

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: #14-303 ~ Antero Resources ~ Mudlick 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: 39.320031N/-80.835156W**

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

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 14th day of October, 2014

Antero Resources

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

Central District

39.320031N/-80.835156W

Permit #14-303 Mudlick 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

14-303

FILED

2014 OCT 16 PM 2:30



October 14, 2014

DETHA ROGERS
COUNTY CLERK
DODDRIDGE COUNTY, WV

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 Mudlick Well Pad. Our project is located in Doddridge County, Central District and per FIRM map #54017C0105C this location is not within the floodplain.

Attached you will find the following:

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

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

Thank you in advance for your consideration.

Sincerely,

Emily Kijowski
Floodplain Engineer
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 14, 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 Land, 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 Alteration (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): OK

SIGNATURE: OK DATE: October 14, 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: _____

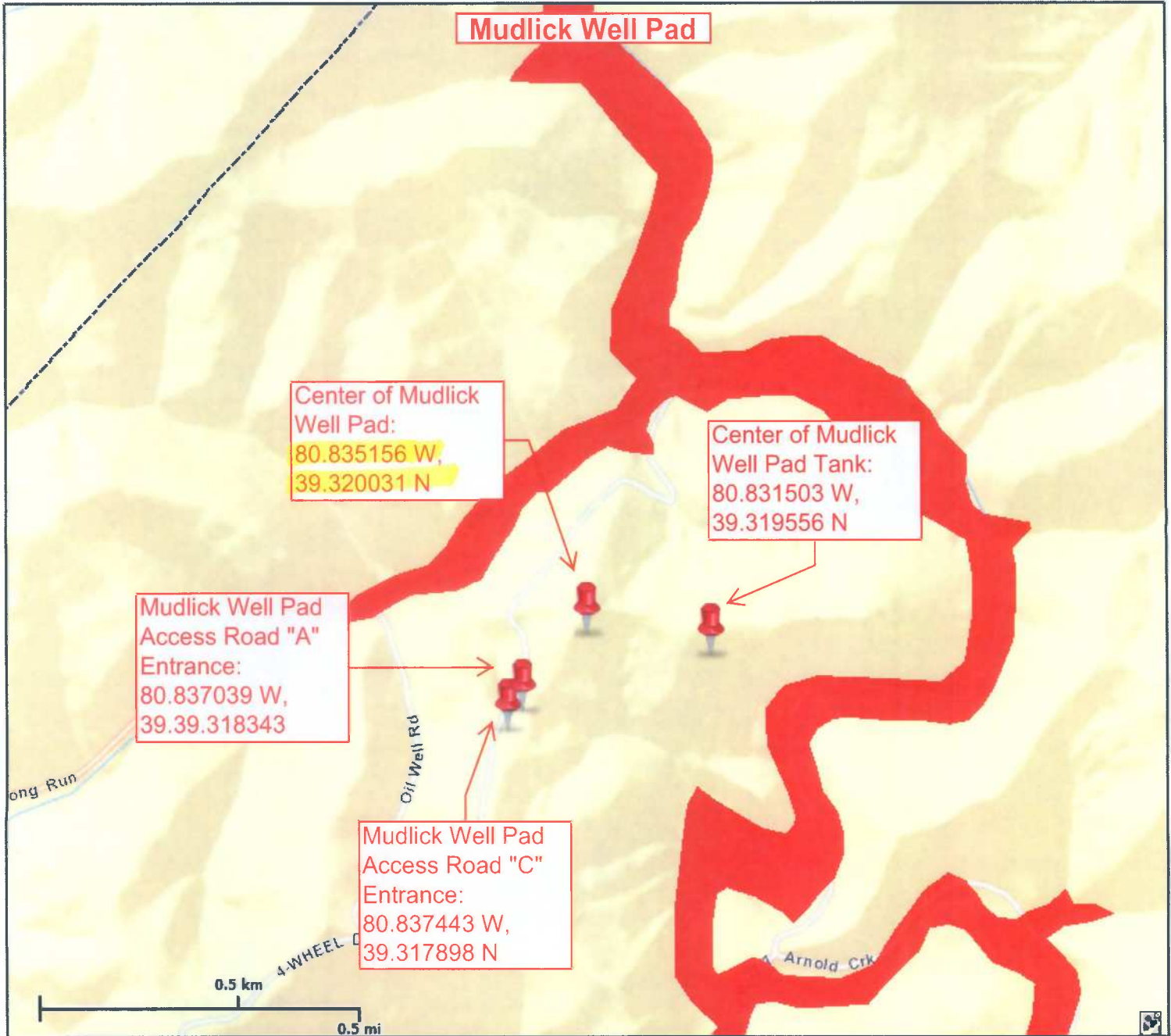
OWNER'S ADDRESS: _____

**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 10/14/2014

-  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: 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
14-303

was published in said paper for *2*

successive weeks beginning with the issue
of *October 21st* 2014 and

ending with the issue of
October 28th 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

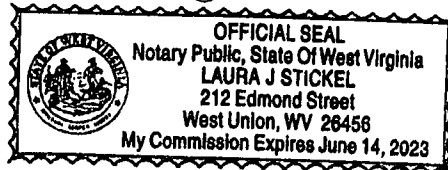
BEFORE ME THIS THE *28th* DAY

OF *October* 2014

NOTARY PUBLIC

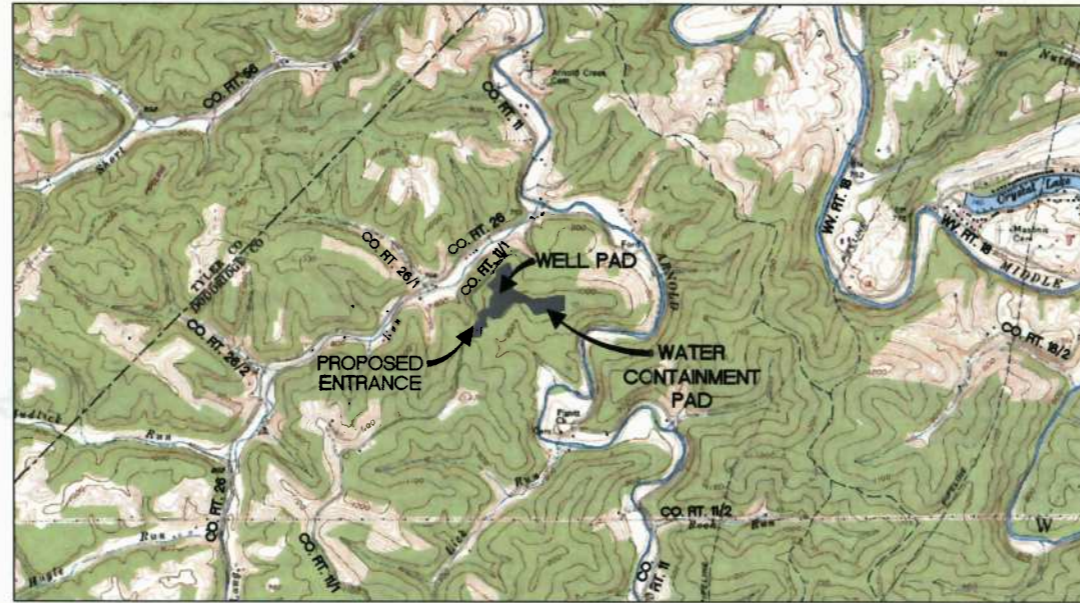
Laura J. Stickel

LEGAL ADVERTISEMENT
Doddridge County
Floodplain Permit Application
Please take notice that on the 14th day of October, 2014
Antero Resources filed an application for a Floodplain
Permit to develop land located at or about Central
District 39-320031N/801835156W Permit #14-303
Mudlick 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
118 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

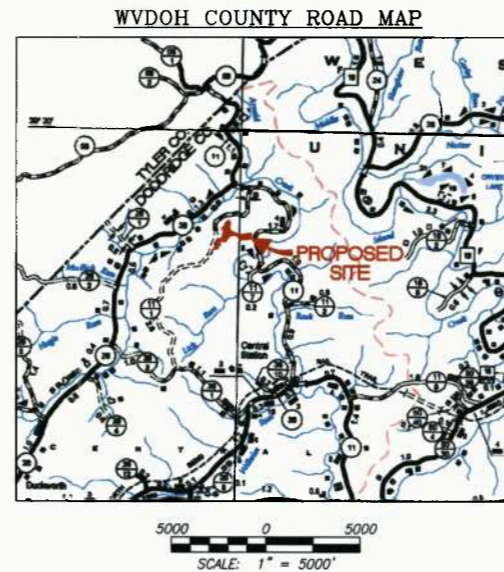


MUDLICK WELL PAD & WATER CONTAINMENT PAD SITE DESIGN & CONSTRUCTION PLAN, EROSION & SEDIMENT CONTROL PLANS

CENTRAL DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA
ARNOLD CREEK WATERSHED
USGS 7.5 WEST UNION QUAD MAP



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



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

- 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 - WELL PAD PLAN
- 9 - WATER CONTAINMENT PAD PLAN
- 10 - WELL PAD GRADING PLAN
- 11 - WATER CONTAINMENT PAD GRADING PLAN
- 12 - ACCESS ROAD PROFILES & SECTIONS
- 13 - WELL PAD & WATER CONTAINMENT PAD SECTIONS
- 14-18 - CONSTRUCTION DETAILS
- 19 - ACCESS ROAD RECLAMATION PLAN
- 20 - WELL PAD RECLAMATION PLAN
- 21 - WATER CONTAINMENT PAD RECLAMATION PLAN
- 22 - FIRM EXHIBIT
- GE500-GE506 - GEOTECHNICAL DETAILS

MUDLICK LIMITS OF DISTURBANCE AREA (AC)	
Total Site	
Access Road "A" (740')	3.31
Access Road "B" (515')	2.30
Access Road "C" (90')	0.42
Access Road "D" (81')	0.30
Staging Area	0.95
Well Pad	7.06
Water Containment Pad	4.06
Excess/Topsoil Material Stockpiles	3.66
Total Affected Area	22.06
Total Wooded Acres Disturbed	16.76
Impacts to Michael Shepherd TM 4-1	
Access Road "A" (692')	3.18
Access Road "C" (90')	0.42
Access Road "D" (81')	0.30
Staging Area	0.95
Well Pad	2.73
Excess/Topsoil Material Stockpiles	2.03
Total Affected Area	9.61
Total Wooded Acres Disturbed	8.85
Impacts to Brian M. James TM 4-12	
Access Road "A" (48')	0.13
Access Road "B" (515')	2.30
Well Pad	4.33
Water Containment Pad	4.06
Excess/Topsoil Material Stockpiles	1.63
Total Affected Area	12.45
Total Wooded Acres Disturbed	7.91

Proposed Well Name	WN North NAD 27	WN North NAD 83	UTM (METERS) Zone 17	NAD 83 Lat & Long
Victor	N 301542.03	N 301576.97	N 4352332.97	LAT 39-19-13 0282
Unit 1H	E 1622251.05	E 1590809.90	E 514216.47	LONG -80-50-06 2731
Breccia	N 301532.52	N 301567.46	N 4352330.09	LAT 39-19-12 9348
Unit 2H	E 1622254.17	E 1590813.01	E 514217.46	LONG -80-50-06 2317
Breccia	N 301523.02	N 301557.96	N 4352327.21	LAT 39-19-12 8413
Unit 1H	E 1622257.28	E 1590816.12	E 514218.46	LONG -80-50-06 1903
Victor	N 301513.52	N 301548.46	N 4352324.33	LAT 39-19-12 7479
Unit 2H	E 1622260.40	E 1590819.24	E 514219.46	LONG -80-50-06 1489
Darcy	N 301504.01	N 301536.96	N 4352321.45	LAT 39-19-12 6544
Unit 1H	E 1622263.51	E 1590822.35	E 514220.45	LONG -80-50-06 1075
Darcy	N 301494.51	N 301529.45	N 4352318.57	LAT 39-19-12 5609
Unit 2H	E 1622266.62	E 1590825.47	E 514221.45	LONG -80-50-06 0661
Well Pad Elevation	1,041.0			

LOCATION COORDINATES

ACCESS ROAD "A" ENTRANCE
LATITUDE: 39.318343 LONGITUDE: -80.837039 (NAD 83)
N 4352117.03 E 514047.82 (UTM ZONE 17 METERS)

ACCESS ROAD "C" ENTRANCE
LATITUDE: 39.317898 LONGITUDE: -80.837443 (NAD 83)
N 4352087.58 E 514012.92 (UTM ZONE 17 METERS)

CENTER OF TANK
LATITUDE: 39.319556 LONGITUDE: -80.831503 (NAD 83)
N 4352252.57 E 514524.63 (UTM ZONE 17 METERS)

CENTROID OF PAD
LATITUDE: 39.320031 LONGITUDE: -80.835156 (NAD 83)
N 4352304.70 E 514209.83 (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 WITHIN FEMA FLOOD ZONE "X" PER FEMA FLOOD MAP #54017C0105C.

MISS UTILITY STATEMENT

ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN; TICKET #1417841416. 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

STREAM AND WETLAND DELINEATIONS WERE PERFORMED IN JUNE, 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 JUNE 18, 2014 JURISDICTIONAL STREAMS & WETLANDS 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.

GEOTECHNICAL NOTE

A SUBSURFACE INVESTIGATION OF THE PROPOSED SITE WAS PERFORMED BY PENNSYLVANIA SOIL & ROCK, INC. BETWEEN JULY 17, 2014 & JULY 24, 2014. THE REPORT PREPARED BY PENNSYLVANIA SOIL & ROCK, INC. DATED JULY 31, 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) 842-4068 CELL: (304) 478-9770

JOHN KAWCAK - OPERATIONS SUPERINTENDENT
CELL: (817) 368-1553

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

ANTHONY SMITH - FIELD ENGINEER
OFFICE: (304) 842-4208 CELL: (304) 673-6196

MARK JOHNSON - SURVEYING COORDINATOR
OFFICE: (304) 842-4162 CELL: (304) 719-6449

JACK BELL - LAND AGENT
CELL: (304) 376-9682

ENGINEER/SURVEYOR:
NAVITUS ENGINEERING, INC.
CYRUS S. KUMP, PE - PROJECT MANAGER/ENGINEER
OFFICE: (888) 682-4185 CELL: (540) 686-6747

ENVIRONMENTAL:
ALLSTAR ECOLOGY, LLC
RYAN L. WARD - ENVIRONMENTAL SCIENTIST
OFFICE: (866) 213-2666 CELL: (304) 692-7477

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, WETLANDS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD.
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 WELL PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.

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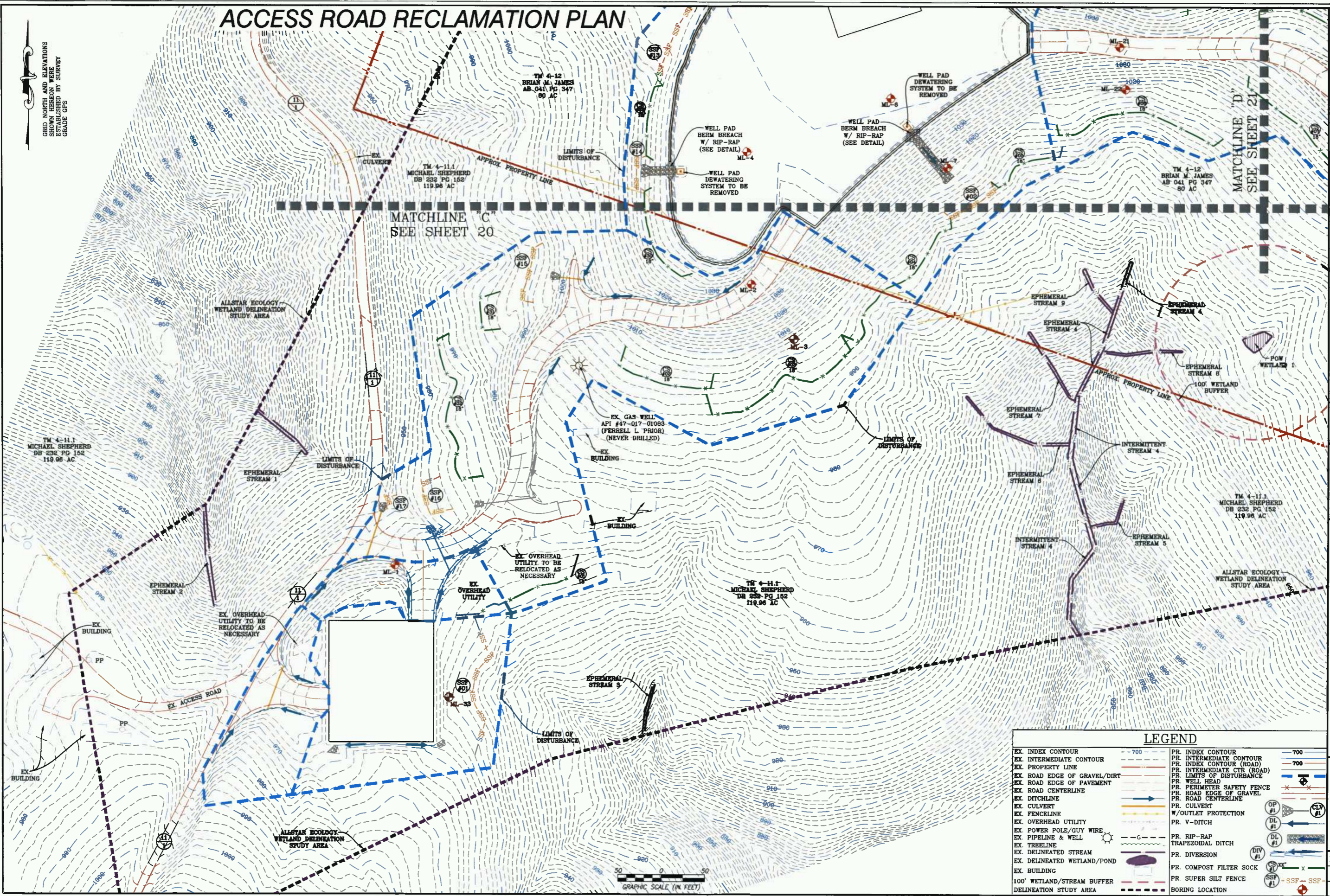
COVER SHEET
MUDLICK
WELL PAD & WATER CONTAINMENT PAD
CENTRAL DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 08/08/2014
SCALE: AS SHOWN
SHEET 1 OF 22

ACCESS ROAD RECLAMATION PLAN

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

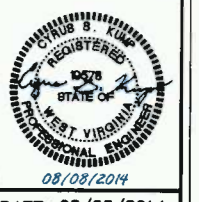


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ACCESS ROAD RECLAMATION PLAN
MUDLICK
WELL PAD & WATER CONTAINMENT PAD
CENTRAL DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 08/08/2014
SCALE: 1" = 50'
SHEET 19 OF 22

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

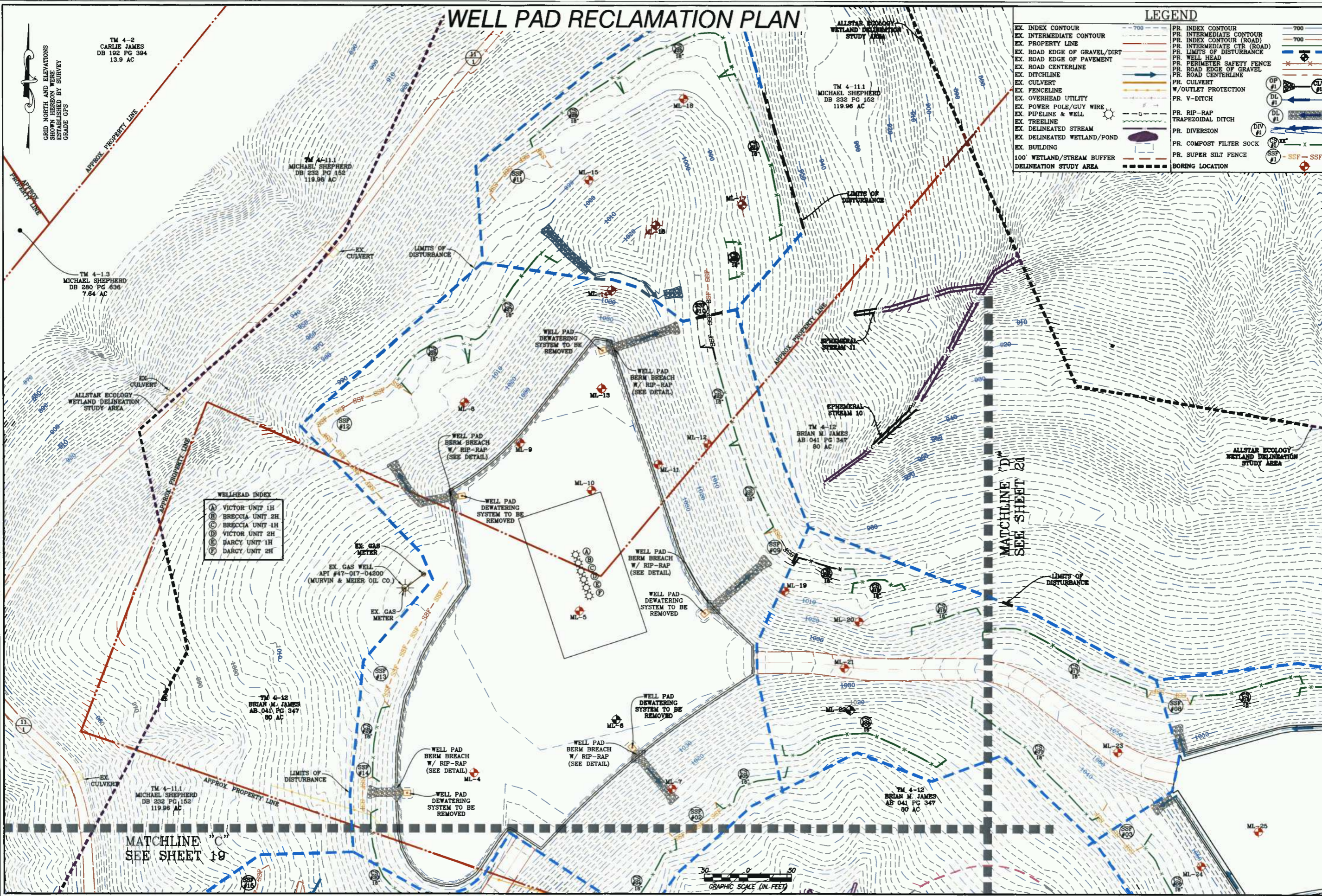
WELL PAD RECLAMATION PLAN

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

WELLHEAD INDEX

A	VICTOR UNIT 1H
B	BRECCIA UNIT 2H
C	BRECCIA UNIT 1H
D	VICTOR UNIT 2H
E	DARCY UNIT 1H
F	DARCY UNIT 2H



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WELL PAD RECLAMATION PLAN

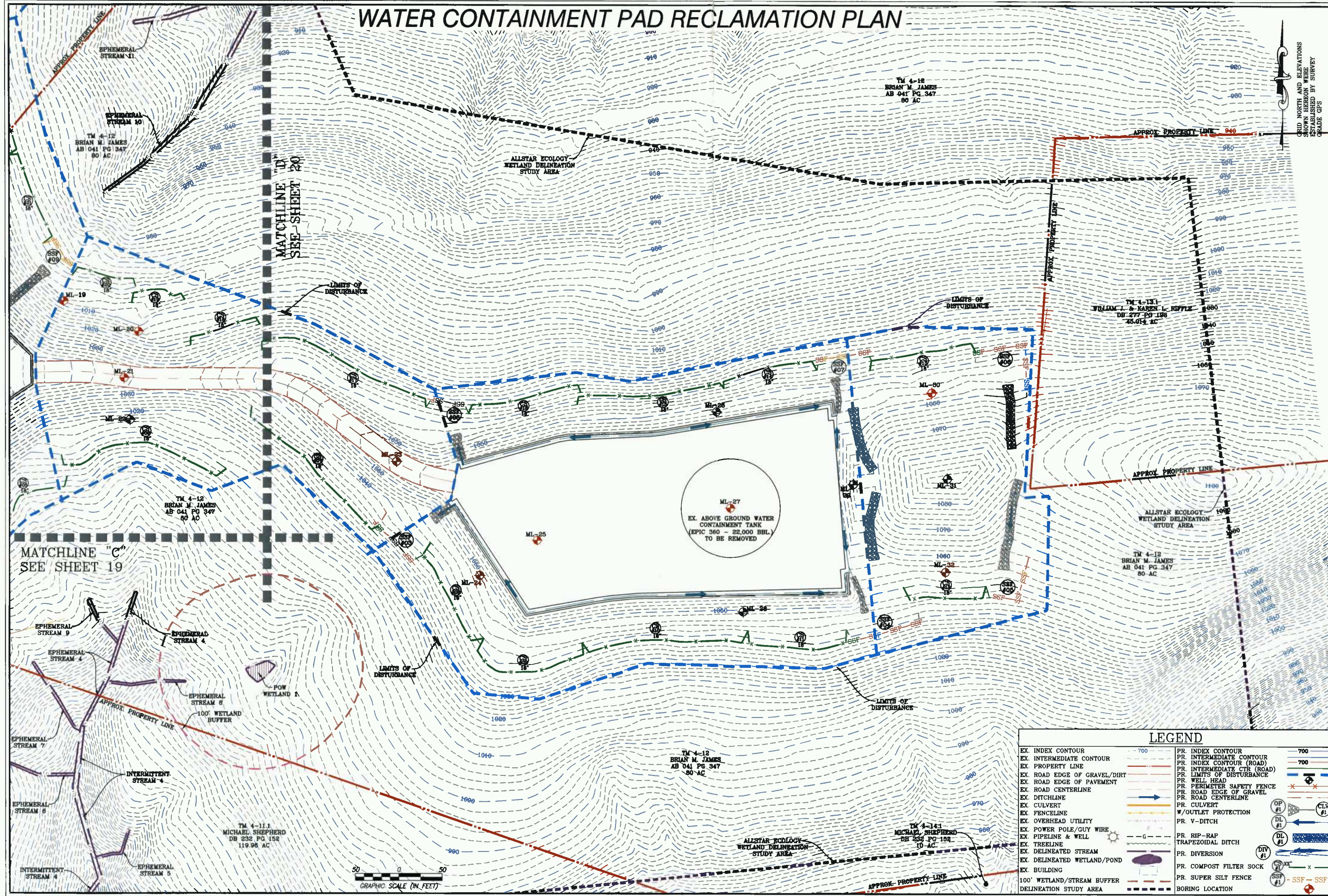
MUDLICK

WELL PAD & WATER CONTAINMENT PAD
CENTRAL DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 08/08/2014
SCALE: 1" = 50'
SHEET 20 OF 22

WATER CONTAINMENT PAD RECLAMATION PLAN



TM 4-12
BRIAN M. JAMES
AB 041 PG. 347
80 AC

TM 4-13-1
WILLIAM J. & KAREN L. RUFFLE
DB 277 PG. 156
45-014 AC

TM 4-12
BRIAN M. JAMES
AB 041 PG. 347
80 AC

ML-27
EX. ABOVE GROUND WATER
CONTAINMENT TANK
(EPIC 360 - 22,000 BBL.)
TO BE REMOVED

TM 4-12
BRIAN M. JAMES
AB 041 PG. 347
80 AC

TM 4-14-1
MICHAEL SHEPHERD
DB 255 PG. 152
10 AC

TM 4-11-1
MICHAEL SHEPHERD
DB 232 PG. 152
119.98 AC

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

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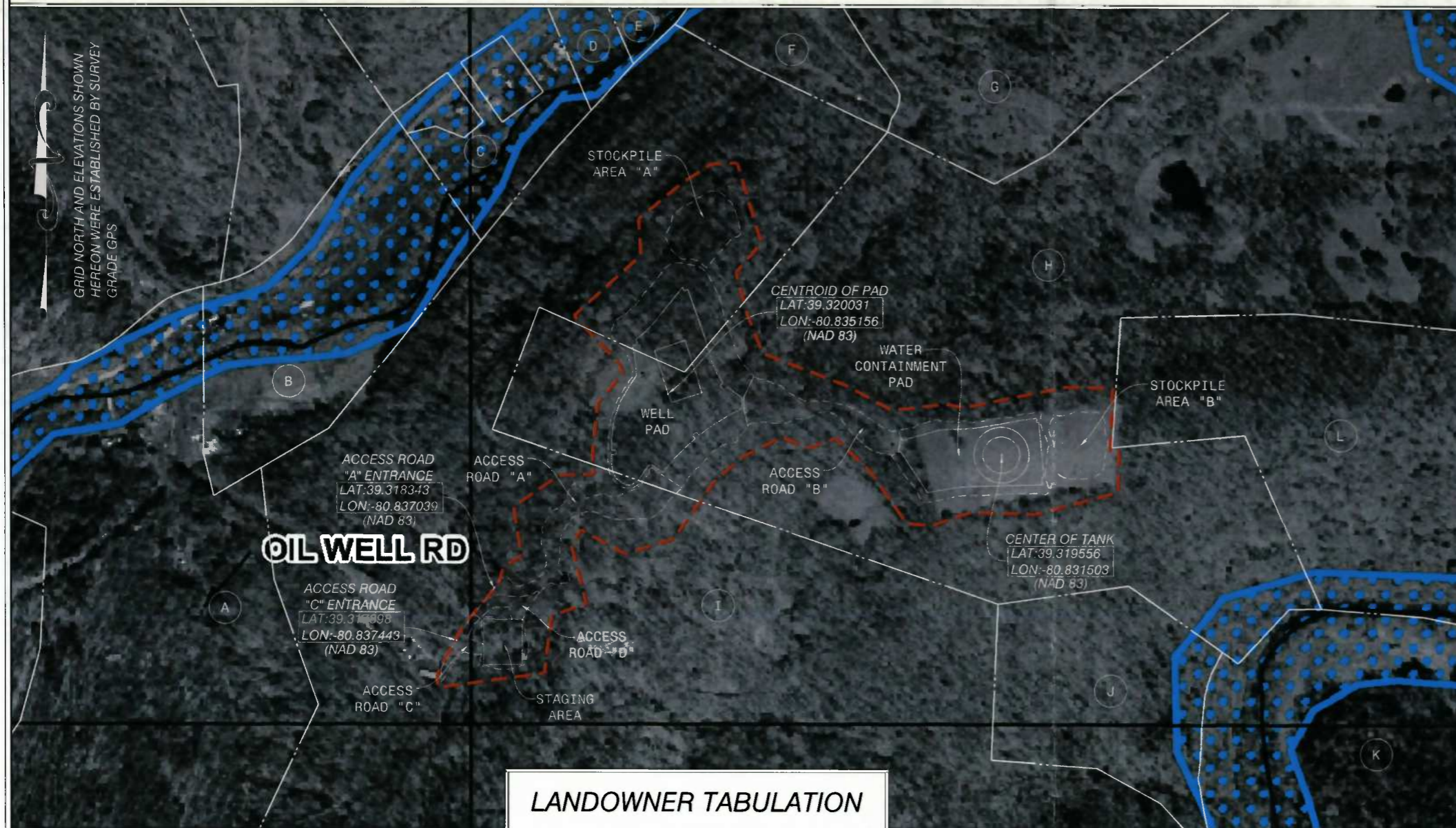
WATER CONTAINMENT PAD RECLAMATION PLAN
MUDLICK
WELL PAD & WATER CONTAINMENT PAD
CENTRAL DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 08/08/2014
SCALE: 1" = 50'
SHEET 21 OF 22

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	W/OUTLET PROTECTION
EX. PIPELINE & WELL	PR. V-DITCH
EX. TREELINE	PR. RIP-RAP
EX. DELINEATED STREAM	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

FIRM EXHIBIT



LANDOWNER TABULATION

A	TM 4-10 MICHAEL SHEPHERD DB 232 PG 152 58.23 ACRES ROUTE 1 BOX 721 GREENWOOD, WV 26415	D	TM 4-5 CARLIE JAMES DB 192 PG 394 3.09 ACRES 151 KELLEY JAMES LANE WEST UNION, WV 26456	G	TM 4-7 CARLIE & KAREN M. JAMES DB 197 PG 358 69.09 ACRES 151 KELLEY JAMES LANE WEST UNION, WV 26456	J	TM 4-14.1 MICHAEL SHEPHERD DB 232 PG 152 10 ACRES ROUTE 1 BOX 721 GREENWOOD, WV 26415
B	TM 4-1.3 MICHAEL SHEPHERD DB 280 PG 636 7.64 ACRES ROUTE 1 BOX 721 PENNSBORO, WV 26415	E	TM 4-6 LONNIE C. JAMES DB 181 PG 005 43 ACRES 5813 LONG RUN ROAD PENNSBORO, WV 26415	H	TM 4-12 BRIAN M. JAMES AB 041 PG 347 80 ACRES 510 SAM CAVINS ROAD WEST UNION, WV 26456	K	TM 4-14 EUGENE V. CHIPPS II SF 008 PG 405 23.2 ACRES ROUTE 4 BOX 3006 CLARKSBURG, WV 26301
C	TM 4-2 CARLIE JAMES DB 192 PG 394 13.9 ACRES 151 KELLEY JAMES LANE WEST UNION, WV 26456	F	TM 4-7.1 CARLIE JAMES DB 232 PG 090 4.59 ACRES 151 KELLEY JAMES LANE WEST UNION, WV 26456	I	TM 4-11.1 MICHAEL SHEPHERD DB 232 PG 152 119.96 ACRES ROUTE 1 BOX 721 GREENWOOD, WV 26415	L	TM 4-13.1 WILLIAM J. & KAREN L. RIFFLE DB 277 PG 193 45.014 ACRES PO BOX 961229 FORT WORTH, TX 76161


PANEL 0105C

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

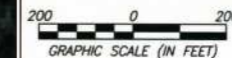
PANEL 105 OF 325
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
DODDRIDGE COUNTY 54024 0105 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**
54017C0105C
MAP REVISED
OCTOBER 4, 2011
Federal Emergency Management Agency

FLOODPLAIN NOTE
THE PROPOSED SITE IS LOCATED IN
FLOOD ZONE "X" PER FEMA FLOOD MAP
#54017C0105C



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FIRM EXHIBIT
MUDLICK
WELL PAD & WATER CONTAINMENT PAD
CENTRAL DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 08/08/2014

SCALE: 1" = 200'

SHEET 22 OF 22