

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 STOPE 2H

47-017-06948-00-00

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: STOPE 2H

Farm Name: ANTERO RESOURCES CORP

U.S. WELL NUMBER: 47-017-06948-00-00

Horizontal 6A New Drill

Date Issued: 1/30/2023

Promoting a healthy environment.

# 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.
- 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.

OPERATOR WELL NO. Stope Unit 2H / 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 Corporate 494507062 017 - Doddrif Southwei Oxford 7.5'
Operator ID County District Quadrangle
2) Operator's Well Number: Stope Unit 2H Well Pad Name: Locke Pad
3) Farm Name/Surface Owner: Antero Resources Corporation Public Road Access: Taylor Drain Road
4) Elevation, current ground: 1108' Elevation, proposed post-construction: 1100.5'
5) Well Type (a) Gas X Oil Underground Storage
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 Expected Pressure(s): Marcellus Shale: 7000' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#
8) Proposed Total Vertical Depth: 7000' TVD
9) Formation at Total Vertical Depth: Marcellus
10) Proposed Total Measured Depth: 21300' MD
11) Proposed Horizontal Leg Length: 10725' / *Open to modification at a later date
12) Approximate Fresh Water Strata Depths: 236', 260', 320', 326'
13) Method to Determine Fresh Water Depths: 47017033900000, 47017000980000 Offset well records. Depths have been adjusted according to surface elevations.  14) Approximate Saltwater Depths: 1733', 1750'
15) Approximate Coal Seam Depths: None Anticipated
16) Approximate Depth to Possible Void (coal mine, karst, other): None 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:  Depth:  Seam:
Owner: JAN 11 2023
WV Department of

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01/05/2023

470 1 706948

API NO. 47-017 - OPERATOR WELL NO. Stope Unit 2H

Well Pad Name: Locke Pad

18)

### **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	<u>Grade</u>	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill up 1/202
Conductor	20"	New	H-40	79#	100'	100'	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J/K-55	54.5#	376'	376' -	CTS, 392 Cu. Ft.
Coal	9-5/8"	New	J-/K55	36#	2500'	2500' ~	CTS, 1018 Cu. Ft.
Intermediate						S- 2000012000	
Production	5-1/2"	New	P-110CY	20#	21300'	21300' -	CTS, 4439 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#	72-02-02-02-02-02-02-02-02-02-02-02-02-02	4,000	
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							1.10
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	2000		
Liners						_	

### **PACKERS**

Kind:	N/A	
Sizes:	N/A	RECEIV® Office of Oil
Depths Set:	N/A	JAN 11 2000

WV Department Environmental Protection

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OR 01/05/2023

API NO. 47- 017

OPERATOR WELL NO. Stope Unit 2H
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 bring water followed by 40 bbls fresh water and 65 bbls bentonite.

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

RE: Request for Variance – Class L Cement Stope Unit 2H

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 (Stope Unit 2H) 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 RECEIVED
Office of Oil and Gas

DEC 2 7 2022

WV Department of Environmental Protection



west virginia department of environmental protection

02/23/2023

Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 Phone (304) 926-0450

TAI THE MAN TOWNED AND A STANDARD

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

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

LEGISLATIVE RULE 35CSR4 SECTION 11.5 AND LEGISLATIVE RULE 35CSR8 SECTION 9.2.h.8.,	)	ORDER NO.	2022-14
RELATING TO THE CEMENTING OF OIL AND GAS WELLS	)		RECEIVED Office of Oil and Gas
	,		DEC 2 7 2022
			WV Department of 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

- 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.
- 2. 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.

RECEIVED
Office of Oil and Gas

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

DEC 2 7 2022

WV Departmental Protection

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

API Number 47 - 017

Operator's Well No. Stope Unit 2H

# 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	OP Code 494507062 02/23/2023 Quadrangle Oxford 7.5'
Do you anticipate using more than 5,000 bbls of water to comp Will a pit be used? Yes No	olete the proposed well work? Yes No No
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.)
Will a synthetic liner be used in the pit? Yes	No ✓ If so, what ml.? N/A
Proposed Disposal Method For Treated Pit Wastes:	
Reuse (at API Number Future permitte	al)? Air, freshwater, oil based, etc.  Surface - Air/Freshwater, Intermediate - Dust/Stiff Foam, Production - Water Based Mud
-If oil based, what type? Synthetic, petroleum, etc. Sy	
Additives to be used in drilling medium? Please See Attachment	DEC 2 7 2022
	offsite, etc. Drill cuttings stored in tanks, removed of site and taken to landfill.
-If left in pit and plan to solidify what medium will be	used? (cement, lime, sawdust) N/A
Wetzel Cou	adfill (Permit #SWF-1032-98), Northwestern Landfill (Permit # SWF-1025/WV0109410) anty Landfill (Permit #SWF-1021)
Permittee shall provide written notice to the Office of Oil and G	has of any load of drill cuttings or associated waste rejected at any within 24 hours of rejection and the permittee shall also disclose
provisions of the permit are enforceable by law. Violations of law or regulation can lead to enforcement action.  I certify under penalty of law that I have personally application form and all attachments thereto and that based	onditions of the GENERAL WATER POLLUTION PERMIT issued reginia Department of Environmental Protection. I understand that the any term or condition of the general permit and/or other applicable examined and am familiar with the information submitted on this on my inquiry of those individuals immediately responsible for ue, accurate, and complete. I am aware that there are significant ity of fine or imprisonment.
Company Official Signature Gretchen Kohler	
Company Official (Typed Name) Gretchen Kohler	
Company Official Title Director Environmental & Regulatory Com	pliance
Subscribed and sworn before me this 21 day of 1	
OronoBlaire	
My commission expires 27 Apr	NOTARY PUBLIC STATE OF COLORADO NOTARY ID 19994011871 MY COMMISSION EXPIRES 27-Apr-2024

Antero Resources Corporation	Operator's	Well No. Stope Unit 2H	
Proposed Revegetation Treatment: Acres Disturbed 27.54 a	acres Prevegetation	pH	
Lime 2-4 Tons/acre or to correct to pl	110,10801111111	,,,,	
Fertilizer type Hay or straw or Wood Fiber (will be used	i where needed)	02/23/2	
500	bs/acre	02/23/2	
Mulch 2-3 Tons.			
Access Road (7.89 acres) + Well Pad (13.31 acres) Spoil Pile		opsoil Stripping 2 (1,96 acres) =	
Sec	ed Mixtures		
Temporary	Perm	anent	
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 requested by surface owner		
creage, of the land application area.  Photocopied section of involved 7.5' topographic sheet.  lan Approved by: 6/05/202	2.3		
		RECEIVED Office of Oil and Gas	
		JAN 11 2023	
		WV Department of Environmental Protection	
eld Reviewed? (V) Ver	Date: 01/05/2023		



### 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:** 

RECEIVED Office of Oil and Gas

JAN 11 2023

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

WV Department of

### **Driving Directions:**

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.

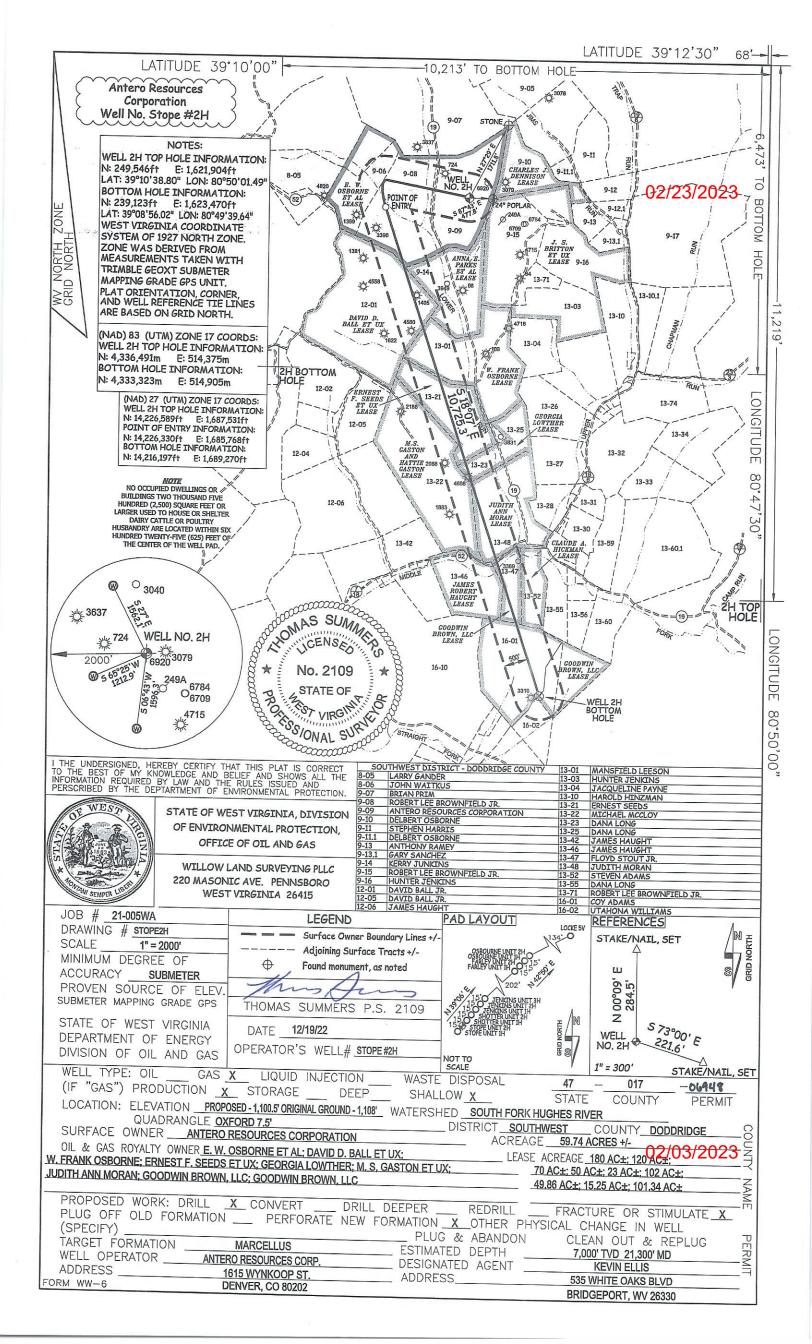
**EMERGENCY (24 HOUR) CONTACT 1-800-878-1373** 

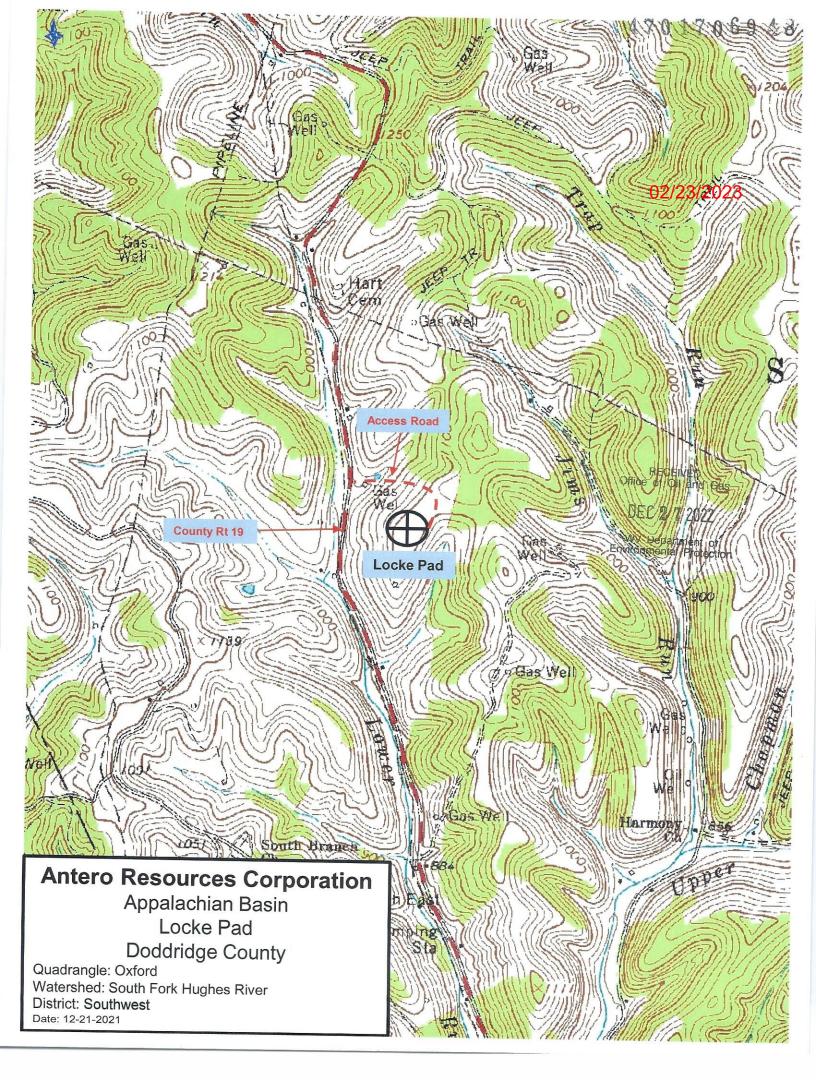
1

03/01/2021

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Of 01/05/2023





Operator's Well Number

Stope Unit 2H

### 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 -02/23/2023

- (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:

No.			
Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
E.W. Osborne, et al Lease			
E.W. Osborne, et al	Hope Natural Gas	. <i>T</i> o	
Hope Natural Gas	Trio Oil and Gas Company	1/8	0057/0132
	The on and cas company	Assignment	0072/0496
Trio Oil and Gas Company	Charter D. Stinespring, Paul B. Davis, and G.W. Hill	Assignment	0131/0687
Charter D. Stinespring, Paul B.			
Davis, and G.W. Hill	J&J Enterprises, Inc.	Assignment	0131/0762
10.15	and an arrangement of the second of the seco		
J&J Enterprises, Inc.	Eastern American Energy Corp.	Assignment	0159/0139
Eastern American Energy Corp.	Energy Corporation of America	Merger	0006/0450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	0272/0307
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change RECEIVED Office of Oil and Gas	0046/0523
David D. Ball, et ux Lease		DEC 2 7 2022	
David D. Ball, et ux	L.E. Mossor and Harry Haddox	1/8 WV Department of	
L.E. Mossor and Harry Haddox	Francis Friestad	1/8 WV Department of Environmental Protection Assignment	0089/0301
Francis Friestad	W.H. Thomson	Assignment	0089/0454
W.H. Thomson	Bet-Ro, Inc.	Assignment	0090/0313
Bet-Ro, Inc.	Key Oil Company	Assignment	0222/0426
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0183/0418
Antero Resources Appalachian Corporation	Antero Resources Corporation	Assignment	0255/0257
	America resources corporation	Name Change	0046/0523
✓ W. Frank Osborne Lease			
W. Frank Osborne	Dittshurgh 9 Mart VI 11 0		
Pittsburgh & West Virginia Gas Company	Pittsburgh & West Virginia Gas Company Equitable Gas Company	1/8	0045/0301
Equitable Gas Company	Equitrans, Inc.	Assignment	0121/0303
Equitrans, Inc.	Equitrans, IP	Assignment	0154/0475
Equitrans, LP	Equitable Production-Eastern States Inc.	Deed	0302/0123
Equitable Production-Eastern States Inc.	Equitable Production Company	Assignment	0192/0019
Equitable Production Company	EQT Production Company	Merge	0281/0346
<b>EQT Production Company</b>	Antero Resources Corporation	Name Change	0281/0346
	values resources corporation	Assignment	0487/0641
Ernest F. Seeds, et ux Lease			
Ernest F. Seeds, et ux	Antero Resources Corporation	1/8+	0503/0500
	• • • • • • • • • • • • • • • • • • • •	-/ 5.	0502/0599

Operator's Well Number

Stope Unit 2H

### 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 -02/23/2023

- (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
Georgia Lowther Lease Georgia Lowther Key Oil Company Antero Resources Appalachian Corporation	Key Oil Company Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Name Change	0188/0063 0256/0305 <b>0046/0523</b>
/ Judith Ann Moran Lease			
Judith Ann Moran	Antero Resources Corporation	1/8	0503/0711
✓ Goodwin Brown, LLC Lease			
Goodwin Brown, LLC	Antero Resources Corporation	1/8+ RECEIVED Office of Oil and Gas	0504/0133
		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.

Omanatau's	W-11 N	Stone Unit 2L
Operator s	well No.	Stope Unit 2H

### 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)

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Rovalty	Book/Page
✓ Goodwin Brown, LLC Lease		, , , , , , , , , , , , , , , , , , , ,	resjuity	DOOK/1 age
	Goodwin Brown, LLC	Antero Resources Corporation	1/8+	0499/0719

\*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.

RECEIVED
Office of Oil and Gas

DEC 2 7 2022

WV Department of Environmental Protection

- 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

By: Tim Rady

Its: Senior Vice President of Land

Page 1 of 1



Antero Resources
1615 Wynkoop Stree 02/23/2023
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 57th Street SE Charleston, WV 25304

RE:

Stope Unit 2H

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 Stope Unit 2H 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 Stope Unit 2H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Antonia Booth Landman Associate RECEIVED Office of Oil and Gas

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 None	ce Certification: 12/20/2022	API No.	47- 017 -		
			's Well No. Sto	ppe Unit 2H	
MT-41. 1 3			Name: Locke		
Notice has l	been given:		•		
Pursuant to th	ne provisions in West Virginia Code §	22-6A, the Operator has provided the r	equired parties	with the Notice Forms lists	
State:		•		with the Police Politis liste	
County:	West Virginia	UTM NAD 83 Easting:	514375m		
District:	Doddridge Southwest	Northing:	4336491m		-
Quadrangle:	Oxford 7.5'	Public Road Access:	Taylor Drain Ro	ad	-
Watershed:	South Fork Hughes River	Generally used farm name:	Antero Resourc	es Corporation	
watershed.	Coddin ork nuglies River				-
it has provide information re of giving the requirements Virginia Code of this article	ed the owners of the surface described and significant surface owner notice of entry to surface owner notice of entry to surface owner notice of subsection (b), section sixteen of es 22-6A-11(b), the applicant shall the have been completed by the applicant		14) A certificate osection (b), see equirement was ten of this art the surface of that the notice	ion from the operator that ( ection ten of this article, the s deemed satisfied as a resu icle six-a; or (iii) the notice	i li
Pursuant to V that the Oper	West Virginia Code § 22-6A, the Operator has properly served the required	erator has attached proof to this Notice (	Certification		
		parties with the following.		OOC OFFICE HOP	
FLEASE CHE	CK ALL THAT APPLY			OOG OFFICE USE ONLY	
☐ 1. NOT	TICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRED BECA	LICENO		
		SEISMIC ACTIVITY WAS CONDUC	USE NO	☐ RECEIVED/	
				NOT REQUIRED	
☐ 2. NOT	TCE OF ENTRY FOR PLAT SURVI	EY or  NO PLAT SURVEY WAS C	ONDLICTED		
W		= 1.0 TEM SCRVET WAS C	ONDUCTED	RECEIVED	
■ 3. NOT	ICE OF INTENT TO DRILL or	☐ NOTICE NOT REQUIRED BECA NOTICE OF ENTRY FOR PLAT SUR' WAS CONDUCTED or	USE VEY	RECEIVED/ NOT REQUIRED	
W 2005		WRITTEN WAIVER BY SURFA (PLEASE ATTACH)			
4. NOT	ICE OF PLANNED OPERATION	(PLEASE ATTACH)  RECEIVED  Office of Oil and Gas		RECEIVED	
■ 5. PUBI	LIC NOTICE	DEC 2 7 2022		RECEIVED	
■ 6. NOTI	ICE OF APPLICATION	WV Department of Environmental Protect	tion	☐ RECEIVED	
	CONTROL OF THE CONTRO				

### 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.

Its:

### 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 personal transfer of the notice requirements within West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties 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 penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator: Antero Resources Corporation

By: Diana Hoff

Diana Hoff

Senior VP of Operations

Telephone: 303-357-7310

Address: 1615 Wynkoop Street

Denver, CO 80202 Facsimile: 303-357-7315

Email: mturco@anteroresources.com

NOTAME BEATH NOTARY PUBLIC STATE OF COLORADO NOTARY ID 19994011871 MY COMMISSION EXPIRES 27-Apr-2024 Subscribed and sworn before me this 2 day of 0c 2022

Viane Blair

Notary Public

My Commission Expires

27 Spr 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 Gas

DEC 2 7 2022

WV Department of Environmental Protection WW-6A (9-13)

API NO. 47010 1706948

OPERATOR WELL NO. Stope Unit 2H
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. RECEIVED
Office of Oil and Gas ☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to: DEC 2 7 2022 ☑ SURFACE OWNER(s) ☐ COAL OWNER OR LESSEE Name: Antero Resources Corporation WV Department of Environmental Protection Name: NO DECLARATIONS ON RECORD WITH COUNTY Address: PO BOX 1826 Address: Cockeysville, MD 21030 Name: ☐ COAL OPERATOR Address: Name: NO DECLARATIONS ON RECORD WITH COUNTY Address: ☐ SURFACE OWNER(s) (Road and/or Other Disturbance) SURFACE OWNER OF WATER WELL Address: AND/QR WATER PURVEYOR(s) Name: Robert Lee Boonfield Address: 2564 Taylor Prain Rd West union WV 26456 Name: Address: ☐ UPERATUR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: Name: Address: Address:

\*Please attach additional forms if necessary

WW-6A (8-13) 470 1706948

OPERATOR WELL NO. Stope Unit 2H
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 plan required by section seven of this article; and (3) the well plat.

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

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

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

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental and-gas/pages/default.aspx.

### Well Location Restrictions

WV Department of Environmental Protection

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

API 16.727 Q17 1 7 0 6 9 4 8

OPERATOR WELL NO. Stope Unit 2H

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 compa 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

DEC 2 7 2022

WV Department of Environmental Protection

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

WW-6A (8-13) API NO. 47- 047 0 1 7 0 6 9 4 8

OPERATOR WELL NO. Stope Unit 2H

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 sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this chapter, as applicable and as incorporated into this article by section five of this article.

### **Comment Requirements**

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

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

### **Permit Denial or Condition**

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

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

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

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

RECEIVED
Office of Oil and Gas

DEC 2 7 2022

WV Department of Environmental Protection

WW-6A (8-13)

01706948

OPERATOR WELL NO. Stope Unit 2H Well Pad Name: Locke Pad

Notice is hereby given by:

Well Operator: Antero Resources Corpo

Telephone: (303) 357-7310 hanc

Email: mturco@anteroresources. Address:\_ 1615 Wynkoop Street

Denver, CO 80202

Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

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 21 day of 000, 2022.

hane Blair Notary Public ires 27 Apr 2024

My Commission Expires\_

RECEIVED Office of Oil and Gas

DEC 2 7 2022

WV Department of Environmental Protection

### 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 Not	e Requirement: Notice shall be provided at l lice: 12/21/2022 Date Perm	east TEN (10) days prior to filing it Application Filed: 12/21/2022	02/23/2023 a permit application.
Delivery me	ethod pursuant to West Virginia Code § 22	-6A-16(b)	
☐ HAND DELIV	■ CERTIFIED MAIL		
drilling a holo of this subse subsection m	W. Va. Code § 22-6A-16(b), at least ten days ested or hand delivery, give the surface owner rizontal well: <i>Provided</i> , That notice given provided as of the date the notice was provided to any be waived in writing by the surface owner ble, facsimile number and electronic mail add	prior to filing a permit application notice of its intent to enter upon ursuant to subsection (a), section to the surface owner: <i>Provided, ho</i>	the surface owner's land for the purpose of ten of this article satisfies the requirements wever, That the notice requirements of this
Name: Antero	ereby provided to the SURFACE OWN	ER(s):	RECEIVED Office of Oil and Gas
Address: P.O Cockeysville, MI		Address:	DEC 2 7 2022
Pursuant to V	Preby given: West Virginia Code § 22-6A-16(b), notice is wher's land for the purpose of drilling a horiz West Virginia	hereby given that the undersigned ontal well on the tract of land as for UTM NAD 83	WV Department of Environmental Protection well operator has an intent to enter upon ollows:
District:	Doddridge West Union	Northing:	4336491m
Quadrangle:	Oxford 7.5'	Public Road Access:	Taylor Drain Road
Watershed:	South Fork Hughes River	Generally used farm name:	Antero Resources Corporation
Pursuant to V facsimile nun related to hor	Shall Include: West Virginia Code § 22-6A-16(b), this not observed and electronic mail address of the openizontal drilling may be obtained from the Se 57th Street, SE, Charleston, WV 25304 (304)	and the operator's authorize	ed representative. Additional information
Notice is her	reby given by:		
Address:	Antero Resources Corporation	Authorized Representative:	Mallory Turco
	1615 Wynkoop St.	Address:	1615 Wynkoop St.
Telephone:	Denver, CO 80202	_	Denver, CO 80202
Email:	303-357-7323	Telephone:	303-357-7223
Facsimile:	mturco@anteroresources.com	_ Email:	mturco@anteroresources.com
i acsimile.	303-357-7315	Facsimile:	303-357-7315
Oil and Car	D.: N.		

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.

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

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information requires to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Addition headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <a href="https://www.dep.wv.gov/oil-angas/pages/default.aspx">www.dep.wv.gov/oil-angas/pages/default.aspx</a> .  Well Operator:  Antero Resources Corporation  Address:  Address:  1615 Wynkoop Street  Telephone:	Notice Time Date of Notice	Requirement: notice shall be provided no later ce: 12/21/2022 Date Permit Applica	than the filination Filed:	ng date of permi 2/21/2022	t application.
Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified in return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notic the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The informat of the purpose of drilling of a horizontal well on the provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with drilling of a horizontal well on the records of the surface to surface owner whose land will be used in conjunction with drilling of a horizontal well on the surface owner at the address listed in the records of the sheriff at the time of notice.  Notice is hereby provided to the SURFACE OWNER(s) (at the address listed in the records of the sheriff at the time of notice):  Notice is hereby given:  Not	Delivery met	hod pursuant to West Virginia Code § 22-6A	-16(c)		02/23/2023
Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notic planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The informat drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation damages to the surface affected by oil and gas operations to the extent the damages are compensable under article, six-b of this chap of notice.  Notice is hereby provided to the SURFACE OWNER(s) (at the address listed in the records of the sheriff at the time of notice):  Name: Anthero Resources Corporation  Name: Address: POBOX 1826	■ CERTI	FIED MAIL.	ID		02/23/2023
Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice the planned operation. The notice required by this subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation drilling of a horizontal well on the surface owner at the address listed in the records of the sheriff at the time of notice.  Notice is hereby provided to the SURFACE OWNER(s) (at the address listed in the records of the sheriff at the time of notice):  Name:Anton Resources Corporation Address: PO BOX 1826  Cookeyswille, MD 21030  Name:Anton Resources Corporation Address:		DI DECEMBER			
the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with difficult of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation damages to the surface affected by oil and gas operations to the extent the damages are compensable under article; six-b of this chap of notice.  Notice is hereby provided to the SURFACE OWNER(s)  (at the address listed in the records of the sheriff at the time of notice):  Name:  Address: Antero Resources Corporation  Name:  Cockeysville, Mid 21030  Notice is hereby given:  Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:  State:  West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:  State:  West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:  State:  West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface awner's land for the purpose of drilling a horizontal well on the tract of land as follows:  State:  West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface awner who seed and will be used in conjunction with the drilling of horizontal well on the tract of land as follows:  South Fork Hughes River  This Notice Sh					
This Notice Shall Include:  Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include:  Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information require to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Addition flored and surface agreement containing an offer of compensation for makes the damages are compensable under article six-b of this chapter. Addition flored and compensation agreement containing an offer of compensation for beatures. Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-andition promatics.  Well Operator:  Anderes:  Name:	the planned or required to be drilling of a languages to the	peration. The notice required by this subsection provided by subsection (b), section ten of this a norizontal well; and (3) A proposed surface using engagement of the surface affected by oil and can appear to the surface affected by oil appear to the surface affected by oil appear to the surface affected by oil appear to the surface affected	ion shall inclarticle to a sure and compe	ude: (1) A copy face owner who assation agreement	or the drilling of a horizontal well notice or of this code section; (2) The information se land will be used in conjunction with the ont containing an offer of compensation for
This Notice Shall Include:  Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: Quadrangle: Watershed:  South Fork Hughes River  This Notice Shall Include:  Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information require to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Addition the agasty pages/default.aspx.  Well Operator:  Antero Resources Corporation  Address:  Wov Department of Environmental Protection  Name:  Natical  Natical  Name:  Natical  Name:  Name:  Name:  Natical  Natical  Name:  Name:  Name:  Natical  Nat					
Address: PO BOX 1826 Cockeysville, MD 21030  Notice is hereby given:  Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:  State: West Virginia County: Doddridge UTM NAD 83 Easting: 514375m Outhing: District: Southwest Public Road Access: Taylor Drain Road Quadrangle: Oxford 7.5' Generally used farm name: Taylor Drain Road Antero Resources Corporation  This Notice Shall Include:  Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to to information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection starking agas/pages/default.aspx.  Well Operator: Antero Resources Corporation  Address: 1615 Wynkoop Street Deriver, CO 80202	(at the address	listed in the records of the all of the state of the stat			DEC \$ 1 2022
Address: PO BOX 1826 Cockeysville, MD 21030  Notice is hereby given:  Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:  State: West Virginia County: Doddridge UTM NAD 83 Easting: 514375m Northing: Doddridge 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(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection (303) 367-7310  Well Operator: Antero Resources Corporation  Address: 1615 Wynkoop Street Derver, CO 80202	Name: Antero	Resources Corporation			WV Department of
Notice is hereby given:  Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:  State: West Virginia Doddridge UTM NAD 83 Easting: 514375m  County: Doddridge Northing: 4336491m  District: Southwest Public Road Access: Taylor Drain Road Public Road Access: Taylor Drain Road Antero Resources Corporation  This Notice Shall Include:  Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Addition related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection (2) Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and (303) 357-7310  Well Operator: Antero Resources Corporation  Address: Denver, CO 80202			Name		Environmental Protection
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Quadrangle: Oxford 7.5' South Fork Hughes River  This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information requires to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Addition the headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and surface and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Addition the secretary, at the WV Department of Environmental Protection agas/pages/default.aspx.  Well Operator:  Antero Resources Corporation  Address:    Address:   1615 Wynkoop Street   Denver, CO 80202   Denver, CO 802	State: County:	West Virginia  Doddridge	UTM NAD	Easting: Northing:	ct of land as follows:
Watershed: South Fork Hughes River  This Notice Shall Include:  Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information requires to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Addition headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and sasy/pages/default.aspx.  Well Operator:  Antero Resources Corporation  Address:  Address:  Address:  Denver, CO 80202		30.00			
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Telephone: (303) 357-7310  Email: mturco@antercrescurace.com Denver, CO 80202	Pursuant to We to be provided horizontal well surface affected information rel headquarters, I	est Virginia Code § 22-6A-16(c), this notice shall by W. Va. Code § 22-6A-10(b) to a surface; and (3) A proposed surface use and compensad by oil and gas operations to the extent the dated to horizontal drilling may be obtained from coated at 601 57th Street, SE. Charleston V.	ation agreeme	nt containing an ompensable under	sed in conjunction with the drilling of a offer of compensation for damages to the article six-b of this chapter. Additional
Telephone: (303) 357-7310  Email: mturco@antercrescurace.com Denver, CO 80202		Antero Resources Corporation	Address:	1615 W I	
Email: mturco@anteroresources.com	1 1		. 1441 C35.	W <sub>to.</sub> State	t
303-357-7375	Email:	mturco@anteroresources.com	Facsimile		
Oil and Gas Privacy Notice:			- modiffic.	003-337-7375	

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

OPERATOR WELL NO. Stope Unit 2H 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.

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

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

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: Provided, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the 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 I, , hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows: West Virginia Easting: 514375m UTM NAD 83 County: Doddridge Northing: 4336491m Office of District: Southwest Public Road Access: Taylor Drain Road Quadrangle: Oxford 7.5' Generally used farm name: Antero Resources Corporation 2 7 2022 Watershed: South Fork Hughes River WV Department of I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

SURFACE OWNER (Road and/or Other Disturbance)  SURFACE OWNER (Impoundments/Pits)  Signature:  Print Name:  Date:  FOR EXECUTION BY A CORPORATION, ET	*Please check the box that applies	FOR EXECUTION BY A NATURAL PERSON
□ SURFACE OWNER (Road and/or Other Disturbance) □ SURFACE OWNER (Impoundments/Pits) □ COAL OWNER OR LESSEE	■ SURFACE OWNER	
SURFACE OWNER (Impoundments/Pits)  FOR EXECUTION BY A CORPORATION, ET	(S) (A)	Print Name:
☐ COAL OWNER OR LESSEE	☐ SURFACE OWNER (Impoundments/Pits)	
Company: Antero Resources Corporation	☐ COAL OWNER OR LESSEE	FOR EXECUTION BY A CORPORATION, ETC. Company: Antero Resources Corporation
COAL OPERATOR  By: Diana Hoff 1 Dance OF Senior VP of Operations	☐ COAL OPERATOR	By: Diana Hoff ( ) and ( )
WATER PURVEYOR Signature:	WATER PURVEYOR	
☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD    Date:	☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD	

### 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

Subject: DOH Permit for the Locke Pad, Doddridge County Stope Unit 2H Well Site Office of Oil and Gas

DEC 2 7 2022

WV Department of Environmental Protection

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	
1. Fresh Water	Chemical Abstract Service Number (CAS #)
2. 2 Phosphobutane 1,2,4 tricarboxylic acid	7732-18-5 02/23/2023
3. Ammonium Persulfate	37971-36-1
4. Anionic copolymer	7727-54-0
5. Anionic polymer	Proprietary
BTEX Free Hydrotreated Heavy Naphtha	Proprietary
Cellulase enzyme	64742-48-9
Demulsifier Base	(Proprietary)
Ethoxylated alcohol blend	(Proprietary)
Ethoxylated alcohol blend     Ethoxylated Nonylphenol	Mixture
11. Ethoxylated oleylamine	68412-54-4
12. Ethylene Glycol	26635-93-8
13. Glycol Ethers	107-21-1
14. Guar gum	111-76-2
15. Hydrogen Chloride	9000-30-0
16. Hydrotreated light distillates, non-aromatic, BTEX free	7647-01-0
17. Isopropyl alcohol	64742-47-8
18. Liquid, 2,2-dibromo-3- nitrilopropionamide	67-63-0
19. Microparticle	10222-01-2
20. Petroleum Distillates (BTEX Below Detect)	Proprietary Of RECE
21. Polyacrylamide	64742-47-8 Of Oil Oil
22. Propargyl Alcohol	Proprietary 64742-47-8  57-55-6  DFC D  Proprietary  Office RECEIVED  Office of Oil and Gas
23. Propylene Glycol	107-19-7
24. Quartz	57-55-6 WV Department of 7631-86 9
25. Sillica crystalline quartz	14808-60-7 Department of 7631-86-9
26. Sodium Chloride	7631-86-9
27. Sodium Hydroxide	7647-14-5
28. Sugar	1310-73-2
29. Surfactant	57-50-1
30. Suspending agent (solid)	68439-51-0
31. Tar hases quinclone derive henrylable it	14808-60-7
<ul><li>31. Tar bases, quinolone derivs, benzyl chloride-quarternized</li><li>32. Solvent Naptha, petroleum, heavy aliph</li></ul>	72480-70-7
33. Soybean Oil, Me ester	64742-96-7
34. Copolymer of Maleic and Acrylic Acid	67784-80-9
35. DETA Phosphonate	52255-49-9
	15827-60-8
36. Hexamythylene Triamine Penta	34690-00-1
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 phosphonic acid	23605-74-5
41. Diethylene Glycol	111-46-6
42. Methenamine	100-97-0
43. Polyethylene polyamine	68603-67-8
44. Coco amine	61791-14-8
45. 2-Propyn-1-olcompound with methyloxirane	38172-91-7

OPERATOR: Antero Resources Corporation	WELL NO: Stope Unit 2	2H
PAD NAME: Locke Pad		
REVIEWED BY: Mallory Turco	SIGNATURE:	02/23/2023
WELL RESTRICTION	NS CHECKLIST	
HODYGOVE		RECEIVED

	HORIZONTAL 6A WELL	Office of Oil and Gas
		DEC 2 7 2022
Well Re	strictions	WV Department of Environmental Protection
_	At Least 100 Feet from Pad and LOD (including any E&S Control Perennial Stream, Lake, Pond, Reservoir or Wetland; OR	Feature) to any
	DEP Waiver and Permit Conditions	
v	At Least 300 Feet from Pad and LOD (including any E&S Control Naturally Producing Trout Stream; OR	Feature) to any
V	DEP Waiver and Permit Conditions	
V	At Least 1000 Feet from Pad and LOD (including any E&S Contro Groundwater Intake or Public Water Supply; OR	l Feature) to any
	DEP Waiver and Permit Conditions	
V	At Least 250 Feet from an Existing Water Well or Developed Sprir Drilled; OR	ng to Well Being
	Surface Owner Waiver and Recorded with County Clerk, O	R
	DEP Variance and Permit Conditions	
$\checkmark$	At Least 625 Feet from an Occupied Dwelling Structure to Center of	of the Pad; OR
	Surface Owner Waiver and Recorded with County Clerk, Ol	
	DEP Variance and Permit Conditions	
$\checkmark$	At Least 625 Feet from Agricultural Buildings Larger than 2500 Squof the Pad; OR	uare Feet to the Center
	Surface Owner Waiver and Recorded with County Clerk, OF	₹
	DEP Variance and Permit Conditions	