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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)

Monday, September 11, 2023  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET  
  
DENVER, CO 80202

Re: Permit Modification Approval for VIEWER UNIT 2H  
47-103-03590-00-00

**LATERAL EXTENSION**

ANTERO RESOURCES CORPORATION

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

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

James A. Martin  
Chief

Operator's Well Number: VIEWER UNIT 2H  
Farm Name: ANTERO RESOURCES CORP  
U.S. WELL NUMBER: 47-103-03590-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 09/11/2023

Promoting a healthy environment.

09/15/2023

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: Viewer Unit 2H MOD ✓ Well Pad Name: Furbee Pad

3) Farm Name/Surface Owner: Antero Resources Corp. Public Road Access: CR 50

4) Elevation, current ground: As-built 1211' Elevation, proposed post-construction: \_\_\_\_\_

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

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

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus Shale: 7500' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7500' TVD ✓

9) Formation at Total Vertical Depth: Marcellus ✓

10) Proposed Total Measured Depth: 25000' MD ✓

11) Proposed Horizontal Leg Length: 16240' \*Open to modification at a later date

12) Approximate Fresh Water Strata Depths: 575' ✓

13) Method to Determine Fresh Water Depths: 47103308970000 Offset well records. Depths have been adjusted according to surface elevations. ✓

14) Approximate Saltwater Depths: 2284' ✓

15) Approximate Coal Seam Depths: 973' ✓

16) Approximate Depth to Possible Void (coal mine, karst, other): None Anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No X

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

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WV  
Environ. Office of

*Smiley*  
*8-31-23*

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         | J-55     | 91.59#                 | 100'                       | 100' ✓                       | CTS, 96 Cu. Ft. ✓             |
| Fresh Water  | 13-3/8"   | New         | J-55     | 54.5#                  | 625'                       | 625' ✓                       | CTS, 651 Cu. Ft.              |
| Coal         | 9-5/8"    | New         | J-55     | 36#                    | 3100'                      | 3100' ✓                      | CTS, 1262 Cu. Ft.             |
| Intermediate |           |             |          |                        |                            |                              |                               |
| Production   | 5-1/2"    | New         | P110-ICY | 23#                    | 25000'                     | 25000' ✓                     | CTS, 5372 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"                    | 0.375"              | 2250                 | 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"              | 14,360               | 2500 ✓                                   | Class G/H   | ~1.8                     |
| Tubing       | 2-3/8"    | 4.778"                 | 0.19"               | 11,200               |  |             |                          |
| Liners       |           |                        |                     |                      |  |             |                          |

**PACKERS**

|             |     |  |  |  |  |
|-------------|-----|--|--|--|--|
| Kind:       | N/A |  |  |  | RECEIVED<br>Office of Oil and Gas<br>SEP 01 2023<br>WV Department of<br>Environmental Protection |
| Sizes:      | N/A |  |  |  |  |
| Depths Set: | N/A |  |  |  |  |

*[Handwritten Signature]*  
 8-31-23

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

Drill a new horizontal shallow well into the Marcellus Shale.

\*Antero will be air drilling the fresh water string which makes it difficult to determine when fresh water is encountered. Therefore, we have built in a buffer for the casing setting depth which helps to ensure that all fresh water zones are covered.

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): 33.19 acres

22) Area to be disturbed for well pad only, less access road (acres): 13.86 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.

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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 G/H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

WV Department of  
Environmental Protection

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.

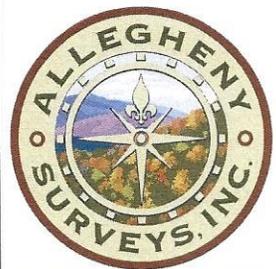
*Smig*  
09-31-23

11,714' to Bottom Hole

6,409' to Top Hole  
 TOP HOLE LATITUDE 39 - 35 - 00  
 BTM HOLE LATITUDE 39 - 37 - 30

**Antero Resources**  
**Well No. Viewer 2H**  
**BHL MOD**  
 Antero Resources Corporation

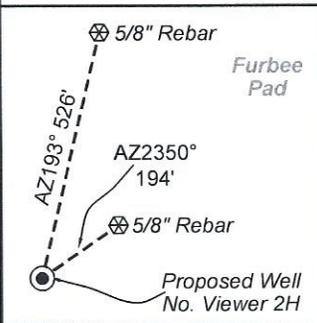
Page 1 of 4



**Notes**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Viewer Unit 2H Top Hole coordinates are  
 N: 387,214.84' Latitude: 39°33'23.77"  
 E: 1,652,903.46' Longitude: 80°43'51.83"  
 Bottom Hole coordinates are  
 N: 402,926.26' Latitude: 39°35'58.34"  
 E: 1,647,808.79' Longitude: 80°44'59.66"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,378,589.697m N: 4,383,350.359m  
 E: 523,119.511m E: 521,487.635m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

LONGITUDE 80 - 42 - 30

**Well Location References (NTS)**



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.

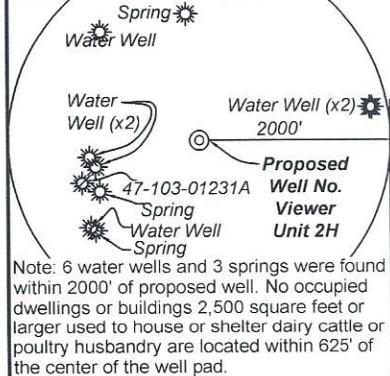
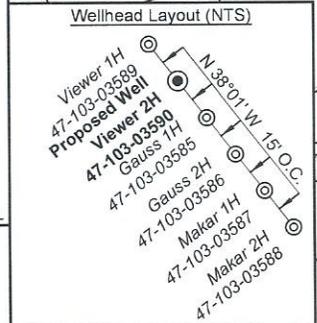
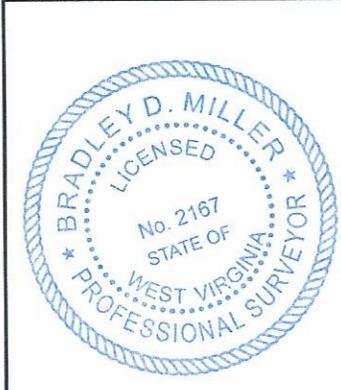
*Bradley D. Miller*  
 Bradley D. Miller, P.S. 2167

**Notes:**  
 Well No. Viewer Unit 2H UTM Zone 17, NAD 1927  
 Top Hole Coordinates  
 N: 14,364,707.51'  
 E: 1,716,219.66'  
 Point of Entry Coordinates  
 N: 14,364,949.15'  
 E: 1,716,072.90'  
 Bottom Hole Coordinates  
 N: 14,380,326.46'  
 E: 1,710,865.22'

|    | Bearing    | Dist.    |
|----|------------|----------|
| L1 | S 67°57' W | 1,891.4' |
| L2 | N 89°00' W | 1,971.9' |
| L3 | N 83°27' E | 1,620.4' |
| L4 | N 88°24' E | 1,634.7' |
| L5 | N 30°19' W | 282.8'   |

9,737' to Top Hole

9,273' to Bottom Hole



FILE NO: 27-34-G-18  
 DRAWING NO: Viewer Unit 2H 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: 2023  
 OPERATOR'S WELL NO. Viewer Unit 2H  
 API WELL NO  
 47 - 103 - 03590  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1,211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
 DISTRICT: Green COUNTY: Wayne  
 SURFACE OWNER: Resources Corp. ACREAGE: 58.1  
 ROYALTY OWNER: James Allen Sell LEASE NO: ACREAGE: 58.1

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: 25,000' MD  
 7,500' TVD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.  
 Denver, CO 80202 Bridgeport, WV 26330

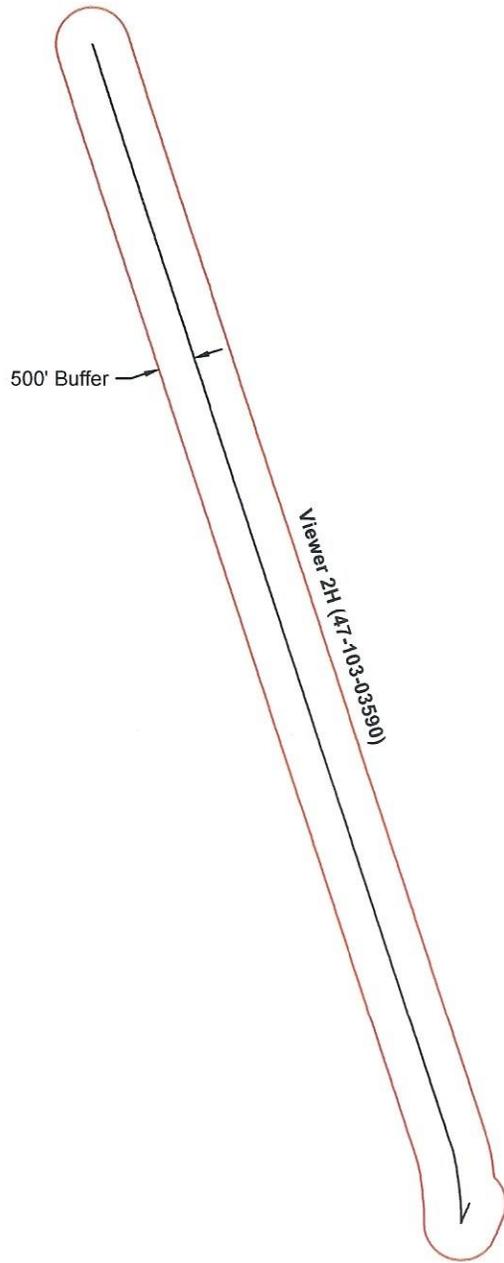
09/15/2023

**LEGEND**

- ⊙ Proposed gas well
- ⊛ Existing Well, as noted
- ⊛ Digitized Well, as noted



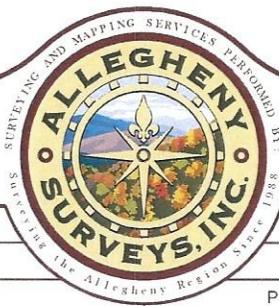
The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone



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AUG 29 2023

WV Department of  
Environmental Protection



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

172 Thompson Drive  
Bridgeport, WV 26330

|                        |                                  |
|------------------------|----------------------------------|
| PARTY CHIEF: C. Lynch  | DRAWN BY: J. Smith               |
| RESEARCH: J. Miller    | PREPARED: May 12, 2023           |
| SURVEYED: Dec. 2016    | PROJECT NO: 27-34-G-18           |
| FIELD CREW: C.L., K.M. | DRAWING NO: Viewer 2H BHLMOD AOR |

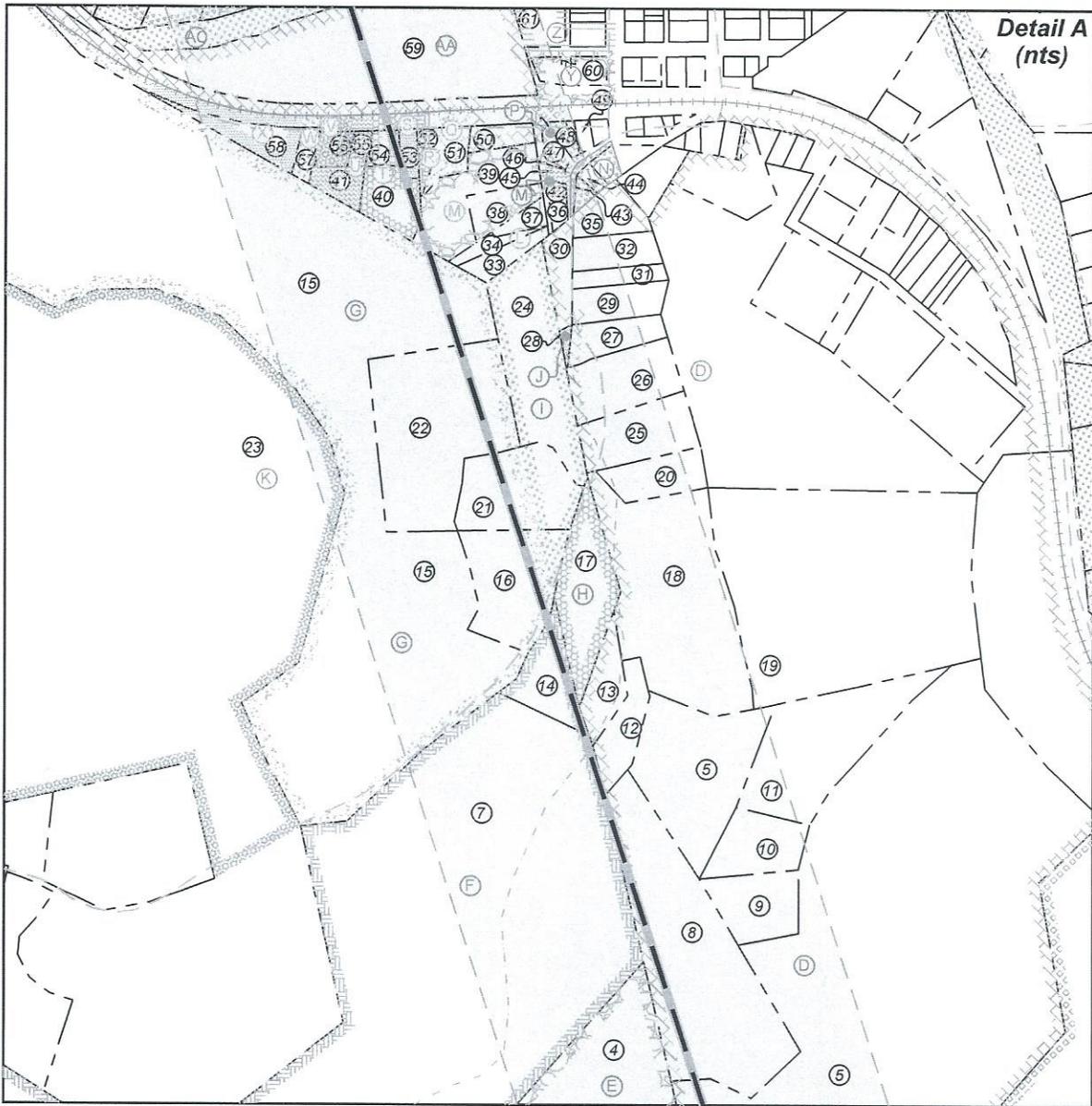
Sheet 1 of 1

*CL # 4022673  
Amt \$ 7500  
Date 8/22/23*



Scale: 1 inch = 2500 feet

09/15/2023



FILE NO: 27-34-G-18  
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 Submeter  
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 WVDOT, Harrisville, WV

  
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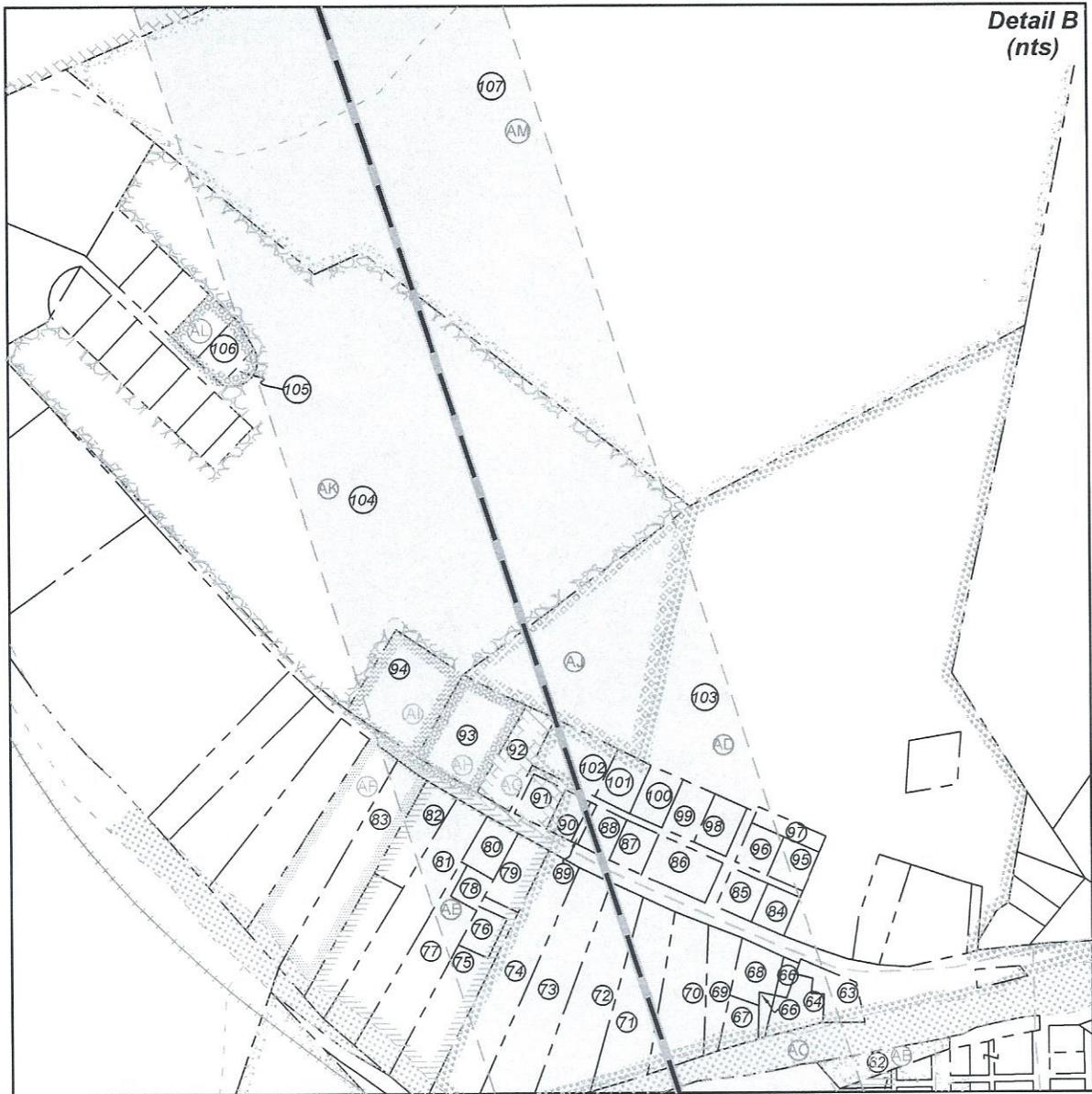
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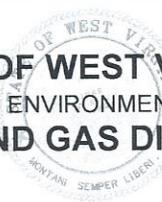
| Leases |                             |
|--------|-----------------------------|
| A      | James Allen Sell            |
| B      | William R. Stalnaker        |
| C      | Marilyn Halley Seeley       |
| D      | Antero Minerals, LLC        |
| E      | George Neason Myers, et ux  |
| F      | Antero Minerals, LLC        |
| G      | Dean H. Bucher              |
| H      | Dean H. Bucher              |
| I      | Dean H. Bucher              |
| J      | Dean H. Bucher              |
| K      | Dean H. Bucher              |
| L      | Faith Fellowship Ministries |
| M      | David P. Lancaster, et ux   |
| N      | Robert P. Willoughby        |
| O      | Pearl Lynn Larimore         |
| P      | John S. Starkey             |
| Q      | Belinda A. Henderson        |
| R      | Thomas R. Yost Sr., et ux   |

| Leases |                             |
|--------|-----------------------------|
| S      | Thomas R. Yost Sr., et ux   |
| T      | Stanley J. Ashcraft, Jr.    |
| U      | Brenda Ellen Glasscock      |
| V      | Patrick B. Glasscock, et ux |
| W      | Brenda Ellen Glascock       |
| X      | Kenneth Calvin Willard      |
| Y      | William E. Duke, et ux      |
| Z      | Daniel S. Brown, et ux      |
| AA     | Ruby Lynn Price             |
| AB     | Thomas S. Haught, et ux     |
| AC     | WVDNR                       |
| AD     | Shiben Estates Inc.         |
| AE     | Nola Jean Parks             |
| AF     | Howard D. Bucher, et ux     |
| AG     | Thelma Jean Tennant         |
| AH     | Kimberly K. McCale          |
| AI     | Bryan J. Lemasters, et ux   |
| AJ     | Daniel W. Henderson, et ux  |

| Leases |                            |
|--------|----------------------------|
| AK     | Michael Paul Melott, et ux |
| AL     | Jack E. Daken, et ux       |
| AM     | Chesapeake Appalachia, LLC |
| AN     | Margaret Lancaster, et vir |
| AO     | Mary E. Snider             |
| AP     | Shiben Estates Inc.        |
| AQ     | Barbara Anne Amos King     |
| AR     | Lillian Priscilla Grimm    |
| AS     | Valerie Preat              |
| AT     | Valerie Preat              |
| AU     | James D. Highley, et ux    |
| AV     | Nancy B. Hatfield, et al   |
| AW     | Maria Delia Estrada        |
| AX     | Nancy B. Hatfield, et al   |
| AY     | Nancy B. Hatfield, et al   |
| AZ     | Fern Nuhring               |
| BA     | Nancy B. Hatfield, et al   |



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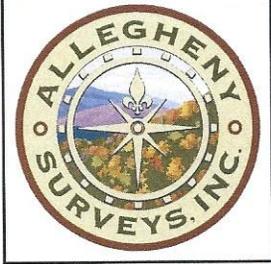
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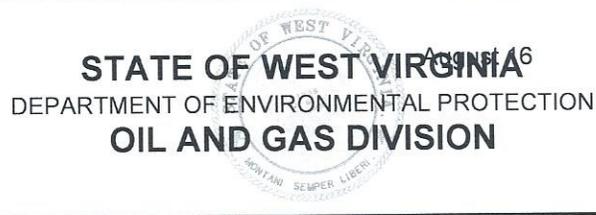
09/15/2023



| ID | TM-Par  | Owner   | Bk/Pg     | Acres |
|----|---------|---|-----------|-------|
| 1  | 17-12   | Antero Resources Corp.                        | 483/888   | 58.10 |
| 2  | 17-60   | Ross Bucher                                   | 411/765   | 79.00 |
| 3  | 17-1    | Antero Resources Corp                         | 483/888   | 15.35 |
| 4  | 13-69.1 | Donald L. Mason                               | 410/759   | 14.00 |
| 5  | 13-70   | Doris Ruth Haught, et al                      | AP112/912 | 33.78 |
| 6  | 13-71   | Charles R. & Kay L. Blair                     | 387/577   | 63.11 |
| 7  | 13-69   | Donald L. Mason                               | 410/759   | 69.61 |
| 8  | 13-70.1 | Clark B. & Linda J. Haught                    | 422/525   | 4.75  |
| 9  | 13-70.2 | Cory R. & Mary L. Haught                      | 449/135   | 1.04  |
| 10 | 13-70.4 | Adriene N. Derby                              | 459/95    | 0.93  |
| 11 | 13-70.3 | Tom & Betty C. Haught                         | 303/65    | 2.59  |
| 12 | 13-59   | Douglas A. & Shirley J. Bucher                | 460/929   | 0.75  |
| 13 | 13-58   | Douglas A. & Shirley J. Bucher                | 363/292   | 0.85  |
| 14 | 13-57   | Carol S. Bishop                               | 433/306   | 0.89  |
| 15 | 13-90   | Coastal Forest Resources Co.                  | 444/105   | 36.13 |
| 16 | 13-44   | Nicholas Lee Henderson                        | 421/85    | 1.75  |
| 17 | 13-45   | Janet Lee Higginbotham                        | 368/196   | 1.25  |
| 18 | 13-46.1 | Douglas A. & Shirley J. Bucher                | 300/188   | 4.42  |
| 19 | 29-69.1 | Donald L. II & Cshawn L. Smith                | 350/465   | 8.80  |
| 20 | 13-46   | Carol Knapp Revocable Trust                   | 437/796   | 0.70  |
| 21 | 13-84   | Nathan L. Anderson                            | 359/611   | 5.12  |
| 22 | 13-91   | Coastal Forest Resources Co.                  | 444/105   | 3.47  |
| 23 | 13-43   | John R. & Johanna S. Harter                   | 437/867   | 46.25 |
| 24 | 13-45.1 | Faith Fellowship Ministries Church            | 398/491   | 2.58  |
| 25 | 29-68   | Carol Knapp Revocable Trust                   | 437/796   | 1.30  |
| 26 | 29-67   | Carol Knapp Revocable Trust                   | 437/796   | 1.33  |
| 27 | 29-67.1 | Tully S. Vanwinkle                            | 68/379    | 0.57  |
| 28 | 29-40   | Faith Fellowship Ministries                   | 477/796   | 0.19  |
| 29 | 29-66   | Tully S. Vanwinkle                            | 68/379    | 0.63  |
| 30 | 29-41   | Faith Fellowship Ministries                   | 477/796   | 0.45  |
| 31 | 29-65   | Tully S. Vanwinkle                            | 68/379    | 0.31  |
| 32 | 29-64   | Tully S. Vanwinkle                            | 68/379    | 0.59  |
| 33 | 29-39   | Faith Fellowship Ministries                   | 477/796   | 0.20  |
| 34 | 29-38   | Faith Fellowship Ministries                   | 477/796   | 0.20  |
| 35 | 29-61   | Pearl Lynn Larrimore                          | 403/430   | 0.81  |
| 36 | 29-42   | Faith Fellowship Ministries                   | 477/786   | 0.09  |
| 37 | 29-33   | Faith Fellowship Ministries                   | 477/796   | 0.15  |
| 38 | 29-32   | David & Debra Lancaster                       | 261/469   | 0.47  |
| 39 | 29-31   | David & Debra Lancaster                       | 333/167   | 1.50  |
| 40 | 28-48   | Stanley J. Ashcraft, Jr. & Suzanna L. Miller  | 469/840   | 0.70  |
| 41 | 28-41   | Brenda Ellen Taylor & Patrick Wayne Glasscock | 442/539   | 0.38  |
| 42 | 29-43   | Jami Barnes                                   | 442/231   | 0.06  |
| 43 | 29-60   | Pearl Lynn Larrimore                          | 403/430   | 0.03  |
| 44 | 29-59   | Pearl Lynn Larrimore                          | 403/430   | 0.08  |
| 45 | 29-44   | Jami Barnes                                   | 442/231   | 0.06  |
| 46 | 29-45   | William Leccese                               | 484/153   | 0.01  |
| 47 | 29-46   | William Leccese                               | 484/153   | 0.19  |
| 48 | 29-47   | William Leccese                               | 484/153   | 0.12  |
| 49 | 29-47.1 | Rhonda Thomas                                 | 431/798   | 0.09  |
| 50 | 29-30   | Sara Larrimore, et al                         | AP107/99  | 0.20  |
| 51 | 28-40   | Belinda Ann Gump                              | 404/403   | 0.50  |
| 52 | 28-39   | Thomas R. Yost, Sr., et al                    | 361/125   | 0.17  |
| 53 | 28-38   | Thomas R. & Billie Jo Yost                    | 397/286   | 0.19  |
| 54 | 28-36   | Stanley J. Ashcraft, Jr. & Suzanna L. Miller  | 469/840   | 0.25  |
| 55 | 28-37   | Brenda Ellen Taylor & Patrick Wayne Glasscock | 442/539   | 0.11  |
| 56 | 28-35   | Brenda Ellen Taylor & Patrick Wayne Glasscock | 442/758   | 0.23  |
| 57 | 28-34   | Brenda Ellen Taylor & Patrick Wayne Glasscock | 442/736   | 0.17  |
| 58 | 28-42   | George Keck                                   | 71/258    | 0.50  |
| 59 | 28-25   | Sara Larrimore, et al                         | AP107/99  | 4.50  |
| 60 | 28-31   | Ricky L. & Amy F. Bassett                     | 481/782   | 0.36  |
| 61 | 28-27   | Daniel S. & Leah M. Brown                     | 411/328   | 0.38  |
| 62 | 28-26   | Thomas S. & Betty C. Haught                   | 415/521   | 0.99  |

| ID  | TM-Par  | Owner                              | Bk/Pg    | Acres  |
|-----|---------|------------------------------------|----------|--------|
| 63  | 28-33.1 | Robin D. Stillwagoner              | 467/508  | 0.45   |
| 64  | 28-33.2 | Thomas L. & Emily Marie Gifford    | 421/20   | 0.37   |
| 65  | 28-32.1 | Benjamin J. Dotson                 | 447/881  | 0.10   |
| 66  | 28-33   | Benjamin J. Dotson                 | 447/881  | 0.18   |
| 67  | 28-24.1 | Joetta Cain                        | 436/186  | 0.31   |
| 68  | 28-24   | Benjamin J. Dotson                 | 447/881  | 0.34   |
| 69  | 28-23   | Cathy D. Brown                     | 431/594  | 0.55   |
| 70  | 28-22   | Justin D. Carter                   | 452/12   | 1.23   |
| 71  | 28-21   | Ronnie Robinson                    | 392/14   | 1.48   |
| 72  | 28-20   | Thelma L. Brideman                 | MS10/131 | 1.82   |
| 73  | 28-19   | Ricky L. & Cindy S. Wade           | 420/441  | 2.07   |
| 74  | 28-18   | Ronald S. Anderson                 | 417/63   | 2.14   |
| 75  | 28-17.2 | Darel L. & Joyce A. Ueltschy       | 424/365  | 1.33   |
| 76  | 28-17.1 | Darel L. & Joyce A. Ueltschy       | 424/365  | 0.25   |
| 77  | 28-15   | Nathan D. & Jacqueline Johnson     | 404/399  | 1.46   |
| 78  | 28-16   | Nathan D. & Jacqueline Johnson     | 404/399  | 0.20   |
| 79  | 28-17   | Sharyn D. Utt                      | 360/348  | 0.49   |
| 80  | 28-15.1 | Christopher David Thomas           | 365/112  | 0.35   |
| 81  | 28-14   | Benjamin F. & Ruth Kocher          | 242/14   | 1.83   |
| 82  | 28-12   | Benjamin F. Kocher                 | 202/264  | 0.67   |
| 83  | 28-11   | Howard D. & Clara Mae Bucher       | 285/483  | 1.62   |
| 84  | 28-44   | David Lewis Anderson               | 242/483  | ---    |
| 85  | 28-3    | David Anderson, et al              | WB57/511 | ---    |
| 86  | 28-4    | Valerie D. Piatt                   | 423/422  | ---    |
| 87  | 28-5    | Alex M. Henderson                  | 471/165  | ---    |
| 88  | 28-2.1  | Michael A. Briggs                  | 454/625  | ---    |
| 89  | 28-2.8  | Michael A. Briggs                  | 454/625  | ---    |
| 90  | 28-2.2  | Toy L. & Thelma Jean Tennant       | 219/111  | ---    |
| 91  | 28-6    | Toy L. & Thelma Jean Tennant       | 408/326  | ---    |
| 92  | 28-2.7  | Toy L. & Thelma Jean Tennant       | 228/265  | ---    |
| 93  | 28-2.6  | Phillip Bassett                    | 440/61   | ---    |
| 94  | 28-1    | Bryan J. & Christina D. Lemasters  | 315/335  | ---    |
| 95  | 28-46   | David Lewis Anderson               | WB57/511 | ---    |
| 96  | 28-45   | David Lewis Anderson               | WB57/511 | ---    |
| 97  | 28-47   | David Lewis Anderson               | WB57/511 | ---    |
| 98  | 28-2.5  | Robert L. Yoho                     | 452/434  | ---    |
| 99  | 28-2.4  | Robert L. Yoho                     | 452/434  | ---    |
| 100 | 28-2.3  | Michael A. Briggs                  | 454/625  | ---    |
| 101 | 28-2    | Michael A. Briggs                  | 454/625  | ---    |
| 102 | 28-2.9  | Toy L. & Thelma Jean Tennant       | 253/20   | ---    |
| 103 | 13-21   | Daniel W. & Ruth A. Henderson      | 244/111  | 30.95  |
| 104 | 13-19.1 | Michael Paul & Tamatha Lynn Melott | 379/128  | 23.95  |
| 105 | 13A-28  | Jack E. & Constance D. Dakan       | 354/503  | 0.10   |
| 106 | 13A-27  | Jack E. & Constance D. Dakan       | 268/88   | 0.34   |
| 107 | 13-13   | Linda M. Headley                   | 385/209  | 85.5   |
| 108 | 13-6    | Margaret Lancaster                 | 333/440  | 39.39  |
| 109 | 8-43    | Debra Key Fluharty, et al          | 368/559  | 35.00  |
| 110 | 8-28    | Nancy B. Hatfield                  | 474/481  | 449.48 |
| 111 | 8-34    | Peter S. & Marietta A. Florea      | 420/915  | 42.00  |
| 112 | 8-33    | Lloyd L. King                      | 319/55   | 20.35  |
| 113 | 8-31    | Valerie Preat                      | 416/599  | 32.5   |
| 114 | 8-27    | Valerie Preat                      | 416/599  | 16.80  |
| 115 | 8-32    | Valerie Preat                      | 416/599  | --     |
| 116 | 8-26.1  | James D. & Julie M. Highley        | 360/318  | 9.79   |
| 117 | 8-48    | James D. Highley Jr.               | 472/167  | 41.00  |
| 118 | 8-22    | John D. & Connie J. Morgan         | 417/944  | 40.00  |
| 119 | 8-12    | John D. & Connie J. Morgan         | 417/944  | 13.60  |
| 120 | 8-13.1  | William H. & Charlene M. Gore      | 370/632  | 20.27  |
| 121 | 8-11    | Andrea Wade                        | 420/853  | 13.50  |
| 122 | 8-4.1   | William H. & Charlene M. Gore      | 370/632  | 38.71  |
| 123 | 8-4.2   | William H. & Charlene M. Gore      | 370/632  | 22.93  |

FILE NO: 27-34-G-18  
 DRAWING NO: Viewer Unit 2H BHL MOD  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY:  
Submeter  
 PROVEN SOURCE OF ELEVATION:  
WVDOT, Harrisville, WV



DATE: 2023  
 OPERATOR'S WELL NO. Viewer Unit 2H  
 API WELL NO  
47 - 103 - 03590  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: As-Built 1,211' WATERSHED: Fishing Creek QUADRANGLE: Pine Grove  
 DISTRICT: Green COUNTY: Wayne  
 SURFACE OWNER: Antero Resources Corp. ACREAGE: 58.1  
 ROYALTY OWNER: James Allen Sell LEASE NO: \_\_\_\_\_ ACREAGE: 58.1  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 7,500' TVD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 25,000' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.  
Denver, CO 80202 Bridgeport, WV 26330

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

| Grantor, lessor, etc.   | Grantee, lessee, etc.        | Royalty | Book/Page |
|---|------------------------------|---------|-----------|
| <u>A: James Allen Sell Lease</u><br>James Allen Sell                      | Antero Resources Corporation | 1/8+    | 258A/0467 |
| <u>B: William R. Stalnaker Lease</u><br>William R. Stalnaker              | Antero Resources Corporation | 1/8+    | 179A/0069 |
| <u>A: James Allen Sell Lease</u><br>James Allen Sell                      | Antero Resources Corporation | 1/8+    | 258A/0467 |
| <u>E: George Neason Myers, et ux Lease</u><br>George Neason Myers, et ux  | Antero Resources Corporation | 1/8+    | 201A/0459 |
| <u>D: Antero Minerals, LLC Lease</u><br>Antero Minerals, LLC              | Antero Resources Corporation | 1/8+    | 250A/0795 |
| <u>F: Antero Minerals, LLC</u><br>Antero Minerals, LLC                    | Antero Resources Corporation | 1/8+    | 250A/0795 |
| <u>G: Dean H. Bucher Lease</u><br>Dean H. Bucher                          | Antero Resources Corporation | 1/8+    | 262A/0198 |
| <u>M: David P. Lancaster, et ux Lease</u><br>David P. Lancaster, et ux    | Antero Resources Corporation | 1/8+    | 210A/0567 |
| <u>T: Stanley J. Ashcraft, Jr. Lease</u><br>Stanley J. Ashcraft, Jr.      | Antero Resources Corporation | 1/8+    | 192A/0752 |
| <u>S: Thomas R. Yost, Sr., et ux Lease</u><br>Thomas R. Yost, Sr., et ux  | Antero Resources Corporation | 1/8+    | 310A/0010 |
| <u>T: Stanley J. Ashcraft, Jr. Lease</u><br>Stanley J. Ashcraft, Jr.      | Antero Resources Corporation | 1/8+    | 192A/0752 |
| <u>AA: Ruby Lynn Price Lease</u><br>Ruby Lynn Price                       | Antero Resources Corporation | 1/8+    | 219A/0206 |
| <u>AC: WVDNR Lease</u><br>WVDNR   | Antero Resources Corporation | 1/8+    | 323A/0541 |
| <u>AD: Shiben Estates Inc. Lease</u><br>Shiben Estates Inc.               | Antero Resources Corporation | 1/8+    | 302A/0848 |
| <u>AG: Thelma Jean Tennant Lease</u><br>Thelma Jean Tennant               | Antero Resources Corporation | 1/8+    | 220A/0543 |
| <u>AJ: Daniel W. Henderson, et ux Lease</u><br>Daniel W. Henderson, et ux | Antero Resources Corporation | 1/8+    | 293A/0690 |
| <u>AK: Michael Paul Melott, et ux Lease</u><br>Michael Paul Melott, et ux | Antero Resources Corporation | 1/8+    | 236A/0488 |

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Office Of Oil and Gas

AUG 29 2023

WV Department of  
Environmental Protection

09/15/2023

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|---|--|----------------------------|-------------------------------------|
| <u>AM: Chesapeake Appalachia, LLC Lease</u><br>Chesapeake Appalachia, LLC<br>SWN Production Company<br>Antero Exchange Properties LLC | SWN Production Company<br>Antero Exchange Properties LLC<br>Antero Resources Corporation | 1/8<br>Assignment<br>Merge | 157A/0640<br>177A/0533<br>0013/0311 |
| <u>AN: Margaret Lancaster, et vir Lease</u><br>Margaret Lancaster, et vir   | Antero Resources Corporation   | 1/8+                       | 192A/0758                           |
| <u>AP: Shiben Estates Inc. Lease</u><br>Shiben Estates Inc.   | Antero Resources Corporation   | 1/8+                       | 312A/0021                           |
| <u>AQ: Barbara Anne Amos King Lease</u><br>Barbara Anne Amos King   | Antero Resources Corporation   | 1/8+                       | 293A/0650                           |
| <u>AS: Valerie Preat Lease</u><br>Valerie Preat   | Antero Resources Corporation   | 1/8+                       | 294A/0049                           |
| <u>AU: James D. Highley, et ux Lease</u><br>James D. Highley, et ux   | Antero Resources Corporation   | 1/8+                       | 287A/0566                           |
| <u>AV: Nancy B. Hatfield, et al Lease</u><br>Nancy B. Hatfield, et al   | Antero Resources Corporation   | 1/8+                       | 298A/0727                           |
| <u>AX: Nancy B. Hatfield, et al Lease</u><br>Nancy B. Hatfield, et al   | Antero Resources Corporation   | 1/8+                       | 298A/0727                           |
| <u>AY: Nancy B. Hatfield, et al Lease</u><br>Nancy B. Hatfield, et al   | Antero Resources Corporation   | 1/8+                       | 298A/0727                           |

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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.

\*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

09/15/2023

**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)**

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| Lease Name or Number          | Grantor, Lessor, etc. | Grantee, Lessee, etc.        | Royalty | Book/Page |
|-------------------------------|-----------------------|------------------------------|---------|-----------|
| <b>AZ: Fern Nuhring Lease</b> |                       |                              |         |           |
|                               | Fern Nuhring          | Antero Resources Corporation | 1/8+    | 298A/0540 |

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\*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

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

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