



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

Friday, June 27, 2025
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for INCLINE UNIT 2H
47-095-02928-00-00

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 blue ink signature of James A. Martin, written in a cursive style.

James A. Martin
Chief

Operator's Well Number: INCLINE UNIT 2H
Farm Name: JIMMY E. & EARL P. PATTERSON & LINDA LOU
U.S. WELL NUMBER: 47-095-02928-00-00
Horizontal 6A New Drill
Date Modification Issued: 6/27/2025

Promoting a healthy environment.

07/04/2025

WW-6B
(04/15)

API NO. 47- 095 - 02928
OPERATOR WELL NO. Incline Unit 2H MOD
Well Pad Name: Mary Patterson Pad

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

4041090
5/13/25
\$7,500.00

1) Well Operator: Antero Resources Corporation 494507062 095 - Tyler Union Middlebourne
Operator ID County District Quadrangle

2) Operator's Well Number: Incline Unit 2H MOD Well Pad Name: Mary Patterson Pad

3) Farm Name/Surface Owner: Jimmy E. & Earl P. Patterson & Linda Lou Dennis Public Road Access: Dansers Lane

4) Elevation, current ground: 694.76' Elevation, proposed post-construction: 694.70'

5) Well Type (a) Gas X Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow X Deep _____

Horizontal X

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6300' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6300' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 18400' MD

11) Proposed Horizontal Leg Length: 10090.5'

12) Approximate Fresh Water Strata Depths: 85', 185', 235'

13) Method to Determine Fresh Water Depths: 47-095-00081

14) Approximate Saltwater Depths: 718

15) Approximate Coal Seam Depths: None

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: _____

Seam: _____

Owner: _____

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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#	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#	18400	18400	3709 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			

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07/04/2025
Stephen McCoy
Digitally signed by Stephen
Date: 2025.06.09 10:08:49
-04'00'

WW-6B
(10/14)

API NO. 47- 095 - 02928
OPERATOR WELL NO. Incline Unit 2H 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.

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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): 17.05 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.

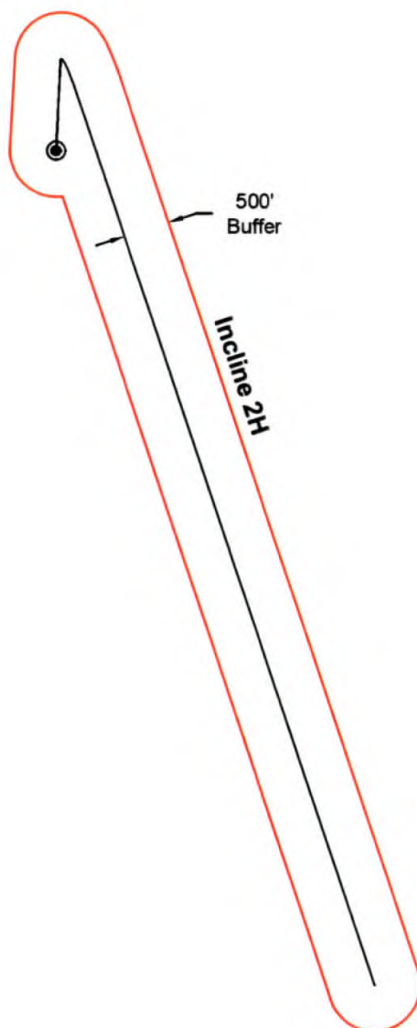
*Note: Attach additional sheets as needed.

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



Scale: 1 inch = 2000 feet

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Office Of Oil and Gas

JUN 10 2025

WV Department of
Environmental Protection

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

172 Thompson Drive
Bridgeport, WV 26330



PARTY CHIEF: C. Lynch	DRAWN BY: J. McNemar
RESEARCH: J. Miller	PREPARED: June 9, 2025
SURVEYED: Dec. 2016	PROJECT NO: 170-54-U-23
FIELD CREW: C.L., K.M.	DRAWING NO: Incline 2H AOR

Sheet 1 of 1

07/04/2025

**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
S: Jane Doan Schwab Lease	Jane Doan Schwab	Antero Resources Corporation	1/8+	306/682

***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.

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WV Department of
Environmental Protection

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

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>A: Linda Lou Dennis Lease</u> Linda Lou Dennis	Linda Lou Dennis	1/8+	234/5
<u>C: George Alan Starkey, et ux Lease</u> George Alan Starkey, et ux SEP Exploration, LLC	SEP Exploration Antero Resources Corporation	1/8+ Agreement	281/509 347/568
<u>F: Anthony D. Furbie Lease</u> Anthony D. Furbie	Antero Resources Corporation	1/8+	324/495
<u>I: Tyler Rod & Gun Club, Inc. Lease</u> Tyler Rod & Gun Club, Inc.	Antero Resources Corporation	1/8+	306/664
<u>H: Barbara A. Fowler Lease</u> Barbara A. Fowler	Antero Resources Corporation	1/8+	88/385
<u>I: Tyler Rod & Gun Club, Inc. Lease</u> Tyler Rod & Gun Club, Inc.	Antero Resources Corporation	1/8+	306/664
<u>X: Kevin R. Roberts Lease</u> Kevin R. Roberts	Antero Resources Corporation	1/8+	559/199
<u>P: Paul E. Snider Lease</u> Paul E. Snider	Antero Resources Corporation	1/8+	554/643

*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.

***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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07/04/2025

Antero Resources
Well No. Incline 2H
BHL-MOD
Antero Resources Corporation

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Well Location References

Not To Scale

Proposed Well No. Incline 2H

AZ96° 287' Stake & Tack

AZ296° 309' Stake & Tack

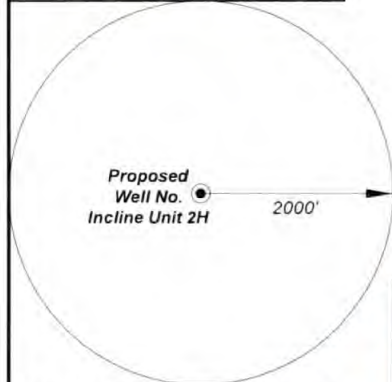
Mary Patterson Pad



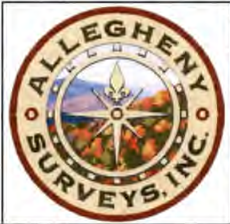
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Bradley D. Miller

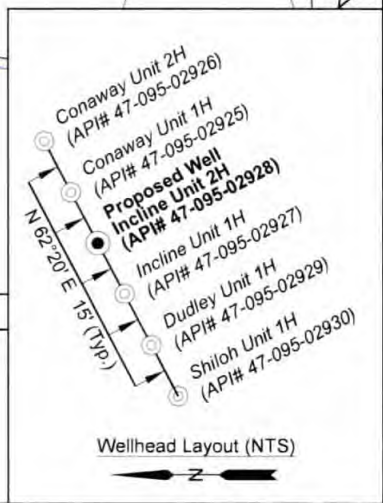
Bradley D. Miller, P.S. 2167



Note: No water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



Tag	Bearing	Dist	Monument
L1	N 77°13' W	2,366.9'	Capped Iron Rebar
L2	N 01°17' W	2,166.3'	1/2" Rebar
L3	N 40°41' E	4,155.2'	1" Pipe
L4	S 10°27' E	3,351.9'	Iron Pin
L5	N 24°31' E	600.1'	Point of Entry



FILE NO: 170-54-U-23

DRAWING NO: Incline Unit 2H

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

DATE: April 16 2025

OPERATOR'S WELL NO. Incline Unit 2H

API WELL NO

47 095 02928

STATE COUNTY PERMIT

WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL

(IF GAS) PRODUCTION: ☐ STORAGE ☐ DEEP ☒ SHALLOW

LOCATION: ELEVATION: Proposed: 694.70' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne

DISTRICT: Union COUNTY: Tyler 07/04/2025

SURFACE OWNER: Jimmy E. & Earl P. Patterson & Linda Lou Dennis ACREAGE: 68.22

ROYALTY OWNER: Linda Lou Dennis LEASE NO: ACREAGE: 98.225

PROPOSED WORK: ☐ DRILL ☐ CONVERT ☒ DRILL DEEPER ☐ FRACTURE OR STIMULATE ☐ PLUG OFF OLD FORMATION

☐ PERFORATE NEW FORMATION ☒ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL-MOD 6,300' TVD

☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 18,400' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Conrad Baston

ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.

Denver, CO 80202 Bridgeport, WV 26330

Page 2 of 2

 Proposed gas well
 Well Reference, as noted
 Monument, as noted
 Existing Well, as noted
 Creek or Drain
 Existing Road
 Surface boundary (approx.)
 State / County line

**West Virginia Coordinate System
of 1927, North Zone
based upon Differential GPS Measurements.**

Well No. Incline Unit 2H Top Hole coordinates are
N: 361,919.52' Latitude: 39°29'02.62"
E: 1,578,496.50' Longitude: 80°59'36.34"

Bottom Hole coordinates are
N: 352,892.56' Latitude: 39°27'33.98"
E: 1,581,935.36' Longitude: 80°58'50.59"

UTM Zone 17, NAD 1983

Top Hole Coordinates	Bottom Hole Coordinates
N: 4,370,504.261m	N: 4,367,771.688m
E: 500,579.530m	E: 501,673.109m

Plat orientation and corner and well references
are based upon the grid north meridian.

Well location references are based upon the magnetic
meridian

Well No. Incline Unit 2H
UTM Zone 17, NAD 1927

Top Hole Coordinates
N: 14,338,182.67'
E: 1,642,270.49'

Point of Entry Coordinates
N: 14,338,732.61'
E: 1,642,510.24'

Bottom Hole Coordinates
N: 14,329,217.47'
E: 1,645,858.35'

ID	Lease
A	Linda Lou Dennis
B	Ted A. & Darlene K. Koerber
C	George Alan Starkey, et ux
E	Antero Minerals, LLC
F	Anthony D. Furbree
G	Antero Minerals, LLC
H	Barbara A. Fowler
I	Tyler Rod & Gun Club, Inc.
J	Herbert A. & Sandra K. McEwen, JTWROS
K	Kevin R. Roberts
L	FG, LLC
M	Five Star Resources
P	Paul E. Snider
R	BC Farms Investments, LLC
S	Jane Doan Schwab
Z	WV Dept. of Commerce, Division of Natural Resources

		Tyler County	
No.	TM / Par	Owner	Bk / Pg Ac.
1	9 / 8	Jimmy E. Patterson, et al	OR49 / 645 68.22
2	9 / 3	Gregory L. & Shirley F. Michael	357 / 131 293.00
3	9 / 7.2	Ted A. & Darlene K. Koerber	301 / 157 112.09
4	9 / 14	George A. & Yvonne Starkey	184 / 21 65.51
5	9 / 40	Gary & Joyce Hagerty	243 / 261 2.35
6	9 / 40.1	Patricia D. & Kenneth O. Thomas, Jr.	OR18 / 401 2.37
7	9 / 41	Harold D. Furbee Estate	OR80 / 332 7.97
8	9 / 41.1	Jason W. Roberts	OR63 / 783 1.00
9	9 / 42.1	Charles E. & Patsy J. Eddy	658 / 702 0.94
10	9 / 42.2	Alan D. Johnson	555 / 787 2.00
11	9 / 42	Donna L. Johnson	199 / 145 16.20
12	9 / 46	Tyler Rod & Gun Club	159 / 229 33.83
13	9 / 47	Coastal Forest Resources Co.	301 / 131 67.24
14	13 / 25.2	Herbert A. & Sandra K. McEowen	354 / 457 25.05
15	13 / 22	James E. & J. Thomas Keeder	399 / 343 35.00
16	13 / 24.1	James E. & Marsha Delancey	344 / 145 30.69
17	13 / 24.2	Marilyn & Mark Spiker, et al	569 / 276 31.13
18	13 / 25	Paul E. Snider	338 / 205 26.01
19	13 / 26	Paul E. Snider	189 / 412 83.62
20	13 / 27	George A. & Catherine E. Eddy	169 / 756 39.15
21	1 / 8	James P. Fleshers	576 / 260 37.82
22	2 / 7	Fred Davis	341 / 606 58.41
23	1 / 3	Julie A. Taylor	OR7 / 737 110.00
24	1 / 2	Howard O. & Dawn C. Fleshers	334 / 281 91.00

FILE NO: 170-54-U-23

DRAWING NO: Incline Unit 2H

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Submeter

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47	095	02928
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Denver, CO 80202

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Bridgeport, WV 26330