

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, November 17, 2025 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Re:

Permit Modification Approval for OCEAN UNIT 1H

47-095-02949-00-00

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.

H. Jason Harmon Acting Chief

Operator's Well Number: OCEAN UNIT 1H

Farm Name: ANTERO RESOURCES CORPORATION

U.S. WELL NUMBER: 47-095-02949-00-00

Horizontal 6A New Drill

Date Modification Issued: 11/17/2025

Promoting a healthy environment.

API NO. 47-095	- 02949	
OPERATOR W	ELL NO. Ocean Unit 1H MOD	_
Well Pad Nan	ne: Shinn Pad	

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

1) Well Operate	or: Antero	Resources	Corporat	494507062	095 - Tyler	Lincoln	Paden City
				Operator ID	County	District	Quadrangle
2) Operator's W	Vell Number:	Ocean Un	it 1H MOI	D / Well Pa	nd Name: Shinn	Pad	
3) Farm Name/	Surface Own	ier: Antero Re	sources Corpo	Public Ro	ad Access: Bad	ger Run R	oad
4) Elevation, cu	rrent ground	l: <u>1036'</u>	Ele	evation, proposed	l post-construction	on: 1036'	
5) Well Type	(a) Gas	X			lerground Storag		
	Other						
	(b)If Gas	Shallow	X	Deep			
		Horizontal	X				
6) Existing Pad					_		
7) Proposed Tar Marcellus Sha	get Formationale: 6700' TVI	on(s), Deptho D, Anticipate	(s), Anticij d Thicknes	pated Thickness s- 55 feet, Associ	and Expected Pro ated Pressure- 28	essure(s): 300#	
8) Proposed Tot				/	() () () () () () () () () ()		
9) Formation at	Total Vertica	al Depth:	Marcellus				
10) Proposed To	otal Measure	d Depth: 2	22600' ME				
11) Proposed Ho	orizontal Leg	g Length: 1	3153'	/			- (T)
12) Approximat	e Fresh Wate	er Strata Dep	oths:	328		Office Of C	<i>3</i> 1.
13) Method to D	Determine Fre	esh Water D	epths: 47	7-095-02781	/	NON	1 4 20
Approximat	e Saltwater I	Depths: 144	40				epartment of hental Protection
(15) Approximat	e Coal Seam	Depths: N	/A	2.00.000000,722.00		Environm	Jenus
16) Approximate	e Depth to Po	ossible Void	(coal min	e, karst, other):	None Anticipate	ed	
17) Does Propos directly overlyin	sed well loca ig or adjacen	tion contain t to an active	coal seam e mine?	s Yes	No	X	
(a) If Yes, prov	vide Mine In	fo: Name:					
		Depth:					,
		Seam:				Ch	# 4045714
		Owner:			4		750000



WW-6B
(04/15)

API NO. 47- 095 - 02949

OPERATOR WELL NO. Ocean Unit 1H MOD Well Pad Name: Shinn Pad

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100	100	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	378	378	CTS, 394 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#	22600	22600	4767 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

ТҮРЕ	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							0
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							

D I OTTEN	~
PACKER	5

Office Of Oil and Gas	
1 1 /L LU	
WV Department of Environmental Protection	
Envio	

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

A DI	NO.	17	005		00040
AFI	NO.	4/-	095	-	02949

OPERATOR WELL NO. Ocean Unit 1H MOD
Well Pad Name: Shinn Pad

19)	Describe	proposed	well	work,	including	the	drilling	and	nlugging	hack	ofans	nilot ho	10.
								5 miles	Prussins	Duck	or any	DII JUILD	IIC.

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 Diseasofor Fracturing or Stimulating Well."

Anticipated Max Pressure - 9300 lbs Anticipated Max Rate - 80 bpm NOV 1 4 WV Department of Invironmental Protection

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 38.32 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 16.29 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.

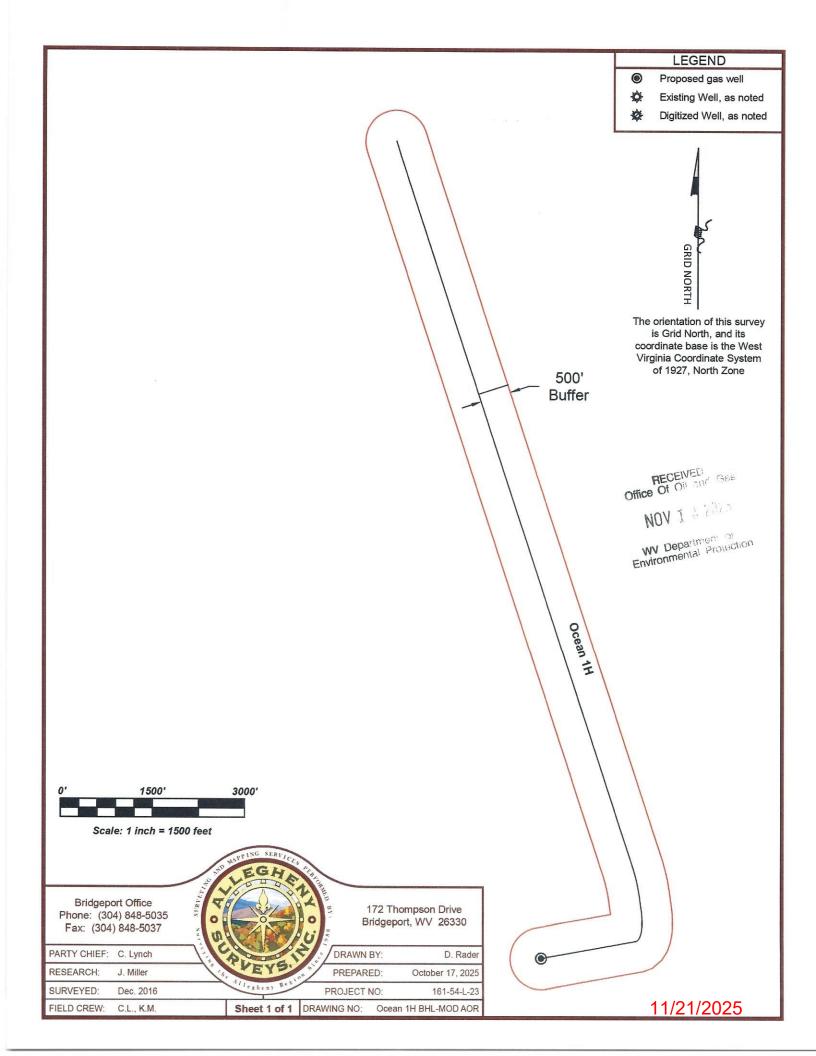
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.

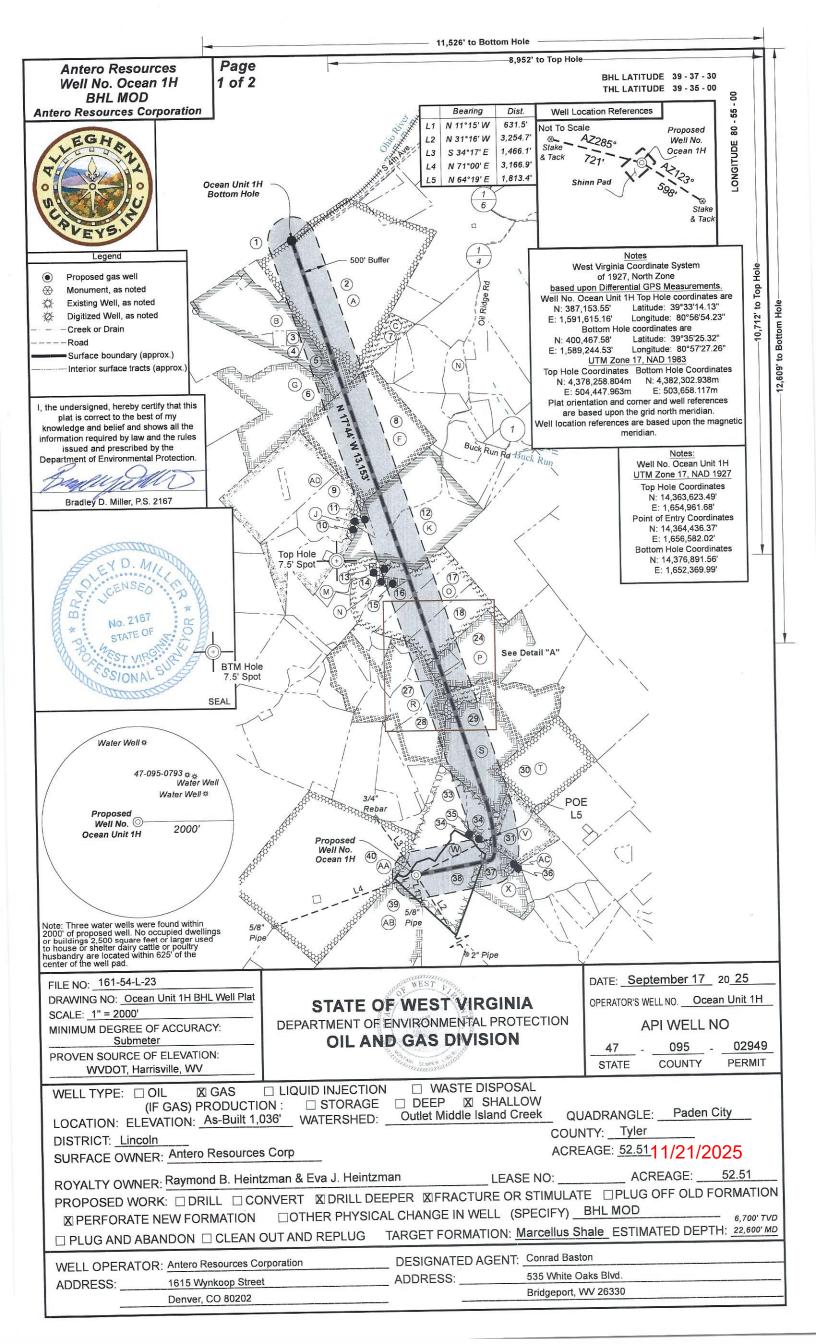
Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud. pump 10 bbls fresh water.

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.

Page 3-01 3-025 Sightly signed 5/ Stephen Stephen Mccoy Mccoy Date: 2025.09.10 08:11:04 -04'00'

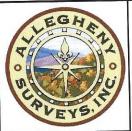
^{*}Note: Attach additional sheets as needed.





Antero Resources Well No. Ocean 1H **BHL MOD**

Antero Resources Corporation



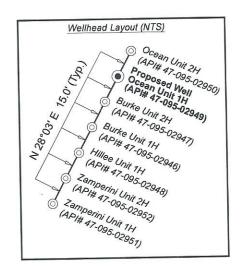
	Leases
A	Golden Eagle Resources II, LLC
В	Betty Jean Reed
С	Michael J. Hough
F	Greenbrier Royalty Fund II, LLC
G	BRC Appalachian Minerals I, LLC
J	William J. Patterson, et al
K	William J. Patterson, et al
М	Joshua D. Beaty & Michelle E. Beaty
N	Michael D. Eddy
0	Michael D. Eddy
Р	Shirley Myers
R	AMP Fund II, LP
S	BRC Appalachian Minerals I, LLC
T	Bounty Minerals, LLC
V	Drilling Appalachian Corporation
W	Raymond B. Heintzman & Eva J. Heintzman
X	Bounty Minerals, LLC
AA	Nevin Porter, et al
AB	Virginia A. Nalley
AC	Michael V. Smith
AD	William J. Patterson, et al

Page

2 of 2

	Detail	A (1" = 10	('00')	
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The state of				24)
40.19	THE WAY	A A		P
20	2) 9	23	h	23
15	R 12) Par	26	
Y	Y	29	25	7
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15	28	北北		

ID	TM-Par	Owner	Bk/Pg	Acres
1	XX-XX	Owner	xx/xx	X.XX
2	1-4	Haessly Hardwood Lumber Company 29		166.20
3	4-55	Bertha & Carl Wise	150/481	2.00
4	4-53.2	Danny G. Stewart & Everet M. Rine	323/674	7.90
5	4-53	Betty J. Reed	WB39/498	51.77
6	4-38	Dorthy Stewart	562/573	59.54
7	4-57	Michael J. Hough & Linda L. Anderson	OR19/795	11.64
8	4-58	Patrick & Shirley Lancaster	270/272	108.00
9	4-34	Dorthy Stewart	562/573	20.00
10	4-32	William J. Cooper	315/593	2.00
11	4-31	William Joseph Cooper	203/256	3.00
12	4-85	Patrick & Shirley A. Lancaster	212/376	86.22
13	4-28.1	Mike Eddy	344/226	2.10
14	4-28	Janice M. Eddy	188/546	13.64
15	4-86.1	Mike Eddy	344/226	2.51
16	4-86	Janice M. & Michael D. Eddy	188/546	28.63
17	4-87	Janice M. & Michael D. Eddy	188/546	30.24
18	4-88	Janice M. & Michael D. Eddy	188/546	30.10
19	4-89	Joyce A. Bassett	333/511	2.57
20	4-107	Bruce M. Edmonds	349/334	11.6
21	4-99	Frank W. & Sherry L. Brogden	332/105	4.50
22	4-90	William J. Grasso	284/609	5.01
23	4-90.2	William J. Grasso	284/609	1.00
24	4-90.1	Gary B. & Melinda J. Lewis	473/1	47.3
25	4-96	James D. Buck	404/633	5.03
26		Donna Kathy Johnston	184/133	3.44
-	8-11.2	Frank & Sherry Brogden	367/657	14.1
27	8-11	Robert Travis Stevenson	357/190	27.0
29		Grayce Louise Buck	144/482	86.8
30	8-13	Donna Kathy Johnston	184/133	50.0
31	-	Elden Jackson & Jennifer Lynn Wryosdick	385/343	30.0
32		Justin P. & Stephanie M. Richards	411/189	11.2
33		Antero Resources Corp	296/490	35.5
34	_	Adam Nathaniel Wayne	236/556	0.78
35		Jodie E. Michael	373/544	1.78
-		Michael V. Smith	219/609	_
36	1000000000	David E. & Ila Grace Kyle	270/206	24.6
37		Antero Resources Corp	296/494	
38		Virginia A. Nalley	218/520	
39		Olive Branch Animal Rescue & Refuge, Inc	333/804	_



FILE NO: _161-54-L-23 DRAWING NO: Ocean Unit 1H BHL 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

WEST

DATE: September 17 20 25 OPERATOR'S WELL NO. Ocean Unit 1H API WELL NO 47 - 095 - 02949 STATE COUNTY PERMIT 02949

7.77		
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WELL TYPE: □ OIL X GAS □ LIQUID INJECTION	N 🗆 WASTE DISPOSAL					
(IF CAS) PRODUCTION: STORAGE	□ DEEP 🕅 SHALLOW					
(IF GAS) PRODUCTION. GOTOTORE	Outlet Middle Island Creek QUADRANGLE: Paden City					
LOCATION: ELEVATION: As-Built 1,036' WATERSHED:						
DISTRICT: Lincoln	COUNTY:Tyler					
Artera Pasaureas Corn	ACREAGE: <u>52.51</u> 11/21/2025					
SURFACE OWNER: Antero Resources Corp	11/21/2020					
	man LEASE NO: ACREAGE:52.51					
ROYALTY OWNER: Raymond B. Heintzman & Eva J. Heintz	TIME! LEASE NO AONLAGE					
PROPOSED WORK, TIPPILL TOONVERT KIDRILL DE	PROPOSED WORK: DRILL CONVERT MORILL DEEPER MFRACTURE OR STIMULATE PLUG OFF OLD FORMATION					
PROPOSED WORK. DRILL DONVERT WEREEDE	N SUANOF IN WELL (SPECIEV) BHI MOD					
☑ PERFORATE NEW FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 6,700' TVD 6,700' TVD						
TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 22,600'MD						
□ PLUG AND ABANDON □ CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 22,600 MD						
	DESIGNATED AGENT: Conrad Baston					
WELL OPERATOR: Antero Resources Corporation						
ADDRESS: 1615 Wynkoop Street	ADDRESS: 535 White Oaks Blvd.					
	Bridgeport, WV 26330					
Denver, CO 80202						

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
/W: Raymo	nd B. Heintzman & Eva J. Heintzman			
<u>Lease</u>				
	3. Heintzman & Eva J. Heintzman	McCombs Conrad & Barrett	1/8	207/136
	Conrad & Barrett	Appalachian Exploration & Development, Inc	Assignment	207/487
	n Exploration & Development, Inc	The Carter-Jones Lumber Company	Assignment	233/563
	Jones Lumber Company	Applied Mechanics Corporation	Assignment	258/132
585	echanics Corporation	Triad Hunter, LLC	Assignment	385/566
Triad Hunt	er, LLC	Antero Resources Corporation	Assignment	496/776
X: Bounty	Minerals, LLC Lease			
Bounty Mi	nerals, LLC	Antero Resources Corporation	1/8+	301/448
/ V: Drilling	Appalachian Corporation Lease			
	palachian Corporation	Antero Resources Corporation	1/8+	296/19
0 ,		Time of Resources corporation	1/6+	290/19
	nd B. Heintzman & Eva J. Heintzman			
<u>Lease</u>	3. Heintzman & Eva J. Heintzman	McCombs Convol & Bound	1.0	
	Conrad & Barrett	McCombs Conrad & Barrett Appalachian Exploration & Development, Inc	1/8	207/136
	n Exploration & Development, Inc	The Carter-Jones Lumber Company	Assignment Assignment	207/487
	Jones Lumber Company	Applied Mechanics Corporation	Assignment	233/563
	echanics Corporation	Triad Hunter, LLC	Assignment	258/132 385/566
Triad Hunt		Antero Resources Corporation	Assignment	496/776
/		out-out-products according to the displace of season on service. ★ Season resident on the		RECEIVED 369/300 369/784
	alachian Minerals I, LLC Lease			RECEIVED GAS
the second of the second of the second	chian Minerals I, LLC	BRC Working Interest Company LLC	1/8+	Of Oil at 369/300
	ng Interest Company LLC	Chesapeake Appalachia, LLC	Assignment	369/300 369/784 378/764 470/668
	e Appalachia, LLC	Statoil USA Onshore Properties Inc	Assignment	MOV 1 4 378/764
	Onshore Properties Inc nge Titleholder LLC	SWN Exchange Titleholder LLC	Assignment	470/668
	iction Company LLC	SWN Production Company LLC Antero Exchange Properties	Merger	Departmen 544/242
	hange Properties	Antero Resources Corporation	Assignment Merger	Department 1470/008 NV Department 1544/242 Surronmental Projecting/404 544/242 525/315
	mange rioperaes	Antero Resources corporation	ivierger	525/315
	/lyers Lease:			
Shirley My	ers	Antero Resources Corporation	1/8+	179/121
✓ O: Michael	D. Eddy Lease:			
Michael D.		SEP Appalachia, LLC	1/8+	320/130
SEP Appala	ā.	Antero Resources Corporation	Agreement	375/26
/N: Michael	D. Eddy Lease:			
Michael D.		SEP Appalachia, LLC	1/0.	220/420
SEP Appala	•	Antero Resources Corporation	1/8+ Agreement	320/130 375/26
/		c.o nesodices corporation	Agreement	375/26
	D. Eddy Lease			
Michael D.		SEP Appalachia, LLC	1/8+	320/130
SEP Appala	chia, LLC	Antero Resources Corporation	Agreement	375/26

Ocean Unit 1H MOD

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	Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
	illiam J. Patterson, et al Lease			
Willia	am J. Patterson, et al	Antero Resources Corporation	1/8+	200/60
	eenbrier Royalty Fund II, LLC Lease nbrier Royalty Fund II, LLC	Ambana Danasana Carana		
GICCI	north noyalty I and II, LLC	Antero Resources Corporation	1/8+	296/90

*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

NOV 1 4 2025

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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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	D = =1./D
A: Golden Eagle Resources II, LLC Leas		Station, Dessee, etc.	Royalty	Book/Page
	Golden Eagle Resources II, LLC	Antero Resources Corporation	1/8+	325/383

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

Office Of Oil and Gas

Office Of Oil and Gas

NOV 1 4 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 Reso	ources Corporation	
By:	Tim Rady	Com Voeler	
Its:	Senior Vice President of Land		



November 13th, 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 modifications for approved wells on the Shinn Pad. We are requesting to extend the horizontal lateral length which will change the bottom hole location of the Ocean Unit 1H & Ocean Unit 2H wells.

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,

Carly Wren Permitting Agent

Antero Resources Corporation

Enclosures

RECEIVED Gas Office Of Oil and Gas NOV 14 2025 WV Department of Euritonmental Protection