west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

PERMIT MODIFICATION APPROVAL

June 04, 2015

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET
DENVER, CO 80202

Re: Permit Modification Approval for API Number 8510198, Well #: MCNABB UNIT 3H

Extend Lateral

Oil and Gas Operator:
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.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

for Gene Smith

Gene Smith
Assistant Chief of Permitting
Office of Oil and Gas

4708510198 MOD

Antero Resources

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

May 29, 2015

West Virginia Department of Environmental Protection
Office of Oil and Gas
Attn: Ms. Melanie Hankins
601 57th Street
Charleston, WV 25304

Ms. Hankins:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for four approved wells on the Mackay Pad. We are requesting to extend the horizontal lateral lengths which will change the bottom hole locations of the McNabb Unit 1H (API# 47-085-10196), McNabb Unit 2H (API# 47-085-10197), McNabb Unit 3H (API# 47-085-10198) and McNabb Unit 4H (API# 47-085-10199).

Attached you will find the following documents:

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

If you have any questions please feel free to contact me at (303) 357-7323.

Thank you in advance for your consideration.

Sincerely,

Ashlie Steele

Ashlie Steele
Permitting Supervisor
Antero Resources Corporation

Enclosures

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Environmental Protection

WW-6B
(04/15)

API# 47-085-10198 PERMIT MODIFICATION

API NO. 47- 085 - 10198
OPERATOR WELL NO. McNabb Unit 3H
Well Pad Name: Mackay Pad

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

1) Well Operator: Antero Resources Corporat

494488557	085-Ritchie	Clay	Pullman 7.5'
Operator ID	County	District	Quadrangle

2) Operator's Well Number: McNabb Unit 3H Well Pad Name: Mackay Pad

3) Farm Name/Surface Owner: Mackay, Jack D. et al Public Road Access: CR 19/3

4) Elevation, current ground: ~ 1128' Elevation, proposed post-construction: 1099'

5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow _____ Deep X
Horizontal X

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6700' TVD, Anticipated Thickness- 50 feet, Associated Pressure- 3000#

8) Proposed Total Vertical Depth: 6700' TVD

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 19,600' MD

11) Proposed Horizontal Leg Length: 12,443'

12) Approximate Fresh Water Strata Depths: 177', 225', 437'

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

14) Approximate Saltwater Depths: 1991', 2053', 2057'

15) Approximate Coal Seam Depths: N/A

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 X

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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API# 47-085-10198 PERMIT MODIFICATION

API NO. 47- 085 - 10198
OPERATOR WELL NO. McNabb Unit 3H
Well Pad Name: Mackay 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#	40'	40'	CTS, 38 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/48#	490'	490'* See #19	CTS, 681 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2400'	2400'	CTS, 977 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	19,600'	19,600'	5012 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

NSH 6/4/15

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	30"	24"	0.438"	1530	50	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	1000	Class A	1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.361"	12,630	2500	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

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

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Environmental Protection

API# 47-085-10198 PERMIT MODIFICATION

API NO. 47- 085 - 10198
OPERATOR WELL NO. McNabb Unit 3H
Well Pad Name: Mackay 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): 35.10 acres

22) Area to be disturbed for well pad only, less access road (acres): 3.95 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

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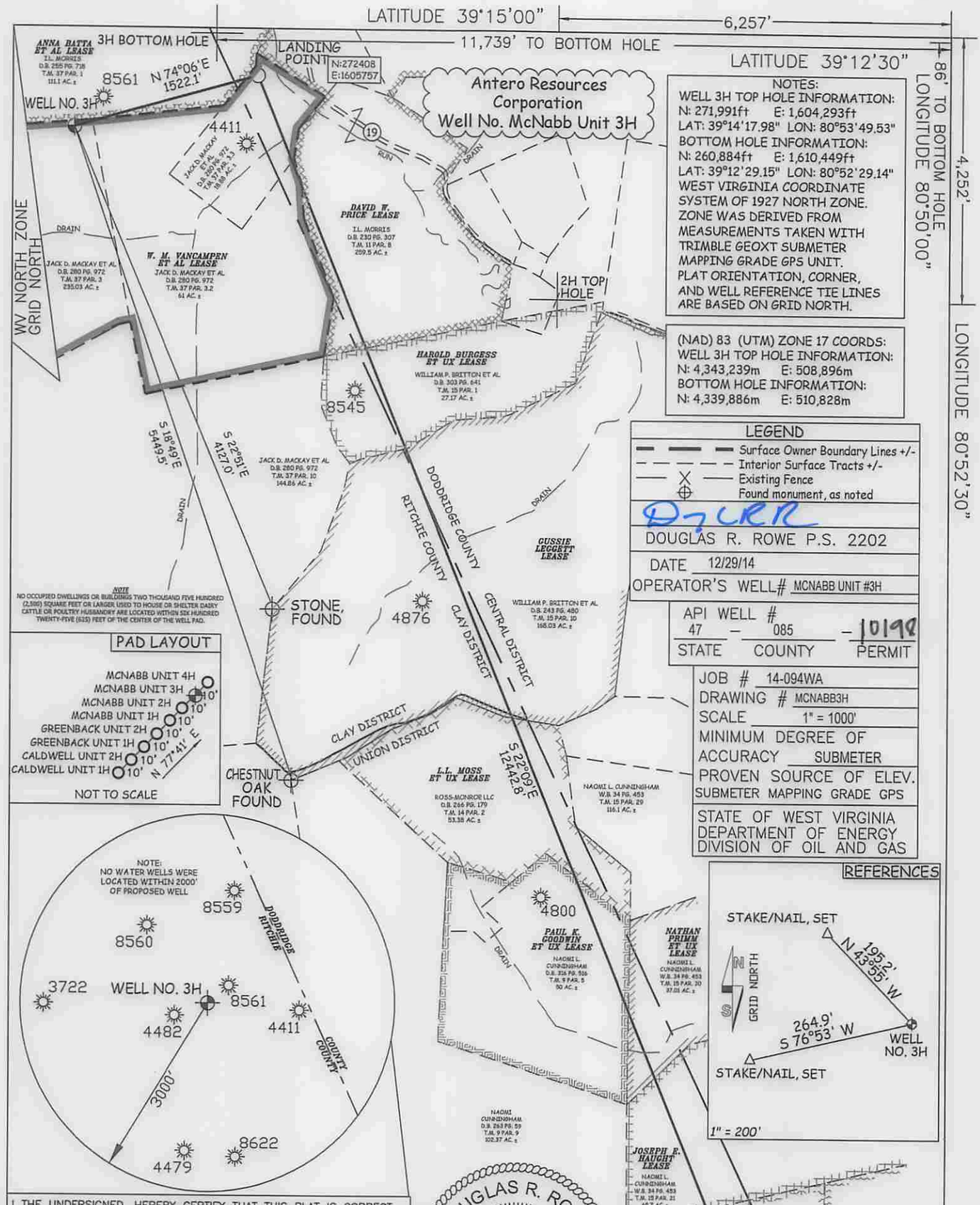
25) Proposed borehole conditioning procedures:

WV Department of
Environmental Protection

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.



NOTES:
WELL 3H TOP HOLE INFORMATION:
N: 271,991ft E: 1,604,293ft
LAT: 39°14'17.98" LON: 80°53'49.53"
BOTTOM HOLE INFORMATION:
N: 260,884ft E: 1,610,449ft
LAT: 39°12'29.15" LON: 80°52'29.14"
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: 4,343,239m E: 508,896m
BOTTOM HOLE INFORMATION:
N: 4,339,886m E: 510,828m

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

D7LRR

DOUGLAS R. ROWE P.S. 2202

DATE 12/29/14

OPERATOR'S WELL# MCNABB UNIT #3H

API WELL #
47 – 085 – 10198
STATE COUNTY PERMIT

JOB # 14-094WA
DRAWING # MCNABB3H
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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

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.

PAD LAYOUT
MCNABB UNIT 4H
MCNABB UNIT 3H
MCNABB UNIT 2H
MCNABB UNIT 1H
GREENBACK UNIT 2H
GREENBACK UNIT 1H
CALDWELL UNIT 2H
CALDWELL UNIT 1H
10'
N 77°41' E
NOT TO SCALE

NOTE:
NO WATER WELLS WERE LOCATED WITHIN 2000' OF PROPOSED WELL

REFERENCES

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 DEPTARTMENT OF ENVIRONMENTAL PROTECTION.

STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,099' WATERSHED CABIN RUN
QUADRANGLE PULLMAN 7.5' (TH); OXFORD 7.5' (BH) DISTRICT CLAY COUNTY RITCHIE
SURFACE OWNER JACK D. MACKAY ET AL ACREAGE 253.03 ACRES +/-
OIL & GAS ROYALTY OWNER W.M. VANCAMPEN ET AL; ANNA BATTA ET AL; LEASE ACREAGE 312 AC±; 111 AC±;
DAVID W PRICE; HAROLD BURGESS ET UX; GUSSIE LEGGETT; 105 AC±; 29 AC±; 169 AC±;
L.L. MOSS ET UX; PAUL K GOODWIN ET UX; NATHAN PRIMM ET UX; 54 AC±; 50 AC±; 37 AC±;
JOSEPH E HAUGHT; BRICE M BYHAM ET VIR; RUSSEL GRAY ET AL 66 AC±; 41 AC±; 225 AC±
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X
PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL
(SPECIFY) MOD-BHL PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,700' TVD 19,600' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS CT CORPORATION SYSTEM
DENVER, CO 80202 5400 D BIG TYLER ROAD
CHARLESTON, WV 25313

FORM WW-6

WW-6A1

Operator's Well Number McNabb 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:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
Anna Batta et al Lease			
Anna S. Batta et vir	Northeastern Operating Company, Inc.	1/8	0225/0699
Northeastern Operating Company, Inc.	Key Oil Company	Assignment	0226/0163
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0253/0747
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
WM VanCampen, et al Lease			
William Charles VanCampen	Warren R. Haught, et al	1/8	0122/0565
Warren R. Haught, et al	Haught, Inc.	Assignment	0124/0296
Haught, Inc.	Mountaineer 1979-A	Assignment	0129/0449
Mountaineer 1979-A	Mountain V Oil and Gas Co.	Assignment	0230/0253
Mountain V Oil and Gas Co.	Robert Matheny, Jr. & HMS Resources, Inc.	Assignment	0243/0911
Robert Matheny, Jr. & HMS Resources, Inc.	Genesis Exploration & Production	Assignment	0244/1079
Genesis Exploration & Production	Antero Resources Appalachian Corporation	Assignment	0260/1028
HMS Resources	Antero Resources Appalachian Corporation	Assignment	0260/1035
Robert Matheny, Jr. & HMS	Antero Resources Appalachian Corporation	Assignment	0260/1042
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
David W. Price Lease			
David W. Price	**Antero Resources Corporation**	**1/8+**	**0348/0729**
Harold Burgess, et ux Lease			
Harold R. Burgess, et ux	Key Oil Company	1/8	0181/0267
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0256/0285
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0276/0526
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Gussie Leggett Lease			
Gussie Leggett	Alton Skinner	1/8	0107/0480
Alton Skinner II, et al as Co-Administrator for the Estate of Alton Skinner	Desari S. Garrett, et al	Assignment	0169/0193
Desari S. Garrett, et al	DC Petroleum, Inc.	Assignment	0170/0583
DC Petroleum, Inc. & Chase Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	0257/0062
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
L.L. Moss, et ux Lease			
L.L. Moss, et ux	Alton Skinner	1/8	0112/0178
Alton Skinner II, et al as Co-Administrator for the Estate of Alton Skinner	Desari S. Garrett et al	Assignment	0169/0193
Desari S. Garrett, et al	DC Petroleum, Inc.	Assignment	0170/0583
DC Petroleum, Inc. & Chase Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	0257/0062
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

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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****

WW-6A1

Operator's Well Number McNabb 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:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
Paul K. Goodwin, et ux Lease			
Paul K. Goodwin	Alton Skinner	1/8	0128/0384
Alton Skinner	Alton L. Skinner, II, Crystal G. Skinner & Desari S. Garrett	Intestate Conveyance	Recital in 0216/0391
Alton L. Skinner, II, et al	Crystal G. Skinner & Desari S. Garrett	Deed of Conveyance	0216/0391
Crystal G. Skinner & Desari S. Garrett	DC Petroleum, Inc.	Deed of Conveyance	0247/0245
DC Petroleum, Inc., et al	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0254/0133
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Nathan R. Primm, et ux Lease			
Nathan R. Primm and Thelma Primm, his wife	C.A. Stricklin	1/8	0067/0190
C.A. Stricklin	Alton Skinner	Assignment	0118/0536
Alton Skinner and Chase Petroleum, Inc., a WV corporation wholly owned by Alton L. Skinner, deceased	Desari S. Garrett, Alton L. Skinner, II and Crystal G. Skinner, Heirs at Law	Assignment	AP 0025/0684
Alton Skinner, II	Desari S. Garrett and Crystal G. Skinner	Assignment	DB 0222/0266
Desari S. Garrett and Crystal G. Skinner	DC Petroleum, Inc.	Assignment	DB 0224/0140
DC Petroleum, Inc. & Chase Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	0254/0133
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Joseph E. Haught Lease			
Joseph E. Haught and Carolyn B. Haught, his wife	Alton Skinner	1/8	0112/0154
Alton Skinner and Chase Petroleum, Inc., a WV corporation wholly owned by Alton L. Skinner	Desari Garrett, Alton L. Skinner, II and Crystal G. Skinner, Heirs at Law	Assignment	AP 0025/0684
Alton L. Skinner, II	Desari S. Garrett and Crystal G. Skinner	Assignment	DB 0222/0266
Crystal G. Skinner & Desari S. Garrett	DC Petroleum, Inc.	Assignment	DB 0224/0140
DC Petroleum, Inc and Chase Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	0257/0062
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Brice M. Byham,et vir Lease			
Brice M. Byham and Edgar W. Byham, her husband	Alton Skinner	1/8	0116/0437
Alton Skinner and Chase Petroleum, Inc., a WV corporation wholly owned by Alton L. Skinner	Desari Garrett, Alton L. Skinner, II and Crystal G. Skinner, Heirs at Law	Assignment	AP 0025/0684
Alton L. Skinner, II	Desari S. Garrett and Crystal G. Skinner	Assignment	DB 0222/0266
Crystal G. Skinner & Desari S. Garrett	DC Petroleum, Inc.	Assignment	DB 0224/0140
DC Petroleum, Inc and Chase Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	0257/0062
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

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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****

API# 47-085-10198 PERMIT MODIFICATION

WW-6A1
(5/13)

Operator's Well No. McNabb 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
Russel Gray, et al Lease				
	Russel H. Gray and Edith Gray, his wife, et ux	Alton Skinner	1/8	0121/0123
	Alton Skinner and Chase Petroleum, Inc., a WV Corporation Wholly Owned by Alton L. Skinner	Desari Garrett, Alton L. Skinner, and Crystal G. Skinner, Heirs at Law	Assignment	AP 0025/0684
	Alton L. Skinner, II	Desari S. Garrett and Crystal G. Skinner	Assignment	DB 0222/0266
	Crystal G. Skinner & Desari S. Garrett	DC Petroleum, Inc.	Assignment	DB 0224/0140
	DC Petroleum, Inc. and Chase Petroleum, Inc.	Antero Resources Appalachian Corporation	Assignment	0257/0062
	Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

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

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

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

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

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JUN 02 2015
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: VP of Production

FORM WW-6A1
EXHIBIT 1

FILED
JUN 10 2013
IN THE OFFICE OF SECRETARY OF STATE

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

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

APPLICATION FOR AMENDED CERTIFICATE OF AUTHORITY

**** 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: [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
JUN 02 2013
WV Department of
Environmental Protection