

DATE August 8, 2013

PAY TO THE ORDER OF ANTERO RESOURCES

\$ 941.75

Nine Hundred Fourty-One Dollars and 75/100



Ralph S. Sanders  
Beth A. Rogers

MEMO #13-044 Reimburse Tom's Fork to Sherwood

⑈001033⑈ ⑈051502175⑈

⑈119649⑈

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Linda Cogar  
HC 68 Box 11A  
West Union, WV 26456

13-044

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  Agent  Addressee

X *Linda Cogar*

B. Received by (Printed Name)

C. Date of Delivery  
8-5-13

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

2. Article Number 7012 1010 0001 4282 8461  
(Transfer from service label)

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

George L. Gagnon  
Rt. 1, Box 312  
West Union, WV 26456

13-044

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  Agent  Addressee

X *George L. Gagnon*

B. Received by (Printed Name)

C. Date of Delivery  
8-5-13

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

2. Article Number 7012 1010 0001 4282 8447  
(Transfer from service label)

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

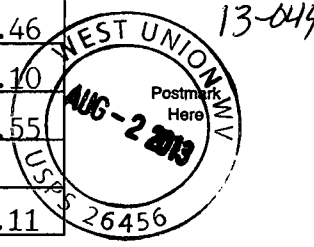
7012 1010 0001 4282 8447

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
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For delivery information visit our website at [www.usps.com](http://www.usps.com)®

**OFFICIAL USE**

Postage	\$ .46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



Sent To **George L. Gagnon**  
 Street, Apt. No.; or PO Box No. **Rt. 1, Box 312**  
 City, State, ZIP+4 **West Union, WV 26456**

PS Form 3800, August 2006 See Reverse for Instructions

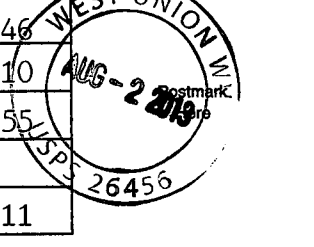
7012 1010 0001 4282 8454

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
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For delivery information visit our website at [www.usps.com](http://www.usps.com)®

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Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



Sent To **Ronald G. Barnes**  
 Street, Apt. No.; or PO Box No. **181 Smith Lane**  
 City, State, ZIP+4 **Howard, PA 16841**

PS Form 3800, August 2006 See Reverse for Instructions

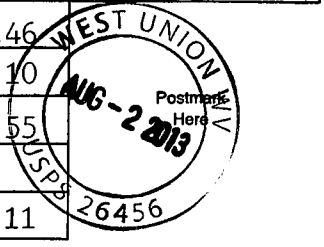
7012 1010 0001 4282 8447

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<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



Sent To **Linda Cogar**  
 Street, Apt. No.; or PO Box No. **HC 68 Box 11A**  
 City, State, ZIP+4 **West Union, WV 26456**

PS Form 3800, August 2006 See Reverse for Instructions

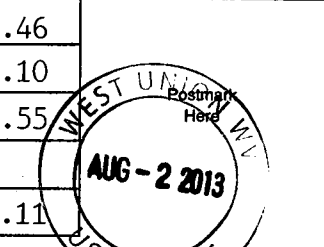
7012 1010 0001 4282 8478

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Postage	\$ .46
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Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.11</b>



Sent To **George & Barbara Adrian**  
 Street, Apt. No.; or PO Box No. **Rt. 1, Box 95 A**  
 City, State, ZIP+4 **New Milton, WV 26411**

PS Form 3800, August 2006 See Reverse for Instructions

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:

13-044

George & Barbara Adrian  
Rt 1 Box 95 A  
New Milton, WV 26411

2. Article Number

(Transfer from service label)

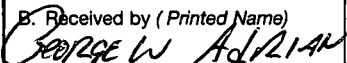
7012 1010 0001 4282 8478

**COMPLETE THIS SECTION ON DELIVERY**

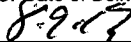
A. Signature


 Agent Addressee

B. Received by (Printed Name)



C. Date of Delivery



D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type

 Certified Mail Express Mail Registered Return Receipt for Merchandise Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee)

 Yes

UNITED STATES POSTAL SERVICE



First-Class Mail  
Postage & Fees Paid  
USPS  
Permit No. G-10

- Sender: Please print your name, address, and ZIP+4 in this box •

FILED

2013 AUG 12 AM 11:49

CLERK  
COUNTY CLERK  
PO BOX 100  
WEST UNION, WV

H A. ROGERS  
ODDRIDGE COUNTY CLERK  
18 E. COURT ST., RM 102  
WEST UNION, WV 26456



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- Print your name and address on the reverse so that we can return the card to you.
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1. Article Addressed to:

13-044

Ronald G. Barnes  
181 Smith Lane  
Howard, PA 16841

2. Article Number

(Transfer from service label)

7012 1010 0001 4282 8454

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

X *Ronald G. Barnes* Agent Addressee

B. Received by (Printed Name)

Ronald G. Barnes

C. Date of Delivery

8/6/13

D. Is delivery address different from item 1?  YesIf YES, enter delivery address below:  No

3. Service Type

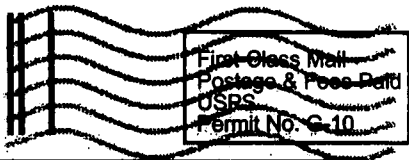
 Certified Mail Express Mail Registered Return Receipt for Merchandise Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee)

 Yes

UNITED STATES POSTAL SERVICE  
JOHNSTOWN PA, 159

07 AUG 2013 PM 3



• Sender: Please print your name, address, and ZIP+4 in this box •

FILED

2013 AUG -9 PM 12: 20

BETHE A. ROGERS  
DODD RIDGE COUNTY CLERK  
118 E. COURT ST., RM 102  
WEST UNION, WV 26456



By: BH - MEH - AML  
Asst. Chief Tax Deputy

W. C .Underwood Jr.  
Sheriff of Doddridge County

The Person paying Money into the Treasury shall forthwith file one of these Receipts with the County Clerk

## Doddridge County, West Virginia

No. 226

Date: August 1, 2013  
\*\*\*Customer copy\*\*\*

Received: #13-044 Antero Toms fork to sherwood pl

\$15,015.00

In Payment For: 318 Building Permits (LP)

For: 12-Flood Plain Ordinance #20 Fund

By: BH - MEH - AML  
Asst. Chief Tax Deputy

W. C .Underwood Jr.  
Sheriff of Doddridge County



ANTERO RESOURCES CORPORATION  
1625 17th STREET, SUITE 300  
DENVER, COLORADO 80202

Vendor Name	Vendor No.	Date	Check Number	Check Total
DODDRIDGE COUNTY COMMISSION	43312	Jul-16-2013	33758	\$15,015.00

VOUCHER	VENDOR INV #	INV DATE	TOTAL AMOUNT	PRIOR PMTS & DISCOUNTS	NET AMOUNT
07-AP-5873	OSHERWOODPIP	07/15/13	15,015.00	0.00	15,015.00
-	TOMS FORK TO SHERWOOD PL				
	TOTAL INVOICES PAID				15,015.00

13-044

DETACH AND RETAIN FOR TAX PURPOSES



Legal Advertisement:  
Doddridge County  
Floodplain Permit Application

Please take notice that on the 31<sup>st</sup> day of July, 2013  
**ANTERO RESOURCES APPALACHIAN CORPORATION –TOMS FORK  
TO SHERWOOD PIPELINE,** filed an  
application for a Floodplain Permit to develop land located at or  
about: **SURFACE OWNERS: RONALD BARNES, GEORGE GAGNON,  
LINDA COGAR, GEORGE & BARBARA ADRIAN,  
NEW MILTON DISTRICT, T/M 3, PCL 2,2.2, 6 AND 10.3.**

The Application is on file with the Clerk of the County Court and  
may be inspected or copied during regular business hours.

Any interested persons who desire to comment shall present  
the same in writing by **August 20, 2013.**

Delivered to the:  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456.

Beth A Rogers, Doddridge County Clerk  
Dan Wellings, Doddridge County Flood Plain Manager

\*\*\*\*\*  
\* P. 01 \*  
\* TRANSACTION REPORT \*  
\* AUG-02-2013 FRI 03:43 PM \*  
\* FOR: DODDRIDGE CO. CLERK 304 873 1840 \*  
\* SEND \*  
\* DATE START RECEIVER TX TIME PAGES TYPE NOTE M# DP \*  
\* AUG-02 03:43 PM 93048731600 25" 1 FAX TX OK 549 \*  
\* TOTAL : 25S PAGES: 1 \*  
\*\*\*\*\*

Legal Advertisement:

Doddridge County  
Floodplain Permit Application

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118 E. Court Street, West Union, WV 26456.

Beth A Rogers, Doddridge County Clerk  
Dan Wellings, Doddridge County Flood Plain Manager

Doddridge County Flood Plain Refund Calculator (if not in Flood Plain)

Tom's Fork to Sherwood

Estimated Construction Costs	\$2,703,000.00
Amount over \$100,000	\$2,603,000.00
Drilling Oil and Gas Well Fee	\$1,000.00
Deposit for additional charges	\$1,000.00
\$5 per \$1,000 over \$100,000	\$13,015.00
Amount Due with application	\$15,015.00
95% of Application Fee minus \$1,000 deposit	<del>\$13,314.25</del>
Cost for Permit	<del>\$700.75</del>
Total Refund (Includes 100% of 1,000 deposit)	<del>\$14,314.25</del>

Pipeline bore is going under the floodplain and does need a floodplain permit per ruling from state FEMA, office of Homeland Security, and Kevin Sneed.

Therefore only the \$1,000 ~~for~~ deposit for expenses is to be returned.

Dan Helling

PERMIT NO. 13-044

**DODDRIDGE COUNTY**  
**FLOODPLAIN DEVELOPMENT**  
**PERMIT**

PURPOSE FOR PERMIT: Gas Pipeline

ISSUED TO Antero

ADDRESS: 1625 17<sup>th</sup> St., Denver Co 80202

PROJECT ADDRESS: New Milton, WV

Tax Map: 31 2, 2.2, 6 & 10/3

ISSUED BY: Dan Wellens

DATE: 08/21/2013

THIS PERMIT MUST BE POSTED ON THE PREMISES IN A CONSPICUOUS PLACE SO AS TO BE CLEARLY  
VISIBLE FROM THE STREET.

Blandville  
Pipeline  
crossing Meathouse  
Fork



July 16, 2013

Doddridge County Commission  
Attn: Dan Wellings, Doddridge County Floodplain Manager  
118 East Court Street, Room 102  
West Union, WV 26456

Antero Resources  
1625 17th Street  
Denver, Colorado 80202  
Office 303.357.7310  
Fax 303.357.7315

Mr. Wellings:

Antero Resources Corporation (Antero) would like to submit a Doddridge County Floodplain permit application for our Tom's Fork to Sherwood Pipeline. Our project is located in Doddridge County, New Milton District. Horizontal directional drilling has been selected as the construction technique for this pipeline installation which will cause zero surface disturbance.

Please note, a portion of the proposed pipeline will bore under the floodplain, however, since Antero will not be adding any fill or structures to construct this project, the flood plain level will not be impacted. The designed pipeline shall not sift, pull apart, nor float in the event of a flood.

Attached you will find the following:

- Doddridge County Floodplain Permit Application and permit fees
- FIRM Map
- A detailed set of plans signed by a WV licensed professional engineer
- Spill Prevention Containment and Control Plan
- Directional Plan
- Copies of other required permits

If you have any questions please feel free to contact me at (303) 357-6820.

Thank you in advance for your consideration.

Sincerely,

Shauna Redican  
Permit Representative  
Antero Resources Corporation

Enclosures

2013 JUL 18 AM 9:08  
FIRM  
DODDRIDGE COUNTY, WV

# DODDRIDGE COUNTY FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

## SECTION 1: GENERAL PROVISIONS (APPLICANT TO READ AND SIGN)

1. No work may start until a permit is issued.
2. The permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Compliance is issued.
5. The permit will expire if no work is commenced within six months of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal requirements.
7. Applicant hereby gives consent to the Floodplain Administrator/Manager or his/her representative to make inspections to verify compliance.
8. **I, THE APPLICANT CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.**

DODDRIDGE COUNTY, WV

2013 JUL 18 AM 9:09

FILED

APPLICANT'S SIGNATURE Shauna Redican

DATE July 16th, 2013

## SECTION 2: PROPOSE DEVELOPMENT (TO BE COMPLETED BY APPLICANT).

**IF THE APPLICANT IS NOT A NATURAL PERSON, THE NAME, ADDRESS, AND TELEPHONE NUMBER OF A NATURAL PERSON WHO SHALL BE APPOINTED BY THE APPLICANT TO RECEIVE NOTICE PURSUANT TO ANY PROVISION OF THE CURRENT DODDRIDGE COUNTY FLOODPLAIN ORDINANCE.**

Antero Resources Appalachian Corporation - Shauna Redican, Permit Representative

APPLICANT'S NAME: \_\_\_\_\_

ADDRESS: 1625 17th Street, Denver, CO 80202

TELEPHONE NUMBER: Contact Shauna Redican: 303-357-6820

**BUILDER'S NAME:** Antero Resources Corporation

**ADDRESS:** 1625 17th Street, Denver, CO 80202

**TELEPHONE NUMBER:** (303) 357-7310

**ENGINEER'S NAME:** Thrasher - Matthew W. Fluharty

**ADDRESS:** 30 Columbia Boulevard, Clarksburg, WV 26301

**TELEPHONE NUMBER:** 304-624-4108

**PROJECT LOCATION:**

**NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT)** \_\_\_\_\_

PLEASE SEE ATTACHED EXHIBIT A

**ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT)** \_\_\_\_\_

PLEASE SEE ATTACHED EXHIBIT A

**DISTRICT:** New Milton

**DATE/FROM WHOM PROPERTY**

**PURCHASED:** N/A

**LAND BOOK DESCRIPTION:** \_\_\_\_\_

**DEED BOOK REFERENCE:** \_\_\_\_\_

**TAX MAP REFERENCE:** TM 3, Pcl 2, 2.2, 6 and 10.3

**EXISTING BUILDINGS/USES OF PROPERTY:** N/A

**NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY** N/A

**ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY** N/A

To avoid delay in processing the application, please provide enough information to easily identify the project location.

**DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES)**

**A. STRUCTURAL DEVELOPMENT**

**ACTIVITY**

**STRUCTURAL TYPE**

- |  |   |
|--|---|
| <input type="checkbox"/> New Structure           | <input type="checkbox"/> Residential (1 – 4 Family)       |
| <input type="checkbox"/> Addition                | <input type="checkbox"/> Residential (more than 4 Family) |
| <input type="checkbox"/> Alteration              | <input type="checkbox"/> Non-residential (floodproofing)  |
| <input type="checkbox"/> Relocation              | <input type="checkbox"/> Combined Use (res. & com.)       |
| <input type="checkbox"/> Demolition              | <input type="checkbox"/> Replacement                      |
| <input type="checkbox"/> Manufactured/Mobil Home |   |

**B. OTHER DEVELOPMENT ACTIVITIES:**

- Fill             Mining             Drilling            X            Pipelining  
 Grading  
 Excavation (except for STRUCTURAL DEVELOPMENT checked above)  
 Watercourse Altercation (including dredging and channel modification)  
 Drainage Improvements (including culvert work)  
 Road, Street, or Bridge Construction  
 Subdivision (including new expansion)  
 Individual Water or Sewer System  
 Other (please specify)
- 

**C. STANDARD SITE PLAN OR SKETCH**

1. SUBMIT ALL STANDARD SITE PLANS, IF ANY HAVE BEEN PREPARED.
2. IF STANDARD SITE PLANS HAVE NOT BEEN PREPARED:  
 SKETCH ON A SEPARATE 8 ½ X 11 INCH SHEET OF PAPER THE SHAPE AND LOCATION OF THE LOT. SHOW THE LOCATION OF THE INTENDED CONSTRUCTION OR LAND USE INDICATING BUILDING SETBACKS, SIZE & HEIGHT. IDENTIFY EXISTING BUILDINGS, STRUCTURES OR LAND USES ON THE PROPERTY.
3. SIGN AND DATE THE SKETCH.

**ACTUAL TOTAL CONSTRUCTION COSTS OF THE COMPLETE DEVELOPMENT IRRESPECTIVE OF WHETHER ALL OR ANY PART OF THE SUBJECT PROPOSED CONSTRUCTION PROJECT IS WITHIN THE FLOODPLAIN \$ 2,703,000.00**

**D. ADJACENT AND/OR AFFECTED LANDOWNERS:**



**1. NAME AND ADDRESS OF ALL OWNERS OF SURFACE TRACTS ADJACENT TO THE AREA OF THE SURFACE TRACT (UP & DOWN STREAM) UPON WHICH THE PROPOSED ACTIVITY WILL OCCUR AND ALL OTHER SURFACE OWNERS UP & DOWN STREAM) WHO OWN PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY (IF ONE HAS BEEN COMPLETED).**

**NAME:** N/A - Project is not within floodplain

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**NAME:** N/A - Project is not within floodplain

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**NAME:** N/A - Project is not within floodplain

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**NAME:** N/A - Project is not within floodplain

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**1. NAME AND ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON ANY ADJACENT PROPERTY AT THE TIME THE FLOODPLAIN PERMIT APPLICATION IS FILED AND THE NAME AND ADDRESS OF AT LEAST ONE ADULT RESIDING IN ANY HOME ON ANY PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY.**

**NAME:** N/A - Project is not within floodplain

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**NAME:** N/A - Project is not within floodplain

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**NAME:** N/A - Project is not within floodplain

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**NAME:** N/A - Project is not within floodplain

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**E. CONFIRMATION FORM**

**THE APPLICANT ACKNOWLEDGES, AGREES, AND CONFIRMS THAT HE/IT WILL PAY WITHIN 30 DAYS OF RECEIPT OF INVOICE BY THE COUNTY FOR ALL EXPENSES RELATIVE TO THE PERMIT APPLICATION PROCESS GREATER THAN THE REQUIRED DEPOSIT FOR EXPENSES INCLUDING:**

- (A) PERSONAL SERVICE OF PROCESS BY THE DODDRIDGE COUNTY SHERIFF AT THE RATES PERMITTED BY LAW FOR SUCH SERVICE.
- (B) SERVICE BY CERTIFIED MAIL RETURN RECEIPT REQUESTED.
- (C) PUBLICATION.

**Antero Resources Corporation**  
**Tom's Fork Pipeline**  
**Horizontal Directional Drill Landowner Information**

<b>County</b>	<b>District</b>	<b>Map</b>	<b>Parcel</b>	<b>Owner</b>	<b>Address</b>	<b>City, State Zip</b>
Doddridge	6 - New Milton	3	6	George & Barbara Adrian	Route 1 Box 95A	New Milton, WV 26411
Doddridge	6 - New Milton	3	2	George Gagnon	Route 1 Box 312	West Union, WV 26456
Doddridge	6 - New Milton	3	2.2	Linda Cogar	HC 68 Box 11A	West Union, WV 26456
Doddridge	6 - New Milton	1	10.3	Ronald Barnes	181 Smith Lane	Howard, PA 16841

EXHIBIT A

- (D) COURT REPORTING SERVICES AT ANY HEARINGS REQUESTED BY THE APPLICANT.
- (E) CONSULTANTS AND/OR HEARING EXPERTS UTILIZED BY DODDRIDGE COUNTY FLOODPLAIN ADMINISTRATOR/MANAGER OR FLOODPLAIN APPEALS BOARD FOR REVIEW OF MATERIALS AND/OR TESTIMONY REGARDING THE EFFICACY OF GRANTING OR DENYING THE APPLICANT'S FLOODPLAIN PERMIT.

NAME (PRINT): Shauna Redican

SIGNATURE: *Shauna Redican* DATE: 7-16-13

After completing SECTION 2, APPLICANT should submit form to Floodplain Administrator/Manager or his/her representative for review.

**SECTION 3: FLOODPLAIN DETERMINATION (to be completed by Floodplain Administrator/Manager or his/her representative)**

**THE PROPOSED DEVELOPMENT:**

THE PROPOSED DEVELOPMENT IS LOCATED ON:

FIRM Panel: 54017C 0140C  
 Dated: 7-31-13 10/04/2011

Is **NOT** located in a Specific Flood Hazard Area (Notify applicant that the application review is complete and **NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED**).

Is located in Special Flood Hazard Area.  
 FIRM zone designation AE  
 100-Year flood elevation is: N/A NGVD (MSL)

Unavailable

The proposed development is located in a floodway.  
 FBFM Panel No. \_\_\_\_\_ Dated \_\_\_\_\_

See section 4 for additional instructions.

SIGNED Dan Wellington

DATE 08/21/2013

**SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by Floodplain Administrator/Manager or his/her representative)**

The applicant must submit the documents checked below before the application can be processed.

- A plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.
- Development plans, drawn to scale, and specifications, including where applicable: details for anchoring structures, storage tanks, proposed elevation of lowest floor, (including basement or crawl space), types of water resistant materials used below the first floor, details of flood proffing of utilities located below the first floor and details of enclosures below the first floor. Also \_\_\_\_\_
- Subdivision or other development plans (If the subdivision or development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).
- Plans showing the extent of watercourse relocation and/or landform alterations.
- Top of new fill elevation \_\_\_\_\_ Ft. NGVD (MSL).  
For floodproofing structures applicant must attach certification from registered engineer or architect.
- Certification from a registered engineer that the proposed activity in a regulatory floodway will not result in any increase in the height of the 100-year flood. A copy of all data and calculations supporting this finding must also be submitted.
- Manufactured homes located in a floodplain area must have a West Virginia Contractor's License and a Manufactured Home Installation License as required by the Federal Emergency Management Agency (FEMA).

Anthony's  
Page  
to keep

Tom's Fork to  
Sherwood

SIGNED

01/26

Boe is going under flood plain  
Must obtain permit!

DATE

**SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by Floodplain Administrator/Manager or his/her representative)**

The applicant must submit the documents checked below before the application can be processed.

A plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.

Development plans, drawn to scale, and specifications, including where applicable: details for anchoring structures, storage tanks, proposed elevation of lowest floor, (including basement or crawl space), types of water resistant materials used below the first floor, details of flood proffing of utilities located below the first floor and details of enclosures below the first floor. Also \_\_\_\_\_

Subdivision or other development plans (If the subdivision or development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).

Plans showing the extent of watercourse relocation and/or landform alterations.

Top of new fill elevation \_\_\_\_\_ Ft. NGVD (MSL).

For floodproofing structures applicant must attach certification from registered engineer or architect.

Certification from a registered engineer that the proposed activity in a regulatory floodway will not result in any increase in the height of the 100-year flood. A copy of all data and calculations supporting this finding must also be submitted.

Manufactured homes located in a floodplain area must have a West Virginia Contractor's License and a Manufactured Home Installation License as required by the Federal Emergency Management Agency (FEMA).

I still need

Cover sheet

X

Other:

Names of landowners

✓ Filed 07/26/13

**SECTION 5: PERMIT DETERMINATION (To be completed by Floodplain Administrator/Manager or his/her representative)**

I have determined that the proposed activity **(type is or is not)** in conformance with provisions of the Floodplain Ordinance adopted by the County Commission of Doddridge County on May 21, 2013. The permit is issued subject to the conditions attached to and made part of this permit.

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

If the Floodplain Administrator/Manager found that the above was not in conformance with the provisions of the Doddridge County Floodplain Ordinance and/or denied that application, the applicant may complete an appealing process below.

APPEALS: Appealed to the County Commission of Doddridge County?  Yes  No  
Hearing Date: \_\_\_\_\_  
County Commission Decision - Approved  Yes  No

CONDITIONS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION 6: AS-BUILT ELEVATIONS (To be submitted by APPLICANT before Certificate of Compliance is issued).**

The following information must be provided for project structures. This section must be completed by a registered professional engineer or a licensed land surveyor (or attach a certification to this application).

COMPLETE 1 OR 2 BELOW:

- 1 Actual (As-Built) Elevation of the top of the lowest floor (including basement or crawl space is \_\_\_\_\_ FT. NGVD (MSL)
- 2 Actual (As Built) elevation of floodproofing is \_\_\_\_\_ FT. NGVD (MSL)

**Note:** Any work performed prior to submittal of the above information is at risk of the applicant.

**SECTION 7: COMPLIANCE ACTION (To be completed by the Floodplain Administrator/Manager or his/her representative).**

The Floodplain Administrator/Manager or his/her representative will complete this section as applicable based on inspection of the project to ensure compliance with the Doddridge County Floodplain Ordinance.

**INSPECTIONS:**

DATE: 12/05/13 BY: Dan Wellins  
DEFICIENCIES? Y/N

**COMMENTS**

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**SECTION 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain Administrator/Manager or his/her representative).**

Certificate of Compliance issued: DATE: \_\_\_\_\_ BY: \_\_\_\_\_

**CERTIFICATE OF COMPLIANCE  
FOR DEVELOPMENT IN SPECIAL FLOOD HAZARD AREA  
(OWNER MUST RETAIN)**

PERMIT NUMBER: \_\_\_\_\_

PERMIT DATE: \_\_\_\_\_

PURPOSE –

CONSTRUCTION LOCATION: \_\_\_\_\_

OWNER'S ADDRESS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**THE FOLLOWING MUST BE COMPLETED BY THE FLOODPLAIN  
ADMINISTRATOR/MANAGER OR HIS/HER AGENT.**

**COMPLIANCE IS HEREBY CERTIFIED WITH THE REQUIREMENT OF THE  
FLOODPLAIN ORDINANCE ADOPTED BY THE COUNTY COMMISSION OF  
DODDRIDGE COUNTY ON MAY 21, 2013.**

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_



Antero

13-044



Pipe line bore on Meathouse Fork  
near Blandville - Rt. 18 south

12/05/2013

DJW

**ANTERO RESOURCES**

**WVDOH MEATHOUSE FORK CREEK AND HWY 18 HDD CONSTRUCTION ESTIMATES**

HDD 1,302' of 20" Steel and 24" HDPE across Meathouse Fork Creek and HWY 18

Doddridge County, West Virginia

	20"	24"
	Steel	HDPE
Mobilize/Demobilize	\$50,000	\$50,000
Material	\$91,000	\$75,000
Michels HDD Support	\$201,000	\$247,000
HDD Subcontractor	\$864,000	\$1,006,000
Pipe Hauling	\$9,000	\$10,000
Mud Disposal	<u>\$50,000</u>	<u>\$50,000</u>
Total Cost Estimate	\$1,265,000	\$1,438,000

## Spill Prevention Containment and Control Plan

### **INTRODUCTION**

Horizontal directional drilling has been selected as the construction technique for this pipeline installation due to the fact that it is a zero disturbance crossing technique. Since there will be no in stream work, this will greatly reduce the chance of sedimentation or contamination of the stream.

The equipment to be used to install this pipeline crossing shall consist of a horizontal directional drill machine with the associated power and steering unit, a mixing/recycling unit and pump for the drilling mud, and miscellaneous pieces of construction equipment.

### **PURPOSE**

The purpose of this plan is to establish monitoring and response criteria that shall minimize the environmental effects of the construction operation.

The HDD construction technique shall use drilling fluid to facilitate the drilling of the borehole as well as the installation of the pipeline. This fluid also has a stabilizing function of the borehole by providing a seal reducing the risk of the drilling fluid evacuating the bore hole through fissures. The drilling fluid is composed of naturally occurring clay and water. The clay portion of the fluid functions as both a lubricant for the drill head and pipe as well as a sealant that fill any pore spaces surrounding the bore hole. Inert, non-toxic additives may be added to the drilling fluid to improve its properties.

It is possible that some of the drilling fluid will be lost in fractures in the soil surrounding the bore hole. While it is not anticipated, drilling fluids may reach the surface through a fracture. This is defined as an inadvertent return.

A spotter shall be utilized to monitor for inadvertent returns. Specific measures shall be taken to reduce the likelihood of inadvertent returns and various non-toxic polymers may be added to the drilling fluid to improve the characteristics of the mud and help prevent an inadvertent return.

### **PROCEDURE**

A typical horizontal directional drill installation starts with the drilling of a "pilot hole." This drilling of the pilot hole includes the use of drilling fluid to cut through the soil and rock material from the entry to the exit points. The drilling fluid is pumped through the drilling pipe and exits through the head of the drill. This lubricates the drill head as well as allows the fluid to flow back through the bore hole, sealing any fractures in the soil as well as carrying any soil cuttings back to the surface at the entry point. These returns are then recycled and pumped back through the drill pipe to repeat the cycle. As the drilling process progresses, more of the drilling fluid will be absorbed by the earth immediately surrounding the drill pipe helping to seal the bore hole. This loss of fluid is a normal process and does not necessarily mean that the drilling fluid is returning to the surface through an inadvertent return.

Once the pilot hole is completed, the bore hole is then enlarged, in a process called reaming, until the diameter is adequate for installation of the pipeline. Reaming consists of the installation of a larger diameter drill head which will be pulled through the original pilot hole until the optimal diameter is achieved.

Measures shall be implemented to contain and control the drilling fluid at the horizontal directional drill entry and exit points. This will typically consist of the excavation of collection containment pits around the entry and exit locations. All returns which are collected in these pits will be pumped to the mixing/recycling unit to be reused in the construction process. While joining and disassembling the drilling pipe, it is typical that drilling fluid is spilled on the drill rig; this fluid is also to be collected and recycled.

### **TRAINING & MONITORING**

Supervisory and other personnel who will be on site shall receive training with respect to the control and containment of the drilling fluids. This training will include, but not be limited to: the necessity of environmental protection, any environmentally sensitive areas located near the project location, specific permit requirements of the project, proper lines of communication, authority, and responsibility, emergency contact names and phone numbers, and events which require reporting.

The project superintendent has the overall responsibility for monitoring the horizontal direction drill construction technique for any inadvertent returns. The drill rig operator shall be responsible for monitoring drilling fluid pressures and return rates. The superintendent with the assistance of any employees on site shall be responsible for visually inspecting the surface of the bore for any inadvertent returns.

### **SPILL RESPONSE & NOTIFICATION**

The bore contractor shall immediately notify the client's representative of any sudden losses in drilling fluid or of any inadvertent returns. If an inadvertent return is observed, the bore contractor shall take immediate action to eliminate, reduce, or control the release of the drilling fluid. The actions taken will be dependent on the volume and geologic conditions of the inadvertent return location.

The actions may include, but not be limited to: excavating a small pit, sand bag cofferdam, or silt fence around the release point to trap sediment to be pumped back to the entry site, reducing drilling fluid pressures, or thickening the drilling fluid mixture. Drilling fluid which is recovered will be recycled and reused when practical.

The bore contractor shall consult with the client and client's representatives to determine which method will be the most appropriate to eliminate, reduce, or control the inadvertent release. The bore contractor shall document the nature of the release including the location and extent of the inadvertent return, the procedures used to reduce the rate of leakage, the measures employed at the site of the inadvertent return, and the measured success of containing or eliminating the inadvertent return.

## Directional Plan

### **SAFETY**

All directional drill contractor employees will comply with all laws and permit regulations as well as any safety procedures specified by employer and client. Prior to construction commencement and prior to each shift change, a tailgate safety meeting will be performed to discuss daily safety topics/concerns and/or any operational changes.

### **RECORDS & LOGS**

Directional drilling contractor will keep and maintain drilling logs, an updated drill path, and the volume of drilling mud which has been used. All records to be available for review by client and client's representatives. A copy of all records shall be provided to the client at the completion of the project.

### **SITE PREPARATION**

A site survey shall be performed to locate and mark the following: any existing utilities to be crossed by the horizontal directional drill, entry and exit points of the drill, and the centerline of the pipeline for the purpose of aligning the drilling machine.

Tracking wires shall be placed on the existing ground surface after the survey has been completed. These wires shall be used to establish the initial alignment and guide the head of the drill during the construction bore hole.

The survey probe to be located in the drill head will be calibrated for magnetic direction and inclination.

### **DRILLING OPERATIONS**

#### Phase I – Pilot Hole Drilling

The pilot hole consists of a smaller diameter bore hole from the entry to exit points of the horizontal directional drill. The survey probe will be inserted into head of the drill. This probe will provide survey data and will help steer the drill. Drilling fluid shall be pumped through the drill pipe as construction progresses. The drilling fluid shall primarily consist of a mix of dry bentonite and fresh water. Drill operator will make changes to the drill speed and drilling fluid pressures based on survey readings during drilling procedures. When the drill head reaches the exit hole the pilot hole is complete.

#### Phase II - Reaming

Once the pilot hole is complete, the bore hole is then "reamed" to enlarge the diameter. Reaming the pilot hole consists of attaching a larger drill head and pulling it back through the pilot hole. The reaming sequences will be determined in the field with the standard reamer dimension to be 1.5 times the outside diameter of the pipeline.

### Phase III – Swabbing (if necessary)

Swabbing the bore hole may be performed after reaming depending on the amount of fluid returns. Swabbing can ensure that there are minimal residual cuttings and fluids left in the bore hole.

### Phase IV – Testing and Pullback

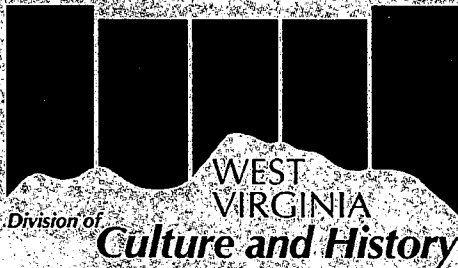
Hydrostatically test the product pipeline to ensure there are no leaks and pull the pipeline through the recently completed bore hole. The pullback process should be continuous until the pipeline installation has been completed.

### **INADVERTENT RETURNS**

Throughout the drilling operations the surface between the entry and exit points shall be inspected and monitored in order to identify and inadvertent returns. Drilling fluid volumes and pressures shall also be monitored in an effort to quickly identify any potential for inadvertent returns. In the case of an inadvertent return, the release shall be evaluated and the contractor employees with the consultation of the client representatives shall determine the most appropriate containment techniques. Drilling is to be suspended if the fluid release cannot be controlled until appropriate containment is in place. Benign drilling fluid additives will also be on site in case of lost circulation.

### **REPORTING**

Thorough records shall be kept throughout the pilot hole drilling, reaming, and pullback processes. These records shall include times, rates of drilling, fluid volumes, inclination of the drill head, location, and various measured information. These records shall be used to create as-built drawings which will be provided to the client upon completion of the project. Detailed reports of recorded information will also be provided to the client upon completion of the project.



Division of

**Culture and History**

May 1, 2013

**The Culture Center**  
1900 Kanawha Blvd. E.  
Charleston, WV 25305-0300

**Randall Reid-Smith, Commissioner**

Phone 304.558.0220 • www.wvculture.org  
Fax 304.558.2779 • TDD 304.558.3562  
EEO/AA Employer

Mr. Luke Erickson  
Project Manager  
Environment & Archaeology  
221 Main Street  
Florence, KY 41042

RE: Tom's Fork to Sherwood Pipeline - Phase I Survey  
Antero Resources Appalachian Corporation  
FR#: 13-537-DO

Dear Mr. Erickson:

We have reviewed the report titled *Abbreviated Phase I Cultural Resources Report for the Antero Resources Appalachian Corporation Tom's Fork to Sherwood Pipeline Project in Doddridge County, West Virginia*. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to the submitted information, Antero Resources Appalachian Corporation is proposing the construction of a natural gas gathering line in Doddridge County, WV. It is our understanding that no above ground project components are proposed as part of this project. It is our understanding that this project requires a permit from the US Army Corps of Engineers and that the agency has defined the Area of Potential Effect (APE) for the proposed project as terrain within 100-feet of jurisdictional waters of the United States. It is our understanding that 5 discrete segments of the proposed pipeline were investigated. The above referenced technical report addresses our concerns regarding the potential for archaeological resources within the proposed permit area. According to the report, no archaeological resources were identified during the systematic survey of the APE. We concur that no further archaeological investigations are necessary within the APE. In our opinion, there are no historic properties located within the proposed APE. No further consultation is necessary. However, if intact cultural resources, including cemeteries, are identified during construction of the proposed pipeline, please cease all activity in the area of discovery and contact this office immediately.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Lora A Lamarre-DeMott, Senior Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/LLD

13-044



**DIVISION OF NATURAL RESOURCES**

324 Fourth Avenue, Room 200  
South Charleston WV 25303-1228  
TDD (304) 558-1439  
TDD 1-800-354-6087  
Fax (304) 558-6048  
Telephone (304) 558-3225

Earl Ray Tomblin  
Governor

Frank Jezioro  
Director

May 9, 2013

Division of Natural Resources  
**LICENSE AND RIGHT OF ENTRY**

Re: P-13-VI/09-552

Antero Resources Appalachian Corporation  
c/o Kleinfelder East, Inc.  
Attention: Heather Krepsik  
230 Executive Drive, Suite 122  
Cranberry Township, PA 16066-

Dear Sir or Madam:

The Division of Natural Resources hereby grants to you for a term of 10 years, from the date hereof, a License and Right of Entry to construct, replace, cover, repair, operate, maintain, use and remove a sixteen inch (16") and a twenty inch (20") natural gas gathering line, and a twenty-four inch (24") HDPE waterline at nine (9) separate locations along Little Toms Fork, Webley Fork, an unnamed tributary of Webley Fork, Toms Fork, an unnamed tributary of Toms Fork, Lick Run, Right Hand Fork, Meathouse Fork, Douglascamp Run, and an unnamed tributary of Douglascamp Run, New Milton and Grant District, Doddridge County, West Virginia, as shown located and highlighted in red on the map attached hereto as Exhibit A - D.

This License and Right of Entry is subject to the following terms and conditions:

**High Quality Streams (HQS)** as listed in the West Virginia Division of Natural Resources High Quality Stream Sixth Edition published in 2001 and for any trout streams and direct tributaries of trout streams:

- Directional boring is the only method permitted during the fish spawning season. Fish spawning season for warmwater streams runs from April 1<sup>st</sup> through June 30<sup>th</sup>. Trout spawning season runs from October 1<sup>st</sup> through April 30<sup>th</sup>.
- Other dry ditch methods (pump around, flume or cofferdam) as described in WVDEP water resources manual (published 2006) on page 3.21-4 may be used outside of spawning seasons.
- Each crossing that utilizes dry ditch methods must be completed in 2 consecutive work days.

**Non-high quality stream:**

- Directional boring or other dry ditch methods (pump around, flume or cofferdam) as described in WVDEP water resources manual (published 2006) on page 3.21-4 may be used at all times during fish spawning season from April 1<sup>st</sup> through June 30<sup>th</sup>. This eliminates the need for spawning season restrictions.



Antero Resources Appalachian Corporation  
P-13-VI/09-552  
Page 2  
May 9, 2013

- Crossings using methods other than directional boring. Must be completed in 1 work day.
- Only ephemeral/intermittent streams that are dry can be trenched.

**Bank Stabilization**

All bank stabilization projects must begin immediately upon completion of utility line crossing and be completed within 24 hours of completion of utility line crossing.

**Freshwater Mussels**

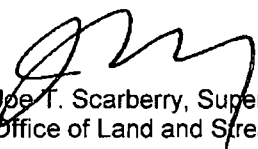
Mussel surveys on streams with known US Fish and Wildlife listed or candidate endangered species will be required if directional boring is not an option. Contact Janet Clayton of the WVDNR Wildlife Diversity Program for information concerning mussels at 304-637-0245.

For further assistance, contact the appropriate WVDNR District Fisheries Biologist.  
District 1 304-825-6787 District 2 304-822-3551 District 3 304-924-6211  
District 4 304-256-6947 District 5 304-675-0871 District 6 304-420-4550

The issuance of this License and Right of Entry by the Division of Natural Resources does not preclude the necessity to obtain a permit from the Corps of Engineers or any other state or federal permits which may be required by law, nor does this License and Right of Entry negate the need to comply with the West Virginia Water Pollution Control Act and/or the State Environmental Quality Board's administrative regulations, applicant is also responsible for determining if the proposed activity is located within an identified flood plain and it is the applicant's responsibility for contacting the local governmental agency in charge of that program and obtaining a flood plain development permit for it. This License and Right of Entry does not grant any rights or privileges, or permission to enter upon or to cross the property of any other person, nor is permission granted to remove any material that lies upon the property of any other persons. Work should be completed in as brief a period as possible and within one year from the date of this letter. In the event you fail or refuse to comply with any of the terms or conditions herein, this License and Right of Entry will be canceled and considered null and void and the Division will reject further applications.

Your check in the amount of \$7875.00 is now due and payable to the Division of Natural Resources covering the (10) ten-year fee of this agreement. Your agreement will be effective upon receipt of your payment in full.

Sincerely,

  
Joe T. Scarberry, Supervisor  
Office of Land and Streams

JTS:cs

attachment

pc: DNR Fish Biologist  
Mr. Mike Zeto, Environmental Enforcement  
DNR Conservation Officers



DEPARTMENT OF THE ARMY  
HUNTINGTON DISTRICT, CORPS OF ENGINEERS  
502 EIGHTH STREET  
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO  
ATTENTION OF

Regulatory Division  
Energy Resource Branch  
LRH-2013-00474-OHR-Webley Fork

MAY 22 2013

Mr. Brett F. Fletcher  
Antero Resources  
1625 17th Street  
Denver, Colorado 80202

Dear Mr. Fletcher:

I refer to the information submitted on your behalf by Kleinfelder East, Incorporated regarding the proposed Tom's Fork to Sherwood Pipeline. The proposed 11.01-mile long project would include the construction of a 16-inch diameter gas line, a 20-inch diameter gas line, and a 24-inch diameter water line within the same right-of-way. The proposed project would be located in Doddridge County, West Virginia. The northern terminus of the project would be at 39.2708 N, 80.6861 W, the southern terminus would be at 39.1899 N, 80.7125 W. Construction of the proposed pipeline project would include seven (7) temporary stream crossings as described in the attached Table 1.

The U.S. Army Corps of Engineers (Corps) authority to regulate waters of the United States is based, in part, on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act requires that a Department of the Army permit be obtained prior to the discharge of dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires that a Department of the Army permit be obtained for any work in, on, over or under a navigable water.

You have requested we provide a preliminary jurisdictional determination (PJD) for the aquatic resources described in attached table. Based on a review of the information provided and other information available to us, this office has determined the streams described in Table 1 **may** be jurisdictional waters of the United States. This determination has been made in accordance with the Regulatory Guidance Letter for Jurisdictional Determinations issued by the U.S. Army Corps of Engineers on June 26, 2008 (RGL No. 08-02). As indicated in the guidance, this PJD is non-binding and cannot be appealed (33 C.F.R. 331.2) and only provides a written indication that waters of the U.S., including wetlands, may be present on-site.

You have declined to exercise the option to obtain an approved JD in this instance and at this time. For the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the streams described in the attached PJD will be evaluated as if they are waters of the United States.

Attached please find two copies of the PJD. If you agree with the findings of this PJD and understand your options regarding the same, please sign and date one copy of the form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy to the following address:

Ms. Susan Porter (LRH-2013-00474-OHR-Webley Fork)  
U.S. Army Corps of Engineers, Huntington District  
502 8th Street  
Huntington, West Virginia 25701

I also refer to the pre-construction notification you have submitted for the proposed pipeline project. You have requested authorization from the Department of the Army to temporarily discharge fill material into the seven (7) streams described in the attached Table 1 for the installation of utility lines. The information submitted indicates the streams would be restored to pre-construction conditions upon completion of the project.

Based on the submitted information, it has been determined the proposed discharge of fill material into waters of the United States for the construction of the Tom's Fork to Sherwood Pipeline meets the criteria for authorization under Nationwide Permit Number (NWP) #12 (attached) under the February 21, 2012 Federal Register, Notice of Reissuance of Nationwide Permits (77 FR 10184) provided you comply with all terms and conditions of the enclosed material. A copy of this NWP can be found on our website at <http://www.lrh.usace.army.mil/Missions/Regulatory.aspx>.

Please be aware this nationwide permit authorization does not obviate the requirement to obtain other Federal, state or local authorizations required by law. A copy of this NWP and verification letter must be supplied to your project engineer responsible for construction activities. A copy of the verification letter must be kept at the site during construction. Upon completion of the work, the attached certification must be signed and returned to this office.

If you have any questions concerning the above, please contact Ms. Susan A. Porter at (304) 399-5610 or by email at [Susan.A.Porter@usace.army.mil](mailto:Susan.A.Porter@usace.army.mil).

Sincerely,



Kimberly D. Courts-Brown  
Regulatory Project Manager  
Energy Resource Branch

Enclosures

CF: (w/out encls)  
Ms. Heather Krepsik  
Kleinfelder East, Incorporated  
230 Executive Drive, Suite 122  
Cranberry Township, PA 16066

Ms. Carrie Traver  
U.S. Environmental Protection Agency - Region III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103

**Table 1 – Proposed Stream Fill  
Antero Resources  
Tom's Fork to Sherwood Pipeline  
LRH-2013-00474-OHR-Webley Fork**

Stream Name	Flow Regime	Longitude	Latitude	Fill Length (linear feet)
Stream 4 – Webley Fork	Perennial	39.205205	-80.726845	<30
Stream 89 – UnTrib Tom's Fork	Intermittent	39.225558	-80.709572	<20
Stream 94 – UnTrib Webley Fork	Intermittent	39.205721	-80.726628	<20
Stream 97 – Little Tom's Fork	Perennial	39.195765	-80.718585	<75
Stream 98 – Douglascamp Run	Perennial	39.27037	-80.71315	<10
Stream 99 – Douglascamp Run	Perennial	39.27053	-80.71308	<10
Stream 100 – UnTrib Douglascamp Run	Perennial	39.27049	-80.71301	<10



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

West Virginia Field Office  
694 Beverly Pike  
Elkins, West Virginia 26241



March 15, 2013

Ms. Heather Krepsik  
Kleinfelder  
230 Executive Drive, Suite 122  
Cranberry Township, Pennsylvania 16066

Re: Antero Resources Appalachian Corporation, Tom's Fork to Sherwood Pipeline Project,  
Doddridge County, West Virginia

Dear Ms. Krepsik:

This responds to your request of March 1, 2013, for information regarding the potential occurrence of federally listed endangered and threatened species and their designated critical habitats. Antero Resources Appalachian Corporation (Antero) proposes to construct the 6.04-mile (9.7 kilometer [km]) Tom's Fork to Sherwood pipeline project in Doddridge County, West Virginia. These comments are provided pursuant to the Endangered Species Act (ESA, 87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

The project area is within the range of the Indiana bat (*Myotis sodalis*) and may provide summer foraging and roosting habitats, as well as winter habitat, for this endangered mammal. Indiana bats use caves or mine portals for winter hibernation habitat between November 15 and March 31. Indiana bats may use the proposed site for foraging and roosting between April 1 and November 14. Indiana bat foraging habitat is generally defined as riparian, bottomland, or upland forest, as well as old fields or pastures with scattered trees. Roosting and maternity habitats consist primarily of live or dead hardwood trees which have exfoliating bark that provides space for bats to roost between the bark and the bole of the tree. Tree cavities, crevices, splits, or hollow portions of tree boles and limbs also provide roost sites. In West Virginia, the Service considers all forest habitats containing trees greater than or equal to 5 inches (12.7 centimeter) in diameter at breast height to be potentially suitable as summer roosting and foraging habitat for the Indiana bat.

Based on radio-telemetry data, the Service presumes that Indiana bats are present in areas within 5 miles (8 km) of hibernacula, 5 miles (8 km) of summer capture sites with no known maternity roosts, and 2.5 miles (4 km) of maternity roosts. The proposed project does not pass through any of these buffer zones.

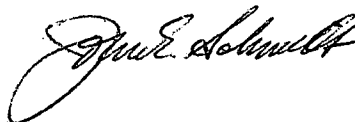
Ms. Heather Krepsik  
March 15, 2013

2

In your March 1, 2013, correspondence you stated that Antero will clear all project-related timber when bats are in hibernation (November 15 through March 31) to avoid direct impacts to Indiana bats and that no caves or portals exist within the proposed project boundary. An estimated 68.99 acres (27.9 hectares [ha]) of forest area would be cleared for the project, which would leave approximately 1,713.4 acres (693.4 ha) or 86 percent of forested habitat within the ¼-mile (0.4 km) buffer area after project clearing has been completed. The total number of acres in the buffer area is 1,992.1 (806.2 ha). The results of this analysis show that there will be sufficient forested habitat remaining on the landscape post-construction to support Indiana bats.

As a result of this information, the Service has concluded that the project may affect, but is not likely to adversely affect any federally listed endangered and threatened species. No biological assessment or further section 7 consultation under the ESA is required with the Service. Should project plans change or amendments be proposed that we have not considered in your proposed action, or if additional information on listed and proposed species becomes available, or if new species become listed or critical habitat is designated, this determination may be reconsidered. If you have any questions regarding this letter, please contact Liz Stout of my staff at (304) 636-6586, Ext. 15, or [elizabeth\\_stout@fws.gov](mailto:elizabeth_stout@fws.gov) or at the letterhead address.

Sincerely,



John E. Schmidt  
Acting Field Supervisor



March 1, 2013

Ms. Barbara Douglas  
Endangered Species Biologist  
United States Fish and Wildlife Service  
West Virginia Field Office  
694 Beverly Pike  
Elkins, West Virginia 26241

**Re: Rare, Threatened and Endangered Species Consultation**  
Tom's Fork to Sherwood Pipeline Project (Tom's Fork)  
Doddridge County, West Virginia  
Antero Resources Appalachian Corporation

Dear Ms. Douglas:

Antero Resources Appalachian Corporation (Antero) is proposing to install a 6.04-mile, 24-inch diameter HDPE, water line and a 20-inch diameter, steel natural gas pipeline near the town of New Milton in Doddridge County, West Virginia. The proposed pipeline will connect the Erwin Hilltop Gathering line to the Sherwood compressor station. Figures 1 and 2 present topographic and aerial maps that show the proposed project area, USGS West Union and Oxford 7.5' quadrangles, and GPS coordinates for each end of the line. These figures also present the proposed project area in relation to the federally protected terrestrial and aquatic areas as provided by USFWS on 2/5/2013.

The Tom's Fork Pipeline ties into the Erwin Hilltop Pipeline at the southern terminus of the proposed alignment. Traveling north it crosses 5 NHD streams and no NWI wetlands until it ties into the existing right of way (ROW) of the previously constructed White Oak Pipeline, just south of Meathouse Fork near the confluence of the Georgescamp Run tributary (Figure 1). From that point, the proposed pipeline will be installed in the constructed White Oak ROW to the Sherwood Compressor Station. Both of the pipelines will be bored under Meathouse Fork. The pipeline alignment extending from the Erwin Hilltop Pipeline to the White Oak ROW tie in point is 6.04 miles and will



be a 100' wide maintained ROW. From the White Oak ROW tie in to the Sherwood Compressor Station is 4.2 miles of existing 100' wide maintained ROW. Bat mist net studies were conducted for the White Oak Pipeline. Three mist net stations were located in the general vicinity of the tie in location between the White Oak Pipeline and the Tom's Fork Pipeline. The concurrence response letter from the USFWS regarding these surveys is provided in Attachment A. Copies of the surveys are available upon request.

Antero would like to conduct clearing prior to March 31, 2013, for the Tom's Fork pipeline. This pipeline will impact approximately 73.34 acres, of which approximately 68.99 acres are forested (based on GIS reviews of aerial photography). There are 1,992.10 acres of land within a ¼ mile buffer surrounding the pipeline. The pre-construction wooded acreage for this buffer area is 1,782.37 acres and the post-construction wooded acreage is 1,713.38 acres. This project would not require water withdrawal.


Kleinfelder is requesting information concerning the potential occurrence of rare, threatened and endangered species and their critical habitat within a one-half mile radius of the proposed pipeline. We would also like to request information concerning listed species occurring within wetlands adjacent or hydrologically connected to the proposed Project area.

We appreciate your timely review of this request. Please contact myself (724-831-5114) or Thomas Woodrow (724-831-5129) with any questions.

Respectfully submitted,



Heather S. Krepsik  
Senior Environmental Scientist



Thomas Woodrow, PE  
Project Manager

c: Barbara Sargeant, West Virginia Division of Natural Resources

Enclosures (3)

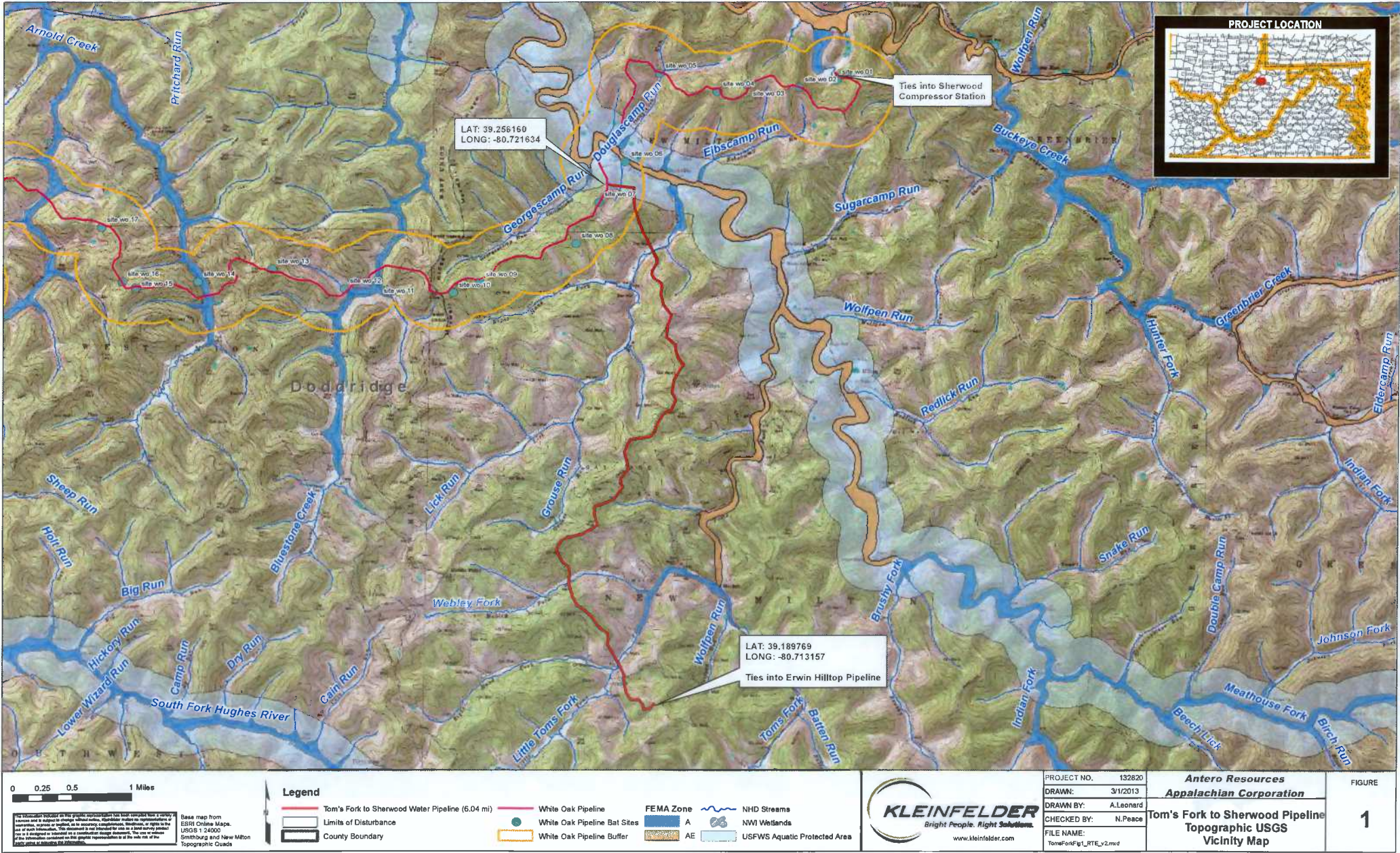
Figure 1 – USGS Topographic Map

Figure 2 – Aerial Imagery Map

Attachment A – White Oak Pipeline – USFWS Concurrence Form for Indiana Bat Mist Net Reports

**FIGURE 1**  
**USGS Topographic Map**





0 0.25 0.5 1 Miles

**Legend**

- Tom's Fork to Sherwood Water Pipeline (6.04 mi)
- Limits of Disturbance
- County Boundary
- White Oak Pipeline
- White Oak Pipeline Buffer
- FEMA Zone A
- FEMA Zone AE
- NHD Streams
- NWI Wetlands
- USFWS Aquatic Protected Area
- White Oak Pipeline Bat Sites

Base map from  
ESRI Online Maps  
USGS 1:24000  
Smithsonian and New Milton  
Topographic Quads



PROJECT NO.	132820
DRAWN BY:	3/1/2013
DRAWN BY:	A. Leonard
CHECKED BY:	N. Peace
FILE NAME:	Tom's Fork to Sherwood Pipeline
	Tom's Fork to Sherwood Pipeline

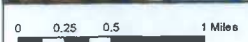
**Antero Resources**  
**Appalachian Corporation**

**Tom's Fork to Sherwood Pipeline**  
**Topographic USGS**  
**Vicinity Map**

FIGURE  
**1**

**FIGURE 2**  
**Aerial Map**





Base map from  
ESRI Online Maps  
USGS 1:24000  
Smithburg and New Milton  
Topographic Quads

Legend	
	Tom's Fork to Sherwood Water Pipeline (6.04 mi)
	Limits of Disturbance
	County Boundary
	White Oak Pipeline
	White Oak Pipeline Bat Sites
	White Oak Pipeline Buffer
	FEMA Zone A
	FEMA Zone AE
	NHD Streams
	NW Wetlands
	USFWS Aquatic Protected Area



PROJECT NO.	132820
DRAWN BY:	3/1/2013
CHECKED BY:	A.Leonard
FILE NAME:	N.Peace
	Tom'sFork_g2_RTE_v2.mxd

**Antero Resources**  
**Appalachian Corporation**

Tom's Fork to Sherwood Pipeline  
Aerial Imagery  
Vicinity Map

FIGURE  
**2**

**ATTACHMENT A**  
**White Oak Pipeline – USFWS Concurrence Form for Indiana Bat Mist Net Reports**



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

West Virginia Field Office  
694 Beverly Pike  
Elkins, West Virginia 26241

### Concurrence Form for Indiana Bat Mist Net Reports

Contact Name: MICHAEL WILCOX

Email Address or Fax Number: michael.wilcox@hatchmott.com

Project: WHITE OAK Pipeline Project, Doddridge & Putnam Co. WV

The U.S. Fish and Wildlife Service has reviewed the report on the bat survey conducted in the proposed project area and submitted on June 21, 2012. The survey followed the protocol outlined in the Draft Indiana Bat Recovery Plan. The survey covered 33.4 acres/kilometers of potential bat habitat and was conducted at 34 net sites from June 1 to June 11, 2012. No federally-listed bats were captured.

Mist net surveys are considered current for 5 years (the summer they are completed and the following four summer seasons). In this case, the survey will expire on May 15, 2017. If a significant amendment is proposed to change or expand this project, or if timber will be removed after that date, a new survey may be necessary and the Service should be contacted.

The area was surveyed for caves and abandoned mine portals and none were found on the property.

Based on the information provided to us, the Service has concluded that no federally-listed endangered and threatened bats are expected to be impacted by the project. Therefore, this project is not likely to adversely affect federally-listed species, and no further consultation under section 7(a)(2) of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required with the Service. Should project plans change or amendments be proposed, or if additional information on listed and proposed species becomes available, this determination may be reconsidered.

If you have any questions regarding these comments, please contact LIZ STOUT at (304) 636-6586 or at the letterhead address.

[Signature] Date: 7-5-12  
Biologist

[Signature] Date: 7/5/12  
for Deborah Carter, Field Supervisor





FILED

2013 JUL 31 AM 5:37

REGISTERED ENGINEERS  
TODD W. SLEAK  
WOODRUFF COUNTY, WV  
Stream and Wetland Crossings  
(Bee Lewis to Adrian Waterline)



A. The main objective of any water body crossing is to construct the pipeline in a manner which minimizes erosion and subsequent sedimentation into the water body. When water levels are temporarily high, the crossing will be postponed until water levels subside. Minor and intermediate water bodies will be crossed either utilizing the dry-ditch flume pipe method or dam and pump-around techniques, as directed by the associated permit. Major water bodies will have a site-specific crossing method such as a Horizontal Directional Drill. Equipment bridges (mat bridges) will be installed over minor water bodies and wetlands. Sediment filter devices for trench spoil will be installed prior to commencing trenching activities. The pipeline will normally be installed within a 48 hour window. Water body bottoms will be returned as near as practical to their original contours upon completion of installation. Restoration will follow directly behind and stream banks will be restored to original contours. The main objective of any wetland crossing is to construct the pipeline and restore the original contour of the wetland. For wetland crossings without standing water, normal construction techniques will be used. The right-of-way can be used for access thru the wetland. Wetland crossings with standing water will be constructed as separate construction entities, such that trenching, installation, backfilling and restoration are completed in the minimum number of days necessary. The push-pull or float technique of pipe installation will be utilized. Current base flood elevations at the four proposed stream crossings are listed below. Following pipeline installation, the right-of-way will be restored to pre-construction contours and no permanent structures will be constructed; therefore, there will be no change to the base flood elevations.

- Right Fork Arnold Creek – approximately 915 feet
- Left Fork Arnold Creek – approximately 958 feet
- Unnamed Tributary to Bluestone Creek – approximately 958 feet
- Bluestone Creek – approximately 948 feet

**Horizontal Directional Drill  
(Tom's Fork to Sherwood Pipeline HDD)**

B. The pipeline will be installed across Meathouse Fork Creek utilizing the Horizontal Directional Drill method. A drill rig will be set up on the east side of WVD0H 18 to drill under HWY 18 and Meathouse Fork. The pipe will be welded together in one pipe string on the west side of Meathouse Fork outside the stream buffers. Once the drill is completed to the right size, the pipeline will be pulled through the hole and connected to the proposed pipeline on both sides. All required ECDs will be installed and maintained prior to beginning the drill and throughout the completion. The current base flood elevation at the proposed stream crossing is a maximum of approximately 811 feet. Following construction and since no construction work will take place within the floodplain, there will be no change to the base flood elevation.



FILED

2013 JUL 26 AM 4:03

LINDA ADRIAN  
COUNTY CLERK  
DODDRIDGE COUNTY, WV

TOMS FORK TO SHERWOOD PIPELINES  
HORIZONTAL DIRECTIONAL DRILL LANDOWNER INFORMATION

AFFECTED PARCEL INFORMATION							
COUNTY	DISTRICT	MAP	PARCEL	OWNER	DEED BOOK/PAGE	ADDRESS	CITY, STATE ZIP
DODDRIDGE	6-NEW MILTON	1	10.3	RONALD G. BARNES	277/653	181 SMITH LANE	HOWARD, PA 16841
DODDRIDGE	6-NEW MILTON	3	2	GEORGE L. GAGNON	264/668	ROUTE 1 BOX 312	WEST UNION, WV 26456
DODDRIDGE	6-NEW MILTON	3	2.2	LINDA COGAR	JAP 26/108, DB 189/92	HC 68 BOX 11A	WEST UNION, WV 26456
DODDRIDGE	6-NEW MILTON	3	6	GEORGE W. & BARBARA B. ADRIAN	260/630	ROUTE 1 BOX 95A	NEW MILTON, WV 26411

ADJOINING PARCEL INFORMATION							
COUNTY	DISTRICT	MAP	PARCEL	OWNER	DEED BOOK/PAGE	ADDRESS	CITY, STATE ZIP
DODDRIDGE	6-NEW MILTON	1	9	ROBERT S. MAXWELL ET UX	133/310	HC 68 BOX 10	WEST UNION, WV 26456
DODDRIDGE	6-NEW MILTON	1	10	DONALD L. BARNES	277/657	7761 SKYLINE DRIVE	HARRISBURG, PA 17112
DODDRIDGE	6-NEW MILTON	3	1	SUE ANN SPIKER	214/675	166 LINDEN LANE	JANE LEW, WV 26378
DODDRIDGE	6-NEW MILTON	3	2.1	ANDERSON L. & LUEVA STOVER	166/71	NEW MILTON STAR ROUTE BOX 11	WEST UNION, WV 26456
DODDRIDGE	6-NEW MILTON	3	3	GEORGE W. & BARBARA B. ADRIAN	260/630	ROUTE 1 BOX 95A	NEW MILTON, WV 26411
DODDRIDGE	6-NEW MILTON	3	4	DAVID G. & VICTORIA L. BLAND	229/58	HC 68 BOX 17A	WEST UNION, WV 26456
DODDRIDGE	6-NEW MILTON	3	4.2	HOMER L. & DELORES M. WEEKLEY	254/197	HC 68 BOX 16B	WEST UNION, WV 26456
DODDRIDGE	6-NEW MILTON	3	6.1	TIMOTHY R. & REBECCA J. CLYNE	266/220	HC 68 BOX 14	WEST UNION, WV 26456

13-044

STATE OF WEST VIRGINIA,  
COUNTY OF DODDRIDGE, TO WIT

I, Virginia Nicholson, Editor of THE  
HERALD RECORD, a weekly newspaper  
published regularly, in Doddridge County,  
West Virginia, Do Hereby Certify Upon  
Oath That the Accompanying Legal Notice  
Entitled:

*Floodplain Permit*

was published in said paper for

*2*

successive weeks beginning with the issue

of *August 6* 2013 and

ending with the issue of

*August 13* 2013 and

that said notice contains

*210*

WORD SPACE at *115* cents a word

amounts to the sum of \$

*24.15*

FOR FIRST PUBLICATION, SECOND  
PUBLICATION IS 75% OF THE FIRST  
PUBLICATION

\$ *18.11*  
and each publication thereafter

\$ *42.26* TOTAL

EDITOR

*Danny Fuchs*

SWORN TO AND SUBSCRIBED

BEFORE ME THIS THE *15* DAY  
OF *August* 2013

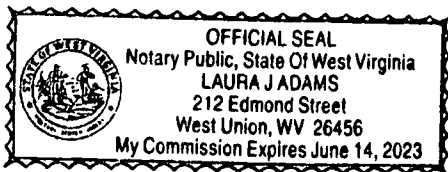
NOTARY PUBLIC

*Laura J Adams*

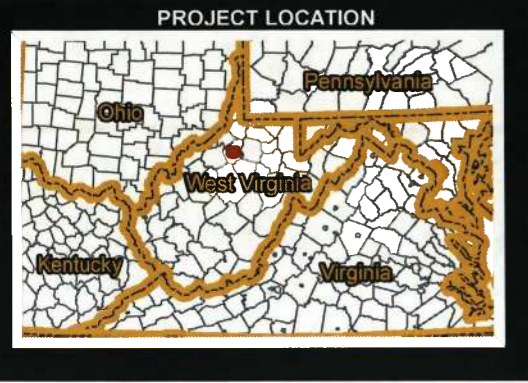
LEGAL ADVERTISEMENT  
Doddridge County  
Floodplain Permit Application  
Please take notice that on the 31st day of July, 2013,  
ANTERO RESOURCES APPALACHIAN  
CORPORATION, TOMS FORK TO SHERWOOD  
PIPELINE, filed an application for a Floodplain Permit  
to develop a line located at or about SURFACE  
OWNERS, RONALD BARNES, GEORGE GAGNON,  
LINDA COGAR, GEORGE & BARBARA ADRIAN,  
NEW MILTON DISTRICT, T/M, 3, PCL 2, 2.6, 6 AND  
10.3.

The Application is on file with the Clerk of the County  
Court and may be inspected or copied during regular  
business hours. Any interested persons who desire to  
comment shall present the same in writing by August 20<sup>th</sup>,  
2013.

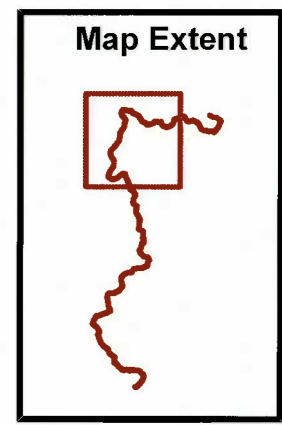
Delivered to the:  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456  
Beth A. Rogers, Doddridge County Clerk  
Dan Wellings, Doddridge County Flood Plan Manager  
8-6-2xb







# TOM'S FORK TO SHERWOOD PIPELINE CENTERLINE CROSSING OVER FEMA FIRM 54017C0140C ANTERO RESOURCES CORPORATION



SITE LOCATIONS NAD 83	
SW Boundary of Floodplain at Centerline (UTM Meters)	N=4345783.1 m E=523988.5 m
NE Boundary of Floodplain at Centerline (UTM Meters)	N=4345839.4 m E=524030.5 m
	LATITUDE LONGITUDE
SW Boundary of Floodplain at Centerline	39.261050 -80.721946
NE Boundary of Floodplain at Centerline	39.261557 -80.721457

NEW MILTON DISTRICT, DODDRIDGE COUNTY, WV  
LITTLE MUSRINGUM-MIDDLE ISLAND WATERSHED

FLOODPLAIN CONDITIONS	
DO SITE CONSTRUCTION ACITVITES TAKE PLACE IN FLOODPLAIN:	YES=HDD
PERMIT NEEDED FROM COUITY FLOODPLAIN COORDINATOR:	YES
HEC-RAS STUDY COMPLETED:	N/A
FLOODPLAIN SHOWN ON DRAWINGS:	YES
FIRM MAP NUMBER (S) FOR SITE:	54017C0140C
ACREAGE OF CONSTRUCTION IN FLOODPLAIN:	N/A



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Base map from  
ESRI Online Maps.  
USGS 1:24,000  
Smithburg and New Milton  
Topographic Quads

### Legend

— Tom's Fork to Sherwood Pipeline (11.01 mi)



PROJECT NO.	132820
DRAWN:	7/10/2013
DRAWN BY:	A.Leonard
CHECKED BY:	N.Peace
FILE NAME:	FEMA_FIRM.mxd

**Antero Resources Corporation**  
Tom's Fork to Sherwood Pipeline  
Doddridge County, West Virginia  
Flood Insurance Rate Map

FIGURE  
**1**



N/F  
 GEORGE W. &  
 BARBARA B. ADRIAN  
 TM 3 PAR 6  
 HORIZ. DISTANCE ≈  
 2,819' ±

STA: 388+49

N/F  
 GEORGE L. GAGNON  
 TM 3 PAR 2  
 HORIZ. DISTANCE ≈  
 328' ±

STA: 391+77

N/F  
 WV ST RT. 18  
 HORIZ. DISTANCE ≈  
 21' ±

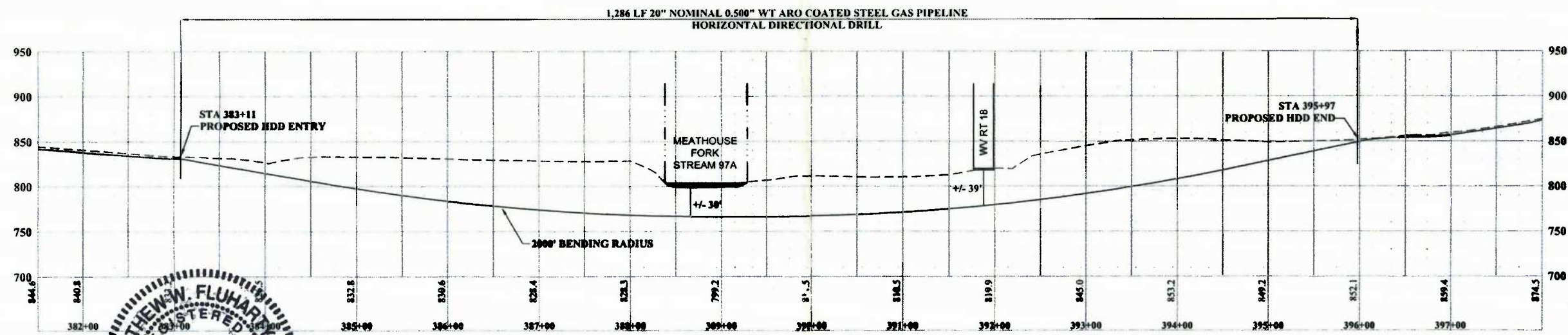
STA: 391+98

N/F  
 RONALD L. BARNES  
 TM 1 PAR 10  
 HORIZ. DISTANCE ≈  
 930' ±

**SURVEYOR'S NOTE:**  
 BOUNDARY MONUMENTS FOUND AND PROPERTY LINES SHOWN ON THIS DRAWING WERE OBTAINED FROM PARTIAL FIELD SURVEY AND RESEARCHED INFORMATION TAKEN FROM VARIOUS RECORDS ON FILE IN THE LOCAL COUNTY COURTHOUSE. TO OBTAIN A MORE ACCURATE BOUNDARY LINE LOCATION, A FULL PROPERTY SURVEY IS RECOMMENDED.



NOTE : DUE TO THIS BEING A ZERO DISTURBANCE HORIZONTAL DIRECTIONAL DRILL INSTALLATION OF WELDED STEEL PIPELINE, THE DESIGNED PIPELINE SHALL NOT SHIFT, PULL APART, NOR FLOAT IN THE EVENT OF FLOOD.



**MATTHEW W. FLUHARTY**  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF WEST VIRGINIA  
 #16375  
*Matthew W. Fluharty*  
 MATTHEW W. FLUHARTY, WV P.E. #16375

APPROVED FOR PERMITS DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 APPROVED FOR CONSTRUCTION DATE: \_\_\_\_\_ BY: \_\_\_\_\_

**CONSTRUCTION PLANS**



SURVEY DATE: 3/7/2013-3/11/2013		SCALE: AS SHOWN
SURVEY BY: GW, CF, JM	DRAWN BY: JH	DATE: 7/11/2013
FIELD BOOK No: 12-52,13-5,13-10	CREATED: 7/11/2013	DATE: 7/11/2013
LAYOUT DATE: 7/11/2013	APPROVED: [Signature]	DATE: 7/11/2013
PROJECT No. 101-015-0153		REPRODUCTION OF THESE DOCUMENTS IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION, IS STRICTLY PROHIBITED.
ANTERO RESOURCES APPALACHIAN CORPORATION TOMS FORK TO SHERWOOD PIPELINES DODDRIDGE COUNTY, WEST VIRGINIA SHEET LAYOUT		THRASHER PHONE (844) 824-4108 CIVIL, ENVIRONMENTAL, CONSULTING - FIELD SERVICES 30 Columbia Boulevard - Coonjohara, WV 26041
SHEET No. <b>SL</b>		



N/F  
 GEORGE W. &  
 BARBARA B. ADRIAN  
 TM 3 PAR 6  
 HORIZ. DISTANCE ≈  
 2,819' ±

STA: 388+49

N/F  
 GEORGE L. GAGNON  
 TM 3 PAR 2  
 HORIZ. DISTANCE ≈  
 328' ±

STA: 391+77

N/F  
 WV ST RT. 18  
 HORIZ. DISTANCE ≈  
 21' ±

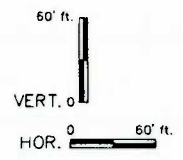
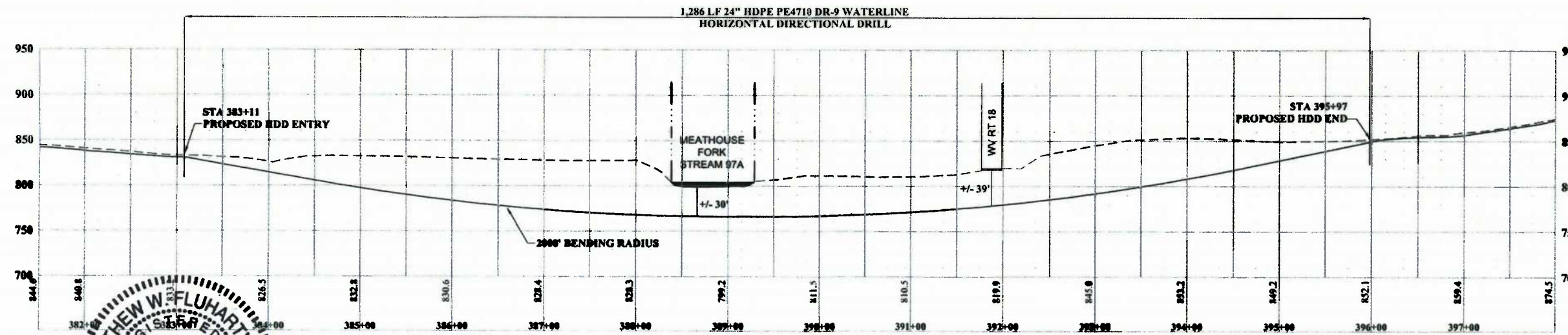
STA: 391+98

N/F  
 RONALD L. BARNES  
 TM 1 PAR 10  
 HORIZ. DISTANCE ≈  
 930' ±

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**MATTHEW W. FLUHARTY**  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF WEST VIRGINIA  
 No. 16375  
*Matthew W. Fluharty* 7/12/13  
 MATTHEW W. FLUHARTY, WV P.E. #16375

APPROVED FOR PERMITS DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 APPROVED FOR CONSTRUCTION DATE: \_\_\_\_\_ BY: \_\_\_\_\_

**CONSTRUCTION PLANS**



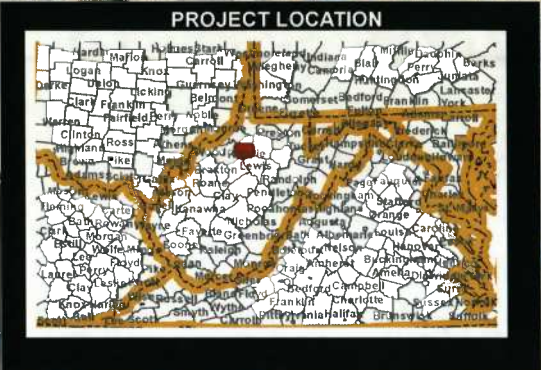
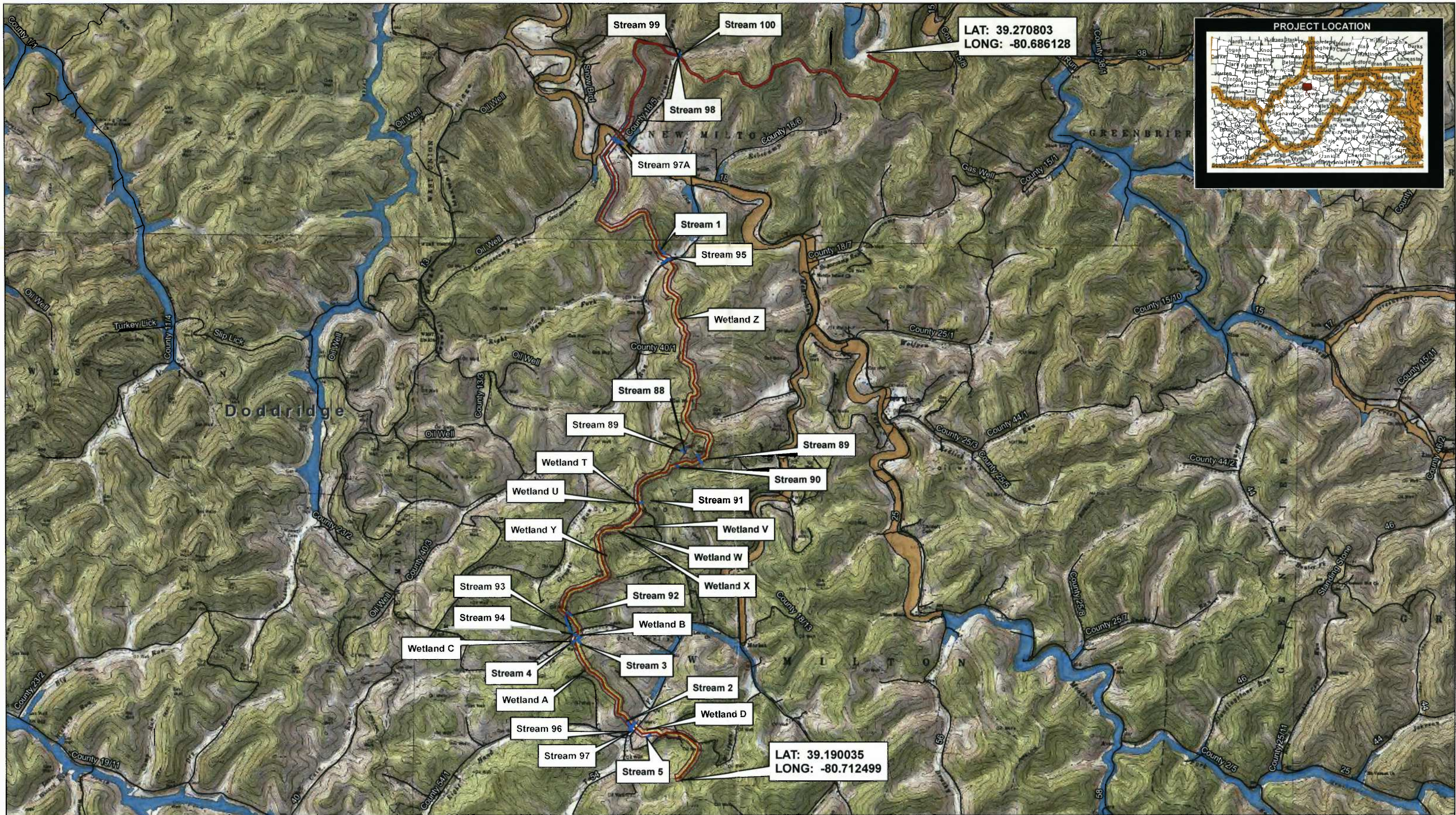
ANTERO RESOURCES  
 APPALACHIAN CORPORATION  
 TOMS FORK TO SHERWOOD PIPELINES  
 DODDRIDGE COUNTY, WEST VIRGINIA  
 SHEET LAYOUT  
**SL**

101-015-0153

SCALE AS SHOWN  
 SURVEY BY: G.W. ADRIAN DATE: 7/11/2013  
 FIELD BOOK No. 13-52.13-5.13-10 CHECKED: \_\_\_\_\_  
 LAYOUT PAR. LAYOUT (2) APPROVED: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
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CAD FILE: 101-015-0153 Antero - Toms Fork To Sherwood\Drawings\HDD\PLN-PROF.dwg PLOT DATE/TIME: 7/11/2013 2:28 PM USER: tom.martin





0 0.25 0.5 1 Miles

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Base map from  
ESRI Online Maps.  
USGS 1:24000  
Smithburg and New Milton  
Topographic Quads

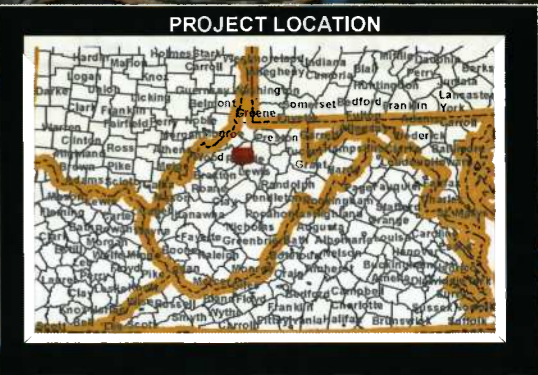
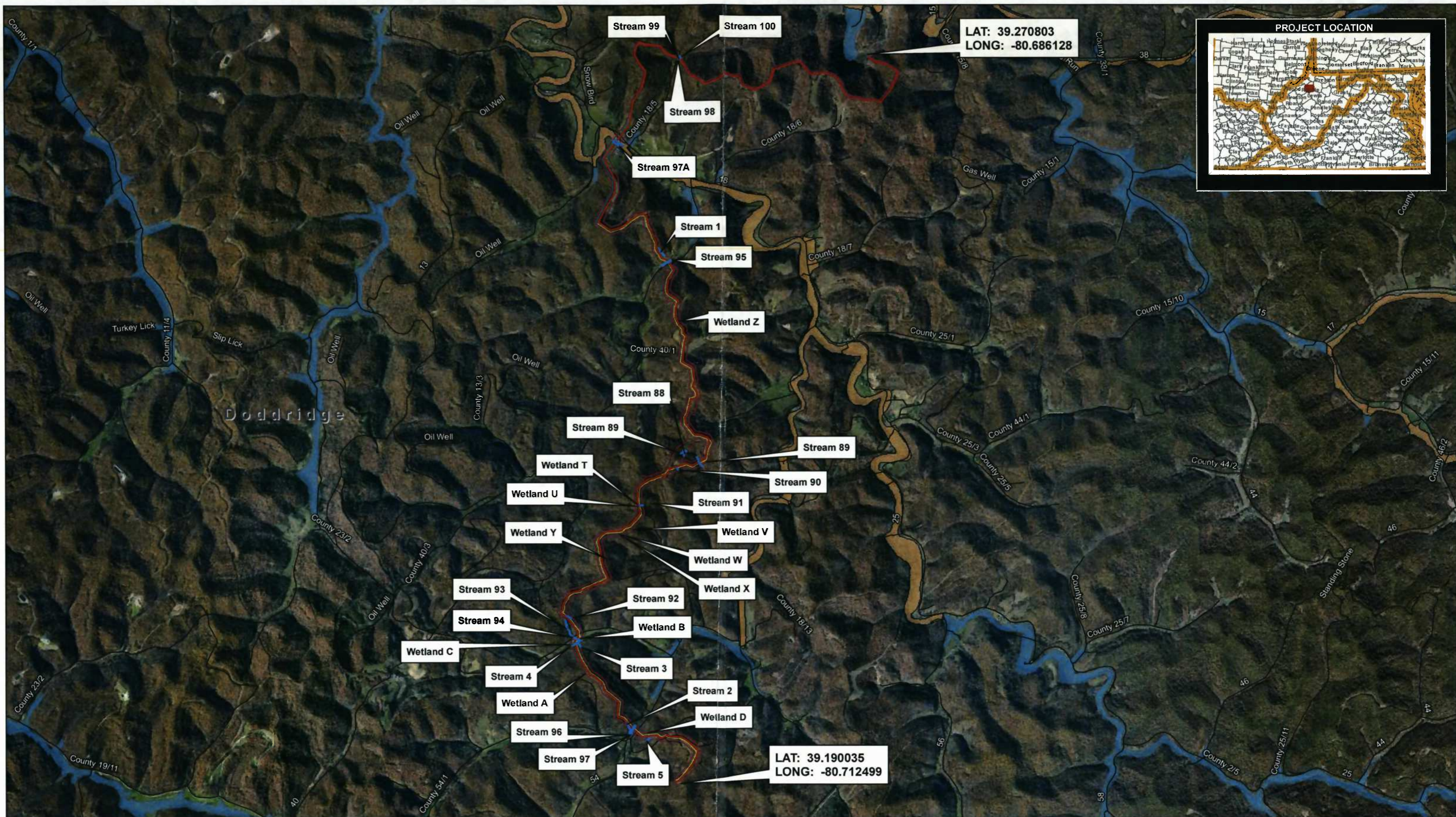
**Legend**

- Tom's Fork to Sherwood Pipeline (11.01 mi)
- Area of Interest (328.82 Acres)
- Tom's Fork to Sherwood Pipeline - Construction ROW
- White Oak Pipeline - Construction ROW
- Delineated Streams
- Delineated Wetlands
- FEMA Zone A
- FEMA Zone AE
- Existing Road
- County Boundary



PROJECT NO.	132820	<b>Antero Resources Appalachian Corporation</b>	FIGURE <b>1</b>
DRAWN:	4/12/2013		
DRAWN BY:	A. Leonard	<b>Tom's Fork to Sherwood Pipeline USGS Topographic Map</b>	
CHECKED BY:	N. Peace		
FILE NAME:	TomsForkFig1_Floodplain_v2.mxd		





0 0.25 0.5 1 Miles

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Base map from  
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Smithburg and New Milton  
Topographic Quads

**Legend**

- Tom's Fork to Sherwood Pipeline (11.01 mi)
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- FEMA Zone AE
- Existing Road
- County Boundary



PROJECT NO.	132820
DRAWN:	4/12/2013
DRAWN BY:	A. Leonard
CHECKED BY:	N. Peace
FILE NAME:	TomsForkFig2_Floodplain_v2.mxd

<b>Antero Resources</b> <b>Appalachian Corporation</b>	
Tom's Fork to Sherwood Pipeline Aerial Imagery Map	

FIGURE  
**2**