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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Tuesday, January 18, 2022  
PERMIT MODIFICATION APPROVAL  
New Drill / Modification/ Lateral Extension

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET  
DENVER, CO 80202

Re: Permit Modification Approval for TRADER UNIT 1H  
47-103-03459

Extending Lateral

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, Chief. The signature is written in a cursive, flowing style. Below the signature, the name and title are printed in a black, sans-serif font.

James A. Martin  
Chief

Operator's Well Number: TRADER UNIT 1H  
Farm Name: ANTERO RESOURCES CORPORATION  
U.S. WELL NUMBER: 47-103-03459  
New Drill Modification/ Lateral Extension  
Date Modification Issued: 01/18/2022

Promoting a healthy environment.

01/21/2022



December 30, 2021

Antero Resources  
1615 Wynkoop Street  
Denver, CO 80202  
Office 303.357.7310  
Fax 303.357.7315

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Attn: Mr. Taylor Brewer  
601 57<sup>th</sup> Street  
Charleston, WV 25304

Mr. Brewer:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for approved well on the existing Journeyman Pad: Trader Unit 1H & 2H (47-103-03459-00 & 47-103-03460-00) Expedited.

2 Exp. Mods

Attached you will find the following:

- Revised Form WW-6B
- Revised Form WW-6A1
- Revised Mylar Plat
- AOR

RECEIVED  
Office of Oil and Gas

JAN 4 2021

WV Department of  
Environmental Protection

If you have any questions please feel free to contact me at (303) 357-7182.

Thank you in advance for your consideration.

Sincerely,

Mallory Stanton  
Permitting Supervisor  
Antero Resources Corporation

Enclosures

CHK# 4003485  
Amt \$ 5,000  
Date 12/21/21

01/21/2022

CU#  
4003485  
95000  
12/21/21

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

1) Well Operator: Antero Resources Corporation 494507062 103-Wetzel Green Pine Grove 7.5"  
Operator ID County District Quadrangle

2) Operator's Well Number: Trader Unit 1H Well Pad Name: Journeyman Pad

3) Farm Name/Surface Owner: Antero Resources Corporation Public Road Access: Eight Mile Road

4) Elevation, current ground: 1,175' Elevation, proposed post-construction: 1,154'

5) Well Type (a) Gas  Oil  Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow  Deep \_\_\_\_\_

Horizontal  \_\_\_\_\_

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus Shale: 7400' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7,400'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 25,000'

11) Proposed Horizontal Leg Length: 15,597'

12) Approximate Fresh Water Strata Depths: 52'

13) Method to Determine Fresh Water Depths: 103-00326, Depths have been adjusted according to surface elevations

14) Approximate Saltwater Depths: 1,642' (reference well 103-00326)

15) Approximate Coal Seam Depths: 960' (reference well 103-30927)

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

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

JES  
1/5/2022

WW-6B  
(04/15)

API NO. 47-103 - 03459 MOD  
 OPERATOR WELL NO. Trader Unit 1H  
 Well Pad Name: Journeyman Pad

**CASING AND TUBING PROGRAM**

18)

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#	80	80 ✓	CTS, 77 Cu. Ft.
Fresh Water	13-3/8	New	J/K-55	54.5#	300	300 ✓	CTS, 313 Cu. Ft.
Coal	9-5/8	New	J/K-55	36#	2500	2500 ✓	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2	New	PY-110	23#	25000	25000 ✓	CTS, 5372 Cu. Ft.
Tubing	2-3/8	New	N-80	4.7#			
Liners							

*JCB*  
*1/5/2022*

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	~1.18
Fresh Water	13-3/8	17-1/2"	0.380"	2730	1000	Class A	~1.18
Coal	9-5/8	12-1/4"	0.352"	3520	1500	Class A	~1.18
Intermediate							
Production	5-1/2	8-3/8" & 8-1/2"	0.415"	12,630	9300		
Tubing	2-3/8	4.778"	0.190"	11,200		Lead-H/POZ & Tail-H	H/POZ-1.44 & H-1.8
Liners							

**PACKERS**

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

WW-6B  
(10/14)

API NO. 47-103 - 03459 MOD  
OPERATOR WELL NO. Trader Unit 1H  
Well Pad Name: Journeyman Pad

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:  
Drill, perforate, fracture a new horizontal 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): 33.53

22) Area to be disturbed for well pad only, less access road (acres): 7.3

23) Describe centralizer placement for each casing string:

Conductor: No centralizers.  
Surface Casing: One centralizer 10' above the float shoe and one every 4th joint spaced up the hole to surface.  
Intermediate Casing: One centralizer above float joint, one centralizer 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 cement.  
Surface Casing: Class A cement with 2-3% calcium chloride and 1/4 lb of flake.  
Intermediate Casing: Class A cement with 1/4 lb of flake, 5 gallons of clay treat.  
Production Casing 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 Casing Tail Cement: Class H + 45 PPS Calcium Carbonate + 1.0% Flake + 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.



47103301390000

Trader Unit 1H

47103002020000

47103302900000

47103003260000



Antero Resources Corporation

Trader Unit 1H - AOR



- WELL SYMBOLS**
- Abandoned Oil and Gas Well
  - Dry Hole, With Show of Gas
  - Plugged Gas Well

August 17, 2021

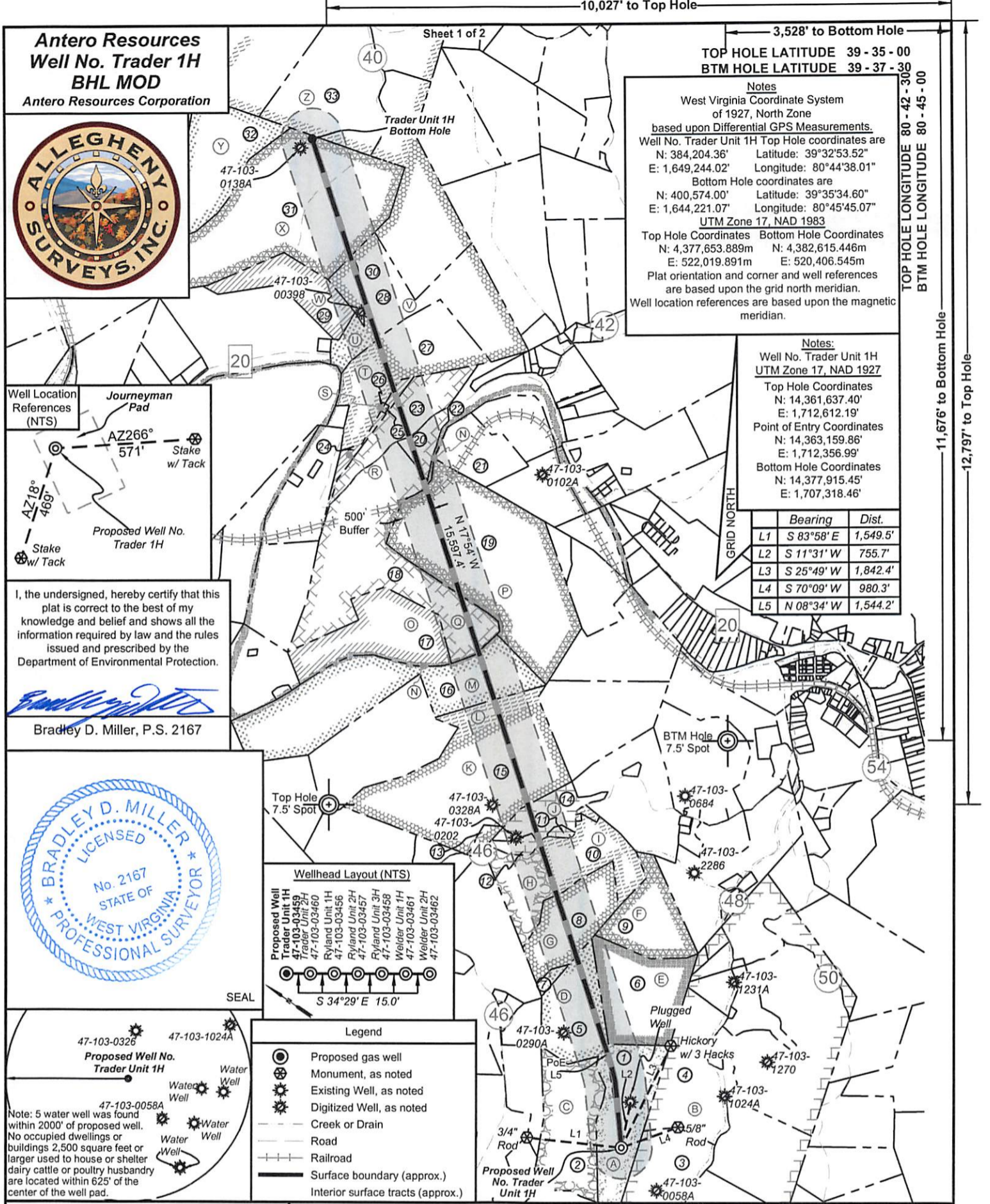
RECEIVED  
Office of Oil and Gas

JAN 4 2021

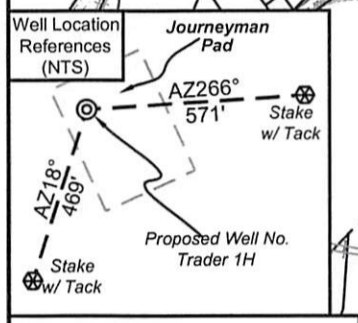
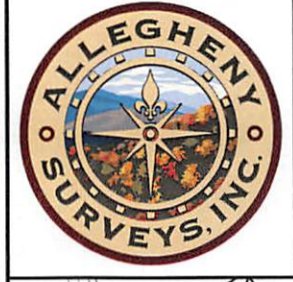
WV Department of  
Environmental Protection

01/21/2022

UWI (API Num)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not per'd
47103301390000	J M ANDERSON	1	MOUNTAIN IRON&SUP	MOUNTAIN IRON&SUP	3,040		Big Injun, Gordon	Weir, Benson, Alexander
47103002020000	Unknown	Unknown	Unknown	Unknown	3,022		Gordon	Weir, Benson, Alexander
47103302900000	LUCINDA RICHMOND	1343	HOPE NATURAL GAS	HOPE NATURAL GAS	2,906		3rd Salt, Big Injun, Gordon	Weir, Benson, Alexander
47103003260000	FOX	5440	DOMINION TRANSMISSION	HOPE NATURAL GAS	2,108		Big Injun, Gordon	Weir, Benson, Alexander



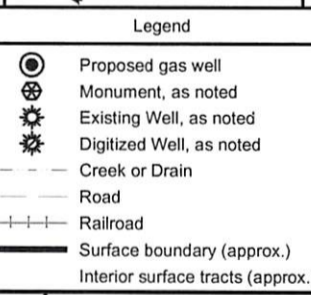
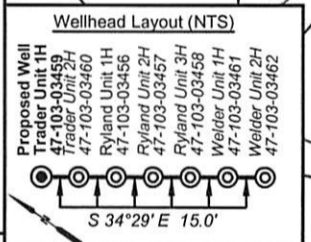
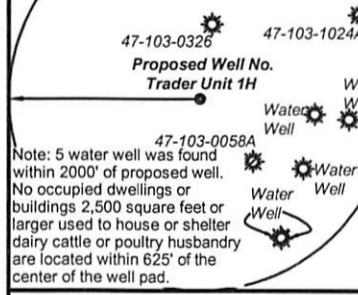
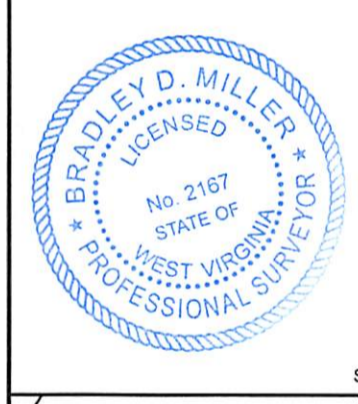
**Antero Resources**  
**Well No. Trader 1H**  
**BHL MOD**  
 Antero Resources Corporation



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*

Bradley D. Miller, P.S. 2167



10,027' to Top Hole

3,528' to Bottom Hole

TOP HOLE LATITUDE 39 - 35 - 00

BTM HOLE LATITUDE 39 - 37 - 30

TOP HOLE LONGITUDE 80 - 42 - 30

BTM HOLE LONGITUDE 80 - 45 - 00

Notes

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

Well No. Trader Unit 1H Top Hole coordinates are  
 N: 384,204.36' Latitude: 39°32'53.52"  
 E: 1,649,244.02' Longitude: 80°44'38.01"

Bottom Hole coordinates are  
 N: 400,574.00' Latitude: 39°35'34.60"  
 E: 1,644,221.07' Longitude: 80°45'45.07"

UTM Zone 17, NAD 1983

Top Hole Coordinates	Bottom Hole Coordinates
N: 4,377,653.889m	N: 4,382,615.446m
E: 522,019.891m	E: 520,406.545m

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

Notes:

Well No. Trader Unit 1H UTM Zone 17, NAD 1927

Top Hole Coordinates  
 N: 14,361,637.40'  
 E: 1,712,612.19'

Point of Entry Coordinates  
 N: 14,363,159.86'  
 E: 1,712,356.99'

Bottom Hole Coordinates  
 N: 14,377,915.45'  
 E: 1,707,318.46'

	Bearing	Dist.
L1	S 83°58' E	1,549.5'
L2	S 11°31' W	755.7'
L3	S 25°49' W	1,842.4'
L4	S 70°09' W	980.3'
L5	N 08°34' W	1,544.2'

FILE NO: 133-34-G-18

DRAWING NO: Trader 1H BHL MOD

SCALE: 1" = 2000'

MINIMUM DEGREE OF ACCURACY: Submeter

PROVEN SOURCE OF ELEVATION: CORS, Monroe County, OH

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

DATE: December 22 2021

OPERATOR'S WELL NO. Trader Unit 1H

API WELL NO. MOD  
 47 - 103 - 03459

STATE COUNTY PERMIT

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

LOCATION: ELEVATION: Existing 1,175' Proposed 1,154' WATERSHED: Fishing Creek QUADRANGLE: TOP Hole: Pine Grove BTM Hole: Porter Falls

DISTRICT: Green Antero Resources Larrison Brothers, LLC; Bounty Minerals, LLC; Chesapeake Appalachia, LLC COUNTY: Weta

SURFACE OWNER: Corporation BRC Appalachian Minerals I, LLC (2); WVDNR; Chaplik Family Trust; ACREAGE: 47.5 123.8; 119; 140;

ROYALTY OWNER: Pamela Ann Palmer Emch; Dianne K. Howell; Melinda Debner; Acropolis, Inc. (2) LEASE NO: ACREAGE: 113.53; 130; 33;

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,400' TVD 25,000' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System

ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road

Denver, CO 80202 Charleston, WV 25313



**Antero Resources**  
**Well No. Trader 1H**  
**BHL MOD**  
 Antero Resources Corporation



Leases	
A	Pamela Ann Palmer Emch
B	William R. Stalnaker
C	BRC Appalachian Minerals I, LLC
D	Dianne K. Howell
E	David E. Bowyer
F	Acropolis, Inc.
G	Melinda Debner
H	Acropolis, Inc.
I	Acropolis, Inc.
J	Acropolis, Inc.
K	P & P Fujimo, LLC
L	Black Rock Enterprises
M	Shiben Estates, Inc.
N	WVDNR
O	Chesapeake Appalachia, LLC
P	BRC Appalachian Minerals I, LLC
Q	Bounty Minerals, LLC
R	Chaplik Family Trust
S	Wetzel County Public Service District No.1
T	Larrison Brothers, LLC
U	Joyce A. Roberts
V	BRC Appalachian Minerals I, LLC
W	John S. Starkey
X	Chesapeake Appalachia, LLC
Y	Bernard E. Willey, et ux
Z	Linda Headlee Malone, et vir

ID	TMPar	Owner	Bk/Pg	Acres
1	16-26	Antero Resources Corporation	474/713	47.50
2	16-25	Antero Resources Corporation	474/713	39.00
3	17-22	Perry D. Bucher	411/759	37.65
4	17-58	Pennie Baker	411/735	42.41
5	16-15	Donald L. Smith II, et ux	451/925	36.45
6	16-16	Donald L. Smith II, et ux	451/925	60.75
7	16-12	Donald L. Smith II, et ux	451/925	2.30
8	16-4	Donald L. Smith II, et ux	451/925	38.00
9	16-13	Donald L. Smith II, et ux	451/925	35.00
10	13-67	Gerold F. & Debra D. Richard	398/544	63.27
11	13-67.3	Dana Stuart Straight	368/19	1.42
12	13-67.2	Floyd M. Amos Est.	W66/309	5.00
13	13-41.1	Albert D. & Michelle D. Hornbeck	357/701	2.92
14	13-67.5	Julie A. & Aaron E. Hinderman	398/322	16.44
15	13-41	Shari D. Burgess	432/665	95.08
16	13-27	Donald P. Vandyke & Mark L. Vandyke	410/241	123.80
17	12-58	Donald P. Vandyke & Mark L. Vandyke	425/472	46.00
18	12-33	Kevin E. & Carol L. Cunningham	397/533	84.68
19	13-18	Coastal Forest Resources Co.	444/105	119.00
20	13-1	Randy W. LeMasters	406/16	4.25
21	13-2	Dwain Ray Brown	421/897	19.75
22	8-38.9	H. Dorn Higginbotham & Janet L. Workman Higginbotham	363/197	5.00
23	12-33.2	Kevin E. & Carol L. Cunningham	411/185	28.61
24	12-13	John & Barbara Chaplik	410/256	8.61
25	12-33.1	Wetzel County Public Service District	362/207	0.24
26	12-13.1	Wetzel County Public Service District	362/209	0.15
27	8-47	Larrison Brothers, LLC	417/100	53.62
28	8-29	James L. Scott, Sr., et al	431/50	64.76
29	8-45	John Gregory Starkey	450/315	28.00
30	8-29.1	E.G. Morgan	180/136	6.00
31	8-25	Jody Kay Rine, et al	435/542	130.00
32	8-24	Bernard Ely & Carolyn S. Willey	347/42	47.50
33	8-20.3	Brent A. & Amy S. Boram	427/802	62.60

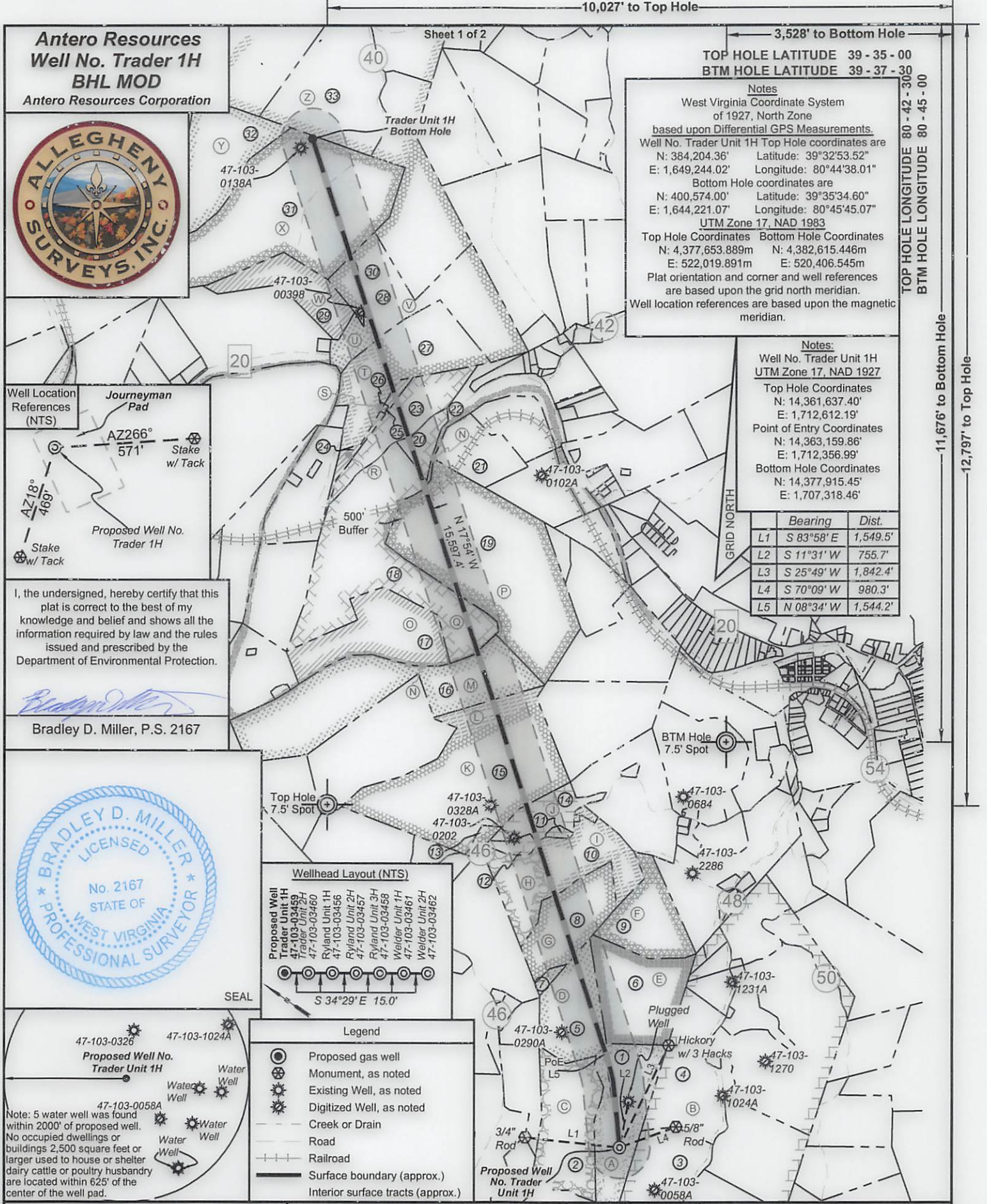
FILE NO: 133-34-G-18  
 DRAWING NO: Trader 1H BHL MOD  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY:  
 Submeter  
 PROVEN SOURCE OF ELEVATION:  
 CORS, Monroe County, OH



DATE: December 22 2021  
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 API WELL NO MOD  
 47 - 103 - 03459  
 STATE COUNTY PERMIT

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 DISTRICT: Green Antero Resources Larrison Brothers, LLC; Bounty Minerals, LLC; Chesapeake Appalachia, LLC COUNTY: Wetzel  
 SURFACE OWNER: Corporation BRC Appalachian Minerals I, LLC (2); WVDNR; Chaplik Family Trust; ACREAGE: 47.5 123.8; 119; 140;  
 ROYALTY OWNER: Pamela Ann Palmer Emch; Dianne K. Howell; Melinda Debner; Acropolis, Inc. (2) LEASE NO: ACREAGE: 57.38; 8.61; 20.7;  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
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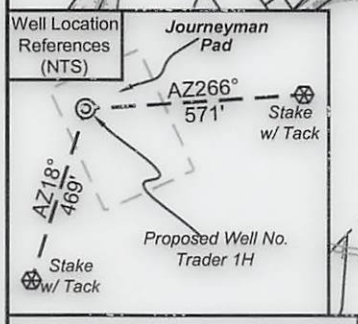


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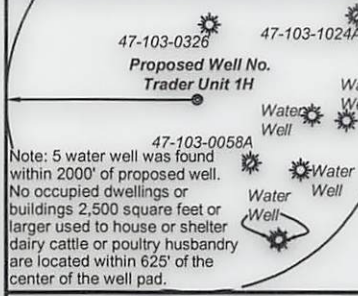
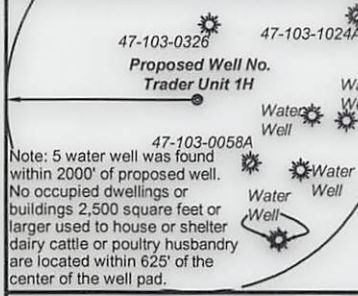
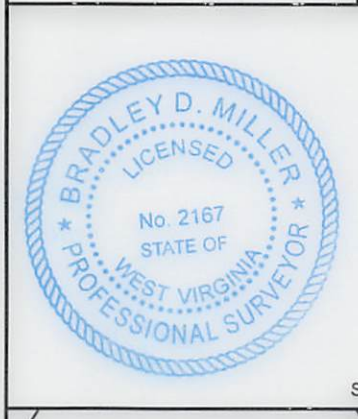
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 3,528' to Bottom Hole  
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**BTM HOLE LATITUDE 39 - 37 - 30**  
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**Notes**  
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I, the undersigned, 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



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 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: CORS, Monroe County, OH

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

DATE: December 22 2021  
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 API WELL NO. 109  
 47 - 103 - 03459  
 STATE COUNTY PERMIT

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 P&P Fujimo, LLC; Black Rock Enterprises; Shiben Estates, Inc. 57.38; 8.61; 20.7;  
 ROYALTY OWNER: Pamela Ann Palmer Emch; Dianne K. Howell; Melinda Debner; Acropolis, Inc. (2) LEASE NO: ACREAGE: 113.53; 130; 33;  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 7,400' TVD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 25,000' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313

**Antero Resources**  
**Well No. Trader 1H**  
**BHL MOD**  
 Antero Resources Corporation



Leases	
A	Pamela Ann Palmer Emch
B	William R. Stalnaker
C	BRC Appalachian Minerals I, LLC
D	Dianne K. Howell
E	David E. Bowyer
F	Acropolis, Inc.
G	Melinda Debner
H	Acropolis, Inc.
I	Acropolis, Inc.
J	Acropolis, Inc.
K	P & P Fujimo, LLC
L	Black Rock Enterprises
M	Shiben Estates, Inc.
N	WVDNR
O	Chesapeake Appalachia, LLC
P	BRC Appalachian Minerals I, LLC
Q	Bounty Minerals, LLC
R	Chaplik Family Trust
S	Wetzel County Public Service District No.1
T	Larrison Brothers, LLC
U	Joyce A. Roberts
V	BRC Appalachian Minerals I, LLC
W	John S. Starkey
X	Chesapeake Appalachia, LLC
Y	Bernard E. Willey, et ux
Z	Linda Headlee Malone, et vir

ID	TM/Par	Owner	Bk/Pg	Acres
1	16-26	Antero Resources Corporation	474/713	47.50
2	16-25	Antero Resources Corporation	474/713	39.00
3	17-22	Perry D. Bucher	411/759	37.65
4	17-58	Pennie Baker	411/735	42.41
5	16-15	Donald L. Smith II, et ux	451/925	36.45
6	16-16	Donald L. Smith II, et ux	451/925	60.75
7	16-12	Donald L. Smith II, et ux	451/925	2.30
8	16-4	Donald L. Smith II, et ux	451/925	38.00
9	16-13	Donald L. Smith II, et ux	451/925	35.00
10	13-67	Gerold F. & Debra D. Richard	398/544	63.27
11	13-67.3	Dana Stuart Straight	368/19	1.42
12	13-67.2	Floyd M. Amos Est.	W66/309	5.00
13	13-41.1	Albert D. & Michelle D. Hornbeck	357/701	2.92
14	13-67.5	Julie A. & Aaron E. Hinderman	398/322	16.44
15	13-41	Shari D. Burgess	432/665	95.08
16	13-27	Donald P. Vandyke & Mark L. Vandyke	410/241	123.80
17	12-58	Donald P. Vandyke & Mark L. Vandyke	425/472	46.00
18	12-33	Kevin E. & Carol L. Cunningham	397/533	84.68
19	13-18	Coastal Forest Resources Co.	444/105	119.00
20	13-1	Randy W. LeMasters	406/16	4.25
21	13-2	Dwain Ray Brown	421/897	19.75
22	8-38.9	H. Dorn Higginbotham & Janet L. Workman Higginbotham	363/197	5.00
23	12-33.2	Kevin E. & Carol L. Cunningham	411/185	28.61
24	12-13	John & Barbara Chaplik	410/256	8.61
25	12-33.1	Wetzel County Public Service District	362/207	0.24
26	12-13.1	Wetzel County Public Service District	362/209	0.15
27	8-47	Larrison Brothers, LLC	417/100	53.62
28	8-29	James L. Scott, Sr., et al	431/50	64.76
29	8-45	John Gregory Starkey	450/315	28.00
30	8-29.1	E.G. Morgan	180/136	6.00
31	8-25	Jody Kay Rine, et al	435/542	130.00
32	8-24	Bernard Ely & Carolyn S. Willey	347/42	47.50
33	8-20.3	Brent A. & Amy S. Boram	427/802	62.60

FILE NO: 133-34-G-18  
 DRAWING NO: Trader 1H BHL MOD  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY:  
 Submeter  
 PROVEN SOURCE OF ELEVATION:  
 CORS, Monroe County, OH

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

DATE: December 22 2021  
 OPERATOR'S WELL NO. Trader Unit 1H  
 API WELL NO MOD  
 47 -- 103 -- 03459  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: Existing 1,175' Proposed 1,154' WATERSHED: Fishing Creek QUADRANGLE: TOP Hole: Pine Grove  
 BOTTOM Hole: Porter Falls  
 DISTRICT: Green Antero Resources Larrison Brothers, LLC; Bounty Minerals, LLC; Chesapeake Appalachia, LLC COUNTY: W 24 N 12 E 38 78333; 22;  
 SURFACE OWNER: Corporation BRC Appalachian Minerals I, LLC (2); WVDNR; Chaplik Family Trust; ACREAGE: 47.5 123.8; 119; 140;  
 P&P Fujimo, LLC; Black Rock Enterprises; Shiben Estates, Inc. 57.38; 8.61; 20.7;  
 ROYALTY OWNER: Pamela Ann Palmer Emch; Dianne K. Howell; Melinda Debner; Acropolis, Inc. (2) LEASE NO: ACREAGE: 113.53; 130; 33;  
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WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313

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>Pamala Ann Palmer Emch Lease</u>			
A	Pamala Ann Palmer Emch	Chesapeake Appalachia LLC	1/8+	129A/0350
	Chesapeake Appalachia LLC	SWN Production Company	Assignment	157A/0540
	SWN Production Company	Antero Exchange Properties, Inc	Assignment	177A/0533
	Antero Exchange Properties, Inc	Antero Resources Corporation	Merger	0013/0311
	<u>Dianne K. Howell Lease</u>			
P	Dianne K. Howell	Antero Resources Corporation	1/8+	187A/0833
	<u>Melinda Debner Lease</u>			
G	Melinda Debner	Antero Resources Corporation	1/8+	190A/0714
	<u>Acropolis Inc. Lease</u>			
H	Acropolis Inc.	Antero Resources Corporation	1/8+	179A/0358
	<u>Acropolis Inc. Lease</u>			
J	Acropolis Inc.	Antero Resources Corporation	1/8+	179A/0355
	<u>P &amp; P Fujimo, LLC Lease</u>			
K	P & P Fujimo, LLC	Antero Resources Corporation	1/8+	179A/0606
	<u>Black Rock Enterprises Lease</u>			
L	Black Rock Enterprises	Antero Resources Corporation	1/8+	203A/0933
	<u>Shiben Estates, Inc. Lease</u>			
M	Shiben Estates, Inc.	Antero Resources Corporation	1/8+	174A/0062
	<u>Bounty Minerals, LLC Lease</u>			
Q	Bounty Minerals, LLC	Antero Resources Corporation	1/8+	188A/0511
	<u>BRC Appalachian Minerals I LLC Lease</u>			
P	BRC Appalachian Minerals I LLC	BRC Working Interest Company	1/8	102A/505
	BRC Working Interest Company LLC	Chesapeake Appalachia LLC	Assignment	103A/470
	Chesapeake Appalachia LLC	SWN Production Company	Assignment	157A/540
	SWN Production Company	Antero Exchange Properties LLC	Assignment	177A/533
	Antero Exchange Properties LLC	Antero Resources Corporation	Merger	13/311
	<u>Wetzel County Public Service District No 1 Lease</u>			
S	Wetzel County Public Service District No 1	Antero Resources Corporation	1/8+	193A/10
	<u>Larrison Brothers LLC Lease</u>			
T	Larrison Brothers LLC	Antero Resources Corporation	1/8+	274A/595

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
U <u>Joyce S Roberts Lease</u> Joyce S Roberts	Antero Resources Corporation	1/8+	219A/926
↓ <u>BRC Appalachian Minerals I LLC Lease</u> BRC Appalachian Minerals I LLC BRC Working Interest Company LLC Chesapeake Appalachia LLC SWN Production Company Antero Exchange Properties LLC	BRC Working Interest Company Chesapeake Appalachia LLC SWN Production Company Antero Exchange Properties LLC Antero Resources Corporation	1/8 Assignment Assignment Assignment Merger	102A/505 103A/470 157A/540 177A/533 13/311

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
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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  
✓ Chesapeake Appalachian LLC Lease

Chesapeake Appalachia LLC	Statoil USA Onshore Properties Inc	Assignment	120A/109
SWN Production Company LLC	Antero Exchange Properties LLC	Assignment	177A/533
Antero Exchange Properties LLC	Antero Resources Corporation	Merged	13/311

\*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.

**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: Tim Rady  
 Its: Vice President - Land



Stansberry, Wade A &lt;wade.a.stansberry@wv.gov&gt;

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**Expedited Horizontal H6A Well Work Permit API: (47-103-03459)**

1 message

**Stansberry, Wade A** <wade.a.stansberry@wv.gov>

Wed, Jan 19, 2022 at 10:15 AM

To: Mallory Stanton &lt;mstanton@anteroresources.com&gt;, Dani DeVito &lt;ddevito@shalepro.com&gt;, mhamsher@anteroresources.com, "Harris, Bryan O" &lt;bryan.o.harris@wv.gov&gt;, Scott Lemley &lt;slemley@wvassessor.com&gt;

I have attached a copy of the newly issued well [permit](#) number. This will serve as your copy.


**47-103-03459 - TRADER UNIT 1H**

If you have any questions, then [please](#) contact us here at the Office of Oil and Gas.

Thank you,

**Wade A. Stansberry****Environmental Resource Specialist 3****West Virginia Department of Environmental Protection****Office of Oil & Gas****601 57th St. SE****Charleston, WV 25304****(304) 926-0499 ext. 41115****(304) 926-0452 fax****[Wade.A.Stansberry@wv.gov](mailto:Wade.A.Stansberry@wv.gov)**

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 **47-103-03459 - mod.pdf**  
4098K**01/21/2022**