

west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

February 27, 2013

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-1706189, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: DOTSON UNIT 2H
Farm Name: DAVIS, JONATHAN
API Well Number: 47-1706189
Permit Type: Horizontal 6A Well
Date Issued: 02/27/2013

Promoting a healthy environment.

09/24/2021

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the fill material shall be within plus or minus 2% (unless soil test results show a greater range of moisture content is appropriate and 95% compaction can still be achieved) of the optimum moisture content as determined by the standard proctor density test, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort. Each lift must meet 95 % compaction of the optimum density based on results from the standard proctor density test of the actual soils used in specific engineered fill sites. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
3. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
4. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
5. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

09/24/2021

17-06189

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION

17 1 671

1) Well Operator: Antero Resources Appalachian Corporation 494488557 Doddridge Central West Union 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Dotson Unit 2H Well Pad Name: Existing Jonathan Davis Pad

3 Elevation, current ground: 1146' Elevation, proposed post-construction: 1146'

4) Well Type: (a) Gas Oil
Other
(b) If Gas: Shallow Deep
Horizontal

5) Existing Pad? Yes or No: Yes

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):
Marcellus Shale: 7,000' TVD, Anticipated Thickness- 60 feet, Associated Pressure- 3,100#

7) Proposed Total Vertical Depth: 7,000' TVD

8) Formation at Total Vertical Depth: Marcellus Shale

9) Proposed Total Measured Depth: 14,500' MD

10) Approximate Fresh Water Strata Depths: 148', 340'

11) Method to Determine Fresh Water Depth: Offset well records. Depths have been adjusted according to surface elevations.

12) Approximate Saltwater Depths: 1581'

13) Approximate Coal Seam Depths: 824'

14) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated ✓

15) Does land contain coal seams tributary or adjacent to, active mine? No

16) Describe proposed well work: Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale

*Antero will be air drilling the fresh water string which makes it difficult to determine when freshwater is encountered, therefore we have built in a buffer for the casing setting depth which helps to ensure that all fresh water zones are covered.

17) Describe fracturing/stimulating methods in detail:
Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 24.44 acres existing

19) Area to be disturbed for well pad only, less access road (acres): 7.42 acres existing

RECEIVED
7.42 acres existing
State of West Virginia
JAN 11 2021
WV Department of
Environmental Protection

09/24/2021

SDW
1/25/2021

20)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft.</u>	<u>FOOTAGE: For Drilling</u>	<u>INTERVALS: Left in Well</u>	<u>CEMENT: Fill -up (Cu. Ft.)</u>
Conductor	20"	New	H-40	94#	40'	40'	CTS, 38 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/ 48#	395'	395' *see above	CTS, 549 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2550'	2550'	CTS, 1038 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	14500'	14500'	3573 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7200'	
Liners							

<u>TYPE</u>	<u>Size</u>	<u>Wellbore Diameter</u>	<u>Wall Thickness</u>	<u>Burst Pressure</u>	<u>Cement Type</u>	<u>Cement Yield</u>
Conductor	20"	24"	0.438"	1530	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	Class A	1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	Class A	1.18
Intermediate						
Production	5-1/2"	8-3/4" & 8-1/2"	0.361"	12630	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11200		
Liners						

PACKERS

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

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Office of Oil & Gas
JAN 23 2021
Ministry of
Economic Development

21) Describe centralizer placement for each casing string.

Conductor: no centralizers

Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.

Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.

Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

22) Describe all cement additives associated with each cement type.

Conductor: no additives, Class A cement.

✓ Surface: Class A cement with 2% calcium and 1/4 lb flake, 5 gallons of clay treat

Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat

Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51

Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

23) Proposed borehole conditioning procedures.

Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.

Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.

Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

*Note: Attach additional sheets as needed.

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JAN 11 2003
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Environmental Protection

09/24/2021

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

**CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE**

Operator Name Antero Resources Appalachian Corporation OP Code 494488557

Watershed Arnold Creek Quadrangle West Union

Elevation 1146' County Doddridge District Central

Description of anticipated Pit Waste: No pit will be used at this site (Drilling and Flowback Fluids will be stored in tanks. Cuttings will be tanked and hauled off site.)

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a synthetic liner be used in the pit? N/A. If so, what mil.? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
 - Reuse (at API Number Future permitted well locations when applicable. API# will be provided on Form WR-34)
 - Off Site Disposal (Meadowfill Landfill Permit #SWF-1032-98)
- Other (Explain _____)

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Surface - Air/Freshwater, Intermediate - Dust/Stiff Foam, Production - Water Based Mud

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used? Please See Attachment

Will closed loop system be used? Yes

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed offsite and taken to landfill

-If left in pit and plan to solidify what medium will be used? Cement, lime, N/A

-Landfill or offsite name/permit number? Meadowfill Landfill (Permit #SWF-1032-98)

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Cole Kilstrom*

Company Official (Typed Name) Cole Kilstrom

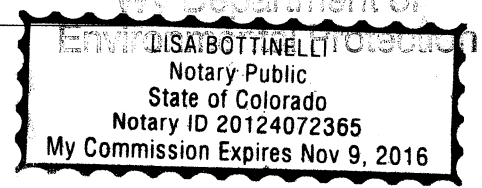
Company Official Title Environmental Specialist

Subscribed and sworn before me this 3 day of January, 20 13

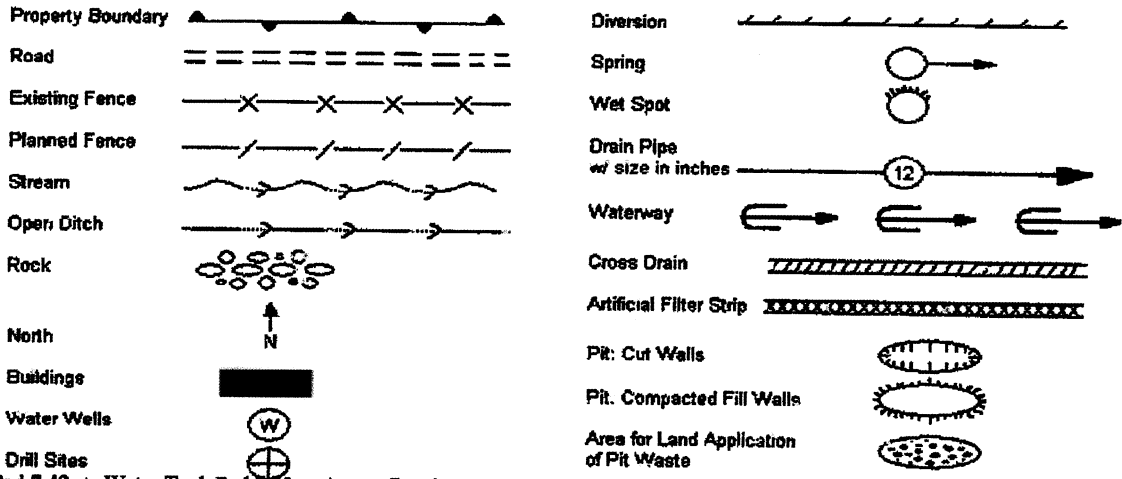
Lisa Bottinelli Notary Public

My commission expires Nov 9, 2013

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Office of Oil & Gas
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(Existing Pad 7.42 + Water Tank Pad 3.29 + Access Road A 12.57 + Spoil Pad 1.16 = 24.44 acres)

Proposed Revegetation Treatment: Acres Disturbed 24.44 Prevegetation pH _____

Lime 2-3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch 2-3 Tons/acre Hay or straw or Wood Fiber (will be used where needed)

Seed Mixtures pre-seed & mulch all disturbed areas as soon as reasonably possible per WU DEP ETS manual

Seed Type	Area I (Temporary)		Area II (Permanent)	
	Seed Type	Area I (Temporary)	Seed Type	Area II (Permanent)
Tall Fescue		45	Tall Fescue	45
Perennial Rye Grass		20	Perennial Rye Grass	20

*or type of grass seed requested by surface owner

*or type of grass seed requested by surface owner

Attach:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. D. Warratt

Comments: _____

Title: Oil & Gas Inspector Date: 1/25/2013

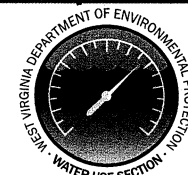
Field Reviewed? Yes No

FIELD OFFICE
Office of Oil & Gas
JAN 28 2013
WV Department of Environmental Protection

09/24/2021



Water Management Plan: Primary Water Sources



WMP- 01004

API/ID Number:

047-017-06189

Operator:

Antero Resources

Dotson Unit 2H

Important:

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

DEP is aware that some intake points will be used for mutiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interepreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov.

APPROVED FEB 22 2013

Source Summary

WMP- 01004

API Number:

047-017-06189

Operator:

Antero Resources

Dotson Unit 2H

Stream/River

● Source **West Fork River @ JCP Withdrawal** Owner: **James & Brenda Raines**

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
4/14/2013 4/14/2013 5,500,000 39.320913 -80.337572

Regulated Stream? Stonewall Jackson Dam Ref. Gauge ID: 3061000 WEST FORK RIVER AT ENTERPRISE, WV

Max. Pump rate (gpm): **1,000** Min. Gauge Reading (cfs): **170.54** Min. Passby (cfs) **146.25**

DEP Comments:

● Source **West Fork River @ McDonald Withdrawal** Owner: **David Shrieves**

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
5/1/2013 5/1/2014 5,500,000 39.16761 -80.45069

Regulated Stream? Stonewall Jackson Dam Ref. Gauge ID: 3061000 WEST FORK RIVER AT ENTERPRISE, WV

Max. Pump rate (gpm): **3,000** Min. Gauge Reading (cfs): **170.54** Min. Passby (cfs) **106.30**

DEP Comments:

● Source **West Fork River @ GAL Withdrawal** Owner: **David Shrieves**

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
5/1/2013 5/1/2014 5,500,000 39.16422 -80.45173

Regulated Stream? Stonewall Jackson Dam Ref. Gauge ID: 3061000 WEST FORK RIVER AT ENTERPRISE, WV

Max. Pump rate (gpm): **1,000** Min. Gauge Reading (cfs): **170.54** Min. Passby (cfs) **106.30**

DEP Comments:

APPROVED FEB 22 2013

● Source **Middle Island Creek @ Dawson Withdrawal** Owner: **Gary D. and Rella A. Dawson**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
5/1/2013	5/1/2014	5,500,000		39.379292	-80.867803

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 3,000 **Min. Gauge Reading (cfs): 76.03** **Min. Passby (cfs) 28.83**

DEP Comments:

● Source **McElroy Creek @ Forest Withdrawal** Owner: **Forest C. & Brenda L. Moore**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
5/1/2013	5/1/2014	5,500,000		39.39675	-80.738197

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 1,000 **Min. Gauge Reading (cfs): 71.96** **Min. Passby (cfs) 13.10**

DEP Comments:

● Source **McElroy Creek @ Sweeney Withdrawal** Owner: **Bill Sweeney**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
5/1/2013	5/1/2014	5,500,000		39.398123	-80.656808

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 1,000 **Min. Gauge Reading (cfs): 69.73** **Min. Passby (cfs) 6.66**

DEP Comments:

APPROVED FEB 28 2010

● Source **Meathouse Fork @ Gagnon Withdrawal** Owner: **George L. Gagnon and Susan C. Gagnon**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
5/1/2013	5/1/2014	5,500,000		39.26054	-80.720998

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 1,000 **Min. Gauge Reading (cfs): 71.96** **Min. Passby (cfs) 11.74**

DEP Comments:

● Source **Meathouse Fork @ Whitehair Withdrawal** Owner: **Elton Whitehair**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
5/1/2013	5/1/2014	5,500,000		39.211317	-80.679592

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 1,000 **Min. Gauge Reading (cfs): 69.73** **Min. Passby (cfs) 7.28**

DEP Comments:

● Source **Tom's Fork @ Erwin Withdrawal** Owner: **John F. Erwin and Sandra E. Erwin**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
5/1/2013	5/1/2014	5,500,000		39.174306	-80.702992

Regulated Stream? Ref. Gauge ID: **3114500** MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 1,000 **Min. Gauge Reading (cfs): 69.73** **Min. Passby (cfs) 0.59**

DEP Comments:

APPROVED TO 2 2013

● Source **Arnold Creek @ Davis Withdrawal** Owner: **Jonathon Davis**

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
5/1/2013 5/1/2014 5,500,000 39.302006 -80.824561

Regulated Stream? Ref. Gauge ID: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **1,000** Min. Gauge Reading (cfs): **69.73** Min. Passby (cfs) **3.08**

DEP Comments:

● Source **Buckeye Creek @ Powell Withdrawal** Owner: **Dennis Powell**

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
5/1/2013 5/1/2014 5,500,000 39.277142 -80.690386

Regulated Stream? Ref. Gauge ID: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **1,000** Min. Gauge Reading (cfs): **69.73** Min. Passby (cfs) **4.59**

DEP Comments:

● Source **South Fork of Hughes River @ Knight Withdrawal** Owner: **Tracy C. Knight & Stephanie C. Knight**

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
5/1/2013 5/1/2014 5,500,000 39.198369 -80.870969

Regulated Stream? Ref. Gauge ID: 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV

Max. Pump rate (gpm): **3,000** Min. Gauge Reading (cfs): **39.80** Min. Passby (cfs) **1.95**

DEP Comments:

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● Source **North Fork of Hughes River @ Davis Withdrawal** Owner: **Lewis P. Davis and Normal J. Davis**

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
5/1/2013 5/1/2014 5,500,000 39.322363 -80.936771

Regulated Stream? Ref. Gauge ID: 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WA

Max. Pump rate (gpm): **1,000** Min. Gauge Reading (cfs): **35.23** Min. Passby (cfs) **2.19**

DEP Comments:

Source Summary

WMP-01004 API Number: 047-017-06189 Operator: Antero Resources
Dotson Unit 2H

Purchased Water

● Source **Middle Island Creek @ Solo Construction** Owner: **Solo Construction, LLC**

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
5/1/2013 5/1/2014 5,500,000 1,000,000 39.399094 -81.185548

Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Virtual Gauge, Ohio River @ Willow Island

Max. Pump rate (gpm): Min. Gauge Reading (cfs): **6,468.00** Min. Passby (cfs)

DEP Comments:

Elevation analysis indicates that this location has the same elevation as Middle Island Creek's pour point into the Ohio River. As such, it is deemed that water flow at this location is heavily influenced by the Ohio River.

APPROVED 09/22/2013

Source Detail

WMP-01004 API/ID Number: 047-017-06189 Operator: Antero Resources

Dotson Unit 2H

Source ID: 12520 Source Name: Middle Island Creek @ Solo Construction Source Latitude: 39.399094
 Solo Construction, LLC Source Longitude: -81.185548

HUC-8 Code: 5030201 Anticipated withdrawal start date: 5/1/2013

Drainage Area (sq. mi.): 25000 County: Pleasants Anticipated withdrawal end date: 5/1/2014

Endangered Species? Mussel Stream? Total Volume from Source (gal): 5,500,000

Trout Stream? Tier 3? Max. Pump rate (gpm):

Regulated Stream? Ohio River Min. Flow Max. Simultaneous Trucks:

Proximate PSD? City of St. Marys Max. Truck pump rate (gpm): 0

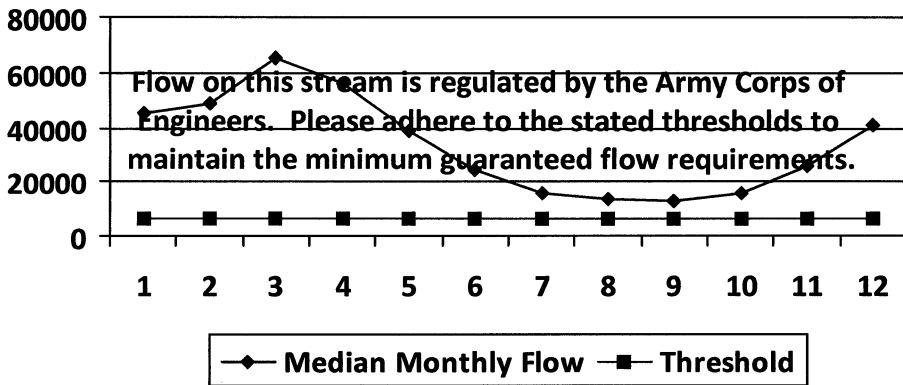
Gauged Stream?

Reference Gaug: 9999999 Virtual Gauge, Ohio River @ Willow Island

Drainage Area (sq. mi.): 25,000.00 Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): -

Passby at Location (cfs): -

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

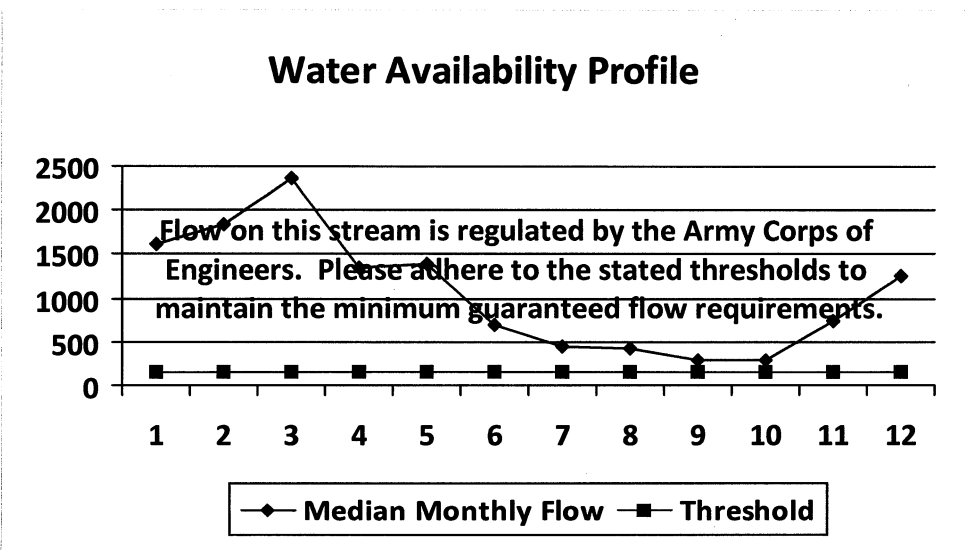
Source Detail

WMP-01004	API/ID Number: 047-017-06189	Operator: Antero Resources
Dotson Unit 2H		

Source ID: 12507	Source Name: West Fork River @ JCP Withdrawal James & Brenda Raines	Source Latitude: 39.320913
		Source Longitude: -80.337572
HUC-8 Code: 5020002	Drainage Area (sq. mi.): 532.2	County: Harrison
<input type="checkbox"/> Endangered Species? <input type="checkbox"/> Trout Stream? <input checked="" type="checkbox"/> Regulated Stream? <input type="checkbox"/> Proximate PSD? <input checked="" type="checkbox"/> Gauged Stream?	<input checked="" type="checkbox"/> Mussel Stream? <input type="checkbox"/> Tier 3? Stonewall Jackson Dam	Anticipated withdrawal start date: 4/14/2013 Anticipated withdrawal end date: 4/14/2013 Total Volume from Source (gal): 5,500,000 Max. Pump rate (gpm): 1,000 Max. Simultaneous Trucks: 0 Max. Truck pump rate (gpm): 0

Reference Gaug: 3061000	WEST FORK RIVER AT ENTERPRISE, WV
Drainage Area (sq. mi.): 759.00	Gauge Threshold (cfs): 234

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	1,630.82	-	-
2	1,836.14	-	-
3	2,365.03	-	-
4	1,352.59	-	-
5	1,388.37	-	-
6	695.67	-	-
7	450.73	-	-
8	430.37	-	-
9	299.45	-	-
10	293.59	-	-
11	736.74	-	-
12	1,257.84	-	-



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	17.61
Downstream Demand (cfs):	0.00
Pump rate (cfs):	2.23
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

09/24/2021

Source Detail

WMP- 01004 API/ID Number: 047-017-06189 Operator: Antero Resources
 Dotson Unit 2H

Source ID: 12508 Source Name: West Fork River @ McDonald Withdrawal
 David Shrieves Source Latitude: 39.16761
 Source Longitude: -80.45069

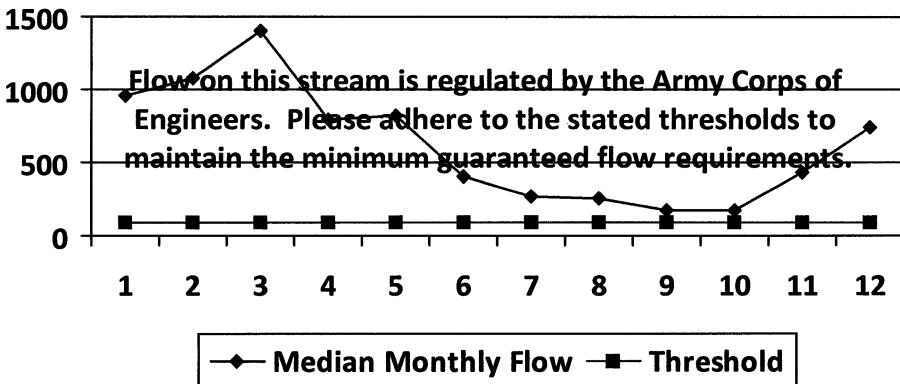
HUC-8 Code: 5020002 Anticipated withdrawal start date: 5/1/2013
 Drainage Area (sq. mi.): 314.91 County: Harrison Anticipated withdrawal end date: 5/1/2014

Endangered Species? Mussel Stream?
 Trout Stream? Tier 3?
 Regulated Stream? Stonewall Jackson Dam Total Volume from Source (gal): 5,500,000
 Proximate PSD? Max. Pump rate (gpm): 3,000
 Gauged Stream? Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

Reference Gaug: 3061000 WEST FORK RIVER AT ENTERPRISE, WV
 Drainage Area (sq. mi.): 759.00 Gauge Threshold (cfs): 234

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	964.98	-	-
2	1,086.47	-	-
3	1,399.42	-	-
4	800.34	-	-
5	821.52	-	-
6	411.64	-	-
7	266.70	-	-
8	254.66	-	-
9	177.19	-	-
10	173.72	-	-
11	435.94	-	-
12	744.28	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -
 Upstream Demand (cfs): 17.61
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 6.68
 Headwater Safety (cfs): 24.27
 Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): -
 Passby at Location (cfs): -

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP-01004 API/ID Number: 047-017-06189 Operator: Antero Resources
 Dotson Unit 2H

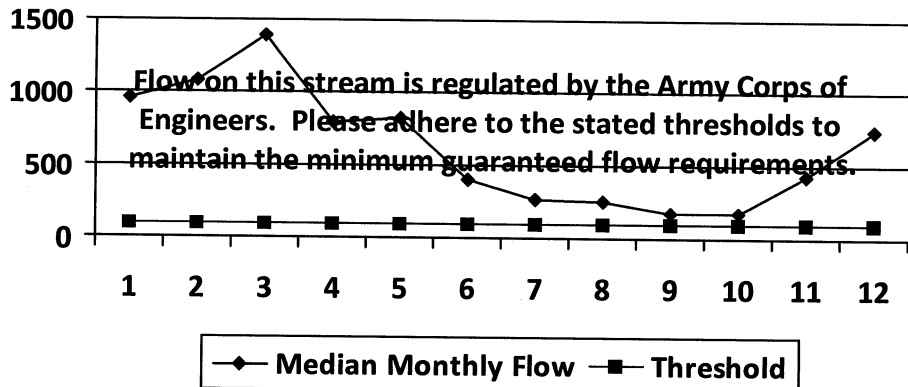
Source ID: 12509 Source Name: West Fork River @ GAL Withdrawal
 David Shrieves Source Latitude: 39.16422
 Source Longitude: -80.45173
 HUC-8 Code: 5020002
 Drainage Area (sq. mi.): 313.67 County: Harrison
 Anticipated withdrawal start date: 5/1/2013
 Anticipated withdrawal end date: 5/1/2014
 Total Volume from Source (gal): 5,500,000
 Max. Pump rate (gpm): 1,000
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

- Endangered Species? Mussel Stream?
 Trout Stream? Tier 3?
 Regulated Stream? Stonewall Jackson Dam
 Proximate PSD?
 Gauged Stream?

Reference Gaug: 3061000 WEST FORK RIVER AT ENTERPRISE, WV
 Drainage Area (sq. mi.): 759.00 Gauge Threshold (cfs): 234

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	961.18	-	-
2	1,082.19	-	-
3	1,393.91	-	-
4	797.19	-	-
5	818.28	-	-
6	410.02	-	-
7	265.65	-	-
8	253.65	-	-
9	176.49	-	-
10	173.04	-	-
11	434.22	-	-
12	741.35	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -
 Upstream Demand (cfs): 17.61
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 2.23
 Headwater Safety (cfs): 24.18
 Ungauged Stream Safety (cfs): 0.00
 Min. Gauge Reading (cfs): -
 Passby at Location (cfs): -

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP-01004

API/ID Number: 047-017-06189

Operator: Antero Resources

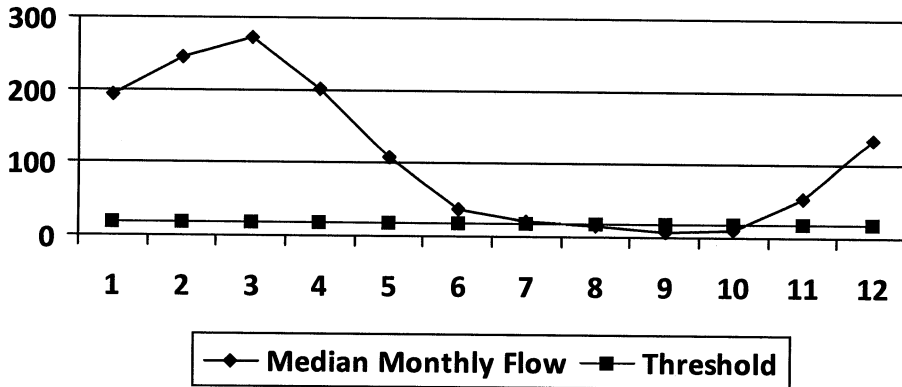
Dotson Unit 2H

Source ID: 12510	Source Name: Middle Island Creek @ Dawson Withdrawal Gary D. and Rella A. Dawson	Source Latitude: 39.379292
HUC-8 Code: 5030201		Source Longitude: -80.867803
Drainage Area (sq. mi.): 181.34	County: Tyler	Anticipated withdrawal start date: 5/1/2013
<input type="checkbox"/> Endangered Species?	<input checked="" type="checkbox"/> Mussel Stream?	Anticipated withdrawal end date: 5/1/2014
<input type="checkbox"/> Trout Stream?	<input type="checkbox"/> Tier 3?	Total Volume from Source (gal): 5,500,000
<input type="checkbox"/> Regulated Stream?		Max. Pump rate (gpm): 3,000
<input type="checkbox"/> Proximate PSD?		Max. Simultaneous Trucks: 0
<input checked="" type="checkbox"/> Gauged Stream?		Max. Truck pump rate (gpm): 0

Reference Gaug: 3114500	MIDDLE ISLAND CREEK AT LITTLE, WV
Drainage Area (sq. mi.): 458.00	Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	194.47	42.06	152.68
2	244.62	42.06	202.83
3	273.72	42.06	231.93
4	203.26	42.06	161.47
5	107.22	42.06	65.43
6	37.44	42.06	-4.35
7	21.19	42.06	-20.60
8	17.45	42.06	-24.34
9	8.94	42.06	-32.85
10	11.23	42.06	-30.56
11	54.82	42.06	13.04
12	133.96	42.06	92.17

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	17.82
Upstream Demand (cfs):	13.10
Downstream Demand (cfs):	6.55
Pump rate (cfs):	6.68
Headwater Safety (cfs):	4.45
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	76.03
Passby at Location (cfs):	28.82

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

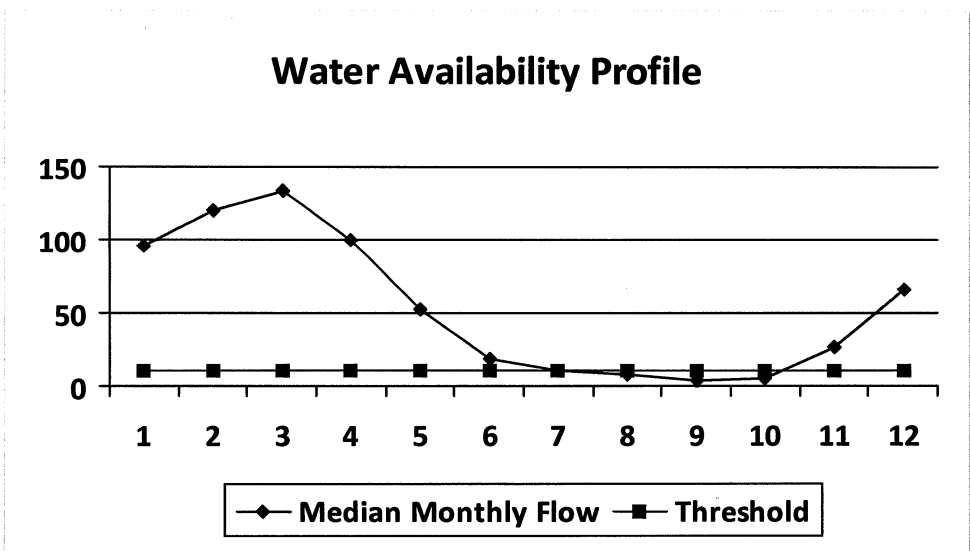
Source Detail

WMP- 01004	API/ID Number: 047-017-06189	Operator: Antero Resources
Dotson Unit 2H		

Source ID: 12511	Source Name: McElroy Creek @ Forest Withdrawal Forest C. & Brenda L. Moore	Source Latitude: 39.39675	Source Longitude: -80.738197
HUC-8 Code: 5030201	Drainage Area (sq. mi.): 88.85	County: Tyler	Anticipated withdrawal start date: 5/1/2013
<input type="checkbox"/> Endangered Species?	<input type="checkbox"/> Mussel Stream?		Anticipated withdrawal end date: 5/1/2014
<input type="checkbox"/> Trout Stream?	<input type="checkbox"/> Tier 3?		Total Volume from Source (gal): 5,500,000
<input type="checkbox"/> Regulated Stream?			Max. Pump rate (gpm): 1,000
<input type="checkbox"/> Proximate PSD?			Max. Simultaneous Trucks: 0
<input type="checkbox"/> Gauged Stream?			Max. Truck pump rate (gpm): 0

Reference Gaug: 3114500	MIDDLE ISLAND CREEK AT LITTLE, WV	Gauge Threshold (cfs): 45
Drainage Area (sq. mi.): 458.00		

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	95.28	17.55	77.91
2	119.86	17.55	102.48
3	134.11	17.55	116.74
4	99.59	17.55	82.22
5	52.54	17.55	35.16
6	18.35	17.55	0.97
7	10.38	17.55	-6.99
8	8.55	17.55	-8.82
9	4.38	17.55	-13.00
10	5.50	17.55	-11.87
11	26.86	17.55	9.49
12	65.63	17.55	48.26



Water Availability Assessment of Location

Base Threshold (cfs):	8.73
Upstream Demand (cfs):	2.23
Downstream Demand (cfs):	0.00
Pump rate (cfs):	2.23
Headwater Safety (cfs):	2.18
Ungauged Stream Safety (cfs):	2.18
Min. Gauge Reading (cfs):	71.96
Passby at Location (cfs):	13.09

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01004 API/ID Number: 047-017-06189 Operator: Antero Resources

Dotson Unit 2H

Source ID: 12512 Source Name: McElroy Creek @ Sweeney Withdrawal
 Bill Sweeney Source Latitude: 39.398123
 Source Longitude: -80.656808

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 45.16 County: Doddridge

Anticipated withdrawal start date: 5/1/2013

Anticipated withdrawal end date: 5/1/2014

Total Volume from Source (gal): 5,500,000

Max. Pump rate (gpm): 1,000

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

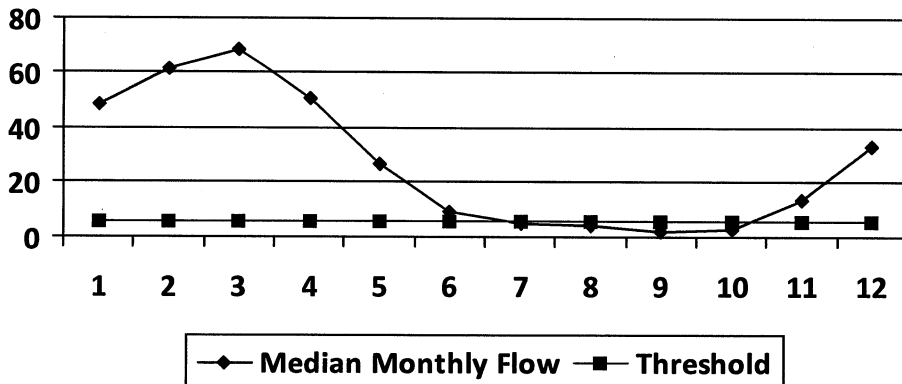
- Endangered Species? Mussel Stream?
- Trout Stream? Tier 3?
- Regulated Stream?
- Proximate PSD?
- Gauged Stream?

Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00 Gauge Threshold (cfs): 45

Month	<u>Median monthly flow (cfs)</u>	<u>Threshold (+ pump)</u>	<u>Estimated Available water (cfs)</u>
1	48.43	8.88	39.93
2	60.92	8.88	52.42
3	68.17	8.88	59.67
4	50.62	8.88	42.12
5	26.70	8.88	18.21
6	9.32	8.88	0.83
7	5.28	8.88	-3.22
8	4.34	8.88	-4.15
9	2.23	8.88	-6.27
10	2.80	8.88	-5.70
11	13.65	8.88	5.16
12	33.36	8.88	24.86

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 4.44

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs): 2.23

Headwater Safety (cfs): 1.11

Ungauged Stream Safety (cfs): 1.11

Min. Gauge Reading (cfs): 69.73

Passby at Location (cfs): 6.66

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01004

API/ID Number: 047-017-06189

Operator: Antero Resources

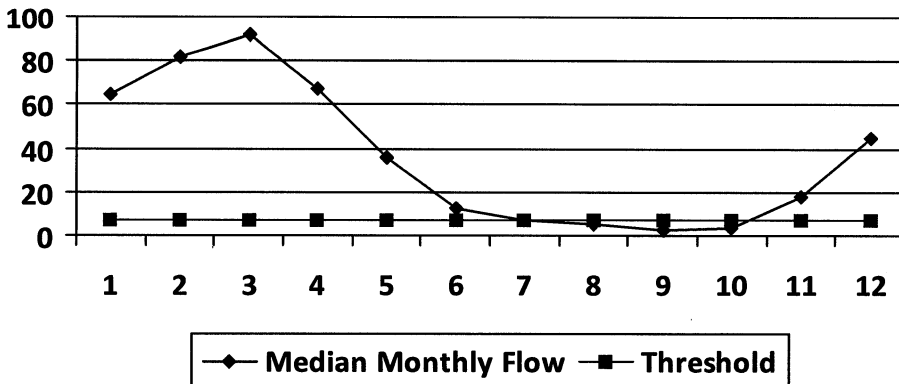
Dotson Unit 2H

Source ID: 12513	Source Name: Meathouse Fork @ Gagnon Withdrawal George L. Gagnon and Susan C. Gagnon	Source Latitude: 39.26054	Source Longitude: -80.720998
HUC-8 Code: 5030201	Drainage Area (sq. mi.): 60.6	County: Doddridge	Anticipated withdrawal start date: 5/1/2013
<input checked="" type="checkbox"/> Endangered Species?	<input checked="" type="checkbox"/> Mussel Stream?		Anticipated withdrawal end date: 5/1/2014
<input type="checkbox"/> Trout Stream?	<input type="checkbox"/> Tier 3?		Total Volume from Source (gal): 5,500,000
<input type="checkbox"/> Regulated Stream?			Max. Pump rate (gpm): 1,000
<input type="checkbox"/> Proximate PSD?			Max. Simultaneous Trucks: 0
<input type="checkbox"/> Gauged Stream?			Max. Truck pump rate (gpm): 0

Reference Gaug	3114500	MIDDLE ISLAND CREEK AT LITTLE, WV	
Drainage Area (sq. mi.)	458.00	Gauge Threshold (cfs):	45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	64.99	13.39	51.70
2	81.75	13.39	68.46
3	91.47	13.39	78.19
4	67.93	13.39	54.64
5	35.83	13.39	22.55
6	12.51	13.39	-0.77
7	7.08	13.39	-6.20
8	5.83	13.39	-7.45
9	2.99	13.39	-10.30
10	3.75	13.39	-9.53
11	18.32	13.39	5.04
12	44.76	13.39	31.48

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	5.95
Upstream Demand (cfs):	2.23
Downstream Demand (cfs):	2.81
Pump rate (cfs):	2.23
Headwater Safety (cfs):	1.49
Ungauged Stream Safety (cfs):	1.49
Min. Gauge Reading (cfs):	71.96
Passby at Location (cfs):	11.74

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01004 API/ID Number: 047-017-06189 Operator: Antero Resources
 Dotson Unit 2H

Source ID: 12514 Source Name: Meathouse Fork @ Whitehair Withdrawal
 Elton Whitehair Source Latitude: 39.211317
 Source Longitude: -80.679592

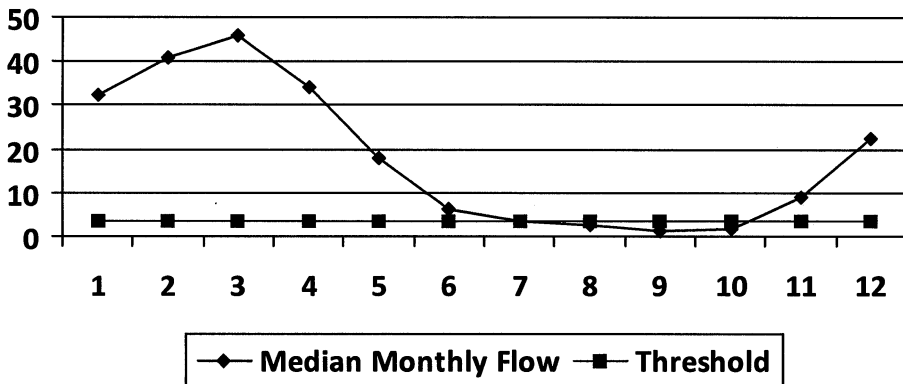
HUC-8 Code: 5030201 Anticipated withdrawal start date: 5/1/2013
 Drainage Area (sq. mi.): 30.37 County: Doddridge Anticipated withdrawal end date: 5/1/2014
 Endangered Species? Mussel Stream?
 Trout Stream? Tier 3?
 Regulated Stream?
 Proximate PSD?
 Gauged Stream?

Total Volume from Source (gal): 5,500,000
 Max. Pump rate (gpm): 1,000
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV
 Drainage Area (sq. mi.): 458.00 Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	32.57	6.70	26.15
2	40.97	6.70	34.55
3	45.84	6.70	39.42
4	34.04	6.70	27.62
5	17.96	6.70	11.54
6	6.27	6.70	-0.15
7	3.55	6.70	-2.87
8	2.92	6.70	-3.50
9	1.50	6.70	-4.92
10	1.88	6.70	-4.54
11	9.18	6.70	2.76
12	22.43	6.70	16.01

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 2.98
 Upstream Demand (cfs): 0.00
 Downstream Demand (cfs): 2.81
 Pump rate (cfs): 2.23
 Headwater Safety (cfs): 0.75
 Ungauged Stream Safety (cfs): 0.75

Min. Gauge Reading (cfs): 69.73
 Passby at Location (cfs): 7.29

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01004 API/ID Number: 047-017-06189 Operator: Antero Resources
 Dotson Unit 2H

Source ID: 12515 Source Name: Tom's Fork @ Erwin Withdrawal
 John F. Erwin and Sandra E. Erwin Source Latitude: 39.174306
 Source Longitude: -80.702992

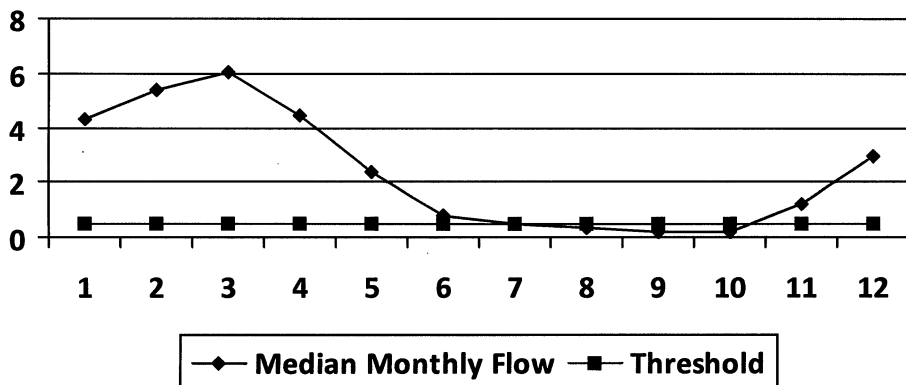
HUC-8 Code: 5030201 Anticipated withdrawal start date: 5/1/2013
 Drainage Area (sq. mi.): 4.01 County: Doddridge Anticipated withdrawal end date: 5/1/2014
 Endangered Species? Mussel Stream?
 Trout Stream? Tier 3?
 Regulated Stream?
 Proximate PSD?
 Gauged Stream?

Total Volume from Source (gal): 5,500,000
 Max. Pump rate (gpm): 1,000
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV
 Drainage Area (sq. mi.): 458.00 Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	4.30	2.82	1.88
2	5.41	2.82	2.98
3	6.05	2.82	3.63
4	4.49	2.82	2.07
5	2.37	2.82	-0.05
6	0.83	2.82	-1.60
7	0.47	2.82	-1.96
8	0.39	2.82	-2.04
9	0.20	2.82	-2.23
10	0.25	2.82	-2.18
11	1.21	2.82	-1.21
12	2.96	2.82	0.54

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 0.39
 Upstream Demand (cfs): 0.00
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 2.23
 Headwater Safety (cfs): 0.10
 Ungauged Stream Safety (cfs): 0.10

Min. Gauge Reading (cfs): 69.73
 Passby at Location (cfs): 0.59

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01004 API/ID Number: 047-017-06189 Operator: Antero Resources
 Dotson Unit 2H

Source ID: 12516 Source Name: Arnold Creek @ Davis Withdrawal
 Jonathon Davis Source Latitude: 39.302006
 Source Longitude: -80.824561

HUC-8 Code: 5030201 Anticipated withdrawal start date: 5/1/2013
 Drainage Area (sq. mi.): 20.83 County: Doddridge Anticipated withdrawal end date: 5/1/2014
 Total Volume from Source (gal): 5,500,000

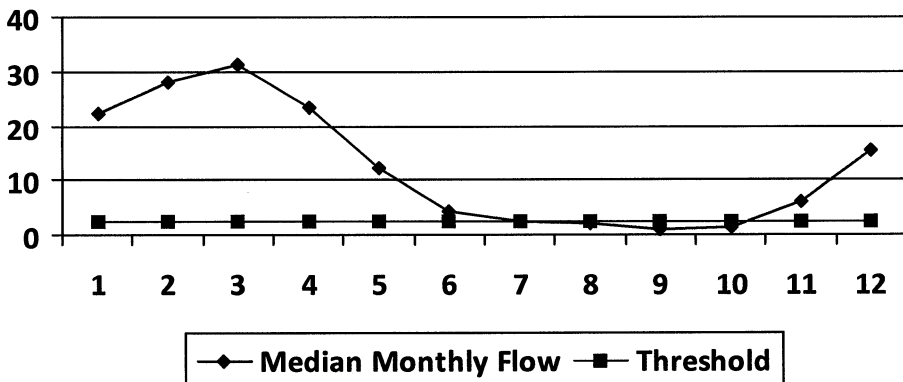
Endangered Species? Mussel Stream?
 Trout Stream? Tier 3?
 Regulated Stream?
 Proximate PSD?
 Gauged Stream?

Max. Pump rate (gpm): 1,000
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV
 Drainage Area (sq. mi.): 458.00 Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	22.34	5.30	17.29
2	28.10	5.30	23.05
3	31.44	5.30	26.39
4	23.35	5.30	18.30
5	12.32	5.30	7.26
6	4.30	5.30	-0.75
7	2.43	5.30	-2.62
8	2.00	5.30	-3.05
9	1.03	5.30	-4.03
10	1.29	5.30	-3.76
11	6.30	5.30	1.25
12	15.39	5.30	10.34

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 2.05
 Upstream Demand (cfs): 0.00
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 2.23
 Headwater Safety (cfs): 0.51
 Ungauged Stream Safety (cfs): 0.51

Min. Gauge Reading (cfs): 69.73
 Passby at Location (cfs): 3.07

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP-01004

API/ID Number: 047-017-06189

Operator: Antero Resources

Dotson Unit 2H

Source ID: 12517 Source Name: Buckeye Creek @ Powell Withdrawal
Dennis Powell

Source Latitude: 39.277142
Source Longitude: -80.690386

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 31.15 County: Doddridge

Anticipated withdrawal start date: 5/1/2013

Anticipated withdrawal end date: 5/1/2014

- Endangered Species? Mussel Stream?
- Trout Stream? Tier 3?
- Regulated Stream?
- Proximate PSD?
- Gauged Stream?

Total Volume from Source (gal): 5,500,000

Max. Pump rate (gpm): 1,000

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

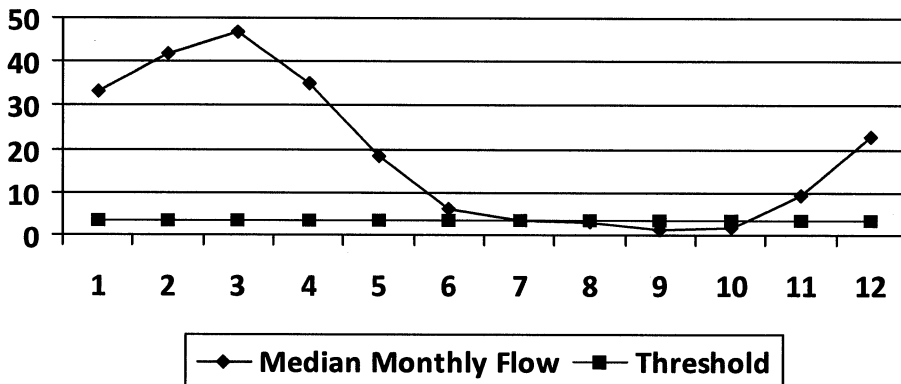
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	33.41	6.82	26.95
2	42.02	6.82	35.56
3	47.02	6.82	40.56
4	34.92	6.82	28.46
5	18.42	6.82	11.96
6	6.43	6.82	-0.03
7	3.64	6.82	-2.82
8	3.00	6.82	-3.46
9	1.53	6.82	-4.92
10	1.93	6.82	-4.53
11	9.42	6.82	2.96
12	23.01	6.82	16.55

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	3.06
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	2.23
Headwater Safety (cfs):	0.77
Ungauged Stream Safety (cfs):	0.77
<hr/>	
Min. Gauge Reading (cfs):	69.73
Passby at Location (cfs):	4.59

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01004 API/ID Number: 047-017-06189 Operator: Antero Resources
 Dotson Unit 2H

Source ID: 12518 Source Name: South Fork of Hughes River @ Knight Withdrawal
 Tracy C. Knight & Stephanie C. Knight Source Latitude: 39.198369
 Source Longitude: -80.870969

HUC-8 Code: 5030203 Anticipated withdrawal start date: 5/1/2013
 Drainage Area (sq. mi.): 16.26 County: Ritchie Anticipated withdrawal end date: 5/1/2014

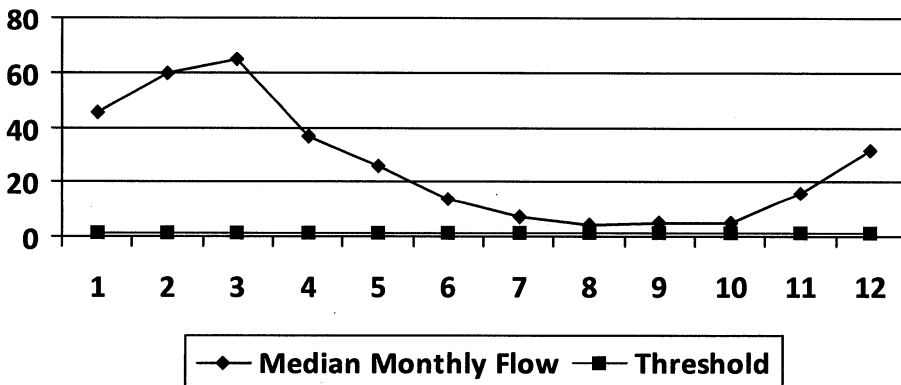
Endangered Species? Mussel Stream?
 Trout Stream? Tier 3?
 Regulated Stream?
 Proximate PSD?
 Gauged Stream?

Total Volume from Source (gal): 5,500,000
 Max. Pump rate (gpm): 3,000
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

Reference Gaug: 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV
 Drainage Area (sq. mi.): 229.00 Gauge Threshold (cfs): 22

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45.67	14.26	31.44
2	59.55	14.26	45.31
3	65.21	14.26	50.97
4	36.87	14.26	22.63
5	25.86	14.26	11.63
6	13.90	14.26	-0.33
7	6.89	14.26	-7.34
8	3.98	14.26	-10.25
9	4.79	14.26	-9.45
10	5.20	14.26	-9.04
11	15.54	14.26	1.30
12	32.06	14.26	17.82

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 1.56
 Upstream Demand (cfs): 5.62
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 6.68
 Headwater Safety (cfs): 0.39
 Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): 39.80
 Passby at Location (cfs): 1.95

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01004 API/ID Number: 047-017-06189 Operator: Antero Resources
 Dotson Unit 2H

Source ID: 12519 Source Name: North Fork of Hughes River @ Davis Withdrawal
 Lewis P. Davis and Normal J. Davis Source Latitude: 39.322363
 Source Longitude: -80.936771

HUC-8 Code: 5030203 Anticipated withdrawal start date: 5/1/2013
 Drainage Area (sq. mi.): 15.18 County: Ritchie Anticipated withdrawal end date: 5/1/2014

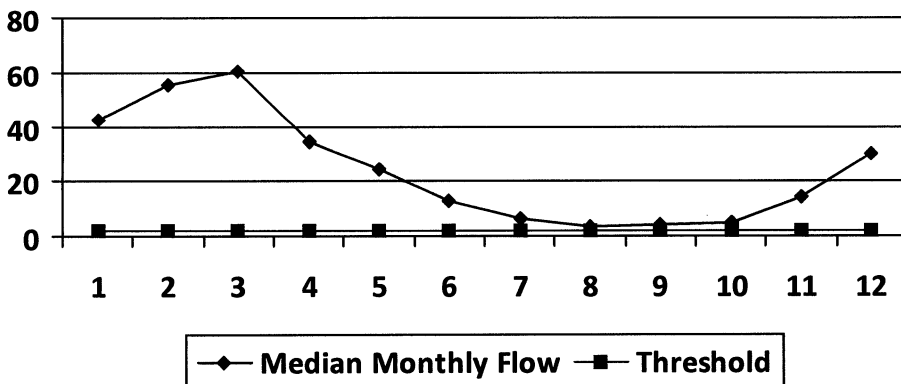
Endangered Species? Mussel Stream?
 Trout Stream? Tier 3?
 Regulated Stream?
 Proximate PSD?
 Gauged Stream?

Total Volume from Source (gal): 5,500,000
 Max. Pump rate (gpm): 1,000
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

Reference Gaug: 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV
 Drainage Area (sq. mi.): 229.00 Gauge Threshold (cfs): 22

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	42.64	4.42	38.36
2	55.59	4.42	51.32
3	60.88	4.42	56.60
4	34.42	4.42	30.14
5	24.15	4.42	19.87
6	12.98	4.42	8.70
7	6.44	4.42	2.16
8	3.72	4.42	-0.56
9	4.47	4.42	0.19
10	4.85	4.42	0.57
11	14.50	4.42	10.23
12	29.93	4.42	25.65

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 1.46
 Upstream Demand (cfs): 0.00
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 2.23
 Headwater Safety (cfs): 0.36
 Ungauged Stream Safety (cfs): 0.36

Min. Gauge Reading (cfs): 35.23
 Passby at Location (cfs): 2.19

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

09/24/2021



**Water Management Plan:
Secondary Water Sources**



WMP- 01004	API/ID Number: 047-017-06189	Operator: Antero Resources
Dotson Unit 2H		

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Lake/Reservoir

Source ID: 12521	Source Name: City of Salem Reservoir (Lower Dog Run)	Source start date: 5/1/2013
		Source end date: 5/1/2014
Max. Daily Purchase (gal): 1,000,000	Total Volume from Source (gal): 5,500,000	
DEP Comments:		

APPROVED FEB 22 2013

09/24/2021

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

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- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 12522	Source Name	Pennsboro Lake	Source start date:	5/1/2013
			Source end date:	5/1/2014
	Max. Daily Purchase (gal)		Total Volume from Source (gal):	5,500,000

DEP Comments:

Source ID: 12523	Source Name	Powers Lake (Wilderness Water Park Dam)	Source start date:	5/1/2013
			Source end date:	5/1/2014
	Max. Daily Purchase (gal)		Total Volume from Source (gal):	5,500,000

DEP Comments:

APPROVED FEB 22 2013

09/24/2021

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

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- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID:	12524	Source Name	Powers Lake Two	Source start date:	5/1/2013
				Source end date:	5/1/2014
		Max. Daily Purchase (gal)		Total Volume from Source (gal):	5,500,000

DEP Comments:

[Empty text box for DEP Comments]

APPROVED FEB 22 2013

09/24/2021

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Other

Source ID:	12525	Source Name	Poth Lake (Landowner Pond)	Source start date:	5/1/2013
				Source end date:	5/1/2014
		Max. Daily Purchase (gal)		Total Volume from Source (gal):	5,500,000
DEP Comments:					

Source ID:	12526	Source Name	Williamson Pond (Landowner Pond)	Source start date:	5/1/2013
				Source end date:	5/1/2014
		Max. Daily Purchase (gal)		Total Volume from Source (gal):	5,500,000
DEP Comments:					

APPROVED TCO 2 8 2013

09/24/2021

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

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- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 12527	Source Name: Eddy Pond (Landowner Pond)	Source start date: 5/1/2013
		Source end date: 5/1/2014
Max. Daily Purchase (gal)		Total Volume from Source (gal): 5,500,000

DEP Comments:

Source ID: 12528	Source Name: Hog Lick Quarry	Source start date: 5/1/2013
		Source end date: 5/1/2014
Max. Daily Purchase (gal)	1,000,000	Total Volume from Source (gal): 5,500,000

DEP Comments:

APPROVED FOR SIGNATURE

09/24/2021

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

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- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID:	12529	Source Name	Glade Fork Mine	Source start date:	5/1/2013
				Source end date:	5/1/2014
		Max. Daily Purchase (gal)	1,000,000	Total Volume from Source (gal):	5,500,000

DEP Comments:

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Recycled Frac Water

Source ID:	12530	Source Name	Dotson Unit 2H	Source start date:	5/1/2013
				Source end date:	5/1/2014
		Max. Daily Purchase (gal)		Total Volume from Source (gal):	5,500,000

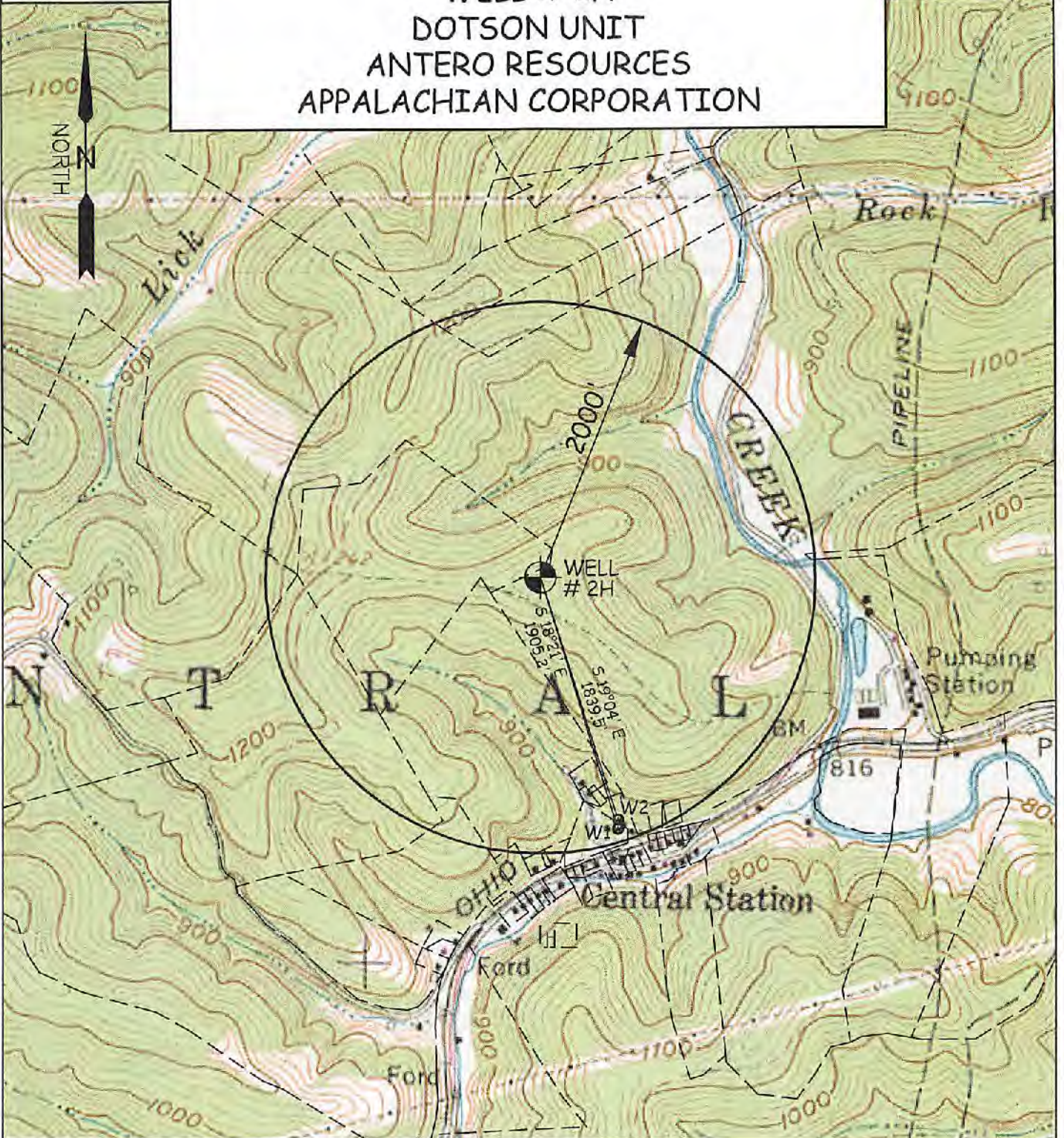
DEP Comments:

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APPROVED FEB 22 2013

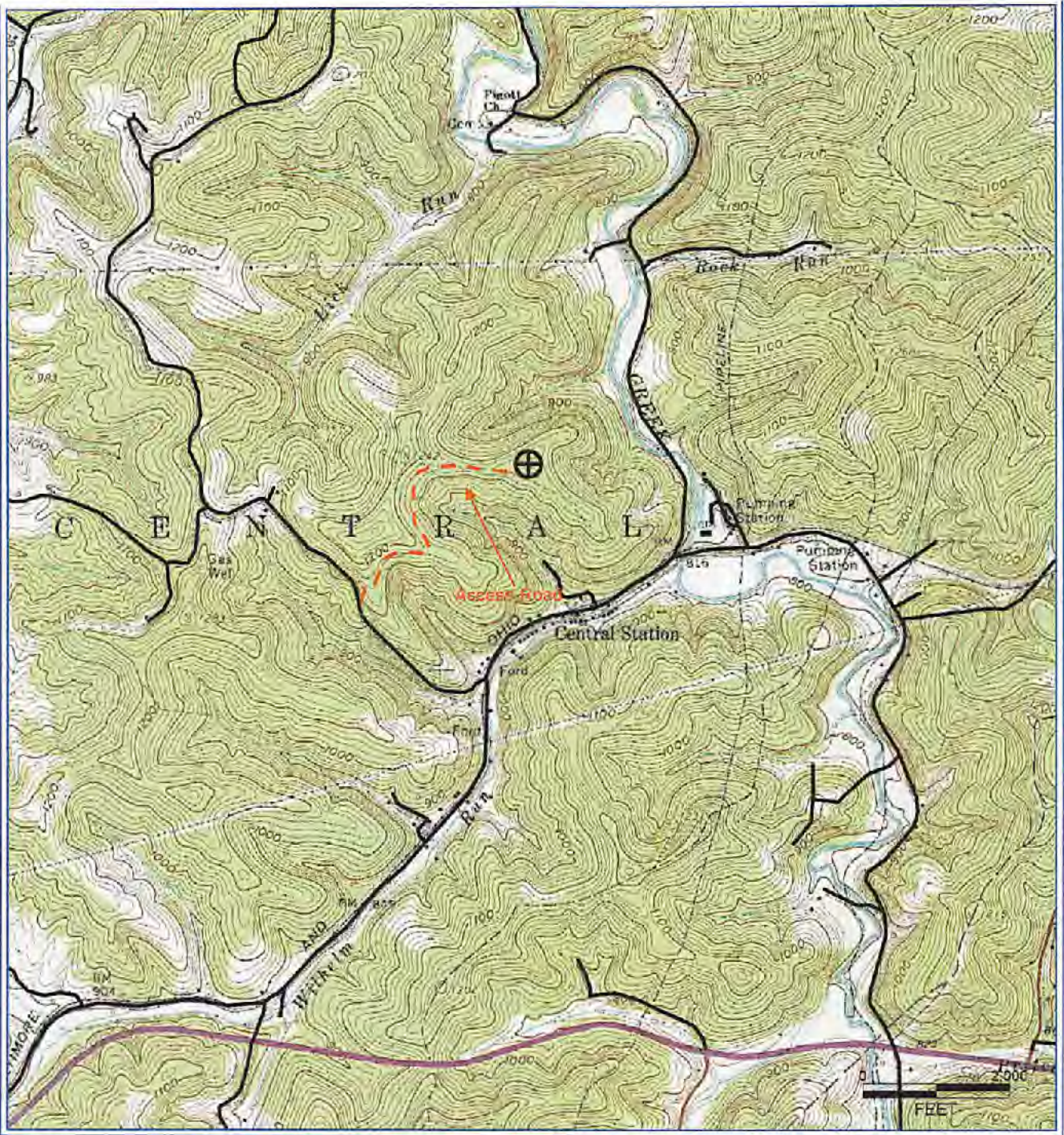
09/24/2021

**WELL # 2H
DOTSON UNIT
ANTERO RESOURCES
APPALACHIAN CORPORATION**



WELL	SURFACE OWNER	ADDRESS
W1	Robert L. & Dorothy N. Harper	Rt. 1 Box 307 West Union, WV 26456
W2	Wilma Ash	Rt. 1 Box 319 1/2 West Union, WV 26456

WILLOW LAND SURVEYING PLLC P.O. BOX 17, PENNSBORO, WV 26415 (304) 659-1717	TOPO SECTION(S) OF : WEST UNION 7.5' QUAD	SCALE : 1-INCH = 1000-FEET 0' 1000' 2000' 3000'
	DATE: 01/04/13 DRAWN BY: D.L.P.	



PETRA 11/2012 4:18:23 PM

17-06189 H6A DOTSON UNIT 2H
 ANTERO RESOURCES

PAD NAME: JONATHAN DAVIS

Antero Resources Corporation

APPALACHIAN BASIN

Dotson Unit 2H
 Doddridge County



REMARKS
 QUADRANGLE: WEST UNION
 WATERSHED: ARNOLD CREEK
 DISTRICT: CENTRAL

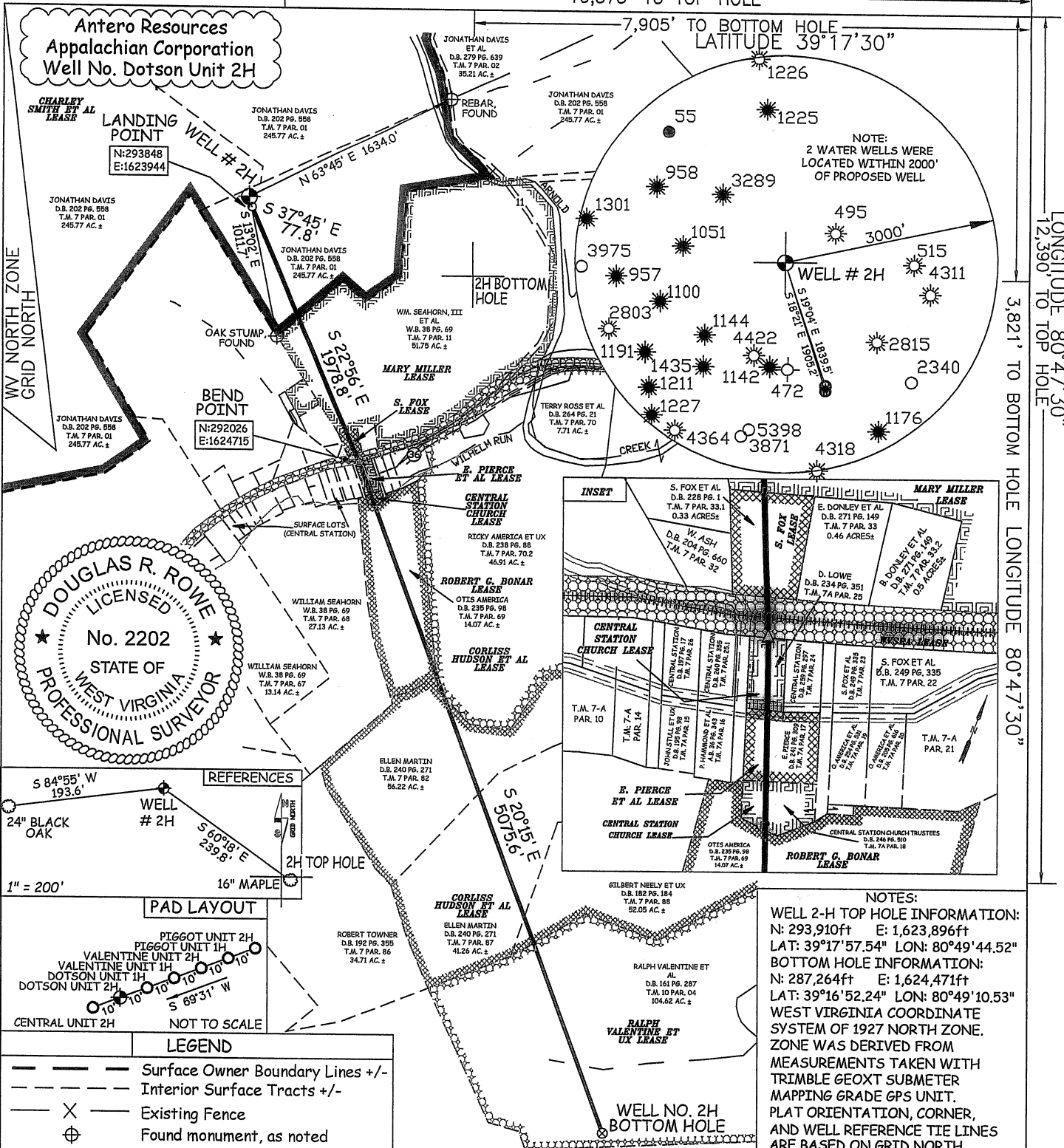
Date: 01/03/2013 **09/24/2021**

LATITUDE 39°20'00"
10,575' TO TOP HOLE

7,905' TO BOTTOM HOLE
LATITUDE 39°17'30"

LONGITUDE 80°47'30"
12,390' TO TOP HOLE

3,821' TO BOTTOM HOLE
LONGITUDE 80°47'30"



NOTES:

WELL 2-H TOP HOLE INFORMATION:
N: 293,910ft E: 1,623,896ft
LAT: 39°17'57.54" LON: 80°49'44.52"

BOTTOM HOLE INFORMATION:
N: 287,264ft E: 1,624,471ft
LAT: 39°16'52.24" LON: 80°49'10.53"

WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

JOB # 12-099WA
DRAWING # DOTSON2H
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
266 HUSHERS RUN RD PENNSBORO WEST VIRGINIA 26415

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 2-H TOP HOLE INFORMATION:
N: 4,350,016m E: 514,756m
BOTTOM HOLE INFORMATION:
N: 4,348,005m E: 515,575m

DJR
DOUGLAS R. ROWE P.S. 2202

DATE 12/28/12
OPERATOR'S WELL# DOTSON UNIT 2H
API WELL #

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
LOCATION: ELEVATION 1,146' WATERSHED ARNOLD CREEK DISTRICT CENTRAL COUNTY DODDRIDGE
QUADRANGLE WEST UNION 7.5'

SURFACE OWNER JONATHAN DAVIS ACREAGE 245.77 ACRES +/-
OIL & GAS ROYALTY OWNER CHARLEY SMITH ET AL; MARY MILLER ET AL; S. FOX; WV STATE RAIL AUTHORITY; LEASE ACREAGE 213 AC; 54 AC; 0.444 AC; 301.19 AC +/-
CENTRAL STATION CHURCH; E. PIERCE ET AL; CENTRAL STATION CHURCH; ROBERT BONAR; CORLISS HUDSON ET AL; CORLISS HUDSON ET AL; RALPH VALENTINE ET UX 0.138 AC; 0.344 AC; 0.19564 AC; 14.7 AC; 246 AC; 244.6 AC; 104.62 AC
PROPOSED WORK: DRILL CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) **09/24/2021**
PLUG & ABANDON ___ CLEAN OUT & REPLUG ___ ESTIMATED DEPTH 7,000' TVD 14,500' MD
TARGET FORMATION MARCELLUS
WELL OPERATOR ANTERO RESOURCES APPALACHIAN CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1625 17TH STREET ADDRESS CT CORPORATION SYSTEM
DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME PERMIT



Well Site Safety Plan

Antero Resources

Well Name: Dotson Unit 1H, Dotson Unit 2H, Piggot Unit 1H, Piggot Unit 2H, Valentine Unit 1H and Valentine Unit 2H

Pad Location: JONATHAN DAVIS PAD
(Doddridge County/Central District)

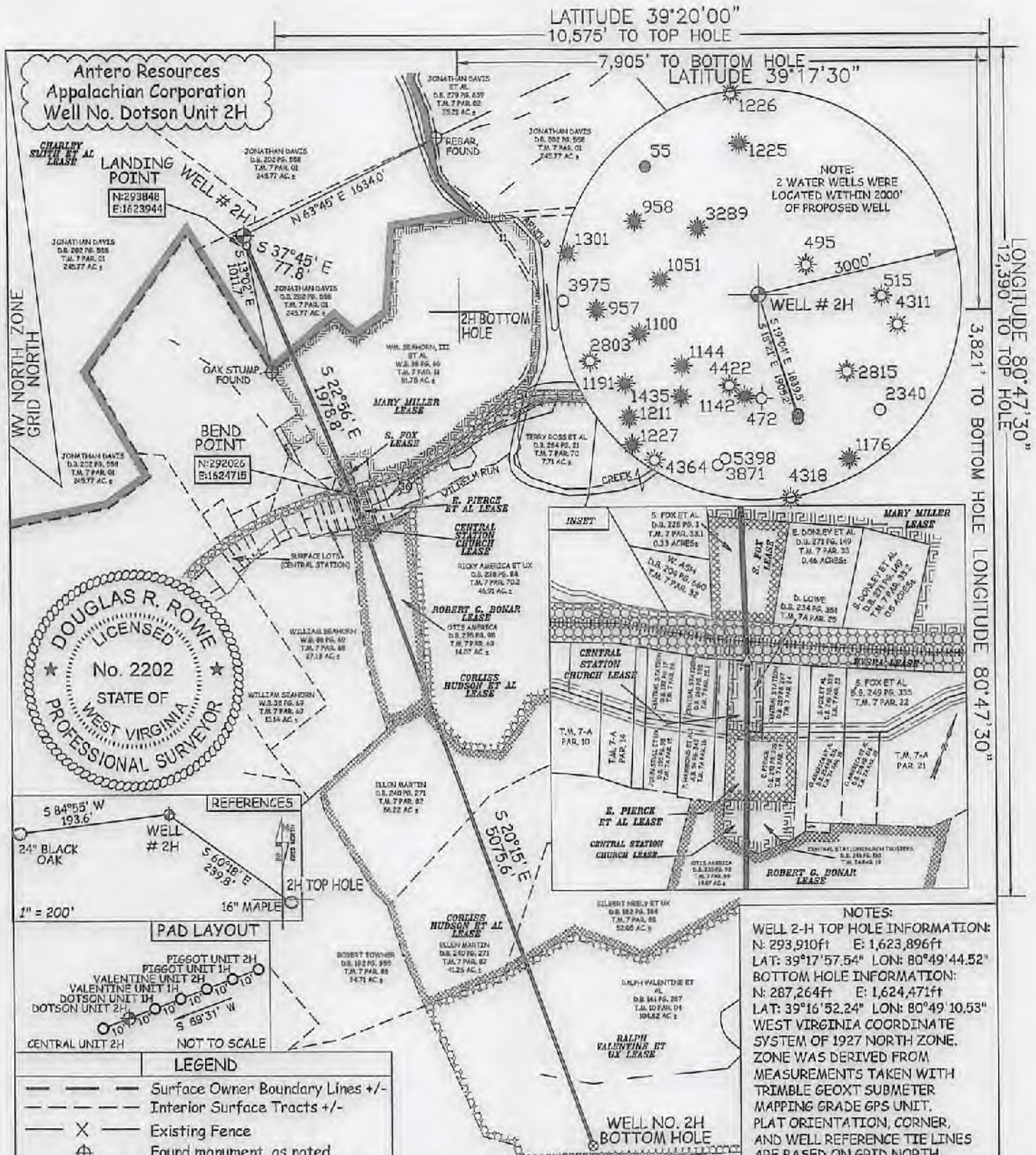
GPS Coordinates: Lat 39°17'57.76"/Long 80°49'43.44"

Driving Directions: From the intersection of I-79 and Hwy 50 near Clarksburg, head west on Hwy 50 for ~ 31.3 miles, then turn RIGHT at Arnolds Creek Rd (Co Route 1/1). In ~2.1 miles, continue on road, which becomes Stone Valley Rd (Co Route 36). In ~0.4 miles, bear RIGHT to get on Co Route 36/1. In ~ 0.7 miles, look for rig signs and lease road on the RIGHT. Follow lease road to location.

SDW
1/25/2013

RECEIVED
Office of Oil & Gas

JAN 28 2013



Antero Resources
Appalachian Corporation
Well No. Dotson Unit 2H

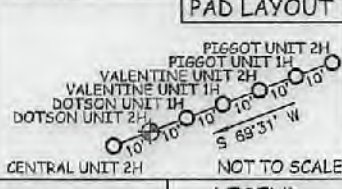
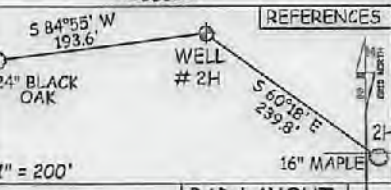
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7,905' TO BOTTOM HOLE
LATITUDE 39°17'30"

LONGITUDE 80°47'30"
12,390' TO TOP HOLE
3,821' TO BOTTOM HOLE
LONGITUDE 80°47'30"

LANDING POINT
N:293848
E:1623944

BEND POINT
N:292026
E:1624718

DOUGLAS R. ROWE
LICENSED
No. 2202
STATE OF
WEST VIRGINIA
PROFESSIONAL SURVEYOR



LEGEND	
---	Surface Owner Boundary Lines +/-
---	Interior Surface Tracts +/-
-X-	Existing Fence
⊕	Found monument, as noted

NOTES:
WELL 2-H TOP HOLE INFORMATION:
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LAT: 39°17'57.54" LON: 80°49'44.52"
BOTTOM HOLE INFORMATION:
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JOB # 12-099WA
DRAWING # DOTSON2H
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
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N: 4,348,005m E: 515,575m

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
266 HUSHERS RUN RD PENNSBORO WEST VIRGINIA 26415

DOUGLAS R. ROWE P.S. 2202

DATE 12/28/12
OPERATOR'S WELL# DOTSON UNIT 2H
API WELL #

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
LOCATION: ELEVATION 1,146' WATERSHED ARNOLD CREEK DISTRICT CENTRAL COUNTY DODDRIDGE

QUADRANGLE WEST UNION 7.5'
SURFACE OWNER JONATHAN DAVIS ACREAGE 245.77 ACRES +/-
OIL & GAS ROYALTY OWNER CHARLEY SMITH ET AL; MARY MILLER ET AL; S. FOX; WV STATE RAIL AUTHORITY; LEASE ACREAGE 213 AC; 54 AC; 0.444 AC; 301.19 AC +/-
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PROPOSED WORK: DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR
STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW FORMATION X
OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
PLUG & ABANDON CLEAN OUT & REPLUG ESTIMATED DEPTH 7,000' TVD 14,500' MD
TARGET FORMATION MARCELLUS DIANNA STAMPER
WELL OPERATOR ANTERO RESOURCES APPALACHIAN CORP. DESIGNATED AGENT CT CORPORATION SYSTEM
ADDRESS 1625 17TH STREET ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME PERMIT

09/24/2021

06189 H6A

WW-6A1

Operator's Well Number Dotson Unit 2H

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Charley Smith et al Lease</u>			
Charley Smith, et al Hugh K. Spencer	Hugh K. Spencer Antero Resources Appalachian Corp.	1/8 Assignment	0066/0449 0261/0681
<u>Mary Miller Lease</u>			
Mrs. Mary Miller Key Oil Company acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, H. G. Hardbarger.	H. G. Hardbarger Antero Resources Appalachian Corp.	1/8 *Partial Assignment of Oil and Gas Leases	0066/0123 0256/0285
<u>S. Fox Lease</u>			
Steven H. & Patty A. Fox, h/w	Antero Resources Appalachian Corp.	14%	0283/0557
<u>West Virginia State Rail Authority Lease</u>			
West Virginia State Rail Authority	Antero Resources Appalachian Corp.	1/8	0253/0409
<u>Central Station Church Lease</u>			
Central Station Church	Antero Resources Appalachian Corp.	17%	0284/0614
<u>E. Pierce et al Lease</u>			
Eva Rosalee Pierce, Life Estate and Mark Allen Pierce, Remainderman	Antero Resources Appalachian Corp.	15%	0282/0128
<u>Central Station Church Lease</u>			
Central Station Church	Antero Resources Appalachian Corp.	17%	0284/0612

CONTINUED ON NEXT PAGE

RECEIVED
Office of Oil & Gas
JUN 11 2021
Environmental Protection
09/24/2021

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Robert G. Bonar Lease</u>			
Robert G. Bonar	Chesapeake Appalachia, LLC	1/8	0233/0459
Chesapeake Appalachia, LLC	Antero Resources Appalachian Corp.	Letter Agreement	0233/0459
<u>Corliss Hudson et al Lease</u>			
Corliss P. Hudson, et al	James I. Shearer	1/8	0067/0374
Corliss P. Hudson, et al	James I. Shearer	1/8	0067/0370
Key Oil Company acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, James I. Shearer.			
Key Oil Company	Antero Resources Appalachian Corp	*Partial Assignment of Oil and Gas Leases	0256/0285
Whittle Corporation acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, James I. Shearer.			
Whittle Corporation	Antero Resources Appalachian Corp	*Partial Assignment of Oil and Gas Leases	0261/0018
HMS Resources, Inc. acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, James I. Shearer.			
HMS Resources, Inc.	Antero Resources Appalachian Corp	*Partial Assignment of Oil and Gas Leases	0215/0388
Robert L. Matthey, Jr. acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, James I. Shearer.			
Robert L. Matthey, Jr.	Antero Resources Appalachian Corp	*Partial Assignment of Oil and Gas Leases	0215/0388
Genesis Exploration & Production Co., LLC, Inc. acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, James I. Shearer.			
Genesis Exploration & Production Co., LLC	Antero Resources Appalachian Corp	*Partial Assignment of Oil and Gas Leases	0217/0438

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RECEIVED
JAN 11 2023
Environmental 09/24/2024

17-06189

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Ralph Valentine et ux Lease			
Ralph J. Valentine & Judith G. Valentine, his wife	Key Oil Company	1/8	0178/0155
Key Oil Company	Antero Resources Appalachian Corp	*Partial Assignment of Oil and Gas Leases	0256/0285

*Partial Assignments to Antero Resources Appalachian Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Antero Resources Appalachian Corporation
 By: Randy Kloberdanz
 Its: Director of Regulatory and Environmental Affairs

RECEIVED
 Office of Oil & Gas
 SEP 17 2021
 WV Department of
 Environmental Protection

09/24/2021

17-06189



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

January 4, 2013

West Virginia Department of Environmental Protection
Chief, Office of Oil and Gas
Attn: Mr. James Martin
601 57th Street SE
Charleston, WV 25304

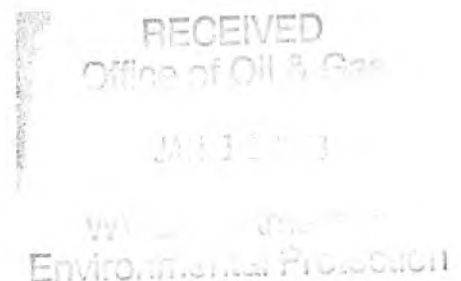
RE: Dotson Unit 2H
Quadrangle: West Union 7.5'
Doddridge County/ Central District, West Virginia

Mr. Martin:

Antero Resources Appalachian Corporation (Antero) is submitting the following application for a new well work permit for the Dotson Unit 2H horizontal shallow well. As an authorized representative, I certify that Antero has the right to extract, produce or market the oil or gas for all leases through which the Dotson Unit 2H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Tim Rady
Senior Landman



09/24/2021

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION**

Date of Notice Certification: 01/03/2013

API No. 47- 017 - 06189
Operator's Well No. Dotson Unit 2H
Well Pad Name: Existing Jonathan Davis Pad

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>514756m</u>
County: <u>Doddridge</u>	Northing: <u>4350016m</u>
District: <u>Central</u>	Public Road Access: <u>CR 11</u>
Quadrangle: <u>West Union 7.5'</u>	Generally used farm name: <u>Davis, Jonathan L.</u>
Watershed: <u>Arnold Creek</u>	

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:

*PLEASE CHECK ALL THAT APPLY

1. NOTICE OF SEISMIC ACTIVITY or NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED

2. NOTICE OF ENTRY FOR PLAT SURVEY or NO PLAT SURVEY WAS CONDUCTED
**Not applicable, Plat Survey was done prior to Implementation of WV Code 22-6A

3. NOTICE OF INTENT TO DRILL or NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or

WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)

4. NOTICE OF PLANNED OPERATION

5. PUBLIC NOTICE

6. NOTICE OF APPLICATION

OOG OFFICE USE ONLY

RECEIVED/ NOT REQUIRED

RECEIVED

RECEIVED/ NOT REQUIRED

RECEIVED

RECEIVED

RECEIVED

Required Attachments:

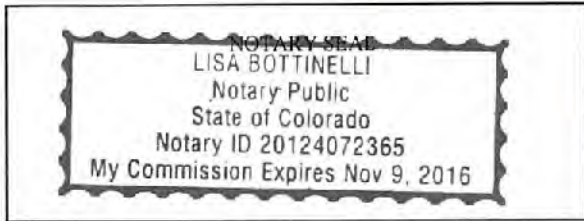
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

RECEIVED
Environmental Protection
09/24/2021

Certification of Notice is hereby given:

THEREFORE, I Randy Kloberdanz, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>Antero Resources Appalachian Corporation</u>	Address:	<u>1625 17th Street</u>
By:	<u>Randy Kloberdanz</u>		<u>Denver, CO 80202</u>
Its:	<u>Director of Regulatory & Environmental Affairs</u>	Facsimile:	<u>303-357-7315</u>
Telephone:	<u>(303) 357-7310</u>	Email:	<u>amihalcin@anteroresources.com</u>



Subscribed and sworn before me this 3 day of January 2013
Lisa Bottinelli Notary Public
 My Commission Expires Nov. 9, 2013

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.



STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 01/04/2013 **Date Permit Application Filed:** 01/04/2013

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b), no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner.

Notice is hereby provided to:

SURFACE OWNER(s)
 Name: Jonathan L. Davis ✓
 Address: 3175 Sam Cavins Road
West Union, WV 26456

Name: _____
 Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: _____
 Address: _____
 Name: _____
 Address: _____

SURFACE OWNER(s) (Impoundments/Pits)

Name: _____
 Address: _____

COAL OWNER OR LESSEE
 Name: No Declarations on Record with County
 Address: _____

COAL OPERATOR
 Name: No Declarations on Record with County
 Address: _____

WATER PURVEYOR(s)/OWNER(s) OF WATER WELL, SPRING OR OTHER WATER SUPPLY SOURCE
 Name: None identified within 1500 feet
 Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: WV Department of Environmental Protection
 Address: _____

*Please attach additional forms if necessary

09/24/2021

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall also include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No wellpad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such

factors, if necessary.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

09/24/2021

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

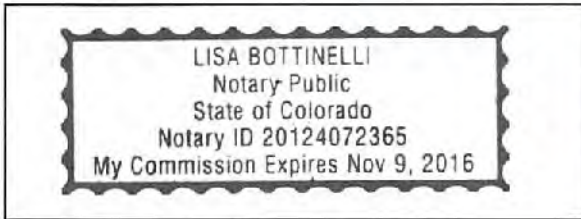
Notice is hereby given by:

Well Operator: Antero Resources Appalachian Corporaiton
Telephone: 303-357-7310
Email: amihalcin@anteroresources.com

Address: 1625 17th Street
Denver, CO 80202
Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



Subscribed and sworn before me this 3 day of January 2013
Lisa Bottinelli Notary Public
My Commission Expires Nov 9, 2016

RECEIVED
Office of Oil & Gas
JAN 11 2013
WV Department of
Environmental Protection

17-06189

SIGNED 10 DAY NOTICE WAIVER
to fulfill WV Code 22, Article 6A, Section 16(b)



January 13, 2012

Jonathan Davis
Rural Route 1 Box 271
West Union, WV 26456

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

RE: Advance Surface Owner Notice Waiver
West Virginia Code - Chapter 22, Article 6A, Section 16(b)
Well Pad: Jonathan Davis
Quadrangle: West Union
Doddridge County/Central District, West Virginia

Dear Mr. Davis:

You are the surface owner of lands on which Antero Resources Appalachian Corporation intends to drill horizontal shallow wells on the subject pad location.

Chapter 22, Article 6A, Section 16(b) of the Code of West Virginia provides that the operator shall give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well. This notice is required to be given at least ten (10) days prior to the filing of a permit application. The rule further provides that the notice requirements may be waived in writing by the surface owner.

To facilitate our operations, we are requesting your waiver of WV Code §22-6A-16(b) as it applies to multiple wells located on the subject pad. If you agree with providing such waiver, please so indicate by signing in the space provided at the bottom of this letter.

Please note that you will be receiving an additional notification including a copy of Antero's permit application for each well once it has been submitted to the West Virginia Department of Environmental Protection, Office of Oil and Gas, as required by WV Code §22-6A-10(b).

Thank you for your cooperation in this matter. If you have any questions, please feel free to contact me at (303) 357-7323 or amihalcin@anteroresources.com.

Sincerely,

Ashlie Mihalcin
Permit Representative
Antero Resources Appalachian Corporation

The undersigned surface owner hereby waives the 10-day notice period for drilling operations per WV Code §22-6A-16(b) as it relates to the above referenced location in Doddridge County, West Virginia.

JONATHAN DAVIS
Printed Name

Jonathan Davis
Signature

RECEIVED
Office of Oil & Gas
1-19-12
Date
JAN 15 2012

WV Department of Environmental Protection

09/24/2021

17-06189

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

Date of Notice: 01/19/2012 **Date Permit Application Filed:** 01/04/2013

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Jonathan L. Davis
Address: 3175 Sam Cavins Road
West Union, WV 26456

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia UTM NAD 83 Easting: 514756m
County: Doddridge Northing: 4350018m
District: Central Public Road Access: CR 11
Quadrangle: West Union 7.5' Generally used farm name: Davis, Jonathan L.
Watershed: Arnold Creek

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: Antero Resources Appalachian Corporation
Address: 1625 17th Street
Denver, CO 80202
Telephone: 303-357-7310
Email: amihalcin@anteroresources.com
Facsimile: 303-357-7315

Authorized Representative: Ashlie Mihalcin
Address: 1625 17th Street
Denver, CO 80202
Telephone: 303-357-7310
Email: amihalcin@anteroresources.com
Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

RECEIVED
Office of Oil & Gas
WV Department of
Environmental Protection
09/24/2021

17-06189

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 01/04/2013 **Date Permit Application Filed:** 01/04/2013 ✓

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

- CERTIFIED MAIL
RETURN RECEIPT REQUESTED
- HAND
DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Jonathan L. Davis
Address: 3175 Sam Cavins Road
West Union, WV 26456

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>514756m</u>
County:	<u>Doddridge</u>		Northing:	<u>4350016m</u>
District:	<u>Central</u>	Public Road Access:		<u>CR 11</u>
Quadrangle:	<u>West Union 7.5'</u>	Generally used farm name:		<u>Davis, Jonathan L.</u>
Watershed:	<u>Arnold Creek</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: Antero Resources Appalachian Corporation
Telephone: 303-357-7310
Email: amihalcin@anteroresources.com

Address: 1625 17th Street
Denver, CO 80202
Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

JAN 13 2013
WV Department of
Environmental Protection

09/24/2021

List of Anticipated Additives Used for Fracturing or Stimulating Well

Additives	Chemical Abstract Service Number (CAS #)
Fresh Water	7732-18-5
2 Phosphobutane 1,2,4 tricarboxylic acid	37971-36-1
Ammonium Persulfate	7727-54-0
Anionic copolymer	proprietary
Anionic polymer	proprietary
BTEX Free Hydrotreated Heavy Naphtha	64742-48-9
Cellulase enzyme	(Proprietary)
Demulsifier Base	(Proprietary)
Ethoxylated alcohol blend	Mixture
Ethoxylated Nonylphenol	68412-54-4
Ethoxylated oleylamine	26635-93-8
Ethylene Glycol	107-21-1
Glycol Ethers	111-76-2
guar gum	9000-30-0
Hydrogen Chloride	7647-01-0
Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8
Isopropyl alcohol	67-63-0
liquid, 2,2-dibromo-3-nitrilopropionamide	10222-01-2
Microparticle	proprietary
Petroleum Distillates (BTEX Below Detect)	64742-47-8
Polyacrylamide	57-55-6
Propargyl Alcohol	107-19-7
Propylene Glycol	57-55-6
Quartz	14808-60-7
Sillica, crystalline quartz	7631-86-9
Sodium Chloride	7647-14-5
Sodium Hydroxide	1310-73-2
Sugar	57-50-1
Surfactant	68439-51-0
Suspending agent (solid)	14808-60-7
Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7

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Office of Oil & Gas

JAN 11 2013

U.S. Department of
Environmental Protection

09/24/2021

17-06189

**CERTIFICATION OF AGREEMENT WITH WVDOH
to fulfill WV Code 22, Article 6A, Section 20**

**OIL AND GAS ROAD
STATEWIDE BONDING AGREEMENT**

THIS AGREEMENT, executed in duplicate, made and entered into this 28 day of February, 2012, by and between the **WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS**, hereinafter called "DEPARTMENT," and Antero Resources Appalachia Corporation, a DELAWARE company, hereinafter called "COMPANY."

WITNESSETH:

WHEREAS, Company has horizontal gas well drilling operations in certain areas of West Virginia; and

WHEREAS, the Department believes that the frequent and repetitive use of certain sections of highways in the State by Company, its contractors, agents, independent contractors or suppliers of drilling materials or drilling equipment, and employees contributes to increased wear and tear to public roads in the state road system in the State, including local roads ("State Owned Roads"); and,

WHEREAS, the Department and Company have entered into this Agreement to satisfy the requirements of the Department's policy entitled "Oil & Gas Road Policy" dated January 3, 2012, as issued by Paul A. Mattox, Jr., Secretary of Transportation / Commissioner of Highways, and any subsequent related policies, hereinafter called "Policy", a copy of which is made a part of this Bonding Agreement and is identified as Attachment 1.

NOW, THEREFORE, for and in consideration of the mutual agreements hereinafter set forth, the parties agree as follows:

I. For purposes of this Bonding Agreement, "Project Transportation Usage" of the Company shall be understood to mean use of one or more State Owned Roads for the delivery and removal of drilling materials and drilling equipment at the site or location of one or more of Company's horizontal gas well pad locations. To the extent reasonably practical, prior to commencing use of a State Owned Road for Project Transportation Usage after January 1, 2011, the Company shall submit to the Department a section or sections of current official WVDOH County Highway maps identifying the exact location of the proposed project and the State Owned Roads that the Company will utilize for the Project Transportation Usage.

II. Company and Department shall within 14 days of the Company's submittal, agree to a list of these sections of State Owned Roads, hereinafter called "Project Roads List", to be utilized for each of Company's projects, identified by route number and milepost; at a time to be mutually agreed to by the parties prior to initial commencement of Project Transportation Usage of a particular State Owned Road on a Project Roads List, the Company and Department will jointly review the condition of the roads and bridges on the Project Roads List. The Department will document the road type and surface condition and general right-of-way width of each section of road on the Project Road List. Either party may supplement this documentation with photographs, video or other evidence of the present condition of the road surface, shoulders, ditches, culverts, bridges or other structures or appurtenances of roads on the Project Road List, as well as approaches to the roads, utility facilities located within or along the right-of-way, or any other condition, including third-party activities, that may affect the duties and responsibilities of the parties under this Agreement. A copy of any such documentation must be made and provided to the other party within ten business days after the joint review of the roads on the Project Roads List.

III. Department shall issue a Project Agreement or Project Permit, as appropriate, to Company to use State Owned Roads and may include any minor or major improvements required of Company prior to, during or after Project with the assignment of responsibilities of

09/24/2021

both parties prior to, during and after the operator has completed well fracturing..

IV. In the Project Agreement/Project Permit, the Department shall not require the use of State Owned Roads other than the roads proposed by Company unless the Department has safety concerns as to the Company's proposed roads. A failure to agree on roads that may otherwise be lawfully used for a particular Project Transportation Usage shall result in the designation of the State Owned Roads proposed by Company, with milepost determinations as designated by Department. This Agreement shall only cover portions of State Owned Roads designated on the Project Roads List.

V. For the duration of Company's Project Transportation Usage of the Stated Owned Roads on the Project Roads List, whether by the Company, its contractors (while working on behalf of Company), agents, independent contractors or suppliers of drilling materials or drilling equipment, or employees, the Company agrees to pay for all reasonable maintenance and repair costs incurred by the Department to repair areas of the State Owned Roads included in the Project Roads List that were directly damaged by Company's Project Transportation Usage, as determined to be reasonably necessary and appropriate by the Department. The Department shall keep a record of all labor performed by Department employees and contractors for such maintenance and repairs and shall send an invoice for the same to Company.

VI. Company shall be responsible for the cost of all maintenance and repairs reasonably necessary to put the existing roadways, bridges and appurtenances on the Project Roads List utilized for the Project Transportation Usage in the condition that existed immediately prior to the Project Transportation Usage. Company shall not be required to pay for maintenance or repairs to put any areas of such roadways, bridges and appurtenances on the Project Roads List in a condition better than the condition that existed immediately prior to the Project Transportation Usage. Company shall also not be required to pay for maintenance or repairs to any areas of these roadways, bridges or appurtenances on the Project Roads List that are not actually utilized for the Project Transportation Usage or for damage not caused by Project Transportation Usage.

VII. Company shall notify the Department in writing of Company's final completion of Project Transportation Usage for particular roadways, bridges and appurtenances on the Project Roads List. Within fourteen days after its receipt of written notification of the completion of the Project Transportation Usage for all roads on a Project Roads List, the Department will review the condition of the roadways, bridges and appurtenances on the Project Roads List actually utilized for the Project Transportation Usage and advise Company of any final repairs reasonably necessary to leave these roads, bridges and appurtenances in a condition reasonably deemed by Department to be equal to their condition prior to commencement of Project Transportation Usage; and, upon completion of all such final repairs by or on behalf of Company and acceptance by Department, the Company shall be released from all further liability for maintenance or repairs to roads, bridges, or appurtenances on said Project Roads List. Any maintenance or repair work under the Project Agreement/Project Permit for roads, bridges or appurtenances on the Project Roads List may be performed by a contractor directly chosen by the Company as approved by the Department, the Department's workforce, or a private contractor hired by the Department through the public bid process in accordance with state law, all of which work shall be subject to the standards and specifications of the Department.

VIII. In order to ensure performance of Company's performance and payment obligations under this Bonding Agreement, the Company shall post a corporate surety bond, hereinafter called "Master Bond", with the Department named as the beneficiary, which form of bond shall be subject to the consent of the Department, not to be unreasonably withheld. The amount and form of the bond shall be in accordance with the Policy as set forth above. However, the amount of the Master Bond does not limit the amount of claims that may be made by the Department against the Company under this Bonding Agreement. The Company shall provide the Master Bond to the Department within one (1) month after the execution of this Bonding Agreement. The Master Bond shall secure the good faith performance of all payment obligations of Company under the terms of this Bonding Agreement respecting the roads, bridges and appurtenances on the Project Roads List for each Project Transportation Usage undertaken by the Company, and shall remain in effect until termination of this Agreement. Company shall not be obligated to provide any other bonds, sureties, or other guarantees of performance to the Department for Company's use of State Owned Roads, except as required in this Agreement.

Department of
Environmental Protection

09/24/2021

IX. Company shall maintain Commercial General Liability Insurance in the amount of two million dollars, with a minimum coverage of one million dollars per occurrence, for personal injury or death to persons, or for property damage, resulting from Company's Project Transportation Usage and shall present evidence of such insurance to Department upon request.

X. Company's usage of State Owned Roads under the Project Agreement/Project Permit shall comply with all applicable Federal, State and local laws and regulations including, but not limited to, to the extent applicable, the National Environmental Policy Act, Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act, Rare, Threatened and Endangered Species Act, Section 401 Water Quality Certification, and hazardous waste requirements. Further, upon reasonable written request of Department, Company shall furnish Department with acceptable documentation of such compliance which is in the possession of the Company.

XI. Company shall defend, indemnify and hold Department harmless from and against any and all losses, damage, and liability, and from all claims for damages on account of or by reason of bodily injury, including death, which may be sustained, or claimed to be sustained, by any person or persons, including employees of Department, and from and against any and all claims, losses or liabilities for damages to property, arising out of the negligent or willful acts or omissions of Company, its agents, independent contractors and suppliers of drilling materials or drilling equipment, employees and contractors, in the performance of all Project Transportation Usage activities undertaken pursuant to this Agreement (collectively, "claims"). The Company shall not be responsible to indemnify, defend or hold harmless Department for any claims caused by the negligent or willful acts or omissions of the Department or its agents, employees and contractors or third parties not performing work at the direction of Company or delivering drilling equipment or drilling materials, including water, for use by or for company.

XII. If a provision of this Agreement is or becomes illegal, invalid or unenforceable in any jurisdiction, that shall not affect the validity or enforceability of any other provision of this Agreement; or the validity or enforceability in other jurisdictions of that or any other provision of this Agreement.

XIII. Department shall give Company a minimum of thirty days written notice of default under the terms of this Bonding Agreement and the opportunity to cure this default during such thirty-day period. If a default is not cured to the satisfaction of Department, or provision acceptable to Department is not made for a cure, Department may then elect to terminate this Bonding Agreement in whole or in part, and may in addition exercise its rights under the Master Bond or seek any other lawful relief available. Company may terminate this Bonding Agreement upon thirty days written notice to Department for any reason. In the event Company terminates this Agreement for any reason, it shall be liable for the repair and maintenance costs set forth above for prior Project Transportation Usage.

XIV. Nothing herein shall be construed to mean that Company shall have any jurisdiction or control over any public roads in the state road system.

XV. Company, its contractors, agents, employees and suppliers shall at all times be subject to applicable provisions of state and federal law, including without limitation laws requiring operation of vehicles in accordance with legal size and weight restrictions and posted weight limits. Oversize/overweight permits for vehicle or loads not otherwise conforming with law must be obtained in accordance with law; Department agrees to work in good faith with Company to review and grant (where authorized by law) such permits in a timely manner upon request by Company.

XVI. This Bonding Agreement shall be construed and enforced in accordance with the laws of the State of West Virginia, as they may be amended.

XVII. This Bonding Agreement shall be binding upon the successors and assigns of each party hereto.

RECEIVED
09/24/2021
DEPARTMENT OF
Environmental Protection

09/24/2021

IN WITNESS WHEREOF, the parties hereto have caused this Bonding Agreement to be executed by their duly authorized officers effective as of the date first above written.

WEST VIRGINIA DEPARTMENT OF
TRANSPORTATION,
DIVISION OF HIGHWAYS

Doreen Borja
Witness

By: Marilyn A. Murphy
State Highway Engineer

AUSTIN RESOURCES APPALACHIAN CORPORATION

Rachel Bouchard
Witness

By: A. A. Schupp
Title: VP ACCOUNTING AND ADMINISTRATION

(To be executed in duplicate)

APPROVED AS TO FORM THIS
8th DAY OF March, 2012

[Signature]
ATTORNEY LEGAL DIVISION
WEST VIRGINIA DEPARTMENT
OF HIGHWAYS

RECEIVED
Office of O&G & Gas

JAN 11 2013

West Virginia Department of
Environmental Protection

JONATHAN DAVIS PAD AS-BUILT ANTERO RESOURCES APPALACHIAN CORPORATION



West Virginia State Plane Coordinate System
North Zone, 16227
Elevations Based on NAVD83
Elevations by Survey Grade GPS & GPS/RTK Post-Processing

AFFECTED TAX PARCELS: 71
CENTRAL DISTRICT
T88 P - Pkg. 1
Auctioneer: C. Clave
DOB: 05/14/09
245.27 Acres
(Affected area from Avenue Road A = 12.57 Acres, 1,603 ft of RD A)
(Affected area from Cull Pad = 7.42 Acres)
(Affected area from Water Tank Pad = 3.29 Acres)
(Affected area from Spoil Pad = 1.16 Acres)

LDD Areas (ac)	
Road A (3400 feet)	12.57
Drill Pad	7.42
Water Tank Pad	3.29
Spoil Pad	1.16
Total Affected Area	24.44
Total Road Length	3400

Project Contacts
ANTERO RESOURCES
 Tom Adams - Construction Manager
 304-858-3405 OR 304-463-0183 Cell
 Mike Aull - Survey Coordinator
 304-200-8197 Cell
 Roger Camp - Survey Coordinator
 304-451-8208
 CB Wootton, Environmental Engineer
 304-222-7842, cell 311-08 304-478-8770 Cell
 John Kewick, Engineer
 617-688-8933
 Dan Whittle
 617-775-4638
 Arnie Kozicki, Construction Supervisor
 485-227-8341
 Anthony Smith, PMP Engineer
 304-613-3025 OR 304-452-4134 Cell
Geotech. A. Patton
 Ed Yelaw, PE, CE - Antero Survey, Inc.
 304-818-6038 OR 204-619-1937 Cell
 Kim Wilson, PE - LAW Enterprises, Inc.
 304-207-4119 OR 336-889-0165 Cell

- Well Location Restrictions:**
- All Pad and Fracture PI 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 production from the center of the pad.
 - * 100' from edge of disturbance to wetlands, perennial streams, natural or artificial lake, 500' or equivalent.
 - * 500' from edge of disturbance to a naturally reproducing trout stream.
 - * 1200' of a surface or ground water stream to a public water supply.

WEST VIRGINIA QUAD
 0 1000 2000 3000 4000

SITE LOCATION AND ID	
Center of Pad	16227 17 16227 17 16227 17 16227 17
Drill Pad Center	16227 17 16227 17 16227 17 16227 17



Well Table		
<p>Proposed Well Pad and Drilling Pad shall be located at least 100 feet from any existing well or developed spring used for human or domestic animals.</p>	<p>Proposed Well Pad and Drilling Pad shall be located at least 250 feet from any occupied dwelling or barn greater than 2500 SF used for poultry or dairy production.</p>	<p>Proposed Well Pad and Drilling Pad shall be located at least 500 feet from any naturally reproducing trout stream.</p>
<p>Proposed Well Pad and Drilling Pad shall be located at least 100 feet from any wetlands, perennial streams, natural or artificial lake, 500' or equivalent.</p>	<p>Proposed Well Pad and Drilling Pad shall be located at least 500 feet from any surface or ground water stream to a public water supply.</p>	<p>Proposed Well Pad and Drilling Pad shall be located at least 1200 feet from any surface or ground water stream to a public water supply.</p>

SDW
10/22/2012

EXISTING INDEX
 1 DOVER SHEET LOCATION MAP
 2 AS-BUILT SITE PLANS

FLOODPLAIN CONDITIONS	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	NO
NEC-RAS STUDY COMPLETED:	N/A
FLOODPLAIN SHOWS ON DRAWINGS:	N/A
FIRM MAP NUMBER(S) FOR SITE:	14817C0111C
ACT/PAGES OF CONSTRUCTION IN FLOODPLAIN:	N/A

MISS UNLTY 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!!



DATE	REVISIONS
8-17-12	Updated Well Configuration

Allegany Surveyors, Inc.
 177 Thompson Drive
 Morgantown, WV 26505
 (304) 296-6600

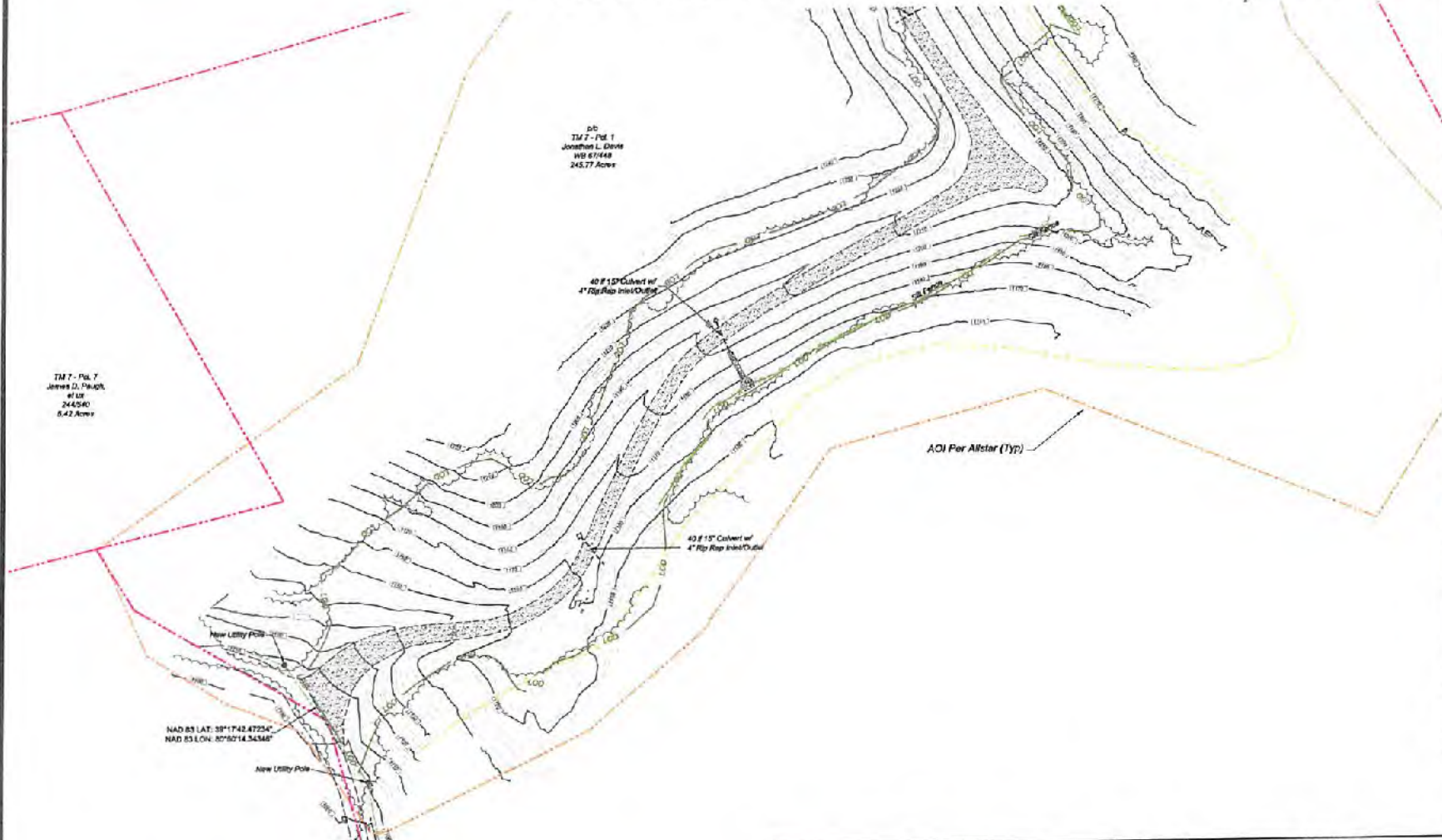
LAW ENTERPRISES, INC.
 1000-1000
 1000-1000
 1000-1000
 1000-1000

ANTERO RESOURCES
 THIS DOCUMENT IS PREPARED FOR
 ANTERO RESOURCES APPALACHIAN CORP.

COVER SHEET LOCATION MAP
 JONATHAN DAVIS PAD AS-BUILT
 CENTRAL DISTRICT
 BOONSHOOR COUNTY, WV

RECEIVED
 Dept. of Oil & Gas
 JAN 28 2013
 WV Department of
 Environmental Protection

AS-BUILT SITE PLAN (1)



NAD 83 LAT: 39°17'42.47254"
 NAD 83 LON: 82°50'14.54348"

Legend	
As-Built 2" Conduit	LOI
As-Built 10" Conduit	Limit of Disturbance
Tree Line	Site Fence
Surface Demer/Property Line	Conduit
Existing Gas Line CL	

DATE	REVISIONS



Allegheny Survey, Inc.
 177 Thompson Drive
 Bridgeport, WV 26330
 (304) 844-5035



LAW ENTERPRISES, INC.
 200 W. 10th St.
 Parkersburg, WV 26104



ANTERO RESOURCES
 THIS DOCUMENT PREPARED FOR
 ANTERO RESOURCES
 APALACHIAN CORP

AS-BUILT SITE PLAN (1)
 JONATHAN DAVIS PAD AS-BUILT
 CENTRAL DISTRICT
 POWERS COUNTY, WV

Date: 8/14/12
 Scale: 1" = 50'
 Designed By: CCWPCSM
 Pk No. Jones 208-11
 Page 3 of 4

AS-BUILT SITE PLAN (2)



Allegany Surveys, Inc.
172 Thompson Drive
Bridgeport, WV 26308
(304) 845-9033



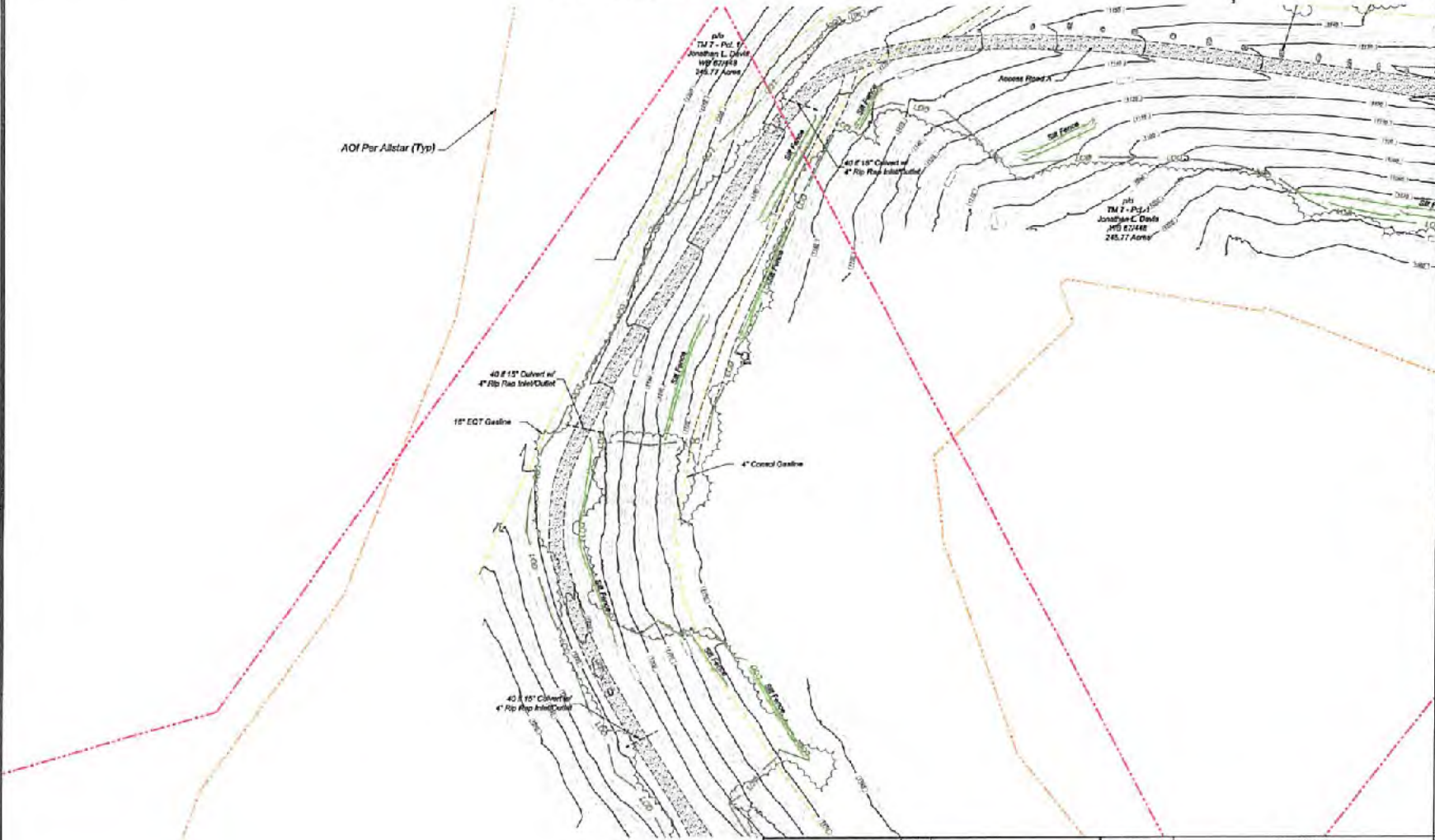
L&W ENTERPRISES, INC.
1000 W. 10th Street
Martinsburg, WV 26150
P.O. Box 10772
Martinsburg, WV 26107
TEL: 304-263-1234
FAX: 304-263-1234
E-MAIL: L&W@L&W.COM



ANTERO RESOURCES
THIS DOCUMENT
PREPARED FOR:
ANTERO RESOURCES
ATYALACHMAN CORP

AS-BUILT SITE PLAN (2)
JONATHAN DAVIS PAD AS-BUILT
CENTRAL DISTRICT
DODDRIEGE COUNTY, WV

AOf Per Allstar (Typ)

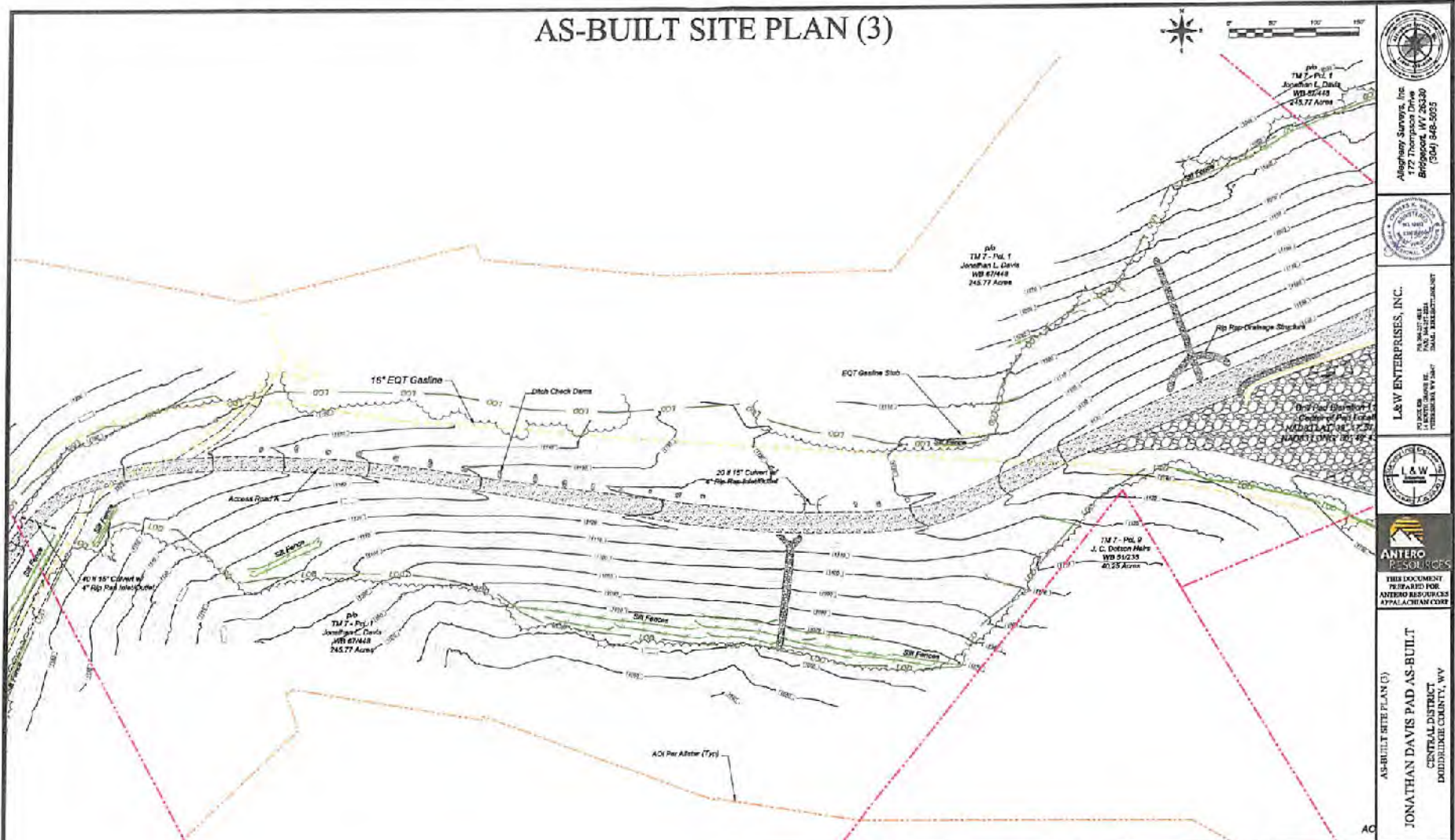


Legend	
— 100'	As-Built 2' Contour
— 10'	As-Built 10' Contour
—	Tree Line
—	Surface Owner Property Line
—	Existing Gas Line CL
—	LEO
—	Limits of Disturbance
—	SB Fence
—	Culvert

DATE	REVISIONS

Date: 8/14/12
Scale: 1" = 50'
Drawn By: CLK/CKM
P&M No. Antero 014-11
Page 3 of 4

AS-BUILT SITE PLAN (3)



Allegheny Surveys, Inc.
172 Thompson Drive
Bridgeport, WV 26330
(304) 846-5035



L&W ENTERPRISES, INC.
100 N. MAIN STREET
HERRINGSPRING, WV 26041
TEL: 304-846-5035



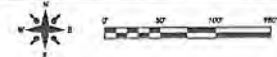
ANTERO RESOURCES
THIS DOCUMENT PREPARED FOR:
ANTERO RESOURCES
APPALACHIAN COAL

AS-BUILT SITE PLAN (3)
JONATHAN DAVIS PAD AS-BUILT
CENTRAL DISTRICT
BOULDER COUNTY, WY

Legend		DATE	REVISIONS
— 100 —	As-Built 2' Contour		
— 100 —	As-Built 10' Contour		
— 100 —	True Elevation		
— 100 —	Surface Owner Property Line		
— 100 —	Existing Gas Line CL		
— 100 —	1:00:1		
— 100 —	Limits of Disturbance		
— 100 —	Silt Fence		
— 100 —	Culvert		

Date: 8/14/12
Scale: 1" = 50'
Prepared by: CKW/CKM
File No.: A-100-114-11
Page: 4 of 4

AS-BUILT SITE PLAN (4)



Legend	
— AS-BUILT 2' Contour	--- Limits of Disturbance
- - - AS-BUILT 10' Contour	--- SR Fence
..... True Eline	--- CUM
- - - - - Surface Owner Property Line	
- - - - - Casting Gas Line CL	

DATE	REVISIONS
12-5-12	Updated Well Configuration

Gregory S. Stevens
Professional Engineer
No. 15189
State of West Virginia

L&W ENTERPRISES, INC.
Professional Engineer
No. 15189
State of West Virginia

ANTERO RESOURCES
Professional Engineer
No. 15189
State of West Virginia

AS-BUILT SITE PLAN (4)
JONATHAN DAVIS PAD AS-BUILT
CENTRAL DISTRICT
DODDRIEDGE COUNTY, WV

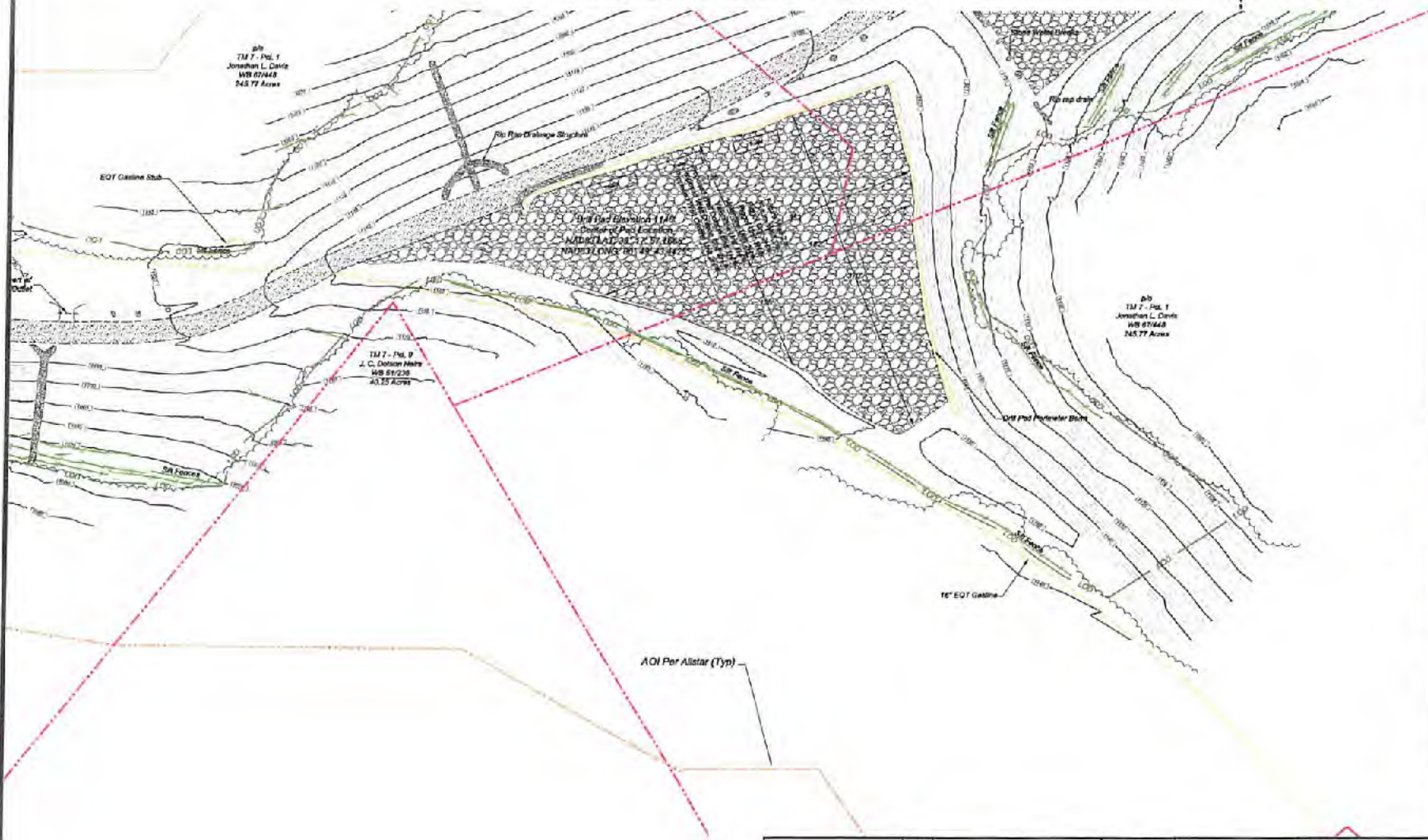
Date: 8/14/12
Scale: 1" = 50'
Designed by: C.W. WICK
File No.: Antero 201-11
Page: 3 of 3

Gregory S. Stevens, Inc.
172 Thurston Drive
Bridgport, WV 26330
(304) 848-5028

L&W ENTERPRISES, INC.
1410 W. MARKET STREET
FARMINGTON, WV 26434
TEL: 304-848-5028

ANTERO RESOURCES
THIS DOCUMENT
PREPARED FOR
ANTERO RESOURCES
AT ALACRYAN COBY

AS-BUILT SITE PLAN (5)



lot
TM 7 - Pl. 1
Jonathan L. Davis
WB 07448
245.77 Acres

RV Pad Generator Bank
RV Pad Potable Water Bank
RV Pad
291.48 Acres
WB 07448
WB 07448
WB 07448

lot
TM 7 - Pl. 1
Jonathan L. Davis
WB 07448
245.77 Acres

TM 7 - Pl. 9
J. C. Davidson Heirs
WB 07428
43.25 Acres

AOI For Allstar (Typ)

Legend	
--- 100 ---	As-Built 2" Ditch
--- 100 ---	As-Built 12" Ditch
---	Tree Line
- - - - -	Surface Owner Property Line
- - - - -	Existing Gas Line CL
---	100
---	Limits of Disturbance
---	20' Fence
---	Curve?

DATE	REVISIONS
12-5-12	Updated Wall Configuration

Allegany Surveys, Inc.
772 Thompson Drive
Martinsburg, WV 26130
(304) 248-5025

L&W ENTERPRISES, INC.
P.O. Box 1000
Martinsburg, WV 26155
FREDERICK COUNTY, WV

ANTERO RESOURCES, INC.
THIS DOCUMENT PREPARED FOR ANTERO RESOURCES, INC. APPALACHIAN CORP.

AS-BUILT SITE PLAN (5)
JONATHAN DAVIS PAD AS-BUILT
CENTRAL DISTRICT
DODD BRIDGE COUNTY, WV

Date: 8/14/12
Scale: 1" = 50'
Designed by: GPC/CDM
File No. Anter 24-1
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