



 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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Wednesday, May 1, 2019
 WELL WORK PLUGGING PERMIT
 Vertical Plugging

CORE APPALACHIA OPERATING LLC
 414 SUMMERS STREET

CHARLESTON, WV 25301

Re: Permit approval for 6861
 47-099-00811-00-00

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

Operator's Well Number: 6861
 Farm Name: US ARMY COE
 U.S. WELL NUMBER: 47-099-00811-00-00
 Vertical Plugging
 Date Issued: 5/1/2019

R

47-099-00811 P
05/03/2019

PERMIT CONDITIONS

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

1) Date February 22, 2019
2) Operator's Well No. 806861
3) API Well No. 47-099 - 00811

05/03/2019

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 ___ / Shallow X ___

5) Location: Elevation 876.21' Watershed East Fork of Twelvepole Creek
District Stonewall County Wayne Quadrangle Kiahsville

6) Well Operator Core Appalachia Operating, LLC 7) Designated Agent Jessica Greathouse
Address P.O. Box 6070 Address P.O. Box 6070
Charleston, WV 25362 Charleston, WV 25362

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Allen Flowers Name R & R Well Service
Address 165 Grassy Lick Lane Address 42 Lynch Ridge
Liberty, WV 25124 Walton, WV 25286

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

SEE ATTACHED SHEET

RECEIVED
Office of Oil and Gas

MAR 11 2019

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 3-11-2019

PLUGGING PROCEDURE

806861

WAYNE COUNTY, WEST VIRGINIA

API# 47-099-00811

BY: DMC

DATE: 3/7/2019

Current Status

10 3/4" @ 21'

8 5/8" @ 449'

7" @ 1317'

5 1/2" @ 1583' Pulled

3" tbg @ 1592' w/Anchor Pkr 3"x 6 5/8" x 16" @ 1581'

Shale: Shot 2247'-3134'

TD @ 3134'

Coal @ 130-135'

Fresh Water @ 155'

Salt Water @ 900'

Gas Shows @ 1525', 1580', 1583', 2090-2095', 2910', 3090'

Oil Show @ 2097'

Elevation 864.84'

6/7/2007 Swab Rig FL @ 1425', TD @ 1552', 3" tbg dropped**Objective: Plug and abandon**

- 1) Prepare road and location.
- 2) MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- ★ SPOT GEL TO FILL SHOT HOLE TO 2240'.
- 4) Cut 3" tbg at free point and pull.
- 5) Spot 200' cement plug @ TD, ~ 2240 - 2040'.
- 6) TIH and tag cement plug, ADD CEMENT IF NEEDED.
- 7) Spot 6% gel from 2040' - 1630'
- 8) Spot 155' cement plug from 1630' - ~~1475'~~
- 9) Spot 6% gel from 1475' - ~~1400'~~.
- 10) Cut 7" at free point and pull. PLACE 100' CEMENT PLUG ACROSS CASING CUT.
- 11) Spot 130' cement plug from 1400' - 1270'.
- 12) Spot 6% gel from 1270 - 950'.
- 13) Spot 150' cement plug from 950-800'.
- 14) Spot 6% gel from 800 - 500'.
- 15) Spot 100' cement plug from 500 - 400'.

- 16) Spot 6% gel from **400 – 200'**.
- 17) Attempt to pull 8 5/8" csg. If unsuccessful, shoot or rip holes @ 150', 130', 100'.
- 18) Spot 200' cement plug from **200' – Surface**.
- 19) Pull work string and top off w/cement.
- 20) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

806861

05/03/2019

47-099-00811P

Gas

Permit No. WAY-011
Wayne Quaa.

Company United Fuel Gas Co.
Address Box 1273, Charleston, W. Va.
Farm U.F.G.Co.Min.Tr.#1 Acres 39,155.30
Location Lt.Fk. of 12 pole creek.
Well No. 6661 Elev. 864.84
District Grant County - Wayne
Mineral United Fuel Gas Co.
Commenced 10/23/51
Completed 1/15/52
Date Shot 1/13/52 From 2247 to 3134
With 5666 2/3# Gelatin
Open Flow 35/10ths Water in 2"
Volume 250 M plus 133 M
R.P. 380-270# 48 40 hours

CASING & TUBING

10 3/4	27
8 5/8	445
7"	1317
5 1/2	1533 Palled
3 Tubing	1592

Anchor Packer 3" x 3 5/8"
x 16 Depth set 15.1'

Soil	0	10
Sand	10	70
Slate	70	100
Sand	100	130
Coal	130	135
Slate	135	155
Sand	155	220
Slate & Shells	220	300
Sand	300	330
Slate	330	365
Sand	365	455
Slate	455	500
Sand	500	530
Slate	530	617
Sand	617	796
Slate	796	796
Salt Sand	796	1000
Slate	1000	1005
Sand	1005	1045
Slate	1045	1050
Sand	1050	1121
Slate	1121	1157
Maxon Sand	1157	1275
Little Lino	1275	1280
Big Lino	1280	1405
Red Rock	1405	1516
Injun Sand	1516	1557
Black Lime	1557	1563
Slate & Shells	1563	2060
Brown Shale	2060	2060
Borca Grit	2060	2097
Slate & Shells	2097	2147
Brown Shale	2147	2200
White Slate	2200	2300
Brown Shale	2300	2640
White Slate	2640	2678
Brown Shale	2678	3120
Firo Clay	3120	3134
Total Depth	3134'	

Water 155' 4 BPH
HEW 900'
Gas 1409-1420' 7/10 W 2" 112 M
blow down to 20M at 1475'
Gas 1525' 4/10 W 2" 84 M
Gas 1530' inc. to 5/10 W 2" 94 M
Gas 1533' 12/10 W 2" 146 M
Gas in Borca 2090-2095' estimated 20 M
Show oil 2097'
Small increase in gas 2910'
Gas 3090' inc. to 10/10 W 2" 179 M
Test before shot 39/10 W 1" 66M
Shot 11-28-51 with 350# Detonite from
1526-1557
Test aftershot & cleaned out 10/10
W 2" 133 M
Test before shooting shale 13/10 W
2" 152 M
Shot 1-16-52 with 5666-2/3# Gelatin
from 2247-3134
Test 16 hours after shot 35/10 W 2"
250 M

FINAL OPEN FLOW - 393M - Injun 133 M
48 Hr. R. P. 300# Cag. Shale 200 M
48 Hr. R. P. 270# Tubing

Shut in 1-21-52 in 3" tubing

RECEIVED
Office of Oil and Gas

FEB 25 2019

WV Department of
Environmental Protection

1) Date: February 22, 2019
2) Operator's Well Number 806861 **05/03/2019**

3) API Well No.: 47 - 47-099 - 00811

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 <u>United States Army Corps of Engineers</u>	Name <u>None</u>
Address <u>Attn: Ms. Anita Bradburn, Realty Specialist</u>	Address _____
<u>502 8th Street</u>	_____
(b) Name <u>Huntington, WV 25701</u>	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Bureau of Land Management, Rolla Solid Minerals Office</u>
_____	Address <u>Attention: Timothy W. Howell</u>
(c) Name _____	<u>1400 Independence Road</u>
Address _____	Name <u>Rolla, Missouri 65401</u>
_____	Address _____
6) Inspector <u>Allen Flowers</u>	(c) Coal Lessee with Declaration
Address <u>165 Grassy Lick Lane</u>	Name <u>Argus Energy, LLC</u>
<u>Liberty, WV 25124</u>	Address <u>81 Enterprise Drive</u>
Telephone <u>304-552-8308</u>	<u>Debord, KY 41214</u>

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 Core Appalachia Operating, LLC
 By: Jessica Greathouse
 Its: Manager - EHS & Administration Services
 Address P.O. Box 6070
Charleston, WV 25362
 Telephone 304-353-5240

RECEIVED
 Office of Oil and Gas
FEB 25 2019
 West Virginia Department of
 Environmental Protection

Subscribed and sworn before me this 22nd day of February 2019
Phyllis A. Copley Notary Public
 My Commission Expires September 16, 2023

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 depprivacyofficer@wv.gov.

806861 05/03/2019
 47-099-00817P

7015 0640 0005 7840 2711

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Certified Mail Fee	\$3.50	
Extra Services & Fees (check box, add fee as appropriate)	\$2.80	
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<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.30	
Total	\$7.80	

Postmark Here: 0523 01

Date: 02/22/2019

To: **806861 P&A**
 Bureau of Land Management
 Rolla Solid Minerals Office
 1400 Independence Drive
 Rolla, Missouri 65401
 Attn: Timothy Nowel

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Certified Mail Fee	\$3.50	
Extra Services & Fees (check box, add fee as appropriate)	\$2.80	
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.30	
Total	\$7.80	

Postmark Here: 0523 01

Date: 02/22/2019

To: **806861 P&A**
 United States Army Corps of Engineers
 Attn: Ms. Anita Bradburn, Realty Specialist
 502 8th Street
 Huntington, WV 25701

PS Instructions

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DEBORD, KY 41214

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Certified Mail Fee	\$3.50	
Extra Services & Fees (check box, add fee as appropriate)	\$2.80	
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.30	
Total	\$7.80	

Postmark Here: 0523 01

Date: 02/22/2019

To: **806861 P&A**
 Argus Energy, LLC
 81 Enterprise Drive
 Debord, KY 41214

PS Instructions

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 U.S. Department of
 Environmental Protection

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Core Appalachia Operating, LLC OP Code 494518671

Watershed (HUC 10) East Fork of Twelvepole Creek Quadrangle Kiahsville

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: Plugging returns/Cement - Will utilize above ground tanks

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 20

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Any fluid recovered will be hauled to a Core tank battery and disposed of properly)

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. _____

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. _____

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

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Department of Environmental Protection

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]
Company Official (Typed Name) Jessica Greathouse
Company Official Title Manager - EHS and Administrative Services



Subscribed and sworn before me this 22nd day of February, 2019

Phyllis A. Copley Notary Public

My commission expires September 16, 2023

Proposed Revegetation Treatment: Acres Disturbed 1 +/- Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount _____ lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary


Permanent

Seed Type	lbs/acre
Red Fescue	40
Alsike	5
Annual Rye	15

Seed Type	lbs/acre
Red Fescue	15
Alsike Clover	5

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: 

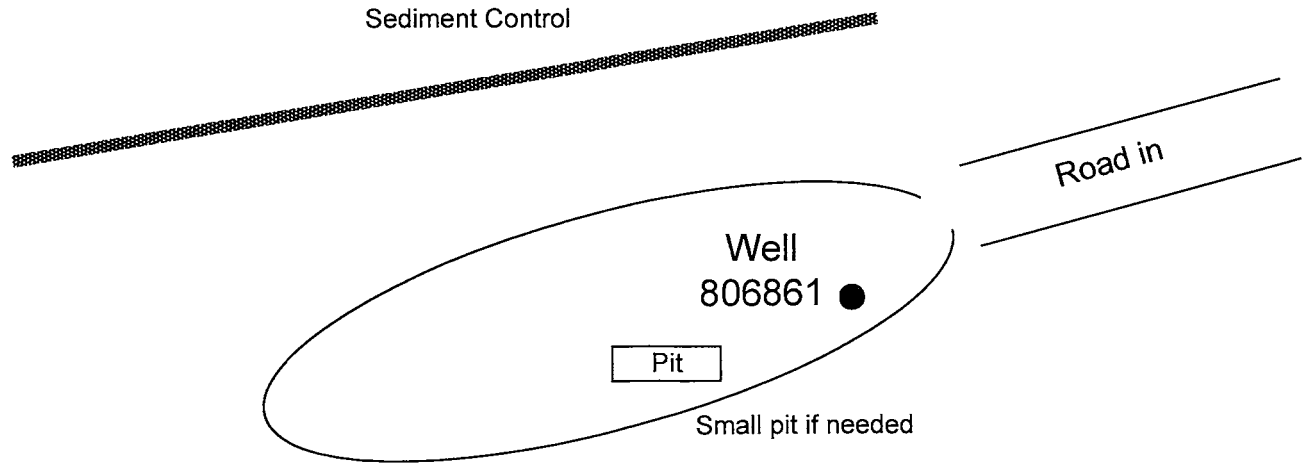
Comments: _____

Title: Inspector Date: 3-11-2019

Field Reviewed? () Yes () No

Diagram of Well 806861
API 47-099-00811
Field Office - Hamlin
County - Wayne

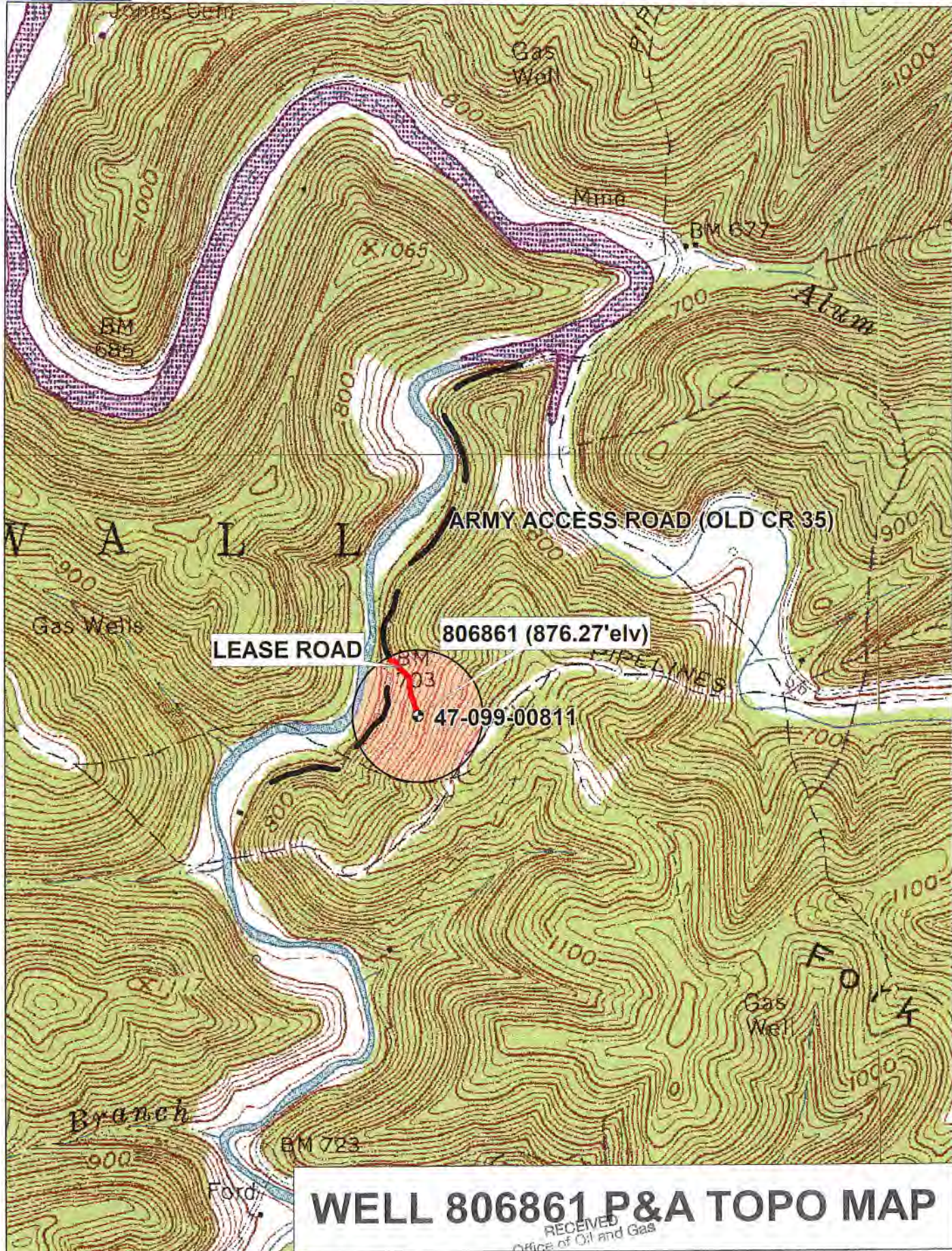
Surface Owner:
US ARMY COE



Note: No Land Application if pit is used

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Site Plan



LEASE ROAD

806861 (876.27'elv)

47-099-00811

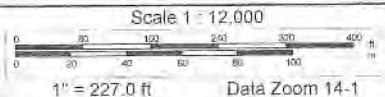
ARMY ACCESS ROAD (OLD CR 35)

WELL 806861 P&A TOPO MAP

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Office of Oil and Gas

FEB 25 2019

Department of
Environmental Protection



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WW-7
8-30-06



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

API: 47-099-00811 WELL NO.: 806861

FARM NAME: TCO MIN TR 1

RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC

COUNTY: Wayne DISTRICT: Stonewall

QUADRANGLE: Kiahsville

SURFACE OWNER: US ARMY COE

ROYALTY OWNER: Core Appalachia Production, LLC

UTM GPS NORTHING: 4213519.36m

UTM GPS EASTING: 385625.43m GPS ELEVATION: 267.09m [876.27']

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:

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

Survey grade GPS ; Post Processed Differential

Real-Time Differential

Mapping Grade GPS : Post Processed Differential

Real-Time Differential

4. 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.

[Signature]
Signature

EHS Specialist
Title

2/22/19
Date

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