

# Commercial/Industrial Floodplain Development Permit

## Doddridge County, WV Floodplain Management

This permit has been issued to **Antero Resources**, and is for the approved commercial and/or industrial development project associated with this permit that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

### Permit: #14-288 ~ Antero Resources ~ Lowther Well Pad

**Date Approved: 10/03/2014**

**Expires: N/A**

**Issued to: Antero Resources**

**POC: Emily Kijowski  
303-357-7310**

**Company Address: 1615 Wynkoop Street  
Denver, CO 80202**

**Project Address: New Milton District  
Lat/Long: 39.2389011N/80.698683W**

**Purpose of development: Well Pad construction. Project does not impact floodplain.**

**Issued by: Edwin L. "Bo" Wriston, Doddridge County FPM (or designee)**

**Date: 10/03/2014**

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For additional information regarding this permit, please contact  
Doddridge County Floodplain Manager at 304.873.2631, or via email at  
doddridgecountyfpm@gmail.com  
118 East Court Street; West Union, WV 26456

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Legal Advertisement:  
Doddridge County  
Floodplain Permit Application

Please take notice that on the 16<sup>th</sup> day of September, 2014

**Antero Resources**

filed an application for a Floodplain Permit to develop land located at or about:

**West Union District**

**39.2389011N/80.698683W**

**Permit #14-288 Lowther Well Pad**

(Note: This project is not within the floodplain)

The Application is on file with the Clerk of the County Court and may be inspected or copied during regular business hours. As this project is outside the FEMA identified floodplain of Doddridge County, Doddridge County Floodplain Management has no regulatory authority.

Any interested persons who desire to comment shall present the same in writing by **November 6, 2014**, delivered to:

Clerk of the County Court

118 E. Court Street, West Union, WV 26456

Beth A Rogers, Doddridge County Clerk

Edwin L. "Bo" Wriston, Doddridge County Flood Plain Manager

#14-288



September 17, 2014

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

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

Mr. Wriston:

Antero Resources Appalachian Corporation (Antero) would like to submit a Doddridge County Floodplain permit application for our Lowther Well Pad. Our project is located in Doddridge County, New Milton District and per FIRM map #54017C0230C this location is not within the floodplain.

Attached you will find the following:

- Doddridge County Floodplain Permit Application
- Lowther Construction Plans
- FIRM Map
- WV Flood Tool Map

If you have any questions please feel free to contact me at (303) 357-7232.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Emily Kijowski".

Emily Kijowski  
Permit Representative  
Antero Resources Appalachian Corporation

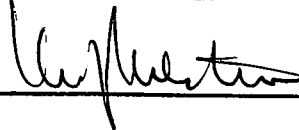
Enclosures

# 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.**

APPLICANT'S SIGNATURE \_\_\_\_\_



DATE September 15, 2014

## 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.**

APPLICANT'S NAME: Antero Midstream LLC - Randy Kloberdanz,

ADDRESS: 1615 Wynkoop Street, Denver, CO 80202

TELEPHONE NUMBER: Contact Emily Kijowski (303) 357-7232

2014 SEP 18 PM 1:36

FILED

**BUILDER'S NAME:** Antero Midstream LLC  
**ADDRESS:** 1615 Wynkoop Strett, Denver, CO 80202  
**TELEPHONE NUMBER:** (303)-357-7310

**ENGINEER'S NAME:** Navitus Energy Engineering  
**ADDRESS:** 151 Windy Hill Lane, Winchester, VA, 22602  
**TELEPHONE NUMBER:** (888)-662-4185

**PROJECT LOCATION:**

**NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT)** Please see Surface Owner Table

**ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT)** Please see Surface Owner Table

**DISTRICT:** \_\_\_\_\_

**DATE/FROM WHOM PROPERTY**

**PURCHASED:** \_\_\_\_\_

**LAND BOOK DESCRIPTION:** Please see Surface Owner Table

**DEED BOOK REFERENCE:** Please see Surface Owner Table

**TAX MAP REFERENCE:** Please see Surface Owner Table

**EXISTING BUILDINGS/USES OF PROPERTY:** None

**NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY** Please see Surface Owner Table

**ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY** \_\_\_\_\_

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 checked="" 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:**

- |                          |      |                          |        |                          |          |                          |            |
|--------------------------|------|--------------------------|--------|--------------------------|----------|--------------------------|------------|
| <input type="checkbox"/> | Fill | <input type="checkbox"/> | Mining | <input type="checkbox"/> | Drilling | <input type="checkbox"/> | 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 \$ N/A - Location is not within the floodplain**

**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-No properties sharing an  
**ADDRESS:** immediate and common boundary  
up or down stream due to the  
location not being in floodplain

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

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

**NAME:** \_\_\_\_\_  
**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-No properties sharing an  
**ADDRESS:** immediate and common boundary  
up or down stream due to the  
location not being in floodplain

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

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

**NAME:** \_\_\_\_\_  
**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.

- (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): Kevin Kilstrom

SIGNATURE: *Kevin Kilstrom* DATE: September 15, 2014

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: \_\_\_\_\_

Dated: \_\_\_\_\_

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 \_\_\_\_\_

100-Year flood elevation is: \_\_\_\_\_ NGVD (MSL)

Unavailable

The proposed development is located in a floodway.

FBFM Panel No. \_\_\_\_\_

Dated \_\_\_\_\_

See section 4 for additional instructions.



SIGNED \_\_\_\_\_

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).

Other:

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**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: \_\_\_\_\_ BY: \_\_\_\_\_  
DEFICIENCIES ?      Y/N

COMMENTS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

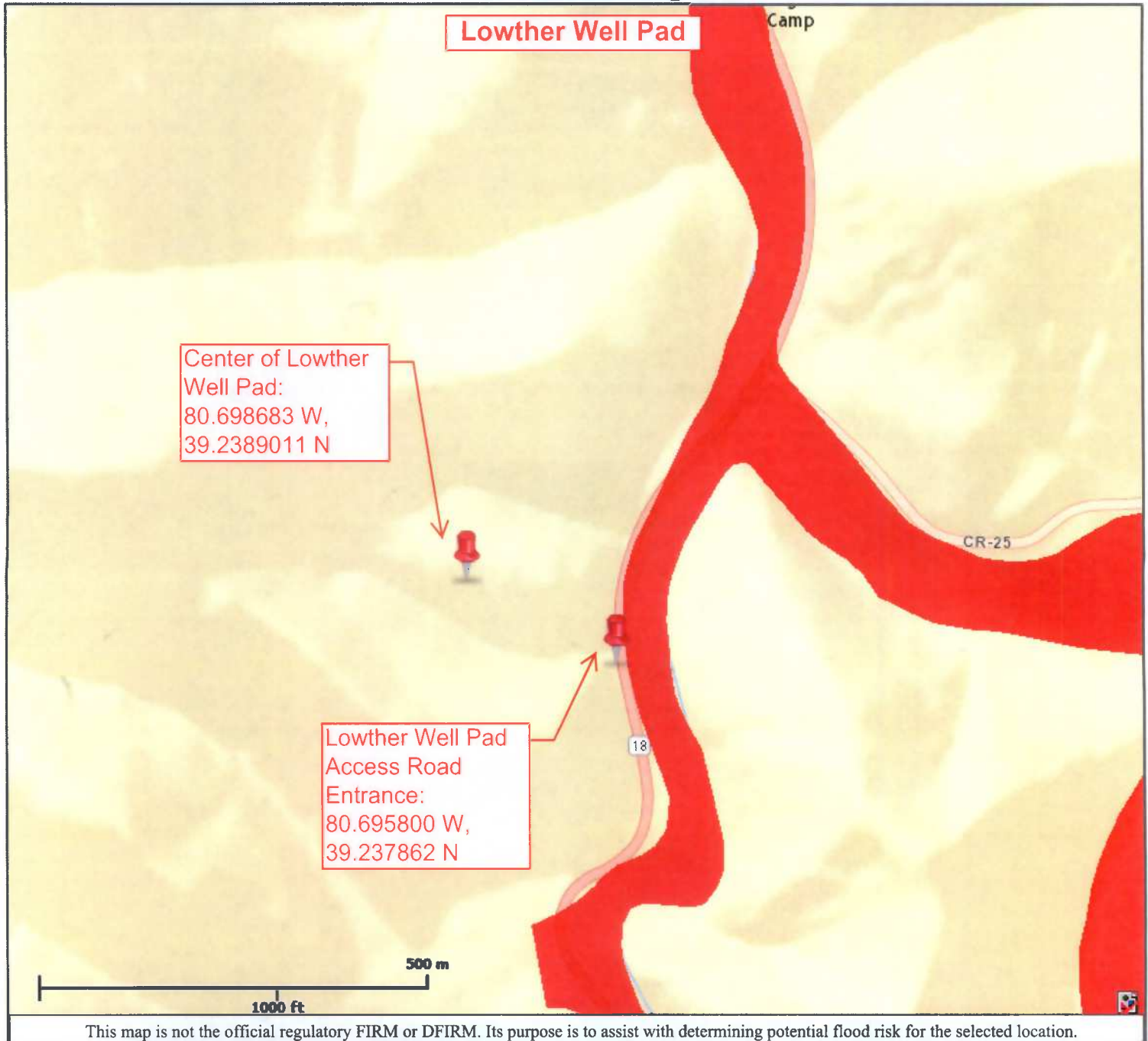
**OWNER'S ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**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** \_\_\_\_\_

# WV Flood Map



Map Created on 9/15/2014

 Location of the mouse click

 **Flood Hazard Zone**  
(1% annual chance floodplain)

**User Notes:**

**Disclaimer:**  
The online map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. To obtain more detailed information in areas where Base Flood Elevations have been determined, users are encouraged to consult the latest Flood Profile data contained in the official flood insurance study. These studies are available online at [www.msc.fema.gov](http://www.msc.fema.gov).

WV Flood Tool is supported by FEMA, WV NFIP Office, and WV GIS Technical Center  
(<http://www.MapWV.gov/flood>)

**Flood Hazard Area:**  
**Elevation:** N/A  
**Location (long, lat):**  
**Location (UTM 17N):**  
**FEMA Issued Flood Map:**  
**Contacts:**  
**CRS Information:**  
**Parcel Number:**

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  
That the Accompanying Legal Notice  
Entitled:

*Floodplain Permit*  
*# 14-288*

was published in said paper for ..... 1 .....  
successive weeks beginning with the issue  
of *October 7<sup>th</sup>* 2014 and  
ending with the issue of

..... 2014 and  
that said notice contains *189*  
WORD SPACE at *115* cents a word  
amounts to the sum of \$ *21.74*

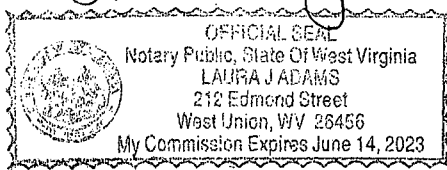
FOR FIRST PUBLICATION, SECOND  
PUBLICATION IS 75% OF THE FIRST  
PUBLICATION

\$ .....  
and each publication thereafter  
\$ *21.74* ..... TOTAL

EDITOR  
*Virginia Nicholson*

SWORN TO AND SUBSCRIBED  
BEFORE ME THIS THE *10<sup>th</sup>* DAY  
OF *October* 2014

NOTARY PUBLIC  
*Laura J. Adams*



LEGAL ADVERTISEMENT  
Doddridge County  
Floodplain/Permit Application  
Please take notice that on the 16th day of September  
2014 Antero Resources filed an application for a  
Floodplain Permit to develop land located at or about:  
West Union District 35 23890 LN #0:698683W Permit  
#14-288 Lowther Well Pad (Note: This project is not  
within the floodplain) The Application is on file with the  
Clerk of the County Court and may be inspected or  
copied during regular business hours. As this project is  
outside the FEMA identified floodplain of Doddridge  
County Doddridge County Floodplain Management has  
no regulatory authority. Any interested persons who  
desire to comment shall present the same in writing by  
October 27, 2014.  
Delivered to the  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456  
Beth A. Rogers, Doddridge County Clerk  
Edwin L. Baiter, Doddridge County Floodplain  
Manager  
150 10/14/14

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  
That the Accompanying Legal Notice  
entitled:

*Floodplain Permit*  
*# 14-288*

was published in said paper for ... *2* ...

successive weeks beginning with the issue  
of ... *October 14<sup>th</sup>* ... 2014 and  
ending with the issue of

*October 21<sup>st</sup>* ... 2014 and

that said notice contains ... *189* ...

WORD SPACE at ... *115* ... cents a word

amounts to the sum of \$ ... *21.74* ...

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

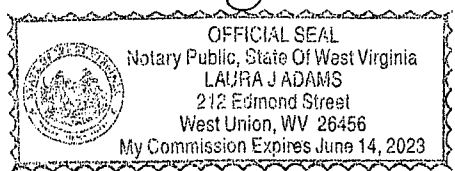
\$ *16.31* ...  
and each publication thereafter

\$ *38.05* ... TOTAL

EDITOR  
*Virginia Nicholson*

SWORN TO AND SUBSCRIBED  
BEFORE ME THIS THE ... *23<sup>rd</sup>* ... DAY  
OF ... *October* ... 2014

NOTARY PUBLIC  
*Laura J Adams*



LEGAL ADVERTISEMENT  
Doddridge County  
Floodplain Permit Application  
Please take notice that on the 16th day of September,  
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County, Doddridge County Floodplain Management has  
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desire to comment shall present the same in writing by  
November 6, 2014.  
Delivered to the  
Clerk of the County Court  
118 E. Court Street, West Union, WV 26456  
Beth A. Rogers, Doddridge County Clerk  
Edwin L. "Bo" Wriston, Doddridge County Flood Plain  
Manager  
10-14-2xb

# FIRM EXHIBIT

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0230C

## FIRM

FLOOD INSURANCE RATE MAP  
DODDRIDGE COUNTY,  
WEST VIRGINIA  
AND INCORPORATED AREAS

PANEL 230 OF 325  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

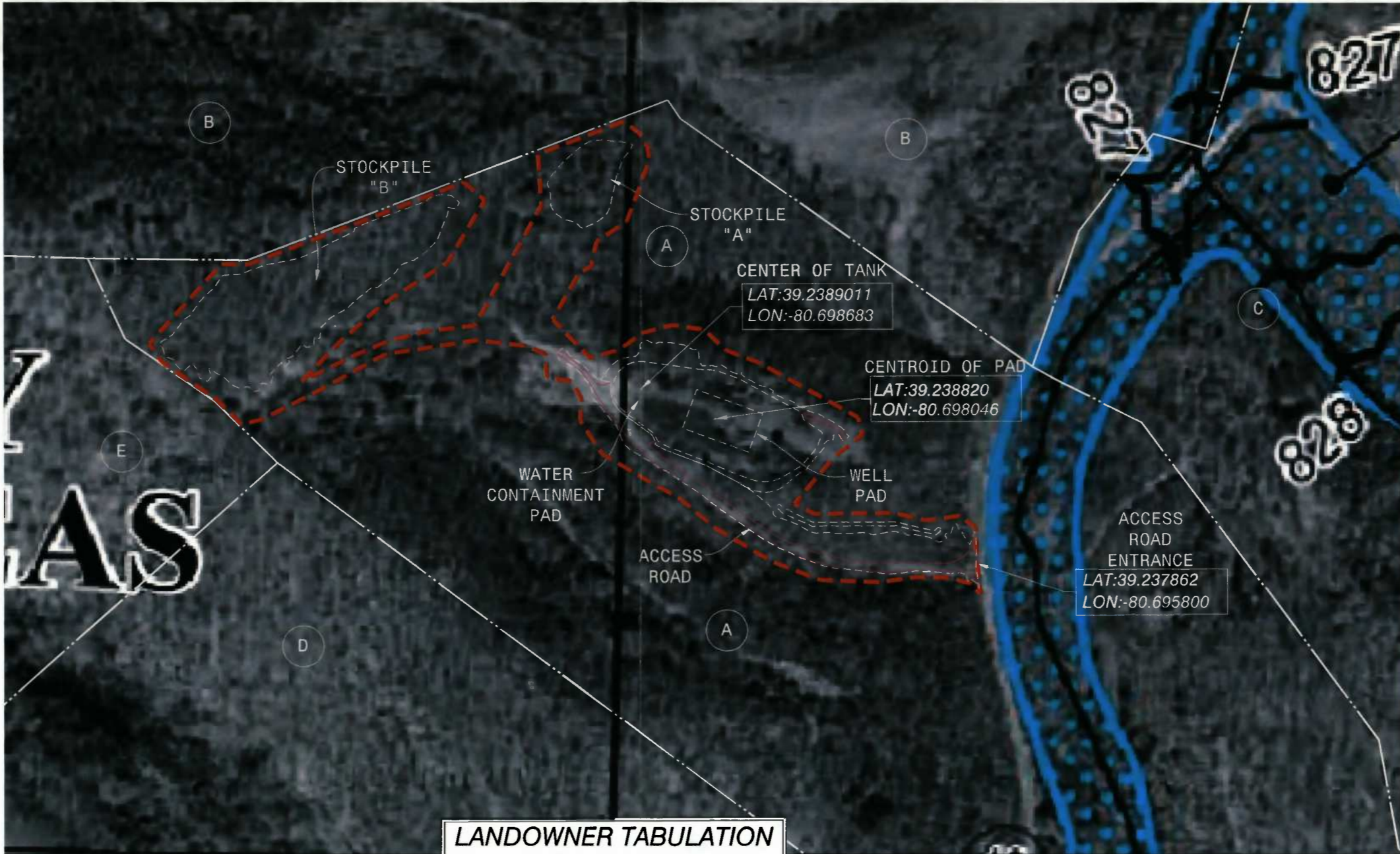
COMMUNITY	NUMBER	PANEL	SUFFIX
DODDRIDGE COUNTY	540024	0230	C

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
54017C0230C

**MAP REVISED**  
OCTOBER 4, 2011

Federal Emergency Management Agency



### LANDOWNER TABULATION

- |  |   |   |
|--|---|---|
| <p><b>A</b></p> <p>TM 8-4<br/>J.H. LOWTHER<br/>WB 05 PG 047<br/>99.1 ACRES<br/>2017 8TH AVE. N<br/>MOORHEAD, MN 56560</p>  | <p><b>C</b></p> <p>TM 8-5<br/>NORMA C. BOWYER<br/>DB 220 PG 070<br/>68.1 ACRES<br/>31 MEATHOUSE FORK RD.<br/>NEW MILTON, WV 26411</p>   | <p><b>E</b></p> <p>TM 8-3<br/>MARY H. HOLLAND (DB 101 PG 488) &amp;<br/>BASSELL MAXWELL<br/>(DB 090 PG 378)<br/>39.34 ACRES<br/>225 WATCHUNG FRK<br/>WESTFIELD, NJ 07090 &amp;<br/>P.O. BOX 659 WICHITA FALLS, TX 76307</p> |
| <p><b>B</b></p> <p>TM 4-24<br/>DAVID E. BOWYER (DB 296 PG 381) &amp;<br/>DEBORAH L. WYCKOFF<br/>(WB 43 PG 001)<br/>151.99 ACRES<br/>HC 69 BOX 28<br/>ALMA, WV 26320 &amp;<br/>RT 1 BOX 35<br/>NEW MILTON, WV 26411</p> | <p><b>D</b></p> <p>TM 8-14<br/>DAVID E. BOWYER (DB 296 PG 381) &amp;<br/>DEBORAH L. WYCKOFF (WB 043 PG 001)<br/>101.46 ACRES<br/>HC 69 BOX 28<br/>ALMA, WV 26320 &amp;<br/>RT 1 BOX 35<br/>NEW MILTON, WV 26411</p> |   |



**FLOODPLAIN NOTE**  
THE PROPOSED SITE IS LOCATED IN  
FLOODZONE "X" PER FEMA FLOOD MAP  
#54017C0230C.

**NAVITUS**  
ENERGY ENGINEERING  
Telephone: (866) 662-4185 | www.NavitusEng.com

DATE	REVISION

**Antero Resources**  
THIS DOCUMENT  
WAS PREPARED FOR:  
ANTERO RESOURCES  
CORPORATION

FIRM EXHIBIT  
**LOWTHER**  
WELL PAD & WATER CONTAINMENT PAD  
NEW MILTON DISTRICT  
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 05/28/2014  
SCALE: 1" = 150'  
SHEET 19 OF 19



**LOCATION COORDINATES**

ACCESS ROAD ENTRANCE  
 LATITUDE: 39.237862 LONGITUDE: -80.695800 (NAD 83)  
 N 4343217.01 E 526252.81 (UTM ZONE 17 METERS)

CENTROID OF WELL PAD  
 LATITUDE: 39.238820 LONGITUDE: -80.698046 (NAD 83)  
 N 4343322.68 E 526058.65 (UTM ZONE 17 METERS)

CENTER OF WATER CONTAINMENT TANK  
 LATITUDE: 39.239011 LONGITUDE: -80.698683 (NAD 83)  
 N 4343343.67 E 526003.55 (UTM ZONE 17 METERS)

**GENERAL DESCRIPTION**

THE ACCESS ROAD(S), WATER CONTAINMENT PAD, AND WELL PAD ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

**FLOODPLAIN NOTE**

THE PROPOSED SITE IS LOCATED IN FLOODZONE "X" PER FEMA FLOOD MAP #54017C0230C.

**MISS UTILITY STATEMENT**

ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN; TICKET #1310122811. IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.

**ENTRANCE PERMIT**

ANTERO RESOURCES CORPORATION WILL OBTAIN AN ENCROACHMENT PERMIT (FORM MM-109) FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

**ENVIRONMENTAL NOTES**

WETLAND DELINEATIONS WERE PERFORMED ON DECEMBER 17 & 19, 2012 & FEBRUARY 8, 2013 BY ALLSTAR ECOLOGY, LLC. TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE FEBRUARY 25, 2013 WETLAND DELINEATION & STREAM IDENTIFICATION REPORT (WDSIR) WAS PREPARED BY ALLSTAR ECOLOGY, LLC. AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE REPORT DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP.

**GEOTECHNICAL NOTE**

THE PROPOSED ACCESS ROAD CUT SLOPE (1.5:1) SHALL BE FIELD VERIFIED BY A CERTIFIED GEOTECHNICAL ENGINEER TO ENSURE THE PROPOSED SLOPES ARE ADEQUATE PRIOR TO CONSTRUCTION. ACCESS ROAD CONSTRUCTION SHALL BE MONITORED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER OR PROJECT DESIGN ENGINEER DURING CONSTRUCTION.

A SUBSURFACE INVESTIGATION OF THE PROPOSED SITE WAS PERFORMED BY PENNSYLVANIA SOIL & ROCK, INC. ON APRIL 21-25 & APRIL 28-30, 2014. THE REPORT PREPARED BY PENNSYLVANIA SOIL & ROCK, INC. DATED MAY 23, 2014, REFLECTS THE RESULTS OF THE SUBSURFACE INVESTIGATION. THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS REPORT WAS USED IN THE PREPARATION OF THESE PLANS. PLEASE REFER TO THE SUBSURFACE INVESTIGATION REPORT BY PENNSYLVANIA SOIL & ROCK, INC. FOR ADDITIONAL INFORMATION, AS NEEDED.

**PROJECT CONTACTS**

**OPERATOR:**  
 ANTERO RESOURCES CORPORATION  
 535 WHITE OAKS BLVD  
 BRIDGEPORT, WV 26330  
 PHONE: (304) 842-4100  
 FAX: (304) 842-4102

ELI WAGONER - ENVIRONMENTAL ENGINEER  
 OFFICE: (304) 842-4068 CELL: (304) 476-9770

JOHN KAWCAK - OPERATIONS SUPERINTENDENT  
 CELL: (917) 368-1553

AARON KUNZLER - CONSTRUCTION SUPERVISOR  
 CELL: (405) 227-8344

ANTHONY SMITH - FIELD ENGINEER  
 OFFICE: (304) 842-4208 CELL: (304) 673-8196

CHARLES E. COMPTON, III - SURVEYING  
 COORDINATOR  
 CELL: (304) 719-6449

JACK BELL - LAND AGENT  
 CELL: (304) 378-9682

**ENGINEER/SURVEYOR:**  
 NAVITUS ENGINEERING, INC.  
 CYRUS S. KUMP, PE - PROJECT  
 MANAGER/ENGINEER  
 OFFICE: (888) 662-4185 CELL: (540) 686-6747

**ENVIRONMENTAL:**  
 ALLSTAR ECOLOGY, LLC  
 RYAN L. WARD - ENVIRONMENTAL SCIENTIST  
 OFFICE: (866) 213-2866 CELL: (304) 692-7477

**GEOTECHNICAL:**  
 PENNSYLVANIA SOIL & ROCK, INC.  
 CHRISTOPHER W. SAMIOS - PROJECT ENGINEER  
 OFFICE: (412) 372-4000 CELL: (412) 589-0662

**RESTRICTIONS NOTES:**

- THERE ARE NO WETLANDS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD. THERE IS A PERENNIAL STREAM (TOMS FORK) ADJACENT TO THE ACCESS ROAD ENTRANCE THAT WILL REMAIN UNDISTURBED.
- THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND LOD.
- THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.
- THERE ARE NO EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.
- THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.
- THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.

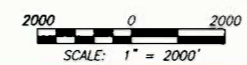
# LOWTHER WELL PAD & WATER CONTAINMENT PAD SITE DESIGN & CONSTRUCTION PLAN, EROSION & SEDIMENT CONTROL PLANS

NEW MILTON DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA  
 TOMS FORK & MEATHOUSE FORK WATERSHEDS

USGS 7.5 NEW MILTON & SMITHBURG QUAD MAPS



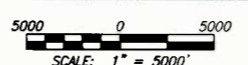
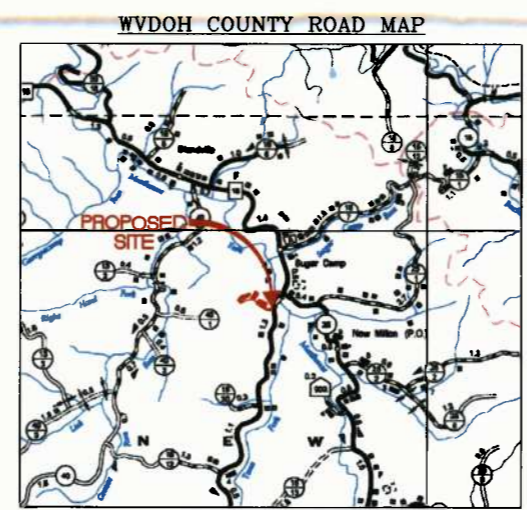
WEST VIRGINIA STATE PLANE COORDINATE SYSTEM  
 NORTH ZONE, NAD83  
 ELEVATION BASED ON NAVD88  
 ESTABLISHED BY SURVEY GRADE GPS & OPUS  
 POST-PROCESSING



LOWTHER LIMITS OF DISTURBANCE AREA (AC)	
Impacts to J.H. Lowther TM 8-4	
Access Road "A" (1,201')	3.43
Well Pad	3.55
Excess/Topsoil Material Stockpiles	7.46
<b>Total Affected Area</b>	<b>14.44</b>
Total Wooded Acres Disturbed	13.16



(NOT TO SCALE)



MISS Utility of West Virginia  
 1-800-245-4848  
 West Virginia State Law  
 (Section XIV: Chapter 24-C)  
 Requires that you call two  
 business days before you dig in  
 the state of West Virginia.  
 IT'S THE LAW!!

**DESIGN CERTIFICATION**  
 THE DRAWINGS, CONSTRUCTION NOTES, AND REFERENCE DIAGRAMS ATTACHED HERETO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS CRS 35-8.

Proposed Well Name	WV North NAD 27	WV North NAD 83	UTM (METERS) Zone 17	NAD 83 Lat & Long
Empty Well	N 271332.43	N 271368.34	N 4343324.78	LAT 39-14-19.8208
Location	E 166004.19	E 1629163.13	E 526054.29	LONG -80-41-53.1462
Empty Well	N 271328.99	N 271364.90	N 4343323.78	LAT 39-14-19.7880
Location	E 1660613.58	E 1629172.52	E 526057.17	LONG -80-41-53.0263
Gola Unit 1H	N 271325.55	N 271361.45	N 4343322.78	LAT 39-14-19.7553
Location	E 1660622.97	E 1629181.91	E 526060.05	LONG -80-41-52.9063
Stokes Unit 1H	N 271322.10	N 271358.01	N 4343321.78	LAT 39-14-19.7225
Location	E 1660632.30	E 1629191.29	E 526062.92	LONG -80-41-52.7864
Stokes Unit 2H	N 271318.06	N 271354.57	N 4343320.78	LAT 39-14-19.6897
Location	E 1660641.74	E 1629200.88	E 526065.80	LONG -80-41-52.6665
Gallagher Unit 1H	N 271315.22	N 271351.12	N 4343319.78	LAT 39-14-19.6569
Location	E 1660651.13	E 1629210.07	E 526068.68	LONG -80-41-52.5466
Gallagher Unit 2H	N 271311.77	N 271347.68	N 4343318.77	LAT 39-14-19.6241
Location	E 1660660.52	E 1629219.46	E 526071.56	LONG -80-41-52.4267
Empty Well	N 271308.33	N 271344.24	N 4343317.77	LAT 39-14-19.5913
Location	E 1660669.91	E 1629228.85	E 526074.44	LONG -80-41-52.3068
Well Pad Elevation	983.0			

**SHEET INDEX**

- COVER SHEET
- CONSTRUCTION AND E&S CONTROL NOTES
- MATERIAL QUANTITIES
- EXISTING CONDITIONS
- OVERALL PLAN SHEET INDEX & VOLUMES
- ACCESS ROAD, WATER CONTAINMENT PAD, & WELL PAD PLAN
- STOCKPILE PLAN
- ACCESS ROAD PROFILE
- ACCESS ROAD SECTIONS
- WELL PAD & WATER CONTAINMENT PAD SECTIONS
- CONSTRUCTION DETAILS
- ACCESS ROAD, WATER CONTAINMENT PAD, & WELL PAD RECLAMATION PLAN
- STOCKPILE RECLAMATION PLAN
- FIRM EXHIBIT
- GE500-GE505 - GEOTECHNICAL DETAILS

**NAVITUS**  
 ENERGY ENGINEERING  
 Telephone: (888) 662-4185 | www.NavitusEng.com

REVISION	DATE

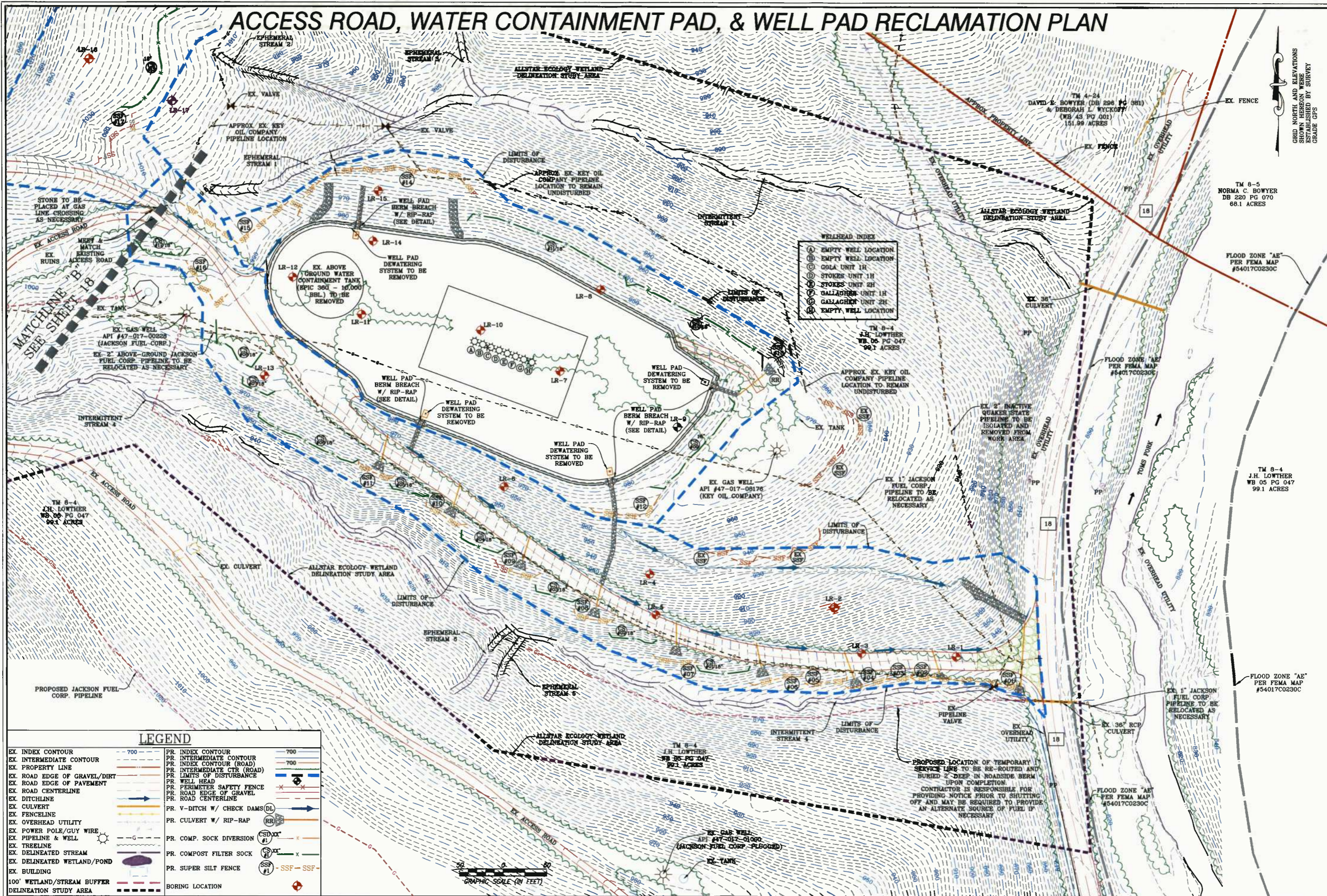
**Antero**  
 THIS DOCUMENT WAS PREPARED FOR ANTERO RESOURCES CORPORATION

**COVER SHEET**  
**LOWTHER**  
 WELL PAD & WATER CONTAINMENT PAD  
 NEW MILTON DISTRICT  
 DODDRIDGE COUNTY, WEST VIRGINIA

05/28/2014

DATE: 05/28/2014  
 SCALE: AS SHOWN  
 SHEET 1 OF 19

# ACCESS ROAD, WATER CONTAINMENT PAD, & WELL PAD RECLAMATION PLAN



**WELLHEAD INDEX**

- ① EMPTY WELL LOCATION
- ② EMPTY WELL LOCATION
- ③ COLA UNIT 1H
- ④ STOKES UNIT 1H
- ⑤ STOKES UNIT 2H
- ⑥ GALLAGHER UNIT 1H
- ⑦ GALLAGHER UNIT 2H
- ⑧ EMPTY WELL LOCATION

**LEGEND**

EX. INDEX CONTOUR	--- 700 ---	PR. INDEX CONTOUR	--- 700 ---
EX. INTERMEDIATE CONTOUR	--- 700 ---	PR. INTERMEDIATE CONTOUR	--- 700 ---
EX. PROPERTY LINE	---	PR. PROPERTY LINE	---
EX. ROAD EDGE OF GRAVEL/DIRT	---	PR. ROAD EDGE OF GRAVEL/DIRT	---
EX. ROAD EDGE OF PAVEMENT	---	PR. ROAD EDGE OF PAVEMENT	---
EX. ROAD CENTERLINE	---	PR. ROAD CENTERLINE	---
EX. DITCHLINE	---	PR. DITCHLINE	---
EX. CULVERT	---	PR. CULVERT	---
EX. FENCELINE	---	PR. FENCELINE	---
EX. OVERHEAD UTILITY	---	PR. OVERHEAD UTILITY	---
EX. POWER POLE/GUY WIRE	---	PR. POWER POLE/GUY WIRE	---
EX. PIPELINE & WELL	---	PR. PIPELINE & WELL	---
EX. TREELINE	---	PR. TREELINE	---
EX. DELINEATED STREAM	---	PR. DELINEATED STREAM	---
EX. DELINEATED WETLAND/POND	---	PR. DELINEATED WETLAND/POND	---
EX. BUILDING	---	PR. BUILDING	---
100' WETLAND/STREAM BUFFER DELINEATION STUDY AREA	---	PR. 100' WETLAND/STREAM BUFFER DELINEATION STUDY AREA	---
		PR. V-DITCH W/ CHECK DAMS (DL)	---
		PR. CULVERT W/ RIP-RAP	---
		PR. COMP. SOCK DIVERSION	---
		PR. COMPOST FILTER SOCK	---
		PR. SUPER SILT FENCE	---
		BORING LOCATION	---



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REVISION	DATE

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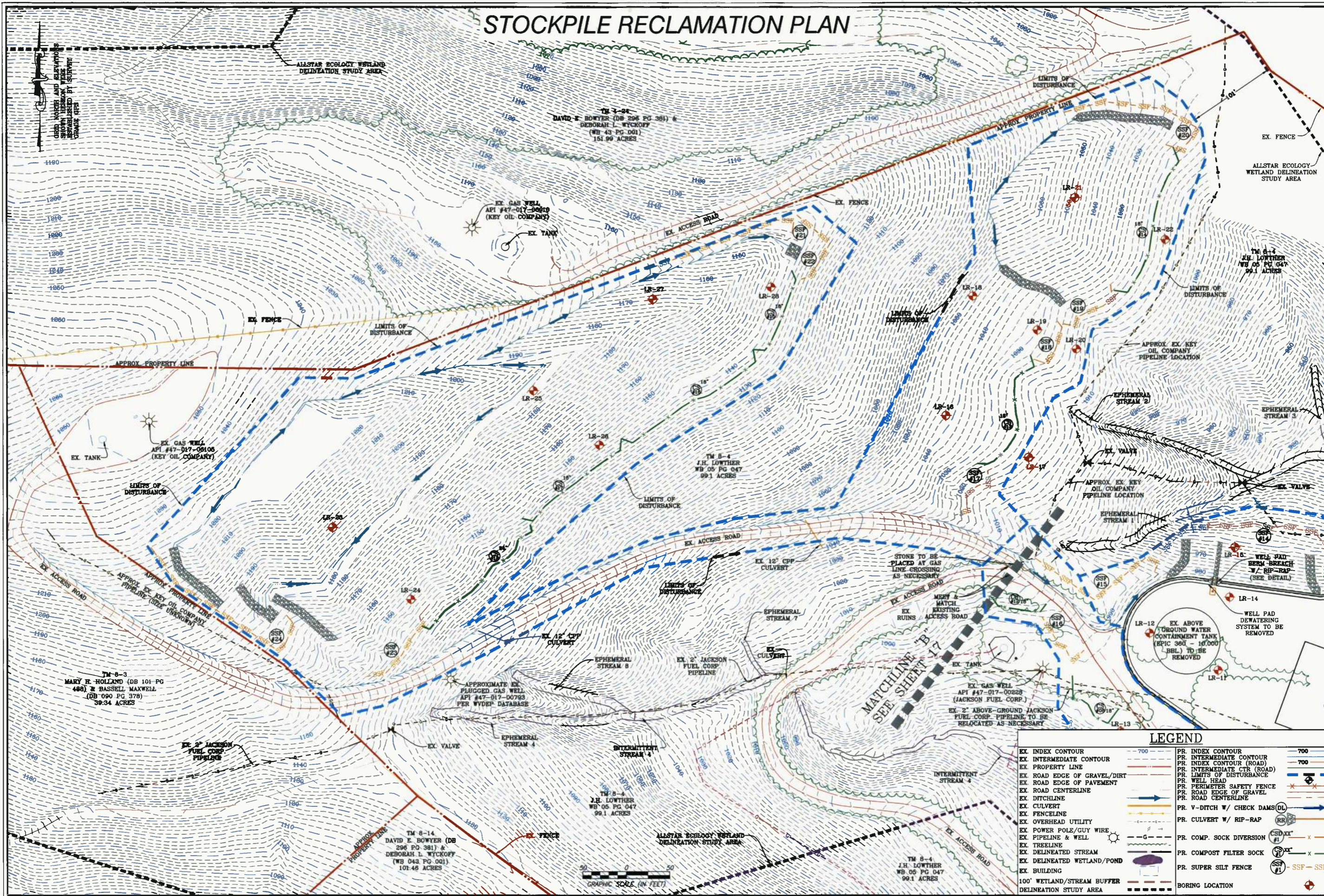
**LOWTHER**

WELL PAD & WATER CONTAINMENT PAD  
NEW MILTON DISTRICT  
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 05/28/2014  
SCALE: 1" = 50'  
SHEET 17 OF 19

# STOCKPILE RECLAMATION PLAN



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DATE	REVISION

**Antero**  
RESOURCES

THIS DOCUMENT WAS PREPARED FOR:  
ANTERO RESOURCES CORPORATION

STOCKPILE RECLAMATION PLAN

**LOWTHER**  
WELL PAD & WATER CONTAINMENT PAD  
NEW MILTON DISTRICT  
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 05/28/2014  
SCALE: 1" = 50'  
SHEET 18 OF 19

### LEGEND

EX INDEX CONTOUR	-700	PR INDEX CONTOUR	700
EX INTERMEDIATE CONTOUR	-700	PR INTERMEDIATE CONTOUR	700
EX PROPERTY LINE	-	PR INDEX CONTOUR (ROAD)	700
EX ROAD EDGE OF GRAVEL/DIRT	-	PR INTERMEDIATE CTR (ROAD)	-
EX ROAD EDGE OF PAVEMENT	-	PR LIMITS OF DISTURBANCE	-
EX ROAD CENTERLINE	-	PR WELL HEAD	-
EX DITCHLINE	-	PR PERIMETER SAFETY FENCE	-
EX CULVERT	-	PR ROAD EDGE OF GRAVEL	-
EX FENCELINE	-	PR ROAD CENTERLINE	-
EX OVERHEAD UTILITY	-	PR V-DITCH W/ CHECK DAMS (DL)	-
EX POWER POLE/GUY WIRE	-	PR CULVERT W/ RIP-RAP	-
EX PIPELINE & WELL	-	PR COMP. SOCK DIVERSION	-
EX TRELISE	-	PR COMPOST FILTER SOCK	-
EX DELINEATED STREAM	-	PR SUPER SILT FENCE	-
EX DELINEATED WETLAND/POND	-	PR BORING LOCATION	-
EX BUILDING	-		
100' WETLAND/STREAM BUFFER	-		
DELINEATION STUDY AREA	-		