

west virginia department of environmental protection

02/23/2023

Office of Oil and Gas 601 57<sup>th</sup> Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452

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

Monday, January 30, 2023 WELL WORK PERMIT Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Re:

Permit approval for JENKINS 1H

47-017-06942-00-00

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

Chief

Operator's Well Number: JENKINS 1H

Farm Name: ANTERO RESOURCES CORP

Horizontal 6A New Drill

U.S. WELL NUMBER: 47-017-06942-00-00

Date Issued: 1/30/2023

Promoting a healthy environment.

API Number: 47 0 1 7 0 6 9 4 2

### **PERMIT CONDITIONS**

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

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#### CONDITIONS

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

4701706942

API NO. 47- 017

OPERATOR WELL NO. Jenkins Unit 1H / Well Pad Name: Locke Pad

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

1) Well Operator: Antero Resources Corporal 494507062 017 - Operator ID Count	Doddri Southwei Oxford 7.5  District Quadrangle
2) Operator's Well Number: Jenkins Unit 1H / Well Pad Name:	
3) Farm Name/Surface Owner: Antero Resources Corporation Public Road Access	SS: Taylor Drain Road
4) Elevation, current ground: 1108' Elevation, proposed post-co. 5) Well Type (a) Gas X Oil Underground	
Other  (b)If Gas Shallow X Deep  Horizontal X	
6) Existing Pad: Yes or No No	
7) Proposed Target Formation(s), Depth(s), 'Anticipated Thickness and Exp Marcellus Shale: 7000' TVD, Anticipated Thickness- 55 feet, Associated Pre	
8) Proposed Total Vertical Depth: 7000' TVD /	
9) Formation at Total Vertical Depth: Marcellus	
10) Proposed Total Measured Depth: 12800' MD /	
11) Proposed Horizontal Leg Length: 3211' *Open to modification at a	a later date /
12) Approximate Fresh Water Strata Depths: 236', 260', 320', 326'	
13) Method to Determine Fresh Water Depths: 47017033900000, 47017000980000 Offset well 14) Approximate Saltwater Depths: 1733', 1750'	I records. Depths have been adjusted according to surface elevations.
15) Approximate Coal Seam Depths: None Anticipated	
16) Approximate Depth to Possible Void (coal mine, karst, other): None A	Anticipated
17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine?  Yes	No X
(a) If Yes, provide Mine Info: Name:	
Depth:	RECEIVED
Seam:	Office of Oil and Gas
Owner:	JAN 1 1 2023
	WV Department o° Environmental Protection

2 01/5/2023

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4701706942

OPERATOR WELL NO. Junkins Unit 1H
Well Pad Name: Locke Pad

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. 17. 73/20	) <b>)</b> 2
Conductor	20"	New	H-40	79#	100'	100'	CTS, 96 Cu. Ft.	1
Fresh Water	13-3/8"	New	J/K-55	54.5#	376'	376'	CTS, 392 Cu. Ft.	1
Coal	9-5/8"	New	J-/K55	36#	2500'	2500' /	CTS, 1018 Cu. Ft.	1
Intermediate								
Production	5-1/2"	New	P-110CY	20#	12800'	12800' !	CTS, 2298 Cu. Ft.	1
Tubing	2-3/8"	New	N-80	4.7#				
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"	0.375"	2250	50	Class A/L	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A/L	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A/L	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	14,360	2500	Class G/H	~1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

### **PACKERS**

N/A	
N/A	RECEIVED Office of Oil and Gas
N/A	JAN 11 2023
	N/A

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OPERATOR WELL NO. Jenkins Unit 1H

Well Pad Name: Locke Pad

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

Drill a new horizontal shallow well into the Marcellus Shale.

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\*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): 27.54 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 13.31 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:

Conductor: no additives, Class A/L cement.

Surface: Class A/L cement with 2-3% calcium chloride and 1/4 lb of flake Intermediate: Class A/L 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 G/H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

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 bbls fresh water, pump 48 bbls 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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December 21, 2022

West Virginia Office of Oil and Gas Attn: Taylor Brewer 601 57<sup>th</sup> St SE Charleston, WV 25304 Office 02/26/2023

DEC 2 7 2022

WV Department of Environmental Protection

RE: Request for Variance – Class L Cement Jenkins Unit 1H

County, WV

Mr. Brewer:

Pursuant to 35CSR8 Section 9.2.h.8, Antero Resources Corporation ("Antero") would like to implement the variance to allow Class L Cement in place of Class A cement relating to the construction of the following horizontal wells (Jenkins Unit 1H) on the Locke pad.

Antero only plans to use this method if Class A cement is not available to be use due to supply issues. Please see Order No 2022-14 attached.

If you have any questions or need further information, please feel free to contact Mallory Turco, Permitting Manager, at (303) 357-7182 or email at <a href="mailto:mturco@anteroresources.com">mturco@anteroresources.com</a>.

Sincerely,

Stefan Gaspar Permitting Agent Antero Resources Corporation



west virginia department of environmental protection

02/23/2023

Office of Oil and Gas 601 57<sup>th</sup> Street, SE Charleston, WV 25304 Phone (304) 926-0450 Harold D. Ward, Cabinet Secretary dep.wv.gov

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

IN THE MATTER OF A VARIANCE FROM	)		RECEIVED
LEGISLATIVE RULE 35CSR4	)	ORDER NO.	2022-Price of Oil and Gas
SECTION 11.5 AND LEGISLATIVE RULE	)		DEC 2 7 2022
35CSR8 SECTION 9.2.h.8.,	)		DLC 2 1 LOLL
RELATING TO THE CEMENTING	)		WV Department of Environmental Protection
OF OIL AND GAS WELLS	)		Environmental Protection

#### REPORT OF THE OFFICE

In response to industry requests, the West Virginia Department of Environmental Protection, Office of Oil and Gas has reviewed the proposed use of American Petroleum Institute (API) Class L cement to be used in place of API Class A cement for well construction.

#### **FINDINGS OF FACT**

- 1. On July 14, 2022, Northeast Natural Energy (NNE) submitted a variance request from Legislative Rule 35CSR8 Section 9.2.h.8., for the use of API Class L cement in place of API Class A cement, relating to the construction of horizontal wells.
- Laboratory analysis submitted by NNE on July 14, 2022, indicates API Class L cement is comparable to API Class A cement and thereby satisfies the requirements of the West Virginia Code.
- 3. Contemporaneously, the Chief of the Office of Oil and Gas also chose to consider a variance to Legislative Rule 35CSR4 Section 11.5., for the use of API Class L cement in place of API Class A cement, relating to the construction of vertical wells.

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 On August 18, 2022, the Office of Oil and Gas provided public notice of acceptance of public comments on the variance consideration. During the 20-day public comment period, no comments were received.

### CONCLUSIONS OF LAW

02/23/2023

Pursuant to Article 6 and Article 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to Legislative Rule 35CSR4, Section 18 and Legislative Rule 35CSR8, Section 14, the Chief of the Office of Oil and Gas may grant a variance from any requirement of these rules.

#### **ORDER**

It is ordered that the Class L cement product approved and monogramed by API is approved for use in place of API Class A cement for well construction subject to the provisions of Legislative Rule 35CSR4 and Legislative Rule 35CSR8.

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DEC 2 7 2022

WV Department of Environmental Protection

Dated this, the 13th day of September, 2022.

IN THE NAME OF THE STATE OF WEST VIRGINIA

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

James Martin, Chief Office of Oil and Gas WW-9 (4/16)

API Number 47 - 017 - Operator's Well No. Jenkins Unit 1H

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

### FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Antero Resources Corporation OP Code 494507062 02/23/2023
Watershed (HUC 10) South Fork Hughes River Quadrangle Oxford 7.5'
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No
Will a pit be used? Yes No V
If so, please describe anticipated pit waste:  No pit will be used at this site (Drilling and Flowback Fluids will be stored in tanks. Cuttings will be tanked and hauled off site)  No pit will be used at this site (Drilling and Flowback Fluids will be stored in tanks. Cuttings will be tanked and hauled off site)  EIVED
Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A
Proposed Disposal Method For Treated Pit Wastes: DEC 2 7 2022
Land Application  Underground Injection (UIC Permit Number *UIC Permit # will be provided on Form WR-3Ænvironmental Protect  Reuse (at API Number Future permitted well locations when applicable. API# will be provided on Form WR-34  Off Site Disposal (Supply form WW-9 for disposal location) (Meadowfill Landfill Permit #SWF-1032-98)  Other (Explain Northwestern Landfill Permit #SWF-1025/  WV0109410  Wetzel County Landfill (Permit #SWF-1021)  Will closed loop system be used? If so, describe: Yes, fluids stored in tanks, cuttings removed offsite and taken to landfill.
Surface - Air/Freshwater, Intermediate -
Orning medium anticipated for this well (vertical and norizontal)? Air, freshwater, oil based, etc.
-If oil based, what type? Synthetic, petroleum, etc. Synthetic
Additives to be used in drilling medium? Please See Attachment
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Drill cuttings stored in tanks, removed offsite and taken to 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 (Permit #SWF-1032-98), Northwestern Landfill (Permit #SWF-1025/WV0109410)  Wetzel County Landfill (Permit #SWF-1021)
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.  I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.  Company Official Signature  Gentlern Kohler  Company Official (Typed Name) Gretchen Kohler
company official (Typed Name)
Company Official Title_ Director Environmental & Regulatory Compliance
Subscribed and sworn before me this 21 day of 000 , 20 22  Notary Public DIANE BLAIR NOTARY PUBLIC STATE OF COLORADO
My commission expires 27 Apr 2024 STATE OF COLUMNO NOTARY ID 19994011871 MY COMMISSION EXPIRES 27-Apr-2024

Antero Resources Corporation	Operator's	Well No. Jenkins Unit 1H
Proposed Revegetation Treatment: Acres Disturbed 27.54 a		pH
Lime 2-4 Tons/acre or to correct to pI		
Fertilizer type Hay or straw or Wood Fiber (will be used	where needed)	02/23/2023
Fertilizer amount 500	bs/acre	
Mulch 2-3 Tons/ Access Road (7.89 acres) + Well Pad (13.31 acres) Spoil Pile (		opsoil Stripping 2 (1.96 acres) =
See	d Mixtures	
Temporary	Perm	nanent
Seed Type lbs/acre	Seed Type	lbs/acre
Annual Ryegrass 40	Crownvetch	10-15
Field Bromegrass 40	Tall Fescue	30
See attached Table IV-3 for additional seed type (Locke Pad Design)	See attached Table IV-4A for addition	nal seed type (Locke Pad Design)
*or type of grass seed requested by surface owner	*or type of grass seed requ	uested by surface owner
Photocopied section of involved 7.5' topographic sheet.		
Plan Approved by:	5/2023	
Comments:		<u> </u>
Title: OOG Inspector	Date: 0//05/202	3
7.117	) No	RECEIVED Office of Oil and Gas

JAN 1 1 2023

WV Department of Environmental Protection



### 911 Address 2703 Taylor Drain Rd, West Union WV 26456

02/23/2023

# Well Site Safety Plan Antero Resources

Well Name: Locke Unit 5H, Jenkins Unit 1H-3H, Shotter Unit 1H-2H,

Stope Unit 1H-2H

**Pad Location: LOCKE PAD** 

**Doddridge County/Southwest District** 

**GPS Coordinates:** 

Entrance - 39.178401, -80.836153(NAD83)
Pad Center - 39.177765, -80.833194 (NAD83)

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JAN 1 1 2023

# **Driving Directions:**

WV Department of Environmental Protection

From Pullman; Head northeast on Main St towards Ash Hill St for 0.3 miles. Turn right onto Oxford Rd for 5.1 miles. Continue onto S Fork of Hughes River for 0.8 miles. Turn right onto Taylor Drain Rd for 2.7 miles. Lease road will be on the left.

### **Alternate Route:**

From Auburn; Head west on Auburn Rd/ Main St toward Toll Gate Rd for 30 ft. Take Co Rd 7/13 and Summers Rd Brushy Fork to Taylor Drain Rd in Doddridge County for 6.5 miles. Turn left onto Taylor Drain Rd for 1.5 miles. Lease road will be on the right.

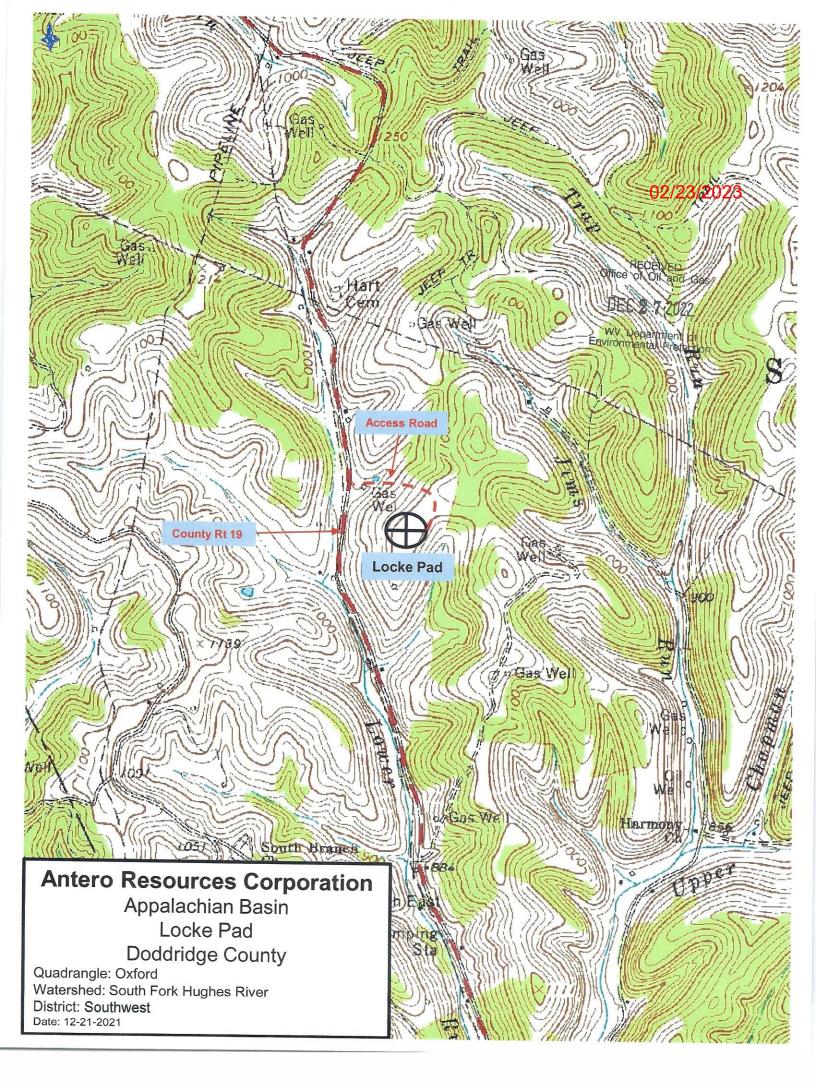
**EMERGENCY (24 HOUR) CONTACT 1-800-878-1373** 

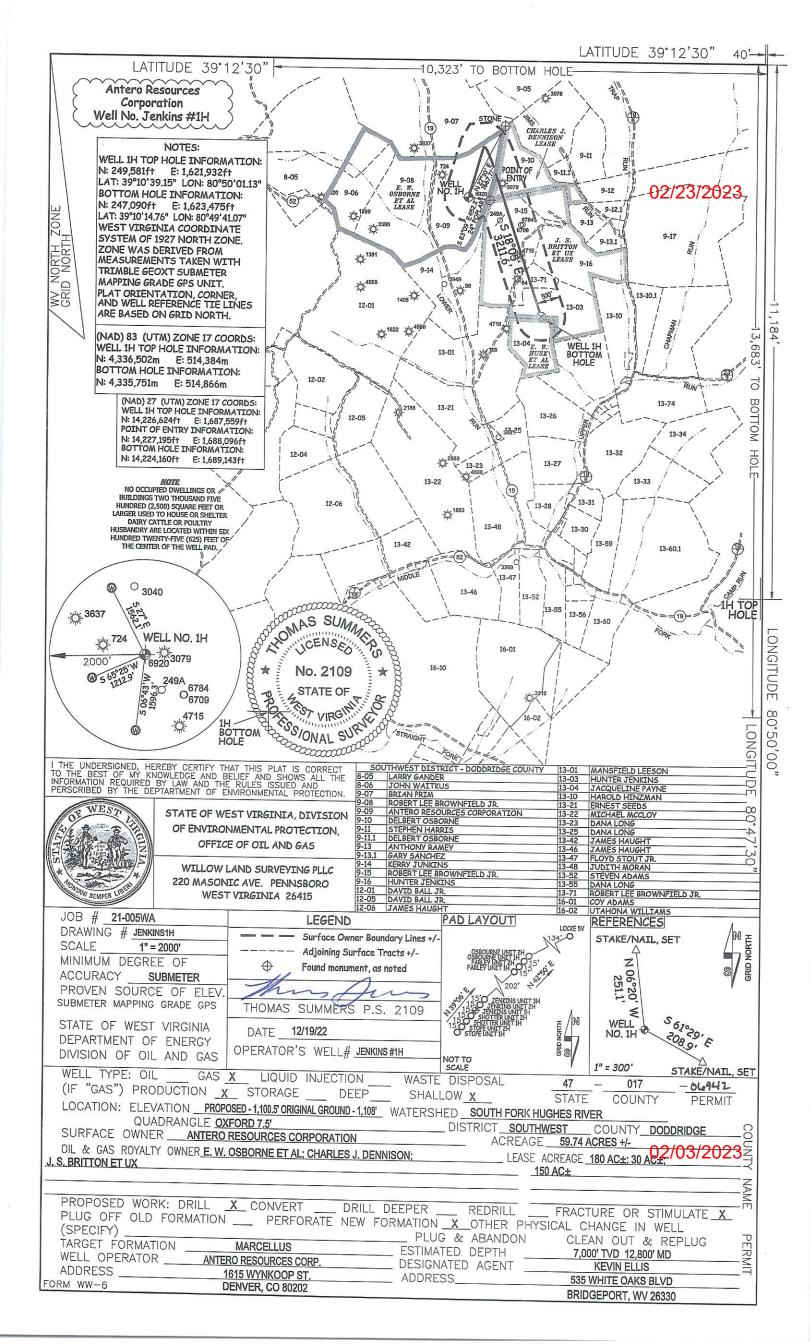
1

03/01/2021

SSP Page 1







Operator's Well Number

Jenkins 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  $-\frac{02}{23}$ 

- (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
E.W. Osbourne, et al Lease E.W. Osbourne et al Hope Natural Gas Trio Oil and Gas Company Charter D. Stinespring, Paul B. Davis and G.W. Hill J & J Enterprises, Inc Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation	Hope Natural Gas Trio Oil and Gas Company Charter D. Stinespring, Paul B. Davis and G.W. Hill J & J Enterprises, Inc Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Assignment Assignment Assignment Merger Assignment Name Change	57/132 72/496 131/687 131/762 159/139 6/450 272/307 46/523
✓ <u>Charles J. Dennison Lease</u> Chareles J. Dennison Clarence Mutschelknaus Et al Antero Resources Appalachian Corporation	Clarence Mutschelknaus et al Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Name Change	105/129 262/74 <b>46/523</b>

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DEC 2 7 2022

WV Department of Environmental Protection

<sup>\*</sup>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.

Operator's	W7-11 NT	lanking	Unit 1L
Operator s	well No.	OCHMINS	OTHE TH

### 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 Applicated 2023 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
J.S. Britton, et ux Lease		, = 22200, 000	Royalty	Book/Fage
	J.S. Britton, et ux	U.G. Summers	1/8	0022/0438
	U.G. Summers	The Fisher Oil Company	Assignment	0022/0443
	The Fisher Oil Company	The Philadelphia Company of West Virginia	Assignment	0024/0064
	The Philadelphia Company of West Virginia	Pittsburgh & WV Gas Company	Assignment	0032/0253
	Pittsburgh & WV Gas Company	Equitable Gas Company	Assignment	0121/0257
	Equitable Gas Company	Equitrans, Inc.	Assignment	0154/0475
	Equitrans, Inc.	Equitrans, LP	Deed	0302/0123
	Equitrans, LP	Equitable Production-Eastern States Inc.	Assignment	0192/0019
	Equitable Production-Eastern States Inc.	Equitable Production Company	Merge	0281/0346
	Equitable Production Company	<b>EQT Production Company</b>	Name Change	0281/0346
	<b>EQT Production Company</b>	Antero Resources Corporation	Assignment	0487/0641
*Partial Assignments to Anter	P Resources Corporation include 100% rights	An outract and the	Office of	ECEIVED of Oil and Gas

\*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.

DEC 2 7 2022

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

WV Department of Environmental Protection

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

Well Operator: Antero Resources Corporation

By: Tim Rady

Its: Senior Vice President of Land

Page 2 of 1



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

December 14, 2022

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

RE:

Jenkins Unit 1H

Quadrangle: Oxford 7.5'

Doddridge County/Southwest District, West Virginia

Mr. Martin:

Antero Resources Corporation (Antero) is submitting the following application for a new well work permit for the Jenkins 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 Jenkins Unit 1H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Antonia Booth
Landman Associate

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DEC 2 7 2022

WV Department of Environmental Protection

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

Date of Notic	ce Certification: 12/20/2022	AI	PI No. 47- 017 -				
			erator's Well No. Jenk	xins Unit 1H			
			ell Pad Name: Locke	00/00/000			
Notice has l	oeen given:						
Pursuant to th	tract of land as follows:	§ 22-6A, the Operator has provide	ed the required parties v	with the Notice Forms listed			
below for the	tract of faild as follows:		and a parties	with the Proffee Forms fisted			
State:	West Virginia	UTM NAD 83 Ea	sting: 514384m				
County:	Doddridge	NO	orthing: 4336502m				
District:	Southwest	Public Road Access:		ad			
Quadrangle: Watershed:	Oxford 7.5'	Generally used farm	name: Antero Resource	es Corporation			
watersned:	South Fork Hughes River						
Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section tends of this article have been completed by the applicant.							
that the Oper	West Virginia Code § 22-6A, the Operator has properly served the require CK ALL THAT APPLY	erator has attached proof to this I d parties with the following:	Notice Certification	OOG OFFICE USE ONLY			
☐ 1. NOT	TICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS CO		RECEIVED/ NOT REQUIRED			
☐ 2. NOT	TICE OF ENTRY FOR PLAT SURV	TEY or I NO PLAT SURVEY	WAS CONDUCTED	☐ RECEIVED			
■ 3. NOT	TICE OF INTENT TO DRILL or	☐ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLA WAS CONDUCTED or		RECEIVED/ NOT REQUIRED			
п.		WRITTEN WAIVER BY S  (PLEASE ATTACH)RECT  Office of C	SURFACE OWNER EIVED Dil and Gas				
_	ICE OF PLANNED OPERATION		7 2022	☐ RECEIVED			
5. PUB	LIC NOTICE		partment of ental Protection	☐ RECEIVED			
■ 6. NOT	ICE OF APPLICATION	Environme	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	☐ RECEIVED			

### Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia 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.

### Certification of Notice is hereby given:

THEREFORE, I Diana Hoff , 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 perpendicular 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 / Mana

Its: Telephone:

Senior VP of Operations 303-357-7310

Address:

1615 Wynkoop Street

Denver, CO 80202

Facsimile:

303-357-7315

Email:

mturco@anteroresources.com

DIANTERSLAN **NOTARY PUBLIC** STATE OF COLORADO NOTARY ID 19994011871 MY COMMISSION EXPIRES 27-Apr-2024 Subscribed and sworn before me this 1 day of 000 2022.

Diane Blair

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 depprivacyofficer@wv.gov.

> RECEIVED Office of Oil and Gas

> > DEC 2 7 2022

WV Department of Environmental Protection

API NO. 47- 017 OPERATOR WELL NO. Jenkins Unit 1H
Well Pad Name: Locke 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: 12/21/2022 Date Permit Application Filed: 12/21/2022 02/23/2023 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: RECEIVED of Oil and Gas ☑ SURFACE OWNER(s) ☐ COAL OWNER OR LESSEE Antero Resources Corporation Name: Name: NO DECLARATIONS ON RECORD WITH COUNTY DEC 2 7 2022 Address: PO BOX 1826 Address: Cockeysville, MD 21030 // Department of Name: ☐ COAL OPERATOR Environmental Protection 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: Robert Lee Brownfield Address: 2864 Taylor Drain Rd West union, wy 20456 Name: Address: ☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: Name: Address: Address: \*Please attach additional forms if necessary

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WW-6A (8-13)

API NO. 47- 017

OPERATOR WELL NO. Jenkins Unit 1H

Well Pad Name: Locke Pad

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 02/23/2023

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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

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

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

### Well Location Restrictions

DEC 2 7 2022

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

WW-6A (8-13)

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API NO. 47-017

OPERATOR WELL NO. Jenkins Unit 1H

Well Pad Name: Locke 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 the compared to the compared 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 agree of as penns Gas 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:

DEC 2 7 2022

WV Department of W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, Annual or 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:

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

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- 017

OPERATOR WELL NO. Jenkins Unit 1H

Well Pad Name: Locke 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 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 rescaled 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;

DEC 2 7 2022

(3) Damage would occur to publicly owned lands or resources; or

(4) The proposed well work fails to protect fresh water sources or supplies.

WV Department of Environmental Protection

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.

WW-6A (8-13)

4701706942

API NO. 47-017 OPERATOR WELL NO. Jenkins Unit 1H Well Pad Name: Locke Pad

Notice is hereby given by:

Well Operator: Antero Resources Corporation Telephone: (303) 357-7310

(303) 357-7310 Dana mturco@anteroresources.com Email:

Address: 1615 Wynkoop Street

Denver, CO 80202

Oil and Gas Privacy Notice:

Facsimile: 303-357-7315

02/23/2023

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.

DIANE BLAIR NOTARY PUBLIC STATE OF COLORADO NOTARY ID 19994011871 MY COMMISSION EXPIRES 27-Apr-2024

Subscribed and sworn before me this 2 day of 00 2022. Oigne Blair Notary Public 27 Apr 2024 My Commission Expires

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Office of Oil and Gas

DEC 2 7 2022

WV Department of Environmental Protection

WW-6A4 (1/12)

Operator Well No. Jenkins Unit 1H

Multiple Wells on Locke Pad

# 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.

02/23/2023 Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application. Date of Notice: 12/21/2022 Date Permit Application Filed: 12/21/2022 Delivery method pursuant to West Virginia Code § 22-6A-16(b) ☐ HAND CERTIFIED MAIL DELIVERY RETURN RECEIPT REQUESTED Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: Provided, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: Provided, however, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative Office of Oil and Gas Notice is hereby provided to the SURFACE OWNER(s): Name: Antero Resources Corporation Name: DEC 2 7 2022 Address: P.O. Box 1826 Address: Cockeysville, MD 21030 WV Department of Environmental Protection Notice is hereby given: Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows: State: West Virginia Easting: 514384m UTM NAD 83 County: Doddridge Northing: 4336502m District: West Union Public Road Access: Taylor Drain Road Quadrangle: Oxford 7.5' Generally used farm name: Antero Resources Corporation Watershed: South Fork Hughes River This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. 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 <a href="https://www.dep.wv.gov/oil-and-gas/pages/default.aspx">www.dep.wv.gov/oil-and-gas/pages/default.aspx</a>. Notice is hereby given by: Well Operator: Antero Resources Corporation Authorized Representative: Mallory Turco Address: 1615 Wynkoop St. Address: 1615 Wynkoop St. Denver, CO 80202 Denver, CO 80202 Telephone: 303-357-7323 Telephone: 303-357-7223 Email: mturco@anteroresources.com Email: mturco@anteroresources.com Facsimile: 303-357-7315 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 <a href="deprivacyofficer@wv.gov">deprivacyofficer@wv.gov</a>.

WW-6A5 (1/12) 47017069 Operator Well No. Jenkins Unit 1H

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

Notice Time Date of Notice	Requirement: notice shall be provided no late e: 12/21/2022 Date Permit Applie	er than the filing cation Filed: 1	g date of permi 2/21/2022	t application.
Delivery met	hod pursuant to West Virginia Code § 22-6.	A-16(c)		02/23/2023
	FIED MAIL HA IN RECEIPT REQUESTED DE	ND LIVERY		0_,_0,_0
the planned of required to be drilling of a h damages to the (d) The notices of notice.  Notice is here	V. Va. Code § 22-6A-16(c), no later than the requested or hand delivery, give the surface of peration. The notice required by this subsection required by subsection (b), section ten of this orizontal well; and (3) A proposed surface use surface affected by oil and gas operations to be required by this section shall be given to the by provided to the SURFACE OWNER(s)	stion shall include article to a surface owner surface owner	d will be used fude: (1) A copy face owner who assation agreement	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
(at the address	listed in the records of the sheriff at the time	of notice):		DEC 2 7 2022
Address: PO BO	Resources Corporation	Name:		DEC & 1 2022
The state of the s	sville, MD 21030	Addres	SS:	WV Department of Environmental Protection
State: County: District: Quadrangle:	oy given: est Virginia Code § 22-6A-16(c), notice is here ne surface owner's land for the purpose of dril West Virginia Doddridge Southwest Oxford 7.5' South Fork Hughes River	UTM NAD Public Road	Easting: Northing:	well operator has developed a planned ct of land as follows:  514384m  4336502m  Taylor Drain Road  Antero Resources Corporation
horizontal well; surface affected information rela	st Virginia Code § 22-6A-16(c), this notice sl by W. Va. Code § 22-6A-10(b) to a surface and (3) A proposed surface use and compen- by oil and gas operations to the extent the attention of the content	sation agreeme	nt containing an ompensable under	offer of compensation with the drilling of a offer of compensation for damages to the er article six-b of this chapter. Additional
Well Operator:	Antero Resources Corporation	Address:	1615 Wynkoop Stree	f
Telephone:	(303) 357-7310		Denver, CO 80202	
Email:	mturco@anteroresources.com	Facsimile:	303-357-7315	
01 10 -			-10 001 1010	

Oil and Gas Privacy Notice:

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

7017706942 OPERATOR WELL NO. Jenkins Unit 1H

Well Pad Name: Locke Pad

### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS **VOLUNTARY STATEMENT OF NO OBJECTION**

Instructions to Persons Named on Page WW-6A

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

#### **Comment and Waiver Provisions**

DEC 2 7 2022

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 with the secretary as to the location or construction of the applicant's proposed well work with the secretary as to the location or construction of the applicant's proposed well work with the secretary as to the location or construction of the applicant's proposed well work with the secretary as to the location or construction of the applicant's proposed well work with the secretary as to the location or construction of the applicant's proposed well work with the secretary as to the location or construction of the applicant's proposed well work with the secretary as to the location or construction of the applicant's proposed well work with the secretary as to the location or construction of the applicant's proposed well work with the secretary as to the location or construction of the applicant's proposed well work with the secretary as the location or construction of the applicant's proposed well were applicant to the location of the applicant to the location of the applicant to the location of the location of the location of the applicant to the location of application is filed with the secretary.

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

### VOLUNTARY STATEMENT OF NO OBJECTION

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ww-6A and required, and	, hereby state that I have re- sted above, and that I have received copies o attachments consisting of pages one (1) the the well plat, all for proposed well work on the	ırough	, including as follows:	Named on Page WW-6A and the associated pplication for a Well Work Permit on Form the erosion and sediment control plan, if	
State:	West Virginia	UTM NAD	Easting:	514384m	
County:	Doddridge	Public Road Access:			
District:	Southwest			Taylor Drain Road	
Quadrangle:		Generally i	used farm name:	Antero Resources Corporation	
Watershed:	South Fork Hughes River				
*Please check	se materials.  The box that applies		FOR EXECU	TION BY A NATURAL PERSON	
■ SURFA	CE OWNER		Signature:		
□ SURFAC	CE OWNER (Road and/or Other Disturba	ance)	Print Name:		
□ SURFAC	CE OWNER (Impoundments/Pits)				
□ COAL C	OWNER OR LESSEE		Company: Anter	TION BY A CORPORATION, ETC.  o Resources Corporation	
□ COAL C	PERATOR		By: Diana Hoff Its: Senior VP of C	Operations O. All	
WATER	PURVEYOR		Signature:		
□ OPERA	TOR OF ANY NATURAL GAS STORA	GE FIELD	Date:		

### 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.



## WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways** 

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

02/23/2023
Jimmy Wriston, P. E.
Secretary of Transportation
Commissioner of Highways

July 19, 2022

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

RECEIVED Office of Oil and Gas

DEC 2 7 2022

WV Department of Environmental Protection

Subject: DOH Permit for the Locke Pad, Doddridge County
Jenkins 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 #04-2021-0946 which has been issued to Antero Resources Corporation for access to the State Road for a well site located off Doddridge County Route 19 SLS MP 9.31.

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

Cc: Diane Blair

Antero Resources Corporation

CH, OM, D-4

File

E.E.O./AFFIRMATIVE ACTION EMPLOYER

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 #)			5#)
1	. Fresh Water			7732-18-5	<u> </u>
2	. 2 Phosphobutane 1,2,4 tricarboxylic acid	Office of Oil and	Gas	37971-36-1	02/23/2023
3	. Ammonium Persulfate			7727-54-0	
4	. Anionic copolymer	DEC 2 7 202	2	Proprietary	
5				Proprietary	
6	The second secon	WV Department	ot ection	64742-48-9	
7		Environmental Prot	GOLIO.	(Proprietary)	
8	GARAGE TENAS SERVICE AND AND A			(Proprietary)	
9	. Ethoxylated alcohol blend			Mixture	
1	Ethoxylated Nonylphenol			68412-54-4	
	Ethoxylated oleylamine			26635-93-8	
1	2. Ethylene Glycol			107-21-1	
1	3. Glycol Ethers			111-76-2	
	4. Guar gum			9000-30-0	
	5. Hydrogen Chloride			7647-01-0	
	<ol><li>Hydrotreated light distillates, non-aromatic,</li></ol>	BTEX free		64742-47-8	
	7. Isopropyl alcohol			67-63-0	
	8. Liquid, 2,2-dibromo-3- nitrilopropionamide			10222-01-2	
	9. Microparticle			Proprietary	
	0. Petroleum Distillates (BTEX Below Detect)			64742-47-8	
2	Polyacrylamide			57-55-6	
	2. Propargyl Alcohol			107-19-7	
2	3. Propylene Glycol			57-55-6	
2	4. Quartz			14808-60-7	
	5. Sillica crystalline quartz			7631-86-9	
2	6. Sodium Chloride			7647-14-5	
	7. Sodium Hydroxide			1310-73-2	
	8. Sugar			57-50-1	
	9. Surfactant			68439-51-0	
	Suspending agent (solid)			14808-60-7	
	<ol> <li>Tar bases, quinolone derivs, benzyl chloride-</li> </ol>	quarternized		72480-70-7	
	2. Solvent Naptha, petroleum, heavy aliph			64742-96-7	
	3. Soybean Oil, Me ester			67784-80-9	
	Copolymer of Maleic and Acrylic Acid			52255-49-9	
	5. DETA Phosphonate			15827-60-8	
	6. Hexamythylene Triamine Penta			34690-00-1	
	7. Phosphino Carboxylic acid polymer			71050-62-9	
	3. Hexamethylene diamine penta			23605-74-5	
	2-Propenoic acid, polymer with 2 propenami		9003-06-9		
	). Hexamethylene diamine penta (methylene p	23605-74-5			
	L. Diethylene Glycol	111-46-6			
	2. Methenamine			100-97-0	
	3. Polyethylene polyamine			68603-67-8	
	1. Coco amine			61791-14-8	
45	5. 2-Propyn-1-olcompound with methyloxirane			38172-91-7	
					1

WW-6A7 (6-12)

(6-12)								
OPERATOR:_	Antero Resources Corporation	WELL NO: Jenkins Unit 1H	wh					
PAD NAME:_	Locke Pad							
REVIEWED B	BY: Mallory Turco	SIGNATURE: MM hw	02/23/2023					
			02/20/2020					
	NS CHECKLIST	RECEIVED Office of Oil and Gas						
	6A WELL	DEC 2 7 2022						
Well Restric	ations		WV Department of Environmental Protection					
wen Kestric	CUOIIS							
V	At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland; OR							
	DEP Waiver and Permit Condition	as						
At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream; OR								
	DEP Waiver and Permit Condition	as						
At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply; OR								
	DEP Waiver and Permit Conditio	ns						
At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled; OR								
	Surface Owner Waiver and Recor	ded with County Clerk, OR						
	DEP Variance and Permit Condition	ons						
$\checkmark$	At Least 625 Feet from an Occupied Dwe	elling Structure to Center of the Pa	d; OR					
	Surface Owner Waiver and Recor	ded with County Clerk, OR						
	DEP Variance and Permit Condition	ons						
$\checkmark$	At Least 625 Feet from Agricultural Buil of the Pad; OR	dings Larger than 2500 Square Fee	et to the Center					

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions