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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, June 26, 2019  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for GABITALALEK UNIT 2H  
47-095-02581-00-00

**Extending lateral**

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

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over the typed name and title.

Operator's Well Number: GABITALALEK UNIT 2H  
Farm Name: GARY D. DAWSON ET UX  
U.S. WELL NUMBER: 47-095-02581-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 6/26/2019

Promoting a healthy environment.

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

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

2) Operator's Well Number: Gabitalalek Unit 2H Well Pad Name: Dawson Pad

3) Farm Name/Surface Owner: Gary D. Dawson et ux Public Road Access: State Route 18

4) Elevation, current ground: 1009' Elevation, proposed post-construction: \_\_\_\_\_

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

6) Existing Pad: Yes or No Yes *JCB*  
6/26/2019

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus Shale: 6900' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6900' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 20900' MD

11) Proposed Horizontal Leg Length: 12297'

12) Approximate Fresh Water Strata Depths: 115', 320', 455'

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

14) Approximate Saltwater Depths: 551', 1583', 1830'

15) Approximate Coal Seam Depths: 275', 424', 975'

16) Approximate Depth to Possible Void (coal mine, karst, other): None Anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No

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

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WW-6B  
(04/15)

API NO. 47- 095 - 02581

OPERATOR WELL NO. Gabitalelek Unit 2H

Well Pad Name: Dawson 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	54.5#	505 *see # 19	505 *see # 19	CTS, 702 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500	2500	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	20900	20900	5339 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

JCS  
6/26/2019

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"	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 HIPOZ & Tel - 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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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

*JCB*  
6/26/2019

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): Existing 28.65 acres

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

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 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.

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\*Note: Attach additional sheets as needed.



LATITUDE 39°25'00"

11,198'

6,242' TO BOTTOM HOLE  
LATITUDE 39°22'30"

LONGITUDE 80°50'00"

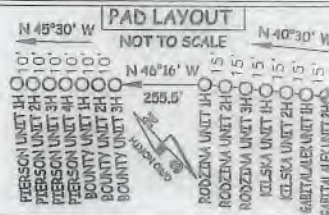
13,343'

LONGITUDE 80°50'00"

Antero Resources Corporation  
Well No. Gabitalalek Unit 2H

NOTES:  
WELL 2H TOP HOLE INFORMATION:  
N: 323,491ft E: 1,611,920ft  
LAT: 39°22'48.12" LON: 80°52'22.61"  
BOTTOM HOLE INFORMATION:  
N: 312,770ft E: 1,616,717ft  
LAT: 39°21'02.88" LON: 80°51'19.46"  
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT TAPMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

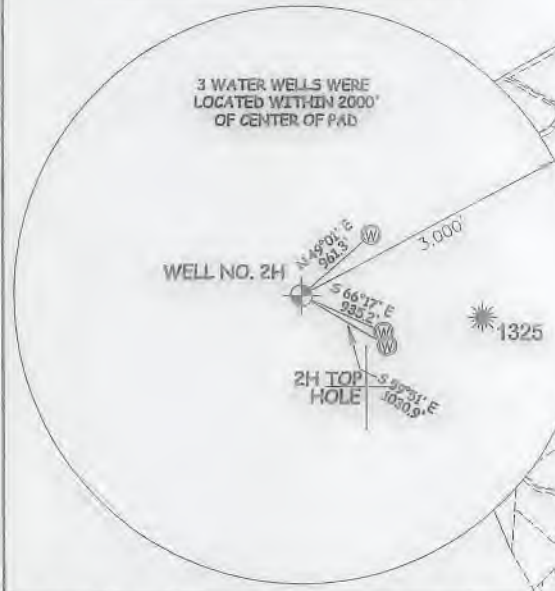
(NAD) 83 (UTM) ZONE 17 COORDS:  
WELL 2H TOP HOLE INFORMATION:  
N: 4,358,967m E: 510,957m  
BOTTOM HOLE INFORMATION:  
N: 4,355,725m E: 512,473m



Clay District - Ritchie County

12-14	Warren Sulter Jr.
12-14.1	Gary Dawson
12-14.2	Nathaniel Hendricks
12-14.3	Gwalia Dawson Hrs.
12-14.4	Gary Dawson
12-14.5	McCartney Keystons Trust
12-19	Robert Sinclair
15-01	Gary Dawson
15-11	Larry Caine
15-12	Larry Robinson
15-13	Joseph Mills Community Center
15-14	David Cowles Jr.
15-15	Russell Bonner Est
15-16	Russell Bonner Est
15-17	Antero Resources Corp.
15-18	W.V.D.N.R.
15-19	Antero Resources Corp.
15-110	Gary Dawson
15-02	Robert Graham
15-07	Ralph Underwood III
15-7.1	Judith Bagley
15-08	Conrad Castilow
15-09	Eugene Bennett
15-12	Larry Hadley
15-13	Sara Reed
15-13.1	Sara Reed
15-13.2	Cecil Lovejoy
15-14	George Moore
15-14.1	Linda Moore
15-18	John Jozekiewicz Sr.
15-19	David Price
15-20	Sandra Clark
15-32	Marvin Sole
15-32.1	Marvin Sole
15-33	Randy Dawson
15-34	Ronnie Dawson
15-35	Jemie Ferguson
15-36	Donald Ferguson
17-03	Kimberly Ridgeway
17-10	Jason Glasscock
17-10.1	Sandra Clark
17-10.5	Sandra Clark
17-10.6	George Sprouis
17-12	GNSS Transmission Corporation

WV NORTH ZONE  
GRID NORTH



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



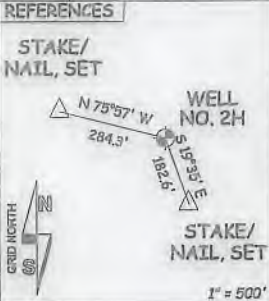
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WILLOW LAND SURVEYING PLLC  
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

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.

(NAD) 27 (UTM) ZONE 17 COORDS:  
WELL 2H TOP HOLE INFORMATION:  
N: 14,300,331ft E: 1,676,319ft  
POINT OF ENTRY INFORMATION:  
N: 14,301,357ft E: 1,677,407ft  
BOTTOM HOLE INFORMATION:  
N: 14,289,695ft E: 1,681,292ft

JOB # 18-032WA  
DRAWING # GABITALALEK2HR2  
SCALE 1" = 2000'  
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

LEGEND  
----- Surface Owner Boundary Lines +/-  
----- Interior Surface Tracts +/-  
----- Existing Fence  
----- Found monument, as noted  
DOUGLAS R. ROWE P.S. 2202  
DATE 4/10/19  
OPERATOR'S WELL # GABITALALEK UNIT #2H



WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_ 47 \_\_\_ 095 \_\_\_ 02561  
(IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X STATE COUNTY PERMIT  
LOCATION: ELEVATION 1,009' - AS BUILT WATERSHED HEADWATERS MIDDLE ISLAND CREEK COUNTY NAME  
QUADRANGLE SHIRLEY 7.5' (TH) WEST UNION 7.5' (BH) DISTRICT CENTERVILLE COUNTY TYLER  
SURFACE OWNER GARY D. DAWSON ET UX ACREAGE 104.27 ACRES +/- LEASE ACREAGE 104.27 AC. +/- 0.54 AC. +/- 2.8 AC. +/- 2.08 AC. +/-  
OIL & GAS ROYALTY OWNER GARY D. DAWSON ET UX; CARL W. ASH; GARY D. DAWSON; CARL W. ASH; ROBERT C. DEAN; WVDNR; PATTY L. BUTERBRAUGH; RANDALL DALE ASH ET UX; CONRAD E. COSTILOW; MARGARET E. OLEXA; THELMA FERGUSON ET AL.; 50.7 AC. +/- 64.78 AC. +/- 103.01 AC. +/- 130 AC. +/- 55.75 AC. +/- 79.5 AC. +/- 48 AC. +/-  
NANCY B. WESTFALL ET UX; RALPH J. WESTFALL ET UX; AMANDA GREGG ET AL.; VIOLET GREGG ET AL.; VIOLET GREGG ET AL.; NATHAN JOSEPH 28 AC. +/- 94 AC. +/- 85 AC. +/- 80 AC. +/- 114 AC. +/- 147 AC. +/-  
PROPOSED WORK: DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER X REDRILL \_\_\_ FRACTURE OR STIMULATE X  
PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL  
(SPECIFY) MOD BHL PLUG & ABANDON \_\_\_ CLEAN OUT & REPLUG \_\_\_  
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,900' TVD 20,900' MD  
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD  
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313



WW-6A1

Operator's Well Number Gabitalalek Unit 2H

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

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

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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
<b><u>Gary D. Dawson et ux Lease (TM 15 PCL 1)</u></b>			
Gary D. Dawson et ux	Antero Resources Corporation	1/8+	0459/0133
<b><u>Carl W. Ash Lease (TM 12 PCL 14.4)</u></b>			
Carl W. Ash	Antero Resources Corporation	1/8+	0497/0153
<b><u>Gary D. Dawson et ux Lease (TM 12 PCL 14.1)</u></b>			
Gary D. Dawson et ux	Antero Resources Corporation	1/8+	0497/0153
<b><u>Robert Dean Lease</u></b>			
Robert Dean	Antero Resources Corporation	1/8+	0481/0807
<b><u>Patty L. Buterbraugh Lease</u></b>			
Patty Buterbraugh	Antero Resources Corporation	1/8+	0444/0337
<b><u>Carl W. Ash Lease (TM 12 PCL 14.2)</u></b>			
Carl W. Ash	Antero Resources Corporation	1/8+	0559/0403
<b><u>WVDNR Lease</u></b>			
WVDNR	Antero Resources Corporation	1/8+	0481/0807
<b><u>Randall Dale Ash et ux Lease</u></b>			
Randall Dale Ash et ux	The Coastal Corporation	1/8	0278/0558
The Coastal Corporation	Pardee Gas Company LLC	Merger	0282/0458
Pardee Gas Company LLC	Pardee & Curtin Resources Company	Name Change	0282/0458
Pardee & Curtin Resources Company	Tioga Lumber Company	Merger	0282/0458
Tioga Lumber Company	Pardee Resources Group	Merger	0282/0458
Pardee Resources Group	Pardee Minerals LLC	Merger	0282/0458
Pardee Minerals LLC	Antero Resources Appalachian Corporation	Assignment	0416/0465
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
Antero Resources Corporation	CNX Gas Company LLC	Assignment	0468/0769
CNX Gas Company LLC	Antero Resources Corporation	Assignment	0626/0386
<b><u>Conrad E. Costillow Lease</u></b>			
Conrad E. Costillow	Antero Resources Corporation	1/8+	0505/0644
Antero Resources Corporation	CNX Gas Company LLC	Assignment	0546/0770
CNX Gas Company LLC	Antero Resources Corporation	Assignment	0626/0386

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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\*\*

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<b>Margaret E. Olexa Lease</b>			
Margaret E. Olexa	Ronald H. Woodburn	1/8	0377/0013
Ronald H. Woodburn	Sancho Oil & Gas Corporation	Assignment	0455/0706
Sancho Oil & Gas Corporation	Antero Resources Corporation	Assignment	0498/0605
Antero Resources Corporation	CNX Gas Company LLC	Assignment	0503/0754
CNX Gas Company LLC	Antero Resources Corporation	Assignment	0626/0386
<b>Thelma Ferguson et al Lease</b>			
Thelma Ferguson et al	Kepeco Inc	1/8	0249/0171
Kepeco Inc	Eastern Kentucky Company	Name Change	0001/0006
Eastern Kentucky Company	Kepeco Inc	Assignment	0261/0392
Kepeco Inc	Union Drilling Inc	Name Change	0001/0010
Union Drilling Inc	Equitable Resources Exploration Inc	Assignment	0274/0070
Equitable Resources Exploration Inc	Equitable Resources Energy Company	Assignment	0280/0186
Equitable Resources Energy Company	Enervest East Limited Partnership	Assignment	0313/0145
Enervest East Limited Partnership	The Houston Exploration Company	Assignment	0342/0160
The Houston Exploration Company	Seneca Upshur Petroleum Inc	Assignment	0344/0158
Seneca Upshur Petroleum Inc	Seneca Upshur Petroleum LLC	Merger	0009/0198
Seneca Upshur Petroleum LLC	Antero Resources Appalachian Corporation	Assignment	0402/0132
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
Antero Resources Corporation	CNX Gas Company LLC	Assignment	0425/0701
CNX Gas Company LLC	Antero Resources Corporation	Assignment	0626/0386
<b>Nancy B. Westfall Lease</b>			
Nancy B. Westfall	Antero Resources Corporation	1/8+	0635/0676
<b>Ralph J. Westfall et ux Lease</b>			
Ralph J. Westfall et ux	Royal Resources Corporation	1/8	0200/0111
Royal Resources Corporation	L&M Associates Inc	Assignment	0223/0176
L&M Associates Inc	Anvil Oil Company Inc	Assignment	0267/0016
Anvil Oil Company Inc	Dominion Appalachian Development Inc	Assignment	0323/0383
Dominion Appalachian Development Inc	Dominion Appalachian Development LLC	Name Change	0001/0015
Dominion Appalachian Development LLC	Consol Gas Appalachian Development LLC	Name Change	0009/0131
Consol Gas Appalachian Development LLC	Consol Gas Reserves Inc	Merger	0009/0144
Consol Gas Reserves Inc	Consol Gas Company	Merger	0009/0156
Consol Gas Company	CNX Gas Company	Merger	0009/0206
CNX Gas Company	Noble Energy Inc	Assignment	0388/0286
Noble Energy Inc	CNX Gas Company	Assignment	0550/0273
CNX Gas Company	Antero Resources Corporation	Agreement	0262/0386

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<b>Amanda Gregg et al Lease</b>			
Amanda Gregg et al	Hope Natural Gas Company	1/8	0081/0137
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Assignment	0169/0026
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	0249/0287
Consolidated Gas Transmission Corporation	CNG Transmission Corporation	Name Change	0051/0795
CNG Transmission Corporation	Dominion Transmission Inc	Name Change	0210/0287
Dominion Transmission Inc	Consol Energy Holdings LLC	Assignment	0374/0187
Consol Energy Holdings LLC	Consol Gas Company	Name Change	0384/0191
Consol Gas Company	CNX Gas Company LLC	Name Change	0384/0191
CNX Gas Company LLC	Antero Resources Corporation	Agreement	0626/0386
<b>Violet Gregg et al Lease (TM 17 PCL 10)</b>			
Violet Gregg et al	James F. Doan	1/8	0254/0243
James F. Doan	Appalachian Energy Development	Assignment	0254/0243
Appalachian Energy Development	Anvil Oil Company	Assignment	0256/0386
Anvil Oil Company	Dominion Appalachian Development	Assignment	0323/0383
Dominion Appalachian Development	Consol Gas Appalachian Development LLC	Name Change	0009/0131
Consol Gas Appalachian Development LLC	Consol Gas Reserves Inc	Merger	0009/0144
Consol Gas Reserves Inc	Consol Gas Company	Merger	0009/0156
Consol Gas Company	CNX Gas Company	Merger	0009/0206
CNX Gas Company	Noble Energy Inc	Assignment	0388/0286
Noble Energy Inc	CNX Gas Company LLC	Assignment	0550/0273
CNX Gas Company LLC	Antero Resources Corporation	Agreement	0626/0386
<b>WVDNR Lease</b>			
WVDNR	Antero Resources Corporation	1/8+	0553/0295
<b>Violet Gregg et al Lease (TM 17 PCL 10.1)</b>			
Violet Gregg et al	James F. Doan	1/8	0196/0238
James F. Doan	Anvil Oil Company Inc	Assignment	0254/0245
Anvil Oil Company Inc	Anvil Oil & Gas Company	Name Change	WVSOS
Anvil Oil & Gas Company	Dominion Appalachian Development Inc	Assignment	0323/0383
Dominion Appalachian Development Inc	Consol Gas Appalachian Development	Name Change	0009/0131
Consol Gas Appalachian Development	Consol Gas Reserves Inc	Merger	0009/0144
Consol Gas Reserves Inc	Consol Gas Company	Merger	0009/0156
Consol Gas Company	CNX Gas Company LLC	Name Change	0009/0206
CNX Gas Company LLC	Antero Resources Corporation	Agreement	0648/0156

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WV Department of  
Environmental Protection



WW-6A1  
(5/13)

Operator's Well No. Gabitalalek Unit 2H

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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>Nathan Joseph Lease</u>				
	Nathan Joseph	Central Development Company	1/8	0061/0344
	Central Development Company	Carnegie Natural Gas Company	Assignment	0340/0368
	Carnegie Natural Gas Company	Murvin Oil Company	Assignment	0340/0368
	Murvin Oil Company	Murvin & Meier Oil Company	Assignment	0318/0233
	Murvin & Meier Oil Company	Antero Resources Appalachian Corporation	Partial Assignment	0423/0840
	Antero Resources Appalachian Corporation	CNX Gas Company	Assignment	0468/0769
	CNX Gas Company	Antero Resources Corporation	Agreement	0626/0386

\*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

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JUN 10 2013

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



Fenney Barker, Manager  
Corporations Division  
Tel: (304)558-8000  
Fax: (304)558-8381  
Website: www.wvscd.com  
E-mail: business@wvscd.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 Appalachia Corporation
- Date Certificate of Authority was issued in West Virginia: 6/25/2009
- 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)

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.)

Allyn A. Schopp (304) 357-7310  
Contact Name Phone Number

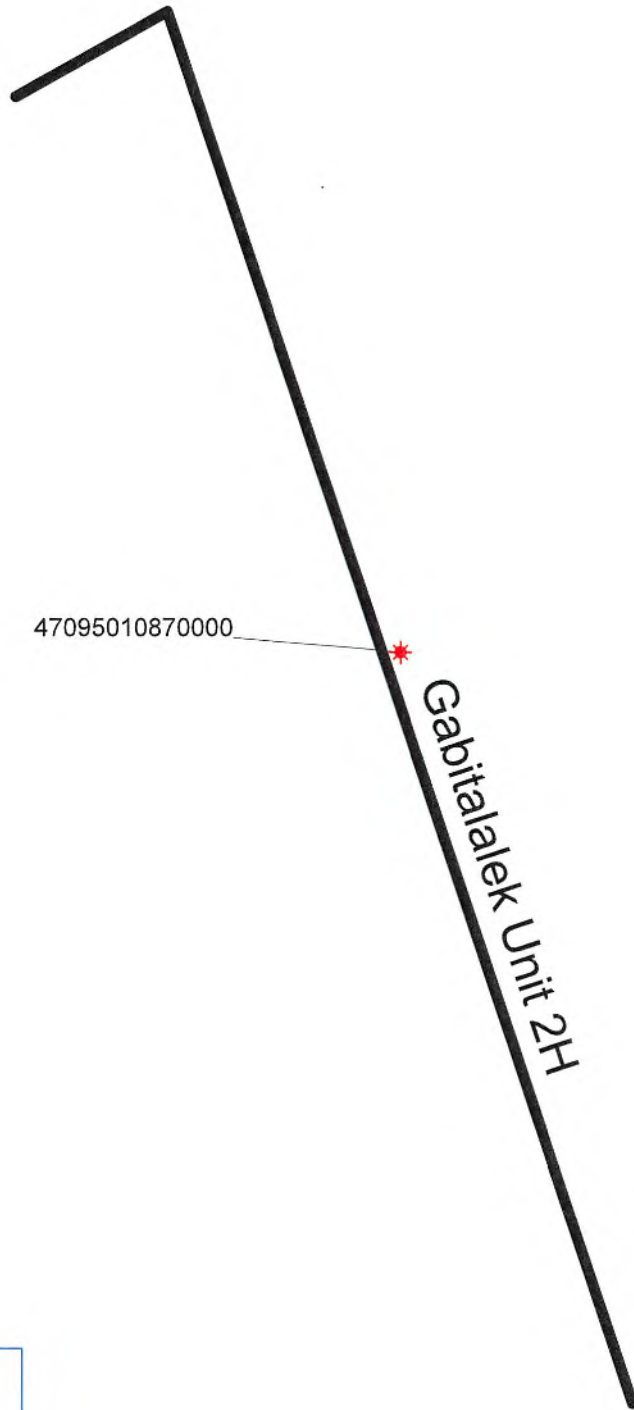
7. Signature information (See below *\*Important Legal Notice Regarding Signatures\**):

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

*\*Important Legal Notice Regarding Signatures\** For West Virginia Code §11D-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.

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47095010870000

Gabitalalek Unit 2H



Antero Resources Corporation

Gabitalalek Unit 2H - AOR



WELL SYMBOLS  
Gas Well

December 3, 2018

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LWI (APINUM) 47095610870000	Well Name FERGUSON T ET AL	Well Number WK-339	Operator ALLIANCE PETR CORP	Hist Oper KEPCO INCORPORATED	TD 5,833	Perforated Interval (shallowest, deepest) 4404 - 5776	Perforated Formation(s)	Productible Formation(s) not perf'd Riley, Big Injun, Weir, Alexander
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