

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

Monday, July 7, 2025 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Re:

Permit Modification Approval for Eleanor Unit 1H

47-095-02932-00-00

Lateral Extension

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) 926-0450.

A. Martin

Operator's Well Number: Eleanor Unit 1H

Farm Name: Robert F & Rita K Scardina

U.S. WELL NUMBER: 47-095-02932-00-00

Horizontal 6A New Drill

Date Modification Issued: 07/07/2025

Promoting a healthy environment.

WW-6B (04/15)

JUL 0 1 2025

WV Department of Environmental Protection

API NO. 47-095	- 02932	
OPERATOR	WELL NO.	Eleanor Unit 1H MOD

Well Pad Name: Starkey Pad

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

	_				
1) Well Operator: Antero F	Resources Corpo	See I	095 - Tyler	Lincoln	Paden City
2 2		Operator ID	County	District	Quadrangle
2) Operator's Well Number:	Eleanor Unit 1H	MOD Well 1	Pad Name: Stark	ey Pad	
3) Farm Name/Surface Own	er: Robert F. Scardina & Rita	A K. Scardina Public R	oad Access: Har	milton Driv	е
4) Elevation, current ground:	1092'	Elevation, propose	ed nost-constructi	on:	
5) Well Type (a) Gas X		Ur			
Other		O1	derground Storag		
(b)If Gas	Shallow X	Deep			
]	Horizontal X				
6) Existing Pad: Yes or No		TANDA DA CONTRACTOR DE CONTRAC			
7) Proposed Target Formation		icinated Thickness	— and Evnacted Dr	2000000(2).	
Marcellus Shale: 6700' TVD), Anticipated Thickr	less- 55 feet, Associated	ciated Pressure- 2	800#	
8) Proposed Total Vertical De		/			
9) Formation at Total Vertica		IS			
10) Proposed Total Measured		MD /			
11) Proposed Horizontal Leg	No. 100	/			
12) Approximate Fresh Water		464 /			
13) Method to Determine Free		47-095-00275			
(4) Approximate Saltwater De		47-030-00273			A
5) Approximate Coal Seam I	Depths: None				
6) Approximate Depth to Pos	ssible Void (coal m	ine, karst, other):	None Anticipate	ed	
7) Does Proposed well locati lirectly overlying or adjacent	on contain coal sea to an active mine?	**	No	X	
(a) If Yes, provide Mine Info	: Name:				
	Depth:		There		
	Seam:				
	Owner:				
	OWING!.				

Office of Oil and Gas

WW-6B (04/15)

JUL 0 1 2025

WV Department of Environmental Protection API NO. 47- 095 _ 02932

OPERATOR WELL NO. Eleanor Unit 1H MOD
Well Pad Name: Starkey Pad

18)

CASING AND TUBING PROGRAM

TYPE		NI	T	T	T		
	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS Left in Well (ft)	Fill-up
Conductor	20"	New	H-40	94#	100	100	(Cu. Ft.)/CTS CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	514		
Coal	9-5/8"	New	J-55	36#	2500	514	CTS, 536 Cu. Ft.
Intermediate				OOII	2300	2500	CTS, 1018 Cu. Ft.
Production	5-1/2"	New	P-110	23#	21000	21000	1004.0
Tubing	2-3/8"	New	N-80	4.7#	21000	21000	4364 Cu. Ft
Liners							

TYPE		XX 111	Wall	1	A meticin set a 1		
	Size (in)	Wellbore Diameter (in)	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	
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A/L	1110
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A/L	
Intermediate					1000	Olass AVE	~1.18
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	2000		1// UZ-1.44 & N-1.6
Liners				1.,200			-

PACKERS

Kind:	N/A	
Sizes:	N/A	
Depths Set:	N/A	

WW-6B (10/14) RECEIVED
Office of Oil and Gas

JUL 0 1 2025

WV Department of Environmental Protection API NO. 47- 095 - 02932

OPERATOR WELL NO. Eleanor Unit 1H MOD

Well Pad Name: Starkey 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): 35.27 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 14.87 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 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 spacer.

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

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

^{*}Note: Attach additional sheets as needed.

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WV Department of Environmental Protection

LEGEND

- Proposed gas well
- Existing Well, as noted
- Digitized Well, as noted



The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone

Bridgeport Office Phone: (304) 848-5035 Fax: (304) 848-5037

PARTY CHIEF: C. Lynch

RESEARCH: J. Miller
SURVEYED: Dec. 201

FIELD CREW:

Dec. 2016

C.L., K.M. Sheet 1 of 1

U U

500' Buffer

> 172 Thompson Drive Bridgeport, WV 26330

PREPARED: C. Robinson

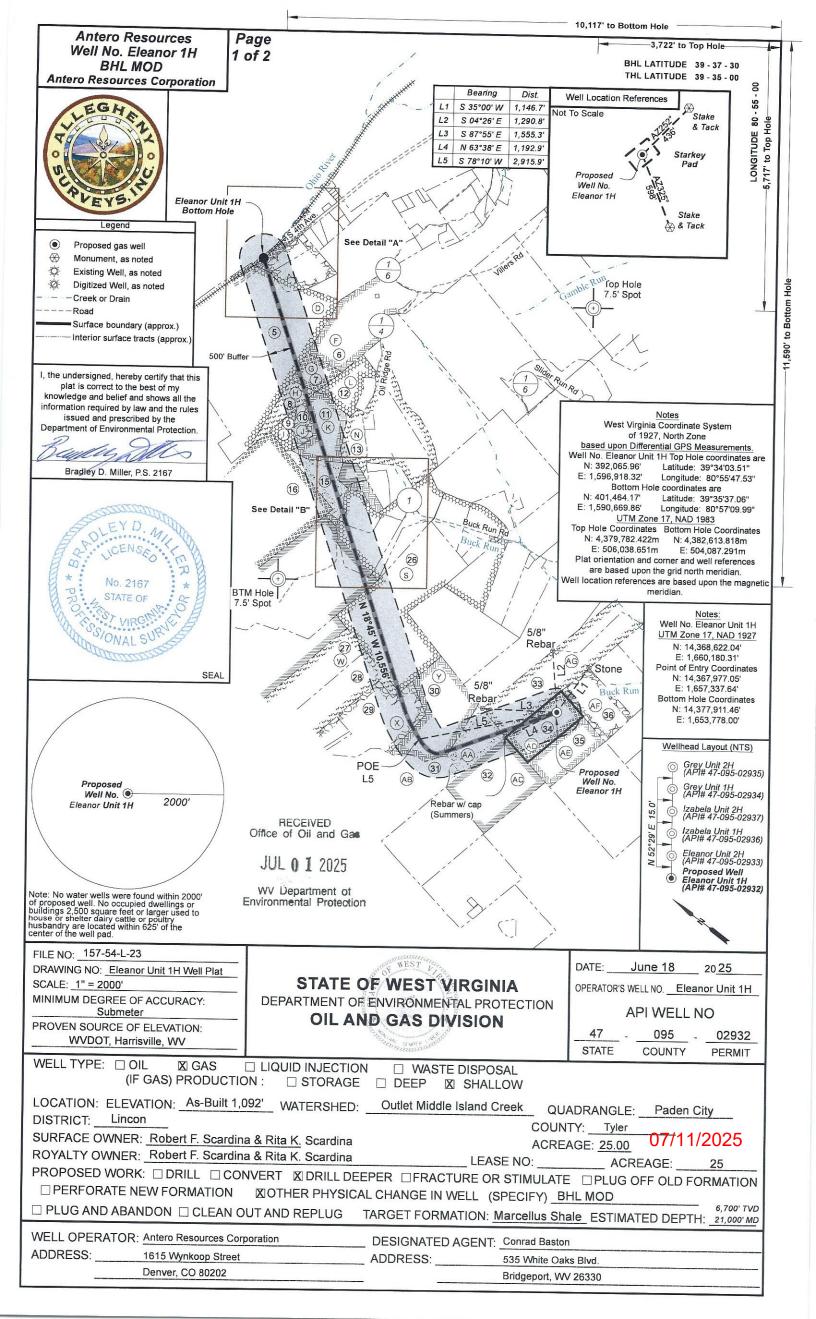
PREPARED: June 13, 2025

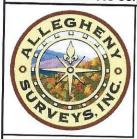
PROJECT NO: 157-54-L-23

DRAWING NO: Eleanor 1H AOR

0' 2000' 4000'

Scale: 1 inch = 2000 7541 1/2025



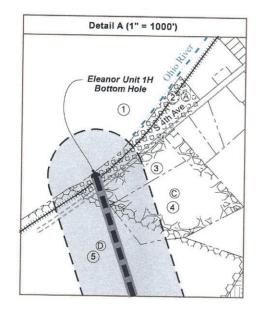


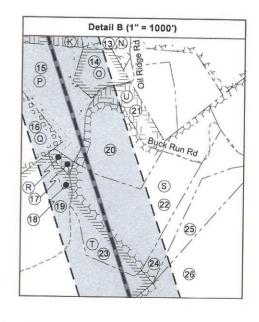
JUL 0 1 2025

WV Department of Environmental Protection

	Leases
Α	Paul Wissmach Glass Company
С	Albert Merton & Barbara Jo Mohrman
D	Golden Eagle Resources II, LLC
F	Henry P. Snyder, et al
G	Stanley E. Dennis & Edith L. Dennis, h/w
Н	Michael J. Hough
-1	John Stanley Starkey
J	Antero Minerals, LLC
K	OCTO Energy
L	Eagle Investments, LLC
N	Ralph Mikes or Dora Mikes, h/w
0	Virgil L. Cooper & Tracie J. Cooper
Р	Virgil E. Cooper, et al
Q	Greenbrier Royalty Fund II, LLC
R	Karen Lynn Shreves
S	John L. Renner, II
Т	William J. Patterson, Life Tenant, et al
U	Maxine Ankrom
W	Janice Eddy
X	Shirley Myers
Y	Moore Self Storage, North Carolina, LLC
AA	Robert F. & Rita K. Scardina
AB	BRC Appalachian Minerals I, LLC
AC	Robert F. & Rita K. Scardina, et ux
AD	Robert F. & Rita K. Scardina, et ux
AE	Robert F. & Rita K. Scardina, et ux
AF	Robert F. & Rita K. Scardina, et ux
AG	AMP IV, LP

ID	TM-Par	Owner	Bk/Pg	Acres
1	XX-XX	Owner	xx/xx	x.xx
2	3-157	Paul Wissmach Glass Co.	224/252	7.00
3	1-2	Albert Merton & Barbara Jo Mohrman	399/329	5.18
4	1-3	Albert Merton & Barbara Jo Mohrman	399/329	17.50
5	1-4	Haessly Hardwood Lumber Co.	290/457	166.20
6	1-21	Stanley E. & Edith L. Dennis	350/414	77.71
7	4-56	Stanley E. & Edith L. Dennis	394/61	11.75
8	4-57	Delmer D. & Louanna G. Hough	306/520	11.64
9	4-59	Jason & Lindsey Snider	395/344	7.00
10	4-60	Sharon Lee Ellison	WB44/190	
11	4-61	Carl D. O'Neil	133/175	18.81
12	4-63	Eagle Hardwood Inc.	345/195	16.79
13	4-65.1	Carl D. O'Neil	WB36/381	
14	4-82.2	Virgil L. & Tracie J. Cooper	333/220	4.46
15	4-82.4	Virgil L. & Tracie J. Cooper	444/521	13.00
16	4-58	Patrick & Shirley A. Lancaster	270/272	108.00
17	4-83	Karen Lynn Wright	358/404	1.00
18	4-85.1	Karen L. Cooper	262/48	0.75
19	4-85	Patrick & Shirley A. Lancaster	212/376	86.22
20	4-82	Virgil E. Cooper	199/41	10.90
21	4-82.1	Ricky & Barbra Keys	416/328	5.80
22	4-84	Virgil E. Cooper Jr. & Barbra J. Cooper	264/182	19.98
23	4-85.2	Samuel R. Gleseke & Erin N. Eakin	375/416	4.67
24	4-78.1	Earl Snider	220/11	6.63
25	4-78	Lesley J. Snider	220/13	6.83
26	4-76	Scott & Jeffery Grim	387/119	90.00
27	4-87	Janice M. Eddy & Michael D. Eddy	OR188/546	
28	4-88	Janice M. Eddy & Michael D. Eddy	OR188/546	
29	4-90.1	Gary B. & Melinda J. Lewis	473/1	47.33
30	4-91	Donna K. Johnston		54.06
31	8-12	Donna Kathy Johnston		86.89
32	8-14	Robert F. Scardina, et ux		72.79
33	5-9.4	Neil R. Stebbins		51.48
34	5-11	Robert F. Scardina, et ux		25.00
35	5-10	Robert F. Scardina, et ux		25.00
36	5-12	Robert F. Scardina, et ux		25.00





FILE NO: 1	57-54-L-23
DRAWING N	IO: Eleanor Unit 1H Well Plat
SCALE: 1"	= 2000'
MINIMUM D	EGREE OF ACCURACY: Submeter
PROVEN SO	OURCE OF ELEVATION:
WVI	DOT, Harrisville, WV

Denver, CO 80202

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

WEST

DATE: _ June 18 _ 20<u>25</u> OPERATOR'S WELL NO. ___Eleanor Unit 1H

API WELL NO

47 . _ 095 - 02932

Bridgeport, WV 26330

VVVDOT, Harrisville, VVV	Firm.	SEMPER COLD	STATE	COUNTY	PERMIT
WELL TYPE: □ OIL	☐ LIQUID INJECTION ☐ ☐ DIN : ☐ STORAGE ☐ ☐	WASTE DISPOSAL			
LOCATION: ELEVATION: As-Built 1,0 DISTRICT: Lincon		let Middle Island Cree	k QUADRANG	GLE: <u>Paden (</u>	City
SURFACE OWNER: Robert F. Scarding ROYALTY OWNER: Robert F. Scarding			ACREAGE: 25	.00 07/11/2	
PROPOSED WORK: DRILL CON	IVERT IN DRILL DEEPER	LEASE N □FRACTURE OR ST	NO: /	ACREAGE:	25 OPMATION
PERFORATE NEW FORMATION	MOTHER PHYSICAL CHA	NGE IN WELL (SPE	CIFY) BHL MOD		
☐ PLUG AND ABANDON ☐ CLEAN O		T FORMATION: Mar	cellus Shale_EST	IMATED DEPTI	H: <u>21,000' MD</u>
WELL OPERATOR: Antero Resources Corp. ADDRESS:	5_0.	GNATED AGENT: Con	nrad Baston		

Operator's Well Number

Eleanor Unit 1H MOD

JUL 0 1 2025

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Office of Oil and Gas

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)

WV Department of Environmental Protection

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
	AD: Robert F. & Rita K. Scardina, et ux Lease Robert F. & Rita K. Scardina, et ux	Antero Resources Corporation	1/8+	235/654
• 1	AG: AMP IV, LP Lease AMP IV, LP	Antero Resources Corporation	1/8+	231/747
-	AA: Robert F. & Rita K. Scardina Lease Robert F. & Rita K. Scardina	Antero Resources Corporation	1/8+	235/654
	Y: Moore Self Storage, North Carolina, LLC Lease Moore Self Storage, North Carolina, LLC	Antero Resources Corporation	1/8+	261/175
1	X: Shirley Myers Lease Shirley Myers	Antero Resources Corporation	1/8+	179/121
	W: Janice Eddy Lease Janice Eddy SEP Exploration, LLC	SEP Exploration, LLC Antero Resources Corporation	1/8+ Agreement	320/134 358/294
1	S: John L. Renner, II Lease John L. Renner, II	Antero Resources Corporation	1/8+	332/730
/	T: William J. Patterson, Life Tenant, et al Lease William J. Patterson, Life Tenant, et al	Antero Resources Corporation	1/8+	200/60
	S: John L. Renner, II Lease John L. Renner, II	Antero Resources Corporation	1/8+	332/730
/	P: Virgil E. Cooper, et al Lease Virgil E. Cooper, et al K: OCTO Energy Lease	Antero Resources Corporation	1/8+	205/466
	OCTO Energy, LLC J: Antero Minerals, LLC Lease	Antero Resources Corporation	1/8+	205/353
	Antero Minerals, LLC K: OCTO Energy Lease	Antero Resources Corporation	1/8+	307/454
	OCTO Energy H: Michael J. Hough Lease	Antero Resources Corporation	1/8+	205/353
	G: Stanley E. Dennis & Edith L. Dennis, h/w	Antero Resources Corporation	1/8+	217/560
	Lease	Antero Resources Corporation	1/8+	260/443
	<u>D: Golden Eagle Resources II, LLC Lease</u> Golden Eagle Resources II, LLC	Antero Resources Corporation	1/8+	7/11/20 ^{325/383}

Operator's Well Number

Eleanor Unit 1H MOD

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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Grantor, lessor, etc. Grantee, lessee, etc. Royalty Book/Page

Albert Merton & Barbara Jo Mohrman

Antero Resources Corporation

1/8+

324/464

*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.

**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

*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.

Office of Oil and Gas

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WV Department of Environmental Protection

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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- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	D a a 1 / D - a
A: Paul Wissmach Glass Company I	ease	Crames, Eessee, etc.	Royalty	Book/Page
	Paul Wissmach Glass Company	Antero Resources Corporation	1/8+	329/620

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Office of Oil and Gas

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WV Department of Environmental Protection

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

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

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

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

Well Operator: By:	Antero Resources Corporation	
	Tim Rady	
Its:	Senior Vice President of Land	
		_

JUL 0 1 2025

WV Department of Environmental Protection



June 30th, 2025

West Virginia Department of Environmental Protection Office of Oil and Gas Attn: Mr. Taylor Brewer 601 57th 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 modification for an approved well on the Starkey Pad. We are requesting to extend the horizontal lateral length which will change the bottom hole location of the Eleanor Unit 1H well.

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the revised MD and Production Casing/Cement program
- REVISED Form WW-6A1, which shows the leases we will be drilling into
- > REVISED Mylar Plat, which shows the new bottom hole location

If you have any questions please feel free to contact me at (303) 357-7373.

Thank you in advance for your consideration.

Sincerely,

CA 1/1 1

Carly Wren Permitting Agent

Antero Resources Corporation

CK# 4041957

AMT \$7,500, %

Enclosures