

### west virginia department of environmental protection

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

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

Tuesday, July 1, 2025 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Re:

Permit Modification Approval for CONAWAY UNIT 1H

47-095-02925-00-00

Lateral Path Revision

### ANTERO RESOURCES CORPORATION

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926

James A. Martin

Chief

Operator's Well Number: CONAWAY UNIT 1H

Farm Name: JIMMY E. & EARL P. PATTERSON & LINDA LOU

U.S. WELL NUMBER: 47-095-02925-00-00

Horizontal 6A New Drill

Date Modification Issued: 07/01/2025

Promoting a healthy environment.

API NO. 47-095	02925	
OPERATOR WEL	L NO.	Conaway Unit 1H MOD
Well Pad Name	: Mary F	Patterson Pad

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

							/	
1) Well Operator	r: Antero F	Resources (	Corpora	494507062	0	95 - Tylei	Union	Middlebourne
				Operator II		County	District	Quadrangle
2) Operator's W	ell Number:	Conaway I	Unit 1H N	MOD Wel	l Pad N	lame: Ma	ry Pattersor	Pad
3) Farm Name/S	Surface Own	er: Jimmy E. & Earl P	P. Patterson & Linda	Lou Dennis Public	Road	Access: D	ansers Lan	9
4) Elevation, cur	rrent ground:	694.76'	El	evation, prop	osed po	st-constru	ction: 694.7	'0'
, ,,	(a) Gas X		Oil		Underg	round Sto	rage	
	-	Shallow	Х	Dee	, _			_
	24	Horizontal	X					
6) Existing Pad:	Yes or No	Yes						
7) Proposed Tar Marcellus Sha	_			ipated Thickr ss- 55 feet, As			20 (20)	
8) Proposed Tot	al Vertical D	epth: 6300	D' TVD	/				
9) Formation at			Marcellus	3				
10) Proposed To	otal Measure	d Depth: 2	20400' M	D /				-
11) Proposed Ho		-	11533'					
12) Approximat	e Fresh Wate	er Strata Dej	pths:	235' /				RECEIVED
13) Method to D	Determine Fr	esh Water D	epths:	47-095-0008	1			Office of Oil and Gas
14) Approximat								JUN 3 0 2025
15) Approximat	e Coal Seam	Depths: N	/A				Envi	VV Department of ronmental Protection
16) Approximat	e Depth to P	ossible Void	d (coal m	ine, karst, oth	er): No	one Antici		
17) Does Propos directly overlying	sed well loca	tion contain	coal sea				No X	
(a) If Yes, pro	vide Mine In	fo: Name:	:					
		Depth	7					
		Seam:						
		Owner						

API NO. 47-\_095 \_\_-02925

OPERATOR WELL NO. Conaway Unit 1H MOD
Well Pad Name: Mary Patterson Pad

18)

# CASING AND TUBING PROGRAM

ТҮРЕ	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100	100 /	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	300	300 /	CTS, 313 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500	2500 /	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	20400	20400 /	4213 Cu. Ft
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"	0.438"	1530	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"	12,630	2500	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

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# **PACKERS**

JUN 3 0 2025

Kind:	N/A	WV Department of Environmental Protection
Sizes:	N/A	
Depths Set:	N/A	

W١	٧-	61	3
(10	/1	4	)

API NO. 47- 095 - 02925

OPERATOR WELL NO. Conaway Unit 1H MOD Well Pad Name: Mary Patterson Pad

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

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

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): 32.49 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 13.09 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

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.

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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

WV Department of Environmental Protection

Production: Tail cement- Class 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:

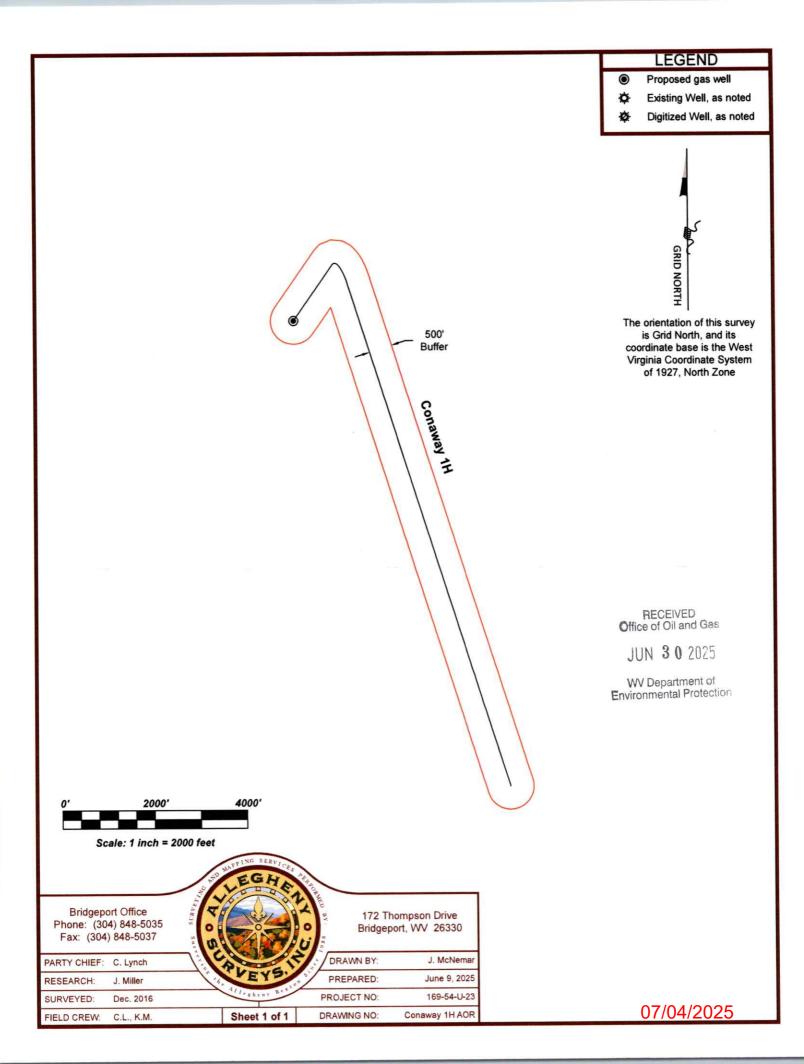
Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

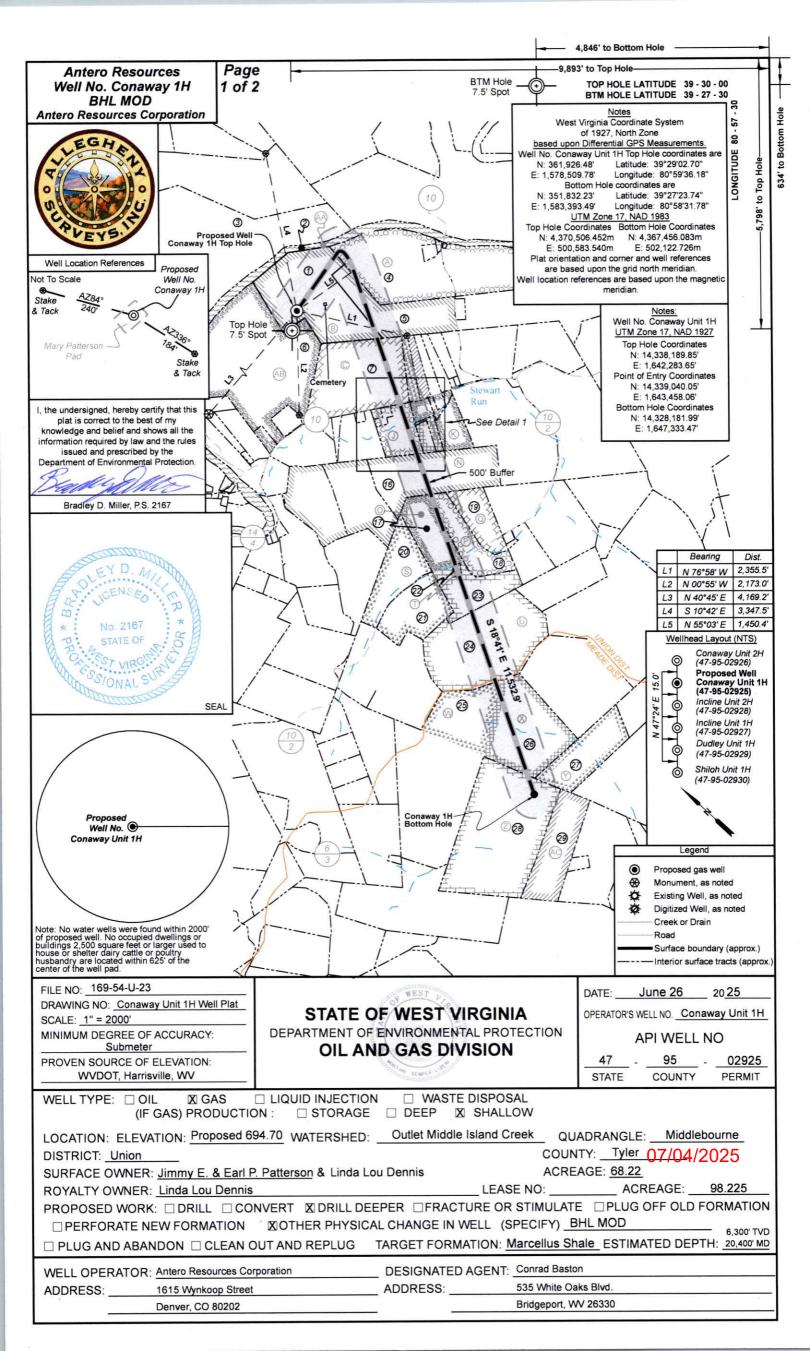
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.

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.

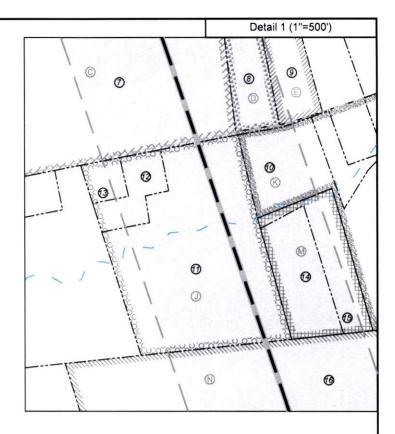
Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls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

\*Note: Attach additional sheets as needed.





Antero Resources Well No. Conaway 1H BHL MOD Antero Resources Corporation Page 2 of 2



ID	Lessor						
Α	J & N Management Enterprises, LLC						
В	Linda Lou Dennis						
С	George A. & Yvonne Starkey						
D	Donald Marvin Thomas						
E	Joseph B. & Melanie Thomas						
J	Antero Minerals, LLC						
K	Antero Minerals, LLC						
М	Myra L. Butcher						
N	Ronald L. Adams Trust						
0	Herbert A. & Sandra K. McEowen, JTWROS						
Р	Jodie L. Yost						
Q	Shirley L. Chapman						
S	Kevin R. Roberts						
Т	John Lester Snider, Jr.						
U	Paul E. Snider						
W	Jane Doan Schwab						
Х	BRC Appalachian Minerals I, LLC						
Υ	Kenneth M. Lantz						
Z	Mary F. Mutschelknaus						
AA	WV Dept. of Commerce, Division of Natural Resources						
AB	Ted A. Darlene K. Koerber						
AC	George E. Post, et ux						

No.	TM / Par	Owner	Bk/Pg	Ac.
1	9/8	Jimmy E. Patterson, et al	OR49 / 645	68.22
2		Middle Island Creek		
3	9/3	Gregory L. & Shirley F. Michael	357 / 131	293.00
4	9/9	Patrick L. & Tammy M. Smith	370 / 11	58.50
5	9/12	Jimmy E. Patterson, et al	OR79 / 645	30.00
6	9/7.2	Ted A. & Darlene Koerber	301 / 157	112.09
7	9/14	George A. & Yvonne Starkey	184 / 21	65.51
8	9 / 15.5	Donald M. & Montana Thomas	277 / 656	5.56
9	9 / 15.7	Joseph B. Thomas	277 / 264	5.65
10	9/43	George A. & Yvonne Starkey	350 / 455	15.70
11	9/42	Donna L. Johnson	199 / 145	16.20
12	9/42.2	Alan D. Johnson	555 / 787	2.00
13	9 / 42.1	Charles E. & Patsy J. Eddy	658 / 702	0.94
14	9 / 43.1	Robert V. & Myra L. Butcher	219 / 305	3.92
15	9 / 43.2	Robert V. & Myra L. Butcher	227 / 187	2.95
16	9/47	Coastal Lumber Company	301 / 131	67.24
17	13 / 25.2	Herbert A. & Sandra K. McEowen	354 / 457	25.05
18	13 / 25.3	Jody Clegg Yost	354 / 552	23.75
19	9/51	Troy M. & Alexandra D. Watson	OR11 / 385	21.50
20	13/24.1	James E. & Marsha Delancey	344 / 145	30.69
21	13/24.2	Marilyn Spiker, et al	569 / 276	31.13
22	13 / 25.1	John L. Snider, Jr.	336 / 390	1.00
23	13 / 25	Paul E. Snider	338 / 205	26.01
24	13/26	Paul E. Snider	189 / 412	83.62
25	1/8	James P. Flesher	576 / 260	37.00
26	2/7	Fred Davis	341 / 608	58.41
27	2/9	Fred Davis	341 / 608	35.56
28	1/3	Julie Ann Taylor	OR7 / 737	110.00
29	2/48	Kathleen F & Edwin F Weber Jr	OR204 / 737	

FILE NO: 169-54-U-23

DRAWING NO: Conaway Unit 1H Well Plat

SCALE: 1" = 2000'

MINIMUM DEGREE OF ACCURACY:
Submeter

PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

ı	OPERATOR	SW	ELL NO.	Cor	aw	ay Unit 1H
١		Α	PI W	ELL	Ν	0
I	47	-	95	ĺ	-	02925
ı	STATE		COLL	NTV		PERMIT

DATE: \_\_\_\_\_June 26 \_\_\_\_ 20\_25

				New Control Control	10
	☐ LIQUID INJECTION ON: ☐ STORAGE		DISPOSAL SHALLOW		
LOCATION: ELEVATION: Proposed 69 DISTRICT: Union SURFACE OWNER: Jimmy E. & Earl P			COUN	ADRANGLE: TY: Tyler AGE: 68.22	
ROYALTY OWNER: Linda Lou Dennis		tive - 1950 to the Victorian Control	LEASE NO:		
PROPOSED WORK: □ DRILL □ COI □ PERFORATE NEW FORMATION □ PLUG AND ABANDON □ CLEAN O	<b>⊠</b> OTHER PHYSICAL	L CHANGE IN W	ELL (SPECIFY) B	HL MOD	6,300' TVD
WELL OPERATOR: Antero Resources Cor ADDRESS: 1615 Wynkoop Street			AGENT: Conrad Bastor		
Denver, CO 80202	2		Bridgeport, W	-0.505.000.09a	

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

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

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

	Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
6	B: Linda Lou Dennis Lease Linda Lou Dennis	Antero Resources Corporation	1/8+	234/5
/	A: J & N Management Enterprises, LLC Lease J&N Management Enterprises, LLC	Antero Resources Corporation	1/8+	223/540
1	/ <u>B: Linda Lou Dennis Lease</u> Linda Lou Dennis	Antero Resources Corporation	1/8+	234/5
/	C: George A. & Yvonne Starkey Lease George A. & Yvonne Starkey SEP Exploration, LLC	SEP Exploration, LLC Antero Resources Corporation	1/8+ Agreement	281/509 <b>347/611</b>
1	J: Antero Minerals, LLC Lease Antero Minerals, LLC	Antero Resources Corporation	1/8+	185/98
1	N: Ronald L. Adams Trust Lease Ronald L. Adams Trust	Antero Resources Corporation	1/8+	594/411
/	P: Jodie L. Yost Lease Jodie L. Yost	Antero Resources Corporation	1/8+ RECEIVED	88/388
/	O: Herbert A. & Sandra K. McEowen,  JTWROS Lease  Herbert A. & Sandra K. McEowen JTWROS	Antero Resources Corporation	Office of Oil and G	
1	<u>U: Paul E. Snider Lease</u> Paul E. Snider	Antero Resources Corporation	WV Department o 1/8+Environmental Protect	f tion 554/643
	W: Jane Doan Schwab Lease Jane Doan Schwab	Antero Resources Corporation	1/8+	306/682
1	X: BRC Appalachian Minerals I, LLC BRC Appalachian Minerals I, LLC BRC Working Interest Company LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc EQT Production Company	BRC Working Interest Company LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc EQT Production Company Antero Resources Corporation	1/8 Assignment Assignment Assignment Assignment	369/300 369/784 378/764 539/239 <b>663/1</b>

<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.

\*\*Pooling/Unitization – Antero has filed a horizontal well unitization application with the West Virginia Oil and Gas Conservation Commission that seeks to pool certain owners in this tract 07/04/2025

<sup>\*</sup>Cotenancy Utilization - Antero is utilizing the Co-tenancy Modernization and Majority Protection Act to proceed with development of certain royalty owners' interests in this tract.

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Z: Mary F. Mutschelknaus Lease					
	Mary F. Mutschelknaus	Antero Resources Corporation	1/8+	291/27	

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

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

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

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JUN 3 0 2025

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 1 of 1

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June 26th, 2025

West Virginia Department of Environmental Protection Office of Oil and Gas Attn: Mr. Taylor Brewer 601 57<sup>th</sup> Street Charleston, WV 25304 Antero Resources 1615 Wynkoop Street Denver, CO 80202 Office 303.357.7310 Fax 303.357.7315

Mr. Brewer:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for approved well on the existing Mary Patterson Pad: Conaway Unit 1H (47-095-02925) and Conaway Unit 2H (47-095-02926) Expedited.

Attached you will find the following:

- > AOR
- Revised Form WW-6B
- Revised Form WW-6A1
- Revised Mylar Plat

CK# 4042371 # 750000 6/26/2025

If you have any questions please feel free to contact me at (303) 357-6959.

Thank you in advance for your consideration.

Sincerely,

Stefan Gaspar Permitting Agent

Enclosures

Antero Resources Corporation

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WV Department of Environmental Protection