

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: #14-279 ~ Antero Resources ~
Lick Run Well Pad**

Date Approved: 09/16/2014

Expires: N/A

Issued to: Antero Resources

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

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

**Project Address: West Union District
Lat/Long: 39.233027N/80.730500W**

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

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

Date: 09/16/2014

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

Legal Advertisement:
Doddridge County
Floodplain Permit Application

Please take notice that on the 11th day of September, 2014

Antero Resources

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

West Union District

39.233027N/80.730500W

Permit #14-279 Lick 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 **October 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

14-279

FILED

2014 SEP 11 PM 12: 58

BETH A. JONES
COUNTY CLERK
DODDRIDGE COUNTY, WV



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

September 4, 2014

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 Lick Run Well Pad. Our project is located in Doddridge County, West Union District and per FIRM map #54017C0115C this location is **not** within the floodplain.

Attached you will find the following:

- Doddridge County Floodplain Permit Application
- Lick 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

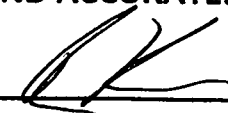
Enclosures

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 September 4, 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 Engineering Inc.
ADDRESS: 151 Windy Hill Lane, Winchester, VA 22602
TELEPHONE NUMBER: (888)-62-4185

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 Kloberdanz

SIGNATURE:  DATE: September 4, 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:

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: _____

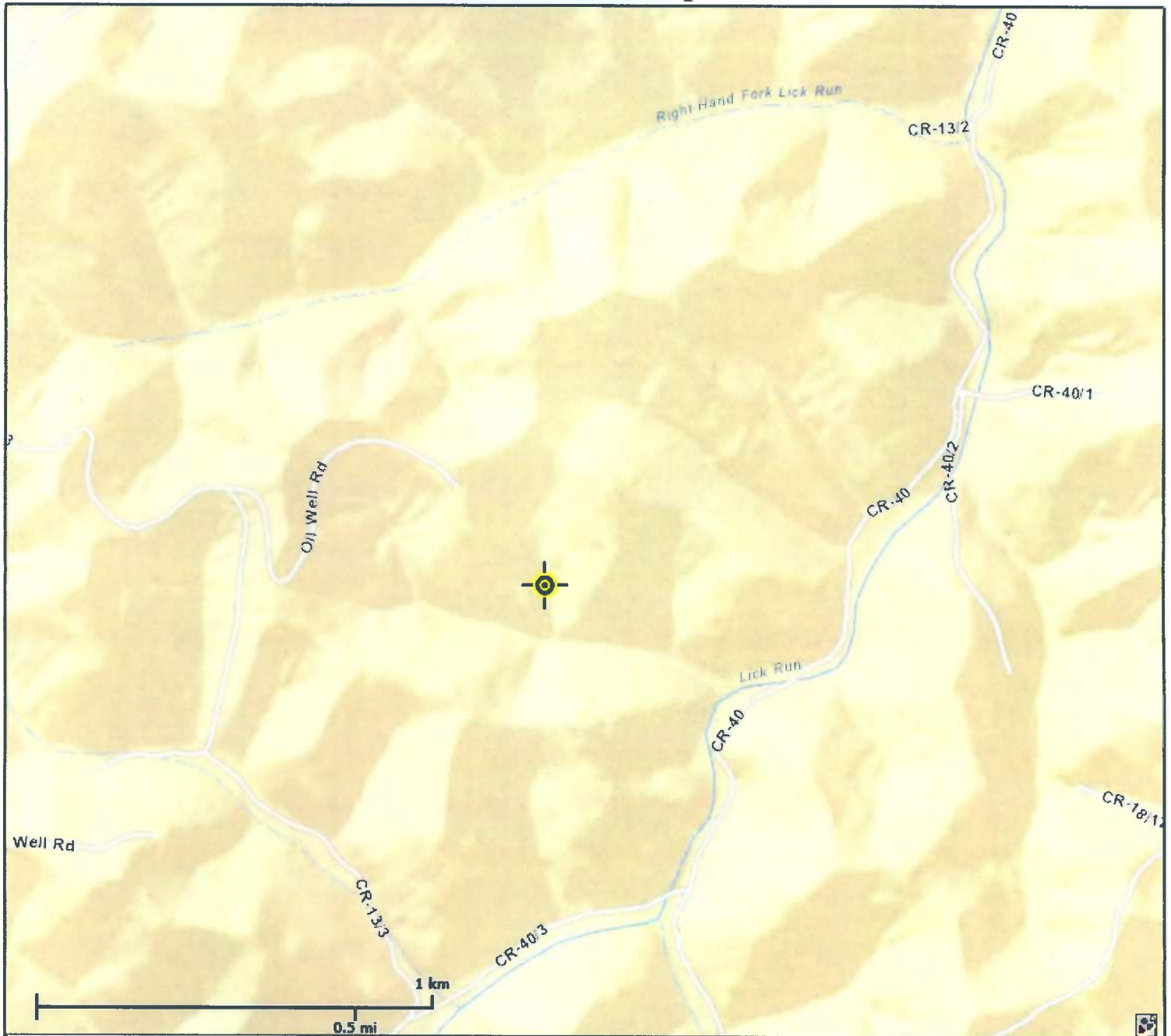
OWNER'S ADDRESS: _____

**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



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 8/21/2014



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.

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

Flood Hazard Area:

Elevation: About 944 feet

Location (long. lat): 80.730500, W. 39.23027 N

Location (UTM 17N): (523260, 4342671)

FEMA Issued Flood Map: 54017C0230C

Contacts: Doddridge County

CRS Information: N/A

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*
..... *# 14-279*

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

successive weeks beginning with the issue
of *September 16th* 2014 and
ending with the issue of

..... *September 23rd* 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

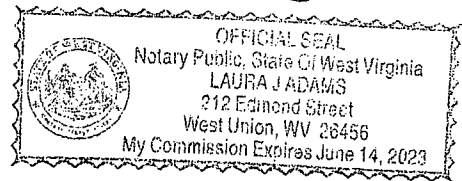
\$ *38.05* TOTAL

EDITOR
..... *Virginia Nicholson*

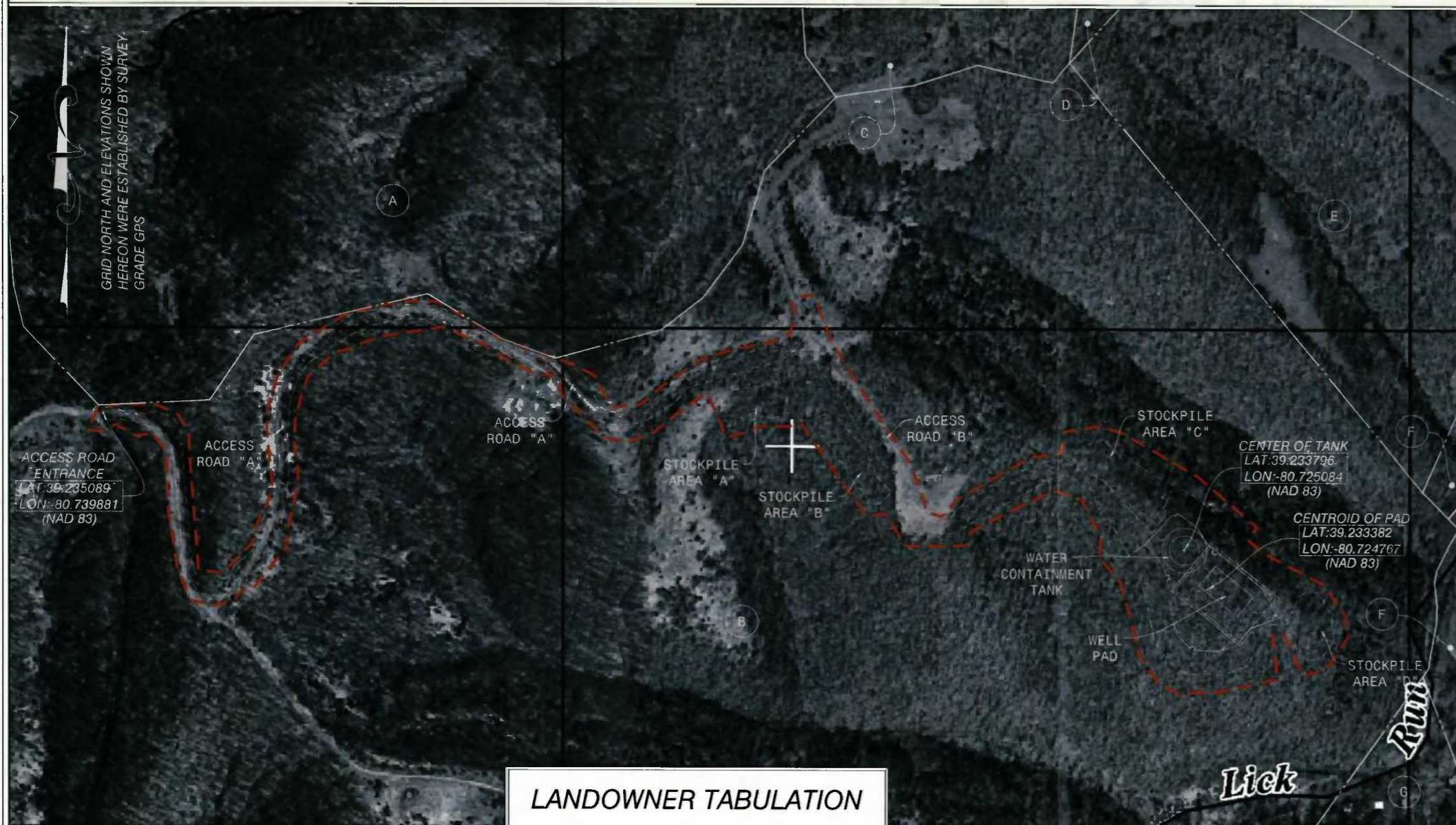
SWORN TO AND SUBSCRIBED
BEFORE ME THIS THE *25th* DAY
OF *September* 2014

NOTARY PUBLIC
..... *Laura J Adams*

LEGAL ADVERTISEMENT.
Doddridge County
Floodplain Permit Application
Please take notice that on the 11th day of September,
2014, Antero Resources filed an application for a
Floodplain Permit to develop land located at or about:
West Union District 39-233027N/80.730500W Permit #14-
279 Lick 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 October
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
9-16-2xb



FIRM EXHIBIT



LANDOWNER TABULATION

- | | | |
|---|--|--|
| <p>A</p> <p>TM 3-1.1
 GEORGE W. & BARBARA B. ADRIAN,
 NELSON W. & DONNA J. ELLMORE,
 LARRY A. & CYNTHIA E. BASSETT,
 PAUL S. & RHEMA M. CROWLEY &
 RONNIE YOPP
 DB 272 PG 655
 290.67 ACRES
 196 TRAILS END ROAD
 NEW MILTON, WV 26411</p> | <p>C</p> <p>TM 3-12.1
 ROBERT GAYLE MAXWELL
 DB 214 PG 233
 82.3 ACRES
 1 FIRST AMERICAN WAY
 WEST LAKE, TX 76262</p> | <p>F</p> <p>TM 7-4
 SUTTON FARM LLC
 DB 258 PG 14
 52.04 ACRES
 6729 FRONT ROYAL ROAD
 SPRINGFIELD, VA 22151</p> |
| <p>B</p> <p>TM 7-1
 IKE L. MORRIS
 DB 230 PG 307
 2331.51 ACRES
 PO BOX 397
 GLENVILLE, WV 26351</p> | <p>D</p> <p>TM 3-12.1
 ROBERT G. MAXWELL
 DB 220 PG 79
 103.6 ACRES
 1263 LICK RUN ROAD
 NEW MILTON, WV 26411</p> | <p>G</p> <p>TM 7-7
 ALAN & CAROL SMITH
 DB 231 PG 675
 81.38 ACRES
 744 NORTH MAIN STREET
 NEW MARTINSVILLE, WV 26155</p> |
| <p>E</p> <p>TM 7-2
 SUTTON FARM, LLC
 DB 258 PG 14
 38.5 ACRES
 6729 FRONT ROYAL ROAD
 SPRINGFIELD, VA 22151</p> | | |


PANEL 0230C

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

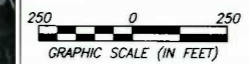
PANEL 230 OF 325
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

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

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



NAVITUS
 ENERGY ENGINEERING
 Telephone: (888) 682-4185 | www.NavitusEng.com

REVISION	DATE


 THIS DOCUMENT WAS PREPARED FOR:
 ANTERO RESOURCES CORPORATION

FIRM EXHIBIT
LICK RUN
 WELL PAD & WATER CONTAINMENT PAD
 NEW MILTON DISTRICT
 DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 07/10/2014
 SCALE: 1" = 250'
 SHEET 27 OF 27

LOCATION COORDINATES

ACCESS ROAD ENTRANCE
 LATITUDE: 39.235089 LONGITUDE: -80.739881 (NAD 83)
 N 4342897.38 E 522449.48 (UTM NAD83, ZONE 17 METERS)

CENTROID OF WELL PAD
 LATITUDE: 39.233382 LONGITUDE: -80.724767 (NAD 83)
 N 4342711.87 E 523754.40 (UTM NAD83, ZONE 17 METERS)

CENTER OF WATER CONTAINMENT TANK
 LATITUDE: 39.233796 LONGITUDE: -80.725084 (NAD 83)
 N 4342757.71 E 523726.95 (UTM NAD83, 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 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 #1414130265. 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 SEPTEMBER 12, 2013 BY KLEINFELDER 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 SEPTEMBER 18, 2013 JURISDICTIONAL FEATURES MAP WAS PREPARED BY KLEINFELDER AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE EXHIBIT 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 PENNSYLVANIA SOIL & ROCK, INC. ON JUNE 9-11, 2014. THE REPORT PREPARED BY PENNSYLVANIA SOIL & ROCK, INC. DATED JULY 3, 2014, REFLECTS THE RESULTS OF THE SUBSURFACE INVESTIGATION. THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS REPORT WERE 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) 842-4088 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) 873-6196

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

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

ENGINEER/SURVEYOR:
 NAVITUS ENGINEERING, INC.
 CYRUS S. KUMP, PE - PROJECT MANAGER/ENGINEER
 OFFICE: (888) 682-4185 CELL: (540) 886-8747

ENVIRONMENTAL:
 KLEINFELDER
 RUSSELL PERKINS - PROJECT MANAGER
 OFFICE: (410) 850-0404 CELL: (443) 857-4545

GEOTECHNICAL:
 PENNSYLVANIA SOIL & ROCK, INC.
 CHRISTOPHER W. SAMIOS-PROJECT ENGINEER
 OFFICE: (412) 372-4000 CELL: (412) 589-0862

RESTRICTIONS NOTES:

1. THERE ARE NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD. THERE ARE WETLAND IMPACTS THAT WILL NEED TO BE PERMITTED BY THE APPROPRIATE AGENCIES.
2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND LOD.
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.
4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE PROPOSED WELL PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.

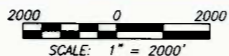
LICK RUN WELL PAD & WATER CONTAINMENT PAD SITE DESIGN & CONSTRUCTION PLAN, EROSION & SEDIMENT CONTROL PLANS

NEW MILTON DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA
 MEATHOUSE FORK WATERSHED

USGS 7.5 WEST UNION, SMITHBURG, OXFORD, & NEW MILTON QUAD MAPS



WEST VIRGINIA STATE PLANE COORDINATE SYSTEM
 NORTH ZONE, NAD83
 ELEVATION BASED ON NAVD83
 ESTABLISHED BY SURVEY GRADE GPS & OPUS
 POST-PROCESSING

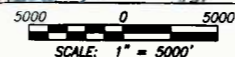
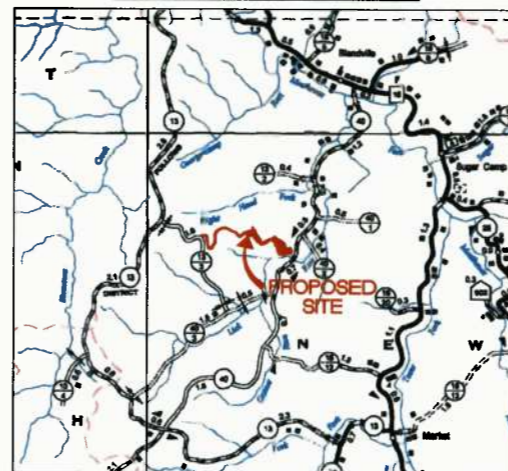


WEST VIRGINIA COUNTY MAP



(NOT TO SCALE)

WVDOH COUNTY ROAD MAP



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.

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!!

SHEET INDEX

- 01 - COVER SHEET
- 02 - CONSTRUCTION AND E&S CONTROL NOTES
- 03 - MATERIAL QUANTITIES
- 04 - STORM DRAINAGE COMPUTATIONS
- 05 - EXISTING CONDITIONS
- 06 - OVERALL PLAN SHEET INDEX & VOLUMES
- 07-09 - ACCESS ROAD PLAN
- 10 - ACCESS ROAD, WATER CONTAINMENT PAD & WELL PAD PLAN
- 11 - WELL PAD GRADING PLAN
- 12-13 - ACCESS ROAD PROFILES
- 14-16 - ACCESS ROAD SECTIONS
- 17 - WELL PAD SECTIONS
- 18-22 - CONSTRUCTIONS DETAILS
- 23-25 - ACCESS ROAD RECLAMATION PLAN
- 26 - ACCESS ROAD, WATER CONTAINMENT PAD & WELL PAD RECLAMATION PLAN
- 27 - FIRM EXHIBIT
- GE500-GE505 - GEOTECHNICAL DETAILS

LICK RUN LIMITS OF DISTURBANCE AREA (AC)	
Total Site	
Impacts to the L. Morris, TN, Z-1	
Access Road "A" (4,340')	12.44
Access Road "B" (1,924')	6.43
Well Pad	8.46
Excess/Topsoil Material Stockpiles	7.43
Total Affected Area	34.76
Total Wooded Acres Disturbed	25.69

Proposed Well Name	WV North NAD 27	WV North NAD 83	UTM (METERS) Zone 17	NAD 83 Lat & Long
Sutton Farms Unit 2H	N 269408.08 E 1653082.50	N 269504.39 E 1621621.39	N 4342718.62 E 523766.17	LAT 39-14-00.3941 LONG -80-43-28.6709
Sutton Farms Unit 1H	N 269482.35 E 1653070.26	N 269498.07 E 1621829.14	N 4342716.74 E 523768.56	LAT 39-14-00.3328 LONG -80-43-28.5712
Frank Ford Unit 1H	N 269456.03 E 1653078.01	N 269491.76 E 1621636.90	N 4342714.86 E 523770.96	LAT 39-14-00.2714 LONG -80-43-28.4716
Frank Ford Unit 2H	N 269449.72 E 1653085.77	N 269485.45 E 1621644.65	N 4342712.97 E 523773.35	LAT 39-14-00.2100 LONG -80-43-28.3719
Frank Ford Unit 3H	N 269443.41 E 1653093.52	N 269479.13 E 1621652.41	N 4342711.09 E 523775.75	LAT 39-14-00.1487 LONG -80-43-28.2723
Beetle Unit 1H	N 269437.09 E 1653101.28	N 269472.82 E 1621660.16	N 4342709.20 E 523778.14	LAT 39-14-00.0873 LONG -80-43-28.1727
Beetle Unit 2H	N 269430.78 E 1653109.03	N 269466.50 E 1621667.92	N 4342707.32 E 523780.54	LAT 39-14-00.0260 LONG -80-43-28.0730
Walton Unit 3H	N 269424.46 E 1653116.79	N 269460.19 E 1621675.67	N 4342706.44 E 523782.93	LAT 39-13-59.9646 LONG -80-43-27.9734
Walton Unit 2H	N 269418.15 E 1653124.54	N 269453.88 E 1621683.43	N 4342703.55 E 523785.33	LAT 39-13-59.9033 LONG -80-43-27.8737
Walton Unit 1H	N 269411.84 E 1653132.30	N 269447.56 E 1621691.18	N 4342701.67 E 523787.72	LAT 39-13-59.8419 LONG -80-43-27.7741
Well Pad Elevation				1,071.0

LICK RUN WETLAND IMPACT (SQUARE FEET)			
Wetland and Impact Cause	Fill (SF)	Total Impact (SF)	Total Impact (AC)
Wetland A (Well Pad)	557	557	0.01
Wetland A1 (Access Road "A")	786	786	0.02
Wetland A2 (Access Road "A")	417	417	0.01

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REVISION

DATE



THIS DOCUMENT WAS PREPARED FOR:
 ANTERO RESOURCES CORPORATION

COVER SHEET
LICK RUN
 WELL PAD & WATER CONTAINMENT PAD
 NEW MILTON DISTRICT
 DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 07/10/2014

SCALE: AS SHOWN

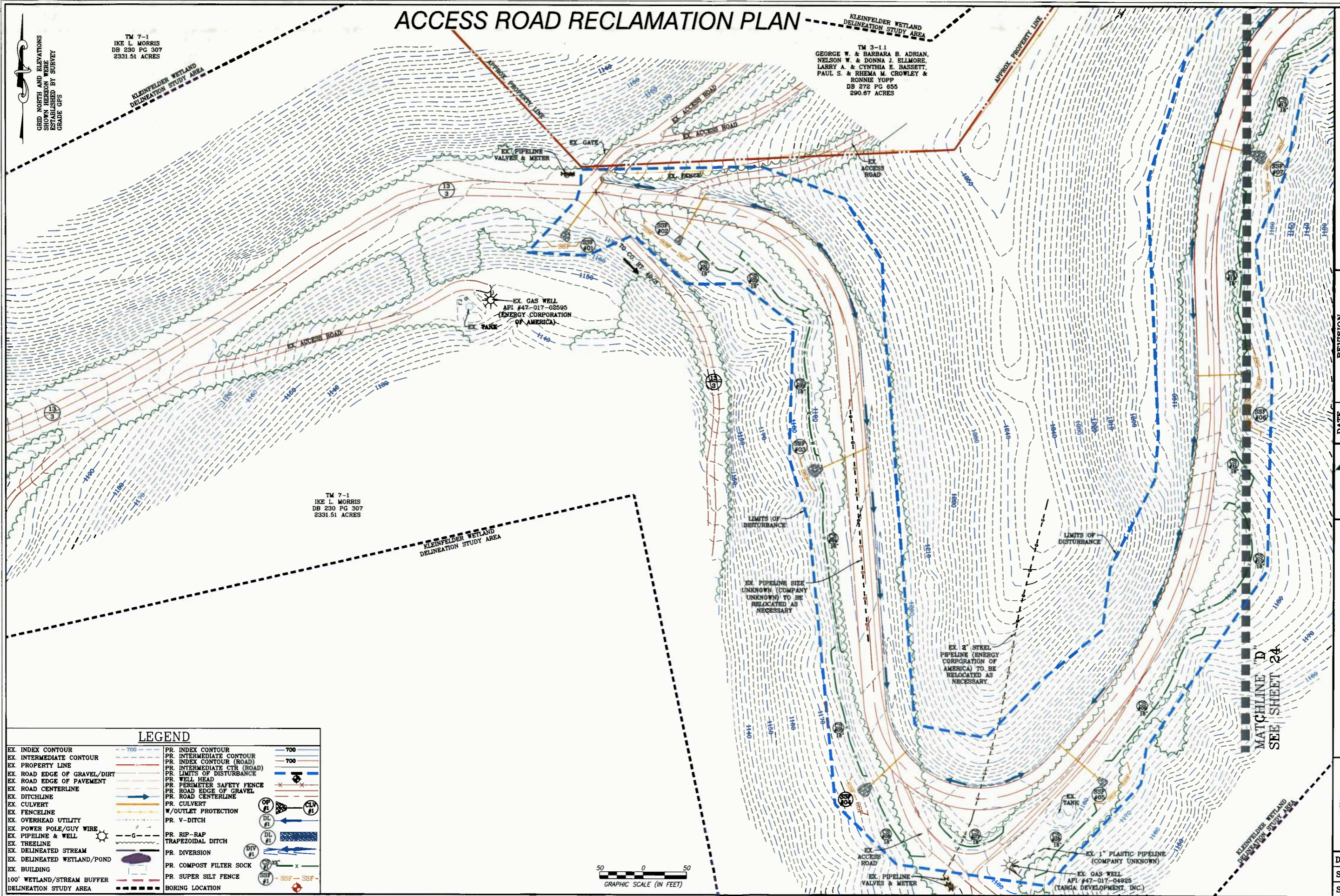
SHEET 1 OF 27

ACCESS ROAD RECLAMATION PLAN

TM 3-1.1
 GEORGE W. & BARBARA B. ADRIAN,
 NELSON W. & DONNA J. ELLMORE,
 LARRY A. & CYNTHIA E. BASSETT,
 PAUL S. & RHEMA M. CROWLEY &
 RONNIE YOFF
 DB 272 PG 655
 290.87 ACRES

TM 7-1
 IKE L. MORRIS
 DB 230 PG 307
 2331.51 ACRES

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 DB 230 PG 307
 2331.51 ACRES



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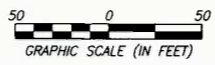
Antero
 THIS DOCUMENT
 WAS PREPARED FOR:
 ANTERO RESOURCES
 CORPORATION

ACCESS ROAD RECLAMATION PLAN
LICK RUN
 WELL PAD & WATER CONTAINMENT PAD
 NEW MILTON DISTRICT
 DODDRIDGE COUNTY, WEST VIRGINIA

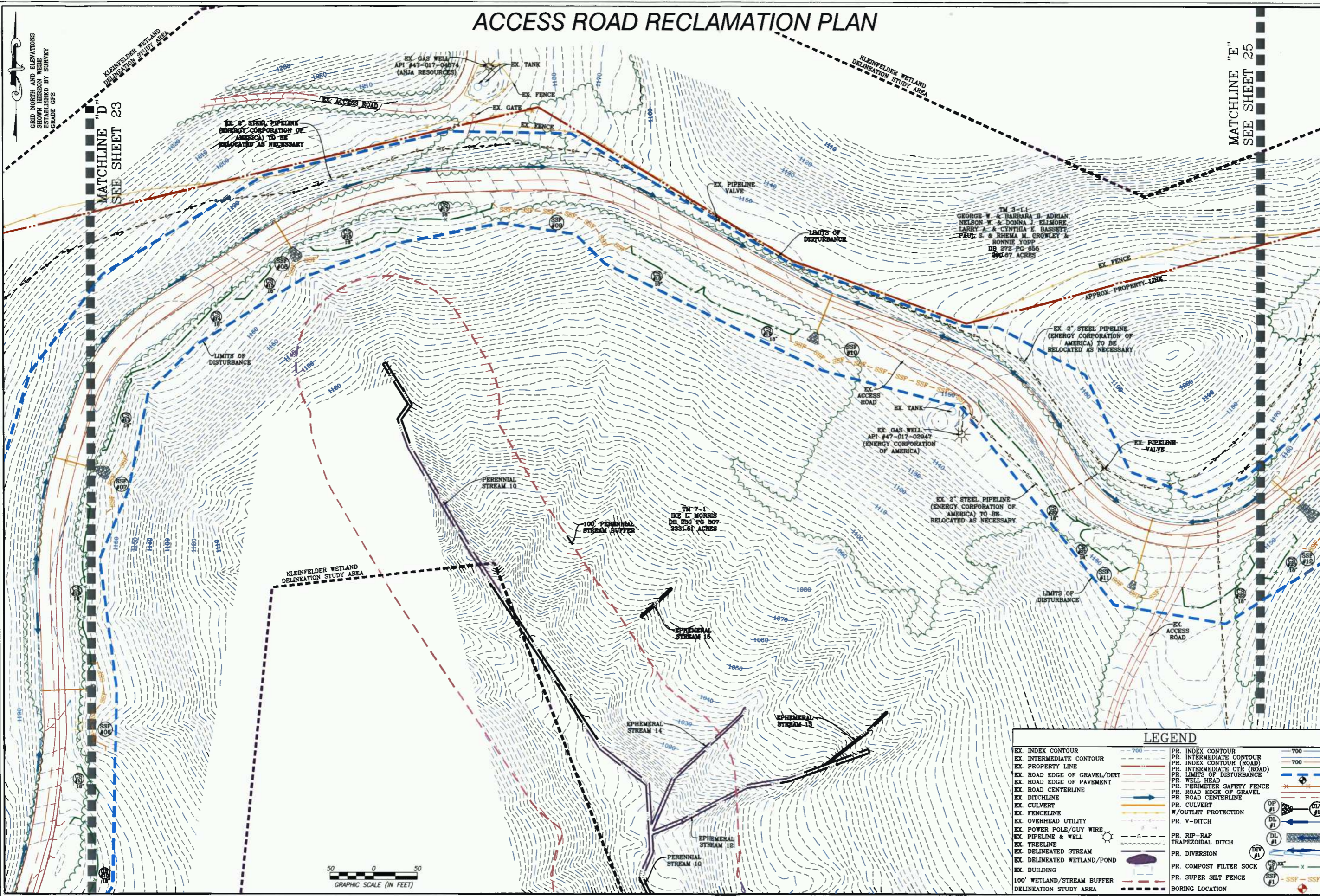
DATE: 07/10/2014
 SCALE: 1" = 50'
 SHEET 23 OF 27

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. LIMITS OF DISTURBANCE
EX. ROAD CENTERLINE	PR. ROAD CENTERLINE	EX. DITCHLINE	PR. WELL HEAD
EX. CULVERT	PR. PERIMETER SAFETY FENCE	EX. FENCELINE	PR. ROAD EDGE OF GRAVEL
EX. OVERHEAD UTILITY	PR. V-DITCH	EX. POWER POLE/GUY WIRE	PR. CULVERT
EX. PIPELINE & WELL	PR. RIP-RAP	EX. TREELINE	PR. W/OUTLET PROTECTION
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	PR. BORING LOCATION		



ACCESS ROAD RECLAMATION PLAN



GRID NORTH AND ELEVATIONS SHOWN HEREON WERE ESTABLISHED BY SURVEY GRADE GPS

MATCHLINE "D" SEE SHEET 23

MATCHLINE "E" SEE SHEET 25



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 CENTERLINE	PR. LIMITS OF DISTURBANCE
EX. ROAD EDGE OF PAVEMENT	PR. WELL HEAD
EX. DITCHLINE	PR. PERIMETER SAFETY FENCE
EX. CULVERT	PR. ROAD CENTERLINE
EX. FENCELINE	PR. CULVERT
EX. OVERHEAD UTILITY	W/OUTLET PROTECTION
EX. POWER POLE/GUY WIRE	PR. V-DITCH
EX. PIPELINE & WELL	PR. RIP-RAP TRAPEZOIDAL DITCH
EX. TREELINE	PR. DIVERSION
EX. DELINEATED STREAM	PR. COMPOST FILTER SOCK
EX. DELINEATED WETLAND/POND	PR. SUPER SILT FENCE
EX. BUILDING	BORING LOCATION
100' WETLAND/STREAM BUFFER	
DELINEATION STUDY AREA	

REVISION	DATE

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ACCESS ROAD RECLAMATION PLAN
LICK RUN
WELL PAD & WATER CONTAINMENT PAD
NEW MILTON DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA

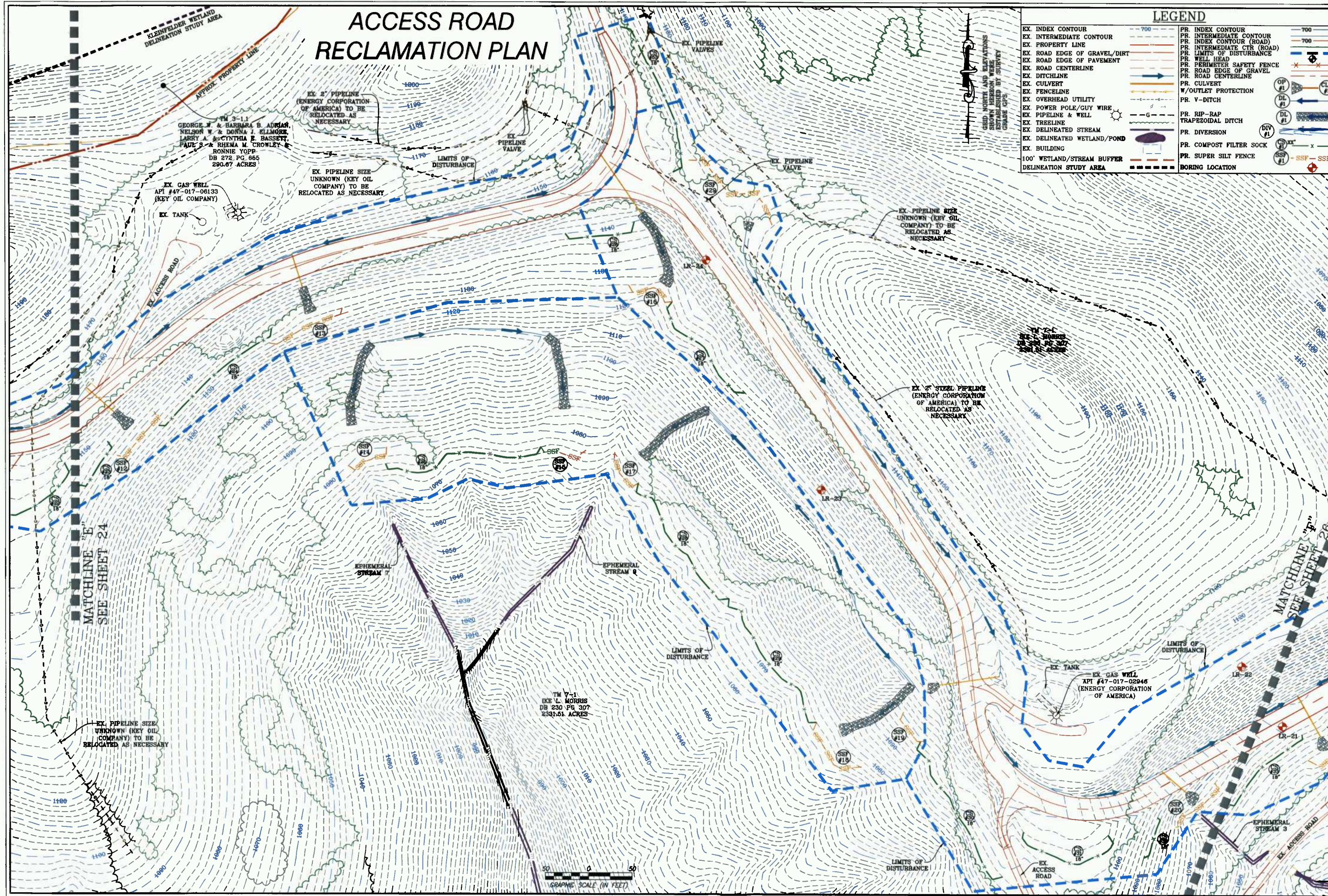


DATE: 07/10/2014
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SHEET 24 OF 27

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ACCESS ROAD RECLAMATION PLAN



LEGEND	
EX INDEX CONTOUR	PR INDEX CONTOUR
EX INTERMEDIATE CONTOUR	PR INTERMEDIATE CONTOUR
EX PROPERTY LINE	PR INDEX CONTOUR (ROAD)
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EX BUILDING	PR COMPOST FILTER SOCK
100' WETLAND/STREAM BUFFER	PR SUPER SILT FENCE
DELINEATION STUDY AREA	BORING LOCATION

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

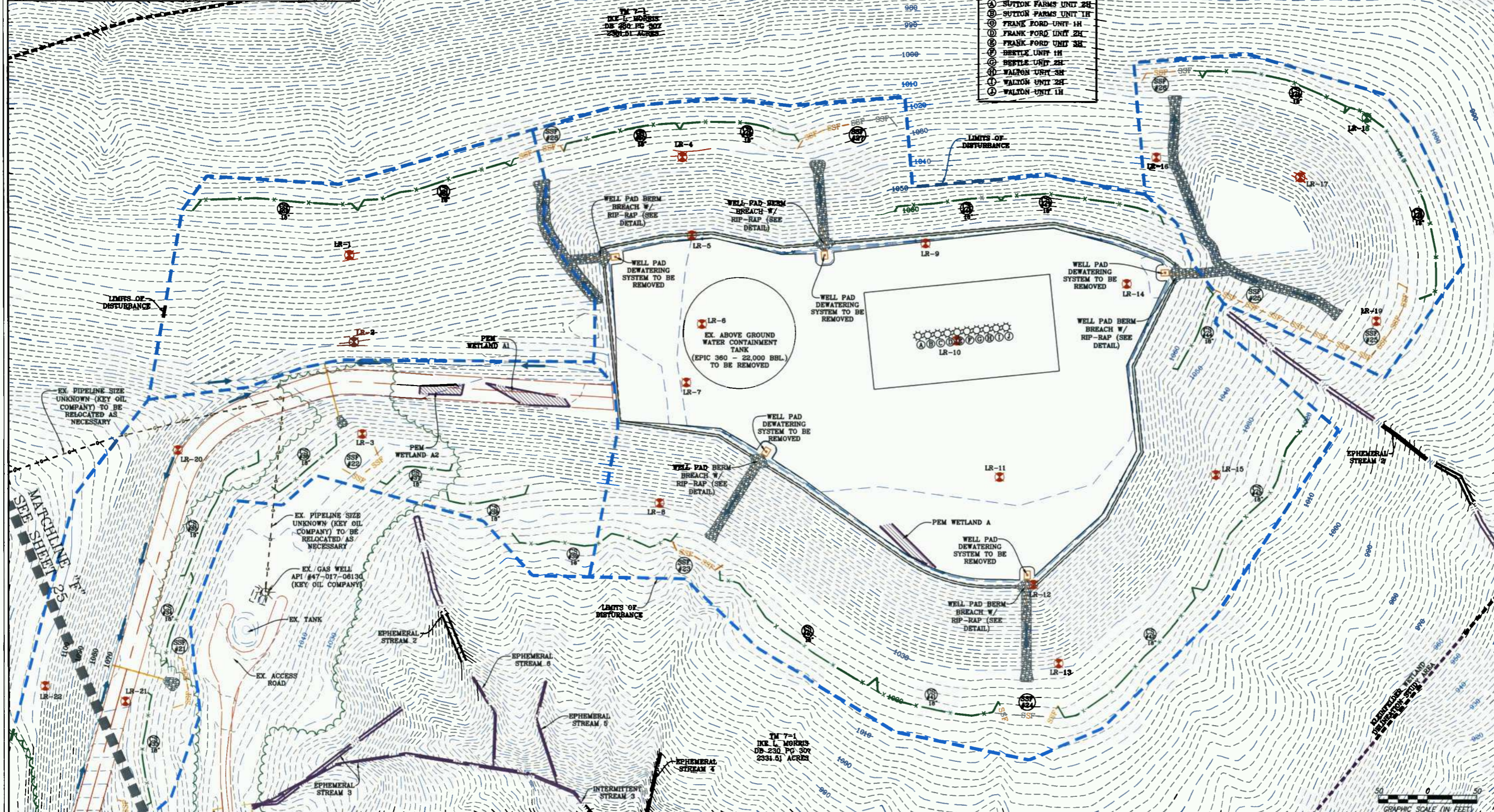
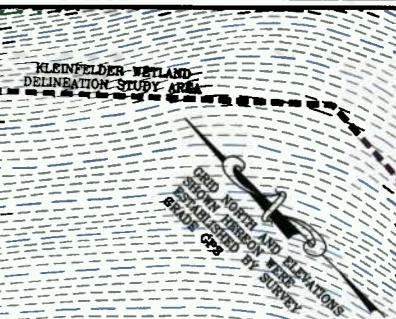


DATE: 07/10/2014
SCALE: 1" = 50'
SHEET 25 OF 27

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. LIMITS OF DISTURBANCE
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100' WETLAND/STREAM BUFFER	PR. SUPER SILT FENCE	DELINEATION STUDY AREA	PR. BORING LOCATION

ACCESS ROAD, WATER CONTAINMENT PAD & WELL PAD RECLAMATION PLAN



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ACCESS ROAD, WATER CONTAINMENT PAD & WELL PAD RECLAMATION PLAN

LICK RUN

WELL PAD & WATER CONTAINMENT PAD

NEW MILTON DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 07/10/2014

SCALE: 1" = 50'

SHEET 26 OF 27