



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

October 11, 2013

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-8510062, 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: HORNET UNIT 1H
Farm Name: QUIMBY, FRANKLIN P.

API Well Number: 47-8510062

Permit Type: Horizontal 6A Well

Date Issued: 10/11/2013

Promoting a healthy environment.

PERMIT CONDITIONS

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

CONDITIONS

1. The Office of Oil and Gas has approved your permit application, which includes your addendum. Please be advised that the addendum is part of the terms of the well work permit, and will be enforced as such. The Office of Oil and Gas must receive a copy of all data collected, and submitted in a timely fashion, but no later than the WR35 submittal.
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 fifty (50) 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.
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

PERMIT CONDITIONS

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.



Addendum for Antero pads in Ritchie County, WV

Hornet Unit 1H Permit #47-085-10062 Edwin pad

Hornet Unit 2H Permit #47-085-10063 Edwin pad

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

- 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 Marcellus to Alexander wells 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 stimulations, 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
- Tracers demonstrate that we rarely reach offset wells at 660' offset
 - Will use tracers at each lateral

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

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

2) Operator's Well Number: Hornet Unit 1H Well Pad Name: Edwin Pad

3 Elevation, current ground: ~1220' Elevation, proposed post-construction: 1191'

4) Well Type: (a) Gas Oil Underground Storage

Other

(b) If Gas: Shallow Deep

Horizontal

5) Existing Pad? Yes or No: No

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):

Marcellus Shale: 6800' TVD, Anticipated Thickness- 50 Feet, Associated Pressure- 3000#

7) Proposed Total Vertical Depth: 6800' TVD

8) Formation at Total Vertical Depth: Marcellus Shale

9) Proposed Total Measured Depth: 18,700' MD

10) Approximate Fresh Water Strata Depths: 116', 128', 202'

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

12) Approximate Saltwater Depths: 1,366', 2,140', 2,254'

13) Approximate Coal Seam Depths: 194'

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

15) Does proposed well location contain coal seams directly overlying or adjacent to an active mine? If so, indicate name and depth of mine: No

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

17) Describe fracturing/stimulating methods in detail:

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

Received

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 18.74 acres

19) Area to be disturbed for well pad only, less access road (acres): 5.32 acres

20)

CASING AND TUBING PROGRAM

85 10062

TYPE	Size	New or Used	Grade	Weight per ft.	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
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#	2460'	2460'	CTS, 1002 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	18700'	18700'	4747 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

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

PACKERS

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

DR Received

10-3-13

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21) Describe centralizer placement for each casing string. Conductor: no centralizers
Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.
Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.
Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

22) Describe all cement additives associated with each cement type. _____
Conductor: no additives, Class A cement.
Surface: Class A cement with 2-3% calcium chloride
Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat
Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51
Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

23) Proposed borehole conditioning procedures. Conductor: blowhole clean with air, run casing, 10 bbls fresh water.
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.
Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.
Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water. pump 48 bbls barite pill. pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

*Note: Attach additional sheets as needed.

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) Tributary of Cabin Run Quadrangle Pullman 7.5'

Elevation 1191' County Ritchie District Clay

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

Will a pit be used for drill cuttings? Yes No X

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 N/A No N/A If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

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

Will closed loop system be used? Yes

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

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

Additives to be used 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)

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 Gerard G. Alberts

Company Official (Typed Name) Gerard G. Alberts

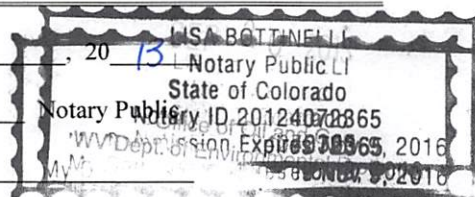
Company Official Title Environmental & Regulatory Manager

Received

Subscribed and sworn before me this 11 day of Sept

Handwritten signature of notary

My commission expires 11/9/2010



Form WW-9

Operator's Well No. Hornet Unit 1H

Antero Resources Corporation

Proposed Revegetation Treatment: Acres Disturbed 18.74 Prevegetation pH _____

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

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

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

Mulch 2-3 Tons/acre

Access Roads (8.48) + Drill Water Containment Pad & (5.32) + Spoil Pads (4.94) = 18.74 Acres
Seed Mixtures

Seed Type	Area I (Temporary) lbs/acre	Seed Type	Area II (Permanent) lbs/acre
Tall Fescue	45	Tall Fescue	45
Perennial Rye Grass	20	Perennial Rye Grass	20
*or type of grass seed requested by surface owner		*or type of grass seed requested by surface owner	

Attach:
Drawing(s) of road, location, pit and proposed area for land application.
Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]
Comments: grasses & mulch all out area no less than 2 ton per acre - maintain all O&G stuff

Title: safety gas inspect Date: 10-10-13
Field Reviewed? () Yes () No

Received
SEP 20 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

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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**WV Department of
Environmental Protection**

13. Escaid 110
Drilling Fluid Solvent – Aliphatic Hydrocarbon
14. Ligco
Highly Oxidized Leonardite – Filtration 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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WV Department of
Environmental Protection



Water Management Plan: Primary Water Sources



WMP- 01496

API/ID Number:

047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Important:

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

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

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

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

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

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

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

APPROVED OCT 10 2013

Source Summary

WMP- 01496

API Number:

047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Stream/River

● Source **Ohio River @ Ben's Run Withdrawal Site** Tyler Owner: **Ben's Run Land Company Limited Partnership**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.46593	-81.110781

Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): **3,360** Min. Gauge Reading (cfs): **6,468.00** Min. Passby (cfs)

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: <http://www.erh.noaa.gov/ohrfc//flows.shtml>

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.320913	-80.337572

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

Max. Pump rate (gpm): **2,000** Min. Gauge Reading (cfs): **175.00** Min. Passby (cfs) **146.25**

DEP Comments:

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.16761	-80.45069

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

Max. Pump rate (gpm): **3,000** Min. Gauge Reading (cfs): **175.00** Min. Passby (cfs) **106.30**

DEP Comments:

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.16422	-80.45173

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

Max. Pump rate (gpm): 2,000 **Min. Gauge Reading (cfs): 175.00** **Min. Passby (cfs) 106.30**

DEP Comments:

Source **Middle Island Creek @ Mees Withdrawal Site** Pleasants Owner: **Sarah E. Mees**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.43113	-81.079567

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

Max. Pump rate (gpm): 3,360 **Min. Gauge Reading (cfs): 52.59** **Min. Passby (cfs) 47.63**

DEP Comments:

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.379292	-80.867803

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

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

DEP Comments:

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.39675	-80.738197

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

Max. Pump rate (gpm): 1,000 **Min. Gauge Reading (cfs): 74.77** **Min. Passby (cfs) 13.10**

DEP Comments:

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.26054	-80.720998

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

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

DEP Comments:

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.211317	-80.679592

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

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

DEP Comments:

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

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
11/11/2013 11/11/2014 12,760,000 39.174306 -80.702992

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

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

DEP Comments:

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

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
11/11/2013 11/11/2014 12,760,000 39.302006 -80.824561

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

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

DEP Comments:

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

Start Date End Date Total Volume (gal) Max. daily purchase (gal) Intake Latitude: Intake Longitude:
11/11/2013 11/11/2014 12,760,000 39.277142 -80.690386

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

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

DEP Comments:

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.198369	-80.870969

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

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

DEP Comments:

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		39.322363	-80.936771

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

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

DEP Comments:

Source Summary

WMP- 01496

API Number:

047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Purchased Water

● Source **Ohio River @ Select Energy** Pleasants Owner: **Select Energy**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000	500,000	39.346473	-81.338727

Regulated Stream? **Ohio River Min. Flow** Ref. Gauge ID: **9999998** Ohio River Station: **Racine Dam**

Max. Pump rate (gpm): 1,680 **Min. Gauge Reading (cfs): 7,216.00** **Min. Passby (cfs)**

DEP Comments: Refer to the specified station on the National Weather Service's Ohio River forecast website: <http://www.erh.noaa.gov/ohrfc//flows.shtml>

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

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000	1,000,000	39.399094	-81.185548

Regulated Stream? **Ohio River Min. Flow** Ref. Gauge ID: **9999999** Ohio River Station: **Willow Island Lock & Dam**

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

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

● Source **Claywood Park PSD** Wood Owner: **Claywood Park PSD**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000		-	-

Regulated Stream? Ref. Gauge ID: **9999998** Ohio River Station: **Racine Dam**

Max. Pump rate (gpm): **Min. Gauge Reading (cfs): 7,216.00** **Min. Passby (cfs)**

DEP Comments: Elevation analysis indicates that this location has approximately the same elevation as Little Kanawha's pour point into the Ohio River. As such, it is deemed that water flow at this location is heavily influenced by the Ohio River.

Source **Sun Valley Public Service District** **Harrison** Owner: **Sun Valley PSD**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
11/11/2013	11/11/2014	12,760,000	200,000	-	-

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

Max. Pump rate (gpm): **Min. Gauge Reading (cfs): 171.48** **Min. Passby (cfs)**

DEP Comments:

Source Detail

WMP- 01496

API/ID Number: 047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Source ID: 26392 Source Name: Ohio River @ Select Energy
Select Energy

Source Latitude: 39.346473

Source Longitude: -81.338727

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 County: Pleasants

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream? Tier 3?

Max. Pump rate (gpm): 1,680

Regulated Stream? Ohio River Min. Flow

Max. Simultaneous Trucks:

Proximate PSD?

Max. Truck pump rate (gpm):

Gauged Stream?

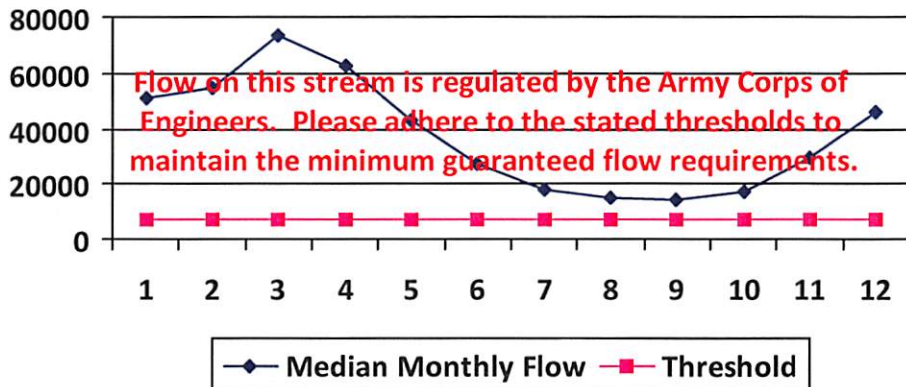
Reference Gaug: 9999998 Ohio River Station: Racine Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 7216

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	50,956.00	-	-
2	54,858.00	-	-
3	73,256.00	-	-
4	62,552.00	-	-
5	43,151.00	-	-
6	27,095.00	-	-
7	17,840.00	-	-
8	14,941.00	-	-
9	14,272.00	-	-
10	17,283.00	-	-
11	29,325.00	-	-
12	46,050.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs): 3.74

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): -

Passby at Location (cfs): -

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

Source Detail

WMP- 01496

API/ID Number: 047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Source ID: 26393 Source Name: Middle Island Creek @ Solo Construction
Solo Construction, LLC

Source Latitude: 39.399094

Source Longitude: -81.185548

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 County: Pleasants

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm):

Regulated Stream? Ohio River Min. Flow

Max. Simultaneous Trucks:

Proximate PSD? City of St. Marys

Max. Truck pump rate (gpm) 0

Gauged Stream?

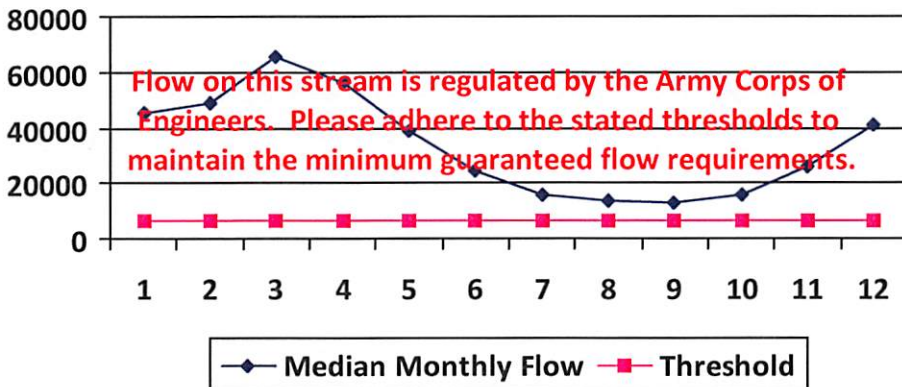
Reference Gaug 9999999 Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.) 25,000.00

Gauge Threshold (cfs): 6468

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): -

Passby at Location (cfs): -

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

Source Detail

WMP-01496

API/ID Number: 047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Source ID: 26394 Source Name: Claywood Park PSD Source Latitude: -
 Claywood Park PSD Source Longitude: -

HUC-8 Code: 5030203

Drainage Area (sq. mi.): 25000 County: Wood

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream? Tier 3?

Max. Pump rate (gpm):

Regulated Stream?

Max. Simultaneous Trucks: 0

Proximate PSD? Claywood Park PSD

Max. Truck pump rate (gpm): 0

Gauged Stream?

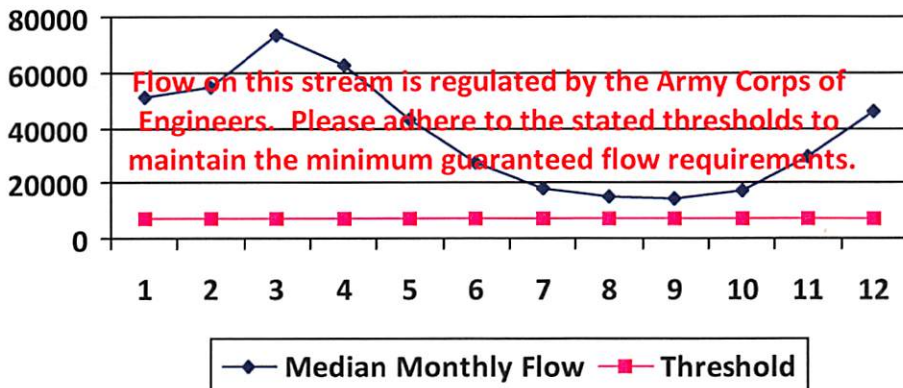
Reference Gaug: 9999998 Ohio River Station: Racine Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 7216

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	50,956.00	-	-
2	54,858.00	-	-
3	73,256.00	-	-
4	62,552.00	-	-
5	43,151.00	-	-
6	27,095.00	-	-
7	17,840.00	-	-
8	14,941.00	-	-
9	14,272.00	-	-
10	17,283.00	-	-
11	29,325.00	-	-
12	46,050.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): -

Passby at Location (cfs): -

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

Source Detail

WMP- 01496

API/ID Number: 047-085-10062

Operator: Antero Resources

Hornet Unit 1H

Source ID: 26395 Source Name: Sun Valley Public Service District Source Latitude: -
 Sun Valley PSD Source Longitude: -

HUC-8 Code: 5020002

Drainage Area (sq. mi.): 391.85 County: Harrison

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm):

Regulated Stream?

Stonewall Jackson Dam

Max. Simultaneous Trucks:

Proximate PSD?

Max. Truck pump rate (gpm):

Gauged Stream?

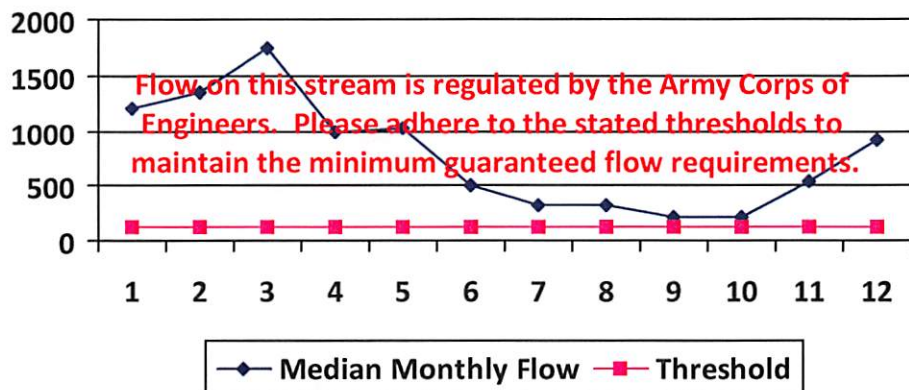
Reference Gaug: 3061000 WEST FORK RIVER AT ENTERPRISE, WV

Drainage Area (sq. mi.): 759.00

Gauge Threshold (cfs): 234

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	1,200.75	-	-
2	1,351.92	-	-
3	1,741.33	-	-
4	995.89	-	-
5	1,022.23	-	-
6	512.21	-	-
7	331.86	-	-
8	316.87	-	-
9	220.48	-	-
10	216.17	-	-
11	542.45	-	-
12	926.12	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs):

Downstream Demand (cfs):

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): -

Passby at Location (cfs): -

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

Source Detail

WMP- 01496 API/ID Number: 047-085-10062 Operator: Antero Resources
 Hornet Unit 1H

Source ID: 26378 Source Name: Ohio River @ Ben's Run Withdrawal Site Source Latitude: 39.46593
 Ben's Run Land Company Limited Partnership Source Longitude: -81.110781

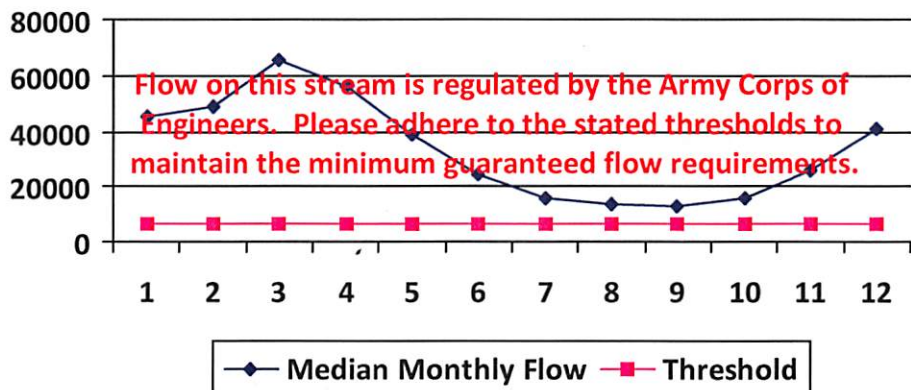
HUC-8 Code: 5030201 Drainage Area (sq. mi.): 25000 County: Tyler Anticipated withdrawal start date: 11/11/2013
 Anticipated withdrawal end date: 11/11/2014

- Endangered Species? Mussel Stream?
 - Trout Stream? Tier 3?
 - Regulated Stream? Ohio River Min. Flow
 - Proximate PSD?
 - Gauged Stream?
- Total Volume from Source (gal): 12,760,000
 Max. Pump rate (gpm): 3,360
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

Reference Gaug: 9999999 Ohio River Station: Willow Island Lock & Dam
 Drainage Area (sq. mi.): 25,000.00 Gauge Threshold (cfs): 6468

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -
 Upstream Demand (cfs): 0.00
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 7.49
 Headwater Safety (cfs): 0.00
 Ungauged Stream Safety (cfs): 0.00

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

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

Source Detail

WMP-01496 API/ID Number: 047-085-10062 Operator: Antero Resources
 Hornet Unit 1H

Source ID: 26379 Source Name: West Fork River @ JCP Withdrawal Source Latitude: 39.320913
 James & Brenda Raines Source Longitude: -80.337572

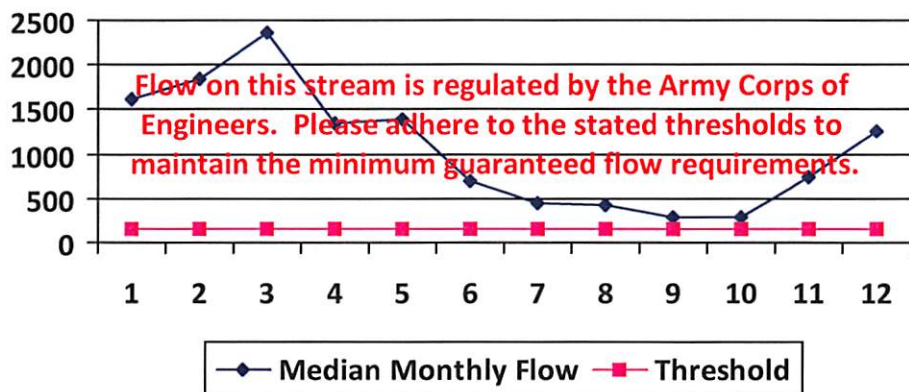
HUC-8 Code: 5020002 Drainage Area (sq. mi.): 532.2 County: Harrison Anticipated withdrawal start date: 11/11/2013
 Anticipated withdrawal end date: 11/11/2014

- Endangered Species? Mussel Stream?
 - Trout Stream? Tier 3?
 - Regulated Stream? Stonewall Jackson Dam
 - Proximate PSD?
 - Gauged Stream?
- Total Volume from Source (gal): 12,760,000
 Max. Pump rate (gpm): 2,000
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

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

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -
 Upstream Demand (cfs): 24.29
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 4.46
 Headwater Safety (cfs): 0.00
 Ungauged Stream Safety (cfs): 0.00

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

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

Source Detail

WMP- 01496

API/ID Number: 047-085-10062

Operator: Antero Resources

Hornet Unit 1H

Source ID: 26380 Source Name: West Fork River @ McDonald Withdrawal
David Shrieves

Source Latitude: 39.16761
Source Longitude: -80.45069

HUC-8 Code: 5020002

Drainage Area (sq. mi.): 314.91 County: Harrison

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm): 3,000

Regulated Stream?

Stonewall Jackson Dam

Max. Simultaneous Trucks: 0

Proximate PSD?

Max. Truck pump rate (gpm): 0

Gauged Stream?

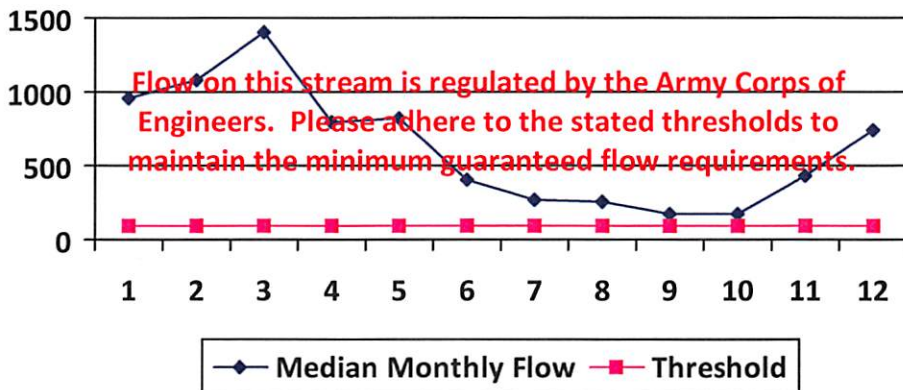
Reference Gaug: 3061000 WEST FORK RIVER AT ENTERPRISE, WV

Drainage Area (sq. mi.): 759.00

Gauge Threshold (cfs): 234

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs): 24.29

Downstream Demand (cfs): 0.00

Pump rate (cfs): 6.68

Headwater Safety (cfs): 24.27

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): -

Passby at Location (cfs): -

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

Source Detail

WMP-01496

API/ID Number: 047-085-10062

Operator: Antero Resources

Hornet Unit 1H

Source ID: 26381 Source Name: West Fork River @ GAL Withdrawal
David Shrieves

Source Latitude: 39.16422
Source Longitude: -80.45173

HUC-8 Code: 5020002

Drainage Area (sq. mi.): 313.67 County: Harrison

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm): 2,000

Regulated Stream? Stonewall Jackson Dam

Max. Simultaneous Trucks: 0

Proximate PSD?

Max. Truck pump rate (gpm): 0

Gauged Stream?

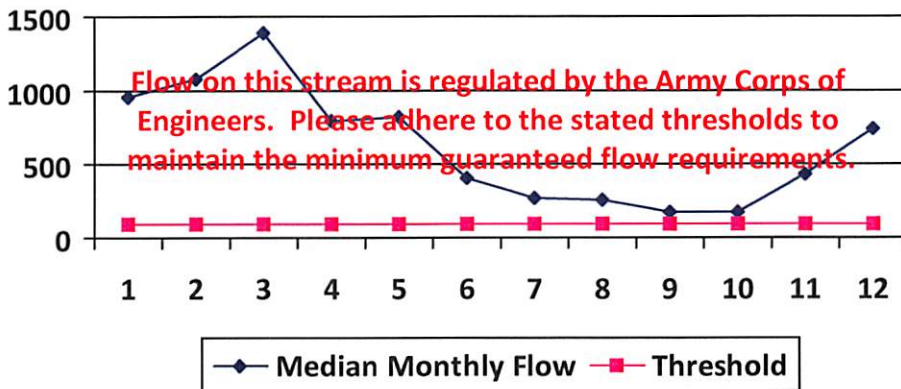
Reference Gaug: 3061000 WEST FORK RIVER AT ENTERPRISE, WV

Drainage Area (sq. mi.): 759.00

Gauge Threshold (cfs): 234

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs): 24.29

Downstream Demand (cfs): 0.00

Pump rate (cfs): 4.46

Headwater Safety (cfs): 24.18

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): -

Passby at Location (cfs): -

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

Source Detail

WMP- 01496

API/ID Number: 047-085-10062

Operator: Antero Resources

Hornet Unit 1H

Source ID: 26382 Source Name: Middle Island Creek @ Mees Withdrawal Site
Sarah E. Mees

Source Latitude: 39.43113
Source Longitude: -81.079567

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 484.78 County: Pleasants

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm): 3,360

Regulated Stream?

Max. Simultaneous Trucks: 0

Proximate PSD?

Max. Truck pump rate (gpm): 0

Gauged Stream?

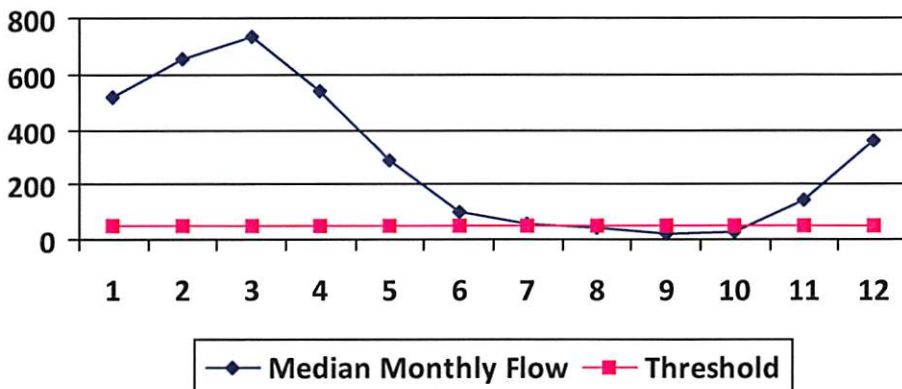
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	519.88	55.12	465.14
2	653.95	55.12	599.22
3	731.75	55.12	677.01
4	543.38	55.12	488.65
5	286.64	55.12	231.90
6	100.10	55.12	45.36
7	56.65	55.12	1.91
8	46.64	55.12	-8.10
9	23.89	55.12	-30.85
10	30.01	55.12	-24.72
11	146.56	55.12	91.83
12	358.10	55.12	303.37

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 47.63

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs): 7.49

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): 52.49

Passby at Location (cfs): 47.63

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

Source Detail

WMP-01496

API/ID Number: 047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Source ID: 26383 Source Name: Middle Island Creek @ Dawson Withdrawal
Gary D. and Rella A. Dawson

Source Latitude: 39.379292

Source Longitude: -80.867803

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 181.34 County: Tyler

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Total Volume from Source (gal): 12,760,000

Max. Pump rate (gpm): 3,000

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

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

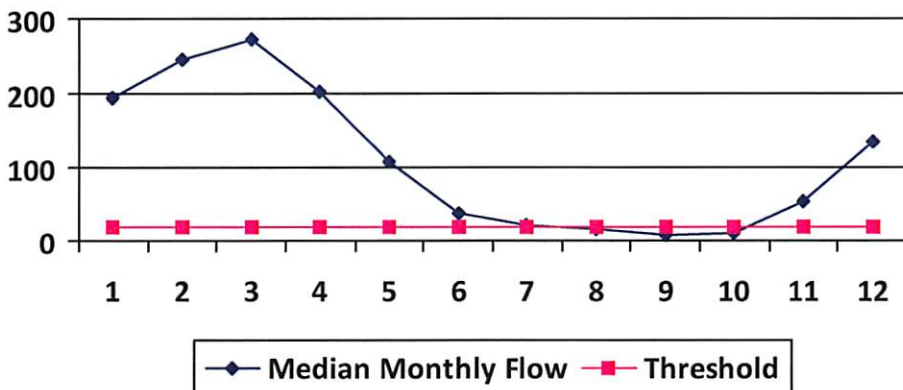
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 17.82

Upstream Demand (cfs): 13.10

Downstream Demand (cfs): 6.55

Pump rate (cfs): 6.68

Headwater Safety (cfs): 4.45

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): 76.03

Passby at Location (cfs): 28.82

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

Source Detail

WMP-01496

API/ID Number: 047-085-10062

Operator: Antero Resources

Hornet Unit 1H

Source ID: 26384 Source Name: McElroy Creek @ Forest Withdrawal Source Latitude: 39.39675
 Forest C. & Brenda L. Moore Source Longitude: -80.738197

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 88.85 County: Tyler

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm): 1,000

Regulated Stream?

Max. Simultaneous Trucks: 0

Proximate PSD?

Max. Truck pump rate (gpm): 0

Gauged Stream?

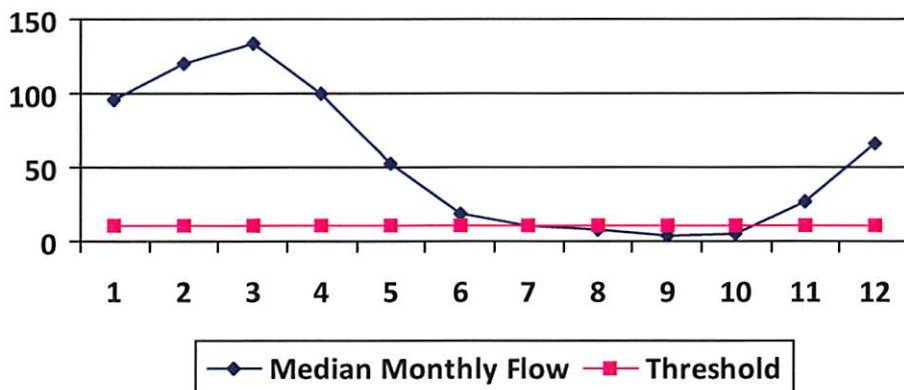
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	95.28	19.78	75.68
2	119.86	19.78	100.25
3	134.11	19.78	114.51
4	99.59	19.78	79.99
5	52.54	19.78	32.93
6	18.35	19.78	-1.26
7	10.38	19.78	-9.22
8	8.55	19.78	-11.05
9	4.38	19.78	-15.23
10	5.50	19.78	-14.10
11	26.86	19.78	7.26
12	65.63	19.78	46.03

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 8.73

Upstream Demand (cfs): 4.46

Downstream Demand (cfs): 0.00

Pump rate (cfs): 2.23

Headwater Safety (cfs): 2.18

Ungauged Stream Safety (cfs): 2.18

Min. Gauge Reading (cfs): 74.19

Passby at Location (cfs): 13.09

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

Source Detail

WMP- 01496 API/ID Number: 047-085-10062 Operator: Antero Resources
 Hornet Unit 1H

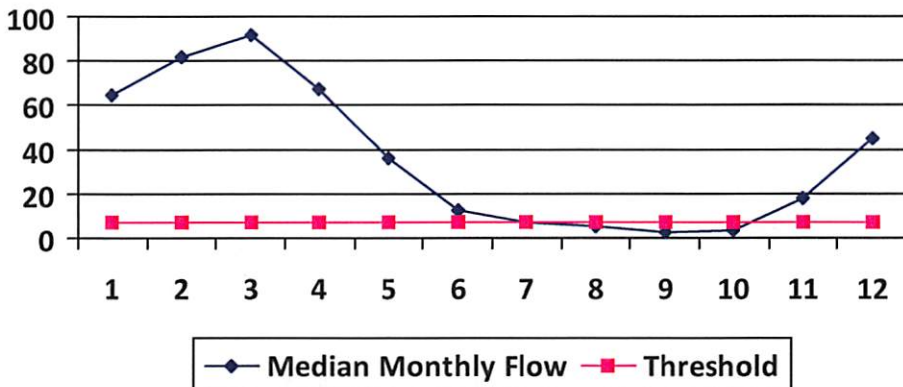
Source ID: 26385 Source Name: Meathouse Fork @ Gagnon Withdrawal Source Latitude: 39.26054
 George L. Gagnon and Susan C. Gagnon Source Longitude: -80.720998
 HUC-8 Code: 5030201
 Drainage Area (sq. mi.): 60.6 County: Doddridge Anticipated withdrawal start date: 11/11/2013
 Anticipated withdrawal end date: 11/11/2014
 Total Volume from Source (gal): 12,760,000
 Max. Pump rate (gpm): 1,000
 Max. Simultaneous Trucks: 0
 Max. Truck pump rate (gpm): 0

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

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

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

Water Availability Profile



Water Availability Assessment of Location

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

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

Source Detail

WMP- 01496

API/ID Number: 047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Source ID: 26386 Source Name: Meathouse Fork @ Whitehair Withdrawal
Elton Whitehair

Source Latitude: 39.211317
Source Longitude: -80.679592

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 30.37 County: Doddridge

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 12,760,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm): 1,000

Regulated Stream?

Max. Simultaneous Trucks: 0

Proximate PSD?

Max. Truck pump rate (gpm): 0

Gauged Stream?

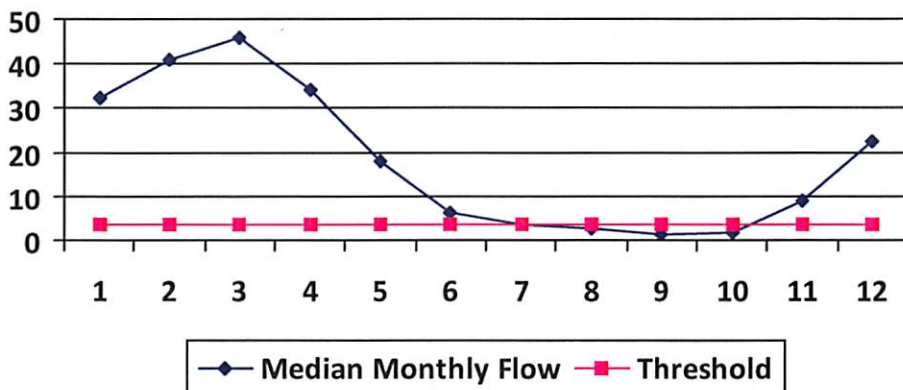
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 2.98

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 2.81

Pump rate (cfs): 2.23

Headwater Safety (cfs): 0.75

Ungauged Stream Safety (cfs): 0.75

Min. Gauge Reading (cfs): 69.73

Passby at Location (cfs): 7.29

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

Source Detail

WMP-01496

API/ID Number: 047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Source ID: 26387 Source Name: Tom's Fork @ Erwin Withdrawal
John F. Erwin and Sandra E. Erwin

Source Latitude: 39.174306
Source Longitude: -80.702992

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 4.01 County: Doddridge

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Total Volume from Source (gal): 12,760,000

Max. Pump rate (gpm): 1,000

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

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

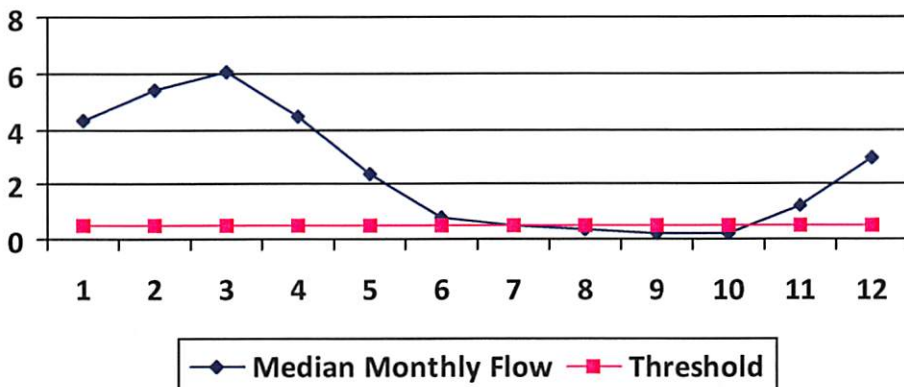
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 0.39

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs): 2.23

Headwater Safety (cfs): 0.10

Ungauged Stream Safety (cfs): 0.10

Min. Gauge Reading (cfs): 69.73

Passby at Location (cfs): 0.59

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

Source Detail

WMP- 01496

API/ID Number: 047-085-10062

Operator: Antero Resources

Hornet Unit 1H

Source ID: 26388 Source Name: Arnold Creek @ Davis Withdrawal
Jonathon Davis

Source Latitude: 39.302006
Source Longitude: -80.824561

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 20.83 County: Doddridge

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

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Total Volume from Source (gal): 12,760,000

Max. Pump rate (gpm): 1,000

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

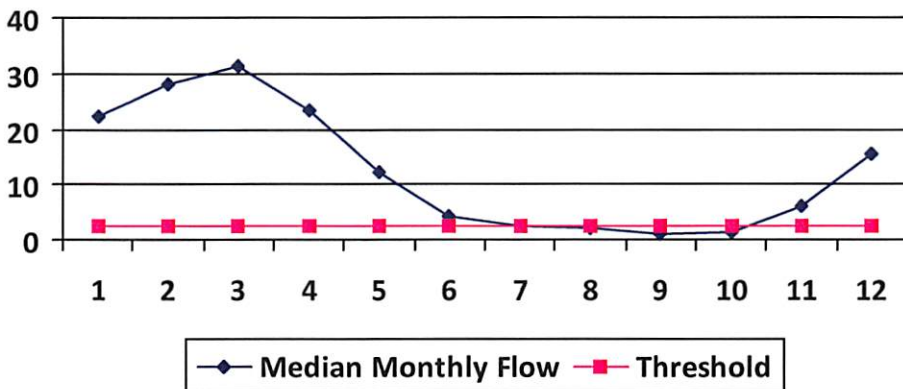
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 2.05

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs): 2.23

Headwater Safety (cfs): 0.51

Ungauged Stream Safety (cfs): 0.51

Min. Gauge Reading (cfs): 69.73

Passby at Location (cfs): 3.07

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

Source Detail

WMP- 01496

API/ID Number: 047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Source ID: 26389 Source Name: Buckeye Creek @ Powell Withdrawal
Dennis Powell

Source Latitude: 39.277142
Source Longitude: -80.690386

HUC-8 Code: 5030201

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

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

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Total Volume from Source (gal): 12,760,000

Max. Pump rate (gpm): 1,000

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

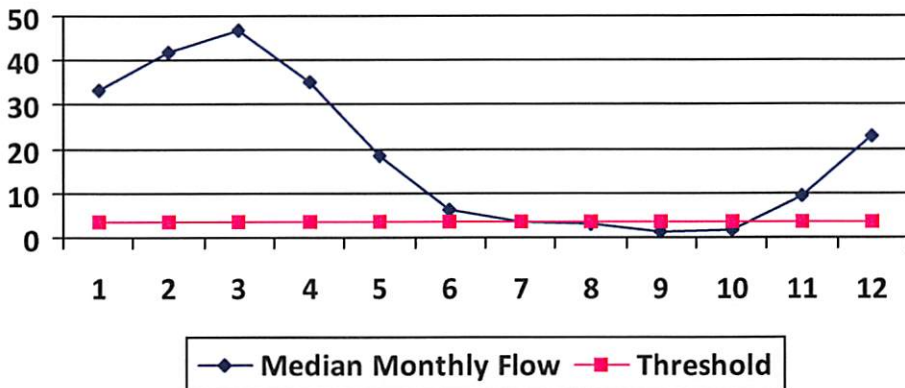
Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.): 458.00

Gauge Threshold (cfs): 45

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 3.06

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs): 2.23

Headwater Safety (cfs): 0.77

Ungauged Stream Safety (cfs): 0.77

Min. Gauge Reading (cfs): 69.73

Passby at Location (cfs): 4.59

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

Source Detail

WMP-01496

API/ID Number: 047-085-10062

Operator: Antero Resources

Hornet Unit 1H

Source ID: 26390 Source Name: South Fork of Hughes River @ Knight Withdrawal
 Tracy C. Knight & Stephanie C. Knight Source Latitude: 39.198369
 Source Longitude: -80.870969

HUC-8 Code: 5030203

Drainage Area (sq. mi.): 16.26 County: Ritchie

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Total Volume from Source (gal): 12,760,000

Max. Pump rate (gpm): 3,000

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

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

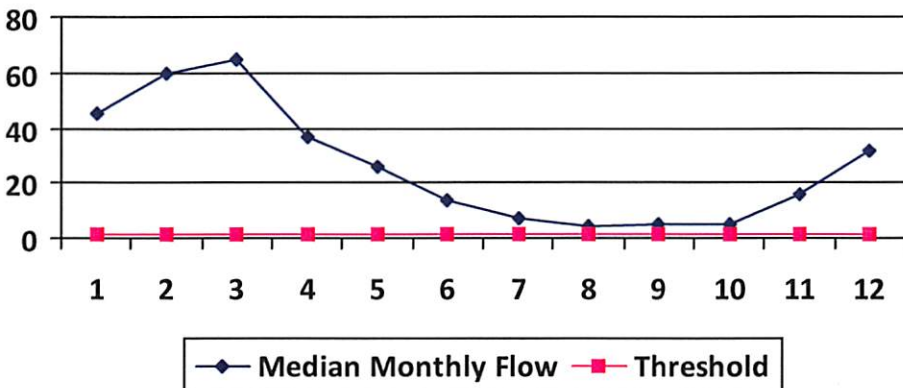
Reference Gaug: 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV

Drainage Area (sq. mi.): 229.00

Gauge Threshold (cfs): 22

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 1.56

Upstream Demand (cfs): 5.62

Downstream Demand (cfs): 0.00

Pump rate (cfs): 6.68

Headwater Safety (cfs): 0.39

Ungauged Stream Safety (cfs): 0.00

Min. Gauge Reading (cfs): 39.80

Passby at Location (cfs): 1.95

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

Source Detail

WMP-01496

API/ID Number: 047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Source ID: 26391 Source Name: North Fork of Hughes River @ Davis Withdrawal Source Latitude: 39.322363
 Lewis P. Davis and Norma J. Davis Source Longitude: -80.936771

HUC-8 Code: 5030203

Drainage Area (sq. mi.): 15.18 County: Ritchie

Anticipated withdrawal start date: 11/11/2013

Anticipated withdrawal end date: 11/11/2014

Total Volume from Source (gal): 12,760,000

Max. Pump rate (gpm): 1,000

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

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

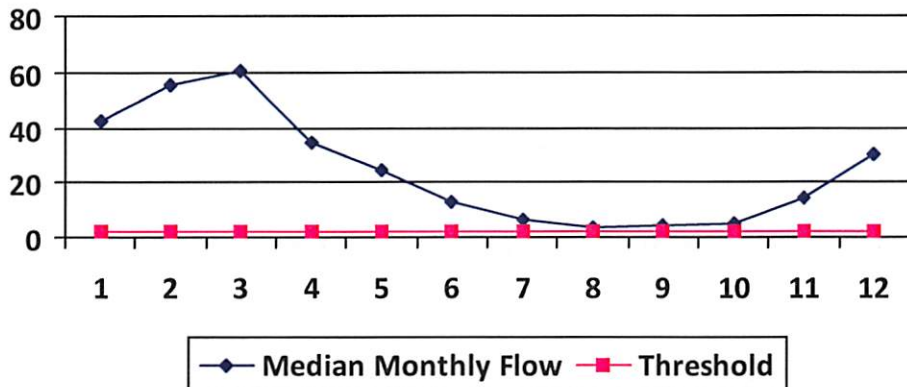
Reference Gaug: 3155220 SOUTH FORK HUGHES RIVER BELOW MACFARLAN, WV

Drainage Area (sq. mi.): 229.00

Gauge Threshold (cfs): 22

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

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): 1.46
 Upstream Demand (cfs): 0.00
 Downstream Demand (cfs): 0.00
 Pump rate (cfs): 2.23
 Headwater Safety (cfs): 0.36
 Ungauged Stream Safety (cfs): 0.36
 Min. Gauge Reading (cfs): 35.23
 Passby at Location (cfs): 2.19

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



Water Management Plan:
Secondary Water Sources



WMP-01496 API/ID Number 047-085-10062 Operator: Antero Resources
Hornet Unit 1H

Important:

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

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

Lake/Reservoir

Source ID: 26396 Source Name City of Salem Reservoir (Lower Dog Run) Source start date: 11/11/2013
Public Water Provider Source end date: 11/11/2014
Source Lat: 39.28834 Source Long: -80.54966 County Harrison
Max. Daily Purchase (gal) 1,000,000 Total Volume from Source (gal): 12,760,000
DEP Comments:

WMP-01496

API/ID Number

047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Important:

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

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

Source ID:	<input type="text" value="26397"/>	Source Name	<input type="text" value="Pennsboro Lake"/>		Source start date:	<input type="text" value="11/11/2013"/>
					Source end date:	<input type="text" value="11/11/2014"/>
	Source Lat:	<input type="text" value="39.281689"/>	Source Long:	<input type="text" value="-80.925526"/>	County	<input type="text" value="Ritchie"/>
	Max. Daily Purchase (gal)	<input type="text"/>	Total Volume from Source (gal):	<input type="text" value="12,760,000"/>		
DEP Comments:	<input type="text"/>					

Source ID:	<input type="text" value="26398"/>	Source Name	<input type="text" value="Powers Lake (Wilderness Water Park Dam)"/>		Source start date:	<input type="text" value="11/11/2013"/>
			<input type="text" value="Private Owner"/>		Source end date:	<input type="text" value="11/11/2014"/>
	Source Lat:	<input type="text" value="39.255752"/>	Source Long:	<input type="text" value="-80.463262"/>	County	<input type="text" value="Harrison"/>
	Max. Daily Purchase (gal)	<input type="text"/>	Total Volume from Source (gal):	<input type="text" value="12,760,000"/>		
DEP Comments:	<input type="text"/>					

Hornet Unit 1H

Important:

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

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

Source ID: 26399	Source Name	Powers Lake Two	Source start date:	11/11/2013		
			Source end date:	11/11/2014		
	Source Lat:	39.247604	Source Long:	-80.466642	County	Harrison
	Max. Daily Purchase (gal)		Total Volume from Source (gal):	12,760,000		

DEP Comments:

WMP-01496

API/ID Number

047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Important:

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

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

Other

Source ID: Source Name
 Source start date:
Source end date:
Source Lat: Source Long: County
Max. Daily Purchase (gal) Total Volume from Source (gal):
DEP Comments:

Source ID: Source Name
 Source start date:
Source end date:
Source Lat: Source Long: County
Max. Daily Purchase (gal) Total Volume from Source (gal):
DEP Comments:

Hornet Unit 1H

Important:

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

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

Source ID: 26402	Source Name	Eddy Pond (Landowner Pond)		Source start date:	11/11/2013
				Source end date:	11/11/2014
	Source Lat:	39.19924	Source Long:	-80.886161	County
					Ritchie
	Max. Daily Purchase (gal)		Total Volume from Source (gal):		12,760,000
DEP Comments:					

Source ID: 26403	Source Name	Hog Lick Quarry Industrial Facility		Source start date:	11/11/2013
				Source end date:	11/11/2014
	Source Lat:	39.419272	Source Long:	-80.217941	County
					Marion
	Max. Daily Purchase (gal)	1,000,000	Total Volume from Source (gal):		12,760,000
DEP Comments:					

WMP-01496

API/ID Number

047-085-10062

Operator:

Antero Resources

Hornet Unit 1H

Important:

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

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

Source ID: 26404 Source Name: Glade Fork Mine Industrial Facility Source start date: 11/11/2013 Source end date: 11/11/2014

Source Lat: 38.965767 Source Long: -80.299313 County: Upshur

Max. Daily Purchase (gal): 1,000,000 Total Volume from Source (gal): 12,760,000

DEP Comments:

Recycled Frac Water

Source ID: 26405 Source Name: Hornet Unit 2H Source start date: 11/11/2013 Source end date: 11/11/2014

Source Lat: Source Long: County:

Max. Daily Purchase (gal): Total Volume from Source (gal): 12,760,000

DEP Comments:



Well Site Safety Plan

Antero Resources

Well Name: Hornet Unit 1H, Hornet Unit 2H, Myrtle Unit 1H, Myrtle Unit 2H, Miracle Unit 1H, Miracle Unit 2H, Kehrer Unit 1H, Kehrer Unit 2H, Moats Unit 1H, Moats Unit 2H

Pad Location: EDWIN PAD
Ritchie County/ Clay District

GPS Coordinates: Lat 39°13'49.56"/Long 80°54'10.19" (NAD83)

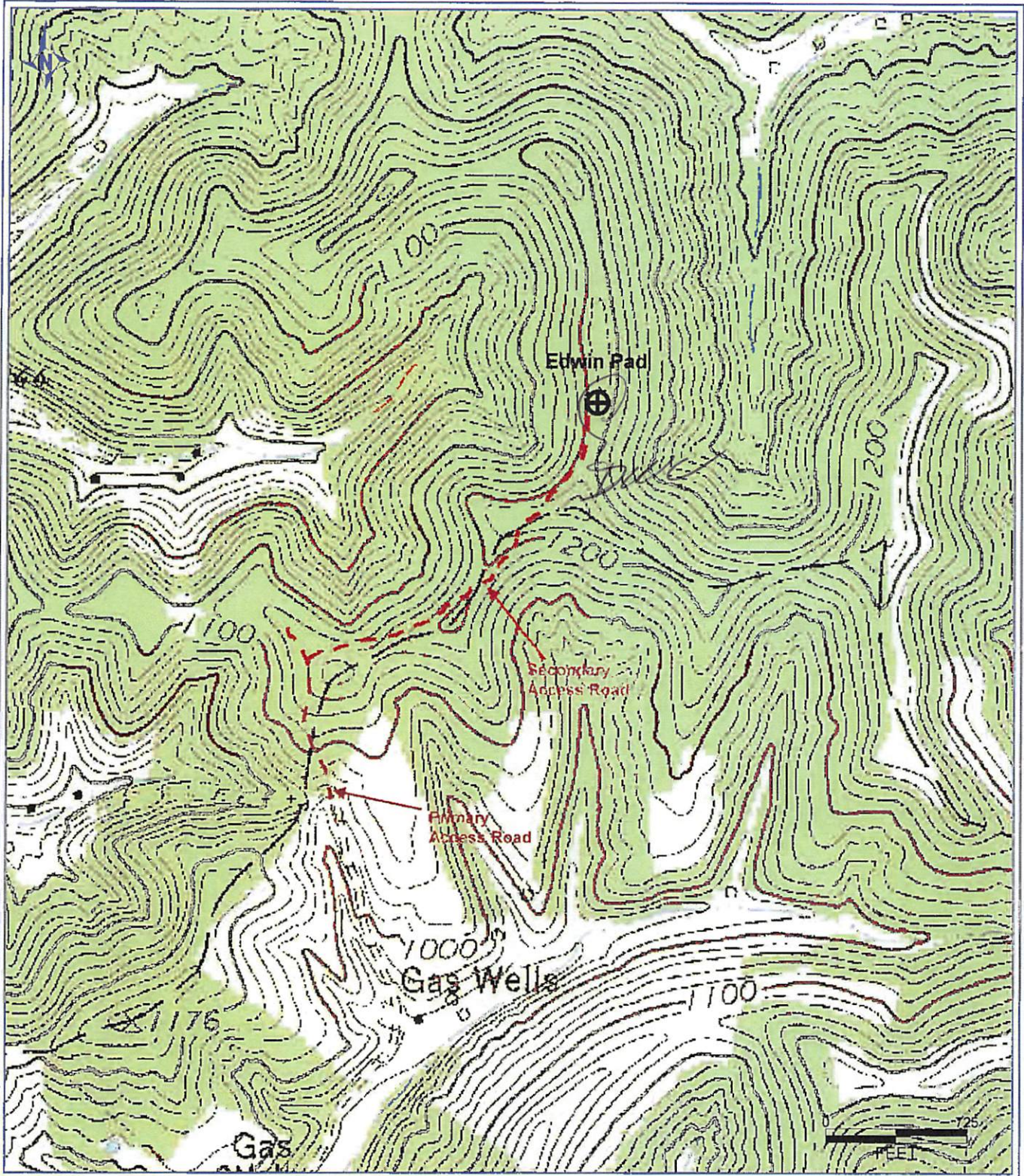
Driving Directions:

Head south on WV 74 for 1.3 miles. Turn left onto Lynn Camp road. Stay on Lynn Camp road for 1.3 miles. Take slight right onto County Road 10/Cabin Run road. Continue onto County road 10/4 for 2.7 miles. Turn left to stay on County Road 10/4 and continue for .4 miles. Access road on left

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Office of Oil & Gas
SEP 05 2013

WV Department of
Environmental Protection

David Wilson
10-10-13



DETRA 8/9/2013 9:27:16 AM

85 10062

Antero Resources Corporation
Appalachian Basin
 Hornet Unit 1H
Ritchie County

Received

Quadrangle: Pullman
 Watershed: Little Kanawha
 District: Clay
 Date: 8-9-2013

OCT 4 2013

Office of Oil and Gas
 WV Dept. of Environmental Protection

LATITUDE 39°15'00"

7,925'

1,002' TO BOTTOM HOLE
LATITUDE 39°17'30"

LONGITUDE 80°55'00"

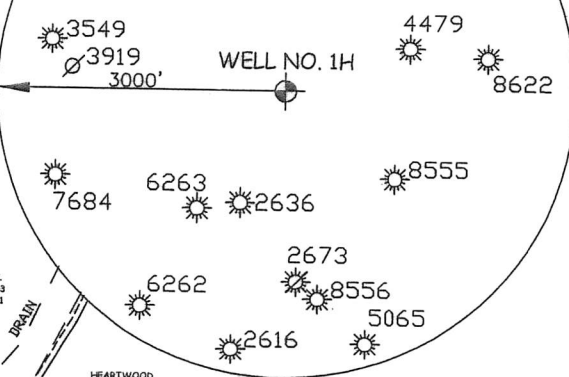
11,457' TO BOTTOM HOLE

7,094'

LONGITUDE 80°52'30"

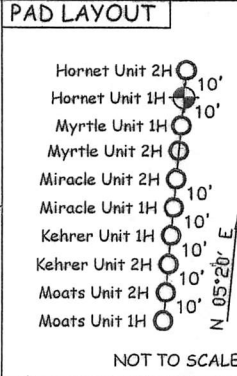
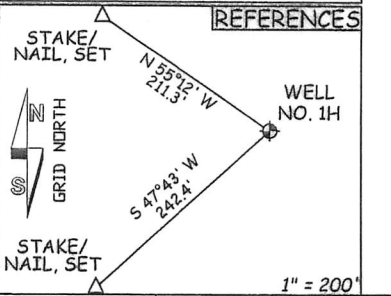
Antero Resources Appalachian Well No. Hornet Unit 1H

NOTE:
NO WATER WELLS WERE
LOCATED WITHIN 2000'
OF PROPOSED WELL

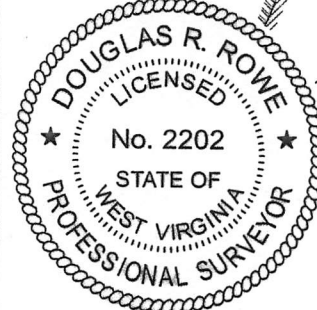
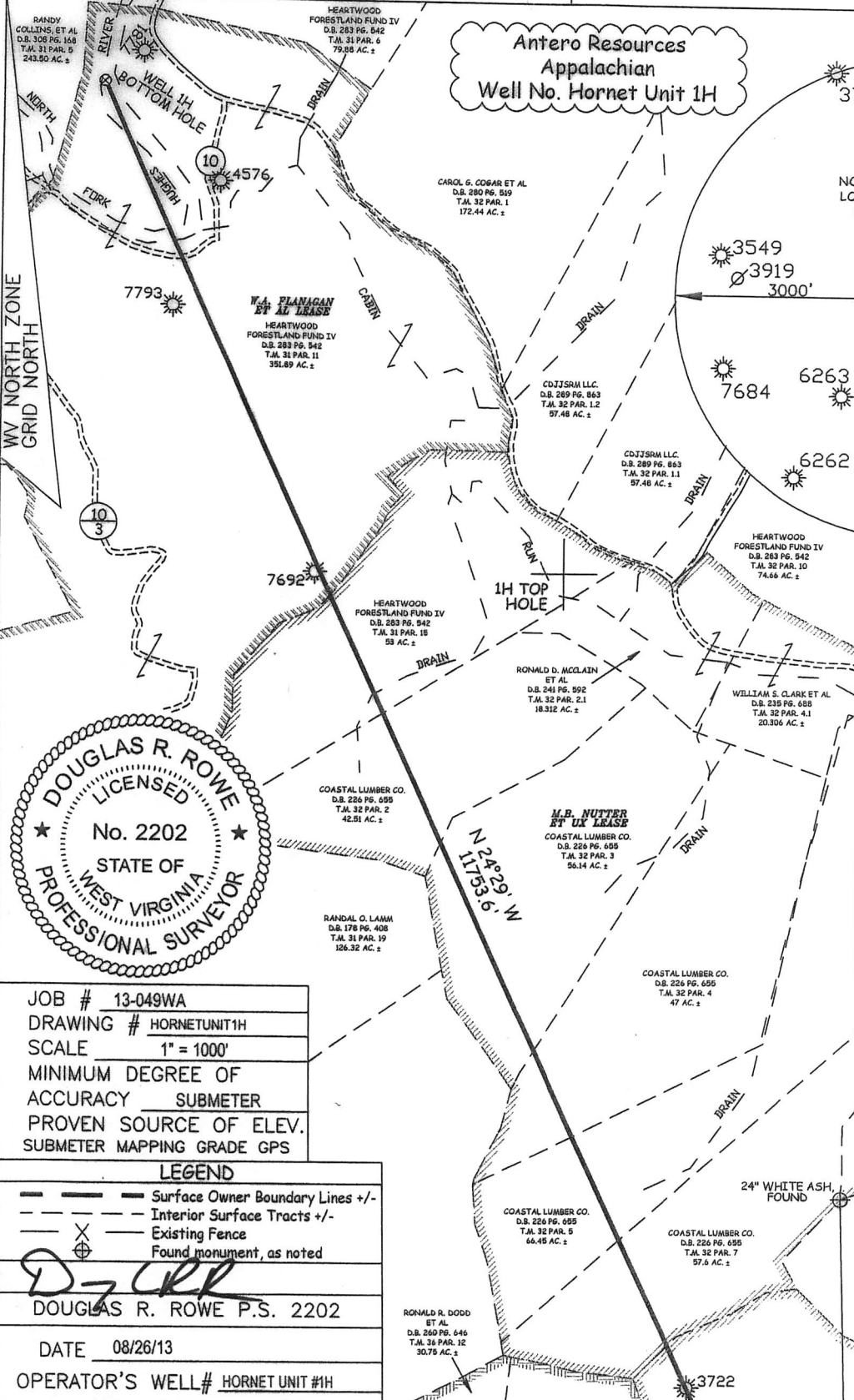


NOTES:
WELL 1H TOP HOLE INFORMATION:
N: 269,175ft E: 1,602,582ft
LAT: 39°13'49.88" LON: 80°54'10.71"
BOTTOM HOLE INFORMATION:
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LAT: 39°15'36.76" LON: 80°55'12.74"
WEST VIRGINIA COORDINATE
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ZONE WAS DERIVED FROM
MEASUREMENTS TAKEN WITH
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PLAT ORIENTATION, CORNER,
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(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 4,342,372m E: 508,389m
BOTTOM HOLE INFORMATION:
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NOTE
NO OCCUPIED DWELLINGS OR BUILDINGS TWO
THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR
LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE
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HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER
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JOB # 13-049WA
DRAWING # HORNETUNIT1H
SCALE 1" = 1000'
MINIMUM DEGREE OF
ACCURACY SUBMETER
PROVEN SOURCE OF ELEV.
SUBMETER MAPPING GRADE GPS

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

DOUGLAS R. ROWE P.S. 2202
DATE 08/26/13
OPERATOR'S WELL # HORNET UNIT #1H

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT
TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE
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STATE OF WEST VIRGINIA, DIVISION
OF ENVIRONMENTAL PROTECTION,
OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
API WELL # 47-085-10662
WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
LOCATION: ELEVATION 1,191' WATERSHED TRIBUTARY OF CABIN RUN
QUADRANGLE PULLMAN 7.5 (TH), PENNSBORO 7.5 (BH) DISTRICT CLAY COUNTY RITCHIE
SURFACE OWNER FRANKLIN P. QUIMBY ACREAGE 23 ACRES +/-
OIL & GAS ROYALTY OWNER LAWRENCE C. HEIM ET AL; MATILDA DONOHO ET VIR; WM. VANCAMPEN; M.B. NUTTER ET UX; W.A. FLANAGAN ET AL
LEASE ACREAGE 53 ACRES±; 156 ACRES±; 312 ACRES±; 400 ACRES±; 238 ACRES±

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 18,700' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1625 17TH STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME PERMIT

LATITUDE 39°15'00"

7,925'

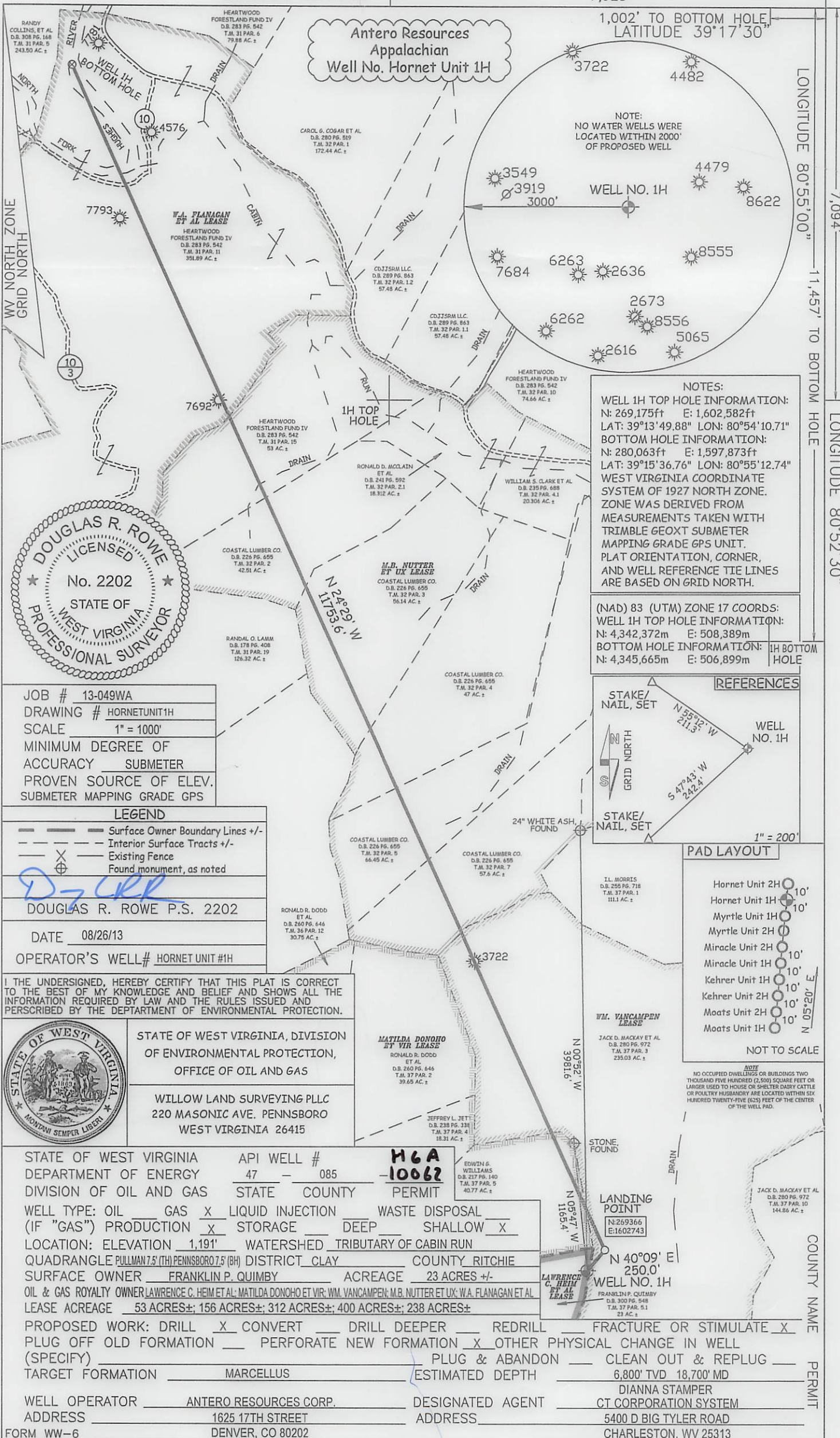
1,002' TO BOTTOM HOLE, LATITUDE 39°17'30"

LONGITUDE 80°55'00"

7,094'

11,457' TO BOTTOM HOLE

LONGITUDE 80°52'30"

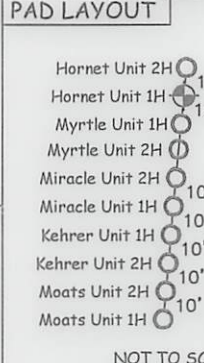
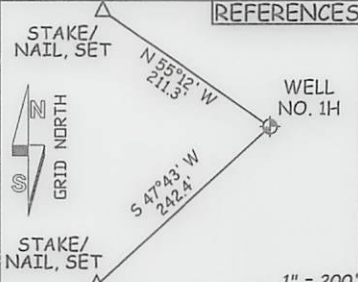


Antero Resources
Appalachian
Well No. Hornet Unit 1H

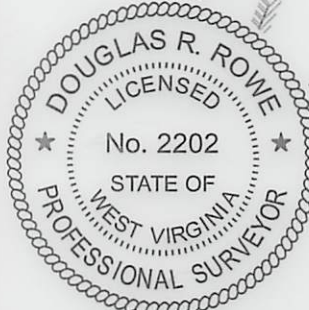
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WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

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

API WELL # **H6A 10662**
47 - 085
STATE COUNTY PERMIT

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(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

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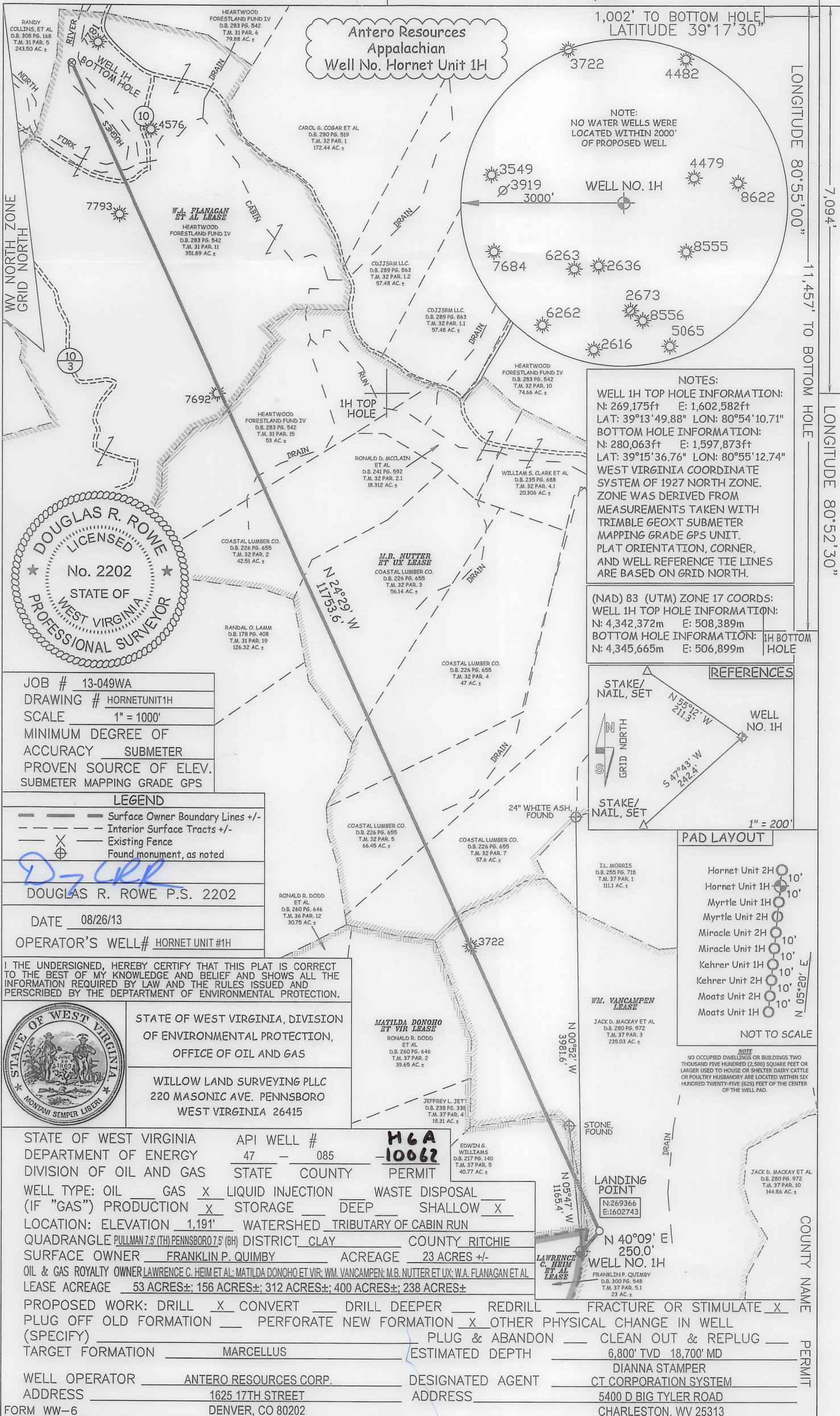
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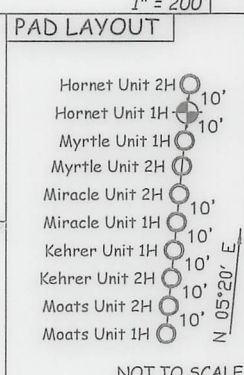
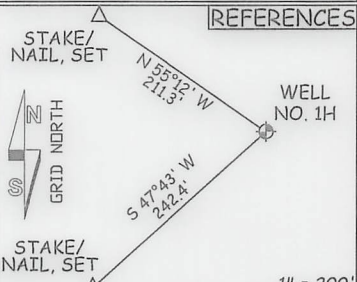


**Antero Resources
Appalachian
Well No. Hornet Unit 1H**

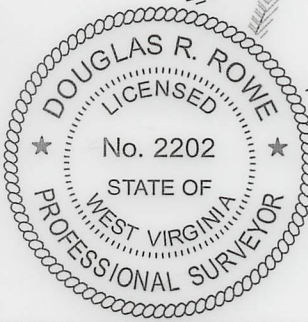
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OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

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

API WELL # **H6A 47 - 085**
10062

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(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

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TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,800' TVD 18,700' MD

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ADDRESS 1625 17TH STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

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
<u>Lawrence C. Heim et al Lease</u>			
Lawrence C. Heim et ux Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation	Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corp Antero Resources Corporation	1/8 Merger Assignment Name Change	LB 0196/0222 DB 0306/0836 LB 0257/0377 Exhibit 1
<u>WM. Vancampen Lease</u>			
William Charles VanCampen Warren R. Haught, et al Haught, Inc. Mountaineer 1979-A Mountain V Oil and Gas Co. Robert Matheny, Jr. & HMS Resources, Inc. Genesis Exploration & Production HMS Resources Robert Matheny, Jr. & HMS Antero Resources Appalachian Corporation	Warren R. Haught, et al Haught, Inc. Mountaineer 1979-A Mountain V Oil and Gas Co. Robert Matheny, Jr. & HMS Resources, Inc. Genesis Exploration & Production Antero Resources Appalachian Corporation Antero Resources Appalachian Corporation Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment Name Change	LB0122/0565 LB0124/0296 LB0129/0449 LB0230/0253 LB0243/0911 LB0244/1079 LB0260/1028 LB0260/1035 LB0260/1042 Exhibit 1
<u>Matilda Donoho et vir Lease</u>			
Matilda Ackley Donoho, et vir Carnegie Natural Gas Company Carnegie Production Company EQT Production Company Antero Resources Appalachian Corporation	Carnegie Natural Gas Company Carnegie Production Company EQT Production Company Antero Resources Appalachian Corp Antero Resources Corporation	1/8 Merger Merger Notice of Agreement Name Change	LB0035/0455 LB0228/0859 Exhibit 2 LB0266/0545 Exhibit 1
<u>M.B. Nutter et ux Lease</u>			
M.B. Nutter, et ux Glen F. McBurney Ruth McBurney Helen F. Young & James E Young co Trustees, Will of Charles E. Young Palmer Hill Eastern America Energy Corp. Energy Corp. of America Antero Resources Appalachian Corporation	Glen F. McBurney Ruth McBurney Charles E. Young Palmer Hill Eastern American Energy Corp. Energy Corp. of America Corporation Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Assignment Assignment Assignment Assignment Assignment Name Change	LB0065/0594 LB0066/0341 LB0075/0409 LB0117/0164 LB0196/0611 DB 0240/0498 LB 0257/0377 Exhibit 1

RECEIVED
Office of Oil & Gas
SEP 05 2013
WV Department of
Environmental Protection

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>W.A. Flanagan et al Lease</u>	W.A. Flanagan et al	W.C. Taylor	1/8	LB 0028/0312
	W.C. Taylor	W.A. Flanagan	Assignment	LB 0058/0362
	W.A. Flanagan	J.L. Newman	Assignment	LB 0058/0362
	J.L. Newman	The Philadelphia Company of WV	Assignment	LB 0058/0363
	The Philadelphia Company of WV	Pittsburgh and WV Gas Co	Assignment	LB 0063/0295
	Pittsburgh and WV Gas Co	Equitable Gas Co	Assignment	LB 0126/0515
	Equitable Gas Co	EQT Production Company	Assignment	DB 0059/0854
	EQT Production Company	Antero Resources Appalachian Corporation	Notice of Agreement	LB 0266/0545
	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.

**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

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: Vice President of Production

RECEIVED
 OFFICE OF OIL & GAS
 SEP 05 2013
 WV Department of
 Environmental Protection

FILED

JUN 10 2013

Natalje 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

APPLICATION FOR
AMENDED CERTIFICATE
OF AUTHORITY

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

**** 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:

- Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
 - Date Certificate of Authority was issued in West Virginia: 8/25/2008
 - Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of Incorporation.)
 - Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
 - Other amendments:
(attach additional pages if necessary)
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 |
7. Signature information (See below *Important Legal Notice Regarding Signature*):
- | | |
|--|--|
| Print Name of Signer: <u>Alvyn A. Schopp</u> | Title/Capacity: <u>Authorized Person</u> |
| Signature: <u>[Handwritten Signature]</u> | Date: <u>June 10, 2013</u> |

***Important Legal Notice Regarding Signature:** Per West Virginia Code §31D-1-122. 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.

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Office of Oil & Gas

SEP 05 2013

WV Department of
Environmental Protection

State of West Virginia



Certificate

*I, Natalie E. Tennant, Secretary of State of the
State of West Virginia, hereby certify that*

EQT PRODUCTION COMPANY

has filed a "Certificate of Registration of Trade Name" in my office according to the provisions of Chapter 47 of the West Virginia Code and was found to conform to law.

Therefore, I hereby issue this

CERTIFICATE OF REGISTRATION OF TRADE NAME

authorizing it to transact business in West Virginia under the assumed name of

CARNEGIE PRODUCTION COMPANY



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
April 9, 2009*

Natalie E. Tennant

Secretary of State



August 30, 2013

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

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

RE: Well Name: Hornet Unit 1H
Quadrangle: Pullman 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 Hornet 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 Hornet Unit 1H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Sloane Ford
Landman

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Office of Oil & Gas

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WV Department of
Environmental Protection

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

Date of Notice Certification: 08/30/2013

API No. 47- 085 -

Operator's Well No. Hornet Unit 1H

Well Pad Name: Edwin Pad

Notice has been given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>508,389m</u>
County: <u>Ritchie</u>		Northing: <u>4,342,372m</u>
District: <u>Clay</u>	Public Road Access: <u>CR 10/4</u>	
Quadrangle: <u>Pullman 7.5'</u>	Generally used farm name: <u>Quimby, Franklin P.</u>	
Watershed: <u>Tributary of Cabin Run</u>		

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

<p>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:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
---	---

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.

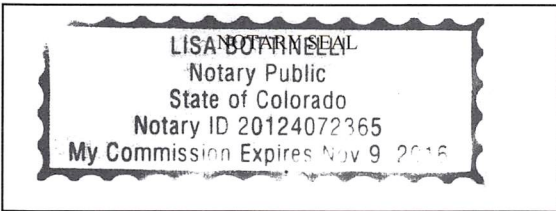
RECEIVED
 OFFICE OF OIL & GAS
 AUG 30 2013
 DEPARTMENT OF ENVIRONMENTAL PROTECTION

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
By: Kevin Kilstrom *[Signature]*
Its: Vice President of Production
Telephone: (303) 357-7310

Address: 1625 17th Street
Denver, CO 80202
Facsimile: 303-357-7315
Email: amihalcin@anteroresources.com



Subscribed and sworn before me this 30 day of August 13
[Signature] Notary Public
My Commission Expires 11/9/2016

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil & Gas
SEP 05 2013
WV Department of
Environmental Protection

**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: 9/11/2013 **Date Permit Application Filed:** 9/12/2013

Notice of:

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

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

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

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

WATER PURVEYOR(s)/OWNER(s) OF WATER WELL, SPRING OR OTHER WATER SUPPLY SOURCE
Name: NONE LOCATED WITHIN 1500 FEET
Address: _____

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

*Please attach additional forms if necessary.

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.

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

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

Received

SEP 20 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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.

Received

SEP 20 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

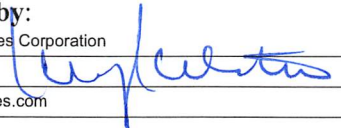
WW-6A
(8-13)

PERMIT UPDATE- PAD DESIGN
(API#: 47-085-10062)

API NO. 47- 085 - 10062
OPERATOR WELL NO. Hornet Unit 1H
Well Pad Name: Edwin Pad

Notice is hereby given by:

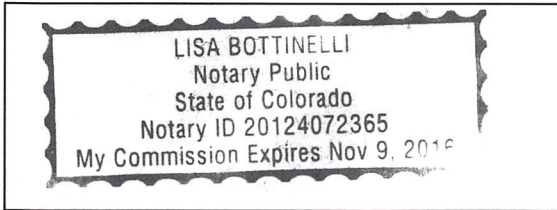
Well Operator: Antero Resources Corporation
Telephone: (303) 357-7310
Email: amihalcin@anteroresources.com



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

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 11 day of Sept 2013.

Lisa Bottinelli Notary Public

My Commission Expires 11/9/2016

Received

SEP 20 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

WW-6A Notice of Application Attachment:

Surface Owners:

Owner: Franklin P. and Janice S. Quimby ✓
Address: 9291 Staunton Turnpike
Smithville, WV 26178

Owner: Edwin G. Williams ✓
Address: 1112 E. Penn Ave.
Pensboro, WV 26415

Owner: Jack D. MacKay & Anita G. Peale ✓
Address: 1791 Cabin Run Rd.
West Union, WV 26456

Anita G. Peale (2nd Address) ✓
105 Colechester Lane
Palm Coast, FL 32137

Surface Owners (Road and/or Other Disturbance):

Owner: James M. Lafferty ✓
Address: 2488 White Oak Rd.
Pullman, WV 26421

Owner: Charles E. and Stella M. Cottrill ✓
Address: 2976 White Oak Rd.
Pullman, WV 26421

Owner: Linda S. Kirk and Trisha J. Whaley ✓
Address: 219 North Stout Street
Pensboro, WV 26362

Owner: Stephen W. and Mary G. Whaley ✓
Address: 157 Mountain Drive
Pensboro, WV 26415

Owner: Annie M. Whaley ✓
Address: 4464 Pike Road
Ellenboro, WV 26346

Owner: Mary A. Simmons, Patsy Sams, ✓
Randy M. Simmons, and Roger Williams ✓
Address: P.O. Box 43
Ellenboro, WV 26346

Mary A. Simmons, Life Estate (2nd Address) ✓
506 Riverview Drive
Belmont, WV 26134

Randy M. Simmons ✓
(2nd Address, as a part of Mary A. Simmons Life Estate) ✓
16 Mound Maner
Saint Mary's, WV 26170

David Williams ✓
(additional, as a part of Mary A. Simmons Life Estate) ✓
1277 Glendale Rd.
Cairo, WV 26337

Edwin Williams ✓
(additional, as a part of Mary A. Simmons Life Estate) ✓
1112 Penn Ave.
Pensboro, WV 26415

Patsy J. Kiser ✓
(additional, as a part of Mary A. Simmons Life Estate) ✓
67928 Wintergreen Rd.
Lore City, OH 43755

Received

SEP 20 2013

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: 8/15/2013 **Date of Planned Entry:** 8/24/2013

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: PLEASE SEE ATTACHMENT

Address: _____

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: NO DECLARATIONS ON RECORD WITH COUNTY

Address: _____

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: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.230501, -80.902814</u>
County: <u>Ritchie</u>	Public Road Access: <u>CR 10/4</u>
District: <u>Clay</u>	Watershed: <u>Tributary of Cabin Run</u>
Quadrangle: <u>Pullman 7.5'</u>	Generally used farm name: <u>Quimby, Franklin P.</u>

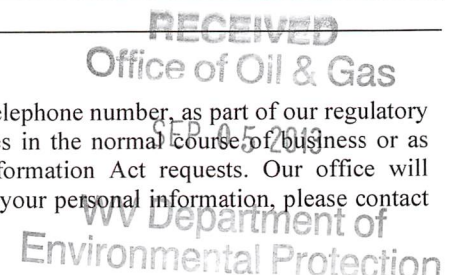
Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). 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: <u>Antero Resources Corporation</u>	Address: <u>1625 17th Street</u>
Telephone: <u>(303) 357-7310</u>	<u>Denver, CO 80202</u>
Email: <u>amihalcin@anteroresources.com</u>	Facsimile: <u>303-357-7315</u>

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.



WW-6A3 Notice of Entry For Plat Survey Attachment:

Surface Owners:

✓ **Owner:** Jack D. Mackay and Anita G. Peale
Address: 1791 Cabin Run Road
West Union, WV 26456

✓ **Owner:** Anita G. Peale
Address: 105 Colechester Lane
Palm Coast, FL 32137

✓ **Owner:** Franklin P. and Janice S. Quimby
Address: 9291 Staunton Turnpike
Smithville, WV 26178

Mineral Owners:

✓ **Owner:** Roena P. Mossor
Address: 1313 Pearl Street
Harrisville, WV 26362

✓ **Owner:** EQT Corporation
Address: 625 Liberty Ave., Ste 1700
Pittsburgh, PA 15222

✓ **Owner:** Charles E. Anderson
Address: 221 Owl Hollow Dr.
Saylorsburg, PA 18353

✓ **Owner:** Williams C. and Kimberly F. Vancampen
Address: 826 Lafayette Parkway
Williamsport, PA 17701

RECEIVED
Office of Oil & Gas

SEP 05 2013

WV Department of
Environmental Protection

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: 09/02/2013 **Date Permit Application Filed:** 09/02/2013

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

CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED 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: PLEASE SEE ATTACHMENT ✓ Name: _____
Address: _____ Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>508,389m</u>
County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:		<u>CR 10/4</u>
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:		<u>Quimby, Franklin P.</u>
Watershed:	<u>Tributary of Cabin Run</u>			

This Notice Shall Include:

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

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

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.

RECEIVED
Office of Oil & Gas

SEP 05 2013

WV Department of
Environmental Protection

WW-6A5 Notice of Planned Operations Attachment:

Surface Owners:

✓ **Owner:** Franklin P. and Janice S. Quimby
Address: 9291 Staunton Turnpike
Smithville, WV 26178

✓ **Owner:** Edwin G. Williams
Address: 1112 E. Penn Ave.
Pennsboro, WV 26415

✓ **Owner:** Jack D. MacKay & Anita G. Peale
Address: 1791 Cabin Run Rd.
West Union, WV 26456

✓ Anita G. Peale (2nd Address)
105 Colechester Lane
Palm Coast, FL 32137

RECEIVED
Office of Oil & Gas

SEP 05 2013

WV Department of
Environmental Protection

WW-6AW
(1-12)

API NO. 47-085 - 10062
OPERATOR WELL NO. Hornet Unit 1H
Well Pad Name: Edwin Pad

PERMIT MODIFICATION - PAD DESIGN

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, Edwin G. Williams, 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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>508,389m</u>
County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:		<u>CR 10/4</u>
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:		<u>Quimby, Franklin P.</u>
Watershed:	<u>Tributary of Cabin Run</u>			

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.

<p>*Please check the box that applies</p> <p><input checked="" type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Edwin G. Williams</u></p> <p>Print Name: <u>EDWIN G. WILLIAMS</u></p> <p>Date: <u>9-16-2013</u></p>
	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>

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@wy.gov.

WW-6AW
(1-12)

API NO. 47-085 - 10062
OPERATOR WELL NO. Hornet Unit 1H
Well Pad Name: Edwin Pad

PERMIT MODIFICATION - PAD DESIGN

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, Jack D Mackay, 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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>508,389m</u>
County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:	<u>CR 10/4</u>	
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:	<u>Quimby, Franklin P.</u>	
Watershed:	<u>Tributary of Cabin Run</u>			

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.

<p>*Please check the box that applies</p> <p><input checked="" type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Jack D Mackay</u></p> <p>Print Name: <u>JACK D. MACKAY</u></p> <p>Date: <u>16 SEPT. 2013</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
--	--

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.

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, Anita Peale, 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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>508,389m</u>
County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:	<u>CR 10/4</u>	
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:	<u>Quimby, Franklin P.</u>	
Watershed:	<u>Tributary of Cabin Run</u>			

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

- SURFACE OWNER
- SURFACE OWNER (Road and/or Other Disturbance)
- SURFACE OWNER (Impoundments/Pits)
- COAL OWNER OR LESSEE
- COAL OPERATOR
- WATER PURVEYOR
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD

FOR EXECUTION BY A NATURAL PERSON

Signature: Anita G. Peale
Print Name: Anita G Peale
Date: 9-17-13

FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
By: _____
Its: _____
Signature: _____
Date: _____

Oil and Gas Privacy Notice:

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WW-6AW
(1-12)

API NO. 47-085 - 10062
OPERATOR WELL NO. Home Unit 1H
Well Pad Name: Edwin Pad

PERMIT MODIFICATION - PAD DESIGN

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, Franklin P. & Janice S. Quimby, 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 Easting: 508,389m
County: Ritchie UTM NAD 83 Northing: 4,342,372m
District: Clay Public Road Access: CR 10/4
Quadrangle: Pullman 7.5' Generally used farm name: Quimby, Franklin P.
Watershed: Tributary of Cabin Run

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.

<p>*Please check the box that applies</p> <p><input checked="" type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Janice Quimby</u></p> <p>Print Name: <u>Janice Quimby</u></p> <p>Date: <u>9/16/13</u></p>
	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>

Oil and Gas Privacy Notice:

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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, James M. LeBlond, 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:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>508,389m</u>
County:	<u>Ritchie</u>	Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:	<u>CR 10/4</u>
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:	<u>Quimby, Franklin P.</u>
Watershed:	<u>Tributary of Cabin Run</u>		

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

- SURFACE OWNER
- SURFACE OWNER (Road and/or Other Disturbance)
- SURFACE OWNER (Impoundments/Pits)
- COAL OWNER OR LESSEE
- COAL OPERATOR
- WATER PURVEYOR
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD

FOR EXECUTION BY A NATURAL PERSON

Signature: James M. LeBlond
Print Name: James M. LeBlond
Date: 9-25-13

FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
By: _____
Its: _____
Signature: _____
Date: _____

Oil and Gas Privacy Notice:

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WW-6AW
(1-12)

API NO. 47- 085 - 10062
OPERATOR WELL NO. Hornet Unit 1H
Well Pad Name: Edwin Pad

PERMIT MODIFICATION - PAD DESIGN

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, Linda S. Kirk, 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: 608,389m
County: Ritchie Northing: 4,342,372m
District: Clay Public Road Access: CR 10/4
Quadrangle: Pullman 7.5' Generally used farm name: Quimby, Franklin P.
Watershed: Tributary of Cabin Run

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

- SURFACE OWNER
- SURFACE OWNER (Road and/or Other Disturbance)
- SURFACE OWNER (Impoundments/Pits)
- COAL OWNER OR LESSEE
- COAL OPERATOR
- WATER PURVEYOR
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD

FOR EXECUTION BY A NATURAL PERSON

Signature: Linda S. Kirk
Print Name: Linda S. Kirk
Date: 10/1/13

FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
By: _____
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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-6AW
(1-12)

API NO. 47- 085 - 10062
OPERATOR WELL NO. Home Unit 1H
Well Pad Name: Edwin Pad

PERMIT MODIFICATION - PAD DESIGN

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, Trisha J. Whaley, 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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>608,389m</u>
County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:	<u>CR 10/4</u>	
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:	<u>Quimby, Franklin P.</u>	
Watershed:	<u>Tributary of Cabin Run</u>			

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Trisha Whaley</u></p> <p>Print Name: <u>TRISHA WHALEY</u></p> <p>Date: <u>10/1/13</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
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PERMIT MODIFICATION - PAD DESIGN

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, Stephen W. & Mary G. Whaley, 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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>508,389m</u>
County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:	<u>CR 10/4</u>	
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:	<u>Quimby, Franklin P.</u>	
Watershed:	<u>Tributary of Cabin Run</u>			

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Stephen W. Whaley</u></p> <p>Print Name: <u>Stephen W. Whaley</u></p> <p>Date: <u>10-4-13</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
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WW-6AW
(1-12)

API NO. 47- 085 - 10062
OPERATOR WELL NO. Hornet Unit 1H
Well Pad Name: Edwin Pad

PERMIT MODIFICATION - PAD DESIGN

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

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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, Annie M. Whaley, 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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>508,389m</u>
County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:		<u>CR 10/4</u>
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:		<u>Quimby, Franklin P.</u>
Watershed:	<u>Tributary of Cabin Run</u>			

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Annie M. Whaley</u></p> <p>Print Name: <u>Annie M. Whaley</u></p> <p>Date: <u>9-16-13</u></p>
	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p>
	<p>Signature: _____</p> <p>Date: _____</p>

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PERMIT MODIFICATION - PAD DESIGN

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

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Comment and Waiver Provisions

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VOLUNTARY STATEMENT OF NO OBJECTION

I, Mary A. Simmons, 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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>508,389m</u>
County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:		<u>CR 10/4</u>
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:		<u>Quimby, Franklin P.</u>
Watershed:	<u>Tributary of Cabin Run</u>			

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Edwin M. Williams</u> P.O.A.</p> <p>Print Name: <u>EDWIN M. WILLIAMS</u></p> <p>Date: <u>9-16-2013</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
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WW-6AW
(1-12)

API NO. 47-085 - 10062
OPERATOR WELL NO. Homel Unit 1H
Well Pad Name: Edwin Pad

PERMIT MODIFICATION - PAD DESIGN

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

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VOLUNTARY STATEMENT OF NO OBJECTION

I, Patsy J. Kiser, 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:

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County: Ritchie Northing: 4,342,372m
District: Clay Public Road Access: CR 10/4
Quadrangle: Pullman 7.5' Generally used farm name: Quimby, Franklin P.
Watershed: Tributary of Cabin Run

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Patsy J. Kiser</u></p> <p>Print Name: <u>Patsy J. Kiser</u></p> <p>Date: <u>9/16-2013</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
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WW-6AW
(1-12)

API NO. 47- 085 - 10062
OPERATOR WELL NO. Hornet Unit 1H
Well Pad Name: Edwin Pad

PERMIT MODIFICATION - PAD DESIGN

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

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Comment and Waiver Provisions

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VOLUNTARY STATEMENT OF NO OBJECTION

I, Roger Williams, 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:

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County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:		<u>CR 10/4</u>
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:		<u>Quimby, Franklin P.</u>
Watershed:	<u>Tributary of Cabin Run</u>			

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Roger Williams</u></p> <p>Print Name: <u>ROGER WILLIAMS</u></p> <p>Date: <u>9-16-2004</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
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PERMIT MODIFICATION - PAD DESIGN

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

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VOLUNTARY STATEMENT OF NO OBJECTION

I, David Williams, 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:

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County:	<u>Ritchie</u>		Northing:	<u>4,342,372m</u>
District:	<u>Clay</u>	Public Road Access:	<u>CR 10/4</u>	
Quadrangle:	<u>Pullman 7.5'</u>	Generally used farm name:	<u>Quimby, Franklin P.</u>	
Watershed:	<u>Tributary of Cabin Run</u>			

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>David Williams</u></p> <p>Print Name: <u>David Williams</u></p> <p>Date: <u>9/16/2013</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
--	---

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.



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

August 23, 2013

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 Edwin Pad, Ritchie County
Hornet Unit 1H Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #03-2013-0348 which has been applied for by Antero Resources Corporation for access to the State Road for a well site located off of County Route 10/4 in Ritchie County.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE 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, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

Cc: Ashlie Mihalcin
Antero Resources Corporation
CH, CHH, OM, D-3
File

E.E.O./AFFIRMATIVE ACTION EMPLOYER

RECEIVED
Office of Oil & Gas

SEP 05 2013

WV Department of
Environmental Protection

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
Silica, 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

RECEIVED
Office of Oil & Gas

SEP 05 2013

WV Department of
Environmental Protection

EDWIN DRILL AND WATER SITE DESIGN & CONSTRUCTION EROSION & SEDIMENT CONTROL PLAN ANTERO RESOURCES CORPORATION



★ = PROJECT LOCATION

PROJECT CONTACTS

PROJECT OWNER

ANTERO RESOURCES
981 E WASHINGTON AVE
PO BOX 309
ELLENBORO, WV 26346

CONTACT: ANTHONY SMITH
FIELD ENGINEER
304.869.3405 OFFICE
304.673.6196 CELL

CONTACT: JOHN KAWCAK
ENGINEER
817.368.1553

CONTACT: ELI WAGONER
ENVIRONMENTAL
ENGINEER
304.622.3842, EXT 311
OFFICE

CONTACT: AARON KUNZLER
CONSTRUCTION
SUPERVISOR
405.227.8344

LOCATION SURVEYOR

TRIPLE H ENTERPRISES
CONTACT: DARELL BOICE, PS
204 NEELEY AVE
WEST UNION, WV 26456
304.873.3360

ENGINEER OF RECORD

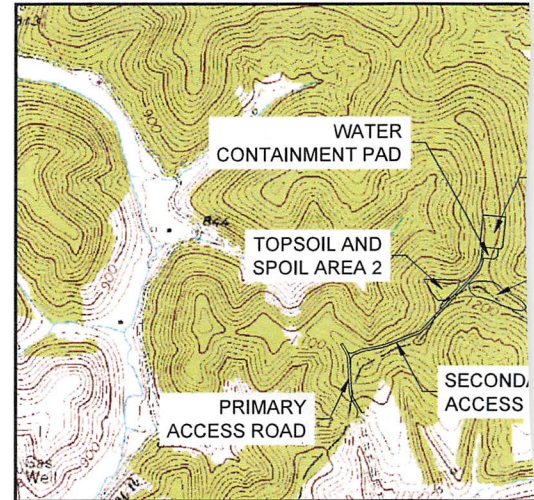
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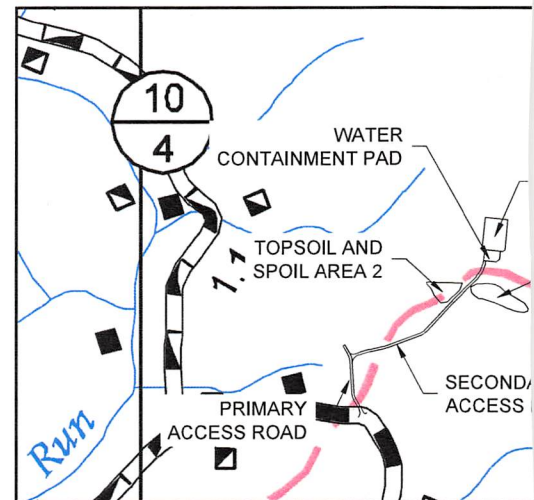


NORTH MERIDIAN REFERENCED TO NAD83 WEST VIRGINIA STATE PLANE NORTH ZONE
AFFECTED TAX PARCELS: SEE SHEET 2
PULLMAN 7.1
LITTLE KANA WATERSHED

SITE LOCATIONS				
DESCRIPTION	NAD 83 (WV NORTH ZONE)		UTM ZONE 17 (METERS)	
	LATITUDE	LONGITUDE	NORTHING	EASTING
CENTROID OF DRILL AND WATER CONTAINMENT PAD	39° 13' 49.56"	-80° 54' 10.19"	4342353.02	508386.71
PRIMARY ACCESS ROAD ENTRANCE	39° 13' 30.45"	-80° 54' 27.63"	4341763.49	507969.19
SECONDARY ACCESS ROAD ENTRANCE	39° 13' 36.60"	-80° 54' 29.50"	4341953.03	507924.16

FLOODPLAIN 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:	54085C0225C
ACREAGES OF CONSTRUCTION IN FLOODPLAIN:	N/A

ACCESS ROAD LENGTH (FEET)	
DESCRIPTION	FEET
COUNTY ROUTE TO SECONDARY ACCESS ROAD ENTRANCE	800
PROPOSED SECONDARY ACCESS ROAD TO DRILL PAD	1,863
TOTAL	2,663



DESIGN CERTIFICATION

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

MM-109 PERMIT

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

**Know what's below.
Call before you dig.**

MISS UTILITY OF WEST VIRGINIA
1-800-245-4848
WEST VIRGINIA STATE LAW
REQUIRES THAT YOU CALL TWO
BUSINESS DAYS BEFORE YOU
DIG IN THE STATE OF WEST
VIRGINIA. IT'S THE LAW!!

ATTACHED IMAGES: Images: Antero Logo 2.jpg Images: call811.jpg Images: WV-Counties.jpg Images: pullman.tif
E BLOCK XREF: ERWIN_USGS
FILE: G:\clients\Antero\Projects\Edwin\Design\Civil\Site Plans - Final - LAYOUT - 1 COVER PAGE & LOCATION MAP

CONTAINMENT PAD CONSTRUCTION PLAN, EROSION CONTROL PLANS ANTERO RESOURCES CORPORATION

PLAN REPRODUCTION WARNING

THE PLANS HAVE BEEN CREATED ON ANSI D (22"x34") SHEETS. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.

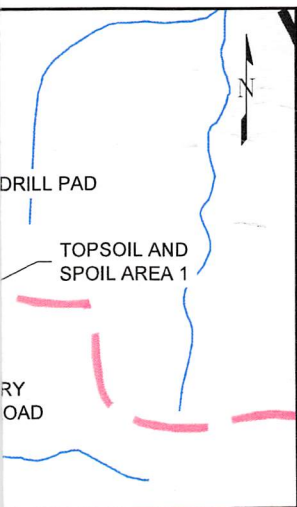
THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING. ANY SET OF THE PLANS THAT IS NOT PLOTTED IN FULL COLOR SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION PURPOSES.

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

WELL HEAD LAYOUT				
WELL NAME	NAD 83 (WV NORTH ZONE)			
	NORTHING	EASTING	LATITUDE	LONGITUDE
MOATS UNIT 1H	269129.59	1571133.00	39° 13' 49.39"	-80° 54' 10.18"
MOATS UNIT 2H	269139.54	1571133.94	39° 13' 49.49"	-80° 54' 10.17"
KEHRER UNIT 2H	269149.50	1571134.88	39° 13' 49.59"	-80° 54' 10.16"
KEHRER UNIT 1H	269159.45	1571135.82	39° 13' 49.69"	-80° 54' 10.15"
MIRACLE UNIT 1H	269169.41	1571136.77	39° 13' 49.79"	-80° 54' 10.14"
MIRACLE UNIT 2H	269179.36	1571137.71	39° 13' 49.89"	-80° 54' 10.13"
MYRTLE UNIT 2H	269189.32	1571138.65	39° 13' 49.98"	-80° 54' 10.12"
MYRTLE UNIT 1H	269199.27	1571139.60	39° 13' 50.08"	-80° 54' 10.11"
HORNET UNIT 1H	269209.23	1571140.54	39° 13' 50.18"	-80° 54' 10.10"
HORNET UNIT 2H	269219.18	1571141.48	39° 13' 50.28"	-80° 54' 10.09"

WELL HEAD LAYOUT				
WELL NAME	NAD 27 (WV NORTH ZONE)		UTM ZONE 17 (METERS)	
	NORTHING	EASTING	NORTHING	EASTING
MOATS UNIT 1H	269094.92	1602574.30	4342347.78	508386.96
MOATS UNIT 2H	269105.02	1602575.24	4342350.86	508387.20
KEHRER UNIT 2H	269115.13	1602576.19	4342353.95	508387.43
KEHRER UNIT 1H	269125.23	1602577.13	4342357.03	508387.67
MIRACLE UNIT 1H	269135.33	1602578.08	4342360.11	508387.90
MIRACLE UNIT 2H	269145.44	1602579.02	4342363.20	508388.14
MYRTLE UNIT 2H	269154.53	1602579.95	4342365.97	508388.38
MYRTLE UNIT 1H	269164.63	1602580.89	4342369.05	508388.61
HORNET UNIT 1H	269174.74	1602581.84	4342372.14	508388.85
HORNET UNIT 2H	269184.84	1602582.78	4342375.22	508389.09

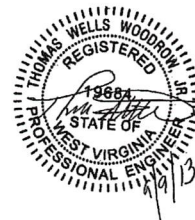
SHEET INDEX	
PAGE NO.	DESCRIPTION
1	COVER PAGE & LOCATION MAP
2	SCHEDULE OF QUANTITIES
3 - 4	NOTES
5	KEY MAP
6	EXISTING CONDITIONS
7 - 9	OVERALL SITE PLAN
10 - 12	ACCESS ROAD PLAN AND PROFILE
13 - 15	GRADING & DRAINAGE PLAN
16 - 18	EROSION & SEDIMENT CONTROL PLAN
19	DRILL AND WATER CONTAINMENT PAD CROSS SECTION & PROFILE
20	PRIMARY ACCESS ROAD CROSS SECTION & PROFILE
21 - 22	SECONDARY ACCESS ROAD CROSS SECTION & PROFILE
23 - 30	DETAILS
31 - 33	RECLAMATION PLAN



WELL LOCATION RESTRICTIONS

- DRILL PAD IS TO COMPLY WITH WELL LOCATION RESTRICTIONS OF WV CODE 22-6A-12. THE PADS COMPLY WITH THE FOLLOWING RESTRICTIONS:
- 250' FROM AN EXISTING WELL OR DEVELOPED SPRING USED FOR HUMAN OR DOMESTIC ANIMALS
 - 625' FROM AN OCCUPIED DWELLING OR BARN GREATER THAN 2500 SF USED FOR POULTRY OR DAIRY MEASURED FROM THE CENTER OF THE PAD
 - 100' FROM EDGE OF DISTURBANCE TO WETLANDS, PERENNIAL STREAMS, NATURAL OR ARTIFICIAL LAKE, POND OR RESERVOIR
 - 300' FROM EDGE OF DISTURBANCE TO NATURALLY REPRODUCING TROUT STREAMS
 - 1000' OF SURFACE OR GROUND WATER INTAKE TO A PUBLIC WATER SUPPLY

ISSUED FOR CONSTRUCTION



SEAL

NO.	REVISION	BY	DATE
1	MATERIAL SPOIL REVISIONS	RAP	09/09/13
2			
3			
4			
5			

KLEINFELDER
Bright People. Right Solutions.
230 EXECUTIVE DRIVE SUITE 122
CRANBERRY TOWNSHIP, PA 16066
PH. 724-772-7072 FAX. 724-772-7079
www.kleinfelder.com

ACAD FILE: COVER.dwg
PROJ. NO. 133140

**EDWIN DRILL AND W.C. PAD
COVER PAGE & LOCATION MAP**

ANTERO RESOURCES CORPORATION
EDWIN DRILL AND W.C. PAD
CLAY DISTRICT
RITCHIE COUNTY
WEST VIRGINIA

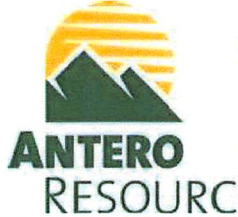
DESIGNED BY: RAP
MODIFIED BY: RAP
CHECKED BY: CAL
DATE: 09-09-13
SCALE:
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
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CONSTRUCTION
1
1 of 33 sheets

EDWIN DRILL AND WATER SITE DESIGN & CONSTRUCTION EROSION & SEDIMENT CONTROL ANTERO RESOURCES



★ = PROJECT LOCATION

PROJECT CONTACTS



Electronic Version of Plans Can Be Viewed at: [Q\OIL](#)

PROJECT OWNER

ANTERO RESOURCES
981 E WASHINGTON AVE
PO BOX 309
ELLENBORO, WV 26346

CONTACT: ANTHONY SMITH
FIELD ENGINEER
304.869.3405 OFFICE
304.673.6196 CELL

CONTACT: JOHN KAWCAK
ENGINEER
817.368.1553

CONTACT: ELI WAGONER
ENVIRONMENTAL
ENGINEER
304.622.3842, EXT 311
OFFICE

CONTACT: AARON KUNZLER
CONSTRUCTION
SUPERVISOR
405.227.8344

LOCATION SURVEYOR

TRIPLE H ENTERPRISES
CONTACT: DARELL BOICE, PS
204 NEELEY AVE
WEST UNION, WV 26456
304.873.3360

ENGINEER OF RECORD

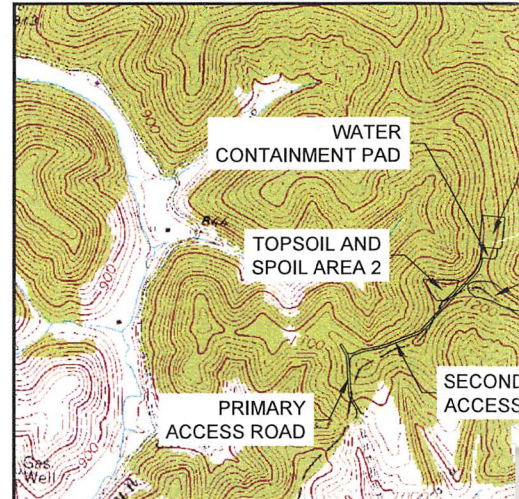
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WV PE #196884
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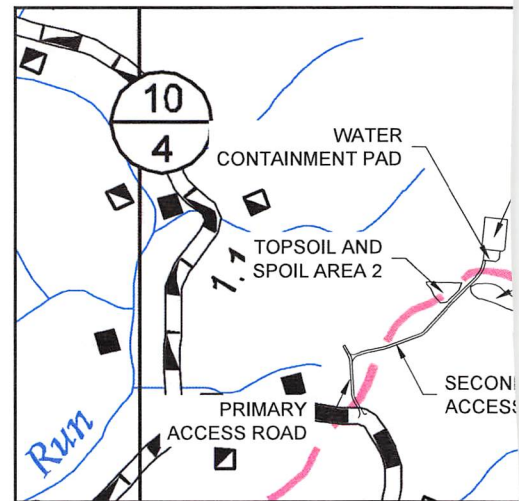


NORTH MERIDIAN REFERENCED TO NAD83
WEST VIRGINIA STATE PLANE NORTH ZONE
AFFECTED TAX PARCELS: PULLMAN
SEE SHEET 2

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FLOODPLAIN 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:	54085C0225C
ACREAGES OF CONSTRUCTION IN FLOODPLAIN:	N/A

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API#8510062
API#8510063

ATTACHED IMAGES: Images: Antero Logo 2.jpg Images: call811.jpg Images: WV-County.jpg Images: pullman.tif
 ATTACHED XREFS: XRef: ANTERO 11X11 TITLE BLOCK XRef: Edwin_UJCS
 CAD FILE: G:\Edwin\Antero\Facilities\Edwin\Design\Site Plans - Final - LAYOUT - 1 COVER PAGE & LOCATION MAP

CONTAINMENT PAD CONSTRUCTION PLAN, CONTROL PLANS CORPORATION

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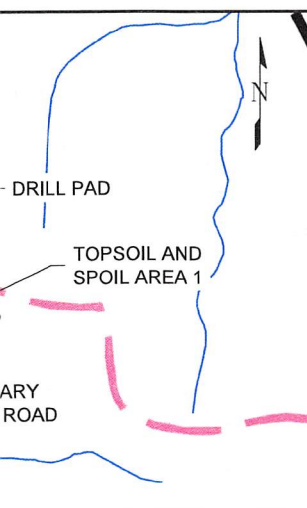
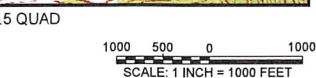
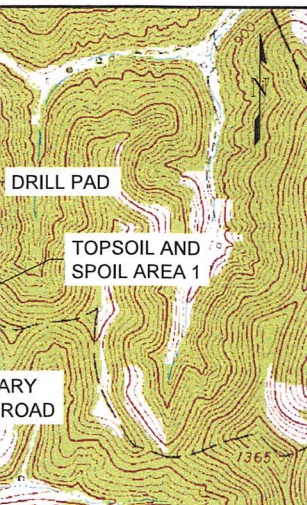
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**APPROVED
WVDEP OOG**

SAY 10/11/2013

ES
ASASAY FILESREVIEWS



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**ISSUED FOR
CONSTRUCTION**

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- 300' FROM EDGE OF DISTURBANCE TO NATURALLY REPRODUCING TROUT STREAMS
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SEAL

NO.	REVISION	BY	DATE
1	MATERIAL SPOIL REVISIONS	RAP	09/09/13
2	ADDRESS WDEP COMMENTS	CAL	10/11/13
3			
4			
5			

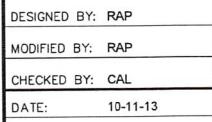
PROJ. NO. 133140	ACAD. FILE: COVER.dwg
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**EDWIN DRILL AND W.C. PAD
COVER PAGE & LOCATION MAP**

ANTERO RESOURCES CORPORATION
EDWIN DRILL AND W.C. PAD
CLAY DISTRICT
WEST VIRGINIA
RITCHIE COUNTY

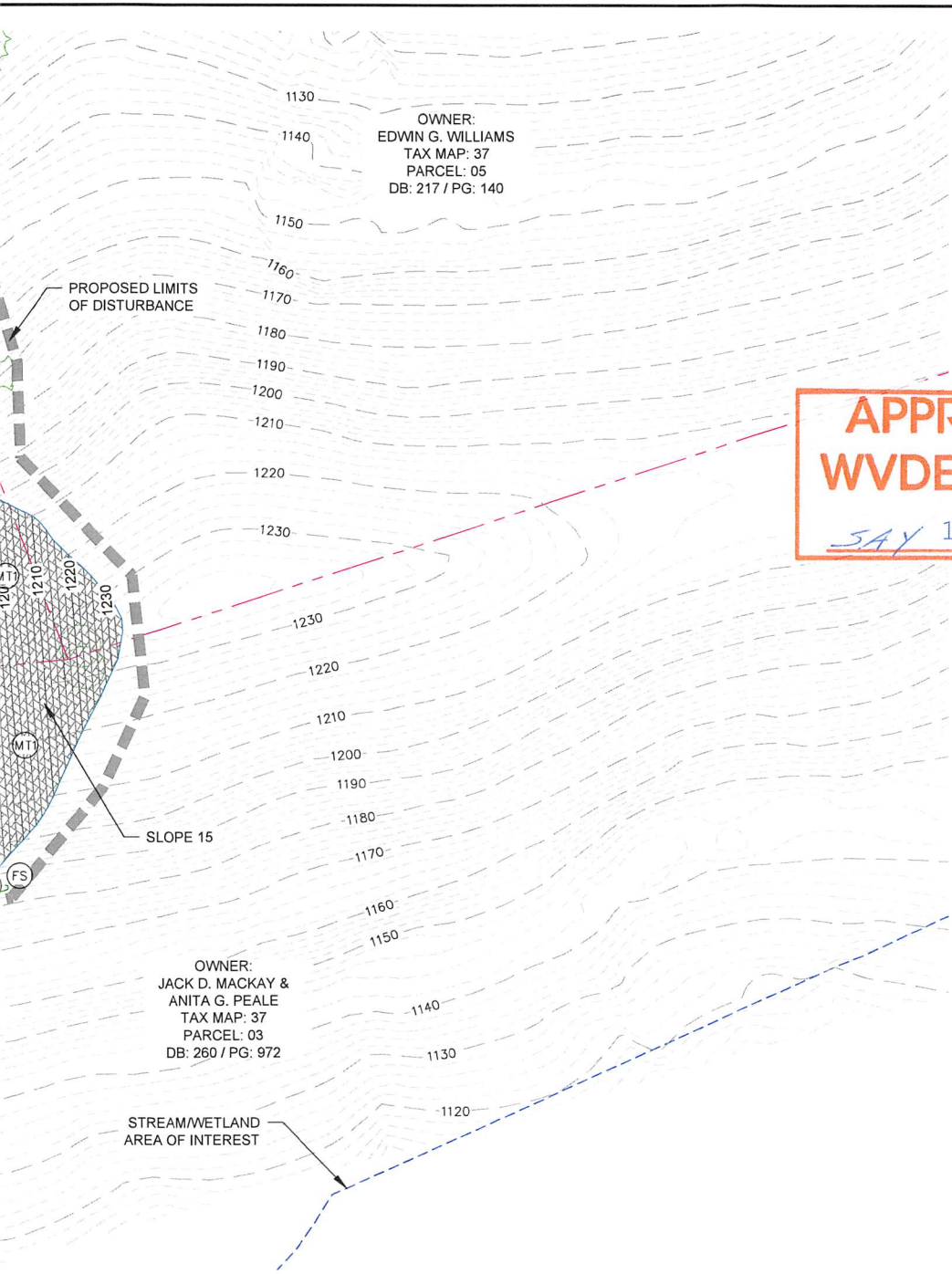
DESIGNED BY: RAP
MODIFIED BY: RAP
CHECKED BY: CAL
DATE: 10-11-13
SCALE:



ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

CONSTRUCTION

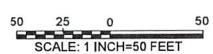
1
1 of 33 sheets



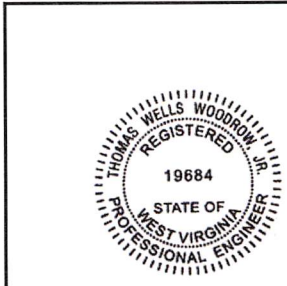
**APPROVED
WVDEP OOG**
SAY 10/11/2013

- NOTES:**
- CONTRACTOR TO INSTALL ROCK CHECK DAMS WITHIN ROADSIDE DITCHES. SEE DETAIL ON PAGE 26 FOR SPACING REQUIREMENTS. ROCK CHECK DAMS WILL BE INSTALLED DURING CONSTRUCTION AS EROSION CONTROL MEASURES AND REMAIN IN PLACE AS PERMANENT CHECK DAMS AFTER CONSTRUCTION IS COMPLETE.
 - ALL FILTER SOCK TO BE 18" UNLESS OTHERWISE NOTED.
 - IN TOPSOIL PLACEMENT AREAS, CONTRACTOR TO INSTALL PROPER BMPs TO ENSURE NO OFFSITE EROSION & SEDIMENTATION RUNOFF.
 - FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE (FIRM) PANEL 54085C0225C INDICATES NO SPECIAL FLOOD HAZARD AREAS WITHIN THE PROJECT AREA.
 - INSTALL ROCK FILTER OUTLETS ALONG SEDIMENT BARRIERS AS SHOWN AND AT LOW POINTS AS IDENTIFIED IN THE FIELD.
 - CUT AND FILL SLOPES TO BE 2H:1V UNLESS NOTED OTHERWISE.

SUPER SILT FENCE & FILTER SOCK TABLE		
ID NUMBER	SSF(LF)	FS(LF)
35		SEE TABLE ON PREVIOUS SHEET FOR QUANTITY
36		78
37	87	
38	105	
39	55	
40		52
41		169
42	103	
43	152	
44	173	
TOTALS	675	299



**ISSUED FOR
CONSTRUCTION**



SEAL

NO.	REVISION	BY	DATE
△	MATERIAL SPOIL REVISIONS	RAP	09/09/13
△	ADDRESS WDEP COMMENTS	CAL	10/11/13
△	-	-	-
△	-	-	-
△	-	-	-

ACAD FILE:
EROSION & SEDIMENT CONTROL.dwg

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PROJ. NO.
133140

**EDWIN DRILL AND W.C. PAD
EROSION & SEDIMENT CONTROL
PLAN**

ANTERO RESOURCES CORPORATION
EDWIN DRILL AND W.C. PAD
CLAY DISTRICT
RITCHIE COUNTY
WEST VIRGINIA

DESIGNED BY:	RAP
MODIFIED BY:	RAP
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SCALE:	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	

CONSTRUCTION
18
18 of 33 sheets