



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, May 22, 2019  
WELL WORK PLUGGING PERMIT  
Vertical Plugging

CORE APPALACHIA OPERATING LLC  
414 SUMMERS STREET

CHARLESTON, WV 25301

Re: Permit approval for 808131  
47-045-00358-00-00

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: 808131  
Farm Name: VIRGIL & ADA KIRK  
U.S. WELL NUMBER: 47-045-00358-00-00  
Vertical Plugging  
Date Issued: 5/22/2019

I

47-045-00358P

05/24/2019

## 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

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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 March 11, 2019  
2) Operator's 05/24/2019  
Well No. 808131  
3) API Well No. 47-045-0358 P

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 700.68' Watershed Big Harts Creek  
District Guyan County Logan Quadrangle Trace

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 Jeffrey L. Smith Name R & R Well Service  
Address 5349 Karen Circle, Apartment # 2101 Address 42 Lynch Ridge  
Cross Lane, WV 25313 Walton, WV 25286

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

SEE ATTACHED SHEET

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WV Department of  
Environmental Protection

OK  
gawm  
FOR JOE SMITH

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

Work order approved by inspector \_\_\_\_\_ Date 5/21/19

## PLUGGING PROCEDURE

808131

LOGAN COUNTY, WEST VIRGINIA

API# 47-045-00358

BY: DMC

DATE: 1/14/19

05/24/2019

Current Status

10" @ 43'

8" @ 293'

7" @ 1312'

3" tbg @ 3620' w/Hookwall pkr 3"x 6 5/8" x 16" @ 2093'

Shale: Shot 2677'-3727'

TD @ 3727'

Coal @ 25-28'

Fresh Water @ 110', 340'

Salt Water @ Not Reported

Gas Shows @ 1434', 2090', 2400', 2418-3735'

Elevation 711.81'

9/1/2017 Echometer FL @ 1681'

**Objective: Plug and abandon**

- 1) Prepare road and location.
- 2) MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- 4) Cut 3" tbg at free point and pull. *GEL HOLE TO 2100'. SET 100' PLUG FROM 2500' - 2400'.*
- 5) Spot 100' cement plug @ TD, ~ 2080 - 1980'. *WCC, CHECK DEPTH, ADD CEMENT IF NEEDED.*
- 6) Spot 6% gel from 1980 - 1490'.
- 7) Spot 100' cement plug from 1490 - 1390'.
- 8) Spot 6% gel from 1390 - 1365'.
- 9) Cut 7" at free point and pull.
- 10) Spot 100' cement plug from 1365 - 1265'.
- 11) Spot 6% gel from 1265 - 760'.
- 12) Spot 100' cement plug from 760 - 660'.
- 13) Spot 6% gel from 660 - 390'.
- 14) Attempt to pull 8" csg. If unsuccessful, shoot or rip holes @ 110', 100', 25'.
- 15) Spot 140' cement plug from 390 - 250'.
- 16) Spot 6% gel from 250 - 110'.
- 17) Spot 110' cement plug from 110' - Surface.
- 18) Pull work string and top off w/cement.
- 19) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.

OK JMM

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STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

808131  
47-0.45-00358 P

*Salden*

WELL RECORD

Permit No. LOG-358

Oil or Gas Well Gas  
(KIND)

Company UNITED FUEL GAS CO.  
Address P.O. Box 1273, Charleston 25, W.Va.  
Farm U. F. G. Co. Min. Tr. #1 Acres 22,388.78  
Location (waters) Big Harts Creek  
Well No. 8131-PI Elev. 711.81  
District Chapmansville County Logan  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by United Fuel Gas Co. & Lloyd G. Jackson  
1/2 Address \_\_\_\_\_  
Drilling commenced 6-30-53  
Drilling completed 9-20-53  
Date Shot 9-22-53 From 2677 To 3727  
With 6,666-2/3# Gelatin  
Open Flow 58 /10ths Water in 2" Inch  
/10ths Merc. in \_\_\_\_\_ Inch  
Volume 321,000 Cu. Ft.  
Rock Pressure 455 lbs. 48 hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
Fresh water 110 feet 340 feet  
Salt water \_\_\_\_\_ feet \_\_\_\_\_ feet

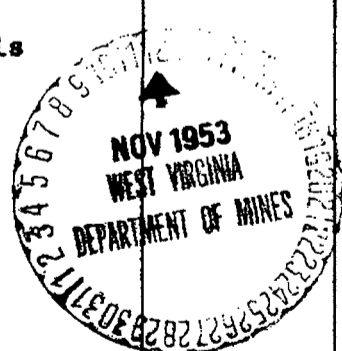
Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
18			Kind of Packer
18			Hook Wall
10		43'	Size of
8 1/2		293'	3"x6-5/8"x16"
7"		1312'	Depth set
5 3/16			2093'
8		3620	Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

05/24/2019

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
COAL WAS ENCOUNTERED AT 25 FEET 36 INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Surface			0	15	Water 110'	2	bailers per hour
Slate			15	25			
Coal			25	28	Hole full water 340'		
Slate			28	98			
Sand			98	118	Show gas 1434'		
Slate			118	387			
Sand			387	417	Gas 2090'	3/10 W 1" 18 M	
Slate			417	476			
Sand			476	535	Gas 2400'	not enough to gauge	
Slate			535	600			
Salt Sand			600	756	Gas 2418'	2/10 W 1" 15 M	
Slate & Shells			756	990	Gas 2475'	not enough to gauge	
Sand			990	1040	Gas 2520'	2/10 W 1" 15 M	
Slate			1040	1060	Gas 2550'	not enough to gauge	
Sand			1060	1095	Gas 2646'	2/10 W 1" 15 M	
Red Rock			1095	1101	Gas 2680'	4/10 W 1" 21 M	
Slate & Shells			1101	1160	Gas 2715'	3/10 W 1" 18 M	
Red Rock			1160	1164	Gas 2790'	3/10 W 1" 18 M	
Slate			1164	1180	Gas 2868'	4/10 W 1" 21 M	
Maxon Sand			1180	1225	Gas 2927'	6/10 W 1" 26 M	
Little Lime			1225	1271	Gas 2940'	8/10 W 1" 30 M	
Pencil Cave			1271	1276	Gas 3039'	8/10 W 1" 30 M	
Big Lime			1276	1465	Gas 3070'	12/10 W 1" 37 M	
Red Rock			1465	1525	Gas 3082'	14/10 W 1" 39 M	
Injun Sand			1525	1540	Gas 3235'	16/10 W 1" 42 M	
Slate			1540	1640	Gas 3320'	18/10 W 1" 45 M	
Shell			1640	1760	Gas 3640'	18/10 W 1" 45 M	
Slate & Shell			1760	2032	Gas 3656'	20/10 W 1" 47 M	
Brown Shale			2032	2053	Gas 3671'	22/10 W 1" 49 M	
Berea Grit			2053	2065	Gas 3705'	26/10 W 1" 54 M	
Slate			2065	2075	Gas 3735'	30/10 W 1" 58 M	
Shell			2075	2095			
Slate			2095	2105			
Shell			2105	2135	Test before shot 23/10 W 1" 51 M		
Slate			2135	2248	Shot 9-22-53 with 6,666-2/3# Gelatin from 2677-3727'		
Slate & Shells			2248	3039	Test 18 hrs. after shot 58/10 W 2" 32LM		
Shale			3039	3330			
Slate			3330	3592			
Shale			3592	3727			
Total depth			3727'		FINAL OPEN FLOW - 321 M - Br. Shale		

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MAR 18 2019  
WV Department of Environmental Protection



(Over)

48 Hrs. R.P. 455#

WW-4A  
Revised 6-07

1) Date: March 11, 2019  
2) Operator's Well Number 808131

3) API Well No.: 47 - 47-045 - 00358

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>Virginia and Ada Kirk</u>	Name <u>None</u>
Address <u>39 Aarons Way</u>	Address _____
<u>Harts, WV 25524</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Southern Region Industrial, Inc.</u>
_____	Address <u>Three Commercial Place</u>
_____	<u>Norfolk, VA 23510</u>
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Jeffrey L. Smith</u>	(c) Coal Lessee with Declaration
Address <u>5349 Karen Circle, Apartment # 2101</u>	Name <u>None</u>
<u>Cross Lanes, WV 25313</u>	Address _____
Telephone <u>681-313-6743</u>	_____

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Office of Oil and Gas

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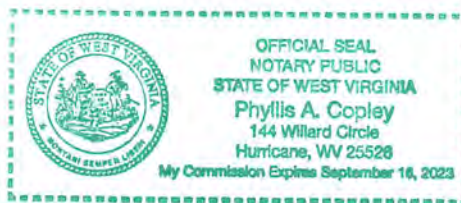
WV Department of  
Environmental Protection

**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	<u>Core Appalachia Operating, LLC</u>
By:	<u>JG</u> <u>Jessica Greathouse</u>
Its:	<u>Manager - EHS &amp; Administration Services</u>
Address	<u>P.O. Box 6070</u>
	<u>Charleston, WV 25362</u>
Telephone	<u>304-353-5240</u>

email/fax perm. f:  
pcopley@dgc.com  
jgreathouse@dgc.com

Subscribed and sworn before me this 15<sup>th</sup> day of March, 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](mailto:depprivacyofficer@wv.gov).



05/24/2019

WW-9  
(5/16)

API Number 47-045-00358  
Operator's Well No. 808131

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) Big Harts Creek Quadrangle Trace

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) \_\_\_\_\_

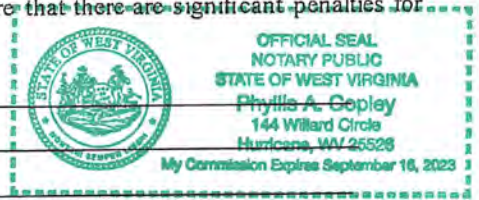
-Landfill or offsite name/permit number? \_\_\_\_\_

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 15<sup>th</sup> day of March, 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	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Alsike	5	Alsike Clover	5
Annual Rye	15		

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: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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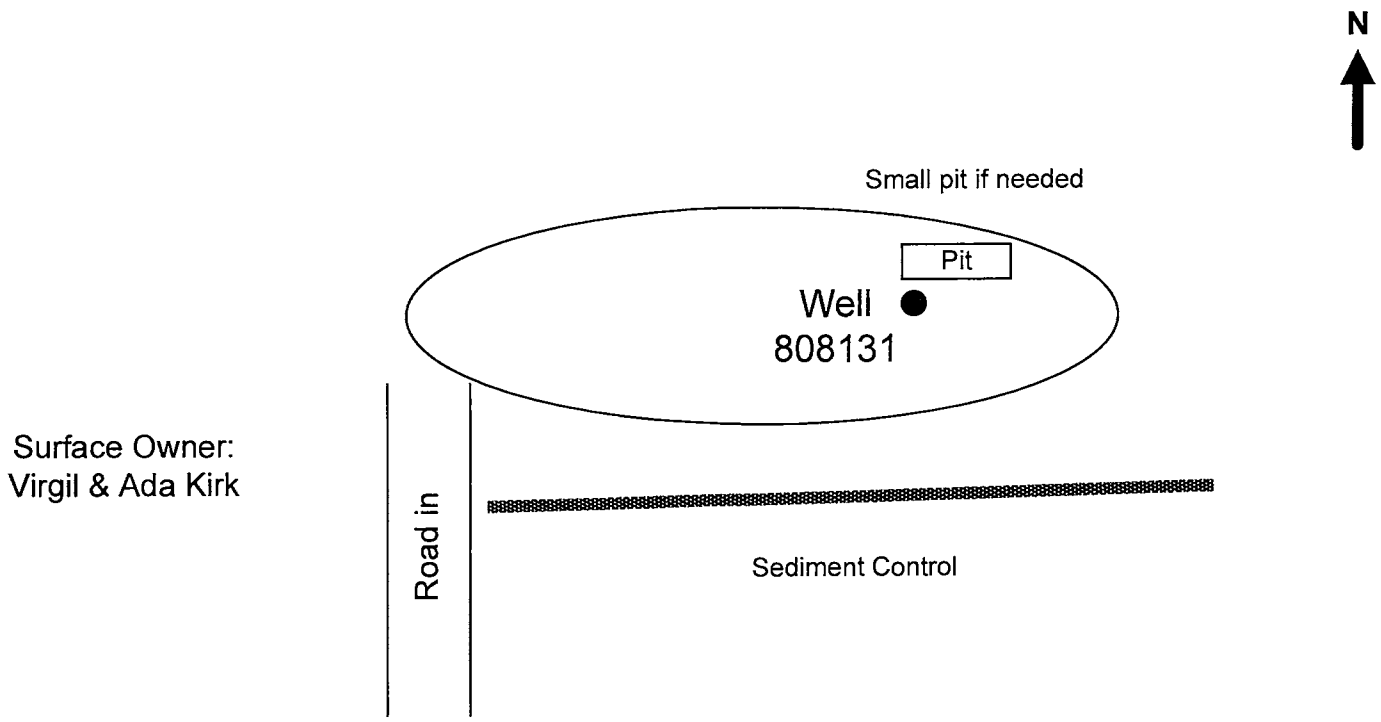
WV Department of  
Environmental Protection

Title: \_\_\_\_\_ Date: \_\_\_\_\_

Field Reviewed? ( ) Yes ( ) No



Diagram of Well 808131  
API 47-045-00358  
Field Office - Hamlin  
County - Logan



Note: No Land Application if pit is used

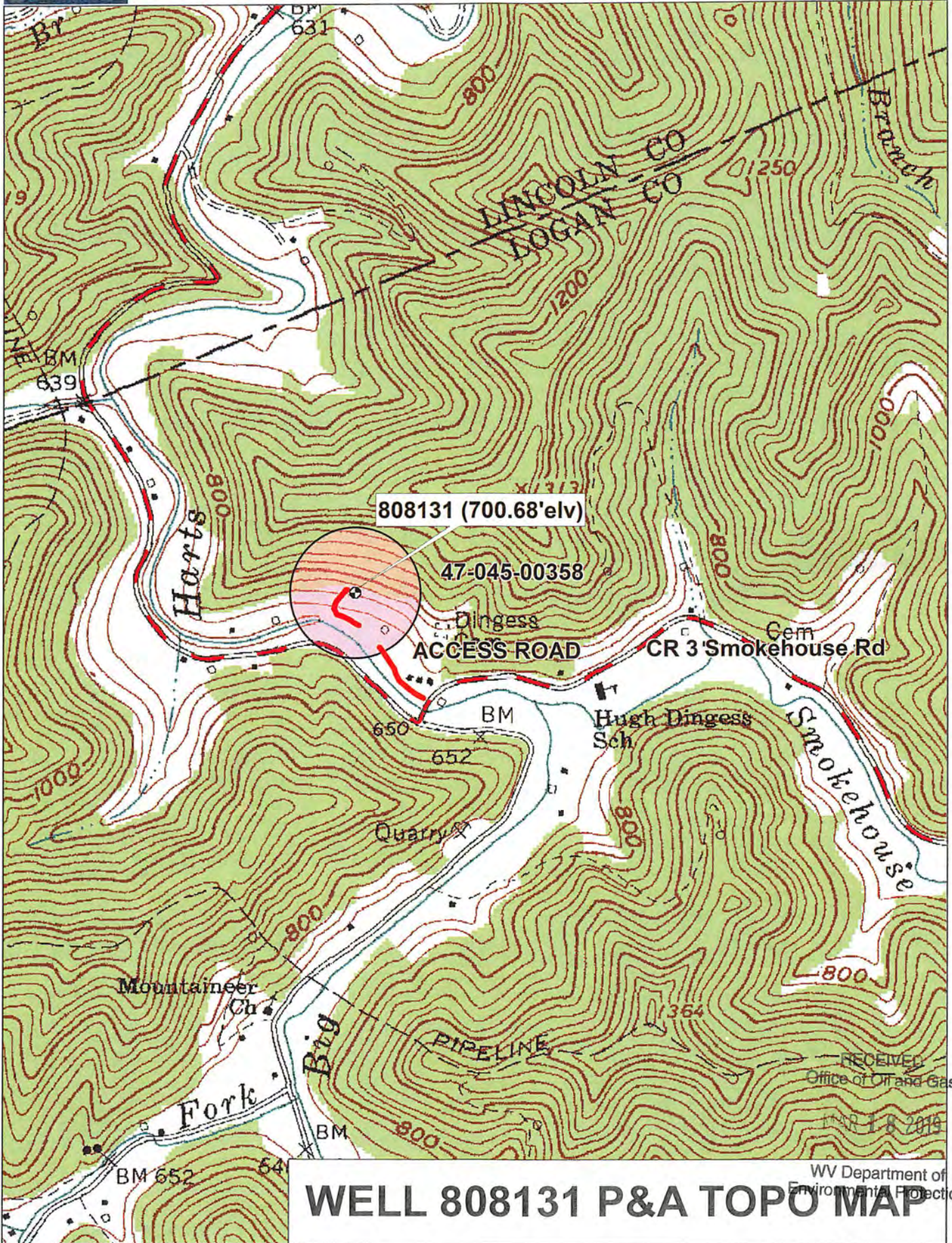
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# Site Plan



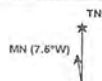


# WELL 808131 P&A TOPO MAP

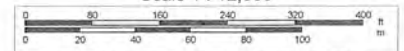
Data use subject to license.

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www.delorme.com



Scale 1 : 12,000



1" = 227.0 ft Data Zoom 14-1



WW-7  
8-30-06



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

API: 47-045-00358 WELL NO.: 808131

FARM NAME: TCO MIN 223

RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC

COUNTY: Logan DISTRICT: Guyan

QUADRANGLE: Trace

SURFACE OWNER: Virgil & Ada Kirk

ROYALTY OWNER: Core Appalachia Production, LLC

UTM GPS NORTHING: 4204234.20m

UTM GPS EASTING: 399414.84m GPS ELEVATION: 213.57m [700.66' elev]

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

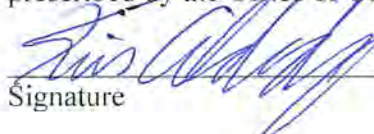
Real-Time Differential

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

EHS Specialist  
Title

3/7/19  
Date

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