

Commercial/Industrial Floodplain Development Permit

Doddridge County, WV Floodplain Management

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

Permit: #14-263 ~ Antero Resources ~ Henley Well Pad

Date Approved: 08/26/2014 Expires: N/A

Issued to: Antero Resources POC: Emily Kijowski 303-357-7310

Company Address: 1615 Wynkoop Street Denver, CO 80202

Project Address: Greenbrier District

Lat/Long: 39.184737N/80.552301W and 39.187052N/80.546400W

Purpose of development: Well Pad & Water Containment Pad construction. <u>Project does not impact floodplain.</u>

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

Date: 08/26/2014

Legal Advertisement:

Doddridge County

Floodplain Permit Application

Please take notice that on the 19th day of August, 2014

Antero Resources

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

Greenbrier District

39.184737N/80.552301W and 39.187052N/80.546400W

Permit #14-263 Henley Well and Water Containment Pad

(Note: This project is not within the floodplain)

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

Any interested persons who desire to

comment shall present the same in writing by September 22, 2014, delivered to:

Clerk of the County Court

118 E. Court Street, West Union, WV 26456

Beth A Rogers, Doddridge County Clerk

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



August 15, 2014

Doddridge County Commission Attn: Bo Wriston, Doddridge County Floodplain Manager 118 East Court Street, Room 102 West Union, WV 26456 Antero Resources 1615 Wynkoop Street Denver, CO 80202 Office 303.357.7310 Fax 303.357.7315

Mr. Wriston:

Antero Resources Appalachian Corporation (Antero) would like to submit a Doddridge County Floodplain permit application for our Henley Well Pad. Our project is located in Doddridge County, Greenbrier District and per FIRM maps #54017C0260C and #54033C0220D this location is **not** within the floodplain.

Attached you will find the following:

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

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

Thank you in advance for your consideration.

Sincerely,

Emily Kijowski

Permit Representative

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Antero Resources Appalachian Corporation

Enclosures

DODOMOGE COUNTY, WY

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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 August 18, 2014

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

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

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

ADDRESS: 1615 Wynkoop Street, Denver, CO 80202

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

BUILDER'S NAME: Antero Midstream LLC
ADDRESS: 1615 Wynkoop Strett, Denver, CO 80202
TELEPHONE NUMBER: (303)-357-7310
ENGINEER'S NAME: Navitus Engineering, Inc.
ADDRESS: 151 Windy Hill Lane, Winchester, VA 22602
TELEHONE NUMBER: (888) 662-4185
PROJECT LOCATION:
NAME OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) Please see Surface Owner Table
ADDRESS OF SURFACE OWNER/OWNERS (IF NOT THE APPLICANT) Please see Surface Owner Table
DISTRICT:
DATE/FROM WHOM PROPERTY
DATE/FROM WHOM PROPERTY PURCHASED:
DATE/FROM WHOM PROPERTY PURCHASED: LAND BOOK DESCRIPTION: Please see Surface Owner Table
DATE/FROM WHOM PROPERTY PURCHASED: LAND BOOK DESCRIPTION: Please see Surface Owner Table DEED BOOK REFERENCE: Please see Surface Owner Table
DATE/FROM WHOM PROPERTY PURCHASED: LAND BOOK DESCRIPTION: Please see Surface Owner Table DEED BOOK REFERENCE: Please see Surface Owner Table TAX MAP REFERENCE: Please see Surface Owner Table
DATE/FROM WHOM PROPERTY PURCHASED: LAND BOOK DESCRIPTION: Please see Surface Owner Table DEED BOOK REFERENCE: Please see Surface Owner Table TAX MAP REFERENCE: Please see Surface Owner Table EXISTING BUILDINGS/USES OF PROPERTY: None
DATE/FROM WHOM PROPERTY PURCHASED: LAND BOOK DESCRIPTION: Please see Surface Owner Table DEED BOOK REFERENCE: Please see Surface Owner Table TAX MAP REFERENCE: Please see Surface Owner Table
DATE/FROM WHOM PROPERTY PURCHASED: LAND BOOK DESCRIPTION: Please see Surface Owner Table DEED BOOK REFERENCE: Please see Surface Owner Table TAX MAP REFERENCE: Please see Surface Owner Table EXISTING BUILDINGS/USES OF PROPERTY: None NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY Please see Surface Owner Table ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE
DATE/FROM WHOM PROPERTY PURCHASED: LAND BOOK DESCRIPTION: Please see Surface Owner Table DEED BOOK REFERENCE: Please see Surface Owner Table TAX MAP REFERENCE: Please see Surface Owner Table EXISTING BUILDINGS/USES OF PROPERTY: None NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY Please see Surface Owner Table

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 New Structure []Residential (1 – 4 Family) Addition Residential (more than 4 Family) Alteration Non-residential (floodproofing) Relocation Π Combined Use (res. & com.) **Demolition** П Replacement Manufactured/Mobil Home

B. OTHER DEVEOPLMENT ACTIVITIES:

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[]	Fill	[]	Mining	[]	Drilling	n	Pipelining	
X	Grading		_		J	.,		
[]	Excavation	(except	for STRUCTUR	RAL DEVE	LOPMENT che	ecked ab	ove)	
[]					ing and chann			
[]			ents (includin				,	
[]			dge Construct		,			:
נו 🗀			ng new expan					•
[]			Sewer Systen	-				
[]	Other (plea		•					

C. STANDARD SITE PLAN OR SKETCH

- 1. SUBMIT ALL STANDARD SITE PLANS, IF ANY HAVE BEEN PREPARED.
- 2. IF STANDARD SITE PLANS HAVE NOT BEEN PREPARED:

 SKETCH ON A SEPARATE 8 ½ X 11 INCH SHEET OF PAPER THE SHAPE AND LOCATION OF THE LOT. SHOW THE LOCATION OF THE INTENDED CONSTRUCTION OR LAND USE INDICATING BUILDING SETBACKS, SIZE & HEIGHT. IDENTIFY EXISTING BUILDINGS, STRUCTURES OR LAND USES ON THE PROPERTY.
- 3. SIGN AND DATE THE SKETCH.

ACTUAL TOTAL CONSTRUCTION COSTS OF THE COMPLETE DEVELOPMENT
IRRESPECTIVE OF WHETHER ALL OR ANY PART OF THE SUBJECT PROPOSED
CONSTRUCTION PROJECT IS WITHIN THE FLOODPLAIN \$ N/A - Location is not within the floodplain

D. ADJACENT AND/OR AFFECTED LANDOWNERS:

OF THE SURFACE TRACT (UP & DOWN STREAM) UPON WHICH THE PROPOSED **ACTIVITY WILL OCCUR AND ALL OTHER SURFACE OWNERS UP & DOWN STREAM)** WHO OWN PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY (IF ONE HAS BEEN COMPLETED). NAME: N/A-No properties sharing an NAME: ADDRESS:immediate and common boundary ADDRESS: up or down stream due to the location not being in floodplain NAME:_____ NAME: ADDRESS:_____ ADDRESS: 1. NAME AND ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON ANY ADJACENT PROPERTY AT THE TIME THE FLOODPLAIN PERMIT APPLICATION IS FILED AND THE NAME AND ADDRESS OF AT LEAST ONE ADULT RESIDING IN ANY HOME ON ANY PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY. NAME: N/A-No properties sharing an NAME:____ ADDRESS: immediate and common boundary ADDRESS:_____ up or down stream due to the location not being in floodplain NAME:____ NAME:____ ADDRESS:____ ADDRESS:_____

1. NAME AND ADDRESS OF ALL OWNERS OF SURFACE TRACTS ADJACENT TO THE AREA

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): Rundy Kloberdanz	
SIGNATURE:	DATE: August 18, 2014
After completing SECTION 2, APPLICANT should submit form to Administrator/Manager or his/her representative for review.	o Floodplain
SECTION 3: FLOODPLAIN DETERMINATION (to be con Administrator/Manager or his/her representative)	mpleted by Floodplain
THE PROPOSED DEVELOPMENT:	
THE PROPOSED DEVELOPMENT IS LOCATED ON:	
FIRM Panel:	
Dated:	
[] Is <u>NOT</u> located in a Specific Flood Hazard Area (Notify a review is complete and NO FLOOPLAIN DEVELOPMENT PERMI	pplicant that the application T IS REQUIRED).
[] Is located in Special Flood Hazard Area.	. :
FIRM zone designation	
100-Year flood elevation is:	NGVD (MSL)
[] Unavailable	
[] The proposed development is located in a floodway.	
FBFM Panel No.	Dated

See section 4 for additional instructions.

	TION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by
Floo	dplain Administrator/Manager or his/her representative)
The a	pplicant must submit the documents checked below before the application can be essed.
0.	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
0	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 elevationFt. 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.

DATE___

SIGNED_

[]

Contractor's License and a Manufactured Home Installation License as required by the

Manufactured homes located in a floodplain area must have a West Virginia

Federal Emergency Management Agency (FEMA).

ION 5: PERI	MIT DETERMINATION (To be completed by Floodplain
Administra	ator/Manager or his/her representative)
provisions of County on M	mined that the proposed activity (type is or is not) in conformance we fight the Floodplain Ordinance adopted by the County Commission of Do May 21, 2013. The permit is issued subject to the conditions attached of this permit.
SIGNED	DATE
with the pro	plain Administrator/Manager found that the above was not in conform evisions of the Doddridge County Floodplain Ordinance and/or denied the applicant may complete an appealing process below.
APPEALS:	Appealed to the County Commission of Doddridge County? [] Yes Hearing Date:
	County Commission Decision - Approved [] Yes [] No
CONDITIONS	S:
	

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).

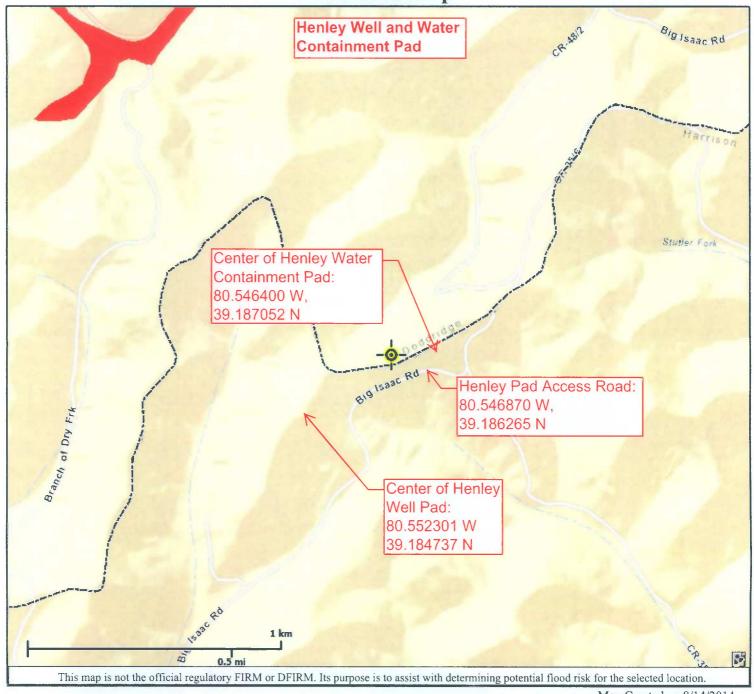
COMPLETE 1 OR 2 BELOW:

1	Actual (As-Built) Elevation of the top of the lowest floor (including basement or crawl space isFT. NGVD (MSL)
2	Actual (As Built) elevation of floodproofing isFT. NGVD (MSL)
Note appli	e: Any work performed prior to submittal of the above information is at risk of the icant.
SECT	FION 7: COMPLIANCE ACTION (To be completed by the Floodplain
Adm	ninistrator/Manager or his/her representative).
as ap	Floodplain Administrator/Manager or his/her representative will complete this section plicable based on inspection of the project to ensure compliance with the Doddridge ty Floodplain Ordinance.
IN	ISPECTIONS:
	DATE:BY: DEFICIENCIES ? Y/N
C	OMMENTS
SECT	ION 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain
Admi	inistrator/Manager or his/her representative).
Certifi	cate of Compliance issued: DATE:

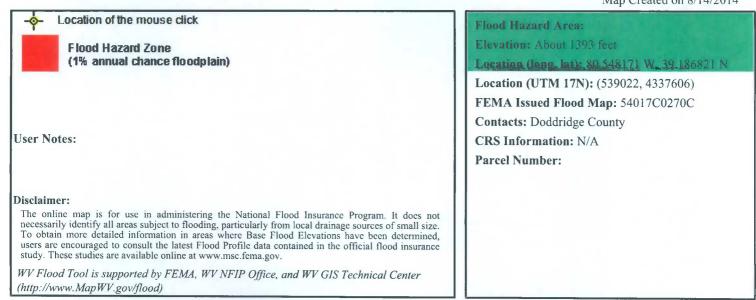
CERTIFICATE OF COMPLIANCE FOR DEVELOPMENT IN SPECIAL FLOOD HAZARD AREA (OWNER MUST RETAIN)

PEI PEI	RMIT NUMBER:
PURPOSE	
CONSTRUCTION LOCATION:	
OWNER'S ADDRESS:	
	·
	OMPLETED BY THE FLOODPLAIN
ADMINISTRATOR/MANAGER	R OR HIS/HER AGENT.
COMPLIANCE IS HEREE	BY CERTIFIED WITH THE REQUIREMENT OF THE
FLOODPLAIN ORDINANCE AC	DOPTED BY THE COUNTY COMMISSION OF
DODDRIDGE COUNTY ON MA	AY 21, 2013.
SIGNED	D. 4 C -
	DATE

WV Flood Map



Map Created on 8/14/2014



LEGAL ADVERTISEMENT:

LEGAL ADVERTISEMENT:
Doddridge County
Floodplain Permit Application
Please take notice that on the 19th day of August, 2014
Anjero Resources filed an application for a Floodplain
Permit to develop land located at or about. Greenbrier
District 39 184737 N/80 552301W and
39 187052N/80 546400W Permit #14-263 Healley Well and
Water Containment Pad (Note: This project is not within
the floodplain) The Application is on file with the Clerk
of the County Court and may be inspected or copied
during regular business hours. As this project is outside
the FEMA identified floodplain of Doddridge County,
Doddridge County, Floodplain Management has no
regulatory authority. Any interested persons who desire
to comment shall present the same in writing by
September 22, 2014
Delivered to the:

Delivered to the: Delivered to the:
Clerk of the County Court

118 E. Court Street, West Union, WV 26456

U. Beth A. Rogers, Doddridge County Clerk
Edwin L. "Bo" Wriston, Doddridge County Flood Plain Vriston, Dogur

9-2-2xb

STATE OF WEST VIRGINIA, COUNTY OF DODDRIDGE, TO WIT

I, Virginia Nicholson, Editor of THE HERALD RECORD, a weekly newspaper published regularly, in Doddridge County, West Virginia, Do Hereby Certify That the Accompanying Legal Notice
Floodplain Permet \$ 14-263
4
was published in said paper for
successive weeks beginning with the issue
of September 2nd 2014 and
ending with the issue of
September 9 to 2014 and
that said notice contains
WORD SPACE at
amounts to the sum of \$21,74
FOR FIRST PUBLICATION, SECOND PUBLICATION IS 75% OF THE FIRST PUBLICATION
\$
2805
\$Q. O. O. O. TOTAL
Miginia Micholson
SWORN TO AND SUBSCRIBED
BEFORE ME THIS THE DAY
OF September 2014
NOTARY PUBLIC DOWNS
OFFICIAL SEAL Notary Public, State Of West Virginia LAURA J ADAMS 212 Edmond Street West Union, WV 26456

My Commission Expires June 14, 2023

FIRM EXHIBIT



(A)TM 15-16.1 **CLARENCE & GABRIELE HOOVER** DB 257 PG 712 13.73 ACRES RT 3 BOX 79A SALEM, WV 26426

(B)

(c)

TM 402-13 WILLIAM D. & TABITHA N. RATLIFF DB 1406 PG 384 48.45 ACRES C/O ADAM CARDER RR 1 BOX 44 LOST CREEK, WV 26385

> TM 15-33 **GABRIELE HOOVER** AB 035 PG 493 16.13 ACRES RT 3 BOX 79A SALEM, WV 26426

TM 401-19 ERONISLAW & URSULA SZMIGIEL DB 1244 PG 261 2.087 ACRES RR2 BOX 160 B1 JANE LEW, WV 26378

> TM 401-4 FRANCES O. PHARES WB 166 PG 606 8.8 ACRES 235 E. MAIN STREET CLARKSBURG, WV 26301

TM 401-1.5 RICHARD K. & WANDA F. HENLEY DB 1349 PG 344 48.66 ACRES 225 RAINBOW DRIVE LIVINGSTON, TX 77399

TM 401-1.1 TIMOTHY G. & NANCY JO HUGHES DB 1237 PG 881 43.85 ACRES RR 2 BOX 158 JANE LEW, WV 26378

TM 401-1.2 TIMOTHY G. & NANCY JO HUGHES DB 1237 PG 881 65.99 ACRES **RR2 BOX 158** JANE LEW, WV 26378

TM 401-2 CLARENCE & GABRIELE HOOVER DB 1150 PG 898 1.1 ACRES 832 INDEPENDENCE ROAD **SALEM, WV 26426**

RT 3 BOX 79A **SALEM, WV 26426** TM 402-1 JAMES OMAR CUMBERLEDGE DB 1451 PG 1103 19 94 ACRES

C/O WILLIS CUMBERLEDGE RR 2 BOX 161

TM 15-16

GABRIELE HOOVER

AB 035 PG 493

71.41 ACRES

WEST UNION, WV 26456 TM 402-17 WILLIS L. & ARLETA P. CUMBERLEDGE DB 842 PG 535 80 ACRES RR2 BOX 161 JANE LEW, WV 26378

TM 402-13.2 JOSHUA M. & SARAH J.HACKER DB 1419 PG 1310 7.25 ACRES RR 2 BOX 160C JANE LEW, WV 26378

TM 402-13.1 MICHAEL A. & BARBARA J. DAVIS DB 1431 PG 1022 48.45 ACRES RR 2 BOX 165 JANE LEW, WV 26378

PROGRAM

HOODHINSURANGE

WNO

PANEL 0260C

FIRM

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

PANEL 260 OF 325 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

should be used when placing map orders; the Community Number shown above should be



MAP NUMBER 54017C0260C MAP REVISED **OCTOBER 4, 2011**

Federal Ensergency Management Agency

PANEL 0220D

FIRM

FLOOD INSURANCE RATE MAP

HARRISON COUNTY. **WEST VIRGINIA** AND INCORPORATED AREAS

PANEL 220 OF 355

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY



MAP NUMBER 54033C0220D

EFFECTIVE DATE OCTOBER 2, 2012

Federal Emergency Management Agency



FLOODPLAIN NOTE
THE PROPOSED SITE IS LOCATED IN
FLOOD ZONE "X" PER FEMA FLOOD MAPS
#54017C0260C & #54033C0220D

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THIS DOCUMENT WAS PREPARED FOR: ANTERO RESOURCES CORPORATION

WATER CONTAINMENT PAD RIER & UNION DISTRICTED

HENLEY WELL PAD

ATE: 04/28/2014 SCALE: 1" =200' SHEET 23 OF 23

CENTROID OF WELL PAD LATITUDE: 39.184737 LONGITUDE: -80.552301 (NAD 83) N 4337372.87 E 538686.09 (UTM NAD83, ZONE 17 METERS)

CENTER OF WATER CONTAINMENT TANK
LATITUDE: 39.187052 LONGITUDE: -80.548400 (NAD 83) N 4337632.32 E 539174.50 (UTM NAD83, ZONE 17 METERS)

GENERAL DESCRIPTION

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

FLOODPLAIN NOTE
THE PROPOSED SITE IS LOCATED IN FLOODZONE "X" PER FEMA FLOOD MAPS #54017C0260C & #54033C0220D.

MISS UTILITY STATEMENT
ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING
OF UTILITIES PRIOR TO THIS PROJECT DESIGN; TICKET #1310825142.
IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF

ENTRANCE PERMIT

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

ENVIRONMENTAL NOTES
WETLAND DELINEATIONS WERE PERFORMED IN APRIL-MAY, 2014 BY ALLSTAR ECOLOGY TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE MAY 08, 2014 JURISDICTIONAL STREAMS AND WETLANDS MAP WAS PREPARED BY ALLSTAR ECOLOGY AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE REPORT DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE

GEOTECHNICAL NOTE

A SUBSURFACE INVESTIGATION OF THE PROPOSED SITE WAS PERFORMED BY KLEINFELDER ON OCTOBER 15-18, 2013 & MARCH 19-APRIL 8, 2014. THE REPORT PREPARED BY KLEINFELDER DATED APRIL 25, 2014. REFLECTS THE RESULTS OF THE SUBSURFACE INVESTIGATION. THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS REPORT WAS USED IN THE PREPARATION OF THESE PLANS. PLEASE REFER TO THE SUBSURFACE INVESTIGATION REPORT BY KLEINFELDER FOR ADDITIONAL INFORMATION, AS NEEDED.

PROJECT CONTACTS

OPERATOR:
ANTERO RESOURCES CORPORATION
535 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330 PHONE: (304) 842-4100 FAX: (304) 842-4112

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

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

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

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

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

DAVE CAVA - LAND AGENT CELL: (304) 641-5814

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

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

OFFICE: (724) 772-7072 CELL: (704) 400-1103

GEOTECHNICAL: KLEINFELDER JOSHUA D. FREGOSI-ENGINEER

- RESTRICTIONS NOTES:

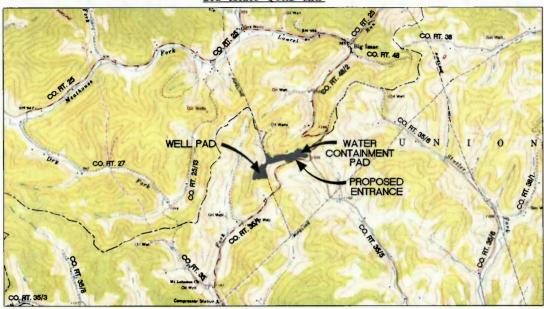
 1. THERE ARE NO PERENNIAL STREAMS, WETLANDS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD.
- THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD
- THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.
- THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.
- THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.
- THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET

HENLEY WELL PAD & WATER CONTAINMENT PAD

SITE DESIGN & CONSTRUCTION PLAN, FROSION & SEDIMENT CONTROL PLANS

GREENBRIER & UNION DISTRICTS. DODDRIDGE & HARRISON COUNTIES. WEST VIRGINIA LAUREL RUN, RIGHT FORK KINCHELOE CREEK & TANNER FORK WATERSHEDS

BIG ISAAC QUAD MAP

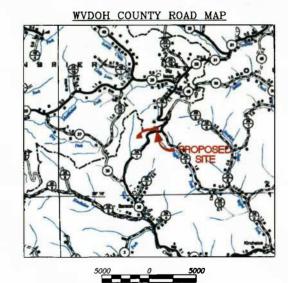




WEST VIRGINIA COUNTY MAP







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

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

SHEET INDEX

01 - COVER SHEET

02 - CONSTRUCTION AND E&S CONTROL NOTES

03 - MATERIAL QUANTITIES

05 - OVERALL PLAN SHEET INDEX & VOLUMES

06 - ACCESS ROAD & WATER CONTAINMENT PAD PLAN

NAVD88

OR - ACCESS ROAD PROFILES

11-13 - WELL PAD SECTIONS

14 - WATER CONTAINMENT PAD SECTIONS

15-20 - CONSTRUCTIONS DETAILS

21 - ACCESS ROAD & WATER CONTAINMENT PAD RECLAMATION PLAN

22 - WELL PAD RECLAMATION PLAN

23 - FIRM EXHIBIT

GE501-GE516 - GEOTECHNICAL DETAILS

HENLEY LIMITS OF DISTURBANCE AR	EA (AC)
Total Site	
Access Road "A" (386')	1.13
Access Road "B" (1578')	6.61
Well Pad	5.24
Water Containment Pad	2.79
Excess/Topsoil Material Stockpiles	5.12
Total Affected Area	20.8
Total Wooded Acres Disturbed	16.4
Impacts to Clarence & Gabriele Hoover 1	M 15-16.1
Access Road "A" (105')	0.38
Access Road "B" (103')	0.31
Water Containment Pad	2.40
Excess/Topsoil Material Stockpiles	1.10
Total Affected Area	4.19
Total Wooded Acres Disturbed	3.83
Impacts to Gabriele Hoover TM 15	-33
Access Road "A" (281')	0.75
Access Road "B" (999")	4.78
Water Containment Pad	0.39
Excess/Topsoil Material Stockpiles	1.97
Total Affected Area	7.89
Total Wooded Acres Disturbed	6.98
Impacts to Timothy G. & Nancy Jo Hughes	TM 401-1.2
Access Road "B" (329")	0.68
Well Pad	1.35
Excess/Topsoil Material Stockpiles	0.62
Total Affected Area	2.65
Total Wooded Acres Disturbed	0.28
Impacts to Frances O. Phares TM 4	01-4
Access Road "B" (147')	0.84
Well Pad	0.79
Excess/Topsoil Material Stockpiles	0.19
Total Affected Area	1.82
Total Wooded Acres Disturbed	1.35
Impacts to Richard K. & Wanda F. Henley	1
Well Pad	3.10
Excess/Topsoil Material Stockpiles	1.24
Total Affected Area	4.34
Total Wooded Acres Disturbed	4.03
Total Wooded Acres Disturbed	4.03

Proposed	WW North	WV North	UTM (METERS)	NAD 83 Lat & Long
Well Name	NAD 27	NAD 83	Zone 17	
Betty Lou	N 251069.26	N 251106.24	N 4337360.14	LAT 39-11-04 6437
Unit 1H	E 1701622.29	E 1670181.93	E 538653.54	LONG -80-33-08.8101
Betty Lou	N 251072.14	N 251109.12	N 4337361.06	LAT 39-11-04.6733
Unit 2H	E 1701631.87	E 1670191.51	E 538656.45	LONG -80-33-08.6889
Andrea	N 251075 01	N 251111.99	N 4337361.98	LAT 39-11-04.7028
Unit 1H	E 1701641.44	E 1670201.09	E 538659.35	LONG -80-33-08.5677
Andrea	N 251077.89	N 251114.87	N 4337362.91	LAT 39-11-04.7324
Unit 2H	E 1701651.02	E 1670210.66	E 538662 25	LONG -80-33-08.4465
Lebanon	N 251080.78	N 251117.74	N 4337363.83	LAT 39-11-04.7819
Unit 1H	E 1701660.60	E 1670220.24	E 538665.15	LONG -80-33-08.3253
Lebanon	N 251083.64	N 251120.62	N 4337364.76	LAT 39-11-04.7914
Unit 2H	E 1701670.18	E 1670229.82	E 538668.08	LONG -80-33-08.2041
Tanner	N 251086.51	N 251123.50	N 4337365.69	LAT 39-11-04.8210
Unit 1H	E 1701679.75	E 1670239.40	E 538670.96	LONG -80-33-08.0829
Tanner	N 251089 39	N 251126.37	N 4337366.61	LAT 39-11-04.8505
Unit 2H	E 1701689.33	E 1670248.97	E 538673.86	LONG -80-33-07.9617
Myrtle	N 251092 27	N 251129.25	N 4337367.53	LAT 39-11-04.8800
Unit 1H	E 1701698.91	E 1670258.55	E 538676.77	LONG -80-33-07.8405
Well Pad Elevation	1.461.0			



REVISION	DELINEATIC			
	WETLAND			
	PER			
	UPDATE			
DATE	05/13/2014 UPDATE PER WETLAND DELINEATION			

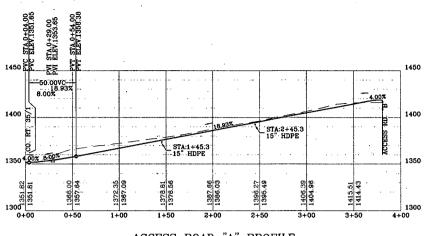


WATER CONTAINMENT PAD RIER & UNION DISTRICTS REISON COUNTIES, WEST VIRGINIA

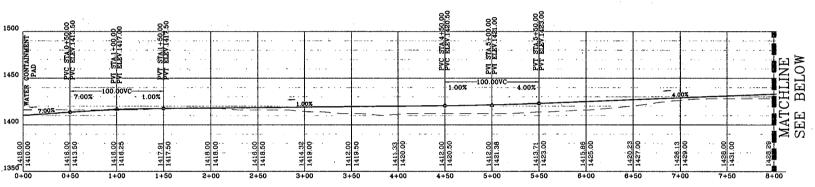
HENLEY

DATE: 04/28/2014 SCALE: AS SHOWN SHEET 1 OF 23

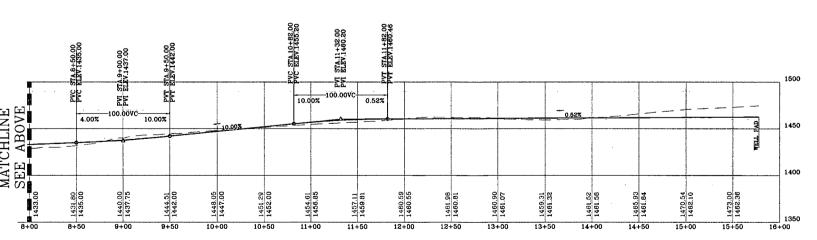
ACCESS ROAD PROFILES



ACCESS ROAD "A" PROFILE SCALE: HORIZ. 1" = 50' VERT. 1" = 50'



ACCESS ROAD "B" PROFILE SCALE: HORIZ. 1" = 50' VERT. 1" = 50'



ACCESS ROAD "B" PROFILE SCALE: HORIZ. 1" = 50' VERT. 1" = 50'

ACCESS ROAD PROFILES



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WELL PAD & WATER CONTAINMENT PAD GREENBRIER & UNION DISTRICTS OODDRIDGE & HARRISON COUNTIES. WEST VIRGINIA

HENLEY

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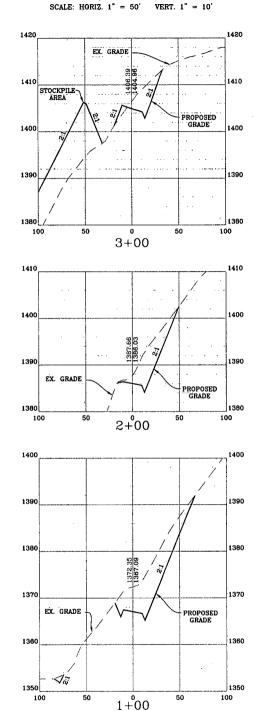
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<u>LEGENI</u>					
X-SECTION	GRID	INDEX INTERMEDIATE			
X-SECTION	GRID	INTERMEDIATE			
X-SECTION	PROP	OSED GRADE			
X-SECTION	EXIST	ING GRADE			

DATE: 04/28/2014 SCALE: AS SHOWN SHEET 8 OF 23

ACCESS ROAD SECTIONS

ACCESS ROAD "A" CROSS-SECTIONS

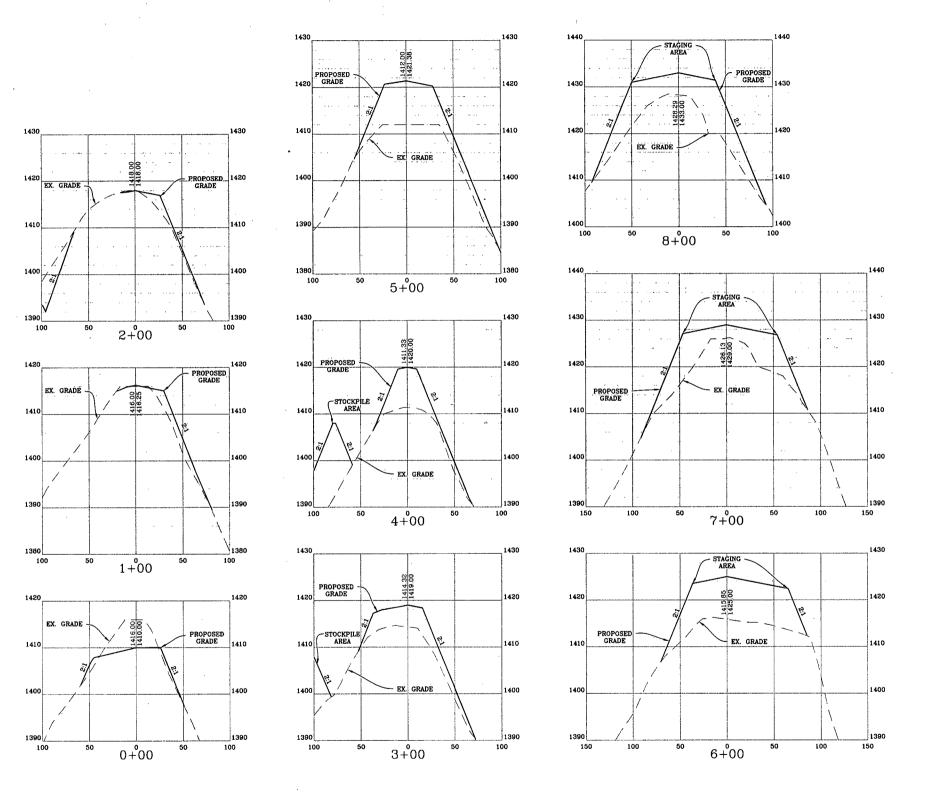


NOTE:
1. ALL FILL AREAS, INCLUDING ACCESS
ROADS AND EXCESS MATERIAL
STOCKPILES, SHALL BE "KEYED IN" AND
COMPACTED IN 12" (MAXIMUM) LOOSE
LIFT THICKNESS WITH A VIBRATING
SHEEPSFOOT ROLLER TO 95%
COMPACTION PER STANDARD PROCTOR.
MOISTURE CONTENT WILL BE
CONTROLLED IN ACCORDANCE WITH THE
STANDARD PROCTOR TEST (ASTM-D698)

2. ALL CUT & FILL SLOPES SHALL BE 2:1 UNLESS STATED OTHERWISE.

ACCESS ROAD "B" CROSS-SECTIONS

SCALE: HORIZ. 1" = 50' VERT. 1" = 10'



<u>LEGEND</u>

X-SECTION GRID INDEX
X-SECTION GRID INTERMEDIATE
X-SECTION PROPOSED GRADE
X-SECTION EXISTING GRADE

X-SECTION WATER SURFACE MATCHLINE E _____

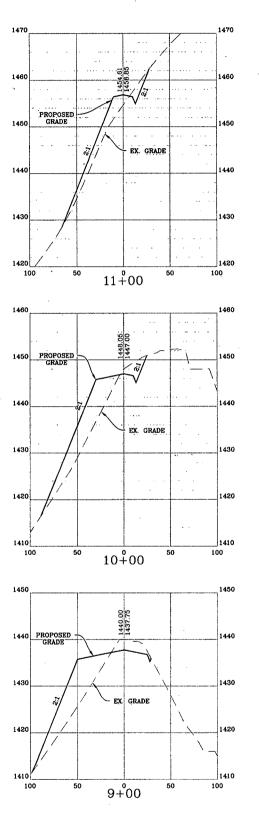
DATE: 04/28/2014

SCALE: AS SHOWN

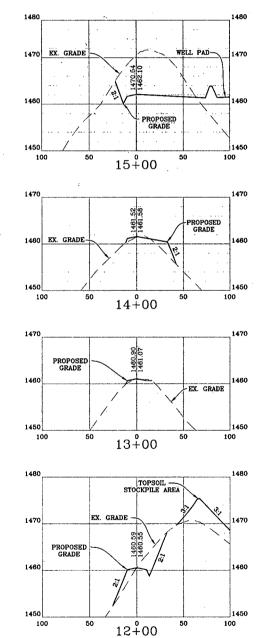
SHEET 9 OF 23

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ACCESS ROAD SECTIONS



ACCESS ROAD "B" CROSS-SECTIONS



NOTE:

1. ALL FILL AREAS. INCLUDING ACCESS
ROADS AND EXCESS MATERIAL
STOCKPILES, SHALL BE "KEYED IN" AND
COMPACTED IN 12" (MAXIMUM) LOOSE
LIFT THICKNESS WITH A VIERATING
SHEEPSFOOT ROLLER TO 95%
COMPACTION PER STANDARD PROCTOR.
MOISTURE CONTENT WILL BE
CONTROLLED IN ACCORDANCE WITH THE
STANDARD PROCTOR TEST (ASTM-D698) STANDARD PROCTOR TEST (ASTM-D698) RESULTS.

2. ALL CUT & FILL SLOPES SHALL BE 2:1 UNLESS STATED OTHERWISE.

LEGEND

X-SECTION GRID INDEX
X-SECTION GRID INTERMEDIATE
X-SECTION PROPOSED GRADE
X-SECTION EXISTING GRADE
X-SECTION WATER SURFACE
MATCHLINE

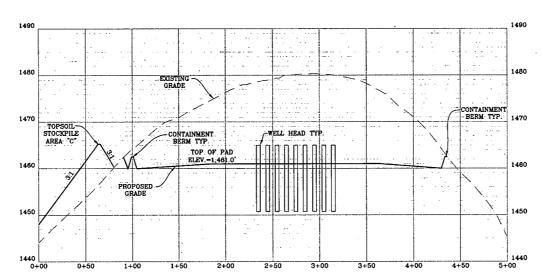
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DATE: 04/28/2014 SCALE: AS SHOWN SHEET 10 OF 23

WELL PAD SECTIONS

WELL PAD CROSS-SECTION "A-A"



WELL PAD SECTIONS

WELL PAD & WATER CONTAINMENT PAD GREENBRIER & UNION DISTRICTS CONDRIDGE & HARRISON COUNTIES, WEST VIRGINIA



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DATE: 04/28/2014 SCALE: AS SHOWN

SHEET 11 OF 23

NOTE:

1. ALL FILL AREAS, INCLUDING ACCESS ROADS AND EXCESS MATERIAL. STOCKPILES, SHALL BE "KEYED IN" AND COMPACTED IN 12" (MAXIMUM) LOOSE LIFT THICKNESS WITH A VIBRATING SHEEPSFOOT ROLLER TO 95% COMPACTION PER STANDARD PROCTOR. MOISTURE CONTENT WILL BE CONTROLLED IN ACCORDANCE WITH THE STANDARD PROCTOR TEST (ASTM-D698) RESULTS.

2. ALL CUT & FILL SLOPES SHALL BE 2:1 UNLESS STATED OTHERWISE.

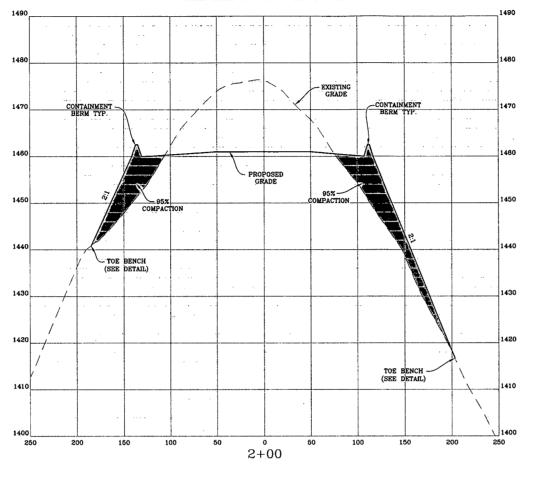
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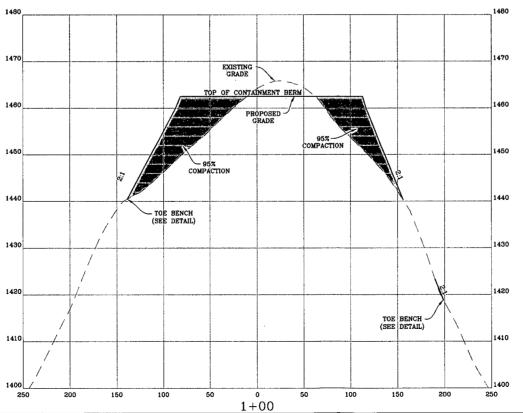
X-SECTION GRID INDEX
X-SECTION GRID INTERMEDIATE
X-SECTION PROPOSED GRADE
X-SECTION EXISTING GRADE
X-SECTION WATER SURFACE
MATCHLINE

WELL PAD SECTIONS

WELL PAD CROSS-SECTIONS ALONG BASELINE "A-A"

SCALE: HORIZ. 1" = 50' VERT. 1" = 10'





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DATE	13/2014						
REVISION	UPDATE						
	PER						
	WETLAND						
7	05/13/2014 UPDATE PER WETLAND DELINEATION						

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WELL PAD SECTIONS

HENLEY
WELL PAD & WATER CONTAINMENT PAD
GREENBRIER & UNION DISTRICTS
ODDRIDGE & HARRISON COUNTIES, WEST VIRGINIA

SHEET 12 OF 23

DATE: 04/28/2014 SCALE: AS SHOWN



2. ALL CUT & FILL SLOPES SHALL BE 2:1 UNLESS STATED OTHERWISE.

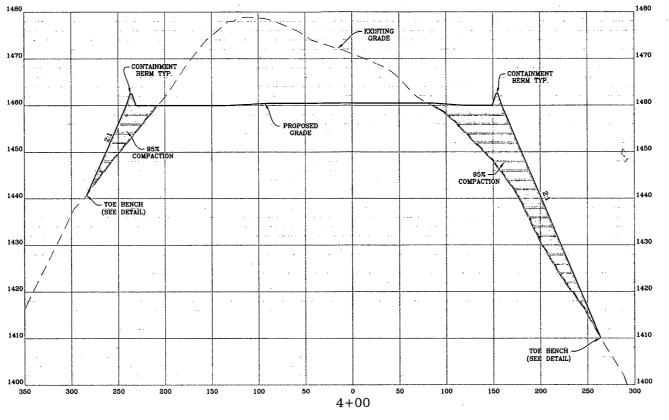
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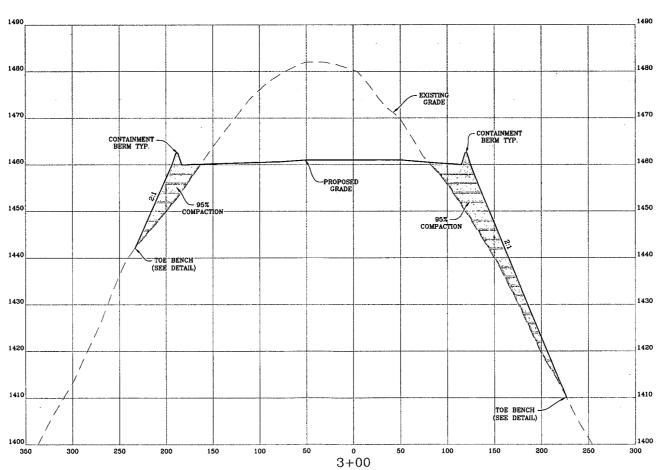
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X-SECTION GRID INDEX
X-SECTION GRID INTERMEDIATE
X-SECTION PROPOSED GRADE
X-SECTION PROPOSED GRADE
X-SECTION WATER SURFACE
MATCHLINE

WELL PAD SECTIONS

WELL PAD CROSS-SECTIONS ALONG BASELINE "A-A" SCALE: HORIZ. 1" = 50' VERT. 1" = 10'





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WELL PAD SECTIONS

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LEGEND X-SECTION GRID INDEX
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X-SECTION PROPOSED GRADE
X-SECTION EXISTING GRADE
X-SECTION WATER SURFACE
MATCHLINE

NOTE:

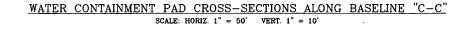
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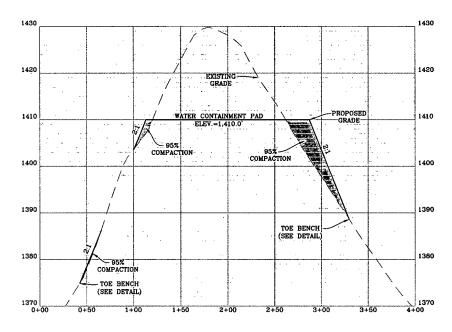
2. ALL CUT & FILL SLOPES SHALL BE 2:1 UNLESS STATED OTHERWISE.

DATE: 04/28/2014 SCALE: AS SHOWN

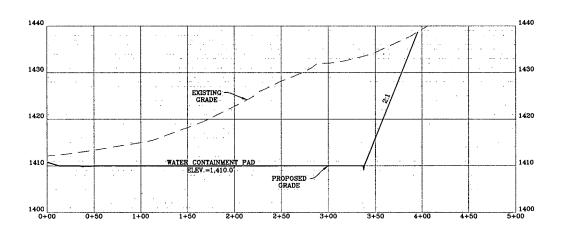
SHEET 13 OF 23

WATER CONTAINMENT PAD SECTIONS





WATER CONTAINMENT PAD CROSS-SECTIONS ALONG BASELINE "B-B" SCALE: HORIZ. 1" = 50' VERT. 1" = 10'



NOTE:

1. ALL FILL AREAS, INCLUDING ACCESS ROADS AND EXCESS MATERIAL STOCKPILES, SHALL BE "KEYED IN" AND COMPACTED IN 12" (MAXIMUM) LOOSE LIFT THICKNESS WITH A VIBRATING SHEEPSFOOT ROLLER TO 95% COMPACTION PER STANDARD PROCTOR. MOISTURE CONTENT WILL BE CONTROLLED IN ACCORDANCE WITH THE STANDARD PROCTOR TEST (ASTM-D698) RESULTS.

-SECTION	GRID	INDE	κ
-SECTION	GRID	INTE	RMEDIA
-SECTION	PROP	OSED	GRADE
-SECTION	EXIST	ING C	RADE

DATE: 04/28/2014 SCALE: AS SHOWN SHEET 14 OF 23

2. ALL CUT & FILL SLOPES SHALL BE 2:1 UNLESS STATED OTHERWISE.

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WELL PAD & WATER CONTAINMENT PAD GREENBRIER & UNION DISTRICTS CONDRINGE & HARRISON COUNTIES. WEST UPPERMENT

WATER CONTAINMENT PAD SECTIONS

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