

#### 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, October 11, 2019 WELL WORK PERMIT Horizontal 6A / Drilling Deeper

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

Re: Permit approval for VELTRI 3HM

47-091-01308-00-00

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

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

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0450.

James A. Martin

Chief

Operator's Well Number:

VELTRE3HM

Farm Name:

VELTRI, ANTHONY J.

U.S. WELL NUMBER:

47-091-01308-00-00

Date Issued: 10/11/2019

Horizontal 6A Drilling Deeper

Promoting a healthy environment.

API Number:	

## **PERMIT CONDITIONS**

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

#### **CONDITIONS**

- 1. 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.
- 2. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled Water Well Regulations, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 3. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- 4. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 5. 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.
- 6. 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, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

WW-6B (04/15)

API NO. 47-091 - 0	01308
<b>OPERATOR WELL</b>	NO. Veltri 3HM
Well Pad Name:	Veltri

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

1) W 11 O . A	rsenal Res	ources	4945	 519412	Taylor	Courthou	Grafton		
1) Well Operator: A	i sciidi Nes						<u>',1</u>		
			Оре	rator ID	County	District	Quadrangle		
2) Operator's Well N	umber: Vel	tri 3HM		_ Well Pa	nd Name: Ve	<u>Itri</u>			
3) Farm Name/Surfac	ce Owner: /	Anthony Vel	tri	Public Ro	ad Access: C	CR's 119/28,	119/27, 13/6		
4) Elevation, current	ground:	1474	Elevation	n, proposed	l post-constru	ction: 1473.2	25		
5) Well Type (a) G	as X	Oil		Unc	derground Sto	rage			
Othe	r								
(b)If	Gas Shal	low X		Deep					
	Hori	zontal X		_					
6) Existing Pad: Yes	or No Yes				_				
7) Proposed Target F Target Formation- Ma	` '		-		•	` ,	ted Pressure- 0.5 psi/ft		
Target Formation- Marcellus Shale, Top- 7,881.0ft, Bottom- 7,968.0ft, Anticipated Thickness- 87ft, Associated Pressure- 0.5 psi/ft  8) Proposed Total Vertical Depth: 7,954 ft.									
			ellus Shale		-				
9) Formation at Total	vertical De			<del></del>					
10) Proposed Total M	leasured De	pth: 13,98	1.4 ft.						
11) Proposed Horizon	ntal Leg Ler	ngth: 5,376	.9 ft.						
12) Approximate Fre	sh Water St	rata Depths:	115',	134', 169'	', 340', 341, <sup>4</sup>	424', 515'			
13) Method to Deterr	nine Fresh \	Water Depths	G: Offsetting	wells reported	d water depths (09	1-00825, 091-0082	26, 091-00949, 091-00991)		
14) Approximate Sal		-				-			
15) Approximate Coa	al Seam Dep	oths: Harlem - 420', Bo	skerstown – 503°, Brush C	reek - 596', Upper Freeport	t = 673', Lower Freeport = 720', Up	pper Kittanning – 780', Middle Kittar	nning – 818', Lower Kittanning – 886', Clarion – 911'		
16) Approximate Dep	oth to Possil	ole Void (coa	ıl mine, ka	rst, other):	None Know	'n			
17) Does Proposed w directly overlying or				Yes	1	No None Kn	own		
(a) If Yes, provide I	Mine Info:	Name:							
, , , , , , , , , , , , , , , , , , ,		Depth:					-		
		Seam:							
		Owner:		_			RECEIVED Office of Oil and Gas		
		_	*						

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WW-6B	
(04/15)	

API NO. 47- 091 - 01308

OPERATOR WELL NO. Veltri 3HM

Well Pad Name: Veltri

## 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	Used		94	80	80 1	CTS
Fresh Water	13.375	New	J-55	54.5	638.2	638.2 /	CTS
Coal							
Intermediate	9.625	New	J-55	40	2,720.8	2,720.8 🗸	CTS
Production	5.5	New	P-110	20	13,981	13,981	TOC @ 2,550
Tubing							
Liners							

Timet L. Sheyrolots 6-17-19

TYPE	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	30			0	Class A, 3% CaCl2	1.2
Fresh Water	13.375	17.5	0.38	2,730	900	Class A, 3% CaCt2	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**

Kind:		
Sizes:		
Depths Set:		

WW-6E	3
(10/14)	į

API NO. 47091	01308	
OPERATOR WEI	L NO.	Veltri 3HM
Well Pad Name	: Veltri	

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 30" hole to Conductor programmed depth then running 24" casing and circulate cement back to surface. The conductor rig will move out and the drilling rig will move in and rig up. The drilling rig will then spud a 17 1/2" hole and drill to fresh water casing (Surface) to the programmed depth, Run 13- 3/8" casing and cement to surface. The rig will continue drilling a 12- 1/4" intermediate hole to the programmed depth, run 9-5/8" casing and cement to surface. The rig with then continue to drill an 8-3/4" hole to a designed KOP. We will then start drilling the curve and lateral section to the programmed total measured depth, run 5 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): 14.4
- 22) Area to be disturbed for well pad only, less access road (acres): 3.36
- 23) Describe centralizer placement for each casing string:

24"- No centralizers 13 3/8" - one bow spring centralizer on every other joint 9 5/8" - one bow spring centralizer every third joint from TD to surface 5 1/2" - one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 2,800'; there will be no centralizers from 2,800 to surface.

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

24" will be circulated to surface. The 13 3/8" casing will be cemented to surface with Class A cement and no greater than 3% CaCl (calcium chloride). The 9 5/8" casing will be cemented to surface with Class A cement, & no greater than 3% calcium chloride. The 5 1/2" production string will be cemented back to 2,550' (+/-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 for placement and possibly gypsum gas blocking additive to aid in blocking/gas migration (in combination with other additive mentioned here, helps may be the combination with other additive mentioned here, helps may be the combination with other additive mentioned here. a "right angle" set) during the plastic phase of the cement set-up.

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25) Proposed borehole conditioning procedures:

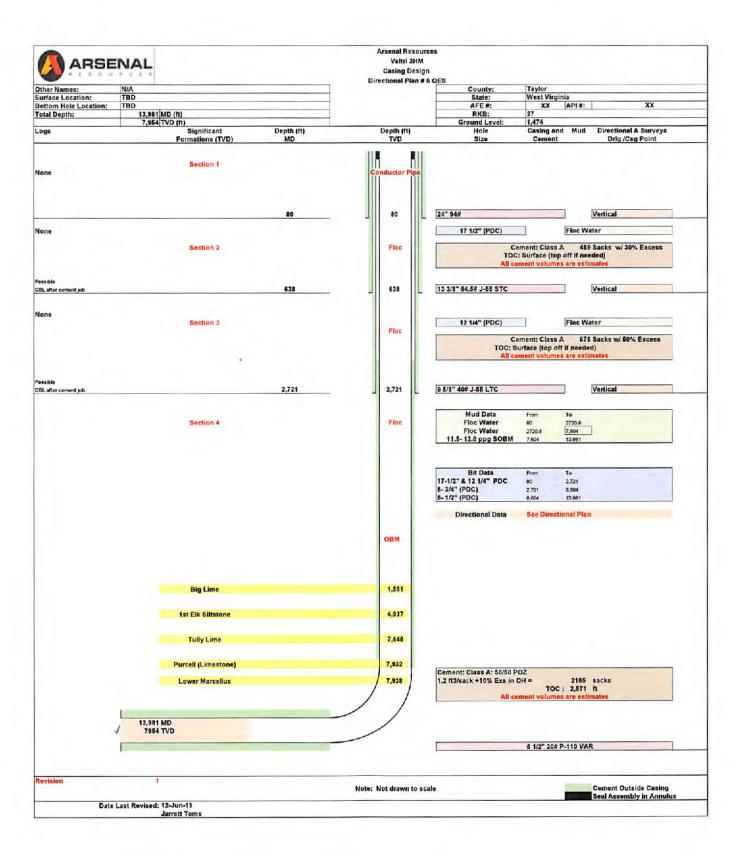
Top holes will be drilled with fresh water KOP. At KOP, the wellbore will be loaded with synthetic oil based much properties as to build a filter call. barite-weighted mud system with such properties as to build a filter-cake on the face of the bore-hole. This will provide lubricity as well as stabilizing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

\*Note: Attach additional sheets as needed.

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

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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 Taylor County, WV prior to hydraulic fracturing at the following ARSENAL RESOURCES wells on the Veltri 3HM 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 8,000'TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Benson formation (approximately 4,400' 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:

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- Inspect their surface equipment prior to fracturing to establish integrity and establish prefrac well conditions.
- frac well conditions.

  2. Observe wells closely during and after fracturing and monitor for abnormal increases in WV Department of water, gas or pressure.

  Environmental Protection
- Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
- 4. Notify the OOG and ARSENAL RESOURCES if any changes in water, gas production, pressure or other anomalies are identified.



## 2. Reporting

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

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Area of Review Report -	Veltri	Pad,	3HM	Lateral,	Taylor	County, WV

Well Name	API Number	Operator Name / Address	Well Type	Latitude	Longitude	Total Depth	Perforated Formation(s)	Producing Zones not Perforated
Haymond Nuzum 4	091-00132-P	Alliance Petroleum Corp	Plugged	39.274355	-80.06017	NA	NA	NA
Haymond Nuzum 3	091-00131	Alliance Petroleum Corp	Vertical/Existing	39.259179	-80.058656	4551	Big Lime, Big Injun, Fourth, Speechley, Riley, Benson	NA
E&L J Findley 1	091-00133	Alliance Petroleum Corp	Vertical/Existing	39.269179	-80.054902	4384	Greenbrier Group, Big Lime, Fifty-Foot	NA
								NA

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WW Department of Environmental Protection

"A" transanta WEXFORD, PA 15090 BRIDGEPORT, WV 26330 ADDRESS 6031 WALLACE RD. EXT. SUITE 300 ADDRESS 65 PROFESSIONAL PLACE WELL OPERATOR ARSENAL RESOURCES DESIGNATED AGENT MILLIAM VEIGEL НТЧЭО ОЭТАМІТВЭ - NOITAMAO 1 TEBRAT *SHARICAL CHANGE IN WELL (SPECIFY)* MARCELLUS CLEAN OUT AND REPLUG - OTHER PLUG AND ABANDON \_\_\_ PERFORATE NEW FORMATION CONVERT FRACTURE OR STIMULATE X PLUG OFF OLD ם מורד מבבהבה X הבמצורד 179.462 Effection of the control of the colon of the colo PROPOSED WORK: ROYALTY OWNER - ANTHONY J. VELTRI ET AL W Department of ACREAGE SURFACE OWNER 494.67F ANTHONY J. VELTRI 1 I 2019 GUADRANGLE COUNTY DISTRICT GRAFTON 7.5' COURTHOUSE TAYLOR MATERSHED. ELEVATION LONG RUN 1473,26" - AS BUILT LOCATION: GAST PRODUCTION X STORAGE DEEP SHALLOW X OFFICE OF OIL and Gas DISPOSAL GAS X INJECTION TYPE: **MASTE** TIONID MELL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) OFFICE OF OIL AND GAS HORIZONTAL & VERTICAL DIVISION OF ENVIRONMENTAL PROTECTION SCALE 1. = SD00. YOARUGGA 40 STATE OF WEST VIRGINIA 115200 FILE NO. 8602P3HMR2.dwg AND STATE OF AND S WINIWOW DECKEE COUNTY STATE PERMIT 80810 160 .B.q BY THE DIVISION OF ENVIRONMENTAL PROTECTION, VELTRI 3HM OPERATORS WELL NO. THE REGULATIONS ISSUED AND PRESCRIBED 50 18 JUNE 26 THE INFORMATION REQUIRED BY LAW AND KNOWLEDGE AND BELIEF AND SHOWS ALL 17 02 MAY 23 STATES TOPOGRAPHIC MAPS. THE UNDERSIGNED, HEREBY CERTIFY THAT (+) DENOTES LOCATION OF WELL ON UNITED Land & Energy Development 959, OE 146 CENTER OE BRODORD METE BVD: "5 500 80" EL" OB DMETENCE MEDE LUDIND MUHNIN BRODORED OVE METE NO VOSIONINEM BRIDINGE 1" NO MYLER METE MENE LUDIND MUHN 520, DE NOJES ON SOKKEY E. 681,701,1 1'668'896'b 'N (M) MIU EB'CAN LAT-(N) 39.257983 LONG-(W) 80.053040 NAD'83 GEO. MAD'83 S.P.C.(FT) N. 276,560.2 E. 1,811,901.7 E. 681,140.7 7,278,746,4 .N (M) MTU 88'GAN AMERICAL PROPERTY LAT-(N) 39.271907 LONG-(M) 80.058349 NVD.83 CEO' E, 1,610,147,0 NAD/83 S.P.C.(FT) N. 281,642.7 INION SMIGNAL 'H'8 E. 561,430,4 0.647,745,4 N (M) MTU ES'GAN NAD'83 S.P.C.(FT) N. 282:661.5 E. 1.611.117.9 NAD'83 GEO, LAT-(N) 39.275270 LONG-(M) 60.055646 (S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH) VELTRI 3HM ARSENAL RESOURCES MHE IRT 13/6 8051-190-74 TISM CHILIPS SOET OTEL OTEL OTEL OTEL OTEL TIEM ONILSOCE TIBM GBSO-GORD JUNOS ALNINOS 2.269 B.H BULL SONS ROAD CREEK ROAD NAD' 83 GRID BNIL T32490 WELL LATERAL TEVES TIME **TECEND** NORTH H.I JIV 75 OL LON BEAT STATES (1944) ENGERTED (HEAT) FOR PERCENTER DECHORAGE O USVOJOSJ O West 2001-140-14 CERCHINE O WILL WITHOUT LONGITUDE (NAD'83) VELTRI WELL LAYOUT 47-091-1308 SOCIDAL SHITKING SALLONS VELTRI 95,0561 2 95,55, M 67 148641 DILITAN ANDREAS 95.51 17.C9+3 3 aLUES 27 16.0151 3,96,115 17 BONATRIO 3NIT 80.02 AET LBI 3HM MEGT LIES LATITUDE(NAD'83) 39°17'30" HT 210 3,220' B.H.-

## Stansberry, Wade A

From:

Kelly Davis <kdavis@arsenalresources.com>

Sent:

Thursday, July 11, 2019 1:46 PM

To:

Stansberry, Wade A

Subject:

RE: Veltri Pad Drill Deeper

Wade,

Eddie and I talked with Laura and Taylor about a month ago in regards to these permits. The conductors are currently set on this pad. Since the permits are expiring in October, we are re-permitting these as drill deeper permits. I didn't put in there about the conductors being set. I should have indicated that in the letter. We wanted to submit these applications before they expired. This pad applies to the old rule per our conversation we had with them. It's an older pad from PDC before we became Arsenal Resources.

If you have any other questions, just let me know. Thank you!

## Kelly Davis

Permitting Specialist Arsenal Resources

65 Professional Place, Suite 200 Bridgeport, WV 26330 P: 724.940.1218 C: 304.517.8743



From: Stansberry, Wade A < Wade. A. Stansberry@wv.gov>

Sent: Thursday, July 11, 2019 1:40 PM

To: Kelly Davis <kdavis@arsenalresources.com>

Subject: Veltri Pad Drill Deeper

Kelly,

We wanted to ask what the purpose of these applications are?

The first Drill Deeper applications for the four of these permits are still valid until 10/2/19.

Thank you,

Wade A. Stansberry
Environmental Resources Specialist 3
West Virginia Department of Environmental Protection
Office of Oil & Gas
601 57th St. SE

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# State of West Virginia Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

Operator (as registered with the OOG) Arsenal Resources  Address 6031 Wallace Rd Ext., Suite 300 City Wexford State PA Zip 15090  As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  Top hole Northing Easting  Landing Point of Curve Northing Easting  Bottom Hole Northing Easting  Elevation (ft) 1476 GL Type of Well New Existing Type of Report Interim Pinal  Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow  Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Farm name Anthony J. Veltri  Operator (as registered with the OOG)
Operator (as registered with the OOG)  Address 6031 Wallace Rd Ext., Suite 300  City Wexford  State PA  Zip 15090  As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  Top hole Northing Easting  Landing Point of Curve Northing Easting  Bottom Hole Northing Easting  Elevation (ft) 1476  GL Type of Well New Existing Type of Report Interim Pinal  Permit Type Deviated Horizontal Horizontal A Vertical Depth Type Deep Shallow  Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Address 6031 Wallace Rd Ext., Suite 300 City Wexford State PA Zip 15090  As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey Top hole Northing Easting Landing Point of Curve Northing Easting Bottom Hole Northing Easting  Elevation (ft) 1476 GL Type of Well New Existing Type of Report Interim Final  Permit Type Deviated Horizontal Horizontal A Vertical Depth Type Deep Shallow  Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Top hole Northing Easting Bottom Hole Northing Easting Type of Report Interim Final Permit Type Deviated Horizontal Horizontal A Vertical Depth Type Deep Shallow Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Landing Point of Curve Bottom Hole Northing Easting Easting  Bottom Hole Northing Easting  Elevation (ft) 1476 GL Type of Well New □ Existing Type of Report Interim □ Final  Permit Type □ Deviated □ Horizontal ■ Horizontal 6A □ Vertical Depth Type □ Deep ■ Shallow  Type of Operation □ Convert □ Deepen ■ Drill □ Plug Back □ Redrilling □ Rework □ Stimulate
Bottom Hole Northing Easting
Elevation (ft) 1476 GL Type of Well New   Existing Type of Report Interim   Final    Permit Type   Deviated   Horizontal   Horizontal 6A   Vertical   Depth Type   Deep   Shallow    Type of Operation   Convert   Deepen   Drill   Plug Back   Redrilling   Rework   Stimulate
Permit Type □ Deviated □ Horizontal ■ Horizontal 6A □ Vertical Depth Type □ Deep ■ Shallow  Type of Operation □ Convert □ Deepen ■ Drill □ Plug Back □ Redrilling □ Rework □ Stimulate
Type of Operation □ Convert □ Deepen ■ Drill □ Plug Back □ Redrilling □ Rework □ Stimulate
Well Type □ Brine Disposal □ CBM ■ Gas □ Oil □ Secondary Recovery □ Solution Mining □ Storage □ Other
Type of Completion
Drilled with □ Cable ■ Rotary
Drilling Media Surface hole □ Air □ Mud ■ Fresh Water □ Intermediate hole □ Air □ Mud ■ Fresh Water □ Brine  Mud Type(s) and Additive(s)  NA
Date permit issued 09/26/2014 Date drilling commenced 3/31/2015 Date drilling ceased 4/8/2015
Date completion activities beganNA Date completion activities ceasedNA
Verbal plugging (Y/N) NA Date permission granted NA Granted by NA
Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug  RECEIVE Office of Oil al
None Reported N JUL 11
Freshwater depth(s) ft Open mine(s) (Y/N) depths
Salt water depth(s) ft None Reported Void(s) encountered (Y/N) depths N WV Departm
Coal depth(s) ft None Reported Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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STRINGS Size	Rev. 8/23/13									
STRINGS Size	API 47- 091	01308	Farm nar	ne Anthony	J. Veltri		Well	number_3F	HM	
STRINGS Size	CASING	Hole	Casing		New or	Grade				ent circulate (Y/N)
Intermediate   17 1/2"   13 3/8"   638 2	STRINGS		_	Depth						
Description   Comment   Description   Desc	Conductor	30"	24"	80'	New	9	94.00	NA		Y
Intermediate 1 12 1/4" 9 5/6" 2,720.8' New 40.00 NA Y Intermediate 2 Intermediate 3 NA	Surface	17 1/2"	13 3/8"	638.2'	New	5	54.50	120'		Y
Intermediate 2 Intermediate 3 Interm	Coal									_
Intermediate 3 Incomment Details Cement to surface on Conductor, Surface, and Intermediate. Top of Cement at Surface.  CEMENT Class/Type Number of Sucks Wit (ppg) (R*/sks) (G;2) Top (MD) (Inn) Conductor A 230 15.6 1.2 276 Surface 8+ Intermediate Conductor A 470 15.60 1.20 564 Surface 8+ Intermediate I A 630/196 14.50/15.70 1.55/1.29 976.5/252.84 Surface 8+ Intermediate 2 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ Intermediate 3 Induction NA N	Intermediate 1	12 1/4"	9 5/8"	2,720.8'	New	4	10.00	NA		Υ
Troduction NA	Intermediate 2									
Tabling acker type and depth set  Comment Details  Cement to surface on Conductor, Surface, and Intermediate. Top of Cement at Surface.  CEMENT Class/Type Number Sharry Yield Volume Coment Top (MD) (Inn)  DATA of Cement of Sacks wit (ppg) (R <sup>2</sup> /sks) (R <sup>2</sup> ) Top (MD) (Inn)  Conductor A 230 15.6 1.2 276 Surface 8+  Coal  A 470 15.60 1.20 564 Surface 8+  Coal  Intermediate 1 A 630/196 14.50/15.70 1.55/1.29 976.5/252.84 Surface 8+  Antermediate 2 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 288/298 7.000 8+  Intermediate 2 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 288/298 7.000 8+  Production NA	Intermediate 3							-		
Tacker type and depth set  Comment Details  Cement to surface on Conductor, Surface, and Intermediate. Top of Cement at Surface.  CEMENT Class/Type Number Sturry Yield Volume Cement WOC (Itr.)  DATA of Cement of Sacks wit (ppg) (R 1/sks) (R 2) Top (MD) (Itr.)  Conductor A 230 15.6 1.2 276 Surface 8+ wit (ppg) (R 1/sks) (R 2) Top (MD) (Itr.)  Conductor A 470 15.60 1.20 564 Surface 8+ wit (ppg) (R 1/sks) (R 2) Top (MD) (Itr.)  Intermediate 1 A 630/196 14.50/15.70 1.55/1.29 976.5/252.84 Surface 8+ micromediate 2 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ micromediate 3 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ microm	Production	NA NA	NA	NA	NA	1	NA	NA		NA
CEMENT Class/Type Number of Salets wit (ppg) (ft.)/sks) (ft.) Top (MD) (hr.) Conductor A 230 15.6 1.2 276 Surface 8+ coal	Tubing				†					
CEMENT Class/Type Number of Sacks wt (ppg) (R ½sks) (G½) Top (MD) (hrs)  Conductor A 230 15.6 1.2 276 Surface 8+  Furface A 470 15.60 1.20 564 Surface 8+  Furface A 470 15.60 1.20 1.55/1.29 976.5/252.84 Surface 8+  Furface A 470 1.4./16.5 1.28/1.1 298/298 7.000 8+  Furface A 530/196 14.50/15.70 1.55/1.29 976.5/252.84 Surface 8+  Furface A 630/196 14.50/15.70 1.55/1.29 976.5/252.84 Surface 8+  Furface A 630/196 14.50/15.70 1.55/1.29 976.5/252.84 Surface 8+  Furface A 700 1.55/1.29 976.5/252.84 Surface 9+  Furface A 700 1.55/1.29 976.5/252.84 Sur	Packer type and d	epth set								-
DATA   Of Cement   Of Sacks   wt (ppg)   (ft <sup>3</sup> /sks)   (ft <sup>3</sup> /s)   Top (MD)   (hrs)	Comment Details				<u> </u>					
Condition   A   230   15.6   1.2   276   Surface   8+					•					
Tarface A 470 15.60 1.20 564 Surface 8+    Coal	Conductor						1			
Intermediate 1	Surface		470				564	Surf	face	8+
Intermediate 2 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ Intermediate 3	Coal									
Intermediate 2 Type -1 Kick Plug 233/271 14.4/16.5 1.28/1.1 298/298 7,000 8+ Intermediate 3	Intermediate 1	A	630/196	14.50/1	5.70 1.	55/1.29	976.5/252.8	4 Surf	ace	8+
Intermediate 3 Production NA	Intermediate 2			<u> </u>					100	
The controllers TD (ft) 8.410  Loggers TD (ft) 8.380  Deepest formation penetrated Onondaga Plug back to (ft) 7.000  Plug back procedure Two coment plugs set. Ran 2-7/8" tubing and pumped a 050" kick plug. Then pulled up 110" off bottom and set another 050" cement plug. 1,300" total cement plug and top of coment at 7,000  Cick off depth (ft) NA  Check all wireline logs run	Intermediate 3	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					T	1		
Drillers TD (ft) 8,410	Production	NA	NA NA	NA.		NA	NA	N	A	NA
Plug back to (ft) 7.000 Plug back procedure Two coment plugs set. Ran 2-7/8"tubing and pumped a 650' kick plug. Then pulled up 110' off bottom and set another 650' cement plug. 1,300' total coment plug and top of coment at 7,000' Cick off depth (ft) NA  Check all wireline logs run	Tubing									
Check all wireline logs run    caliper   density   deviated/directional   induction   temperature   sonic	Deepest forma Plug back pro	ation penetrated Or ocedure Two coment pluga		d pumped a 650' kick p	Plug bacl	k to (ft) 7.	000	ement plug. 1,300' to	otal cement plug	and top of cement at 7,000°
DESCRIBE THE CENTRALIZER PLACEMENT USED 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  Offfice of Oil and Gas  WAS WELL COMPLETED AS SHOT HOLE	-		•	•					□sonic	:
WAS WELL COMPLETED OPEN HOLE?   Yes   No DETAILS   W. Department of Environmental Partners   Destance   Partners   Partne										
WAS WELL COMPLETED AS SHOT HOLE							TRING			
WAS WELL COMPLETED AS SHOT HOLE   Yes   No DETAILS   W Department of Environmental Plants   Short Shor										
WAS WELL COMPLETED AS SHOT HOLE   Yes   No DETAILS   W Department of Environmental Plants   Short Shor										
WAS WELL COMPLETED AS SHOT HOLE										RECEIVED
Environmental Dustanti	WAS WELL (	COMPLETED AS	SHOT HOLE	□ Yes □	No D	DETAILS				
	WAS WELL (	COMPLETED OP	EN HOLE?	□Yes □ N	No DE	TAILS _			Wv Environ	Department of nmental Protecti
WERE TRACERS USED										

WR-35 Rev. 8/23/13 Page 3 of 4

API 47- 091 _ 01308	Farm name Anthony J. Veltri	Well number_3HM
<u> </u>		

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
NA					

Please insert additional pages as applicable.

#### STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
NA			\					
-								
	-							
_								
<b>-</b>		-		<del>                                     </del>				RECEIVED
					-			RECEIVED Office of Oil and Gas
				<del> </del>				1 1 2010
L	<u> </u>		<u> </u>		L	<u> </u>		- 41 T T T T T T T T T T T T T T T T T T

Page 4 of 4 WR-35 Rev. 8/23/13 API 47- 091 \_ 01308 Farm name Anthony J. Veltri Well number\_3HM PRODUCING FORMATION(S) DEPTHS NA TVD MD Please insert additional pages as applicable. GAS TEST □ Build up □ Drawdown □ Open Flow OIL TEST - Flow - Pump Surface NA DURATION OF TEST NA Bottom Hole NA SHUT-IN PRESSURE psi psi hrs OPEN FLOW Oil NGL Water Gas GAS MEASURED BY NA NA NA NA bpd □ Estimated □ Orifice □ Pilot mcfpd bpd bpd LITHOLOGY/ BOTTOM TOP BOTTOM TOP DEPTH IN FT DESCRIBE ROCK TYPE AND RECORD QUANTITYAND FORMATION DEPTH IN FT DEPTH IN FT DEPTH IN FT TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S, ETC) NAME TVD TVD MD MD Sands, Silts, and Coals 1550 1550 Sand, Silt, and Coal 0 0 Big Lime 1550 3192 1550 3200 Limestone Balltown 3192 3826 3200 3890 Sandstone Bradford 3826 4543 3890 4690 Sandstone 4690 5020 Sandstone Benson 4543 4838 7941 Siltstone Elk 4838 7630 5020 Burkett 7630 7656 7941 7967 Shale 7967 8022 Limestone Tully 7656 7711 Mahantango 7711 7882 8022 8193 Shale- Gas Show at 8040 MD Shale- Gas Show at 8260 MD 7882 8281 Marcellus 7970 8193 8245 8249 Limestone **Purcell** 7934 7938 Limestone 7970 8281 Onondaga Please insert additional pages as applicable. Drilling Contractor Sidewinder Zip 77024 Address 952 Echo Ln Houston TX City State Logging Company Baker Hughes Zip City State Address Cementing Company Universal Well Services Zip 16335 PA Address 18360 Technology Dr Box 4 City Meadville State RECEIVED Office of Oil and Gas Stimulating Company City State Zip JUL 1 1 2019

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Please insert additional pages as applicable.

Completed by BODIE CARDER

Signature

Attach copy of FRACFOCUS Registry

Telephone

Title Hen TANG

## VELTRI PAD FLOOD ZONE MAPPING PER FEMA MAP 54091C0120D



APT	Number	47 -	091	
AL I	raumoci	7/-	00	

Operator's Well No. Veltri 3HM

- 01308

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

## FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name_Arsenal Resources	OP Code 494519412
Watershed (HUC 10) Long Run	Quadrangle Grafton
Do you anticipate using more than 5,000 bbls of water to complete the	he proposed well work? Yes V No
Will a pit be used? Yes No V	
If so, please describe anticipated pit waste:	
Will a synthetic liner be used in the pit? Yes No	If so, what ml.?
Proposed Disposal Method For Treated Pit Wastes:	
Land Application	
Underground Injection ( UIC Permit Num	nber)
Reuse (at API Number_various	
Off Site Disposal (Supply form WW-9 for Other (Explain	or disposal location)
Other (Explain	
Will closed loop system be used? If so, describe: Yes, The closed loop system	will contain all of the drilling medium and drill cuttings on location and then be taken to a landfill.
Drilling medium anticipated for this well (vertical and horizontal)?	
-If oil based, what type? Synthetic, petroleum, etc. Synthetic	С
Additives to be used in drilling medium?Bentonite, Soap & Polymer sticks	, Soda Ash, Sodium Bicarbonate, Defoamer, Base Oil, Emulsifiers, Lime, Barite
Drill cuttings disposal method? Leave in pit, landfill, removed offsit	le, etc. Landfill
-If left in pit and plan to solidify what medium will be used	? (cement, lime, sawdust) N/A
-Landfill or offsite name/permit number? Meadowfill Landfill/	Wastemanagement, Westmoreland Sanitary Landfill, Apex Landfill
Permittee shall provide written notice to the Office of Oil and Gas of West Virginia solid waste facility. The notice shall be provided with where it was properly disposed.	
on August 1, 2005, by the Office of Oil and Gas of the West Virginia provisions of the permit are enforceable by law. Violations of any law or regulation can lead to enforcement action.  I certify under penalty of law that I have personally examplication form and all attachments thereto and that, based on obtaining the information, I believe that the information is true, a penalties for submitting false information, including the possibility of Company Official Signature	term or condition of the general permit and/or other applicable mined and am familiar with the information submitted on this my inquiry of those individuals immediately responsible for accurate, and complete. I am aware that there are significant
Company Official (Typed Name) William Veigel	REGEIVED Office of Oil and Gas
Company Official Title Designated Agent	
	JUL 1 1 2019
Subscribed and sworn before me this 17th day of Ju	, 20 19 WV Department of Environmental Protection
Kelly G. Navis	Notary Pub OFFICIAL SEAL Notary Public, State Of West Virginia
My commission expires September 18, 2023	VIGITAL KELLY A DAVIS

Date: 6-17-19

OIL & GAS INSPECTAR

Field Reviewed?

JUL 11 2019 WV Department of Environmental Protection



Tomet l. Shopoloh

## SITE SAFETY PLAN

## **VELTRI 3HM WELL PAD**

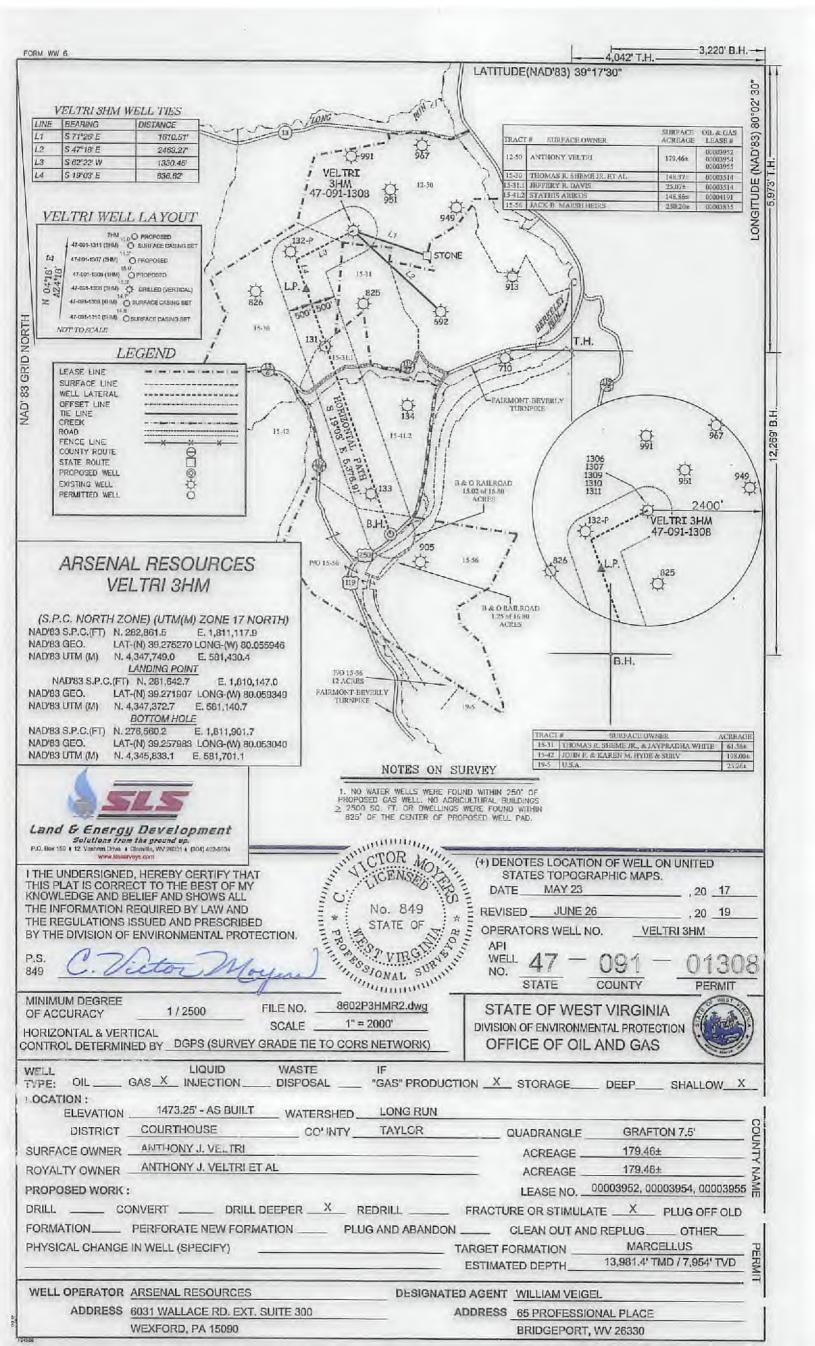
911 Address:

4728 Webster Pike

Grafton, WV 26354

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JUL 1 1 2019



## 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	
Lease Name or	e. 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: Office of Oil and Gas

- 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

Environmental Protection

## Attachment to WW-6A1, Veltri 3HM

etter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
12-50 (00003954)	Anthony J. and Geraldine M. Veltri	Petroleum Development Corporation	12.50% 45/656 46/666 62/574 48/698 Mountaineer, LLC 30/698		40.86
	Petroleum Development Corporation	PDC Mountaineer, LLC		30/698	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		8/554	
12-50 (00003955)	Anthony J. and Geraldine M. Veltri	Petroleum Development Corporation	12.50%	41/164 43/262 44/366 45/654 46/664 62/572 48/637 49/263	137
	Petroleum Development Corporation	PDC Mountaineer, LLC		30/698	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		8/554	
12-50 (00003952)	Dorsey C. Setler and Maude S Setler, his wife	Petroleum Development Corporation	12.50%	42/264 43/351 44/332 45/613 46/579 48/367	240
m	Petroleum Development Corporation	PDC Mountaineer, LLC		30/698	
Office of Oil and Gas  JUL 1 I 2019  Environmental Protection	PDC Mountaineer, LLC	River Ridge Energy, LLC		8/554	

## Attachment to WW-6A1, Veltri 3HM

15-30 15-30.1 (00003514)	Haymond J Nuzum, single, Zona V. Nuzum, widow woman, and Gloria D. Short, Divorced	Consolidated Gas Supply Corporation	12.50%	33/274	505.88
,,	Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation		5/555	
	Consolidated Gas Transmission Corporation	CNG Development Company		6/443	
	CNG Development Company	CNG Producing			
	CNG Producing	Dominion Exploration & Production, Inc			
	Dominion Exploration & Production, Inc	Consol Gas Company		8/368	
	Consol Gas Company	CNX Gas Company LLC		8/368	
	CNX Gas Company LLC	Noble Energy, Inc		32/54	
	CNX Gas Company LLC & Noble Energy, Inc	PDC Mountaineer, LLC		33/198	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		8/554	
15-41.2 (00004191)	Eldon L. Findley and Lois J. Findley, each in his own right and as husband and wife	Consolidated Gas Supply Corporation	12.50%	31/62	256
	Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation		5/555	
	Consolidated Gas Transmission Corporation	CNG Development Company		6/443	
	CNG Development Company	CNG Producing			
	CNG Producing Dom	Dominion Exploration & Production, Inc			
	Dominion Exploration & Production, Inc	Consol Gas Company		8/368	
Env	Consol Gas Company	CNX Gas Company LLC		8/368	
JUL JUL	CNX Gas Company LLC	Noble Energy, Inc		32/54	

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## Attachment to WW-6A1, Veltri 3HM

	CNX Gas Company LLC & Noble Energy, Inc	PDC Mountaineer, LLC		33/198		
	PDC Mountaineer, LLC	River Ridge Energy, LLC		8/554		,
15-56 (00003835)	Jack B. Marsh and Beatrice L. Marsh, his wife	Petroleum Development Corporation	12.50%	44/647 61/49	273	
	Petroleum Development Corporation	PDC Mountaineer, LLC		30/698		
	PDC Mountaineer, LLC	River Ridge Energy, LLC		8/554		,

## 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]

Office of Oil and Gas

JUL 1 1 2019

WW Department of Environmental Protection

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

ARSENAL RESOURCES LLC

Name: Joel E. Symonds

Title: Vice President - Land

RIVER RIDGE ENERGY, LLC

Name: Joel E. Symonds

Title: Vice President - Land

RIVER RIDGE HOLDINGS, LLC

Name: Joel E. Symonds

Title: Vice President - Land

Office of Cil and Gas

JUL 1 1 2019

## West Virginia Secretary of State — Online Data Services

## **Business and Licensing**

Online Data Services Help

047-091-01337

## **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.

## CONSOL GAS COMPANY

Organization Information									
Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason	
C   Corporation	3/26/1973		3/26/1973	Foreign	Profit		1/5/2011	Merger	

Business Purpose	2111 - Mining, Quarrying, Oil & Gas Extraction - Oil and Gas Extraction - Crude Oil and Natural Gas Extraction	Capital Stock	0.0000
Charter County		Control Number	0
Charter State	DE	Excess Acres	0
At Will Term		Member Managed	
At Will Term Years		Par Value	0.000000
Authorized Shares	0		

Addresses		
Гуре	Address	
Local Office Address	ONE DOMINION DRIVE JANE LEW, WV, 26378	RECEIVED Office of Oil and Gas
Mailing Address	1000 CONSOL ENERGY DR. CANONSBURG, PA, 15317 USA	MAY 2 6 2017
Notice of Process Address	CT CORPORATION SYSTEM 5400 D BIG TYLER ROAD CHARLESTON, WV, 25313 USA	WV Department of RECEIVED Environmental Protection of Cil and
Principal Office Address	ONE DOMINION DRIVE JANE LEW, WV, 26378 USA	JUL 1 1 2019 Environmental Protect
Туре	Address	"" ental Protect

Officers		
Туре	Name/Address	
Director	N. J. DEIULIIS 1000 CONSOL ENERGY DRIVE CANONSBURG, PA, 15317 USA	
President	J. BRETT HARVEY 1000 CONSOL ENERGY DRIVE CANONSBURG, PA, 15317 USA	
Secretary	P. J. RICHEY 1000 CONSOL ENERGY DRIVE CANONSBURG, PA, 15317	
Treasurer	J. M. REILLY 1000 CONSOL ENERGY DRIVE CANONSBURG, PA, 15317 USA	
Vice-President	N. J. DEIULIIS 1000 CONSOL ENERGY DRIVE CANONSBURG, PA, 15317	
Туре	Name/Address	

Name Changes	
Date	Old Name
5/21/2010	DOMINION EXPLORATION & PRODUCTION, INC.
5/10/2000	CNG PRODUCING COMPANY
Date	Old Name

Mergers				
Merger Date	Merged	Merged State	Survived	Survived State
7/7/2010	CONSOL GAS RESERVES INC.	VA	CONSOL GAS COMPANY	DE
7 <i>/7/</i> 2010	CONSOL GAS COALBED METHANE, INC.	DE	CONSOL GAS COMPANY	DE
11/19/2010	CONSOL ENERGY HOLDINGS LLC XVI	DE	CONSOL GAS COMPANY	DE
Merger Date	Merged	Merged State	Survived	Survived State

Name	Address		
	CNG PIPELINE CO 1450 POYDRAS STREET NEW ORLEANS, LA, 70112 USA	REO Office of	CEIVED Oil and Gas
	CONSOLIDATED NATURAL GAS COMPANY 625 LIBERTY AVE. PITTSBURGH, PA, 15222 USA		2 6 2017 partment of ental Protecti
	DOMINION COALBED METHANE, INC ONE DOMINION DR JANE LEW, WV, 26378 USA	Environme	ental Protect

Address

Date	Amendment
1/5/2011	MERGER: MERGING CONSOL GAS COMPANY, A QUALIFIED DE CORPORATION WITH AND INTO CNX GAS COMPANY LLC, A QUALIFIED VA LIMITED LIABILITY COMPANY, THE SURVIVOR
11/19/2010	MERGER: MERGING CONSOL ENERGY HOLDINGS LLC XVI, A NON- QUALIFIED DE ORGANIZATION WITH AND INTO CONSOL GAS COMPANY, A QUALIFIED DE CORPORATION, THE SURVIVOR
7 <i>/7/</i> 2010	MERGER: MERGING CONSOL GAS RESERVES INC., A QUALIFIED VA CORPORATION WITH AND INTO CONSOL GAS COMPANY, A QUALIFIED DE CORPORATION, THE SURVIVOR
7/7/2010	MERGER: MERGING CONSOL GAS COALBED METHANE, INC., A QUALIFIED DE CORPORATION WITH AND INTO CONSOL GAS COMPANY, A QUALIFIED DE CORPORATION, THE SURVIVOR
5/21/2010	NAME CHANGE: FROM DOMINION EXPLORATION & PRODUCTION, INC.
5/10/2000	NAME CHANGE: FROM CNG PRODUCING COMPANY
1/18/1985	AMENDMENT: FILED
7/23/1982	ARTICLES OF INCORPORATION
7/30/1980	CERTIFICATE OF INCORPORATION
6/23/1980	MERGER: HIDALGO-WILLACY OIL COMPANY, A TEXAS CORP. NOT QUAL. IN WV, WITH AND INTO CNG PRODUCING COMPANY, THE SURVIVOR
1/31/1975	CERTIFICATE OF INCORPORATION ROLL 91
7/16/1974	CERTIFICATE OF INCORPORATION ROLL 85
Date	Amendment

Annual Reports		
Date filed		
6/22/2010		
6/26/2009		
8/15/2008		
11/30/2007		7
4/11/2007		
10/31/2005	RECEIVED Office of Oil and Gas	
6/2/2005		
3/22/2004	MAY 2 6 2017	
5/21/2003	WV Department of Environmental Protection	
12/19/2001	Environmental Protection	
4/26/2001		
		Office of Oil and Gas
		Hoe of Oil and Gas
		$\rightrightarrows$ $^{JUL}$ 1 1 2019
Date filed		WV Department of Environmental Protection
For more information, please contact the Secretary of St		rivironmental Protection

## West Virginia Secretary of State — Online Data Services

#### **Business and Licensing**

Online Data Services Help

## **Business Organization Detail**

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

#### DOMINION TRANSMISSION, INC.

Organization I	nformatio	n						
Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason
C   Corporation	1/17/1984		1/17/1984	Foreign	Profit			

Business Purpose	4862 - Transportation and Warehousing - Pipeline Transportation - Pipeline Transportation of Natural Gas	Capital Stock	0.0000
Charter County		Control Number	0
Charter State	DE	Excess Acres	0
At Will Term		Member Managed	
At Will Term Years		Par Value	0.000000
Authorized Shares	0		

Addresses			
Туре	Address	RECEIV Office of Oil	ED and Gas
Local Office Address	5400 D BIG TYLER ROAD CHARLESTON, WV, 25313	MAY 26	2017
Mailing Address	445 WEST MAIN STREET CLARKSBURG, WV, 26301 USA	WV Departs Environmental	ment of Protection
Notice of Process Address	CT CORPORATION SYSTEM 5400 D BIG TYLER ROAD CHARLESTON, WV, 25313		Office of Oil and Gas
Principal Office Address	445 WEST MAIN STREET CLARKSBURG, WV, 26301 USA		JUL 11 2019 Environmental Protection
Туре	Address		Environmental Protection

Туре	Name/Address	
Director	DAVID A. CHRISTIAN 120 TREDEGAR STREET RICHMOND, VA, 23219	
President	DIANE LEOPOLD 120 TREDEGAR STREET RICHMOND, VA, 23219	
Secretary	CARTER M REID 100 TREDEGAR STREET 2ND FL. RICHMOND, VA, 23219	
Treasurer	JAMES R. CHAPMAN 120 TREDEGAR ST RICHMOND, VA, 23219	
Vice-President	ARNOLD J. JORDAN, JR. 100 TREDEGAR STREET RICHMOND, VA, 23219	
Туре	Name/Address	

Name	e Changes		
Date		Old Name	
	5/10/2000	CNG TRANSMISSION CORPORATION	
Date		Old Name	

Mergers				
Merger Date	Merged	Merged State	Survived	Survived State
1/16/2002	CNG POWER COMPANY	DE	DOMINION TRANSMISSION, INC.	DE
Merger Date	Merged	Merged State	Survived	Survived State

Date	Amendment
1/16/2002	MERGER: MERGING CNG POWER COMPANY, A QUALIFIED DE CORPORATION WITH AND INTO DOMINION TRANSMISSION, INC., A QUALIFIED DE CORPORATION, THE SURVIVOR
5/10/2000	NAME CHANGE: FROM CNG TRANSMISSION CORPORATION
12/2/1994	CHANGE TO AMEND STOCK IN ARTICLES OF CERTIFICATE OF AUTHORITY.
3/22/1993	CHANGE TO AMEND STOCK DESIGNATION IN ARTICLES OF CERTIFICATE OF AUTHORITY.
8/27/1991	AMENDMENT TO CERTIFICATE OF AUTHORITY.
12/19/1990	AMENDMENT TO CERTIFICATE OF AUTHORITY.
1/13/1988	CHANGE OF NAME FROM: CONSOLIDATED GAS TRANSMISSION CORPORATION.
Date	Amendment

	RECEIVED Office of Oil and Gas
Annual Reports	MAY 2 6 2017
Date filed	W/ Department of
	WV Department of Environmental Protection

Office of Oil and Gas

JUL 1 1 2019

WV Department of Environmental Proteotion

5/26/2016
6/15/2015
6/13/2014
6/14/2013
5/31/2012
5/27/2011
6/9/2010
6/22/2009
8/14/2008
11/1/2007
12/11/2006
9/29/2005
4/25/2005
5/14/2004
4/29/2003
11/5/2001
12/1/2000
Date filed

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

Monday, May 22, 2017 - 1:23 PM

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Office of Oil and Gas

JUL 1 1 2019

Environmental Protection

Office of Oil and Gas

MAY 2 6 2017



May 30, 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; Veltri 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 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 identified 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 identified in the application materials.

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

Sincerely

Coty Brandon
Title Manager

Office of Oil and Gas

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

Date of Notic	ce Certification:		API No. 47	7_ 091 _ 01:	308	
				Well No. Vettr	3НМ	
				Name: Veltri		
Notice has I	oeen given:					
Pursuant to th	ne provisions in West Virginia Code	§ 22-6A, the Operator has provi	ided the req	uired parties v	vith the Notice Forms listed	
below for the	tract of land as follows:					
State:	West Virginia	TITINA NATIVE	Easting:	581,430.4		
County:	Taylor		Northing:		4,347,749	
District:	Courthouse		Public Road Access: Generally used farm name:		CR's 119/28, 119/27, 13/6	
Quadrangle:	Grafton	Generally used far			Veltri	
Watershed:	Long Run					
prescribed by it has provid- information r of giving the requirements Virginia Code	West Virginia Code § 22-6A-7(b), the secretary, shall be verified and ed the owners of the surface descrequired by subsections (b) and (c), s surface owner notice of entry to s of subsection (b), section sixteen a § 22-6A-11(b), the applicant shall have been completed by the applica	shall contain the following infor ibed in subdivisions (1), (2) an ection sixteen of this article; (ii) urvey pursuant to subsection (a of this article were waived in v tender proof of and certify to the	mation: (14 d (4), subs that the red d), section the writing by	4) A certification (b), sequirement was ten of this artitle surface over	on from the operator that (i) ction ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice wher; and Pursuant to West	
that the Ope	West Virginia Code § 22-6A, the O rator has properly served the require CK ALL THAT APPLY		is Notice C	ertification	OOG OFFICE USE ONLY	
☐ I. NO	TICE OF SEISMIC ACTIVITY OF	■ NOTICE NOT REQUIRE SEISMIC ACTIVITY WAS			RECEIVED/ NOT REQUIRED	
☐ 2. NO	TICE OF ENTRY FOR PLAT SUR	VEY or <a> NO PLAT SURVE</a>	Y WAS CO	ONDUCTED	☐ RECEIVED	
■ 3. NO	TICE OF INTENT TO DRILL or	☐ NOTICE NOT REQUIRE NOTICE OF ENTRY FOR PI WAS CONDUCTED or			RECEIVED/	
					Service Services	
		☐ WRITTEN WAIVER B' (PLEASE ATTACH)	Y SURFAC	CE OWNER		
■ 4. NO	FICE OF PLANNED OPERATION	(PLEASE ATTACH)	Y SURFAC	CE OWNER	□ RECEIVED	
	FICE OF PLANNED OPERATION BLIC NOTICE	(PLEASE ATTACH)	Y SURFAC	CE OWNER		

Required Attachments:

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

JUL 1 1 2019

## 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:

Its:

OFFICIAL SEAL Public, State Of West Virginia

KELLY A DAVIS 2142 Elk City Road Jane Lew, WV 28378

My Commission Expires September 18, 2023

William Veigel

Designated Agent

Telephone:

724-940-1218

Address:

6031 Wallace Road Ext., Suite 300

Wexford, PA 15090

Facsimile: 304-848-9134

Email: kdavis@arsenalresources.com

Subscribed and sworn before me this 9th day of Ju

Notary Public

My Commission Expires

Oil and Gas Privacy Notice:

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

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Office of Oil and Gas

JUL 1 1 2019

WW-6A (9-13)

API NO. 47- 091 - 01308
OPERATOR WELL NO. Veltri 3HM
Well Pad Name: Veltri

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 7-9-19 Date Permit Application Filed: 7-10-19 Notice of: PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) PERSONAL REGISTERED ✓ METHOD OF DELIVERY THAT REQUIRES A SERVICE MAIL RECEIPT OR SIGNATURE CONFIRMATION Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sie] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule. ☐ Application Notice ☐ WSSP Notice ☐ E&S Plan Notice ☐ Well Plat Notice is hereby provided to: COAL OWNER OR LESSEE ☐ SURFACE OWNER(s) Name: CoalQuest Development LLC c/o Chuck Duckworth Name: Anthony Veltri Address: RR 2 Box 416 Address: 100 Tygan Drive Grafton, West Virginia 26354 Grafton, WV 26354 COAL OPERATOR Name: Address: Name: Address: SURFACE OWNER(s) (Road and/or Other Disturbance) ☑ SURFACE OWNER OF WATER WELL Name: Thomas Sheme AND/OR WATER PURVEYOR(s) Address: 722 Nuzum Road Name: See Attached Grafton, WV 26354 Name: Address: Address: □ OPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: Address: Name: Address: \*Please attach additional forms if necessary

WW-6A	
(8-13)	

API NO. 47- 091 - 01308	1
OPERATOR WELL NO.	Veltri 3HM
Well Pad Name: Veltri	

#### 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 w v Department of the Secretary, at the w v Department of the Secretary of the

#### **Well Location Restrictions**

JUL 1 1 2019 Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from all yexisting water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located witten at least of hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house rotection 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

WW-6A (8-13) API NO. 47-091 - 01308

OPERATOR WELL NO. Veltri 3HM

Well Pad Name: Veltri

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

JUL 1 1 2019

WV Department of Environmental Protection

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

WW-6A	
(8-13)	

API NO. 47- 091 - 01308				
OPERATOR WELL NO.	Veltri 3HM			
Well Pad Name: Vettri				

#### 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.

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Office of Oil and Gas

JUL 1 1 2019

WW-6A (8-13)Word 7A

API NO. 47-091 - 01308 OPERATOR WELL NO. Veltri 3HM Well Pad Name: Veltri

Notice is hereby given by:

Well Operator: Arsenal Resources

Telephone: 724-940-1218 Email: kdavis@arsenalresources.com Address: 6031 Wallace Road Ext., Suite 300 Wexford, PA 15090

Facsimile: 304-848-9134

#### Oil and Gas Privacy Notice:

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

OFFICIAL SEAL Notary Public, State Of West Virginia KELLY A DAVIS 2142 Elk City Road Jane Lew, WV 26378 My Commission Expires September 18, 2023 Subscribed and sworn before me this 2th day of July 2019

My Commission Expires September 18 2023

Office of Oil and Gas JUL 1 1 2019 WV Department of Environmental Protection

# Arsenal Resources Veltri 3HM WW-6A – Notice of Application, Attachment

### Surface Owner of Water Well and/or Water Purveyor(s):

Thomas R. Sheme 722 Nuzum Road Grafton, WV 26354

Anthony J. Veltri RR 2 Box 416 Grafton, WV 26354

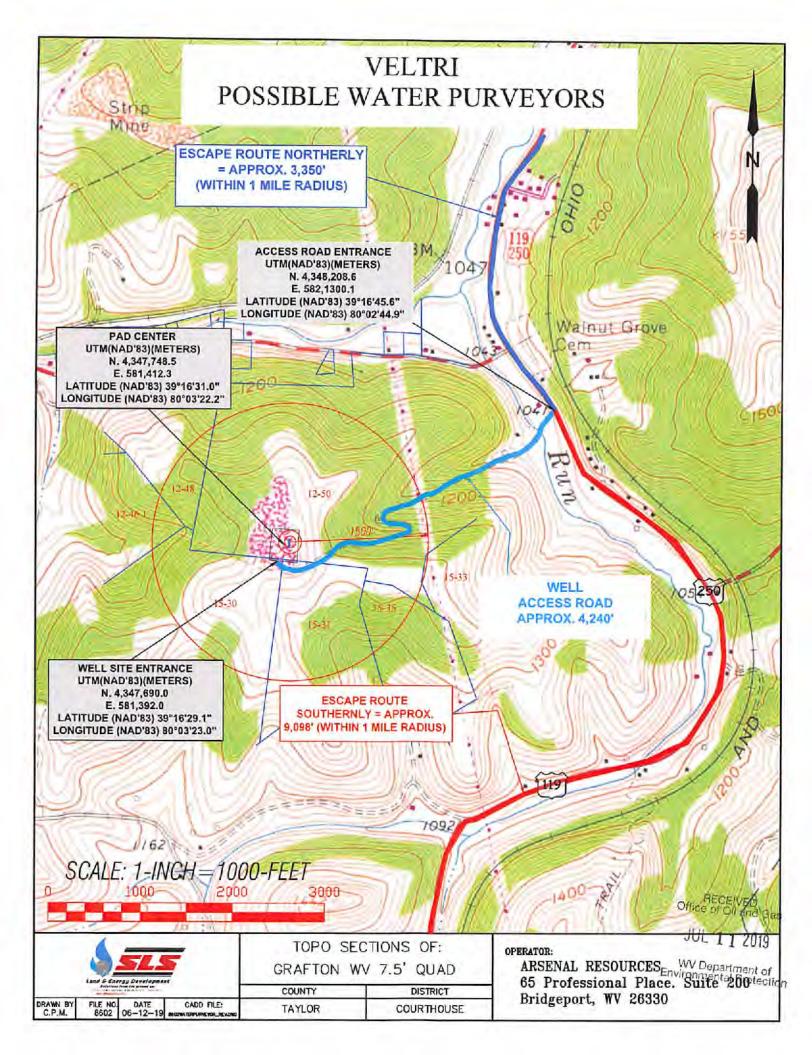
James D. McVicker 5661 Webster Pike Grafton, WV 26354

Jeffrey Minard RR 2 Box 426 Grafton, WV 26354

Mark and Judy Neal P.O. Box 144 Walton, WV 25286

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JUL 1 1 2019





### Possible Water Purveyors within 1,500 feet of Veltri Pad

MAP	PARCEL	OWNER	ADDRESS	
12	46.1	SHEME THOMAS RICHARD JR 🖊	722 NUZUM RD , GRAFTON , WV 26354	
12	48	NEAL MARK WAYNE & JUDY ELAINE	P O BOX 144, WALTON, WV 25286	
12	50	VELTRI ANTHONY J. 🖊	RR 2 BOX 416, GRAFTON, WV 26354	
15	30	SHEME THOMAS R JR JAYPRADHA WHITE	722 NUZUM RD , GRAFTON , WV 26354	
15	31	SHEME THOMAS R JR JAYPRADHA WHITE	722 NUZUM RD , GRAFTON , WV 26354	
15	33	MCVICKER JAMES D	5661 WEBSTER PIKE, GRAFTON, WV 26354	
15	35	MINARD JEFFREY	RR 2 BOX 426 , GRAFTON , WV 26354	

RECEIVED Office of Oil and Gas

JUL 1 1 2019

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

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

Notice Time Date of Notic	e: 7-9-19 Date Per	inte experience in the contract of the contrac	
Delivery met	hod pursuant to West Virginia Code § 2	22-6A-16(b)	
☐ HAND	■ CERTIFIED MAIL		
DELIVE		DUESTED	
receipt reques drilling a hors of this subsec subsection ma	V. Va. Code § 22-6A-16(b), at least ten day sted or hand delivery, give the surface own izontal well: Provided, That notice given tion as of the date the notice was provided by be waived in writing by the surface own le, facsimile number and electronic mail ac	ner notice of its intent to enter upon the pursuant to subsection (a), section te I to the surface owner: <i>Provided</i> , howner. The notice, if required, shall include:	ne surface owner's land for the purpose of n of this article satisfies the requirements never. That the notice requirements of this ude the name, address, telephone number,
	reby provided to the SURFACE OW	/NER(s):	
Name: Anthony		Name:	
Address: RR 2	Box 416	Address:	
		J. 2.710 1211	
	reby given: Vest Virginia Code § 22-6A-16(b), notice		
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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 of the privacy Officer at depprivacyofficer www.gov.

JUL 1 1 2019

WW-6A5 (1/12)

Operator Well No. Veltri 3HM

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

Denvery met	hod pursuant to West Virginia C	Code § 22-6A-16(c)		
■ CERTII	FIED MAIL	☐ 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 operation. The notice required by provided by subsection (b), section norizontal well; and (3) A propose e surface affected by oil and gas of	the surface owner whose land this subsection shall income ten of this article to a subsection surface use and compensations to the extent the	nd will be used for lude: (1) A copy rface owner who nsation agreement damages are com	ication, an operator shall, by certified mail or the drilling of a horizontal well notice of of this code section; (2) The information se land will be used in conjunction with the nt containing an offer of compensation for pensable under article six-b of this chapter, sted in the records of the sheriff at the time
	eby provided to the SURFACE O			
	s listed in the records of the shoriff			
Name: Anthony		_ Name		
Address: RR 2 Grafton, WV 2635		Addr	ess:	
operation on State:	the surface owner's land for the pu West Virginia		tal well on the tra	581,430.4
	Taylor	1000	Norming:	
The state of the s	Courthouse	Public Roa	Accese.	4,347,749 CP's 119/28 119/27 13/6
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District: Quadrangle: Watershed:  This Notice S Pursuant to W to be provide horizontal we surface affect information r headquarters,	Craften Long Run  Chall Include:  Vest Virginia Code § 22-6A-16(c), d by W. Va. Code § 22-6A-10(b) Il; and (3) A proposed surface use ed by oil and gas operations to the elated to horizontal drilling may be located at 601 57th Street, SE,	this notice shall include: to a surface owner who and compensation agreen e extent the damages are be obtained from the Sec	1)A copy of this se land will be sent containing as compensable undertary, at the WV	CR's 119/28, 119/27, 13/6
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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.

JUL 1 1 2019

Office of Oil and Gas



Click or tap to enter a date.

Alliance Petroleum Corp 4150 Belden Village Ave. NW Ste 410 Canton, OH 44718-2553

RE: Click or tap here to enter text.

Dear Sir/Madam,

Arsenal Resources has developed a Marcellus pad Veltri 3HM, 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 8,000' TVD) and existing conventional natural gas wells included in the attached well list for which you are believed to be the operator.

Arsenal anticipates conducting hydraulic fracturing at the Veltri 3HM Pad during the Quarter of 2020. 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 MK 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 Office of Oil and Gas

WV Department of Environmental Protection

AOR-'Attachment"B"



### WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## **Division of Highways**

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

June 21, 2019

Byrd E. White, III Secretary of Transportation

> Jimmy Wriston, P. E. Deputy Secretary/ Acting Commissioner

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

Subject: DOH Permit for the Veltri Pad, Taylor County Veltri 3HM Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #04-2013-0786 issued to Arsenal Resources for access to the State Road for a well site located off of US 119 F in Taylor County.

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

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Cc: Kelley Eddy

Arsenal Resources

CH, OM, D-4

File

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JUL 1 1 2019

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

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Office of Oil and Gas

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**FIST OF DRAWINGS** 

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

12/61/ 18 00

IN COURTHOUSE DISTRICT, TAYLOR COUNTY, WEST VIRGINIA. SITUATE ON THE WATERS OF LONG RUN AND BERKELEY RUN

MHT QNA ,11610-16-74 MHB ,01610-16-74 MH2 ,60610-16-74 MH4 PROPOSED WELLS: 14M 47-091-01306, 24M 47-091-01307, 34M 47-91-01308, ARSENAL RESOURCES

NAJ9 SITE PLAN

VELTRI WELL PAD AS-BUILT AND

GRAFTON QUAD

1102/11/1 /T/ ACCEPTED AS-BUILT WYDEP OOG

PROJECT INFORMATION

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PROPERTY DISTURBANCE COMPUTATIONS

LOCATION COORDINATES

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WV Depariment of Environmental Protection Office of Oil and Gas

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