

02/10/2023



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

Tuesday, February 7, 2023
WELL WORK PLUGGING PERMIT
Horizontal 6A Plugging

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit approval for DEBERRY UNIT 2H
47-085-10000-00-00

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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, 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 a blue circular stamp. The signature is fluid and cursive.

Operator's Well Number:
Farm Name: NESS, ASHLEY E. JR.
U.S. WELL NUMBER: 47-085-10000-00-00
Horizontal 6A Plugging
Date Issued: 2/7/2023

Promoting a healthy environment.

PERMIT CONDITIONS 47 0 8 5 1 0 0 0 0 ^{02/10/2023}

West Virginia Code § 22-6-11 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. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

4708510000 02/10/2023

- 1) Date January 19, 2023
- 2) Operator's
Well No. Deberry Unit 2H
- 3) API Well No. 47-085 - 10000

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil ___/ Gas X/ Liquid injection ___/ Waste disposal ___/
(If "Gas, Production ___ or Underground storage ___) Deep ___/ ShallowX
- 5) Location: Elevation 1076' Watershed South Fork Hughes River
District Union County Ritchie Quadrangle Pullman 7.5'
- 6) Well Operator Antero Resources Corporation 7) Designated Agent Kevin Ellis
Address 1615 Wynkoop Street Address 535 White Oaks Blvd
Denver, CO 80202 Bridgeport, WV 26330
- 8) Oil and Gas Inspector to be notified
Name Isaiah Richards
Address 601 57th Street SE
Charleston, WV 25304
- 9) Plugging Contractor
Name N/A - Antero will plug well
Address _____

10) Work Order: The work order for the manner of plugging this well is as follows:

***Please See Attached Work Order**

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Office of Oil and Gas
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WV Department of
Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector



Date

01/31/2023

4708510000 02/10/2023

Deberry Unit 2H
Ritchie County, WV
API #47-085-10000



Antero Resources
1615 Wynkoop St.
Denver, CO 80202
Office: 303.357.7310
Fax: 303.357.7315

Objective: Plug and Abandon Conductor

Well Design:

- 20" OD Conductor, ID 19.124" @ 40' – Cemented to Surface

Oil and Gas Zones:

1. N/A

Procedure:

1. Notify WV DEP 24 hours prior to commencing work. - 304-205-3032
Isaiah Richards
2. Hold JSA Pre Job Meeting.
3. MIRU cement services. Mix and pump Class A cement plug to surface.
 - a. 40' conductor- approximately 70 sacks @ yield of 1.15 ft³/sk
4. Install Monument Marker with API #47-085-10000

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WV Department of Environmental Protection

 01/31/2023

4708510000 02/10/2023

WW-4A
Revised 6-07

1) Date: 1/20/2023
2) Operator's Well Number
Deberry Unit 2H

3) API Well No.: 47 - 085 - 10000

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

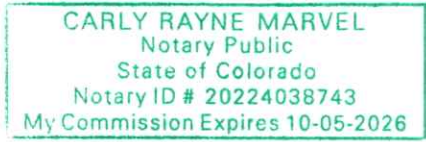
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name PLEASE SEE ATTACHMENT	Name _____
Address _____	Address _____
(b) Name PLEASE SEE ATTACHMENT	(b) Coal Owner(s) with Declaration
Address _____	Name _____
(c) Name PLEASE SEE ATTACHMENT	Address _____
Address _____	Name _____
6) Inspector Isaiah Richards	(c) Coal Lessee with Declaration
Address 601 57th Street SE	Name _____
Charleston, WV 25304	Address _____
Telephone 304-205-3032	_____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator Antero Resources Corporation
 By: Diana Hoff *Diana O. Hoff*
 Its: Senior VP of Operations
 Address 1615 Wynkoop Street
 Denver, CO 80202
 Telephone 303-357-7310

RECEIVED
Office of Oil and Gas
JAN 23 2023

Subscribed and sworn before me this 20 day of January
Carly Marvel Notary Public
 My Commission Expires 10/5/210

Oil and Gas Privacy Notice

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

02/10/2023
4708510000

Cut on dotted line.

Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. **DO NOT PHOTO COPY OR ALTER LABEL.**
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, **DO NOT TAPE OVER BARCODE.** Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # : 9405 5036 9930 0461 0774 66			
Trans. #:	580966736	Priority Mail® Postage:	<u>\$9.90</u>
Print Date:	01/20/2023	Total:	<u>\$9.90</u>
Ship Date:	01/20/2023		
Expected Delivery Date:	01/24/2023		
From: JOHN GIANNAULA 1615 WYNKOOP ST DENVER CO 80202-1106			
To: ASHLEY E NESS JR 2478 OXFORD RD PULLMAN WV 26421-8033			
<small>* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.</small>			



Thank you for shipping with the United States Postal Service!
Check the status of your shipment on the USPS Tracking® page at usps.com

Proposed Revegetation Treatment: Acres Disturbed 3.59 Prevegetation pH

Lime 2-3 Tons/acre or to correct to pH 6.5

Fertilizer type

Fertilizer amount 500 lbs/acre

Mulch 2-3 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre
Annual Ryegrass	40
Field Bromegrass	40

Seed Type	lbs/acre
Crownvetch	10-15
Tall Fescue	30

Please reference Table IV-3 on page 7 of the Well #1 Plugging Plan

Please reference Table IV-4A on page 7 of the Well #1 Plugging Plan

*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, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

[Handwritten signature]

Comments:

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FEB 06 2023

WV Department of Environmental Protection

Title: OOG Inspector

Date: 01/31/2023

Field Reviewed? () Yes (X) No

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Ness Pad Surface Owners

SURFACE INFORMATION:
Well Pad Disturbance
Tax Parcel ID: 10-14-1
Owner: Ashley E. Ness, Jr
Address: 2479 Oxford Road
Pullman, WV 26421

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JAN 23 2023
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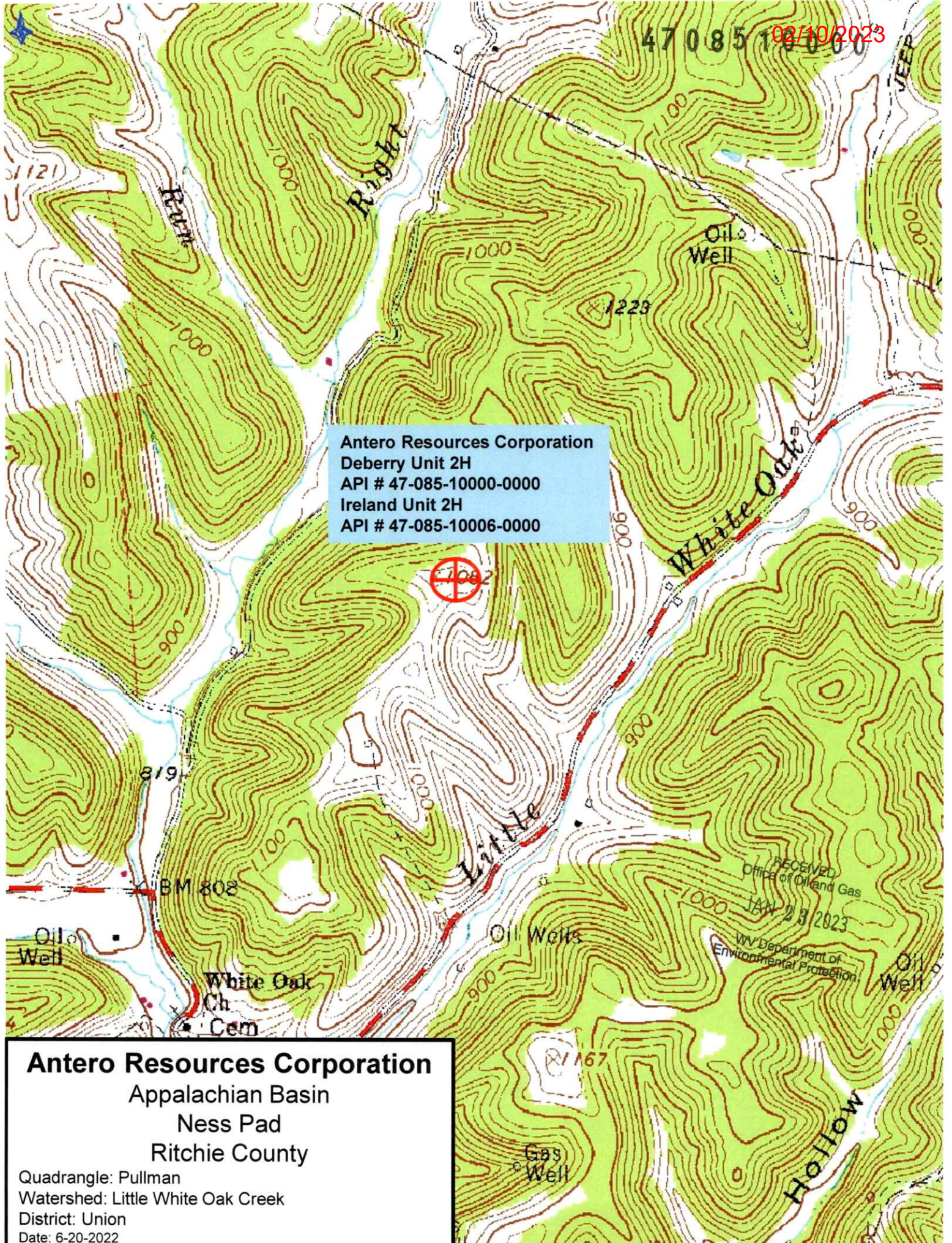
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Antero Resources Corporation
Deberry Unit 2H
API # 47-085-10000-0000
Ireland Unit 2H
API # 47-085-10006-0000



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WV Department of
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Antero Resources Corporation
Appalachian Basin
Ness Pad
Ritchie County
Quadrangle: Pullman
Watershed: Little White Oak Creek
District: Union
Date: 6-20-2022

02/10/2023

4708510000

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-085-10000 WELL NO.: Deberry 2H

FARM NAME: Ness

RESPONSIBLE PARTY NAME: Antero Resources Corporation

COUNTY: Ritchie DISTRICT: Union

QUADRANGLE: Pullman

SURFACE OWNER: Ashley E. Ness Jr.

ROYALTY OWNER: _____

UTM GPS NORTHING: 4338472.10 m

UTM GPS EASTING: 508549.59 m GPS ELEVATION: 1076.0 ft

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:

Survey grade GPS : Post Processed Differential _____
Real-Time Differential

Mapping Grade GPS : Post Processed Differential _____
Real-Time Differential

- Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

May Amy
Signature

Permitting Manager
Title

1/19/23
Date

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State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 085 - 10000 County Ritchie District Union
Quad Pullman 7.5' Pad Name Ness Pad Field/Pool Name ---
Farm name Ness, Ashley E., Jr. Well Number Deberry Unit 2H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4338472m Easting 508549m
Landing Point of Curve Northing
Bottom Hole Northing Easting

Elevation (ft) 1076' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)

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Date permit issued 11/16/2012 Date drilling commenced 4/15/2013 Date drilling ceased
Date completion activities began N/A Date completion activities ceased
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft Open mine(s) (Y/N) depths No
Salt water depth(s) ft Void(s) encountered (Y/N) depths No
Coal depth(s) ft Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

WR-35
 Rev. 8/23/13

API 47-085 - 10000 Farm name Ness, Ashley E., Jr. Well number Deberry Unit 2H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	40'	New	94# H-40	N/A	Y
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							
Packer type and depth set		N/A					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	203 sx	15.1	1.18	38	0'	8 Hrs.
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) 40' Loggers TD (ft) _____
 Deepest formation penetrated _____ Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) _____

Check all wireline logs run caliper density deviated/directional induction neutron resistivity gamma ray temperature sonic

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Rufus Unit 1H API# 47-085-10046). Please reference the wireline logs submitted with Form WR-35 for the Rufus Unit 1H). A Cement Bond Log was included with this submittal.

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

WR-35
Rev. 8/23/13

API 47- 085 - 10000 Farm name Ness, Ashley E., Jr. Well number Deberry Unit 1H

PRODUCING FORMATION(S)	DEPTHS	
	TVD	MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd
GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
* PLEASE SEE EXHIBIT 3					

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JAN 23 2023
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Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company LLC
Address 207 Carlton Drive City Eight Four State PA Zip 15330

Logging Company _____
Address _____ City _____ State _____ Zip _____

Cementing Company Allied Oil & Gas Services, LLC
Address 1036 East Main St. City Bridgeport State WV Zip 26330

Stimulating Company _____
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Mallory Turco Telephone 303-357-7182
Signature Mallory Turco Title Permitting Manager Date 1/11/23

02/10/2023



Kennedy, James P <james.p.kennedy@wv.gov>

plugging permits issued 4708510000 4708510006

1 message

Kennedy, James P <james.p.kennedy@wv.gov>

Tue, Feb 7, 2023 at 12:32 PM


To: Mallory Stanton <mstanton@anteroresources.com>, Isaiah M Richards <isaiah.m.richards@wv.gov>, Dani Devito <ddevito@shalepro.com>, amossor@wvassessor.com


To whom it may concern, plugging permits have been issued for 4708510000 4708510006.


James Kennedy


WVDEP OOG

4 attachments

 **4708510000.pdf**
1790K

 **IR-8 4708510000.pdf**
120K

 **4708510006.pdf**
1786K

 **IR-8 4708510006.pdf**
120K