

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: #14-311 ~ Antero Resources ~ Duckworth Well Pad

Date Approved: 10/23/2014 Expires: N/A

Issued to: Antero Resources POC: Rachel Grzybek 304-842-4008

Company Address: 535 White Oaks Blvd

Bridgeport, WV 26330

Project Address: West Union District Lat/Long: 39.299920N/-80.871783W

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

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

Date: 10/23/2014

#14-3/1



2014 OCT 23 AM 9: 19



October 17, 2014

BETH ALROCENS COUNTY CLERK DODDRIDGE COUNTY, WY

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

Attached you will find the following:

- > Doddridge County Floodplain Permit Application
- Duckworth 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

Enrily Mi

Antero Resources Appalachian Corporation

Enclosures

DODDRIDGE COUNTY FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

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

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

APPLICANT'S SIGNATURE

DATE_October 17, 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:
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 EXISTING BUILDINGS/USES OF PROPERTY: None NAME OF AT LEAST ONE ADULT RESIDING IN EACH RESIDENCE LOCATED UPON THE SUBJECT
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
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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 X **New Structure** Residential (1 – 4 Family) Π Addition Residential (more than 4 Family) Π Alteration Non-residential (floodproofing) n Relocation Combined Use (res. & com.) Π Demolition Π Replacement Manufactured/Mobil Home В. **OTHER DEVEOPLMENT ACTIVITIES:** Fill Π Mining Drilling **Pipelining** Χ Grading Excavation (except for STRUCTURAL DEVELOPMENT checked above) Π 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).

		· · · · · · - ·
)DRESS: <u>imm</u>	nediate and common boundary	ADDRESS:
up c	or down stream due to the	
loca	tion not being in floodplain	
λΜΕ:		NAME:
		ADDRESS:
		ADULT RESIDING IN EACH RESIDENCE
RESIDI	NG IN ANY HOME ON ANY PROPE	ND ADDRESS OF AT LEAST ONE ADULT RTY THAT MAY BE AFFECTED BY FLOODING AS
RESIDI IS DEN	NG IN ANY HOME ON ANY PROPE IONSTRATED BY A FLOODPLAIN ST	RTY THAT MAY BE AFFECTED BY FLOODING AS FUDY OR SURVEY.
RESIDI IS DEM NAME:	NG IN ANY HOME ON ANY PROPE IONSTRATED BY A FLOODPLAIN ST N/A-No properties sharing an	RTY THAT MAY BE AFFECTED BY FLOODING AS FUDY OR SURVEY. NAME:
RESIDI IS DEM NAME:	NG IN ANY HOME ON ANY PROPE 1ONSTRATED BY A FLOODPLAIN ST N/A-No properties sharing an immediate and common boundary	RTY THAT MAY BE AFFECTED BY FLOODING AS FUDY OR SURVEY. NAME:
RESIDI IS DEM NAME:	NG IN ANY HOME ON ANY PROPE MONSTRATED BY A FLOODPLAIN ST N/A-No properties sharing an immediate and common boundary	RTY THAT MAY BE AFFECTED BY FLOODING AS FUDY OR SURVEY. NAME: ADDRESS:
RESIDI IS DEM NAME:	NG IN ANY HOME ON ANY PROPE 1ONSTRATED BY A FLOODPLAIN ST N/A-No properties sharing an immediate and common boundary	RTY THAT MAY BE AFFECTED BY FLOODING AS FUDY OR SURVEY. NAME: ADDRESS:
RESIDI IS DEM NAME: ADDRESS:	NG IN ANY HOME ON ANY PROPE MONSTRATED BY A FLOODPLAIN ST N/A-No properties sharing an immediate and common boundary	RTY THAT MAY BE AFFECTED BY FLOODING AS FUDY OR SURVEY. 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): Rundy Kloburdanz	
SIGNATURE	DATE: October 17, 2014
After completing SECTION 2, APPLICANT should submit form to FI Administrator/Manager or his/her representative for review.	oodplain

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:		
Date	d:		
[] revie	Is <u>NOT</u> located in a Specific Flood Hazard Area (Notify a w is complete and NO FLOOPLAIN DEVELOPMENT PERM	pplicant that the	application
[]	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	
rı	See section 4 for additional instructions		

	SIGNED DATE
	ON 4: ADDITIONAL INFORMATION REQUIRED (To be completed by plain 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.

[]

[]

[]

[]

[]

Certification from a registered engineer that the proposed activity in a regulatory

data and calculations supporting this finding must also be submitted.

Federal Emergency Management Agency (FEMA).

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

floodway will not result in any increase in the height of the 100-year flood. A copy of all

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

Administr	ator/Manager or his/her re	e completed by Floodpla presentative)	<u></u>
provisions o County on N	mined that the proposed activity f the Floodplain Ordinance adop lay 21, 2013. The permit is issue f this permit.	ed by the County Commissio	n of Dod
SIGNED		DATE	:
with the pro	lain Administrator/Manager fou visions of the Doddridge County the applicant may complete an a	Floodplain Ordinance and/or	conform denied t
APPEALS:	Appealed to the County Comm		[] Yes {]
	County Commission Decision		· · · · · · · · · · · · · · · · · · ·

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).

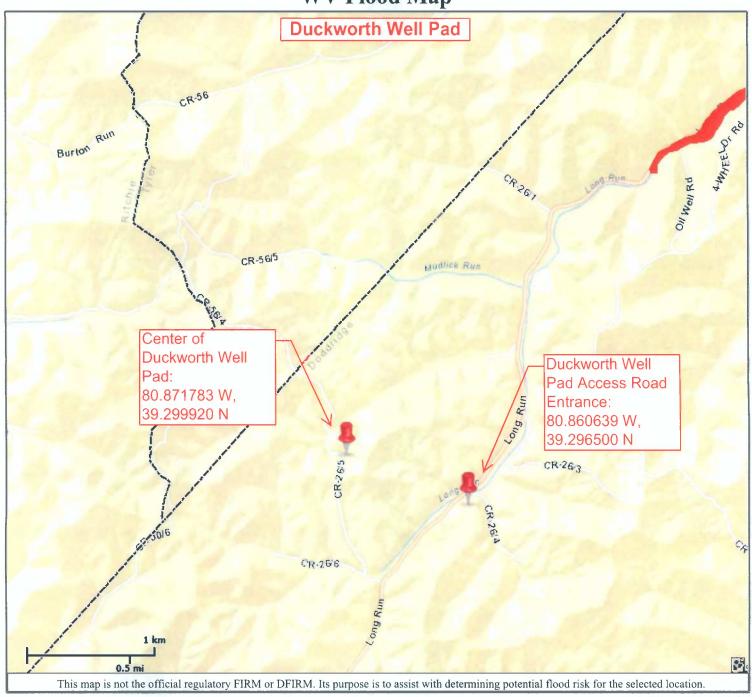
COMPLETE 1 OR 2 BELOW:

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	: Any work performed prior to submittal of the above information is at risk of the cant.
SECT	FION 7: COMPLIANCE ACTION (To be completed by the Floodplain
Adm	ninistrator/Manager or his/her representative).
as ap	loodplain 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	NSPECTIONS:
	DATE:BY: DEFICIENCIES ? Y/N
C	OMMENTS
<u>SECT</u>	ION 8: CERTIFICATE OF COMPLIANCE (To be completed by Floodplain
<u>Adm</u> i	inistrator/Manager or his/her representative).
Certifi	icate of Compliance issued: DATF:

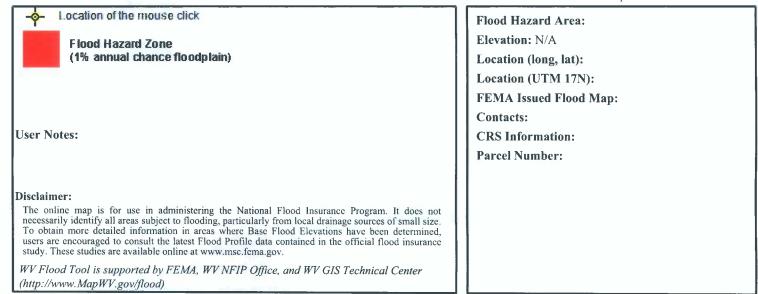
CERTIFICATE OF COMPLIANCE FOR DEVELOPMENT IN SPECIAL FLOOD HAZARD AREA (OWNER MUST RETAIN)

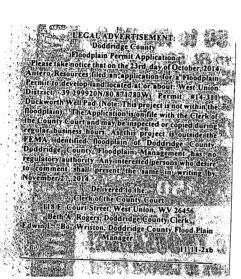
	PERMIT NUMBER: PERMIT DATE:	
PURPO		
CONSTRUCTION LOCATION	ON:	<u> </u>
OWNER'S ADDRESS:		
THE FOLLOWING MUST B ADMINISTRATOR/MANA	E COMPLETED BY THE FLOODPLAIN GER OR HIS/HER AGENT.	
COMPLIANCE IS HE FLOODPLAIN ORDINANCE DODDRIDGE COUNTY ON	REBY CERTIFIED WITH THE REQUIREMENT OF THE ADOPTED BY THE COUNTY COMMISSION OF MAY 21, 2013.	
SIGNED	B	

WV Flood Map



Map Created on 10/16/2014



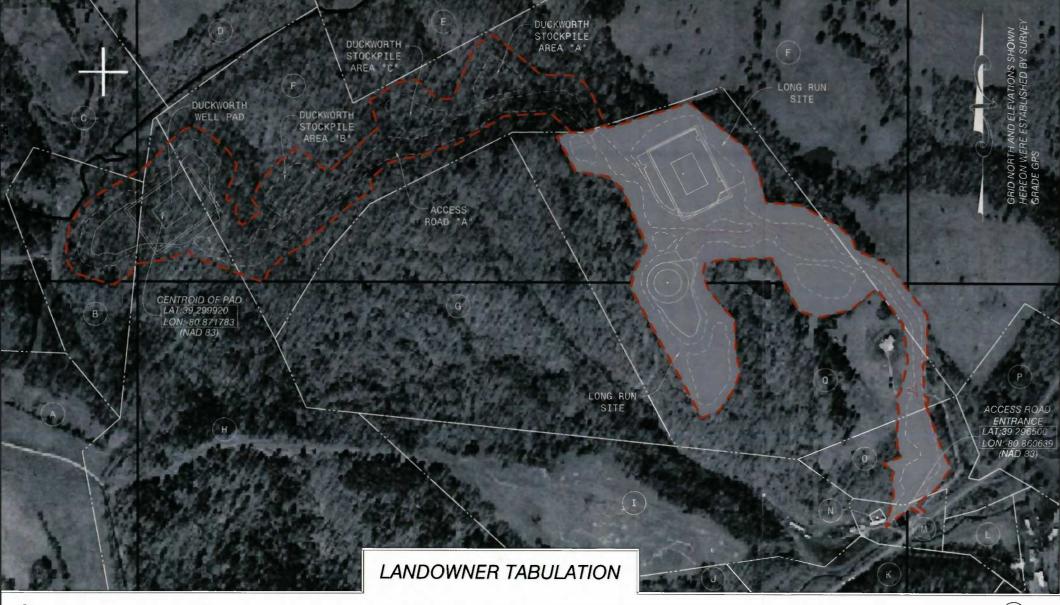


STATE OF WEST VIRGINIA, COUNTY OF DODDRIDGE, TO WIT

I, Virginia Nicholson, Editor of THE HERALD RECORD, 2 weekly newspaper published regularly, in Doddridge County, West Virginia, Do Hereby Certify That the Accompanying Legal Notice uspworth Well Pad was published in said paper for . 2..... successive weeks beginning with the issue of Movember 11th 2014 and ending with the issue of november 18 that said notice contains 189..... FOR FIRST PUBLICATION, SECOND **PUBLICATION IS 75% OF THE FIRST** PUBLICATION and each publication thereafter SWORN TO AND SUBSCRIBED **NOTARY RUBLIC**



FIRM EXHIBIT



PANEL 0115C PROGRAM **FIRM** FLOOD INSURANCE RATE MAP DODDRIDGE COUNTY, **WEST VIRGINIA** AND INCORPORATED AREAS NAMICONALI FECTORIO INSTILICANI CA PANEL 115 OF 325 (SEE MAP INDEX FOR FIRM PANEL LAYOUT) CONTAINS COMMUNITY MAP NUMBER 54017C0115C MAP REVISED

> FLOODPLAIN NOTE
> THE PROPOSED SITE IS LOCATED IN FLOOD ZONE "X" PER FEMA FLOOD MAP #54017C0115C

OCTOBER 4, 2011

TM 6-10 ARTHUR G. & MELISSA A. PAYNE DB 237 PG 502 70.5 ACRES PO BOX 335 PENNSBORO, WV 26415

В TM 6-3 EDWARD V. RICE DB 161 PG 495 9.00 ACRES 2957 CLARKS BLUFF ROAD KINGSLAND, GA 31548

TM 6-2 EDWARD V. RICE DB 161 PG 857 69.13 ACRES 2957 CLARKS BLUFF ROAD KINGSLAND, GA 31548

TM 6-1 WILLIAM F. COTTRILL JR, ET AL DB 293 PG 479 69.25 ACRES 902 TYGART STREET PARKERSBURG, WV 26101

TM 3-15 THELMA JAMES DB 260 PG 025 212.1 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415

TM 6-6 THELMA B. JAMES, TRUSTEE OF THE LAWRENCE L. JAMES LIVING TRUST WB 033 PG 226 107 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415

TM 6-17 CHARLES M. & KIMELA M. KELLEY DB 243 PG 631 30 ACRES ROUTE 1 BOX 771 GREENWOOD, WV 26415

TM 6-11 GEO. DUCKWORTH HEIRS DB 3 PG 544 58 ACRES 2819 EDONIA DRIVE KNOXVILLE, TN 37918

TM 6-12 KIMELA M. & CHARLES M. KELLEY DB 235 PG 672 21 ACRES ROUTE 1 BOX 771 GREENWOOD, WV 26415

TM 6-26 MICHELLE L. LEACH, ET AL WB 040 PG 290 49.56 ACRES ROUTE 1 BOX 778 GREENWOOD, WV 26415

(K) TM 6-27 THELMA B. JAMES TRUSTEE OF THE LAWRENCE L. JAMES LIVING TRUST (WB 033 PG 226) THELMA B. JAMES (DB 269 PG 176) & JUDITH A. NORBERG (WB 020 PG 311) 33 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415 24 NORTH AVENUE CAMERON, WV 26033

TM 6-29 THELMA B. JAMES TRUSTEE OF THE LAWRENCE L. JAMES LIVING TRUST WB 033 PG 226 DB 232 PG 690 2 ACRES

ROUTE 1 BOX 773

GREENWOOD, WV 26415

TM 6-47 CHARLES M. & KIMELA M. KELLEY DB 243 PG 631 1.416 ACRES ROUTE 1 BOX 771 GREENWOOD, WV 26415

> TM 6-13 YOUTH CAMP CHURCH 0.16 ACRES (EXEMPT)

(0) TM 6-14 JOHN FRAME, (DB 271 PG 666) & CARROL R., GARY D. & MICHAEL D. HARRIS, SR (DB 217 PG 592) 5.416 ACRES 320 PENNSYLVANIA AVENUE BRIDGEPORT, WV 26300 PO BOX 53 SMITHBURG WV, 26436

TM 6-15 OPAL R. CARVER (LIFE) & CHARLOTTE D. JAMES (DB 213 PG 378) & THELMA JAMES (DB 260 PG 025) 23.5 ACRES ROUTE 1 BOX 773 GREENWOOD, WV 26415 ROUTE 1 BOX 1029 GREENWOOD, WV 26415

TM 6-5 RICHARD F. McCULLOUGH DB 272 PG 309 39 ACRES ROUTE 1 BOX 770 GREENWOOD, WV 26415



SCALE: 1" =200'

SHEET 28 OF 28

S

Antero

THIS DOCUMENT WAS PREPARED FOR: ANTERO RESOURCES CORPORATION

DUCKWORTH FIRM

LOCATION COORDINATES ACCESS ROAD ENTRANCE

LATITUDE: 39.296500 LONGITUDE: -80.860639 (NAD 83) N 4349689.59 E 512016.96 (UTM ZONE 17 MET (UTM ZONE 17 METERS)

CENTROID OF WELL PAD

LATITUDE: 39.299920 LONGITUDE: -80.871783 (NAD 83) N 4350067.76 E 511055.50 (UTM ZONE 17 METERS)

GENERAL DESCRIPTION

THE ACCESS ROAD AND WELL PAD ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

FLOODPLAIN NOTE

THE PROPOSED SITE IS LOCATED IN FLOOD ZONE "X" PER FEMA MAP NUMBER #54017C0115C.

MISS UTILITY STATEMENT
ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING
OF UTILITIES PRIOR TO THIS PROJECT DESIGN: TICKET #1310223222. IN ADDITION, MISS UTILITY
WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION FOR THIS

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 JANUARY, MARCH AND APRIL, 2013 AND JULY 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 JULY 15, 2014 STREAM AND WETLAND DELINEATION DESIGNER'S MAP WAS PREPARED BY ALLSTAR ECOLOGY AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE MAP DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WYDEP. 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 KLEINFELDER ON JUNE 18-21, 2013, MAY 01, 02, 05-08, 2014, & JUNE 24, 26, 2014. THE REPORT PREPARED BY KLEINFELDER DATED JULY 03, 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) 842-4102

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

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

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

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

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

DAVID PATSY - LAND AGENT CELL: (304) 476-6090

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

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

JOSHUA D. FREGOSI-ENGINEER OFFICE: (724) 772-7072 CELL: (704) 400-1103

- THERE ARE NO LAKES OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD. THERE IS A PERENNIAL STREAM ADJACENT TO THE ACCESS ROAD "A" ENTRANCE AND A WETLAND ADJACENT TO ACCESS ROAD "B" THAT WILL REMAIN UNDISTURBED. NO PERMIT IS REQUIRED.
- THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND
- 3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET
- 4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF
- THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE
- 6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD

DUCKWORTH WELL PAD

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

CENTRAL DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA ARNOLD CREEK WATERSHED

USGS 7.5 PENNSBORO & WEST UNION QUAD MAPS



WEST VIRGINIA COUNTY MAP



(NOT TO SCALE)

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!!

WVDOH COUNTY ROAD MAP



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

SHEET INDEX

- 1 COVER SHEET
- 2 CONSTRUCTION AND E&S CONTROL NOTES
- 3 MATERIAL QUANTITIES
- 4 STORM DRAINAGE COMPUTATIONS
- 5 EXISTING CONDITIONS
- 6 OVERALL PLAN SHEET INDEX & VOLUMES
- 7 ACCESS ROAD PLAN
- 8 ACCESS ROAD, WELL PAD, & WATER CONTAINMENT PAD PLAN
- 9 ACCESS ROAD PLAN
- 10 ACCESS ROAD & WELL PAD PLAN
- 11 WELL PAD GRADING PLAN
- 12-13 ACCESS ROAD PROFILES
- 14-15 ACCESS ROAD SECTIONS
- 16 ACCESS ROAD SECTIONS & WELL PAD SECTIONS
- 17 WELL PAD SECTIONS
- 18 STREAM CROSSING "A" & "B" DETAILS
- 19-23 CONSTRUCTION DETAILS
- 24 ACCESS ROAD RECLAMATION PLAN
- 25 ACCESS ROAD, WELL PAD, & WATER CONTAINMENT PAD RECLAMATION PLAN
- 26 ACCESS ROAD RECLAMATION PLAN
- 27 ACCESS ROAD & WELL PAD RECLAMATION PLAN

GE501-GE521 - GEOTECHNICAL DETAILS

DUCKWORTH LIMITS OF DISTURBANCE	AREA (AC)
Total Site	
Access Road "A" (1927')	6.51
Well Pad	6.75
Excess/Topsoil Material Stockpiles	3.94
Total Affected Area	17.20
Total Wooded Acres Disturbed	17.20
Impacts to Edward V. Rice TM 6	-3
Well Pad	2.47
Total Affected Area	2.47
Total Wooded Acres Disturbed	2.47
Impacts to Geo. Duckworth Heirs TI	# 6-11
Access Road "A" (1759')	0.38
Well Pad	2.49
Total Affected Area	2.87
Total Wooded Acres Disturbed	2.87
mpacts to Thelma B. James, Trustee of the Lat Living Trust TM 6-6	wrence L. Jam
Access Road "A" (168')	6.13
Well Pad	1.73
Excess/Topsoil Material Stockpiles	3.94
Total Affected Area	11.80
Total Wooded Acres Disturbed	11.80
Impacts to Edward V. Rice TM 6	-2
Well Pad	0.06
Total Affected Area	0.06
Total Wooded Acres Disturbed	0.06

Proposed Well Name	WW North	W North	Zone 17	NAD 83 Lat & Long
Virginia	N 294283.86	N 294318.51	N 4350068.42	LAT 39-17-59.7345
Unit 1H	E 1611776.12	E 1580335.00	E 511062 19	LONG -80-52-18.1401
Virginia	N 294289.69	N 294324.33	N 4350070.24	LAT 39-17-59.7932
Unit 2H	E 1611784.25	E 1580343.14	E 511064.63	LONG -80-52-18.0378
Virginia	N 294295.51	N 294330.16	N 4350072.05	LAT 39-17-59.8520
Unit 3H	E 1611792.38	E 1580351.27	E 511067.08	LONG -80-52-17.9355
Future -	N 294301.33	N 294335.98	N 4350073.87	LAT 39-17-59.9108
Well	E 1611800.51	E 1580359 40	E 511069 53	LONG -80-52-17 8332
Future	N 294307.15	N 294341.80	N 4350075.58	LAT 39-17-59.9695
Well	E 1611808.65	E 1580367.53	E 511071.98	LONG -80-52-17.7309
Well Pad Elevation	985.0			





Antero

DUCKWORTH

SHEET

COVER

DATE: 08/05/2014 SCALE: AS SHOWN SHEET 1 OF 28

