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west virginia department of environmental protection

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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](http://www.dep.wv.gov)

## PERMIT MODIFICATION APPROVAL

July 18, 2014

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET  
DENVER, CO 80202

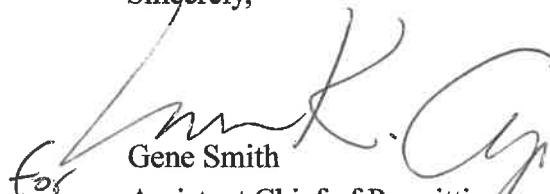
Re: Permit Modification Approval for API Number 1706313 , Well #: PROUDFOOT UNIT 1H  
**Extended lateral**

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

  
for Gene Smith  
Assistant Chief of Permitting  
Office of Oil and Gas

Promoting a healthy environment.

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05/31/2024



July 15, 2014

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

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Attn: Ms. Laura Cooper  
601 57<sup>th</sup> Street  
Charleston, WV 25304

Ms. Laura Cooper:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for two approved wells on the Pennington North Pad. We are requesting to modify the spacing of the horizontal laterals which will change the bottom hole location of the Sibley Unit 1H (API#47-017-06321) and Proudfoot Unit 1H (API# 47-017-06313).

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the revised MD and Production Casing/Cement program
- REVISED Form WW-6A1, which shows the additional leases that the lateral will drill through
- REVISED Mylar Plat, which shows the new bottom hole location

If you have any questions please feel free to contact me at (303) 357-7323.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Ashlie Mihalcin".

Ashlie Mihalcin  
Permitting Supervisor  
Antero Resources Corporation

Enclosures

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Office of Oil and Gas

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WV Department of  
Environmental Protection

05/31/2024

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 New Milton New Milton 7.5'  
Operator ID County District Quadrangle
- 2) Operator's Well Number: Proudfoot Unit 1H Well Pad Name: Pennington North Pad
- 3) Farm Name/Surface Owner: Morris, I.L. and Pennington, Bernard C. & Maureen F. Public Road Access: CR 40
- 4) Elevation, current ground: 1275' Elevation, proposed post-construction: 1275'
- 5) Well Type (a) Gas  Oil  Underground Storage   
 Other   
 (b) If Gas Shallow  Deep   
 Horizontal
- 6) Existing Pad: Yes or No Yes
- 7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):  
Marcellus Shale: 7200' TVD, Anticipated Thickness- 60 feet, Associated Pressure- 3250#
- 8) Proposed Total Vertical Depth: 7200' TVD
- 9) Formation at Total Vertical Depth: Marcellus Shale
- 10) Proposed Total Measured Depth: 14,300' MD
- 11) Proposed Horizontal Leg Length: 6493'
- 12) Approximate Fresh Water Strata Depths: 145', 237'
- 13) Method to Determine Fresh Water Depths: Offset well records. Depths have been adjusted according to surface elevations.
- 14) Approximate Saltwater Depths: 613', 1552', 1620'
- 15) Approximate Coal Seam Depths: 8', 78', 1490'
- 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**

<b>TYPE</b>	<b>Size</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling</b>	<b>INTERVALS: Left in Well</b>	<b>CEMENT: Fill-up (Cu. Ft.)</b>
Conductor	20"	New	H-40	94#	40'	40'	CTS, 38 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/48#	300'	300'	CTS, 417 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2480'	2480'	CTS, 1010 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	14300'	14300'	3531 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

<b>TYPE</b>	<b>Size</b>	<b>Wellbore Diameter</b>	<b>Wall Thickness</b>	<b>Burst Pressure</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
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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WV Department of  
Environmental Protection

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.  
\*Antero is requesting to change the spacing of the lateral which will change the BHL and proposed Measured Depth. All other plans are the same as originally permitted.

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): 9.65 acres

22) Area to be disturbed for well pad only, less access road (acres): 5.55 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.

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Office of Oil and Gas

\*Note: Attach additional sheets as needed.

JUL 18 2014

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05/31/2024



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**west virginia** department of environmental protection

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

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

October 04, 2013

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-1706313, 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: PROUDFOOT UNIT 1H  
Farm Name: PENNINGTON, BERNARD C. ,ET  
**API Well Number: 47-1706313**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 10/04/2013

**Promoting a healthy environment.**

05/31/2024



## 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

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1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE regarding this proposed activity.
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 fill material shall be within plus or minus 2% of the optimum moisture content as determined by the standard proctor density test, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort. Each lift must meet 95 % compaction of the optimum density based on results from the standard proctor density test of the actual soils used in specific engineered fill sites. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
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.

05/31/2024





**Antero Resources Corporation**

Proposed Revegetation Treatment: Acres Disturbed 9.65 Prevegetation pH \_\_\_\_\_

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

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum) Hay or straw or Wood Fiber (will be used where needed)

Mulch 2-3 Tons/acre

Road A (.41) + Access Road B (.45) + Drill Pad (5.55) + Associated Pit (2.82) + Associated Pit Pad (.42) = 9.65 Acres  
Seed Mixtures

Seed Type	Area I (Temporary) lbs/acre
Tall Fescue	45
Perennial Rye Grass	20

Seed Type	Area II (Permanent) lbs/acre
Tall Fescue	45
Perennial Rye Grass	20

\*or type of grass seed requested by surface owner

\*or type of grass seed requested by surface owner

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Douglas Newton

Comments: Proceed + Mulch install ETS to W. Dep regulations

Title: Oil & Gas Inspector Date: 8-22-2013

Field Reviewed?  Yes  No



## **Well Site Safety Plan**

### **Antero Resources**

**Well Name: Proudfoot Unit 1H, Proudfoot Unit 2H, Sibley Unit 1H, Sibley Unit 2H, Lick Run Unit 1H, Lick Run Unit 2H, Harriet Unit 1H, Harriet Unit 2H**

**Pad Location: PENNINGTON NORTH PAD**  
Doddridge County/ New Milton District

**GPS Coordinates: Lat 39° 12' 37.548"/-80° 44' 20.475" (NAD83)**

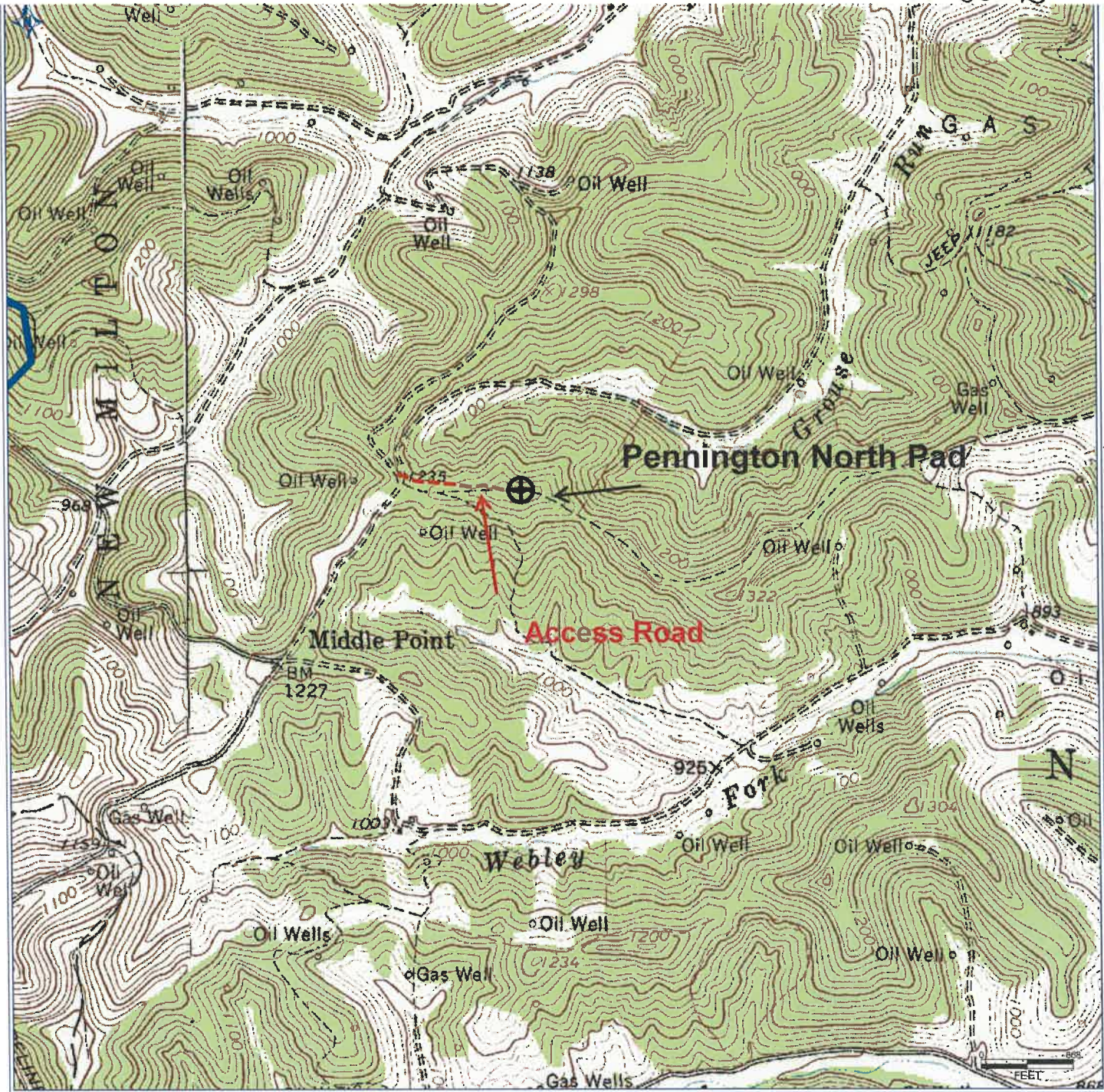
#### **Driving Directions:**

From the intersection of Co Route 50/16 and US-50 W near the town of Smithburg head South on Co Route 50/16 for 0.2 miles. Turn left to stay on Co Route 50/16 for 1.6 miles. Turn left onto WV-18 S for 1.1 miles. Turn right onto Co Route 40/Lick Run for 4.5 miles. Lease road will be on your left.

*DCN*  
*8-22-2013*



11-06513



PEIRA 7/11/2013 10:18:55 AM

Received  
Office of Oil & Gas

JUL 19 2013

**Antero Resources Corporation**

APPALACHIAN BASIN

Proudfoot Unit 1H

Doddridge County



REMARKS  
 QUADRANGLE: NEW MILTON  
 WATERSHED: TRIB. OF LITTLE TOMS FORK  
 DISTRICT: NEW MILTON

Date: 7/11/2013

05/31/2024



LATITUDE 39°15'00"

8,739'

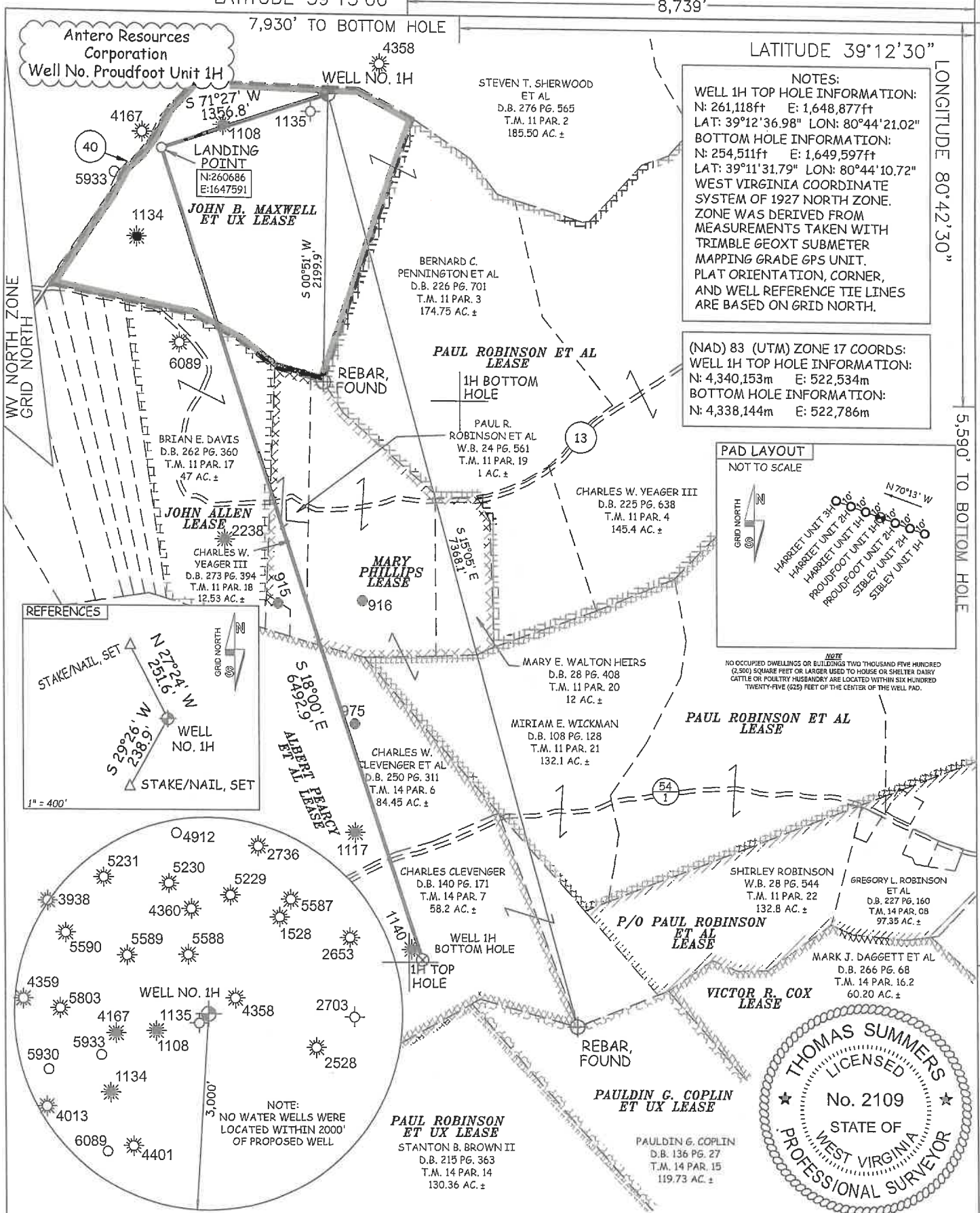
LATITUDE 39°12'30"


LONGITUDE 80°42'30"

5,590' TO BOTTOM HOLE

14,470'

LONGITUDE 80°42'30"



JOB # 13-053WA DRAWING # PROUDFOOT1HREV. SCALE 1" = 1000' MINIMUM DEGREE OF ACCURACY SUBMETER PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS	I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.	<b>LEGEND</b> - - - Surface Owner Boundary Lines +/- - - - Interior Surface Tracts +/- X Existing Fence ⊕ Found monument, as noted THOMAS SUMMERS P.S. 2109
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X LOCATION: ELEVATION 1,275' WATERSHED TOMS FORK QUADRANGLE NEW MILTON 7.5' DISTRICT NEW MILTON COUNTY DODDRIDGE SURFACE OWNER BERNARD C. PENNINGTON ET AL ACREAGE 174.75 ACRES +/- OIL & GAS ROYALTY OWNER JOHN B. MAXWELL ET UX; JOHN ALLEN; MARY PHILLIPS; ALBERT PEARCY ET AL LEASE ACREAGE 101.98 ACRES +/-; 47 ACRES +/-; 63.4 AC +/-; 375 AC +/- PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) <u>Permit Modification - B-HL (spacing)</u> PLUG & ABANDON CLEAN OUT & REPLUG TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,200' TVD 14,300' 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	 STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415	DATE 05/28/14 OPERATOR'S WELL# PROUDFOOT UNIT #1H API WELL # 47 - 017 - <u>06313 H6A</u> STATE COUNTY PERMIT DATE 05/31/2024

**PERMIT MODIFICATION API# 47-017-06313**

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

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

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

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<b><u>John B. Maxwell et ux Lease</u></b>			
John B. Maxwell & Ida J. Maxwell	South Penn Oil Company	1/8	LB 0013/0289
South Penn Oil Company	Pennzoil Company	Name Change	See Exhibit 2
Pennzoil Company	Pennzoil Products Company	Assignment	DB 0201/0510
Pennzoil Products Company	Pennzoil Exploration and Production Company	Assignment	DB 0239/0355
Pennzoil Exploration and Production Company	PennzEnergy Exploration and Production Company, LLC	Assignment	DB 0240/0702
PennzEnergy Exploration and Production Company, LLC	Devon Energy Production Company, LP	Assignment	DB 0244/0399
Devon Energy Production Company, LP	East Resources Inc.	Assignment	DB 0247/0337
East Resources Inc.	Antero Resources Corporation	Assignment	LB 0292/0365
<b>Antero Resources Appalachian Corporation</b>	<b>Antero Resources Corporation</b>	<b>Name Change</b>	<b>See Exhibit 1</b>
<b><u>John Allen Lease</u></b>			
John Allen	Key Oil Company	1/8	LB 0181/0125
Key Oil Company	Bluestone Energy Partners	Assignment	LB 0238/0660
Bluestone Energy Partners	Antero Resources Appalachian Corporation	Merger	DB 0288/0001
<b>Antero Resources Appalachian Corporation</b>	<b>Antero Resources Corporation</b>	<b>Name Change</b>	<b>See Exhibit 1</b>
<b><u>Mary Phillips Lease</u></b>			
Mary Phillips, et al	McCallester Fuel Company	1/8	LB 0077/0027
Paul Robinson, et al	McCallester Fuel Company	1/8	LB 0076/0486
McCallester Fuel Company	Ryan Consolidated Petroleum Corporation	Assignment	LB 0078/0026
McCallester Fuel Company	Ryan Consolidated Petroleum Corporation	Assignment	LB 0080/0127
Ryan Consolidated Petroleum Corporation	Ormand Industries, Inc.	Name Change	See Exhibit 3
Ormand Industries, Inc.	WVA Pacific Operating Co.	Assignment	LB 0147/0327
WVA Pacific Operating Co.	Charles Nesler	Assignment	LB 0147/0705
Charles Nesler	Targa Development, Inc.	Assignment	LB 0246/0459
Targa Development, Inc.	Antero Resources Appalachian Corporation	Assignment	LB 0293/0718
<b>Antero Resources Appalachian Corporation</b>	<b>Antero Resources Corporation</b>	<b>Name Change</b>	<b>See Exhibit 1</b>

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

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

05/31/2024

WW-6A1  
(5/13)

Operator's Well No. Proudfoot Unit 1H

**PERMIT MODIFICATION API# 47-017-06313**

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
✓ <u>Albert Percy et al Leases</u>	Albert Percy, et al South Penn Oil Company Pennzoll Company Pennzoll Products Company Pennzoll Exploration and Production Company PennzEnergy Exploration and Production, L.L.C. Devon Energy Production Company, L.P. East Resources, Inc. Antero Resources Appalachian Corporation	South Penn Oil Company Pennzoll Company Pennzoll Products Company Pennzoll Exploration and Production Company PennzEnergy Exploration and Production, L.L.C. Devon Energy Production Company, L.P. East Resources, Inc. Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Name Change Assignment Assignment Merger Merger Assignment Assignment Name Change	LB 0014/0312 See Exhibit 2 DB 0203/0821 DB 0239/0355 DB 0240/0702 DB 0244/0399 DB 0247/0337 LB 0292/0366 See Exhibit 1
*Partial Assignments to Antero Resources Appalachian Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.				

**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.

RECEIVED  
Office of Oil and Gas

Well Operator: Antero Resources Corporation  
By: Kevin Kilstrom  
Its: Vice President of Production

JUL 18 2014

WV Department of  
Environmental Protection



FILED

JUN 10 2013

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



Peasey Barker, Manager  
Corporations Division  
Tel: (304)558-8000  
Fax: (304)558-8381  
Website: [www.wvsof.com](http://www.wvsof.com)  
E-mail: [business@wvsof.com](mailto:business@wvsof.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:

- 1. Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
- 2. Date Certificate of Authority was issued in West Virginia: 6/26/2008
- 3. Corporate name has been changed to: Antero Resources Corporation  
(Attach one Certified Copy of Name Change as filed in home State of Incorporation.)
- 4. Name the corporation elects to use in WV: Antero Resources Corporation  
(due to home state name not being available)
- 5. Other amendments: \_\_\_\_\_  
(attach additional pages if necessary)

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

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

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

Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person  
Signature: [Handwritten Signature] Date: June 10, 2013

*\*Important Legal Notice Regarding Signature\** For West Virginia Code §31D-1-122. Penalty for signing false document. Any person who signs a document he or she knows is false in any material respect and knows that the document is to be delivered to the secretary of state for filing is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars or confined in the county or regional jail not more than one year, or both.

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Office of Oil and Gas

Form CT-4

Revised 4/13

JUL 18 2014

WV Department of  
Environmental Protection

05/31/2024

## 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.**

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JUL 18 2014

WV Department of  
 Environmental Protection

Column 1	4	3	7
Column 2	5	5	0
Column 3	1	3	6
Column 4	17	5	5

05/31/2024





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

July 11, 2013

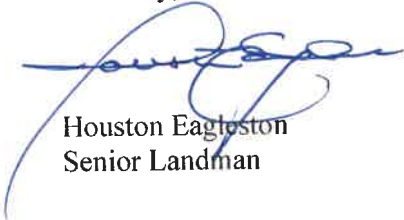
West Virginia Department of Environmental Protection  
Chief, Office of Oil and Gas  
Attn: Mr. James Martin  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

RE: Proudfoot Unit 1H  
Quadrangle: New Milton 7.5'  
Doddridge County/New Milton District, West Virginia

Mr. Martin:

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

Sincerely,



Houston Eagleton  
Senior Landman

Received  
Office of Oil & Gas

JUL 19 2013

05/31/2024

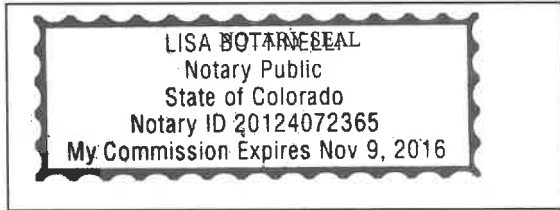




**Certification of Notice is hereby given:**

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

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



Subscribed and sworn before me this 15 day of July 2013.  
[Signature] Notary Public  
 My Commission Expires 11/9/2016

**Oil and Gas Privacy Notice:**

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

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Office of Oil & Gas

JUL 19 2013

05/31/2024



**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:** 07/15/2013 **Date Permit Application Filed:** 07/15/2013

**Notice of:**

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

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

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

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

**Notice is hereby provided to:**

SURFACE OWNER(s)

Name: I. L. Morris ✓  
 Address: P.O. Box 397  
Glenville, WV 26351

Name: Bernard C. & Maureen F. Pennington ✓  
 Address: 1989 Webley Fork Road  
New Milton, WV 26411

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

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments/Pits)

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: NO DECLARATIONS ON RECORD WITH COUNTY  
 Address: \_\_\_\_\_

COAL OPERATOR

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

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

Name: NO WATER WELL OWNERS WITHIN 1500'  
 Address: \_\_\_\_\_ **Received**  
**Office of Oil & Gas**

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

\*Please attach additional forms if necessary

05/31/2024

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

**Well Location Restrictions**

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

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factors, if necessary.

**Written Comment:**

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

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

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

**Time Limits and Methods for Filing Comments.**

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

received

Office of Oil and Gas

June 2, 2019

FILED

JUN 10 2019

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHARLESTON, WV

2019

05/31/2024

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

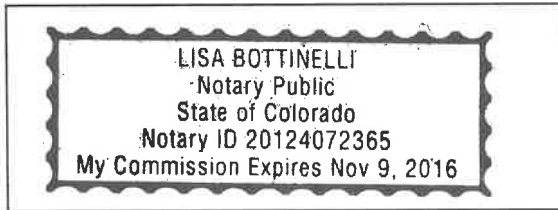
**Notice is hereby given by:**

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

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

**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 15 day of July 2013.  
Lisa Bottinelli Notary Public  
My Commission Expires 11/9/2016

Received  
Office of Oil & Gas

JUL 19 2013

05/31/2024



**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:** 5/22/2013 ✓ **Date of Planned Entry:** 5/31/2013

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

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

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

**Notice is hereby provided to:**

SURFACE OWNER(s)  
Name: I. L. Morris ✓  
Address: P.O. Box 397  
Glennville, WV 26351  
Name: Bernard C. & Maureen F. Pennington ✓  
Address: 1989 Webley Fork Road  
New Milton, WV 26411  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
Name: NO DECLARATIONS ON RECORD WITH COUNTY  
Address: \_\_\_\_\_  
 MINERAL OWNER(s)  
Name: PLEASE SEE ATTACHMENT ✓  
Address: \_\_\_\_\_  
\*please attach additional forms if necessary

**Notice is hereby given:**

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

State:	<u>West Virginia</u>	Approx. Latitude & Longitude:	<u>39.21043023, -80.73902137</u>
County:	<u>Doddridge</u>	Public Road Access:	<u>CR 40</u>
District:	<u>New Milton</u>	Watershed:	<u>Toms Fork</u>
Quadrangle:	<u>New Milton 7.5'</u>	Generally used farm name:	<u>Morris, I.L. and Pennington, Bernard C. &amp; Maureen F.</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> 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](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

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

Office of Oil & Gas

**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](mailto:depprivacyofficer@wv.gov).

05/31/2024

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

✓ <b>Owner:</b> Robert W. Robinson <b>Address:</b> 3556 Stimson Rd. Norton, OH 44203	✓ <b>Owner:</b> Marilyn Spicer <b>Address:</b> 10116 Crescent Florence, KY 41042
✓ <b>Owner:</b> Paul R. Robinson <b>Address:</b> 553 Park Overlook Dr. Worthington, WV 43085	✓ <b>Owner:</b> Kendall B. Robinson <b>Address:</b> PO Box 34 Booneville, KY 41314
✓ <b>Owner:</b> Judith E. Robinson <b>Address:</b> 50558 S.R. 145 Woodsfield, WV 43793	✓ <b>Owner:</b> Janet M. Esposito c/o Mary Dennison Heirs <b>Address:</b> Rt. 1 Box 111 Fairmont, WV 26554
✓ <b>Owner:</b> David Lee Robinson <b>Address:</b> 101 Heiss Dr. Marietta, OH 45750	✓ <b>Owner:</b> Marie Perine Price <b>Address:</b> 100 Maureen St., Lordship Statford, CT 06497
✓ <b>Owner:</b> Michael Allen Robinson <b>Address:</b> 1639 Porto Rico Rd. New Milton, WV 26411	✓ <b>Owner:</b> Voie Elizabeth Perine <b>Address:</b> Box 34 Wolf Summit Wolf Summit, WV 26462
✓ <b>Owner:</b> Gregory L. Robinson, heirs and assigns <b>Address:</b> 1639 Porto Rico Rd. New Milton, WV 26411	✓ <b>Owner:</b> Cecil Perine <b>Address:</b> RR 6 Box 84 Clarksburg, WV 26301
✓ <b>Owner:</b> Jennifer A. Carmen <b>Address:</b> 6414 Firestone Rd. Spencer, OH 44275	✓ <b>Owner:</b> Leslie H. Allen <b>Address:</b> 9261 Lillian Ln Denver, CO 80229
✓ <b>Owner:</b> Jane M. Pepera <b>Address:</b> 4651 Jaycox Rd. Avon, OH 44011	✓ <b>Owner:</b> Ethel Clevenger <b>Address:</b> 907 Beecli Ave. Pittsburgh, PA 15219
✓ <b>Owner:</b> Jerrery W. Robinson <b>Address:</b> 126 E. 4th ST. Williamstown, WV 26187	✓ <b>Owner:</b> Marion W. Robinson, heirs and assigns <b>Address:</b> 55 Ford St. Clarksburg, WV 26306
✓ <b>Owner:</b> James Terrance Robinson <b>Address:</b> 1117 E. Penn Ave. Pennsboro, WV 26415	✓ <b>Owner:</b> Mirian Elizabeth Wickman <b>Address:</b> 3901 Delmont apt 6 Chts Richmond, VA 23298
✓ <b>Owner:</b> Julia Ann Robinson Rogers <b>Address:</b> 399 McDougal Dr. Pennsboro, WV 26415	✓ <b>Owner:</b> Patricia L. Campbell <b>Address:</b> 118 Old Wright Shop Rd. Madison Heights, MA 04572
✓ <b>Owner:</b> Kathryn E. Robinson <b>Address:</b> 399 McDougal Dr. Pennsboro, WV 26415	✓ <b>Owner:</b> Bertha Lee Duncan <b>Address:</b> 531 W. Dakota Ave. Denver, CO 80201

05/31/2024



- ✓ **Owner:** Glenna May Wilson, heirs and assigns  
**Address:** 531 W. Dakota Ave.  
Denver, CO 80201
- ✓ **Owner:** Eleanor L. Ergenbright  
**Address:** 2417 Barnside Ct. Ridgewood FMS  
Salem, WV 26426
- ✓ **Owner:** Sarah L. Burch  
**Address:** 9619 Rainbrook Dr.  
Richmond, VA 23238
- ✓ **Owner:** John Stephen Lawrence, Jr.  
**Address:** 7505 Willowbrook Rd.  
Fairfax, VA 22039
- ✓ **Owner:** Robert Russell Lawrence  
**Address:** 19969 Interlachen Circle  
Ashburn, VA 20147
- ✓ **Owner:** Kara Lynn Sibley Reinertsen  
**Address:** 20222 Birdsnest Pl  
Ashburn, VA 20147
- ✓ **Owner:** Donna G. Buckner  
**Address:** 1029 Indian Grave  
Turtle Creek, WV 25203
- ✓ **Owner:** Dovetta J. Wallen  
**Address:** 2070 Gaylann Dr.  
Brunswick, OH 44212

Received  
Office of Oil & Gas

JUL 19 2013

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05/31/2024

**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:** 07/15/2013      **Date Permit Application Filed:** 07/15/2013

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

- CERTIFIED MAIL                                       HAND  
RETURN RECEIPT REQUESTED                                      DELIVERY

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

**Notice is hereby provided to the SURFACE OWNER(s)**  
(at the address listed in the records of the sheriff at the time of notice):

Name: I. L. Morris  
Address: P.O. Box 397  
Glenville, WV 26351

Name: Bernard C. & Maureen F. Pennington  
Address: 1989 Webley Fork Road  
New Milton, WV 26411

**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>522,534m</u>
County:	<u>Doddridge</u>		Northing:	<u>4,340,153m</u>
District:	<u>New Milton</u>	Public Road Access:	<u>CR 40</u>	
Quadrangle:	<u>New Milton 7.5'</u>	Generally used farm name:	<u>Morris, I.L. and Pennington, Bernard C. &amp; Maureen F.</u>	
Watershed:	<u>Toms Fork</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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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

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

**Oil and Gas Privacy Notice:**

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

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17-06313  
7/19

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

July 15, 2013

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

**Subject: DOH Permit for the Pennington North Pad, Doddridge County  
Proudfoot Unit 1H Well site**

Dear Dr. Martin,

This well site will be accessed from a DOH permit #04-2012-1021 which has been issued to Antero Resources Corporation for access to the State Road for a well site located off of Doddridge County Route 40 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,

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

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

Received

JUL 18 2013

Office of Oil and Gas  
WV Dept. of Environmental Protection

E.E.O./AFFIRMATIVE ACTION EMPLOYER

05/31/2024

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

**OIL AND GAS ROAD  
STATEWIDE BONDING AGREEMENT**

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

**WITNESSETH:**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Office of Oil & Gas

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

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

05/31/2024



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

WEST VIRGINIA DEPARTMENT OF  
TRANSPORTATION,  
DIVISION OF HIGHWAYS

Doreen Borja  
Witness

By: Marilyn Murphy  
State Highway Engineer

Rachel Bouchard  
Witness

AMERICO RESOURCES APPALACHIAN CORPORATION  
By: A. Schupp  
Title: VP ACCOUNTING AND ADMINISTRATION

(To be executed in duplicate)

APPROVED AS TO FORM THIS  
8<sup>th</sup> DAY OF Mar, 2012

J. J. Miller  
ATTORNEY LEGAL DIVISION  
WEST VIRGINIA DEPARTMENT  
OF HIGHWAYS

Received  
Office of Oil & Gas

JUN 13 2012

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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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## 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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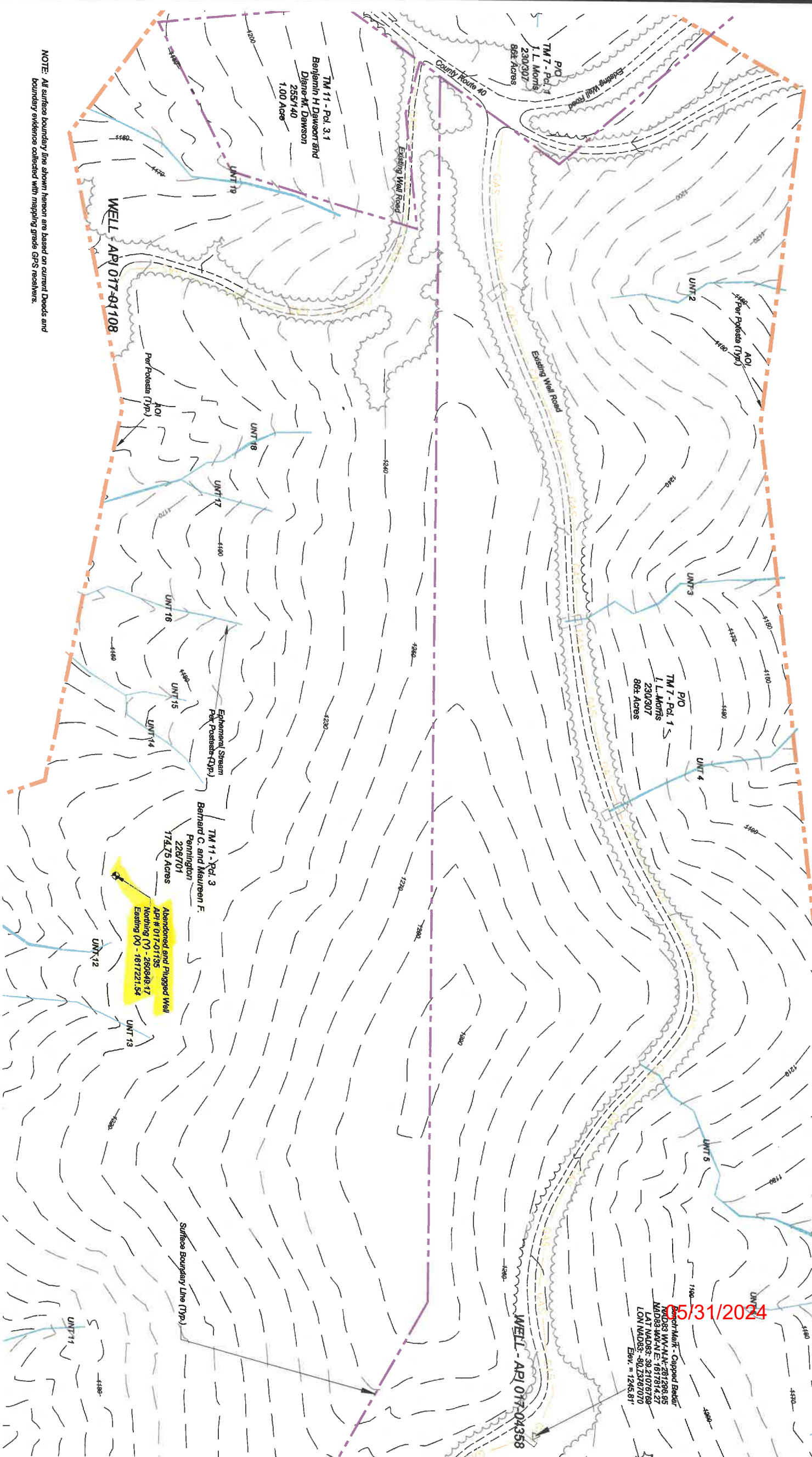
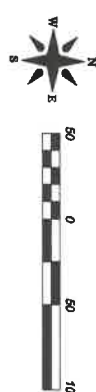






All topographic information shown hereon is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

# EXISTING CONDITIONS



### Legend

- Existing 2' Contour
- Existing 10' Contour
- Existing Tree Line
- Existing Utility Pole
- Existing Gas Line CL

DATE	REVISIONS
4-3-13	Updated Per New Antero Standards
6-25-13	Revised Per Navitus Review Comments
10-4-13	Added Plugged Well Outside LOD

EXISTING CONDITIONS  
**PENNINGTON NORTH PAD AND ASSOCIATED PIT**  
 NEW MILTON DISTRICT  
 DODDRIDGE COUNTY, WV

**ANTERO RESOURCES**  
 THIS DOCUMENT PREPARED FOR ANTERO RESOURCES CORPORATION



**L&W ENTERPRISES, INC.**  
 PO BOX 826  
 14 SOUTH GROVE ST.  
 PETERSBURG, WV 26847  
 TEL: 304-257-4818  
 FAX: 304-257-2224  
 EMAIL: KIRK@CITLONLINE.NET



**Allegheny Surveys, Inc.**  
 172 Thompson Drive  
 Bridgeport, WV 26330  
 (304) 848-5035



05/31/2024



All topographic information shown hereon is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2011

THESE ARE NO WETLAND OR STREAM IMPACTS ASSOCIATED WITH THIS SITE DESIGN. (BASED ON CURRENT AOI)

PENNINGTON NORTH PAD AND ASSOCIATED PIT SITE DESIGN

ANTERO RESOURCES CORPORATION

Station	Bottom	Berms	Grass	Area-Ft
1238	0	0	0.000	
1237	7,789	11,442	0.343	
1236	5,792	24,146	0.790	
1235	8,983	37,755	1.188	
1234	11,478	52,069	1.668	
1233	20,385	85,934	2.510	
1232	24,827	1,091,118	3.161	
1231	21,029	1,321,318	3.748	
1230	31,907	1,624,086	4.571	
1229	39,015	1,865,090	5.724	
1228	50,098	2,119,699	6.945	
1227	56,093	2,354,628	7.282	
1226	62,039	2,578,420	8.009	
1225	68,010	2,791,117	8.588	
1224	75,210	3,033,111	9.292	
1223	82,641	3,333,111	9.988	

If necessary, the 2" Gas Line will be installed along outside generally edge of access road after construction. 2" Gas Line will be installed within the LOD shown.

Associated Pit Capacity w/ 2' of Freeboard = 62,335 Barrels. Top of Water Elev. 1252'. Bottom Elev. 1239'. MAD 83 LAT: 38.21044383, 80.74088719

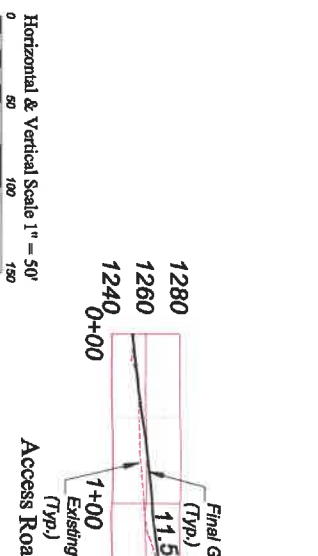
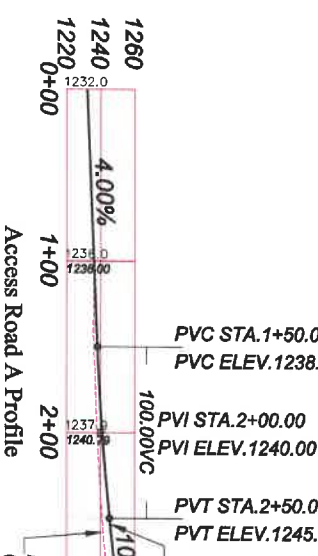
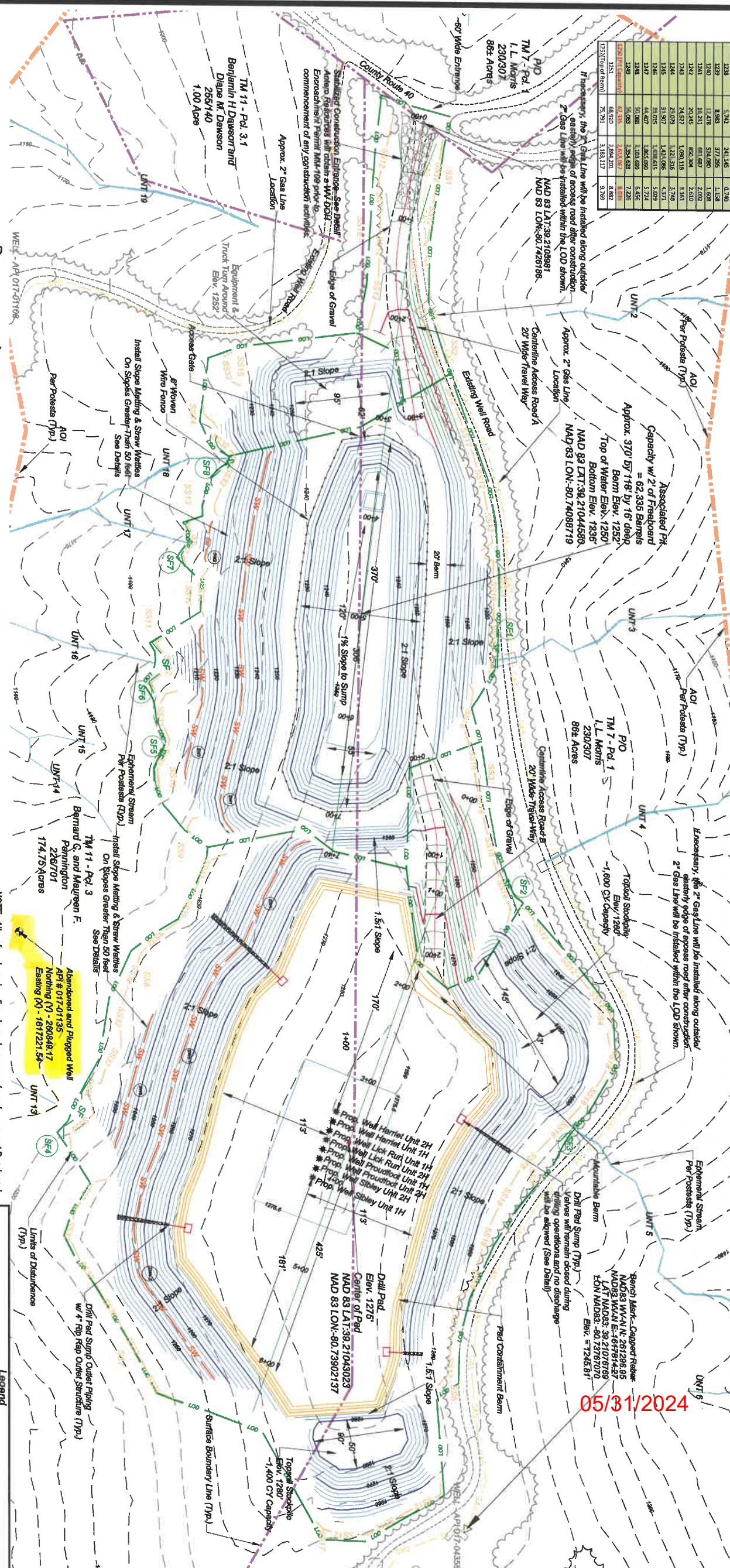
Topsoil Stockpile Elev. 1280'. -1,600 CY Capacity. MAD 83 LAT: 38.21044383, 80.74088719

Drill Pad Sump (Typ.) Valves will remain closed during drilling operations and no discharge will be allowed (See Details). MAD 83 LAT: 38.21044383, 80.74088719

Special Mark - Copper Fence. MAD 83 W/AN: N. 261298.85, E. 164781.457. LAT: 39.21076789, 80.73902137. ELEV. 1245.81'

Drill Pad. Elev. 1275'. Center of Pad. MAD 83 LAT: 38.21043023, 80.73902137

Topsoil Stockpile Elev. 1280'. -1,600 CY Capacity.



NOTE: All surface boundary lines shown hereon are based on current Deeds and boundary evidence collected with mapping grade GPS receivers.

LINE DITCH TREATMENT vs SLOPE of DITCH. Lines with slope less than 3% will be lined with 18\"/>

DATE	REVISIONS
4-3-13	Updated Per New Antero Standards
6-17-13	New Well Layout Configuration
6-25-13	Revised Per Navitus Review Comments
9-11-13	Utilities Renote Per Antero Resources
10-4-13	Added Plugged Well Outside LOD

DATE	REVISIONS
10/2/12	Updated Per New Antero Standards
6-17-13	New Well Layout Configuration
6-25-13	Revised Per Navitus Review Comments
9-11-13	Utilities Renote Per Antero Resources
10-4-13	Added Plugged Well Outside LOD

**SITE DESIGN**  
**PENNINGTON NORTH PAD AND ASSOCIATED PIT**  
 NEW MILTON DISTRICT  
 DODDRIDGE COUNTY, WV

ANTERO RESOURCES  
 THIS DOCUMENT PREPARED FOR ANTERO RESOURCES CORPORATION

L&W ENTERPRISES, INC.  
 PO BOX 826  
 14 SOUTH GROVE ST.  
 PETERSBURG, WV 26347  
 PHE: 304-257-4818  
 FAX: 304-257-2224  
 EMAIL: KIKK@CITLINK.NET

Allegheny Surveys, Inc.  
 172 Thompson Drive  
 Bridgeport, WV 26330  
 (304) 648-5035

05/31/2024

