

### west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary www.dep.wv.gov

Wednesday, October 18, 2023 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for HOLTZ UNIT 2H

47-017-06963-00-00

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.

James A. Martin

Chief

Operator's Well Number: HOLTZ UNIT 2H

Farm Name: ANTERO RESOURCES CORPORATION

U.S. WELL NUMBER: 47-017-06963-00-00

Horizontal 6A New Drill

Date Modification Issued: 10/18/2023

Promoting a healthy environment.

WW-6B (04/15)

| API NO. 47-017              |             |
|-----------------------------|-------------|
| OPERATOR WELL NO. Hotel     | Jnit 2H MOD |
| Well Pad Name: Genevieve Pa |             |

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

| 1) Well Operate                | or: Antero    | Resources     | Corpore     | 4945070      | 62       | <b>_</b>         |            | West Union 7.5' |
|--------------------------------|---------------|---------------|-------------|--------------|----------|------------------|------------|-----------------|
|                                |               |               |             | Operator     |          | County           | District   | Quadrangle      |
| 2) Operator's V                | Vell Number   | : Holtz Uni   | 2H MOD      | ) v          | Vell Pac | l Name: Gene     | evieve Pad |                 |
| 3) Farm Name/                  | Surface Own   | ner: Antero   | Midstream   | ı, LLC Pub   | lic Roa  | d Access: W      | Route 18   | N               |
| 4) Elevation, cu               | irrent ground | d: 886'       | El          | evation, pro | oposed   | post-construct   | ion:       |                 |
| 5) Well Type                   | (a) Gas       | х             | Oil _       |              | Unde     | erground Stora   | ge         |                 |
|                                | Other         |               |             |              |          |                  |            | <del></del> _   |
|                                | (b)If Gas     | Shallow       | X           | D            | eep      |                  |            | •               |
|                                |               | Horizontal    | <u>x</u>    | <del></del>  |          |                  |            |                 |
| 6) Existing Pad                | l: Yes or No  | Yes           |             |              |          | _                |            |                 |
| 7) Proposed Ta<br>Marcellus Sh |               |               |             |              |          | and Expected F   |            |                 |
| 8) Proposed To                 | tal Vertical  | Depth: 700    | 00, L/D     |              |          |                  |            |                 |
| 9) Formation a                 |               |               | Marcellus   | 5            |          |                  |            |                 |
| 10) Proposed T                 | otal Measur   | ed Depth:     | 18900' M    | ID           |          |                  |            | ·=·             |
| 11) Proposed F                 | Iorizontal Le | eg Length:    | 8670.5'     | _            |          |                  |            |                 |
| 12) Approxima                  | ate Fresh Wa  | iter Strata D | epths:      | 308', 521    | ļ'       |                  |            | <u>.</u> .      |
| 13) Method to                  | Determine F   | resh Water    | Depths:     | 47-017-02    | 319      |                  |            |                 |
| 14) Approxima                  | ite Saltwater | Depths: 1     | 468'        |              | -,       |                  |            |                 |
| 15) Approxima                  | ate Coal Sear | m Depths:     | None Ider   | ntified      |          |                  |            |                 |
| 16) Approxima                  |               |               |             |              | other):  | None Anticipa    | ated       |                 |
| 17) Does Propedirectly overly  | osed well loc | cation conta  | in coal sea |              |          |                  | o <u>X</u> |                 |
| (a) If Yes, pro                | ovide Mine l  | Info: Nam     | e:          |              |          |                  |            |                 |
| • • •                          |               | Dept          | h:          |              |          |                  |            |                 |
|                                |               | Sean          | n:          |              |          |                  |            | <u></u>         |
|                                |               | Own           | er:         |              |          |                  |            |                 |
|                                |               |               |             |              | Office   | e of Oil and Gas |            |                 |
|                                |               |               |             |              | Ŋſ       | T 16 2023        |            |                 |

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WW-6B (04/15) API NO. 47-017 OPERATOR WELL NO. Holtz Unit 2H MOD
Well Pad Name: Genevieve Pad

18)

## CASING AND TUBING PROGRAM

| TYPE         | Size<br>(in) | New<br>or<br>Used | Grade | Weight per ft.<br>(lb/ft) | FOOTAGE: For<br>Drilling (ft) | INTERVALS:<br>Left in Well<br>(ft) | CEMENT:<br>Fill-up<br>(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#                     | 571'                          | 571'                               | CTS, 595 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#                       | 18900'                        | 18900'                             | CTS, 3835 Cu. Ft                    |
| Tubing       | 2-3/8"       | New               | N-80  | 4.7#                      |                               |                                    |                                     |
| Liners       |              |                   |       |                           |                               |                                    |                                     |

Timed L. Dayrold 10-13-23

| TYPE         | Size (in) | Wellbore<br>Diameter (in) | Wall<br>Thickness<br>(in) | Burst Pressure<br>(psi) | Anticipated Max. Internal Pressure (psi) | Cement<br>Type | <u>Yield</u><br>(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                                     | Class G/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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WW-6B (10/14) API NO. 47-017 OPERATOR WELL NO. Holtz Unit 2H MOD
Well Pad Name: Genevieve Pad

| 19) Describe proposed well work, including the drilling and plugging back of any pilot | not noi | any p | 01 8 | back - | Jaailla | ı blı | and | drilling | the ! | meiuding | work. | well | ne proposed | i) Descr | 19) |
|--|---------|-------|------|--------|---------|-------|-----|----------|-------|----------|-------|------|-------------|----------|-----|
|--|---------|-------|------|--------|---------|-------|-----|----------|-------|----------|-------|------|-------------|----------|-----|

Drill, perforate, fracture a new vertical 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): 24.86 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 7.69 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 eir, 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.

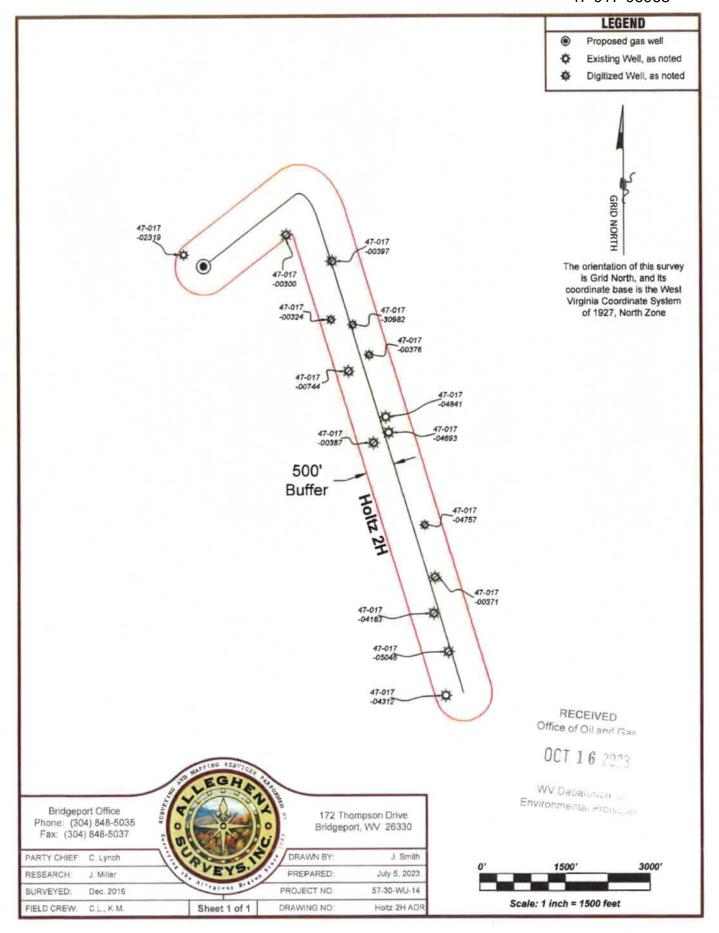
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\*Note: Attach additional sheets as needed.

OCT 16 2023

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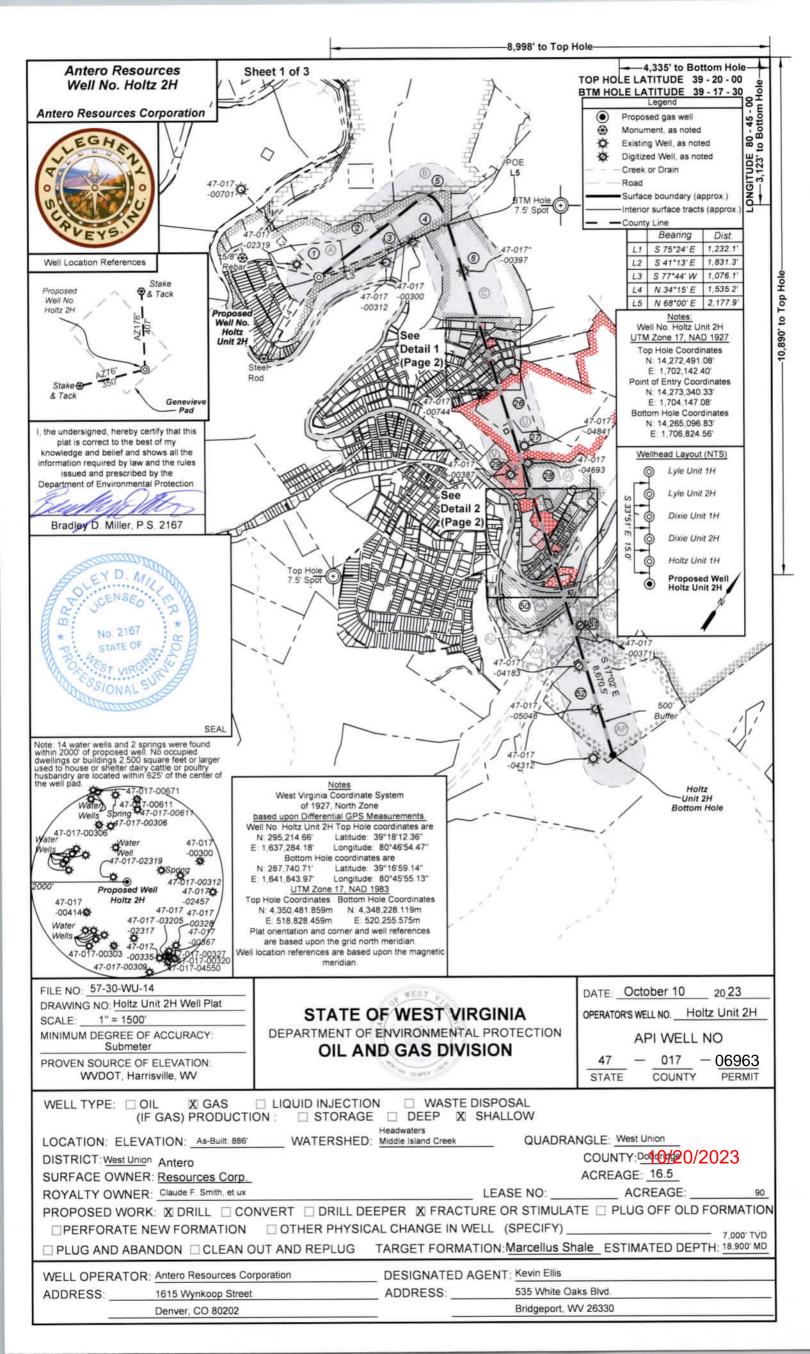
WV Department or Environmental Protection



| UWI (APMum)    | Well Name              | Well Number | Operator              | Historical Operator  | TD    | Perforated Interval (shallowest, deepest) | Perforated Formation(s)     | Producible Formation(s) not perf'd        |
|----------------|------------------------|-------------|-----------------------|----------------------|-------|---|-----------------------------|---|
| 47017023190000 | BETTY JANE LANGFITT    | 1           | PILLAR ENERGY LLC     | KEY OIL INC          | 5,241 | 5080 - 5146                               | Alexander                   | Warren, Speechly, Balltown, Alley, Benson |
| 47017003000000 | GLENN MAXON            | 1           | SIBERT & SMITH        | SIBERT & SMITH       | 1,930 |   | 8 fg Injun                  | Gordon, Beres                             |
| 47017003240000 | JAMES B HEFLIN         | 1           | UNION DRILLING CO     | UNION DRILLING CO    | 1,865 |   | Madon, Bit Injun            | Alexander, Seres                          |
| 47017007440000 | OTIS C BARKER ET AL    | 1           | DIE COLDMY DEV        | OLE COLONY DEV       | 2,050 |   | Maxton, Big Lime, Big Injun | Gordon, Beres                             |
| 47017003870000 | CHARLES CHEUVRONT HERS | 1           | GARRETSON & EDWARDS   | GARRETSON & EDWARDS  |       |   |                             |   |
| 47017041830000 | FARR CARCLYN TRUST     | 1           | HAYDEN HARPER ENR EA  | RARE EARTH MINERALS  | 5,251 |   | Warren, Benson, Alexander   | Gordon, Berea                             |
| 47017050480000 | GRIBBLE                | 1           | KEY OIL CO            | KEY OIL CO           | 2.753 | 1996 - 2664                               | Big Infun, Stuaw, Hampshire | Alexander, Gurdon, Berea                  |
| 47017043120000 | FARR C TRUST           | 4           | HARPER CROSBY HOLDING | RARE EARTH MINERALS  | 2,850 | 2720 - 2740                               | Gordon                      | Alexander, Berea                          |
| 47017003970000 | J M MCKINNEY ET UX     | 3           | SPENCER HUGH K ET AL  | SPENCER HUGH K ET AL | 2,100 |   | Big Indian                  | Alexander, Berea                          |
|                | JOHN ADAMS/ELI NUTTER  | 1           | UNKNOWH               | UNKNOWN              | 2,824 |   | Rig Injun, Squaw, Forth     | Gordon, Berea                             |
| 47017003760000 | TULA CHARTER           | 1           | POWELL KENNETH        | POWELL KENNETH       | 1,900 |   |                             | Berea                                     |
| 47017048410000 | HAUGHT                 | 2           | KEY DIL CO            | KEY OIL CO           | 2,863 | 2013 - 2718                               |                             | Serea                                     |
| 47017046930000 |                        | 1           | KEY DIL CO            | KEY OIL CO           | 5,368 | 3247 - 5219                               |                             | Alexander, Berea                          |
| 47017047570000 |                        | 2           |                       | KEY DIL CO           | 2,515 | 1662 - 2368                               |                             | Alexander, Berea                          |
| 47017003710000 |                        | 1           | TWIN J DRILLING       | TWIN J DRILLING      | 1,816 |   |                             | Alexander, Berea                          |

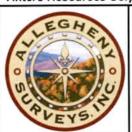
Office of Oil and Gas

Environmental Protection

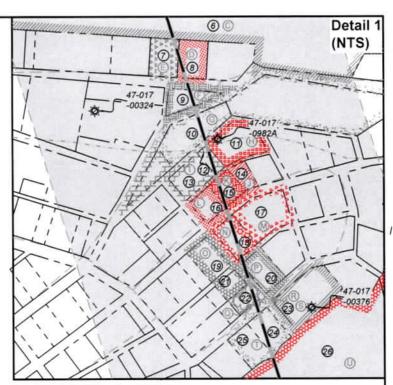


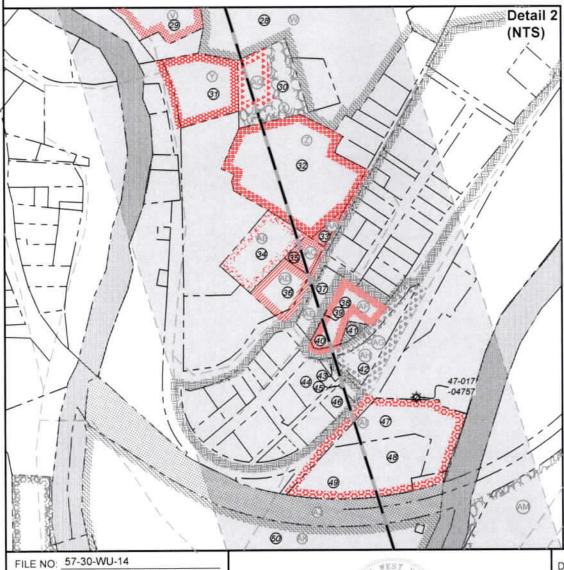
Antero Resources Well No. Holtz 2H

Antero Resources Corporation



Sheet 2 of 3





DRAWING NO: Holtz Unit 2H Well Plat

SCALE: 1" = 1500'

MINIMUM DEGREE OF ACCURACY:
Submeter

PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

Denver, CO 80202

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

OPERATOR'S WELL NO. Holtz Unit 2H

API WELL NO

47 — 017 — 06963

STATE COUNTY PERMIT

Bridgeport, WV 26330

| ACARAM DAGARIN ACCORDINANTA INTERCENTA |                                    |                             |                 | ATMINISTER CEASURE IN | 10.57 E-12.50 F-10.10 |
|--|------------------------------------|-----------------------------|-----------------|-----------------------|---|
|  | ☐ LIQUID INJECTION ON: ☐ STORAGE ☐ | □ WASTE DISPO<br>DEEP 🏿 SHA |                 |                       |   |
| LOCATION: ELEVATION: As-Built: 886     | WATERSHED: Headw                   |                             | QUADRAN         | GLE: West Union       |   |
| DISTRICT: West Union Antero            |                                    |                             | (               | COUNTY: 04040 0 0 / 2 | 2023  |
| SURFACE OWNER: Resources Corp.         |                                    |                             | A               | CREAGE: 16.5          | ı   |
| ROYALTY OWNER: Claude F. Smith, et ux  |                                    | LEA                         | ASE NO:         | ACREAGE:              | 90  |
| PROPOSED WORK: X DRILL CO              | NVERT   DRILL DEEPER               | X FRACTURE                  | OR STIMULATE    | ☐ PLUG OFF OLD F      | FORMATION   |
| □ PERFORATE NEW FORMATION              | OTHER PHYSICAL CH                  | IANGE IN WELL               | (SPECIFY)       |                       | 7.000' TVD  |
| ☐ PLUG AND ABANDON ☐ CLEAN C           | OUT AND REPLUG TARG                | SET FORMATION               | :Marcellus Shal | e_ESTIMATED DEPT      |   |
| WELL OPERATOR: Antero Resources Con    | rporation DES                      | SIGNATED AGEN               | T: Kevin Ellis  |                       |   |
| ADDRESS: 1615 Wynkoop Street           |                                    | DRESS:                      | 535 White Oaks  | Blvd.                 |   |

Antero Resources Corporation



|    | Leases                          |
|----|---------------------------------|
| A  | Claude F. Smith, et ux          |
| В  | G. Frank Ash, et ux             |
| C  | John F. Curran, II              |
| D  | Pooled Tract                    |
| E  | Roy J. Hartley                  |
| F  | Roger Nicholson                 |
| G  | Elijah B. Ross                  |
| Н  | Pooled Tract                    |
| 1  | Joshua C. Cutright &            |
|    | Mariah S. Coffman               |
| J  | Pooled Tract                    |
| K  | Darlene McKinney                |
| L  | Beth Ann Rogers                 |
| М  | Melissa Sutton                  |
| N  | Pooled Tract                    |
| 0  | Karen A. Shepherd               |
| Р  | Henry Ahouse, et ux             |
| Q  | Viginia L. Nicholson            |
| R  | Richard C. McMillan, et ux      |
| S  | James E. Sandstrom              |
| Т  | Jennifer L. Landers             |
| U  | Earnest Spence Shannon, et al.  |
| V  | Peter B. Ireland                |
| W  | Frank Holtz, Jr.                |
| X  | Sherri Lee Dixon                |
| Y  | Pooled Tract                    |
| Z  | Pooled Tract                    |
| AA | Pooled Tract                    |
| AB | M.D.S. Inc.                     |
| AC | Pooled Tract                    |
| AD | Pooled Tract                    |
| AE | Franklin Maxwell Heirs, LP No.1 |
| AF | Edwina Gains, et vir            |
| AG | Richard Jr.& Jazmane Plauger    |
| AH | Frank Blandori                  |
| Al | Pooled Tract                    |
| AJ | WV State Rail Authority         |
| AK | Timothy C. Phillips             |
| AL | WVDNR                           |
| AM | WV Department of Highways       |
| AN | R.S. Maxwell &                  |
|    | Clarence Sigley, Sr., et ux     |
| AP | Carolyn E. Farr Trust           |
| AQ | Pooled Tract                    |

| ID | TM-Par  | Owner  | Bk/Pg     | Acres |
|----|---------|--|-----------|-------|
| 1  | 11-3    | Antero Resources Corp.   | 431/528   | 16.50 |
| 2  | 11-4    | Paul D. & Sharon K. Weekley  | 186/743   | 17.30 |
| 3  | 11-5    | Barbara Jean Travis & Sharon K. Weekley                            | WB62/674  |       |
| 4  | 7-28    | Barbara Jean Travis & Sharon K. Weekley                            | WB62/674  | 17.00 |
| 5  | 7-27    | Barbara Jean Travis & Sharon K. Weekley                            | WB62/674  | 69.69 |
| 6  | 11-7    | Paul David, II & Linda Nicole Weekley                              | 250/445   | 41.16 |
| 7  | 1-5     | Roy J. & Renelda Hartley   | 303/178   | 0.25  |
| 8  | 1-6     | Deborah C. Robinson & Robert F. Fetty                              | 265/402   | 0.25  |
| 9  | 1-12    | Roger Nicholson  | 309/630   | 0.42  |
| 10 | 1-15    | Elijah B. Ross   | 361/225   | 0.47  |
| 11 | 1-17    | William G. Montgomery  | 471/568   | 0.33  |
| 12 | 1-16    | William G. Mongomery   | 471/568   | 0.13  |
| 13 | 1-45    | William G. Mongomery   | 471/568   | 0.23  |
| 14 | 1-47.1  | Charles R. Hughes  | WB103/508 | 0.09  |
| 15 | 1-47    | Darlene McKinney & Tom Doak  | AB55/162  | 0.16  |
| 16 | 1-46    | Darlene McKinney & Tom Doak  | AB55/162  | 0.16  |
| 17 | 1-58    | Melissa Sutton   | 356/148   | 0.43  |
| 18 | 1-56    | Diana M. Grandt  | 306/50    | 0.22  |
| 19 | 1-54    | Karen A. Shepherd  | WB72/285  | 0.22  |
| 20 | 1-55    | Henry & Jan Ahouse   | 251/65    | 0.22  |
| 21 | 1-53    | David Ford King  | 512/371   | 0.11  |
| 22 | 1-53.1  | Ronald S. Nicholson  | 469/533   | 0.11  |
| 23 | 1-62    | John M., Sharon L. & Matthew Smith                                 | 469/76    | 0.44  |
|    | 1-62    | Jennifer L. Landers  | AB52/466  | 0.44  |
| 24 |         |  | AB52/466  | 0.22  |
| 25 | 1-64    | Jennifer L. Landers  | 342/354   | 10.99 |
| 26 | 11-21   | Justin E. & Melissa Ann Holtz                                      | 342/354   | 23.77 |
| 27 | 11-23   | Justin E. & Melissa Ann Holtz  Justin E. Holtz & Melissa Ann Megna |           | 13.66 |
| 28 | 11-42   | David Bowyer, et al  | 259/269   |       |
| 29 | 4-97    | Elizabeth G. Leggett   | 315/207   | 3,50  |
| 30 | 4-8     |  | 371/413   | 0.75  |
| 31 | 4-96    | Mary Ann & Teigh Byrne   | 236/606   |       |
| 32 | 4-10    | Odd Fellows Cemetery   | /         | 2.55  |
| 33 | 4-12    | William C. Davis & Robert K. Davis                                 | 302/1     | 0.08  |
| 34 | 4-11    | Catholic Cemetery  | /         | 0.79  |
| 35 | 4-12.2  | Richard G. & Linda K. Kinney                                       | 171/385   | 0.19  |
| 36 | 4-12.1  | Joshua C. Howell   | 278/146   | 0.35  |
| 37 | 4-13    | David N. & Linda L. Bonnell  | 158/702   | 0.37  |
| 38 | 4-14.4  | Tamara L. & Robert F. Henderson                                    | 279/451   | 0.33  |
| 39 | 4-14.2  | Richard Plauger, Jr. & Jazmane Plauger                             | 244/566   | 0.004 |
| 40 | 4-14    | Richard Plauger, Jr. & Jazmane Plauger                             | 244/566   | 0.19  |
| 41 | 4-14.3  | Richard Plauger Jr. & Jazmane Plauger                              | 364/419   | 0.07  |
| 42 | 4-32    | Frank & Jessica Blandori   | 362/538   | 0.53  |
| 43 | 4-40    | Deloris F. Kimball   | AP40/631  | 0.08  |
| 44 | 4-39    | Bradley S. & Joyce A. Lapo   | 272/633   | 0.40  |
| 45 | 4-41    | Frank & Jessica Blandori   | 273/416   | 0.05  |
| 46 | 4-43    | Dennis C. Griffin, Jr.   | AB58/86   | 0.12  |
| 47 | 11-67.2 | Town of West Union   | 360/517   | 1.12  |
| 48 | 11-67.3 | Town of West Union   | 202/184   | 0.87  |
| 49 | 11-67.1 | Town of West Union   | 202/184   | 0.60  |
| 50 | 11-77   | Board of Education   | 94/229    | 10.26 |
| 51 | 11-80   | Karen M. Ireland Family Limited Partnership                        | 235/3     | 105.3 |
| 52 | 11-81   | Carolyn E. Farr Irrevocable Trust                                  | 221/627   | 41.74 |

| FILE NO: | 57-30-WU-14                                   |
|----------|---|
|          | G NO: Holtz Unit 2H Well Plat                 |
| SCALE:   | 1" = 1500'                                    |
| MINIMUN  | DEGREE OF ACCURACY:<br>Submeter               |
|          | SOURCE OF ELEVATION:<br>WDOT, Harrisville, WV |

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

WEST

| DATE: _ | Octobe     | er 10 | 2023          |
|---------|------------|-------|---------------|
| OPERATO | R'S WELL N | NO    | Holtz Unit 2H |
|         | API        | WEL   | L NO          |
| 47      | _          | 017   | _ 06963       |

COUNTY

PERMIT

STATE

| WELL TYPE: ☐ OIL   |                                   | DISPOSAL<br>SHALLOW |                                    |            |
|--|-----------------------------------|---------------------|------------------------------------|------------|
| LOCATION: ELEVATION: As-Built: 886' WATERSHED: DISTRICT: West Union Antero | Headwaters<br>Middle Island Creek | QUADRA              | NGLE: West Union COUNTY: Dod 10/12 | 023        |
| SURFACE OWNER: Resources Corp.   |                                   |                     | ACREAGE: 16.5                      |            |
| ROYALTY OWNER: Claude F. Smith, et ux                                      |                                   | LEASE NO:           | ACREAGE:                           | 90         |
| PROPOSED WORK: X DRILL CONVERT DRILL DE                                    | EPER X FRACT                      | URE OR STIMULA      | TE   PLUG OFF OLD F                | ORMATION   |
| □ PERFORATE NEW FORMATION □ OTHER PHYSICA                                  | AL CHANGE IN V                    | VELL (SPECIFY)_     |                                    | 7.000' TVD |
| $\square$ PLUG AND ABANDON $\square$ CLEAN OUT AND REPLUG                  | TARGET FORM                       | ATION: Marcellus St | nale_ESTIMATED DEPTI               |            |
| WELL OPERATOR: Antero Resources Corporation                                | DESIGNATED                        | AGENT: Kevin Ellis  |                                    |            |
| ADDRESS: 1615 Wynkoop Street   | ADDRESS:                          | 535 White O         | aks Blvd.                          |            |
| Denver, CO 80202   |                                   | Bridgeport, V       | VV 26330                           |            |

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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, et                | c.                             | Royalty    | Book/Page    |
|--|------------------------------------|--------------------------------|------------|--------------|
| A: Claude F. Smith, et ux Lease                  |                                    |                                |            |              |
| Claude F. Smith                                  | Key Oil Company                    |                                | 1/8        | 104/704      |
| Key Oil Company                                  | XOIL Drilling Partners LP          |                                | Assignment | 105/566      |
| XOIL Drilling Partners LP                        | XPLOR Corporation                  |                                | Assignment | 146/649      |
| XPLOR Corporation                                | Venus Exploration                  |                                | Merge      | wv sos       |
| Venus Exploration Inc                            | Allegheny Interests Inc            |                                | Assignment | 184/512      |
| Allegheny Interests Inc                          | Rubin Resources Inc                |                                | Assignment | 187/685      |
| Rubin Resources Inc                              | Petro Edge Energy LLC              |                                | Assignment | 230/666      |
| Petro Edge Energy LLC                            | Statoil USA Onshore Properties Inc |                                | Assignment | 285/71       |
| Statoil USA Onshore Properties Inc               | EQT Production Company             |                                | Assignment | 428/356      |
| EQT Production Company                           | Antero Resources Corporation       |                                | Agreement  | 385/268      |
| C: John F. Curran, II Lease:                     |                                    |                                |            |              |
| John F. Curran, II                               | Antero Resources Corporation       |                                | 1/8+       | 463/171      |
| E: Roy J. Hartley Lease:                         |                                    |                                |            |              |
| Roy J. Hartley                                   | Antero Resources Corporation       |                                | 1/8+       | 511/76       |
| D: Pooled Tract                                  |                                    |                                |            |              |
| F: Roger Nicholson Lease:                        |                                    |                                |            |              |
| Roger Nicholson                                  | Antero Resources Corporation       |                                | 1/8        | 457/91       |
| G: Elijah B. Ross Lease:                         |                                    |                                |            |              |
| Elijah B. Ross                                   | Antero Resources Corporation       |                                | 1/8        | 504/447      |
| H: Pooled Tract                                  |                                    |                                |            |              |
| I: Joshua C. Cutright & Mariah S. Coffman Lease: | A-1 B                              |                                | 1/0:       | 544/200      |
| Joshua C. Cutright and Mariah S. Coffman         | Antero Resources Corporation       |                                | 1/8+       | 511/309      |
| K. Darlene Mckinney Lease. Darlene McKinney      | Antero Resources Corporation       |                                | 1/84       | 520/484      |
|  |                                    |                                |            | W 1557 155 4 |
| L: Beth Ann Rogers Lease:<br>Beth Ann Rogers     | Antero Resources Corporation       |                                | 1/8+       | 465/281      |
| M: Melissa Sutton Lease:                         |                                    |                                | _          |              |
| Melissa Sutton                                   | Antero Resources Corporation       |                                | 1/84       | 511/302      |
| N: Pooled Tract                                  |                                    |                                |            |              |
| P: Henry Ahouse, et ux Lease                     | 2.0 21 32 30                       |                                | 278        |              |
| Henry Ahouse, et ux                              | Antero Resources Corporation       |                                | 1/8+       | 511/306      |
| O: Karen A. Shepherd Lease                       | Antone Developer Community         | The second of the second       | 1/0.       | 470/107      |
| Karen A. Shepherd                                | Antero Resources Corporation       | RECEIVED Office of Oil and Gas | 1/8+       | 479/197      |
|  |                                    |                                |            |              |
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| Grantor, lessor, etc.  | Grantee, lessee,  | etc.                           | Royalty                            | Book/Page                          |
|--|---|--------------------------------|------------------------------------|------------------------------------|
| Q: Virginia L. Nicholson Lease<br>Virginia L Nicholson   | Antero Resources Corporation  |                                | 1/8+                               | 475/557                            |
| T: Jennifer L. Landers <u>Lease</u><br>Jennifer L. Landers   | Antero Resources Corporation  |                                | 1/8+                               | 512/624                            |
| U: Earnest Spence Shannon, et al Lease<br>Fatnest Spence Shannon, et al<br>Duncan Sartan<br>D. Lee Jones                             | Duncan Sartan<br>Dr. Lee Jones<br>Bayard Thiuman Cowper III, and<br>Cowper  | Roscoé B. G.                   | 178<br>Assignment<br>Atsignment    | 73/285<br>74/467<br>98/111         |
| Sayard Thurman Cowper III, and Roscoe B. G. Cowpei aWrence H. Abregg logh K. Spencer Ronald B. Spencer and Rhonda S. Rossetti a. co. | Hugh K. Spencer<br>Ronald B: Spencer and Rhonda S:<br>trustees of the Hugh K. Spencer !<br>Spencer Enterprises, LLC |                                | Assignment Will Book Assignment    | 98/235<br>33/68                    |
| trustees of the Hugh K. Spencer Marital B Trust<br>Spencer Enterprises, LLC<br>Antero Resources Appalachian Corporation              | Antero Resources Appalachian Co<br>Antero Resources Corporation   | occoration                     | Assignment<br>Merger               | 264/99<br>46/523                   |
| /: Peter B. Ireland Lease<br>Peter B. Ireland  | Antero Resources Corporation  |                                | 1/8+                               | 501/380                            |
| W: Frank Holtz, Jr. Lease<br>Frank Holtz, Jr<br>Key Oil Company<br>Antero Resources Appalachian Corporation                          | Key Oil Company<br>Antero Resources Appalachian Co<br>Antero Resources Corporation                                  | orporation                     | 1/8<br>Assignment<br><b>Merger</b> | 193/12<br>276/526<br><b>46/523</b> |
| AQ. Pooled Tract   |   |                                |                                    |                                    |
| K: Sherri Lee Dixon Lease<br>Sherri Lee Dixon  | Antero Resources Corporation  |                                | 1/8+                               | 519/53                             |
| Z: Pooled Tract<br>AB: M.D.S joc. Lease<br>M.D.S. Inc.   | Antero Resources Corporation  |                                | 1/8+                               | 458/130                            |
| AC: Pooled Tract   |   |                                |                                    |                                    |
| AD: Pooled Trad  AE: Franklin Maxwell Heirs, LP No. 1 Lease Franklin Maxwell Heirs, LP No. 1   | Antero Resources Corporation  | RECEIVED Office of Oil and Gas | 1/8+                               | 484/158                            |
| AF: Edwina Galns, et vir Lease<br>Edwina Gains, et vir   | Amero Resources Corporation   | OCT 16 2023                    | 1/84                               | 522/78                             |
|  |   | WV Department of               |                                    | _                                  |

Environmental Protection

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|--|--|-------------|-----------|
| AE: Franklin Maxwell Heirs, LP No. 1 Lease       |  |             |           |
| Franklin Maxwell Heirs, LP No. 1                 | Antero Resources Corporation             | 1/8+        | 484/158   |
| AH: Frank Blandori                               |  |             |           |
| Frank Blandori                                   | Antero Resources Corporation             | 1/8+        | 524/125   |
| AE: Franklin Maxwell Heirs, LP No. 1 Lease       |  |             |           |
| Franklin Maxwell Heirs, LP No. 1                 | Antero Resources Corporation             | 1/8+        | 484/158   |
| Al: Pooled Tract                                 |  |             |           |
| AJ: WV State Rail Authority Lease                |  |             |           |
| WV State Rail Authority                          | Antero Resources Appalachian Corporation | 1/8+        | 253/409   |
| Antero Resources Appalachian Corporation         | Antero Resources Corporation             | Name Change | 46/523    |
| AK: Timothy C. Phillips Lease                    |  |             |           |
| Timothy C. Phillips                              | Antero Resources Corporation             | 1/8+        | 488/365   |
| AJ: WV State Rail Authority Lease                |  |             |           |
| WV State Rail Authority                          | Antero Resources Appalachian Corporation | 1/8+        | 253/409   |
| Antero Resources Appalachian Corporation         | Antero Resources Corporation             | Name Change | 46/523    |
| AM: WV Department of Highways Lease              |  |             |           |
| WV Department of Highways                        | Antero Resources Corporation             | 1/8+        | 521/1     |
| AN: R. S. Maxwell & Clarence Sigley, Sr., et ux  |  |             |           |
| Lease  |  |             |           |
| R.S. Maxwell and Clarence E. Sigley, Sr., et ux, | Key Oil Company                          | 1/8         | 193/20    |
| Trustee for Carolyn E. Farr Trust                |  |             |           |
| Key Oil Company                                  | Antero Resources Appalachian Corporation | Assignment  | 276/526   |
| Antero Resources Appalachian Corporation         | Antero Resources Corporation             | Name Change | 46/523    |

\*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

\*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.

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| Operator's Well No. | Holtz Unit 2H MOD |
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| Lease Name or Number             | Grantor, Lessor, etc. | Grantee, Lessee, etc.        | Royalty | Book/Page |
|----------------------------------|-----------------------|------------------------------|---------|-----------|
| RP: Carelya E. Farr Trust Lesse: | Carolya E. Farr Trust | Antero Resources Corporation | 1/8+    | 500/61    |
|                                  | Carolyn E. Farr Trust | Antero Resources Corporation | 1/8+    | 500/      |

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WV Department of Environmental Protection

#### 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:            | Tlm Rady                      |  |  |
| Its:           | Senior Vice President of Land |  |  |

Page 1 of 1