

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

Harold D. Ward, Cabinet Secretary www.dep.wv.gov

Thursday, July 7, 2022 WELL WORK PERMIT Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Permit approval for TRAINER 1H Re:

47-017-06939-00-00

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

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

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

Operator's Well Number:

TRAINER 1H

Farm Name: BRIAN D LEMLEY & CHRIST

U.S. WELL NUMBER: 47-017-06939-00-00

Horizontal 6A New Drill

Date Issued: 7/7/2022

API Number: 47-017-06939

PERMIT CONDITIONS

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

CONDITIONS

- This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
- 2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled Water Well Regulations, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

API Number: 47-017-06939

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

WW-6B (04/15) API NO. 47-0 7

OPERATOR WELL NO. TrainerUnit 1H

Well Pad Name: Lens upped

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

1) Well Operator: Ant	ero Resources Corpor	494507062	017-Doddrid Gran	smithburg 7.5'
		Operator ID	County Distr	ict Quadrangle
2) Operator's Well Nur	nber: Trainer Unit 1H	Well P	ad Name: Lemley Pad	
3) Farm Name/Surface	Owner: Phillip N. Hill, 6	et al Public Ro	oad Access: Hollow Ru	ın Rd
4) Elevation, current gre	ound: 1304' AS BUILT I	Elevation, propose	d post-construction:	
5) Well Type (a) Gas Other	X Oil	Un	derground Storage	
(b)If G	as Shallow X Horizontal X	Deep		
6) Existing Pad: Yes or	No Yes			
A Committee of the comm	mation(s), Depth(s), Anti o' TVD, Anticipated Thickn			(s):
8) Proposed Total Verti	cal Depth: 7700' TVD			
9) Formation at Total V		JS		
10) Proposed Total Mea	sured Depth: 9300' M	D		
11) Proposed Horizonta	Leg Length: 946.6			
12) Approximate Fresh	Water Strata Depths:	225, 279, 790		
13) Method to Determin	ne Fresh Water Depths:	47-017-04998, 47-017-0	4719, Depths have been adjuste	ed according to surface elevations.
14) Approximate Saltwa	ater Depths: 1460', 167	3', 1700', 1710'		
15) Approximate Coal S	Seam Depths: 980'			
16) Approximate Depth	to Possible Void (coal n	nine, karst, other):	None Anticipated	
	location contain coal se acent to an active mine?		No X	
(a) If Yes, provide Min	ne Info: Name:			RECEIVED Office of Oil & Gas
7 F	Depth:			JUN 2 3 2022
	Seam:			
	Owner:		Er	WV Department of ovironmental Protection

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07/08/2022

WW-6B (04/15) API NO. 47- 01 7 -

OPERATOR WELL NO. Trainer Unit 1H

Well Pad Name: Lemi eyPad

18)

CASING AND TUBING PROGRAM

TYPE	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	20"	New	X60	78.67#	100	100	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	840'	840'	CTS, 433 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	3200'	3200'	CTS, 1303 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110HP	23#	9300'	9300'	1426 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

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	20"	24"	0.438"	1530	50	Class A	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	12,630	2500	Last HPOZ & Tall - H	H/POZ~1.44 & H~1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

N/A	RECEIVED
N/A	Office of Oil & Gas
N/A	JUN 2 3 2022 WV Department of
	N/A

Page 2 of 3

5M 6-6-207/08/2022 WW-6B (10/14) API NO. 47-017 OPERATOR WELL NO. Trainer Unit 1H Well Pad Name: Lemley Fad

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

Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale.

*Antero will be air drilling the fresh water string which makes it difficult to determine when fresh water is encountered. Therefore, we have built in a buffer for the casing setting depth which helps to ensure that all fresh water zones are covered.

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

Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

Anticipated Max Pressure - 9300 lbs Anticipated Max Rate - 80 bpm

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 27.26 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 4.31 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers

Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.

Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.

Production Casing; one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

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

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Conductor: no additives, Class A cement.

Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake

Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat

Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51 Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-2使nvironmental Protection

JUN 2 3 2022

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25) Proposed borehole conditioning procedures:

Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.

Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.

Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbis fresh water, pump 48 bbis barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

*Note: Attach additional sheets as needed.

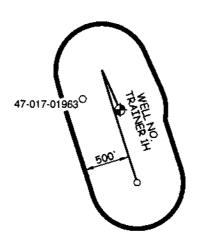
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LEMLEY PAD ANTERO RESOURCES CORPORATION



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WILLOW LAND SURVEYING, PLLC P.O. BOX 17, PENNSBORO, WV 26415 (304) 659-1717

DATE: 05/19/22

DRAWN BY: D.L.P.

JOB #: 22-005WA

0'

FILE: TRAINER1HAOR.DWG

SCALE: 1-INCH = 1000-FEET

1000' 2000'

3000'

WW-9 (4/16)

API Number	47 -	017				
One	rator's	Well	No	T	reiner Unit 1H	

DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DIS	SPOSAL & RECLAMATION PLAN
Operator Name Antero Resources Corporation	OP Code 494507062
Watershed (HUC 10) McElroy Creek	Quadrangle Smithburg 7.5'
Do you anticipate using more than 5,000 bbls of water to com Will a pit be used? Yes No V	
If so, please describe anticipated pit waste:	the send as three size (Chilling and Flowback Flade will be spond in funds. Cuttings will be tanked and issued off size,)
Will a synthetic liner be used in the pit? Yes	No If so, what ml.? N/A
Proposed Disposal Method For Treated Pit Wastes:	
Land Application	** N ** IIC Parmit # will be provided on Form WR-34
	mit Number "UIC Permit # will be provided on Form WR-34 itted well locations when applicable. API# will be provided on Form WR-34
	/W-9 for disposal location) (Meadowfill Landfill Permit #SWF-1032-98)
Other (Explain	Northwestern Landfill Permit #SWF-1025/ WY0109410 (Wetzel Co Landfill Permit #SWF-1021)
Will closed loop system be used? If so, describe: Yes, fluids	Section - Mythersector, Incidental
Drilling medium anticipated for this well (vertical and horizon	ontal)? Air, freshwater, oil based, etc.
-If oil based, what type? Synthetic, petroleum, etc.	Synthetic
Additives to be used in drilling medium? Please See Attachme	ent
Drill cuttings disposal method? Leave in pit, landfill, remove	
-If left in pit and plan to solidify what medium will b	
	Landilli (Permit #SWF-1032-88), Northwestern Landfill (Permit # SWF-1025/WV0109410)
(Wctzel s	Co Landitti Perinit #5 WF-10211
Permittee shall provide written notice to the Office of Oil and West Virginia solid waste facility. The notice shall be provide where it was properly disposed.	I Gas of any load of drill cuttings or associated waste rejected at any ed within 24 hours of rejection and the permittee shall also disclose
on August 1, 2005, by the Office of Oil and Gas of the West 1 provisions of the permit are enforceable by law. Violations law or regulation can lead to enforcement action. I certify under penalty of law that I have personal application form and all attachments thereto and that, bas	d conditions of the GENERAL WATER POLLUTION PERMIT issued Virginia Department of Environmental Protection. I understand that the of any term or condition of the general permit and/or other applicable lily examined and am familiar with the information submitted on this sed on my inquiry of those individuals immediately responsible for a true, accurate, and complete. I am aware that there are significant ibility of fine or imprisonment. RECEIVED Office of Oil & Gas
Company Official (Typed Name) Gretchen Kohler	JUN 2 3 2022
Company Official Title Director Environmental & Regulatory C	Compliance WV Department of Environmental Protection
	M @
Subscribed and sworn before me this 3 day of	IV DIANE BLAIR
Chamerstan	Notary Public NOTARY PUBLIC
My commission expires 27 Ag	TMV POMMICRION EXPIRES 27-A0
	5ry 07/08/
	377 017007
	6-16-77

Form WW-9

Operator's Well No. Trainer Unit 1H

Proposed Revegetation Treatme	ent: Acres Disturbed 27.2	6 acres	Prevegetation p	Н
Lime 2-4	Tons/acre or to correct to			
Fertilizer type Hay or s	straw or Wood Fiber (will be u	sed where needed)		
Fertilizer amount 500		lbs/acre		
Mulch 2-3	To	ons/acre		
	coss Road "B" (1 39 acres) + Well Pad		around Pad (1.36) + Centrali	zed Impoundment Pad (5,54 acres) +
		OCCU IVIIALUI CO	a Law Zintes	
Temp	oorary		Perm	anent
Seed Type	lbs/acre		Seed Type	lbs/acre
Annual Ryegrass	40	Crown	vetch	10-15
Field Bromegrass	40	Tall Fe	scue	30
See attached Table IV-3 for additional	seed type Lemley Pad Design)	See attached	Table IV-4A for addition	al seed type (Lemiey Pad Design
			Company of the second	a shirth but so size a street of
Attach: Maps(s) of road, location, pit an provided). If water from the pit acreage, of the land application	nd proposed area for land ap will be land applied, includ area.	plication (unless er	ngineered plans incl	uding this info have been ad dimensions (L x W), and
*or type of grass seed requartach: Maps(s) of road, location, pit and provided). If water from the pit acreage, of the land application. Photocopied section of involved	nd proposed area for land ap will be land applied, includ area.	plication (unless er	ngineered plans incl	uding this info have been
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Form WW-9 Additives Attachment

SURFACE INTERVAL

- 1. Fresh Water
- 2. Soap -Foamer AC
- 3. Air

INTERMEDIATE INTERVAL

STIFF FOAM RECIPE:

- 1) 1 ppb Soda Ash / Sodium Carbonate-Alkalinity Control Agent
- 2) 1 ppb Conqor 404 (11.76 ppg) / Corrosion Inhibitor
- 3) 4 ppb KLA-Gard (9.17 ppg) / Amine Acid Complex-Shale Stabilizer
- 4) 1ppb Mil Pac R / Sodium Carboxymethylcellulose-Filtration Control Agent
- 5) 12 ppb KCL / Potassium Chloride-inorganic Salt
- 6) Fresh Water 80 bbls
- 7) Air

PRODUCTION INTERVAL

1. Alpha 1655

Salt Inhibitor

2. Mil-Carb

Calcium Carbonate

3. Cottonseed Hulls

Cellulose-Cottonseed Pellets - LCM

4. Mil-Seal

Vegetable, Cotton & Cellulose-Based Fiber Blend - LCM

5. Clay-Trol

Amine Acid Complex - Shale Stabilizer

6. Xan-Plex

Viscosifier For Water Based Muds

7. Mil-Pac (All Grades)

Sodium Carboxymethylcellulose - Filtration Control Agent

8. New Drill

Anionic Polyacrylamide Copolymer Emulsion – Shale Stabilizer

9. Caustic Soda

Sodium Hydroxide - Alkalinity Control

10. Mil-Lime

Calcium Hydroxide - Lime

11. LD-9

Polyether Polyol – Drilling Fluid Defoamer

12. Mil Mica

Hydro-Biotite Mica - LCM

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13. Escaid 110

Drilling Fluild Solvent - Aliphatic Hydrocarbon

14. Ligco

Highly Oxidized Leonardite - Filteration Control Agent

15. Super Sweep

Polypropylene - Hole Cleaning Agent

16. Sulfatrol K

Drilling Fluid Additive - Sulfonated Asphalt Residuum

17. Sodium Chloride, Anhydrous

Inorganic Salt

18. D-D

Drilling Detergent - Surfactant

19. Terra-Rate

Organic Surfactant Blend

20. W.O. Defoam

Alcohol-Based Defoamer

21. Perma-Lose HT

Fluid Loss Reducer For Water-Based Muds

22. Xan-Plex D

Polysaccharide Polymer - Drilling Fluid Viscosifier

23. Walnut Shells

Ground Cellulosic Material - Ground Walnut Shells - LCM

24. Mil-Graphite

Natural Graphite - LCM

25. Mil Bar

Barite - Weighting Agent

26. X-Cide 102

Biocide

27. Soda Ash

Sodium Carbonate - Alkalinity Control Agent

28. Clay Trol

Amine Acid complex – Shale Stabilizer

29. Sulfatrol

Sulfonated Asphalt - Shale Control Additive

30. Xanvis

Viscosifier For Water-Based Muds

31. Milstarch

Starch - Fluid Loss Reducer For Water Based Muds

32. Mil-Lube

Drilling Fluid Lubricant

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911 Address 3126 Morgans Run Rd West Union, WV 26456

Well Site Safety Plan Antero Resources

Well Name: Lemley Unit 5V

Pad Location: LEMLEY PAD

Doddridge County/Grant District

Office of Oil & Gas

JUN 23 2022

WV Department of Environmental Protection

GPS Coordinates:

Entrance - Lat 39°19′25.08″/Long -80°41′13.18″ (NAD83)

Pad Center - Lat 39°19′34.87″/Long -80°40′48.39″ (NAD83)

Driving Directions:

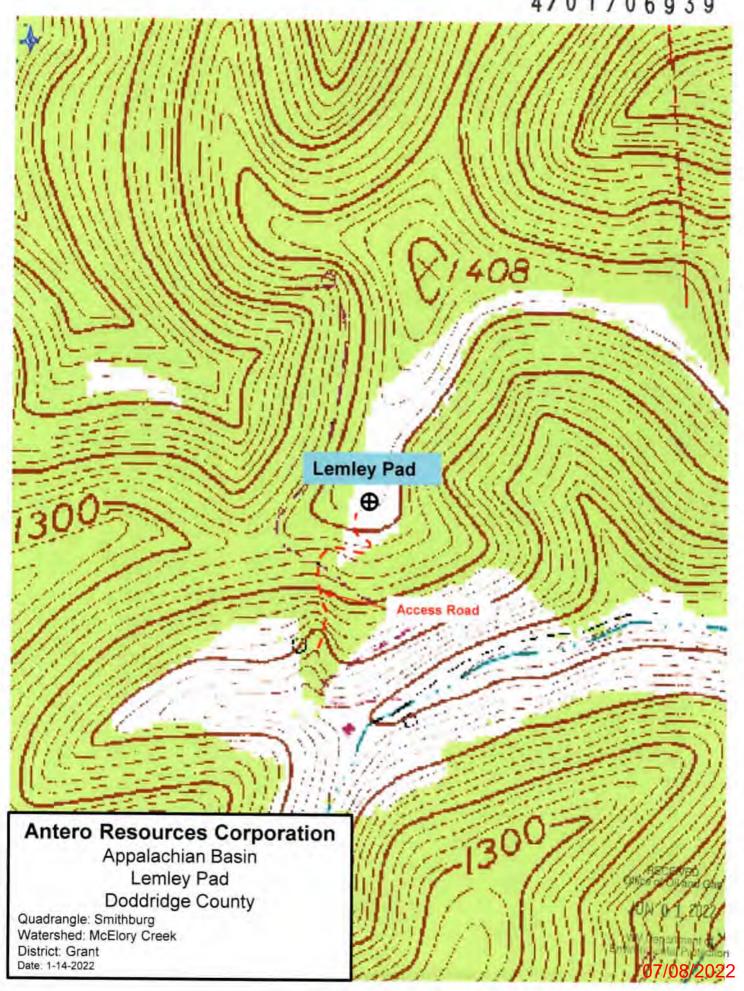
From The intersection of US 50 and Interstate 79 near Bridgeport, WV travel west on US 50 approximately 19 miles. Turn right (north) onto Co Rt 9/Tarkiln Run and take the first left (west) toward Co Rt 3/Big Flint Rd. Turn right (north) onto Co Rt 3/Big Flint Rd and travel approximately 7.5 miles. Turn left onto Co Rt 5/Riggins Run Rd and travel south approximately 0.3 miles. Turn left onto Co Rt 30/Israel Fork and continue south approximately 2.5 miles. Turn left onto Main Camp Rd and continue approximately 0.2 miles to location.

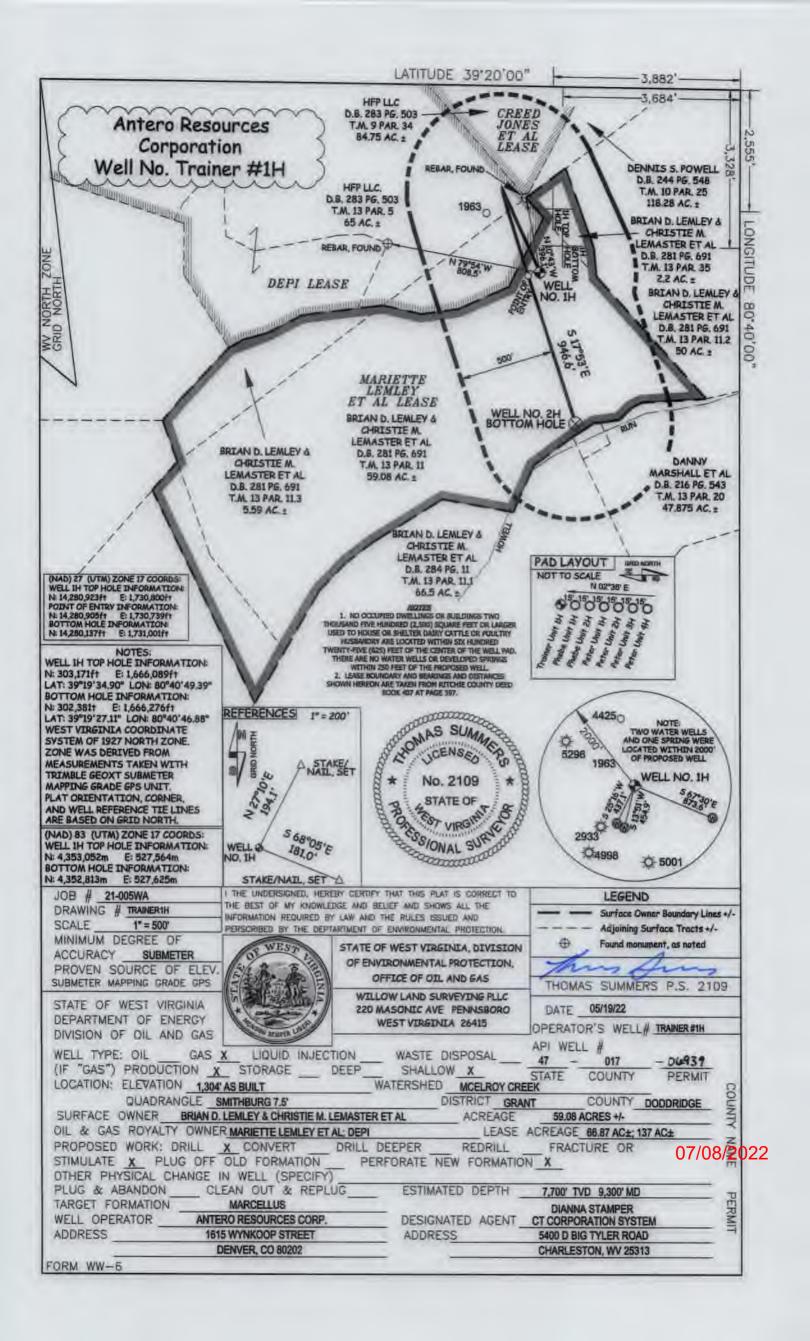
Alternate Route:

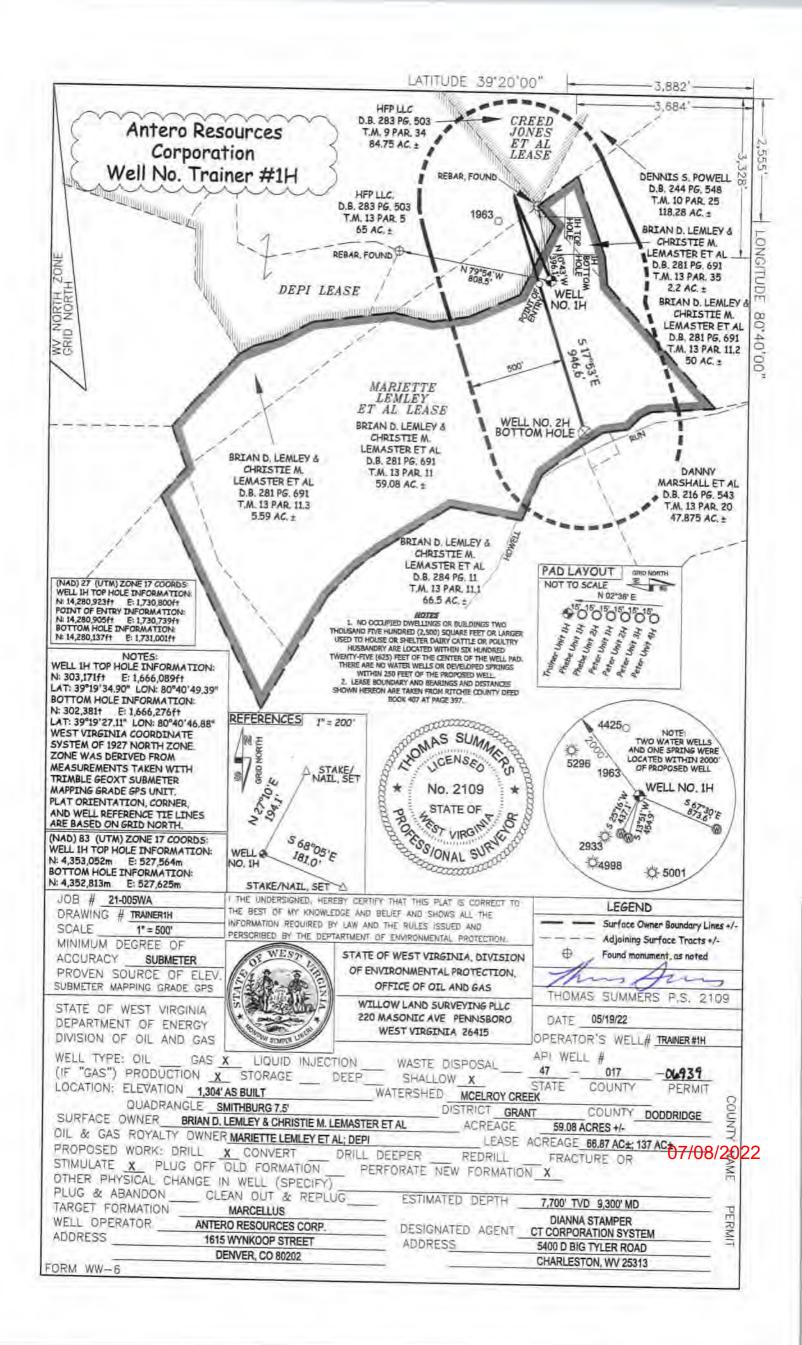
From the intersection of HWY 19 and US-50 near West Union, head east on US-50 for 4.7 miles. Turn left onto Morgans Run/20 and continue for 1.5 miles. Continue straight onto Israels Fork for 1.7 miles. Follow the road up some switch backs, passed the water containment and the pad will be straight ahead.

EMERGENCY (24 HOUR) CONTACT 1-800-878-1373









Operator's Well Num	nber
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Trainer Unit 1H

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:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
Mariette Lemiey, et al Lease			
Mariette Lemley, et al	S&K Land Company	1/8	0114/0075
S&K Land Company	Mert Development, Inc.	Assignment	0115/0110
Mert Development, Inc.	Continental Reserves 1980-E	Assignment	0123/0022
Continental Reserves 1980-E	Appalachian Energy Development Corporation	Assignment	0150/0251
Appalachian Energy Development Corporation	Appatachian Energy Reserves, Inc.	Affidavit of Identity	0019/0210
Appalachian Energy Reserves, Inc.	Jay Shearer	Assignment	0179/0146
Jay Shearer	Clowser Production Company	Assignment	0285/0420
Clowser Production Company	Antero Resources Appalachian Corporation	Assignment	0285/0417
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523
DEPI Lease			
Dominion Exploration & Production Inc.	Dominion Appalachian Development, LLC	1/8	0230/0569
Dominion Appalachian Development, LLC	Antero Resources Appalachian Corporation	Assignment	0231/0145
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523

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^{*}Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

WW-6A1	
(5/13)	

Operator's Well No.	Trainer Unit 1H

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

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

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

Lease Name or				
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Mariette Lemley, et al Lease	_			
	Mariette Lemley, et al	S & K Land Company	1/8	0114/0075
	S & K Land Company	Mert Development, Inc.	Assignment	0115/0110
	Mert Development, Inc.	Continental Reserves 1980-E	Assignment	0123/0022
	Continental Reserves 1980-E	Appalachian Energy Development Corp.	Assignment	0150/0251
	Appalachian Energy Development Corpation	Appalachian Energy Reserves, Inc.	Affidavit of Identity	0019/0210
	Appalachian Energy Reserves, Inc.	Jay Shearer	Assignment	0179/0146
	Jay Shearer	Clowser Production Company	Assignment	0285/0420
	Clowser Production Company	Antero Resources Appalachian Corporation	n Assignment	0285/0417
	Antero Resources Appalachian Corpation	Antero Resources Corporation	Name Change	0046/0523

^{*}Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

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

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

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

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

Well Operator:	Antero Resources Corporation	RECEIVED Office.of Oil and Gas
By:	Tim Rady	21N a + 2022
Its:	Senior VP of Operations	JUN 0 1 2022

WV Department of Environmental Protection



Antero Resources 1615 Wynkoop Street Denver, CO 80202 Office 303.357.7310 Fax 303.357.7315

May 31, 2022

West Virginia Department of Environmental Protection Chief, Office of Oil and Gas Attn: Mr. James Martin 601 57th Street SE Charleston, WV 25304

RE:

Trainer Unit 1H

Quadrangle: Smithburg 7.5'

Doddridge County/Grant District, West Virginia

Mr. Martin:

Antero Resources Corporation (Antero) is submitting the following application for a new well work permit for the Trainer Unit 1H horizontal shallow well. As an authorized representative, I certify that Antero has the right to extract, produce or market the oil or gas for all leases through which the Trainer Unit 1H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Tyler Skavdahl Senior Landman

> RECEIVED Office of Oil and Gas

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

Date of Notice Certification: 05/30/2022		API No. 47- 017 -				
				Operator'	s Well No. Train	er Unit 1H
				Well Pad	Name: Lemley	Pad
Notice has						
Pursuant to th	ne provisions in West Virginia C	ode § 22-6A.	the Operator has pro	ovided the re	quired parties v	with the Notice Forms listed
State:	tract of land as follows: West Virginia			Transland		
County:	Doddridge		UTM NAD 83	Easting: Northing:	527563.5m 4353052.3m	
District:	Grant		Public Road Ac		Hollow Run Rd	
Quadrangle:	Smithburg 7.5'				Hill, et al	
Watershed:	McElroy Creek		Generally used farm name:		riii), et ai	
it has provid information r of giving the requirements Virginia Cod	the secretary, shall be verified a ed the owners of the surface di equired by subsections (b) and (surface owner notice of entry of subsection (b), section sixte e § 22-6A-11(b), the applicant si have been completed by the app	lescribed in su c), section sixt to survey pur- seen of this art shall tender pro	bdivisions (1), (2) teen of this article; (suant to subsection icle were waived in	and (4), sub ii) that the re (a), section writing by	section (b), sec equirement was ten of this arti- the surface ov	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. If rator has properly served the re ECK ALL THAT APPLY			this Notice (ertification	OOG OFFICE USE ONLY
☐ I. NO	TICE OF SEISMIC ACTIVITY		TICE NOT REQUI			☐ RECEIVED/
			ic activity was	S CONDUC	TED	NOT REQUIRED
□ 2. NO	TICE OF ENTRY FOR PLAT S	SURVEY or	Control of the Control		792	The state of the s
	TICE OF ENTRY FOR PLAT S	or NOTIC	NO PLAT SURV	EY WAS C	ONDUCTED USE	NOT REQUIRED
		or NO NO NOTICE WAS C	NO PLAT SURV OTICE NOT REQUI	EY WAS C RED BECA PLAT SUR BY SURFA	ONDUCTED USE VEY	NOT REQUIRED RECEIVED RECEIVED
■ 3. NO		or NOTIC WAS C	NO PLAT SURV OTICE NOT REQUI E OF ENTRY FOR CONDUCTED OF RITTEN WAIVER	EY WAS C RED BECA PLAT SUR BY SURFA	ONDUCTED USE VEY	NOT REQUIRED RECEIVED RECEIVED
■ 3. NO	FICE OF INTENT TO DRILL	or NOTIC WAS C	NO PLAT SURV OTICE NOT REQUI E OF ENTRY FOR CONDUCTED OF RITTEN WAIVER	EY WAS C RED BECA PLAT SUR BY SURFA	ONDUCTED USE VEY	NOT REQUIRED RECEIVED RECEIVED NOT REQUIRED

Required Attachments:

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



Cili and Gas

Its:

Certification of Notice is hereby given:

THEREFORE, I Diana Hoff

A. 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: Antero Resources Corporation

By: Diana Hoff

Senior Vice President - Operations

Diana (

Telephone: 303-357-7310

Address: 1615 Wynkoop Street

Denver, CO 80202

Facsimile: 303-357-7315

Email: mstanton@anteroresources.com

NOTARY PUBLIC STATE OF COLORADO

NOTARY ID 19994011871 MY COMMISSION EXPIRES 27-Apr-2024 Subscribed and sworn before me this 31 day of May 2022

QuaneBloir Notary Public

My Commission Expires 27 Apr 2024

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 depprivacyofficera wy gov.

API NO. 47-017 1 7 0 6 9 3 9
OPERATOR WELL NO. Trainer Unit 1H
Well Pad Name: Lemley Pad

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: 04/12/2022 Date Permit Application Filed: 05/31/2022 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 [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule. ☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to: ☑ SURFACE OWNER(s) COAL OWNER OR LESSEE Name: NO DECLARATIONS ON RECORD WITH COUNTY Name: PLEASE SEE ATTACHMENT Address: _____ Address: Name: □ COAL OPERATOR Address: Name: NO DECLARATIONS ON RECORD WITH COUNTY Address: ☐ SURFACE OWNER(s) (Road and/or Other Disturbance) Name: _____ SURFACE OWNER OF WATER WELL Address: AND/OR WATER PURVEYOR(s) Name: PLEASE SEE ATTACHMENT Name: Address: Address: **OPERATOR OF ANY NATURAL GAS STORAGE FIELD** ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: Address: Name: Address: RECEIVED *Please attach additional forms if necessary Office of Oil and Gas



RECEIVED Office of Oil and Gas

JUN 0 1 2022

4701706939 API NO. 47-017

OPERATOR WELL NO. Trainer Unit 1H

Well Pad Name: Lamley Pad

WV Department of 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.

Pursuam to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oiland-gas pages/default aspx.

Well Location Restrictions

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

4701706939

OPERATOR WELL NO. Trainer Unit 1H

Well Pad Name: Lemley Pad

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:

| RECEIVED Office of Oil and Gas

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

JUN 0 1 2022

WV Department of Environmental intelection

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

API NO. 47-017 1 7 0 6 9 3 9
OPERATOR WELL NO. Trainer Unit 1H
Well Pad Name: Lemiley Pad

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have THIRTY (30) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources: or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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API NO. 47-017

OPERATOR WELL NO. Trainer Unit 1H

Well Pad Name: Lemley Pad

Notice is hereby given by:

Well Operator: Antero Resources Corporation

Telephone: (303) 357-7310 Email:

Diana mstanton@anteroresources.com

Address: 1615 Wynkoop Street

Denver, CO 80202

Facsimile: 303-357-7315

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(awy.gov.

DIANE BLAIR NOTARY PUBLIC STATE OF COLORADO NOTARY ID 19994011871 MY COMMISSION EXPIRES 27-Apr-2024 Subscribed and sworn before me this 31 day of May

Olone Blair

My Commission Expires 27 Apr 2024

Notary Public

RECEIVED Office of Oil and Gas

WW-6A Notice of Application Attachment: Multiple Wells - Lemley Pad

Surface Owners:

Tax Parcel ID: 13-5

Owner: HFP LLC Address: PO Box 418

Kenova, WV 25530-0418

Surface Owners:

Tax Parcel ID: 13-11, 11.2, 35

Owner: Brian D. Lemley & Christy M. LeMaster

Address: 1105 20th St.

Vienna, WV 26105-1237

Owner: Jefferey D. Hill Address: 35 Timberland Dr.

Parkersburg, WV 26104-3702

Water Source Owners: Within 2000'

TM 13-11

2 Water Wells: 893.5' (W1) 952.2 (W2)

Owner: Brian D. Lemley & Christy M. LeMaster.

Address: 1105 20th Street

Vienna, WV 25530

TM 14-43

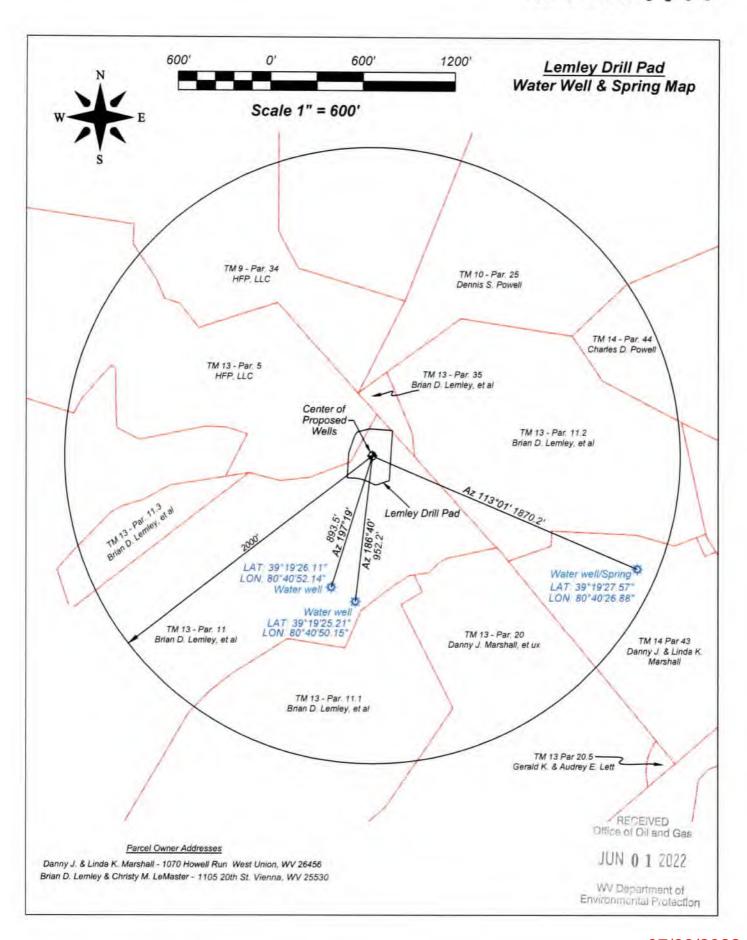
1 Water Well: 1870.2' (W1)

Owner: Danny J. & Linda K. Marshall

Address: 1070 Howell Run

West Union, WV 26456

RECEIVED Office of Oil and Gas



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 Noti	Requirement: Notice shall be provided a ce: 04/12/2022 Date Pe	at least TEN (10) days prior to filing a rmit Application Filed: 05/31/2022	permit application.	
Delivery me	thod pursuant to West Virginia Code §	22-6A-16(b)		
☐ HAND	■ CERTIFIED MAIL			
DELIVI		OUESTED		
DELIT	RETORN RECEIFT RE	QUESTED		
receipt reque drilling a hor of this subsection m	V. Va. Code § 22-6A-16(b), at least ten da sted or hand delivery, give the surface ow izontal well: Provided, That notice giver ction as of the date the notice was provide ay be waived in writing by the surface ow sle, facsimile number and electronic mail a	ner notice of its intent to enter upon the pursuant to subsection (a), section ted to the surface owner; <i>Provided, how</i> oner. The notice, if required, shall incl	ne surface owner's land on of this article satisfice vever. That the notice rude the name, address,	d for the purpose of es the requirements requirements of this telephone number.
Notice is he	reby provided to the SURFACE OV	VNER(s):		
- contract	EASE SEE ATTACHMENT	Name:		
Address:		Address:		
State: County: District: Quadrangle:	Doddridge Grant Smithburg 7.5'	UTM NAD 83 Easting: Northing: Public Road Access: Generally used farm name:	4353052.3m Hollow Run Rd Hill, et al	
Pursuant to facsimile nur related to ho	**Shall Include: West Virginia Code § 22-6A-16(b), this mber and electronic mail address of the rizontal drilling may be obtained from the 157th Street, SE, Charleston, WV 25304 (contraction)	operator and the operator's authorize e Secretary, at the WV Department of	ed representative. Add f Environmental Prote	litional information ection headquarters.
Notice is be	reby given by:			
	DT: Antero Resources Corporation	Authorized Representative:	Mallory Stanton	RECEIVED
Address:	1615 Wynkoop St	Address:	1615 Wynkoop St.	Office of Cit and Gas
	Denver, CO 80202	- Decreased	Denver, CO 80202	JUN 0 1 2022
Telephone:	303-357-7310	Telephone:	303-357-7310	3011 11 1 2007
Email:	mstanton@anterpresources.com	Email:	mstanton@anteroresources.com	
Facsimile:	303-357-7315	Facsimile:	303-357-7315	
	212 210 (212)		200.000.000	

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 depprivacyofficerative gov.

WW-6A4 Notice of Intent to Drill Attachment: Multiple Wells - Lemley Pad

Surface Owners:

Tax Parcel ID: 13-5

Owner:

HFP LLC

Address:

PO Box 418

Kenova, WV 25530-0418

Surface Owners:

Tax Parcel ID: 13-11, 11.2, 35

Owner:

Brian D. Lemley & Christy M. LeMaster

Address:

1105 20th St.

Vienna, WV 26105-1237

Owner:

Jefferey D. Hill

Address:

35 Timberland Dr.

Parkersburg, WV 26104-3702

WW-6A5 (1/12)

Operator Well No. Trainer Unit 1H

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

Date of	Time Ro Notice:	equirement: notic			plater than the filing		application.
Deliver	metho	od pursuant to W	est Virginia (Code §	22-6A-16(c)		
■ cr	RTIFI	ED MAIL		П	HAND		
		RECEIPT REQU	ESTED	_	DELIVERY		
return re the plan required drilling damages (d) The of notice	to be poof a horices contices	equested or hand de eration. The notic rovided by subsect rizontal well; and surface affected by required by this se y provided to the	elivery, give to e required by ion (b), section (3) A propose oil and gas of ction shall be SURFACE (this surface on ten of the surface of surface of the surface of th	ce owner whose lan absection shall inclu- f this article to a sur- ace use and compen- as to the extent the do the surface owner	d will be used for de: (1) A copy face owner who sation agreement amages are com	ication, an operator shall, by certified mail for 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 opensable under article six-b of this chapter, sted in the records of the sheriff at the time
(at the a	ddress l	isted in the records			ime of notice):		
Name:		SEE ATTACHMENT		-	Name:		
Notice i	s hereb	y given: st Virginia Code §	22-6A-16(c),	notice i	Addres	s:he undersigned	well operator has developed a planned
Notice i Pursuan operatio State: County: District:	s hereb	y given: st Virginia Code §	22-6A-16(c), and for the pr	notice i urpose o	s hereby given that to f drilling a horizont UTM NAD	he undersigned al well on the tra Basting: Northing:	well operator has developed a planned act of land as follows: 527563.5m 4353062.3m Hollow Run Rd
Notice i	s hereb	y given: st Virginia Code § e surface owner's l vest Virginia Doddridge	22-6A-16(c), and for the pi	notice i	s hereby given that to f drilling a horizont UTM NAD	he undersigned al well on the tra 33 Easting: Northing:	act of land as follows: 527563.5m 4353062.3m
Notice i Pursuan operatio State: County: District: Quadran Watersh This No Pursuan to be pr horizont surface informat headqua	s hereb to Wes n on the ggle: s ed: M tice Sha to Wes ovided al well; affected ion relaters, lo	y given: st Virginia Code § e surface owner's l Vest Virginia Ooddridge Grant Smithburg 7.5 fcElroy Creek all Include: st Virginia Code § by W. Va. Code and (3) A propose by oil and gas op ated to horizontal ocated at 601 57 th	22-6A-16(c), § 22-6A-10(b) ed surface use perations to the	this note to the and connected the obtain	Address shereby given that to f drilling a horizont. UTM NAD a Public Road Generally us tice shall include: (1 surface owner whose interest the damages are coined from the Secretary and the damages are coined from the Secretary and the secretary and the secretary and the secretary and the secretary are coined from the Secretary and the secretary and the secretary are considered from the secretary and the secretary are secretary and the secretary are secretary and the secretary are secretary as a se	he undersigned al well on the tra Basting: Northing: Access: ed farm name: A copy of this e land will be ent containing an ompensable und tary, at the WV	act of land as follows: 527563.5m 4353062.3m Hollow Run Rd
Notice i Pursuan operatio State: County: District: Quadran Watersh This No Pursuan to be pr horizont surface informal headqua	s hereby to West on on the gele: Seed: Mettice Shart to West ovided all well; affected iton relates, loss defau	y given: st Virginia Code § e surface owner's l Vest Virginia Ooddridge Grant Smithburg 7.5 fcElroy Creek all Include: st Virginia Code § by W. Va. Code and (3) A propose by oil and gas op ated to horizontal ocated at 601 57 th	22-6A-16(c), § 22-6A-10(b) ed surface use perations to the	this note to the and connected the obtain	Address shereby given that to ferilling a horizont. UTM NAD Public Road Generally us tice shall include: (1 turface owner whose the damages are coined from the Secretary and the Secretary was section. WV 25304	he undersigned al well on the tra Basting: Northing: Access: ed farm name: A copy of this e land will be ent containing an ompensable und tary, at the WV	act of land as follows: 527563.5m 4353062.3m Hollow Run Rd Hill. et al code section; (2) The information required used in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional Department of Environmental Protection
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Notice i Pursuan operatio State: County: District: Quadran Watersh This No Pursuan to be pr horizont surface informat	s hereby to West on on the general street of the west ovided all well; affected ion relates, less defauters, less defauterator:	y given: st Virginia Code § e surface owner's l vest Virginia boddridge Grant Grillburg 7.5 dcElroy Creek all Include: st Virginia Code § by W. Va. Code and (3) A propose by oil and gas op ated to horizontal bocated at 601 57 th	22-6A-16(c), § 22-6A-10(b) d surface use erations to the drilling may Street, SE.	this note to the and connected the obtain	Address shereby given that to ferilling a horizont. UTM NAD Public Road Generally us tice shall include: (1 turface owner whose the damages are coined from the Secretary and the Secretary was section. WV 25304	he undersigned al well on the tra Basting: Northing: Access: ed farm name: Acopy of this e land will be ent containing an ompensable und tary, at the WV (304-926-0450) 1615 Wynkoop Stre Denver, CO 80202	act of land as follows: 527563.5m 4353062.3m Hollow Run Rd Hill. et al code section; (2) The information required used in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional / Department of Environmental Protection) or by visiting www.dep.ww.gov/oil-and-

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 departice of the departice of the

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JUN DI := 1

07/08/2022

WW-6A5 Notice of Planned Operations Attachment: Multiple Wells - Lemley Pad

Surface Owners:

Tax Parcel ID: 13-5

Owner: Address: HFP LLC PO Box 418

Kenova, WV 25530-0418

Surface Owners:

Tax Parcel ID: 13-11, 11.2, 35

Owner:

Brian D. Lemley & Christy M. LeMaster

Address:

1105 20th St.

Vienna, WV 26105-1237

Owner: Address: Jefferey D. Hill 35 Timberland Dr.

Parkersburg, WV 26104-3702

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W/ Centration to the Environment of 07/08/2022



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Jimmy Wriston, P. E. Secretary of Transportation Commissioner of Highways

May 26, 2022

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

Subject: DOH Permit for the Lemley Pad, Doddridge County Trainer Unit 1H Well Site

Dear Mr. Martin,

D. Alan Reed, P.E.

State Highway Engineer

This well site will be accessed from a DOH permit #04-2013-0425 which has been issued to Antero Resources Corporation for access to the State Road for a well site located off Doddridge County Route 30 SLS MP 1.68.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a STATEWIDE 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. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Day & Chayton

Cc: Diane Blair

Antero Resources Corporation

CH, OM, D-4

File

Office of Oil and Gas

JUN 0 1 2

W/ Department of O7/08/2022

Subdivision 3.3.e A listing of the anticipated additives that may be used in the water used for fracturing or stimulating the well. (A listing of the additives that were actually used in the fracturing or stimulating of the well shall be submitted as part of the completion report required by W. Va. Code 22-6-22.)

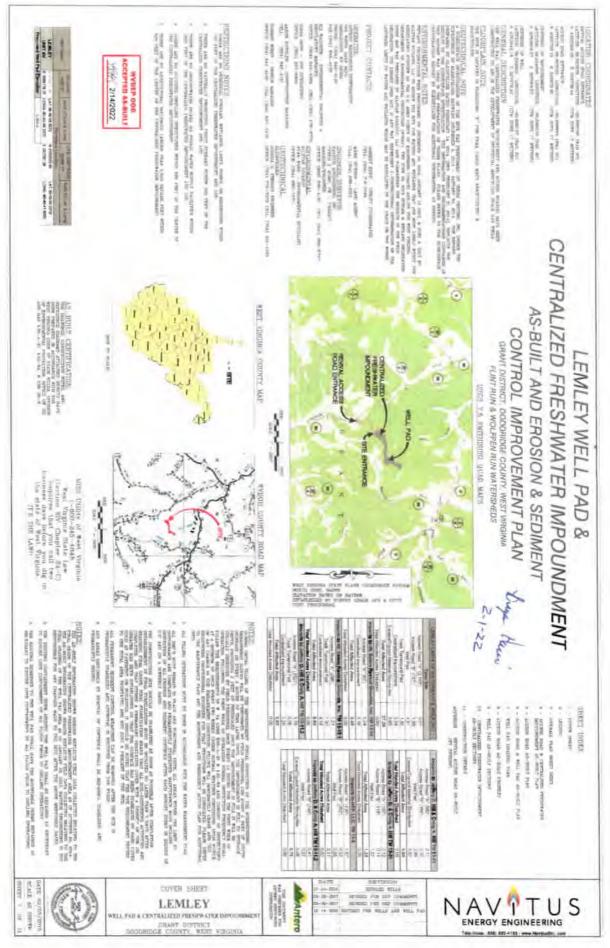
FRACTURING/STIMULATING INTERVAL

Additive	Chemical Abstract Service Number (CAS #)
1. Fresh Water	7732-18-5
2 Phosphobutane 1,2,4 tricarboxylic acid	37971-36-1
3. Ammonium Persulfate	7727-54-0
4. Anionic copolymer	Proprietary
5. Anionic polymer	Proprietary
6. BTEX Free Hydrotreated Heavy Naphtha	64742-48-9
7. Cellulase enzyme	(Proprietary)
8. Demulsifier Base	(Proprietary)
Ethoxylated alcohol blend	Mixture
10. Ethoxylated Nonylphenol	68412-54-4
11. Ethoxylated oleylamine	26635-93-8
12. Ethylene Glycol	107-21-1
13. Glycol Ethers	111-76-2
14. Guargum	9000-30-0
15. Hydrogen Chloride	7647-01-0
16. Hydrotreated light distillates, non-aromatic, BTEX free	e 64742-47-8
17. Isopropyl alcohol	67-63-0
18. Liquid, 2,2-dibromo-3- nitrilopropionamide	10222-01-2
19. Microparticle	Proprietary
20. Petroleum Distillates (BTEX Below Detect)	64742-47-8
21. Polyacrylamide	57-55-6
22. Propargyl Alcohol	107-19-7
23. Propylene Glycol	57-55- 6
24. Quartz	14808 -6 0-7
25. Sillica crystalline quartz	7631-86-9
26. Sodium Chloride	7647-14- 5
27. Sodium Hydroxide	1310-73-2
28. Sugar	57-50-1
29. Surfactant	68439-51-0
30. Suspending agent (solid)	14808-60-7
31. Tar bases, quinolone derivs, benzyl chloride-quarterniz	red 72480-70-7
32. Solvent Naptha, petroleum, heavy aliph	64742-96-7
33. Soybean Oil, Me ester	67784-80-9
34. Copolymer of Maleic and Acrylic Acid	52255-49- 9
35. DETA Phosphonate	15827-60-8
36. Hexamythylene Triamine Penta	346 9 0-00-1
37. Phosphino Carboxylic acid polymer	71050-62-9
38. Hexamethylene diamine penta	23605-74-5
39. 2-Propenoic acid, polymer with 2 propenamide	9003-06-9
40. Hexamethylene diamine penta (methylene phosphon	ic acid) 23605-74-5
41. Diethylene Glycol	111-46-6
42. Methenamine	100- 9 7-0
43. Polyethylene polyamine	68603-67-8
44. Coco amine	51791-14-8
45. 2-Propyn-1-olcompound with methyloxirane	38172-91-7

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WW Department of





OPERATOR: Antero Resources	Corp. WELL NO: Trainer Unit 1H
PAD NAME: Lemley Pad	
REVIEWED BY: Diane Blair	SIGNATURE: Diane Blair

WELL RESTRICTIONS CHECKLIST

HORIZONTAL 6A WELL

V	At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to Perennial Stream, Lake, Pond, Reservoir or Wetland; OR	o any
	DEP Waiver and Permit Conditions	
~	At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to Naturally Producing Trout Stream; OR	o any
	DEP Waiver and Permit Conditions	
'	At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) Groundwater Intake or Public Water Supply; OR	to any
	DEP Waiver and Permit Conditions	
'	At Least 250 Feet from an Existing Water Well or Developed Spring to Well Drilled; OR	Being
	Surface Owner Waiver and Recorded with County Clerk, OR	
	DEP Variance and Permit Conditions	
'	At Least 625 Feet from an Occupied Dwelling Structure to Center of the Pad	; OR
	Surface Owner Waiver and Recorded with County Clerk, OR	
	DEP Variance and Permit Conditions	
'	At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet of the Pad; OR	to the Center
	Surface Owner Waiver and Recorded with County Clerk, OR	RECEIVED Office of Oil & Gas
	DEP Variance and Permit Conditions	JUN 2 8 2022

W Department of Environmental Protection 07/08/2022