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

June 14, 2016

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-8510286, issued to ANTERO RESOURCES 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 completion of permitted well work, 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: EUGENE UNIT 1H
Farm Name: SELLERS, DENNIS J
API Well Number: 47-8510286
Permit Type: Horizontal 6A Well
Date Issued: 06/14/2016

Promoting a healthy environment.

API Number: _____

PERMIT CONDITIONS

4708510286

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. Operator shall take additional measures with this permitted activity to avoid communication with offset wells. Such additional measures are described in the attached addendum. This addendum is part of the terms of the well work permit, and includes a description of depth and completed formations of offset wells. Also included is a description of monitoring activities that will take place during fracturing operations of the permitted well work.

2. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE regarding this proposed activity.

3. 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 one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

4. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. 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.

5. 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.

6. 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.

API Number: _____

PERMIT CONDITIONS 4708510286

7. 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.

8. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.

9. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

10. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

WW-6AW
(1-12)

API NO. 47- 085 -
OPERATOR WELL NO. Eugene Unit 1H
Well Pad Name: Pool Pad

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

VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A
The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions
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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided,* That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, _____, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	West Virginia	UTM NAD 83 Easting:	4708510286 / 507632m
County:	Ritchie	Northing:	4349867m
District:	Clay	Public Road Access:	CR 50/26
Quadrangle:	Pennsboro 7.5'	Generally used farm name:	Dennis J. Sellers
Watershed:	North Fork Hughes River		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

*Please check the box that applies	FOR EXECUTION BY A NATURAL PERSON
☐ SURFACE OWNER	Signature: _____
☐ SURFACE OWNER (Road and/or Other Disturbance)	Print Name: _____
☐ SURFACE OWNER (Impoundments/Pits)	Date: _____
☐ COAL OWNER OR LESSEE	**FOR EXECUTION BY A CORPORATION, ETC.**
☐ COAL OPERATOR	Company: _____
☐ WATER PURVEYOR	By: _____
☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD	Its: _____
	Signature: _____
	Date: _____

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 of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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APR 18 2016

4708510286

Addendum for Antero pads in Ritchie County, WV

Eugene Unit 1H Pool Pad

The following outlines the process to be undertaken by Antero Resources prior to and during completion process of wells in Ritchie County.

▪Investigate all wells within 1320' of new wells - for all identified Marcellus vertical wells and any existing well(s) with an interval that is less than 1500 feet from the deepest formation drilled (including, but not specific to the Alexander formation) to the top of Marcellus:

- Contact operator of all wells
- Confirm well status, producing horizon, well completion/stimulation information
- Discuss plans to stimulate the horizontal Marcellus wells and the plans for monitoring potential impact on shallow wells
- Make sure all vertical wells (with an interval that is less than 1500 feet from the deepest formation drilled to the top of Marcellus) have adequate wellhead equipment, Including pressure gauges
- Provide shallow well operator with frac dates and develop plan for monitoring during stimulation
- If well waters out during frac, shut it in until after stimulation, and install adequate well control equipment prior to swabbing in the impacted shallow well

▪Control fracturing parameters during job to limit fracture height growth

- Limit rate and limit pressures for each segment of fracturing stages

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4708510286

WW-6B
(04/15)

API NO. 47- 085 -
OPERATOR WELL NO. Eugene Unit 1H
Well Pad Name: Pool Pad

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator:	Antero Resources Corporat	494488557	085 - Ritchie	Clay	Pennsboro 7.5'
		Operator ID	County	District	Quadrangle

2) Operator's Well Number: Eugene Unit 1H Well Pad Name: Pool Pad

3) Farm Name/Surface Owner: Dennis J. Sellers Public Road Access: CR 50/26

4) Elevation, current ground: 1206' Elevation, proposed post-construction: 1187'

5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow X Deep _____
Horizontal X

4708510286 Michael Doff 5/18/16

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6800' TVD, Anticipated Thickness- 75 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6800' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 19,850' MD

11) Proposed Horizontal Leg Length: 12,492'

12) Approximate Fresh Water Strata Depths: 174', 239'

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

14) Approximate Saltwater Depths: 753', 1599', 1658'

15) Approximate Coal Seam Depths: 634', 1081', 1233'

16) Approximate Depth to Possible Void (coal mine, karst, other): None Anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No X

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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WW-6B
(04/15)

API NO. 47- 085 -
OPERATOR WELL NO. Eugene Unit 1H
Well Pad Name: Pool Pad

4708510-38

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
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#	300'	300'	CTS, 417 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500'	2500'	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	19,850'	19,850'	CTS, 5051 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

MAC
5/10/16

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	24"	0.438"	1530	50	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	1000	Class A	1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.361"	12,630	2500	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

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

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WW-6B
(10/14)

API NO. 47- 085 -
OPERATOR WELL NO. Eugene Unit 1H
Well Pad Name: Pool Pad

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

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."

Anticipated Max Pressure - 9300 lbs
Anticipated Max Rate - 80 bpm

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 19.86 acres

22) Area to be disturbed for well pad only, less access road (acres): 12.26 acres

23) 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.

24) Describe all cement additives associated with each cement type:

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Conductor: no additives, Class A cement.
Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake
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

25) 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.

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*Note: Attach additional sheets as needed.

MDC
5/18/16

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WW-9
(2/15)

API Number 47 - 085 -

Operator's Well No. Eugene Unit 1H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Antero Resources Corporation OP Code 494488557

Watershed (HUC 10) North Fork Hughes River Quadrangle Pennsboro 7.5'

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

Will a pit be used? Yes ☐ No ☑

If so, please describe 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.)

Will a synthetic liner be used in the pit? Yes ☐ No ☑ If so, what ml.? N/A

MAG
5/19/16

Proposed Disposal Method For Treated Pit Wastes:

- ☐ Land Application
- ■ Underground Injection (UIC Permit Number *UIC Permit # will be provided on Form WR-34)
- ■ Reuse (at API Number Future permitted well locations when applicable. API# will be provided on Form WR-34)
- ■ Off Site Disposal (Supply form WW-9 for disposal location) (Meadowfill Landfill Permit #SWF-1032-98) Northwestern Landfill Permit #SWF-1025/ WV0109410
- ☐ Other (Explain)

Will closed loop system be used? If so, describe: Yes

Drilling medium anticipated for this well (vertical and horizontal)? 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 in drilling medium? Please See Attachment

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

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

-Landfill or offsite name/permit number? Meadowfill Landfill (Permit #SWF-1032-98), Northwestern Landfill (Permit # SWF-1025/WV0109410)

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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

Company Official (Typed Name) Cole Kilstrom

Company Official Title Environmental & Regulatory Manager

NATALIE KOMP
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID # 20144028170
MY COMMISSION EXPIRES JULY 18, 2016

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MAY 20 2016

Subscribed and sworn before me this 15th day of April, 20 16

Notary Public

My commission expires May 18, 2018

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WV Department of
Environmental Protection

Form WW-9

Operator's Well No. Eugene Unit 1H

Antero Resources Corporation

Proposed Revegetation Treatment: Acres Disturbed 19.86 acres Prevegetation pH _____

Lime 2-4 Tons/acre or to correct to pH 6.5

Fertilizer type Hay or straw or Wood Fiber (will be used where needed)

Fertilizer amount 500 lbs/acre

Mulch 2-3 Tons/acre

Main Access Road (4.06 acres) + Well Pad (12.26 acres) + Topsoil (1.84 acres) + Staging Area (1.70 acres) = 19.86 Acres

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Crownvetch	10-15
Field Bromegrass	40	Tall Fescue	30
See attached Table for additional seed type (Pool Pad Design Page 23)		See attached Table for additional seed type (Pool Pad Design Page 23)	
*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 (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Daff

Comments: Preseed & Mulch any disturbed areas per WVDEP regulations. Maintain & Upgrade E-n-S as necessary

4708510286

Title: Oil & Gas Inspector Date: 5/18/16

Field Reviewed? (✓) Yes ( ) No

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Form WW-9 Additives Attachment

SURFACE INTERVAL

1. Fresh Water
2. Soap –Foamer AC
3. Air

INTERMEDIATE INTERVAL

STIFF FOAM RECIPE:

1) 1 ppb Soda Ash / Sodium Carbonate-Alkalinity Control Agent
2) 1 ppb Conqor 404 (11.76 ppg) / Corrosion Inhibitor
3) 4 ppb KLA-Gard (9.17 ppg) / Amine Acid Complex-Shale Stabilizer
4) 1ppb Mil Pac R / Sodium Carboxymethylcellulose-Filtration Control Agent
5) 12 ppb KCL / Potassium Chloride-inorganic Salt
6) Fresh Water 80 bbls
7) Air

PRODUCTION INTERVAL

1. Alpha 1655
   Salt Inhibitor
2. Mil-Carb
   Calcium Carbonate
3. Cottonseed Hulls
   Cellulose-Cottonseed Pellets – LCM
4. Mil-Seal
   Vegetable, Cotton & Cellulose-Based Fiber Blend – LCM
5. Clay-Trol
   Amine Acid Complex – Shale Stabilizer
6. Xan-Plex
   Viscosifier For Water Based Muds
7. Mil-Pac (All Grades)
   Sodium Carboxymethylcellulose – Filtration Control Agent
8. New Drill
   Anionic Polyacrylamide Copolymer Emulsion – Shale Stabilizer
9. Caustic Soda
   Sodium Hydroxide – Alkalinity Control
10. Mil-Lime
    Calcium Hydroxide – Lime
11. LD-9
    Polyether Polyol – Drilling Fluid Defoamer
12. Mil Mica
    Hydro-Biotite Mica – LCM

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13. Escaid 110
    Drilling Fluild Solvent – Aliphatic Hydrocarbon
14. Ligco
    Highly Oxidized Leonardite – Filteration Control Agent
15. Super Sweep
    Polypropylene – Hole Cleaning Agent
16. Sulfatrol K
    Drilling Fluid Additive – Sulfonated Asphalt Residuum
17. Sodium Chloride, Anhydrous
    Inorganic Salt
18. D-D
    Drilling Detergent – Surfactant
19. Terra-Rate
    Organic Surfactant Blend
20. W.O. Defoam
    Alcohol-Based Defoamer
21. Perma-Lose HT
    Fluid Loss Reducer For Water-Based Muds
22. Xan-Plex D
    Polysaccharide Polymer – Drilling Fluid Viscosifier
23. Walnut Shells
    Ground Cellulosic Material – Ground Walnut Shells – LCM
24. Mil-Graphite
    Natural Graphite – LCM
25. Mil Bar
    Barite – Weighting Agent
26. X-Cide 102
    Biocide
27. Soda Ash
    Sodium Carbonate – Alkalinity Control Agent
28. Clay Trol
    Amine Acid complex – Shale Stabilizer
29. Sulfatrol
    Sulfonated Asphalt – Shale Control Additive
30. Xanvis
    Viscosifier For Water-Based Muds
31. Milstarch
    Starch – Fluid Loss Reducer For Water Based Muds
32. Mil-Lube
    Drilling Fluid Lubricant

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Well Site Safety Plan
Antero Resources

Well Name: **Eugene Unit 1H, Vernon Unit 1H, Vernon Unit 2H, Vernon Unit 3H**

Pad Location: **POOL PAD**
Ritchie County/Clay District

4708510286

GPS Coordinates: Lat 39°17'53.31"/Long -80°54'41.35" (NAD83)

Driving Directions:

From the intersection of I-79 and HWY 50 near Clarksburg, WV, head west on HWY 50 for approximately 35.6 miles. Turn right on Old US 50 East (Northwest Turnpike) and follow for approximately 1.3 miles. Turn right on Sugar Run Road and follow for approximately 1.5 miles. Access Road will be on the left.

EMERGENCY (24 HOUR) CONTACT 1-800-878-1373

Michael Goff
5/18/16

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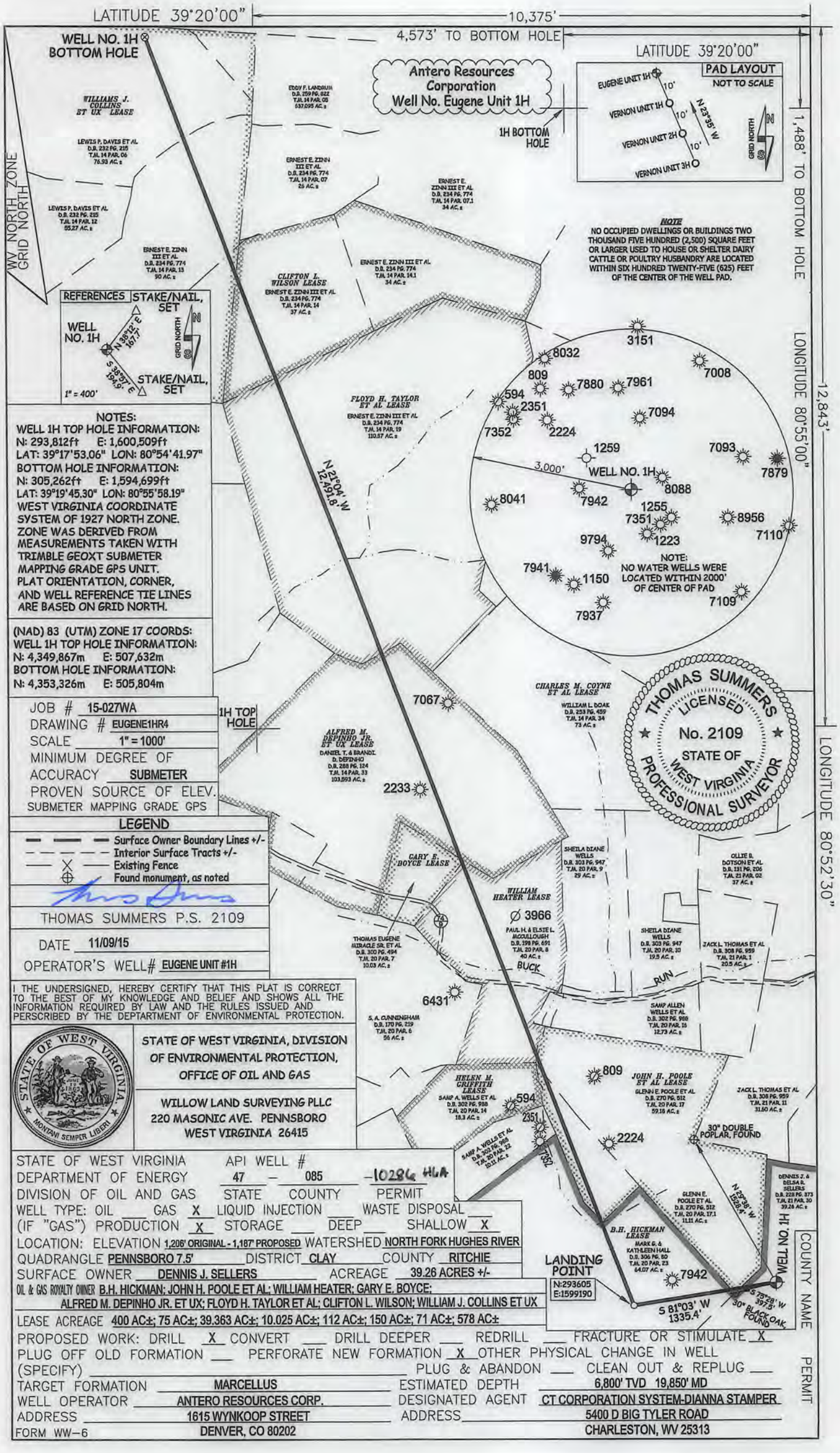
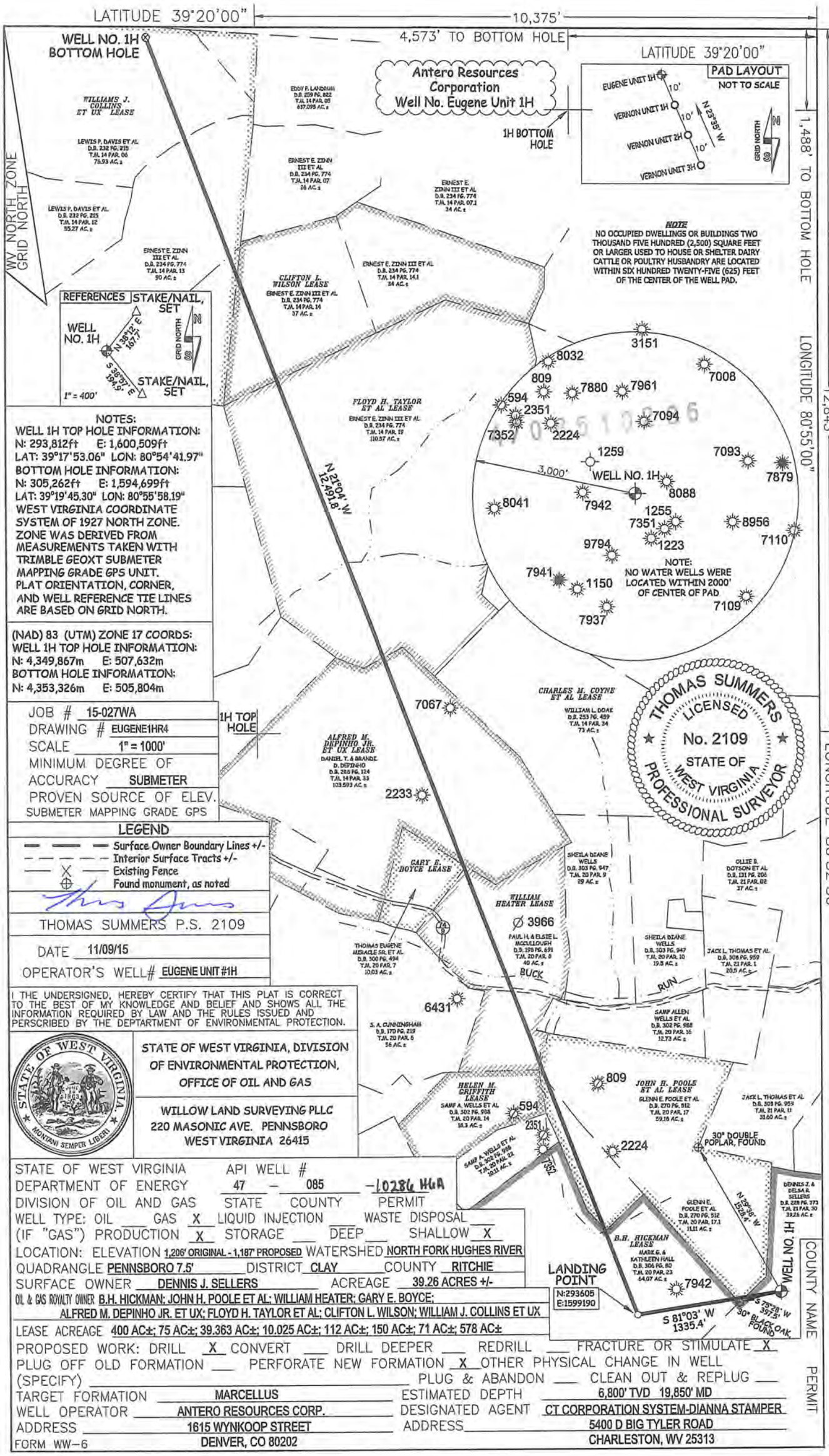


STATE OF WEST VIRGINIA — API WELL # 47 – 085 – 10286 HLA
DEPARTMENT OF ENERGY — STATE — COUNTY — PERMIT
DIVISION OF OIL AND GAS
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,206' ORIGINAL - 1,187' PROPOSED WATERSHED NORTH FORK HUGHES RIVER
QUADRANGLE PENNSBORO 7.5' DISTRICT CLAY COUNTY RITCHIE
SURFACE OWNER DENNIS J. SELLERS ACREAGE 39.26 ACRES +/-
OIL & GAS ROYALTY OWNER B.H. HICKMAN; JOHN H. POOLE ET AL; WILLIAM HEATER; GARY E. BOYCE; ALFRED M. DEPINHO JR. ET UX; FLOYD H. TAYLOR ET AL; CLIFTON L. WILSON; WILLIAM J. COLLINS ET UX
LEASE ACREAGE 400 AC±; 75 AC±; 39.363 AC±; 10.025 AC±; 112 AC±; 150 AC±; 71 AC±; 578 AC±
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 ___
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,800' TVD 19,850' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313
FORM WW-6


LATITUDE 39°20'00"
10,375'
4,573' TO BOTTOM HOLE
WELL NO. 1H
BOTTOM HOLE
Antero Resources Corporation
Well No. Eugene Unit 1H
1H BOTTOM HOLE
LATITUDE 39°20'00"
PAD LAYOUT
NOT TO SCALE
EUGENE UNIT 1H
VERNON UNIT 1H
VERNON UNIT 2H
VERNON UNIT 3H
10'
N 23°35' W
GRID NORTH
1,488' TO BOTTOM HOLE
LONGITUDE 80°55'00"
12,843'
LONGITUDE 80°52'30"
WV NORTH ZONE GRID NORTH
WILLIAMS J. COLLINS ET UX LEASE
EDDY P. LANDRUM D.B. 259 PG. 822 T.M. 14 PAR. 05 637.095 AC.±
LEWIS P. DAVIS ET AL D.B. 232 PG. 215 T.M. 14 PAR. 06 76.93 AC.±
ERNEST E. ZINN III ET AL D.B. 234 PG. 774 T.M. 14 PAR. 07 26 AC.±
ERNEST E. ZINN III ET AL D.B. 234 PG. 774 T.M. 14 PAR. 07.1 34 AC.±
LEWIS P. DAVIS ET AL D.B. 232 PG. 215 T.M. 14 PAR. 12 85.27 AC.±
ERNEST E. ZINN III ET AL D.B. 234 PG. 774 T.M. 14 PAR. 13 90 AC.±
ERNEST E. ZINN III ET AL D.B. 234 PG. 774 T.M. 14 PAR. 14.1 34 AC.±
CLIFTON L. WILSON LEASE
ERNEST E. ZINN III ET AL D.B. 234 PG. 774 T.M. 14 PAR. 14 37 AC.±
NOTE
NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
REFERENCES
STAKE/NAIL, SET
WELL NO. 1H
N 38°57' E 1067'
S 38°57' E 1043'
GRID NORTH
STAKE/NAIL, SET
1" = 400'
3151
8032
809
7880
7961
7008
594
2351
7094
7352
2224
1259
7093
3,000'
WELL NO. 1H
7879
8088
8041
7942
1255
7351
8956
9794
1223
7110
7941
1150
NOTE:
NO WATER WELLS WERE LOCATED WITHIN 2000' OF CENTER OF PAD
7109
7937
FLOYD H. TAYLOR ET AL LEASE
ERNEST E. ZINN III ET AL D.B. 234 PG. 774 T.M. 14 PAR. 19 110.37 AC.±
N 21°04' W 12,491.8'
NOTES:
WELL 1H TOP HOLE INFORMATION:
N: 293,812ft E: 1,600,509ft
LAT: 39°17'53.06" LON: 80°54'41.97"
BOTTOM HOLE INFORMATION:
N: 305,262ft E: 1,594,699ft
LAT: 39°19'45.30" LON: 80°55'58.19"
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.
(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 4,349,867m E: 507,632m
BOTTOM HOLE INFORMATION:
N: 4,353,326m E: 505,804m
JOB # 15-027WA
DRAWING # EUGENE1HR4
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
1H TOP HOLE
7067
CHARLES M. COYNE ET AL LEASE
WILLIAM L. DOAK D.B. 253 PG. 459 T.M. 14 PAR. 34 73 AC.±
ALFRED M. DEPINHO JR. ET UX LEASE
DANIEL T. & BRANDI D. DEPINHO D.B. 286 PG. 124 T.M. 14 PAR. 33 103.593 AC.±
2233
THOMAS SUMMERS LICENSED No. 2109 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR
LEGEND
Surface Owner Boundary Lines +/-
Interior Surface Tracts +/-
Existing Fence
Found monument, as noted
GARY E. BOYCE LEASE
SHEILA DIANE WELLS D.B. 303 PG. 947 T.M. 20 PAR. 9 29 AC.±
OLLIE B. DOTSON ET AL D.B. 131 PG. 206 T.M. 21 PAR. 02 37 AC.±
WILLIAM HEATER LEASE
3966
PAUL H. & ELSIE L. MCCULLOUGH D.B. 198 PG. 691 T.M. 20 PAR. 8 40 AC.±
SHEILA DIANE WELLS D.B. 303 PG. 947 T.M. 20 PAR. 10 19.5 AC.±
JACK L. THOMAS ET AL. D.B. 308 PG. 959 T.M. 21 PAR. 1 20.5 AC.±
THOMAS SUMMERS P.S. 2109
DATE 11/09/15
OPERATOR'S WELL# EUGENE UNIT #1H
THOMAS EUGENE MIRACLE SR. ET AL. D.B. 300 PG. 494 T.M. 20 PAR. 7 10.03 AC.±
BUCK
RUN
6431
S. A. CUNNINGHAM D.B. 170 PG. 219 T.M. 20 PAR. 6 56 AC.±
SAMP ALLEN WELLS ET AL D.B. 302 PG. 988 T.M. 20 PAR. 16 12.73 AC.±
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 RULES ISSUED AND PERSCRIBED BY THE DEPTARTMENT OF ENVIRONMENTAL PROTECTION.
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415
809
JOHN H. POOLE ET AL LEASE
GLENN E. POOLE ET AL D.B. 270 PG. 512 T.M. 20 PAR. 17 59.16 AC.±
JACK L. THOMAS ET AL D.B. 308 PG. 959 T.M. 21 PAR. 11 31.60 AC.±
HELEN M. GRIFFITH LEASE
SAMP A. WELLS ET AL D.B. 302 PG. 988 T.M. 20 PAR. 14 18.3 AC.±
594
2351
2224
30" DOUBLE POPLAR, FOUND
SAMP A. WELLS ET AL D.B. 302 PG. 988 T.M. 20 PAR. 12 10.11 AC.±
2383
DENNIS J. & DELSA R. SELLERS D.B. 228 PG. 373 T.M. 21 PAR. 30 39.26 AC.±
N 29°36' W 1528.7'
GLENN E. POOLE ET AL D.B. 270 PG. 512 T.M. 20 PAR. 17.1 18.11 AC.±
B.H. HICKMAN LEASE
MARK E. & KATHLEEN HALL D.B. 306 PG. 80 T.M. 20 PAR. 23 64.07 AC.±
7942
HI 'ON TEM
COUNTY NAME PERMIT
LANDING POINT
N:293605
E:1599190
S 81°03' W 1335.4'
S 75°28' W 391.5'
30" BLACK OAK, FOUND
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
API WELL # 47 - 085 - 10286 HGA
STATE COUNTY PERMIT
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,206' ORIGINAL - 1,187' PROPOSED WATERSHED NORTH FORK HUGHES RIVER
QUADRANGLE PENNSBORO 7.5' DISTRICT CLAY COUNTY RITCHIE
SURFACE OWNER DENNIS J. SELLERS ACREAGE 39.26 ACRES +/-
OIL & GAS ROYALTY OWNER B.H. HICKMAN; JOHN H. POOLE ET AL; WILLIAM HEATER; GARY E. BOYCE; ALFRED M. DEPINHO JR. ET UX; FLOYD H. TAYLOR ET AL; CLIFTON L. WILSON; WILLIAM J. COLLINS ET UX
LEASE ACREAGE 400 AC±; 75 AC±; 39.363 AC±; 10.025 AC±; 112 AC±; 150 AC±; 71 AC±; 578 AC±
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 ___
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,800' TVD 19,850' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313
FORM WW-6

WW-6A1

Operator's Well Number Eugene Unit1H

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
B. H. Hickman Lease			
B.H. Hickman	M.G. Zinn	1/8	0029/0447
M.G. Zinn	J.L. Newman	Assignment	0126/0415
J.L. Newman	The Philadelphia Company of West Virginia	Assignment	0091/0265
The Philadelphia Company of West Virginia	Pittsburgh & West Virginia Gas Company	Assignment	0055/0359
Pittsburgh & West Virginia Gas Company	Equitable Gas Company	Assignment	DB 0126/0473
Equitable Gas Company	P.D. Farr, II	Assignment	0192/0804
P.D. Farr, II	Antero Resources Appalachian Corporation	Assignment	0257/0249
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
John H. Poole, et al Lease			
John H. Poole, et al	Jack F. Merandi	1/8	0092/0005
Jack F. Merandi	J & J Enterprises, Inc.	Assignment	0197/0014
J & J Enterprises, Inc.	Eastern American Energy Corporation	Assignment	0231/0732
Eastern American Energy Corporation	Key Oil Company	Assignment	0203/0639
Key Oil Company	Antero Resources Appalachian Corporation	Assignment	0258/0509
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Helen M. Griffith Lease			
Helen M. Griffith	Antero Resources Appalachian Corporation	1/8+	0264/1073
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
William Heater Lease			
William Heater	Antero Resources Appalachian Corporation	1/8+	0260/0891
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Gary E. Boyce Lease			
Gary E. Boyce	Antero Resources Appalachian Corporation	1/8+	0261/0225
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Alfred M. DePhino, Jr., ex ux Lease			
Alfred M. DePhino, Jr., et ux	J & J Enterprises, Inc.	1/8	0172/0327
J & J Enterprises, Inc.	Eastern American Energy Corporation	Assignment	0231/0732
Eastern American Energy Corporation	Energy Corporation of America	Assignment	0306/0836
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	0257/0377
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

4708501286

Received
Office of Oil & Gas
APR 18 2016

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

****CONTINUED ON NEXT PAGE****

WW-6A1

Operator's Well Number Eugene Unit1H

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
Floyd H. Taylor, et al Lease			
Floyd H. Taylor, et al	F.C. Stone	1/8	0093/0194
Bettie Stone, duly appointed executrix of the Estate of F.C. Stone, deceased	Floyd W. Stone	Assignment	0201/0695
Floyd W. Stone d/b/a Stone Oil & Gas	Johnson Enterprises	Assignment	0201/0722
Johnson Enterprises	Jeff Burdette	Assignment	0227/0488
Jeff Burdette a/k/a Jeffrey H. Burdette	Kiedasch and Summers Enterprises, LLC	Assignment	0248/0770
Kiedasch and Summers Enterprises, LLC	Key Oil Company	Assignment	0250/0424
Key Oil Company	Antero Resources Appalachian Corporation	*Partial Assignment of Oil & Gas	0253/0747
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Clifton L. Wilson Lease			
Clifton L. Wilson	J & J Enterprises, Inc.	1/8	0164/0611
J & J Enterprises, Inc.	Eastern American Energy Corporation	Assignment	0231/0732
Eastern American Energy Corporation	Energy Corporation of America	Assignment	DB 0306/0836
Energy Corporation of America	Antero Resources Appalachian Corporation	Memorandum of Agreement	0257/0397
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

47085 02286

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Office of Oil & Gas
APR 18 2016

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

****CONTINUED ON NEXT PAGE****

WW-6A1
(5/13)

Operator's Well No. Eugene Unit 1H

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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
William J. Collins, et ux Lease				
	William J. Collins, et ux	E.D. Willis	Flate Rate	0042/0055
	E.D. Willis	E.M. Treat Oil & Gas Company	Memorandum of Agreement	0058/0447
	E.M. Treat Oil & Gas Company	Consumers Gas Utility Company	Assignment	0058/0450
	Consumers Gas Utility Company	W.C.P Partnership	Assignment	0148/0522
	W.C.P. Partnership	Crude Oil and Gas, Inc.	Assignment & Agreement	0169/0509
	Crude Oil and Gas, Inc.	Clarence E. Sigley, Sr.	Assignment	0260/0232
	Clarence E. Sigley, Sr.	Antero Resources Appalachian Corp.	Assignment of Oil & Gas Lease	0262/0486
	Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

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

4708510286

Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas

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

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Office of Oil & Gas
APR 18 2016

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 Corporation
By: Kevin Kilstrom
Its: Senior VP of Production

FORM WW-6A1
EXHIBIT 1

FILED

JUN 10 2013

IN THE OFFICE OF SECRETARY OF STATE

Natalie E. Tennant
Secretary of State
1900 Kanawha Blvd E
Bldg 1, Suite 157-K
Charleston, WV 25305

Penney Barker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvsos.com
E-mail: business@wvsos.com

Office Hours: Monday – Friday
8:30 a.m. – 5:00 p.m. ET

FILE ONE ORIGINAL
(Two if you want a filed stamped copy returned to you)
FEE: $25.00

APPLICATION FOR AMENDED CERTIFICATE OF AUTHORITY

**** In accordance with the provisions of the West Virginia Code, the undersigned corporation hereby **** applies for an Amended Certificate of Authority and submits the following statement:

1. Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation

2. Date Certificate of Authority was issued in West Virginia: 6/25/2008

3. Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)

4. Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)

5. Other amendments:
(attach additional pages if necessary)

4708510286

6. Name and phone number of contact person. (This is optional, however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)

Alvyn A. Schopp — (303) 357-7310
Contact Name — Phone Number

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Office of Oil & Gas
APR 18 2016

7. Signature information (See below *Important Legal Notice Regarding Signature):

Print Name of Signer: Alvyn A. Schopp — Title/Capacity: Authorized Person

Signature: [signature] — Date: June 10, 2013

*Important Legal Notice Regarding Signature: Per West Virginia Code §31D-1-129, Penalty for signing false document. Any person who signs a document he or she knows is false in any material respect and knows that the document is to be delivered to the secretary of state for filing is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars or confined in the county or regional jail not more than one year, or both.

WW-60
(7-01)

DATE: April 15, 20 16
OPERATOR'S
WELL NO. Eugene Unit 1H

API NO: 47- 085
State County Permit No.

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

A F F I D A V I T

State of Colorado

4708510286

County of Denver

I, Thomas Kuhn (the designated owner or operator, or authorized representative thereof), after being duly sworn, do declare that the undersigned is authorized by the owner of the working interest in the well permit application to which this affidavit is attached to state that (he, she, or it) shall tender to the owner of the oil and gas in place not less than one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced, or marketed before deducting the amount to be paid or set aside for the owner of the oil or gas in place, or all such oil or gas to be extracted, produced, or marketed from the well. West Virginia Code 22-6-8(e).

Signed: _____

Taken, subscribed and sworn to before me this 15th day of April, 20 16.

Received
Office of Oil & Gas
APR 18 2016

_____
Notary Public

My Commission expires: July 18, 2018

NATALIE KOMP
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID # 20144028170
MY COMMISSION EXPIRES JULY 18, 2018

Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

April 12, 2016

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

RE: Eugene Unit 1H
Quadrangle: Pennsboro 7.5'
Ritchie County/Clay District, West Virginia

Mr. Martin:

Antero Resources Corporation (Antero) is submitting the following application for a new well work permit for the Eugene Unit 1H 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 Eugene Unit 1H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Tom Kuhn
Landman

Received
Office of Oil & Gas
APR 18 2016

4708510286

WW-6AC
(1/12)

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

Date of Notice Certification: 04/13/2016

API No. 47- 085 -
Operator's Well No. Eugene Unit 1H
Well Pad Name: Pool 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:	West Virginia	UTM NAD 83 Easting:	507632m
County:	Ritchie	Northing:	4349867m
District:	Clay	Public Road Access:	CR 50/26
Quadrangle:	Pennsboro 7.5'	Generally used farm name:	Dennis J. Sellers
Watershed:	North Fork Hughes River		

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.

4708510285

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	OOG OFFICE USE ONLY
☐ 1. NOTICE OF SEISMIC ACTIVITY or ☑ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	☐ RECEIVED/ NOT REQUIRED
☑ 2. NOTICE OF ENTRY FOR PLAT SURVEY or ☐ NO PLAT SURVEY WAS CONDUCTED	☐ RECEIVED
☐ 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)	☐ RECEIVED/ NOT REQUIRED
☑ 4. NOTICE OF PLANNED OPERATION	☐ RECEIVED
☑ 5. PUBLIC NOTICE	☐ RECEIVED
☑ 6. NOTICE OF APPLICATION	☐ 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
Office of Oil & Gas
APR 18 2016

WW-6AC
(1/12)

Certification of Notice is hereby given:

THEREFORE, I Kevin Kilstrom, 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:	Antero Resources Corporation	Address:	1615 Wynkoop Street
By:	Kevin Kilstrom		Denver, CO 80202
Its:	Senior VP of Production	Facsimile:	303-357-7315
Telephone:	303-357-7310	Email:	asteele@anteroresources.com

NOTARY SEAL

NATALIE KOMP
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID # 20144028170
MY COMMISSION EXPIRES JULY 18, 2018

Subscribed and sworn before me this 15th day of April 2016

Natalie Komp Notary Public

My Commission Expires July 18, 2018

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.

4708510286

Received
Office of Oil & Gas
APR 18 2016

WW-6A
(9-13)

API NO. 47- 085 -
OPERATOR WELL NO. Eugene Unit 1H
Well Pad Name: Pool Pad

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: 4/18/2016 **Date Permit Application Filed:** 4/18/2016

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. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to:

☑ SURFACE OWNER(s)
Name: PLEASE SEE ATTACHMENT
Address:

Name:
Address:

☑ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: PLEASE SEE ATTACHMENT
Address:

Name:
Address:

☐ SURFACE OWNER(s) (Impoundments or 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:

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☐ WATER PURVEYOR(s)/OWNER(s) OF WATER WELL, SPRING OR OTHER WATER SUPPLY SOURCE
Name: NONE IDENTIFIED WITHIN 2000'
Address:

☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name:
Address:

*Please attach additional forms if necessary

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WW-6A
(8-13)

API NO. 47- 085 -
OPERATOR WELL NO. Eugene Unit 1H
Well Pad Name: Pool Pad

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 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.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

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.

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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 well pad 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

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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.

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. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

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. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

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

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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.**

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(8-13)

API NO. 47- 085 -
OPERATOR WELL NO. Eugene Unit 1H
Well Pad Name: Pool Pad

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.

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.

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(8-13)

API NO. 47- 085 -
OPERATOR WELL NO. Eugene Unit 1H
Well Pad Name: Pool Pad

Notice is hereby given by:

Well Operator: Antero Resources Corporation
Telephone: (303) 357-7310
Email: asteele@anteroresources.com

Address: 1615 Wynkoop 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.

NATALIE KOMP
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID # 20144028170
MY COMMISSION EXPIRES JULY 18, 2018

Subscribed and sworn before me this 15th day of April 2015.

Natalie Komp Notary Public

My Commission Expires July 18, 2018

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WW-6A Notice of Application Attachment (POOL PAD):

List of Surface Owner(s) with Proposed Disturbance associated with Pool Well Pad:

WELL PAD – All owners were notified of all well work permit applications, and have executed signed Surface Use Agreements with Antero Resources Corporation.

TM 20 PCL 17.1
Owner: Glenn Poole
Address: 6117 38th Avenue West
Bradenton, FL 34209

Owner: John Paul Poole
Address: 2625 Meadland Road
Bridgeport, WV 26330

TM 21 PCL 30 & 30.2
Owner: Dennis & Delsa Sellers
Address: 531 Park Drive
Pennsboro, WV 26415

ROAD AND/OR OTHER DISTURBANCE – All owners have executed signed Surface Use and/or Road Agreements with Antero Resources Corporation. However, they were only notified if their tracts were overlying the oil and gas leasehold being developed by the proposed well work.

TM 21 PCL 30 & 37.2
Owner: Dennis & Delsa Sellers
Address: 531 Park Drive
Pennsboro, WV 26415

TM 21 PCL 44
Owner: Richard Lee Flyer
Address: 1010 York Road
Dillsburg, PA 17019

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WW-6A3
(1/12)

Operator Well No. Eugene Unit 1H

Multiple Wells on the Pool Pad

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

Date of Notice: 7/14/2015 **Date of Planned Entry:** *7/24/2015

*Please note that this is an estimated date. Antero may begin surveying seven (7) days but no more than forty-five (45) after your receipt of this notice (whichever comes first).

Delivery method pursuant to West Virginia Code § 22-6A-10a

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

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

☑ SURFACE OWNER(s)

Name: Glenn E. Poole (TM 20 PCL 17.1)
Address: 6117 38th Ave. W.
Brandenton, FL 34209

Name: John Paul Poole (TM 20 PCL 17.1)
Address: 2625 Meadland Rd.
Bridgeport, WV 26330

Name: Dennis J. & Delsa R. Sellers (TM 21 PCL 30, TM 21 PCL 30.1, 30.2, 37.2)
Address: 531 Park Dr.
Pennsboro, WV 26415

☑ COAL OWNER OR LESSEE

Name: NO DECLARATIONS ON RECORD WITH COUNTY
Address:

4708510283

☑ MINERAL OWNER(s)

Name: PLEASE SEE ATTACHMENT
Address:

*please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State:	West Virginia	Approx. Latitude & Longitude:	Approx. 39.298131, -80.911436
County:	Ritchie	Public Road Access:	CR 50/26
District:	Clay	Watershed:	North Fork Hughes River
Quadrangle:	Pennsboro 7.5'	Generally used farm name:	Sellers, Dennis J. & Delsa R.

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production 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). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator:	Antero Resources Corporation	Address:	1615 Wynkoop Street
Telephone:	(303) 357- 7310		Denver, CO 80202
Email:	asteele@anteroresources.com	Facsimile:	(303) 357-7315

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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.

Tax Map 20 Parcel 17.1
Tax Map 21 Parcel 30
Tax Map 21 Parcel 30.1
Tax Map 21 Parcel 30.2
Tax Map 21 Parcel 37.2

WW-6A3 Notice of Entry For Plat Survey

Mineral Owners:
Tax Parcel ID: 3-20-17.1

Owner: Glenn E. Poole & John Paul Poole
Address: 6117 38th Ave. W.
Bradenton, FL 34209

Mineral Owners:
Tax Parcel ID: 3-21-30

Owner: Anne Cecilia Coyne Foster c/o Charles M. Coyne
Address: 16504 Edgewater Dr.
Lakewood, OH 44107

Owner: Eleanore Catherine Coyne c/o Charles M. Coyne
Address: 16504 Edgewater Dr.
Lakewood, OH 44107

Owner: Mary Margaret Coyne Daugherty c/o Charles M. Coyne
Address: 16504 Edgewater Dr.
Lakewood, OH 44107

Owner: Charles Michael Coyne
Address: 16504 Edgewater Dr.
Lakewood, OH 44107

Owner: Ronald D. Dotson
Address: 12243 Robson Rd.
Grafton, OH 44044

Owner: Clarence E. Sigley
Address: PO Box 1126
Bridgeport, WV 26330

Owner: Bruce Edmund Rogers
Address: 2621 Austin Ave.
Youngstown, OH 44509

Owner: Glenn Lee Rogers
Address: 167 Brookside Dr.
Pennsboro, WV 26415

Owner: Veronica Sue Augustynovich
Address: 1749 New Jolie Place
Portland, OR 97229

Owner: Winola H. Carman
Address: 1265 Burton Run Rd.
Pennsboro, WV 26415

Owner: Karl K. Hickman
Address: 609 Morgantown Rd.
Uniontown, PA 15401

Owner: Michael Arrington
Address: 106 Portal Lane
Madison, AL 35758

Mineral Owners:
4708510286
Tax Parcel ID: 3-21-30.1

Owner: Lonny Dwynn Thomas & Donna Jean Thomas, Living Trust - Lonny Dwynn & Donna Joan Thomas
Address: 885 E. Stoneybrook Loop
Post Falls, ID 83854

Owner: Ronald A. Cooley
Address: 2429 SW Alderwood Court
Dallas, OR 97338

Owner: Ridgewood Development, LLC
Address: 955 Bull Creek Rd.
Waverly, WV 26184

Owner: Lyle E. Cooley
Address: 211 NW Woods Lane
Dallas, OR 97338

Owner: Dennnis J. Sellers & Delsa R. Sellers
Address: 531 Park Drive
Pennsboro, WV 26415

Mineral Owners:
Tax Parcel ID: 3-21-30.2

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Owner: James R. Hogan, Jr.
Address: PO Box 367
Glen Burnie, MD 21060

Owner: Living Trust of Lonny Dqynn Thomas & Donna Joan Thomas, Lonny Dwynn Thomas & Donna Jean Thomas, Settlors and Trustees
Address: 885 E. Stoneybrook Loop
Post Falls, ID 83854

Owner: Ronald A. Cooley
Address: 2429 SW Alderwood Ct.
Dallas, OR 97338

Owner: Ein M. Cooley c/o Ronald Cooley
Address: 2429 SW Alderwood Ct.
Dallas, OR 97338

Owner: Lyle E. Cooley
Address: 211 NW Woods Lane
Dallas, OR 97338

Mineral Owners:

Tax Parcel ID: 3-21-37.2

Owner: Rosemary Cook
Address: Rt. 3, Lower Wyoming Rd.
Spring Green, WI 53588

Owner: Ruthalee Carroll
Address: 98 Cambridge Rd.
Elkton, MD 21921

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WW-6A5
(1/12)

Operator Well No. Eugene Unit 1H

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: 04/18/2016 **Date Permit Application Filed:** 04/18/2016

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: Glenn Poole / John Paul Poole
Address: 6117 38th Avenue West / 2625 Meadland Road
Bradenton, FL 34209 / Bridgeport, WV 26330

Name: Dennis & Delsa Sellers
Address: 531 Park Drive
Pennsboro, WV 26415

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: West Virginia
County: Ritchie
District: Clay
Quadrangle: Pennsboro 7.5'
Watershed: North Fork Hughes River

UTM NAD 83 Easting: 507632m
Northing: 4349867m
Public Road Access: CR 50/26
Generally used farm name: Dennis J. Sellers

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 Corporation
Address: 1615 Wynkoop Street
Denver, CO 80202
Telephone: (303) 357-7310
Email: asteele@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.

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways
1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

April 8, 2016

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the Pool Pad, Ritchie County
Eugene Unit 1H Well site

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Dear Mr. Martin,

This well site will be accessed from a DOH permit #03-2015-0402 which has been issued to Antero Resources Corporation for access to the State Road for a well site located off County Route 50/26 in Ritchie County.

This operator h signed a STATEWILD OIL AND GAS ROAD MAINTENACE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K Clayton

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

Cc: Natalie Komp
Antero Resources Corporation
CH, OM, D-3
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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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Antero Resources Corporation Site Construction Plan for

Pool Well Pad & Water Containment Pad

Antero Resources Corporation (Antero) is submitting the following Site Construction Plan in compliance with §35-8-5.5. This plan is submitted in conjunction with the Pool Well Pad & Water Containment Pad Site Design & Construction Plan, Erosion & Sediment Control Plans prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection and Office of Oil and Gas, and certified by Civil & Environmental Consultants Inc., a West Virginia registered professional engineer.

Requirement §5.5.a. *The plan should describe the nature and purpose of the construction project and identify the procedures for construction that will be used to achieve site stability. The plan shall be considered conditions of the permit and be enforceable as such.*

Antero Response
The nature and purpose of the subject project is to perforate, fracture, and complete one or more horizontal shallow wells. Procedures to achieve site stability include seeding and mulching of earth disturbed areas and implementation of erosion and sediment best management practices (BMPs). Details of seeding and mulching rates as well as procedures for installation and maintenance of erosion and sediment BMPs are outlined on page 3 of "Pool Well Pad & Water Containment Pad Site Design & Construction Plan, Erosion & Sediment Control Plans" (Site Design) prepared and certified by Civil & Environmental Consultants Inc. of West Virginia.

These procedures will be considered as conditions of the permit and shall be inspected and maintained for continual compliance measures outlined in §35-8-5.5.

Requirement §5.5.b.1. *A vicinity map location the site in relation to the surrounding area and roads;*

Antero Response
Please refer to the vicinity map on page 1 for the location the site in relation to the surrounding area and roads.

Requirement §5.5.b.2. *A plan view site map at a scale of one inch equal to one hundred feet (1"=100') or greater that shows appropriate detail of all site features and:*

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> ***Requirement §5.5.b.A..*** *Clearly identifies the limit of disturbance for the project;*

Antero Response
"Overall Site Plan," "Final Site Design Plan," "Well Pad Profiles & Cross Sections," "Staging Pad Profiles & Cross Sections", "Main Access Road Profiles & Cross Sections," and "Top Soil Pile Profiles & Cross Sections" maps are included on pages 5-22 of the Site Design.

> ***Requirement §5.5.b.2.B.*** *Provides existing topographic information on a contour interval that affords sufficient detail to illustrate site terrain conditions*

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Antero Response
Please refer to the "Existing Conditions" maps on page 2 of the Site Design for the current topographic conditions for the constructed pad on a contour interval that affords sufficient detail to illustrate site terrain conditions.

> ***Requirement §5.5.b.2.C.*** *Identifies proposed cut and fill areas with grading contours at an interval that provides sufficient detail to accurately depict slope ratios, indicating top and bottom of slopes; and*

Antero Response
"Overall Site Plan," "Final Site Design Plan," "Well Pad Profiles & Cross Sections," "Staging Pad Profiles & Cross Sections", "Main Access Road Profiles & Cross Sections," and "Top Soil Pile Profiles & Cross Sections" maps are included on pages 5-22 of the Site Design.

> ***Requirement §5.5.b.2.D.*** *Identifies any existing structures, roads, water bodies, and other critical areas within the area that would most likely be affected by the construction.*

Antero Response
"Overall Site Plan," "Final Site Design Plan," "Well Pad Profiles & Cross Sections," "Staging Pad Profiles & Cross Sections", "Main Access Road Profiles & Cross Sections," and "Top Soil Pile Profiles & Cross Sections" maps are included on pages 5-22 of the Site Design for the maps identifying any structures, roads, water bodies, and other critical areas within the area of interest that would be most likely affected by construction.

> ***Requirement §5.5.b.3.*** *A cross-section of the length and width of the location, providing cut and fill volumes; and*

Antero Response
"Overall Site Plan," "Final Site Design Plan," "Well Pad Profiles & Cross Sections," "Staging Pad Profiles & Cross Sections", "Main Access Road Profiles & Cross Sections," and "Top Soil Pile Profiles & Cross Sections" maps are included on pages 5-22 of the Site Design for a cross-section of the location. The cut and fill volumes can be found in the "Schedule of Quantities" on page 4.

> ***Requirement §5.5.b.4.*** *Any other engineering designs or drawings necessary to construct the project.*

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Antero Response
All other engineering designs and drawings necessary to construct this project are included in the Site Design.

> ***Requirement §5.5.c.*** *At a minimum, site construction shall be conducted in accordance with the following criteria:*

Antero Response
All Antero contractors shall be notified of and comply with the measures outlined in Section 5.5.c of §35-8.

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Requirement §5.5.c.1. *All woody material, brush, and trees shall be cleared from the site area and kept to the minimum necessary for proper construction, including the installation of necessary sediment controls. Trees six inches in diameter and larger shall be cut and logs stacked;*

Antero Response
The Site Design outlines measures to maintain compliance with Section 201 of the WVDOH Specifications which outlines clearing and grubbing measures. Please refer to Construction and E&S Control Notes on page 3 of the Site Design.

Requirement §5.5.c.2. *Topsoil shall be removed from construction areas and stockpiled for reuse during reclamation. In woodland areas, tree stumps, large roots, large rocks, tree and leaf debris, and ground vegetation shall be removed prior to actual site constructions;*

Antero Response
The Site Design outlines procedures for stripping and stocking topsoil. Please refer to Construction and E&S Control Notes on page 3 of the Site Design. In addition, soil for stockpiling and use as fill shall be further compliant with measures outlined in Section 5.5.c.2. of §35-8-5.5.

Requirement §5.5.c.3. *No embankment fill shall be placed on frozen material;*

Antero Response
All Antero contractors shall be notified of and comply with measures outlined in Section 5.5.c.3. of §35-8-5.5.

Requirement §5.5.c.4. *The fill material shall be clean mineral soil, free of roots, woody vegetation, stumps, sod, large rocks, frozen soil or other objectionable material;*

Antero Response
The Site Design outlines procedures for stripping and stocking topsoil. Please refer to Construction and E&S Control Notes on page 3 of the Site Design. In addition, soil shall be further defined to the measures outlined in Section 5.5.c.4. of §35-8-5.5.

Requirement §3.2.b.5. *Embankment material shall exhibit adequate soil strength and contain the proper amount of moisture to ensure that compaction will be achieved;*

Antero Response
All Antero contractors shall be notified of and comply with measures outlined in Section 5.5.c.5. of §35-8-5.5.

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Requirement §5.5.c.6 *Earthen fill slopes should be constructed with slopes no steeper than a ratio of two to one (2:1);*

Antero Response
The Site Design outlines all earthen fill slopes to be constructed with slopes no steeper than a ratio of two to one (2:1).

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Requirement §5.5.c.7. *Fill material will be placed in lifts or layers over the length of the fill. Lift thickness of soil shall be as thin as the suitable random excavated material will permit, typically from six to twelve (12) inches; and*

Antero Response
Please refer to the Construction and E&S Control Notes on page 3 of the Site Design. Fill shall be placed in horizontal lifts of maximum loose depth of 12 inches. Compaction will be performed with a compactor with a minimum of five ton static drum weight vibratory roller or five ton static drum weight sheeps footed compactor as appropriate for the type of soil material at the site or other compactor approved by the Engineer.

Requirement §5.5.c.8. *The size of rock lifts shall not exceed thirty-six (36) inches. The rock shall not be greater in any dimension than thirty-six (36) inches;*

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Antero Response
All Antero contractors shall be notified of and comply with measures outlined in Section 5.5.c.8. of §35-8-5.5.

Requirement §5.5.c.9. *Compaction shall be obtained by compaction equipment or by routing the hauling equipment over the fill so that the entire surface of each fill lift is compacted by at least one wheel or tread track of equipment or by a compactor. Each lift shall be compacted before beginning the next lift;*

Antero Response
Compaction compliance measures are outlined in the Construction and E&S Notes on page 3. Compaction is required with a compactor with a minimum of five ton static drum weight vibratory roller or five ton static drum weight sheeps footed compactor as appropriate for the type of soil material at the site or other compactor approved by the Engineer.

Requirement §5.5.c.10. *Surface water diversion ditches shall be constructed above the disturbed area to intercept water and to divert surface water runoff around the site; and*

Antero Response
Construction and E&S Control Notes on page 3 of the Site Design identifies the surface diversions used to prevent surface water and subsurface water from flowing on to the well pad and coming into contact with the stormwater associated with the well pad. Additional Erosion & Sediment BMPs will be used to prevent sediment discharges from the project.

Requirement §5.5.c.11. *In areas of steep terrain, a terraced bench shall be constructed at the base of the slope where fill is to be placed, creating a toe foundation and aid in holding fill material. Additional terracing shall be constructed from each additional fifty (50) vertical feet of slope and shall be a minimum of ten (10) feet wide.*

Antero Response
All Antero contractors shall be notified of and comply with the measures outlined in Section 5.5.c.11. of §35-8-5.5.

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Antero Resources Corporation Erosion and Sediment Control Plan for Pool Well Pad & Water Containment Pad

Antero Resources Corporation (Antero) is submitting the following narrative and set of drawings in compliance with §35-8-5.4. This plan is submitted in conjunction with the Pool Well Pad &Water Containment Pad Site Design & Construction Plan, Erosion & Sediment Control Plans prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection and Office of Oil and Gas, and certified by Civil & Environmental Consultants Inc., a West Virginia registered professional engineer.

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Requirement §5.4.b.1. *A general sequence of events that describe in relative terms how and when each construction phase (i.e. clearing and grubbing, mass grading, stabilization) will occur and when each erosion and sediment control best management practice ("BMP") will be installed;*

Antero Response:
The following includes a general sequence of events that describe in relative terms how and when each construction phase is anticipated to occur and erosion and sediment control BMPs to be installed. Please refer to the Pool Well Pad & Water Containment Pad Site Design & Construction Plan, Erosion & Sediment Control Plans (Site Design) prepared and certified by Civil & Environmental Consultants Inc. for specific construction measures. Compliance with the measures outlined in the Site Construction Plan (§35-8-5.4) submitted in conjunction with this plan will also be maintained.

1. Access roads, drill pad, water tank pad and staging pad shall be constructed in accordance with the construction documents and the scope of work and shall conform generally with the grades, berms, depths and dimensions shown.
2. The construction documents show the existing and finish grades and berms, etc. That all cut and fill estimates are based upon. The engineer's estimates of the quantities are only estimates and may change based on actual field conditions.
3. The grades, berms, depths, and dimensions may change based on actual field conditions. The engineer reserves the right to change grades, berms, depths and dimensions as necessary to meet field conditions.
4. The contractor shall provide the engineer all reasonable facilities and provide information and samples as required by the engineer for proper monitoring and testing of material workmanship.
5. The contractor shall have on site at all times when construction is in progress a competent superintendent thoroughly familiar with the construction of earth berms and embankments, the compaction of soils and erosion and sediment controls.
6. Silt sock or super silt fence shall be installed prior to clearing and grubbing as shown on the drawings in accordance with WVDEP Best Management Practices manual chapter 3. Surface water shall be diverted away from all excavations and the face of all fills to prevent flooding and softening of the subgrade or compacted materials.

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7. Clearing and grubbing shall remove all brush, trees, roots, stumps, fences, signs or any other material that is not to be reused for the construction. Some stumps may remain at the approval of the engineer. No clearing debris shall be buried on-site without the landowner's and Engineer's written permission. If approved, any debris burial site shall be seeded and mulched.
8. Top soil shall be stripped and stockpiled with appropriate stabilization and silt sock/silt fence to prevent erosion. The top soil shall be reused during the reclamation process or on the face of the access roads, drill pad, water tank pad, and staging pad prior to seeding.
9. Toe keys of 10' wide minimum shall be excavated on all receiving slopes with height exceeding 5' measured vertically from the toe to the crest to provide a base for the fill slopes.
10. Prior to placing any fill, the exposed subgrade shall be compacted and proof rolled to produce a stable and unyielding surface.

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11. All random fill material shall be placed in loose lifts of up to 12" and shall be compacted to at least 95% of the laboratory maximum dry density as determined by the standard proctor test method (astm d698). The moisture content shall be within 3% of optimum moisture content as determined by the standard proctor test (astm d698). Inspector is responsible for the original soil test and providing a copy of the results with moisture-density curve to the engineer. The inspector shall do in-place density tests every third lift of soil and shall be done in two random places per test lift. Field density tests for compaction shall be performed in accordance with astm d6938 (nuclear method). Records shall be maintained of test location and results and provided to the engineer on request. Areas that fail for compaction shall be removed, re-compacted and retested for compliance. In lieu of standard proctor testing, the contractor may proof-roll the soil every 24" of soil lift with a loaded 15 ton tandem dump truck. Soil that deflects under the rear wheels greater than 1/2" shall be removed, re-compacted and retested. Compaction of soil shall be done with a 5 ton min. sheeps foot, or vibratory sheeps foot roller.
12. Rock fill shall be placed in accordance with section 207.7.3.2.3 of the West Virginia Division of Highways standard specifications roads and bridges, adopted 2010. Rock size shall not be greater in any dimension than 36 inches. Rock is defined as sandstone, limestone, or concrete that cannot be incorporated in a 6 inch (150mm) compacted lift and shall be medium hard to hard.
13. On-site fill shall be used to the maximum extent possible. Any imported fill shall be certified by the contractor to be clear of all hazardous substances or materials and a sample will be submitted to the engineer to determine the suitability of the material. If material is encountered that cannot be ripped by a cat d8 with a single tooth ripper, then the contractor shall contact the engineer who will visit the site and determine if the material may be used as is or must be removed by other means. If unsuitable soils in the subgrade are found they shall be removed and replaced with appropriate fill at the contractor's expense and the engineer's direction.
14. If springs or seeps are encountered, subsurface drainage features shall be installed prior to fill placement. Contact engineer for evaluation and recommendation of corrective measures.
15. The fill toe for all fill embankments shall be benched or keyed into the natural soil. All fill toes shall be supported by competent bedrock or soil material.

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16. Fill placed against existing slopes shall be benched into the existing material during fill placement to reduce the potential for development of a smooth interface between the fill and existing slope.
17. Any soft areas shall be over-excavated to a firm material and backfilled with a well compacted structural fill.
18. Fill required to obtain design grades shall be placed as controlled, compacted fill. The fill shall be free of trash, wood, topsoil, organics, coal, coal mine refuse, frozen material and pieces of rock greater than 6" in any dimension.
19. During placement of material, moisten or aerate each layer of fill, as necessary, to obtain the required compaction. Fill should not be placed on surfaces that are muddy or frozen, or have not been approved by prior proof-rolling. Free water shall be prevented from appearing on the surface during or subsequent to compaction operations.
20. Soil material which is removed because it is too wet to permit proper compaction may be spread and allowed to dry. Drying can be facilitated by discing or harrowing until the moisture content is reduced to an acceptable level. When the soil is too dry, water may be uniformly applied to the layer to be compacted.
21. The fill outslopes shall be overbuilt and trimmed back to design configurations to verify proper compaction.
22. Granular materials shall be compacted to a minimum 75% of its relative density, as determined by astm d4253 and d4254 test methods.
23. Drill pad subgrade should be lined with geotextile separation/stabilization fabric as indicated by an Antero representative, prior to placement of aggregate.
24. Photographic documentation shall be taken by the engineer or engineer's representative and provided to Antero Resources Corp. of the following activities: (1) site after clearing and grubbing (2) the site after topsoil removal (3) toe key and inspection trench construction (4) daily photos of cut and fill operations (5) proof-rolling tests.
25. Prior to as-built certification, the engineer or engineers representative shall provide Antero Resources Corp. with a complete binder that includes all photo documentation, all compaction test reports, results and maps, a report of all cut and fill volumes in cubic yards, subsurface drain locations and a copy of the as-built confirmation survey prior to liner placement.
26. The contractor will be responsible for the repair of any damages to the existing streets and utilities which occurs as a result of his construction project within or contiguous with the existing right-of-way.
27. Contractor to contact operator and engineer if groundwater is encountered during construction.
28. The contractor is responsible for constructing the site in accordance with the design plans and construction documents and the scope of work shall conform with the grades, berms, depths, dimensions, etc. shown hereon.
29. It shall be the sole responsibility of the contractor to comply with all federal, state, and local safety requirements, including the 1970 OSHA act. Precaution for the protection of persons, including employees and property, shall always be exercised by the contractor initiation, maintenance, and supervision of all safety requirements, precautions, and programs in

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connection with the work, including all requirements per cfr 1910.146, shall also be the sole responsibility of the contractor.

30. Construction activities shall be restricted to the areas shown on the plans within the limits of disturbance, unless otherwise authorized by Antero Resources Corporation. Modification plan must be submitted to the dep for any activities performed outside of the limits of disturbance.
31. Preservation of benchmarks, property corners, reference points, stakes and other survey reference monuments or markers is the responsibility of the contractor. In cases of willful of careless destruction the contractor shall be required to replace or restore said monument or marker. Resetting of markers shall be performed by a professional surveyor as approved by Antero Resources Corporation.
32. The contractor shall maintain adequate clearance form all electric lines, if any, in accordance with national electrical safety code.
33. Any digital files provided to the contractor by CEC are provided for the convenience of the contractor only. The construction of the site shall meet all design parameters of the WVDEP approved CEC design plans. CEC will not be held liable for the contractor using the digital files to waiver from the approved design plans.
34. All existing and designed culverts and culvert sumps shall be cleaned and cleared of debris during the course of construction. Any excess erosion due to the plugging of a culvert shall be the sole responsibility of the contractor.
35. Contractor shall provide Antero Resources Corp. with all surveying digital files for as-built records.

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Requirement §5.4.b.2. *A description of the stabilization methods to be used, including the application rates for temporary and permanent seeding and mulching, and provide the timeframes for establishing stabilization*

Antero Response:
Stabilization methods used include seeding and mulching of disturbed areas as well as the implementation of erosion and sediment control BMPs. Please refer to Construction and E&S Control Notes on page 3 and "Construction Details" on pages 23-30 for detailed descriptions of the different stabilization methods to be used. Seeding and mulching is to be in accordance with the WVDOT Standard Specifications unless specified otherwise in the plans or unless specified otherwise by the construction engineer or Antero representative. Please refer to Erosion and Sediment Control Narrative under Construction and E&S Control Notes on page 3 of the Site Design for more specific information regarding application, liming, and mulching rates.

Erosion and sediment BMPs will be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMPs. In a timely manner after earth disturbance activities cease, Antero shall stabilize any areas disturbed by the activities. During non-germination periods, mulch must be applied at the specified rates. Disturbed areas which are not at finish grade and which will be re-disturbed within 1 year will be stabilized in accordance with the temporary vegetative stabilization and specifications. Disturbed areas which are finished grade or which will not be re-disturbed within 1 year will be stabilized in accordance with the permanent vegetative stabilization specification. Please refer to "Construction and E&S Control Notes" on page 3 for more information regarding timeframes for establishing stabilization and erosion and sediment BMPs.

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The site shall be considered to have achieved full stabilization when it has a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics to resist sliding and other movements. Until the site achieves final stabilization, Antero will assure that the best management practices (BMPs) are implemented, inspected, operated, and maintained. As such, Antero will maintain written inspection logs. All maintenance work, including cleaning, repair, replacement, regarding, and re-stabilization shall be performed immediately upon discovery of deficiency. After final stabilization has been achieved, temporary erosion and sediment BMPs controls will be removed. Areas disturbed during removal of the BMPs will be stabilized immediately.

Requirement §5.4.b.3. *Details of specifications for the erosion and sediment control BMPs employed on the project.*

Antero Response:
Please refer to the "Construction and E&S Control Notes," and "Construction Details" on pages 3 and 23-30 in the Site Design for specifications including instructions for installation, inspection, and maintenance for erosion and sediment control BMPs employed at this site.

Requirement §5.4.b.3. *A vicinity map locating the site in relation to the surrounding area and roads;*

Antero Response:
A "Vicinity Map" locating the site in relation to the surrounding area and roads is included on page 1 the Site Design.

Requirement §5.4.c.2 *A plan view site map at a scale of one inch equal to one hundred feet (1"=100') or greater, showing appropriate detail of all site features, including the identification of site access that provides for a stabilized construction entrance and exit to reduce tracking of sediment onto public or private roads; and*

Antero Response:
"Overall Site Plan," "Final Site Design Plan," "Well Pad Profiles & Cross Sections," "Staging Pad Profiles & Cross Sections", "Main Access Road Profiles & Cross Sections," and "Top Soil Pile Profiles & Cross Sections" maps are included on pages 5-22 of the Site Design. Specific design and layout and inspection and maintenance notes for a stabilized construction entrance are included in the "Construction and E&S Control Notes" verbiage on page 3.

Requirement §5.4.c.3. *The location of all proposed erosion and sediment control BMPs*

Antero Response:
"Overall Site Plan," "Final Site Design Plan," "Well Pad Profiles & Cross Sections," "Staging Pad Profiles & Cross Sections", "Main Access Road Profiles & Cross Sections," and "Top Soil Pile Profiles & Cross Sections" maps are included on pages 5-22 of the Site Design locate all proposed erosion and sediment control BMPs.

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POOL WELL PAD
FINAL SITE DESIGN, CONSTRUCTION PLANS, & EROSION & SEDIMENT CONTROL PLANS
ANTERO RESOURCES CORPORATION

LAT./LONG: N 39° 17' 50.56" W 80° 54' 37.54"
(APPROXIMATE CENTER OF PROJECT)

APPROVED
WVDEP OOG
5/17/2016

WEST VIRGINIA 811 ONE CALL WAS PERFORMED IN DECEMBER, 2015.

THE FOLLOWING UTILITY COMPANIES MAY BE PRESENT IN THE PROJECT AREA:

- FRONTIER COMMUNICATIONS (FORMERLY VERIZON)
- ALLIANCE PETROLEUM CORPORATION
- CONSUMERS GAS UTILITY COMPANY
- ENERGY CORPORATION OF AMERICA
- EQT MIDSTREAM
- FIRST ENERGY CORP

WEST VIRGINIA 811 — CALL BEFORE YOU DIG!

WEST VIRGINIA STATE LAW REQUIRES THAT YOU CALL TWO BUSINESS DAYS BEFORE YOU DIG IN THE STATE OF WEST VIRGINIA. IT'S THE LAW!

PROJECT OWNER/APPLICANT

ANTERO RESOURCES CORPORATION
535 WHITE OAKS BLVD
BRIDGEPORT, WV 26330
PH (304) 842-4100
CONTACT ROBERT WIRKS

CIVIL ENGINEER

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
600 MARKETPLACE AVE - SUITE 200
BRIDGEPORT, WV 26330
PH (304) 933-3119
CONTACT: JOSEPH D. ROBINSON, P.E.

WVDOH

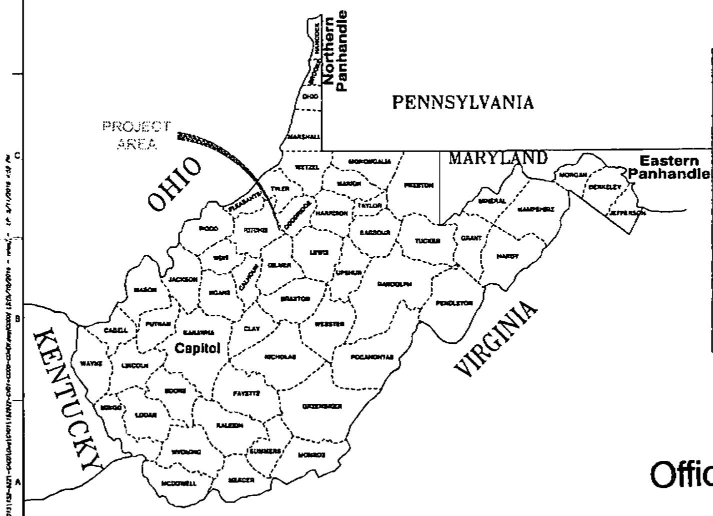
DISTRICT THREE
PH: (304) 420-4585
CONTACT: DISTRICT ENGINEER JAMES E. ROTEN, JR

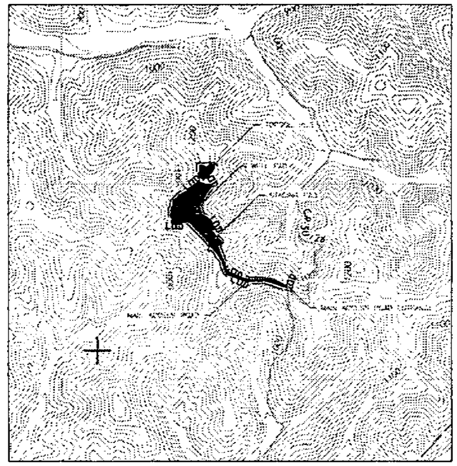
SPILL HOTLINE

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP)
PH: (800) 642-3074

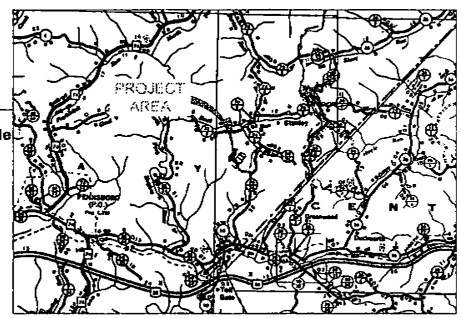
NATIONAL RESPONSE CENTER
PH: (800) 424-8802

LOCAL EMERGENCY SERVICES		
	NAME	TELEPHONE NO.
AMBULANCE		911
HOSPITAL EMERGENCY ROOM	UNITED HOSPITAL CENTER	(681) 342-1000
FIRE DEPARTMENT		911
POLICE DEPARTMENT		911
POISON CONTROL CENTER	WEST VIRGINIA POISON CENTER	(800) 222-1222





LOCATION MAP
PENNSBORO USGS 7.5' QUAD
SCALE IN FEET
0 1000 2000
1 INCH = 1000 FEET
NORTH



VICINITY MAP
RITCHIE, DODDRIDGE, AND TYLER COUNTY ROAD MAPS
SCALE IN FEET
1 MILE 2 MILE
1 INCH = 1 MILE
NORTH

FLOOD PLAIN CONDITIONS	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	NO
HEC-RAS STUDY COMPLETED:	N/A
FLOODPLAIN SHOWN ON DRAWINGS:	N/A
FIRM MAP NUMBER(S) FOR SITE:	54085C0125C
ACREAGE OF CONSTRUCTION IN FLOODPLAIN:	N/A

SITE LOCATIONS	WEST VIRGINIA NORTH ZONE			
	NAD 83 (2011)		UTM83-17	
	LATITUDE	LONGITUDE	NORTHING	EASTING
BEGINNING OF MAIN ACCESS ROAD	39.294625	-80.905480	4349476.5608	508150.6172
CENTROID OF PAD	39.298141	-80.911485	4349866.2298	507632.4225
CENTROID OF STAGING AREA	39.296792	-80.909911	4349716.5653	507768.3110
CENTROID OF WATER TANK	39.297272	-80.910384	4349769.8190	507729.1284

WELL HEAD	NAD83		UTM-M		WV NORTH - NAD27		WV NORTH - NAD83	
	LATITUTE	LONGITUDE	NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING
EUGENE 1H	39.298152	-80.911489	4349867.4247	507632.0540	293812.4504	1600508.9361	293846.7915	1569067.8632
VERNON 1H	39.298127	-80.911474	4349864.6586	507633.3172	293803.3043	1600512.9296	293837.6455	1569071.8568
VERNON 2H	39.298102	-80.911460	4349861.8920	507634.5863	293794.1559	1600516.9428	293828.4972	1569075.8700
VERNON 3H	39.298077	-80.911445	4349859.1076	507635.8470	293784.9497	1600520.9272	293819.2911	1569079.8543
UNKNOWN UNIT 1	39.298040	-80.911423	4349854.9530	507637.7476	293771.2117	1600526.9366	293805.5533	1569085.8637
UNKNOWN UNIT 2	39.298002	-80.911401	4349850.7802	507639.6542	293757.4141	1600532.9648	293791.7557	1569091.8919
UNKNOWN UNIT 3	39.297965	-80.911379	4349846.6356	507641.5501	293743.7095	1600538.9592	293778.0513	1569097.8862
UNKNOWN UNIT 4	39.297927	-80.911357	4349842.4892	507643.4430	293729.9991	1600544.9437	293764.3410	1569103.8707
UNKNOWN UNIT 5	39.297890	-80.911335	4349838.3332	507645.3389	293716.2568	1600550.9377	293750.5989	1569109.8648
UNKNOWN UNIT 6	39.297852	-80.911313	4349834.1737	507647.2454	293702.5028	1600556.9660	293736.8450	1569115.8930
UNKNOWN UNIT 7	39.297815	-80.911291	4349830.0138	507649.1252	293688.7488	1600562.9068	293723.0911	1569121.8338
UNKNOWN UNIT 8	39.297777	-80.911269	4349825.8576	507651.0345	293675.0053	1600568.9447	293709.3477	1569127.8717

Limits of Disturbance Parcel Break Ups - Pool Well Pad					
Ritchie County, West Virginia					
Owner	TM-Parcel	Deed-Page	Total Acres	Type of Disturbance	Acreage
Glenn Pool & John Paul	20-17.1	270-512	11.11	WELL PAD	0.57
				Total	0.57
Dennis & Delsa Sellers	21-30	228-373	39.26	WELL PAD	11.32
				TOPSOIL	1.84
				STAGING AREA	0.4
				Total	13.56
Dennis & Delsa Sellers	21-30.2	228-373	12.25	WELL PAD	0.37
				Total	0.37
Dennis & Delsa Sellers	21-37.2	228-373	37.40	MAIN ACCESS ROAD	2.88
				STAGING AREA	1.3
				Total	4.18
Richard Lee Flyer	21-44	150-451	66.75	MAIN ACCESS ROAD	1.18
				Total	1.18
Total Disturbance					19.86

L.O.D. AREAS	
DESCRIPTION	ACRES
MAIN ACCESS ROAD	4.06
WELL PAD	12.26
TOPSOIL	1.84
STAGING AREA	1.70
TOTAL	19.86
WOODED	17.61

SHEET INDEX	
[illegible]	[illegible]

PLAN REPRODUCTION WARNING

THE PLANS HAVE BEEN CREATED ON ANSI D (22" X 34") SHEETS. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.

THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING. ANY SET OF THE PLANS THAT IS NOT PLOTTED IN FULL COLOR SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION PURPOSES.

WARNING: INFORMATION MAY BE LOST IN COPYING AND/OR GRAY SCALE PLOTTING.

[illegible]	
[illegible]	[illegible]

REVISION RECORD
NO | DATE | DESCRIPTION
[illegible]

Civil & Environmental Consultants, Inc.
600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330
Ph: 304.933.3119 · 855.488.9539 · Fax: 304.933.3327
www.cecinc.com

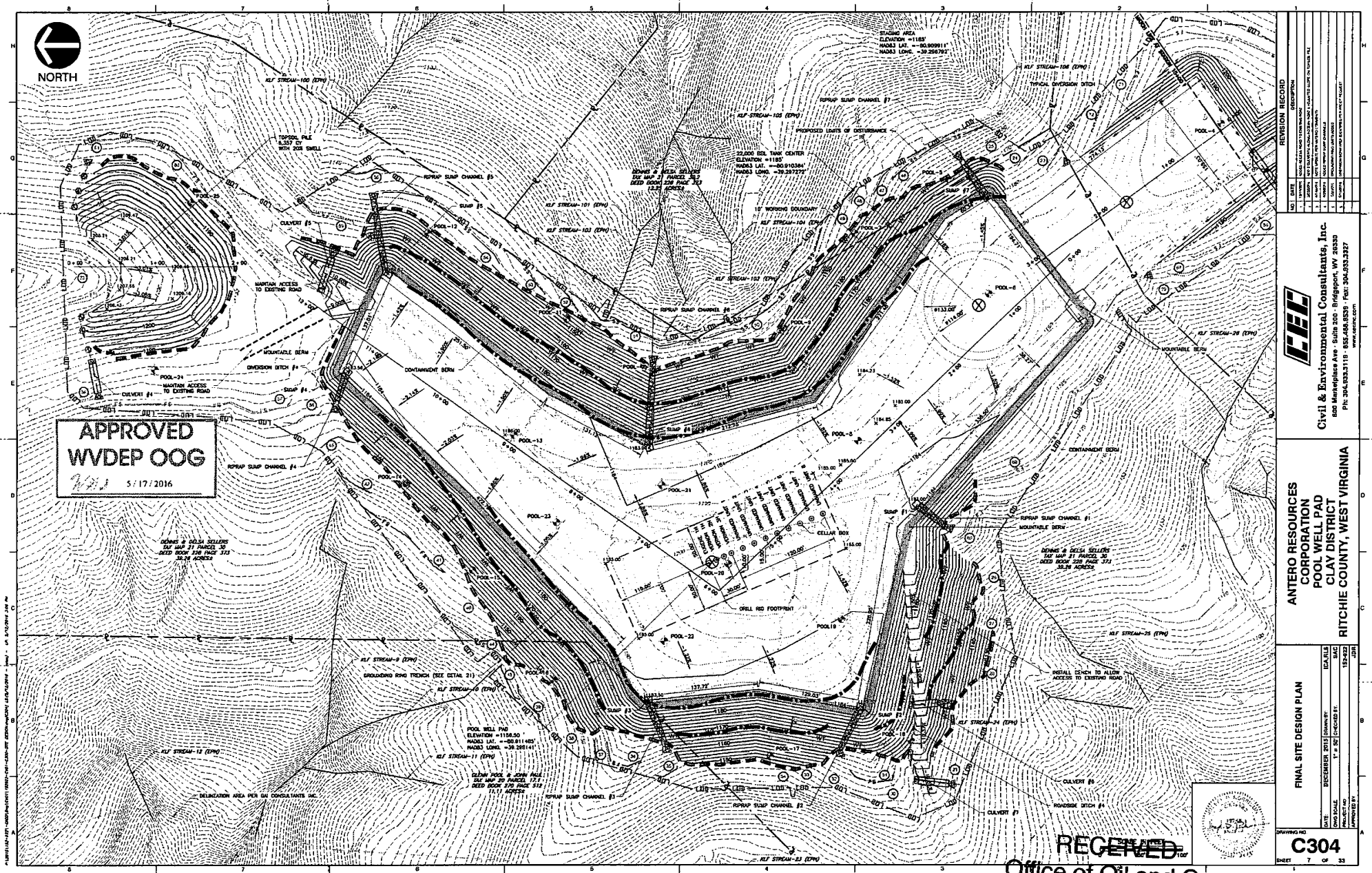
ANTERO RESOURCES CORPORATION
POOL WELL PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA

COVER SHEET

DATE:	DECEMBER 2015	DRAWN BY	ICA,RLS
DWG SCALE	AS SHOWN	CHECKED BY:	SAC
PROJECT NO	152-922		
APPROVED BY	JDR		

DRAWING NO.: C000
SHEET 1 OF 33

RECEIVED
Office of Oil and Gas
JUN 14 2016
WV Department of Environmental Protection


NORTH
APPROVED
WVDEP OOG
5/17/2016
REVISION RECORD
DESCRIPTION
Civil & Environmental Consultants, Inc.
800 Market Place Ave - Suite 200 - Bridgeport, WV 26330
Ph: 304.933.3118 - 855.488.8539 - Fax: 304.933.3927
www.cecinc.com
ANTERO RESOURCES CORPORATION
POOL WELL PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA
FINAL SITE DESIGN PLAN
DRAWING NO
C304
SHEET 7 OF 33
RECEIVED
Office of Oil and Gas
JUN 14 2016
WV Department of
Environmental Protection

POOL WELL
FINAL SITE DESIGN, CONST
EROSION & SEDIMENT C
ANTERO RESOURCES

LAT./LONG: N 39° 17' 50.56" W
(APPROXIMATE CENTER O

WEST VIRGINIA 811 ONE CALL WAS PERFORMED IN DECEMBER, 2015.

THE FOLLOWING UTILITY COMPANIES MAY BE PRESENT IN THE PROJECT AREA:

- FRONTIER COMMUNICATIONS (FORMERLY VERIZON)
- ALLIANCE PETROLEUM CORPORATION
- CONSUMERS GAS UTILITY COMPANY
- ENERGY CORPORATION OF AMERICA
- EQT MIDSTREAM
- FIRST ENERGY CORP

WEST VIRGINIA 811 CALL BEFORE YOU DIG!

WEST VIRGINIA STATE LAW REQUIRES THAT YOU CALL TWO BUSINESS DAYS BEFORE YOU DIG IN THE STATE OF WEST VIRGINIA. IT'S THE LAW!

LOCATION MA

PENNSBORO USGS 7.5'
SCALE IN FEET
0 1000
1 INCH = 1000 FEET

PROJECT OWNER/APPLICANT

ANTERO RESOURCES CORPORATION
535 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PH: (304) 842-4100
CONTACT: ROBERT WIRKS

CIVIL ENGINEER

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
600 MARKETPLACE AVE - SUITE 200
BRIDGEPORT, WV 26330
PH: (304) 933-3119
CONTACT: JOSEPH D. ROBINSON, P.E.

WVDOH

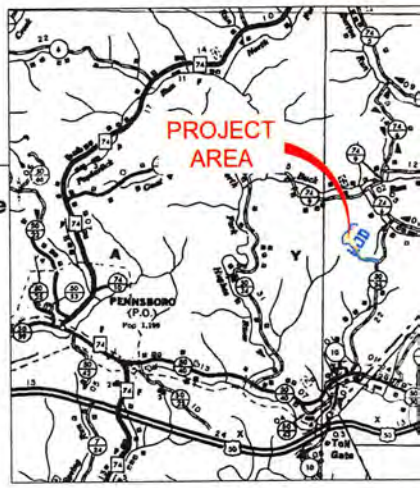
DISTRICT THREE
PH: (304) 420-4595
CONTACT: DISTRICT ENGINEER
JAMES E. ROTEN, JR.

SPILL HOTLINE

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP)
PH: (800) 642-3074

NATIONAL RESPONSE CENTER
PH: (800) 424-8802

LOCAL EMERGENCY SERVICES		
	NAME	TELEPHONE NO.
AMBULANCE		911
HOSPITAL EMERGENCY ROOM	UNITED HOSPITAL CENTER	(681) 342-1000
FIRE DEPARTMENT		911
POLICE DEPARTMENT		911
POISON CONTROL CENTER	WEST VIRGINIA POISON CENTER	(800) 222-1222



VICINITY MA

RITCHIE, DODDRIDGE, AND TYLER C
SCALE IN FEET
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1 INCH = 1 MILE

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AD
UCTION PLANS, &
NTROL PLANS
ORPORATION

54' 37.54"
OJECT)

NORTH

MAPS

NORTH

FLOOD PLAIN CONDITIONS	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	NO
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Michael Daff
5/18/16

SHEET INDEX	
SHEET 1 OF 32	COVER SHEET
SHEET 2 OF 32	EXISTING CONDITIONS PLAN
SHEET 3 OF 32	CONSTRUCTION NOTES
SHEET 4 OF 32	SUMMARY OF QUANTITIES
SHEET 5 OF 32	OVERALL SITE PLAN
SHEETS 6-7 OF 32	FINAL SITE DESIGN PLAN
SHEETS 8-14 OF 32	WELL PAD PROFILES & CROSS SECTIONS
SHEETS 15-16 OF 32	STAGING PAD PROFILE & CROSS SECTIONS
SHEETS 17-21 OF 32	ACCESS ROAD PROFILES & CROSS SECTIONS
SHEETS 22 OF 32	TOPSOIL PILE PROFILE & CROSS SECTIONS
SHEETS 23-30 OF 32	CONSTRUCTION DETAILS
SHEETS 31-32 OF 32	RECLAMATION PLAN

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WELL RESTRICTIONS CHECKLIST (HORIZONTAL 6A WELL)	
AT LEAST 100 FEET FROM PAD AND LOD (INCLUDING ANY E&S CONTROL FEATURE) TO ANY PERENNIAL STREAM, LAKE, POND, RESERVOIR OR WETLAND:	YES
AT LEAST 300 FEET FROM PAD AND LOD (INCLUDING ANY E&S CONTROL FEATURE) TO ANY NATURALLY PRODUCING TROUT STREAM:	YES
AT LEAST 1000 FROM PAD AND LOD (INCLUDING ANY E&S CONTROL FEATURE) TO ANY GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY:	YES
AT LEAST 250 FEET FROM AN EXISTING WATER WELL OR DEVELOPED SPRING TO WELL BEING DRILLED:	YES
AT LEAST 625 FEET FROM AN OCCUPIED DWELLING STRUCTURE TO CENTER OF PAD:	YES
AT LEAST 625 FEET FROM AGRICULTURAL BUILDINGS LARGER THAN 2500 SQUARE FEET TO THE CENTER OF THE PAD:	YES

JOSEPH D. ROBINSON REGISTERED 19756 STATE OF WEST VIRGINIA

RECEIVED
Office of Oil and Gas
MAY 20 2016
WV Department of Environmental Protection

REVISION RECORD		
NO	DATE	DESCRIPTION
1	12/15/2015	UPDATES PER ANTERO COMMENTS
2	12/15/2015	ADDED ACCESS ROAD TO EXISTING ROAD
3	2/22/2016	UPDATES PER ANTERO COMMENTS

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ANTERO RESOURCES CORPORATION
POOL WELL PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA

COVER SHEET

DRAWN BY:	ICA,RLS
DATE:	DECEMBER-2015
CHECKED BY:	SAC
DWG SCALE:	AS SHOWN
PROJECT NO:	152-922
APPROVED BY:	JDR

DRAWING NO: C000
SHEET 1 OF 32