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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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Monday, July 22, 2019  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / Horizontal 6A Well - 1

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for SPELLMAN UNIT 2H  
47-017-06693-00-00

**Modified Well Bore Design**

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 handwritten signature in blue ink, appearing to read 'James A. Martin', is written over a circular blue ink stamp.

James A. Martin  
Chief

Operator's Well Number: SPELLMAN UNIT 2H  
Farm Name: JONES, JEFFREY K. SR, ET AL  
U.S. WELL NUMBER: 47-017-06693-00-00  
Horizontal 6A Horizontal 6A Well - 1  
Date Modification Issued: July 22, 2019

Promoting a healthy environment.

WW-6B  
(04/15)

Permit Modification API#: 47-017-06693

API NO. 47-017 - 06693

OPERATOR WELL NO. Spellman Unit 2H

Well Pad Name: Balli 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 017-Doddridge Central West Union 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: Spellman Unit 2H Well Pad Name: Balli Pad

3) Farm Name/Surface Owner: Jeffrey K. Jones, Sr. et al Public Road Access: CR 11/1 (Ramseys Ridge Rd)

4) Elevation, current ground: 1135.5' Elevation, proposed post-construction: \_\_\_\_\_

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

Other \_\_\_\_\_

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

Horizontal  \_\_\_\_\_

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus Shale: 6707' TVD, Anticipated Thickness- 50 feet, Associated Pressure- 3100#

8) Proposed Total Vertical Depth: 6707' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 14305' MD

11) Proposed Horizontal Leg Length: 8884'

12) Approximate Fresh Water Strata Depths: 14', 70', 118', 240'

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

14) Approximate Saltwater Depths: 680', 1581', 1720'

15) Approximate Coal Seam Depths: 85'

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: \_\_\_\_\_

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WW-6B  
(04/15)

Permit Modification API#: 47-017-06693

API NO. 47- 017 - 06693

OPERATOR WELL NO. Spellman Unit 2H

Well Pad Name: Balli Pad

18)

**CASING AND TUBING PROGRAM**

| <b>TYPE</b>  | <u>Size (in)</u> | <u>New or Used</u> | <u>Grade</u> | <u>Weight per ft. (lb/ft)</u> | <u>FOOTAGE: For Drilling (ft)</u> | <u>INTERVALS: Left in Well (ft)</u> | <u>CEMENT: Fill-up (Cu. Ft.)/CTS</u> |
|--------------|------------------|--------------------|--------------|-------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|
| Conductor    | 20"              | New                | H-40         | 94#                           | 65'                               | 65'                                 | CTS, 62 Cu. Ft.                      |
| Fresh Water  | 13-3/8"          | New                | J-55/H-40    | 54.5#/48#                     | 315'                              | 315'                                | CTS, 1008Cu. Ft.                     |
| Coal         | 9-5/8"           | New                | J-55         | 36#                           | 2450'                             | 2450'                               | CTS, 998 Cu. Ft.                     |
| Intermediate |                  |                    |              |                               |                                   |                                     |                                      |
| Production   | 5-1/2"           | New                | P-110        | 20#                           | 14305'                            | 14305'                              | 3534 Cu. Ft.                         |
| Tubing       | 2-3/8"           | New                | N-80         | 4.7#                          |                                   | 7100'                               |                                      |
| Liners       |                  |                    |              |                               |                                   |                                     |                                      |

| <b>TYPE</b>  | <u>Size (in)</u> | <u>Wellbore Diameter (in)</u> | <u>Wall Thickness (in)</u> | <u>Burst Pressure (psi)</u> | <u>Anticipated Max. Internal Pressure (psi)</u> | <u>Cement Type</u>    | <u>Cement Yield (cu. ft./k)</u> |
|--------------|------------------|-------------------------------|----------------------------|-----------------------------|---|-----------------------|---------------------------------|
| Conductor    | 30"              | 24"                           | 0.438"                     | 1530                        | 50  | Class A               | 1.18                            |
| Fresh Water  | 13-3/8"          | 17-1/2"                       | 0.38"/0.33"                | 2730/1730                   | 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"               | 0.361"                     | 12,630                      | 2500  | Lead-H/POZ & Tail - H | H/POZ-1.44 & H-1.8              |
| Tubing       | 2-3/8"           | 4.778"                        | 0.19"                      | 11,200                      |   |                       |                                 |
| Liners       |                  |                               |                            |                             |   |                       |                                 |

**PACKERS**

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

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WW-6B  
(10/14)

Permit Modification API#: 47-017-06693

API NO. 47- 017 - 06693

OPERATOR WELL NO. Spellman Unit 2H

Well Pad Name: Balli Pad

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

Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

Anticipated Max Pressure - 9300 lbs  
Anticipated Max Rate - 80 bpm

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 14.56 existing acres

22) Area to be disturbed for well pad only, less access road (acres): 8.83 existing 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% A

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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.

WV Department of Environmental Protection  
Office of Oil and Gas

\*Note: Attach additional sheets as needed.

WW-6A1  
(5/13)

Operator's Well No. Spellman Unit 2H

**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:

| Lease Name or Number              | Grantor, Lessor, etc.                    | Grantee, Lessee, etc.                    | Royalty     | Book/Page |
|-----------------------------------|--|--|-------------|-----------|
| <u>Charles B. Duckworth Lease</u> | Charles B. Duckworth                     | H.T. Rominger                            | 1/8         | 0159/0460 |
|                                   | H.T. Rominger                            | Key Oil Company                          | Assignment  | 0178/0377 |
|                                   | Key Oil Company                          | Antero Resources Appalachian Corporation | Assignment  | 0256/0285 |
|                                   | Antero Resources Appalachian Corporation | Antero Resources Corporation             | Name Change | Exhibit 1 |

\*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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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, 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.

JUL 26 2018  
WV Department of  
Environmental Protection

Well Operator: Antero Resources Corporation  
By: Diana Hoff  
Its: VP of Operations

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    |
|--|--|-----------------------------|--------------|
| <b><u>Donald L. Pigott Lease</u></b>           |  |                             |              |
| Donald L. Pigott                               | Key Oil Company                          | 1/8                         | 0179/0682    |
| Key Oil Company                                | Antero Resources Appalachian Corporation | Assignment                  | 0256/0285    |
| Antero Resources Appalachian Corporation       | Antero Resources Corporation             | Name Change                 | Exhibit 1    |
| <b><u>Nell Allen Lease</u></b>                 |  |                             |              |
| Nell Allen                                     | Key Oil Company                          | 1/8                         | 0107/0743    |
| Key Oil Company                                | J&J Enterprises, Inc.                    | Assignment                  | 0141/0090    |
| J&J Enterprises, Inc.                          | Eastern American Energy Corporation      | Merger                      | 0159/0139    |
| Eastern American Energy Corporation            | Energy Corporation of America            | Merger                      | 0240/0498    |
| Energy Corporation of America                  | Antero Resources Appalachian Corporation | Assignment                  | 0313/0136    |
| Antero Resources Appalachian Corporation       | Antero Resources Corporation             | Name Change                 | Exhibit 1    |
| <b><u>Glenis P. Kilkenney, et al Lease</u></b> |  |                             |              |
| Glenis P. Kilkenney, et vir                    | Trio Petroleum Corp.                     | 1/8                         | 0179/0086    |
| Trio Petroleum Corp.                           | Waco Holding Company                     | Merger                      | DB 0257/0227 |
| Waco Holding Company                           | Waco Oil & Gas Co. Inc.                  | Merger                      | DC 0257/0235 |
| Waco Oil & Gas Co. Inc.                        | XTO Energy, Inc.                         | Assignment and Bill of Sale | 0334/0386    |
| XTO Energy, Inc.                               | Antero Resources Corporation             | Assignment                  | 0354/0398    |
| <b><u>Jane Ann Jones Lease</u></b>             |  |                             |              |
| Jane Ann Jones                                 | Antero Resources Appalachian Corporation | 1/8+                        | 0309/0581    |
| Antero Resources Appalachian Corporation       | Antero Resources Corporation             | Name Change                 | Exhibit 1    |
| <b><u>CNX Gas Company, LLC. Lease</u></b>      |  |                             |              |
| CNX Gas Company, LLC                           | Antero Resources Corporation             | 1/8                         | 0311/0405    |
| <b><u>Midwest Energy, Inc. Lease</u></b>       |  |                             |              |
| Midwest Energy, Inc.                           | Antero Resources Appalachian Corporation | 1/8+                        | 0263/0322    |
| Antero Resources Appalachian Corporation       | Antero Resources Corporation             | Name Change                 | Exhibit 1    |
| <b><u>WVSRA Lease</u></b>                      |  |                             |              |
| West Virginia State Rail Authority             | Antero Resources Appalachian Corporation | 1/8+                        | 0253/0409    |
| Antero resources Appalachian Corporation       | Antero Resources Corporation             | Name Change                 | Exhibit 1    |
| <b><u>Ed Stone, et ux Lease</u></b>            |  |                             |              |
| Ed Stone, et ux                                | H.G. Hardbarger                          | 1/8                         | 0065/0168    |
| H.G. Hardbarger                                | James I. Shearer                         | Assignment                  | 0066/0311    |
| James I. Shearer                               | James Drilling                           | Assignment                  | 0160/0571    |
| James Drilling                                 | Key Oil Company                          | Assignment                  | 0178/0023    |
| Key Oil Company                                | Antero Resources Appalachian Corporation | Assignment                  | 0256/0285    |
| Antero Resources Appalachian Corporation       | Antero Resources Corporation             | Name Change                 | Exhibit 1    |

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\*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.

FORM WW-6A1  
EXHIBIT 1

FILED

JUN 10 2013

Natalie E. Tennant  
Secretary of State  
1900 Kanawha Blvd E  
Bldg 1, Suite 157-K  
Charleston, WV 25305



Penny Barker, Manager  
Corporations Division  
Tel: (304)558-8000  
Fax: (304)558-8381  
Website: [www.wvgsos.com](http://www.wvgsos.com)  
E-mail: [business@wvgsos.com](mailto:business@wvgsos.com)

FILE ONE ORIGINAL  
(Two if you want a filed  
stamped copy returned to you)  
FEE: \$25.00

APPLICATION FOR  
AMENDED CERTIFICATE  
OF AUTHORITY

Office Hours: Monday - Friday  
8:30 a.m. - 5:00 p.m. ET

\*\*\*\* In accordance with the provisions of the West Virginia Code, the undersigned corporation hereby \*\*\*\*  
applies for an Amended Certificate of Authority and submits the following statement:

- Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
- Date Certificate of Authority was issued in West Virginia: 6/25/2008
- Corporate name has been changed to: Antero Resources Corporation  
(Attach one Certified Copy of Name Change as filed in home State of Incorporation.)
- Name the corporation elects to use in WV: Antero Resources Corporation  
(due to home state name not being available)
- Other amendments: \_\_\_\_\_  
(attach additional pages if necessary)
- Name and phone number of contact person. (This is optional, however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)  
Alvyn A. Schopp (303) 357-7310  
Contact Name Phone Number
- Signature information (See below \*Important Legal Notice Regarding Signature):  
Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person  
Signature: [Handwritten Signature] Date: June 10, 2013

**\*Important Legal Notice Regarding Signature:** Per West Virginia Code §31D-1-129. Penalty for signing false document. Any person who signs a document he or she knows is false in any material respect and knows that the document is to be delivered to the secretary of state for filing is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars or confined in the county or regional jail not more than one year, or both.

Form CF-1

Issued by the Office of the Secretary of State

Revised 4/13

WV013 - 04/16/2013 Walter Ekin/WJ/Debbie

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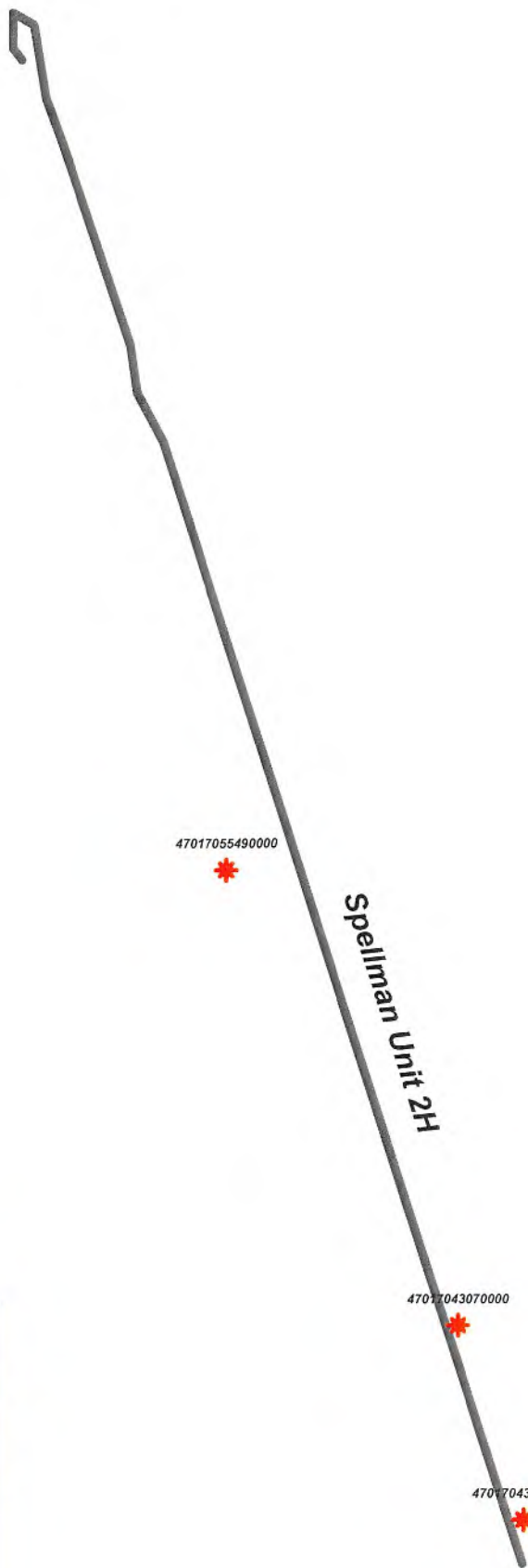
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Spellman Unit 2H - AOR  
Shallow Well Investigation



WELL SYMBOLS  
Gas Well

August 30, 2017



| UWI (APINum)   | Well Name         | Well Number | Operator           | Hist Oper            | TD   |
|----------------|-------------------|-------------|--------------------|----------------------|------|
| 47017043080000 | BARKER ANNA ET AL | 1           | KEY OIL COMPANY    | KEY OIL INCORPORATED | 5579 |
| 47017055490000 | DEPI              | 15135       | CONSOL GAS COMPANY | DOMINION EXPL&PROD   | 5481 |
| 47017043070000 | STONE VIOLET      | 2           | KEY OIL COMPANY    | KEY OIL INCORPORATED | 5391 |

| ELEV_GR | Approx distance to well | TD(SSTVD) | Gross Perf interval | Producing Formation(s)                                | Producible Formation(s) not perf'd*                          |
|---------|-------------------------|-----------|---------------------|---|--|
| 1120    | 86                      | -4459     | 3484-5414           | Warren, Speechley, Balltown, Riley, Benson, Alexander | Big Injun, Weir, Gordon, Bradford                            |
| 1039    | 392                     | -4442     | 3937-5274           | Balltown, Riley, Alexander                            | Big Injun, Weir, Gordon, Warren, Speechley, Bradford, Benson |
| 938     | 62                      | -4453     | 3286-5221           | Warren, Speechley, Balltown, Riley, Benson, Alexander | Big Injun, Weir, Gordon, Bradford                            |

SPELLMAN UNIT 2H (BALLI PAD)- AREA OF REVIEW 35-8-5.11 PAGE 2

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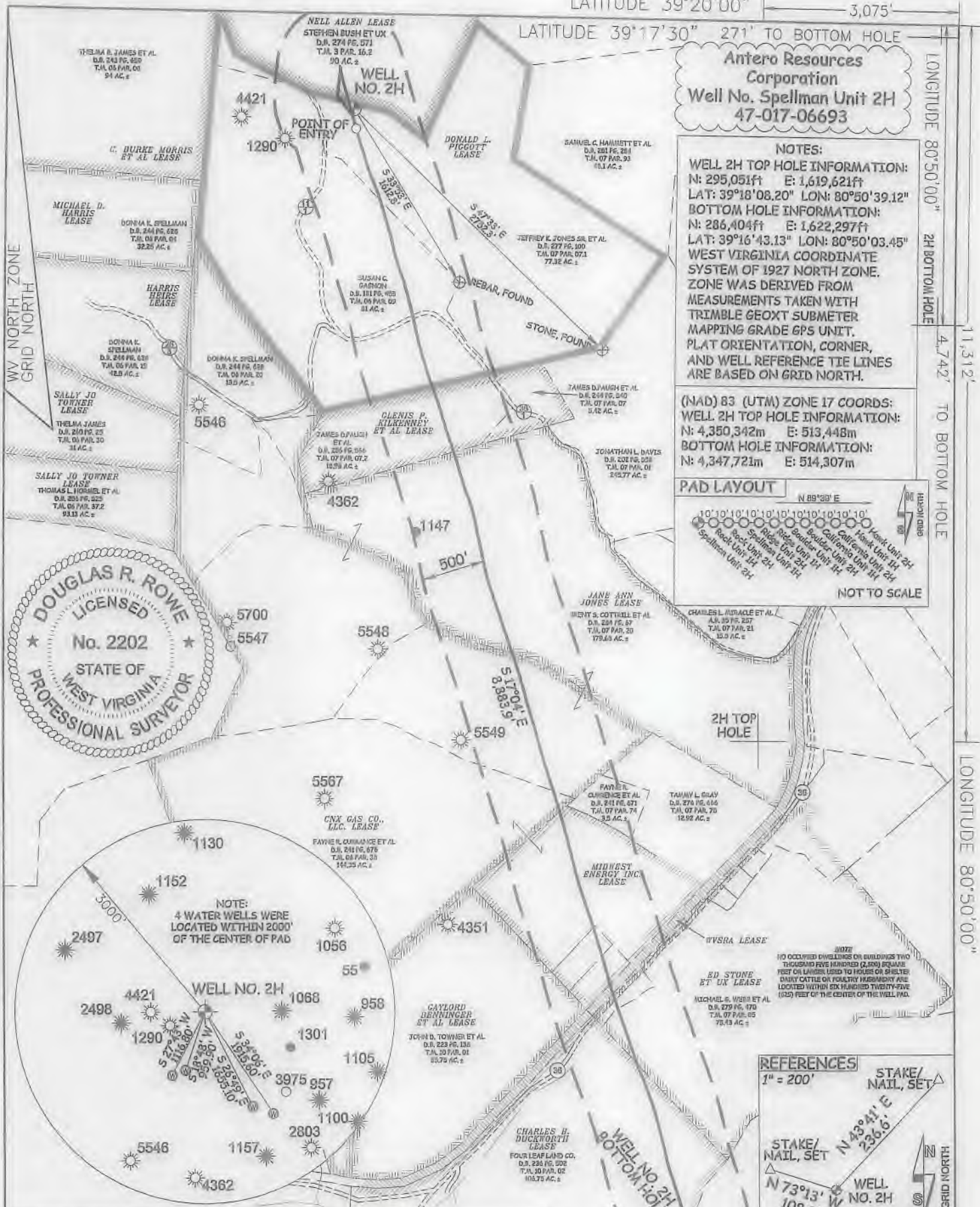
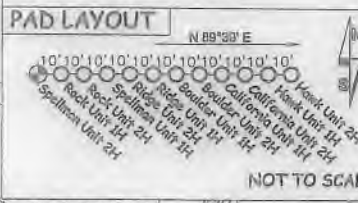
LATITUDE 39°20'00" 3,075'

LATITUDE 39°17'30" 271' TO BOTTOM HOLE

Antero Resources Corporation  
Well No. Spellman Unit 2H  
47-017-06693

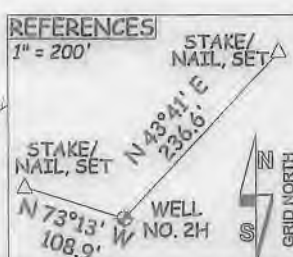
NOTES:  
WELL 2H TOP HOLE INFORMATION:  
N: 295,051ft E: 1,619,621ft  
LAT: 39°18'08.20" LON: 80°50'39.12"  
BOTTOM HOLE INFORMATION:  
N: 286,404ft E: 1,622,297ft  
LAT: 39°16'43.13" LON: 80°50'03.45"  
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:  
WELL 2H TOP HOLE INFORMATION:  
N: 4,350,342m E: 513,448m  
BOTTOM HOLE INFORMATION:  
N: 4,347,721m E: 514,307m



NOTE:  
4 WATER WELLS WERE LOCATED WITHIN 2000' OF THE CENTER OF PAD

NOTE:  
NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER ANY CATTLE OR HORSES OR HIGHWAY PILES LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.



JOB # 14-085WA  
DRAWING # SPELLMAN2HADmod  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND  
Surface Owner Boundary Lines +/-  
Interior Surface Tracts +/-  
Existing Fence  
Found monument, as noted  
DOUGLAS R. ROWE P.S. 2202  
DATE 07/16/18  
OPERATOR'S WELL# SPELLMAN UNIT #2H

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.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WILLOW LAND SURVEYING PLLC  
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS  
WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL  
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X  
LOCATION: ELEVATION 1,135.5' AS BUILT WATERSHED HEADWATERS MIDDLE ISLAND CREEK  
QUADRANGLE WEST UNION 7.5 DISTRICT CENTRAL COUNTY DODDRIDGE  
SURFACE OWNER JEFFREY K. JONES SR. ET AL ACREAGE 77.32 ACRES +/-  
OIL & GAS ROYALTY OWNER DONALD L. PIGGOTT; NELL ALLEN; GLENIS P. KILKENNEY ET AL; LEASE ACRES: 81 ACRES; 176 ACRES; 25 ACRES; JANE ANN JONES; CNX; MIDWEST ENERGY INC.; WVSRA; ED STONE ET UX; CHARLES B. DUCKWORTH 114.5 ACRES; 230.04 ACRES; 31.17 ACRES; 301.19 ACRES; 87 ACRES; 146.25 ACRES  
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X  
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD POE PLUG & ABANDON CLEAN OUT & REPLUG  
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,707' TVD 14,305' MD  
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD  
DENVER, CO 80202 CHARLESTON, WV 25313