



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

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
www.dep.wv.gov

PERMIT MODIFICATION APPROVAL
Horizontal 6A / Horizontal 6A Well - 1

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for ALLI UNIT 2H
47-095-02369-00-00

Extending Lateral Length of Well

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: ALLI UNIT 2H
Farm Name: JARRET W. SHEPHERD ET AL
U.S. WELL NUMBER: 47-095-02369-00-00
Horizontal 6A / Horizontal 6A Well - 1
Date Issued: 2/16/2017

Promoting a healthy environment.

02/17/2017



February 3, 2017

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

West Virginia Department of Environmental Protection
Office of Oil and Gas
Attn: Mr. Wade Stansberry
601 57th Street
Charleston, WV 25304

Mr. Stansberry:

Antero Resources Corporation (Antero) would like to submit the following permit modification for one approved well on the McKim Pad. We are requesting to extend the horizontal lateral length which will change the bottom hole location of the Alli Unit 2H (API# 47-095-02369).

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the revised lateral length, Measured Depth and Production Casing/Cement program
- REVISED Form WW-6A1, which shows the new leases we will be drilling into
- REVISED Mylar Plats, which shows the new bottom hole location

If you have any questions please feel free to contact me at (303) 357-7223.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Shelby Johnson", written over a horizontal line.

Shelby Johnson
Permitting Agent
Antero Resources Corporation

Enclosures

Received
Office of Oil & Gas
FEB 06 2017

02/17/2017

PERMIT MODIFICATION (API# 47-095-02369)

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

1) Well Operator: Antero Resources Corporation

| | | | |
|------------------|--------------------|--------------|--------------------------|
| <u>494507062</u> | <u>095 - Tyler</u> | <u>Meade</u> | <u>Middlebourne 7.5'</u> |
|------------------|--------------------|--------------|--------------------------|

Operator ID County District Quadrangle

2) Operator's Well Number: Alli Unit 2H Well Pad Name: McKim Pad

3) Farm Name/Surface Owner: Jarret W. Shepherd, et al Public Road Access: CR 20/2

4) Elevation, current ground: 1208' Elevation, proposed post-construction: 1172'

5) Well Type (a) Gas Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow Deep _____

Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6500' TVD, Anticipated Thickness- 75 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6500' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21500' MD

11) Proposed Horizontal Leg Length: 13945'

12) Approximate Fresh Water Strata Depths: 308', 405'

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

14) Approximate Saltwater Depths: 1245', 1670'

15) Approximate Coal Seam Depths: 617'

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: _____

18)

CASING AND TUBING PROGRAM

| TYPE | <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# | 40' | 40' | CTS, 38 Cu. Ft. |
| Fresh Water | 13-3/8" | New | J-55/H-40 | 54.5#/48# | 460' *see #19 | 460' *see #19 | CTS, 639 Cu. Ft. |
| Coal | 9-5/8" | New | J-55 | 36# | 2500' | 2500' | CTS, 1018 Cu. Ft. |
| Intermediate | | | | | | | |
| Production | 5-1/2" | New | P-110 | 20# | 21500' | 21500' | 5504 Cu. Ft |
| Tubing | 2-3/8" | New | N-80 | 4.7# | | 7100' | |
| Liners | | | | | | | |

| TYPE | <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 | | | |

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.
*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): 33.29 acres

22) Area to be disturbed for well pad only, less access road (acres): 10.34 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers
Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.
Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.
Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

24) Describe all cement additives associated with each cement type:

Conductor: no additives, Class A cement.
Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake
Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat
Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51
Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

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.

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>Joelynn Family Trust Lease</u> | | | |
| The Joelynn Family Trust | Antero Resources Corporation | 1/8+ | 0483/0286 |
| <u>Ronald P. Hamilton Lease</u> | | | |
| Ronald P. Hamilton | Antero Resources Corporation | 1/8+ | 0439/0764 |
| <u>Ronald P. Hamilton Lease</u> | | | |
| Ronald P. Hamilton | Chesapeake Appalachia, LLC | 1/8+ | 370/538 |
| Chesapeake Appalachia, LLC | Statoil USA Onshore Properties, Inc | Assignment | 384/359 |
| Statoil USA Onshore Properties, Inc | Antero Resources Corporation | Assignment | 544/291 |
| <u>Ralph D. Hacker Lease</u> | | | |
| Ralph D. Thacker | Antero Resources Appalachian Corporation | 1/8+ | 392/1 |
| Antero Resources Appalachian Corporation | Antero Resources Corporation | Name Change | EXHIBIT 1 |
| <u>Hunters Inc Lease</u> | | | |
| Hunters, Inc. | Antero Resources Corporation | 1/8+ | 436/304 |
| <u>Everett McCullough et ux Lease</u> | | | |
| Everett M. McCullough et ux | Chesapeake Appalachia, LLC | 1/8 | 375/730 |
| Chesapeake Appalachia, LLC | Statoil USA Onshore Properties, Inc | Assignment | 384/359 |
| Statoil USA Onshore Properties, Inc | Antero Resources Corporation | Assignment | 544/291 |
| <u>Part of Hunters Inc Lease</u> | | | |
| Hunters, Inc. | Antero Resources Corporation | 1/8+ | 436/304 |
| <u>Eugene R. Hill Trust Lease</u> | | | |
| Eugene R. Hill Trust | Antero Resources Corporation | 1/8+ | 471/741 |
| <u>John B. Bridgeman Lease</u> | | | |
| John B. Bridgeman | Antero Resources Corporation | 1/8+ | 436/302 |
| <u>Alliance Petroleum Corporation Lease</u> | | | |
| Alliance Petroleum Corporation | Antero Resources Appalachian Corporation | 1/8 | 257/753 |
| Antero Resources Appalachian Corporation | Antero Resources Corporation | Name Change | EXHIBIT 1 |

*Partial Assignments to Antero Resources Appalachian Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

WW-6A1
(5/13)

Operator's Well No. Alli 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 |
|------------------------------|---|---|--------------------|-----------|
| Blanche Stewart Lease | Blanche Stewart, widow | Herman Dillon | 1/8 | 121/183 |
| | Herman Dillon | Consolidated Gas Supply Corporation | Assignment | 121/644 |
| | Consolidated Gas Supply Corporation | Consolidated Gas Transmission Corporation | Assignment | 169/756 |
| | Consolidated Gas Transmission Corporation | CNG Development Company | Assignment | 176/601 |
| | CNG Development Company | CNG Producing Company | Name Change | EXHIBIT 2 |
| | CNG Producing Company | Dominion Exploration & Production Company | Merger | 58/366 |
| | Dominion Exploration & Production Company | Dominion Transmission, Inc. | Assignment | 251/621 |
| | Dominion Transmission, Inc. | CONSOL Energy Holding, LLC XVI | Assignment | 251/648 |
| | CONSOL Energy Holding, LLC XVI | CONSOL Gas Company | Merger | 6/634 |
| | CONSOL Gas Company | CNX Gas Company, LLC | Merger | 6/634 |
| | CNX Gas Company, LLC | Antero Resources Corporation | Partial Assignment | 281/631 |

*Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

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

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

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

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

Well Operator: Antero Resources Corporation
 By: Kevin Kilstrom
 Its: Senior Vice President of Production

FILED

JUN 10 2013

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



Penney Barker, Manager
Corporations Division
IN THE OFFICE OF
SECRETARY OF STATE
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvgsos.com
E-mail: 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 WW-6A1
EXHIBIT 2**

KERN HECHLER
FEE \$5.00



TO BE FILED IN DUPLICATE
ORIGINALS

FILED
JUL 10 1991
OFFICE OF
SECRETARY OF STATE
WEST VIRGINIA

**APPLICATION FOR
CERTIFICATE OF WITHDRAWAL
OF
CNG Development Company**

In accordance with Chapter 31, Article 1, Section 60 of the Code of West Virginia, the undersigned corporation hereby applies for a certificate of withdrawal from West Virginia, and submits the following statement:

The name of the corporation is: CNG Development Company

It is incorporated under the laws of Delaware

IT IS NOT TRANSACTING BUSINESS IN WEST VIRGINIA.

It hereby surrenders its authority to transact business in West Virginia. It revokes the authority of its registered agent in West Virginia to accept service of process, and consents that service of process in any action, suit or proceeding based upon any course of action arising in West Virginia during the time the corporation was authorized to transact business in West Virginia may thereafter be made on the corporation by service thereof on the Secretary of State of West Virginia.

The post office address to which the Secretary of State may mail a copy of any process against the corporation is: CNG Producing Company, CNG Tower, 1450 Poydras Street, New Orleans, LA 70112-6000 Attn: Corporate Secretary

The aggregate number of shares which it has authority to issue, itemized by classes, par value of shares, shares without par, and series, if any, within a class, as of this date is:

| NUMBER OF SHARES | CLASS | SERIES | PAR VALUE/NO PAR |
|------------------|--------|--------|------------------|
| 1,400,000 | Common | | \$100 |

The aggregate number of its issued shares, itemized by classes, par value of shares, shares without par, and series, if any, within a class, as of this date is:

| NUMBER OF SHARES | CLASS | SERIES | PAR VALUE/NO PAR |
|------------------|--------|--------|------------------|
| 1,168,410 | Common | | \$100 |

The amount of its state capital as of this date is \$28,814,400

LATITUDE 39°25'00"

9,818'

LATITUDE 39°22'30"

6,760' TO BOTTOM HOLE

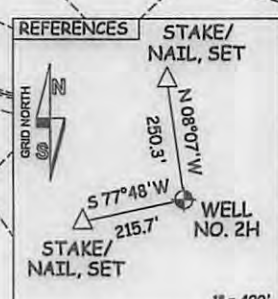
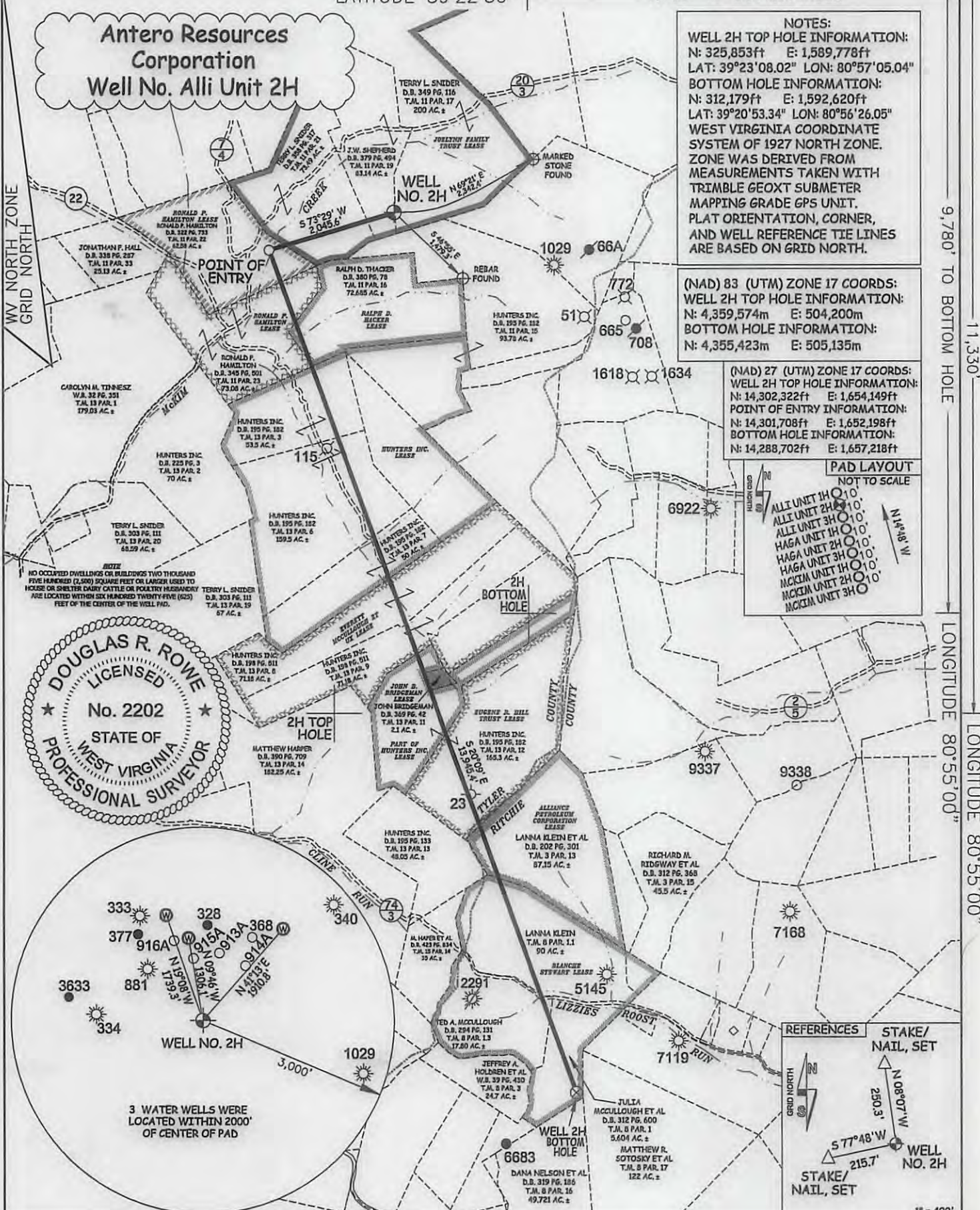
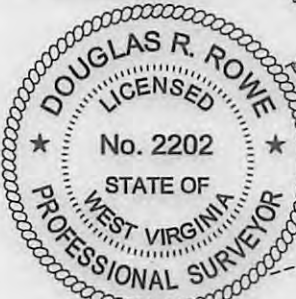
Antero Resources Corporation Well No. Alli Unit 2H

NOTES:
WELL 2H TOP HOLE INFORMATION:
 N: 325,853ft E: 1,589,778ft
 LAT: 39°23'08.02" LON: 80°57'05.04"
BOTTOM HOLE INFORMATION:
 N: 312,179ft E: 1,592,620ft
 LAT: 39°20'53.34" LON: 80°56'26.05"
 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: 4,359,574m E: 504,200m
BOTTOM HOLE INFORMATION:
 N: 4,355,423m E: 505,135m

(NAD) 27 (UTM) ZONE 17 COORDS:
WELL 2H TOP HOLE INFORMATION:
 N: 14,302,322ft E: 1,654,149ft
POINT OF ENTRY INFORMATION:
 N: 14,301,708ft E: 1,652,198ft
BOTTOM HOLE INFORMATION:
 N: 14,288,702ft E: 1,657,218ft

PAD LAYOUT
NOT TO SCALE



JOB # 16-032WA
 DRAWING # ALLI2HR2
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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 PERSCRIBED 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

LEGEND
 - - - - - Surface Owner Boundary Lines +/-
 - - - - - Interior Surface Tracts +/-
 - - - - - Existing Fence
 ⊕ Found monument, as noted

DOUGLAS R. ROWE P.S. 2202
 DATE 01/17/17
 OPERATOR'S WELL# ALLIUNIT#2H

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
 LOCATION: ELEVATION 1,208' - ORIGINAL 1,172' - PROPOSED WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE MIDDLEBOURNE 7.5' (TH) PENNSBORO 7.5' (BH) DISTRICT MEADE COUNTY TYLER
 SURFACE OWNER JARRET W. SHEPHERD ET AL ACREAGE 83.14 ACRES +/-
 OIL & GAS ROYALTY OWNER JOELYNN FAMILY TRUST; RONALD P. HAMILTON; RONALD P. HAMILTON; RALPH D. HACKER; LEASE ACREAGE 431.53 AC±; 62.58 AC±; 73.08 AC±; 84.81 AC±;
 HUNTERS INC.; EVERETT MCCULLOUGH ET UX; EUGENE R. HILL TRUST; ALLIANCE PETROLEUM CORPORATION; BLANCHE STEWART; 471.20 AC±; 188.72 AC±; 104.3 AC±; 87.15 AC±; 195 AC±;
 PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER REDRILL ___ FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL ___
 (SPECIFY) MOD-BHL PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,500' TVD 21,500' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

02/17/2017

9,780' TO BOTTOM HOLE
11,330'
LONGITUDE 80°55'00"
LONGITUDE 80°55'00"

LATITUDE 39°25'00"

9,818'

LATITUDE 39°22'30"

6,760' TO BOTTOM HOLE

Antero Resources Corporation Well No. Alli Unit 2H

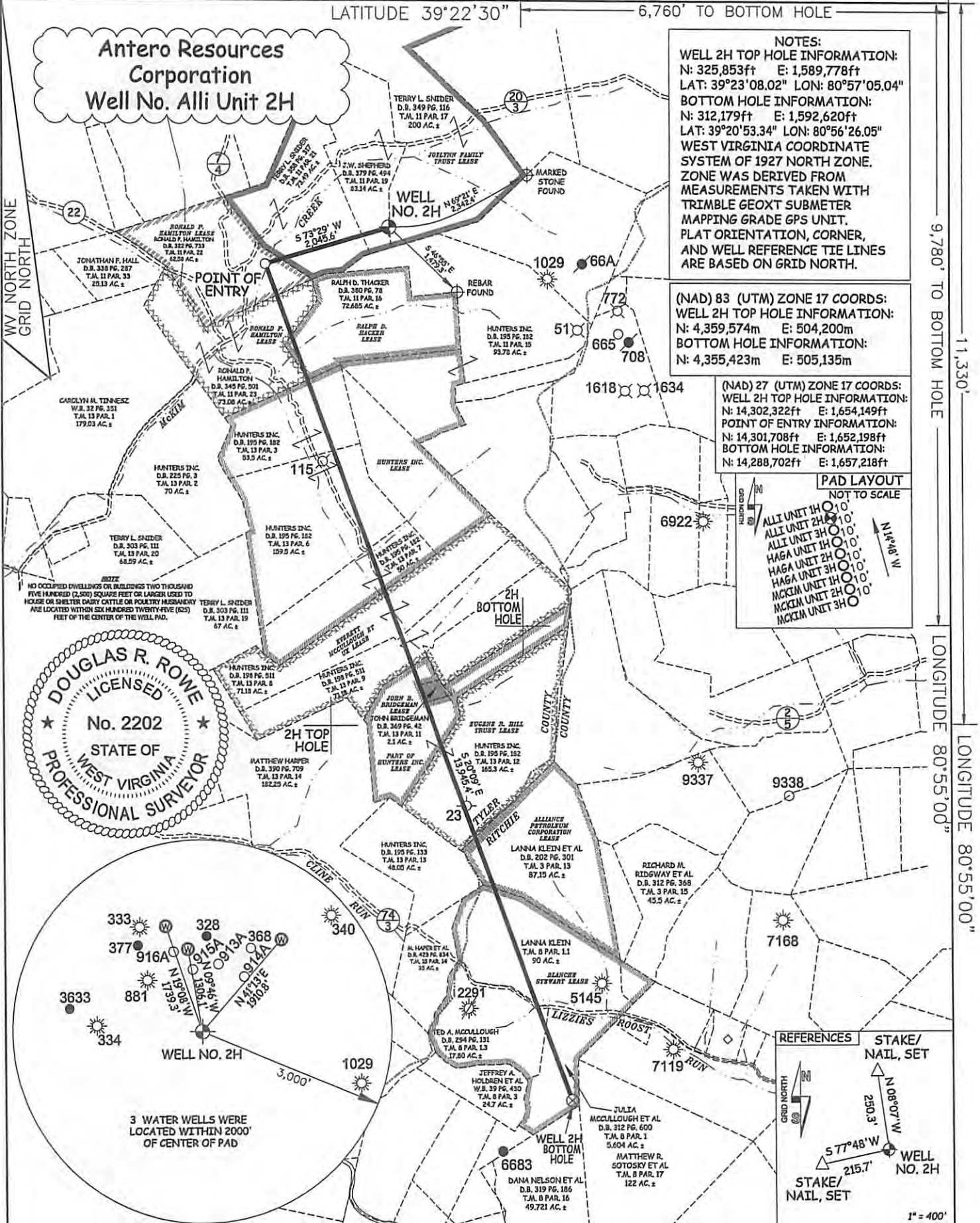
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 - - - - - Interior Surface Tracts +/-
 - - - - - Existing Fence
 ⊕ Found monument, as noted

DOUGLAS R. ROWE P.S. 2202
 DATE 01/17/17
 OPERATOR'S WELL# ALLI UNIT #2H

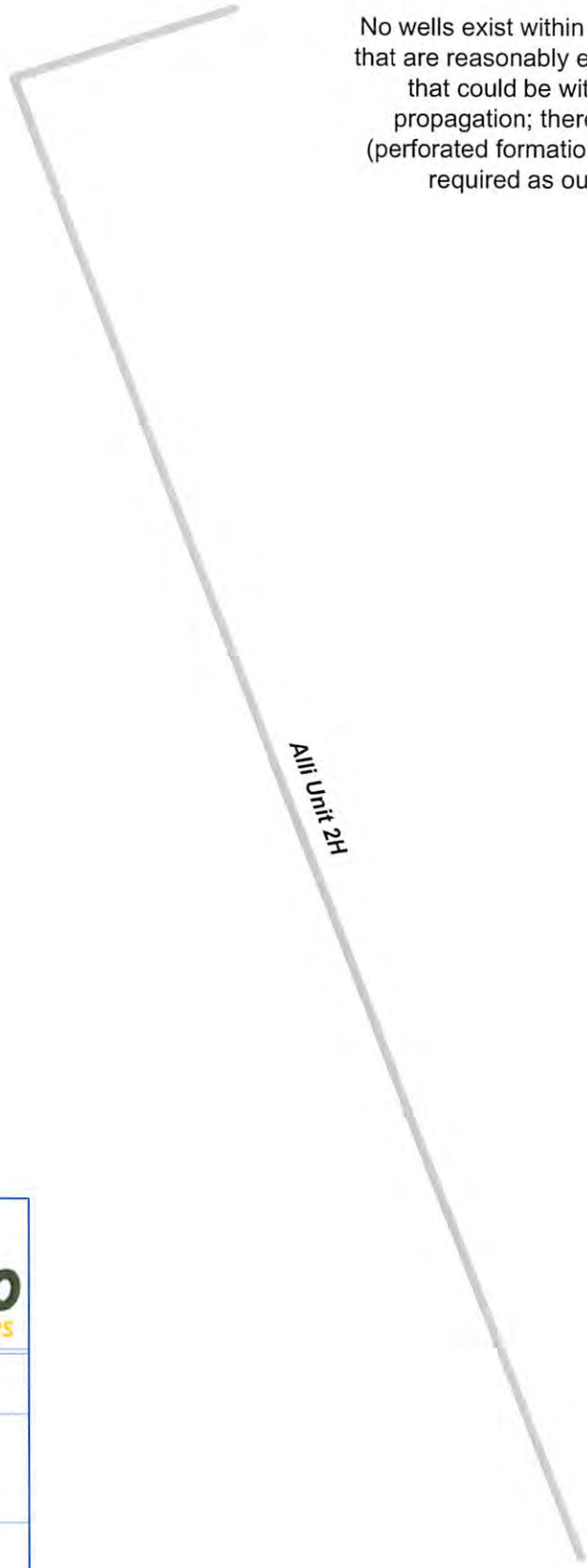
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1,208' - ORIGINAL 1,172' - PROPOSED WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE MIDDLEBOURNE 7.5' (TH) PENNSBORO 7.5' (BH) DISTRICT MEADE COUNTY TYLER
 SURFACE OWNER JARRET W. SHEPHERD ET AL ACREAGE 83.14 ACRES +/-
 OIL & GAS ROYALTY OWNER JOE LYNN FAMILY TRUST; RONALD P. HAMILTON; RONALD P. HAMILTON; RALPH D. HACKER; LEASE ACREAGE 431.53 AC±; 62.58 AC±; 73.08 AC±; 84.61 AC±; HUNTERS INC.; EVERETT MCCULLOUGH ET UX; EUGENE R. HILL TRUST; ALLIANCE PETROLEUM CORPORATION; BLANCHE STEWART; 471.20 AC±; 188.72 AC±; 104.3 AC±; 87.15 AC±; 195 AC±
 PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER X REDRILL ___ FRACTURE OR STIMULATE X
 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD-BHL PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,500' TVD 21,500' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

02/17/2017

COUNTY NAME PERMIT



No wells exist within a 500' radius of the wellbore that are reasonably expected to penetrate a depth that could be within the range of fracture propagation; therefore no additional details (perforated formation, producing zones etc.) are required as outlined in 35CSR8-5.11



Alli Unit 2H



Alli Unit 2H - AOR



WELL SYMBOLS
Gas Well

REMARKS
No wells of interest within area of review.


January 17, 2017

02/17/2017

FORM WM-8 DEWEY, CO 80505 ADDRESS 2400 D BIG LAGER ROAD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DANIA STAMBER - CI CORROSION SYSTEM
 LABEL FORMATION MARSELLUS ESTIMATED DEPTH 8'200, LAD 51'200, WD
 (SPECIES) MOD-BHG BGC & AVOIDON CREAT OUT & BEGUC
 BGC OFF OLD FORMATION BEFORABLE NEM FORMATION X OTHER PHYSICAL CHANGE IN WELL CREATURE OF STIMULATE X
 PROPOSED WORK DRIFT CORRECT DRIFT DEEER X BEDRIFT
 HILLES INC. ELEVETT HOSPITAL ET AL. ELEVETT HILLES BEFORABLE NEM FORMATION: BGCUSHE STAMBER: 41'20' ACS: 188'25' ACS: 104'2' ACS: 81'12' ACS: 182' ACS:

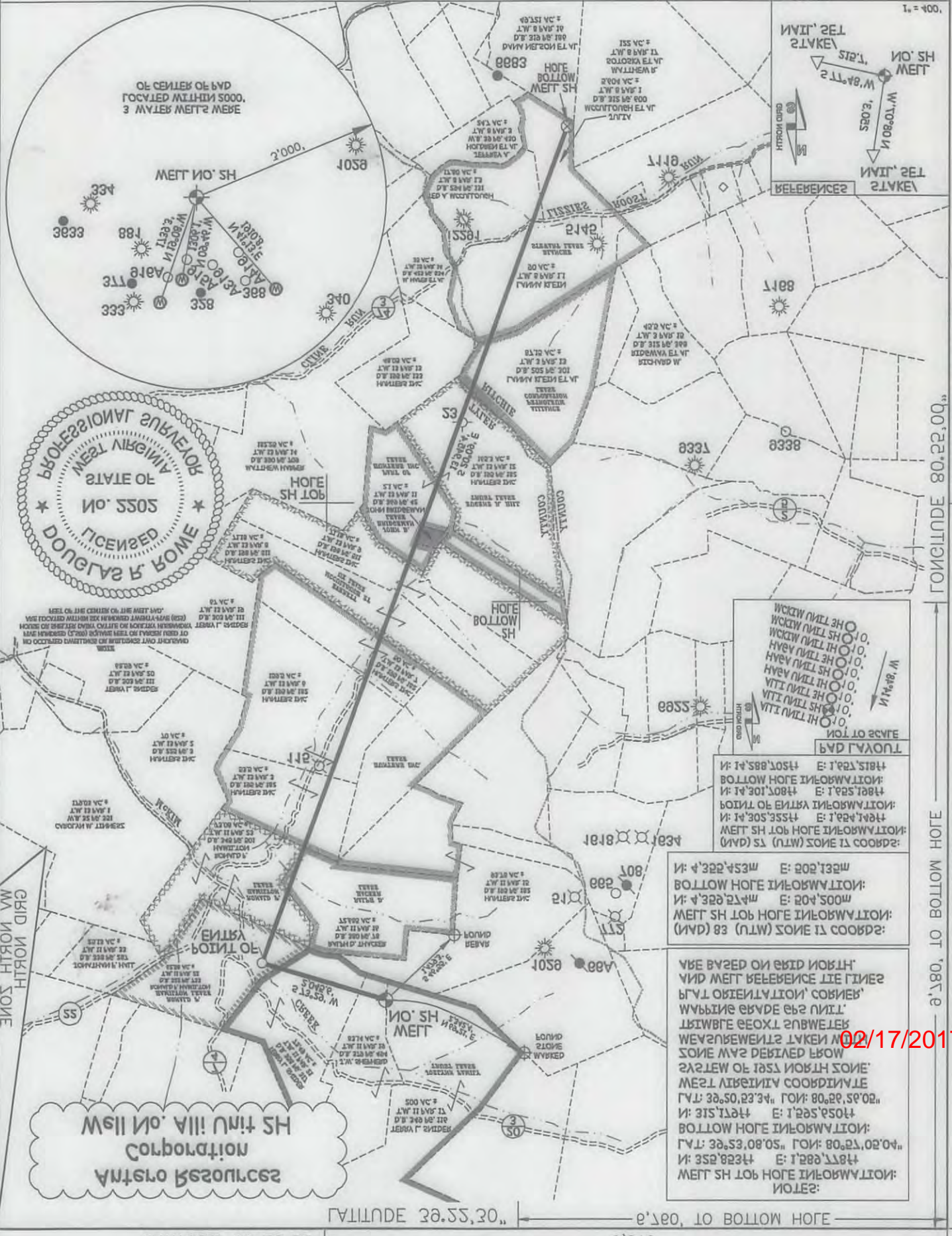
DIVISION OF OIL AND GAS DEPARTMENT OF ENERGY STATE OF WEST VIRGINIA
 SUBMETER MAPPING SCALE BY PROVEN SOURCE OF EQUAL ACCURACY SUBMETER MINIMUM DEGREE OF SCALE 1" = 5000.
 DRAWING # ATTACHED JOB # 10-035MA

WEST VIRGINIA STATE
 550 WASHINGTON AVE. BEINGBOVO
 WITCOM LAND SURVEYING BUREAU
 OFFICE OF OIL AND GAS
 OF ENVIRONMENTAL PROTECTION
 STATE OF WEST VIRGINIA, DIVISION



DESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION INFORMATION RECEIVED BY LAW AND THE RULES ISSUED AND TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS WITH THE THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT

COUNTY NAME BEKMT
 COUNTY 082
 STATE 20
 WELL # 100111115H
 DATE 04/20/11
 DONELAS B. BOME B.S. 2305
 FOUND MONUMENT, OR NOTION
 EXISTING FENCE
 INTERIOR SURFACE TRACTS +1-
 SURFACE OWNER BOUNDARY LINES +1-



02/17/2017

HOGUE TO BOTTOM HOGUE 1'330.
 HOGUE TO BOTTOM HOGUE 80.22,00"
 HOGUE TO BOTTOM HOGUE 80.22,00"
 HOGUE TO BOTTOM HOGUE 80.22,00"