

04/19/2019



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

Thursday, April 18, 2019
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET
DENVER, CO 80202

Re: Permit Modification Approval for SCHRADER UNIT 1H
47-017-06877-00-00

Change Bottom Hole Location leading to a change of the Horizontal Leg from 10811' to 10789'.

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 positioned above the printed name.

James A. Martin
Chief

Operator's Well Number: SCHRADER UNIT 1H
Farm Name: MARY E. DEETS AND/OR PAUL A. SMITH
U.S. WELL NUMBER: 47-017-06877-00-00
Horizontal 6A New Drill
Date Modification Issued: 04/18/2019

Promoting a healthy environment.

WW-6B
(04/15)

Permit Modification (API# 47-017-06877)
API NO. 47-017 - 06877
OPERATOR WELL NO. Schrader Unit 1H
Well Pad Name: Deets 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 - Doddri West Uni Smithburg 7.5'
Operator ID County District Quadrangle
- 2) Operator's Well Number: Schrader Unit 1H Well Pad Name: Deets Pad
- 3) Farm Name/Surface Owner: Mary E. Deets and/or Paul A. Smith Public Road Access: Old US-50
- 4) Elevation, current ground: ~1422' Elevation, proposed post-construction: 1376'
- 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: 7600' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2950#
- 8) Proposed Total Vertical Depth: 7600' TVD
- 9) Formation at Total Vertical Depth: Marcellus
- 10) Proposed Total Measured Depth: 20600' MD
- 11) Proposed Horizontal Leg Length: 10789'
- 12) Approximate Fresh Water Strata Depths: 196', 221'
- 13) Method to Determine Fresh Water Depths: Offset well records. Depths have been adjusted according to surface elevations.
- 14) Approximate Saltwater Depths: 1381', 1843', 1966'
- 15) Approximate Coal Seam Depths: 583', 755', 891
- 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: _____

RECEIVED
Office of Oil and Gas

MAR 29 2019

WV Department of
Environmental Protection

*DAE
3/28/19*

WW-6B
(04/15)

Permit Modification (API# 47-017-06877)
 API NO. 47- 017 - 06877
 OPERATOR WELL NO. Schrader Unit 1H
 Well Pad Name: Deets Pad

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	80'	80'	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/48#	300'	300'	CTS, 417 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#	20600'	20600'	5257 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.438"	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-HPOZ & 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			

RECEIVED
Office of Oil and Gas

MAR 29 2019

WV Department of
Environmental Protection

DAD
5/28/19

WW-6B
(10/14)

Permit Modification (API# 47-017-06877)
API NO. 47-017 - 06877
OPERATOR WELL NO. Schrader Unit 1H
Well Pad Name: Deets 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): 41.13 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.82 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

RECEIVED
Office of Oil and Gas
MAR 29 2019

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.

WW Department of
Environmental Protection

*Note: Attach additional sheets as needed.

DJP
3/28/19

SCHRADER UNIT 1H (DEETS PAD) - AREA OF REVIEW 35-8-5.11 PAGE 1



47017061940000
47017049630000

Schrader Unit 1H



Antero Resources Corporation

Schrader Unit 1H - AOR



WELL SYMBOLS
Gas Well

March 12, 2019

RECEIVED
Office of Oil and Gas

MAR 29 2019

WV Department of
Environmental Protection

*PAR
3/28/19*

SCHRADER UNIT 1H (DEETS PAD) - AREA OF REVIEW 35-8-5.11 PAGE 2

UWI (APINum)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47017061940000	COSTLOW UNIT	1H	ANTERO RESOURCES CORPORATION	ANTERO RESOURCES CORPORATION	17,207	7568 - 17153	Marcellus	
47017049630000	GASKINS	8577	ALLIANCE PETR CORP	DOMINION EXPL&PROD	5,360	1895 - 5136	Maxton, Big Injun, Squaw, Gordon, Benson	Benson, Alexander

WW-6A1
(5/13)

Permit Modification (API# 47-017-06877)
Operator's Well No. Schrader Unit 1H

**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
Dominion Exploration and Production Lease				
	Dominion Exploration & Production	Dominion Appalachian Development, LLC	1/8	0230/0218
	Dominion Appalachian Development, LLC	Antero Resources Appalachian Corporation	Assignment	0231/0145
	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

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 - Production

RECEIVED
Office of Oil and Gas
MAR 15 2019
WV Department of
Environmental Protection

Operator's Well Number

Schrader Unit 1H

Permit Modification (API# 47-017-06877)

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
✓ Johnson B. Smith et ux Lease			
Johnson B. Smith, et ux	Eastern Oil Company	1/8	0022/0231
Eastern Oil Company	A.W. Stevens	Assignment	0042/0328
A.W. Stevens	Eastern Union Gas Company	Assignment	0042/0330
Eastern Union Gas Company	Pittsburgh & West Virginia Gas Company	Assignment	0085/0334
Pittsburgh & West Virginia Gas Company	Equitable Gas Company	Assignment	0121/0257
Equitable Gas Company	Equitrans, Inc.	Assignment	0154/0475
Equitrans, Inc.	EQT Capital Corporation	Name Change	Exhibit 2
EQT Capital Corporation	Antero Resources Corporation	Assignment	0325/0528
✓ T.G. Baker et al Lease			
T.G. Baker et al	J.D. Foley	1/8	0044/0483
J.D. Foley	Delta Petroleum Company	Assignment	Unrecorded
Delta Petroleum Company	Petroleum Development Corporation	Assignment	Unrecorded
Petroleum Development Corporation	PDC Mountaineer, LLC	Assignment	0240/0118
PDC Mountaineer, LLC	Antero Resources Corporation	Assignment	0371/0253
✓ G.L. Swentzel et ux Lease			
G.L. Swentzel et ux	West Union Gas Company	1/8	0023/0482
West Union Gas Company	Eastern Oil Company	Assignment	0024/0136
Eastern Oil Company	A.W. Stevenson	Assignment	0042/0328
A.W. Stevenson	Eastern Union Gas Company	Assignment	0042/0328
Eastern Union Gas Company	Pittsburgh and West Virginia Gas Company	Assignment	0085/0334
Pittsburgh and West Virginia Gas Company	Equitable Gas Company	Assignment	0121/0257
Equitable Gas Company	Equitrans, Inc.	Assignment	0154/0475
Equitrans, Inc.	Equitrans, L.P.	Assignment	0302/0123
Equitrans, L.P.	Equitable Production Eastern States, Inc.	Assignment	0192/0019
Equitable Production Eastern States, Inc.	Equitable Production Company	Merged	Exhibit 3
Equitable Production Company	EQT Production Company	Name Change	0281/0346
EQT Production Company	Antero Resources Corporation	Agreement	0326/0539

RECEIVED
 Office of Oil and Gas
 MAR 15 2019
 WV Department of
 Environmental Protection

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

Operator's Well Number

Schrader Unit 1H

Permit Modification (API# 47-017-06877)

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
✓ P.B. McClain et ux Lease			
P.B. McClain et ux	The West Union Gas Company	1/8	0014/0477
The West Union Gas Company	Eastern Oil Company	Assignment	0023/0479
Eastern Oil Company	A.W. Stevenson	Assignment	0042/0328
A.W. Stevenson	Eastern Union Gas Company	Assignment	0042/0328
Eastern Union Gas Company	Pittsburgh & West Virginia Gas Company	Assignment	0085/0334
Pittsburgh & West Virginia Gas Company	Equitable Gas Company	Assignment	0121/0303
Equitable Gas Company	Equitrans, Inc.	Assignment	0154/0475
Equitrans, Inc.	Equitrans, L.P.	Name Change	0302/0123
Equitrans, L.P.	Equitable Production-Eastern States, Inc.	Assignment	0192/0019
Equitable Production-Eastern States, Inc.	Equitable Production Company	Merged	Exhibit 3
Equitable Production Company	EQT Production Company	Name Change	0281/0346
EQT Production Company	Antero Resources Corporation	Assignment	0325/0539
✓ Doris L. Cleveland Lease			
Doris L. Cleveland	Antero Resources Corporation	1/8+	0353/0069
✓ Charles Schrader et al Lease			
Charles Schrader et al	The Carter Oil Company	1/8	0024/0128
The Carter Oil Company	Hope Natural Gas Company	Assignment	0042/0410
Hope Natural Gas Company	Carl E. Smith, Inc.	Assignment	0068/0468
Carl E. Smith, Inc.	Carl E. Smith Petroleum, Inc.	Assignment	0096/0671
Carl E. Smith Petroleum, Inc.	G.B. Hefner & Associates, Inc.	Assignment	0186/0529
G.B. Hefner & Associates, Inc.	Antero Resources Appalachian Corporation	Partial Assignment	0284/0353
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
✓ John McKinney et al Lease			
John McKinney et al	W.D. Gribble	1/8	0056/0280
W.D. Gribble	Carolyn E. Farr	Conveyance	0003/0055
Carolyn E. Farr	Clarence E. Sigley, Sr., Trustee of the Carolyn Elizabeth Farr Trust	Conveyance	0285/0219
Clarence E. Sigley, Sr., Trustee of the Carolyn Elizabeth Farr Trust	Antero Resources Appalachian Corporation	Assignment	0271/0551
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
✓ Bill L. Sweeney Lease			
Bill L. Sweeney	Antero Resources Corporation	1/8+	0446/0330

*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



Penney Becker, Manager
IN THE OFFICE OF Corporations Division
SECRETARY OF STATE Tel: (304)358-8008
Fax: (304)359-8381
Web site: www.wv.gov
E-mail: business@wv.gov

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 statements:

- 1. Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
- 2. Date Certificate of Authority was issued in West Virginia: 8/25/2008
- 3. Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)
- 4. Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
- 5. Other amendments: _____
(attach additional pages if necessary)

6. 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.)

Alvin A. Schopp (304) 367-7310
Contact Name Phone Number

7. Signature information (See below *"Important Legal Notice Regarding Signatures"*):

Print Name of Signer: Alvin A. Schopp Title/Capacity: Authorized Person

Signature: [Handwritten Signature] Date: June 10, 2013

"Important Legal Notice Regarding Signatures" For West Virginia Code §31D-1-12b. 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.

RECEIVED
Office of Oil and Gas
MAR 15 2019
WV Department of Environmental Protection

FORM WW-6A1
EXHIBIT 2, Page 1

BOOK 512 PAGE 781

ARTICLES OF MERGER
OF
KENTUCKY WEST VIRGINIA GAS COMPANY

a West Virginia Company

Into

EQT CAPITAL CORPORATION

a Delaware Company

FILED
NOV 20 1995
IN THE OFFICE OF
SECRETARY OF STATE
WEST VIRGINIA

Pursuant to the provisions of Section 38, Article 1, Chapter 31 of the Code of West Virginia, 1931, as amended, the undersigned corporation adopts the following Articles of Merger for the purpose of merging a subsidiary corporation into the undersigned as the surviving corporation:

The undersigned foreign corporation is incorporated under the laws of Delaware and the laws of such jurisdiction permit such a merger.

The following Plan of Merger was adopted by the undersigned corporation in the manner prescribed by the laws of the jurisdiction under which it is organized.

This Plan of Merger dated as of November 20, 1995, is among EQT Capital Corporation ("EQT"), a Delaware corporation, Equitrans, Inc. ("Equitrans"), a Delaware corporation and Kentucky West Virginia Gas Company ("Kentucky West"), a West Virginia corporation. The terms of the merger shall be as follows:

1. Equitrans and Kentucky West shall merge into EQT. EQT shall be the surviving corporation with its corporate identity, existence, purposes, powers, franchises, rights and immunities unimpaired.
2. The issued and outstanding shares of common stock of Equitrans and Kentucky West, shall without further action on the part of Equitrans, Kentucky West or EQT, be cancelled and of no further effect as of the Effective Date of the merger (as defined below).
3. A Certificate of Merger shall be filed as required by law with the Secretary of State of the State of West Virginia and the Secretary of State of the State of Delaware. The Effective Date of the merger shall be the last date of filing with the respective secretaries of state (the "Effective Date"). On the Effective Date, Equitrans and Kentucky West will cease to exist as separate corporations and EQT will succeed to all of the assets, rights, privileges, immunities, powers, duties and liabilities of Equitrans and Kentucky West in accordance with the provisions of the West Virginia Corporation Act and of the Delaware General Corporation Law.
4. The current Certificate of Incorporation of EQT shall be its Certificate of Incorporation on and after the Effective Date of the merger.

RECEIVED
Office of Oil and Gas
MAR 15 2019
WV Department of
Environmental Protection

**FORM WW-6A1
EXHIBIT 2, Page 2**

BOOK **512** PAGE **782**

5. This Plan of Merger shall be executed by the corporate officers of Kentucky West, Equitrans and EQT.

The number of outstanding shares of each class of the subsidiary corporation and the number of such shares of each class owned by the surviving corporation are as follows:

<u>Name of Subsidiary</u>	<u>Number of Shares Outstanding</u>	<u>Designation of Class</u>	<u>Number of Shares Owned by Surviving Corporation</u>
Kentucky West Virginia Gas	331,754	Common	331,754

A copy of the Plan of Merger set forth above was mailed on September 1, 1995 to each Shareholder of the subsidiary corporation.

The undersigned corporation hereby: (a) agrees that it may be served with process in the State of West Virginia in any proceeding for the enforcement of the rights of a dissenting shareholder of the above-mentioned subsidiary corporation against the surviving corporation; (b) irrevocably appoints the Secretary of State of the State of West Virginia as its agent to accept service of process in any such proceeding; and (c) agrees that it will promptly pay to the dissenting shareholders of such domestic corporation the amount, if any, to which they shall be entitled under Section 123, Articles 1, Chapter 31 of the Code of West Virginia with respect to the rights of dissenting shareholders.

Dated November 20, 1995.

EQT CAPITAL CORPORATION

By *A. Mark Johnson*
Its President

and *James C. Sheller*
Its Corporate Secretary

RECEIVED
Office of Oil and Gas
MAR 15 2019
WV Department of
Environmental Protection



Certificate

I, Joe Manchin III, Secretary of State of the State of West Virginia, hereby certify that

by the provisions of Chapter 31 of the West Virginia Code, Articles of Merger were received and filed
MERGING EQUITABLE PRODUCTION - EASTERN STATES, INC., A QUALIFIED DE ORGANIZATION, WITH AND INTO
EQUITABLE PRODUCTION COMPANY, A QUALIFIED ORGANIZATION.

Therefore, I hereby issue this

CERTIFICATE OF MERGER

Given under my hand and the Great Seal of the State of West Virginia on this day of June 28, 2001

Secretary of State



MAR 15 2019
OFFICE OF OIL AND GAS
MW Department of Environmental Protection

04/19/2019



March 14, 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 modifications for seven approved wells on the Deets Pad. We are requesting to change the bottom hole locations of the Telstar Unit 2H (API# 47-017-06881), Telstar Unit 3H (API# 47-017-06831), Schrader Unit 1H (API# 47-017-06877), Schrader Unit 2H (API# 47-017-06879), Callahan Unit 1H (API# 47-017-06873), Callahan Unit 2H (API# 47-017-06874), Mondeo Unit 3H (API# 47-017-06878).

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

We would also like to request the following three wells be **cancelled**, Mondeo Unit 1H (API# 47-017-06875), Mondeo Unit 2H (API# 47-017-06876), Telstar Unit 1H (API# 47-017-06880).

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 black ink, appearing to read "Karin Cox", is written over a light blue circular stamp.

Karin Cox
Permitting Agent
Antero Resources Corporation

RECEIVED
Office of Oil and Gas

MAR 29 2019

WV Department of
Environmental Protection

Enclosures

VOID

Section

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 - Doddri West Uni Smithburg 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Schrader Unit 1H Well Pad Name: Deets Pad

3) Farm Name/Surface Owner: Mary E. Deets and/or Paul A. Smith Public Road Access: Old US-50

4) Elevation, current ground: ~1422' Elevation, proposed post-construction: 1376'

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: 7600' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2950#

8) Proposed Total Vertical Depth: 7600' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 20600' MD

11) Proposed Horizontal Leg Length: 10789'

12) Approximate Fresh Water Strata Depths: 196', 221'

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

14) Approximate Saltwater Depths: 1381', 1843', 1966'

15) Approximate Coal Seam Depths: 583', 755', 891'

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: _____

VOID

RECEIVED
Office of Oil and Gas
MAR 15 2019
WV Department of
Environmental Protection

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#	300'	300'	CTS, 417 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#	20600'	20600'	5257 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	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							

PACKERS

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

RECEIVED
 Office of Oil and Gas
 MAR 15 2019
 MN Department of
 Environmental Protection

VOID

WW-6B
(10/14)

Permit Modification (API# 47-017-06877) 04/19/2019
API NO. 47- 017 - 06877
OPERATOR WELL NO. Schrader Unit 1H
Well Pad Name: Deets 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): 41.13 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.82 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.

VOID

RECEIVED
Office of Oil and Gas
MAR 15 2019
Environmental Protection
Department of



47017061940000

47017049630000

Schrader Unit 1H

VOID



Antero Resources Corporation

Schrader Unit 1H - AOR



WELL SYMBOLS
Gas Well

March 12, 2019

SCHRADER UNIT 1H (DEETS PAD) - AREA OF REVIEW 35-8-5.11 PAGE 2

UWI (AP#num)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Productive Formation(s) not perforated
47017061940000	COSTLOW UNIT	1H	ANTERO RESOURCES CORPORATION	ANTERO RESOURCES CORPORATION	17,207	7568 - 17153	Marcellus	
47017049630000	GASKINS	8577	ALLIANCE PETR CORP	DOMINION EXPL&PROD	5,360	1895 - 5136	Maxton, Big Injun, Squaw, Gordon, Benson	Benson, Alexander

RECEIVED
Office of Oil and Gas

MAR 29 2018

WV Department of Environmental Protection

WW-6A1
(5/13)

Permit Modification (API# 47-017-06877)
Operator's Well No. Schrader Unit 1H

**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>Dominion Exploration and Production Lease</u>				
	Dominion Exploration & Production	Dominion Appalachian Development, LLC	1/8	0230/0218
	Dominion Appalachian Development, LLC	Antero Resources Appalachian Corporation	Assignment	0231/0145
	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.

VOID

**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.

RECEIVED
Office of Oil and Gas

MAR 29 2019

Well Operator: Antero Resources Corporation

By: Kevin Kilstrom *Kevin Kilstrom*

Its: Senior Vice President - Production

WV Department of
Environmental Protection

WW-6A1

Operator's Well Number

Schrader Unit 1H

Permit Modification (API# 47-017-06877)

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>Johnson B. Smith et ux Lease</u>			
Johnson B. Smith, et ux	Eastern Oil Company	1/8	0022/0231
Eastern Oil Company	A.W. Stevens	Assignment	0042/0328
A.W. Stevens	Eastern Union Gas Company	Assignment	0042/0330
Eastern Union Gas Company	Pittsburgh & West Virginia Gas Company	Assignment	0085/0334
Pittsburgh & West Virginia Gas Company	Equitable Gas Company	Assignment	0121/0257
Equitable Gas Company	Equitrans, Inc.	Assignment	0154/0475
Equitrans, Inc.	EQT Capital Corporation	Name Change	Exhibit 2
EQT Capital Corporation	Antero Resources Corporation	Assignment	0325/0528
<u>T.G. Baker et al Lease</u>			
T.G. Baker et al	J.D. Foley	1/8	0044/0483
J.D. Foley	Delta Petroleum Company	Assignment	Unrecorded
Delta Petroleum Company	Petroleum Development Corporation	Assignment	Unrecorded
Petroleum Development Corporation	PDC Mountaineer, LLC	Assignment	0240/0118
PDC Mountaineer, LLC	Antero Resources Corporation	Assignment	0371/0253
<u>G.L Swentzel et ux Lease</u>			
G.L. Swentzel et ux	West Union Gas Company	1/8	0023/0482
West Union Gas Company	Eastern Oil Company	Assignment	0024/0136
Eastern Oil Company	A.W. Stevenson	Assignment	0042/0328
A.W. Stevenson	Eastern Union Gas Company	Assignment	0042/0328
Eastern Union Gas Company	Pittsburgh and West Virginia Gas Company	Assignment	0085/0334
Pittsburgh and West Virginia Gas Company	Equitable Gas Company	Assignment	0121/0257
Equitable Gas Company	Equitrans, Inc.	Assignment	0154/0475
Equitrans, Inc.	Equitrans, L.P.	Assignment	0302/0123
Equitrans, L.P.	Equitable Production Eastern States, Inc.	Assignment	0192/0019
Equitable Production Eastern States, Inc.	Equitable Production Company	Merged	Exhibit 3
Equitable Production Company	EQT Production Company	Name Change	0281/0346
EQT Production Company	Antero Resources Corporation	Agreement	0326/0539

RECEIVED
Office of Oil and Gas

MAR 29 2019

WV Department of
Environmental Protection

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

**CONTINUED ON NEXT PAGE

STATE OF TEXAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF AIR QUALITY

On this day, I, the undersigned, being duly sworn, depose and say that the following information is true and correct to the best of my knowledge and belief:

That the above information was obtained from the records of the Texas Department of Environmental Protection, Office of Air Quality, and is true and correct to the best of my knowledge and belief.

That the above information was obtained from the records of the Texas Department of Environmental Protection, Office of Air Quality, and is true and correct to the best of my knowledge and belief.

Subscribed and sworn to before me this _____ day of _____, 2019.

Notary Public in and for the State of Texas
My Commission Expires _____
My Office is located at _____
My Commission Number is _____

Notary Public in and for the State of Texas
My Commission Expires _____
My Office is located at _____
My Commission Number is _____

Notary Public in and for the State of Texas
My Commission Expires _____
My Office is located at _____
My Commission Number is _____

Notary Public in and for the State of Texas
My Commission Expires _____
My Office is located at _____
My Commission Number is _____

Office of Air Quality
Office of Oil and Gas

MAR 20 2019

Environmental Protection
Texas Department of

WW-6A1

Operator's Well Number Schrader Unit 1H
 Permit Modification (API# 47-017-06877)

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>P.B. McClain et ux Lease</u>			
P.B. McClain et ux	The West Union Gas Company	1/8	0014/0477
The West Union Gas Company	Eastern Oil Company	Assignment	0023/0479
Eastern Oil Company	A.W. Stevenson	Assignment	0042/0328
A.W. Stevenson	Eastern Union Gas Company	Assignment	0042/0328
Eastern Union Gas Company	Pittsburgh & West Virginia Gas Company	Assignment	0085/0334
Pittsburgh & West Virginia Gas Company	Equitable Gas Company	Assignment	0121/0303
Equitable Gas Company	Equitrans, Inc.	Assignment	0154/0475
Equitrans, Inc.	Equitrans, L.P.	Name Change	0302/0123
Equitrans, L.P.	Equitable Production-Eastern States, Inc.	Assignment	0192/0019
Equitable Production-Eastern States, Inc.	Equitable Production Company	Merged	Exhibit 3
Equitable Production Company	EQT Production Company	Name Change	0281/0346
EQT Production Company	Antero Resources Corporation	Assignment	0325/0539
<u>Doris L. Cleveland Lease</u>			
Doris L. Cleveland	Antero Resources Corporation	1/8+	0353/0069
<u>Charles Schrader et al Lease</u>			
Charles Schrader et al	The Carter Oil Company	1/8	0024/0128
The Carter Oil Company	Hope Natural Gas Company	Assignment	0042/0410
Hope Natural Gas Company	Carl E. Smith, Inc.	Assignment	0068/0468
Carl E. Smith, Inc.	Carl E. Smith Petroleum, Inc.	Assignment	0096/0671
Carl E. Smith Petroleum, Inc.	G.B. Hefner & Associates, Inc.	Assignment	0186/0529
G.B. Hefner & Associates, Inc.	Antero Resources Appalachian Corporation	Partial Assignment	0284/0353
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>John McKinney et al Lease</u>			
John McKinney et al	W.D. Gribble	1/8	0056/0280
W.D. Gribble	Carolyn E. Farr	Conveyance	0003/0055
Carolyn E. Farr	Clarence E. Sigley, Sr., Trustee of the Carolyn Elizabeth Farr Trust	Conveyance	0285/0219
Clarence E. Sigley, Sr., Trustee of the Carolyn Elizabeth Farr Trust	Antero Resources Appalachian Corporation	Assignment	0271/0551
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Bill L. Sweeney Lease</u>			
Bill L. Sweeney	Antero Resources Corporation	1/8+	0446/0530

RECEIVED
 Office of Oil and Gas

MAR 29 2019

WV Department of
 Environmental Protection

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

FORM WW-6A1
EXHIBIT 1

FILED

JUN 10 2013

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



IN THE OFFICE OF
SECRETARY OF STATE

Foamy Barber, Manager
Corporations Division
Tel: (304)358-8806
Fax: (304)359-4381
Website: www.wv.gov
E-mail: business@wv.gov

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:

- 1. Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
- 2. Date Certificate of Authority was issued in West Virginia: 6/25/2008
- 3. Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of Incorporation.)
- 4. Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
- 5. Other amendments: _____
(attach additional pages if necessary)

6. 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.)

Alvin A. Schopp (303) 357-7310
Contact Name Phone Number

7. Signature Information (See below *Important Legal Notice Regarding Signatures*)

Print Name of Signer: Alvin A. Schopp Title/Capacity: Authorized Person
Signature: [Handwritten Signature] Date: June 10, 2013

Important Legal Notice Regarding Signatures For West Virginia Code §31D-1-12. 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 CP-4

Issued by the Office of the Secretary of State

Revised 4/05

WV03 - 04/05/05 Update Minor Errors

RECEIVED
Office of Oil and Gas

MAR 29 2019

WV Department of
Environmental Protection

FORM WW-6A1
EXHIBIT 2, Page 1

BOOK 512 PAGE 781

ARTICLES OF MERGER
OF
KENTUCKY WEST VIRGINIA GAS COMPANY

a West Virginia Company

and

EQT CAPITAL CORPORATION

a Delaware Company

FILED
NOVEMBER 1995
IN THE OFFICE OF
SECRETARY OF STATE
WEST VIRGINIA

Pursuant to the provisions of Section 36, Article 1, Chapter 31 of the Code of West Virginia, 1931, as amended, the undersigned corporation adopts the following Articles of Merger for the purpose of merging a subsidiary corporation into the undersigned as the surviving corporation:

The undersigned foreign corporation is incorporated under the laws of Delaware and the laws of such jurisdiction permit such a merger.

The following Plan of Merger was adopted by the undersigned corporation in the manner prescribed by the laws of the jurisdiction under which it is organized.

This Plan of Merger dated as of November 20, 1995, is among EQT Capital Corporation ("EQT"), a Delaware corporation, Equitrans, Inc. ("Equitrans"), a Delaware corporation and Kentucky West Virginia Gas Company ("Kentucky West"), a West Virginia corporation. The terms of the merger shall be as follows:

1. Equitrans and Kentucky West shall merge into EQT. EQT shall be the surviving corporation with its corporate identity, existence, purpose, powers, franchises, rights and immunities unimpaired.
2. The issued and outstanding shares of common stock of Equitrans and Kentucky West, shall without further action on the part of Equitrans, Kentucky West or EQT, be cancelled and of no further effect as of the Effective Date of the merger (as defined below).
3. A Certificate of Merger shall be filed as required by law with the Secretary of State of the State of West Virginia and the Secretary of State of the State of Delaware. The Effective Date of the merger shall be the last date of filing with the respective secretaries of state (the "Effective Date"). On the Effective Date, Equitrans and Kentucky West will cease to exist as separate corporations and EQT will succeed to all of the assets, rights, privileges, immunities, powers, duties and liabilities of Equitrans and Kentucky West in accordance with the provisions of the West Virginia Corporation Act and of the Delaware General Corporation Law.
4. The current Certificate of Incorporation of EQT shall be its Certificate of Incorporation on and after the Effective Date of the merger.

RECEIVED
Office of Oil and Gas

MAR 29 2019

WV Department of
Environmental Protection

**FORM WV-6A1
EXHIBIT 2, Page 2**

BOOK 512 PAGE 782

5. This Plan of Merger shall be executed by the corporate officers of Kentucky West, Equitrans and BQT.

The number of outstanding shares of each class of the subsidiary corporation and the number of such shares of each class owned by the surviving corporation are as follows:

<u>Name of Subsidiary</u>	<u>Number of Shares Outstanding</u>	<u>Designation of Class</u>	<u>Number of Shares Owned by Surviving Corporation</u>
Kentucky West Virginia Gas	331,754	Common	331,754

A copy of the Plan of Merger set forth above was mailed on September 1, 1995 to each shareholder of the subsidiary corporation.

The undersigned corporation hereby: (a) agrees that it may be served with process in the State of West Virginia in any proceeding for the enforcement of the rights of a dissenting shareholder of the above-mentioned subsidiary corporation against the surviving corporation; (b) irrevocably appoints the Secretary of State of the State of West Virginia as its agent to accept service of process in any such proceeding; and (c) agrees that it will promptly pay to the dissenting shareholders of such domestic corporation the amount, if any, to which they shall be entitled under Section 123, Article 1, Chapter 31 of the Code of West Virginia with respect to the rights of dissenting shareholders.

Dated November 20, 1995.

BQT CAPITAL CORPORATION

By [Signature]
Its President

and [Signature]
Its Corporate Secretary

RECEIVED
Office of Oil and Gas

MAR 29 2019

WV Department of
Environmental Protection

FORM WW-6A1
EXHIBIT 3

State of West Virginia



Certificate

*I, Joe Manchin III, Secretary of State of the
State of West Virginia, hereby certify that*

by the provisions of Chapter 31 of the West Virginia Code, Articles of Merger were received and filed
MERGING EQUITABLE PRODUCTION - EASTERN STATES, INC., A QUALIFIED DE ORGANIZATION, WITH AND INTO
EQUITABLE PRODUCTION COMPANY, A QUALIFIED ORGANIZATION.

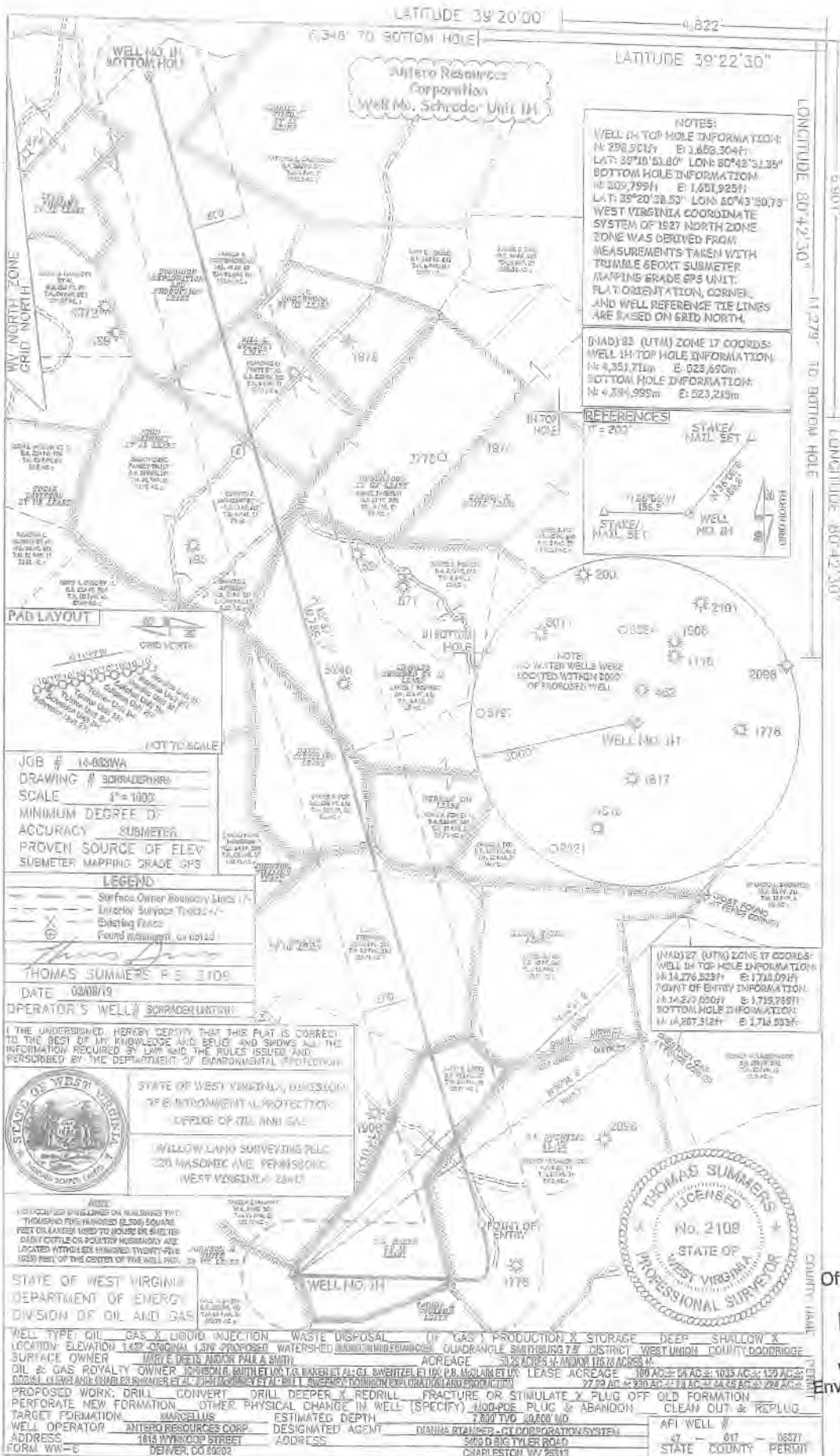
Therefore, I hereby issue this

CERTIFICATE OF MERGER



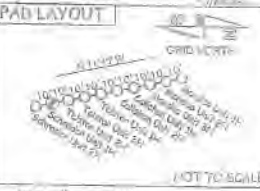
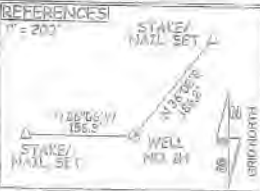
*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
June 28, 2001*

RECEIVED
Office of Oil and Gas
MAR 29 2019
Joe Manchin III
Secretary of State
WV Department of
Environmental Protection



NOTES:
 WELL 1H TOP HOLE INFORMATION:
 N: 298,501ft E: 1,858,304ft
 LAT: 39°10'51.80" LON: 80°43'51.35"
 BOTTOM HOLE INFORMATION:
 N: 309,799ft E: 1,851,925ft
 LAT: 39°20'38.53" LON: 80°43'50.79"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE 680XT 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 1H TOP HOLE INFORMATION:
 N: 4,351,711m E: 028,690m
 BOTTOM HOLE INFORMATION:
 N: 4,394,995m E: 523,249m



JOB # 14-0831WA
 DRAWING # SCHRAEDER1H1
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV SUBMETER MAPPING GRADE GPS

LEGEND
 - - - Surface Owner Boundary Lines (A)
 - - - Interior Surface Ties (A)
 - - - Existing Fences
 - - - Found monument, or noted

THOMAS SUMMERS P.E. 2108
 DATE 03/08/19
 OPERATOR'S WELL # SCHRAEDER1H1

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, DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLLOW LANE SURVEYING PLLC
 220 MASSENE AVE. PENNSYLVANIA, WEST VIRGINIA 26017

ALL LOCATED DWELLINGS OR BUILDINGS TWO THOUSAND FEET MINIMUM (2,000 SQUARE FEET OR LARGER) USED TO HOUSE OR FEED LIVESTOCK OR Poultry HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 DIVISION OF OIL AND GAS

WELL TYPE: OIL	GAS	LIQUID INJECTION	WASTE DISPOSAL	(IF GAS) PRODUCTION & STORAGE	DEEP	SHALLOW
LOCATION: ELEVATION 1452 ORIGINAL 1436 PROPOSED 1436	WATERSHED: BURNING SPRING	QUADRANGLE: SMITHBURG 757	DISTRICT: WEST UNION	COUNTY: DODDRIIDGE		
SURFACE OWNER: ANTERO RESOURCES CORP. & SONS	ACREAGE: 70.25	ACRES IN MINOR TRS: 176				
OIL & GAS ROYALTY OWNER: ANTERO RESOURCES CORP. & SONS	LEASE ACREAGE: 300	ACRES IN ADJ: 1035	ACRES: 159			
ADJACENT OIL & GAS ROYALTY OWNER: ANTERO RESOURCES CORP. & SONS	ACREAGE: 27.79	ACRES IN ADJ: 34	ACRES: 292			
PROPOSED WORK: DRILL	CONVERT	DRILL DEEPER	REDRILL	FRACTURE OR STIMULATE	PLUG OFF	OLD FORMATION
PERFORM NEW FORMATION	OTHER PHYSICAL CHANGE IN WELL (SPECIFY)	MOD. POE. PLUG & ABANDON	CLEAN OUT & REFLUG			
TARGET FORMATION: MARCELLUS	ESTIMATED DEPTH: 7,600 TYP. 20,000 MD					
WELL OPERATOR: ANTERO RESOURCES CORP.	DESIGNATED AGENT: DIANNA STANBER - CT CORPORATION SYSTEM					
ADDRESS: 1815 WYNWOOD STREET	ADDRESS: 3400 S BIG TYLER ROAD					
FORM: WV-5	DENVER, CO 80202	CHARLESTON, WV 26319				
			API WELL #			
			47	017	05377	
			STATE	COUNTY	PERMIT	



RECEIVED
 Office of Oil and Gas
 MAR 29 2019

WV Department of Environmental Protection