



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

March 26, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-1706708, 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: KING UNIT 1H
Farm Name: WEBB, JAMES E.

API Well Number: 47-1706708

Permit Type: Horizontal 6A Well

Date Issued: 03/26/2015

Promoting a healthy environment.

02/13/2026

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. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. 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.
9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

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

1) Well Operator: Antero Resources Corporation 494488557 017- Doddridge Central Oxford 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: King Unit 1H Well Pad Name: James Webb Pad

3) Farm Name/Surface Owner: Webb, James E. Public Road Access: CR 21/1

4) Elevation, current ground: ~995' Elevation, proposed post-construction: 991'

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

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus Shale: 6,900' TVD, Anticipated Thickness- 60 feet, Associated Pressure- 3100#

Handwritten signature and date: 3/25/15

8) Proposed Total Vertical Depth: 6,900' TVD

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 18,200' MD

11) Proposed Horizontal Leg Length: 10,916'

12) Approximate Fresh Water Strata Depths: 64', 80', 145' - Leggett Unit 1H - 310' (nearby Robert Williams Pad - 990' elevation)

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

14) Approximate Saltwater Depths: 1350'

15) Approximate Coal Seam Depths: 183', 716', 1463'

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

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

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

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18)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft. (lb/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#	400' (*see note below)	400' (*see note below)	CTS, 556 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500'	2500'	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	18,200'	18,200'	4,627 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7,100'	
Liners							

*Surface Casing Setting depth was updated per request by WVDEP Office of Oil & Gas and Inspector Doug Newlon (email string dated 3/13/2015) based on offset fresh water depth encountered while drilling on the nearby Robert Williams pad.

Handwritten signature and date: 3-25-15

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

PACKERS

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

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17-06708

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

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

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 8.41 acres

22) Area to be disturbed for well pad only, less access road (acres): 4.17 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers

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

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

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

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

Conductor: no additives, Class A cement.

Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake

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

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

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

25) Proposed borehole conditioning procedures:

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

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

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

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

*Note: Attach additional sheets as needed.

WW-9
(9/13)

API Number 47 - 017 - _____
Operator's Well No. King Unit 1H _____

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Antero Resources Corporation OP Code 49448857

Watershed (HUC 10) Cabin Run Quadrangle Oxford 7.5'

Elevation 991' County Doddridge District Central

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: No pit will be used at this site (Drilling and Flowback Fluids will be stored in tanks. Cuttings will be tanked and hauled offsite).

Will a synthetic liner be used in the pit? Yes No 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 (Supply form WW-9 for disposal location) (Meadowfill Landfill Permit #SWF-1032-98)
- Other (Explain _____)

*DCW
1-8-2015*

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Surface - Air/Freshwater, Intermediate - Dust/Skiff 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)

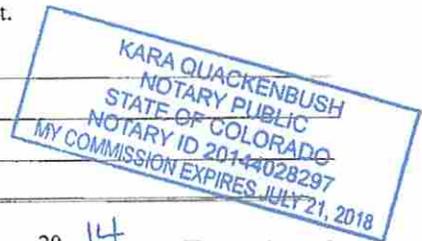
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations 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 *Cole Kilstrom*

Company Official (Typed Name) Cole Kilstrom

Company Official Title Environmental Representative



Subscribed and sworn before me this 18 day of December, 20 14

Kara Quackenbush Notary Public

Received
Office of Oil & Gas

My commission expires July 21, 2018

JAN 09 2015

Form WW-9

Operator's Well No. King Unit 1H

Antero Resources Corporation

Proposed Revegetation Treatment: Acres Disturbed 8.41 acres Prevegetation pH _____

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

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

Fertilizer amount 500 lbs/acre

Mulch 2-3 Tons/acre

Drill Pad (4.17) + Access Road (4.24) = 8.41 Acres

Temporary

Permanent

Seed Type	lbs/acre
<u>Annual Rye Grass</u>	<u>40</u>

Seed Type	lbs/acre
<u>Crownvetch</u>	<u>10-15</u>

*See attached Table 3 for additional seed type (James Webb Pad Design Page 15)

*See attached Table 4A for additional seed type (James Webb Pad Design Page 15)

*or type of grass seed requested by surface owner

*or type of grass seed requested by surface owner

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Douglas Newlan

Comments: seed & Mulch any disturbed Areas To
WV Dep regulations

Title: Oil & Gas Inspector

Date: 1-08-2015

Field Reviewed? () Yes () No

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Form WW-9 Additives Attachment**SURFACE INTERVAL**

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

INTERMEDIATE INTERVAL***STIFF FOAM RECIPE:***

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

PRODUCTION INTERVAL

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

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13. Escaid 110
Drilling 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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Well Site Safety Plan

Antero Resources

Well Name: Mary Jane Unit 1H, Mary Jane Unit 2H, Mary Jane Unit 3H, Hunter Unit 1H, Hunter Unit 2H, Mahogany Unit 1H, Mahogany Unit 2H, King Unit 1H, King Unit 2H

Pad Location: JAMES WEBB PAD
Doddridge County/ Central District

GPS Coordinates: Lat 39°14'18.9564"/Long 80°52'23.6316" (NAD83)

Driving Directions:

From Greenwood, head southeast on County Route 50/30/Old U.S. 50 West/Sunnyside Road for 3.4 miles. Turn right onto County Route 21/Oxford Road and continue for 2 miles. Turn right onto County Route 21/1/Cabin Run. After approximately 0.4 miles, access road will be on the right.

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

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JAN 09 2015

DCN
1-8-2015

17-06708



PETRA 11/24/2014 3:42:15 PM

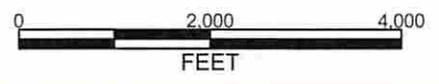
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 WV Department of
 Environmental Protection

Antero Resources Corporation

APPALACHIAN BASIN

King Unit 1H

Doddridge County, WV



REMARKS
 QUADRANGLE: OXFORD
 WATERSHED: CABIN RUN
 DISTRICT: CENTRAL

02/13/2026

November 24, 2014

LATITUDE 39°15'00"

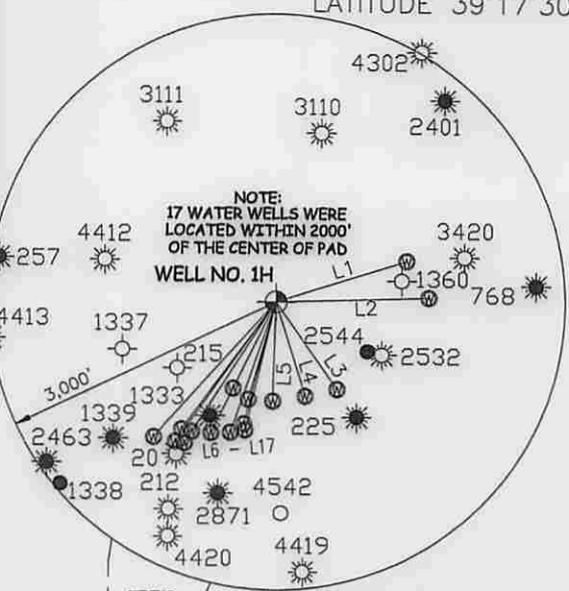
11,376'

5,462' TO BOTTOM HOLE
LATITUDE 39°17'30"

LONGITUDE 80°52'30"
4,184'
9,778' TO BOTTOM HOLE
LONGITUDE 80°50'00"

Antero Resources Corporation
Well No. King Unit 1H

LINE	BEARING	DISTANCE
L1	N 72°15' E	1424.3'
L2	N 88°07' E	1586.6'
L3	S 35°12' E	1107.5'
L4	S 17°19' E	1023.9'
L5	S 01°48' W	1030.8'
L6	S 13°26' W	1399.1'
L7	S 14°41' W	1308.9'
L8	S 15°45' W	1051.0'
L9	S 19°07' W	1434.9'
L10	S 24°11' W	1332.7'
L11	S 28°13' W	1000.6'
L12	S 28°15' W	1517.4'
L13	S 32°47' W	1748.1'
L14	S 32°53' W	1605.3'
L15	S 35°35' W	1788.2'
L16	S 38°23' W	1844.9'
L17	S 42°08' W	1896.8'



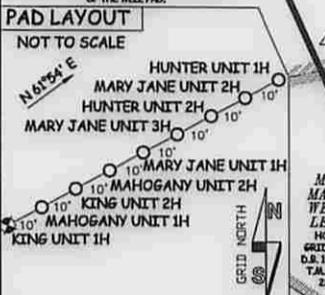
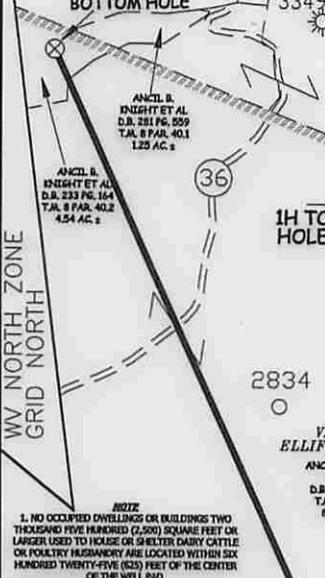
NOTES:
 17 WATER WELLS WERE LOCATED WITHIN 2000' OF THE CENTER OF PAD
WELL NO. 1H

WELL 1H TOP HOLE INFORMATION:
 N: 271,955ft E: 1,610,977ft
 LAT: 39°14'18.64" LON: 80°52'24.58"

BOTTOM HOLE INFORMATION:
 N: 281,627ft E: 1,605,236ft
 LAT: 39°15'53.36" LON: 80°53'39.45"

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

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
 N: 4,343,262m E: 510,932m
BOTTOM HOLE INFORMATION:
 N: 4,346,179m E: 509,134m



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

STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 14-104WA
 DRAWING # KING1H
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
 STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

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

DOUGLAS R. ROWE P.S. 2202
 DATE 12/11/14
 OPERATOR'S WELL# KING UNIT #1H

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 991.4' WATERSHED CABIN RUN
 QUADRANGLE OXFORD 7.5 (TOP HOLE) PENNSBORO 7.5 (BOTTOM HOLE) DISTRICT CENTRAL COUNTY DODDRIDGE
 SURFACE OWNER JAMES E. WEBB ACREAGE 84.89 ACRES +/-
 OIL & GAS ROYALTY OWNER CHARLEY WILSON ET UX; RALPH LEGGETT ET UX; H.B. WILLIAMS ET UX; I.L. MORRIS; LEASE ACREAGE 91 ACRES +/-; 75 ACRES +/-; 307 ACRES +/-; 40.9 ACRES +/-
 GERALDINE WILLARD; MELANIE KING; JAMES W. JOHNSON ET UX; ETTA ORDER ET VIR; MARY MAXINE WELCH; V. OLIVE ELLIFRIT 131.5 ACRES +/-; 30 ACRES +/-; 38.8 ACRES +/-; 201 ACRES +/-; 30 ACRES +/-; 130 ACRES +/-
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,900' TVD 18,200' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313



02/13/2026

LATITUDE 39°15'00"

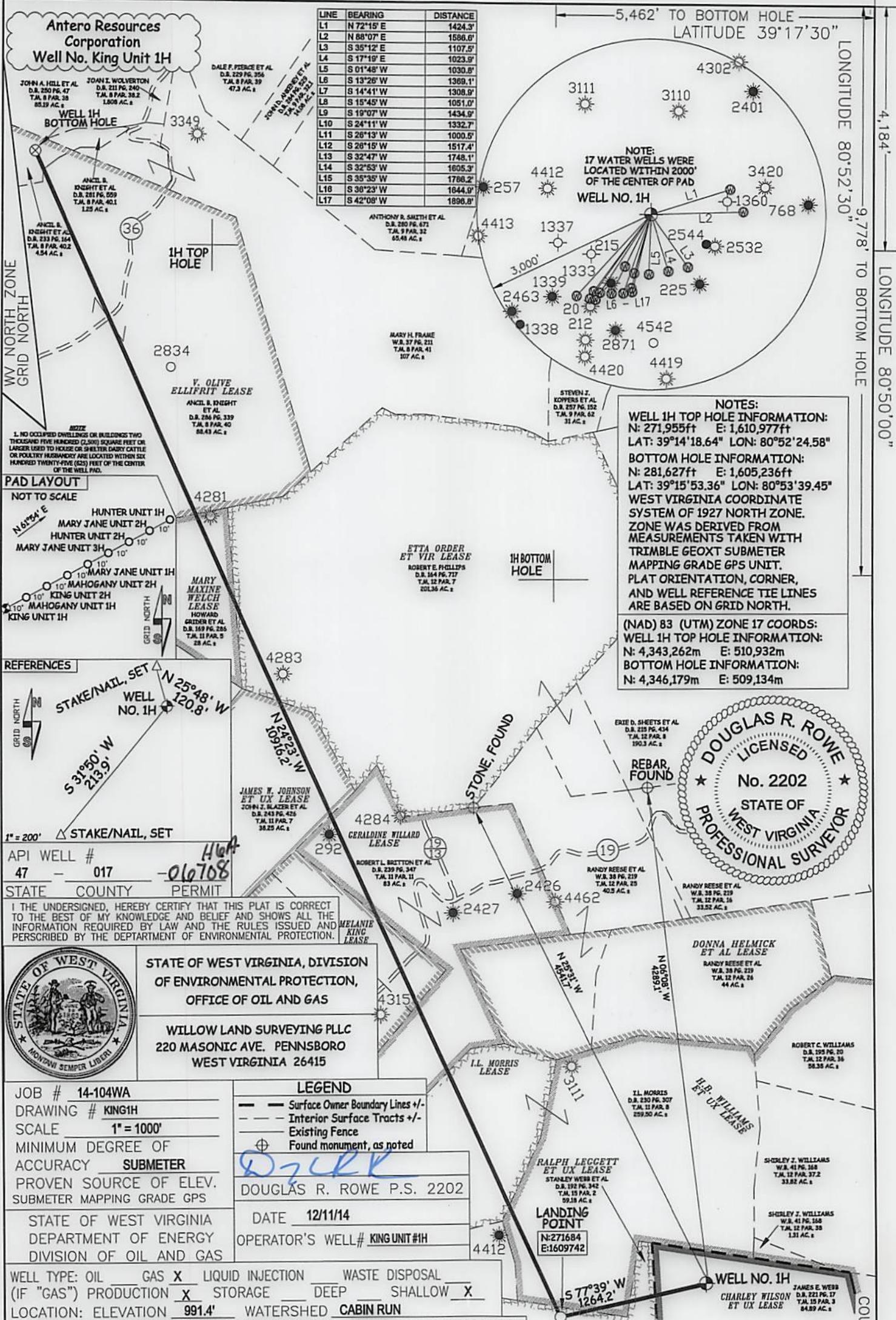
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LATITUDE 39°17'30"

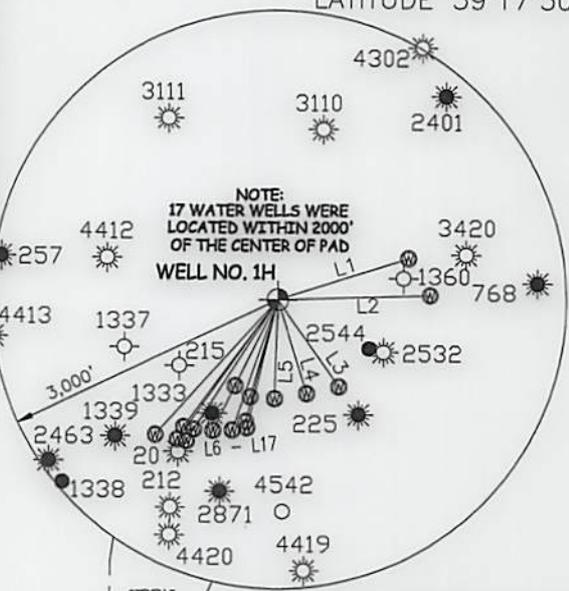
LONGITUDE 80°52'30"

4,184'

9,778' TO BOTTOM HOLE
LONGITUDE 80°50'00"

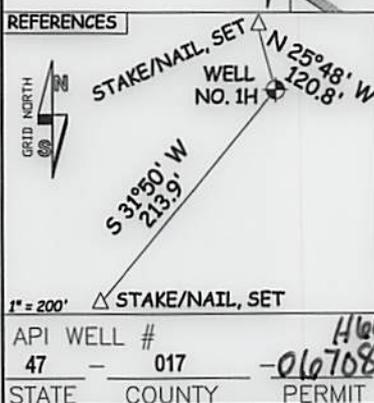
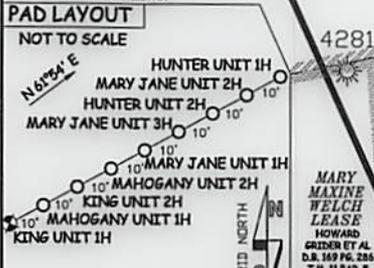


LINE	BEARING	DISTANCE
L1	N 72°15' E	1424.3'
L2	N 88°07' E	1586.6'
L3	S 35°12' E	1107.5'
L4	S 17°19' E	1023.9'
L5	S 01°48' W	1030.8'
L6	S 13°26' W	1369.1'
L7	S 14°41' W	1308.9'
L8	S 15°45' W	1051.0'
L9	S 19°07' W	1434.9'
L10	S 24°11' W	1332.7'
L11	S 28°13' W	1000.5'
L12	S 28°15' W	1517.4'
L13	S 32°47' W	1748.1'
L14	S 32°53' W	1805.3'
L15	S 35°35' W	1786.2'
L16	S 36°23' W	1844.9'
L17	S 42°08' W	1896.8'



NOTES:
 WELL 1H TOP HOLE INFORMATION:
 N: 271,955ft E: 1,610,977ft
 LAT: 39°14'18.64" LON: 80°52'24.58"
 BOTTOM HOLE INFORMATION:
 N: 281,627ft E: 1,605,236ft
 LAT: 39°15'53.36" LON: 80°53'39.45"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE LINE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 1H TOP HOLE INFORMATION:
 N: 4,343,262m E: 510,932m
 BOTTOM HOLE INFORMATION:
 N: 4,346,179m E: 509,134m



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

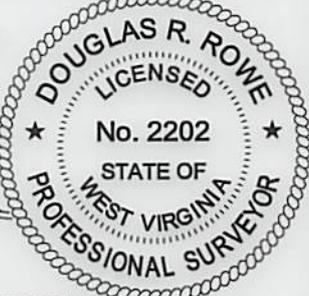
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 14-104WA
 DRAWING # KING1H
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
 STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

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

DOUGLAS R. ROWE P.S. 2202
 DATE 12/11/14
 OPERATOR'S WELL# KING UNIT #1H

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 991.4' WATERSHED CABIN RUN
 QUADRANGLE OXFORD 7.5 (TOP HOLE) PENNSBORO 7.5 (BOTTOM HOLE) DISTRICT CENTRAL COUNTY DODDRIDGE
 SURFACE OWNER JAMES E. WEBB ACREAGE 84.89 ACRES +/-
 OIL & GAS ROYALTY OWNER CHARLEY WILSON ET UX; RALPH LEGGETT ET UX; H.B. WILLIAMS ET UX; I.L. MORRIS; LEASE ACREAGE 91 ACRES +/-; 75 ACRES +/-; 307 ACRES +/-; 40.9 ACRES +/-
 GERALDINE WILLARD; MELANIE KING; JAMES W. JOHNSON ET UX; ETTA ORDER ET VIR; MARY MAXINE WELCH; V. OLIVE ELLIFRIT 131.5 ACRES +/-; 30 ACRES +/-; 38.8 ACRES +/-; 201 ACRES +/-; 30 ACRES +/-; 130 ACRES +/-
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ PLUG & ABANDON _____ CLEAN OUT & REPLUG _____
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,900' TVD 18,200' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313



02/13/2026

WW-6A1

Operator's Well Number King Unit 1H

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

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

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

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Charley Wilson, et ux Lease</u>			
Charley Wilson, et ux	Luther G. Piggott	1/8	0060/0059
Luther G. Piggott	United Operating Company, Inc. - Lyle T. Coffman President	Assignment	0112/0156
United Operating Company, Inc. – Lyle T. Coffman President	Antero Resources Appalachian Corporation	Assignment	0281/0482
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Ralph Leggett, et ux Lease</u>			
Ralph Leggett, et ux	Harold B. Smith	1/8	0088/0228
Harold B. Smith	Reeves Lewenthal	Assignment	0088/0232
Reeves Lewenthal	Ray Resources Corporation	Assignment	0099/0332
Ray Resources Corporation	Bow Valley Petroleum, Inc.	Assignment	0115/0031
Bow Valley Petroleum, Inc.	G.W. Petroleum, Inc.	Name Change	Recital in 0166/0312
G.W. Petroleum, Inc.	Great Western Onshore, Inc.	Name Change	Recital in 0166/0312
Great Western Onshore, Inc.	Eastern American Energy Corporation	Assignment	0166/0312
Eastern American Energy Corporation	Targa Development, Inc.	Assignment	0219/0529
Targa Development, Inc.	Antero Resources Appalachian Corporation	Assignment	0257/0362
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>H.B. Williams, et ux Lease</u>			
H.B. Williams, et ux	Freehold Oil & Gas	Flat Rate	0030/0088
Freehold Oil & Gas	Hope Natural Gas Company	Assignment	0025/0453
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Confirmatory Deed	DB 0143/0345
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	0135/0583
Consolidated Gas Transmission Corporation	CNG Transmission Corporation	Amended Certificate of Authority	AOI 0051/0795
CNG Transmission Corporation	Dominion Transmission, Inc.	Amended Certificate of Authority	AOI 0058/0362
Dominion Transmission, Inc.	CONSOL Energy Holdings	Assignment	0245/0001
CONSOL Energy Holdings, LLC XVI	CNX Gas Company, LLC	Affidavit of Name Changes & Merger	DB 0293/0252
CNX Gas Company, LLC	Antero Resources Appalachian Corporation	Notice of Agreement	0296/0715
CNX Gas Company, LLC & Noble Energy, Inc.	Antero Resources Corporation	Assignment	0325/0507
<u>I.L. Morris Lease</u>			
I.L. (Ike) Morris	Antero Resources Corporation	1/8+	0348/0552
<u>Geraldine Willard Lease</u>			
Geraldine Willard	Key Oil Company	1/8	0260/0346
Key Oil Company	Antero Resources Appalachian Corporation	Partial Assignment of Oil Rights	0272/0350
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.

02/13/2026

CONTINUED ON NEXT PAGE

WW-6A1

Operator's Well Number King Unit 1H

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

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- (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>Melanie King Lease</u>			
Melanie King, et vir Key Oil Company	Key Oil Company Antero Resources Appalachian Corporation	1/8 *Partial Assignment of Oil & Gas Leases	0178/0001 0256/0285
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>James W. Johnson, et ux Lease</u>			
James W. Johnson, et ux Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0266/0224 Exhibit 1
<u>Etta Orders, et vir Lease</u>			
Etta Orders, et vir Key Oil Company	Key Oil Company Antero Resources Appalachian Corporation	1/8 *Partial Assignment of Oil & Gas Leases	0109/0109 0256/0285
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Mary Maxine Welch Lease</u>			
Mary Maxine Welch Key Oil Company	Key Oil Company Antero Resources Appalachian Corporation	1/8 *Partial Assignment of Oil & Gas Leases	0177/0258 0256/0285
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1

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Office of Oil and Gas

DEC 29 2014

WV Department of
Environmental Protection

*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.

02/13/2026
CONTINUED ON NEXT PAGE

**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)**

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<i>V. Olive Ellifritt Lease</i>				
V. Olive Ellifritt, et al		Hope Natural Gas Company, a West Virginia Corporation	1/8	0031/0050
Hope Natural Gas Company, A West Virginia Corporation		Hope Construction & Refining Company, a Delaware Corporation	Assignment	0038/0238
Hope Construction & Refining Corporation, a Delaware Corporation		South Penn Natural Gas Company	Assignment	0054/0149
South Penn Natural Gas Company		South Penn Oil Company, a Corporation	Confirmatory Deed	0133/0296
South Penn Oil Company, a Corporation		Pennzoil Company	Name Change	Exhibit 2
Pennzoil Company		Pennzoil United, Inc.	Confirmatory Deed	0153/0051
Pennzoil United, Inc.		Pennzoil Company	Name Change	Exhibit 3
Pennzoil Company		Vinson Oil & Gas Drilling Company, a Corporation	Assignment & Bill of Sale	0113/0462
Vinson Oil & Gas Drilling Company, a Corporation		Consolidated Gas Supply Corporation	Vinson recognizes and & acknowledges that Consolidated Gas Supply Corporation owns the rights under Pennzoil lease # 80754-50	Recital in 0113/0462
Consolidated Gas Supply Corporation		Consolidated Gas Transmission Corporation	Assignment	0135/0583
Consolidated Gas Transmission Corporation		CNG Development Company	Assignment	0139/0041
CNG Development Company		CNG Producing Company	Merger	Exhibit 4
CNG Producing Company		Dominion Exploration & Production Company, Inc.	Name Change	AOI 0058/0366
Dominion Exploration & Production Company, Inc.		Consol Gas Company	Name Change	DB 0286/0144
Consol Gas Company		CNX Gas Company, LLC	Merger	DB 0292/0469
CNX Gas Company, LLC		Antero Resources Appalachian Corporation	Assignment	0296/0715
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.

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WV Department of
Environmental Protection

Well Operator: Antero Resources Corporation
By: Mark Mauz
Its: VP, Gas & GMT

WW-60
(7-01)

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Office of Oil and Gas

MAR 24 2015

WV Department of
Environmental Protection

DATE: March 12, 20 15

OPERATOR'S
WELL NO. King Unit 1H

API NO: 47- 017
State County Permit No.

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

A F F I D A V I T

State of Colorado

County of Denver

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

Signed: [Signature]

Taken, subscribed and sworn to before me this 12 day of March, 20 15.

Kara Quackenbush

Notary Public

My Commission expires: July 21, 2018

KARA QUACKENBUSH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20144028297
MY COMMISSION EXPIRES JULY 21, 2018

WW-60
(7-01)

DATE: December 19, 20 14
OPERATOR'S
WELL NO. King Unit 1H

API NO: 47- 017
State County Permit No.

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

A F F I D A V I T

State of Colorado

County of Denver

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

Signed: [Signature]

Taken, subscribed and sworn to before me this 19 day of December, 20 14.

[Signature: Kara Quackenbush]
Notary Public

My Commission expires: _____

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Office of Oil and Gas
DEC 29 2014
WV Department of
Environmental Protection

KARA QUACKENBUSH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20144028297
MY COMMISSION EXPIRES 02/13/2026

FORM WW-6A1
EXHIBIT 1

FILED

JUN 10 2013

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



Penney Barker, Manager
Corporations Division
IN THE OFFICE OF
SECRETARY OF STATE
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvssos.com
E-mail: business@wvssos.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: 6/25/2008
- 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)
- 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
- Signature Information (See below *Important Legal Notice Regarding Signature*):
Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person
Signature: [Handwritten Signature] Date: June 10, 2013

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

Form CP-1

Issued by the Office of the Secretary of State

RECEIVED
Office of Oil and Gas

DEC 29 2014

WV Department of
Environmental Protection

02/13/2026

FORM WV-6A1 - EXHIBIT 2

Name SOUTH PENN OIL COMPANY
 Foreign Corporation Delaware Book 199 Page 350
 Admitted July 9, 1955
 Attorney _____
 Reports _____

Address: Drake Theater Bldg.,
106 Duncomb St., Oil City, Penna.

CHANGE OF NAME: THE PENNZOIL COMPANY, filed
July 31, 1963; Book 238, Page 309.

Column 1	4	3	7
Column 2	5	5	0
Column 3	1	3	6
Column 4	7	5	5

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Office of Oil and Gas

DEC 29 2014

WV Department of
Environmental Protection

02/13/2026

FORM WW-6A1
EXHIBIT 3

STATE OF WEST VIRGINIA
CERTIFICATE

I, JOHN D. ROCKEFELLER, IV, Secretary of State of the State of West Virginia,
hereby certify that

PENNZOIL UNITED, INC.,

a corporation organized and existing under and by virtue of the laws of the State of Delaware, which was heretofore duly authorized to hold property and transact business in the State of West Virginia by a certificate of authority issued thereto by my said office on the 1st day of April, 1968, has this day presented to me in my said office a duly certified copy of **Change of Name from PENNZOIL UNITED, INC. to PENNZOIL COMPANY,** filed in the Office of the Secretary of State of the State of Delaware on the 12th day of May, 1972, which said change of name has been duly filed and made a part of the original records now on file in my said office.

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Office of Oil and Gas

DEC 29 2014

WV Department of
Environmental Protection

(G. S.)

Given under my hand and the Great Seal of the said State, at the City of Charleston, this SIXTH day of JUNE, 1972.

JOHN D. ROCKEFELLER, IV,
Secretary of State.

FORM WW-6A1
EXHIBIT 4, PAGE 1



I, Ken Flechler, Secretary of State of the State of West Virginia, hereby certify that
 originals of a Notice of Intention to Withdraw with the application of

CEG DEVELOPMENT COMPANY

for a Certificate of Withdrawal from West Virginia, signed and verified, as required by the provisions of Chapter 31, Article 1, Section 60 of the West Virginia Code are filed in my office and conform to law. Therefore, I issue this

CERTIFICATE OF WITHDRAWAL

and I attach to this certificate a duplicate original of the application.

Given under my hand and the Great Seal of the State of West Virginia, on this



TENTH _____ day of
 JULY _____ 19 91

Ken Flechler

Secretary of State

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 Office of Oil and Gas

DEC 29 2014

WV Department of Environmental Protection
 02/13/2026

FORM WW-6A1
EXHIBIT 4, PAGE 2

KEN HECHLER
FEE \$5.00



TO BE FILED IN DUPLICATE
ORIGINALS

FILED
JUL 10 1991
OFFICE OF
SECRETARY OF STATE
WEST VIRGINIA

APPLICATION FOR
CERTIFICATE OF WITHDRAWAL
OF
CIG Development Company

In accordance with Chapter 31, Article 1, Section 60 of the Code of West Virginia, the undersigned corporation hereby applies for a certificate of withdrawal from West Virginia, and submits the following statement:

The name of the corporation is: CIG Development Company

It is incorporated under the laws of Delaware

IT IS NOT TRANSACTING BUSINESS IN WEST VIRGINIA.

It hereby surrenders its authority to transact business in West Virginia. It revokes the authority of its registered agent in West Virginia to accept service of process, and consents that service of process in any action, suit or proceeding based upon any course of action arising in West Virginia during the time the corporation was authorized to transact business in West Virginia may thereafter be made on the corporation by service thereof on the Secretary of State of West Virginia.

The post office address to which the Secretary of State may mail a copy of any process against the corporation is: CIG Producing Company, CIG Tower, 1450 Poydras Street, New Orleans, LA 70112-6000 Attn: Corporate Secretary

The aggregate number of shares which it has authority to issue, itemized by classes, par value of shares, shares without par, and series, if any, within a class, as of this date is:

NUMBER OF SHARES	CLASS	SERIES	PAR VALUE/NO PAR
1,400,000	Common		\$100

The aggregate number of its issued shares, itemized by classes, par value of shares, shares without par, and series, if any, within a class, as of this date is:

NUMBER OF SHARES	CLASS	SERIES	PAR VALUE/NO PAR
1,168,410	Common		\$100

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Office of Oil and Gas

DEC 29 2014

The amount of its state capital as of this date is WV Department of Environmental Protection

FORM WW-6A1
EXHIBIT 4, PAGE 3

CHG Development Company (Through CHG Producing Company)

Corporate name

President/Vice President

D. Malcolm Johns, Jr.
Secretary

State of Louisiana

Parish Orleans

James E. Wright, Jr.

a Notary Public, do

hereby certify that D. Malcolm Johns, Jr.

XXXXX

the Secretary
office
of CHG Producing Company
corporate name
office

appeared before me and they signed the foregoing as the act and deed of the corporation.

[Signature]
Notary Public

(Notary seal)

My commission expires at death

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Office of Oil and Gas

DEC 29 2014

WV Department of
Environmental Protection

02/13/2026



December 18, 2014

Antero Resources
1615 Wynkoop Street
Denver, CO 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: King Unit 1H
Quadrangle: Oxford 7.5⁺
Doddridge County/Central District, West Virginia

Mr. Martin:

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

Sincerely,

A handwritten signature in blue ink, appearing to read "M. Green", is written over a light blue horizontal line.

Max W. Green
Supervisor of Land Operations - Marcellus

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Office of Oil and Gas

DEC 29 2014

WV Department of
Environmental Protection

02/13/2026

4701706708

WW-PN
(5-04-2012)

**Horizontal Natural Gas Well Work Permit
Application Notice By Publication**

Notice is hereby given:

Pursuant to West Virginia Code 22-6A-10(e) prior to filing an application for a permit for a horizontal well the applicant shall publish in the county in which the well is located or is proposed to be located a Class II legal advertisement.

Paper: The Herald Record

Public Notice Date: 11/25/2014 & 12/2/2014

The following applicant intends to apply for a horizontal natural well work permit which disturbs three acres or more of surface excluding pipelines, gathering lines and roads or utilizes more than two hundred ten thousand gallons of water in any thirty day period.

Applicant: Antero Resources Corporation **Well Number:** King Unit 1H

Address: 1615 Wynkoop St. Denver, CO 80202

Business Conducted: Natural gas production.

Location –

State: West Virginia County: Doddridge
District: Central Quadrangle: Oxford 7.5'
UTM Coordinate NAD83 Northing: 4,343,262m
UTM coordinate NAD83 Easting: 510,932m
Watershed: Cabin Run

Coordinate Conversion:

To convert the coordinates above into longitude and latitude, visit: http://tagis.dep.wv.gov/convert/llutm_conus.php

Electronic notification:

To receive an email when applications have been received or issued by the Office of Oil and Gas, visit <http://www.dep.wv.gov/insidedep/Pages/DEPMailingLists.aspx> to sign up.

Reviewing Applications:

Copies of the proposed permit application may be reviewed at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE Charleston, WV 25304 (304-926-0450). Full copies or scans of the proposed permit application will cost \$15, whether mailed or obtained at DEP headquarters. Copies may be requested by calling the office or by sending an email to DEP.oog@wv.gov.

Submitting Comments:

Comments may be submitted online at <https://apps.dep.wv.gov/oog/comments/comments.cfm>, or by letter to Permit Review, Office of Oil and Gas, 601 57th Street, SE Charleston, WV 25304. Please reference the county, well number, and operator when using this option.

Regardless of format for comment submissions, they must be received no later than thirty days after the permit application is received by the Office of Oil and Gas.

For information related to horizontal drilling visit: www.dep.wv.gov/oil-and-gas/pages/default.aspx

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Office of Oil and Gas

DEC 29 2014

02/13/2026
WV Department of
Environmental Protection

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

Date of Notice Certification: 12/18/2014

API No. 47- 017 -
Operator's Well No. King Unit 1H
Well Pad Name: James Webb

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>510,932m</u>
County: <u>Doddridge</u>		Northing: <u>4,343,262m</u>
District: <u>Central</u>	Public Road Access: <u>CR 21/1</u>	
Quadrangle: <u>Oxford 7.5'</u>	Generally used farm name: <u>Webb, James E.</u>	
Watershed: <u>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.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY		OOG OFFICE USE ONLY <input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED
<input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY	or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	
<input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY	or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED	
<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	
	<input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	
<input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION		
<input checked="" type="checkbox"/> 5. PUBLIC NOTICE		
<input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		

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.

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Office of Oil and Gas

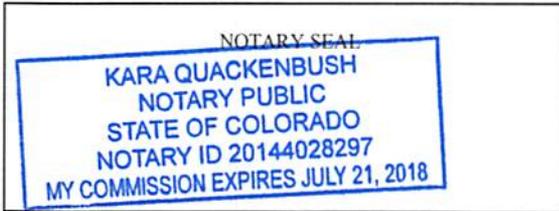
DEC 29 2014

WV Department of Environmental Protection
02/13/2026

Certification of Notice is hereby given:

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

Well Operator:	<u>Antero Resources Corporation</u>	Address:	<u>1615 Wynkoop Street</u>
By:	<u>Ward McNeilly</u> <i>W. McNeilly</i>		<u>Denver, CO 80202</u>
Its:	<u>VP, Reserves Planning & Midstream</u>	Facsimile:	<u>303-357-7315</u>
Telephone:	<u>303-357-7310</u>	Email:	<u>asteele@anteroresources.com</u>



Subscribed and sworn before me this 18 day of December 2014
Kara Quackenbush Notary Public
 My Commission Expires July 21, 2018

Oil and Gas Privacy Notice:

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

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Office of Oil and Gas
DEC 29 2014
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: 12/19/2014 Date Permit Application Filed: 12/19/2014

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: James E. Webb

Address: 813 Cabin Run Rd.
West Union, WV 26456

Name: Joseph E. Webb

Address: 30 Red Oak Dr.
West Union, WV 26456

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

Name: _____

Address: _____

Name: _____

Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: NO DECLARATIONS ON RECORD WITH COUNTY

Address: _____

COAL OPERATOR

Name: NO DECLARATIONS ON RECORD WITH COUNTY

Address: _____

WATER PURVEYOR(s)/OWNER(s) OF WATER WELL, SPRING OR OTHER WATER SUPPLY SOURCE

Name: PLEASE SEE ATTACHMENT

Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____

Address: _____

RECEIVED
Office of Oil and Gas

*Please attach additional forms if necessary
DEC 29 2014

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 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

WW-6A
(8-13)

API NO. 47-01701706703
OPERATOR WELL NO. King Unit 1H
Well Pad Name: James Webb

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

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

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WV Department of
Environmental Protection
02/13/2026

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WV Dept of Environmental Protection
02/13/2016

WW-6A
(8-13)

API NO. 47-017 4701706708
OPERATOR WELL NO. King Unit 1H
Well Pad Name: James Webb

Notice is hereby given by:

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



Address: 1615 Wynkoop Street
Denver, CO 80202
Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 19 day of December 2014
Kara Quackenbush Notary Public
My Commission Expires July 21, 2018

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Environmental Protection
02/13/2026

WW-6A Notice of Application Attachment:**Water Source Owners:**

Owner: James E. Webb (6 water sources)

Address: 813 Cabin Run Rd.
West Union, WV 26456 ✓

Owner: Shirley Jean Williams ✓

Address: 296 Cabin Run Rd.
West Union, WV 26456 ✓

Owner: Brian M. Webb (2 sources)

Address: RR 1 Box 207
West Union, WV 26456 ✓

Owner: Daniel M. Webb ✓

Address: 945 Cabin Run Rd.
West Union, WV 26456 ✓

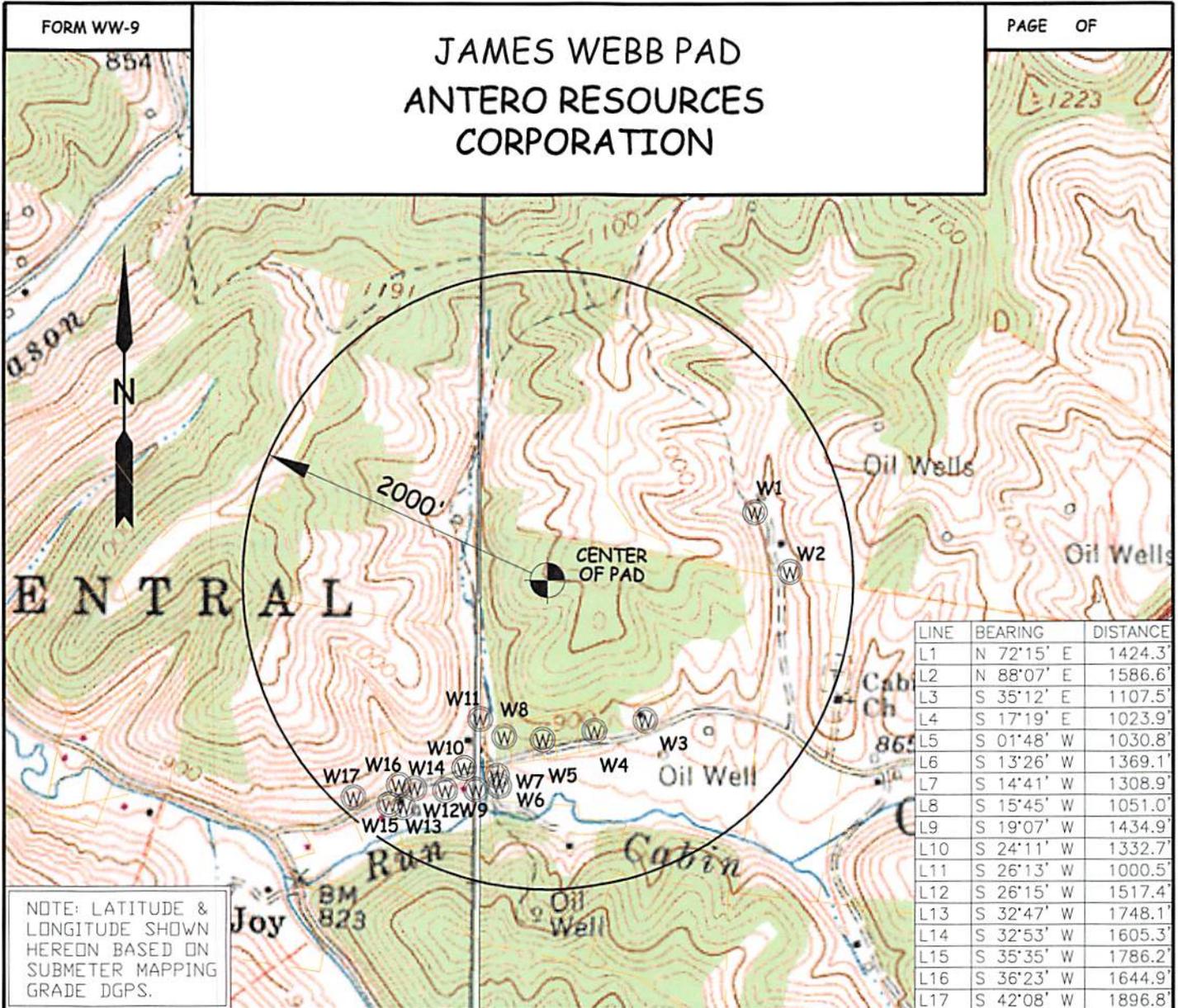
(Note: On attached water well map 7 water sources are identified but they are located greater than 1500' from the subject well pad location)

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02/13/2026
WV Department of
Environmental Protection

JAMES WEBB PAD ANTERO RESOURCES CORPORATION



NOTE: LATITUDE & LONGITUDE SHOWN HEREON BASED ON SUBMETER MAPPING GRADE DGPS.

WELL	SURFACE OWNER	ADDRESS	DIST-TAX MAP-PARCEL	WELL LATITUDE	WELL LONGITUDE
W1	SHIRLEY JEAN WILLIAMS	296 CABIN RUN RD. WEST UNION, WV 26456	1-12-37.1	39° 14' 23.35"	80° 52' 06.93"
W2	ROBERT C. WILLIAMS	RR 1 BOX 212 WEST UNION, WV 26456	1-12-37	39° 14' 19.61"	80° 52' 03.94"
W3	JAMES E. WEBB	813 CABIN RUN RD. WEST UNION, WV 26456	1-15-4	39° 14' 10.01"	80° 52' 15.79"
W4	BRIAN WEBB	RR 1 BOX 207 WEST UNION, WV 26456	1-15-3.2	39° 14' 09.24"	80° 52' 20.02"
W5	JAMES E. WEBB	RT 1 BOX 208A WEST UNION, WV 26456	1-15-3	39° 14' 09.92"	80° 52' 29.52"
W6	DANIEL M. WEBB	945 CABIN RUN RD WEST UNION, WV 26456	1-15-3.6	39° 14' 08.67"	80° 52' 24.29"
W7	BRIAN M. WEBB	RR 1 BOX 207 WEST UNION, WV 26456	1-15-3.2	39° 14' 08.82"	80° 52' 27.51"
W8	JAMES E. WEBB	813 CABIN RUN RD. WEST UNION, WV 26456	1-15-3	39° 14' 06.29"	80° 52' 28.05"
W9	JAMES E. WEBB	813 CABIN RUN RD. WEST UNION, WV 26456	1-15-3	39° 14' 06.77"	80° 52' 30.78"
W10	JAMES E. WEBB	813 CABIN RUN RD. WEST UNION, WV 26456	1-15-3	39° 14' 05.65"	80° 52' 27.86"
W11	JAMES E. WEBB	813 CABIN RUN RD. WEST UNION, WV 26456	1-15-2.5	39° 14' 05.39"	80° 52' 29.79"
W12	JAMES E. WEBB	813 CABIN RUN RD. WEST UNION, WV 26456	1-15-2.5	39° 14' 05.30"	80° 52' 32.34"
W13	DARLENE D. WINEMILLER ET AL	RT 1 BOX 207A WEST UNION, WV 26456	1-15-2.13	39° 14' 05.40"	80° 52' 34.90"
W14	ROBERT P. HARRIS ET AL	RT 1 BOX 207 WEST UNION, WV 26456	1-15-2.9	39° 14' 05.62"	80° 52' 36.22"
W15	EDWARD WEBB ET AL	RR 1 BOX 208 WEST UNION, WV 26456	1-15-2.8	39° 14' 04.19"	80° 52' 35.82"
W16	BRIAN WEBB	RT 1 BOX 207 WEST UNION, WV 26456	1-15-2.7	39° 14' 04.34"	80° 52' 37.01"
W17	STANLEY WEBB ET AL	945 CABIN RUN RD WEST UNION, WV 26456	1-15-2	39° 14' 04.76"	80° 52' 39.98"

WILLOW LAND SURVEYING, PLLC
P.O. BOX 17, PENNSBORO, WV 26415
(304) 659-1717

OXFORD 7.5' QUAD.
PULLMAN 7.5' QUAD.

JOB #: 14-082WA

FILE: JAMESWEBWATERMAP

SCALE : 1-INCH = 1000-FEET



DATE: 10/23/14

DRAWN BY: D.R.R.

WW-6A3
(1/12)

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: 3/26/2014 Date of Planned Entry: 4/5/2014

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: James E. Webb (Life)
Address: 813 Cabin Run Rd.
West Union, WV 26456
Name: Joseph Edward Webb
Address: 30 Red Oak Dr.
West Union, WV 26456

COAL OWNER OR LESSEE
Name: NO DECLARATIONS ON RECORD WITH THE COUNTY
Address:

MINERAL OWNER(s)
Name: Robert L. Riley Cinda L. Fleming
Address: 248 Late Ave 4501 Hudson St.
Bridgeport, WV 26330 Parkersburg, WV 26104
*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia
County: Doddridge
District: Central
Quadrangle: Oxford
Approx. Latitude & Longitude: 39.238599, -80.873231 (NAD 83)
Public Road Access: CR 21/1
Watershed: North Fork Hughes River
Generally used farm name: Webb, Joseph E.

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

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

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

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Oil and Gas Privacy Notice:

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

02/13/2026
Tax Map 15 Parcel 3

WW-6A5
(1/12)

**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: 12/19/2014 **Date Permit Application Filed:** 12/19/2014

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: James E. Webb
Address: 813 Cabin Run Rd.
West Union, WV 26456

Name: Joseph E. Webb
Address: 30 Red Oak Dr.
West Union, WV 26456

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>510,932m</u>
County: <u>Doddridge</u>		Northing: <u>4,343,262m</u>
District: <u>Central</u>	Public Road Access: <u>CR 21/1</u>	
Quadrangle: <u>Oxford 7.5'</u>	Generally used farm name: <u>Webb, James E.</u>	
Watershed: <u>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: Antero Resources Corporation
Telephone: (303) 357-7310
Email: asteele@anteroresources.com

Address: 1615 Wynkoop Street
Denver, CO 80202
Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

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

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4701706708



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

December 16, 2014

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 James Webb Pad, Doddridge County

King Unit 1H Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #04-2013-0201 which has been issued to Antero Resources Corporation for access to the State Road for a well site located off of Doddridge County Route 21/1 SLS.

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,

A handwritten signature in blue ink that reads "Gary K. Clayton".

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

Cc: Ashlie Steele
Antero Resources Corporation
CH, OM, D-4
File

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WV D 02/13/2016
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

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Environmental Protection
02/13/2026

*12-10-2014
Douglas Newb*

JAMES WEBB WELL PAD SITE DESIGN & CONSTRUCTION PLAN, EROSION & SEDIMENT CONTROL PLANS

CENTRAL DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA
CABIN RUN WATERSHED

USGS 7.5 PULLMAN & OXFORD QUAD MAPS

LOCATION COORDINATES
EX. ACCESS ROAD "A" ENTRANCE
LATITUDE: 38.858284 LONGITUDE: -80.868471 (NAD 83)
N 434289.00 E 611845.30 (UTM ZONE 17 METERS)
EX. ACCESS ROAD "B" ENTRANCE
LATITUDE: 38.858284 LONGITUDE: -80.868132 (NAD 83)
N 434300.67 E 611894.30 (UTM ZONE 17 METERS)
CENTROID OF WELL PAD
LATITUDE: 38.858590 LONGITUDE: -80.872861 (NAD 83)
N 434388.84 E 610840.81 (UTM ZONE 17 METERS)

GENERAL DESCRIPTION
THE ACCESS ROADS & WELL PAD HAVE BEEN CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

FLOODPLAIN NOTE
THE SITE IS LOCATED IN FLOODZONE "X" PER FEMA FLOOD MAPS #640170222C & #640170220C

MISS UTILITY STATEMENT
ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN. TICKET #181808897. IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO ANY ON-SITE ACTIVITIES FOR THIS PROJECT.

ENVIRONMENTAL NOTES
WETLAND DELINEATIONS WERE PERFORMED NOVEMBER-DECEMBER, 2013, & SEPTEMBER, 2014 BY GAI CONSULTANTS, INC. TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE SEPTEMBER 20, 2013 RESOURCE LOCATION MAP WAS PREPARED BY GAI CONSULTANTS, INC. AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE MAP DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LATTERED LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE APPROPRIATE AGENCIES BE CONSULTED IN AN EFFORT TO GAIN FURTHER CONSIDERATION OF THE DELINEATION SHOWN ON THIS REPORT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

GEOTECHNICAL NOTES
A SUBSURFACE INVESTIGATION OF THE PROPOSED SITE WAS PERFORMED BY G.A. COVET ENGINEERING, PLLC ON JANUARY 08, 10, 14, 15, & 17, 2014. THE REPORT PREPARED BY G.A. COVET ENGINEERING, PLLC, DATED JANUARY 28, 2014, REFLECTS THE RESULTS OF THE SUBSURFACE INVESTIGATION. THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS REPORT WAS USED IN THE PREPARATION OF THESE PLANS. PLEASE REFER TO THE SUBSURFACE INVESTIGATION REPORT BY G.A. COVET ENGINEERING, PLLC FOR ADDITIONAL INFORMATION, AS NEEDED.

PROJECT CONTACTS

OPERATOR:
ANTERO RESOURCES CORPORATION
635 WHITE GALE BLVD.
BIRDSPRING, WV 26030
PHONE: (204) 848-4100
FAX: (204) 848-4108

KEI WAGNER - ENVIRONMENTAL ENGINEER
OFFICE: (204) 842-4068 CELL: (204) 478-8770

JOHN KAWCAK - OPERATIONS SUPERINTENDENT
CELL: (617) 588-1503

AARON KUNZLER - CONSTRUCTION SUPERVISOR
CELL: (408) 227-8344

ANTHONY SMITH - FIELD ENGINEER
OFFICE: (204) 848-4208 CELL: (204) 875-6106

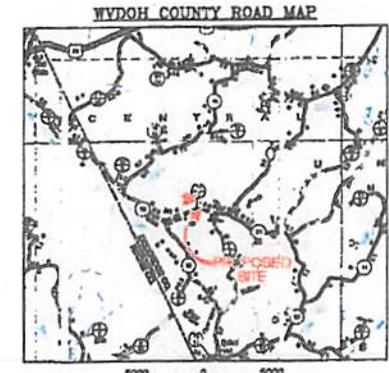
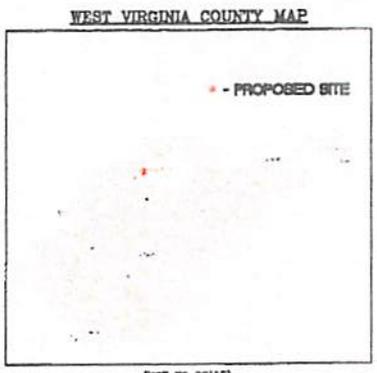
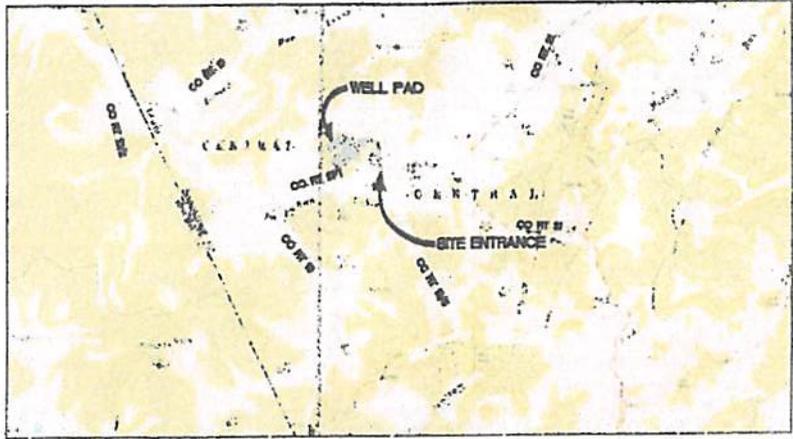
CHARLES E. COMPTON, III - SURVEYING COORDINATOR
CELL: (204) 718-9440

RICHARD LYLES - LAND AGENT
CELL: (770) 578-9833

ENGINEER/SURVEYOR:
NAVITUS ENGINEERING, INC.
CYRUS S. KUMP, PE - PROJECT MANAGER/ENGINEER
OFFICE: (888) 828-1100 CELL: (642) 826-8747

ENVIRONMENTAL:
GAI CONSULTANTS, INC.
JASON A. COOK - SENIOR ENVIRONMENTAL SPECIALIST
OFFICE: (204) 828-8100 CELL: (204) 708-3308

- RESTRICTIONS NOTES:**
- THERE ARE NO PERENNIAL STREAMS, WETLANDS, LAKES, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD. THERE IS A POND ADJACENT TO THE EX. ACCESS ROADS THAT WILL REMAIN UNDISTURBED.
 - THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 500 FEET OF THE WELL PAD AND LOD.
 - THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.
 - THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 800 FEET OF THE WELL(S) BEING DRILLED.
 - THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.
 - THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.



SHEET INDEX

- 01 - COVER SHEET
- 02 - CONSTRUCTION AND ERS CONTROL NOTES
- 03 - EXISTING CONDITIONS
- 04 - OVERALL PLAN SHEET INDEX & VOLUMES
- 05 - EX. ACCESS ROAD PLAN
- 06 - WELL PAD PLAN
- 07 - EX. ACCESS ROAD PROFILES
- 08 - EX. ACCESS ROAD SECTIONS
- 09-10 - WELL PAD SECTIONS
- 11-15 - CONSTRUCTION DETAILS
- 16 - EX. ACCESS ROAD RECLAMATION PLAN
- 17 - WELL PAD RECLAMATION PLAN
- 18 - FIRM EXHIBIT

JAMES WEBB LIMITS OF DISTURBANCE AREA (LDA)

Item	Area (Acres)
Total LDA	8.41
Ex. Access Road "A" (1.836)	4.24
Well Pad	4.17
Total Affected Area	8.41
Total Wooded Acres Disturbed	0.00

Proposed Well Name	WV North	WV North	UTM (2011) Easting	UTM (2011) North	ROAD BE L-E & Long
King Unit 14	N 27184.78	N 27178.00	E 10987.57	E 10987.57	LAT 38-14-18.8205
Mahogany Unit 19	E 181008.48	E 181008.48	N 271834.27	N 271834.27	LAT 38-14-18.8704
King Unit 21	N 271804.18	N 271803.78	E 109894.93	E 109894.93	LAT 38-14-18.0543
Mahogany Unit 28	E 181008.48	E 181008.48	N 272008.48	N 272008.48	LAT 38-14-19.0823
Mary Jane Unit 14	N 271873.80	N 271873.80	E 109887.73	E 109887.73	LAT 38-14-18.1901
Mary Jane Unit 24	E 181008.48	E 181008.48	N 272012.82	N 272012.82	LAT 38-14-17.1760
Hunter Unit 21	N 271802.82	N 271802.82	E 109887.73	E 109887.73	LAT 38-14-18.2599
Mary Jane Unit 21	N 271802.82	N 271802.82	E 109887.73	E 109887.73	LAT 38-14-18.2599
Mary Jane Unit 21	N 271802.82	N 271802.82	E 109887.73	E 109887.73	LAT 38-14-18.2599
Hunter Unit 14	N 271802.82	N 271802.82	E 109887.73	E 109887.73	LAT 38-14-18.2599

DESIGN CERTIFICATION
THE DRAWINGS, CONSTRUCTION NOTES, AND REFERENCE DIAGRAMS ATTACHED HERETO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS CHS 26-2.

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

Received
Office of Oil & Gas
JAN 09 2015

NAVITUS
ENERGY ENGINEERING

REVISION	DATE



THE DOCUMENT WAS PREPARED FOR ANTERO RESOURCES CORPORATION

JAMES WEBB
WELL PAD
CENTRAL DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



DATE: 11/05/2014
SCALE: AS SHOWN
SHEET 1 OF 18

Antero Resources Corporation Erosion and Sediment Control Plan for James Webb Well Pad

**The James Webb Well Pad, as shown in these plans, is also shown as "Staging Area" in the James Webb Centralized Well Freshwater Impoundment Site Design. Refer to the James Webb Centralized Freshwater Impoundment Site Design ("Staging Area") for all construction quantities associated with the construction of the James Webb Well Pad. The Proposed limit of disturbance acreage, as shown in this plan, is repetitive to the acreage previously shown in the James Webb Centralized Freshwater Impoundment Site Design. **

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

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

Antero Response:

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

1. A pre-construction conference with the contactor and the appropriate erosion and sediment control inspector 48 hours prior to beginning work to review the construction drawings and provide any requested guidance.
2. Stake the limits of construction and mark all identified wetlands, streams, and other areas of concern for construction activities. Install signs to designate the areas and orange safety fence to identify important project attributes such as approved access roads, no refueling zones, wetlands/steam bounds, Etc.
3. Maintain the rock construction entrance. All vehicles entering and exiting the site shall do so via the rock construction entrance.
4. Construction all BMP's as soon as clearing and grubbing operations allow. Diversions and sediment trap(s)/basin(s) shall be seeded and mulched immediately.
5. If applicable, convey upslope drainage around the access road and pad/pit area by constructing all diversion berm(s) and/or compost filter sock diversion(s) as shown on the plans.
6. Commence well drilling activity and use of the associated pit facility.

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7. All BMP's must remain in place and functional until all areas within the limit of disturbance are complete and permanently stabilized. Maintenance must include inspection of all erosion and sediment controls after each runoff event in excess of 0.5" and on a biweekly basis.
8. The construction site should be stabilized as soon as possible after completion. Establishment of final stabilization must be initiated no later than 7 days after reaching final grade. Final stabilization means that all soil-disturbing activities are completed, and that either a permanent vegetative cover with a density of 70% or greater has been established or that the surface has been stabilized by hard cover such as pavement or buildings. It should be noted that the 70% requirement refers to the total area vegetated and not just a percent of the site.
9. All permanent sediment control measures can be removed after the site is permanently stabilized and approval is received from the WVDEP.
10. Any Areas disturbed by removal of controls shall be repaired, stabilized, and permanently seeded.

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

Antero Response:

Stabilization methods used include seeding and mulching of disturbed areas as well as the implementation of erosion and sediment control BMPs. Please refer to Construction and E&S Control Notes on page 2 as well as "Construction Details" on page 11-15 for detailed descriptions of the different stabilization methods to be used. Seeding and mulching is to be in accordance with the WVDOT Standard Specifications unless specified otherwise in the plans or unless specified otherwise by the construction engineer or Antero representative. Please refer to Erosion and Sediment Control Narrative under Construction and E&S Control Notes on page 2 of the Site Design for more specific information regarding application, liming, and mulching rates.

Erosion and sediment BMPs will be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMPs. In a timely manner after earth disturbance activities cease, Antero shall stabilize any areas disturbed by the activities. During non-germination periods, mulch must be applied at the specified rates. Disturbed areas which are not at finish grade and which will be re-disturbed within 1 year will be stabilized in accordance with the temporary vegetative stabilization and specifications. Disturbed areas which are finished grade or which will not be re-disturbed within 1 year will be stabilized in accordance with the permanent vegetative stabilization specification. Please refer to "Construction and E&S Control Notes" on page 2 for more information regarding timeframes for establishing stabilization and erosion and sediment BMPs.

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

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

Antero Response:

Please refer to the "Construction and E&S Control Notes" on page 2 and "Construction Details" on pages 11-15 in the Site Design for specifications including instructions for installation, inspection, and maintenance for erosion and sediment control BMPs employed at this site.

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

Antero Response:

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

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

Antero Response:

"Overall Plan Sheet Index & Volumes," "Ex. Access Road Plan," and "Well Pad Plan," maps included on pages 4-6 of the Site Design. Specific design and layout and inspection and maintenance notes for a stabilized construction entrance are included in the "Construction and E&S Control Notes" verbiage on page 2.

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

Antero Response:

"Overall Plan Sheet Index & Volumes," "Ex. Access Road Plan," and "Well Pad Plan," maps included on pages 4-6 of the Site Design locate all proposed erosion and sediment control BMPs.

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