



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

Wednesday, August 19, 2026
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for CASH UNIT 1H
47-095-02984-00-00

Extended Lateral Length

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 handwritten signature in black ink, reading "H. Jason Harmon".

H. Jason Harmon
Chief

Operator's Well Number: CASH UNIT 1H
Farm Name: GREGORY AND BRENDA G. WESTBROOK
U.S. WELL NUMBER: 47-095-02984-00-00
Horizontal 6A New Drill
Date Modification Issued: 8/19/2026

Promoting a healthy environment.

08/21/2026

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

- 1) Well Operator: Antero Resources Corporation 494507062 095 - Tyler Meade Bens Run
Operator ID County District Quadrangle
- 2) Operator's Well Number: Cash Unit 1H MOD Well Pad Name: Barnhart Pad
- 3) Farm Name/Surface Owner: Gregory & Brenda G. Westbrook Public Road Access: McKim Creek Rd
- 4) Elevation, current ground: 1036' Elevation, proposed post-construction: 1036'
- 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: 6700' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#
- 8) Proposed Total Vertical Depth: 6700' TVD
- 9) Formation at Total Vertical Depth: Marcellus
- 10) Proposed Total Measured Depth: 17000' MD
- 11) Proposed Horizontal Leg Length: 7146.4'
- 12) Approximate Fresh Water Strata Depths: 198', 370'
- 13) Method to Determine Fresh Water Depths: From 47-073-01867, 47-095-0084
- 14) Approximate Saltwater Depths: 1,820'
- 15) Approximate Coal Seam Depths: N/A
- 16) Approximate Depth to Possible Void (coal mine, karst, other): N/A
- 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: _____
Seam: _____
Owner: _____

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#	420'	420'	CTS, 438 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	3000'	3000'	CTS, 1221 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	17000'	17000'	3356 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							

PACKERS

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

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): 30.88 acres

22) Area to be disturbed for well pad only, less access road (acres): 11.07 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:

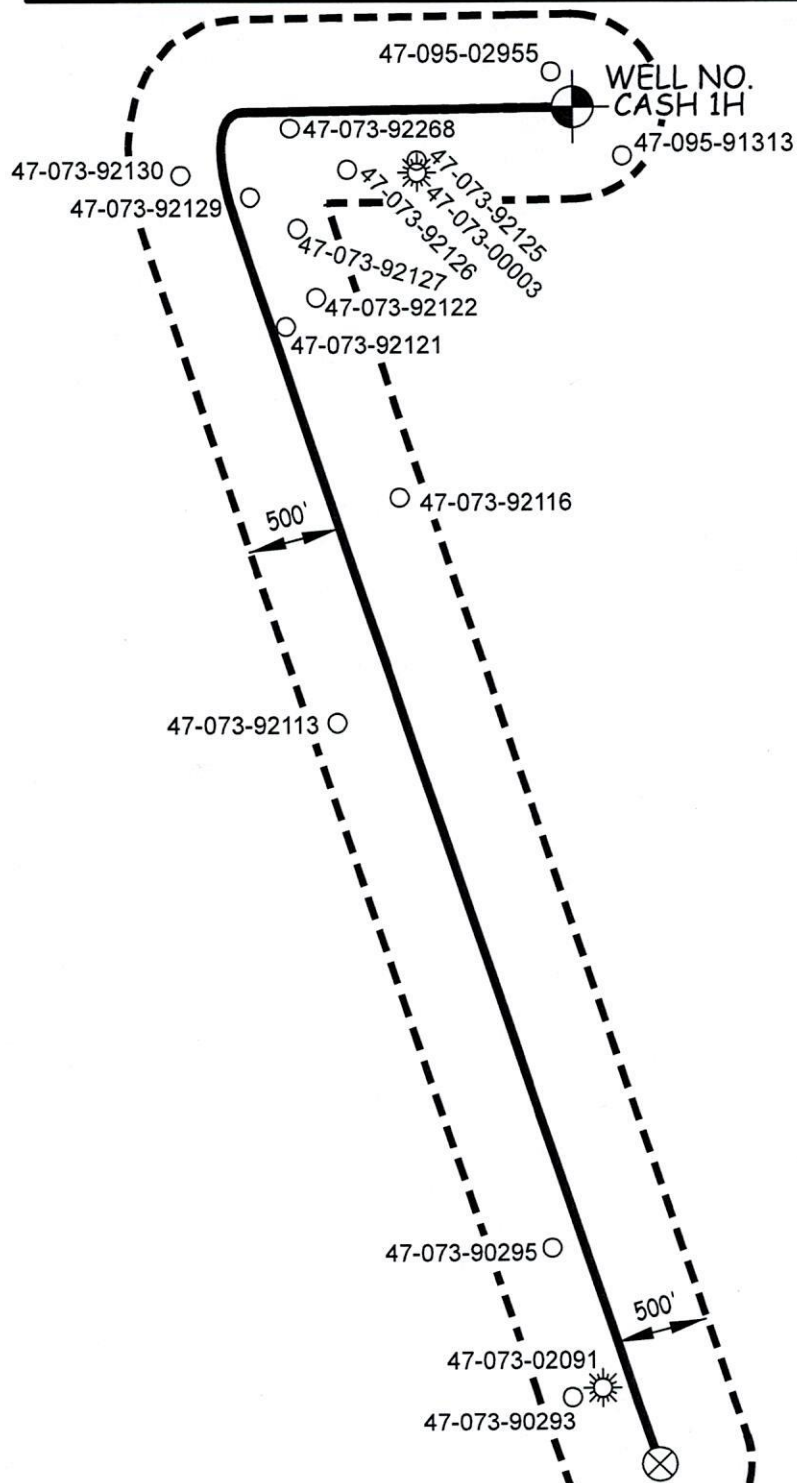
Conductor: no additives, Class A/L cement.
Surface: Class A/L cement with 2-3% calcium chloride and 1/4 lb of flake
Intermediate: Class A/L cement with 1/4 lb of flake, 5 gallons of clay treat
Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% 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.

*Note: Attach additional sheets as needed.

BARNHART PAD ANTERO RESOURCES CORPORATION



WILLOW LAND SURVEYING, PLLC
P.O. BOX 17, PENNSBORO, WV 26415
(304) 659-1717

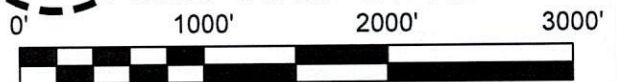
JOB #: 26-003WA

FILE: CASH1HAOR.DWG

DATE: 07/20/26

DRAWN BY: T.B.S.

SCALE : 1-INCH = 1000-FEET



08/21/2026

UWI (APINum)	Well Name	Well Number	Operator	Hist Oper	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
4707392121								
4707392122								
4707392127								
4707392126								
4707300003	ROSS BELL SHINGLETO	1	UNKNOWN	UNKNOWN	939	920-939	1st Cow Run/Moundsville	Weir, Benson, Alexander
4707392125								
4709591313								
4707392129								
4707392130								
4707392268								
4709502955	BARNHART UNIT	5V	ANTERO RESOURCES CORPORATION	ANTERO RESOURCES CORPORATION				
4707392116								
4707392113								
4707390295								
4707302091	SMITH EDNA V ET AL	3	PARDEE GAS	PARDEE GAS	5015	4833 - 4838	Benson	Weir, Alexander
4707390293								

LATITUDE 39°25'00"

2,909'

2,363' TO BOTTOM HOLE

LATITUDE 39°22'30"

7,104' TO BOTTOM HOLE

14,908'

LONGITUDE 81°00'00"

LONGITUDE 81°00'00"

Antero Resources
Corporation
Well No. Cash 1H

WELL NO. 1H

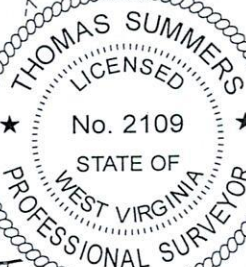
Lafayette District - Pleasants County	
8-9	Gregory & Brenda Westbrook
8-9.1	Gregory & Brenda Westbrook
8-10.6	Gregory & Brenda Westbrook
8-23.3	Victoria Grose
8-24	Clark Living Trust
8-39	Clark Living Trust
8-40	Clark Living Trust
8-41	Clark Living Trust
8-42	Clark Living Trust
8-43	Clark Living Trust
10-20	Deakin Hatfield & Emily Meeks
10-71	Clark Living Trust
10-75	James & Bertha Dye
Meade District - Tyler County	
12-1	Roger Curry & David Belcher
12-23	David Hartley
12-24	Linda Darlene Davis
12-25	David Hartley
12-26	David Hartley
12-26.1	Clark Living Trust
12-28	Clark Living Trust
14-1	Christopher & Rodney Byers

NOTES:

WELL 1H TOP HOLE INFORMATION:
N: 322,546ft E: 1,573,075ft
LAT: 39°22'32.62" LON: 81°00'37.05"
BOTTOM HOLE INFORMATION:
N: 315,169ft E: 1,573,498ft
LAT: 39°21'19.78" LON: 81°00'30.09"
WEST VIRGINIA COORDINATE
SYSTEM OF 1927 NORTH ZONE.
ZONE WAS DERIVED FROM
MEASUREMENTS TAKEN WITH
TRIMBLE GEOXT SUBMETER
MAPPING GRADE GPS UNIT.
PLAT ORIENTATION, CORNER,
AND WELL REFERENCE TIE LINES
ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 4,358,481m E: 499,128m
BOTTOM HOLE INFORMATION:
N: 4,356,236m E: 499,294m

(NAD) 27 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 14,298,738ft E: 1,637,509ft
POINT OF ENTRY INFORMATION:
N: 14,298,111ft E: 1,635,686ft
1H BOTTOM
HOLE
BOTTOM HOLE INFORMATION:
N: 14,291,371ft E: 1,638,054ft



LEASES

A	WILLIAM CRITCHTON VI
B	SYLVIA ROSS AND BELLA ROSS
C	STEVEN CLARK AND JANET CLARK
D	RYAN J. MORGAN
E	BARI ELIZABETH YOUNG GABBITAS
F	BRUCE A. OST AND DEBRA JEAN OST
G	BRENDA SUE LUDOLPH
H	EDNA V. AND CARL L. SMITH
I	MERRION OIL AND GAS CORPORATION
J	LOIS ANN GILLENWATER
K	JULIAN WENDELL WHALEY AND JEANINE LEANN WHALEY REVOCABLE LIVING TRUST AGREEMENT
N	GREGORY A. AND BRENDA G. WESTBROOK
O	GREGORY A. AND BRENDA G. WESTBROOK
P	GREGORY A. AND BRENDA G. WESTBROOK
Q	GREGORY A. AND BRENDA G. WESTBROOK
R	ROGER CURRY

NOTE:
NO WATER WELLS WERE
LOCATED WITHIN 2000'
OF THE CENTER OF PAD

WELL NO. 1H
913300
92268
92126
92125
92129
92127
92123
92122
92120
91313
91312
91308
91307
91306
91307
91314
91315
91311
91308
91307
91306
91307

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT
TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE
INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND
PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

STATE OF WEST VIRGINIA, DIVISION
OF ENVIRONMENTAL PROTECTION,
OFFICE OF OIL AND GASWILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

REFERENCES

STAKE
NAIL, SET
WELL
NO. 1H
STAKE
NAIL, SET
1" = 500'

JOB # 26-003WA

DRAWING # CASH1H

SCALE 1" = 2000'

MINIMUM DEGREE OF

ACCURACY SUBMETER

PROVEN SOURCE OF ELEV.

SUBMETER MAPPING GRADE GPS

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

LEGEND

- Surface Owner Boundary Lines +/-
- Adjoining Surface Tracts +/-
- Found monument, as noted

THOMAS SUMMERS P.S. 2109

DATE 06/25/26

OPERATOR'S WELL# CASH 1H

CASH UNIT 1H
HEBRON UNIT 1H
MELTON UNIT 1H
RENNER UNIT 1H
STOECKERT UNIT 1H
CHILDERS UNIT 1H
CHILDERS UNIT 2H

NOT TO
SCALE

NOTE
NO OCCUPIED DWELLINGS OR BUILDINGS TWO
THOUSAND FIVE HUNDRED (2,500) SQUARE FEET
OR LARGER USED TO HOUSE OR SHELTER DAIRY
CATTLE OR POULTRY HUSBANDRY ARE LOCATED
WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET
OF THE CENTER OF THE WELL PAD.

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐ 47 - 095 - 02984
(IF "GAS") PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒ STATE COUNTY PERMIT
LOCATION: ELEVATION 1,036' PROPOSED WATERSHED OUTLET MIDDLE ISLAND CREEK
QUADRANGLE BENS RUN 7.5' DISTRICT MEADE COUNTY TYLER
SURFACE OWNER GREGORY & BRENDA G. WESTBROOK ACREAGE 68 ACRES +/- 08/21/2026
OIL & GAS ROYALTY OWNER GREGORY & BRENDA G. WESTBROOK LEASE ACREAGE 68 AC.±

PROPOSED WORK: DRILL ☐ CONVERT ☐ DRILL DEEPER ☒ REDRILL ☐ FRACTURE OR STIMULATE ☒
PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☒ OTHER PHYSICAL CHANGE IN WELL
(SPECIFY) MOD-BHL PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,700' TVD 17,000' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CONRAD BASTON
ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAK BLVD.
DENVER, CO 80202 BRIDGEPORT, WV 26330

08/21/2026

**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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
K: The Julian Wendell Whaley and Jeanine Leann Whaley Revocable Living Trust Agreement Lease	The Julian Wendell Whaley and Jeanine Leann Whaley Revocable Living Trust Agreement	Antero Resources Corporation	1/8+	403/238

***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

**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: Antero Resources Corporation

By: Max Green

Its: Vice President of Land



July 29th, 2026

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 Barnhart Pad. We are requesting to extend the horizontal lateral length which will change the bottom hole locations of the Cash Unit 1H & Melton Unit 1H 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,

A handwritten signature in black ink, appearing to read "CW", is written over a horizontal line.

Carly Wren
Permitting Agent
Antero Resources Corporation

4054363
7/28/26
\$7,500.00

Enclosures

08/21/2026