



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, July 18, 2025
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for SHILOH UNIT 1H
47-095-02930-00-00


Lateral Extension/ Forced Pooling

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.

James A. Martin
Chief

Operator's Well Number: SHILOH UNIT 1H
Farm Name: JIMMY E & EARL P PATTERSON & LINDA LOU 
U.S. WELL NUMBER: 47-095-02930-00-00
Horizontal 6A New Drill
Date Modification Issued: 07/18/2025

Promoting a healthy environment.

07/18/2025

WW-6B
(04/15)

API NO. 47- 095 - 02930
OPERATOR WELL NO. Shiloh Unit 1H MOD
Well Pad Name: Mary Patterson Pad

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 Union Middlebourne
Operator ID County District Quadrangle
- 2) Operator's Well Number: Shiloh Unit 1H 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: 24000' MD ✓
- 11) Proposed Horizontal Leg Length: 13911.1' ✓
- 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

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WV Department of
Environmental Protection

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

CK# 4041091
\$ 7500
5/13/2025

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#	24000	24000 ✓	5120 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			RECEIVED
Sizes:	N/A			Office of Oil and Gas
Depths Set:	N/A			JUN 16 2025
				WV Department of Environmental Protection

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): 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

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25) Proposed borehole conditioning procedures:

WV Department of
Environmental Protection

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.

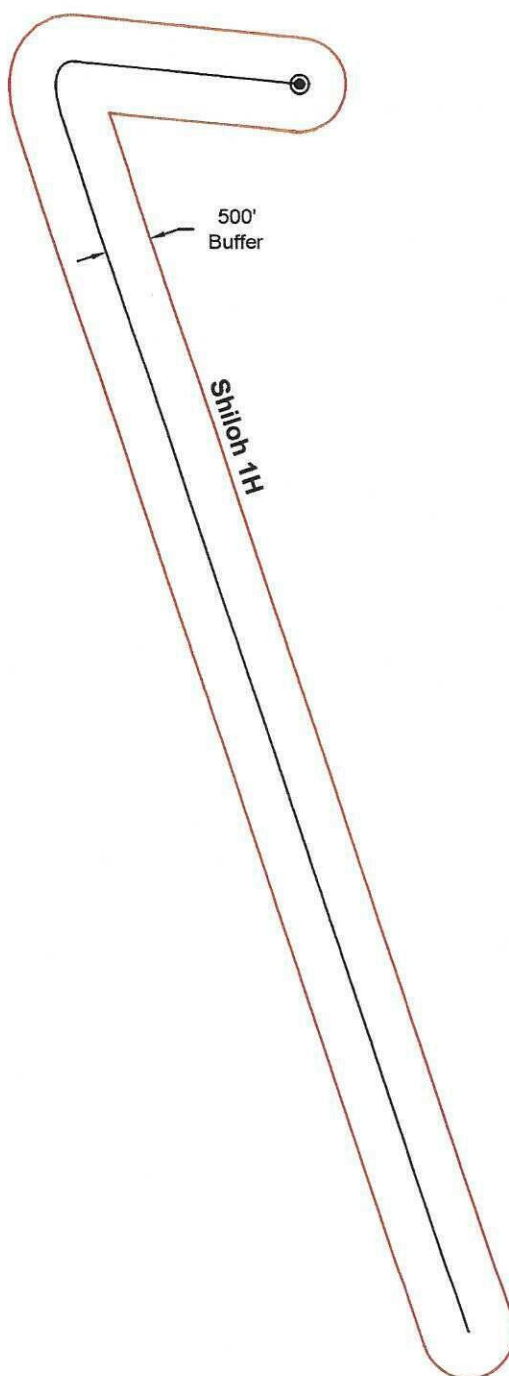
*Note: Attach additional sheets as needed.

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



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

172 Thompson Drive
Bridgeport, WV 26330

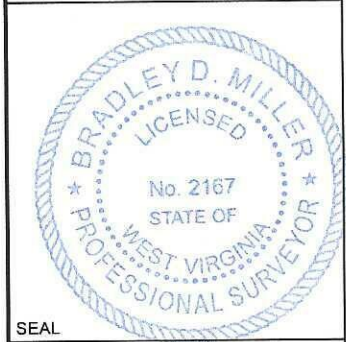
PARTY CHIEF: C. Lynch	DRAWN BY: J. McNemar
RESEARCH: J. Miller	PREPARED: June 9, 2025
SURVEYED: Dec. 2016	PROJECT NO: 172-54-U-23
FIELD CREW: C.L., K.M.	DRAWING NO: Shiloh 1H AOR

Sheet 1 of 1

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Office of Oil and Gas
JUN 16 2025
WV Department of
Environmental Protection

07/18/2025

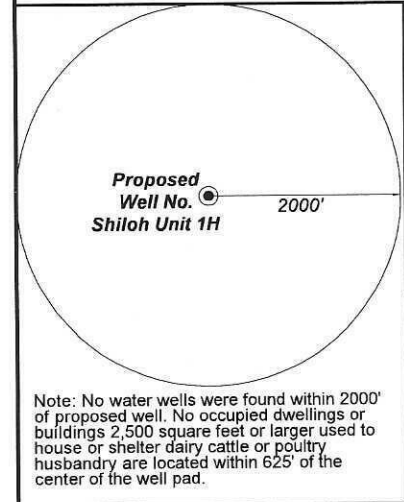
Antero Resources
Well No. Shiloh 1H
BHL-MOD
Antero Resources Corporation



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, P.S. 2167

Notes
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Shiloh Unit 1H Top Hole coordinates are
N: 361,898.62' Latitude: 39°29'02.41"
E: 1,578,456.65' Longitude: 80°59'36.85"
Bottom Hole coordinates are
N: 348,385.90' Latitude: 39°26'49.17"
E: 1,580,251.14' Longitude: 80°59'11.11"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,370,497.693m N: 4,366,390.137m
E: 500,567.496m E: 501,182.935m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.



FILE NO: 172-54-U-23
DRAWING NO: Shiloh Unit 1H
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

Notes:
Well No. Shiloh Unit 1H
UTM Zone 17, NAD 1927
N: 14,338,161.11'
E: 1,642,231.01'
Point of Entry Coordinates
N: 14,337,809.11'
E: 1,639,652.22'
Bottom Hole Coordinates
N: 14,324,684.88'
E: 1,644,250.16'

Tag	Bearing	Dist.	Monument
L1	N 77°55' W	2,401.3'	Capped Iron Rebar
L2	N 02°21' W	2,146.6'	1/2" Rebar
L3	N 40°27' E	4,113.4'	1" Pipe
L4	S 09°43' E	3,365.5'	Iron Pin
L5	S 83°11' W	2,603.6'	Point of Entry (POE)

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

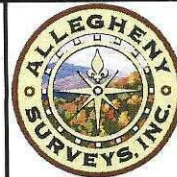
DATE: May 7 2025
OPERATOR'S WELL NO. Shiloh Unit 1H
API WELL NO
47 - 095 - 02930
STATE COUNTY PERMIT

WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL
(IF GAS) PRODUCTION: ☐ STORAGE ☐ DEEP ☒ SHALLOW

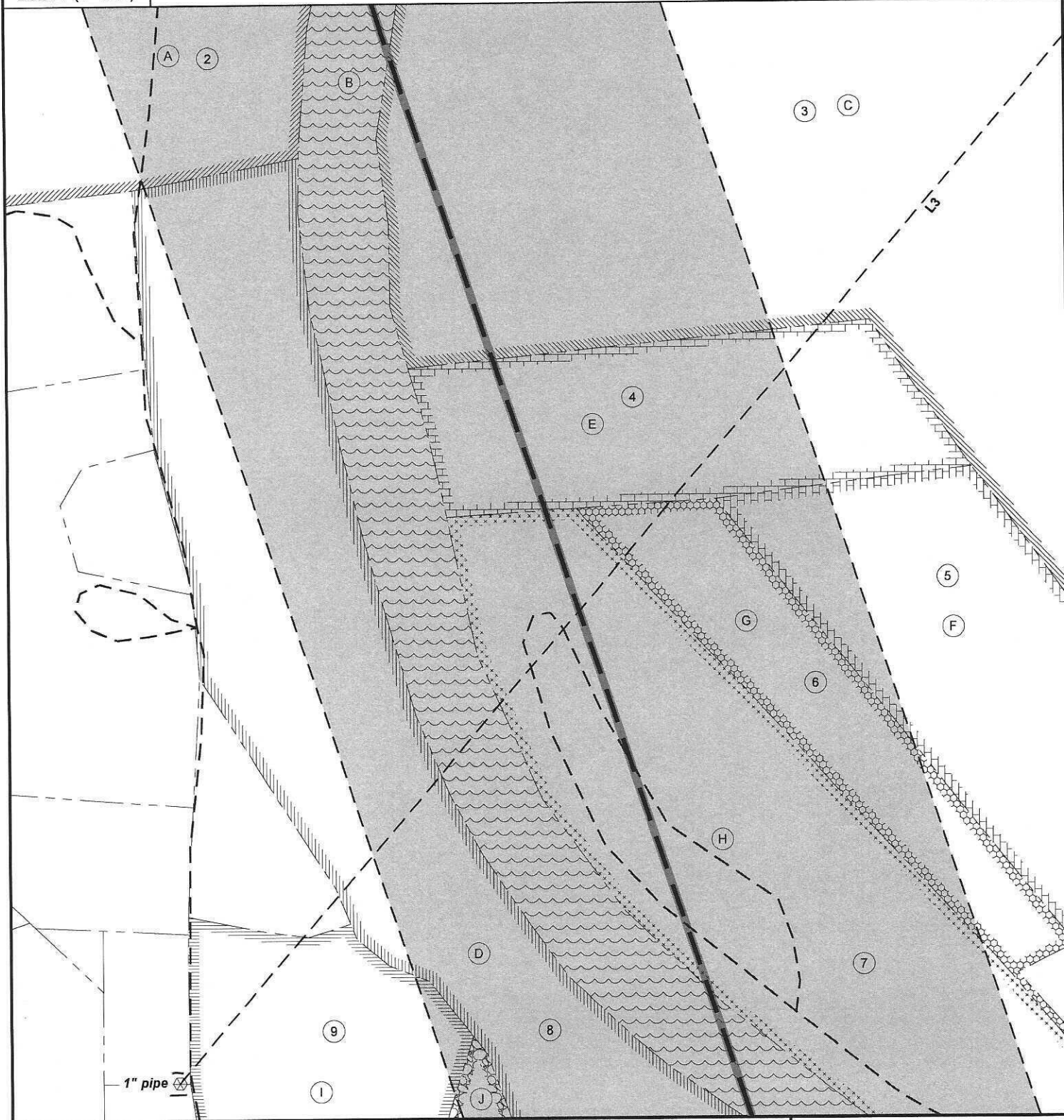
LOCATION: ELEVATION: Proposed: 694.70' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne
DISTRICT: Union/Meade COUNTY: Tyler 07/18/2025
SURFACE OWNER: Jimmy E. & Earl P. Patterson & Linda Lou Dennis ACREAGE: 68.22
ROYALTY OWNER: Linda Lou Dennis LEASE NO: ACREAGE: 98.225

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: 24,000' 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



Detail 1 (1"=250')



FILE NO: 172-54-U-23

DRAWING NO: Shiloh Unit 1H

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: May 7 2025

OPERATOR'S WELL NO. Shiloh Unit 1H

API WELL NO

47 - 095 - 02930
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/Meade

COUNTY: Tyler 07/18/2025

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

ACREAGE: 68.22

ROYALTY OWNER: Linda Lou Dennis

LEASE NO: ACREAGE: 98.225

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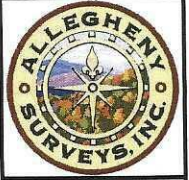
☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,000' MD

WELL OPERATOR: Antero Resources Corporation

DESIGNATED AGENT: Conrad Baston

ADDRESS: 1615 Wynkoop Street
Denver, CO 80202

ADDRESS: 535 White Oaks Blvd.
Bridgeport, WV 26330



Detail 2 (1"=250')



FILE NO: 172-54-U-23

DRAWING NO: Shiloh Unit 1H

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: May 7 20 25

OPERATOR'S WELL NO. Shiloh Unit 1H

API WELL NO

47 - 095 - 02930
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/Meade

COUNTY: Tyler 07/18/2025

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

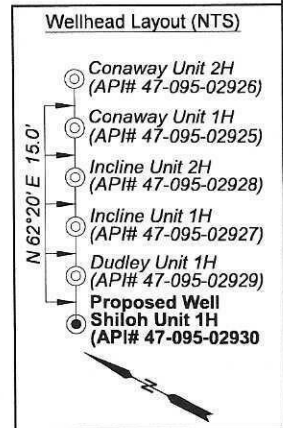
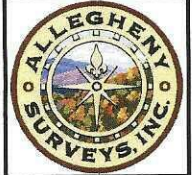
☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,000' MD

WELL OPERATOR: Antero Resources Corporation

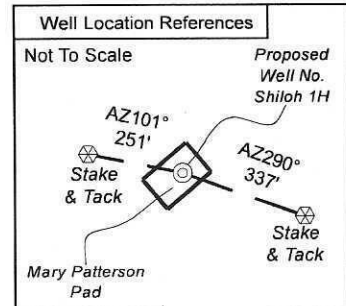
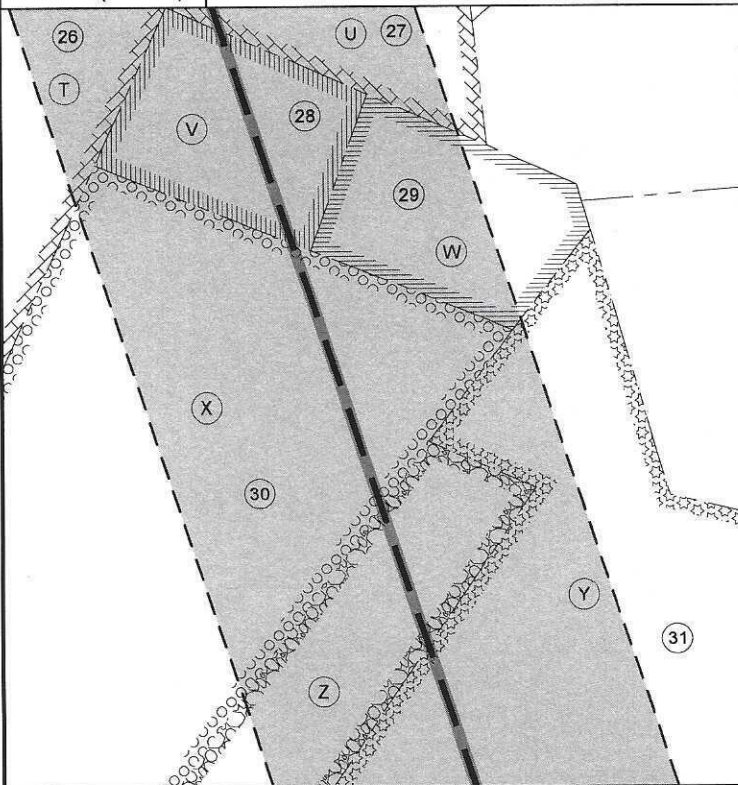
DESIGNATED AGENT: Conrad Baston

ADDRESS: 1615 Wynkoop Street
Denver, CO 80202

ADDRESS: 535 White Oaks Blvd.
Bridgeport, WV 26330



Detail 3 (1"=500')



Legend	
	Proposed gas well
	Well Reference, as noted
	Monument, as noted
	Existing Well, as noted
	Existing Plugged Well, as noted
	Digitized Well, as noted
	Creek or Drain
	Existing Road
	Surface boundary (approx.)
	Railroad Tracks (approx.)
	District line

FILE NO: 172-54-U-23

DRAWING NO: Shiloh Unit 1H

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: May 7 2025

OPERATOR'S WELL NO. Shiloh Unit 1H

API WELL NO

47 - 095 - 02930
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/Meade

COUNTY: Tyler 07/18/2025

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ACREAGE: 68.22

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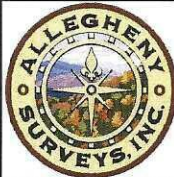
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WELL OPERATOR: Antero Resources Corporation

DESIGNATED AGENT: Conrad Baston

ADDRESS: 1615 Wynkoop Street
Denver, CO 80202

ADDRESS: 535 White Oaks Blvd.
Bridgeport, WV 26330



Tag	Lessor
Tract A	Gregory L. Michael & Shirley F. Michael, h/w
Tract B	WVDNR
Tract C	Ted A. & Darlene K. Koerber, JTWROS
Tract D	Michael Alison Michaels
Tract E	Arlington Cabins, Inc.
Tract F	Paul Thomas Gist, Jr. & Patricia Jo Gist, JTWROS
Tract G	Linda Sue Hayes
Tract H	Arlington Cabins, Inc.
Tract I	David Paul Resources, LLC
Tract J	David Paul Resources, LLC
Tract K	Michael A. Michaels
Tract L	WVDOT, Division of Highways
Tract M	WVDOT, Division of Highways
Tract N	Larry A. Hayes & Linda S. Hayes JTWROS
Tract P	Linda Sue Hayes
Tract Q	Antero Minerals, LLC
Tract R	John Ladie
Tract S	Allen R. Ladie
Tract T	Ridgetop Appalachia, LLC
Tract U	Daniel A. Maxwell
Tract V	Frank L. Fluharty, et ux
Tract W	BC Farms Investments, LLC
Tract X	Kimberly Elain Morton
Tract Y	James Arthur Watson & Angel C. Watson
Tract Z	Robert M. Starkey
Tract AA	Martha Werner, AIF for Anna M. Brown
Tract AB	Michael Ray Martin & Marchel Lynn Martin, JTWROS
Tract AC	Catherine E. Eddy
Tract AD	Ann W. Clutter
Tract AE	Kevin Ray Roberts
Tract AF	Melvia J. Fox
Tract AG	Kevin Ray Roberts
Tract AH	Larry D. McMullen
Tract AI	Ridgewood Development, LLC
Tract AJ	Nancy P. Bailey
Tract AK	Nancy P. Bailey
Tract AL	Nancy P. Bailey
Tract AX	Roy D. Hadley
Tract AY	Janie DeNoon Trust
Tract AZ	Linda Lou Dennis

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 / 7.4	Arlington Cabins, Inc.	333 / 200	5.66
5	9 / 7.1	Patricia J. & Paul T. Gist, Jr.	349 / 197	11.03
6	9 / 39	Teddy A. Kemp	OR183 / 560	5.59
7	9 / 38	Arlington Cabins, Inc.	296 / 16	13.80
8	9 / 28	Michael Michaels	OR264 / 754	20.00
9	9 / 26.10	Richard D. & Patricia G. Munson	399 / 711	5.63
10	9 / 26.11	Richard D. & Patricia G. Munson	399 / 711	4.16
11	9 / 38.1	WV Department of Transportation	332 / 10	0.49
12	9 / 29	Martha Michaels	163 / 529	0.79
13	9 / 29.1	WV Department of Transportation	331 / 432	0.20
14	9 / 34	Linda S. Hayes	377 / 713	0.30
15	9 / 33.1	Larry A. & Linda S. Hayes	223 / 135	0.23
16	9 / 31.1	Larry A. & Linda S. Hayes	251 / 261	0.20
17	9 / 31	Larry A. & Linda S. Hayes	310 / 518	0.41
18	9 / 30	Larry A. & Linda S. Hayes	335 / 176	0.56
19	9 / 26.6	Betty J. Renzella	262 / 180	8.00
20	9 / 36	William A. Ladie, et al	W49 / 465	7.19
21	9 / 33	Larry A. & Linda S. Hayes	186 / 265	0.58
22	9 / 35	Linda S. Hayes	378 / 613	2.00
23	9 / 37	Allen R. & David R. Ladie	317 / 289	9.15
24	13 / 18	Robert W. & Kimberly D. Maxwell	652 / 319	0.43
25	13 / 13	Jackie E. Peckens & Melissa D. Cox	OR210 / 529	30.00
26	13 / 14	Norman Todd Estate	582 / 593	27.93
27	13 / 19	Kimberly D. & Robert W. Maxwell	334 / 17	11.16
28	13 / 16	Patricia N. Cline	577 / 98	6.50
29	13 / 17	Laura E. Wilcox	207 / 249	6.50
30	13 / 30	Robert M. Starkey	353 / 629	82.18
31	13 / 28	James A. Watson	338 / 132	41.90
32	13 / 29	Aaron C. & Kelly J. Cecil	345 / 569	40.00
33	1 / 1.6	Michael R. & Marchel L. Martin	359 / 108	8.05
34	1 / 7.2	Carolyn G. Flannery	OR169 / 756	8.83
35	1 / 7.3	Kevin R. Roberts	327 / 806	8.82
36	1 / 7.4	Christopher & Heather Fox	AR54 / 349	8.82
37	1 / 7	Michael L. & Jason W. Roberts	327 / 893	8.82
38	1 / 1.5	Mark R. & Marie Dillaman	286 / 16	87.30
39	1 / 1.4	James P. Flesher	643 / 710	20.00
40	1 / 1	Gary W. & Shawn McDonald	344 / 429	14.65
41	1 / 1.2	Gary W. & Barbara A. Whitley	270 / 263	42.00
42	1 / 5	Nancy P. Bailey Flesher	334 / 284	84.42
43	4 / 1.1	Nancy P. Bailey Flesher	334 / 284	44.25
44	4 / 1	Janie DeNoon Trust & William S. DeNoon Trustee	319 / 135	44.24
45	4 / 6	Coastal Lumber Company	301 / 131	36.00
46	4 / 1	WSD Properties, LLC	463 / 451	35.50

FILE NO: 172-54-U-23
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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: May 7 2025
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API WELL NO
47 - 095 - 02930
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/Meade COUNTY: Tyler 07/18/2025

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: 24,000' 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

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
<u>AZ: Linda Lou Dennis Lease</u> Linda Lou Dennis	Antero Resources Corporation	1/8+	234/5
<u>C: Ted A. & Darlene K. Koerber, JTWROS Lease</u> Ted A. & Darlene K. Koerber, JTWROS	Antero Resources Corporation	1/8+	234/13
<u>B: WVDNR Lease</u> WVDNR	Antero Resources Corporation	1/8+	339/518
<u>A: Gregory L. Michael & Shirley F. Michael, h/w Lease</u> Gregory L. Michael & Shirley F. Michael, h/w SEP Exploration, LLC	SEP Exploration, LLC Antero Resources Corporation	1/8+ Agreement	251/87 350/586
<u>B: WVDNR Lease</u> WVDNR	Antero Resources Corporation	1/8+	339/518
<u>C: Ted A. & Darlene K. Koerber, JTWROS Lease</u> Ted A. & Darlene K. Koerber, JTWROS	Antero Resources Corporation	1/8+	234/13
<u>E: Arlington Cabins, Inc. Lease</u> Arlington Cabins, Inc.	Antero Resources Corporation	1/8+	234/21
<u>H: Arlington Cabins, Inc. Lease</u> Arlington Cabins, Inc.	Antero Resources Corporation	1/8+	234/21
<u>B: WVDNR Lease</u> WVDNR	Antero Resources Corporation	1/8+	234/21
<u>D: Michael Alison Michaels Lease</u> Michael Alison Michaels	Antero Resources Corporation	1/8	270/14
<u>K: Michael A. Michaels Lease</u> Michael A. Michaels	Antero Resources Corporation	1/8+	311/251
<u>L: WVDOT, Division of Highways Lease</u> WVDOT, Division of Highways	Antero Resources Corporation	1/8	357/595
<u>K: Michael A. Michaels Lease</u> Michael A. Michaels	Antero Resources Corporation	1/8+	311/251
<u>N: Larry A. Hayes & Linda S. Hayes JTWROS Lease</u> Larry A. Hayes & Linda S. Hayes, JTWROS	Antero Resources Corporation	1/8+	349/529
<u>Q: Antero Minerals, LLC Lease</u> Antero Minerals, LLC	Antero Resources Corporation	1/8+	185/98

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Office of Oil and Gas
JUN 16 2025
WV Department of
Environmental Protection

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>P: Linda Sue Hayes Lease</u> Linda Sue Hayes	Antero Resources Corporation	1/8+	302/110
<u>S: Allen R. Ladie Lease</u> Allen R. Ladie	Antero Resources Corporation	1/8+	306/70
<u>B: WVDNR Lease</u> WVDNR	Antero Resources Corporation	1/8+	339/518
<u>T: Ridgetop Appalachia, LLC Lease</u> Ridgetop Appalachia, LLC	Antero Resources Corporation	1/8+	308/794
<u>U: Daniel A. Maxwell Lease</u> Daniel A. Maxwell	Antero Resources Corporation	1/8+	323/318
<u>V: Frank L. Fluharty, et ux Lease</u> Frank L. Fluharty, et ux	Antero Resources Corporation	1/8+	316/284
<u>X: Kimberly Elain Morton Lease</u> Kimberly Elain Morton	Antero Resources Corporation	1/8+	291/604
<u>Z: Robert M. Starkey Lease</u> Robert M. Starkey SEP Exploration, LLC	SEP Exploration, LLC Antero Resources Corporation	1/8+ Agreement	244/622 350/586
<u>Y: James Arthur Watson & Angel C. Watson Lease</u> James Arthur Watson & Angel C. Watson SEP Exploration, LLC	SEP Exploration, LLC Antero Resources Corporation	1/8+ Agreement	244/566 350/586
<u>AA: Martha Wemer, AIF for Anna M. Brown Lease</u> Martha Wemer, AIF for Anna M. Brown	Antero Resources Corporation	1/8+	297/184
<u>AD: Ann W. Clutter Lease</u> Ann W. Clutter	Antero Resources Corporation	1/8+	507/553
<u>AJ: Nancy P. Bailey Lease</u> Nancy P. Bailey	Antero Resources Corporation	1/8+	331/322

*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.

**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

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>AL: Nancy P. Bailey Lease</u>	Nancy P. Bailey	Antero Resources Corporation	1/8+	585/576

**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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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



June 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 modification for approved well on the Mary Patterson Pad. We are requesting to extend the horizontal lateral length which will change the bottom hole location of the Shiloh 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,

A handwritten signature in black ink, appearing to read "CW", is written over a faint, larger signature that appears to be "Carly Wren".

Carly Wren
Permitting Agent
Antero Resources Corporation

Enclosures

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