



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

Thursday, January 28, 2021
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for YOUGH 1H
47-095-02723-00-00

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, is positioned above his name and title.

James A. Martin
Chief

Operator's Well Number: YOUGH 1H
Farm Name: PATRICIA ANN HEINTZMAN
U.S. WELL NUMBER: 47-095-02723-00-00
Horizontal 6A New Drill
Date Modification Issued: 1/28/2021

Promoting a healthy environment.

WW-6B
(04/15)

API NO. 47-095 - 02723

OPERATOR WELL NO. Yough Unit 1H

Well Pad Name: Elk Fork 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 Ellsworth Porters Falls 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Yough Unit 1H Well Pad Name: Elk Fork Pad

3) Farm Name/Surface Owner: Patricia Ann Heintzman Public Road Access: Elk Fork Road

4) Elevation, current ground: 1126' Elevation, proposed post-construction: ~1126'

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal

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6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 7000' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

WV Department of
Environmental Protection

8) Proposed Total Vertical Depth: 7000' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 26500'

11) Proposed Horizontal Leg Length: 16000'

12) Approximate Fresh Water Strata Depths: 125'

13) Method to Determine Fresh Water Depths: 47-095-00269

14) Approximate Saltwater Depths: 1703'

15) Approximate Coal Seam Depths: 58'

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: _____

Handwritten: 02/19/21
0005
Date 12/15/20
Antero
Elk Fork Pad

WW-6B
(04/15)

API NO. 47- 095 - 02723

OPERATOR WELL NO. Yough Unit 1H

Well Pad Name: Elk Fork 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# | 90' | 90' | CTS, 86 Cu. Ft. |
| Fresh Water | 13-3/8" | New | J-55 | 54.5# | 300' | 300' | CTS, 417 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# | 26500' | 26500' | 6879 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 | ~1.18 |
| Fresh Water | 13-3/8" | 17-1/2" | 0.38" | 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" | 8-3/4" & 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 | | | | | | | |

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Environmental Protection

PACKERS

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

WW-6B
(10/14)

API NO. 47- 095 - 02723

OPERATOR WELL NO. Yough Unit 1H

Well Pad Name: Elk Fork Pad

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill a new vertical shallow well into the 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): 43.65 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.91 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 cement.
Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake
Intermediate: Class A 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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JAN 19 2021

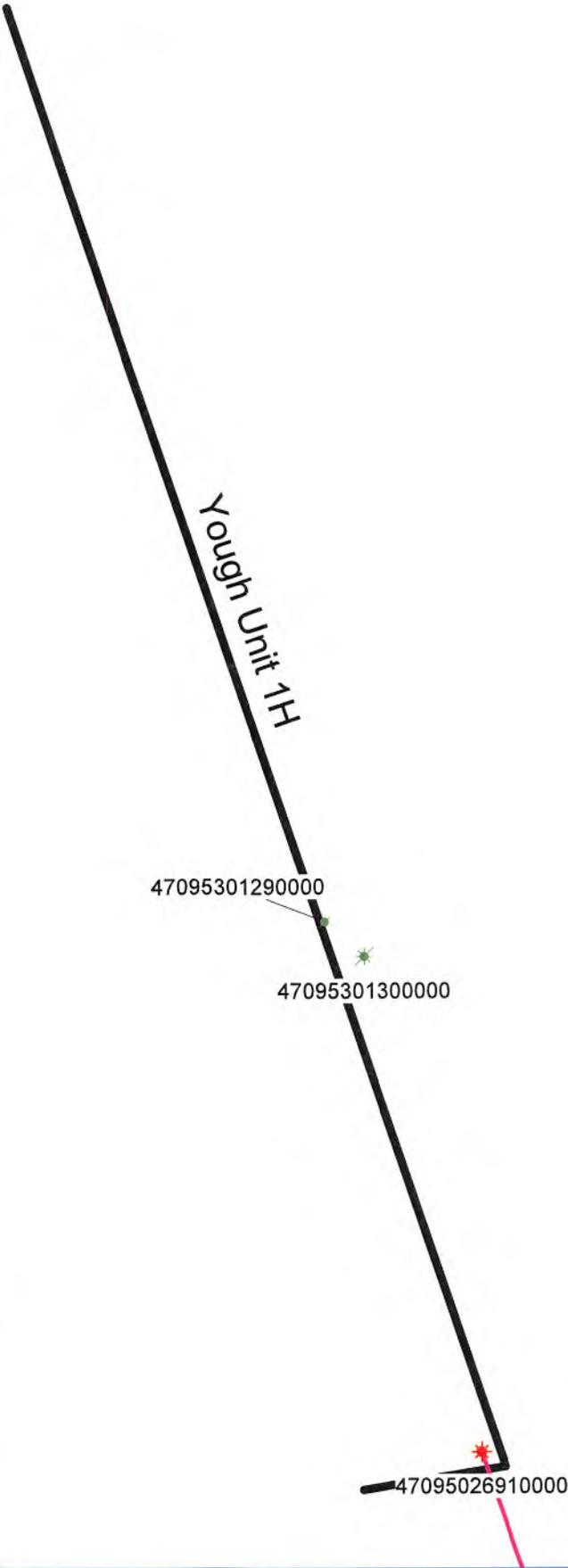
WV Department of
Environmental Protection

25) Proposed borehole conditioning procedures:

*Note: Attach additional sheets as needed.



PERMIT MODIFICATION API # 47-095-02723



Antero Resources Corporation

Yough Unit 1H - AOR



- WELL SYMBOLS
- Abandoned Oil and Gas Well
 - Gas Well
 - Plugged Oil Well

January 13, 2021

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Environmental Protection

| UWI (APINum) | Well Name | Well Number | Operator | Historical Operator |
|----------------|---------------|-------------|------------------------------|------------------------------|
| 47095301290000 | WM T LAZVER | 8 | RENO OIL CO | RENO OIL CO |
| 47095301300000 | ELIAS HAUGHT | 1 | RENO OIL CO | RENO OIL CO |
| 47095026910000 | Richmond Unit | 2 | ANTERO RESOURCES CORPORATION | ANTERO RESOURCES CORPORATION |

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| TD | Perforated Interval (shallowest, deepest) | Perforated Formation(s) | Producible Formation(s) not perf'd |
|--------|---|-------------------------|------------------------------------|
| 1,652 | Unknown | Big Injun | Keener, Alexander, Weir, Berea |
| 1,716 | Unknown | Big Injun | Keener, Alexander, Weir, Berea |
| 22,838 | 6874 - 22726 | Marcellus | N/A |

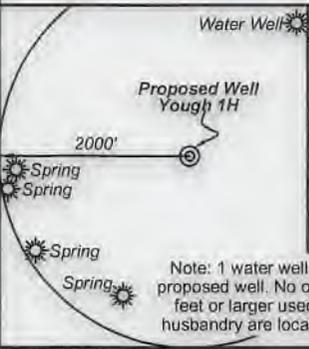
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 Office of Oil and Gas
 JAN 19 2021
 WV Department of
 Environmental Protection

Antero Resources
Well No. Yough 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.

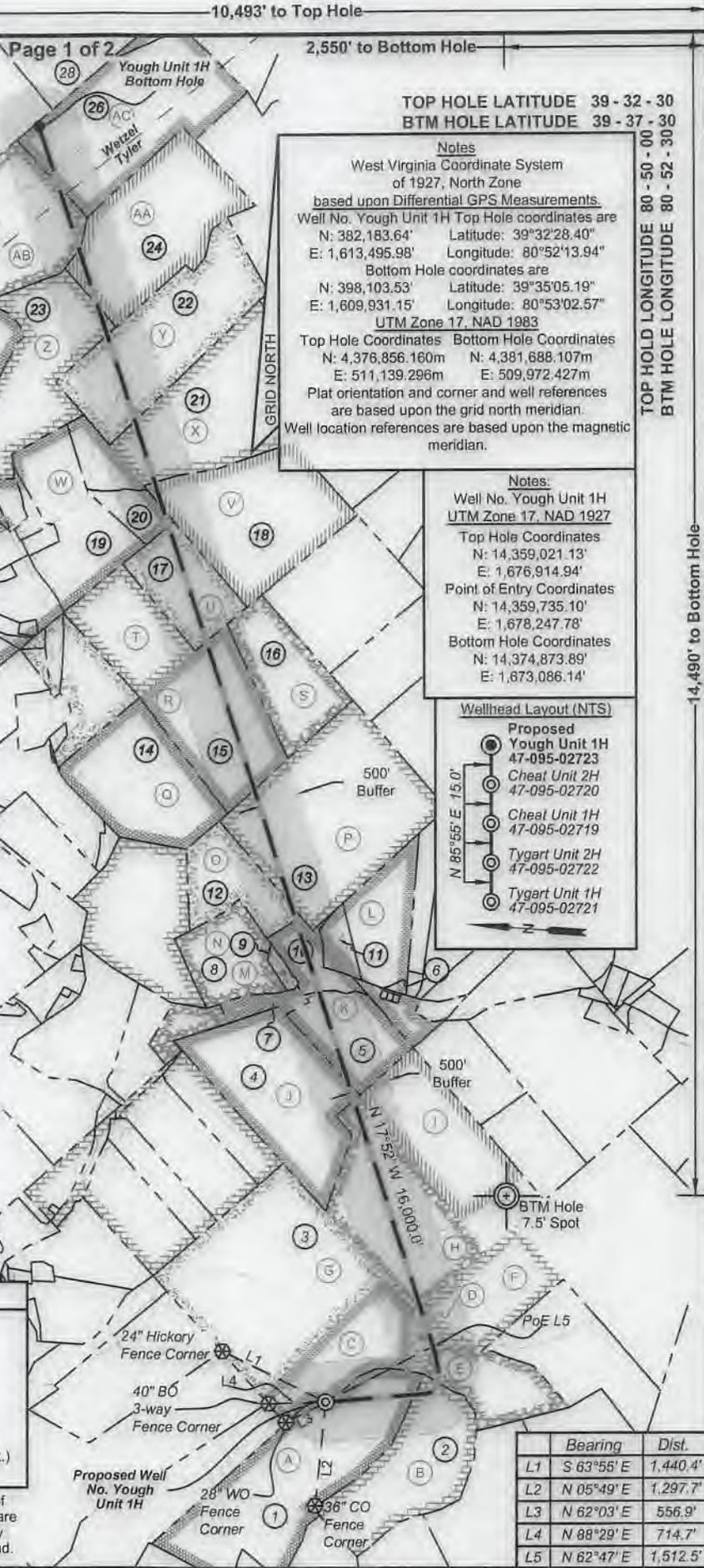
Bradley D. Miller
 Bradley D. Miller, P.S. 2167



Legend

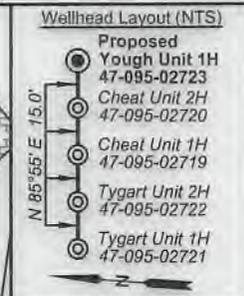
- Proposed gas well
- Monument, as noted
- Existing Well, as noted
- Creek or Drain
- Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)
- County Line

Note: 1 water wells and 4 springs 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.



Notes
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Yough Unit 1H Top Hole coordinates are
 N: 382,183.64' Latitude: 39°32'28.40"
 E: 1,613,495.98' Longitude: 80°52'13.94"
 Bottom Hole coordinates are
 N: 398,103.53' Latitude: 39°35'05.19"
 E: 1,609,931.15' Longitude: 80°53'02.57"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,376,856.160m N: 4,381,688.107m
 E: 511,139.296m E: 509,972.427m
 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. Yough Unit 1H UTM Zone 17, NAD 1927
 Top Hole Coordinates
 N: 14,359,021.13'
 E: 1,676,914.94'
 Point of Entry Coordinates
 N: 14,359,735.10'
 E: 1,678,247.78'
 Bottom Hole Coordinates
 N: 14,374,873.89'
 E: 1,673,086.14'



| Bearing | Dist. |
|---------------|----------|
| L1 S 63°55' E | 1,440.4' |
| L2 N 05°49' E | 1,297.7' |
| L3 N 62°03' E | 556.9' |
| L4 N 88°29' E | 714.7' |
| L5 N 62°47' E | 1,512.5' |

FILE NO: 832-54-E-19
 DRAWING NO: Yough Unit 1H BHL MOD
 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: December 17 2020
 OPERATOR'S WELL NO. Yough 1H
 API WELL NO
 47 - 095 - 02723
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,126' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Top Hole:Porter Falls
 DISTRICT: Ellsworth/Magnolia COUNTY: Bottom Hole:Wetzel
 SURFACE OWNER: Patricia Ann Heintzman ACREAGE: 73.26
 ROYALTY OWNER: Patricia Ann Heintzman; Nina & Phillip Whitefield; Nina A. Whitefield; Larry R. & Kim M. Henthorn; LEASE NO: ACREAGE: 7,000' TVD
 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: 26,500' 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



| ID | TM/Par | Owner | Bk/Pg | Acres |
|----|--------|-------------------------------|---------|--------|
| 1 | 10-2 | Patricia Ann Heintzman | W13/384 | 73.26 |
| 2 | 10-3 | Kevin S. & Melinda S. Goff | 597/808 | 53.75 |
| 3 | 6-36 | Dennis & Clista Heintzman | 297/640 | 417.60 |
| 4 | 6-24 | Harold Skinner | 204/595 | 62.18 |
| 5 | 6-25.2 | Kevin Lee Fletcher | 328/723 | 32.00 |
| 6 | 6-17.3 | Tracy Postlewait | 354/74 | 3.00 |
| 7 | 6-25.1 | Kevin Lee Fletcher | 328/723 | 5.76 |
| 8 | 6-16.4 | Michael L. Roberts | 407/45 | 27.74 |
| 9 | 6-16.5 | James M. & Sherry Starkey | 344/785 | 24.44 |
| 10 | 6-25 | William L. McClain | 253/323 | 11.87 |
| 11 | 6-17 | William McClain | 297/87 | 10.24 |
| 12 | 6-16.5 | James M. & Sherry Starkey | 344/785 | 24.44 |
| 13 | 6-6 | Gary A. & Penny K. Midcap | 301/265 | 100.00 |
| 14 | 6-4 | James D. Vancamp, et al | W38/144 | 46.76 |
| 15 | 6-5 | Gary A. & Penny K. Midcap | 301/265 | 75.55 |
| 16 | 3-32 | Gary A. & Penny K. Midcap | 301/265 | 38.09 |
| 17 | 3-42 | Rosalie B. Henry | 362/339 | 27.00 |
| 18 | 3-24 | Gary A. & Penny K. Midcap | 301/265 | 66.50 |
| 19 | 3-40 | Rosalie Henry | 170/006 | 46.21 |
| 20 | 3-41 | Gary A. & Penny K. Midcap | 296/518 | 7.00 |
| 21 | 3-18 | Gary Midcap | 322/108 | 80.33 |
| 22 | 3-13 | Lomax R. Kunkel | 297/692 | 63.50 |
| 23 | 3-12 | Lomax R. Kunkel | 297/692 | 57.51 |
| 24 | 3-8 | Steven D. & Brenda M. Higgins | 313/623 | 67.00 |
| 25 | 16-65 | Kenneth W. & Norma A. Headley | 355/347 | 58.60 |
| 26 | 16-67 | Robert D. Wetzel | 404/372 | 82.06 |
| 27 | 16-59 | Kenneth W. & Norma A. Headley | 355/347 | 47.75 |
| 28 | 16-61 | Kenneth W. & Norma A. Headley | 355/347 | 41.75 |

| Leases | |
|--------|---------------------------------|
| A | Patricia Ann Heintzman |
| B | Nina & Phillip Whitefield |
| C | Norma Smith |
| D | BRC Appalachian Minerals I, LLC |
| E | Nina A. Whitefield |
| F | Larry R. and Kim M. Henthorn |
| G | Dennis R. Heintzman, et ux |
| H | BRC Appalachian Minerals I, LLC |
| I | BRC Appalachian Minerals I, LLC |
| J | Harold Skinner |
| K | Antero Minerals, LLC |
| L | Larry F. Hughes |
| M | Judy P. Meyers |
| N | Brenda L. Martin |
| O | Judy P. Meyers |
| P | Gary A. Midcap, et ux |
| Q | James D. VanCamp, et al |
| R | James D. VanCamp, et al |
| S | James D. VanCamp, et al |
| T | Penny G. Bond |
| U | Linda Allen |
| V | John W. Bucher |
| W | James D. VanCamp, et al |
| X | Gary A. & Penny K. Midcap |
| Y | Lowmax R. Kunkel |
| Z | Lowmax R. Kunkel |
| AA | Joel Potts III |
| AB | BRC Appalachian Minerals, I LLC |
| AC | Robert D. Wetzel |
| AD | OPEN |

FILE NO: 832-54-E-19
 DRAWING NO: Yough Unit 1H BHL MOD
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Harrisville, WV

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 47 - 095 - 02723
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 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: As-Built 1,126' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Top Hole:Porter Falls
 BTM Hole:Paden City

DISTRICT: Ellsworth/Magnolia COUNTY: Top Hole Tyler 82.06;
 BTM Hole Wetzel 76.25; 53.75; 30; 58.6;

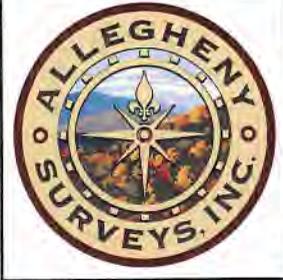
SURFACE OWNER: Patricia Ann Heintzman ACREAGE: 73.26 67; 60; 28.8375; 48; 67;

ROYALTY OWNER: Patricia Ann Heintzman; Nina & Phillip Whitefield; Nina A. Whitefield; Larry R. & Kim M. Henthorn; LEASE NO: ACREAGE: 62.18; 59.75; 63.3125

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 7,000' TVD

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 26,500' MD

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BTM Hole Wetzel 67; 60; 28.8375; 48; 67;
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 86.5; 151.08; 162.125;
 62.18; 59.75; 63.3125

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 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313

10,493' to Top Hole

2,550' to Bottom Hole

Page 1 of 2

Antero Resources
Well No. Yough 1H
BHL MOD
Antero Resources Corporation



TOP HOLE LATITUDE 39 - 32 - 30
BTM HOLE LATITUDE 39 - 37 - 30

Notes
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
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TOP HOLE LONGITUDE 80 - 50 - 00
BTM HOLE LONGITUDE 80 - 52 - 30

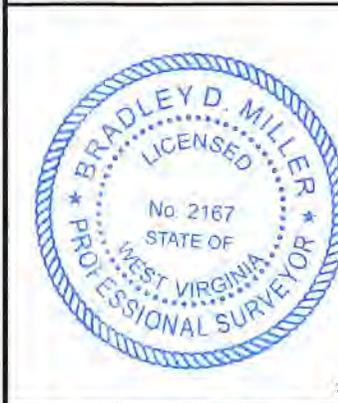
162' to Top Hole

14,490' to Bottom Hole

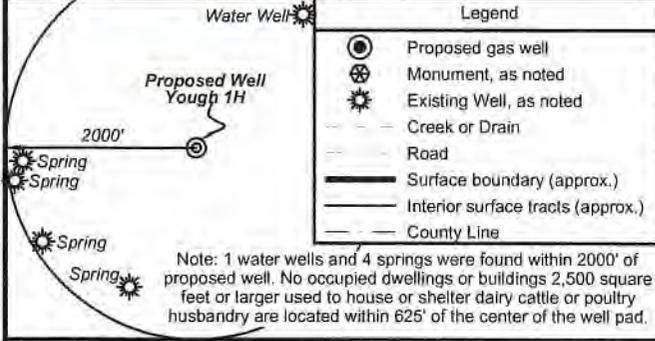
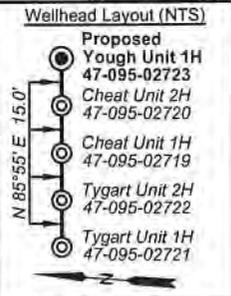


I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Bradley D. Miller
Bradley D. Miller, P.S. 2167



Notes:
Well No. Yough Unit 1H
UTM Zone 17, NAD 1927
Top Hole Coordinates
N: 14,359,021.13'
E: 1,676,914.94'
Point of Entry Coordinates
N: 14,359,735.10'
E: 1,678,247.78'
Bottom Hole Coordinates
N: 14,374,873.89'
E: 1,673,086.14'



| | Bearing | Dist. |
|----|------------|----------|
| L1 | S 63°55' E | 1,440.4' |
| L2 | N 05°49' E | 1,297.7' |
| L3 | N 62°03' E | 556.9' |
| L4 | N 88°29' E | 714.7' |
| L5 | N 62°47' E | 1,512.5' |

FILE NO: 832-54-E-19
DRAWING NO: Yough Unit 1H BHL MOD
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: December 17 20 20
OPERATOR'S WELL NO. Yough 1H
API WELL NO
47 - 095 - 02723
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: As-Built 1,126' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Top Hole:Porter Falls
DISTRICT: Ellsworth/Magnolia COUNTY: Top Hole Tyler 82.06;
SURFACE OWNER: Patricia Ann Heintzman Robert D. Wetzel; Gary A. & Penny K. Midcap; Harold Skinner; Joel Potts, III; Lomax R. Kunkel (2); James D. VanCamp, et al (2); Linda Allen; John W. Bucher; Judy P. Meyers; BRC Appalachian Minerals I, LLC (3); Antero Minerals, LLC; Gary A. Midcap, et ux. 76.25; 53.75; 30; 58.6; 67; 60; 28.8375; 48; 67; 100; 24.44; 48.5; 27; 66.5; 151.08; 162.125; 62.18; 59.75; 63.3125
ROYALTY OWNER: Patricia Ann Heintzman; Nina & Phillip Whitefield; Nina A. Whitefield; Larry R. & Kim M. Henthorn; LEASE NO: ACREAGE: 73.26
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 7,000' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 26,500' 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

WW-6A1

Operator's Well Number Yough Unit 1H

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>Patricia Ann Heintzman Lease</u> Patricia Ann Heintzman | Antero Resources Corporation | 1/8+ | 0594/0309 |
| <u>Nina & Philip Whitefield Lease</u> Nina & Philip Whitefield | Antero Resources Corporation | 1/8+ | 0549/0720 |
| <u>Nina A. Whitefield Lease</u> Nina A. Whitefield | Antero Resources Corporation | 1/8+ | 0504/0345 |
| <u>BRC Appalachian Minerals I LLC Lease (TM 6 PCL 36)</u> BRC Appalachian Minerals I LLC Statoil USA Onshore Properties EQT Production Company | Statoil USA Onshore Properties EQT Production Company Antero Resources Corporation | Assignment Assignment Assignment | 0378/0764 0539/0239 0663/0001 |
| <u>Larry R. & Kim M. Henthorn Lease</u> Larry R. & Kim M. Henthorn | Antero Resources Corporation | 1/8+ | 0572/0349 |
| <u>BRC Appalachian Minerals I LLC Lease (TM 10 PCL 3)</u> BRC Appalachian Minerals I LLC Statoil USA Onshore Properties EQT Production Company | Statoil USA Onshore Properties EQT Production Company Antero Resources Corporation | Assignment Assignment Assignment | 0378/0764 0539/0239 0663/0001 |
| <u>Harold Skinner Lease</u> Harold Skinner | Antero Resources Corporation | 1/8+ | 0576/0102 |
| <u>Antero Minerals LLC Lease</u> Antero Minerals LLC | Antero Resources Corporation | 1/8+ | 0067/0486 |
| <u>Judy P. Meyers Lease</u> Judy P. Meyers | Antero Resources Corporation | 1/8+ | 0002/0044 |
| <u>Gary A. Midcap et ux Lease</u> Gary A. Midcap et ux | Antero Resources Corporation | 1/8+ | 0070/0182 |
| <u>James D. Vancamp et al Lease (TM 6 PCL 3)</u> James D. Vancamp et al Antero Resources Appalachian Corporation | Antero Resources Appalachian Corporation Antero Resources Corporation | 1/8+ Name Change | 0404/0380 Exhibit 1 |
| <u>Linda Allen Lease</u> Linda Allen | Antero Resources Corporation | 1/8+ | 0411/0711 |

RECEIVED
Office of Oil and Gas
JAN 19 2021
WV Department of
Environmental Protection

*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.

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
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| Grantor, lessor, etc. | Grantee, lessee, etc. | Royalty | Book/Page |
|---|--|-------------|-----------|
| <u>James D. Vancamp et al Lease (TM 6 PCL 15)</u> | | | |
| James D. Vancamp et al | Antero Resources Appalachian Corporation | 1/8+ | 0404/0380 |
| Antero Resources Appalachian Corporation | Antero Resources Corporation | Name Change | Exhibit 1 |
| <u>John W. Bucher Lease</u> | | | |
| John W. Bucher | Antero Resources Corporation | 1/8+ | 0579/0254 |
| <u>Gary A. & Penny K. Midcap Lease</u> | | | |
| Gary A. & Penny K. Midcap | Antero Resources Corporation | 1/8+ | 0070/0182 |
| <u>Lomax R. Kunkel Lease (TM 3 PCL 12)</u> | | | |
| Lomax R. Kunkel | EQT Production Company | 1/8+ | 0605/0008 |
| EQT Production Company | Antero Resources Corporation | Assignment | 0663/0001 |
| <u>Lomax R. Kunkel Lease (TM 3 PCL 13)</u> | | | |
| Lomax R. Kunkel | EQT Production Company | 1/8+ | 0605/0008 |
| EQT Production Company | Antero Resources Corporation | Assignment | 0663/0001 |
| <u>Joel Potts III Lease</u> | | | |
| Joel Potts III | Antero Resources Corporation | 1/8+ | 0568/0827 |
| <u>BRC Appalachian Minerals I LLC Lease (TM 16 PCL 65)</u> | | | |
| BRC Appalachian Minerals I LLC | Statoil USA Onshore Properties | Assignment | 0378/0764 |
| Statoil USA Onshore Properties | EQT Production Company | Assignment | 0539/0239 |
| EQT Production Company | Antero Resources Corporation | Assignment | 0663/0001 |

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Office of Oil and Gas
JAN 19 2021
WV Department of
Environmental Protection

WW-6A1
(5/13)

Operator's Well No. Yough Unit 1H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
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| Lease Name or Number | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|-------------------------------|-----------------------|------------------------------|---------|-----------|
| <u>Robert D. Wetzel Lease</u> | Robert D. Wetzel | Antero Resources Corporation | 1/8+ | 0076/0499 |

*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

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JAN 19 2021
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 Resources Corporation
By: Tim Rady
Its: VP of Land

*Co-tenancy utilization – At least 7 mineral owners in tract. At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act.

Expedited Permit Modification

Received date: 1/19/21

Expedited Final Date: 2/18/21

Operator: Antero

Well Name: Yough 1H

Pad Name: EOK York

API: 95-02723

| | MODIFIED PERMIT | ORIGINAL PERMIT |
|----------------|-----------------|-----------------|
| TVD | 7000 ✓ | 7000 ✓ |
| TMD | 26500 ✓ | 9500 ← |
| HL | 16000 ✓ | 0 ← |
| FW | 125 | 125 ✓ |
| SW | 1703 | 1703 ✓ |
| COAL | 58 | 58 ✓ |
| CONDUCTOR | 90 | 90' ✓ |
| FRESHWATER | 300 | 300' ✓ |
| INTERMEDIATE 1 | 2500 | 2500' ✓ |
| INTERMEDIATE 2 | — | — |
| PRODUCTION | 26500 | 9500 ← |

Notes: Heitzman, Whitehead (2), BRC, Hawthorn

Updated AOK concluded

- | | | | |
|----------------|--------------|-------------|-------------|
| ✓ A P Heitzman | ✓ J Skinner | ✓ U Allen | ✓ Z Kunkel |
| ✓ B Whitefield | ✓ K Antero | ✓ W VanCamp | ✓ AA Dotts |
| ✓ E Whitefield | ✓ O Meyers | ✓ V Bucher | ✓ AB BRC |
| ✓ D BRC | ✓ F Hawthorn | ✓ P Midcap | ✓ X Midcap |
| ✓ H BRC | ✓ R VanCamp | ✓ Y Kunkel | ✓ AC Uetzel |

Cotnam