



June 17, 2019

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: Ms. Laura Adkins
601 57th Street
Charleston, WV 25304

Ms. Adkins:

Antero Resources Corporation (Antero) would like to submit the following permit modification for one approved well on the Kirk Hadley Pad. We are requesting to change the bottom hole location of the Treasury Unit 2H (API# 47-~~95~~-02557).

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) 357-6820.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Karin Cox", is written over a white background.

Karin Cox
Permitting Agent
Antero Resources Corporation

Enclosures

RECEIVED
Office of Oil and Gas

JUN 18 2019

WV Department of
Environmental Protection



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Denver, CO 80202
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Antero Resources Corporation (Antero) would like to submit the following permit modification for one approved well on the Kirk Hadley Pad. We are requesting to change the bottom hole location of the Treasury Unit 2H (API# 47-085-02557).

095 (EPD)

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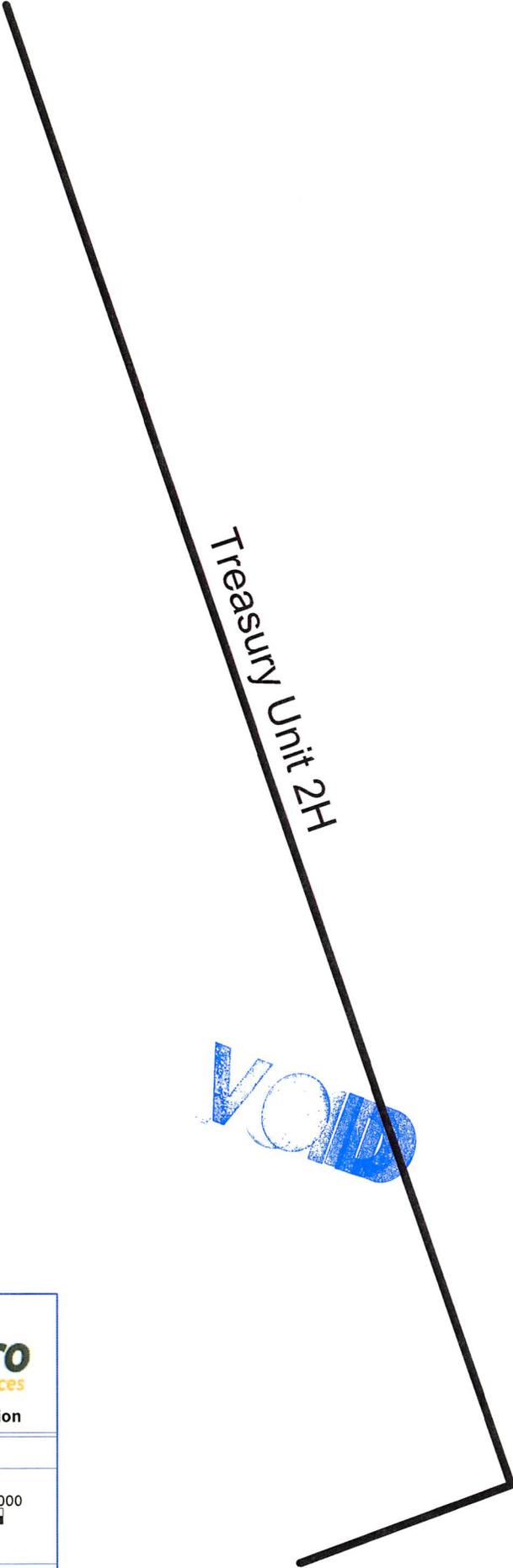
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Karin Cox
Permitting Agent
Antero Resources Corporation

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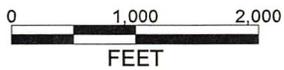
Treasury Unit 1H

VOID



Antero Resources Corporation

Treasury Unit 1H - AOR



REMARKS
No Wells of Interest

October 8, 2018

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Office of Oil and Gas

JUN 18 2019

WV Department of
Environmental Protection

WW-6B
(04/15)

API NO. 47-095 - 02557

OPERATOR WELL NO. Treasury Unit 2H

Well Pad Name: Hadley Pad

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

1) Well Operator: Antero Resources Corporation

494507062	095-Tyler	Meade	Middlebourne 7.5'
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Operator ID County District Quadrangle

2) Operator's Well Number: Treasury Unit 2H Well Pad Name: Hadley Pad

3) Farm Name/Surface Owner: Kirk L. Hadley Public Road Access: CR 6/3

4) Elevation, current ground: 912' 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: 6600' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#



8) Proposed Total Vertical Depth: 6600' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 24300' MD

11) Proposed Horizontal Leg Length: 14976'

12) Approximate Fresh Water Strata Depths: 142', 349'

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

14) Approximate Saltwater Depths: 1225', 1691', 2032'

15) Approximate Coal Seam Depths: 527', 627', 681'

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: _____

WW-6B
(04/15)

API NO. 47- 095 - 02557

OPERATOR WELL NO. Treasury Unit 2H

Well Pad Name: Hadley Pad

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#	80	80	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/48#	399 *see # 19	399 *see # 19	CTS, 554 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#	24300	24300	6274 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
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	20"	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							

VOID

PACKERS

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

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Office of Oil and Gas

JUN 18 2019

WW-6B
(10/14)

API NO. 47-095 - 02557

OPERATOR WELL NO. Treasury Unit 2H

Well Pad Name: Hadley 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.

*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): Existing 14.78 acres

22) Area to be disturbed for well pad only, less access road (acres): Existing 3.94 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 10 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

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JUN 18 2019

*Note: Attach additional sheets as needed.

WW-6A1
(5/13)

Operator's Well No. Treasury 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>Donna Smith Lease</u>	Donna Smith	Antero Resources Corporation	1/8+	0552/0608

*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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JUN 21 2019
WV Department of
Environmental Protection

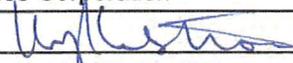
**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

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: Kevin Kilstrom 

Its: Senior Vice President of Production

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Kirk Hadley Lease</u>			
Kirk Hadley	Sancho Oil & Gas Company	1/8	0358/0606
Sancho Oil & Gas Company	Chesapeake Appalachia LLC	Assignment	0370/0154
Chesapeake Appalachia LLC	Statoil USA Onshore Properties, Inc	Assignment	0378/0764
Statoil USA Onshore Properties, Inc	Antero Exchange Properties, LLC	Assignment	0544/0291
Antero Exchange Properties, LLC	Antero Resources Corporation	Merger	0552/0315
<u>Richard Clark Lease (TM 26 PCL 2)</u>			
Richard Clark	Antero Resources Appalachian Corporation	1/8+	0408/0361
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Richard Clark Lease (TM 26 PCL 1)</u>			
Richard Clark	Antero Resources Appalachian Corporation	1/8+	0404/0568
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Richard Clark Lease (TM 20 PCL 97)</u>			
Richard Clark	Antero Resources Appalachian Corporation	1/8+	0408/0363
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>John P.L. Hennessey Lease</u>			
John P.L. Hennessey	Statoil USA Onshore Properties, Inc	1/8	0466/0364
Statoil USA Onshore Properties Inc	Equinor USA Onshore Properties Inc	Affidavit	0604/0703
Equinor USA Onshore Properties Inc	Antero Resources Corporation	Agreement	0639/0677
<u>West Virginia Division of Natural Resources Lease</u>			
West Virginia Division of Natural Resources	Antero Resources Corporation	1/8+	0552/0580
<u>Robert Earl Pitts Lease</u>			
Robert Earl Pitts	Chesapeake Appalachia, LLC	1/8+	0379/0356
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc.	Assignment	0390/0056
Statoil USA Onshore Properties, Inc.	Antero Exchange Properties, LLC	Assignment	0544/0291
Antero Exchange Properties, LLC	Antero Resources Corporation	Merge	0552/0315
<u>Ruth E. Moore, Widow Lease</u>			
Ruth E. Moore, widow	Chesapeake Appalachia, LLC	1/8	0370/0496
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc	Assignment	0465/0463
Statoil USA Onshore Properties, Inc	Antero Exchange Properties, Inc	Assignment	0544/0291
Antero Exchange Properties, Inc	Antero Resources Corporation	Name Change	Exhibit 1

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Rebecca A. Haught Lease</u> Rebecca A. Haught Siltstone Resources II LLC	Siltstone Resources II LLC Antero Resources Corporation	1/8 Agreement	0482/0011 0597/0790
<u>Keith V. & Barbara Frum Lease (TM 19 PCL 19)</u> Keith V. & Barbara Frum	Antero Resources Corporation	1/8+	0639/0015
<u>Keith V. & Barbara Frum Lease (TM 19 PCL 25.2)</u> Keith V. & Barbara Frum	Antero Resources Corporation	1/8+	0639/0015
<u>Michael T. Fluharty Lease (TM 19 PCL 25.3)</u> Michael T. Fluharty Chesapeake Appalachia LLC	Chesapeake Appalachia LLC Antero Resources Corporation	1/8+ Assignment	0399/0401 0544/0291
<u>Gary G. Phillips Jr, et ux Lease (TM 19 PCL 25.1)</u> Gary G. Phillips Jr, et ux	Antero Resources Corporation	1/8+	0619/0603
<u>Jerry E. & Jessie K. Tracy Lease (TM 19 PCL 6)</u> Jerry E. & Jessie K. Tracy	Antero Resources Corporation	1/8+	0465/0728
<u>Jack & Margaret M. Henthorn Lease (TM 19 PCL 26)</u> Jack & Margaret M. Henthorn Chesapeake Appalachia LLC SWN Productions Company LLC Antero Exchange Properties, LLC	Chesapeake Appalachia LLC SWN Productions Company LLC Antero Exchange Properties, LLC Antero Resources Corporation	1/8+ Assignment Assignment Merger	0395/0729 0443/0552 0544/0242 0552/0315
<u>Ridgetop Capitol IV Lease</u> Ridgetop Capital IV	Antero Resources Corporation	1/8+	0561/0612
<u>Mark & Ellen VanDyne Lease</u> Mark & Ellen VanDyne	Antero Resources Corporation	1/8+	0559/0036
<u>Mark & Ellen VanDyne Lease</u> Mark & Ellen VanDyne	Antero Resources Corporation	1/8+	0559/0036
<u>CHK-MAC, LLC Lease (TM 19 PCL p/o 4)</u> CHK-MAC, LLC SWN Production Company, LLC Antero Exchange Properties, LLC	SWN Production Company, LLC Antero Exchange Properties, LLC Antero Resources Corporation	1/8 Assignment Name Change	0465/0481 0544/0242 0552/0315
<u>Harry W. Pixler Lease (TM 19 PCL p/o 4)</u> Harry W. Pixler	Antero Resources Corporation	1/8+	0430/0435

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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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Wednesday, July 17, 2019
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET
DENVER, CO 80202

Re: Permit Modification Approval for TREASURY UNIT 2H
47-095-02557-00-00

Change bottom hole location. Total Measured Depth 11,350 to 24,300. Horizontal Leg Length 4,227 to 14,976. Updated Leases included.

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".

James A. Martin
Chief

Operator's Well Number: TREASURY UNIT 2H
Farm Name: KIRK L. HADLEY
U.S. WELL NUMBER: 47-095-02557-00-00
Horizontal 6A New Drill
Date Modification Issued: 07/17/2019

Promoting a healthy environment.

WW-6B
(04/15)

095 (04/15)
Permit Modification (API# 47-095-02557)
API NO. 47-095 - 02557
OPERATOR WELL NO. Treasury Unit 2H
Well Pad Name: Hadley Pad

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

1) Well Operator: Antero Resources Corporation 494507062 095-Tyler Meade Middlebourne 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Treasury Unit 2H Well Pad Name: Hadley Pad

3) Farm Name/Surface Owner: Kirk L. Hadley Public Road Access: CR 6/3

4) Elevation, current ground: 912' 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: 6600' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

JCB
6/21/2019

8) Proposed Total Vertical Depth: 6600' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 24300' MD ✓

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15) Approximate Coal Seam Depths: 527', 627', 681'

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# 47-085-02557)
 API NO. 47- 095 - 02557
 OPERATOR WELL NO. Treasury Unit 2H
 Well Pad Name: Hadley Pad

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CASING AND TUBING PROGRAM

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Liners							

JPB
6/21/2019

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Liners							

PACKERS

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

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WV Department of
Environmental Protection

Page 2 of 3

WW-6B
(10/14)

Permit Modification (API# 47-085-D2557)
API NO. 47- 095 - 02557
OPERATOR WELL NO. Treasury Unit 2H
Well Pad Name: Hadley Pad

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

JEB
6/21/2019

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): Existing 14.78 acres

22) Area to be disturbed for well pad only, less access road (acres): Existing 3.94 acres

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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.

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Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

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Conductor: no additives, Class A cement.

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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.

RECEIVED
Office of Oil and Gas

*Note: Attach additional sheets as needed.

JUN 21 2019

Page 3 of 3

WV Department of
Environmental Protection



Treasury Unit 2H

RECEIVED
Office of Oil and Gas

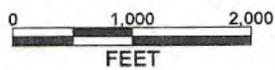
JUN 21 2019

WV Department of
Environmental Protection



Antero Resources Corporation

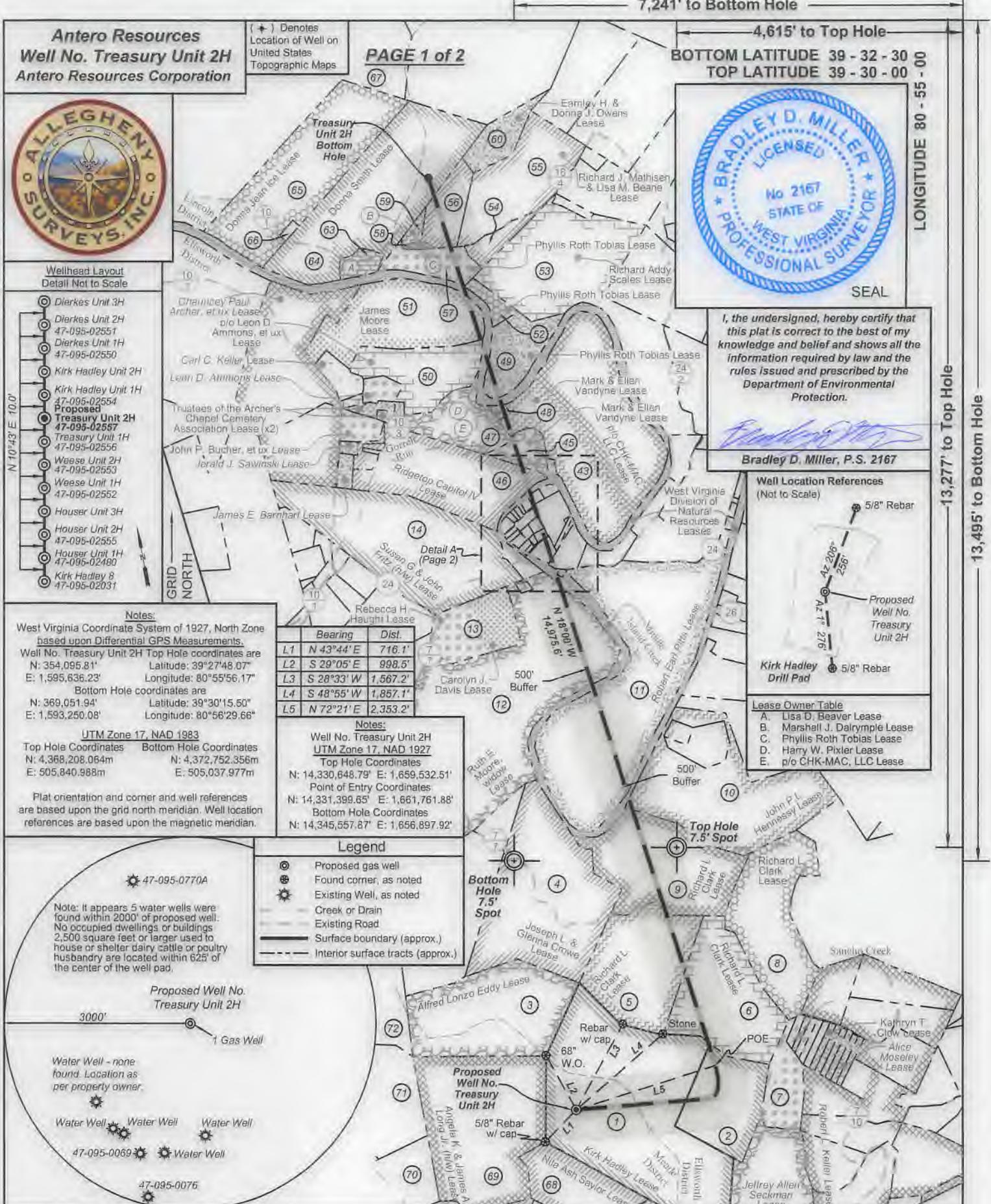
Treasury Unit 1H - AOR



REMARKS
No Wells of Interest

October 8, 2018

JEB
6/21/2019

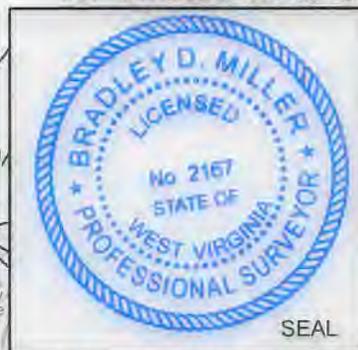


Antero Resources
Well No. Treasury Unit 2H
Antero Resources Corporation

(+) Denotes
 Location of Well on
 United States
 Topographic Maps

PAGE 1 of 2

7,241' to Bottom Hole
 4,615' to Top Hole
 BOTTOM LATITUDE 39 - 32 - 30
 TOP LATITUDE 39 - 30 - 00
 LONGITUDE 80 - 55 - 00

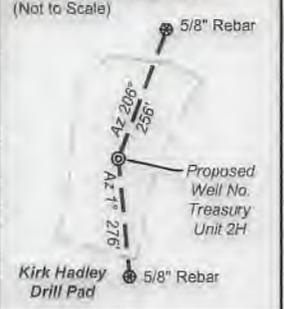


- Wellhead Layout**
 Detail Not to Scale
- Dierkes Unit 3H
 - Dierkes Unit 2H
47-095-02551
 - Dierkes Unit 1H
47-095-02550
 - Kirk Hadley Unit 2H
 - Kirk Hadley Unit 1H
47-095-02554
 - Proposed Treasury Unit 2H
47-095-02557
 - Treasury Unit 1H
47-095-02556
 - Weese Unit 2H
47-095-02553
 - Weese Unit 1H
47-095-02552
 - Houser Unit 3H
 - Houser Unit 2H
47-095-02555
 - Houser Unit 1H
47-095-02480
 - Kirk Hadley 8
47-095-02031

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, P.S. 2167

Well Location References
 (Not to Scale)



Lease Owner Table

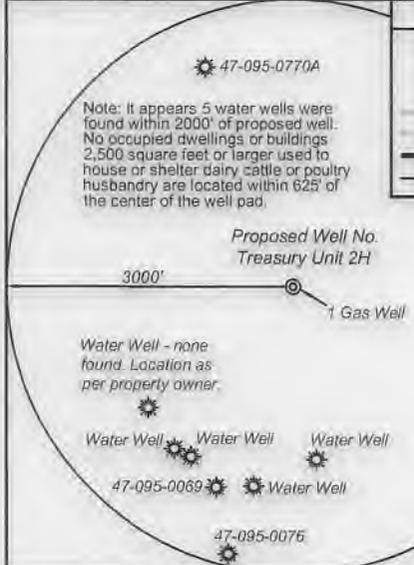
A.	Lisa D. Beaver Lease
B.	Marshall J. Dalrymple Lease
C.	Phyllis Roth Tobias Lease
D.	Harry W. Pixler Lease
E.	p/o CHK-MAC, LLC Lease

Notes:
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Treasury Unit 2H Top Hole coordinates are N: 354,095.81' Latitude: 39°27'48.07" E: 1,595,636.23' Longitude: 80°55'56.17"
 Bottom Hole coordinates are N: 369,051.94' Latitude: 39°30'15.50" E: 1,593,250.08' Longitude: 80°56'29.66"

Bearing	Dist.
L1 N 43°44' E	716.1'
L2 S 29°05' E	998.5'
L3 S 28°33' W	1,567.2'
L4 S 48°55' W	1,857.1'
L5 N 72°21' E	2,353.2'

UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,368,208.064m E: 505,840.988m N: 4,372,752.356m E: 505,037.977m

Notes:
 Well No. Treasury Unit 2H
 UTM Zone 17, NAD 1927
 Top Hole Coordinates
 N: 14,330,648.79' E: 1,659,532.51'
 Point of Entry Coordinates
 N: 14,331,399.65' E: 1,661,761.88'
 Bottom Hole Coordinates
 N: 14,345,557.87' E: 1,656,897.92'



Legend

- Proposed gas well
- ⊕ Found corner, as noted
- ⊙ Existing Well, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- - - Interior surface tracts (approx.)

FILE NO: 101-54-E-18
 DRAWING NO: Treasury 2H Well Plat
 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

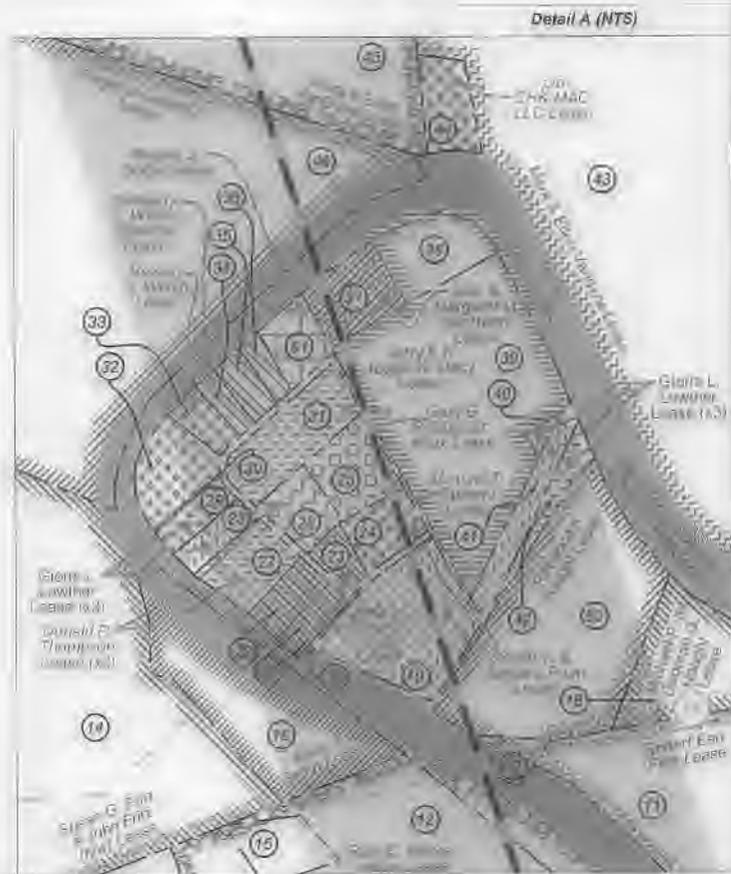
DATE: June 14 20 19
 OPERATOR'S WELL NO. Treasury Unit 2H
 API WELL NO. MoD
 47 - 095 - 02557
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: As-Built 912' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne
 DISTRICT: Meade, Ellsworth, Lincoln COUNTY: Tyler
 SURFACE OWNER: Kirk L. Hadley ACREAGE: 162
 ROYALTY OWNER: Kirk Hadley; Richard L. Clark(3); John P.L. Hennessy; Robert Earl Pitts; LEASE NO: ACREAGE: 0.60; 8.82;
 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: 24,300' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313

54	13-3-4	415 / 732	7.505	Justin L. & Jessica Carpenier	Elisworth District
53	13-5	393 / 473	78.06	Richard Adley Scales	
52	13-7	387 / 671	6.04	Robert D. & Sherry A. Ball	Elisworth District
51	13-8	WB43 / 425	58.98	Larry Moore & James Moore	
50	13-8-1	371 / 36	35.41	Leon B. & Deanna N. Ammons	Elisworth District
49	13-8	387 / 671	21.42	Robert D. & Sherry A. Ball	
48	19-4	388 / 250	1.20	Harry Wayne Pixler	Elisworth District
47	19-56	390 / 553	23.56	Mark L. & Ellen W. VanDyne	
46	19-33	308 / 18	60.12	Ridgetop Capital IV	Elisworth District
45	19-55	333 / 208	9.55	Mark & Ellen VanDyne	
44	19-5	471 / 812	0.89	Ruth A. McDonald	Elisworth District
43	20-1	210 / 37	126.90	Mark L. & Ellen W. VanDyne	
42	19-29	39 / 506	0.39	Gloria L. Lowther	Elisworth District
41	19-28	39 / 506	0.093	Gloria L. Lowther	
40	19-27	39 / 506	0.08	Gloria L. Lowther	Elisworth District
39	19-6	245 / 651	8.05	Jerry E. & Jessie K. Tracy	
38	19-7	337 / 653	0.77	Jerry E. & Jessie K. Tracy	Elisworth District
37	19-26	325 / 86	0.60	Jack & Margaret M. Henthorn	
36	19-9	355 / 875	0.23	Kimberly L. Billings	Elisworth District
35	19-10	355 / 875	0.35	Kimberly L. Billings	
34	19-11	355 / 875	0.23	Kimberly L. Billings	Elisworth District
33	19-12	255 / 334	0.35	Beverly J. Welch	
32	19-13	255 / 334	0.80	Beverly J. Welch	Elisworth District
31	19-25.1	303 / 105	1.288	Gary G. Jr. & Debbie A. Phillips	
30	19-13.1	355 / 782	0.03	Gloria L. Lowther	Elisworth District
29	19-14	355 / 782	0.39	Gloria L. Lowther	
28	19-15	355 / 782	0.39	Gloria L. Lowther	Elisworth District
27	19-16	329 / 47	0.79	Donald R. Thompson	
26	19-25	329 / 47	1.241	Donald R. Thompson	Elisworth District
25	19-25.3	334 / 117	0.631	Keith & Barbara Frum	
24	19-25.2	334 / 117	0.631	Keith & Barbara Frum	Elisworth District
23	19-21	312 / 141	0.30	Jerry Michael & Anna Ariene Cooper	
22	19-17	312 / 141	0.51	Jerry Michael & Anna Ariene Cooper	Elisworth District
21	19-20	312 / 141	0.32	Jerry Michael & Anna Ariene Cooper	
20	19-18	312 / 141	0.06	Jerry Michael & Anna Ariene Cooper	Elisworth District
19	19-19	226 / 268	2.308	Keith V. & Barbara Frum	
18	20-34	344 / 268	7.75	Michael P. & Deborah G. Haught	Elisworth District
17	19-31	334 / 603	0.25	WV Department of Highways	
16	19-32	147 / 426	4.41	Mary J. Smith	Elisworth District
15	19-52.1	369 / 434	1.00	Hops Fellowship in Christ's Church	
14	19-34	318 / 636	95.60	Chauncy P. & Ruth Archer	Elisworth District
13	19-35	WB30 / 315	29.00	Rebecca Haught	
12	19-52	WB43 / 425	188.36	Larry Moore, et al	Elisworth District
11	20-35	161 / 375	140.00	Robert C. Sellers, et al	
10	20-99	247 / 7	74.231	John P. L. Hennessy	Elisworth District
9	20-97	314 / 699	66.84	Dennis J. & Connie S. Moore	
8	26-3	449 / 216	63.02	Dennis James Moore, et al	Elisworth District
7	26-9	404 / 352	28.021	JB Exploration I, LLC	
6	26-2	314 / 701	63.40	Larry G. & Besty E. Moore	Elisworth District
5	26-1	448 / 216	61.78	Dennis James Moore, et al	
4	19-54	WB36 / 738	100.00	Deborah Susan Reed	Elisworth District
3	25-2	333 / 188	75.00	Angela K. & James A. Long Jr.	
2	26-11	321 / 642	40.00	Kirk L. Hadley	Elisworth District
1	26-12	213 / 74	162.00	Kirk L. Hadley	
No.	TM - Par	Bk / Pg	Acres	Owner(s)	

72	2-15-1	333 / 188	23.70	Angela K. & James A. Long Jr.
71	2-5	392 / 712	69.50	Robert L. & Nancy C. Donaghy, et al
70	2-5-1	204 / 309	54.24	Donald R. & Shirley D. Fletcher
69	2-15	333 / 188	100.00	Angela K. & James A. Long Jr.
68	3-1-2	309 / 508	41.25	William Kent & Deborah Lee Snyder
67	15-13	174 / 412	140.00	B.F., Ben H., & Ida M. Kile
66	15-16-1	339 / 706	1.00	Richard G. Thomas
65	15-16	WB30 / 1	81.67	Everett Glen Thomas
64	15-17	191 / 112	127.39	Earl & Donna Smith
63	15-17-1	327 / 758	6.35	Lisa D. Beaver
62	19-30	WB30 / 315	5.40	Rebecca A. Haught
61	19-8	357 / 127	0.60	Robert G. & Pamela R. Gorby
60	13-3-1	350 / 388	13.919	Earnley H. & Donna J. Owens
59	13-3-2	342 / 509	2.433	Marshal J. & Peggy S. Dairympole
58	13-4	267 / 209	1.03	Marshal J. Dairympole
57	13-3	387 / 671	8.62	Robert D. & Sherry A. Ball
56	13-3-5	406 / 668	17.648	Lisa M. Beane
55	13-3-3	349 / 563	70.509	Richard J. Mathisen
No.	TM - Par	Bk / Pg	Acres	Owner(s)



FILE NO: 101-54-E-18
 DRAWING NO: Treasury 2H Well Plat
 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: June 14 20 19
 OPERATOR'S WELL NO. Treasury Unit 2H
API WELL NO MOD
 47 - 095 - 02557
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: As-Built 912' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne
 DISTRICT: Meade, Elisworth, Lincoln LEON D. AMMONS, et ux; JERRY E. & JESSIE K. TRACY; RICHARD J. MATHISEN & LISA M. BEANE; MARK & ELLEN VANDYNE(2); PHYLLIS ROSE TOBIAS(3); JACK & MARGARET M. HENTHORN; RUTH E. MOORE, WIDOW; REBECCA A. HAUGHT; MICHAEL T. FLUHRARY; ROBERT G. GORBY; JAMES MOORE; WEST VIRGINIA DIVISION OF NATURAL RESOURCES(3); DONNA SMITH; KEITH V & BARBARA FRUM(2); HARRY W. PIXLER; GARY G. PHILLIPS, JR., et ux; RIDGETOP CAPITAL IV
 COUNTY: Tyler
 SURFACE OWNER: Kirk L. Hadley ACREAGE: 162
 ROYALTY OWNER: Kirk Hadley, Richard L. Clark(3), John P. L. Hennessy, Robert Earl Pitts, LEASE NO: ACREAGE: 0.60; 8.82;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 6,600' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,300' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313

Antero Resources
Well No. Treasury Unit 2H
Antero Resources Corporation

(+) Denotes
 Location of Well on
 United States
 Topographic Maps

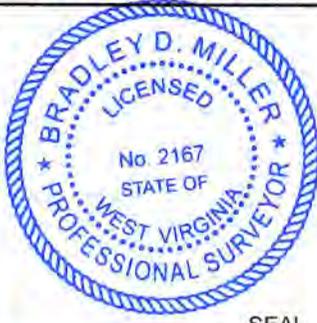
PAGE 1 of 2

7,241' to Bottom Hole

4,615' to Top Hole

BOTTOM LATITUDE 39 - 32 - 30
TOP LATITUDE 39 - 30 - 00

LONGITUDE 80 - 55 - 00



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

- Wellhead Layout**
 Detail Not to Scale
- Dierkes Unit 3H
 - Dierkes Unit 2H 47-095-02551
 - Dierkes Unit 1H 47-095-02550
 - Kirk Hadley Unit 2H
 - Kirk Hadley Unit 1H 47-095-02554
 - Proposed Treasury Unit 2H 47-095-02557
 - Treasury Unit 1H 47-095-02556
 - Weese Unit 2H 47-095-02553
 - Weese Unit 1H 47-095-02552
 - Houser Unit 3H
 - Houser Unit 2H 47-095-02555
 - Houser Unit 1H 47-095-02480
 - Kirk Hadley 8 47-095-02031



Well Location References
 (Not to Scale)



Lease Owner Table

A	Lisa D. Beaver Lease
B	Marshall J. Dalrymple Lease
C	Phyllis Roth Tobias Lease
D	Harry W. Pixler Lease
E	p/o CHK-MAC, LLC Lease

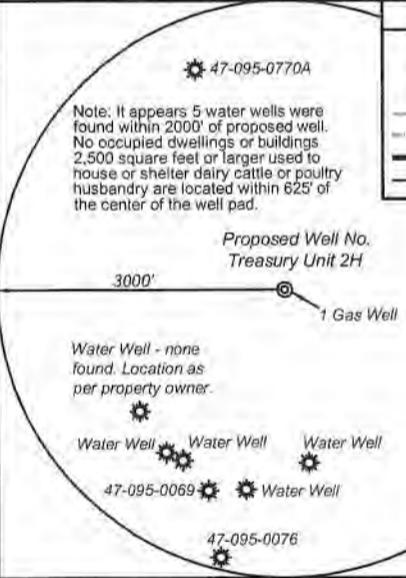
Notes:
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Bearing	Dist.
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L2 S 29°05' E	998.5'
L3 S 28°33' W	1,567.2'
L4 S 48°55' W	1,857.1'
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 Point of Entry Coordinates
 N: 14,331,399.65' E: 1,661,761.88'
 Bottom Hole Coordinates
 N: 14,345,557.87' E: 1,656,897.92'

Legend

- Proposed gas well
- ⊕ Found corner, as noted
- ⊙ Existing Well, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- - - Interior surface tracts (approx.)



FILE NO: 101-54-E-18
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STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: June 14 20 19
 OPERATOR'S WELL NO. Treasury Unit 2H
 API WELL NO
 47 - 095 - 02557
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 912' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne
 DISTRICT: Meade, Ellsworth, Lincoln COUNTY: Tyler
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 ROYALTY OWNER: Kirk Hadley; Richard L. Clark(3); John P.L. Hennessy; Robert Earl Pitts; LEASE NO: _____ ACREAGE: 0.60; 0.82;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD ESTIMATED DEPTH: 24,300' MD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,300' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313

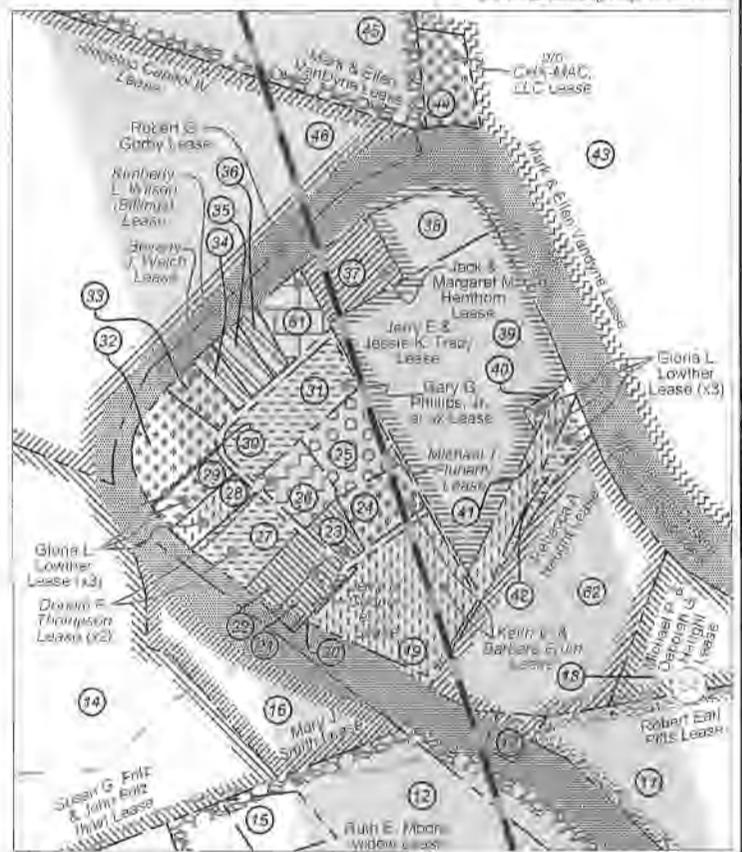
No.	TM - Par.	Bk / Pg	Acres	Owner(s)	District
54	13-3-4	415 / 733	7.605	Justin L. & Jessica Carpenter	Ellsworth District
53	13-5	393 / 473	78.00	Richard Addy Scales	
52	13-7	387 / 671	6.04	Robert D. & Sherry A. Ball	
51	13-8	WB43 / 425	56.98	Larry Moore & James Moore	Ellsworth District
50	13-8-1	371 / 38	35.11	Leon B. & Deanna N. Ammons	
49	13-6	387 / 671	21.42	Robert D. & Sherry A. Ball	
48	19-4	388 / 250	1.20	Harry Wayne Pixler	Ellsworth District
47	10-56	390 / 553	23.56	Mark L. & Ellen W. VanDyne	
46	19-33	308 / 18	60.72	Ridgeloop Capitol IV	
45	19-55	333 / 208	9.55	Mark & Ellen VanDyne	Ellsworth District
44	19-5	471 / 812	0.89	Ruth A. McDonald	
43	20-1	210 / 37	126.90	Mark L. & Ellen W. VanDyne	
42	19-29	39 / 506	0.39	Gloria L. Lowther	Ellsworth District
41	19-28	39 / 506	0.083	Gloria L. Lowther	
40	19-27	39 / 506	0.08	Gloria L. Lowther	
39	19-6	245 / 661	8.05	Jerry E. & Jessie K. Tracy	Ellsworth District
38	19-7	337 / 653	0.77	Jerry E. & Jessie K. Tracy	
37	19-26	326 / 86	0.60	Jack & Margaret M. Henthorn	
36	19-9	355 / 675	0.23	Kimberly L. Billings	Ellsworth District
35	19-10	355 / 675	0.35	Kimberly L. Billings	
34	19-11	355 / 675	0.23	Kimberly L. Billings	
33	19-12	255 / 334	0.35	Beverly J. Welch	Ellsworth District
32	19-13	255 / 334	0.80	Beverly J. Welch	
31	19-25.1	303 / 105	1.288	Gary G. Jr. & Debbie A. Phillips	
30	19-13.1	355 / 782	0.03	Gloria L. Lowther	Ellsworth District
29	19-14	355 / 782	0.39	Gloria L. Lowther	
28	19-15	355 / 782	0.39	Gloria L. Lowther	
27	19-16	329 / 47	0.79	Donald R. Thompson	Ellsworth District
26	19-25	329 / 47	1.241	Donald R. Thompson	
25	19-25.3	334 / 117	0.631	Keith & Barbara Frum	
24	19-25.2	334 / 117	0.631	Keith & Barbara Frum	Ellsworth District
23	19-21	312 / 141	0.30	Jerry Michael & Anna Arlene Cooper	
22	19-17	312 / 141	0.51	Jerry Michael & Anna Arlene Cooper	
21	19-20	312 / 141	0.22	Jerry Michael & Anna Arlene Cooper	Ellsworth District
20	19-18	312 / 141	0.06	Jerry Michael & Anna Arlene Cooper	
19	19-19	225 / 266	2.308	Keith V. & Barbara Frum	
18	20-34	344 / 268	7.75	Michael P. & Deborah G. Haught	Ellsworth District
17	19-31	334 / 603	0.25	WV Department of Highways	
16	19-32	147 / 426	4.41	Mary J. Smith	
15	19-52.1	369 / 434	1.00	Hope Fellowship in Christ's Church	Ellsworth District
14	19-34	318 / 636	95.60	Chauncy P. & Ruth Archer	
13	19-36	WB30 / 315	29.00	Rebecca Haught	
12	19-52	WB43 / 425	186.36	Larry Moore, et al	Ellsworth District
11	20-35	181 / 378	140.00	Robert G. Sellers, et al	
10	20-98	247 / 7	74.231	John R. L. Hennessy	
9	20-97	314 / 899	66.84	Dennis J. & Connie S. Moore	Ellsworth District
8	26-3	448 / 216	63.02	Dennis James Moore, et al	
7	26-9	404 / 352	28.021	JB Exploration I. LLC	
6	26-2	314 / 701	63.40	Larry G. & Besty E. Moore	Ellsworth District
5	26-1	448 / 216	61.78	Dennis James Moore, et al	
4	19-54	WB36 / 730	100.00	Deborah Susan Reed	
3	25-2	333 / 188	75.00	Angela K. & James A. Long Jr.	Ellsworth District
2	26-11	321 / 842	40.00	Kirk L. Hadley	
1	26-12	213 / 74	162.00	Kirk L. Hadley	
No.	TM - Par.	Bk / Pg	Acres	Owner(s)	

No.	TM - Par.	Bk / Pg	Acres	Owner(s)
72	2-15.1	333 / 188	23.70	Angela K. & James A. Long Jr.
71	2-5	382 / 712	69.50	Robert L. & Nancy C. Donaghy, et al
70	2-5.1	204 / 309	51.24	Donald R. & Shirley D. Fletcher
69	2-15	333 / 188	100.00	Angela K. & James A. Long Jr.
68	3-1.2	309 / 588	41.25	William Kent & Deborah Lee Snyder
67	15-13	174 / 412	140.00	B.F., Ben H., & Ida M. Kile
66	15-16.1	339 / 706	1.00	Richard G. Thomas
65	15-16	WB30 / 1	81.87	Everett Glen Thomas
64	15-17	191 / 12	137.89	Eari & Donna Smith
63	15-17.1	327 / 755	6.35	Lisa D. Beaver
62	19-30	WB30 / 315	5.40	Rebecca A. Haught
61	19-8	357 / 127	0.60	Robert G. & Pamela R. Gorby
60	13-3.1	350 / 388	13.919	Eamley H. & Donna J. Owens
59	13-3.2	342 / 509	2.433	Marshall J. & Peggy S. Dalrymple
58	13-4	267 / 209	1.03	Marshall J. Dalrymple
57	13-3	387 / 671	8.62	Robert D. & Sherry A. Ball
56	13-3.5	406 / 668	17.648	Lisa M. Beane
55	13-3.3	349 / 563	70.509	Richard J. Malisen

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Environmental Protection



FILE NO: 101-54-E-18
 DRAWING NO: Treasury 2H Well Plat
 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: June 14 20 19
 OPERATOR'S WELL NO. Treasury Unit 2H
 API WELL NO
 47 - 095 - 02557
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 912' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne
 DISTRICT: Meade, Ellsworth, Lincoln COUNTY: Tyler
 SURFACE OWNER: Kirk L. Hadley ACREAGE: 162
 ROYALTY OWNER: Kirk Hadley; Richard L. Clark(3); John P.L. Hennessy; Robert Earl Pitts. LEASE NO: ACREAGE: 0.60; 8.82;

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 6,600' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,300' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313

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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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Kirk Hadley Lease</u>			
Kirk Hadley	Sancho Oil & Gas Company	1/8	0358/0606
Sancho Oil & Gas Company	Chesapeake Appalachia LLC	Assignment	0370/0154
Chesapeake Appalachia LLC	Statoil USA Onshore Properties, Inc	Assignment	0378/0764
Statoil USA Onshore Properties, Inc	Antero Exchange Properties, LLC	Assignment	0544/0291
Antero Exchange Properties, LLC	Antero Resources Corporation	Merger	0552/0315
<u>Richard Clark Lease (TM 26 PCL 2)</u>			
Richard Clark	Antero Resources Appalachian Corporation	1/8+	0408/0361
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Richard Clark Lease (TM 26 PCL 1)</u>			
Richard Clark	Antero Resources Appalachian Corporation	1/8+	0404/0568
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Richard Clark Lease (TM 20 PCL 97)</u>			
Richard Clark	Antero Resources Appalachian Corporation	1/8+	0408/0363
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>John P.L. Hennessey Lease</u>			
John P.L. Hennessey	Statoil USA Onshore Properties, Inc	1/8	0466/0364
Statoil USA Onshore Properties Inc	Equinor USA Onshore Properties Inc	Affidavit	0604/0703
Equinor USA Onshore Properties Inc	Antero Resources Corporation	Agreement	0639/0677
<u>West Virginia Division of Natural Resources Lease</u>			
West Virginia Division of Natural Resources	Antero Resources Corporation	1/8+	0552/0580
<u>Robert Earl Pitts Lease</u>			
Robert Earl Pitts	Chesapeake Appalachia, LLC	1/8+	0379/0356
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc.	Assignment	0390/0056
Statoil USA Onshore Properties, Inc.	Antero Exchange Properties, LLC	Assignment	0544/0291
Antero Exchange Properties, LLC	Antero Resources Corporation	Merger	0552/0315
<u>Ruth E. Moore, Widow Lease</u>			
Ruth E. Moore, widow	Chesapeake Appalachia, LLC	1/8	0370/0496
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc	Assignment	0465/0463
Statoil USA Onshore Properties, Inc	Antero Exchange Properties, Inc	Assignment	0544/0291
Antero Exchange Properties, Inc	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.

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CONTINUED ON NEXT PAGE

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
Rebecca A. Haught Lease Rebecca A. Haught Siltstone Resources II LLC	Siltstone Resources II LLC Antero Resources Corporation	1/8 Agreement	0482/0011 0597/0790
Keith V. & Barbara Frum Lease (TM 19 PCL 19) Keith V. & Barbara Frum	Antero Resources Corporation	1/8+	0639/0015
Keith V. & Barbara Frum Lease (TM 19 PCL 25.2) Keith V. & Barbara Frum	Antero Resources Corporation	1/8+	0639/0015
Michael T. Fluharty Lease (TM 19 PCL 25.3) Michael T. Fluharty Chesapeake Appalachia LLC	Chesapeake Appalachia LLC Antero Resources Corporation	1/8+ Assignment	0399/0401 0544/0291
Gary G. Phillips Jr, et ux Lease (TM 19 PCL 25.1) Gary G. Phillips Jr, et ux	Antero Resources Corporation	1/8+	0619/0603
Jerry E. & Jessie K. Tracy Lease (TM 19 PCL 6) Jerry E. & Jessie K. Tracy	Antero Resources Corporation	1/8+	0465/0728
Jack & Margaret M. Henthorn Lease (TM 19 PCL 26) Jack & Margaret M. Henthorn Chesapeake Appalachia LLC SWN Productions Company LLC Antero Exchange Properties, LLC	Chesapeake Appalachia LLC SWN Productions Company LLC Antero Exchange Properties, LLC Antero Resources Corporation	1/8+ Assignment Assignment Merger	0395/0729 0443/0552 0544/0242 0552/0315
Ridgetop Capitol IV Lease Ridgetop Capital IV	Antero Resources Corporation	1/8+	0561/0612
Mark & Ellen VanDyne Lease Mark & Ellen VanDyne	Antero Resources Corporation	1/8+	0559/0036
Mark & Ellen VanDyne Lease Mark & Ellen VanDyne	Antero Resources Corporation	1/8+	0559/0036
CHK-MAC, LLC Lease (TM 19 PCL p/o 4) CHK-MAC, LLC SWN Production Company, LLC Antero Exchange Properties, LLC	SWN Production Company, LLC Antero Exchange Properties, LLC Antero Resources Corporation	1/8 Assignment Name Change	0465/0481 0544/0242 0552/0315
Harry W. Pixler Lease (TM 19 PCL p/o 4) Harry W. Pixler	Antero Resources Corporation	1/8+	0430/0435

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Phyllis Roth Tobias Lease</u>			
Phyllis Roth Tobias	Triad Hunter LLC	1/8	0415/0572
Triad Hunter LLC	Antero Resources Corporation	Assignment	0573/0012
<u>Leon D. Ammons, et ux Lease</u>			
Leon D. Ammons, et ux	Antero Resources Corporation	1/8+	0426/0029
<u>James Moore Lease</u>			
James Moore	Antero Resources Appalachian Corporation	1/8+	0399/0299
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Phyllis Roth Tobias Lease</u>			
Phyllis Roth Tobias	Triad Hunter, LLC	1/8+	0415/0577
Triad Hunter, LLC	Antero Resources Corporation	Assignment	0573/0012
<u>Richard J. Mathisen & Lisa M. Beane Lease</u>			
Richard J. Mathisen & Lisa M. Beane	Antero Resources Corporation	1/8+	0558/0341

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WW-6A1
(5/13)

Operator's Well No. Treasury Unit 2H

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Donna Smith Lease	Donna Smith	Antero Resources Corporation	1/8+	0552/0608

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**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

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Page 1 of 1
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Leon D. Ammons, et ux	Antero Resources Corporation	1/8+	0426/0029
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