

# 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: #14-294 ~ Antero Resources ~ Laureen Well Pad

Date Approved: 10/10/2014 Expires: N/A

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

Company Address: 1615 Wynkoop Street

**Denver, CO 80202** 

**Project Address: Grant District** 

Lat/Long: 39.345551N/80.669877W

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

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

Date: 10/10/2014

#### Legal Advertisement:

#### **Doddridge County**

#### Floodplain Permit Application

Please take notice that on the 9<sup>th</sup> day of October, 2014

#### **Antero Resources**

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

#### **Grant District**

39.345551N/80.669877W

#### Permit #14-294 Laureen Well Pad

(Note: This project is not within the floodplain)

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

Any interested persons who desire to

comment shall present the same in writing by November 6, 2014, delivered to:

Clerk of the County Court

118 E. Court Street, West Union, WV 26456

Beth A Rogers, Doddridge County Clerk

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

# 14-294



2014 OCT -9 PM 1:25



October 8, 2014

EETH ALROHERS COUNTY CLERK DOODRIDGE COUNTY, WV Antero Resources 1615 Wynkoop Street Denver, CO 80202 Office 303.357.7310 Fax 303.357.7315

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

Mr. Wriston:

Antero Resources Appalachian Corporation (Antero) would like to submit a Doddridge County Floodplain permit application for our Laureen Well Pad. Our project is located in Doddridge County, Grant District and per FIRM map #54017C0135C this location is **not** within the floodplain.

Attached you will find the following:

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

If you have any questions please feel free to contact me at (304) 842-4008.

Thank you in advance for your consideration.

Sincerely,

Emily Kijowski Floodplain Engineer

Enily ti

Antero Resources Appalachian Corporation

**Enclosures** 

# DODDRIDGE COUNTY FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

## SECTION 1: GENERAL PROVISIONS (APPLICANT TO READ AND SIGN)

- 1. No work may start until a permit is issued.
- 2. The permit may be revoked if any false statements are made herein.
- 3. If revoked, all work must cease until permit is re-issued.
- **4.** Development shall not be used or occupied until a Certificate of Compliance is issued.
- 5. The permit will expire if no work is commenced within six months of issuance.
- **6.** Applicant is hereby informed that other permits may be required to fulfill local, state, and federal requirements.
- 7. Applicant hereby gives consent to the Floodplain Administrator/Manager or his/her representative to make inspections to verify compliance.
- 8. I, THE APPLICANT CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

APPLICANT'S SIGNATURE

DATE September 19, 2014

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

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

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

ADDRESS: 1615 Wynkoop Street, Denver, CO 80202

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

BUILDER'S NAME: Antero Midstream LLC
ADDRESS: 1615 Wynkoop Strett, Denver, CO 80202
TELEPHONE NUMBER: (303)-357-7310
ENGINEER'S NAME: Navitus
ADDRESS: 151 Windy Hill Lane, Winchester, VA 22602
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
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
MANAS OF ATTICACT ONE ADJUST DECEMBER OF
PROPERTY Please see Surface Owner Table
PROPERTY Please see Surface Owner Table
PROPERTY Please see Surface Owner Table  ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE
NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY Please see Surface Owner Table ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT PROPERTY
PROPERTY Please see Surface Owner Table  ADDRESS OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE

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** X Residential (1 – 4 Family) $\Pi$ Addition Residential (more than 4 Family) $\Pi$ Alteration Non-residential (floodproofing) $\Pi$ Relocation Combined Use (res. & com.) Demolition Replacement Manufactured/Mobil Home В. OTHER DEVEOPLMENT ACTIVITIES: Fill Mining Drilling **Pipelining** X 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)

### C. STANDARD SITE PLAN OR SKETCH

Individual Water or Sewer System

Other (please specify)

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

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

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

D. ADJACENT AND/OR AFFECTED LANDOWNERS:

1. NAME AND ADDRESS OF ALL OWNERS OF SURFACE TRACTS ADJACENT TO THE AREA OF THE SURFACE TRACT (UP & DOWN STREAM) UPON WHICH THE PROPOSED ACTIVITY WILL OCCUR AND ALL OTHER SURFACE OWNERS UP & DOWN STREAM) WHO OWN PROPERTY THAT MAY BE AFFECTED BY FLOODING AS IS DEMONSTRATED BY A FLOODPLAIN STUDY OR SURVEY (IF ONE HAS BEEN COMPLETED).

ME: N/A-No properties sharing an NAME:

nmon boundary due to the	ADDRESS:
due to the	
	ADDITEOU.
n floodplain	
	NAME:
	ADDRESS:
Y ADJACENT PROPE ED AND THE NAME A OME ON ANY PROPI	E ADULT RESIDING IN EACH RESIDENCE RTY AT THE TIME THE FLOODPLAIN PERMIT AND ADDRESS OF AT LEAST ONE ADULT ERTY THAT MAY BE AFFECTED BY FLOODING AS
BY A FLOODPLAIN S	
rties sharing an	NAME:
d common boundary	
ream due to the	
eing in floodplain	
	NAME:
	ADDRESS:
	eing in floodplain

### 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.

- COURT REPORTING SERVICES AT ANY HEARINGS REQUESTED BY THE APPLICANT. (D)
- CONSULTANTS AND/OR HEARING EXPERTS UTILIZED BY DODDRIDGE COUNTY (E) 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.

NAM	E (PRINT):	•
SIGN	ATURE:	DATE: September 19, 2014
After Admi	completing SECTION 2, APPLICANT should submit form to F nistrator/Manager or his/her representative for review.	loodplain
SECT Adm	ION 3: FLOODPLAIN DETERMINATION (to be compinistrator/Manager or his/her representative)	pleted by Floodplain
THE	PROPOSED DEVELOPMENT:	
THE P	ROPOSED DEVELOPMENT IS LOCATED ON:	
FIRM Dated	Panel::	
[] reviev	Is <u>NOT</u> located in a Specific Flood Hazard Area (Notify apply is complete and <b>NO FLOOPLAIN DEVELOPMENT PERMIT</b> IS	licant that the application S REQUIRED).
	Is located in Special Flood Hazard Area.  FIRM zone designation	NGVD (MSL)
[]	Unavailable	
[]	The proposed development is located in a floodway.  FBFM Panel No	Dated
[]	See section 4 for additional instructions.	

	ON 4: ADDITIONAL INFORMATION REQUIRED (To be completed by Iplain Administrator/Manager or his/her representative)
The approces	oplicant must submit the documents checked below before the application can be ssed.
0	A plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.
0	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.
0	Top of new fill elevationFt. NGVD (MSL).  For floodproofing structures applicant must attach certification from registered engineer or architect.
0	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 al 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).

ON 5: PER Administr	MIT DETERMINATION (To be ator/Manager or his/her re	<u>e completed by Floodpla</u> presentative)	<u>ain</u>
		<u> </u>	
I have deter	mined that the proposed activity	(type is or is not) in conform	nance wit
provisions o	f the Floodplain Ordinance adopt	ted by the County Commission	on of Dod
made part of	lay 21, 2013. The permit is issue f this permit.	d subject to the conditions a	ttached t
	, and permit.		
SIGNED		DATE	. :
If the Flood	lain Administrator/Manager fou	nd that the above was not in	conform
with the pro	visions of the Doddridge County	Floodplain Ordinance and/or	r denied t
application	WE applicant may complete on o	ppealing process below.	
application,	the applicant may complete an a		
application, APPEALS:		aission of Doddridge County?	) I Vac II
	Appealed to the County Comm		? [] Yes {]
			? [] Yes {]
	Appealed to the County Comm		? [] Ye:

# 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).

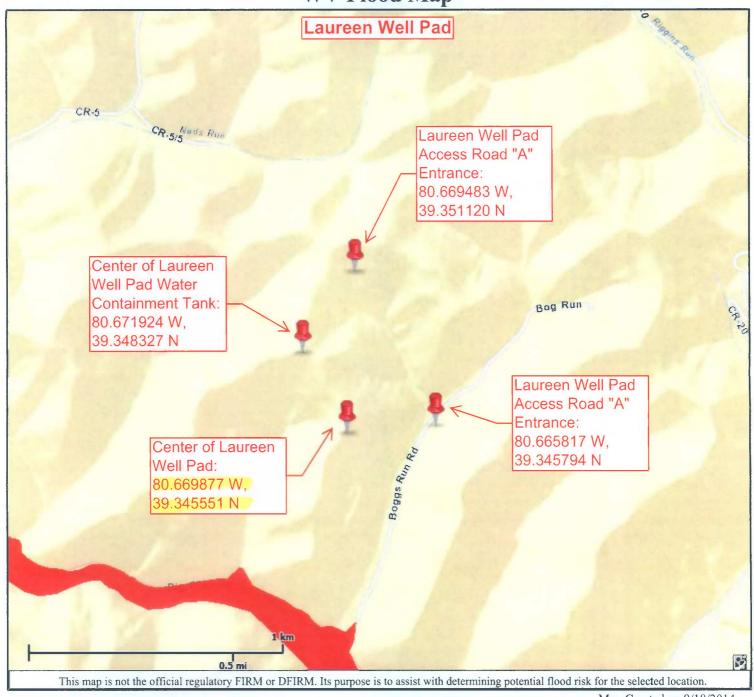
### COMPLETE 1 OR 2 BELOW:

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 appl	e: Any work performed prior to submittal of the above information is at risk of the icant.
SEC	TION 7: COMPLIANCE ACTION (To be completed by the Floodplain
<u>Adn</u>	ninistrator/Manager or his/her representative).
as ap	Floodplain Administrator/Manager or his/her representative will complete this section policable based on inspection of the project to ensure compliance with the Doddridge aty Floodplain Ordinance.
11	NSPECTIONS:
	DATE:BY: DEFICIENCIES ? Y/N
C	OMMENTS
<del></del>	
SECT	ION 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain
Adm	inistrator/Manager or his/her representative).
Certif	icate of Compliance issued: DATE:

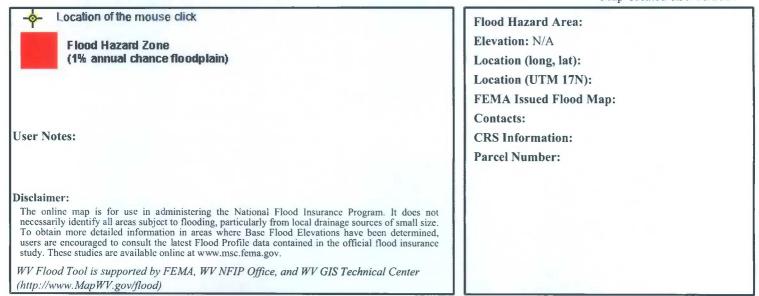
# CERTIFICATE OF COMPLIANCE FOR DEVELOPMENT IN SPECIAL FLOOD HAZARD AREA (OWNER MUST RETAIN)

P P	PERMIT NUMBER:
PURPOS	SE —
CONSTRUCTION LOCATION	N:
OWNER'S ADDRESS:	
THE FOLLOWING MUST BE ADMINISTRATOR/MANAG	COMPLETED BY THE FLOODPLAIN ER OR HIS/HER AGENT.
COMPLIANCE IS HER	EBY CERTIFIED WITH THE REQUIREMENT OF THE
FLOODPLAIN ORDINANCE A	ADOPTED BY THE COUNTY COMMISSION OF
DODDRIDGE COUNTY ON N	ΛΑΥ 21, 2013.
SIGNED	D.4

WV Flood Map



Map Created on 9/18/2014



LÉGAL ADVERTISEMENT:
Doddridge County.
Floodplain Permit Application
Please take notice that on the 9th day of October 2014
Antero Resources filed an application for a Floodalain
Permit to develop land located at or about Grant District
39.345551N/80.669877W/Permit #14-294 1/611745 10/21
Pad (Note: This projectiis not within the floodhiain)
Inc Application is on file with the Clerk of the County
Court igned may be in the control of
business/hours As this projects of ourside the FEMA
County, Floodplan, Management, has no regulatory authority Any, interested persons who desire in the control of
authority Any interested persons who desire to comment
shall present the same in writing by November 6, 2014.
。 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
118 E Court Street West Union WV 26456*
Beth A. Rogers, Doddridge County Clerk
Edwin L. "Bo" Wriston Doddridge County Flood Plain
Manager (1986)
4. 在1967年,1967年中,1967年
10-14-2xb
to the address of the control of the

### 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 was published in said paper for. successive weeks beginning with the issue ending with the issue of that said notice contains . . . /89 amounts to the sum of \$ ... 21.74 FOR FIRST PUBLICATION, SECOND **PUBLICATION IS 75% OF THE FIRST PUBLICATION** and each publication thereafter SWORN TO AND SUBSCRIBED NOTARY PUBLIC

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



THOMAS P. ROMINE DB 275 PG 096 115 ELLIS AVENUE

TM 10-2 NORMAN I. & VICTORIA D. SINES DB 264 PG 430 200.53 ACRES 7126 GREENBANK ROAD BALTIMORE, MD 21220

(D)

TM 9-16

JOSEPHINE J. DONNAHOE WB 031 PG 004

36.25 ACRES

ROUTE 2 BOX 175 WEST UNION, WV 26456

TM 9-6

JOSEPHINE J. DONNAHOE

WB 031 PG 004 17 ACRES

ROUTE 2 BOX 175

WEST UNION, WV 26456

TM 10-1

JOSEPHINE J. DONNAHOE WB 031 PG 004

23.14 ACRES

ROUTE 2 BOX 175

WEST UNION, WV 26456

(A)

(B)

(c)

TM 10-2.1 NORMAN I. & VICTORIA D. SINES DB 299 PG 585 1.36 ACRES 7126 GREENBANK ROAD BALTIMORE, MD 21220

TM 7-5 DAVID A. HOSKINSON

DB 168 PG 787

10.23 ACRES

1968 SMITHTON ROAD

WEST UNION, WV 26456

( G )

TM 10-7.2 JACK E. JR. & MARY B. BORING. TRUSTEES BORING FAMILY TRUST DB 264 PG 091 35 ACRES ROUTE 2 BOX 183 WEST UNION, WV 26456

TM 10-7.1

WB 028 PG 028

30 ACRES

**ELKINS, WV 26241** 

TM 10-6 LAUREEN D. KELLEY DB 205 PG 695 45.52 ACRES 4855 BIG FLINT ROAD WEST UNION, WV 26456 TM 9-17 SUSAN B. (BOGGS) TRAVERS 49.84 ACRES 1 FIRST AMERICAN WAY WESTLAKE, TX 76262

PANEL 0135C **FIRM** FLOOD INSURANCE RATE MAP DODDRIDGE COUNTY, WEST VIRGINIA AND INCORPORATED AREAS PANEL 135 OF 325 (SEE MAP INDEX FOR FIRM PANEL LAYOUT) COMMUNITY Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be MAP NUMBER 54017C0135C MAP REVISED **OCTOBER 4, 2011** Federal Emergency Management Agency

FLOODPLAIN NOTE
THE PROPOSED SITE IS LOCATED IN
FLOOD ZONE X PER FEMA FLOOD MAP
#54017C0135C



S ENGINEER

Antero

THIS DOCUMENT WAS PREPARED FOR: ANTERO RESOURCES CORPORATION

WELL PAD & WATER CONTAINMENT PAD GRANT DISTRICT DODDRIDGE COUNTY, WEST VIRGINIA EXHIBIT

LAUREEN



DATE: 07/18/2014 SCALE: 1" = 300' SHEET 32 OF 32

ACCESS ROAD "B" ENTRANCE LATITUDE: 39.351120 LONGITUDE: -80.669483 (NAD 83) N 4355793.98 E 528478.12 (UTM NAD83, ZONE 17 METERS)

LATITUDE: 39.345551 LONGITUDE: -80.669877 (NAD 83) N 4355175.84 E 528446.38 (UTM NAD83, ZONE 17 METERS)

CENTER OF WATER CONTAINMENT TANK LATITUDE: 39.348327 LONGITUDE: -80.671924 (NAD 83) N 4355483.23 E 528268.93 (UTM NAD83, ZONE 17 METERS)

# LAUREEN WELL PAD & WATER CONTAINMENT PAD

## SITE DESIGN & CONSTRUCTION PLAN, **FROSION & SEDIMENT CONTROL PLANS**

GRANT DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA FLINT RUN WATERSHED

USGS 7.5 SMITHBURG QUAD MAP



2000 0 2000'

#### WEST VIRGINIA COUNTY MAP



SCALE: 1" = 5000

Fill (SF)

395

229 749

Distance to

L.O.D. (LF)

Total Impact (SF)

(LF)

123

ulvert /FI

15

tream 15 (Access Road "B

etland and Impact Cause

/etland 5 (Access Road "B")

etland 6 (Access Road "B") Wetland 7 (Access Road "B") 2,023

Wetland 4 (Access Road "B")

WVDOH COUNTY ROAD MAP

(NOT TO SCALE)

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

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

#### 1 - COVER SHEET

- 4 STORM DRAINAGE COMPUTATIONS
- 5 EXISTING CONDITIONS

- 11 WELL PAD & STOCKPILE PLAN
- 12 WELL PAD GRADING PLAN
- 13 WATER CONTAINMENT PAD GRADING PLAN
- 14-15 ACCESS ROAD PROFILES
- 16-19 ACCESS ROAD SECTIONS

LAUREEN LIMITS OF DISTURBANCE AREA (AC)				
Total Site	te			
Access Road "B" (2,190')	6.12			
Well Pad	5.15			
Water Containment Pad	2.34			
Excess/Topsoil Material Stockpiles	13.56			
Total Affected Area	27.17			
Total Wooded Acres Disturbed	24.90			
Impacts to Norman I. & Victoria D. Sines 1	M 18-2			
Access Road "B" (2,027')	5.20			
Well Pad	1.85			
Water Containment Pad	0.83			
Excess/Topsoil Material Stockpiles	3.04			
Total Affected Area	10.92			
Total Wooded Acres Disturbed	9.21			
Impacts to Josephine J. Donnahoe TM	10-1			
Access Road "B" (163')	0.68			
Water Containment Pad	0.90			
Excess/Topsoil Material Stockpiles	3.22			
Total Affected Area	4.80			
Total Wooded Acres Disturbed	4.80			
Impacts to Josephine J. Donnahoe TM	9-16			
Water Containment Pad	0.61			
Excess/Topsoil Material Stockpiles	2.72			
Total Affected Area	3.33			
Total Wooded Acres Disturbed	2.77			
Impacts to Laureen D. Kelley TM 10	6			
Access Road "B" (0')	0.24			
Well Pad	1.28			
Excess/Topsoil Material Stockpiles	2.49			
Total Affected Area	4.01			
Total Wooded Acres Disturbed	4.01			
Impacts to Jack E., Jr. & Mary B. Boring, Trustees Trust TM 10-7.2	Boring Family			
Well Pad	2.02			
Excess/Topsoil Material Stockpiles	2.09			
Total Affected Area	4,11			

SHEET INDEX CONT'D

22-26 - CONSTRUCTIONS DETAILS

27 - EX. ACCESS ROAD RECLAMATION PLAN

29 - WATER CONTAINMENT PAD RECLAMATION PLAN

31 - WELL PAD & STOCKPILE RECLAMATION PLAN

30 - ACCESS ROAD & WELL PAD RECLAMATION PLAN

28 - ACCESS ROAD RECLAMATION PLAN

GE500-GE508 - GEOTECHNICAL DETAILS

21 - WELL PAD SECTIONS

32 - FIRM EXHIBIT

Proposed	WV North	WV North	UTM (METERS)	NAD 83 Lat & Long
Well Name	NAD 27	NAD 83	Zone 17	
Swan	N 310076.86	N 310113.02	N 4355171.65	LAT 39-20-43.8472
Unit 2H	E 1669113.09	E 1637672.18	E 528449.78	LONG -80-40-11,4165
Swan	N 310086.75	N 310122.92	N 4355174.66	LAT 39-20-43.9447
Unit 1H	E 1669111.64	E 1637670.72	E 528449.29	LONG -80-40-11,4367
Orlole	N 310096.65	N 310132.81	N 4355177.66	LAT 39-20-44.0423
Unit 2H	E 1669110.18	E 1637669.27	E 528448.79	LONG -80-40-11 4568
Oriole	N 310108.54	N 310142.70	N 4355180.67	LAT 39-20-44.1399
Unit 1H	E 1669108.73	E 1637667.81	E 528448.30	LONG -80-40-11.4770
Romine	N 310116.43	N 310152.60	N 4355183.68	LAT 39-20-44.2375
Unit 1H	E 1669107.27	E 1637666.36	E 528447.81	LONG -80-40-11.4972
Ramza	N 310126.33	N 310162.49	N 4355186.68	LAT 39-20-44.3351
Unit 2H	E 1669105.82	E 1637664.90	E 528447.31	LONG -80-40-11.5173
Ramza	N 310136.22	N 310172.39	N 4355189.69	LAT 39-20-44.4327
Unit 1H	E 1669104.36	E 1637663 45	E 528446.82	LONG -80-40-11.5375
Mott	N 310146.12	N 310182.28	N 4355192.70	LAT 39-20-44.5303
Unit 2H	E 1669102 91	E 1637661 99	E 528448 32	LONG -80-40-11.5577
Mott	N 310156.01	N 310192.17	N 4355195.70	LAT 39-20-44.6279
Unit 1H	E 1669101.45	E 1637680.54	E 528445.83	LONG -80-40-11.5778
			in terminal	

4.11

Total Wooded Acres Disturbed

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

#### FLOODPLAIN NOTE

THE PROPOSED SITE IS LOCATED IN FLOODZONE "X" PER FEMA FLOOD MAP #54017C0135C.

MISS UTILITY STATEMENT
ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING
OF UTILITIES PRIOR TO THIS PROJECT DESIGN; TICKET #1414932444
IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF
CONSTRUCTION FOR THIS PROJECT.

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

#### ENVIRONMENTAL NOTES

WETLAND DELINEATIONS WERE PERFORMED IN APRIL & MAY, 2014 BY CORE ENVIRONMENTAL SERVICES, INC. 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 19, 2014 AQUATIC FEATURES TABLE WAS PREPARED BY CORE ENVIRONMENTAL SERVICES, INC. AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE EXHIBIT DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION SHOWN ON THIS EXHIBIT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS

#### GEOTECHNICAL NOTE

THE PROPOSED ACCESS ROAD CUT SLOPE (1.5:1) SHALL BE FIELD VERIFIED BY A CERTIFIED GEOTECHNICAL ENGINEER TO ENSURE THE PROPOSED SLOPES ARE ADEQUATE PRIOR TO CONSTRUCTION. ACCESS ROAD CONSTRUCTION SHALL BE MONITORED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER OR PROJECT DESIGN ENGINEER DURING CONSTRUCTION

A SUBSURFACE INVESTIGATION OF THE PROPOSED SITE WAS PERFORMED BY PENNSYLVANIA SOIL & ROCK, INC. ON JUNE 06, 16-20, 23 & 26-27, 2014. THE REPORT PREPARED BY PENNSYLVANIA SOIL & ROCK, INC. DATED JULY 15, 2014, REFLECTS THE RESULTS OF THE SUBSURFACE INVESTIGATION. THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THEIR REPORT WERE USED IN THE PREPARATION OF THESE PLANS, HOWEVER, ADDITIONAL INVESTIGATION IS NECESSARY TO CONFIRM THE ESTIMATED TOE KEY DEPTHS. PLEASE REFER TO THE SUBSURFACE INVESTIGATION REPORT BY PENNSYLVANIA SOIL & ROCK, INC. FOR ADDITIONAL INFORMATION, AS NEEDED.

ENGINEER/SURVEYOR:
NAVITUS ENGINEERING, INC.
CYRUS S. KUMP, PE - PROJECT

OFFICE: (888) 662-4185 CELL: (540) 686-6747

ENVIRONMENTAL:
CORE ENVIRONMENTAL SERVICES, INC.
DAVID JONES - SENIOR G.I.S. SPECIALIST
OFFICE: (304) 292-2873 CELL: (304) 290-6800

GEOTECHNICAL:
PENNSYLVANIA SOIL & ROCK, INC.
CHRISTOPHER W. SAMIOS-PROJECT ENGINEER

OFFICE: (412) 372-4000 CELL: (412) 589-0662

MANAGER/ENGINEER

#### PROJECT CONTACTS

#### OPERATOR: ANTERO RESOURCES CORPORATION 535 WHITE OAKS BLVD. BRIDGEPORT, WV 26330 PHONE: (304) 842-4100 FAX: (304) 842-4102

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

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

AARON KUNZLER - CONSTRUCTION SUPERVISOR

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

DAVID PATSY - LAND AGENT CELL: (304) 476-6090 CHARLES E. COMPTON, III - SURVEYING

CELL: (304) 719-6449

- RESTRICTIONS NOTES:

  1. THERE ARE NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD. THERE ARE WETLAND IMPACTS THAT WILL NEED TO BE PERMITTED BY THE
- THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND LOD.
- THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET
- THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET
- THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE
- THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2.500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.

- 2 CONSTRUCTION AND E&S CONTROL NOTES
- 3 MATERIAL QUANTITIES

- 6 OVERALL PLAN SHEET INDEX & VOLUMES
- 7 EX ACCESS ROAD PLAN
- 8 ACCESS ROAD PLAN
- 9 WATER CONTAINMENT PAD PLAN
- 10 ACCESS ROAD & WELL PAD PLAN

- 20 WELL PAD & WATER CONTAINMENT PAD SECTIONS

Į	Proposed	WV North	MAN WOLLD	UIM (METERS)	NAU 83 Lat & Long
	Well Name	NAD 27	NAD 83	Zone 17	
	Swan	N 310076.86	N 310113.02	N 4355171.65	LAT 39-20-43.8472
	Unit 2H	E 1669113.09	E 1637672.18	E 528449.78	LONG -80-40-11,4165
	Swan	N 310086.75	N 310122.92	N 4355174.66	LAT 39-20-43.9447
	Unit 1H	E 1669111.64	E 1637670.72	E 528449.29	LONG -80-40-11.4367
	Orlole	N 310096.65	N 310132.81	N 4355177.66	LAT 39-20-44.0423
	Unit 2H	E 1669110.18	E 1637669.27	E 528448.79	LONG -80-40-11 4568
	Oriole	N 310108.54	N 310142.70	N 4355180.67	LAT 39-20-44.1399
	Unit 1H	E 1669108.73	E 1637667.81	E 528448.30	LONG -80-40-11.4770
	Romine	N 310116.43	N 310152.60	N 4355183.68	LAT 39-20-44.2375
	Unit 1H	E 1669107.27	E 1637666.36	E 528447.81	LONG -80-40-11.4972
	Ramza	N 310126.33	N 310162.49	N 4355186.68	LAT 39-20-44.3351
	Unit 2H	E 1669105.82	E 1637664.90	E 528447.31	LONG -80-40-11.5173
	Ramza	N 310136.22	N 310172.39	N 4355189.69	LAT 39-20-44.4327
	Unit 1H	E 1669104.36	E 1637663 45	E 528446.82	LONG -80-40-11.5375
	Mott	N 310146.12	N 310182 28	N 4355192.70	LAT 39-20-44.5303
	Unit 2H	E 1669102 91	E 1637661 99	E 528448 32	LONG -80-40-11.5577
	Mott	N 310156.01	N 310192.17	N 4355195.70	LAT 39-20-44.6279
	Unit 1H	E 1669101.45	E 1637660.54	E 528445.83	LONG -80-40-11.5778
	Well Pad Elevation	1,235.0			





THIS DOCUMENT WAS PREPARED FOR: ANTERO RESOURCES

WATER CONTAINMENT PAD

LAUREEN Ko WELL PAD

COVER

DATE: 07/18/2014 SCALE: AS SHOWN SHEET 1 OF 32

