

# 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: #14-298 ~ Antero Resources ~ Long Run Well Pad

**Date Approved: 10/23/2014**

**Expires: N/A**

**Issued to: Antero Resources**

**POC: Rachel Grzybek  
304-842-4008**

**Company Address: 535 White Oaks Blvd  
Bridgeport, WV 26330**

**Project Address: Central District  
Lat/Long: 39.300491N/-80.7863972W**

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

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

**Date: 10/23/2014**

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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](mailto: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 14<sup>th</sup> day of October, 2014

**Antero Resources**

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

**Central District**

**39.300491N/-80.7863972W**

**Permit #14-298 Long Run 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 10, 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

FILED

2014 OCT 14 PM 2: 11

CLERK OF COURTS  
COUNTY CLERK  
DODDRIDGE COUNTY, WV



October 13, 2014

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

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

Mr. Wriston:

Antero Resources Appalachian Corporation (Antero) would like to submit a Doddridge County Floodplain permit application for our Long Run Well Pad. Our project is located in Doddridge County, Central District and per FIRM map #54017C0115C this location is **not** within the floodplain.

Attached you will find the following:

- Doddridge County Floodplain Permit Application
- Long Run 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 October 10, 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

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

**ENGINEER'S NAME:** Navitus  
**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): Randy Koberdanz

SIGNATURE:  DATE: October 10, 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:** \_\_\_\_\_

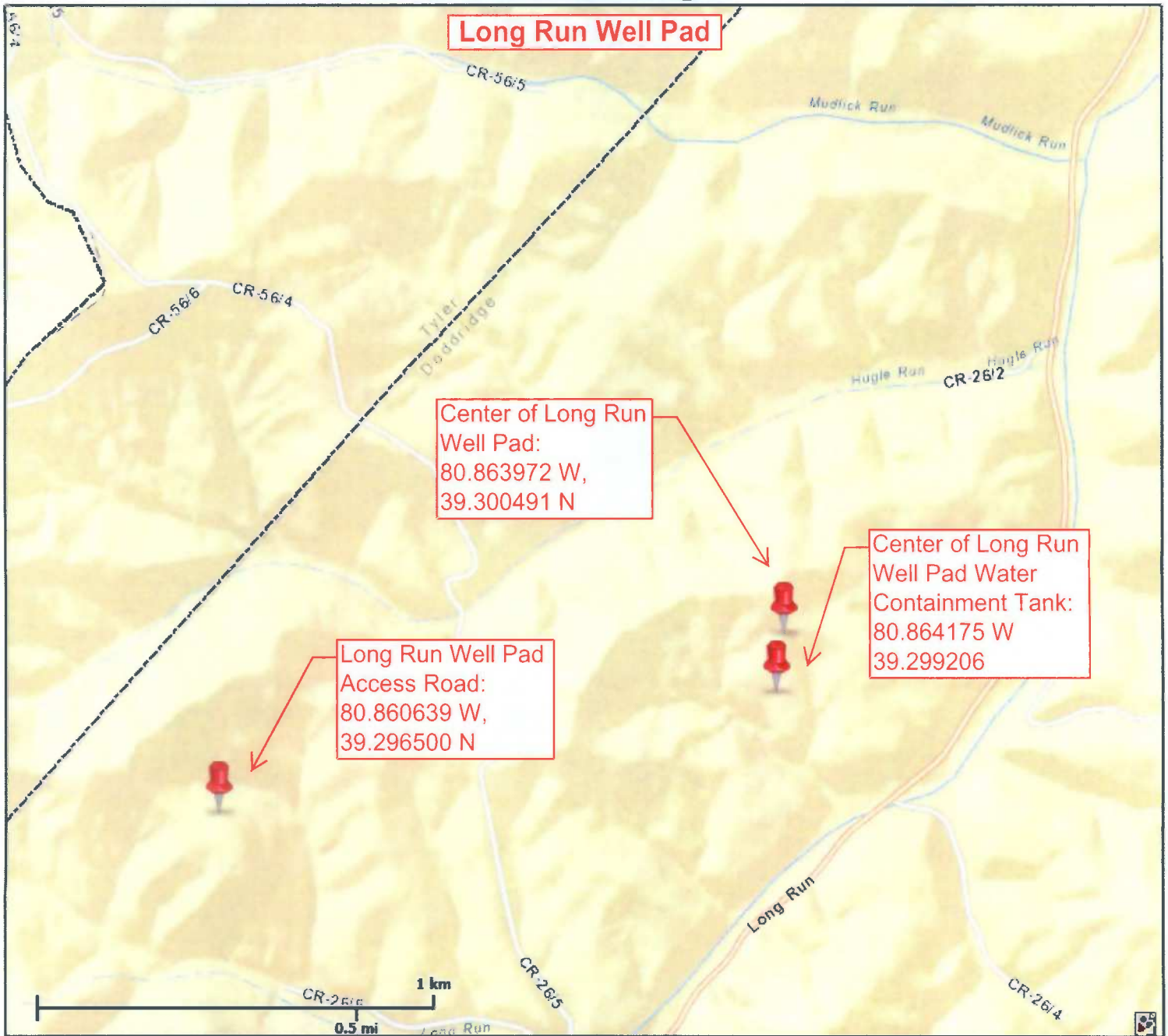
**OWNER'S ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**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



**Long Run Well Pad**


Center of Long Run Well Pad:  
80.863972 W,  
39.300491 N


Center of Long Run Well Pad Water Containment Tank:  
80.864175 W  
39.299206

Long Run Well Pad Access Road:  
80.860639 W,  
39.296500 N

This map is not the official regulatory FIRM or DFIRM. Its purpose is to assist with determining potential flood risk for the selected location.

Map Created on 9/19/2014

 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*  
*# 14-298*

was published in said paper for *2*

successive weeks beginning with the issue  
of *October 21<sup>st</sup>* 2014 and

ending with the issue of  
*October 28<sup>th</sup>* 2014 and

that said notice contains *189*

WORD SPACE at *115* cents a word

amounts to the sum of \$ *21.24*

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

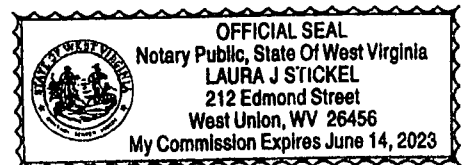
BEFORE ME THIS THE *28<sup>th</sup>* DAY  
OF *October* 2014

NOTARY PUBLIC

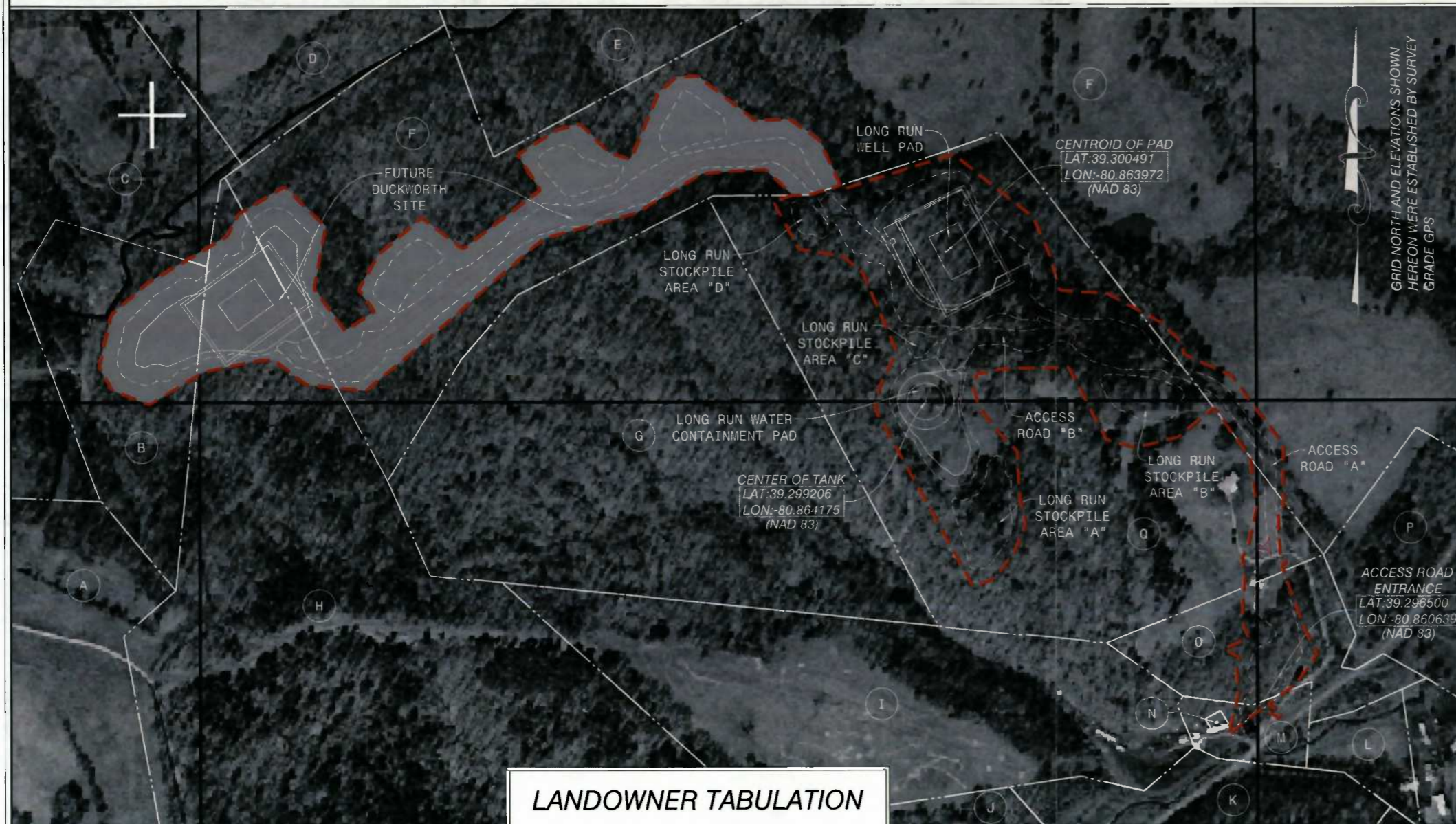
*Laura J. Stichel*

**Legal Advertisement**

LEGAL ADVERTISEMENT  
Doddridge County  
Floodplain Permit Application  
Please take notice that on the 14<sup>th</sup> day of October, 2014  
Aatero Resources filed an application for a Floodplain  
Permit to develop land located at or about Central  
District 39.300491N-80.7863972W Permit #14-298 Long  
Run 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 10, 2014.  
Delivered to the  
Clerk of the County Court  
18 E. Court Street, West Union, WV 26456  
Beth A. Rogers, Doddridge County Clerk  
Edwin L. "Bo" Wriston, Doddridge County Flood Plain  
Manager  
10-21-2xb



# FIRM EXHIBIT



## LANDOWNER TABULATION

<p><b>A</b> TM 6-10 ARTHUR G. &amp; MELISSA A. PAYNE DB 237 PG 502 70.5 ACRES PO BOX 335 PENNSBORO, WV 26415</p>	<p><b>D</b> TM 6-1 WILLIAM FINLEY COTTRILL JR, ET AL DB 293 PG 479 69.25 ACRES 902 TYGART STREET PARKERSBURG, WV 26101</p>	<p><b>G</b> TM 6-17 CHARLES M. &amp; KIMELA M. KELLEY DB 243 PG 631 30 ACRES ROUTE 1 BOX 771 GREENWOOD, WV 26415</p>	<p><b>J</b> TM 6-26 MICHELLE L. LEACH, ET AL WB 040 PG 290 49.56 ACRES ROUTE 1 BOX 778 GREENWOOD, WV 26415</p>	<p><b>L</b> TM 6-29 THELMA B. JAMES TRUSTEE OF THE LAWRENCE L. JAMES LIVING TRUST WB 033 PG 226 DB 232 PG 690 2 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415</p>	<p><b>O</b> TM 6-14 JOHN FRAME (DB 271 PG 666) &amp; CARROL R., GARY D. &amp; MICHAEL D. HARRIS, SR (DB 217 PG 592) 5.416 ACRES 320 PENNSYLVANIA AVENUE BRIDGEPORT, WV 26300 PO BOX 53 SMITHBURG WV, 26436</p>	<p><b>Q</b> TM 6-5 RICHARD F. McCULLOUGH DB 272 PG 309 39 ACRES ROUTE 1 BOX 770 GREENWOOD, WV 26415</p>
<p><b>B</b> TM 6-3 EDWARD V. RICE DB 161 PG 495 9.00 ACRES 2957 CLARKS BLUFF ROAD KINGSLAND, GA 31548</p>	<p><b>E</b> TM 3-15 THELMA JAMES DB 260 PG 025 212.1 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415</p>	<p><b>H</b> TM 6-11 GEO. DUCKWORTH HEIRS DB 3 PG 544 58 ACRES 2819 EDONIA DRIVE KNOXVILLE, TN 37918</p>	<p><b>K</b> TM 6-27 THELMA B. JAMES TRUSTEE OF THE LAWRENCE L. JAMES LIVING TRUST (WB 033 PG 226) THELMA B. JAMES (DB 269 PG 176) &amp; JUDITH A. NORBERG (WB 020 PG 311) 33 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415 24 NORTH AVENUE CAMERON, WV 26033</p>	<p><b>M</b> TM 6-47 CHARLES M. &amp; KIMELA M. KELLEY DB 243 PG 631 1.416 ACRES ROUTE 1 BOX 771 GREENWOOD, WV 26415</p>	<p><b>P</b> TM 6-15 OPAL R. CARVER (LIFE) &amp; CHARLOTTE D. JAMES (DB 213 PG 378) &amp; THELMA JAMES DB 260 PG 025) 60 PG 025 23.5 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415 ROUTE 1 BOX 1029 GREENWOOD, WV 26415</p>	
<p><b>C</b> TM 6-2 EDWARD V. RICE DB 161 PG 857 69.13 ACRES 2957 CLARKS BLUFF ROAD KINGSLAND, GA 31548</p>	<p><b>F</b> TM 6-6 THELMA B. JAMES, TRUSTEE OF THE LAWRENCE L. JAMES LIVING TRUST WB 033 PG 226 107 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415</p>	<p><b>I</b> TM 6-12 KIMELA M. &amp; CHARLES M. KELLEY DB 235 PG 672 21 ACRES ROUTE 1 BOX 771 GREENWOOD, WV 26415</p>	<p><b>N</b> TM 6-13 YOUTH CAMP CHURCH 0.16 ACRES (EXEMPT)</p>			

**NFIP** PANEL 0115C

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

PANEL 115 OF 325  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:  
COMMUNITY NUMBER PANEL SUFFIX  
DODDRIDGE COUNTY 54004 0115 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**  
54017C0115C  
**MAP REVISED**  
OCTOBER 4, 2011

Federal Emergency Management Agency

**FLOODPLAIN NOTE**  
THE PROPOSED SITE IS LOCATED IN FLOOD ZONE "X" PER FEMA FLOOD MAP #54017C0115C

**NAVITUS**  
ENERGY ENGINEERING

Telephone: (866) 662-4185 | www.NavitusEng.com

REVISION	DATE

**Antero Resources**

THIS DOCUMENT WAS PREPARED FOR:  
ANTERO RESOURCES CORPORATION

FIRM EXHIBIT  
**LONG RUN**  
WELL PAD & WATER CONTAINMENT PAD  
CENTRAL DISTRICT  
DODDRIDGE COUNTY, WEST VIRGINIA

DATE: 07/16/2014  
SCALE: 1" = 200'  
SHEET 23 OF 23

**LOCATION COORDINATES**

ACCESS ROAD ENTRANCE  
LATITUDE: 39.298500 LONGITUDE: -80.860639 (NAD 83)  
N 4349689.59 E 512016.96 (UTM ZONE 17 METERS)  
CENTER OF WATER CONTAINMENT TANK  
LATITUDE: 39.299206 LONGITUDE: -80.864175 (NAD 83)  
N 4350132.07 E 511728.90 (UTM ZONE 17 METERS)  
CENTROID OF WELL PAD  
LATITUDE: 39.300491 LONGITUDE: -80.863972 (NAD 83)  
N 4349899.49 E 511711.65 (UTM ZONE 17 METERS)

**GENERAL DESCRIPTION**

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

**FLOODPLAIN NOTE**

THE PROPOSED SITE IS LOCATED IN FLOOD ZONE "X" PER FEMA MAP NUMBER #54017C0115C.

**MISS UTILITY STATEMENT**

ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN. TICKET #1310223222. 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 JANUARY, MARCH AND APRIL, 2013 AND JULY 2014 BY ALLSTAR ECOLOGY 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 JULY 15, 2014 STREAM AND WETLAND DELINEATION DESIGNER'S MAP WAS PREPARED BY ALLSTAR ECOLOGY AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE MAP 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. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION SHOWN ON THIS EXHIBIT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

**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 KLEINFELDER ON JUNE 18-21, 2013, MAY 1, 2, 5-8, 2014, & JUNE 24, 26, 2014. THE REPORT PREPARED BY KLEINFELDER DATED JULY 03, 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 KLEINFELDER FOR ADDITIONAL INFORMATION, AS NEEDED.

**PROJECT CONTACTS**

**OPERATOR:**  
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ANTHONY SMITH - FIELD ENGINEER  
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MARK JOHNSON - SURVEYING COORDINATOR  
OFFICE: (304) 842-4182 CELL: (304) 719-8449

DAVID PATSY - LAND AGENT  
CELL: (304) 476-8090

**ENGINEER/SURVEYOR:**  
NAVITUS ENGINEERING, INC.  
CYRUS S. KUMP, PE - PROJECT  
MANAGER/ENGINEER  
OFFICE: (888) 862-4185 CELL: (540) 886-8747

**ENVIRONMENTAL:**  
ALLSTAR ECOLOGY, LLC  
RYAN L. WARD - ENVIRONMENTAL SCIENTIST  
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**GEOTECHNICAL:**  
KLEINFELDER  
JOSHUA D. FREGOSI-ENGINEER  
OFFICE: (724) 772-7072 CELL: (704) 400-1103

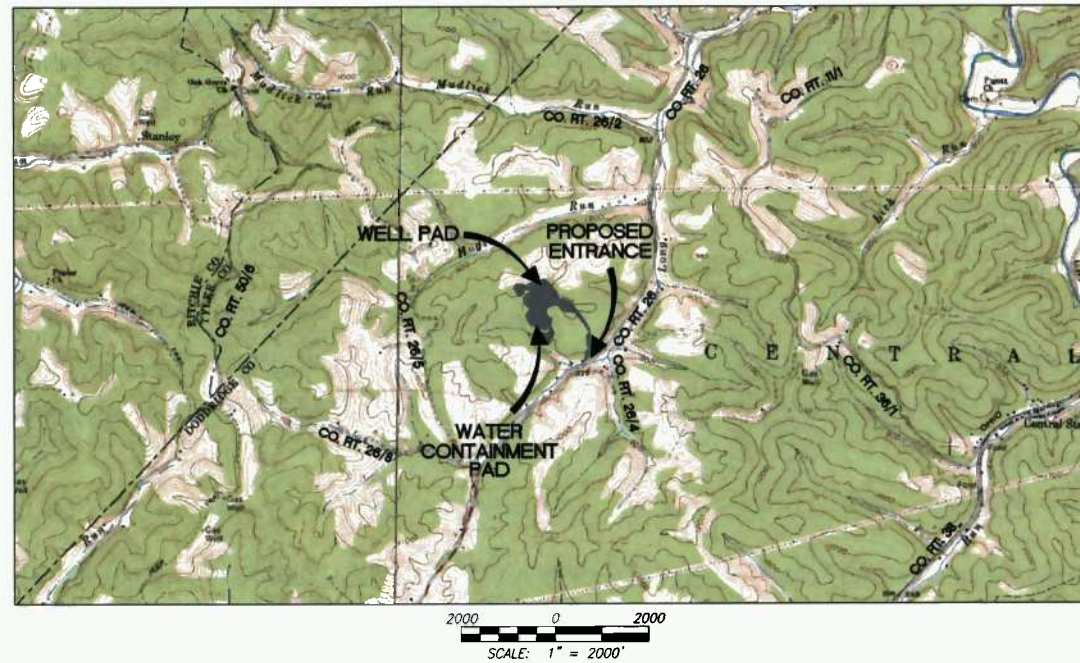
**RESTRICTIONS NOTES:**

- THERE ARE NO LAKES OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD. THERE IS A PERENNIAL STREAM ADJACENT TO THE ACCESS ROAD "A" ENTRANCE AND A WETLAND ADJACENT TO ACCESS ROAD "B" THAT WILL REMAIN UNDISTURBED. NO PERMIT IS REQUIRED.
- 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 APPARENT 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.

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

CENTRAL DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA  
ARNOLD CREEK WATERSHED

USGS 7.5 PENNSBORO & WEST UNION QUAD MAPS

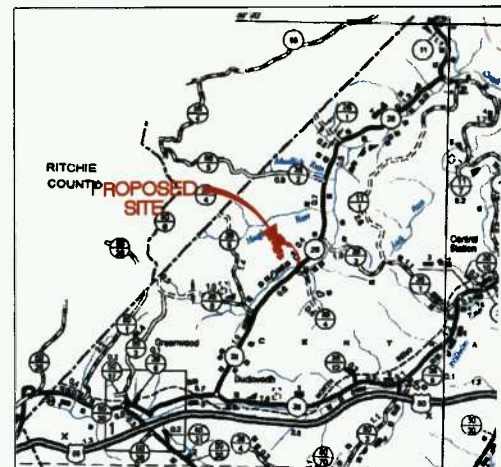


WEST VIRGINIA STATE PLANE COORDINATE SYSTEM  
NORTH ZONE MAPS  
ELEVATION BASED ON NAVD83  
ESTABLISHED BY SURVEY GRADE GPS & OPUS  
POST-PROCESSING

WEST VIRGINIA COUNTY MAP



WVDOH COUNTY ROAD MAP



**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 DIAGRAM ATTACHED HERETO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF IL AND GAS CRS 35-8.

SHEET INDEX

- 1 - COVER SHEET
- 2 - CONSTRUCTION AND E&S CONTROL NOTES
- 3 - MATERIAL QUANTITIES
- 4 - STORM DRAINAGE COMPUTATIONS
- 5 - EXISTING CONDITIONS
- 6 - OVERALL PLAN SHEET INDEX & VOLUMES
- 7 - ACCESS ROAD PLAN
- 8 - ACCESS ROAD, WELL PAD, & WATER CONTAINMENT PAD PLAN
- 9 - WELL PAD GRADING PLAN
- 10 - WATER CONTAINMENT PAD GRADING PLAN
- 11 - ACCESS ROAD PROFILES
- 12 - ACCESS ROAD SECTIONS
- 13 - ACCESS ROAD PROFILES & ROAD SECTIONS
- 14 - WELL PAD & WATER CONTAINMENT PAD SECTIONS
- 15 - STREAM CROSSING "A" & "B" DETAILS
- 16-20 - CONSTRUCTION DETAILS
- 21 - ACCESS ROAD RECLAMATION PLAN
- 22 - ACCESS ROAD, WELL PAD, & WATER CONTAINMENT PAD RECLAMATION PLAN
- 23 - FIRM EXHIBIT

GE501-GE521 - GEOTECHNICAL DETAILS

LONG RUN LIMITS OF DISTURBANCE AREA (AC)	
Total Site	
Access Road "A" (2621')	7.75
Access Road "B" (402')	1.31
Well Pad	4.08
Water Containment Pad	2.63
Excess/Topsoil Material Stockpiles	4.12
Total Affected Area	19.89
Total Wooded Acres Disturbed	13.05
Impacts to Richard F. McCullough TM 6-5	
Access Road "A" (1653')	4.81
Access Road "B" (402')	1.31
Well Pad	4.08
Water Containment Pad	2.63
Excess/Topsoil Material Stockpiles	4.12
Total Affected Area	16.95
Total Wooded Acres Disturbed	11.80
Impacts to Charles M. & Kimela M. Kelley TM 6-47	
Access Road "A" (54')	0.15
Total Affected Area	0.15
Total Wooded Acres Disturbed	0.01
Impacts to John Frame & Carroll R., Gary D. &	
Access Road "A" (474')	1.63
Total Affected Area	1.63
Total Wooded Acres Disturbed	0.99
Impacts to Thelma B. James, Trustee of The Lawrence L. James	
Access Road "A" (440')	1.16
Total Affected Area	1.16
Total Wooded Acres Disturbed	0.25

Proposed Well Name	WV North NAD 27	WV North NAD 83	UTM (METERS) Zone 17	NAD 83 Lat & Long
Janice Unit 1H	N 294479.99 E 1813983.28	N 294814.59 E 1582542.15	N 4350136.36 E 511733.60	LAT 38-18-02.0044 LONG -80-51-50.1035
Janice Unit 2H	N 294470.87 E 1813987.80	N 294505.68 E 1582546.88	N 4350136.60 E 511735.02	LAT 38-18-01.9170 LONG -80-51-50.0442
Mossor Unit 1H	N 294462.05 E 1813992.33	N 294496.76 E 1582551.20	N 4350133.99 E 511736.45	LAT 38-18-01.8295 LONG -80-51-49.9849
Mossor Unit 2H	N 294453.13 E 1813998.85	N 294487.84 E 1582555.73	N 4350131.30 E 511737.87	LAT 38-18-01.7421 LONG -80-51-49.9257
Future Well	N 294444.22 E 1814001.38	N 294478.92 E 1582560.25	N 4350128.61 E 511739.29	LAT 38-18-01.6546 LONG -80-51-49.8664
Future Well	N 294435.30 E 1814005.90	N 294470.01 E 1582564.78	N 4350125.91 E 511740.72	LAT 38-18-01.5672 LONG -80-51-49.8071
Well Pad Elevation			1,025.0	

Stream and Impact Cause	LONG RUN EPHEMERAL STREAM IMPACT (LINEAR FEET)			Total Impact (LF)
	Permanent Impacts (LF)	Inlets/Outlets Structures (LF)	Temp. Impacts Distance to L.O.D. (LF)	
Stream 18 (Access Road "A")	76	9	24	109

Stream and Impact Cause	LONG RUN INTERMITTENT STREAM IMPACT (LINEAR FEET)			Total Impact (LF)
	Permanent Impacts (LF)	Inlets/Outlets Structures (LF)	Temp. Impacts Distance to L.O.D. (LF)	
Stream 19 (Access Road "A")	82	0	36	118
Stream 18 (Access Road "A")	0	12	7	19

Wetland and Impact Cause	LONG RUN WETLAND IMPACT (SQ. FEET)		Total Impact (AC)
	Fill (SF)	Total Impact (SF)	
Wetland 3 (Access Road "A")	438	438	0.01

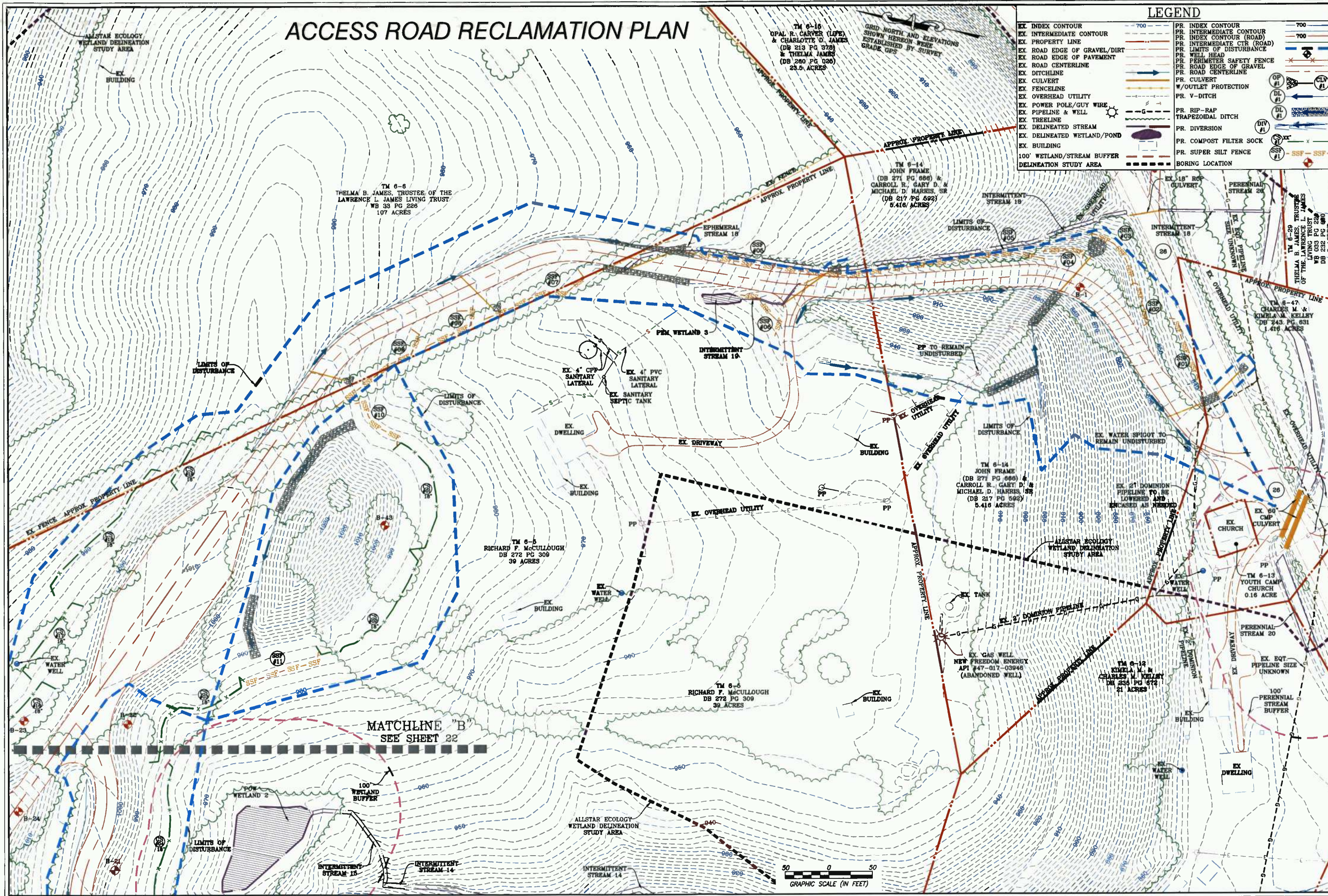
REVISION	DATE

COVER SHEET  
**LONG RUN**  
WELL PAD & WATER CONTAINMENT PAD  
CENTRAL DISTRICT  
DODDRIDGE COUNTY, WEST VIRGINIA

DATE: 07/16/2014  
SCALE: AS SHOWN  
SHEET 1 OF 23



# ACCESS ROAD RECLAMATION PLAN



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

**NAVITUS**  
ENERGY ENGINEERING

Telephone: (888) 662-4185 | www.NavitusEng.com

REVISION	DATE

**Antero**  
Resources

THIS DOCUMENT WAS PREPARED FOR ANTERO RESOURCES CORPORATION

ACCESS ROAD RECLAMATION PLAN  
**LONG RUN**  
WELL PAD & WATER CONTAINMENT PAD  
CENTRAL DISTRICT  
DODDRIDGE COUNTY, WEST VIRGINIA

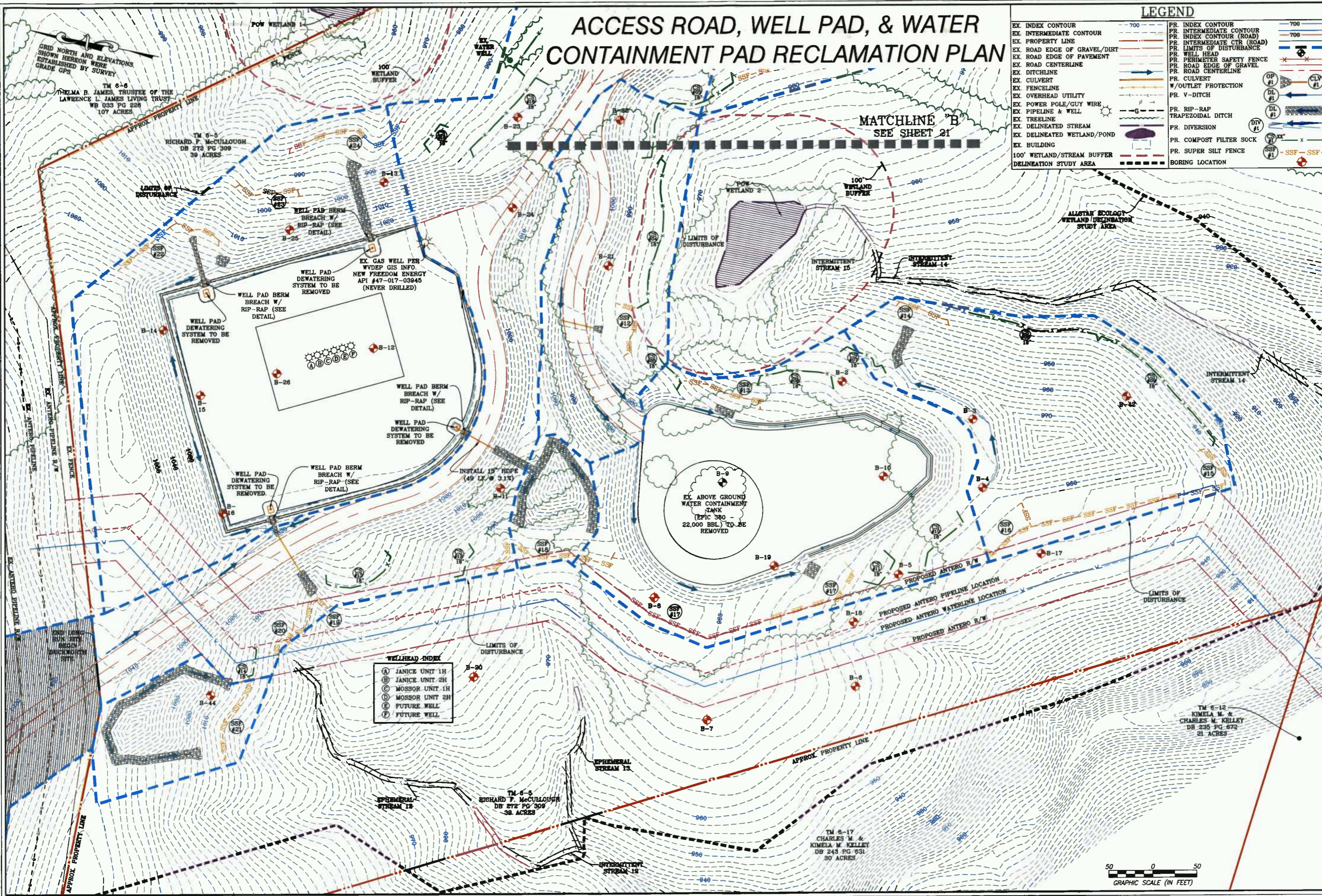


DATE: 07/16/2014  
SCALE: 1" = 50'  
SHEET 21 OF 23

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

## LEGEND

- |                              |                             |
|------------------------------|-----------------------------|
| EX. INDEX CONTOUR            | PR. INDEX CONTOUR           |
| EX. INTERMEDIATE CONTOUR     | PR. INTERMEDIATE CONTOUR    |
| EX. PROPERTY LINE            | PR. INDEX CONTOUR (ROAD)    |
| 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. CULVERT                 |
| EX. POWER POLE/GUY WIRE      | PR. W/OUTLET PROTECTION     |
| EX. PIPELINE & WELL          | PR. V-DITCH                 |
| EX. TREELINE                 | PR. RIP-RAP                 |
| EX. DELINEATED STREAM        | PR. TRAPEZOIDAL DITCH       |
| EX. DELINEATED WETLAND/POND  | PR. DIVERSION               |
| EX. BUILDING                 | PR. COMPOST FILTER SOCK     |
| 100' WETLAND/STREAM BUFFER   | PR. SUPER SILT FENCE        |
| DELINEATION STUDY AREA       | BORING LOCATION             |



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THIS DOCUMENT WAS PREPARED FOR:  
ANTERO RESOURCES CORPORATION

ACCESS ROAD, WELL PAD, & WATER CONTAINMENT PAD RECLAMATION PLAN  
**LONG RUN**  
**WELL PAD & WATER CONTAINMENT PAD**  
CENTRAL DISTRICT  
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 07/16/2014  
SCALE: 1" = 50'  
SHEET 22 OF 23

