



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: #13-086 ~ Antero Resources ~
Victor Pad Extension**

Date Approved: 12/02/2014

Expires: 12/02/2015

Issued to: Antero Resources

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

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

**Project Address: New Milton & Greenbrier Districts, Double Camp of Meathouse Fork
Lat/Long: 39.1115N/80.3730W**

**Purpose of development: Victor pad construction extension. Original permit issued
12/02/2013.**

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

A handwritten signature in black ink, appearing to read "EW", is written over a horizontal line.

Date: 12/02/2014

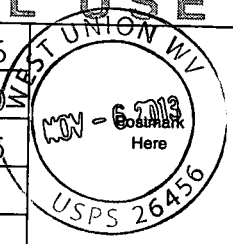
For additional information regarding this permit, please contact
Doddridge County Floodplain Manager at 304.873.2691, or via email at
doddridgecountyfpm@gmail.com
118 East Court Street; West Union, WV 26456

7011 0470 0000 8523 2723

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only, No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	\$.46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11



Sent To **Victor & Wanda Cox** #13-086
Street, Apt. No., or PO Box No. **114 Beech Lick RD**
City, State, ZIP+4 **Salem, WV 26426**

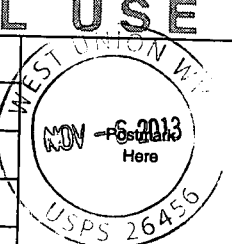
PS Form 3800, August 2006 See Reverse for Instructions

7011 0470 0000 8523 2730

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
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Postage	\$.46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11



Sent To **Thomas & Helen Aspy** #13-086
Street, Apt. No., or PO Box No. **RT. 3, Box 47**
City, State, ZIP+4 **Salem, WV 26426**

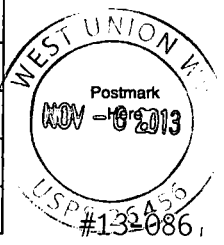
PS Form 3800, August 2006 See Reverse for Instructions

7011 0470 0000 8523 2747

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only, No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	\$.46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.11



Sent To **Kenneth R Sr & Helen L Ryan**
Street, Apt. No., or PO Box No. **4803 10th Ave**
City, State, ZIP+4 **Vienna WV 26105**

PS Form 3800, August 2006 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to: #13-086

Thomas & Helen Aspy
Rt 3. Box 47
Salem, wV 26426

2. Article Number
(Transfer from service label)

7011 0470 0000 8523 2730

COMPLETE THIS SECTION ON DELIVERY

A. Signature

[Handwritten Signature]

- Agent
 Addressee

B. Received by (Printed Name)

THOMAS H. ASPY

C. Date of Delivery

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

NOV 12 2013

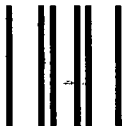
3. Service Type

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

4. Restricted Delivery? (Extra Fee)

- Yes

UNITED STATES POSTAL SERVICE



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

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

FILED

2013 NOV 13 AM 11:46

**SIRH A. ROGERS
SHERIFF
COUNTY CLERK
DODD BRIDGE COUNTY WV**

SIRH A. ROGERS
DODD BRIDGE CO CLERK
118 EAST COURT ST
ROOM 102
WEST UNION, WV 26456



SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to: #13-086

Kenneth R Sr. & Helen L. Ryan
 4803 10th Ave
 Vienna WV 26105

 2. Article Number
 (Transfer from service label)

7011 0470 0000 8523 2747

COMPLETE THIS SECTION ON DELIVERY

A. Signature

x Paula Ryan

 Agent
 Addressee

B. Received by (Printed Name)

Paula Ryan

C. Date of Delivery

11/13/13

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

3. Service Type

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

4. Restricted Delivery? (Extra Fee)

 Yes

UNITED STATES POSTAL SERVICE



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

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

FILED

2013 NOV 14 AM 10:10

**ROGERS
COUNTY CLERK
COUNTY, WV
A ROGERS
BRIDGE CO CLERK
111 EAST COURT ST
ROOM 102
WEST UNION, WV 26456**



UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. 210

FILED

2013 NOV -8 AM 11:21

**BETH A. ROGERS
COUNTY CLERK
DODDRIDGE COUNTY, WV**

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

BETH A ROGERS
DODDRIDGE CO CLERK
118 EAST COURT ST
ROOM 102
WEST UNION, WV 26456



RECIPIENT: COMPLETE THIS SECTION

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

1. Article Addressed to: #13-086

Victor & Wanda Cox
 114 Beech Lick Rd
 Salem, WV 26426

2. Article Number

(Transfer from service label)

7011 0470 0000 8523 2723

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

[Handwritten Signature]

Agent

Addressee

B. Received by (Printed Name)

Victor Cox

C. Date of Delivery

D. Is delivery address different from item 1? Yes

If YES, enter delivery address below: No

3. Service Type

Certified Mail

Express Mail

Registered

Return Receipt for Merchandise

Insured Mail

C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes



1625 17th STREET, SUITE 300
DENVER, COLORADO 80202

Vendor Name	Vendor No.	Date	Check Number	Check Total
DODDRIDGE COUNTY CLERK	45582	Nov-01-2013	41745	\$4,974.85

VOUCHER	VENDOR INV #	INV DATE	TOTAL AMOUNT	PRIOR PMTS & DISCOUNTS	NET AMOUNT
11-AP-73	VICTORPADFP	11/01/13	4,974.85	0.00	4,974.85
FLOOD PLAIN PERMIT - VICTOR PAD					4,974.85
TOTAL INVOICES PAID					

13-086
Antero-Victor Pad

DETACH AND RETAIN FOR TAX PURPOSES

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

W. C. Underwood Jr.
Sheriff of Doddridge County

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

Doddridge County, West Virginia

No. 867

Date: November 7, 2013
Customer copy

Received: #13-086 ANTERO - VICTOR PAD

\$4,974.85

In Payment For: 318 Building Permits (LP)

For: 12-Flood Plain Ordinance #20 Fund

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

W. C. Underwood Jr.
Sheriff of Doddridge County

Doddridge County Flood Plain Application Fee Calculator (if in Flood Plain)**Victor Pad**

Estimated Construction Costs	\$894,969.15
Amount over \$100,000	\$794,969.15
Drilling Oil and Gas Well Fee	\$1,000.00
\$5 per \$1,000 over \$100,000	\$3,974.85
Amount Due with application	\$4,974.85

LOCATION PERMIT FEES

Accessory Building and/or Structures \$ 5.00
(examples: garage, storage or farm building, carport)

Additions and/or Renovations to Single Family Residential ^{OR} of Manufacture Homes
UP TO \$50,000.00 \$10.00

Additions and/or Renovations to Single Family Residential or Manufacture Homes
OVER \$50,000.00 \$10.00

Single Family Residential UP TO \$50,000.00 \$25.00

~~Manufactured Homes – described as having permanent axle and frame NONE~~

Multi-Family \$25.00
Residential and other buildings and structures, including additions and
renovations to existing structures.

New Commercial Structures or Renovations to existing Commercial Structures,
Commercial Land Use Changes and Land Altering Activities \$250.00
(Includes buildings used for business purposes the total costs of which do not exceed \$50,000.00.)

New commercial Structures or Additions or Renovations to Existing Commercial
Structures, Commercial Land Use Changes and Land Altering Activities \$350.00
(the total costs of which exceed \$50,000.00 plus \$2.00 per \$1,000.00 to
cover costs over \$50,000.00)

New Industrial Structures or Additions or Renovations to Existing Industrial
Structures, changes in Land Use and Land Altering Activities for Industrial \$500.00
purposes. (the total costs of which do not exceed \$100,000.00)

New Industrial Structures or Additions or Renovations to Existing Industrial
Structures, changes in Land Use and Land Altering Activities for Industrial \$1,000.00
purposes. (the total costs of which exceed \$100,000.00 plus \$5.00 per \$1,000.00 in
costs over \$100,000.00.)

FEE FOR DRILLING OIL & GAS WELL \$1,000.00
IN FEMA DESIGNATED FLOOD PLAIN

Maximum Fee: In no event shall any Location Permit Fee charged under this Ordinance
exceed the sum of \$100,000.00.

Legal Advertisement:
Doddridge County
Floodplain Permit Application

Please take notice that on the 6th day of November, 2013

**ANTERO RESOURCES APPALACHIAN CORPORATION –
VICTOR PAD PERMIT #13-086**

filed an

application for a Floodplain Permit to develop land located at or
about: **SURFACE OWNERS: VICTOR R. AND WANDA F. COX,
BEECH LICK ROAD**

NEW MILTON /GREENBRIER DISTRICT, DB: 207/541, TM: 13-8

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

Any interested persons who desire to comment shall present
the same in writing by **November 26th, 2013.**

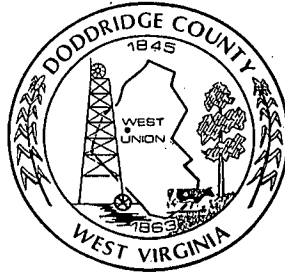
Delivered to the:

Clerk of the County Court

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

Beth A Rogers, Doddridge County Clerk

Dan Wellings, Doddridge County Flood Plain Manager



Commercial/Industrial Floodplain Development Permit

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304-842-4008**

**Company Address: 535 White Oaks Blvd
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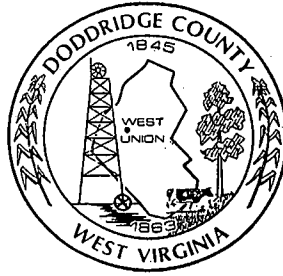
**Project Address: New Milton & Greenbrier Districts, Double Camp of Meathouse Fork
Lat/Long: 39.1115N/80.3730W**

**Purpose of development: Victor pad construction extension. Original permit issued
12/02/2013.**

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

Date: 12/02/2014

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



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doddridgecountyfpm@gmail.com
118 East Court Street; West Union, WV 26456

PERMIT NO. 13-086

DODDRIDGE COUNTY
FLOODPLAIN DEVELOPMENT
PERMIT

PURPOSE FOR PERMIT: CULVERT EXTENSION + ROAD

ISSUED TO ANTERO RESOURCES
1625 17TH ST

ADDRESS: DENVER CO.

PROJECT ADDRESS: NEAR DOUBLE CAMP
OF MEAT HOUSE FORK

ISSUED BY: Dan Welton

DATE: 12/02/2013

CONSTRUCTION MUST START WITHIN 180 DAYS FROM ISSUED DATE. PERMIT EXPIRES IN 12 MONTHS FROM ISSUED DATE. IF EXTENTION IS NEEDED A REQUEST MUST BE MADE IN WRITING STATING A REASON FOR THE EXTENTION.

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

FILED

2013 NOV -4 PM 2:49

BETH A. ROGERS
COUNTY CLERK
DODDRIDGE COUNTY, WV



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

November 1, 2013

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

Mr. Wellings:

Antero Resources Corporation (Antero) would like to submit a Doddridge County Floodplain permit application for our Victor Drill Pad Entrance Road. Our project is located in Doddridge County, New Milton and Greenbrier District. Per HEC-RAS study prepared by L & W Enterprises Inc, on June 1, 2013, and FEMA Map 54017C0235C & 54017C0250C, there is no impact from the entrance road improvements to any adjacent property owners. Except for the work associated with the existing culvert extension, the limits of disturbance for the project are outside of the HEC-RAS Calculated Flood Plain.

Attached you will find the following:

- Doddridge County Floodplain Permit Application and Permit Fee
- Adjacent Surface Owner Data-Exhibit A
- HEC-RAS Floodplain Study
- Improvement Location Permit Application
- FIRM Map
- A detailed set of plans signed by a WV licensed professional engineer

If you have any questions please feel free to contact me at (303) 357-6820. Thank you in advance for your consideration.

Sincerely,



Shauna Redican
Permit Representative
Antero Resources Corporation

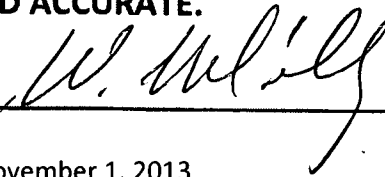
Enclosures

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 November 1, 2013

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

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

APPLICANT'S NAME: Antero Resources Corporation - Ward McNeilly, VP of Engineering

ADDRESS: 1625 17th Street, Denver, CO 80202

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

BUILDER'S NAME: Antero Resources Corporation

ADDRESS: 1625 17th Street, Denver, CO 80202

TELEPHONE NUMBER: (303) 357-7310

ENGINEER'S NAME: Allegheny Surveys, Inc - Thomas D. Corathers

ADDRESS: 172 Thompson Drive, Bridgeport, WV 26330

TELEPHONE NUMBER: 304-848-5035

PROJECT LOCATION:

NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) Victor R. and Wanda F. Cox

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

114 Beech Lick Road, Salem, WV 26426

DISTRICT: New Milton/Greenbrier District

DATE/FROM WHOM PROPERTY

PURCHASED: N/A

LAND BOOK DESCRIPTION:

DEED BOOK REFERENCE: 207/541

TAX MAP REFERENCE: 13-8

EXISTING BUILDINGS/USES OF PROPERTY: None

NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY

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:

- Fill Mining Drilling 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 \$894,969.15

*See attached Floodplain Calculation Fee

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: Please see Exhibit A
 ADDRESS: _____

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
 ADDRESS: _____

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): Ward McNeilly, VP of Engineering

SIGNATURE: *W. McNeilly* DATE: November 1, 2013

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: 235 + 250
 Dated: 10/04/2011

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

Is located in Special Flood Hazard Area.
 FIRM zone designation A
 100-Year flood elevation is: 877.24 to 883.54 NGVD (MSL)

Unavailable

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

See section 4 for additional instructions.

SIGNED *Dan Wellings*

DATE 12/02/2013

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

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

- A plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.
- Development plans, drawn to scale, and specifications, including where applicable: details for anchoring structures, storage tanks, proposed elevation of lowest floor, (including basement or crawl space), types of water resistant materials used below the first floor, details of flood proffing of utilities located below the first floor and details of enclosures below the first floor. Also _____

- Subdivision or other development plans (If the subdivision or development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).
- Plans showing the extent of watercourse relocation and/or landform alterations.
- Top of new fill elevation _____ Ft. NGVD (MSL).
For floodproofing structures applicant must attach certification from registered engineer or architect.
- Certification from a registered engineer that the proposed activity in a regulatory floodway will not result in any increase in the height of the 100-year flood. A copy of all data and calculations supporting this finding must also be submitted.
- Manufactured homes located in a floodplain area must have a West Virginia Contractor's License and a Manufactured Home Installation License as required by the Federal Emergency Management Agency (FEMA).

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: 12/05/13 BY: Dan Weller
DEFICIENCIES ? Y/N

COMMENTS Const. yet to begin.

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** _____

Victor Pad Doddridge County Floodplain Permit – Exhibit A

Impact Parcel - COX VICTOR R & WANDA F (SURV) Acres 17.823722 District 4 Map 13 PID 8.1
Book 207 Page 541

SALEM

FID	2663
DIST	4
MAP	13
PID	8.1
GIS_Link	4-13-8.1
TAXDIST	4
TAXYR	2008
PARID	04 13000800010000
PAR_MAP	13
PAR_MAP1	8
PAR_MAP2	1
OWNTYPE1	
OWNTYPE2	
OWN1	COX VICTOR R & WANDA F (SURV)
OWN2	
ADDR1	
ADDR2	114 Beech Lick Road
ADDR3	SALEM WV 26426
CITYNAME	SALEM

Victor Pad Doddridge County Floodplain Permit – Exhibit A

STATECODE WV
ZIP1 26426
BOOK 207
PAGE 541
LEGAL1 MEATHOUSE
FORK
LEGAL2 25.5 AC
GISJOIN 4-13-8.1
MAPPED_AC 17.823722

Upstream Parcel - ASPY THOMAS D & HELEN L (SURV) Acres 61.47213742 District 4 Map 14 PID 26 Book 205 Page 253

SALEM

FID 2688
DIST 4
MAP 14
PID 26
GIS_Link 4-14-26
TAXDIST 4
TAXYR 2008
PARID 04
14002600000000
PAR_MAP 14
PAR_MAP1 26
PAR_MAP2 0
OWNTYPE1

Victor Pad Doddridge County Floodplain Permit – Exhibit A

OWNTYPE2

OWN1 ASPY THOMAS
D & HELEN L
(SURV)

OWN2

ADDR1

ADDR2 RT 3 BOX 47

ADDR3 SALEM WV
26426

CITYNAME SALEM

STATECODE WV

ZIP1 26426

BOOK 205

PAGE 253

LEGAL1 BEECH LICK

LEGAL2 62.50 AC

GISJOIN 4-14-26

MAPPED_AC 61.472137

**Downstream Parcel - RYAN KENNETH R SR & HELEN L Acres 32.11335836 District 4 Map 13 PID 7
Book 260 Page 676**

VIENNA

FID 2651

DIST 4

MAP 13

PID 7

GIS_Link 4-13-7

Victor Pad Doddridge County Floodplain Permit – Exhibit A

TAXDIST	4
TAXYR	2008
PARID	04 13000700000000
PAR_MAP	13
PAR_MAP1	7
PAR_MAP2	0
OWNTYPE1	
OWNTYPE2	
OWN1	RYAN KENNETH R SR & HELEN L
OWN2	(SURV)
ADDR1	
ADDR2	4803 10TH AVE
ADDR3	VIENNA WV 26105
CITYNAME	VIENNA
STATECODE	WV
ZIP1	26105
BOOK	260
PAGE	676
LEGAL1	MEATHOUSE 27.73 AC
LEGAL2	
GISJOIN	4-13-7
MAPPED_AC	32.113358

CLEARING & GRUBBING; EROSION & SEDIMENT CONTROLS

Victor Pad

	QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
MOBILIZATION	1	EA	\$19,140.00	\$19,140.00
CONSTRUCTION ENTRANCE	1	EA	\$3,172.76	\$3,172.76
CLEARING & GRUBBING	0.00	AC	\$4,513.25	\$0.00
TREE REMOVAL	16.32	AC	\$2,953.00	\$48,192.96
8" COMPOST FILTER SOCK	0	LF		\$0.00
12" COMPOST FILTER SOCK	600	LF	\$3.82	\$2,292.00
18" COMPOST FILTER SOCK	824	LF	\$7.94	\$6,542.56
24" COMPOST FILTER SOCK	2,295	LF	\$9.23	\$21,182.85
32" COMPOST FILTER SOCK	2,215	LF	\$14.00	\$31,010.00
JUTE MATTING - SLOPE MATTING	69,000	SY	\$2.13	\$146,970.00
SUPER SILT FENCE	1,000	LF	\$8.48	\$8,480.00
9" STRAW WATTLES	11,500	LF	\$3.11	\$35,765.00
TOTAL				\$322,748.13

RETAINING STRUCTURES

	QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
CONCRETE BIN BLOCKS (2' x 2' x 6')	0	EA		\$0.00
GABION CAGES WITH STONE (3' X 3' X 6')	0	EA		\$0.00
HORIZONTAL REINFORCEMENT (INSTALL TENSAR TX190 GEOGRID or EQUIVALENT)	0	SY		\$0.00
TOTAL				\$0.00

SITE

	QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
DRILL PAD EXCAVATION	38,773	CY	\$3.75	\$145,398.75
ACCESS ROADS EXCAVATION	36,712	CY	\$4.16	\$152,721.92
TANK PAD and/or FRAC PIT EXCAVATION	0	CY		\$0.00
OFFLOAD PAD EXCAVATION	918	CY	\$7.00	\$6,426.00
SPOIL PAD EXCAVATION	0	CY		\$0.00
TRUCK QUEUE / TURNAROUND EXCAVATION	0	CY		\$0.00
TOPSOIL	11,000	CY	\$4.09	\$44,990.00
DIVERSION DITCH	0	LF		\$0.00
ROADSIDE DITCH	4,900	LF	\$3.99	\$19,551.00
TOTAL				\$369,087.67

SUMP(S) PER ANTERO RESOURCES STANDARD DETAIL

	QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
INSTALL 102" x 78" x 44" PRE CAST SUMP	5	EA	\$844.22	\$4,221.10
VALVE BOX HDPE PIPE (MINIMUM 12" DIAMETER x 48" HEIGHT)	5	EA	\$545.50	\$2,727.50
4" PVC CONNECTIVE PIPE (ANTERO SUMP DRAIN DETAIL)	300	LF	\$9.42	\$2,826.00
TOTAL				\$9,774.60

AGGREGATE SURFACING - SPREADING, COMPACTION, and/or INSTALLATION

	QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
DRILL PAD AASHTO #1 (8" THICK)	6,000	TON	\$2.59	\$15,540.00
DRILL PAD 1 1/2" or 3/4" CRUSHER RUN STONE (2" THICK)	1,500	TON	\$2.89	\$4,335.00

DRILL PAD GEOTEXTILE FABRIC (US 200)	12,700	SY	\$1.06	\$13,462.00
ACCESS ROADS 6" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK)	8,100	TON	\$2.83	\$22,923.00
ACCESS ROADS 1 1/2" OR 3/4" CRUSHER RUN STONE (2" THICK)	2,025	TON	\$2.95	\$5,973.75
ACCESS ROADS GEOTEXTILE FABRIC (US 200)	16,025	SY	\$1.02	\$16,345.50
*INSTALL TENSAR TX190 GEOGRID or EQUIVALENT	16,025	SY	\$0.82	\$13,140.50
OFFLOAD PAD/TRUCK QUEUE/TURNAROUND 6" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK)	750	TON	\$3.50	\$2,625.00
OFFLOAD PAD/TRUCK QUEUE/TURNAROUND 1 1/2" or 3/4" CRUSHER RUN AGGREGATE (2" THICK)	200	TON	\$4.00	\$800.00
OFFLOAD PAD/TRUCK QUEUE/TURNAROUND GEOTEXTILE FABRIC (US 200)	1,540	SY	\$1.25	\$1,925.00
*INSTALL TENSAR TX190 GEOGRID or EQUIVALENT	1,540	SY	\$1.00	\$1,540.00
TOTAL				\$98,609.75

ROAD CULVERTS

	QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
15" HDPE	360	LF	\$20.11	\$7,239.60
18" HDPE	510	LF	\$23.33	\$11,898.30
24" HDPE	0	LF		\$0.00
30" HDPE	0	LF		\$0.00
36" HDPE	0	LF		\$0.00
42" HDPE	0	LF		\$0.00
48" HDPE	20	LF	\$50.00	\$1,000.00
60" HDPE	0	LF		\$0.00
R4 RIP RAP (INLETS/OUTLETS)	140	TON	\$35.69	\$4,996.60
AASHTO #1 STONE (DITCH CHECKS)	20	TON	\$61.10	\$1,222.00
DITCH LINING - (ACCESS ROAD) JUTE MATTING	0	SY	\$3.00	\$0.00
DITCH LINING - (ACCESS ROAD) SYNTHETIC MATTING (TRM)	2,600	SY	\$3.45	\$8,970.00
DIVERSION DITCH LINING - SYNTHETIC MATTING (TRM)	0	SY		\$0.00
TOTAL				\$35,326.50

FENCING/GATES

	QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
4 FT WOVEN WIRE FARM FENCE w/MINIMUM 10 FT POST SPACING (WOODEN and/or "T" POST)	0	LF		\$0.00
16 FT DOUBLE GATE	0	EA		\$0.00
TOTAL				\$0.00

SEEDING

QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
----------	------	------------	-------------

SITE SEEDING (LIME, FERTILIZER, SEEDING, AND HYDRO-MULCH w/TACK (HYC-2 OR EQUAL))	18	AC	\$3,301.25	\$59,422.50
TOTAL				\$59,422.50

UNFORESEEN SITE CONDITIONS

	QUANTITY	UNIT	UNIT PRICE	FINAL PRICE
*ROCK CLAUSE - BLASTING	0.0	CY	\$3.27	\$0.00
*ROCK CLAUSE - HOE RAMMING	0.0	CY	\$11.35	\$0.00
*FRENCH DRAINS	0.0	FT	\$10.93	\$0.00
*ORANGE SAFETY FENCE w/"T" POST (10FT CENTERS) - WETLAND PROTECTION	0.0	LF	\$10.60	\$0.00
*STEEL PANELS w/"T" POST (10 FT CENTERS) - WETLAND PROTECTION	0.0	LF	\$6.35	\$0.00
*SILT FENCE	0.0	LF	\$4.00	\$0.00
*TEMPORARY SEEDING	0.0	AC	\$2.67	\$0.00
*CONSTRUCTION STAKEOUT	0.0	HOUR	\$1,962.50	\$0.00
* JUTE MATTING - SLOPE MATTING	0.0	SY	\$2.13	\$0.00
TOTAL				\$0.00

GRAND TOTAL	\$894,969.15
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**HEC RAS Flood Plain Study of
Victor Drill Pad Entrance Road**

**For
Antero Resource Appalachian Corporation**

By

**L&W Enterprises Inc.
Petersburg, WV
304-257-4818**

June 1, 2013

Study Description

This study, using US Army Corps of Engineers HEC RAS (Vers 4.10) program, will determine the 100 year flood plain within the study area for existing and developed conditions. Antero Resources will improve an existing road and culvert crossing Beech Lick Run within the floodway to a 20' wide travel way. The existing 48" culvert will be extended by 15' and 8" of new stone placed on the road way.

Existing conditions

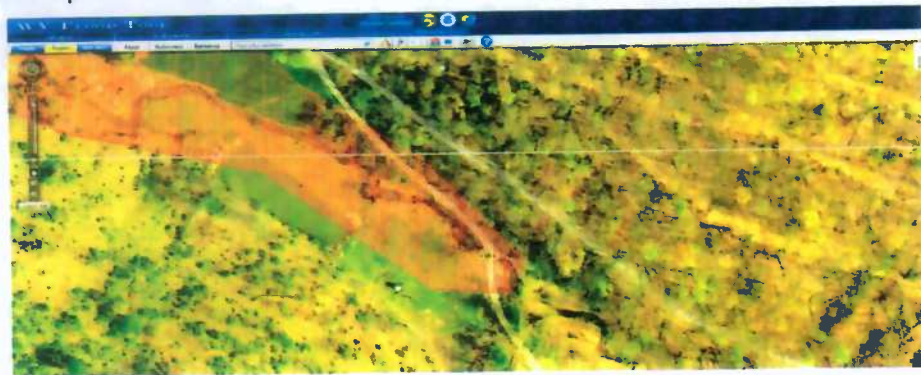
The existing floodway is cut pasture with some trees on the upstream edge. An existing gravel access road crosses Beech Lick Run via a 48" culvert with the road continuing to the south. There is an existing gas well and road and a small pond at the south edge of the valley. The stream runs from south east to north west and is bounded on the north by County Route 25/10 and on the south by the rising mountains. The property in the study area (up and downstream) is owned by Victor and Wanda Cox and Thomas and Helen Aspy. They both have Surface Use Agreements with Antero Resources.

Developed Conditions

The project will improve an existing road and culvert crossing Beech Lick Run within the floodway to a 20' wide travel way. The existing 48" culvert will be extended upstream by 15' with new inlet Rip Rap and 8" of new stone placed on the road way. No other improvements will be made in within the flood plain.

Watershed Description

Enclosure 1 shows the watershed boundaries and conditions overlaid on USGS topo and includes the information required to do the watershed analysis. Values for fields and impervious surfaces were determined by aerial photographs. In general the watershed is typical for the area in Doddridge County. There are steep wooded slopes with relatively wide and flat drainages with meandering streams. This type of watershed will have wide floodways as the low slope stream profile and gradient are not good for stream flow. The water in these types of watersheds tend to rapidly flow from the ridges and accumulate in the floodway and then slowly flow downstream. The area is covered by FEMA Map 54017C0235C and 54017C0250C and is shown as an Approximate Zone A without Base Flood Elevation. Enclosure 2 contains the Firmettes for the study area. The existing Zone A covers a portion of the existing road and the culvert crossing within the flood plain to a point ~30 ft upstream of the existing culvert. Below shows the existing flood plain as shown on the WV Flood Determination Tool.



Watershed Analysis of Peak Flow

The 100 year Peak Flow for the study area was determined using Carlson ServCad Hydrology Module (HydroCad). Runoff curve numbers were assigned to the corresponding areas in the watershed and then weighted accordingly with a resulting weighted CN of 70.8 which was rounded to 71 for analysis purposes. The SCS method was used to determine the Time of Concentration based on the length of flow and average slope. The Time of Concentration for the watershed was calculated to be 172.7 minutes (2.88 hours) which is consistent with this type of watershed. The 100 year storm event is 5.40 inches over a 24 hour period (USDA SCS source).

The resulting 100 year flood event peak discharge was calculated to 927 cubic feet per second (cfs). The results are shown below.

Runoff Curve Number and Runoff Sat Jun 01 07:57:26 2013

Project: Victor By: Date: 06/01/13
 Location: Checked: Date:
 Present

1. Runoff Curve Number (CN)	CN	Soil Group	Area(Acre)
Cover description			
Woods (Good)	70	C	1218.000
Feature Grassland Range (Good)	74	C	225.000
Paved Streets w/ Open Ditches	92	C	10.000

CN (weighted): 70.8
 Total Area: 1453.000 Acre

2. Runoff
 Return Period: 100-Year
 Rainfall, P: 5.40 in
 Runoff, Q: 2.4038 in
 Runoff Volume: 291.0373 Acre-Ft

Time of Concentration (SCS) Sat Jun 01 07:58:08 2013

Project: Victor By: Date: 06/01/13
 Location: Checked: Date:
 Present

Curve Number: 71
 Length of Flow: 14784.00 ft
 Average Land Slope: 4.25 %
 Time of Concentration: 2.878 hrs, 172.7 mins

Graphical Peak Discharge Sat Jun 01 07:58:52 2013

Project: Victor By: Date: 06/01/13
 Location: Checked: Date:
 Present

1. Data:
- Drainage area:.....A = 1453Acres
 - Runoff Curve Number.....CN = 71
 - Time of Concentration:.....Tc = 2.88
 - Storm Type:..... = II
 - Pond and swamp areas spread throughout watershed.... 0.0000 Acres
2. Frequency.....yr = 100
3. Rainfall,P(24-hour).....In = 5.40
4. Initial abstraction, Ia..... = 0.8189
5. Compute Ia/P..... = 0.1813
6. Unit peak discharge, qu.....cm/in = 168.46
7. Runoff,Q.....In = 2.4234
8. Pond & swmp adjustment factor....Fp = 1.00
9. Peak Discharge,qp.....cfs = 927 cfs

HEC RAS Analysis

Cross Sections were developed from survey and ortho-digital topography and entered into the HEC RAS program along with stream reach and Mannings roughness coefficients. Because of the flat gradient, a steady state analysis was performed using Normal Depth boundary conditions for the peak flow. The Mannings n coefficients selected were for the normal to minimal range for the stream and overbank areas. Mannings for the stream was $n=0.030$ as the stream channel is relatively smooth with few obstructions to flow and for the overbanks $n=0.035$.

Existing and developed analysis were performed to determine the appropriate base flood elevations for the given conditions. The model was run with the existing conditions and then with the road improvements with no difference in the calculated flood plain elevations which is reasonable as the existing road and 48" culvert create an obstruction which causes the water to pool upstream of the crossing prior to passing thru the culvert. The analysis did not show the water overtopping the road surface.

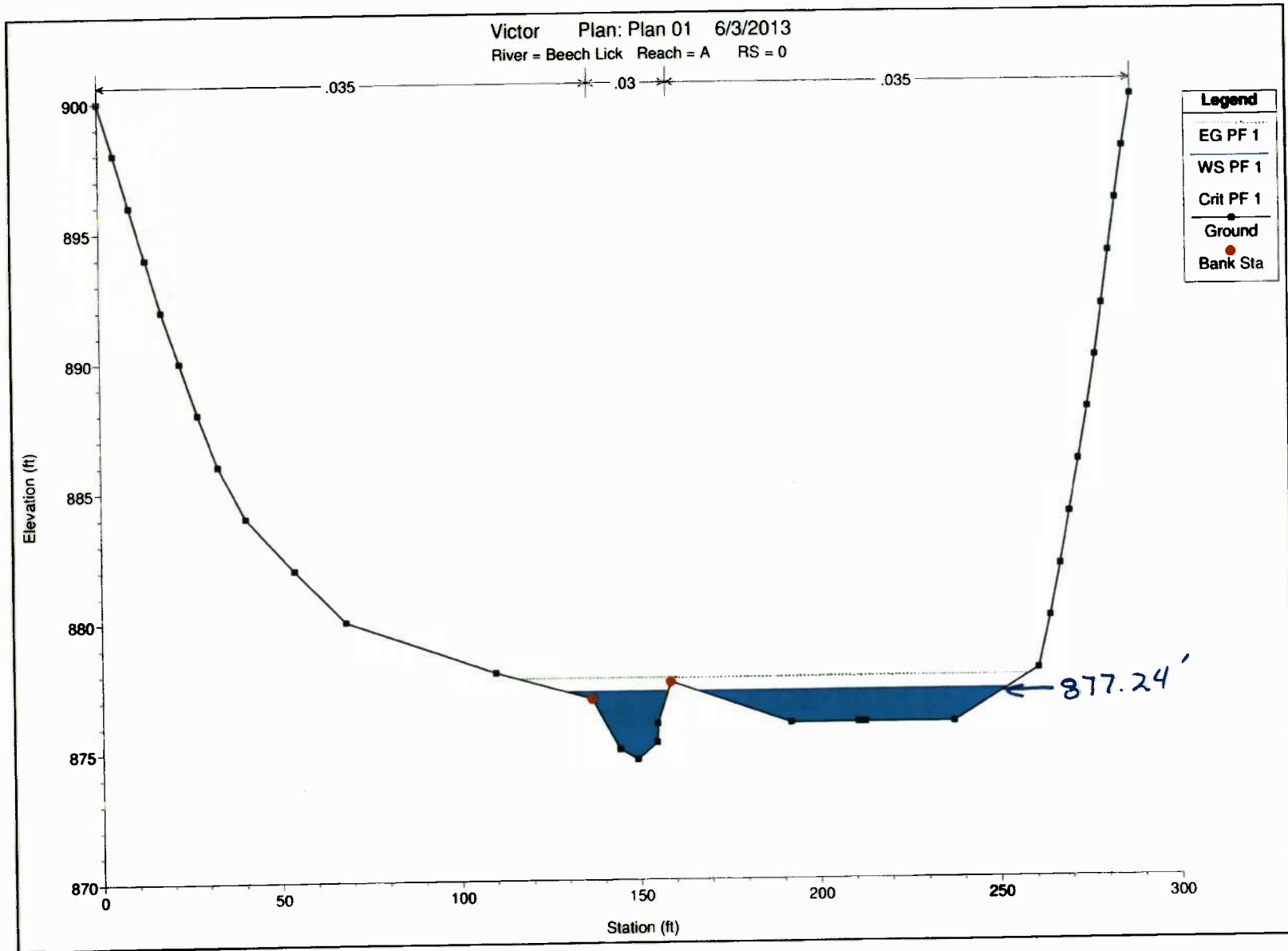
The HEC RAS cross sections for the final conditions are shown in Enclosure 3.

HEC RAS Results

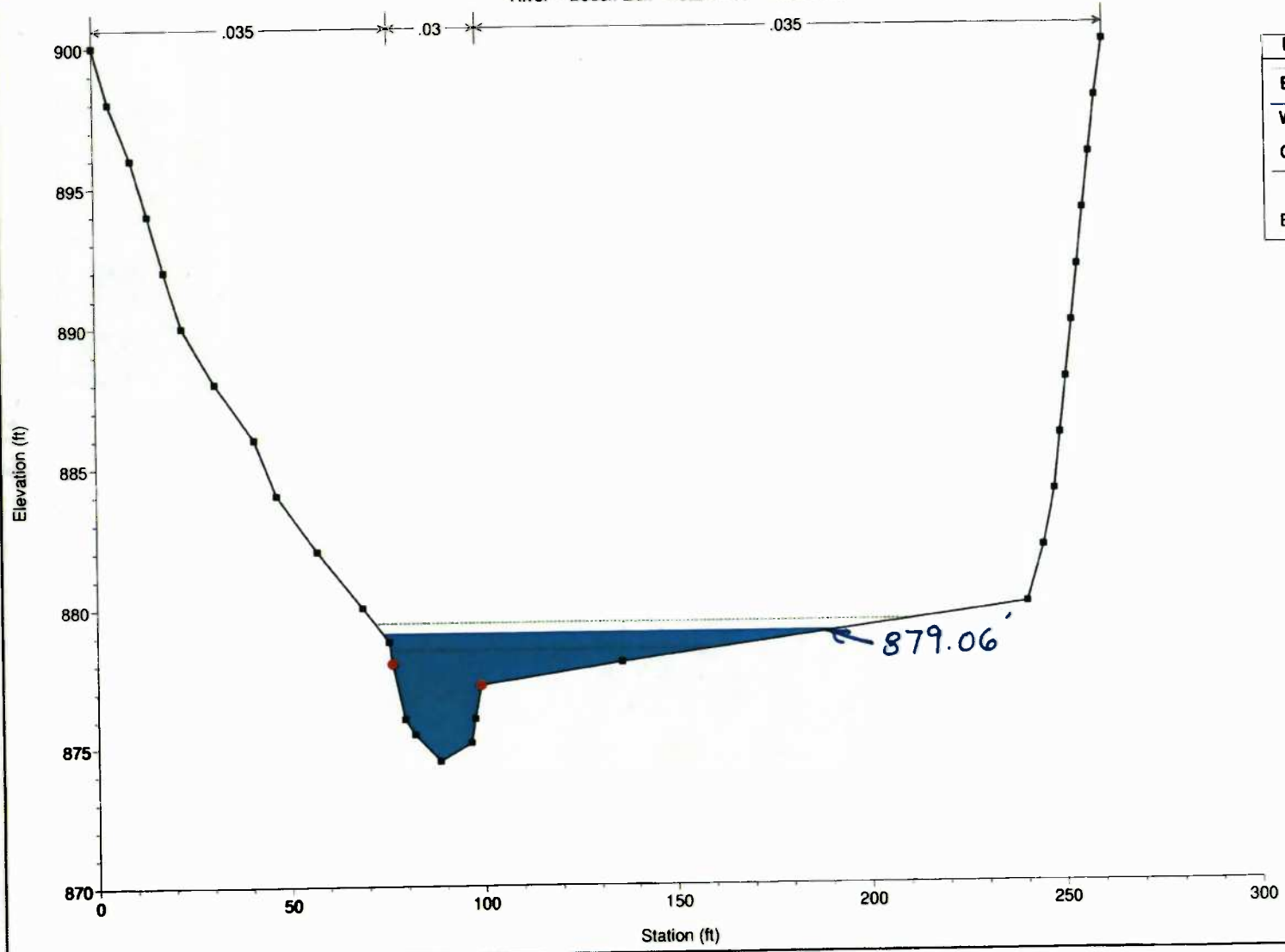
The HEC RAS analysis shows a Base Flood Elevation varying from 877.24 at the downstream extents to 883.54' at the upstream extents. The analysis shows that the improvements to the existing access road and culvert crossing have no effect on the flood plain as the existing structure acts as an obstruction which creates pooling upstream prior to flow passage thru the existing 48" culvert. Downstream of the existing culvert crossing, flood flows remain within the channel for ~100 ft and then spread out over a relatively flat field area which continues downstream. Enclosure 4 is a plan view drawing showing the study area construction, flood plains, cross sections, property ownership and other features. In particular it shows the existing Zone A FEMA floodplain and the calculated HEC RAS developed flood plain.

Based on the HEC RAS results, the Base Flood Elevation varies from 883.54 ft at the upstream end of the studied area to 877.24 ft at the downstream end of the study area as shown in Enclosure 4.

There is no impact from the entrance road improvements to any adjacent property owners. Except for the work associated with the existing culvert extension, the limits of disturbance for the project are outside of the HEC RAS Calculated Flood Plain.

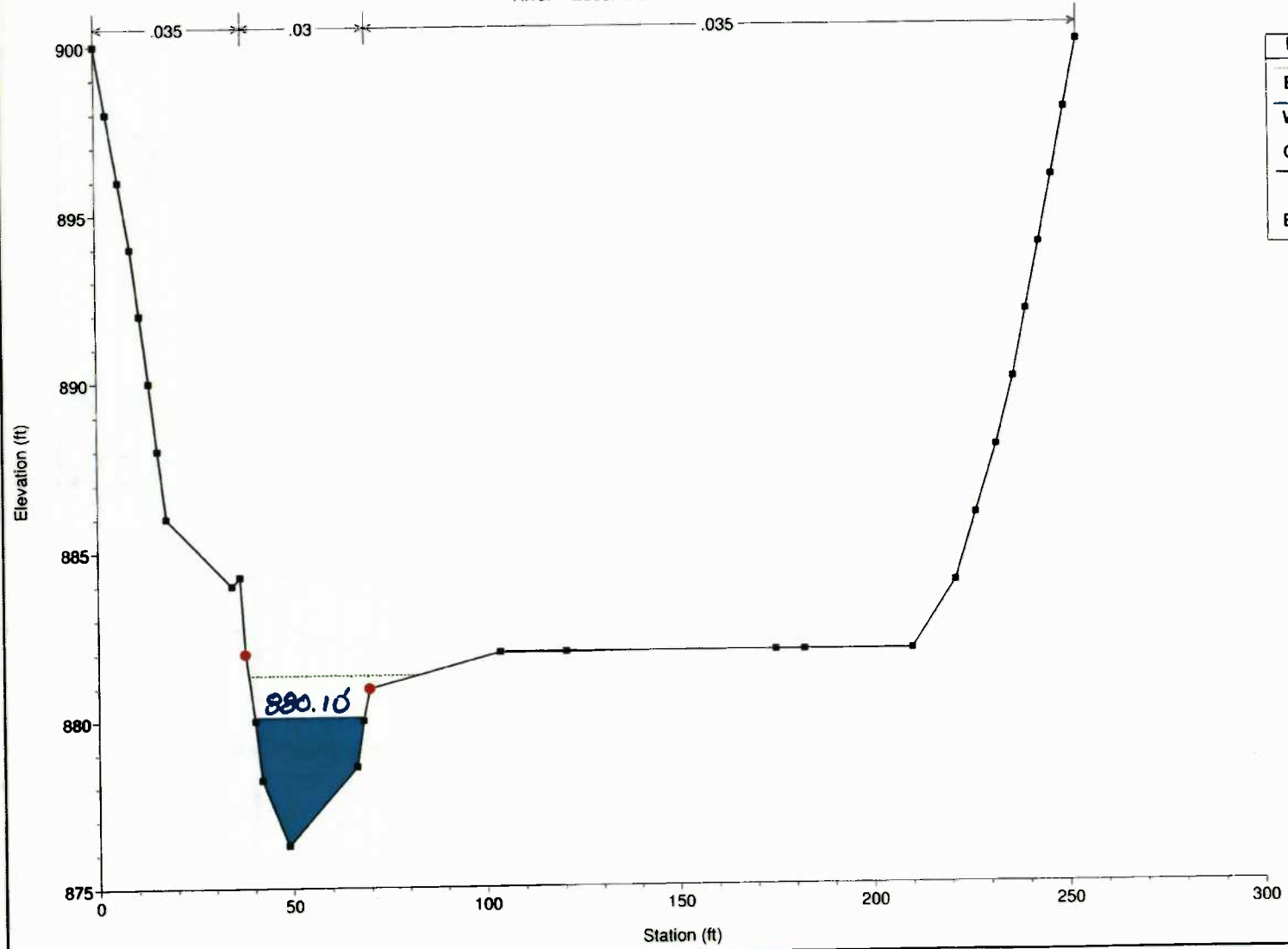


Victor Plan: Plan 01 6/3/2013
River = Beech Lick Reach = A RS = 1.3

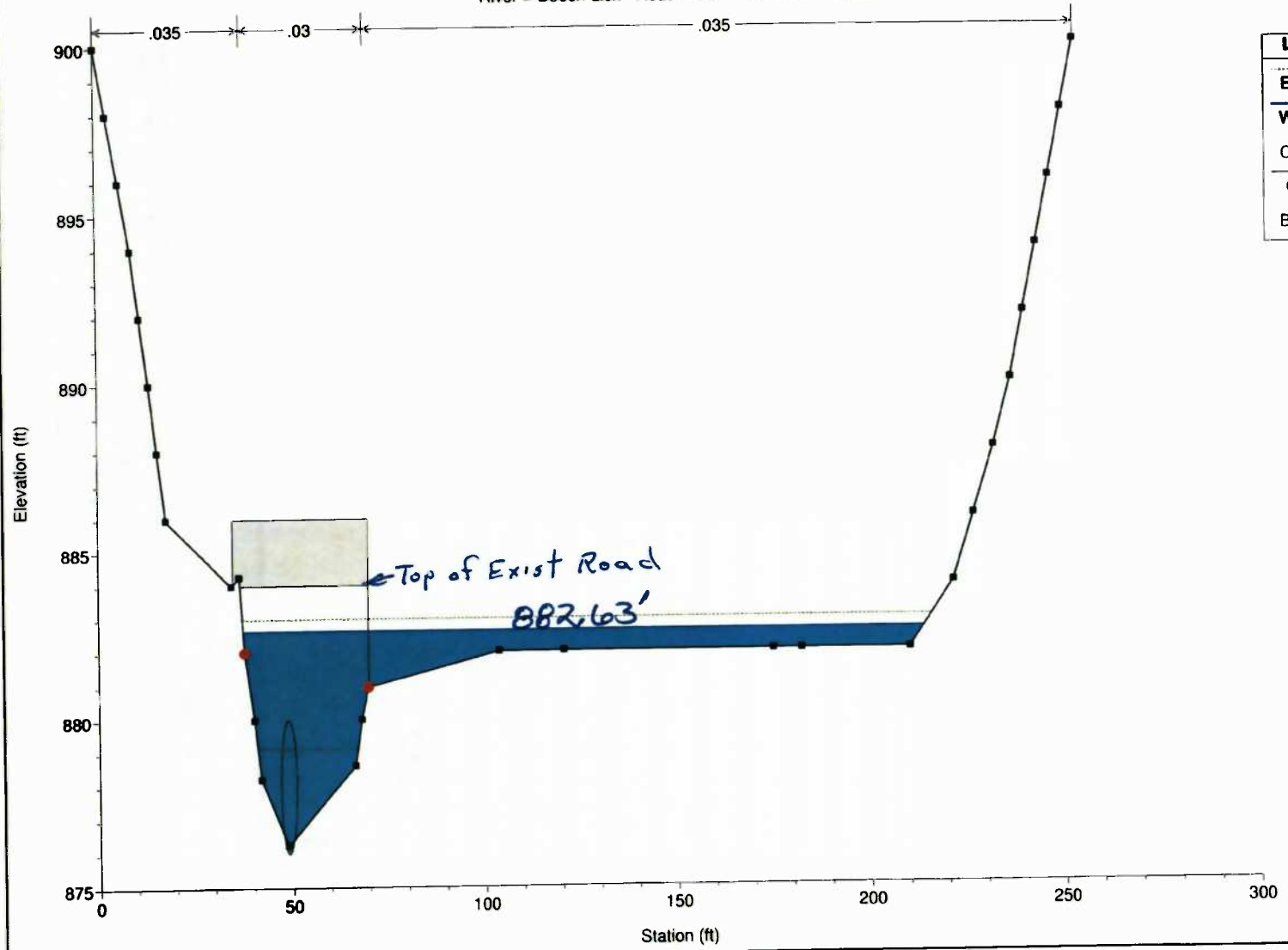


Legend	
EG PF 1	
WS PF 1	
Crit PF 1	
Ground	■
Bank Sta	●

Victor Plan: Plan 01 6/3/2013
River = Beech Lick Reach = A RS = 4.9

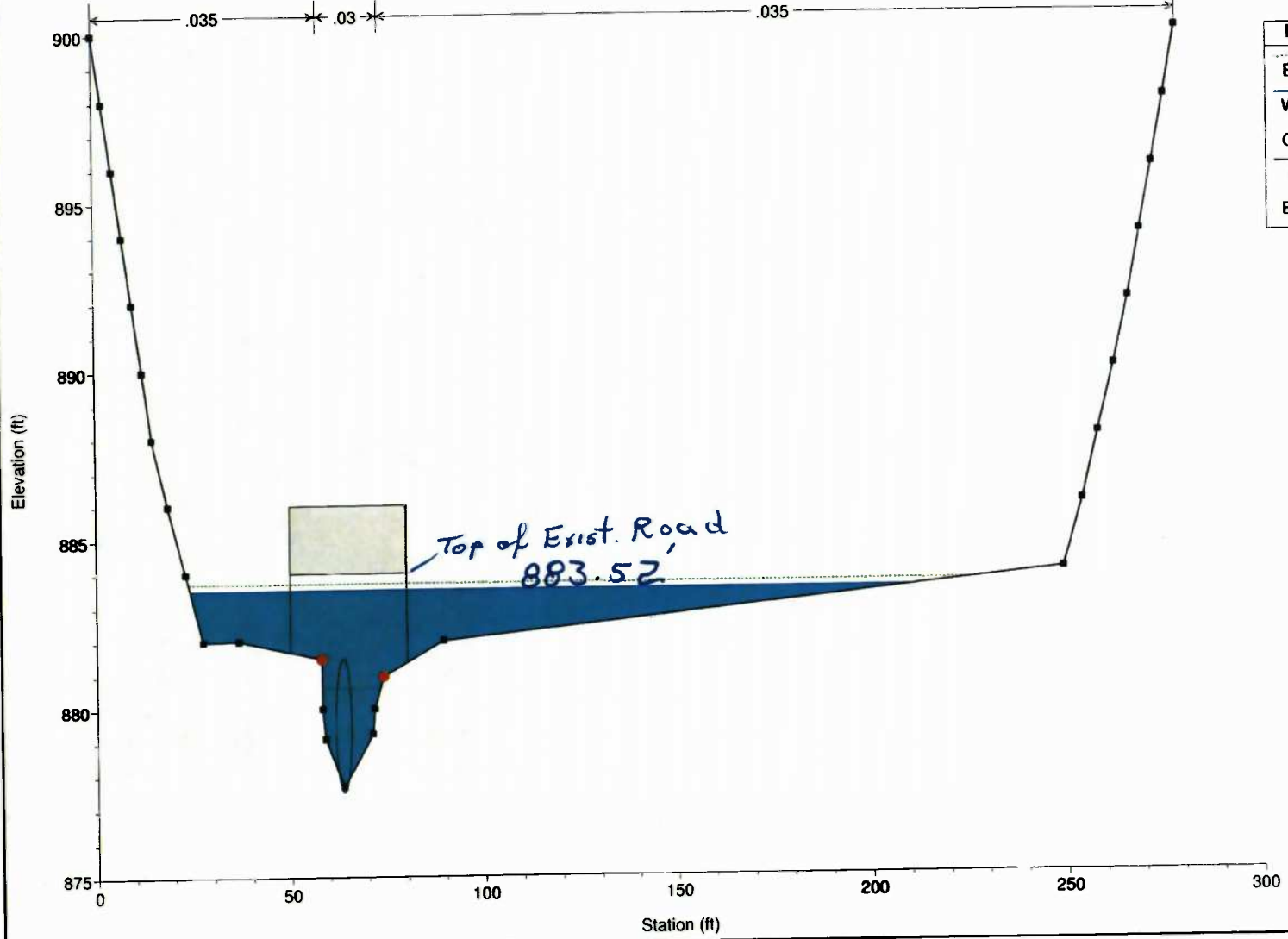


Victor Plan: Plan 01 6/3/2013
River = Beech Lick Reach = A RS = 5.2 Culv



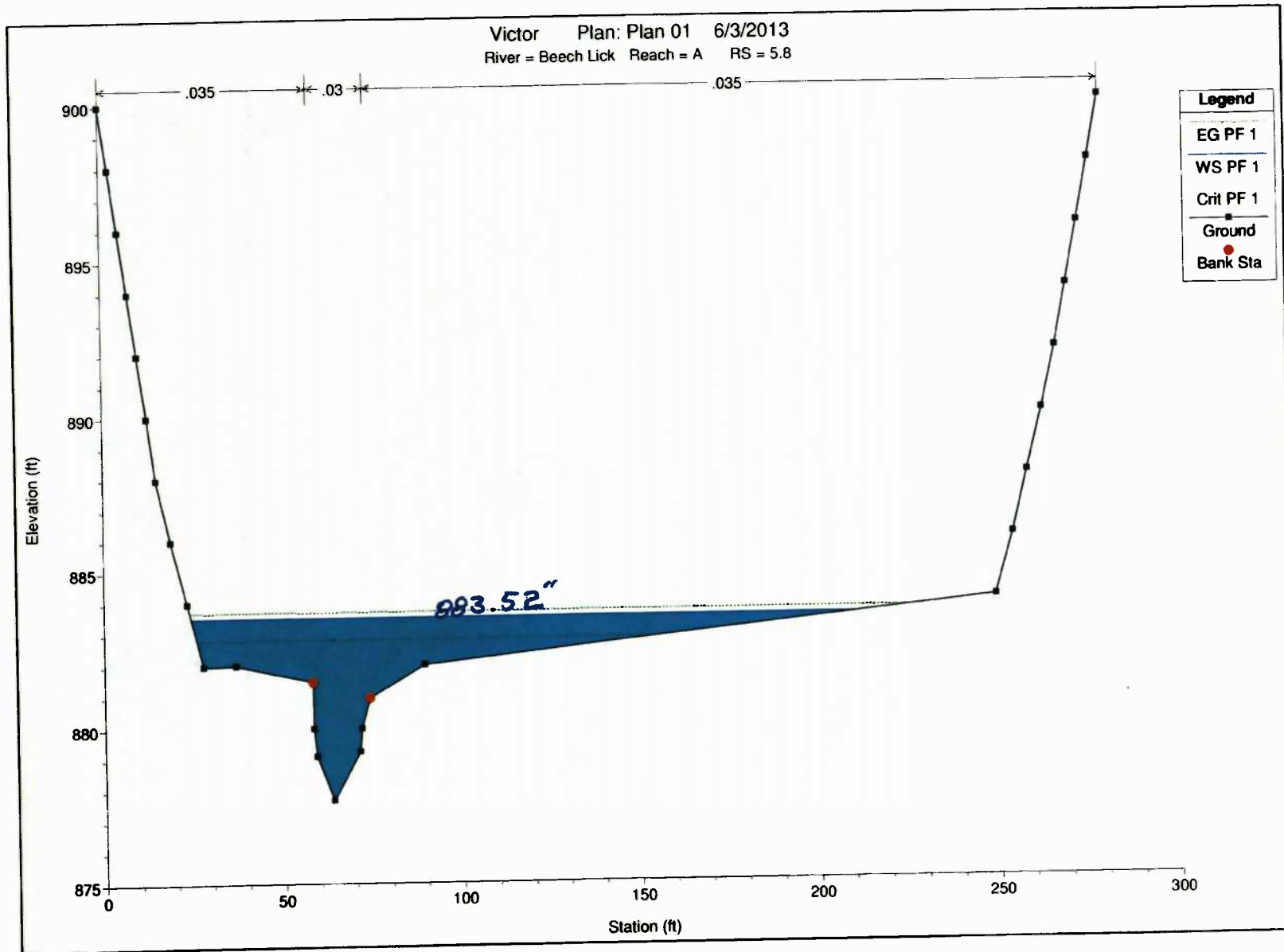
Legend	
EG PF 1	
WS PF 1	
Crit PF 1	
Ground	■
Bank Sta	●

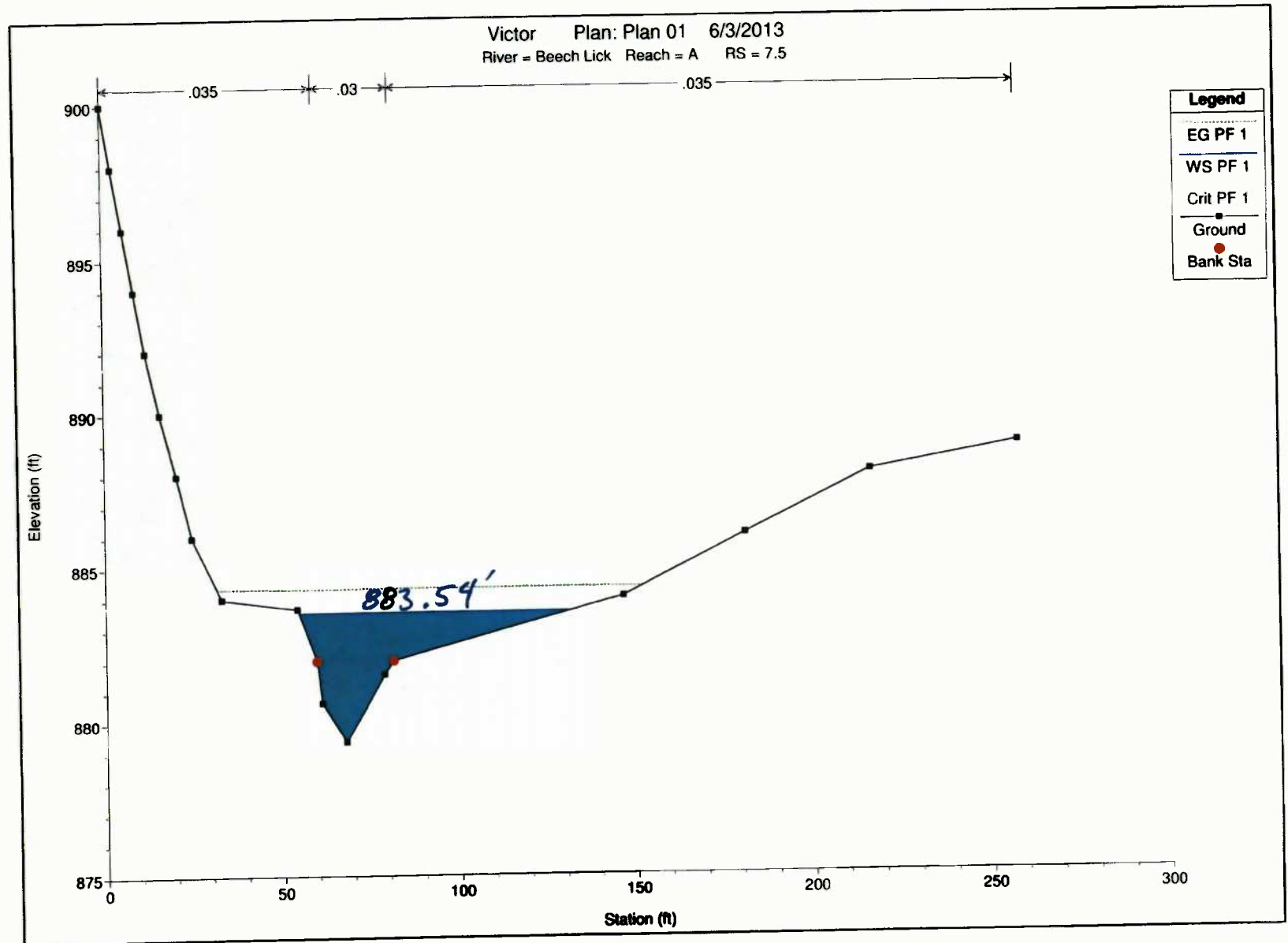
Victor Plan: Plan 01 6/3/2013
River = Beech Lick Reach = A RS = 5.2 Culv



Legend	
EG PF 1	(dotted line)
WS PF 1	(solid line)
Crit PF 1	(line with square markers)
Ground	(line with circle markers)
Bank Sta	(red dot)

Victor Plan: Plan 01 6/3/2013
River = Beech Lick Reach = A RS = 5.8





IMPROVEMENT LOCATION PERMIT APPLICATION
DODDRIDGE COUNTY, WEST VIRGINIA

DODDRIDGE COUNTY COMMISSION
WEST UNION, WEST VIRGINIA 26456

PHONE: (304) 873-2631

A. COVERED ACTIVITIES

This application must be completed and submitted to the Doddridge County Commission if you intend to do one or more of the following activities in Doddridge County, outside of a municipality.

1. Erect or relocate a structure valued at more than \$1,000.00.
2. Alter a building or structure in a way which enlarges the exterior dimensions of the building or structure.
3. Engage in land-altering activities in a flood-prone area.

B. IDENTIFICATION OF PROPERTY OWNER AND BUILDER

1. Property Owner (s)

Name: Antero Resource Appalachian Phone: 304-869-3405
Address: 1625 17th Street, Denver, CO 80202

2. Builder or Contractor

Name: To Be Determined Phone: _____

C. IDENTIFICATION OF PROPERTY

1. District: Greenbrier
2. Date/From Whom Property Purchased: NA
3. Land Book Description: NA
4. Deed Book Reference: 207-541
5. Tax Map Reference: 13-8
6. Existing Buildings/Uses of Property: None

D. IDENTIFICATION OF INTENDED CONSTRUCTION OR LAND USE

1. Briefly describe the intended construction or land use.
2. Sketch on a separate 8 ½ x 11 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 sketch.
4. Estimated cost of building or structure: \$4,000
5. Estimated completion date: Dec 2013

E. NOTES

1. The information on this application is true and accurate to the knowledge of the applicant.
2. The intended construction or land use identified on this application must be started no later than six (6) months from the date the application is approved.
3. In signing this application, it is understood that the Land Development Coordinator or his representative may inspect the property and/or activities identified on this application.
4. If the intended construction or land use identified on this application required Health Department's approval, evidence of such approval from the County and/or State must be submitted to the Doddridge County Commission in order to complete this application.

PUBLIC SEWAGE () YES () NO IF NO, SEPTIC TANK PERMIT # NA

5. Duplicates of this application will be transmitted to:

Doddridge County Assessor's Office

6. The County Commission suggests all applicants call and advise local utility companies of your construction plans in order to avoid damage to underground utility lines.

7. Does your construction or renovation come within the floodplain area?

(x) YES () NO

If your answer is yes, you will be required to have an elevation certificate with your application.

F. I (we), the owner(s) of the property on which the intended improvement is to be constructed, hereby insure that this construction and intended use complies with all restrictive covenants applying to the subject real estate. And, I (we) agree, understand and acknowledge that I (we) assume full responsibility for compliance with any such private land use covenants and that a violation thereof may result in legal sanctions by court injunction and damages irrespective of the issuance of this permit by the Doddridge County Commission.

SIGNED: _____

~~Property Owner~~

Property Owner

Lessee

DO NOT WRITE BELOW THIS LINE – FOR OFFICIAL USE ONLY

Completed Application Received: _____

Subdivision Ordinance:

Complies Does Not Comply Not Applicable

Floodplain Management Ordinance:

Complies Does Not Comply Not Applicable

Flood – Prone:

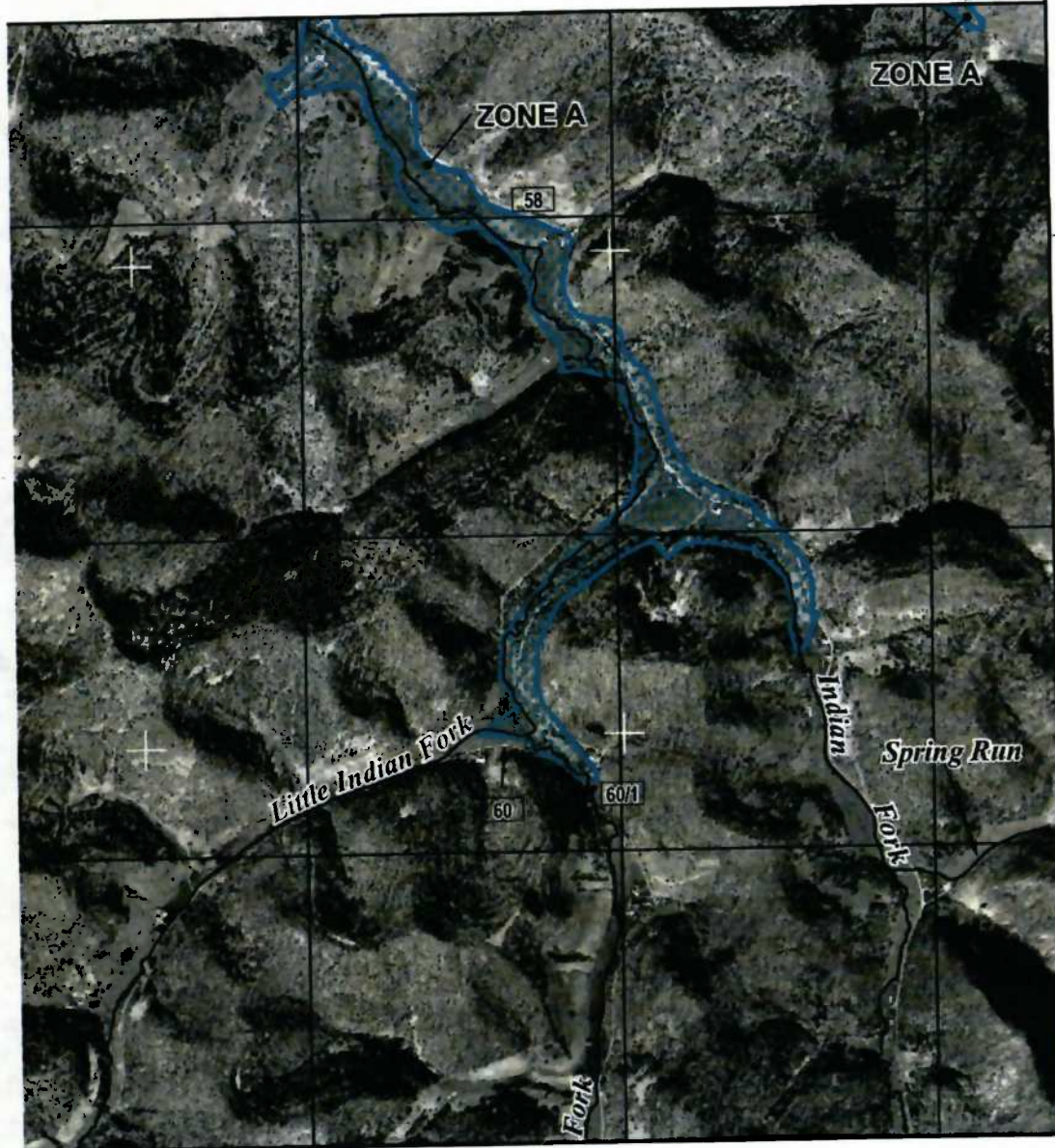
Yes No FIRM Panel No. _____

Aerial No. _____

Application Approved. Permit Issued: _____

Permit No. _____ **Permit Expires:** _____

Signature of Floodplain Manager: _____

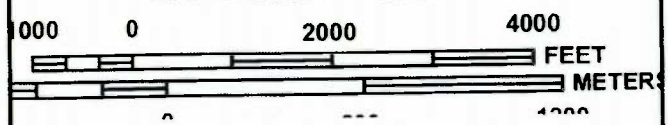


JOINS PANEL 0265

255000 FT
 250000 FT
 245000 FT



MAP SCALE 1" = 2000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0250C

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

PANEL 250 OF 325
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DODDRIDGE COUNTY	540024	0250	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
 54017C0250C
 MAP REVISED
 OCTOBER 4, 2011

Federal Emergency Management Agency

Encl 2 a

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



1645000 FT

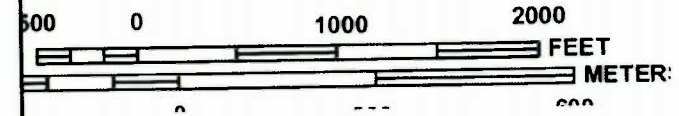
255000 FT

39° 11' 15"

80° 37' 30"
← Study Area



MAP SCALE 1" = 1000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0235C

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

PANEL 235 OF 325
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DODDRIDGE COUNTY	540024	0235	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
54017C0235C
MAP REVISED
OCTOBER 4, 2011

Federal Emergency Management Agency

Encl 2 b

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

STATE OF WEST VIRGINIA,
COUNTY OF DODDRIDGE, TO WIT

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

Floodplain Permit Application
Permit # 13-086

was published in said paper for *1*

successive weeks beginning with the issue
of *November 12* 2013 and

ending with the issue of

November 12 2013 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

\$ *0*
and each publication thereafter

\$ *21.74* TOTAL

EDITOR

Virginia Nicholson

SWORN TO AND SUBSCRIBED

BEFORE ME THIS THE *12th* DAY

OF *November* 2013

NOTARY PUBLIC

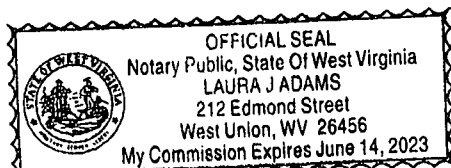
Laura J Adams

LEGAL ADVERTISEMENT
Doddridge County
Floodplain Permit Application

Please take notice that on the 6th day of November, 2013
ANTERO RESOURCES APPALACHIAN
CORPORATION - VICTOR PAD PERMIT #13-086
filed an application for a Floodplain Permit to develop
land located at or about: SURFACE OWNERS: VICTOR
R. AND WANDA F. COX, BEECH LICK ROAD, NEW
MILTON/GREENBRIER DISTRICT, DB: 207541,
TM: 13-8.

The Application is on file with the Clerk of the County
Court and may be inspected or copied during regular
business hours. Any interested persons who desire to
comment shall present the same in writing by November
26th, 2013.

Delivered to the
Clerk of the County Court
118 E. Court Street, West Union, WV 26456
Beth A. Rogers, Doddridge County Clerk
Dan Wellings, Doddridge County Flood Plain Manager
11-12-2013



Antero

13-086



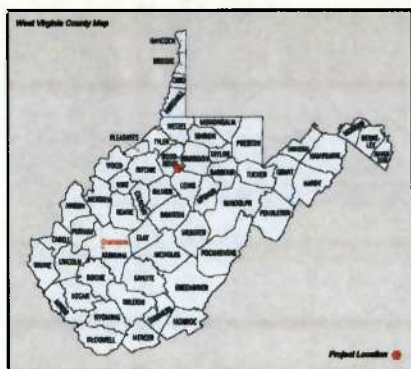
Culvert extension site
prior to construction located
on Beech Lick of MeatHouse Fork

12/05/2013

DJ 2W

VICTOR PAD

PROJECT LOD OVER FEMA FIRM MAPS 54017C0235C / 54017C0250C
ANTERO RESOURCES CORPORATION

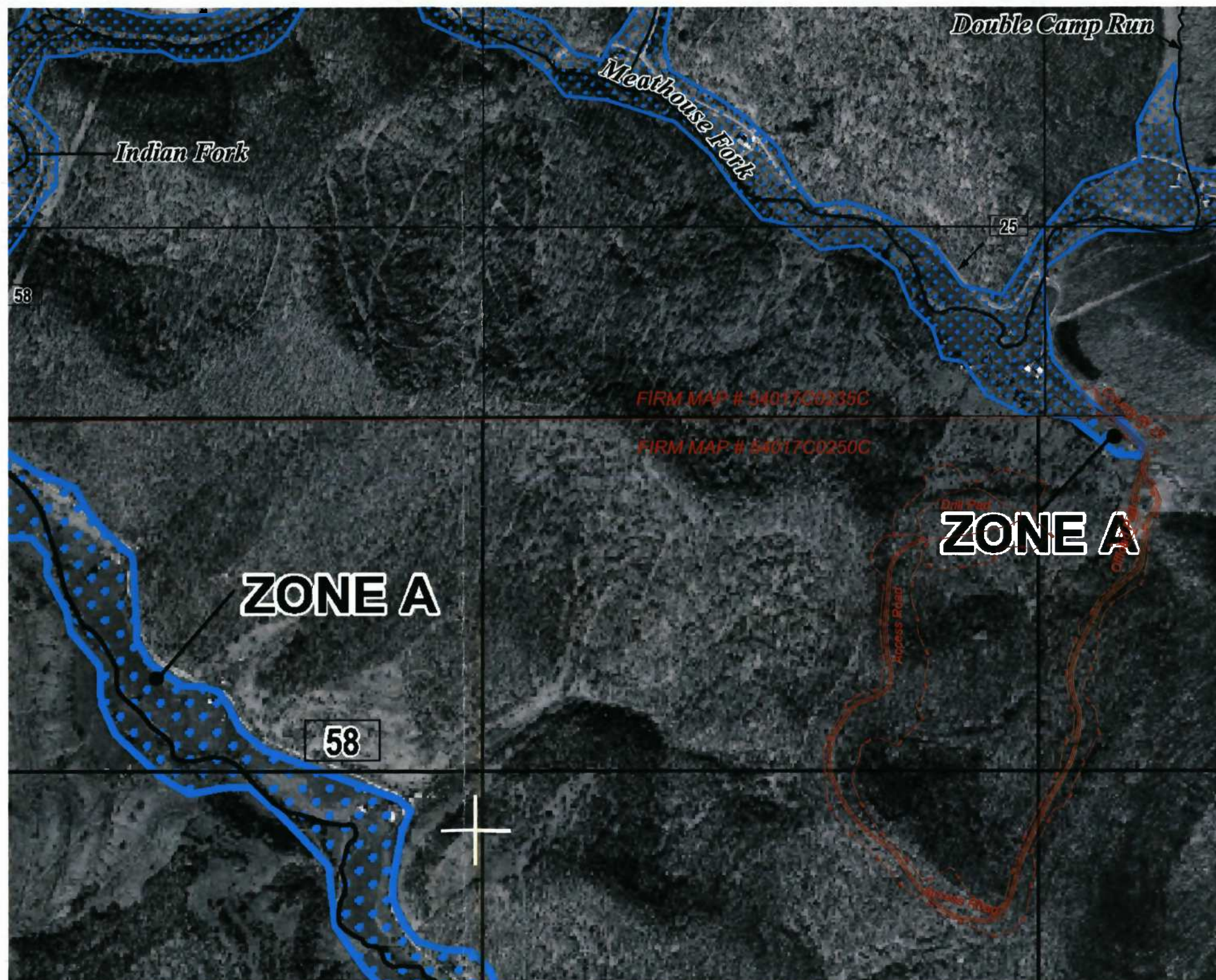


*NOTE: See HEC-RAS Study for further details.

SITE LOCATIONS		
NAD 83		
Begin Acc. Road (UTM Meters)	N=4337712.31 m	E=532084.27 m
Center of Drill Pad (UTM Meters)	N=4337484.51 m	E=531966.34 m
LATITUDE LONGITUDE		
Begin Access Road	39.1892840	-80.8284917
Center of Drill Pad	39.1861095	-80.8310254

NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV
HEADWATERS MIDDLE ISLAND CREEK / MEATHOUSE FORK WATERSHEDS

FLOODPLAIN CONDITIONS	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	YES
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	YES
HEC-RAS STUDY COMPLETED:	YES
FLOODPLAIN SHOWN ON DRAWINGS:	YES
FIRM MAP NUMBER(S) FOR SITE:	54017C0235C / 54017C0250C
ACREAGES OF CONSTRUCTION IN FLOODPLAIN:	0.01 Acres



Allegheny Surveys, Inc.
172 Thompson Drive
Bridgeport, WV 26330
(304) 848-5035

L&W ENTERPRISES, INC.
PO BOX 835
14 SOUTH GROVE ST.
PETERSBURG, WV 26847
TEL: 304-257-8418
FAX: 304-257-2224
EMAIL: L&W@GCTINC.NET



THIS DOCUMENT
PREPARED FOR
ANTERO RESOURCES
CORPORATION

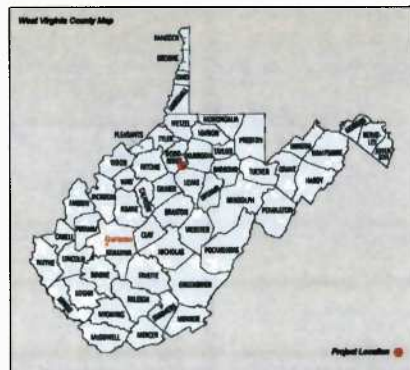
PROJECT LOD OVER FEMA FIRM MAPS
54017C0235C / 54017C0250C
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV

Date: 8/19/13
Scale: 1" = 300'
Designed By: CKW/CKM
File No. Antero 211-12
Page 1 of 1

VICTOR PAD

SITE DESIGN, CONSTRUCTION PLAN, & EROSION & SEDIMENT CONTROL PLANS

ANTERO RESOURCES CORPORATION



Well Table		
Prop. Well Standings Unit 1H WV-N NAD83 E: 251926.80 WV-N NAD83 E: 1847934.87 LAT NAD83: 36.1861338 LOW NAD83: -85.6306818	Prop. Well Sherwood Unit 2H WV-N NAD83 E: 251924.47 WV-N NAD83 E: 1847928.10 LAT NAD83: 36.1861270 LOW NAD83: -85.6306863	Prop. Well Sherwood Unit 1H WV-N NAD83 E: 251922.28 WV-N NAD83 E: 1847916.38 LAT NAD83: 36.1861208 LOW NAD83: -85.6310305
Prop. Well Unassigned Unit 1 WV-N NAD83 E: 251920.00 WV-N NAD83 E: 1847906.63 LAT NAD83: 36.1861141 LOW NAD83: -85.6310947	Prop. Well Unassigned Unit 2 WV-N NAD83 E: 251917.75 WV-N NAD83 E: 1847896.89 LAT NAD83: 36.1861078 LOW NAD83: -85.6310989	Prop. Well Unassigned Unit 3 WV-N NAD83 E: 251915.14 WV-N NAD83 E: 1847884.14 LAT NAD83: 36.1861011 LOW NAD83: -85.6311333

Project Contacts

Antero Resources

Tom Wince - Construction Manager
304-869-3405 Off. 304-483-0933 Cell

Mike Ash - Survey Coordinator
304-380-6181 Cell

Roger Dunlap - Survey Coordinator
304-851-5588

El Wagener, Environmental Engineer
304-622-3842, ext 311 Off. 304-478-9770 Cell

John Kewcak, Engineer
817-368-1553

Dusty Woods
817-771-1436

Aaron Kunzler, Construction Supervisor
405-227-8344

Anthony Smith, Field Engineer
304-869-3405 Off. 304-673-6196 Cell

Surveyor & Engineer

Bill Yetzer, P.S., E.I. - Allegheny Surveys Inc.
304-848-5035 Off. 304-619-4837 Cell

Kirk Wilson, PE - L&W Enterprises, Inc.
304-257-4818 Off. 304-688-0365 Cell

Environmental Consultants

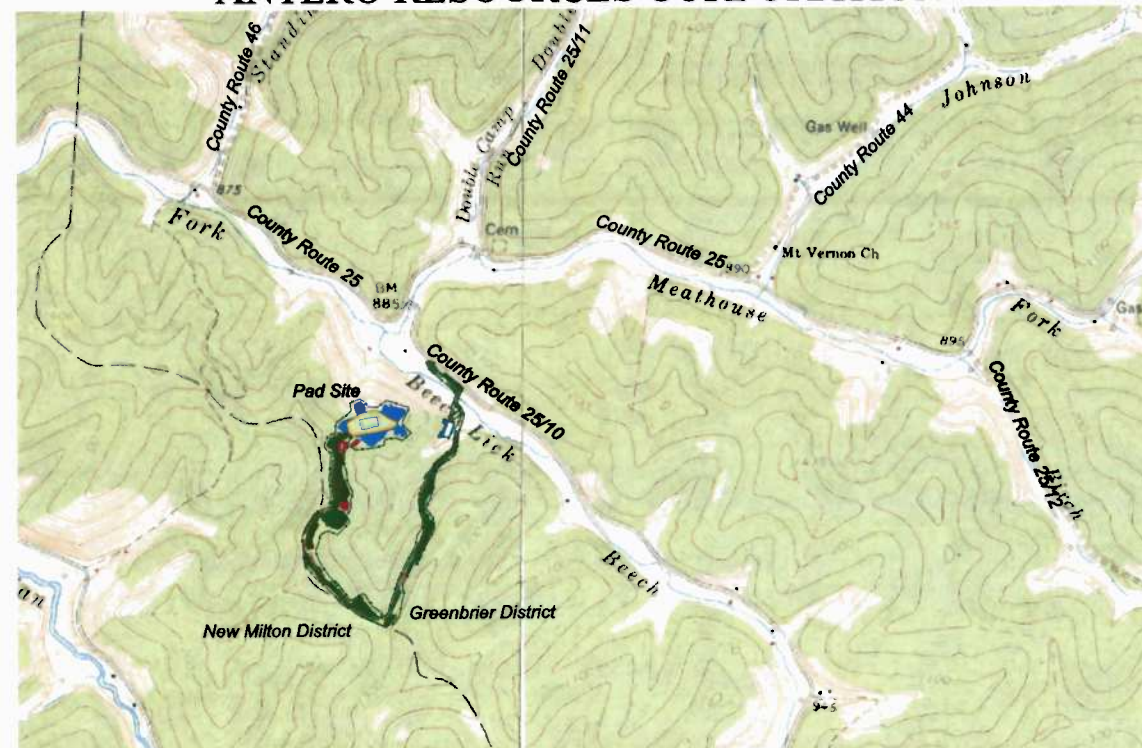
Walter Veselka - Wetland Specialist - AllStar Ecology
304-906-5536

Antero will obtain an Encroachment Permit (Form MM-109) from the West Virginia Department of Transportation Division of Highways, prior to commencement of any construction activities.

Well Location Restrictions:

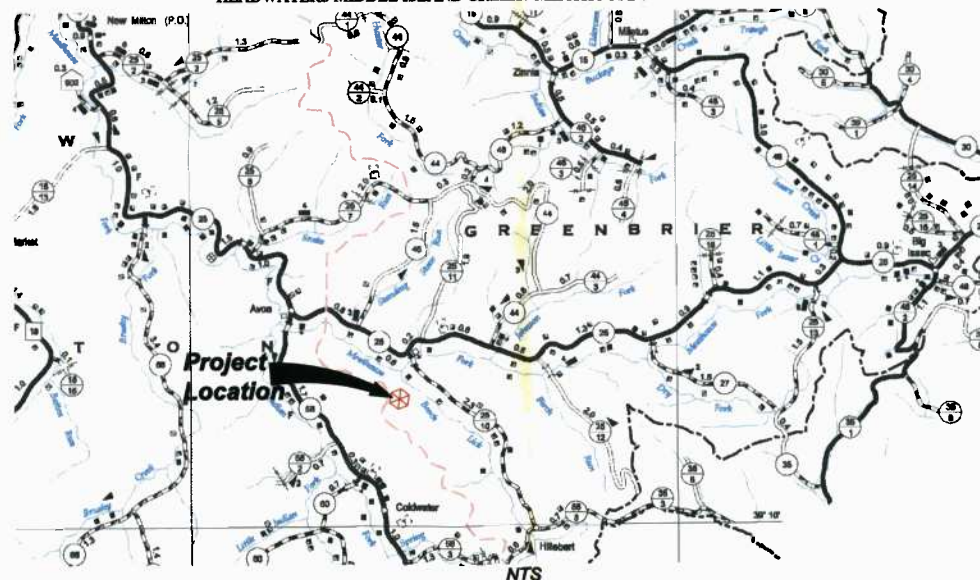
All Pad construction complies with the following restrictions.

- * 250' from an existing well or developed spring used for human or domestic animals.
- * 625' from occupied dwelling or barn greater than 2500 SF used for poultry or dairy measured from the center of the pad.
- * 100' from edge of disturbance to perennial streams, natural or artificial lake, pond or reservoir. Wetlands 4, 7, 8, & 9 are impacted by by Road A and Wetlands 10, 11, & 12 are impacted by the Drill Pad. Army Corps of Engineers Nationwide Permits required for these wetland impacts.
- * 300' from edge of disturbance to a naturally reproducing trout stream.
- * 1000' of a surface or ground water intake to a public water supply.



SITE LOCATIONS		NAD 83	
Begin Access Road (UTM Meter)	N=4337712.31 m	E=532084.27 m	
Center of Drill Pad (UTM Meter)	N=4337494.51 m	E=531866.34 m	
	LATITUDE	LONGITUDE	
Begin Access Road	39.1880640	-80.6284817	
Center of Drill Pad	39.1861085	-80.6310264	

NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV
HEADWATERS MIDDLE ISLAND CREEK / MEATHOUSE FORK WATERSHEDS



West Virginia State Plane Coordinate System
North Zone, NAD83
Elevations Based on NAVD88
Established By Survey Grade GPS & OPUS Post-Processing

Property Owner Information - Victor Pad					
New Milton / Greenbrier District - Doddridge County					
Owner	TM/Parcel	Deed/Page	Total Acres	Type of Disturbance	Acres
Victor R. Cox and Wanda F. Cox	13/8.1	207/541	25.5	Road A	0.02
				Total	0.02
Victor R. Cox and Wanda F. Cox	13/8	207/541	40.32	Road A	1.11
				Road B	0.18
				Tank Offload Pad	0.08
				Drill Pad	3.50
				Total	4.87
Thomas D. and Helen L. Aspy	14/26	205/253	62.5	Road A	0.26
				Road B	0.01
				Total	0.27
Chad W. Johnson, et al	13/10	271/90	63.631	Road A	10.92
				Road B	0.03
				Tank Offload Pad	0.31
				Total	11.26
Chad W. Johnson, et al	13/9	271/90	24	Tank Offload Pad	0.16
				Road A	3.56
				Drill Pad	4.50
				Total	8.22
Elton D. Patton, et al	16/24	186/226	52 Acres	Road A	0.52
				Total	0.52
Brooks J. Gum	16/19	128/8	32.4	Road A	3.32
				Total	3.32
				Grand Total	28.48

LOD Area (ac)	
Road A (6,250 Feet)	19.71
Road B (225 Feet)	0.22
Drill Pad	8.00
Tank Offload Pad	0.55
Total Affected Area	28.48
Total Wooded Acres Disturbed	16.32
Total Linear Feet of Access Road	6,545

Ephemeral Stream Impact (Linear feet)					
Stream and Impact Cause	Culvert (LF)	Inlet/Outlet Structures Fill (LF)	Slope Fill (LF)	Constr. Disturb. To LOD (LF)	Total Impact (LF)
Stream 2 (Access Road A)	0	6	0	4	10
Total Ephemeral Impact	0	6	0	4	10

Intermittent Stream Impact (Linear feet)					
Stream and Impact Cause	Culvert (LF)	Inlet/Outlet Structures (LF)	Slope Fill (LF)	Constr. Disturb. To LOD (LF)	Total Impact (LF)
Stream 1 (Access Road A)	15	7	0	0	22
Total Intermittent Impact	15	7	0	0	22

Perennial Stream Impact (Linear feet)					
Stream and Impact Cause	Culvert (LF)	Inlet/Outlet Structures (LF)	Slope Fill (LF)	Constr. Disturb. To LOD (LF)	Total Impact (LF)
Stream 1 (Access Road A)	15	7	0	0	22
Total Perennial Impact	15	7	0	0	22
Total Stream Impacts					32

Wetland Impact (Square feet)			
Wetland and Impact Cause	Fill (SF)	Constr. Disturb. To LOD (SF)	Total Impact (SF)
Wetland 4 (Access Road A)	10	532	542
Wetland 7 (Access Road A)	0	918	918
Wetland 8 (Access Road A)	0	1106	1106
Wetland 9 (Access Road A)	71	234	305
Wetland 10 (Drill Pad)	0	277	277
Wetland 11 (Drill Pad)	0	70	70
Wetland 12 (Drill Pad)	0	72	72
Total Square Feet	81	3209	3290
Total Acres	0.01	0.07	0.08

DRAWING INDEX

- 1 COVER SHEET/LOCATION MAP
- 2 SCHEDULE OF QUANTITIES
- 3 CONSTRUCTION, EROSION, & SEDIMENT CONTROL NOTES
- 4 EXISTING CONDITIONS
- 5 PLAN SHEET INDEX
- 6-11 SITE PLANS
- 12-13 ACCESS ROAD A CROSS SECTIONS
- 14 DRILL PAD BASELINE PROFILE & CROSS SECTIONS
- 15 DETAILS
- 16 RECLAMATION PLAN

DATE	REVISIONS	Scale: N/A
6-7-13	Updated Per New Antero Standards	Designed By: CKW/CKM
8-19-13	Updated Per New Antero Standards (Sheets: 1, 2, 3, 11, 15, & 16)	File No. Antero 211-12
8-21-13	Updated Wetlands Delineation (Sheets: 1, 4, 5, & 6)	Page 1 of 16

FLOODPLAIN CONDITIONS	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	YES
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	YES
HBC-RAS STUDY COMPLETED:	YES
FLOODPLAIN SHOWN ON DRAWINGS:	YES
FIRM MAP NUMBER(S) FOR SITE:	54017C0235C / 54017C0250C
ACREAGES OF CONSTRUCTION IN FLOODPLAIN:	0.01 Acres

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!!



Know what's below.
Call before you dig.



Allegheny Surveys, Inc.
172 Thompson Drive
Bridgeport, WV 26330
(304) 848-5035



L&W ENTERPRISES, INC.

PE: WA-257-4818
PA: 304-257-2224
14 SOUTH GROVE ST.
PETERSBURG, WV 26447
EMAIL: EIR@LWLINE.NET



THIS DOCUMENT
PREPARED FOR
ANTERO RESOURCES
CORPORATION

COVER SHEET/LOCATION MAP
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV

Date: 2/25/13

Scale: N/A

Designed By: CKW/CKM

File No. Antero 211-12

Page 1 of 16

SCHEDULE OF QUANTITIES

Victor Pad			
DESCRIPTION	QUANTITY	UNIT	FINAL PRICE
CLEARING & GRUBBING; EROSION & SEDIMENT CONTROLS			
MOBILIZATION	1	EA	\$0.00
CONSTRUCTION ENTRANCE	1	EA	\$0.00
CLEARING & GRUBBING (TOTAL TREE REMOVAL 16.32 ACRES)	28.48	AC	\$0.00
8" COMPOST FILTER SOCK	0	LF	\$0.00
12" COMPOST FILTER SOCK	620	LF	\$0.00
18" COMPOST FILTER SOCK	824	LF	\$0.00
24" COMPOST FILTER SOCK	2,295	LF	\$0.00
32" COMPOST FILTER SOCK	2,215	LF	\$0.00
LUTE MATTING - SLOPE MATTING	69,000	SY	\$0.00
SUPER SILT FENCE	1,000	LF	\$0.00
9" STRAW WATTLES	11,500	LF	\$0.00
TOTAL			\$0.00
RETAINING STRUCTURES			
CONCRETE BIN BLOCKS (2' x 2' x 6')	0	EA	\$0.00
GABION CAGES WITH STONE (3' x 3' x 6')	0	EA	\$0.00
HORIZONTAL REINFORCEMENT (INSTALL TENSAR TX190 GEOGRID or EQUIVALENT)	0	SY	\$0.00
TOTAL			\$0.00
SITE UNCLASSIFIED EXCAVATION			
DRILL PAD EXCAVATION	38,773	CY	\$0.00
ACCESS ROADS EXCAVATION	36,712	CY	\$0.00
TANK PAD and/or FRAC PIT EXCAVATION	0	CY	\$0.00
OFFLOAD PAD EXCAVATION	918	CY	\$0.00
SPOIL PAD EXCAVATION	0	CY	\$0.00
TRUCK QUEUE / TURNAROUND / PARKING AREA EXCAVATION	0	CY	\$0.00
TOPSOIL	11,000	CY	\$0.00
DIVERSION DITCH	0	LF	\$0.00
TOTAL			\$0.00
SUMPS (5) PER ANTERO RESOURCES STANDARD DETAIL			
INSTALL 102" x 78" x 44" PRE CAST SUMP PER DETAIL	5	EA	\$0.00
TOTAL			\$0.00
AGGREGATE SURFACING - SPREADING, COMPACTION, and/or INSTALLATION			
DRILL PAD 6" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK)	4,500	TON	\$0.00
DRILL PAD 1 1/2" OR 3/4" CRUSHER RUN STONE (2" THICK)	1,500	TON	\$0.00
DRILL PAD GEOTEXTILE FABRIC (US 200)	12,700	SY	\$0.00
ACCESS ROADS 6" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK)	8,100	TON	\$0.00
ACCESS ROADS 1 1/2" OR 3/4" CRUSHER RUN STONE (2" THICK)	2,025	TON	\$0.00
ACCESS ROADS GEOTEXTILE FABRIC (US 200)	16,025	SY	\$0.00
*INSTALL TENSAR TX190 GEOGRID or EQUIVALENT	16,025	SY	\$0.00
OFFLOAD PAD/TRUCK QUEUE/TURNAROUND 6" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK)	750	TON	\$0.00
OFFLOAD PAD/TRUCK QUEUE/TURNAROUND 1 1/2" OR 3/4" CRUSHER RUN AGGREGATE (2" THICK)	200	TON	\$0.00
OFFLOAD PAD/TRUCK QUEUE/TURNAROUND GEOTEXTILE FABRIC (US 200)	1,540	SY	\$0.00
*INSTALL TENSAR TX190 GEOGRID or EQUIVALENT	1,540	SY	\$0.00
PARKING AREAS 6" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK)	0	TON	\$0.00
PARKING AREAS 1 1/2" OR 3/4" CRUSHER RUN AGGREGATE (2" THICK)	0	TON	\$0.00
PARKING AREAS GEOTEXTILE FABRIC (US 200)	0	SY	\$0.00
*INSTALL TENSAR TX190 GEOGRID or EQUIVALENT	0	SY	\$0.00

* Toe Key Excavation Incidental to Unclassified Excavation = 13,700 CY

DESCRIPTION	QUANTITY	UNIT	FINAL PRICE
TANK PAD 5" OR 4" MINUS CRUSHER RUN AGGREGATE (8" THICK)	0	TON	\$0.00
TANK PAD 1 1/2" OR 3/4" CRUSHER RUN AGGREGATE (2" THICK)	0	TON	\$0.00
TANK PAD GEOTEXTILE FABRIC (US 200)	0	SY	\$0.00
*INSTALL TENSAR TX190 GEOGRID or EQUIVALENT	0	SY	\$0.00
TOTAL			\$0.00
ROAD CULVERTS			
15" HDPE	360	LF	\$0.00
18" HDPE	510	LF	\$0.00
24" HDPE	0	LF	\$0.00
30" HDPE	0	LF	\$0.00
36" HDPE	0	LF	\$0.00
42" HDPE	0	LF	\$0.00
48" HDPE	20	LF	\$0.00
60" HDPE	0	LF	\$0.00
R4 RIP RAP (INLETS/OUTLETS)	155	TON	\$0.00
AASHTO #1 STONE (DITCH CHECKS)	20	TON	\$0.00
DITCH LINING - (ACCESS ROAD) LUTE MATTING	0	SY	\$0.00
DITCH LINING - (ACCESS ROAD) SYNTHETIC MATTING (TRM)	2,600	SY	\$0.00
DIVERSION DITCH LINING - SYNTHETIC MATTING (TRM)	0	SY	\$0.00
TOTAL			\$0.00
FENCING/GATES			
8 FT CHAIN LINK FENCE w/ 3 STRAND BARB WIRE MINIMUM 10 FT POST SPACING (WOODEN and/or "T" POST)	0	LF	\$0.00
16 FT DOUBLE GATE	0	EA	\$0.00
TOTAL			\$0.00
SEEDING			
SITE SEEDING (LIME, FERTILIZER, SEEDING, AND HYDRO-MULCH w/TACK (HYC-2 OR EQUAL))	18	AC	\$0.00
TOTAL			\$0.00
UNFORESEEN SITE CONDITIONS			
* ROCK CLAUSE - HOE RAMMING	0.0	CY	\$0.00
* FRENCH DRAINS	0.0	CY	\$0.00
* PHASE 1 FENCING - STEEL CORRUGATED PANELS w/"T" POST (10 FT CENTERS) - WETLAND PROTECTION	0.0	CY	\$0.00
* PHASE 2 FENCING - SILT FENCE AND/OR FILTER SOCK OUTSIDE OF PHASE 3 FENCING - WETLAND PROTECTION	0.0	CY	\$0.00
* PHASE 3 FENCING - ORANGE SAFETY FENCE w/"T" POST (10 FT CENTERS) - WETLAND PROTECTION	0.0	CY	\$0.00
* 4 FT FARM FENCING (WOOD CORNER AND PULL POST & "T" POST - 10 FT SPACING)	0.0	CY	\$0.00
* 5 STRAND BARB WIRE FENCE (WOOD CORNER AND PULL POST & "T" POST - 10 FT SPACING)	0.0	CY	\$0.00
* SILT FENCE	0.0	FT	\$0.00
* TEMPORARY SEEDING	0.0	LF	\$0.00
* CONSTRUCTION STAKEOUT	0.0	LF	\$0.00
* LUTE MATTING - SLOPE MATTING	0.0	LF	\$0.00
* 18" COMPOST FILTER SOCK	0.0	AC	\$0.00
* 24" COMPOST FILTER SOCK	0.0	HOURL	\$0.00
* 32" COMPOST FILTER SOCK	0.0	SY	\$0.00
TOTAL			\$0.00
ANTERO RESOURCES WILL PROVIDE THE FOLLOWING:			
102" x 78" x 44" PRE CAST SUMP			
VALVE FOR SUMP DISCHARGE			
TX 190 GEOGRID OR EQUIVALENT			
GEOTEXTILE FABRIC (US 200) OR EQUIVALENT			
ALL HDPE OR CMP CULVERTS			
ALL STONE PRODUCTS			
GRAND TOTAL:			\$0.00

The quantities provided are an estimate for consideration. The quantities shown may be greater or less than actually excavated. The engineer is not responsible for variances from the estimated quantities and does not certify to their accuracy.

Victor Pad Quantities						
Description	Cut (CY)	Fill (CY)	Spoil (CY)	Borrow (CY)	Max. Slope	Length Of Slope
Road A	36,700	58,371	n/a	21,671	19.54%	1200 feet
Road B	12	244	n/a	232	8.32%	150 feet
Drill Pad	38,773	18,884	19,889	n/a	n/a	n/a
Tank Offload Pad	918	563	355	n/a	n/a	n/a
Totals	76,403	78,062	20,244	21,903	n/a	n/a
Total Spoil (CY) =			-1,659	(Excess Spoil Capacity)		

The earthwork quantities provided are an estimate for consideration. The quantities shown may be greater or less than actually excavated. The engineer is not responsible for variances from the estimated quantities and does not certify to their accuracy.

EARTHWORK & CAPACITY REPORTS

Access Road A Earthwork Report

Processing 0+00.000 to 62+97.256
Cut Swell Factor: 1.050
Fill Shrink Factor: 1.000
Total Cut: 990900 C.F., 38700.00 C.Y.
Total Fill: 1576017 C.F., 68371.00 C.Y.
Cut to Fill Ratio: 0.62

Access Road B Earthwork Report

Processing 0+00.000 to 2+55.879
Cut Swell Factor: 1.050
Fill Shrink Factor: 1.000
Total Cut: 347,348 C.F., 12,886 C.Y.
Total Fill: 6536,050 C.F., 244,261 C.Y.
Balance Import: 231,396 C.Y.
Cut to Fill Ratio: 0.05

Drill Pad Earthwork Report

Top of pad elevation: 1155.0000
Cut slope percent grade: 66.67, slope ratio: 1.50
Fill slope percent grade: 60.00, slope ratio: 2.00
Cut Swell Factor: 1.05
Fill Shrink Factor: 1.00

Pad Earthwork Volumes
Total cut: 1,046,886.2 C.F., 38,773.53 C.Y.
Total fill: 509,883.6 C.F., 18,884.67 C.Y.
Balance Export: 537,001.7 C.F., 19,888.86 C.Y.
Area: 223699.3 Sq.Ft., 5.135 Acres

Offload Pad Report

Top of pad elevation: 898.0000
Cut slope percent grade: 66.67, slope ratio: 1.50
Fill slope percent grade: 60.00, slope ratio: 2.00
Cut Swell Factor: 1.05
Fill Shrink Factor: 1.00

Pad Earthwork Volumes
Total cut: 24,789.7 C.F., 918.14 C.Y.
Total fill: 15,204.1 C.F., 563.11 C.Y.
Balance Export: 9,585.6 C.F., 355.02 C.Y.
Area: 19085.1 Sq.Ft., 0.436 Acres

DATE	REVISIONS	Scale: N/A
6-7-13	Updated Per New Antero Standards	Designed By: CKW/CKM
8-19-13	Updated Per New Antero Standards	File No. Antero 211-12



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ANTERO RESOURCES

THIS DOCUMENT PREPARED FOR ANTERO RESOURCES CORPORATION

SCHEDULE OF QUANTITIES
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV

Date: 2/25/13

CONSTRUCTION, EROSION AND SEDIMENT NOTES



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ANTERO RESOURCES
CORPORATION

CONSTRUCTION, EROSION AND SEDIMENT NOTES
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV

IMPOUNDMENT / ASSOCIATED PIT CONSTRUCTION SPECIFICATIONS:

(THESE NOTES DO NOT APPLY WHEN IMPOUNDMENTS / FRAC PITS ARE NOT REQUIRED IN THE PLANS)

- THE IMPOUNDMENT/ASSOCIATED PIT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND THE SCOPE OF WORK AND SHALL CONFORM GENERALLY WITH THE GRADES, BERMS, DEPTHS AND DIMENSIONS SHOWN.
- THE CONSTRUCTION DOCUMENTS SHOW THE EXISTING AND NEW GRADES AND BERMS, ETC. THAT ALL CUT AND FILL ESTIMATES ARE BASED UPON. THE ENGINEER'S ESTIMATES OF THE QUANTITIES ARE ONLY ESTIMATES AND MAY CHANGE BASED ON ACTUAL FIELD CONDITIONS.
- THE GRADES, BERMS, DEPTHS, AND DIMENSIONS MAY CHANGE BASED ON ACTUAL FIELD CONDITIONS. THE ENGINEER RESERVES THE RIGHT TO CHANGE GRADES, BERMS, DEPTHS AND DIMENSIONS AS NECESSARY TO MEET FIELD CONDITIONS.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER ALL REASONABLE FACILITIES AND PROVIDE INFORMATION AND SAMPLES AS REQUIRED BY THE ENGINEER FOR PROPER MONITORING AND TESTING OF MATERIAL WORKMANSHIP.
- THE CONTRACTOR SHALL HAVE ON SITE AT ALL TIMES WHEN CONSTRUCTION IS IN PROGRESS A COMPETENT SUPERINTENDENT THOROUGHLY FAMILIAR WITH THE CONSTRUCTION OF EARTH BERMS AND EMBANKMENTS, THE COMPACTON OF SOILS AND PLACEMENTS OF LINERS.
- 6.5 FT. SOIL / SUPER BILT FENCE SHALL BE INSTALLED PRIOR TO CLEARING AND GRUBBING AS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH THE OFFICE OF OIL & GAS, W.V.A. EROSION & SEDIMENT CONTROL FIELD MANUAL, MAY 2012. SURFACE WATER SHALL BE DIVERTED AWAY FROM ALL EXCAVATIONS TO PREVENT FLOODING AND SOFTENING OF THE SUBGRADE OR DRAINAGE MATERIALS.
- CLEARING AND GRUBBING SHALL REMOVE ALL BRUSH, TREES, ROOTS, STUMPS, FENCES, BORDS OR ANY OTHER MATERIAL THAT IS NOT TO BE REUSED FOR THE CONSTRUCTION. SOME STUMPS MAY REMAIN AT THE APPROVAL OF THE ENGINEER. NO CLEARING DEBRIS SHALL BE BURIED ON-SITE.
- TOP SOIL SHALL BE REMOVED AND STOCKPILED WITH APPROPRIATE STABILIZATION AND BILT FENCE TO PREVENT EROSION. THE TOP SOIL SHALL BE REUSED DURING THE RECLAMATION PROCESS OR ON THE FACE OF THE IMPOUNDMENT/FRAC PIT PRIOR TO SEEDING.
- TOP CUTS OF 10' MINIMUM WIDE SHALL BE EXCAVATED ON ALL RECEIVING SLOPES TO PROVIDE A BASE FOR THE IMPOUNDMENT/ASSOCIATED PIT BERMS. ADDITIONAL TERRACING SHALL BE CONSTRUCTED FOR EACH ADDITIONAL FIFTY (50) VERTICAL FEET OF SLOPE AND SHALL BE A MINIMUM OF TEN (10) FEET WIDE.
- PRIOR TO PLACING ANY FILL, THE EXPOSED SUBGRADE SHALL BE COMPACTED AND PROOF ROLLED TO PRODUCE A STABLE AND UNWEAVING SITE.
- IMPOUNDMENT/ASSOCIATED PIT BERMS SHALL BE UNIFORMLY GRADED SOIL FREE FROM AGGREGATE EXCEEDING 1/2". THE FILL SHALL BE FREE OF ALL ORGANIC MATERIAL, STUMPS, BRUSH, OR OTHER DELETERIOUS MATTER.
- ALL FILL SHALL BE PLACED IN LIFTS OF UP TO 12" AND SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY OF THE SOIL PER ASTM D-1556. THE MOISTURE CONTENT SHALL BE CONTROLLED WITHIN PLUS OR MINUS 2% OF THE OPTIMUM TO FACILITATE COMPACTON. CONTRACTOR IS RESPONSIBLE FOR THE ORIGINAL SOIL TEST AND PROVIDING A COPY OF THE RESULTS WITH MOISTURE-DENSITY CURVE TO THE ENGINEER. THE CONTRACTOR SHALL DO IN PLACE DENSITY TESTS EVERY LIFT OF SOIL AND SHALL BE DONE IN TWO RANDOM PLACES ON EACH STRAIGHT SIDE OF THE IMPOUNDMENT/ASSOCIATED PIT BERMS. RECORDS SHALL BE MAINTAINED OF TEST LOCATION AND RESULTS AND PROVIDED TO THE ENGINEER ON REQUEST. AREAS THAT FAIL FOR COMPACTON SHALL BE REMOVED, RE-COMPACTED AND RETESTED FOR COMPLIANCE. IN LIEU OF MODIFIED PROCTOR TESTING, THE CONTRACTOR MAY PROOF-ROLL THE SOIL EVERY 12" OF SOIL LIFT WITH A LOADED 16 TON TANDEM SHAW TRUCK. SOIL THAT DEFORMS UNDER THE REAR WHEELS GREATER THAN 1/2" SHALL BE REMOVED, RE-COMPACTED AND RETESTED. COMPACTON OF SOIL SHALL BE DONE WITH A 4 TON SHEEPS FOOT, OR VIBRATORY ROLLER.
- ON-SITE FILL SHALL BE USED TO THE MAXIMUM EXTENT POSSIBLE. ANY IMPORTED FILL SHALL BE CERTIFIED BY THE CONTRACTOR TO BE CLEAR OF ALL HAZARDOUS SUBSTANCES OR MATERIALS. IF MATERIAL IS ENCOUNTERED THAT CANNOT BE RIPPED BY A CAT/D WITH A SINGLE TOOTH RIPPER, THEN THE CONTRACTOR SHALL CONTACT THE ENGINEER WHO WILL VISIT THE SITE AND DETERMINE IF THE MATERIAL MAY BE USED AS IS OR MUST BE REMOVED BY OTHER MEANS. IF UNSUITABLE SOILS IN THE SUBGRADE ARE FOUND THEY SHALL BE REMOVED AND REPLACED WITH APPROPRIATE FILL AT THE CONTRACTOR'S EXPENSE AND THE ENGINEER'S DIRECTION.
- THE INSIDE OF THE IMPOUNDMENT/ASSOCIATED PIT SHALL BE BOTH SMOOTH DRUM ROLLED AND FREE OF PROTRUDING OR SHARP ROCKS IN ORDER TO RECEIVE THE LINER.
- PRIOR TO THE LINER INSTALLATION THE CONTRACTOR SHALL CONTACT THE SURVEYOR TO DO AN AS-BUILT SURVEY OF THE IMPOUNDMENT/ASSOCIATED PIT TO ENSURE CONFORMANCE WITH THE ENGINEER'S DRAWINGS. THE SURVEYOR SHALL PROVIDE THE INFORMATION TO THE ENGINEER WHO WILL MAKE DETERMINATIONS ON ANY VARIATION FROM THE DRAWINGS AND DIRECT THE CONTRACTOR TO DO CORRECTIVE WORK.
- LINER SHALL BE POLYPLEX SUPERVIBRONS TEXTURED HDPE GEOMEMBRANE, 60ML, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. THE TOP OF THE LINER SHALL BE TURNED DOWN INTO A 4" CHANNEL TRENCH AT THE TOP OF THE BERMS AND CONTROLLED WITH REEPT-FILL AS SHOWN ON THE DRAWINGS OR AS REQUIRED BY THE LINER MANUFACTURER.
- PHOTOGRAPHIC DOCUMENTATION SHALL BE TAKEN BY THE CONTRACTOR AND PROVIDED TO THE ENGINEER OF THE FOLLOWING ACTIVITIES: 1. SITE AFTER CLEARING AND GRUBBING; 2. THE SITE AFTER TOPSOIL REMOVAL; 3. THE KEY AND INSPECTION TRENCH CONSTRUCTION; 4. DAILY PHOTOS OF CUT AND FILL OPERATIONS; 5. PROOF-ROLLING TESTS.
- PRIOR TO AS-BUILT CERTIFICATION, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COMPLETE ENRICH THAT INCLUDES ALL PHOTO DOCUMENTATION, ALL COMPACTON TEST REPORTS, RESULTS AND MAPS, A REPORT OF ALL CUT AND FILL VOLUMES IN CUBIC YARDS, AND A COPY OF THE AS-BUILT CONFIRMATION SURVEY PRIOR TO LINER PLACEMENT.

GENERAL NOTES

- ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH PROBLEMS. WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
- WORK ON THIS PROJECT SHALL CONFORM TO THE OFFICE OF OIL & GAS, W.V.A. EROSION & SEDIMENT CONTROL FIELD MANUAL, MAY, 2012. IN THE EVENT OF CONFLICT BETWEEN THE DESIGN, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT WILL GOVERN.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED DAILY, RELOCATED WHEN NECESSARY AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDING AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- ALL DRAIN INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE MEANS OF CLEANING.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR, AT HIS OR HER EXPENSE, OF ALL EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL CALL MISS UTILITY AT (800) 245-4848.
- INSTALLATION OF CONCRETE, CORRUGATED METAL, OR HDPE STORM PIPE SHALL BE IN CONFORMANCE WITH THESE DRAWINGS.
- ALL MATERIALS USED FOR FILL OR BACK FILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS OR ANY OTHER NON-COMPACTABLE SOIL TYPE MATERIALS. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.
- MATERIALS USED TO FILL AROUND ORANGE STRUCTURES IN UTILITY TRENCHES OR ANY OTHER DEPRESSION REQUIRING FILL OR BACK FILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET FORTH IN ASTM STANDARD D-1556. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACK FILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. THE TESTS SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND THE CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THESE TESTS AND THEIR SUBMITTALS.
- FILL SHALL BE PLACED IN LIFTS AT A MAXIMUM UNCOMPACTED DEPTH OF 12-INCHES WITH SOIL FREE FROM AGGREGATES EXCEEDING 1/2".
- ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER. FAILURE TO CONDUCT DENSITY TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE OF THE FACILITY. TESTS SHALL BE CONDUCTED AT THE SOLE COST OF THE CONTRACTOR OR HIS AGENT.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION.
- SATISFACTORY MATERIALS FOR USE AS FILL FOR PAD AREAS INCLUDE MATERIALS CLASSIFIED IN ASTM D-2487S GW, GM, GC, SW, SP, SM, SC, ML, AND CL GROUPS. THE MOISTURE CONTENT SHALL BE CONTROLLED WITHIN PLUS OR MINUS 2% OF THE OPTIMUM TO FACILITATE COMPACTON. GENERALLY, UNSATISFACTORY MATERIALS INCLUDE MATERIALS CLASSIFIED IN ASTM D-2487 AS PT, CH, MH, CL, OH AND ANY SOIL TOO WET TO FACILITATE COMPACTON. CH AND MH SOILS MAY BE USED SUBJECT TO APPROVAL OF THE ENGINEER. SOILS SHALL HAVE A MINIMUM DRY DENSITY OF 124KPC PER ASTM D-1556 AND SHALL HAVE A PLASTICITY INDEX LESS THAN 17.
- CONTRACTOR SHALL SUBMIT AND ADHERE TO A GENERAL GROUNDWATER PROTECTION PLAN.

EROSION CONTROL NOTES

- THE CONTRACTOR SHALL ARRANGE FOR A PRE-CONSTRUCTION CONFERENCE WITH THE APPROPRIATE EROSION AND SEDIMENT CONTROL INSPECTOR 48 HOURS PRIOR TO BEGINNING WORK.
- ALL EROSION CONTROL DEVICES AS SHOWN OR AS REQUIRED, ARE TO BE CONSTRUCTED TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE WEST VIRGINIA EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL AND ARE TO BE IN PLACE PRIOR TO ALL CONSTRUCTION.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDING AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- ALL DISTURBED AREAS NOT PAVED OR BUILT UPON ARE TO BE FERTILIZED, SEEDING, HYDRO-SEEDING (WITH STRAW AND COTTON PRODUCT WITH TACK AGENTS) OR MULCHED BY THE CONTRACTOR IN ACCORDANCE WITH THE OFFICE OF OIL & GAS, W.V.A. EROSION & SEDIMENT CONTROL FIELD MANUAL, MAY 2012.
- ALL DRAIN INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENuded AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENuded AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 21 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN SIX MONTHS.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.
- SEDIMENT BASINS AND TRAPS, PERMETER DYES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP-SLOPE LAND DISTURBANCE TAKES PLACE.
- STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS IMPOUNDMENT/FRAC PITS, Dikes AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 90 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- ALL DISTURBED AREAS NOT PAVED OR BUILT UPON SHALL BE SEEDING, SLOPE MATTED AND FERTILIZED. PERFORM PERMANENT TOP SOILING, SEEDING, FERTILIZING, AND MATTING AS SOON AFTER FINISH GRADING AS POSSIBLE. SEEDING SHALL COMPLY WITH THE FOLLOWING:
 - TOPSOIL - 4 INCH MINIMUM FOR PERMANENT TURF
 - FERTILIZER - 600 POUNDS PER ACRES OF 10-20-10 FERTILIZER OR EQUIVALENT POUNDAGE OF DIFFERENT ANALYSIS. WORK INTO SOIL PRIOR TO SEEDING.
 - LIME (PERMANENT SEEDING) - AGRICULTURAL LIME SPREAD AT RATE OF 4 TONS/ACRE. WORK INTO SOIL PRIOR TO SEEDING.
 - MULCH - WOOD FIBER OR CHOPPED STRAW AT RATE OF 2 TONS PER ACRE. HYDRO-MULCH (EAST COAST EROSION CONTROL HY-C2 OR EQUAL) AT MANUFACTURER'S RECOMMEND RATE OR 2500 LB/AC WHICH EVER IS GREATER.
 - SEED - 25 LBS. PER ACRE CROWN VETCH AND 30 LBS. PER ACRE PERENNIAL RYEGRASS. TO BE SEEDING BY HAND OR HYDRO-SEEDER.

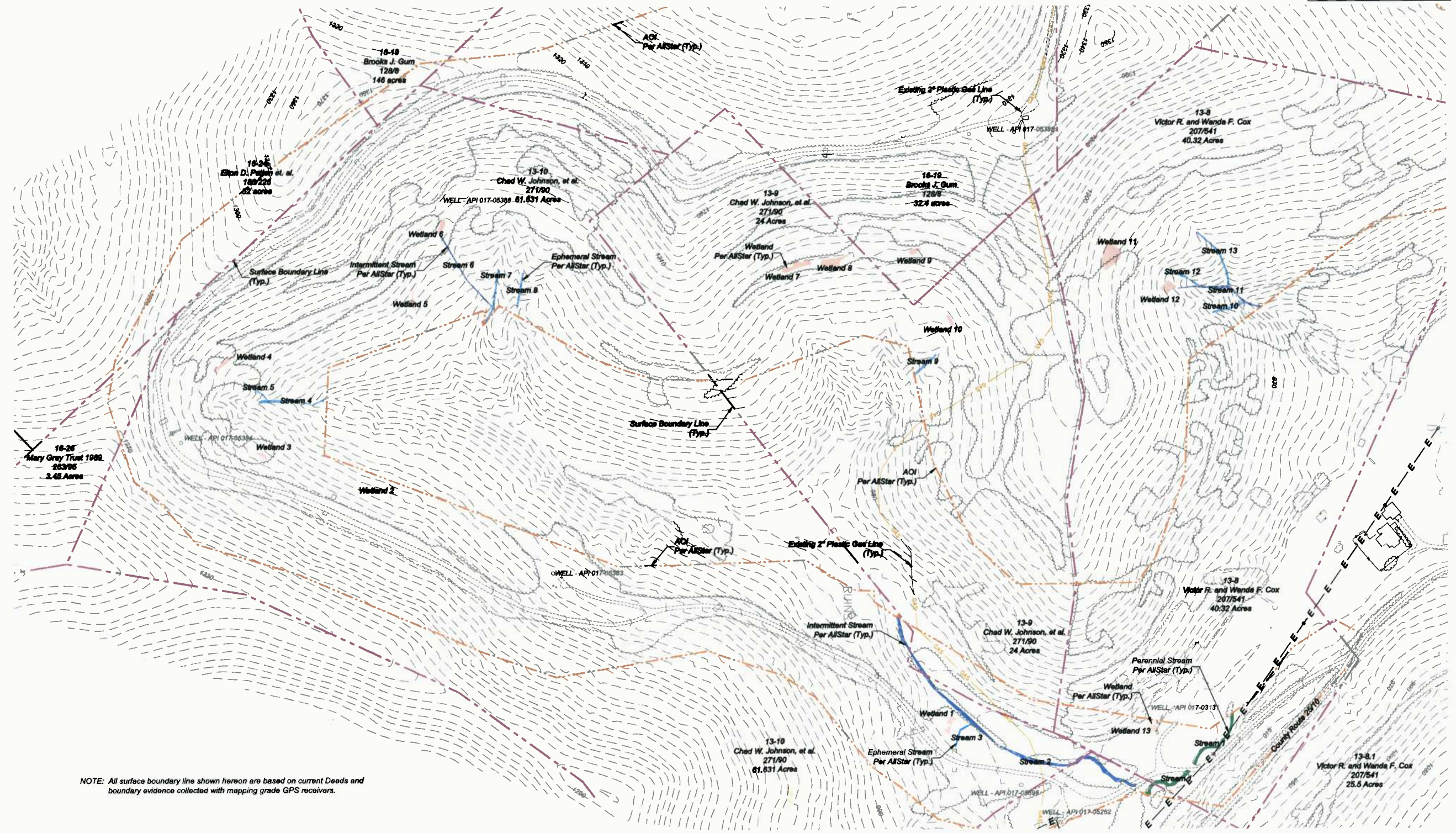
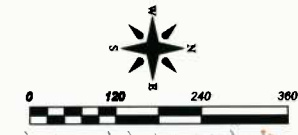
EROSION AND SEDIMENT CONTROL NARRATIVE

- PROJECT DESCRIPTION:** THE PURPOSE OF THIS PROJECT IS TO GRADE AND INSTALL EROSION AND SEDIMENT CONTROL MEASURES, IN PREPARATION FOR THE CONSTRUCTION OF A GAS WELL PAD NEAR BIG ISAAC, WEST VIRGINIA, IN DODDRIDGE COUNTY. THE CONSTRUCTION INCLUDES TWO ACCESS ROADS, DRILL PAD, TANK OFFLOAD PAD, STORM WATER CONTROLS, AND INCIDENTAL WORK. THE TOTAL APPROXIMATE LAND DISTURBANCE ASSOCIATED WITH THIS PROJECT IS 28.48 ACRES.
- EXISTING SITE CONDITIONS:** THE EXISTING SITE IS UPLAND HARDWOODS WITH MODERATE TO STEEP TOPOGRAPHY WITH 0% TO 50% SLOPES. NO EROSION IS NOTICED ON SITE, ON ADJOINING PROPERTIES OR IN ANY NATURAL DRAINAGEWAYS. THE SITE IS ON TWO DRAINAGE AREAS.
- ADJACENT PROPERTY:** THE SITE IS BORDERED ON ALL SIDES BY UPLAND HARDWOODS.
- SOILS:** NO SOIL STUDIES OR INVESTIGATIONS WERE DONE FOR THIS PROJECT.
- OFF-SITE AREAS:** THERE SHALL BE NO BORROW AREA OUTSIDE OF THE PROPOSED GRADING AND CONSTRUCTION AREA.
- CRITICAL EROSION AREAS-CONTROL MAINTENANCE:** ALL 3:1 SLOPES AND STEEPER DITCHES AND OTHER CONTROLS SHALL BE CONSIDERED CRITICAL EROSION AREAS. THESE AREAS SHALL BE MONITORED & MAINTAINED DAILY AND AFTER EACH RAIN FALL OF 0.5 INCHES OR GREATER. THE LOCAL GOVERNING AUTHORITY WILL HAVE THE AUTHORITY TO RECOMMEND THE PLACEMENT OF ADDITIONAL EROSION CONTROL MEASURES IN THESE AREAS IF IT BECOMES EVIDENT DURING CONSTRUCTION THAT THE ONES IN PLACE ARE NOT FUNCTIONING SUFFICIENTLY.
- EROSION AND SEDIMENT CONTROL MEASURES:** UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE OFFICE OF OIL & GAS, W.V.A. EROSION AND SEDIMENT CONTROL FIELD MANUAL, MAY 2012. THE CONTRACTOR SHALL OBTAIN A COPY OF THIS MANUAL FROM THE WEBSITE AND CONSTRUCT ALL DEVICES BASED ON THIS MANUAL OR A HANDBOOK THAT IS COMPARABLE OR EXCEEDS THE SPECIFICATIONS OF THE WEST VIRGINIA MANUAL. THE MINIMUM STANDARDS OF THIS MANUAL SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE. SEE PLANS FOR ALL PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.
- STRUCTURAL PRACTICES:**
 - DIVERSION DITCHES: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.
 - DIVERSION BERMS: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.
 - OUTLET PROTECTION: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.
 - SILT SOCK/STRAW MAT/ESPOUSER BILT FENCE: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.
- VEGETATIVE PRACTICES-TOPSOILING:** TOPSOIL WILL BE STRIPPED FROM THE SITE AND STOCKPILED IN AN AREA AS SHOWN ON THESE PLANS. UPON THE COMPLETION OF THE PROJECT TOPSOIL WILL BE PLACED ON ALL DISTURBED AREAS AT A MINIMUM DEPTH OF 4 INCHES. TEMPORARY SEEDING: ALL DENuded AREAS LEFT DORMANT FOR MORE THAN 21 DAYS SHALL BE SEEDING WITH A FAST GERMINATING SEED. THE TIME OF YEAR WILL BE THE BASIS FOR THE SEED MIXTURE. PERMANENT SEEDING: ALL AREAS TO BE SEEDING WITH PERENNIAL RYEGRASS AND FERTILIZED AS NEEDED TO OBTAIN AN ADEQUATE STAND OF GRASS. PERMANENT SEEDING SHALL BE PLACED WITHIN SEVEN DAYS UPON ACHIEVING FINAL GRADE. WATER, MULCH, AND RESEED AS NECESSARY TO OBTAIN AN ADEQUATE STAND OF VEGETATION, IN THE OPINION OF THE ENGINEER.
- MANAGEMENT STRATEGIES:** CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS WILL BEGIN AND END AS SOON AS POSSIBLE. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES. AFTER ACHIEVING ADEQUATE STABILIZATION OF THE TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AND ANY AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED.
- SEQUENCE OF EVENTS:**
 - A. A PRE-CONSTRUCTION CONFERENCE WILL BE HELD ON SITE WITH CONTRACTOR TO REVIEW THE CONSTRUCTION DRAWINGS AND PROVIDE ANY REQUESTED GUIDANCE.
 - B. CONSTRUCT THE PROPOSED CONSTRUCTION ENTRANCE.
 - C. CONSTRUCT ALL CONSTRUCTION SEDIMENT CONTROL DEVICES AS SOON AS CLEARING AND GRUBBING OPERATIONS ALLOW. DIVERSIONS AND SEDIMENT BASINS SHALL BE SEEDING AND MULCHED IMMEDIATELY.
 - D. CLEAR AND GRUB, REMOVE TOPSOIL AND PLACE AT AN AREA DETERMINED IN THE FIELD WHERE EROSION WILL NOT TAKE PLACE. TOPSOIL STOCKPILE TO BE SEEDING AND MULCHED. BILT FENCE SHALL BE CONSTRUCTED AROUND TOPSOIL STOCKPILES.
 - E. GRADING OPERATIONS AS REQUIRED. CUT SLOPES AND FILL SLOPES SHALL BE TOPSOILED IF NEEDED. DITCH LINES SHALL BE CLEANED. ALL DITCHES WILL HAVE AT LEAST GRASS LINING PROTECTION OR GREATER BASED ON DITCH SLOPE WITH THE FOLLOWING DETERMINATION: 0 TO 3% - GRASS LINED, 3 TO 9% - JUTE MATTING, AND 9% OR GREATER - TBM.
 - F. CULVERT INLET AND OUTLET PROTECTION SHALL BE CONSTRUCTED IMMEDIATELY UPON PLACEMENT OF INLETS AND CULVERTS. INSTALLATION OF MATTING AND/OR RIP RAP TO OCCUR ONCE DITCHES ARE CONSTRUCTED.
 - G. WHEN FINAL GRADE IS ACHIEVED, TOPSOIL TO BE PLACED ON ALL DISTURBED AREAS NOT LINED. SEED ALL DISTURBED AREAS AS REQUIRED. A SOIL SAMPLE SHOULD BE TAKEN AND TESTED TO DETERMINE RECOMMENDED RATES. IF NO SOIL SAMPLE IS TAKEN THE FOLLOWING RATES SHOULD BE APPLIED AS A MINIMUM: LIME AT A RATE OF 4 TONS PER ACRE. FERTILIZE AT A RATE OF 600 LBS. OF 10-20-10 PER ACRE. SEED WITH 45 LBS. PER ACRE OF TALL FESCUE AND 20 LBS. PER ACRE OF PERENNIAL RYE GRASS.
 - H. LIME, FERTILIZER, AND SEED WILL BE APPLIED BY HAND OR USING A HYDRO-SEEDER. HYDRO-MULCH PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - I. FINAL SEEDING MUST OCCUR WITHIN 7 DAYS OF FINAL GRADING.
 - J. WHEN SITE IS STABILIZED WITH ESTABLISHED TURF GROWTH OVER 70%, ALL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED AND REPAIR/STABILIZE THOSE AREAS IN ACCORDANCE WITH STATE STANDARDS.
 - K. MAKE MODIFICATIONS FOR PERMANENT STORM WATER MANAGEMENT.
 - L. FINAL SITE INSPECTION.
 - M. A NOTICE OF TERMINATION SHALL BE FILED WITH WDEP UPON FINAL STABILIZATION.
- PERMANENT STABILIZATION:** ALL AREAS LEFT UNCOVERED BY EITHER BUILDINGS OR PAVEMENT SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING AND WITHIN 7 DAYS. AT NO TIME SHALL LAND LAY DORMANT FOR LONGER THAN 21 DAYS. SEE SEQUENCE OF EVENTS FOR RATES.
- MAINTENANCE AND OTHER CONSIDERATIONS AND GROUND-WATER PROTECTION:** ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH RAINFALL OF 0.5 INCHES OR MORE. THEY WILL BE INSPECTED FOR UNDERMINING, DETERIORATION, EROSION AND EXCESS DEPOSITED MATERIAL. ALL DEFICIENCIES WILL BE CORRECTED IMMEDIATELY. EXCESS MATERIAL WILL BE SPREAD ON THE SITE IN A MANNER WHERE IT IS NOT LIKELY TO ERODE IN THE FUTURE. RECORDS OF CLEANING AND CORRECTIONS WILL BE MAINTAINED BY THE CONTRACTOR. THE "GENERIC GROUNDWATER PROTECTION PLAN FOR CONSTRUCTION SITES" WILL BE USED AND AVAILABLE ON SITE AT ALL TIMES. AN AREA WILL BE PROVIDED FOR VEHICLE AND EQUIPMENT MAINTENANCE. MOBILE FUEL TRUCKS WITH APPROVED TANKS WILL BE USED ON THIS SITE. PORTABLE SANITARY FACILITIES WILL BE AVAILABLE FOR EMPLOYEES. IF CONCRETE IS USED, EXCESS CONCRETE WILL BE DISPOSED OF PROPERLY AND NOT ALLOWED TO REMAIN ON THIS SITE. MACHINERY WILL NOT BE ALLOWED IN LIVE STREAMS. FLUIDS SUCH AS DIESEL FUEL, OIL, OR ANTIFREEZE WILL BE KEPT IN PROPER CONTAINERS AND ANY SPILLAGE WILL BE CLEANED AND TAKEN OFF-SITE TO A PROPER FACILITY. SOLID OR HAZARDOUS WASTES WILL BE DISPOSED IN ACCORDANCE WITH APPROPRIATE STATE AND FEDERAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE CHANGES AND NOTIFY WDEP OF ANY CHANGES TO OPR. A FINAL INSPECTION WILL BE MADE AT THE CONCLUSION OF THE PROJECT AND ALL CORRECTIONS MADE BEFORE SIGN-OFF OF THE PROJECT SITE.

DATE	REVISIONS	Date: 2/25/13
6-7-13	Updated Per New Antero Standards	Scale: N/A
8-19-13	Updated Per New Antero Standards	Designed By: CKW/CXM
		File No. Antero 211-12
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All topographic information shown hereon is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

EXISTING CONDITIONS



NOTE: All surface boundary lines shown hereon are based on current Deeds and boundary evidence collected with mapping grade GPS receivers.

Legend

- - - Existing 2' Contour
- - - Existing 10' Contour
- - - Existing Tree Line
- - - Existing Utility Pole / Line
- - - Existing Gas Line CL

DATE	REVISIONS
6-7-13	Updated Per New Antero Standards
8-21-13	Updated Wetlands Delineation



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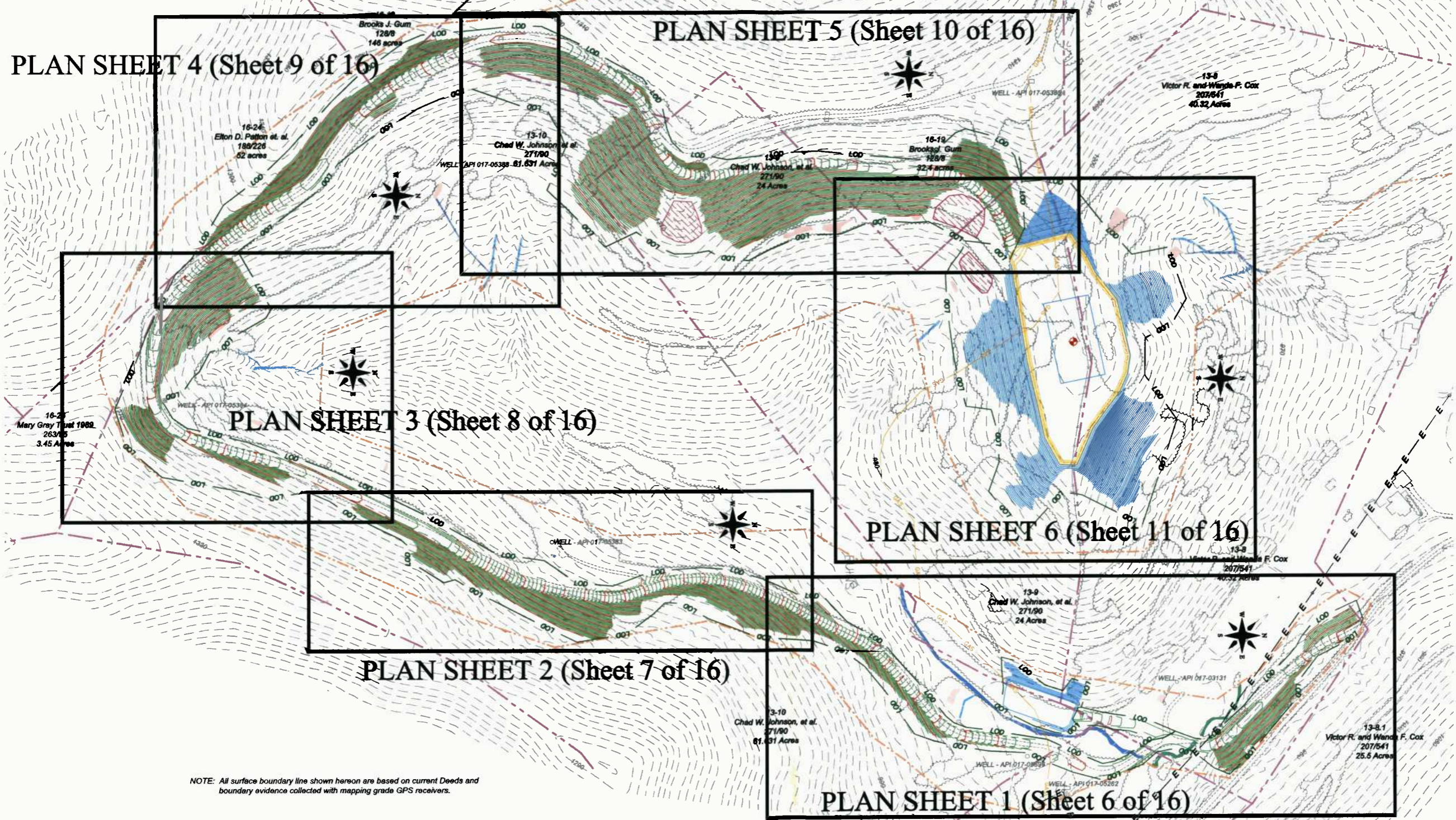
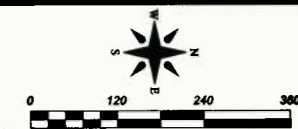
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EXISTING CONDITIONS
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV

Date: 2/25/13
Scale: 1" = 120'
Designed By: CKW/CKM
File No. Antero 211-12
Page 4 of 16

All topographic information shown hereon is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

PLAN SHEET INDEX



NOTE: All surface boundary line shown hereon are based on current Deeds and boundary evidence collected with mapping grade GPS receivers.

Legend

- Existing 2' Contour
- Existing 10' Contour
- Existing Tree Line
- Existing Utility Pole / Line
- Existing Gas Line CL

DATE	REVISIONS
6-7-13	Updated Per New Antero Standards
8-21-13	Updated Wetlands Delineation



Allegheny Surveys, Inc.
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(304) 848-5035



L&W ENTERPRISES, INC.
P.O. BOX 64
P.O. BOX 1100
PETERSBURG, WV 26847
TEL: 304-577-4413
FAX: 304-577-2224
EMAIL: ENR@LWENTR.NET



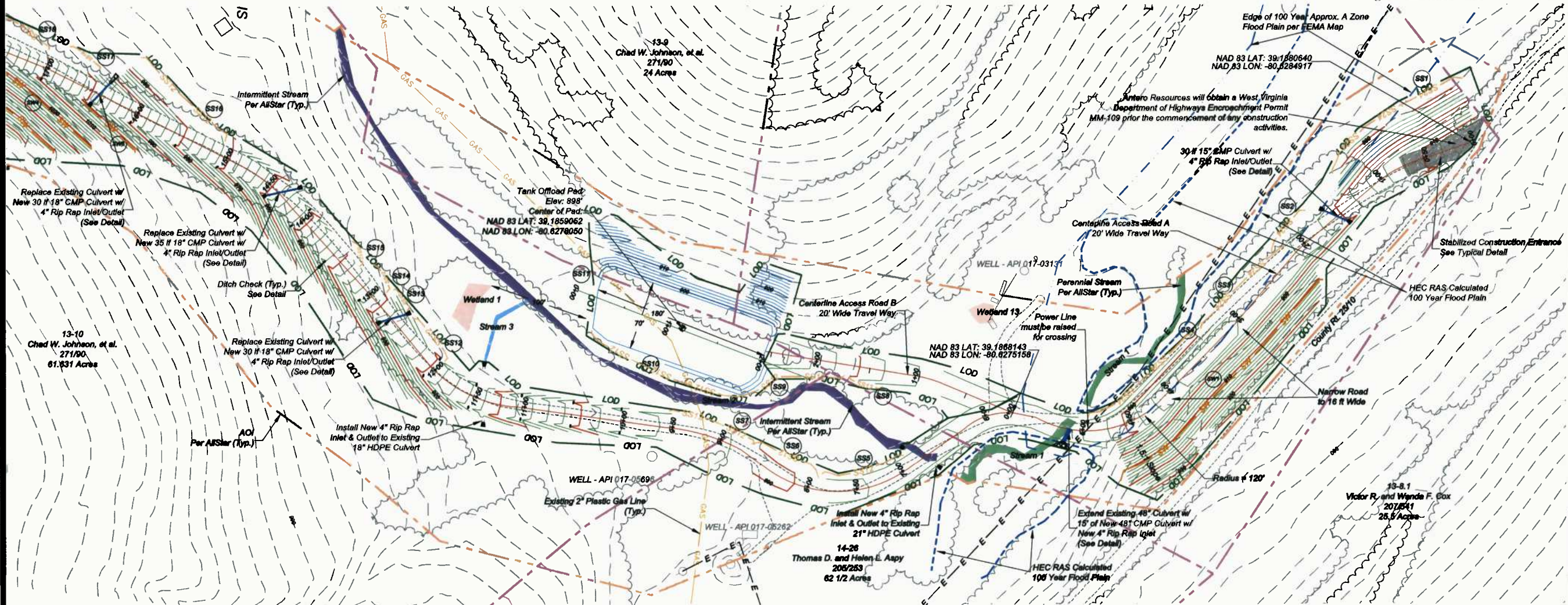
THIS DOCUMENT PREPARED FOR ANTERO RESOURCES CORPORATION

PLAN SHEET INDEX
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIEDGE COUNTY, WV

Date: 2/25/13
Scale: 1" = 120'
Designed By: CKW/CKM
File No. Antero 211-12
Page 5 of 16

All topographic information shown herein is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

SITE PLAN (1) - ACCESS ROAD A STA: 0+00 - 17+00



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(304) 848-5035



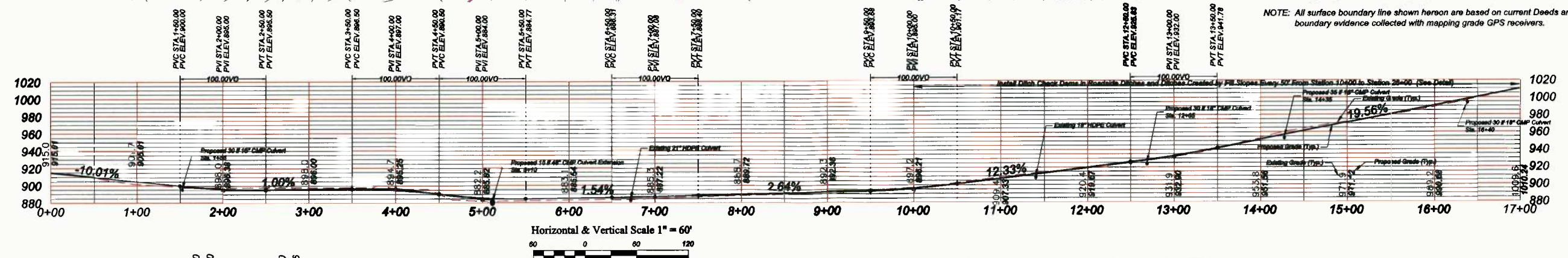
L&W ENTERPRISES, INC.
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Petersburg, WV 25381
FAX: 800-252-2224
EMAIL: KIRK@LWENTR.COM



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SITE PLAN (1) - ACCESS ROAD A STA: 0+00 - 17+00
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV



Access Road A and B Profile

LINED DITCH TREATMENT vs SLOPE OF DITCH
Line with Jute Matting if slope is less than 3%
Line with turf reinforcement matting (TRM) if slope is greater than 3%
*Turf reinforcement matting shall be Excelsior Recyclex or Landlok TRM 435 or equal

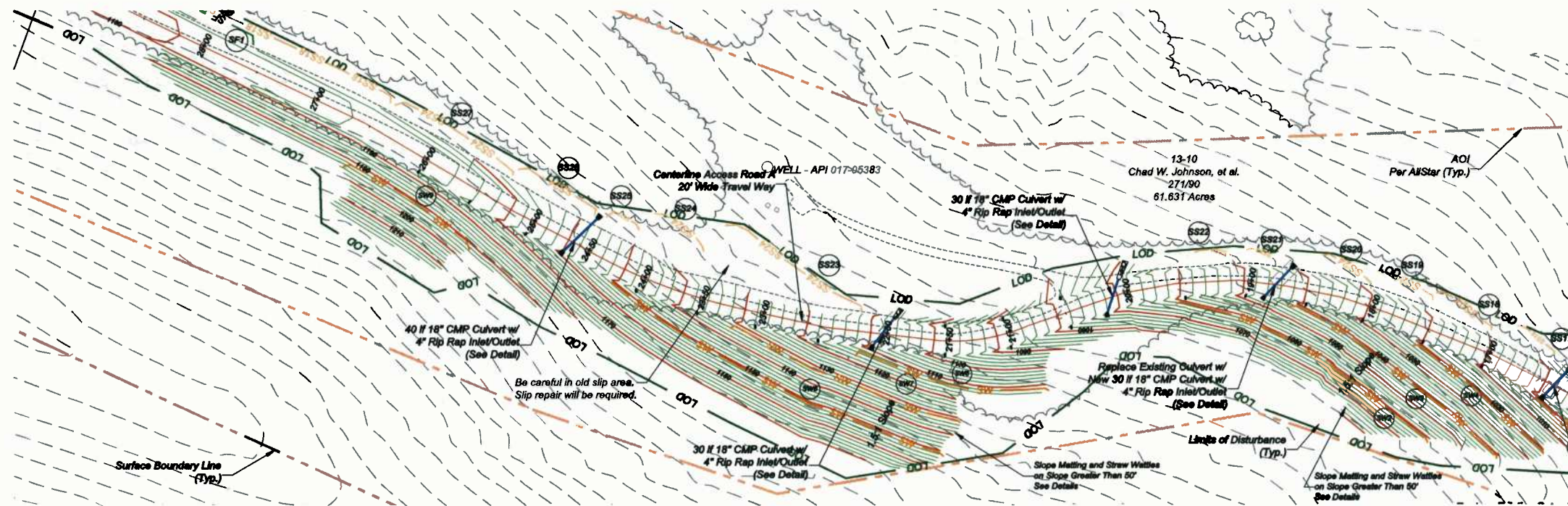
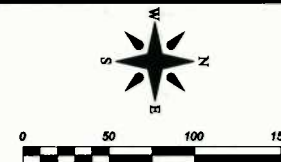
Legend		
1300	Existing 2' Contour	Proposed Check Dam
1000	Existing 10' Contour	Proposed Culvert W/ Inlet & Outlet Protection
---	Existing Tree Line	Proposed Straw Wattles
-E-E-	Surface Owner Property Line	Proposed Silt Sox w/ Diameter
-GAS-	Existing Gas Line CL	Proposed 2' Contour
-LOD-	Limits of Disturbance	Proposed 10' Contour
->-	Proposed Diversion Ditch	Proposed Rip-Rap
->-	Proposed 2' Contour	Silt Soxx Diameter in Inches
->-	Proposed 10' Contour	Super Silt Fence Can be Substituted for Silt Sox of any Size
-SF-	Proposed Super Silt Fence	

DATE	REVISIONS
6-7-13	Updated Per New Antero Standards
8-21-13	Updated Wetlands Delineation

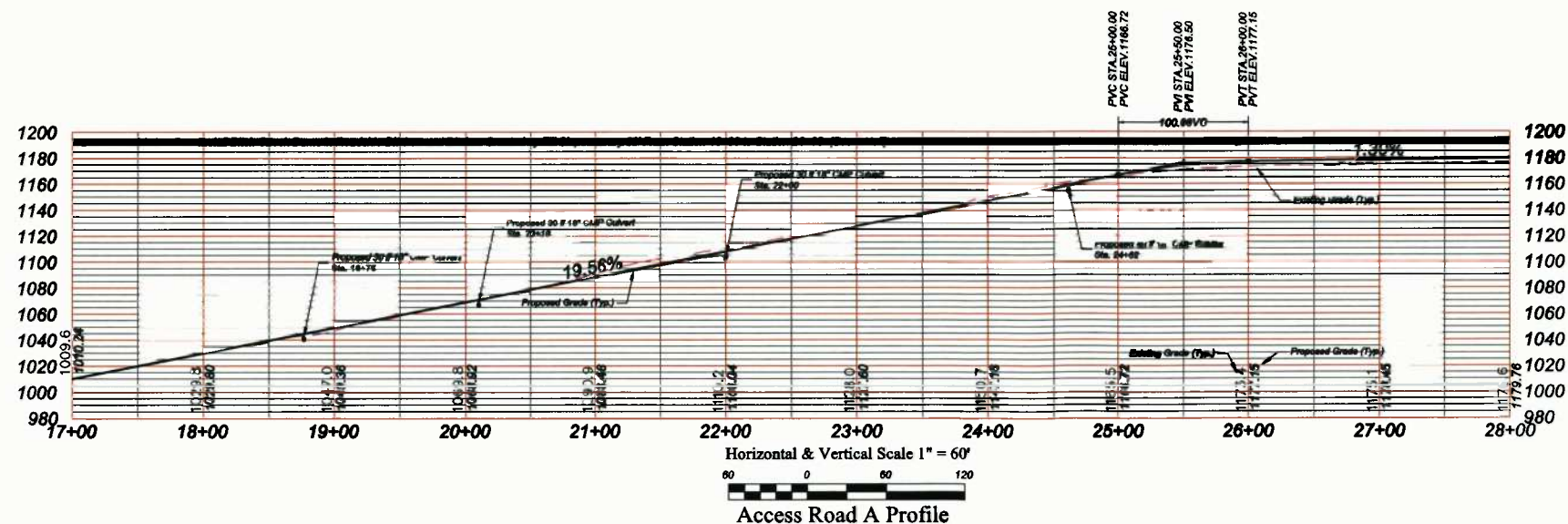
Date: 2/25/13
Scale: 1" = 50'
Designed By: CK/WCKM
File No. Antero 211-12
Page 6 of 16

All topographic information shown herein is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

SITE PLAN (2) - ACCESS ROAD A STA: 17+00 - 28+00

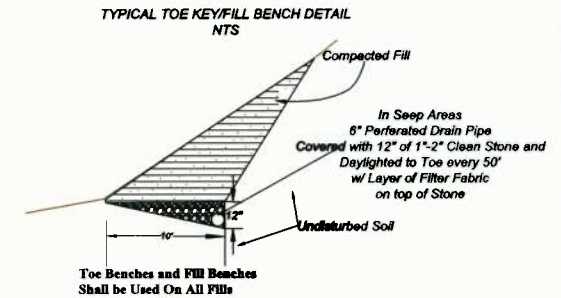


NOTE: All surface boundary line shown herein are based on current Deeds and boundary evidence collected with mapping grade GPS receivers.



Horizontal & Vertical Scale 1" = 60'
Access Road A Profile

LINED DITCH TREATMENT vs SLOPE OF DITCH
Line with Jute Matting if slope is less than 3%
Line with turf reinforcement matting (TRM) if slope is greater than 3%
*Turf reinforcement matting shall be Excelsior Recyclac or Landlok TRM 435 or equal



Legend		
1300	Existing 2' Contour	Proposed Check Dam
1000	Existing 10' Contour	Proposed Culvert W/ Inlet & Outlet Protection
---	Existing Tree Line	Proposed Straw Wattles
E - E	Existing Utility Line / Pole	SSXX
---	Surface Owner Property Line	Proposed Silt Soxx w/ Diameter
GAS	Existing Gas Line CL	Proposed 2' Contour
---	Limit of Disturbance	Proposed 10' Contour
---	Proposed Diversion Ditch	Proposed Rip-Rap
---	Proposed 2' Contour	* Silt Soxx Diameter in Inches
---	Proposed 10' Contour	* Super Silt Fence Can be Substituted for Silt Soxx of any Size
SF	Proposed Super Silt Fence	

DATE	REVISIONS	Date: 2/25/13
6-7-13	Updated Per New Antero Standards	Scale: 1" = 50'
		Designed By: CKW/CEM
		File No. Antero 211-12
		Page 7 of 16



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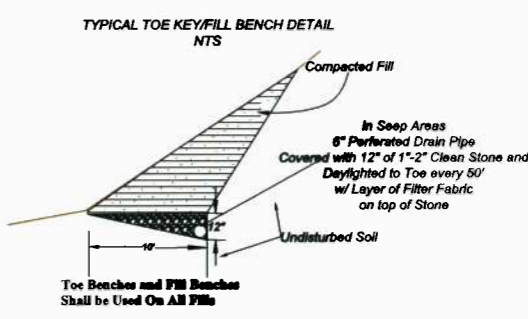
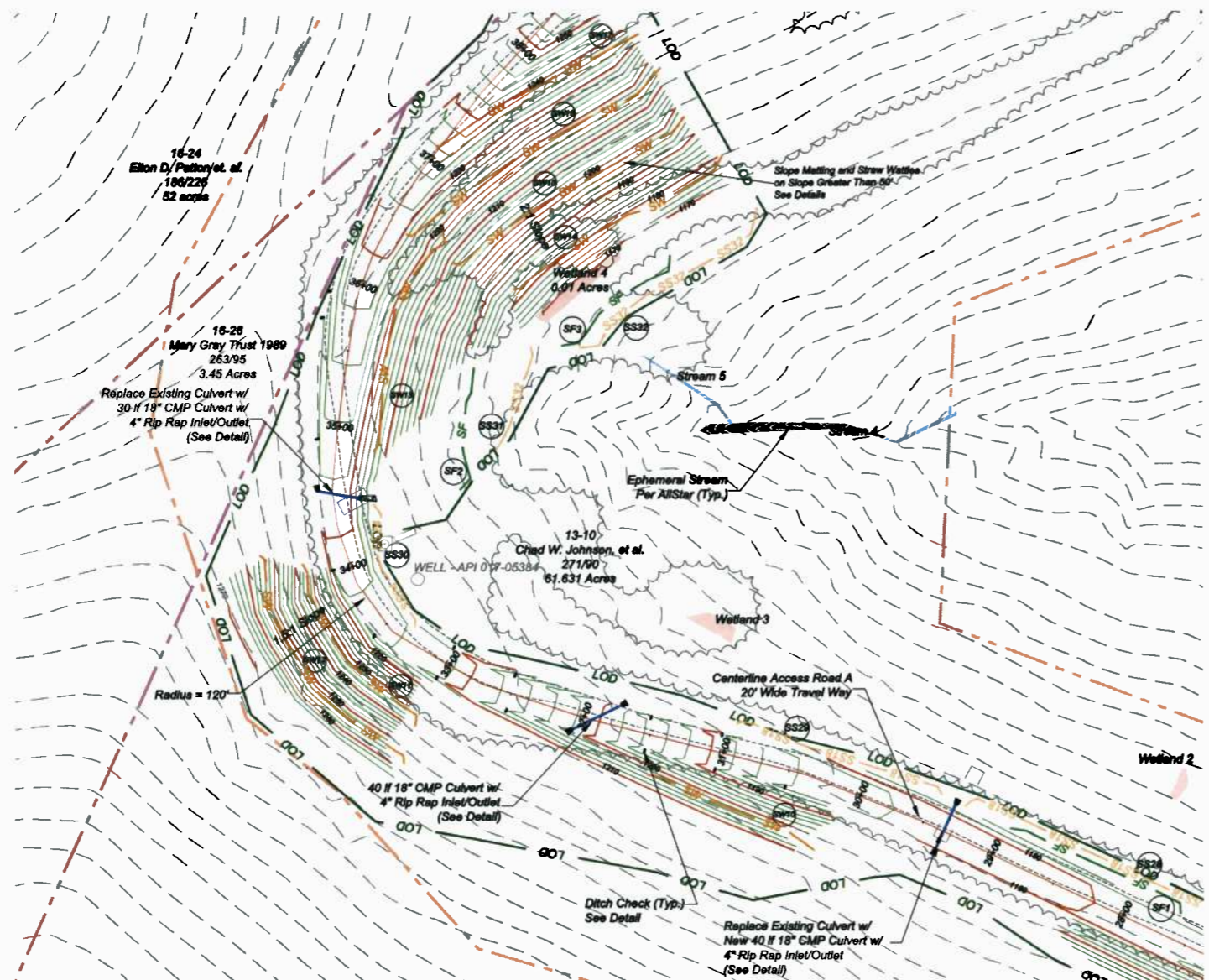
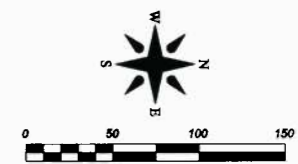


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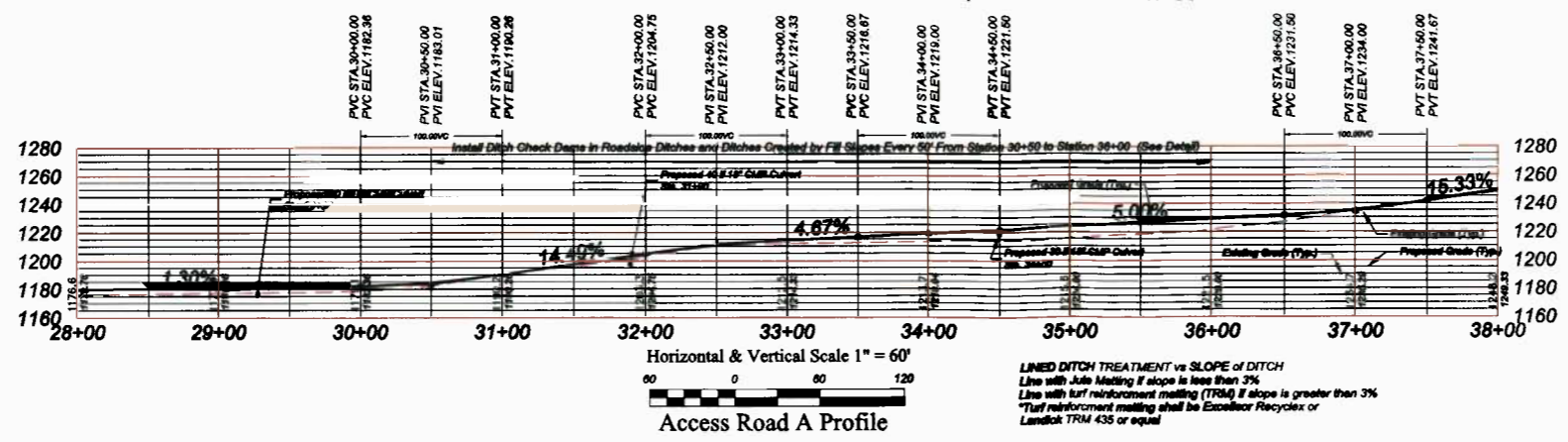
SITE PLAN (2) - ACCESS ROAD A STA: 17+00 - 28+00
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV

All topographic information shown hereon is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

SITE PLAN (3) - ACCESS ROAD A STA: 28+00 - 38+00



NOTE: All surface boundary lines shown hereon are based on current Deeds and boundary evidence collected with mapping grade GPS receivers.



Legend	
Existing 2' Contour	Proposed Check Dam
Existing 10' Contour	Proposed Culvert W/ Inlet & Outlet Protection
Existing Tree Line	Proposed Straw Wattles
Existing Utility Line / Pole	Proposed Silt Sox w/ Diameter
Surface Owner Property Line	Proposed 2' Contour
Existing Gas Line CL	Proposed 10' Contour
LOD - Limits of Disturbance	Proposed Rip-Rep
Proposed Diversion Ditch	Silt Sox Diameter in Inches
Proposed 2' Contour	Super Silt Fence Can be Substituted for Silt Sox of any Size
Proposed 10' Contour	
Proposed Super Silt Fence	

DATE	REVISIONS
6-7-13	Updated Per New Antero Standards

VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIIDGE COUNTY, WV

SITE PLAN (3) - ACCESS ROAD A STA: 28+00 - 38+00

Date: 2/25/13
Scale: 1" = 50'
Designed By: CKW/CCLM
File No. Antero 211-12
Page 8 of 16

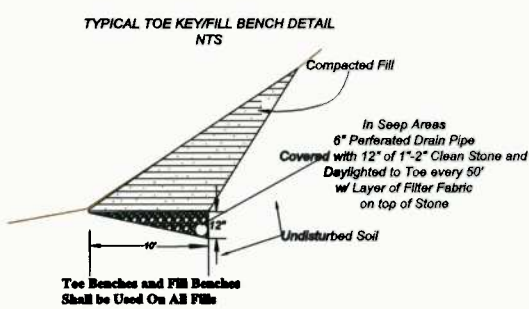
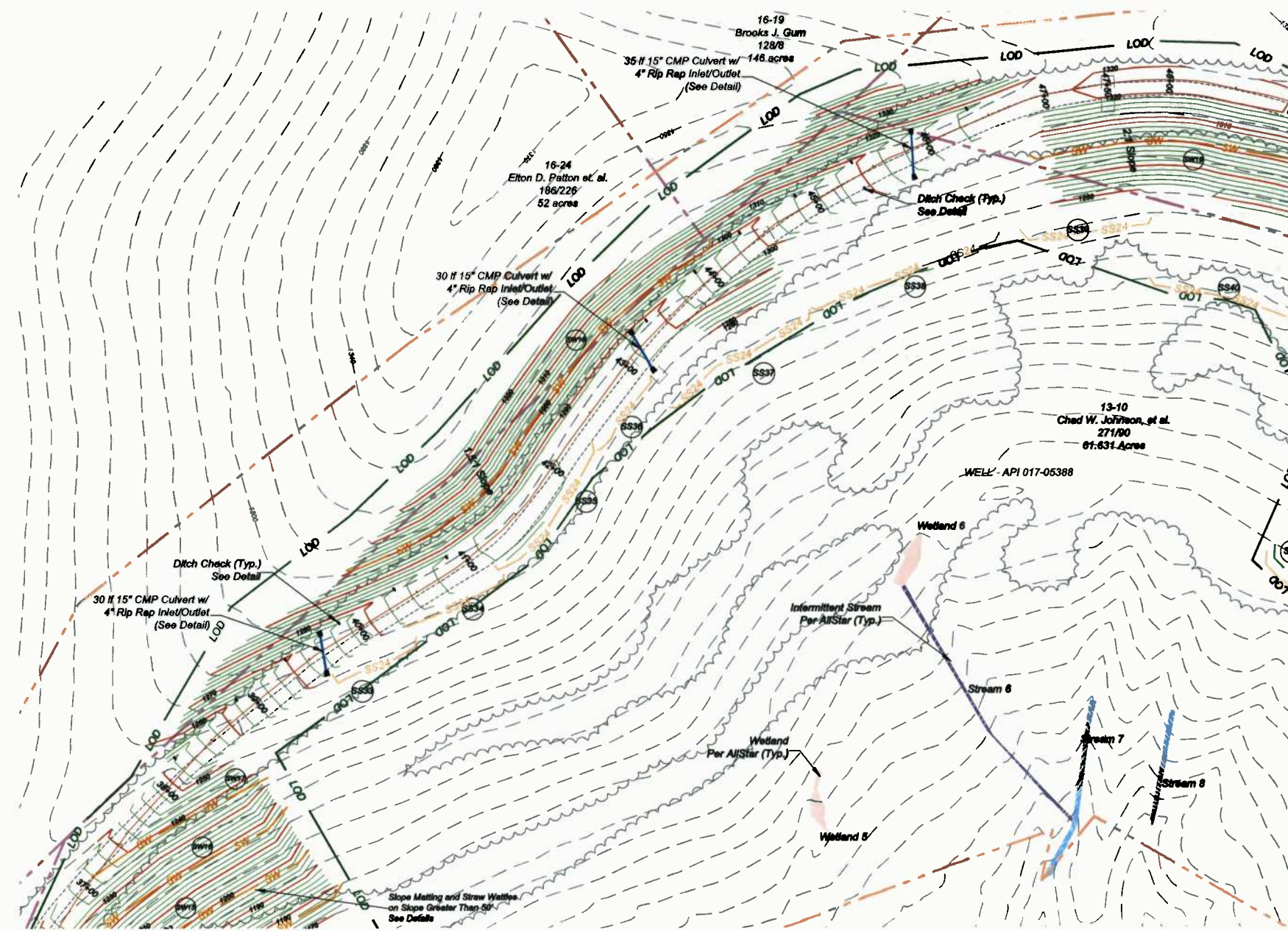
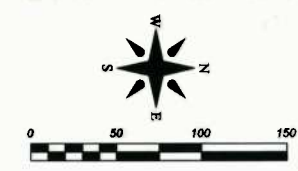
L&W ENTERPRISES, INC.
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L&W Enterprises, Inc.
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PETERSBURG, WV 26447
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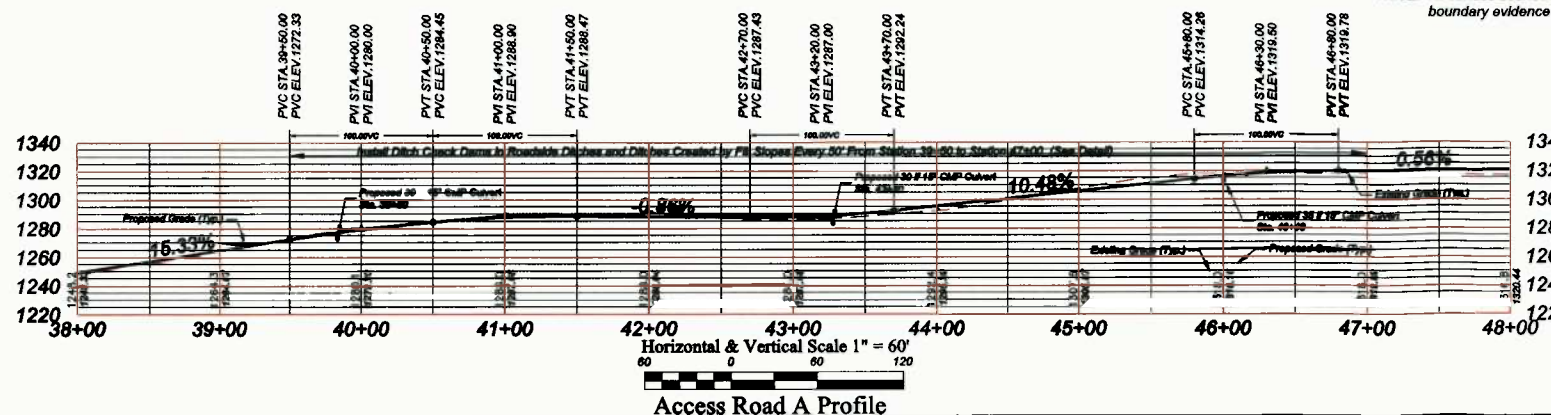
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All topographic information shown hereon is base on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

SITE PLAN (4) - ACCESS ROAD A STA: 38+00 - 48+00



NOTE: All surface boundary line shown hereon are based on current Deeds and boundary evidence collected with mapping grade GPS receivers.



Legend		
1330	Existing 2' Contour	Proposed Check Dam
1300	Existing 10' Contour	Proposed Culvert W/ Inlet & Outlet Protection
---	Existing Tree Line	Proposed Straw Wattles
E - E	Existing Utility Line / Pole	Proposed Silt Soxx w/ Diameter
---	Surface Owner Property Line	Proposed 2' Contour
GAS	Existing Gas Line CL	Proposed 10' Contour
LOD	Limits of Disturbance	Proposed Rip-Rap
→	Proposed Diversion Ditch	* Silt Soxx Diameter in Inches
---	Proposed 2' Contour	* Super Silt Fence Can be Substituted for Silt Soxx of any Size
---	Proposed 10' Contour	
SF	Proposed Super Silt Fence	

DATE	REVISIONS	Date: 2/25/13
6-7-13	Updated Per New Antero Standards	Scale: 1" = 50'
		Designed By: CKW/CJM
		File No. Antero 211-12
		Page 9 of 16

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SITE PLAN (4) - ACCESS ROAD A STA: 38+00 - 48+00

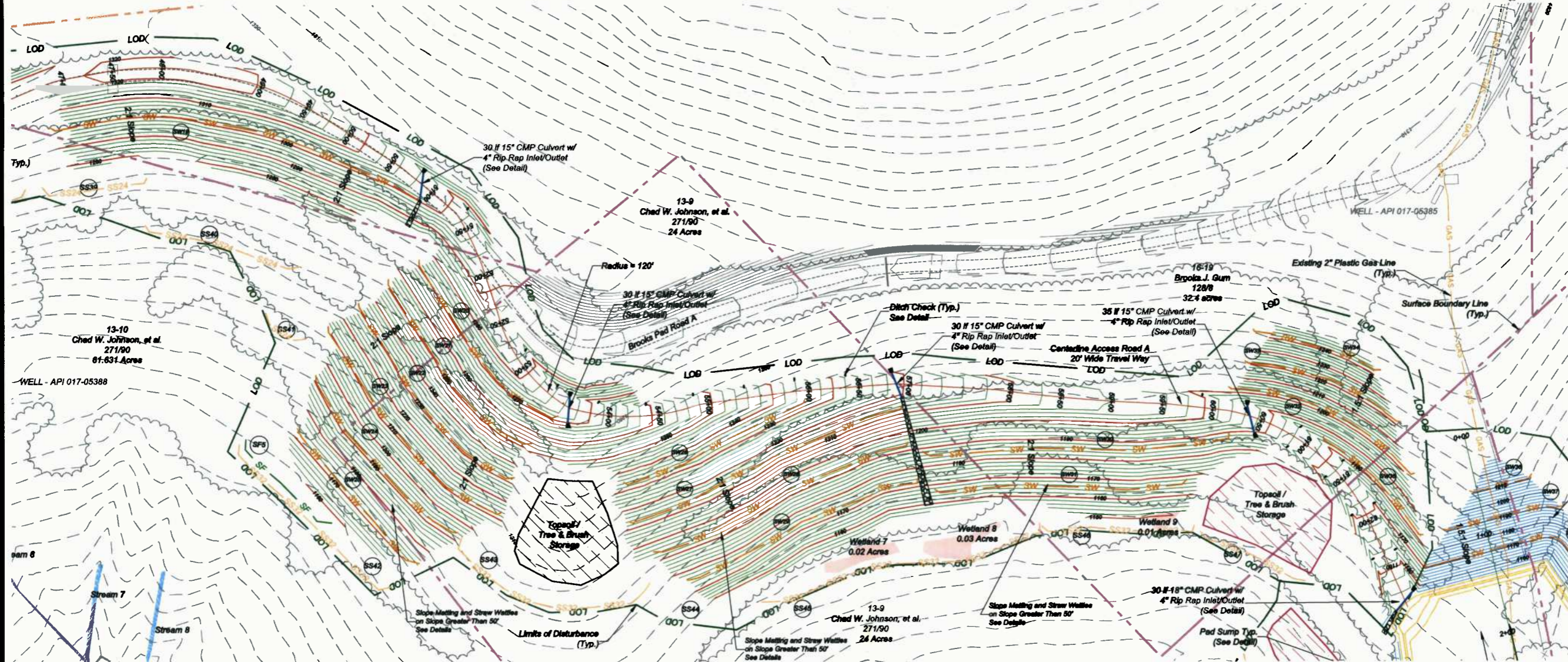
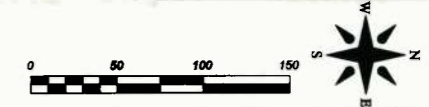
VICTOR PAD

NEW MILTON / GREENBRIER DISTRICT
DODDRIEDGE COUNTY, WV

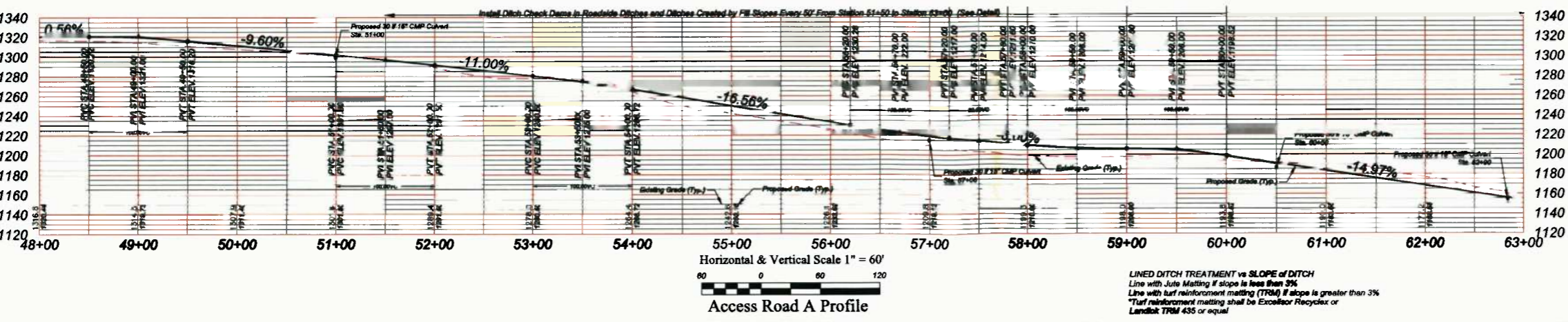
LINED DITCH TREATMENT vs SLOPE OF DITCH
Line with Jute Matting if slope is less than 3%
Line with turf reinforcement matting (TRM) if slope is greater than 3%
*Turf reinforcement matting shall be Excelsior Recycles or Landlok TRM 435 or equal

All topographic information shown hereon is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

SITE PLAN (5) - ACCESS ROAD A STA: 48+00 - 63+00



NOTE: All surface boundary line shown hereon are based on current Deeds and boundary evidence collected with mapping grade GPS receivers.



Legend

- Existing 2' Contour
- Existing 10' Contour
- Existing Tree Line
- Existing Utility Line / Pole
- Surface Owner Property Line
- Existing Gas Line CL
- LOD Limits of Disturbance
- Proposed Diversion Ditch
- Proposed 2' Contour
- Proposed 10' Contour
- Proposed Super Silt Fence
- Proposed Check Dam
- Proposed Culvert W/ Inlet & Outlet Protection
- Proposed Straw Wattles
- Proposed Silt Sox w/ Diameter
- Proposed 2' Contour
- Proposed 10' Contour
- Proposed Rip-Rap

* Silt Sox Diameter in Inches
 * Super Silt Fence Can be Substituted for Silt Sox of any Size

DATE	REVISIONS
6-7-13	Updated Per New Antero Standards



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L&W ENTERPRISES, INC.
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 14 SOUTH GROVE ST.
 PETERSBURG, WV 26847
 TEL: 304-357-4418
 FAX: 304-357-2324
 EMAIL: KIRK@CCTLINE.NET



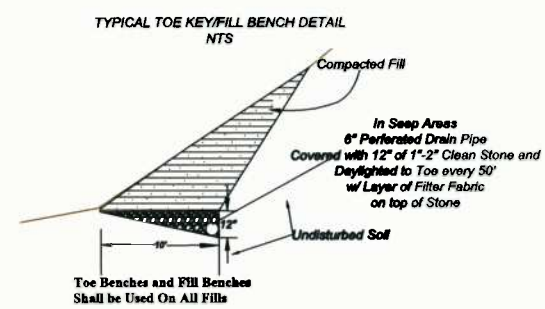
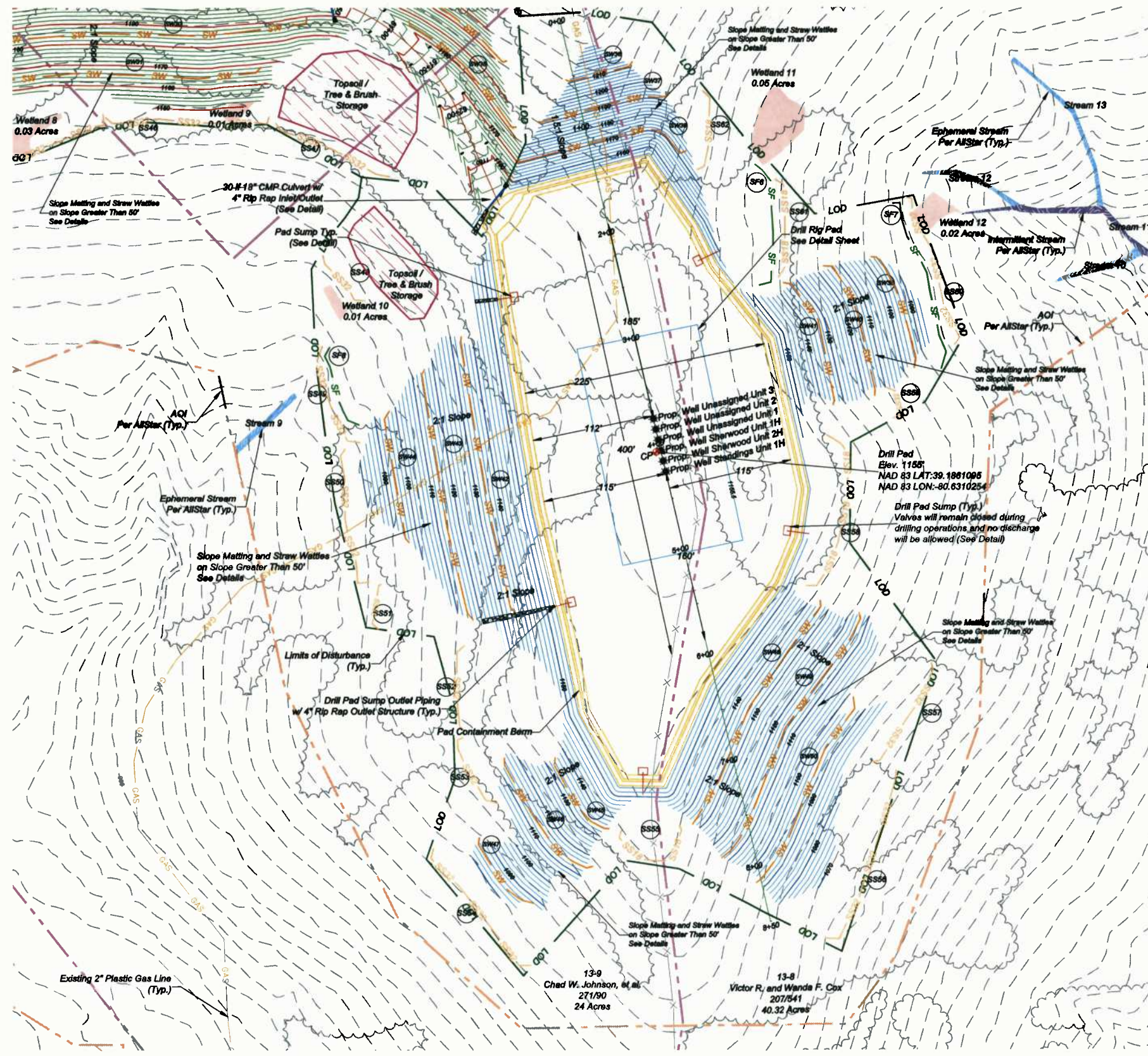
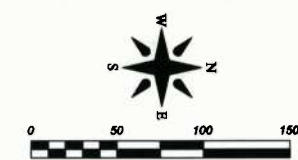
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SITE PLAN (5) - ACCESS ROAD A STA: 48+00 - 63+00
VICTOR PAD
 NEW MILTON / GREENBRIER DISTRICT
 DODDRIIDGE COUNTY, WV

Date: 2/25/13
 Scale: 1" = 50'
 Designed By: CKW/CKM
 File No. Antero 211-12
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All topographic information shown herein is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

SITE PLAN (6)



NOTE: All surface boundary line shown herein are based on current Deeds and boundary evidence collected with mapping grade GPS receivers.

Legend	
--- Existing 2' Contour	Proposed Check Dam
--- Existing 10' Contour	Proposed Culvert W/ Inlet & Outlet Protection
- - - Existing Tree Line	Proposed Straw Wattles
- - - Existing Utility Line / Pole	SW Proposed Silt Soxx w/ Diameter
- - - Surface Owner Property Line	SSXX Proposed 2' Contour
- - - Existing Gas Line CL	Proposed 10' Contour
--- LOD Limits of Disturbance	Proposed Rip-Rap
Proposed Diversion Ditch	* Silt Soxx Diameter in Inches
Proposed 2' Contour	* Super Silt Fence Can be Substituted for Silt Soxx of any Size
Proposed 10' Contour	
SF Proposed Super Silt Fence	

DATE	REVISIONS	DATE: 2/25/13
6-7-13	Updated Per New Antero Standards	Scale: 1" = 50'
8-19-13	Updated Per New Antero Standards	Designed By: CKW/CKM
		File No. Antero 211-12
		Page 11 of 16



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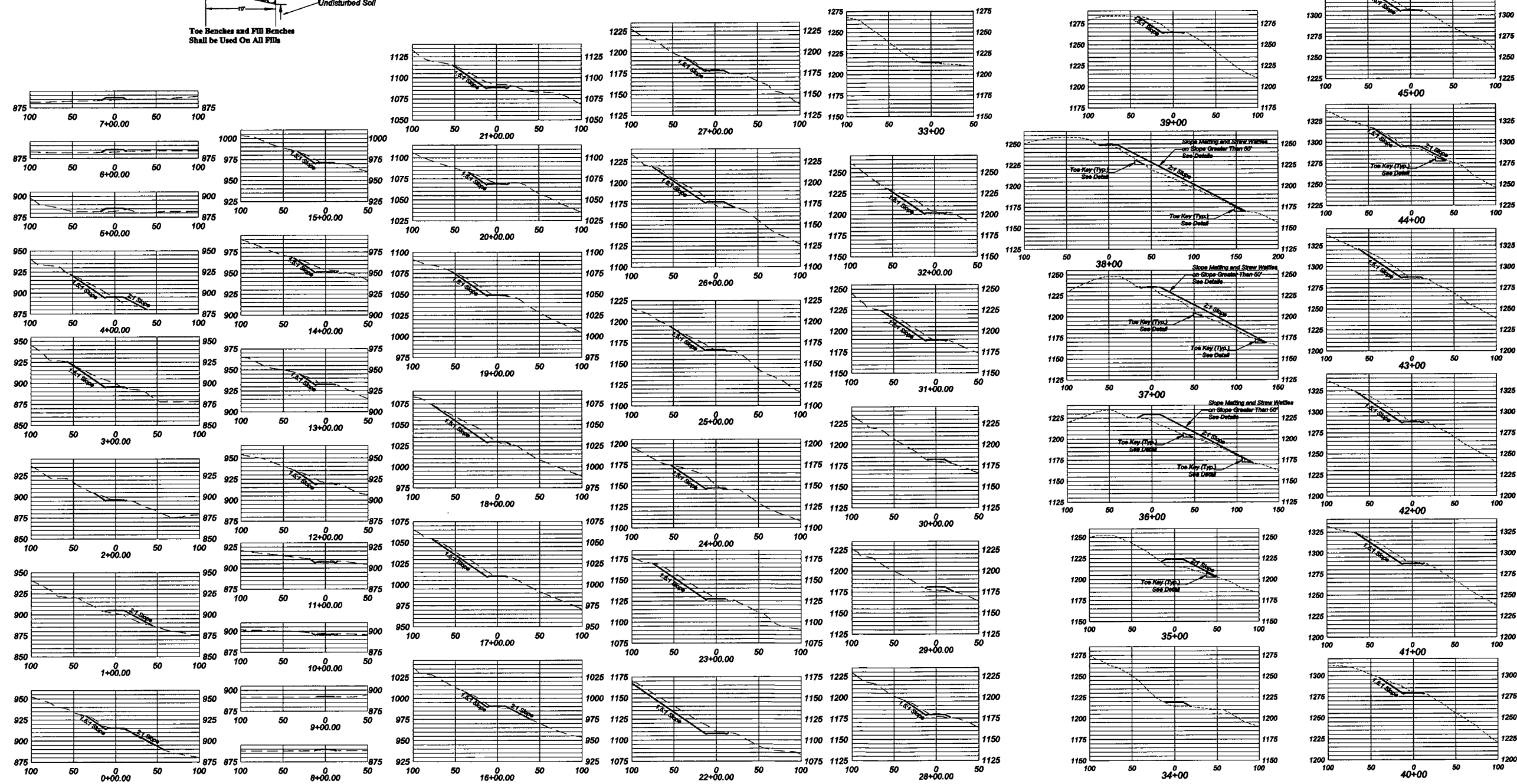
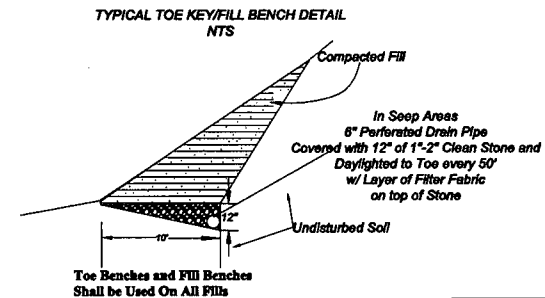
L&W ENTERPRISES, INC.
14 SOUTH GROVE ST.
PETERSBURG, WV 26847
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EMAIL: ERIC@CTCLINK.NET



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SITE PLAN (6)
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV

ACCESS ROAD A CROSS SECTIONS Sta 0+00 to 45+00



Access Road A Cross Sections

Horizontal & Vertical Scale 1" = 60'

DATE	REVISIONS	Date: 2/25/13
6-7-13	Updated Per New Antero Standards	Scale: 1" = 60'
		Designed By: CKW/CKM
		File No. Antero 211-12
		Page 12 of 16



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14 SOUTH GROVE ST.
PETERSBURG, WV 26847
TEL: 304-257-4818
FAX: 304-257-2224
EMAIL: KER@CTLINC.NET

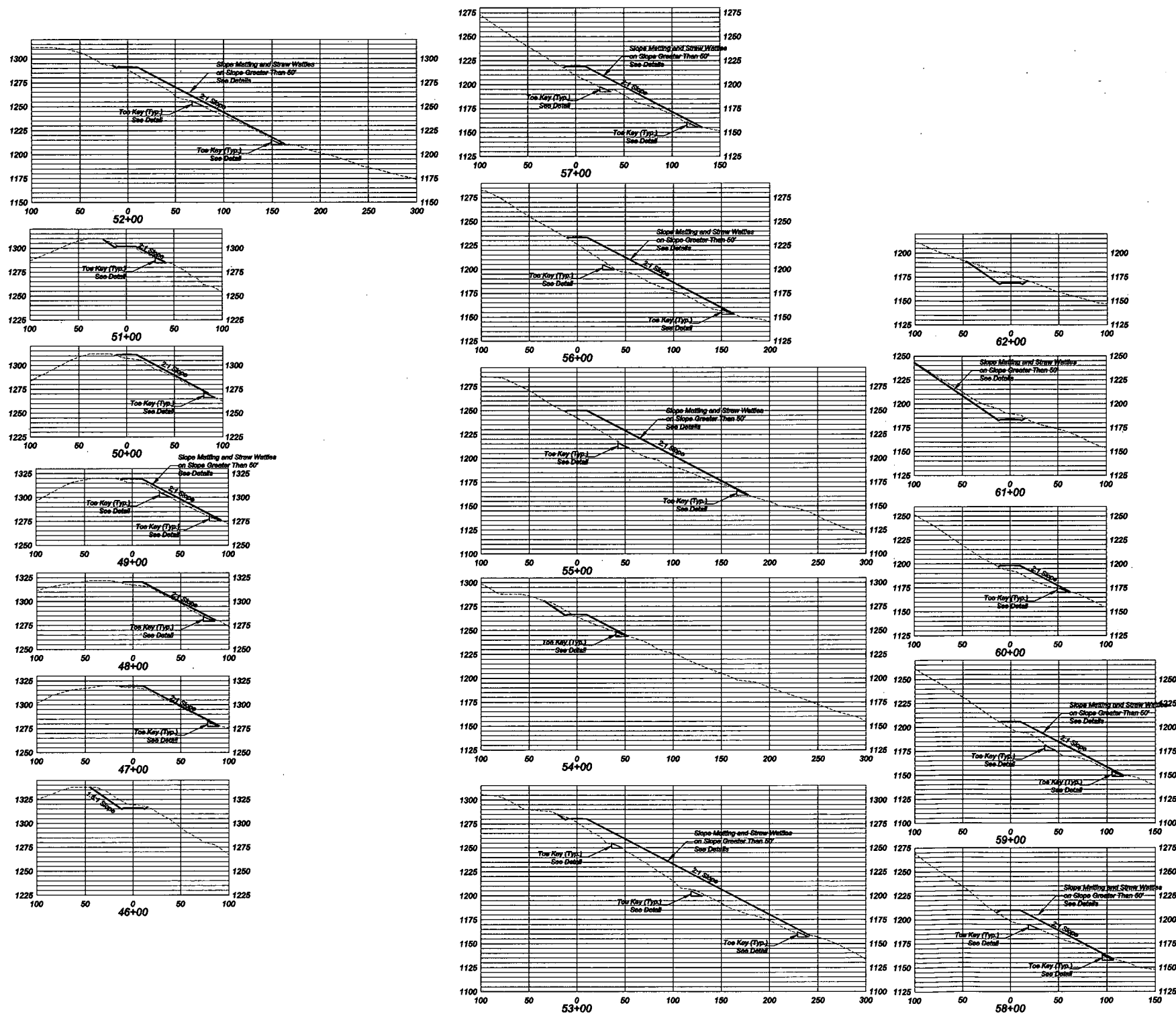


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CORPORATION

ACCESS ROAD A CROSS SECTIONS
Sta 0+00 to 45+00
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIDGE COUNTY, WV

ACCESS ROAD A CROSS SECTIONS

Sta 46+00 to 62+00

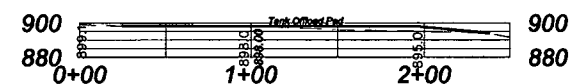


Access Road A Cross Sections

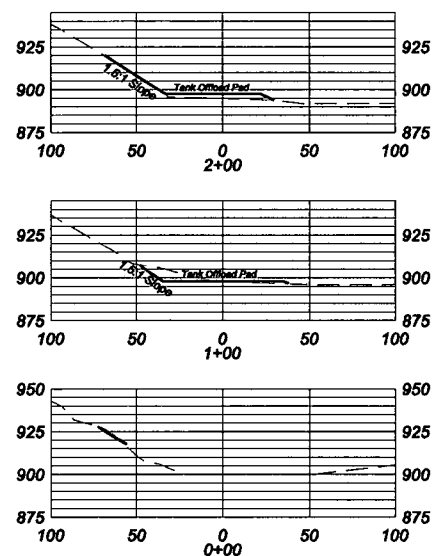
Horizontal & Vertical Scale 1" = 60'



TANK OFFLOAD PAD



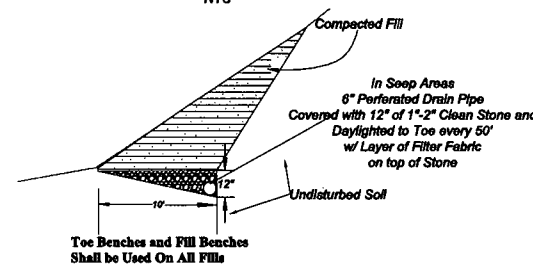
PROFILE



CROSS SECTIONS
Horizontal & Vertical Scale: 1" = 50'



TYPICAL TOE KEY/FILL BENCH DETAIL
NTS

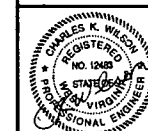


Toe Benches and Fill Benches Shall be Used On All Fills

DATE	REVISIONS	Date: 2/25/13
6-7-13	Updated Per New Antero Standards	Scale: 1" = 60'/50'
		Designed By: CKW/CKM
		File No. Antero 211-12
		Page 13 of 16



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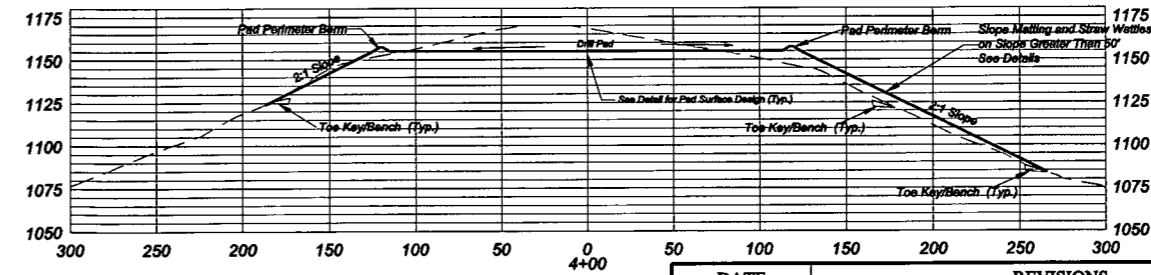
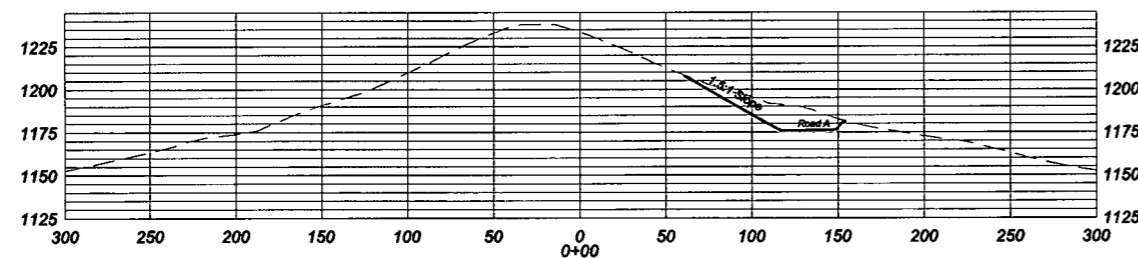
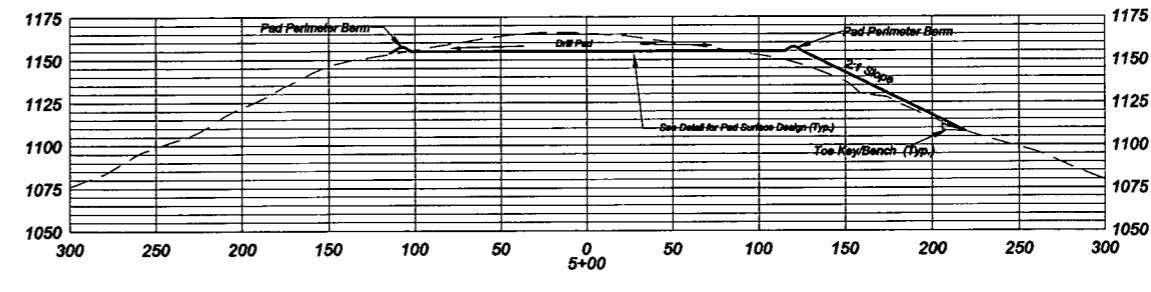
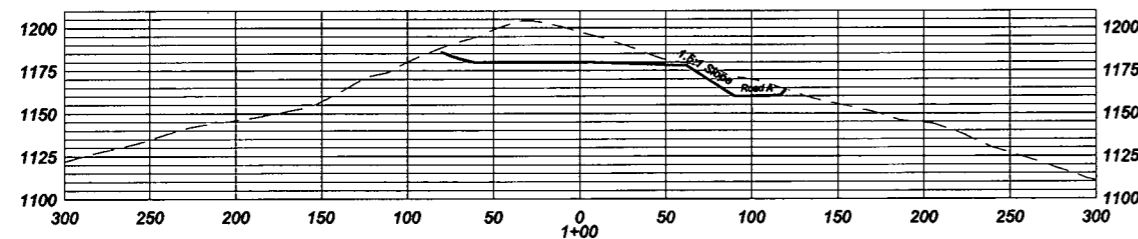
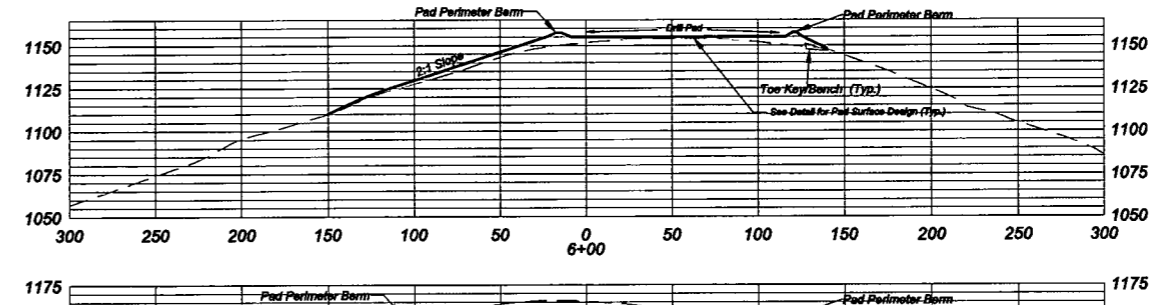
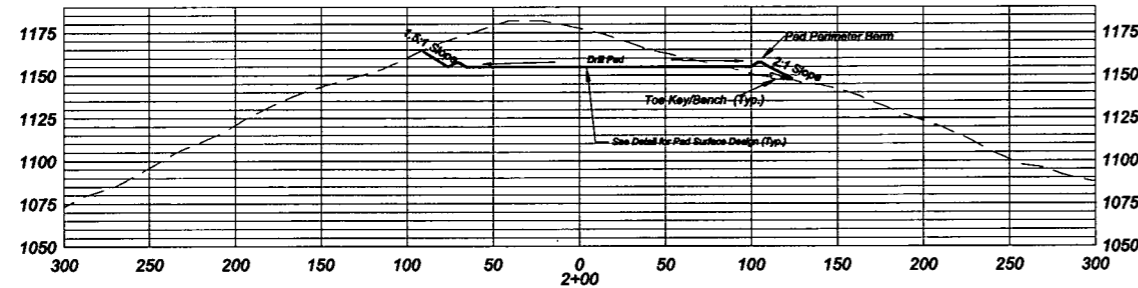
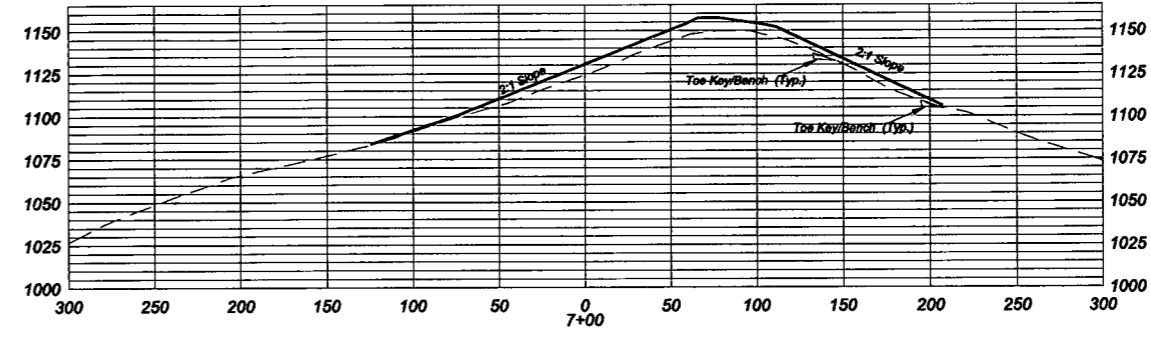
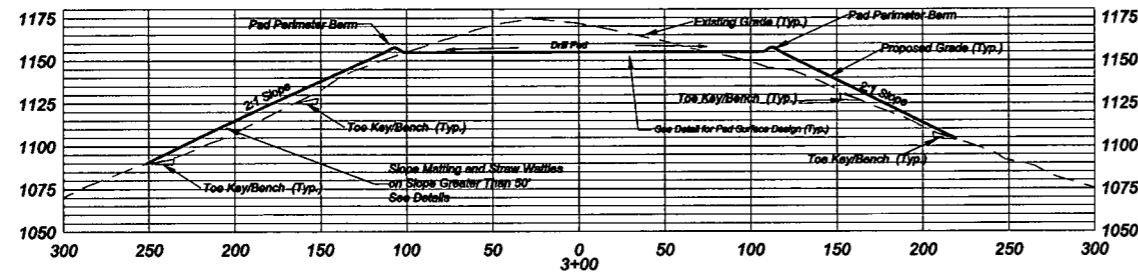
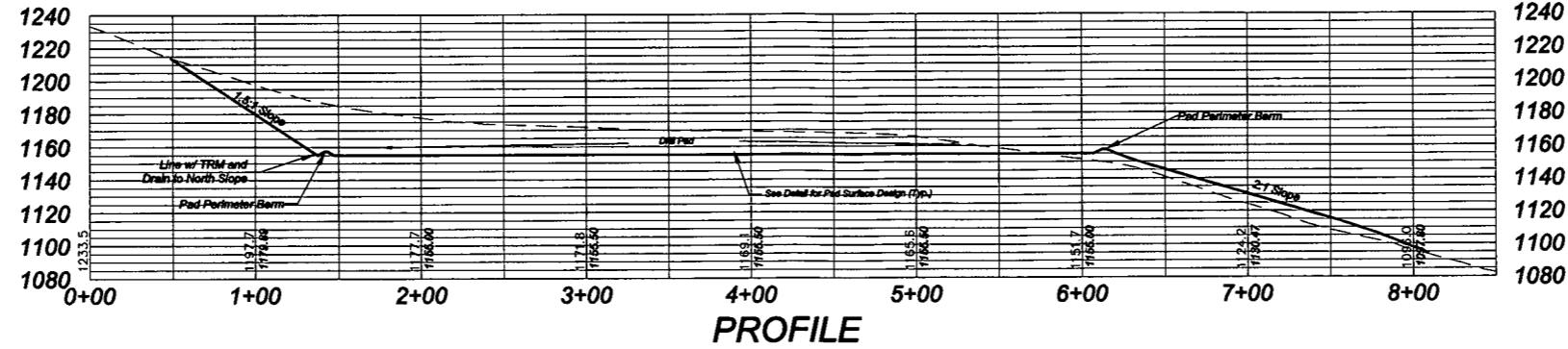
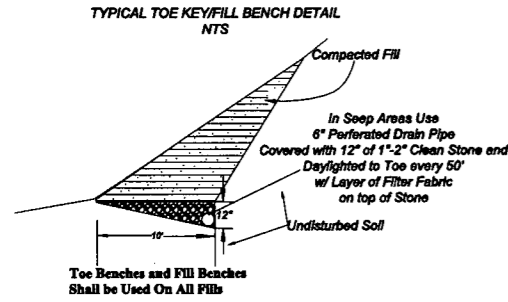
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14 SOUTH GROVE ST.
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EMAIL: KEBK@CTLINK.NET



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ACCESS ROAD A CROSS SECTIONS
Sta 46+00 to 62+00
VICTOR PAD
NEW MILTON / GREENBRIER DISTRICT
DODDRIIDGE COUNTY, WV

DRILL PAD BASELINE PROFILE AND CROSS SECTIONS



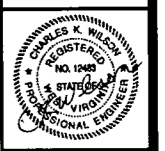
CROSS SECTIONS
Horizontal & Vertical Scale: 1" = 50'



DATE	REVISIONS
6-7-13	Updated Per New Antero Standards



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EMAIL: KIRK@LWENTR.COM

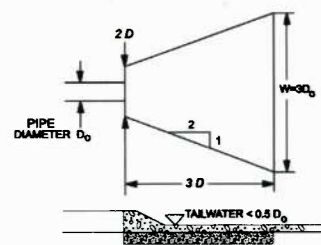


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PREPARED FOR
ANTERO RESOURCES
CORPORATION

DRILL PAD BASELINE
 PROFILE AND CROSS SECTIONS
VICTOR PAD
 NEW MILTON / GRENBRIER DISTRICT
 DODDRIDGE COUNTY, WV

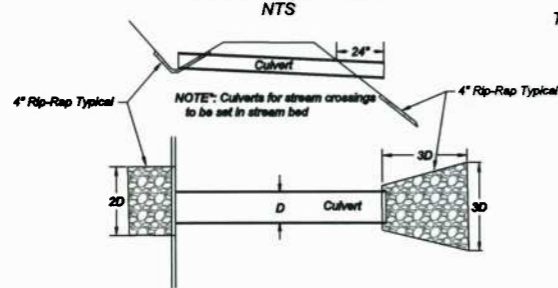
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Scale: 1" = 50'
Designed By: CKW/CKM
File No. Antero 211-12
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DETAILS

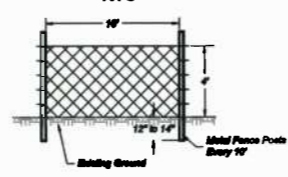


RIP RAP APRON OUTLET PROTECTION
MINIMUM TAILWATER CONDITION

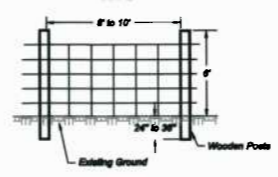
TYPICAL CULVERT & CULVERT INLET AND OUTLET PROTECTION DETAIL
NTS



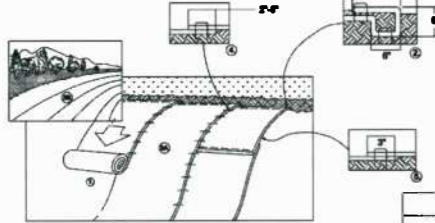
TYPICAL CONSTRUCTION FENCE DETAIL
NTS



TYPICAL WOVEN WIRE FENCE DETAIL
NTS

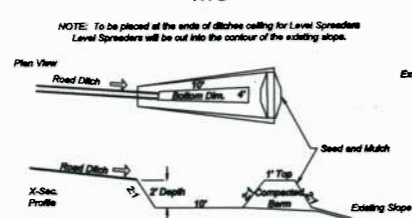


SLOPE MATTING INSTALLATION
(SC180BN)

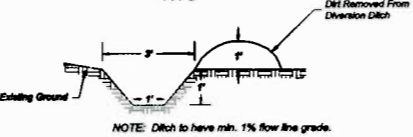


- COVER SLOPES WITH AVAILABLE TOP SOIL.
- PREP SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER, LIME, AND SEED, WHEN NECESSARY.
- BEGIN AT THE TOP OF THE SLOPE BY SECURING THE BLANKET IN A 6" DEEP X 8" WIDE TRENCH BY PLACING APPROXIMATELY 12" OF BLANKET EXTENDING BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE.
- ALL BLANKETS MUST BE FASTENED TO SOIL SURFACE IN A SECURE MANNER BY PLACING STAPLES/STAKES IN LOCATIONS AS SHOWN IN THE PATTERN GUIDE.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2'-0" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SCAM POSITION, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED BEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- SUCCESSIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
- IF SOIL CONDITIONS ARE LOOSE, STAKED OR STAPLED LENGTHS GREATER THAN 8" MAY BE NECESSARY TO SECURE THE BLANKETS PROPERLY.

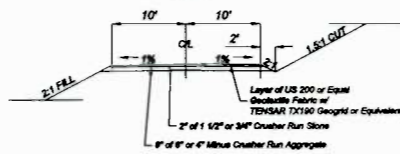
LEVEL SPREADER DETAIL
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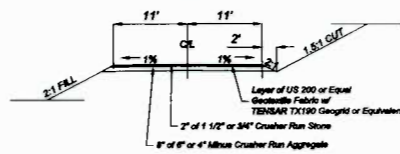
DIVERSION DITCH DETAIL
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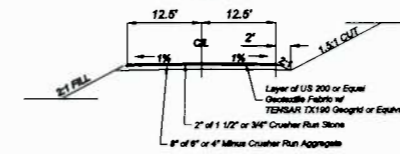
TYPICAL 20' ROAD CROSS SECTION DETAIL
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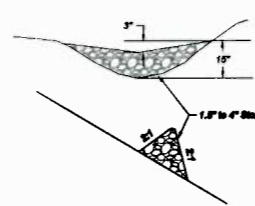
TYPICAL 22' ROAD CROSS SECTION DETAIL
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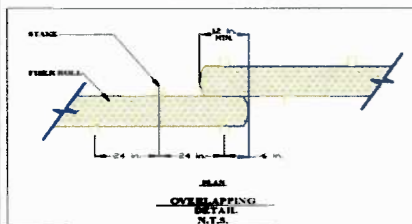
TYPICAL 25' ROAD CROSS SECTION DETAIL
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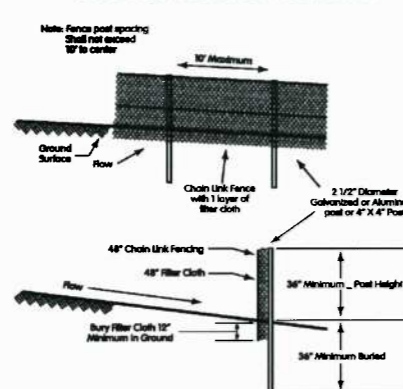
DITCH CHECK DAM DETAIL
SPACING AS INDICATED ON PROFILES
NTS



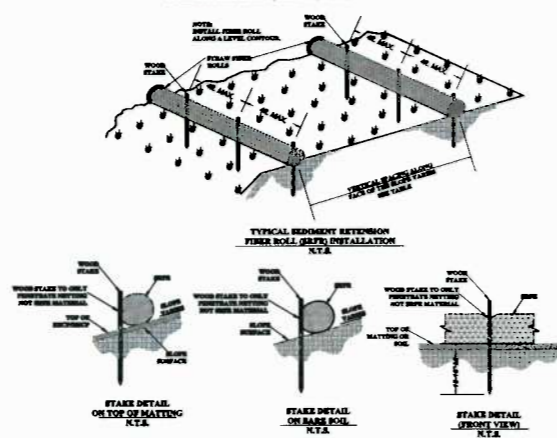
SILT SOXX STAKE OUT



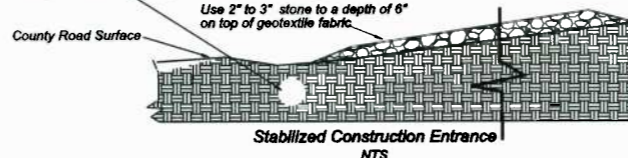
SUPER SILT FENCE TYPICAL DETAIL



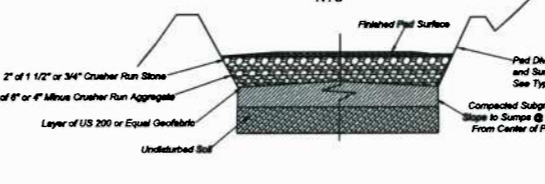
STRAW WATTLE SEDIMENT RETENTION FIBER ROLL (SRFR) INSTALLATION



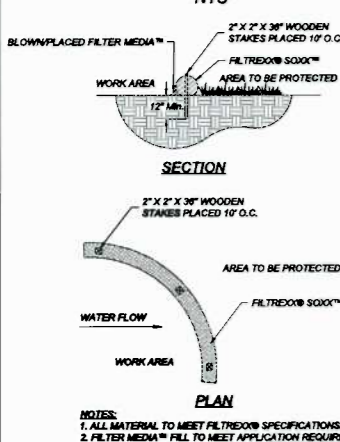
ANTERO RESOURCES STANDARD RIBBON COLOR SCHEME



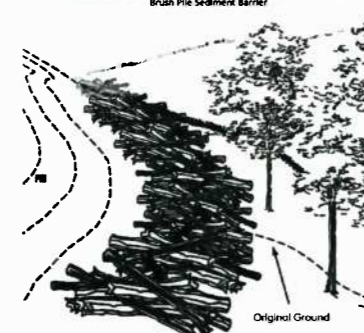
TYPICAL PAD CROSS-SECTION
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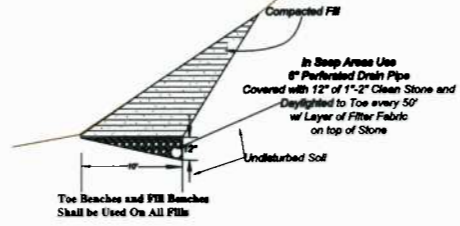
FILTREX "SOXX" FILTER SOCK DETAIL
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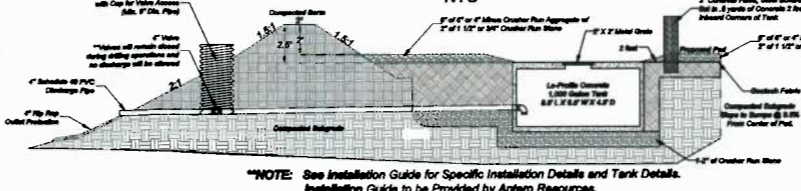
BRUSH BARRIER TYPICAL DETAIL
Brush Pile Sediment Barrier



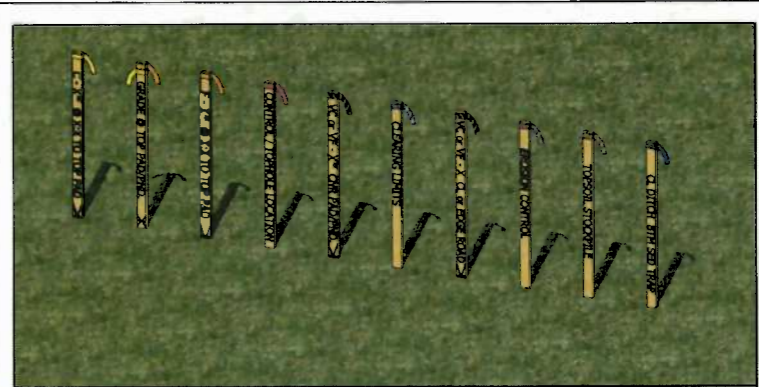
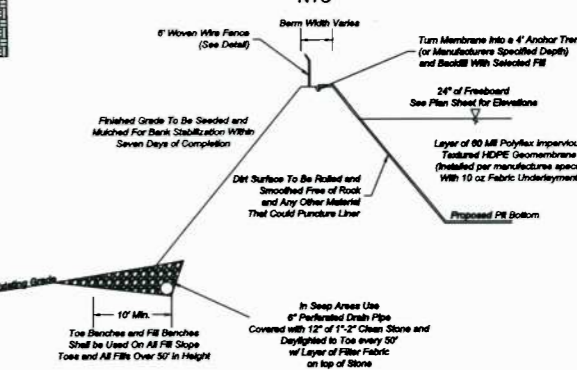
TYPICAL TOE KEY/FILL BENCH DETAIL
NTS



PAD DIVERSION BERM & SUMP DETAIL
NTS



TYPICAL EMBANKMENT DETAIL
NTS



	Yellow Ribbon: Yellow Ribbon used to indicate top of Cuts (C) Cut to be determined at time of stakeout Slope determined by site design
	Yellow & Orange Ribbon: Yellow and Orange Ribbon used to indicate Grade at Top of Pad/Pond/Pit
	Orange Ribbon: Orange Ribbon used to indicate toes of Fills (F) Fill to be determined at time of stakeout Slope determined by site design
	Pink Ribbon: Pink Ribbon used to indicate Top Hole Location Pink Ribbon used to indicate Survey Control Location
	Pink & Black Stripe Ribbon: Pink & Black Stripe Ribbon used to indicate Vertical Cut (VC) at Pad/Pond/Pit corner or edge Pink & Black Stripe Ribbon used to indicate Vertical Fill (VF) at Pad/Pond/Pit corner or edge Vertical Cut/Vertical Fill to be determined at time of stakeout.
	Blue & White Stripe Ribbon: Blue & White Stripe Ribbon used to indicate clearing limits/construction limits
	Orange & Black Stripe Ribbon: Orange & Black Stripe Ribbon used to indicate Vertical Cut (VC) at Centerline or edge of access road Orange & Black Stripe Ribbon used to indicate Vertical Fill (VF) at Centerline or edge of access road
	Pink & White Stripe Ribbon: Pink & White Stripe Ribbon used to indicate Erosion and Sediment Control Structures Silt Fence (SF) Reinforced Fiber Fence (RFF) Super Silt Fence (SSF) Filter Sock (FS)
	Orange & White Stripe Ribbon: Orange & White Stripe Ribbon used to indicate Topsoil Stockpile Locations
	Blue Ribbon: Blue Ribbon used to indicate Centerline (CL) Ditch Blue Ribbon used to indicate Bottom (BTM) Sediment Traps

DATE	REVISIONS
6-7-13	Updated Per New Antero Standards
8-19-13	Updated Per New Antero Standards



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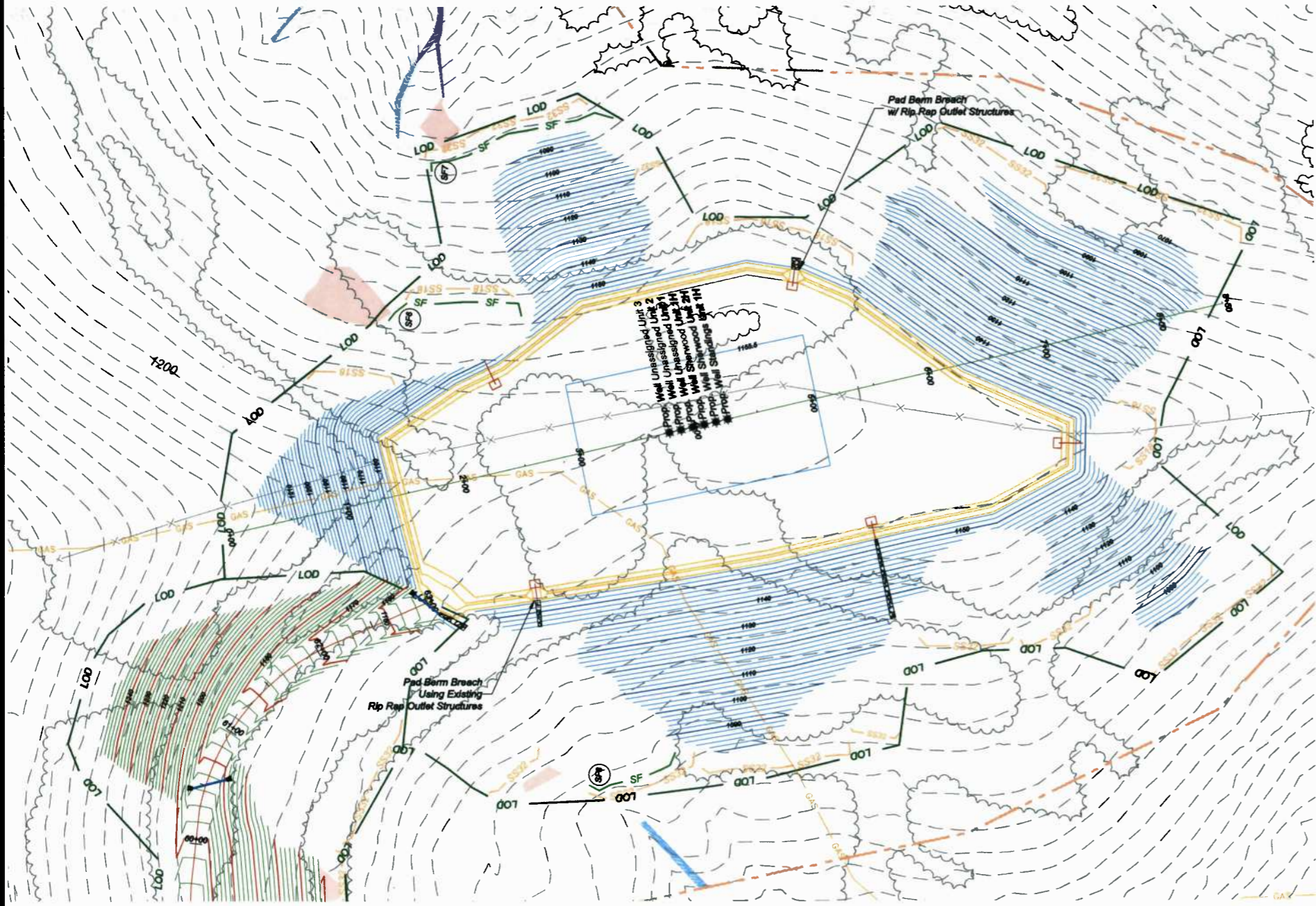
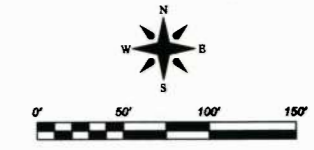
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NEW MILTON / GREENERBERRY DISTRICT
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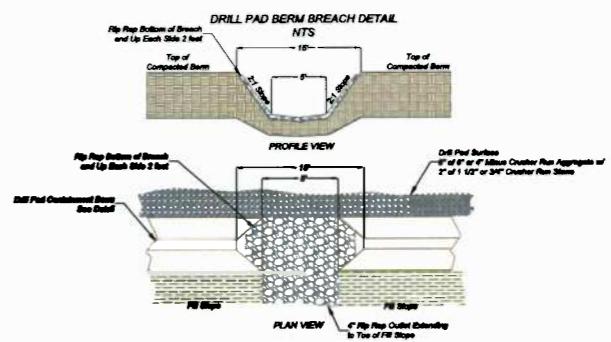
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RECLAMATION PLAN



POST CONSTRUCTION DRILLING/FRACTURING REQUIREMENTS:

1. EROSION AND SEDIMENT CONTROLS SHALL BE REPAIRED/RE-ESTABLISHED IN AREAS WHERE AT LEAST 70% TURF HAS NOT BEEN ATTAINED OR EROSION HAS OCCURRED SINCE INITIAL CONSTRUCTION. REPAIRS TO CRITICAL EROSION AREAS (REGRADING, SEEDING AND MULCH AND/OR SLOPE MATTING) SHALL BE DONE BEFORE DRILLING/FRACTURING OPERATIONS COMMENCE. W/ DOG BMP SHALL BE USED FOR EROSION AND SEDIMENT CONTROLS.
2. MAINTENANCE AND OTHER CONSIDERATIONS AND GROUND WATER PROTECTION: ALL EROSION AND SEDIMENT CONTROL AND DRILL PAD CONTAINMENT MEASURES WILL BE CHECKED DAILY AND AFTER EACH RAINFALL OF 0.5 INCHES OR MORE. THEY WILL BE INSPECTED FOR UNDERMINING, DETRIORATION, EROSION AND EXCESS DEPOSITED MATERIAL. ALL DEFICIENCIES WILL BE CORRECTED IMMEDIATELY. EXCESS MATERIAL WILL BE SPREAD ON THE SITE IN A MANNER WHERE IT IS NOT LIKELY TO ERODE IN THE FUTURE. CLEANING PROCEDURES WILL BE COMPLETED AT REGULAR INTERVALS AND AT LEAST WHEN BEDDIMENT REACHES CLEAN OUT LEVELS SHOWN. RECORDS OF CLEANING AND CORRECTIONS WILL BE MAINTAINED BY THE CONTRACTOR. THE "GENERIC GROUNDWATER PROTECTION PLAN FOR CONSTRUCTION SITES" WILL BE USED AND AVAILABLE ON SITE AT ALL TIMES. AN AREA WILL BE PROVIDED FOR VEHICLE AND EQUIPMENT MAINTENANCE. MOBILE FUEL TRUCKS WITH APPROVED TANKS WILL BE USED ON THIS SITE. PORTABLE SANITARY FACILITIES WILL BE AVAILABLE FOR EMPLOYEES. IF CONCRETE IS USED, EXCESS CONCRETE WILL BE DISPOSED OF PROPERLY AND NOT ALLOWED TO REMAIN ON THIS SITE. MACHINERY WILL NOT BE ALLOWED IN LIVE STREAMS. FLUIDS SUCH AS DIESEL FUEL, GAS, OIL OR ANTIFREEZE WILL BE KEPT IN PROPER CONTAINERS AND ANY SPILLAGE WILL BE CLEANED AND TAKEN OFF SITE TO A PROPER FACILITY. SOLID OR HAZARDOUS WASTES WILL BE DISPOSED IN ACCORDANCE WITH APPROPRIATE STATE AND FEDERAL REGULATIONS.



*NOTE: An additional 5 tons of 4" Rip Rap is required for pad outlet structures.

*NOTE: No Additional Grading Will be Done for Reclamation

Legend	
— 1200 —	Existing 2' Contour
— 1100 —	Existing 10' Contour
— Tree —	Existing Tree Line
— E — E —	Existing Utility Line / Pole
— S — S —	Surface Owner Property Line
— GAS —	Existing Gas Line CL
— LOD —	Limits of Disturbance
— Ditch —	Proposed Diversion Ditch
— 2' —	Proposed 2' Contour
— 10' —	Proposed 10' Contour
— SF —	Proposed Super Silt Fence
— SW —	Proposed Straw Wattles
— SSXX —	Proposed Silt Sox w/ Diameter
— 2' —	Proposed 2' Contour
— 10' —	Proposed 10' Contour
— Rip-Rap —	Proposed Rip-Rap
— Check Dam —	Proposed Check Dam
— Culvert —	Proposed Culvert w/ Inlet & Outlet Protection

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