

02/23/2023



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Monday, January 30, 2023
WELL WORK PERMIT
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit approval for HAUGHT UNIT 5V
47-017-06941-00-00

This well work permit 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 any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of 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.

Per 35 CSR 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- 0450.

James A. Martin
Chief

A handwritten signature in blue ink, appearing to read "James A. Martin", is written over the typed name and title.

Operator's Well Number: HAUGHT UNIT 5V
Farm Name: SUSAN HAUGHT GIDO ET AL
U.S. WELL NUMBER: 47-017-06941-00-00
Horizontal 6A New Drill
Date Issued: 1/30/2023

Promoting a healthy environment.

02/03/2023

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 one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
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. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. 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.
10. 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.
11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

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

1) Well Operator: Antero Resources Corporation 494507062 017-Doddridge New Milton New Milton 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Haught Unit 5V Well Pad Name: Haught Pad

3) Farm Name/Surface Owner: Susan Haught Gido, et al Public Road Access: Brushy Fork Road

4) Elevation, current ground: 1190' Elevation, proposed post-construction: 1193'

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 Expected Pressure(s):
Marcellus Shale: 7700' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7700' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 7700' MD

11) Proposed Horizontal Leg Length: 0' *Open to modification at a later date*

12) Approximate Fresh Water Strata Depths: 271'

13) Method to Determine Fresh Water Depths: 47017017980000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 2406'

15) Approximate Coal Seam Depths: None Anticipated

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: _____

RECEIVED
Office of Oil and Gas

JAN 23 2023

WV Department of
Environmental Protection

 01/19/2023

02/03/2023

WW-6B
(04/15)

4701706941
API NO. 47-017 - 02/23/2023

OPERATOR WELL NO. Haught Unit 5V
Well Pad Name: Haught Pad

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	80	80	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	321	321	CTS, 334 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500	2500	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	7700	7700	1013 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.438"	1530	50	Class A	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	12,630	2500	Lead-HPOZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

Kind:	N/A			RECEIVED Office of Oil and Gas
Sizes:	N/A			JAN 23 2023
Depths Set:	N/A			WV Department of Environmental Protection

JS 01/19/2023

02/03/2023

WW-6B
(10/14)

470170901
02/23/2023
API NO. 47- 017 -
OPERATOR WELL NO. Haught Unit 5V
Well Pad Name: Haught Pad

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

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 33.94 acres

22) Area to be disturbed for well pad only, less access road (acres): 11.40acres

23) Describe centralizer placement for each casing string:

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

25) Proposed borehole conditioning procedures:

RECEIVED
Office of Oil and Gas
JAN 23 2023
WV Department of
Environmental Protection

*Note: Attach additional sheets as needed.

 01/19/2023

02/03/2023

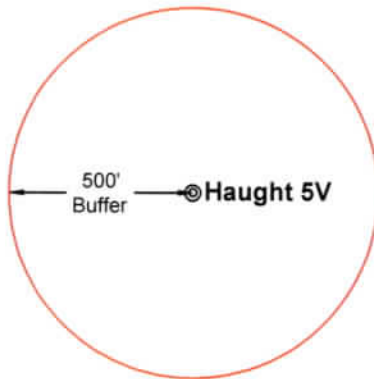
02/23/2023

LEGEND

- ⊙ Proposed gas well
- ⊙ Existing Well, as noted
- ⊙ Digitized Well, as noted



The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone



RECEIVED
Office of Oil and Gas

DEC 20 2022

WV Department of
Environmental Protection



Bridgeport Office
Phone: (304) 848-5035
Fax: (304) 848-5037

172 Thompson Drive
Bridgeport, WV 26330

PARTY CHIEF: C. Lynch	DRAWN BY: J. Smith
RESEARCH: J. Miller	PREPARED: November 11, 2022
SURVEYED: Dec. 2016	PROJECT NO: 262-30-N-22
FIELD CREW: C.L., K.M.	DRAWING NO: Haught 5V AOR

Sheet 1 of 1



Scale: 1 inch = 500 feet

02/03/2023

Antero Resources Corporation

Proposed Revegetation Treatment: Acres Disturbed 33.94 acres Prevegetation pH _____

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

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

Fertilizer amount 500 lbs/acre

Mulch 2-3 Tons/acre

Main Access Road (10.20 acres) + Construction Access Road (0.39 acres) + Well Pad (11.40 acres) + Spoil 1 (3.25 acres) + Spoil 2 (2.00 acres) + Spoil 3 (1.21 acres) + Spoil 4 (3.81 acres) + Spoil 5 (1.68 acres) = 33.94 Acres

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Crownvetch	10-15
Field Bromegrass	40	Tall Fescue	30
See attached Table IV-3 for additional seed type (Haight Pad Design)		See attached Table IV-4A for additional seed type (Haight Pad Design)	
*or type of grass seed requested by surface owner		*or type of grass seed requested by surface owner	

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments: _____

RECEIVED
Office of Oil and Gas
JAN 23 2023
WV Department of
Environmental Protection

Title: OGG Inspector Date: 01/19/2023

Field Reviewed? () Yes () No

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

RECEIVED
Office of Oil and Gas
DEC 20 2022
WV Department of
Environmental Protection

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

RECEIVED
Office of Oil and Gas

DEC 20 2022

WV Department of
Environmental Protection

02/03/2023



911 Address
4001 Brushy Fork Rd
New Milton WV, 26411

Well Site Safety Plan

Antero Resources

Well Name: HAUGHT UNIT 5V

Pad Location: HAUGHT PAD
Doddridge County/New Milton District

GPS Coordinates:

Entrance - Lat 39. 191984 / Long -80.674690 (Nad83)
Pad Center - Lat 39.187690 /Long -80.680878 (Nad83)

Driving Directions:

From US-50 turn south onto WV-18 and travel for 6.3 miles. Turn left onto Meathouse Fork Rd (CO-25) and travel for 3.3 miles. Turn right onto Brushy Fork Rd (CO-56) and travel for 1.4 miles. The Haught Lease Road is one the right.

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

RECEIVED
Office of Oil and Gas

JAN 23 2023

WV Department of Environmental Protection Page 1

JB 01/19/2023

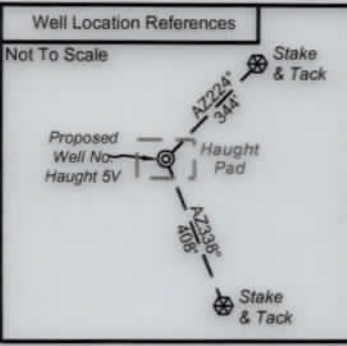
02/03/2023

**Antero Resources
Well No. Haught 5V**

Antero Resources Corporation



LATITUDE 39 - 12 - 30

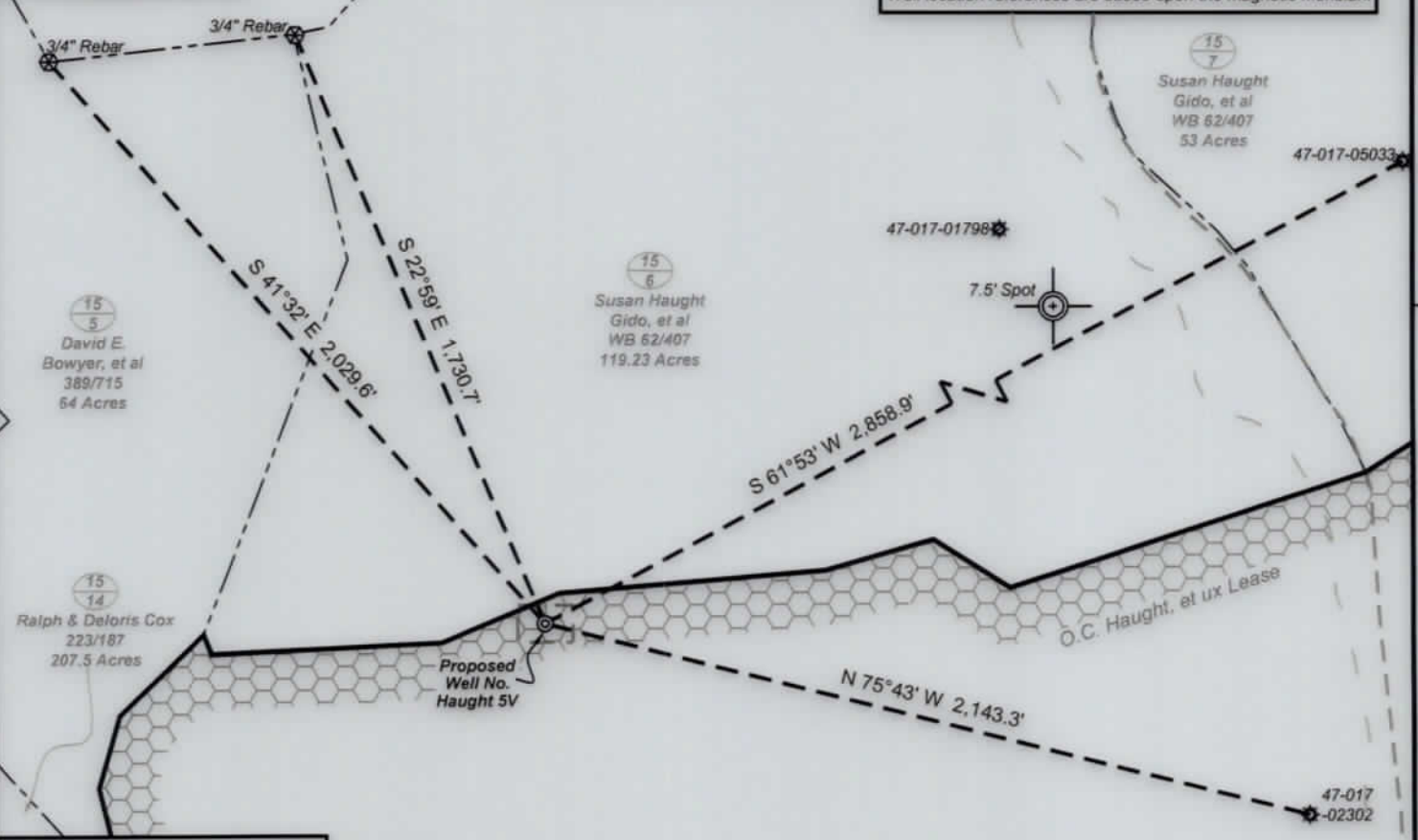


Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Haught 5V coordinates are
N: 252,677.77' Latitude: 39°11'15.78"
E: 1,665,504.73' Longitude: 80°40'48.38"
UTM Zone 17, NAD 1983
Top Hole Coordinates
N: 4,337,666.598m
E: 527,642.056m
UTM Zone 17, NAD 1927
Top Hole Coordinates
N: 14,230,445.56'
E: 1,731,057.90'
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

02/23/2023

LONGITUDE 80 - 40 - 00

7,509' to Top Hole

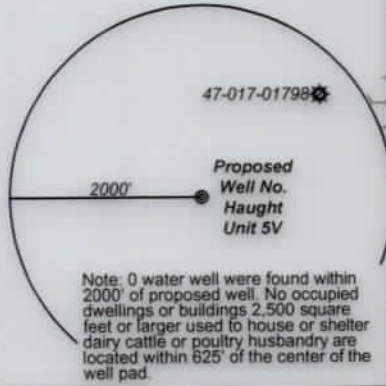


- Legend**
- ⊙ Proposed gas well
 - ⊕ Found corner, as noted
 - ⊗ Existing Well, as noted
 - ⊛ Digitized Well
 - - - Existing Road
 - - - Creek/Drain
 - Surface boundary (approx.)
 - Interior surface tracts (approx.)



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 prescribed by the Department of Environmental Protection.

Bradley D. Miller
Bradley D. Miller, P.S. 2167



FILE NO: 262-30-N-22
DRAWING NO: Haught 5V Well Plat
SCALE: 1" = 500'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

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

DATE: November 11 2022
OPERATOR'S WELL NO. Haught Unit 5V
API WELL NO
47 - 017 - 06941
STATE COUNTY PERMIT

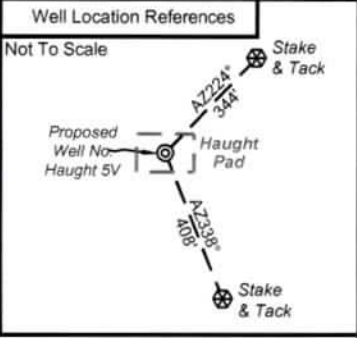
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
Proposed Grade 1,193'
LOCATION: ELEVATION: Existing Grade 1,190' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: New Milton
DISTRICT: New Milton COUNTY: Doddridge
SURFACE OWNER: Susan Haught Gido, et al ACREAGE: 264
ROYALTY OWNER: O.C. Haught, et ux LEASE NO: ACREAGE: 264
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 7,700' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,700' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
Denver, CO 80202 Bridgeport, WV 26330

02/03/2023

Antero Resources
Well No. **Haught 5V**

Antero Resources Corporation

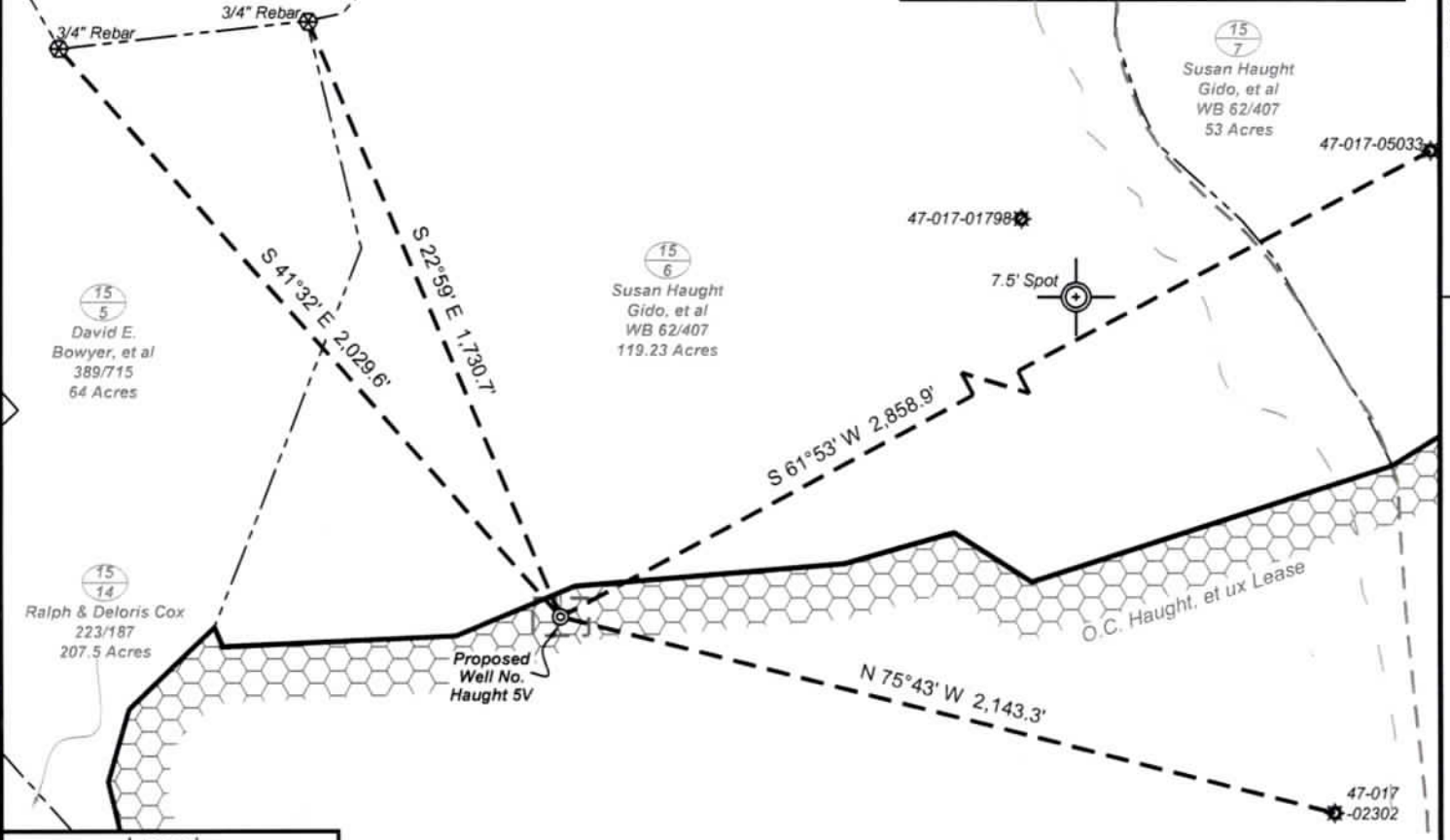


LATITUDE 39 - 12 - 30

LONGITUDE 80 - 40 - 00

Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Haught 5V coordinates are
N: 252,677.77' Latitude: 39°11'15.78"
E: 1,665,504.73' Longitude: 80°40'48.38"
UTM Zone 17, NAD 1983
Top Hole Coordinates
N: 4,337,666.598m
E: 527,642.056m
UTM Zone 17, NAD 1983
Top Hole Coordinates
N: 14,230,445.56'
E: 1,731,057.90'

Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.



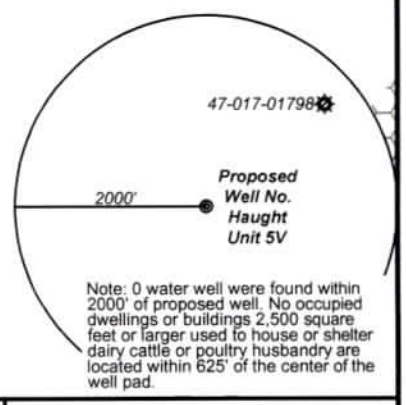
- Legend**
- ⊙ Proposed gas well
 - ⊗ Found corner, as noted
 - ⊛ Existing Well, as noted
 - ⊙ Digitized Well
 - - - Existing Road
 - - - Creek/Drain
 - - - Surface boundary (approx.)
 - - - Interior surface tracts (approx.)



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 prescribed by the Department of Environmental Protection.

Bradley D. Miller

Bradley D. Miller, P.S. 2167



FILE NO: 262-30-N-22
DRAWING NO: Haught 5V Well Plat
SCALE: 1" = 500'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

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

DATE: November 11 2022
OPERATOR'S WELL NO. Haught Unit 5V
API WELL NO
47 - 017 - 06941
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

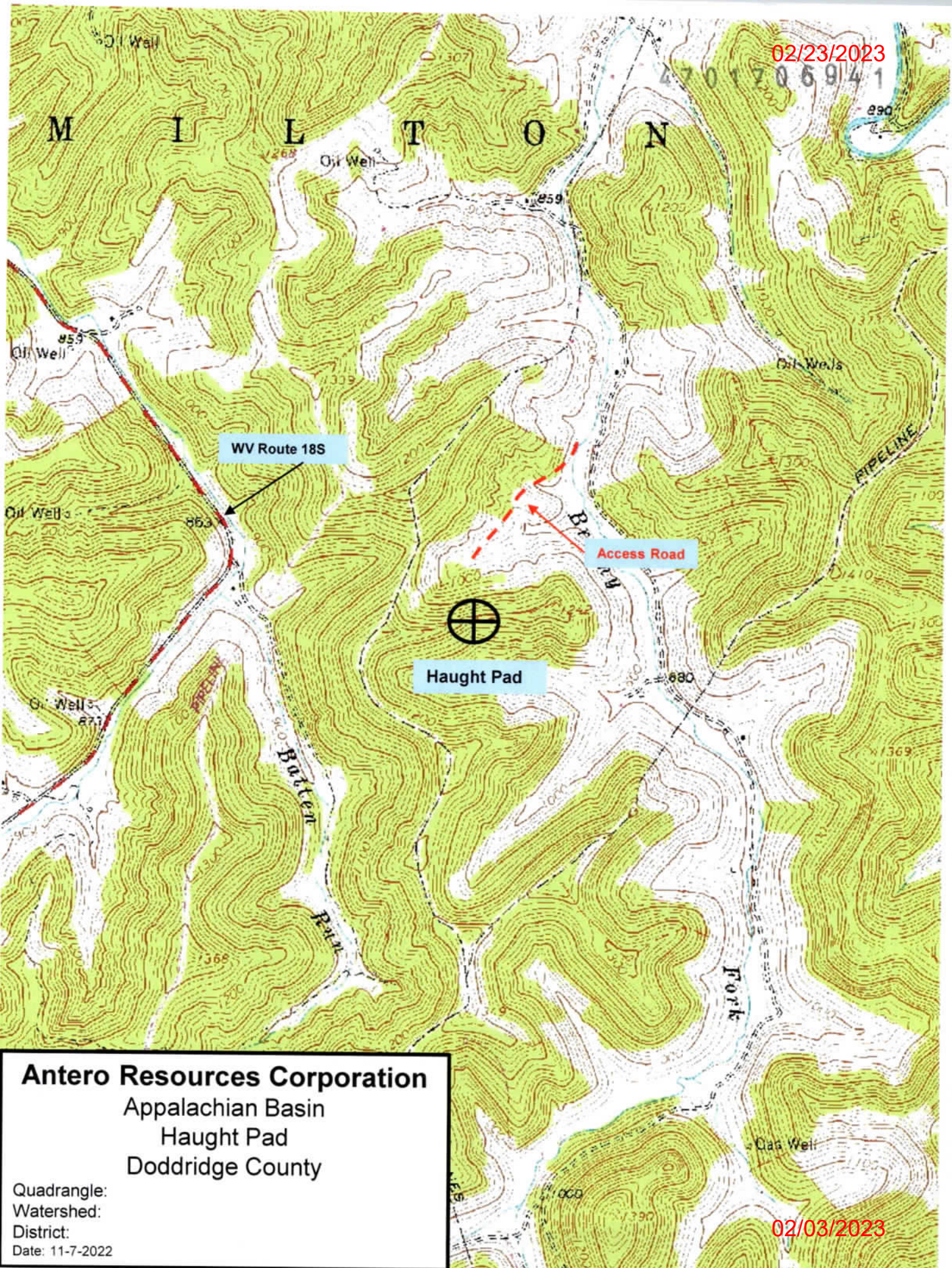
LOCATION: ELEVATION: Proposed Grade 1,193' Existing Grade 1,190' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: New Milton
DISTRICT: New Milton COUNTY: Doddridge

SURFACE OWNER: Susan Haught Gido, et al ACREAGE: 264
ROYALTY OWNER: O.C. Haught, et ux LEASE NO: ACREAGE: 264

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 7,700' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,700' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
Denver, CO 80202 Bridgeport, WV 26330

02/23/2023



WV Route 18S

Access Road

Haught Pad

Antero Resources Corporation
Appalachian Basin
Haught Pad
Doddridge County

Quadrangle:
Watershed:
District:
Date: 11-7-2022

02/03/2023

WW-6A1
(5/13)

Operator's Well No. Haught Unit 5V

**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)**

RECEIVED
Office of Oil and Gas

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 **DEC 20 2022**

(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; WV Department of Environmental Protection

(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>O.C. Haught, et ux Lease</u>				
	O.C. Haught, et ux	Rockwell Petroleum Company	1/8	0103/0367
	Rockwell Petroleum Company	Rockwell Resources LLC	Successor of Interest	0260/0429
	Rockwell Resources LLC	Antero Resources Appalachian Corporation	Assignment	0267/0244
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523

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

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

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

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

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

Well Operator: Antero Resources Corporation
By: Tim Rady
Its: Senior Vice President of Land

December 8, 2022

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

RECEIVED
Office of Oil and Gas

DEC 20 2022

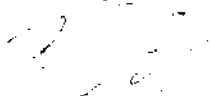
WV Department of
Environmental Protection

RE: Haught Unit 5V
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 Haught Unit 5V 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 Haught Unit 5V horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,


Tyler Adams
Landman

02/03/2023

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

Date of Notice Certification: 12/16/2022

API No. 47- 017 - _____

Operator's Well No. Haught Unit 5V

Well Pad Name: Haught Pad

Notice has been given:

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

State: West Virginia
 County: Doddridge
 District: New Milton
 Quadrangle: New Milton 7.5'
 Watershed: Headwaters Middle Island Creek

UTM NAD 83 Easting: 527642.056m
 Northing: 4337666.598m
 Public Road Access: Brushy Fork Road
 Generally used farm name: Susan Haught Gido, et al

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 type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED		<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input 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"/> RECEIVED/ NOT REQUIRED
<input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION	RECEIVED Office of Oil and Gas	<input checked="" type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 5. PUBLIC NOTICE	DEC 20 2022	<input checked="" type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION	WV Department of Environmental Protection	<input checked="" type="checkbox"/> RECEIVED

Required Attachments:

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

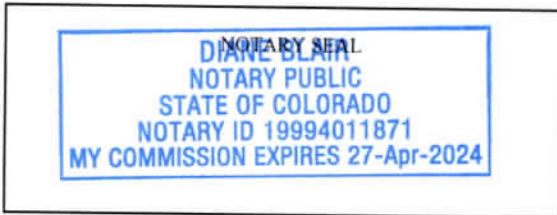
02/03/2023

4701706941

Certification of Notice is hereby given:

THEREFORE, I Diana Hoff, 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>Diana Hoff <i>Diana O. Hoff</i></u>		<u>Denver, CO 80202</u>
Its:	<u>Senior Vice President of Operations</u>	Facsimile:	<u>303-357-7315</u>
Telephone:	<u>303-357-6904</u>	Email:	<u>mturco@anteroresources.com</u>



Subscribed and sworn before me this 19 day of Dec 2022.

Diane Blair Notary Public

My Commission Expires 27 Apr 2024

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas
DEC 20 2022
West Virginia Department of
Environmental Protection

WW-6A
(9-13)

4701706941
API NO. 47- 017 - 02/23/2023
OPERATOR WELL NO. Haught Unit 5V
Well Pad Name: Haught Pad

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

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

Date of Notice: 12/19/2022 Date Permit Application Filed: 12/19/2022

Notice of:

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

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

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

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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

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

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: _____
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: NONE IDENTIFIED WITHIN 1500'
Address: _____

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

*Please attach additional forms if necessary RECEIVED
Office of Oil and Gas

DEC 20 2022

WV Department of
Environmental Protection
02/03/2023

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

RECEIVED
Office of Oil and Gas
DEC 20 2022
02/03/2023
WV Department of
Environmental Protection

WW-6A
(8-13)

4701706941
API NO. 47-017 - 02/23/2023
OPERATOR WELL NO. Haught Unit 5V
Well Pad Name: Haught Pad

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 who tested water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

RECEIVED
Office of Oil and Gas
DEC 20 2022
02/09/2023
WV Department of
Environmental Protection

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

RECEIVED
Office of Oil and Gas

DEC 20 2022

02/03/2023
Office of
Environmental Protection

WW-6A
(8-13)

4701706941
API NO. 47-017 - 02/23/2023
OPERATOR WELL NO. Haught Unit 5V
Well Pad Name: Haught Pad

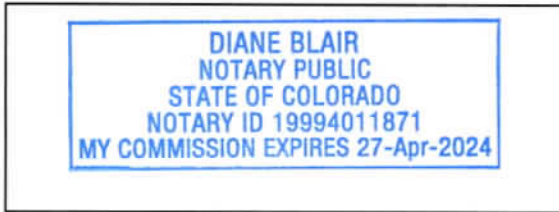
Notice is hereby given by:

Well Operator: Antero Resources Corporation
Telephone: (303) 357-7310 Diana O. Hoff
Email: mturco@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.



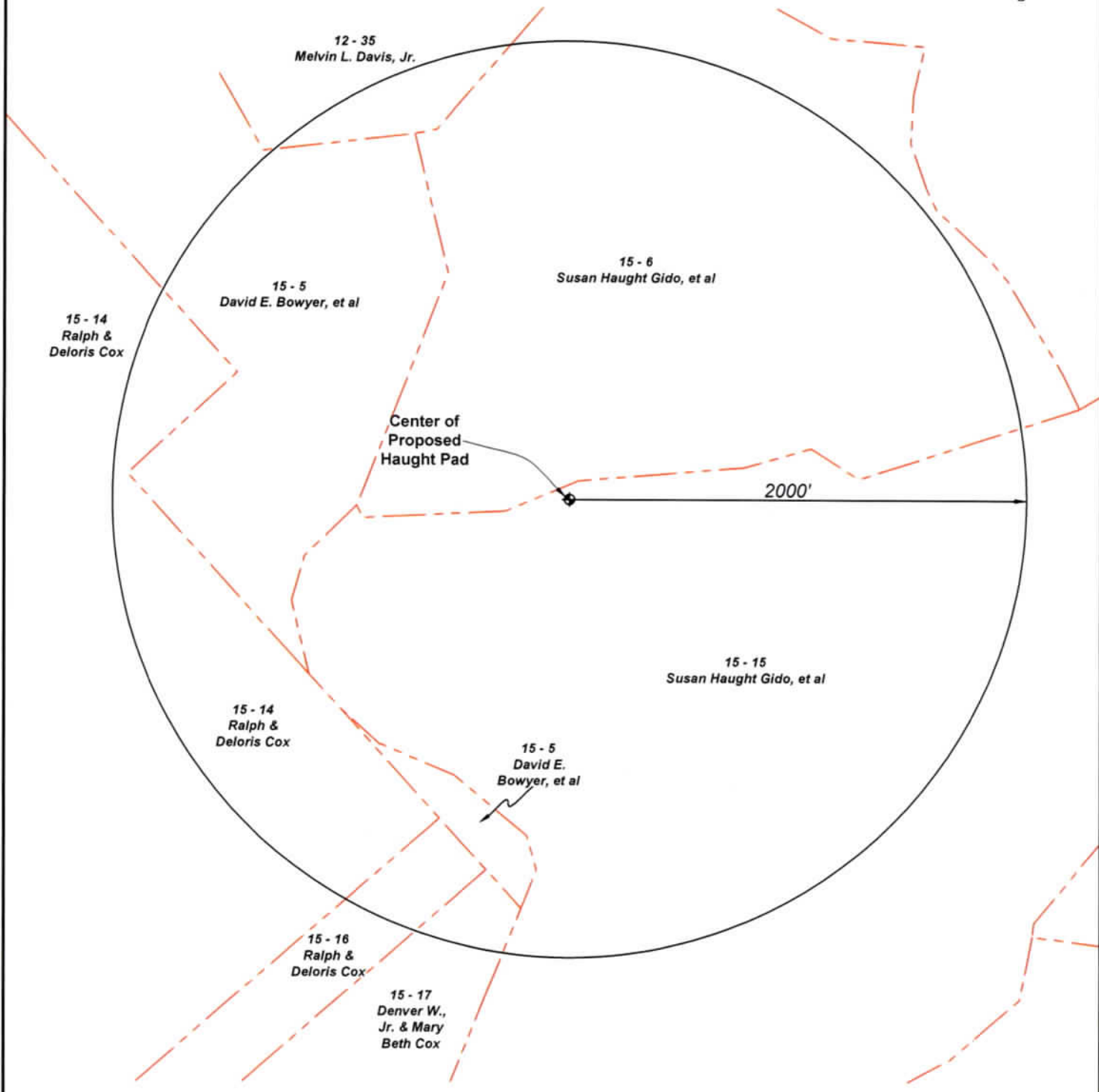
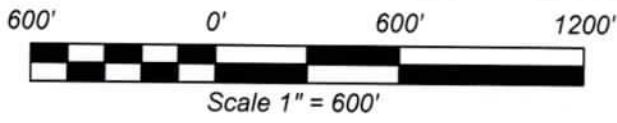
Subscribed and sworn before me this 19 day of Dec 2022.

Diane Blair Notary Public

My Commission Expires 27 Apr 2024

RECEIVED
Office of Oil and Gas
DEC 20 2022
02/03/2023
Department of Environmental Protection

Haight Drill Pad Water Well Map



Note
No water wells or springs found within 2,000' of pad

RECEIVED
Office of Oil and Gas
DEC 20 2022
WV Department of
Environmental Protection

WW-6A Attachment - Notice of Application:

**Surface Owners (Well Pad and Road
and/or Other Disturbance):**

TM 6-15-6 & 6-15-15

Owner: Susan Haught Gido, et al
Address: 698 Cherry Camp Road
Salem, WV 26426

TM 6-15-6 & 6-15-15

Owner: Joseph E. & Carolyn B. Haught,
Trustees of the Haught Family Trust
Address: 2366 East Sahuaro Drive
Phoenix, AZ 85028

TM 6-15-6 & 6-15-15

Owner: Joseph Lynn Ross, Trustee of the Mary
K. Post Revocable Trust
Address: 698 Cherry Camp Road
Salem, WV 26426

RECEIVED
Office of Oil and Gas

DEC 20 2022

02/03/2023
WV Department of
Environmental Protection

4701706941

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

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

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

Date of Notice: 12/01/2022

Date Permit Application Filed: 12/19/2022

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

HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

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

Name: PLEASE SEE ATTACHMENT

Address: _____

Name: _____
Address: _____

Notice is hereby given:

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

State: West Virginia
County: Doddridge
District: New Milton
Quadrangle: New Milton 7.5'
Watershed: Headwaters Middle Island Creek

UTM NAD 83 Easting: 527642.056m
Northing: 4337666.598m
Public Road Access: Brushy Fork Rd
Generally used farm name: Susan Haught Gido, et al

This Notice Shall Include:

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

Notice is hereby given by:

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

Authorized Representative: Mallory Turco
Address: 1615 Wynkoop St.
Denver, CO 80202
Telephone: 303-357-7310
Email: mturco@anteroresources.com
Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas

DEC 9 2022
02/03/2023

02/23/2023

WW-6A4 Attachment - Notice of Intent to Drill:**Surface Owners:****TM 6-15-6 & 6-15-15**

Owner: Susan Haught Gido, et al.
Address: 698 Cherry Camp Road
Salem, WV 26426

TM 6-15-6 & 6-15-15

Owner: Joseph E. & Carolyn B. Haught,
Trustees of the Haught Family Trust
Address: 2366 East Sahuaro Drive
Phoenix, AZ 85028

TM 6-15-6 & 6-15-15

Owner: Joseph Lynn Ross, Trustee of the Mary
K. Post Revocable Trust
Address: 698 Cherry Camp Road
Salem, WV 26426

RECEIVED
Office of Oil and Gas

DEC 20 2022

WV Department of
Environmental Protection

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

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

Date of Notice: 12/19/2022 Date Permit Application Filed: 12/19/2022

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

- CERTIFIED MAIL RETURN RECEIPT REQUESTED
- HAND DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: PLEASE SEE ATTACHMENT Name: _____
 Address: _____ Address: _____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>527642.056m</u>
County: <u>Doddridge</u>	Northing: <u>4337666.598m</u>
District: <u>New Milton</u>	Public Road Access: <u>Brushy Fork Rd.</u>
Quadrangle: <u>New Milton 7.5'</u>	Generally used farm name: <u>Susan Haught Gido, et al</u>
Watershed: <u>Headwaters Middle Island Creek</u>	

This Notice Shall Include:

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

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

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas

DEC 20 2022

WW-6A5 Attachment - Notice of Planned Operation:

Surface Owners:

TM 6-15-6 & 6-15-15

Owner: Susan Haught Gido, et al
Address: 698 Cherry Camp Road
Salem, WV 26426

TM 6-15-6 & 6-15-15

Owner: Joseph E. & Carolyn B. Haught,
Trustees of the Haught Family Trust
Address: 2366 East Sahuaro Drive
Phoenix, AZ 85028

TM 6-15-6 & 6-15-15

Owner: Joseph Lynn Ross, Trustee of the Mary
K. Post Revocable Trust
Address: 698 Cherry Camp Road
Salem, WV 26426

RECEIVED
Office of Oil and Gas
DEC 20 2022
WV Department of
Energy and Mineral Resources

02/03/2023



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
 Charleston, West Virginia 25305-0430 • (304) 558-3505

D. Alan Reed, P.E.
 State Highway Engineer

Jimmy Wriston, P. E.
 Secretary of Transportation
 Commissioner of Highways

December 16, 2022

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 Haught Pad, Doddridge County
 Haught Unit 5V Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2022-0623 which has been applied for by Antero Resources for access to the State Road for a well site located off Doddridge County Route 52 SLS MP 5.54.

This operator is in compliance with §22-6A-20 of the WV Code. 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 October 1, 2018. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

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

Cc: Stefan Gaspar
 Antero Resources
 CH, OM, D-4
 File

RECEIVED
 Office of Oil and Gas

DEC 20 2022


02/03/2023
 Environmental Protection

Subdivision 3.3.e A listing of the anticipated additives that may be used in the water used for fracturing or stimulating the well. (A listing of the additives that were actually used in the fracturing or stimulating of the well shall be submitted as part of the completion report required by W. Va. Code 22-6-22.)

FRACTURING/STIMULATING INTERVAL

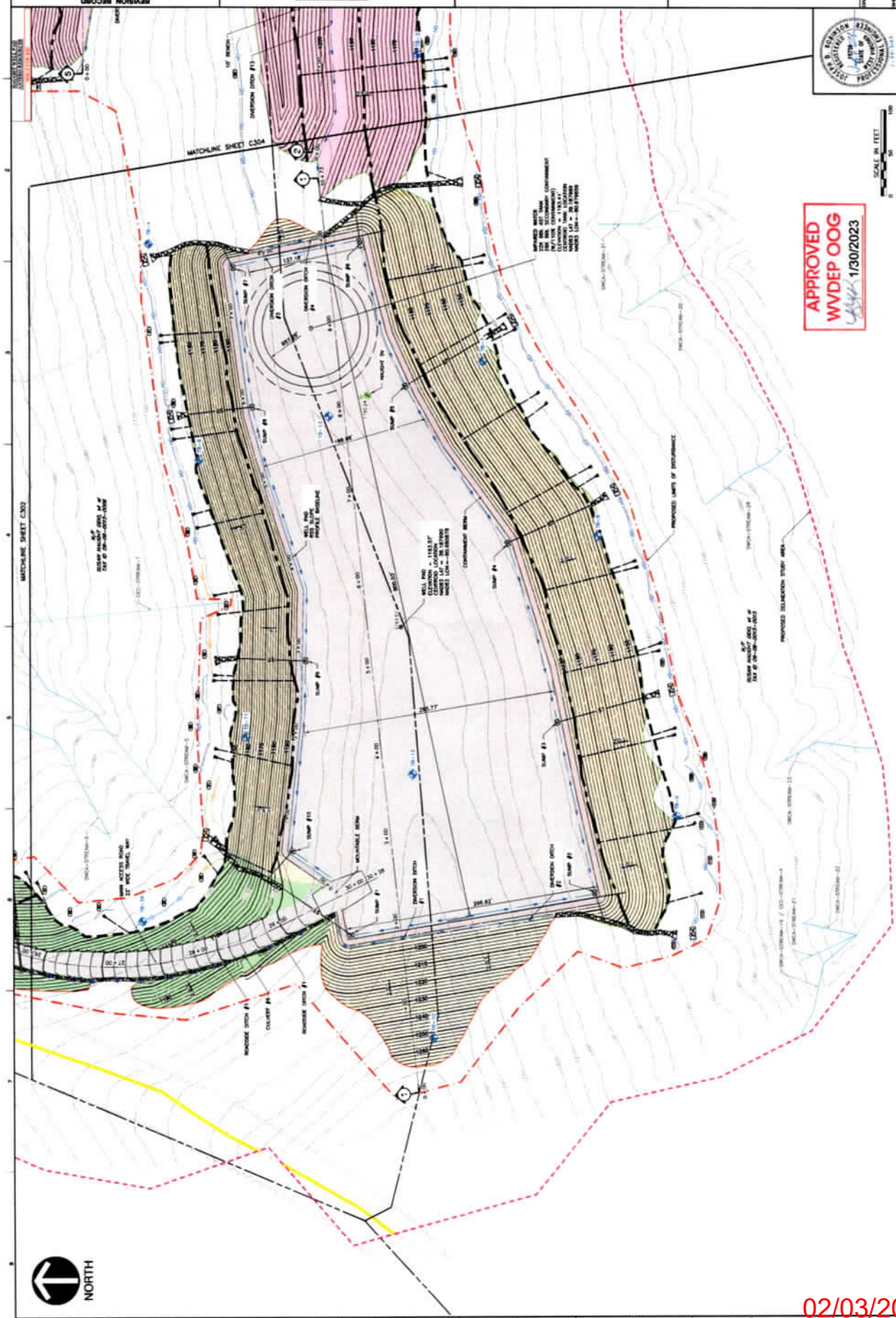
Additive	Chemical Abstract Service Number (CAS #)
1. Fresh Water	7732-18-5
2. 2 Phosphobutane 1,2,4 tricarboxylic acid	37971-36-1
3. Ammonium Persulfate	7727-54-0
4. Anionic copolymer	Proprietary
5. Anionic polymer	Proprietary
6. BTEX Free Hydrotreated Heavy Naphtha	64742-48-9
7. Cellulase enzyme	(Proprietary)
8. Demulsifier Base	(Proprietary)
9. Ethoxylated alcohol blend	Mixture
10. Ethoxylated Nonylphenol	68412-54-4
11. Ethoxylated oleylamine	26635-93-8
12. Ethylene Glycol	107-21-1
13. Glycol Ethers	111-76-2
14. Guar gum	9000-30-0
15. Hydrogen Chloride	7647-01-0
16. Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8
17. Isopropyl alcohol	67-63-0
18. Liquid, 2,2-dibromo-3- nitriopropionamide	10222-01-2
19. Microparticle	Proprietary
20. Petroleum Distillates (BTEX Below Detect)	64742-47-8
21. Polyacrylamide	57-55-6
22. Propargyl Alcohol	107-19-7
23. Propylene Glycol	57-55-6
24. Quartz	14808-60-7
25. Silica crystalline quartz	7631-86-9
26. Sodium Chloride	7647-14-5
27. Sodium Hydroxide	1310-73-2
28. Sugar	57-50-1
29. Surfactant	68439-51-0
30. Suspending agent (solid)	14808-60-7
31. Tar bases, quinolone derivs, benzyl chloride-quarternized	72480-70-7
32. Solvent Naptha, petroleum, heavy allph	64742-96-7
33. Soybean Oil, Me ester	67784-80-9
34. Copolymer of Maleic and Acrylic Acid	52255-49-9
35. DETA Phosphonate	15827-60-8
36. Hexamethylene Triamine Penta	34690-00-1
37. Phosphino Carboxylic acid polymer	71050-62-9
38. Hexamethylene diamine penta	23605-74-5
39. 2-Propenoic acid, polymer with 2 propenamide	9003-06-9
40. Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5
41. Diethylene Glycol	111-46-6
42. Methenamine	100-97-0
43. Polyethylene polyamine	68603-67-8
44. Coco amine	61791-14-8
45. 2-Propyn-1-olcompound with methyloxirane	38172-91-7

02/23/2023

ANTERO RESOURCES CORPORATION NEW MILTON DODDRIDGE COUNTY, WEST VIRGINIA		Civil & Environmental Consultants, Inc. 120 Geneva Boulevard - Shippington, WV 26201 P.O. Box 323, 3119 - 858.488.9529 Fax: 304.323.3237 	SITE PLAN C300
PROJECT NO: 2023-001 SHEET NO: 01 OF 02 DATE: 02/23/2023	DESIGNED BY: J. BISHOP CHECKED BY: J. BISHOP DATE: 02/23/2023		



APPROVED
WVDEP OOG
 1/30/2023



02/03/2023

OPERATOR: Antero Resources Corp. WELL NO: Haught Unit 5V

PAD NAME: Haught Pad

REVIEWED BY: Mallory Turco SIGNATURE: *Mallory Turco*

WELL RESTRICTIONS CHECKLIST

HORIZONTAL 6A WELL

Well Restrictions

- At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland; OR
 DEP Waiver and Permit Conditions
- At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream; OR
 DEP Waiver and Permit Conditions
- At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply; OR
 DEP Waiver and Permit Conditions
- At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled; OR
 Surface Owner Waiver and Recorded with County Clerk, OR
 DEP Variance and Permit Conditions
- At Least 625 Feet from an Occupied Dwelling Structure to Center of the Pad; OR
 Surface Owner Waiver and Recorded with County Clerk, OR
 DEP Variance and Permit Conditions
- At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad; OR
 Surface Owner Waiver and Recorded with County Clerk, OR
 DEP Variance and Permit Conditions

RECEIVED
Office of Oil and Gas

DEC 20 2022

WV Department of
Environmental Protection
02/09/2023

HAUGHT WELL PERMIT SITE ANTERO RESO

LAT./LONG: N 39.187605° W (APPROXIMATE CENTER OF

LOCATION COORDINATES				
SITE LOCATIONS	WV83-NF (NORTH ZONE)		UTM83-17	
	LATITUDE	LONGITUDE	NORTHING	EASTING
MAIN ACCESS ROAD ENTRANCE	39.191984	-80.674690	4338132.0303	528092.8877
CENTROID OF WELL PAD	39.187690	-80.680878	4337653.5797	527560.1991

GENERAL DESCRIPTION:

THE ACCESS ROAD AND WELL PAD ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF MARCELLUS SHALE GAS WELLS.

FLOODPLAIN NOTES:

THE PROPOSED SITE LOCATION IS **NOT WITHIN** ANY IDENTIFIED FLOOD ZONES. PER FEMA MAP NUMBER(S) #54017C0239C

MISS UTILITY STATEMENT:

ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATION OF UTILITIES PRIOR TO THIS PROJECT DESIGN. TICKET #2220952732. IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.

ENTRANCE PERMIT:

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

ENVIRONMENTAL NOTES:

STREAM AND WETLAND DELINEATIONS WERE PERFORMED BY SWCA ENVIRONMENTAL CONSULTANTS (ON AUGUST 17, 2018) AND ASE (ON SEPTEMBER 12, 2018) TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). **CIVIL & ENVIRONMENTAL, INC.** PERFORMED A VERIFICATION OF EXISTING DELINEATIONS BY OTHERS AND FIELD VERIFIED SOME ADDITIONAL FEATURES ON AUGUST 1, 2022. **CIVIL & ENVIRONMENTAL, INC.** PREPARED A STREAM AND WETLAND DELINEATION MAP WHICH VERIFIES AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE MAP DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION SHOWN ON THE EXHIBIT PRIOR TO ENGAGING IN CONSTRUCTION ON THE PROPERTIES DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATER OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

GEOTECHNICAL NOTES:

THE GEOTECHNICAL ANALYSIS WAS PERFORMED BY **CIVIL & ENVIRONMENTAL, INC.** AND SUMMARIZES THE FIELD TESTING AND EXPLORATION. SEE THE HAUGHT GEOTECHNICAL REPORT BY **CIVIL & ENVIRONMENTAL, INC.** DATED DECEMBER 2022.

PROJECT CONTACTS:

OPERATOR:

ANTERO RESOURCES CORPORATION
535 WHITE OAKS BLVD
BRIDGEPORT, WV 26030
PHONE: (304) 842-4100
FAX: (304) 842-4102

ENGINEER/SURVEYOR:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
JOSEPH D. ROBINSON, PE - PROJECT MANAGER/ENGINEER
OFFICE: (304) 933-3119 FAX: (304) 933-3327 CELL: (443) 366-2600

ENVIRONMENTAL:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
JACQUELYN D. KESTER - PRINCIPAL
OFFICE: (304) 933-3119 DIRECT: (304) 948-7121

GEOTECHNICAL:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
KOW ESHUN, PE - VICE PRESIDENT
OFFICE: (304) 933-3119 DIRECT: (304) 948-7142 CELL: (910) 774-1718

ELI WAGONER - ENVIRONMENTAL & REGULATORY MANAGER
OFFICE: (304) 842-4098 CELL: (304) 476-9770

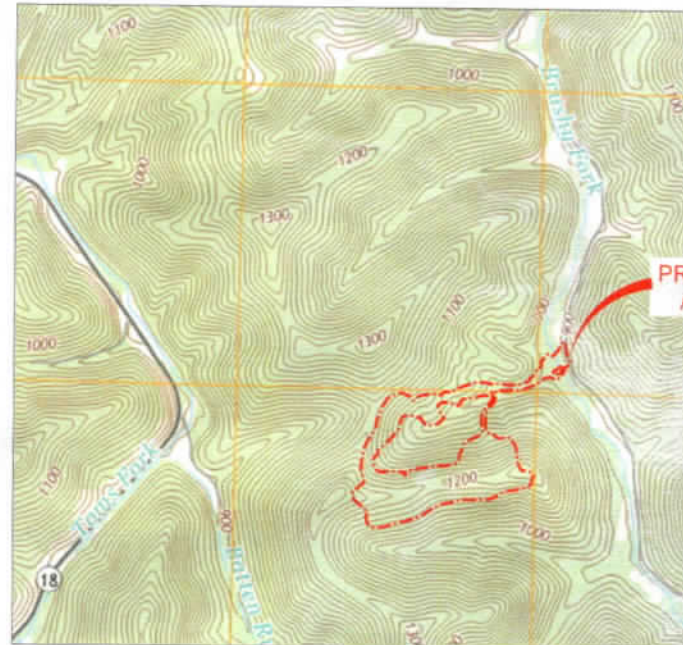
AARON KUNZLER - CONSTRUCTION MANAGER
OFFICE: (304) 842-4151

ROBERT WIRKS - DESIGN MANAGER
OFFICE: (304) 842-4100 CELL: (304) 627-7405

SCOTT HOFFER - UTILITY SUPERVISOR
CELL: (304) 615-8699

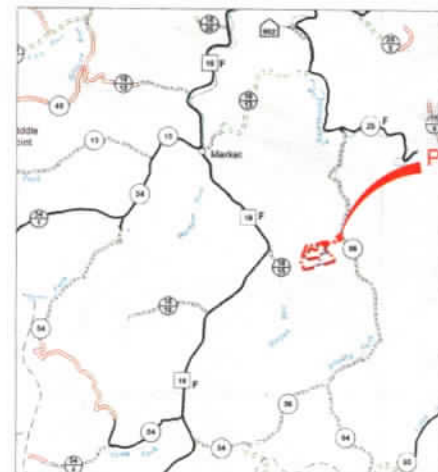
JIM WILSON - LAND AGENT
CELL: 304-671-2708

DIANA HOFF - SVP OPERATIONS
OFFICE: 304-357-0904



LOCATION MAP

NEW MILTON USGS 7.5' QUAD
SCALE IN FEET
0 1000 2000
1 INCH = 1000 FEET



VICINITY MAP

SCALE IN FEET
0 1 MILES 2
1 INCH = 1 MILE

PLAN REPRODUCTION WARNING

THE PLANS HAVE BEEN CREATED ON ANSI D (24" X 36") SHEETS. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.
THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING. ANY SET OF THE PLANS THAT IS NOT PLOTTED IN FULL COLOR SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION PURPOSES.
WARNING INFORMATION MAY BE LOST IN COPYING AND/OR GRAY SCALE PLOTTING



WEST VIRGINIA REQUIRES TWO BUSINESS DAYS BEFORE YOU STATE OF WEST VIRGINIA IT'S THE

PAD PLAN RESOURCES

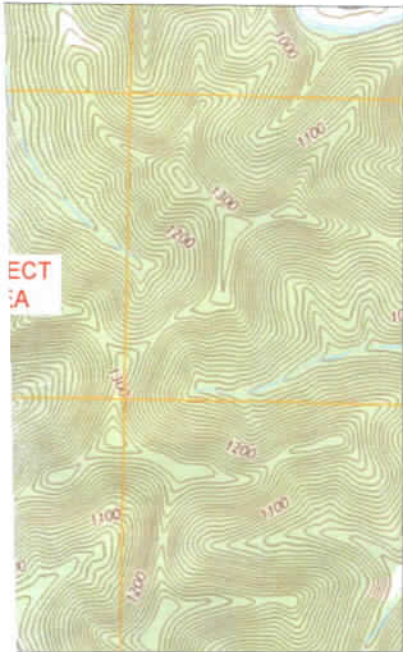
0.680968°
PROJECT)

SHEET INDEX

C000 COVER SHEET	C000 PROFILES AND SECTIONS	C011 PROFILES AND SECTIONS	C803 DETAILS
C001 GENERAL NOTES	C001 PROFILES AND SECTIONS	C012 PROFILES AND SECTIONS	C804 DETAILS
C002 MATERIAL QUANTITIES	C002 PROFILES AND SECTIONS	C013 PROFILES AND SECTIONS	C805 DETAILS
C003 MASTER LEGEND	C003 PROFILES AND SECTIONS	C014 PROFILES AND SECTIONS	C806 DETAILS
C100 EXISTING CONDITIONS	C004 PROFILES AND SECTIONS	C015 PROFILES AND SECTIONS	C900 OVERALL RECLAMATION PLAN
C200 ISOPACH PLAN	C005 PROFILES AND SECTIONS	C016 PROFILES AND SECTIONS	C901 RECLAMATION PLAN
C300 OVERALL SITE PLAN	C006 PROFILES AND SECTIONS	C017 PROFILES AND SECTIONS	C902 RECLAMATION PLAN
C301 SITE PLAN	C007 PROFILES AND SECTIONS	C018 CULVERT PROFILES	C903 RECLAMATION PLAN
C302 SITE PLAN	C008 PROFILES AND SECTIONS	C800 DETAILS	C904 RECLAMATION PLAN
C303 SITE PLAN	C009 PROFILES AND SECTIONS	C801 DETAILS	
C304 SITE PLAN	C010 PROFILES AND SECTIONS	C802 DETAILS	

RESTRICTIONS NOTES:

1. THERE ARE NO LAKES OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD
2. THERE ARE NO NATURALLY PRODUCING TROUT STEAMS WITHIN 300 FEET OF THE WELL PAD AND LOD
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1,000 FEET OF THE WELL PAD AND LOD
4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL PAD AND LOD
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE WELL PAD
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD



LIMITS OF DISTURBANCE PARCEL BREAK UPS - HAUGHT WELL PAD					
DODDRIDGE COUNTY, WEST VIRGINIA					
OWNER	TM-PARCEL	DEED-PAGE	TOTAL ACRES	TYPE OF DISTURBANCE	ACERAGE
ROBERT HAUGHT	15-6	WB62-407	119.23	PARCEL INFORMATION	
				HAUGHT WELL PAD	4.77
				MAIN ACCESS ROAD	10.20
				CONSTRUCTION ACCESS ROAD	0.39
				SPOIL 1	0.62
				SPOIL 2	0.44
				SPOIL 3	1.21
SPOIL 4	3.81				
SPOIL 5	1.68				
				PARCEL TOTAL	23.12
ROBERT HAUGHT	15-15	WB62-407	264	PARCEL INFORMATION	
				HAUGHT WELL PAD	6.63
				SPOIL 1	2.63
				SPOIL 2	1.56
			PARCEL TOTAL	10.82	
			TOTAL	33.94	

ECT
EA



L.O.D. AREAS	
DESCRIPTION	ACRES
HAUGHT WELL PAD	11.40
MAIN ACCESS ROAD	10.20
CONSTRUCTION ACCESS ROAD	0.39
SPOIL 1	3.25
SPOIL 2	2.00
SPOIL 3	1.21
SPOIL 4	3.81
SPOIL 5	1.68
TOTAL	33.94
WOODED	31.21

HAUGHT GRADING VOLUMES			
DESCRIPTION	CUT (CY)	FILL (CY)	NET (CY)
MAIN ACCESS ROAD	19,653	28,977	-9,324
WELL PAD	115,634	80,050	35,584
SPOIL-1	0	10,491	-10,491
SPOIL-2	0	6,782	-6,782
SPOIL-3	0	2,500	-2,500
SPOIL-4	0	13,907	-13,907
SPOIL-5	0	5,337	-5,337
TOTAL	135,287	148,044	-12,757

HAUGHT STOCKPILE CAPACITY		
	NEEDED	PROVIDED
EXCESS SPOIL	39,017	39,017
TOPSOIL / STRIPPING	14,907	22,287

NOTE: EXCESS SPOIL CAPACITY NEEDED INCLUDES 10% SWELL FACTOR FOR CUT MATERIAL. TOPSOIL CAPACITY NEEDED INCLUDES 20% SWELL FACTOR. 12" OF TOPSOIL/STRIPPING MATERIAL REMOVED.

STREAM	OHWM		IMPACT	PERMANENT (LF)	TEMPORARY (LF)	PERMANENT Impact Area	TOTAL LENGTH (LF)
	Width	Depth					
ASE-STREAM-15 / CEC-STREAM-1B (EPH)	2.5	0.33	ACCESS ROAD	97	0	0.006	97
SWCA-STREAM-1 / CEC-BRUSHY FORK	21	4	ACCESS ROAD	0	190	0.000	190
SWCA-STREAM-6 (PER)	7	1.2	ACCESS ROAD	0	254	0.000	254
SWCA-STREAM-10 (EPH)	3.2	0.5	ACCESS ROAD	127	88	0.009	215
CEC-STREAM-9 (EPH)	0	0	ACCESS ROAD	0	103	0.000	103
SWCA-STREAM-15 (EPH)	1.3	0.35	ACCESS ROAD	0	215	0.000	215
SWCA-STREAM-9 / CEC-STREAM-3 (EPH)	1.3	0.35	ACCESS ROAD	65	141	0.002	206
TOTALS				289	991	0.017	1280

WETLAND	IMPACT	PERMANENT (AC)	TEMPORARY (AC)	TOTAL AREA (AC)
SWCA-WETLAND-2 / CEC-WETLAND-C	ACCESS ROAD	0.004	0	0.004
CEC-WETLAND-G	ACCESS ROAD	0.025	0	0.025
TOTALS		0.029	0	0.029

RECEIVED
Office of Oil and Gas

JAN 23 2023

WV Department of Environmental Protection



NO.	DATE	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
120 Genesis Boulevard - Bridgeport, WV 26330
Ph: 304.933.3119 - 855.486.9539 - Fax: 304.933.3327
www.cecinc.com

HAUGHT WELL PAD
ANTERO RESOURCES CORPORATION
NEW MILTON
DODDRIDGE COUNTY, WEST VIRGINIA

COVER SHEET

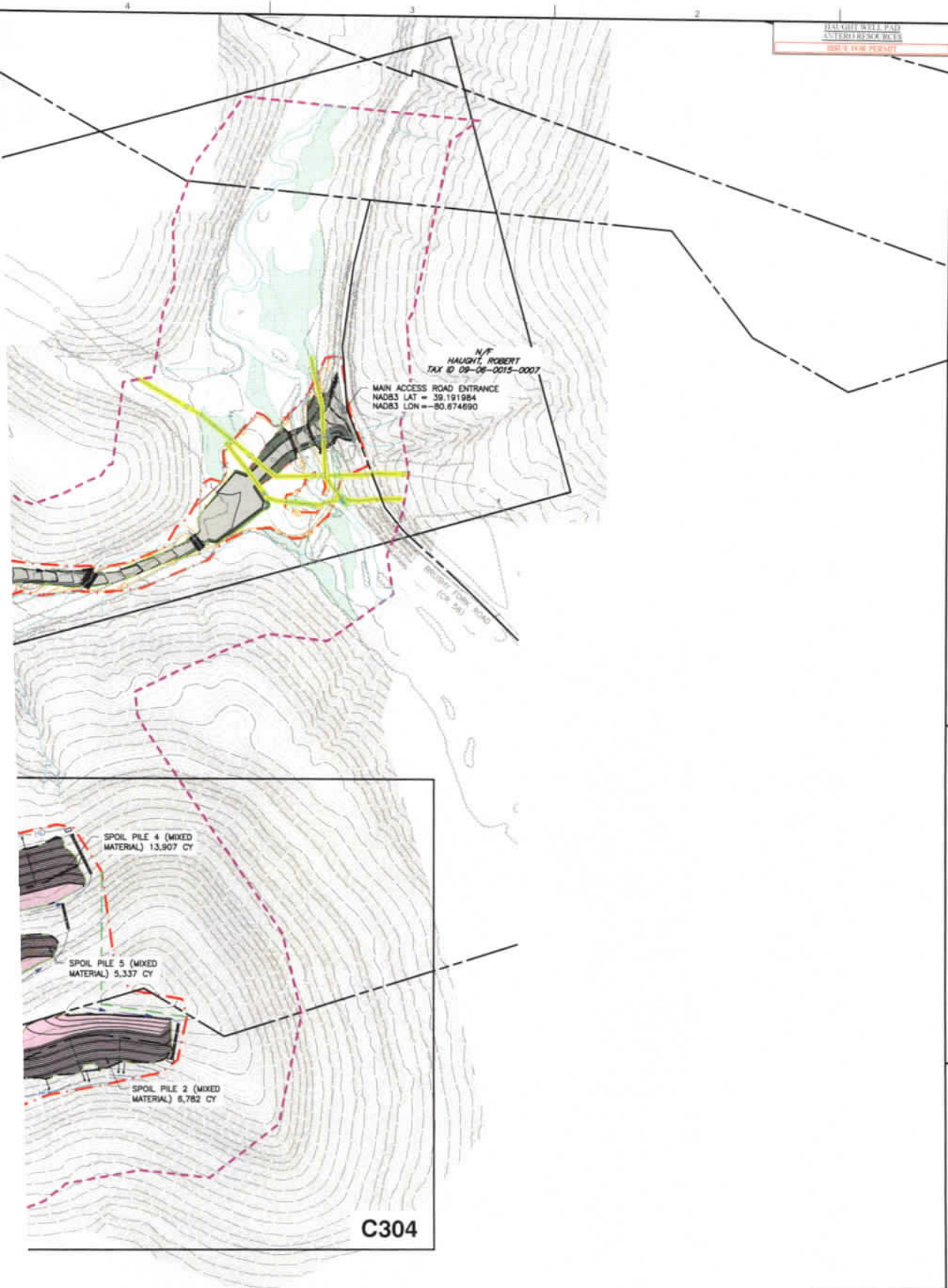
DATE	DECEMBER 2022	DRAWN BY	OWK, DBS
DWG SCALE	AS SHOWN	CHECKED BY	ER
PROJECT NO	323-610	APPROVED BY	JDR
DRAWING NO	C000		

LAW
CALL
IS
THE
INIA

HAUGHT WELL LEGEND							
WELL HEAD LETTER	WELL NAME	ELEVATION	WV NORTH NAD 27	WV NORTH NAD 83	NAD83 UTM-17M	NAD 83	
Z	HAUGHT SV	1193.87	N: 252677.768 E: 1665504.734	N: 252713.862 E: 1634063.975	N: 4337666.596 E: 527642.057	89° 11' 16.10" -80° 40' 47.75"	89° 11' 15.78" -80° 40' 48.38"

[Signature]
01/18/2023

02/23/2023



HAUGHT WELL PAD
ANTERO RESOURCES CORP

NO	DATE	DESCRIPTION

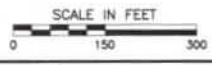


Civil & Environmental Consultants, Inc.
 120 Genesis Boulevard - Bridgeport, WV 26330
 Ph: 304.933.3119 - 855.488.9639 - Fax: 304.933.3327
 www.cenic.com

**HAUGHT WELL PAD
 ANTERO RESOURCES CORPORATION
 NEW MILTON
 DODDRIGE COUNTY, WEST VIRGINIA**

OVERALL SITE PLAN

DATE	DECEMBER 2022	DRAWN BY	OWK, DBS
DWG SCALE	AS SHOWN	CHECKED BY	ER
PROJECT NO	323-610	APPROVED BY	JDR



DRAWING NO
C300

02/03/2023

Handwritten signature and date: 01/19/2023