February 23, 2018 WELL WORK PERMIT Horizontal 6A / New Drill

ARSENAL RESOURCES LLC 6031 WALLACE ROAD EXTENSION SUITE 603

WEXFORD, PA 15090

Re: Permit approval for FRANKLIN JENNINGS 201

47-077-00642-00-00

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

Chie

Operator's Well Number: FRANKLIN JENNINGS 201 Farm Name: FRANKLIN M. & PEGGY A. JENNINGS

U.S. WELL NUMBER: 47-077-00642-00-00

Horizontal 6A / New Drill

Date Issued: 2/23/2018

Promoting a healthy environment.

API N	umber	:							
NS	47	0	7	7	0	0	6	4	2

## 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 (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 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: 4707700642

## 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.

WW-6B (04/15)

API NO. 47		
<b>OPERATOR WELL</b>	NO.	Franklin Jennings 201
Well Pad Name:	Frankl	in Jennings

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

1) Well Opera	tor: Arsenal I	Resouces		494519412	Preston	Lyon	Thornton
				Operator ID	County	District	Quadrangle
2) Operator's	Well Number:	Franklin Je	nnings 2	01 Well Pad	Name: Frank	din Jennin	gs
3) Farm Name	/Surface Owne	r: Franklin	Jenning	Public Road	Access: Pre	ston Coun	ty Route 60/5
4) Elevation, c	urrent ground:	1725.8	Ele	vation, proposed p	ost-constructi	on: 1726	
5) Well Type	(a) Gas X Other		Oil	Under	rground Storag	ge	
	(b)If Gas S	hallow	X	Deep			
	H	orizontal	X				
6) Existing Pad	l: Yes or No <u>N</u>	<u>o</u>					
7) Proposed Ta Target Format	rget Formation lon-Marcellus Sha	(s), Depth(s le, Top-8,191	), Anticip .0ft, Botton	pated Thickness and 1-8,298.0ft, Anticipate	d Expected Pr d Thickness- 107	ressure(s): 'ft, Associated	d Pressure- 0.5 psi/ft
8) Proposed To	tal Vertical De	oth: 8,286	ft				
9) Formation at	Total Vertical	Depth: Ma	arcellus S	Shale		·	
10) Proposed T	otal Measured	Depth: 13	,691ft.				
11) Proposed H	orizontal Leg I	ength: 4,	526.59'				
12) Approximat	te Fresh Water	Strata Depti	hs: 4	175', 675', 845', 1	000'		
13) Method to I	Determine Fresl	ı Water Dej	oths: Offs	etting wells reported water	depths (077-00480, 0	77-00481, 077-0	0482, 077-00563, 077-00564)
14) Approximat	e Saltwater De	pths: 1,600	0'				
15) Approximat	e Coal Seam D	epths:	1717, Hadem- 2007, Date	rstoom-457, Srush Creak-847, Upper Praspo	1-022', Lower Presport-001', Upper	Kitarring-743', Middle (CE	Maring-74f, Lower Killsteing-825', Cladon-800'
16) Approximat	e Depth to Poss	sible Void (	coal mine	, karst, other): No	one Known		
17) Does Propos directly overlyin				Yes	No	None Kno	wn
(a) If Yes, prov	vide Mine Info:	Name:	None		<u> </u>		
		Depth:					
		Seam:			RE	<b>GEIVED</b>	Coe
		Owner:			Office 0	Oil and	-Cas
						2 0 0 2010	)

FEB 2 2 2018

WV Department of Environmental Protection Page 1 of 3 WW-6B (04/15) API NO. 47-

OPERATOR WELL NO. Franklin Jennings 201

Well Pad Name: Franklin Jennings

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	24	New	H-40	94	80	80	CTS
Fresh Water	13.375	New	J-55	54.5	1,050	1,050	CTS
Coal							
Intermediate	9.625	New	J-55	40	1,900	1,900	CTS
Production	5.5	New	P-110	20	13,691	13,691	TOC @ 1,750
Tubing							
Liners							

MgR 10/26/2017

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	24	36			0	Type 1, 3% CaCl2	1.2
Fresh Water	13.375	17.5	0.38	2,730	900	Class A, 3% CaCl2	1.2
Coal							
Intermediate	9.625	12.25	0.395	3,950	1,500	Class A, 3% CaCl2	1.29
Production	5.5	8.5-8.75	0.361	12,640	9,500	Class A/50:50 Poz	1.29/1.34
Tubing					5,000		
Liners					N/A		

#### **PACKERS**

Office of Oil and G

WW-6B (10/14)

API NO. 47		
OPERATOR WELL	NO.	Franklin Jennings 201
Well Pad Name:	Frankli	n Jennings

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

The well will be started with a conductor rig drilling a 36" hole to Conductor programmed depth then running 24" casing and circulate cement back to surface. The conductor rig will move out and the drilling rig will move in and rig up. The drilling rig will then spud a 17  $\frac{1}{2}$ " hole and drill to fresh water casing (Surface) to the programmed depth, Run 13-  $\frac{3}{8}$ " casing and cement to surface. The rig will continue drilling a 12-  $\frac{1}{4}$ " intermediate hole to the programmed depth, run 9-  $\frac{5}{8}$ " casing and cement to surface. The rig with then continue to drill an 8-  $\frac{3}{4}$ " hole to a designed KOP. We will then start drilling the curve and lateral section to the programmed total measured depth, run 5  $\frac{1}{2}$ " 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): 23.33
- 22) Area to be disturbed for well pad only, less access road (acres): 8.01
- 23) Describe centralizer placement for each casing string:

24"- No centralizers,13 3/8" – one bow spring centralizer on every other joint, 9 5/8" – one bow spring centralizer every third joint from TD to surface,5  $\frac{1}{2}$ " – one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 2,000'; there will be no centralizers from 2,000 to surface.

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

24" will be grouted from 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 1,750' (+/- 150' above the casing shoe for the 9 5/8") with Type 1 or Class A and 50/50 Poz cement retarded (to extend pumpability) cellophane flaked for fluid loss, Bentonite gel as an extender (increased pumpability and fluid loss), a defoaming agent to decrease cement foaming during mixing to insure the cement is of proper weight to placement and possibly gypsum gas blocking additive to aid in blocking/gas migration (in combination with other additive mentioned here, helps cement achieve a "right angle" set) during the plastic phase of the cement set-up.

25) Proposed borehole conditioning procedures:

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

Franklin Jennings 201								
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	HCI - 7.5%	7647-01-0					

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ARSE	ENAL 4 c t s		Arsenal Resour Franklin Jennings Casing Design Directional Plan #	s 201 n	047-077-00642	
Other Names:	N/A		Directional Plan #	County:	Preston	
Surface Location: Bottom Hole Location:	TBD TBD			State: AFE #:	West Virginia XX API #: XX	
Total Depth:	13,690 MD (ft) 8,286 TVD (ft)			RKB: Ground Level:	27	
1.bg\$	Significant	Depth (ft)	Depth-(ft)	Hole	1,726 Casing and Mud Directional & Surveys	HOLENS
	Formations (TVD) Section 1	MD	TVD	Size	Cémént Drig (Csg Point	
None			Drive Pipe			
		80	80	24" 94# H-40 STC	Vertical	1
None				17 1/2" (PDC)	Floc Water	
	Section 2		Floc	TOC	ement:Class A 489 Sacks w/ 30% Excess : Surface (top off if needed) ment volumes are estimates	
Possible CBL after cement job		1,050	1,050	13 3/8" 54.5# J-55 STC	Vertical	1
None	Section 3		Floc	12 1/4" (PDC)	Floc Water	
				TOC: S	ement:Class A 678 Sacks w/ 50% Excess urface (top off if needed) ement volumes are estimates	
Possible CBL after coment job		1,900	1,900	9 5/8" 40# J-55 LTC	Vertical	
	Section 4		Floc	Mud Data Floc Water Floc Water 11.5- 12.0 ppg SOBM	From <b>To</b> 60 1000 1000 1000 8,164 8,164 13,660	
				Bit Data 17-1/2" & 12 1/4" PDC 8- 3/4" (PDC) 8- 1/2" (PDC)	From To 50 1,900 1,900 9,164 9,194 13,890	
				Directional Data	See Directional Plan	
			ОВМ			
	Big Lime		1,523			
	1st Elk Siltstone		4,968			
	Tully Lime		7,828			
	Purcell (Limestone)		8,256	Cement: Class A/ 50:50 P	0Z	7
	Lower Marcellus		8,264	1.2 ft3/sack +10% Exs in (	OH = 2292 sacks TOC: 1,750 ft ment volumes are estimates	
	13,690 MD 8286 TVD					
	Francisco de constitución de c	***************************************			5 1/2" 20# P-110 VAR	
Revision	1		Note: Not drawn to sca	ale	Cement Outside Casing Seal Assembly in Annulu	us
Date	Last Revised: 25-Oct-17 Jarrett Toms					

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#### 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 Preston County, WV prior to hydraulic fracturing at the Franklin Jennings 201 pad.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 8,300' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Elk Sand formations (approximately 5,900' TVD).

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

#### 1. Communications with Conventional Operators.

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

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

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

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

- 1. Inspect their surface equipment prior to fracturing to establish integrity and establish prefrac well conditions.
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure.
- 3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for
- 4. Notify the OOG and ARSENAL RESOURCES if any changes in water, gas production, pressing of Oil and Gas or other anomalies are identified. NOV - 1 2017 or other anomalies are identified.



#### 2. Reporting

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

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Area of Review Report	Franklin Jennings	Pad,	201	Lateral,	Preston	_County, W	v
THE CONTROL HERET							

Well Name	API Number	Operator Name / Address	Well Type	Latitude	Longitude	Total Depth	Perforated Formation(s)	Producing Zones not Perforated
G Lynn Jennings 5	077-00481	Diversified Resources, Inc.	Existing	39.336854	-79.883383	5807	Gantz, Balltown, Elk	NA
G Lynn/Rhonda Jennings 6	077-00482	Diversified Resources, Inc.	Existing	39.336195	-79.879883	5845	Benson, Elk	NA

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NOV - 1 2017

WV Department of office of Oil and Gas



Click or tap to enter a date.

Diversified Resources

Address State

RE: Click or tap here to enter text.

Dear Sir/Madam.

Arsenal Resources has developed a Marcellus pad Franklin Jennings 201, located in Preston 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 8,300 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 Franklin Jennings 201 Pad during the Quarter of 2017. 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.
- Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas, or pressure.
- Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
- Notify the OOG and Arsenal Resources if any changes in water, gas production, pressure or other anomalies are identified.

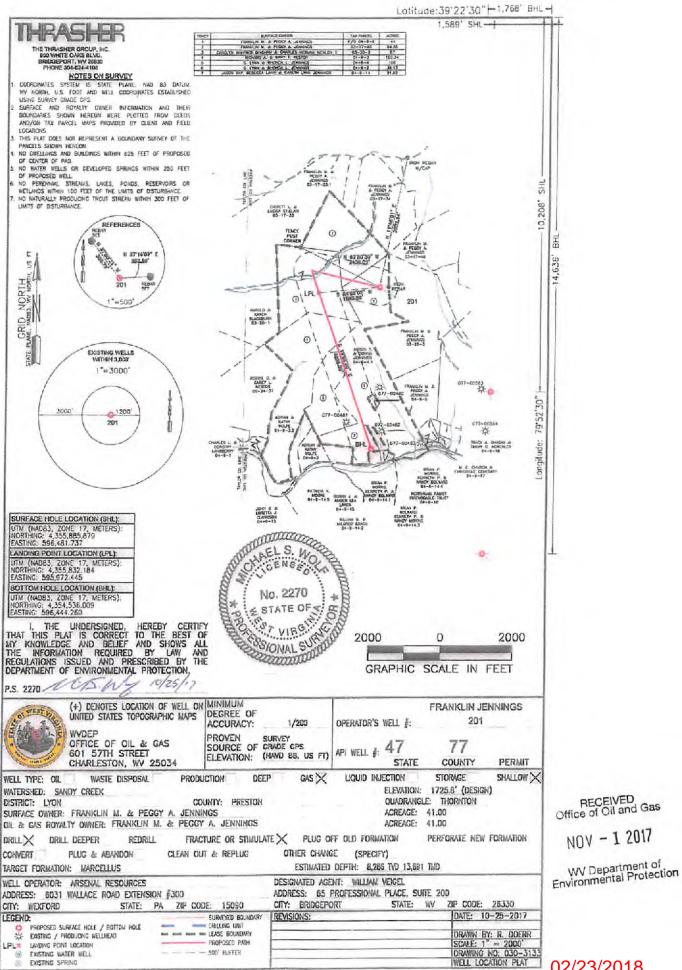
Please feel free to contact me at 724-940-1218 with any questions or comments. You may also contact the WV Office of Oil and Gas at 304-926-0499.

Sincerely.

Kelly Davis Permitting Specialist

> RECEIVED Office of Oil and Gas

> > NOV - 1 2017



WW-9 (4/16)

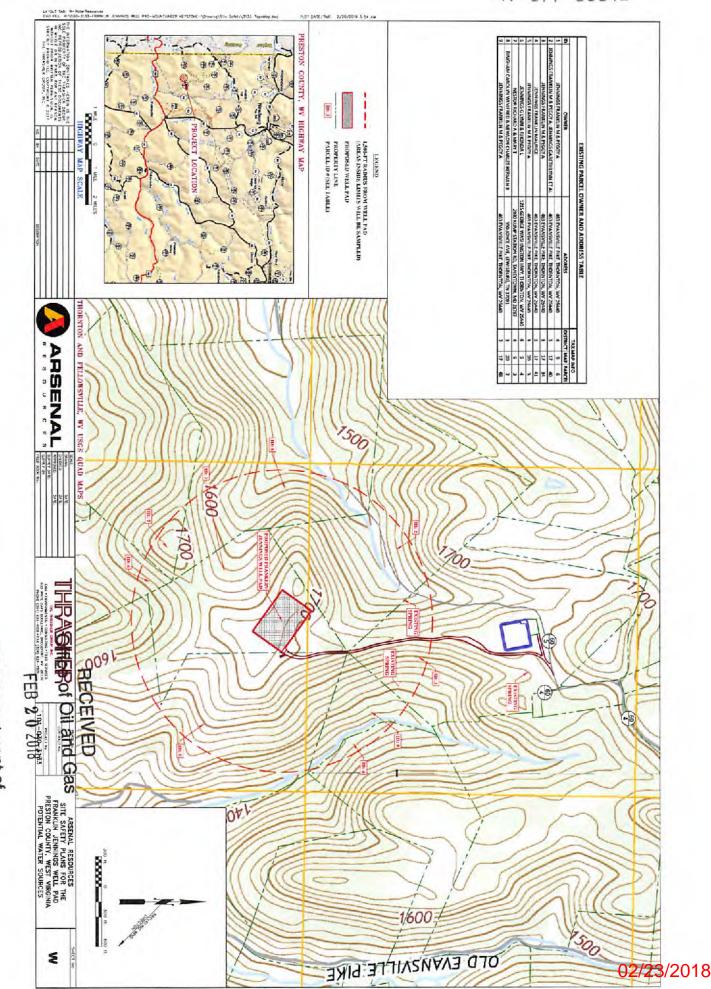
API Number 47 -	
	a series of the series of the Anna State of the Series of

## Operator's Well No. Franklin Jennings 201 STATE OF WEST VIRGINIA NT OF ENVIRONMENT DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

#### FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Arsenal Resources	OP Code _494519412
Watershed (HUC 10) Sandy Creek	Quadrangle Thornton
Do you anticipate using more than 5,000 bbls of water to	complete the proposed well work? Yes V No
Will a pit be used? Yes Vo No	
If so, please describe anticipated pit waste: Pro	oduced Water
Will a synthetic liner be used in the pit? Yes	No If so, what ml.? 60 ml
Proposed Disposal Method For Treated Pit Waste	es:
Land Application	
	Permit Number)
Reuse (at API Number_vanous  Off Site Disposal (Supply form	
Other (Explain	1 W W-2 for disposal focultory
Will closed loop system be used? If so, describe: Yes, the ca	losed loop system will contain all of the drilling medium and drill cuttings on location to then be taken to a landfall
Drilling medium anticipated for this well (vertical and hor	rizontal)? Air, freshwater, oil based, etc. Verbout freshwater, Hotzontal synthetic oil based mud
-If oil based, what type? Synthetic, petroleum, et	tc. Synthetic
	d polymer sticks, soda ash, sodium bicarbonate, defoamer, base oil, emulsifiers, lime, and barite
Drill cuttings disposal method? Leave in pit, landfill, rem	
-If left in pit and plan to solidify what medium w	
-Landfill or offsite name/permit number? Advance	ced Disposal Services, Chesthut Valley Landfill
Permittee shall provide written notice to the Office of Oil West Virginia solid waste facility. The notice shall be pro where it was properly disposed.	and Gas of any load of drill cuttings or associated waste rejected at any vided within 24 hours of rejection and the permittee shall also disclose
on August 1, 2005, by the Office of Oil and Gas of the We provisions of the permit are enforceable by law. Violatic law or regulation can lead to enforcement action.  I certify under penalty of law that 1 have person application form and all attachments thereto and that, obtaining the information, I believe that the information penalties for submitting false information, including the penalties for Submitting false information, including the penalties for Submitting false information.	and conditions of the GENERAL WATER POLLUTION PERMIT issued est Virginia Department of Environmental Protection. I understand that the ons of any term or condition of the general permit and/or other applicable onally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for n is true, accurate, and complete. I am aware that there are significant possibility of fine or imprisonment.  RECEIVED Office of Oil and Gas
Company Official (Typed Name) William Veigel	Office of Oil and Gas
Company Official Title Designated Agent	NOV - 1 2017
Subscribed and sworn before me this 2 6 day	of October . 20 / 7 Environmental Protection
Auty R Miller  My commission expires Tuly 3, 20	

Proposed Revegetation Treatm	nent: Acres Disturbed	15.2 Prevegetation pH	6.8 Average
Lime 2.67	Tons/acre or to corre	ect to pH 6.4	
Fertilizer type 10-20	0-20		
Fertilizer amount 10	00	lbs/acre	
Mulch_ 3-4		_Tons/acre	
		Seed Mixtures	
Ten	nporary	Perma	nent
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
Maps(s) of road, location, pit a provided). If water from the pi acreage, of the land application	it will be land applied, in n area.	and application (unless engineered plans included actually and $(L \times W \times D)$ ) of the pit, and the contraction of the pit, and	ling this info have been dimensions (L x W), an
Maps(s) of road, location, pit a provided). If water from the pit acreage, of the land application Photocopied section of involve Plan Approved by:	it will be land applied, in area.	clude dimensions (L x W x D) of the pit, and	dimensions (L x W), an
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## SITE SAFETY PLAN

## Franklin Jennings Well Pad 201

911 Address:

919 May Road

Thornton, WV 26440

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WV Department of Environmental Protection

02/23/2018

BH

1,589' SHL--FRANKLIN M. & PEGGY A. JENNINGS FRANKLIN M. & PEGGY A. JENNINGS HE THRASHER GROUP, INC 600 WHITE OAKS BLVD. BRIDGEPORT, WV 26330 PHONE 304-624-4108 NOTES ON SURVEY

COORDINATES SYSTEM IS STATE PLANE, NAD 83 DATUM,
WW NORTH, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
SURFACE AND ROYALTY DWNER INFORMATION AND THEIR
BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS
AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD AND/OR TAX PARCEL MAPS PROVIDED BY CHERT MAY FIELD LOCATIONS.

THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON,

NO DWELLINGS AND BUILDINGS WITHIN B25 FEET OF PROPOSED OF CENTER OF PAD. WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.

NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF SH 208 LIMITS OF DISTURBANCE. EVERETT L. & LUCIDA ST.CLAR 03-17-33 REFERENCES o. Sn 0 =500 (1) GRID N PLANE, NADB3. HACKBUR 0 EXISTING WELLS WITHIN 3,000° 1"=3000 0 79'52'30" 1200 3000 201 ongitude: 300 E CHURCH & MALS WOLL OF NS WOLL O SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,355,885.879 EASTING: 596,481.737 LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,355,832.184 EASTING: 595,972.445 VIRGINAL SURVIDUO BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,354,536,009 EASTING: 596,444.260 SONAL SURGO 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
REGULATIONS ISSUED AND PRESCRIBED BY THE
DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2000 2000 0 GRAPHIC SCALE IN 10/25/17 P.S. 2270 105.1 (+) DENOTES LOCATION OF WELL ON MINIMUM UNITED STATES TOPOGRAPHIC MAPS FRANKLIN JENNINGS DEGREE OF 201 ACCURACY: 1/200 OPFRATOR'S WELL #: PROVEN SURVEY SOURCE OF GRADE GPS OFFICE OF OIL & GAS 601 57TH STREET 77 00642 API WELL #: ELEVATION: (NAVD 88, US FT) CHARLESTON, WV 25034 PERMIT STATE COUNTY LIQUID INJECTION STORAGE SHALLOW X GAS X WASTE DISPOSAL PRODUCTION DEEP WELL TYPE: OIL **ELEVATION:** 1725.8' (DESIGN) WATERSHED: SANDY CREEK QUADRANGLE: THORNTON DISTRICT: LYON COUNTY: PRESTON ACREAGE: 41.00 SURFACE OWNER: FRANKLIN M. & PEGGY A. JENNINGS OIL & GAS ROYALTY OWNER: FRANKLIN M. & PEGGY A. JENNINGS ACREAGE: 41.00 PERFORATE NEW FORMATION PLUG OFF OLD FORMATION FRACTURE OR STIMULATE DRILL DEEPER DRILLX OTHER CHANGE CLEAN OUT & REPLUG (SPECIFY) PLUG & ABANDON 02/23/2018 ESTIMATED DEPTH: 8,286 TVD 13,691 TMD TARGET FORMATION: MARCELLUS DESIGNATED AGENT: WILLIAM VEIGEL WELL OPERATOR: ARSENAL RESOURCES ADDRESS: 65 PROFESSIONAL PLACE, SUITE 200 ADDRESS: 6031 WALLACE ROAD EXTENSION #300 WV ZIP CODE: 26330 ZIP CODE: CITY: BRIDGEPORT STATE: 15090 CITY: WEXFORD STATE: DATE: 10-25-2017 REVISIONS: LEGEND: SURVEYED BOUNDARY PROPOSED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLHEAD RAWN BY: R. DOERR - LEASE BOUNDARY 共 SCALE: 1" = 2000'
DRAWING NO: 030-3
WELL LOCATION PLAT PROPOSED PATH LANDING POINT LOCATION LPL

- 500' BUFFER

EXISTING WATER WELL EXISTING SPRING

WW-6A1 (5/13)

Operator's Well No.	Franklin Jennings 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

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

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

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

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

Well Operator: Arsenal Resources

By: William Veigel

Its: Designated Agent

Page 1 of \_\_\_\_\_\_

Attachment to WW-6A1, Franklin Jennings 201

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	Franklin M. Jennings and Peggy A.	· · · · · ·			
1/2	Jennings	R.P. Land Company, LLC	0.18	763/162	703.101
	R.P. Land Company, LLC	Mar Key, LLC		740/1	
2	G. Lynn Jennings	R.P. Land Company, LLC	0.18	763/158	64.68
	R.P. Land Company, LLC	Mar Key, LLC		740/1	
3	Charles Herman Newlon II and Donna R. Newlon, his wife	Mar Key, LLC	0.17	801/693	87.00
3	Carolyn Winifred Bingham and James R. Bingham, Jr., her husband	Mar Key, LLC	0.17	801/691	87.00
4	Richard A. Nestor and Mary T. Nestor, husband and wife	Falcon Partners	0.125	715/114	102.342
	Falcon Partners	Robert F. Kozel		735/480	
	Robert F. Kozel	Mar Key, LLC		759/610	<del></del>
5/6	G. Lynn Jennings and Rhonda Jennings, husband and wife	Falcon Partners	0.125	683/708	145.79
	Falcon Partners	Mar Key, LLC		739/973	
7	Jason R. Knotts and Rebecca L. Knotts, and Gareth L. Jennings	R.P. Land Company, LLC	0.18	773/513	21.816
	R.P. Land Company, LLC	Mar Key, LLC		740/1	

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## Agreement to Drill, Complete and Operate Oil & Gas Wells

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

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

[Signature Page Follows]

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

MOUNTAINEER KEYSTONE LLC

Name: 264-3 Keel

Title: CEO

PDC MOUNTAINEER, LLC

Title: CFO

PDC MOUNTAINEER HOLDINGS, LLC

Name: RLH Keel

Title: CFO

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#### 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").
- 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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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 Icel F Symonds

Title: Vice President - Land

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02/23/2018

047-077-00642

## 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			

	0444 1811			
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	A	Member Managed	MBR	RECEIVED
At Will Term Years		Par Value		Office of Oil and  NOV - 1 20  WV Departmental Pro

Authorized	047-077-00642
Shares	

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	
<b>гре</b>	Address	

Officers		
Гуре	Name/Address	
Member	MOUNTAINEER KEYSTONE ENERGY LLC 6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090	
Organizer	PAUL M HERZING 560 EPSILON DR. PITTSBURGH, PA, 15238 USA	
уре	Name/Address	Office of

NOV - 1 2017

Annual Reports

WV Department of Environmental Protection

**Date filed** 

6/20/2016	047-077-00642
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.

Thursday, February 23, 2017 — 9:08 AM

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Office of Oil and Gas
NOV - 1 2017



People Powered, Asset Strong,

October 27, 2017

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; Franklin Jennings Pad

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 wells. The findings of the title examination show that some of the roadways crossed by the proposed wells are owned in fee by the West Virginia Department of Transportation, Division of Highways and that some are only right of ways. 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,

Ryan Brode Title Attorney

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

Date of Notic	ce Certification: 10 30 17	A	PI No. 47		
				Well No. Frant	klin Jennings 201
		W	Vell Pad N	ame: Franklin	Jennings
Notice has l	oeen given:				
	e provisions in West Virginia Code	\$ 22-6A, the Operator has provid	led the req	uired parties v	vith the Notice Forms listed
	tract of land as follows:				
State:	West Virginia	IIIN/ NAINKA	asting:	596,481.737	
County:	Preston	N	lorthing:	4,355,885.879	
District:	Lyon	Public Road Access		Preston County F	Route 60/5
Quadrangle:	Thornton	Generally used farm	n name:	Franklin M. & Pe	ggy A. Jennings
Watershed:	Sandy Creek				
it has provide information re of giving the requirements Virginia Code	the secretary, shall be verified and sed the owners of the surface described equired by subsections (b) and (c), se surface owner notice of entry to surface owner notice of entry to surface of subsection (b), section sixteen of \$22-6A-11(b), the applicant shall thave been completed by the applicant	bed in subdivisions (1), (2) and betion sixteen of this article; (ii) the present to subsection (a), for this article were waived in when the proof of and certify to the	(4), substhat the reconstruction to the contraction to the contraction to the contraction of the contraction	ection (b), sec quirement was en of this arti the surface ov	ction ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice wner; and Pursuant to West
that the Ope	West Virginia Code § 22-6A, the Operator has properly served the require ECK ALL THAT APPLY		Notice Co	ertification	OOG OFFICE USE ONLY
☐ 1. NO	TICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS CO		The second secon	RECEIVED/ NOT REQUIRED
■ 2. NO	TICE OF ENTRY FOR PLAT SURV	YEY or NO PLAT SURVEY	WAS CO	NDUCTED	RECEIVED
☐ 3. NO	FICE OF INTENT TO DRILL or	NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLANAS CONDUCTED OF			□ RECEIVED/ NOT REQUIRED
		WRITTEN WAIVER BY (PLEASE ATTACH)	SURFAC	E OWNER	
■ 4. NO	TICE OF PLANNED OPERATION				RECEIVED
■ 5. PUE	BLIC NOTICE				RECEIVED
■ 6. NO	FICE OF APPLICATION				RECEIVED

#### Required Attachments:

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

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#### 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

Telephone: 724-940-1218 Address: 6031 Wallace Road Extension, Suite 300

Wexford, PA 15090

Facsimile: 304-848-9134

Email: kdavis@arsenalresources.com

NOTARY SEOFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA CAROLINDA FLANAGAN PO 80x 603 Lumberport WV 26386 My Commission Expires September 15, 2021

Subscribed and sworn before me this 30TH

Notary Public

day of OCT

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 depprivacyofficer@wv.gov.

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### Arsenal Resources Franklin Jennings 201 WW-6-A Attachment

#### Coal Owner or Lessee

Franklin M. and Peggy A. Jennings 463 Evansville Pike Thornton, WV 26440 ACIN 5260 Irwin Road Huntington, WV 25705

#### Water Purveyors

Franklin M. and Peggy A. Jennings 463 Evansville Pike Thornton, WV 26440

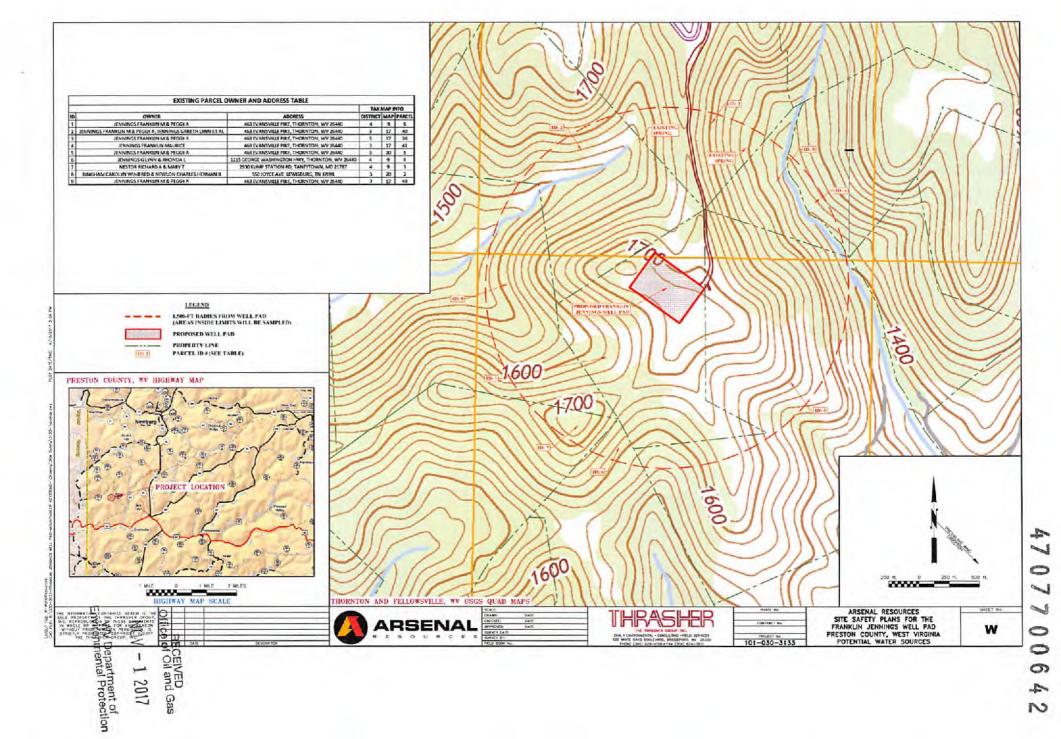
Richard A. and Mary T. Nestor 2930 Kump Station Road Taneytown, MD 21787

G Lynn and Rhoda L. Jennings 1215 George Washington Hwy Thornton, WV 26440

Carolyn W. Bingham and Charles H. Newlon II 550 Joyce Avenue Lewisburg, TN 37091

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047-077-00642

API NO. 47-

OPERATOR WELL NO. Franklin Jennings 201

Well Pad Name: Franklin Jannings

# 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 that	an the filing date of permit application.
Date of Notice: (0-30-17Date Permit Application Filed: 10	2-31-17
Notice of:	
☑ PERMIT FOR ANY ☑ CERTIFICATE OF APP	PROVAL FOR THE
WELL WORK CONSTRUCTION OF A	AN IMPOUNDMENT OR PIT
Delivery method pursuant to West Virginia Code § 22-6A-10	)(b)
☐ PERSONAL ☐ REGISTERED ☑ METH	IOD OF DELIVERY THAT REQUIRES A
	IPT OR SIGNATURE CONFIRMATION
SERVICE MAIL RECEI	IFT 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 primore coal seams; (4) The owners of record of the surface tract or tractively work, if the surface tract is to be used for the placement, constraint 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 of provision of this article to the contrary, notice to a lien holder is not	the tenants in common or other co-owners of interests described in the nt may serve the documents required upon the person described in the eight, article one, chapter eleven-a of this code. (2) Notwithstanding any tontice to a landowner, unless the lien holder is the landowner. W. Va. provide the Well Site Safety Plan ("WSSP") to the surface owner and any
☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice	
Z SURFACE OWNER(s)	☐ COAL OWNER OR LESSEE
Name: Franklin M. & Peggy A. Jennings	Name: See Attached
Address: 463 Evansville Pike	Address:
Thornton, WV 26440	
Name:	□ COAL OPERATOR
Address:	Name: None
	Address:
SURFACE OWNER(s) (Road and/or Other Disturbance)	
Name: Christopher R. Jennings	☑ SURFACE OWNER OF WATER WELL
Address: P.O. Box 86	AND/OR WATER PURVEYOR(s)
Newburg, WV 26410	Name: See Attached
Name: Franklin M. & Peggy A. Jennings	Address:
Address: 463 Evansville Pike	<del></del>
Thornton, WV 26440	☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Z SURFACE OWNER(s) (Impoundments or Pits)	Name:
Name: Franklin M. & Peggy A. Jennings	Address:
Address: 463 Evansville Pike	PECEIVED
Thornton, WV 26440	*Please attach additional forms if necessary Office of Oil and Gas
	NOV - 1 2017

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WV Department of Engine 723/2018

Office of Oil and Gas

047-077-00642

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WV Department of Environmental Protection API NO. 47OPERATOR WELL NO. Franklin Jennings 201
Well Pad Name; Franklin Jennings

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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <a href="https://www.dep.wv.gov/oil-and-gas/pages/default.aspx">www.dep.wv.gov/oil-and-gas/pages/default.aspx</a>.

#### Well Location Restrictions

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

API NO. 47-\_\_\_\_OPERATOR WELL NO. Franklin Jennings 201
Well Pad Name: Franklin Jennings

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

#### Water Well Testing:

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

#### **Water Testing Laboratories:**

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

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

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

#### Written Comment:

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

Office of Oil and Gas

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

NOV - 1 2017

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.

API NO. 47-\_\_\_OPERATOR WELL NO, Franklin Jennings 201
Well Pad Name: Franklin Jennings

#### 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 <a href="http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx">http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx</a> 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.

PECEIVED
Office of Oil and Gas
NOV - 1 2017
WV Department of Environmental Protection

API NO. 47-\_\_\_\_OPERATOR WELL NO. Franklin Jennings 201
Well Pad Name: Franklin Jennings

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 <a href="deepprivacyofficer@wv.gov">deepprivacyofficer@wv.gov</a>.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
CAROLINDA FLANAGAN
PO Box 603
Lumberport WV 26396
My Commission Depress Septembor 15, 2021

Subseribed and sworn before me this

day of OCT, 2

Notary Public

My Commission Expires

Office of Oil and Gas

NOV - 1 2017

WW Department of Environmental Protection

WW-6A3 (1/12) Operator Well No. Franklin Jennings 201

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

	Requirement:	Notice shall be prov	ided at le	ast SEVEN (7) day	s but no more than	FORTY-FIVE (45)	lays prior to
Date of Notice	2: 10/17/2016	Date of Plan	ned Ent	ry: 10/24/2016			
Dalivary math	and nursuant	to West Virginia C	nda 8 22_	6A-10a			
Delivery meth	iou pursuam	to west virginia C	oue 8 22-	uA-10a			
☐ PERSON	IAL 🗆	REGISTERED	■ N	METHOD OF DEL	IVERY THAT RE	QUIRES A	
SERVICE	3	MAIL	R	ECEIPT OR SIGN	ATURE CONFIR	MATION	
on to the surface but no more the beneath such to owner of mine and Sediment ( Secretary, which	ce tract to con- an forty-five of ract that has fi- rals underlying Control Manu- ch statement s	duct any plat surveys days prior to such enti- led a declaration pur- g such tract in the co- al and the statutes an	s required try to: (1) suant to s unty tax re d rules re information	pursuant to this are The surface owner ection thirty-six, are ecords. The notice dated to oil and gas on, including the ac	ticle. Such notice s of such tract; (2) t ticle six, chapter to shall include a sta exploration and pr	shall provide notice of shall be provided at least to any owner or lessee of wenty-two of this code; thement that copies of the roduction may be obtain tige on the Secretary's w	st seven days of coal seams and (3) any ne state Erosion ned from the
Notice is here	by provided t	to:					
■ SURFAC	E OWNER(s)			COAL	OWNER OR LE	SSEE	
Name: Franklin M				Name: See	Attached	-	
Address: 463 E			-				
Thornton, WV 26440		4	Ī	7.7.41.01.5			
Name: Christoph	er R. Jennings (acc	ess road)	<b>y</b>				
Address: P.O. B	30x 86			■ MINE	RAL OWNER(s)		
Newburg, WV 26410					klin M. & Peggy A. Jennin	gs A	
Name:			-		63 Evansville Pike		
Address:				Thornton, WV			
_			-	*please attach	additional forms if neo	cessary	
a plat survey o State: County:	est Virginia C	ode § 22-6A-10(a), r land as follows:	notice is h		ide & Longitude:	operator is planning er 39' 22' 30"; 79' 52' 30" Preston County Route 60/5 Sandy Creek	ntry to conduct
Quadrangle:	Thornton			Generally used	d farm name:	Franklin M. & Peggy A. Jenning	gs
may be obtained Charleston, W obtained from	ed from the Se V 25304 (304 the Secretary	ecretary, at the WV I 4-926-0450). Copies by visiting <u>www.der</u>	Department of such of	nt of Environmenta locuments or additi	l Protection headquonal information re	il and gas exploration a uarters, located at 601 5 elated to horizontal dril	7th Street, SE,
Notice is her		y:		750			NOV - 1 2017
Well Operator	: Arsenal Resour	rces		Address:	6031 Wallace Road Exte	ension, Suite 300	MAA - I SOLL
Telephone:	724-940-1218				Wexford, PA 15090		WV Department of
Email:	kdavis@arsenal	resources.com		Facsimile:	304-848-9134		Environmental Protection

#### Oil and Gas Privacy Notice:

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

### Arsenal Resources Franklin Jennings Pad WW-6A3 Attachment

#### Coal Owner or Lessee:

Franklin M. and Peggy A. Jennings / 463 Evansville Pike Thornton, WV 26440

ACIN 5260 Irwin Road Huntington, WV 25705

Office of Oil and Gas

NOV - 1 2017

WV Department of Environmental Protection

WW-6A5 (1/12) Operator Well No. Franklin Jennings 201

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

	Requirement: notice shall be proved ee: 10-30-17 Date Per		later than the filing plication Filed:		application.
Delivery met	hod pursuant to West Virginia C	ode § 2	2-6A-16(c)		
■ CERTI	FIED MAIL	П	HAND		
	RN RECEIPT REQUESTED	_	DELIVERY		
return receipt the planned of required to be drilling of a l damages to the	requested or hand delivery, give the peration. The notice required by provided by subsection (b), section horizontal well; and (3) A propose the surface affected by oil and gas of	this suntain ten of the surfact surface ten of the surface ten of the surface ten of the surface ten of t	ce owner whose land bsection shall include this article to a surface use and compens to the extent the da	I will be used for de: (1) A copy ace owner whos sation agreement images 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
Notice is her	eby provided to the SURFACE O	WNEE	R(s)		
	s listed in the records of the sheriff				
Name: Franklin	M. & Peggy A. Jennings	_/	Name:	Christopher R. Jennin	95 (access Road)
Address: 463 E		1	7/7/7/7/7/7/	P.O. Box 86	
Thornton, WV 264	140		Newburg,	, WV 26410	
	the surface owner's land for the pu West Virginia		f drilling a horizonta  UTM NAD 8	I well on the tra Easting: Northing:	well operator has developed a planned act of land as follows: 596,481.737 4,355,885.879
District:	Lyon		Public Road		Preston County Route 60/5
Quadrangle:	Thornton		Generally use	ed farm name:	Franklin M. & Peggy A. Jennings
Watershed:	Sandy Creek				
Pursuant to W to be provide horizontal we surface affect information r	ed by W. Va. Code § 22-6A-10(b) ell; and (3) A proposed surface use ted by oil and gas operations to the elated to horizontal drilling may be located at 601 57th Street, SE,	to a s and con e exten- be obtain	urface owner whose impensation agreement the damages are continued from the Secret	e land will be un nt containing ar compensable und ary, at the WV	code section; (2) The information required used in conjunction with the drilling of a noffer of compensation for damages to the ler article six-b of this chapter. Additional Department of Environmental Protection or by visiting

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 of Oil and DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WV Department of Environmental Protection

NOV - 1 2017



#### WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## **Division of Highways**

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

Revised February 20, 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 57<sup>th</sup> Street, SE Charleston, WV 25304

REGEIVED
Office of Oil and Gas

FEB 2 0 2018

Subject: DOH Permit for the Franklin Jennings Pad, Preston County Franklin Jennings 201H WV Department of Environmental Protection

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #04-2017-0033 for the subject site to ARSENAL Resources for access to the State Road for the well site located off of Preston County 60/5 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 January 3, 2012.

Very Truly Yours,

Dany K. Clayton

Gary K. Clayton Regional Maintenance Engineer

Central Office Oil &Gas Coordinator

Cc: Kelly Davis

ARSENAL Resources

CH, OM, D-4

File

	Franklin Jennings 201					
<del>.</del> .	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	HCI - 7.5%	7647-01-0			

RECEIVED Gas
Office of Oil and Gas
NOV - 1 2017
WY Department of Environment of Control Protection

#### PRESTON COUNTY, WV HIGHWAY MAP



HIGHWAY MAP SCALE

THORNTON AND FELLOWSVILLE, WV QUAD MAPS

## ARSENAL RESOURCES

#### **CONSTRUCTION PLANS FOR THE**

### FRANKLIN JENNINGS WELL PAD

#### LYON DISTRICT, PRESTON COUNTY, WV **FEBRUARY 2017**

#### DRIVING DIRECTIONS FROM NEWBURG, WY

- TRAVEL BAST ON PRESION COUNTY ROUTE (CR) 33 FOR APPROXIMATE EY 9.3 MOUS
- TURN RIGHT ONTO REHONVILLE PIKE (WY 92)
  TRAVEL SOUTH APPROXIMATELY 1.2 MILES ON WY 92
- TRAVIL BOUTH APPENDMATELY 1. MILES ON WAY 97 UNEX BEERS ROOM SOCKTICH HELL ROADS (RE-927) L. TRAVIL WIST APPENDMATELY BE MILES ON CH 927) L. TRAVEL BOUTH APPENDMATELY BE 98 (BES SO OC SE) UNEX REGIS ON O MAY ROAD (CR 604) TRAVEL BOUTH APPENDMATELY 9.4. WHILE ON CR 664 HAAF LED I (DERMAIN ON CR 604) CONTICLES BOUTH APPENDMATELY 9.4. WHILE SON CR 664 (CONTICLES BOUTH 9.4. WHILE S

DISTURBANCE SUMMARY

0.00

10.0

- TURN LEFT ONTO CR 609

(District - Tax Map - Parent

Jovenna Franklin M & Pesse A IP/O 4-9-61

Sensings Franklin M & Puppy A (3-17-34) Jennings Franklin M & Puppy A (3-17-40)

- TRAVEL WEST APPROXIMATELY 200 FEET ON CR 60'S TURN RIGHT ONTO FRANKLIN JENNINGS WELL PAD ACCESS ROAD

#### SITE COORDINATES

Coordinate Labol	Well Pad Center	Flowback Pit Center	<b>Access Road Beginning</b>
We's bis Emittede	N 39.347297	V39,353667*	N 19.354584*
WWES-N Longitude	W 29.8803456*	W 79.879943*	W 29.876953*
WVS3-N Northing	806836.221 F	313155.9394	311401616161
WV83-N fasting	1860907.789 1	1861067,684 R	1561330.967 7
UTM 88-27 Northing	4355915 294 m	4355622.712 m	4136725.555 m
UTM 83-17 Facility	555468 765 m	195504 225 m	\$56.554.367 m

Coordinate Labol	Well Pad Center	Flowback Pit Center	Access Road Beginning
We's bit Emittede	N 39.347297	V39,353667*	31 10.354564"
WWXS-N Longitude	W 29.8803456*	W 79.879943*	W 29.87889.9"
WVE3-N Northing	806836.221 F	313155.9394	311409 G16 P
WV83-N fasting	1860907.789 1	1861067,684 R	1561330.967.9
UTM # 8-17 Northing	4355915 294 m	4355622.712 m	4136725.555 m
UTM 83-17 Facility	556468 780 rs	595504 225 m	\$56.554.265 to

#### SURFACE HOLE COORDINATES

					10.00	25 10 7 - 46/6				
Coordinate Label	1				Wells	ium ber				
Coordinate Label	201	20.7	20.5	205	211	2112	211	254	215	216
WVS3-N Latitude	N 39 147607*	N 35 346983"	N 10 346953"	H39349935"	9.39.347565*	9.39.347534*	N 35.347572*	h 11,147665*	W VI 347639*	N 39 347572
WV83-W Longitude	W 75.880257	W 79.886734"	W 79.3801801	W 79.8801371	W78888850"	W 79.880500°	W 79-540761"	W 79.880718*	W 79 £80707*	W 79.860676
WVE3-N Northing	306739 749 ft	308721.987 h	308783 226 ft	308704 #64 h	308912 253 ft	30833£ 839 h	108517.001 R	105949.179 0	300063,354 ft	305373.5301
WVEE-N Easting	1810900.8919	1950978.066 ft	1860685.241 Pt	1860997.417 ft	1860802-270 ft	1860811031 h	1860839.792 0.	1869528 154 ft	1869837 315 h	1860846.077
UTM 83-17 Northing	4355863.274 m	435586 0.667 m	4355 E7 E 060 m	4355875-451 /14	4955957.895 m	4355941 849 m	4355945.403 m	4355940 157 as	4355952.NCI m	4355956.555
LORS LOS STREET	I rorant and -	CARLES WES-	137183 004 -	A DOLLAR TER	PRESENT BAT	PROPERTY OF	PACHAT ACC III	CARTIFOCE -	234345 £76 m	TOURSD TES .

Coordinate Label					Well h	ium ber				
Coordinate Label	201	20.7	20.5	205	211	212	21.1	254	215	216
WVS3-N Latitude	N 39.147607*	N 35 346983"	N 19 346953"	H33346935"	9.39,547565	4.39,347534*	N 35.347572*	8 15,147595*	W W 347639*	4 39 347572"
WV83-N Longitude	W 75.880257*	W 79.386734"	W 79.3801801	W 79.8801371	W 79.8808501	W 79.8805001	W 79.540769*	W74590710*	W 79.580707*	W 79.860676*
WVEB-N Northing	306739 749 ft	308721.987 h	308783 226 ft	308704 #64 h	108912 233 ft	30893£ 879 h	108517.001 R	1051451794	308063,354 %	305373.530 ft
WVEE-N Easting	1810900.891#	1950978.066 ft	1860685.241 Pt	1860997.437 ft	1860802.270 ft	186-0811-031 h	1860839.792.0	1869528 554 ft.	1860837315 h	1860846.077 h
UTM 83-17 Northing				4355875.451 /4					4355952.N11 m	
UTM 13-17 Easting	596485.496 m	596483.250 m	595493.004 m	596496,758 m	596436,245 m	596436.853 m	506441.460 m	596444.668 m	570.846.676 m	596449.254 m

PROJECT

LOCATION

CONTACT INFORMATION

THE THRASHER GROUP, INC R. BRAD MESSENGER, PR OFFICE: 304-624-4108

ARSENAL RESOURCES EDDIE CARDER

DEFICE: 724-940-1204

EMAIL: exarder@arsenalaesourc

WEIRTON

- MOUNDSVILLE

10.59

963

2.01

23.33

WEST VIRGINIA

7/21 3:10/2017



ARSENAL

SHEET INDEX

TITLE SHEET EXISTING CONDITIONS OVERALL SITE PLAN

WELL PAD PROFILE

RECLAMATION PLAN GENERAL NOTES

**OUANTITIES** TYPICAL SECTIONS DETAILS

FLOWBACK PIT PROPILE FLOWBACK PIT SECTIONS TOPSOIL STOCKPILE I PLAN TOPSOIL STOCKPILE 2 & 3 PLAN OVERALL GEOMETRIC LAYOUT WELL PAID GEOMETRIC LAYOUT FLOWBACK PIT & STAGING AREA LAYOUT

DESCRIPTION

WELL PAD ACCESS ROAD PLAN & PROFILE
WELL PAD ACCESS ROAD SECTIONS
FLOWBACK PIT ACCESS ROAD PLAN & PROFILE

FLOWBACK PIT ACCESS ROAD SECTIONS WELL PAD PLAN

WELL PAD SECTIONS
FLOWDACK PIT & STACING AREA PLAN

## PROJECT LOCATION 200000

ENTRANCE LOCATION

ONE CALL UTILITY SYSTEM CONTACT INFO

VICINITY MAP SCALE



CONTRACTOR SHALL NOTHEY THE ONE-CALL SASTEM OF THE UNITAGEOR STATE OF THE OWN-TAKE SYSTEM OF THE INTENDED EXCAVARION OR GEAGLITON NOT LESS THAN FORTY-EISHT (40) HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LIGAL PERBARAL OR STATE HOLIZBYS, NOR MORE, THAN TEN (10) WORK DAYS PRIOR TO THE BEGENNING OF SUCH WORK.

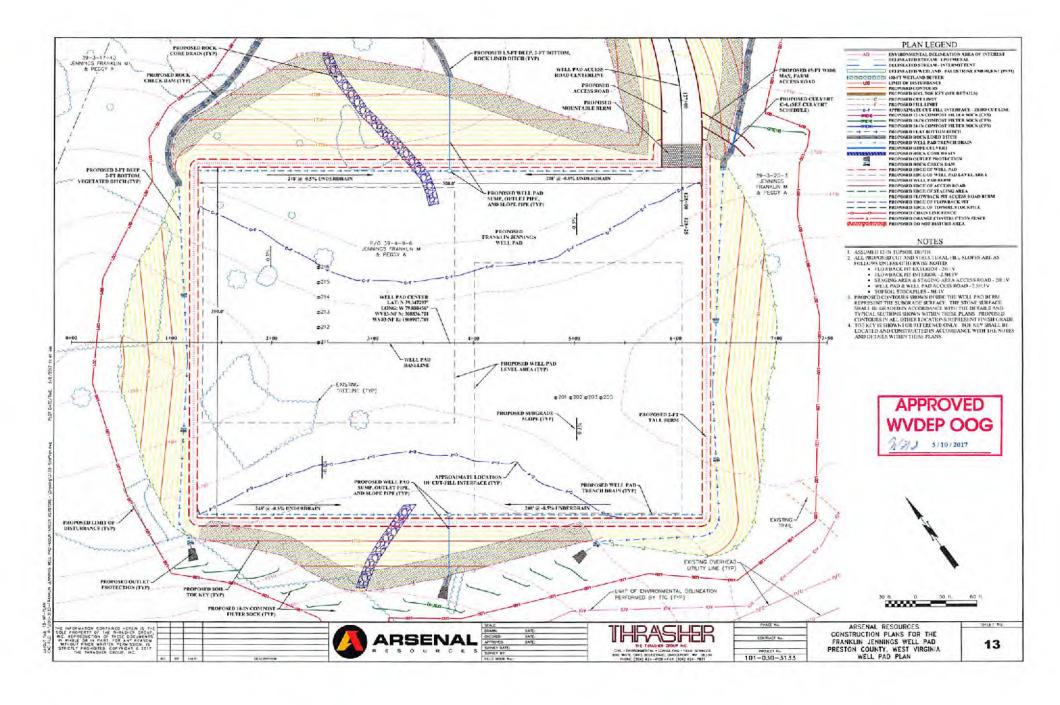
### **APPROVED** WVDEP OOG



NUMBER	SHEETS	BY	DATE	DESCRIPTION
1	3-5, 16 & 30	JFW.	05/08/17	ADDED EMERGENCY LIFELINE TO FLOWERCK FIT: & REVISED WELL PAD SUMP & WELL PAD HILING! DRAIN DETAILS

500 WHITE DAKS BOULEVARD - BRIDGEPORT, WV 26330 PHONE (304) 624-4108 • FAX (304) 624-7831

THE AVERTATION CONTACTED WHERE IS HET SOLD PREPERTY OF THE THEADY CARDINE, MIC. REPROSECTION OF THESE BODDWESTS IN WHOLE OF IN PART, TOO DAY RELEGION WITHIN THE PERMITSION IS STREET, PROPERTIES.





77-00642-201

77-00643-202

77-00644-203

77-00645-204

77-00647-211

77-00648 - 212

February 8, 2018

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

RE: Franklin Jennings Pad 201-205 ? 211-212

#### Dear Laura:

Enclosed, please find the <u>Voluntary Statement of No Objection</u> signed form for ACIN LLC, coal owner or lessee for the Franklin Jennings Pad.

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

Sincerely,

Carolinda Flanagan Permitting Specialist

1-304-838-2987 mobile

1-724-940-1224 office

cflanagan@arsenalresources.com

RECEIVED Office of Oil and Gas

FEB 1 2 2018

WW-6AW (1-12)

FEB 1 2 2018

WV Department of Environmental Protection

API NO. 47-077 OPERATOR WELL NO. See Attached Well Pad Name, Franklin Jennings

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

## VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

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

#### Comment and Waiver Provisions

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

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

#### VOLUNTARY STATEMENT OF NO OBJECTION

State:	the well plat, all for proposed well work on the tra West Virginia	UTM NAD 83 Easting:	See Attached
County: District:	Preston Lyon	Public Road Access:	See Attached
Quadrangle:		Generally used farm name:	County Route 60/6
Watershed:	Maple Run	Senerally used farm name.	гининга, а геруу к желилдэ
□ SURFAC			ON BY A NATOO ALVERSON
issued on thos	that I have no objection to the planned work describe materials.		7 14.
□ SURFAC	CE OWNER	Signature:	Ayer - William
T SUPEAC	E OWNER (Road and/or Other Disturbance)	Print Name: 5	Rodry F. Wooten
- SUNTAC		Date: Nover	nBer 3, 2017
	CE OWNER (Impoundments/Pits)	Date: /Vover	
□ SURFAC		FOR EXECUTI	ON BY A CORPORATION, ETC.
□ SURFAC	CE OWNER (Impoundments/Pits)	FOR EXECUTI Company:	ON BY A CORPORATION, ETC.
□ SURFAC  ■ COAL O	CE OWNER (Impoundments/Pits) WNER OR LESSEE	FOR EXECUTI Company: By: Its:	ON BY A CORPORATION, ETC.

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.