



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

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

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

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for CHARLESTON UNIT 3H
47-085-10244-00-00

Change point of entry, horizontal leg length, TMD, and TVD.

ANTERO RESOURCES CORPORATION

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

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

James A. Martin
Chief

Operator's Well Number: CHARLESTON UNIT 3H
Farm Name: JACKSON, STEPHEN C.
U.S. WELL NUMBER: 47-085-10244-00-00
Horizontal 6A / Horizontal 6A Well - 1
Date Issued: 8/4/2017

Promoting a healthy environment.

08/04/2017



July 21, 2017

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

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

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Office of Oil and Gas

JUL 24 2017

WV Department of
Environmental Protection

Mr. Stansberry:

Antero Resources Corporation (Antero) would like to submit the following permit modification for one approved well on the Buck Run Pad. We are requesting to change the point of entry which will change the horizontal leg length, Total Measured Depth and Total Vertical Depth of the Charleston Unit 3H (API# 47-085-10244).

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the revised Horizontal Leg Length, Measured Depth and Production Casing/Cement Program
- REVISED Form WW-6A1, which shows the new lease we will be drilling into
- REVISED Mylar Plats, which shows the new wellbore path

If you have any questions please feel free to contact me at (303) 357-6759.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Samantha Klaas". The signature is fluid and cursive, with the first name being the most prominent.

Samantha Klaas
Permitting Agent
Antero Resources Corporation

Enclosures

08/04/2017

CHARLESTON UNIT 3H (BUCK RUN PAD) - AREA OF REVIEW 35-8-5.11 PAGE 2
PERMIT MODIFICATION (API# 47-085-10244)

85-10244 MOD

UWI (APINum)	Well Name	Well Number	Operator	Hist Oper	TD
47085082910000	BOYCE HEIRS	1	KEY OIL COMPANY	KEY OIL INCORPORATED	5030
47085083550000	BOYCE HEIRS	5	KEY OIL COMPANY	KEY OIL INCORPORATED	5364

ELEV_GR	Approx distance to well	TD (SSTVD)	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
790	50	4240	4256' - 4916'	Riley, Benson, Alexander	N/A
1100	300	4264	4532' - 5189'	Riley, Benson, Alexander	N/A

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08/04/2017

WW-6B
(04/15)

API NO. 47-085 - 10244
 OPERATOR WELL NO. Charleston Unit 3H
 Well Pad Name: Existing Buck Run 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 085 - Ritchie Clay Pennsboro 7.5'
 Operator ID County District Quadrangle

2) Operator's Well Number: Charleston Unit 3H Well Pad Name: Existing Buck Run Pad

3) Farm Name/Surface Owner: Stephen C. Jackson et al Public Road Access: CR 74/9

4) Elevation, current ground: 1127' Elevation, proposed post-construction: 1127'

5) Well Type (a) Gas Oil Underground Storage
 Other RECEIVED
Office of Oil and Gas
 (b) If Gas Shallow Deep JUL 24 2017
 Horizontal

6) Existing Pad: Yes or No Yes WV Department of
Environmental Protection

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6410' TVD, Anticipated Thickness- 75 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6410' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15531' MD

11) Proposed Horizontal Leg Length: 8846'

12) Approximate Fresh Water Strata Depths: 115', 244', 462'

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

14) Approximate Saltwater Depths: 532', 1149', 1794'

15) Approximate Coal Seam Depths: 420', 557', 757'

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- 085 - 10244
 OPERATOR WELL NO. Charleston Unit 3H
 Well Pad Name: Existing Buck Run 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#	40'	40'	CTS, 38 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	515' *see #19	515' *see #19	CTS, 715 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2450'	2450'	CTS, 998 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	15531'	15531'	3879 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

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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"	2730	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"	0.415"	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							

WV Department of Environment & Natural Resources

PACKERS

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

WW-6B
(10/14)

PERMIT MODIFICATION API# 47-085-10244
API NO. 47- 085 - 10244
OPERATOR WELL NO. Charleston Unit 3H
Well Pad Name: Existing Buck Run 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.

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WV Department of Environmental Protection

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): 28.65 existing acres

22) Area to be disturbed for well pad only, less access road (acres): 9.14 existing acres

23) Describe centralizer placement for each casing string:

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

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

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

25) Proposed borehole conditioning procedures:

Conductor: blowhole clean with air, run casing, 10 bbls fresh water.
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.
Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.
Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

*Note: Attach additional sheets as needed.

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

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

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

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Steve Jackson Lease</u>			
Steve Jackson	Antero Resources Appalachian Corporation	1/8+	0178/0716
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Harvey Weigle Heirs Lease</u>			
Harley Weigle Heirs	J & J Enterprises, Inc.	1/8	0178/0571
J & J Enterprises	Eastern American Energy Company	Assignment	0231/0732
Eastern American Energy Corporation	Energy Corporation of America	Merger	DB 0306/0836
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	0257/0377
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Constance K. Griffith Lease</u>			
Constance K. Griffith	EQT Production Company	1/8	0256/0738
EQT Production Company	Antero Resources Corporation	Assignment	0282/0175
<u>M.H. Jones, et ux Lease</u>			
M.H. Jones, et ux	P.G. McKeon	1/8	0032/0025
P.G. McKeon	Carnegie Natural Gas	Assignment	0041/0357
Carnegie Natural Gas	Carnegie Production Company	Assignment	0228/08559
Carnegie Production Company	EQT Production Company	Certificate of Registration of Trade Name	Exhibit 2
EQT Production Company	Antero Resources Corporation	Assignment	0282/0175
<u>Orma M. Wilson Johnson Lease</u>			
Orma M. Wilson Johnson, Trustee of the Orma M. Wilson Johnson Declaration of Trust	Antero Resources Appalachian Corporation	1/8+	0264/0905
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Edward J. Jones et al Lease</u>			
Edward J. Jones et al	Herman Dotson	1/8	0094/0288
Herman Dotson	M.A. Murphy	Assignment	0097/0243
M.A. Murphy	Key Oil Company	Assignment	0220/0069
Key Oil Company	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0253/0747
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1

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

CONTINUED ON NEXT PAGE

08/04/2017

WW-6A1
(5/13)

Operator's Well No. Charleston Unit 3H

**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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- (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>Carlton Boyce et ux Lease</u>				
	Carlton Boyce et ux	B & M Associates	1/8	0217/0365
	B & M Associates	Key Oil Company	Assignment	0217/0585
	Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0253/0747
	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 Office of Oil and Gas, including but not limited to the following:

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

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

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

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 Barker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvscos.com
E-mail: business@wvscos.com

APPLICATION FOR
AMENDED CERTIFICATE
OF AUTHORITY

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

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

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

- Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
- Date Certificate of Authority was issued in West Virginia: 6/26/2008
- Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)
- Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
- Other amendments: _____
(attach additional pages if necessary)
- Name and phone number of contact person. (This is optional, however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)
Alvyn A. Schopp (303) 367-7310
Contact Name Phone Number
- Signature information (See below *Important Legal Notice Regarding Signatures):
Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person
Signature: [Handwritten Signature] Date: June 10, 2013

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

Form CP-4

Issued by the Office of the Secretary of State

WV 601 - 04/16/2013 WebSite: klanerwv.com

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AUG 03 2017

08/04/2017

FORM WW-6A1
EXHIBIT 2

State of West Virginia



Certificate

I, Natalie E. Tennant, Secretary of State of the State of West Virginia, hereby certify that

EQT PRODUCTION COMPANY

has filed a "Certificate of Registration of Trade Name" in my office according to the provisions of Chapter 47 of the West Virginia Code and was found to conform to law.

Therefore, I hereby issue this

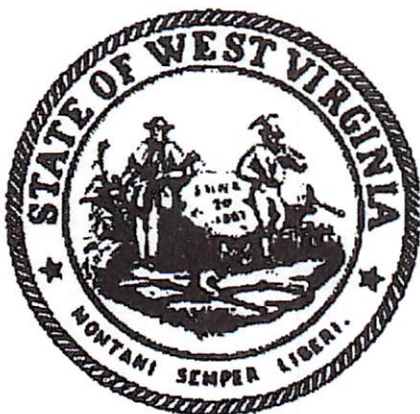
CERTIFICATE OF REGISTRATION OF TRADE NAME

authorizing it to transact business in West Virginia under the assumed name of

CARNEGIE PRODUCTION COMPANY

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OFFICE OF OIL AND GAS

AUG 03 2017



Given under my hand and the Great Seal of the State of West Virginia on this day of April 9, 2009

Natalie E. Tennant

Secretary of State

08/04/2017

LATITUDE 39°20'00"

8,711'

LATITUDE 39°20'00"

LONGITUDE 80°55'00"

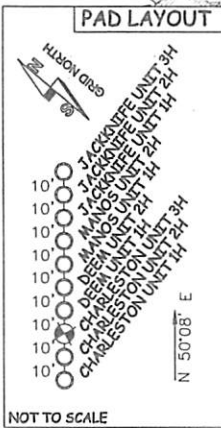
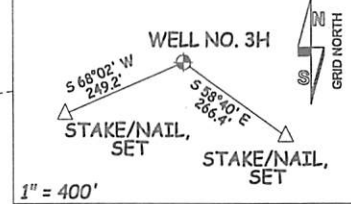
6,365' LONGITUDE 80°55'00"

Antero Resources Corporation
Well No. Charleston Unit 3H
API# 47-085-10244

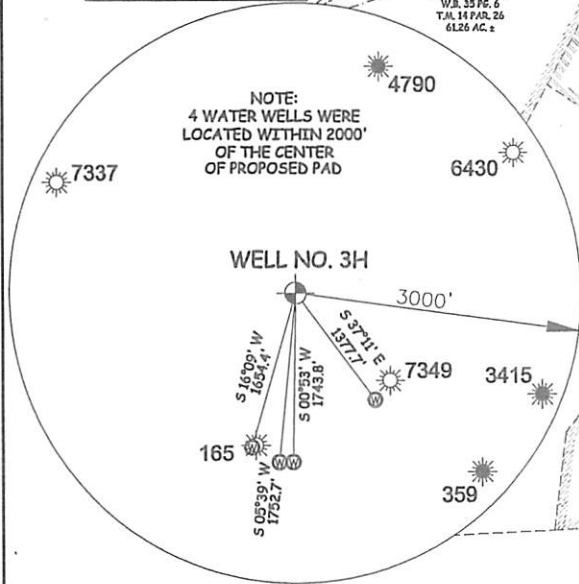
NOTES:
WELL 3H TOP HOLE INFORMATION:
N: 300,452ft E: 1,590,484ft
LAT: 39°18'57.10" LON: 80°56'50.84"
BOTTOM HOLE INFORMATION:
N: 291,766ft E: 1,593,465ft
LAT: 39°17'31.73" LON: 80°56'11.15"
WEST VIRGINIA COORDINATE
SYSTEM OF 1927 NORTH ZONE.
ZONE WAS DERIVED FROM
MEASUREMENTS TAKEN WITH
TRIMBLE GEOXT SUBMETER
MAPPING GRADE GPS UNIT.
PLAT ORIENTATION, CORNER,
AND WELL REFERENCE TIE LINES
ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 3H TOP HOLE INFORMATION:
N: 4,351,839m E: 504,544m
BOTTOM HOLE INFORMATION:
N: 4,349,208m E: 505,496m

REFERENCES



WV NORTH ZONE
GRID NORTH



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



LEGEND
--- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
- x - x - Existing Fence
⊕ Found monument, as noted
THOMAS SUMMERS P.S. 2109
DATE 06/16/17

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

API WELL # 47 - 085 - 10244
STATE COUNTY PERMIT
OPERATOR'S WELL# CHARLESTON UNIT #3H
JOB # 15-037WA
DRAWING # CHARLESTON3H
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



STATE OF WEST VIRGINIA, DIVISION
OF ENVIRONMENTAL PROTECTION,
OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
P.O. BOX 17 PENNSBORO
WEST VIRGINIA 26415

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.
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,127' AS-BUILT WATERSHED NORTH FORK HUGHES RIVER
QUADRANGLE PENNSBORO 7.5' DISTRICT CLAY COUNTY RITCHIE
SURFACE OWNER STEPHEN C. JACKSON ET AL ACREAGE 40.835 ACRES +/-
OIL & GAS ROYALTY OWNER HARVEY WEIGLE HEIRS; STEVE JACKSON; CONSTANCE K. GRIFFITH; LEASE ACREAGE 51 AC±; 117 AC±; 31 AC±;
M. H. JONES ET UX; ORMA M. WILSON JOHNSON; EDWARD J. JONES ET AL; CARLTON BOYCE ET UX 200 AC±; 42 AC±; 73 AC±; 201 AC±
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) POE MOD
PLUG & ABANDON ___ CLEAN OUT & REPLUG ___ ESTIMATED DEPTH 6,410' TVD 15,531' MD
TARGET FORMATION MARCELLUS
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313
FORM WW-6

08/04/2017

RECEIVED Office of Oil and Gas
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JUL 24 2017

WV Department of Environmental Protection
JUL 24 2017

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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- (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
Steve Jackson Lease			
Steve Jackson	Antero Resources Appalachian Corporation	1/8+	0257/0716
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
Harvey Weigle Heirs Lease			
Harley Weigle Heirs	J & J Enterprises, Inc.	1/8	0178/0571
J & J Enterprises	Eastern American Energy Company	Assignment	0231/0732
Eastern American Energy Corporation	Energy Corporation of America	Merger	DB 0306/0836
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	0257/0377
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
Constance K. Griffith Lease			
Constance K. Griffith	EQT Production Company	1/8	0256/0738
EQT Production Company	Antero Resources Corporation	Assignment	0282/0175
Barbara Eppley Lease			
Barbara Eppley	EQT Production Company	1/8	0256/0726
EQT Production Company	Antero Resources Corporation	Assignment	0282/0175
Orma M. Wilson Johnson Lease			
Orma M. Wilson Johnson, Trustee of the Orma M. Wilson Johnson Declaration of Trust	Antero Resources Appalachian Corporation	1/8+	0264/0905
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
Edward J. Jones et al Lease			
Edward J. Jones et al	Herman Dotson	1/8	0094/0288
Herman Dotson	M.A. Murphy	Assignment	0097/0243
M.A. Murphy	Key Oil Company	Assignment	0220/0069
Key Oil Company	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0253/0747
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1



RECEIVED
Office of Oil and Gas

JUL 24 2017

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.

WW-6A1
(5/13)

Operator's Well No. Charleston Unit 3H

**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>Carlton Boyce et ux Lease</u>				
	Carlton Boyce et ux	B & M Associates	1/8	0217/0365
	B & M Associates	Key Oil Company	Assignment	0217/0585
	Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0253/0747
	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

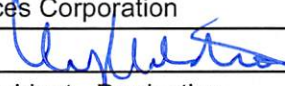
RECEIVED
Office of Oil and Gas

JUL 24 2017



WV Department of
Environmental Protection

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

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 Barker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvsos.com
E-mail: business@wvsos.com

APPLICATION FOR
AMENDED CERTIFICATE
OF AUTHORITY

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

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

**** 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.)

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

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

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

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

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Office of Oil and Gas

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WV Department of
Environmental Protection

VOID