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 west virginia department of environmental protection
 

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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)

Friday, April 19, 2019

WELL WORK PLUGGING PERMIT  
 Vertical Plugging

CORE APPALACHIA OPERATING LLC  
 414 SUMMERS STREET

CHARLESTON, WV 25301

Re: Permit approval for 808455  
 47-043-01220-00-00

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: 808455  
 Farm Name: TCO MIN TR 7  
 U.S. WELL NUMBER: 47-043-01220-00-00  
 Vertical Plugging  
 Date Issued: 4/19/2019

## 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 February 19, 2019  
2) Operator's 04/19/2019  
Well No. 808455  
3) API Well No. 47-043 - 01220

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 1035.78' Watershed Big Creek - Mud River  
District Laurel Hill County Lincoln Quadrangle Hager

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 Jeffery L. Smith Name R & R Well Service  
Address 5369 Big Tyler Road 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:

OK gnm

SEE ATTACHED SHEET

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

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Office of Oil and Gas

FEB 22 2019

Work order approved by inspector OK

Date 4/17/19 WV Department of Environmental Protection

PLUGGING PROCEDURE  
808455  
LINCOLN COUNTY, WEST VIRGINIA  
API# 47-043-01220

BY: DMC  
DATE: 1/14/19

04/19/2019

Current Status

10 3/4" @ 20'  
8 5/8" @ 410'  
7" @ 1814' Pulled  
5 1/2" @ 2115'  
Berea: Shot 2452'-2473'  
Shale: Shot 2840'-3853'  
TD @ 3853'  
Fresh Water 440-450'  
Coal 155-156', 327-330'  
Gas Shows @ 1814-1826', 2450-2455', 3833'  
Oil Show @ 1814-1826'  
Elevation 1035.98'  
2/27/1974 Swab Rig FL @ 475'  
9/7/2005 Swab Rig FL @ 487', TD @ 2184'  
3/6/2012 Echometer FL @ 378'

**Objective: Plug and abandon**

- 1) Prepare road and location.
- 2) MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- 3a) PUMP GEL TO FILL SHOT HOLES. GEL NEEDS TO FILL WELL BORE TO  $\approx$  2000'. gwm
- 4) Spot 115' cement plug @ TD, ~ 2180 - 2065'.
- 5) Spot 6% gel from 2065 - 1860'.
- 6) Cut 5 1/2" csg at free point and pull. SET 100' CEMENT PLUG ACROSS CASING CUT. gwm
- 7) Spot 100' cement plug from 1860 - 1760'.
- 8) Spot 6% gel from 1760 - 1090'.
- 9) Spot 100' cement plug from 1090 - 990'.
- 10) Spot 6% gel from 990 - 500'. 350'
- 10a) ATTEMPT TO PULL 8 5/8" CASING, IF PULLED CEMENT FROM 450' TO SURFACE.
- 11) Spot 150' cement plug from 500 - 350'.
- 12) Spot 6% gel from 350 - 100'.
- 13) Attempt to pull 8 5/8" csg. If unsuccessful, shoot or rip holes @ 100', 400', 350', 300', 200', 150', 100'.
- 14) Spot 450' cement plug from 450' - Surface.
- 15) Pull work string and top off w/cement.
- 16) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.

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WV Department of  
Environmental Protection



808455  
47-043-01220P

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION 6

WELL RECORD

04/19/2019

Quadrangle Midkiff

Permit No. LIN-1220

Oil or Gas Well Gas  
(KIND)

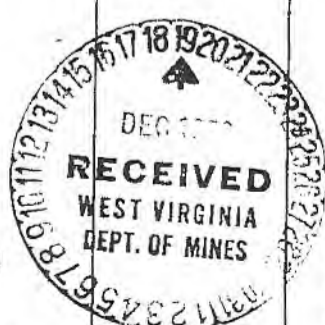
Company United Fuel Gas Company  
 Address P. O. Box 1273; Charleston 25, W. Va.  
 Farm United Fuel Gas Co. Min. Tr. #7 Acres 2562.36  
 Location (waters) Upper Big Creek  
 Well No. 8455 Elev. 1035.98  
 District Jefferson County Lincoln  
 The surface of tract is owned in fee by \_\_\_\_\_  
 Address \_\_\_\_\_  
 Mineral rights are owned by United Fuel Gas Co.  
 Address Charleston, W. Va.  
 Drilling commenced June 12, 1956  
 Drilling completed September 10, 1956  
 Date Shot 9-13-56 From 2452- To 2473'  
 With 133-1/3# Gelatin  
 Open Flow 20 10ths Water in 1 Inch  
 \_\_\_\_\_ /10ths Merc. in \_\_\_\_\_ Inch  
 Volume 47,000 Berea & Shale Cu. Ft.  
 Rock Pressure 400 lbs. 48 hrs.  
 Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
 Fresh water 440-450 feet \_\_\_\_\_ feet  
 Salt water \_\_\_\_\_ feet \_\_\_\_\_ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
18			
13			
10 3/4		20	Size of
8 x 5/8		410	
7 x 5/8	1814	Full	Depth set
5 x 1/2		2115	
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_

COAL WAS ENCOUNTERED AT 155 FEET 12 INCHES  
327 FEET 36 INCHES FEET \_\_\_\_\_ INCHES  
 FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Clay			0	28	Water 440-450'		
Slate			28	45			
Sand			45	75	Gas 1814-1826'	10/10 W 2"	133 M
Slate & Shells			75	155			
Coal			155	156	Show oil 1814-1826'		
Slate			156	205			
Broken Sand			205	285	Gas 2450-2455'	2/10 W 1"	15 M
Slate			285	327			
Coal			327	330	Gas 2455-2461'	10/10 W 1"	33 M
Slate			330	345			
Lime			345	400	Gas 3833'	2/10 W 1"	15 M
Slate & Shells			400	740			
Broken Sand			740	810	Test before shot 2/10 W 1"	15 M	
White Slate			810	837	Shot 9-12-56 with 6,666-2/3# Gelatin		
Sand			827	862	from 2840-3853'		
Slate			862	972	Test 1 hour after shot 70/10 W 2"	353 M	
Salt Sand			972	1382	Test 19 hours after 1st shot 18/10 W 1"		
Slate			1382	1396	45 M		
Sand			1396	1434			
Slate			1434	1460	Shot 9-13-56 with 133-1/3# Gelatin from		
Sand			1460	1585	2452-2473'		
Red Rock			1585	1591			
White Slate			1591	1640	Test 1 hour after shot 90/10 W 1"	100 M	
Red Rock			1640	1645	Test after blowing open 11 days 12/10		
Slate			1645	1720	W 1" 38 M		
Little Lime			1720	1745	18 Hour test 20/10 W 1"	47 M	
Pencil Cave			1745	1750			
Big Lime			1750	1933	FINAL OPEN FLOW - 47 M - Berea & Shale		
Slate & Shells			1933	1950	48 Hr. R. P. 400#		
Red Injun			1950	1960			
Slate			1960	1980	Shut in 9-24-56 in 5 1/2" casing.		
Broken Formation			1980	2010			
Grey Injun			2010	2050			
Slate			2050	2085			



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Formation	Color	Hard or Soft	Top <sup>6</sup>	Bottom	Oil, Gas or Water	Depth Found	Remarks
Big Shell			2085	2170		808455	
Slate & Shells			2170	2435		<u>47-043-01220P</u>	
Brown Shale			2435	2450			
Berea			2450	2466			
Slate & Shells			2466	2667			
Shell			2667	2682			04/19/2019
Slate & Shells			2682	3100			
Grey Shale			3100	3480			
Brown Shale			3480	3660			
Grey Shale			3660	3680			
Brown Shale			3680	3843			
White Slate			3843	3853			
Total Depth			3853'				

Date December 18, 19 56

APPROVED UNITED FUEL GAS COMPANY, Owner

By *S. R. Farrell*  
 (Title) Office of Oil and Gas  
 Supt., Civil Engineering Department

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1) Date: February 19, 2019  
2) Operator's Well Number  
808455

3) API Well No.: 47 - 47-043 - 01

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL 04/19/2019

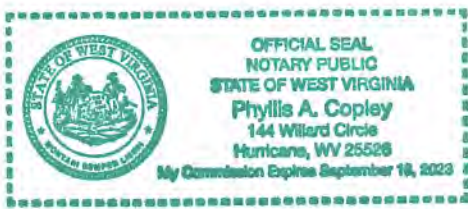
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Jerry G. Umhoefer</u>	Name <u>None</u>
Address <u>634 Union Gap</u>	Address _____
<u>Ranger, WV 25557</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Southern Region Industrial, Inc.</u>
_____	Address <u>Three Commercial Place</u>
(c) Name _____	<u>Norfolk, VA 23510</u>
Address _____	Name _____
_____	Address _____
6) Inspector <u>Jeffery L. Smith</u>	(c) Coal Lessee with Declaration
Address <u>5369 Big Tyler Road</u>	Name <u>None</u>
<u>Cross Lanes, WV 25313</u>	Address _____
Telephone <u>681-313-6743</u>	_____

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

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and de 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 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 Ap 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 E Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies o 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 p 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

Subscribed and sworn before me this 20th 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 o regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal co business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requ 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](mailto:depprivacyoffier@wv.gov).

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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 04/19/2019

Watershed (HUC 10) Big Creek - Mud River Quadrangle Hager

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 a 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 on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable 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 providing 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]

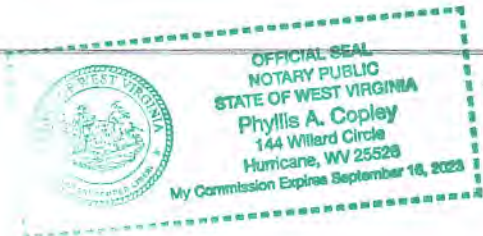
Company Official (Typed Name) Jessica Greathouse

Company Official Title Manager - EHS and Administrative Services

Subscribed and sworn before me this 20th day of February, 2019

Phyllis A. Copley Notary Public

My commission expires September 16, 2023



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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: \_\_\_\_\_

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

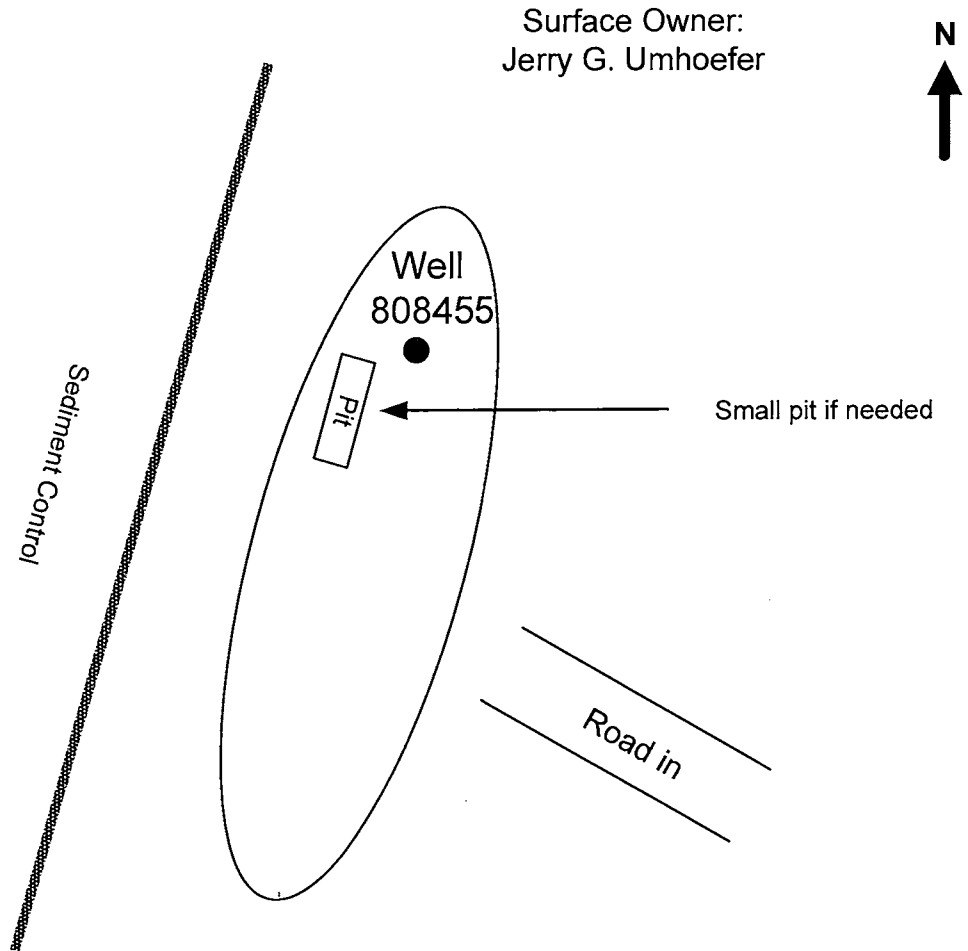
Date: \_\_\_\_\_

Field Reviewed? ( ) Yes ( ) No

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Diagram of Well 808455  
API 47-043-01220  
Field Office - Hamlin  
County - Lincoln



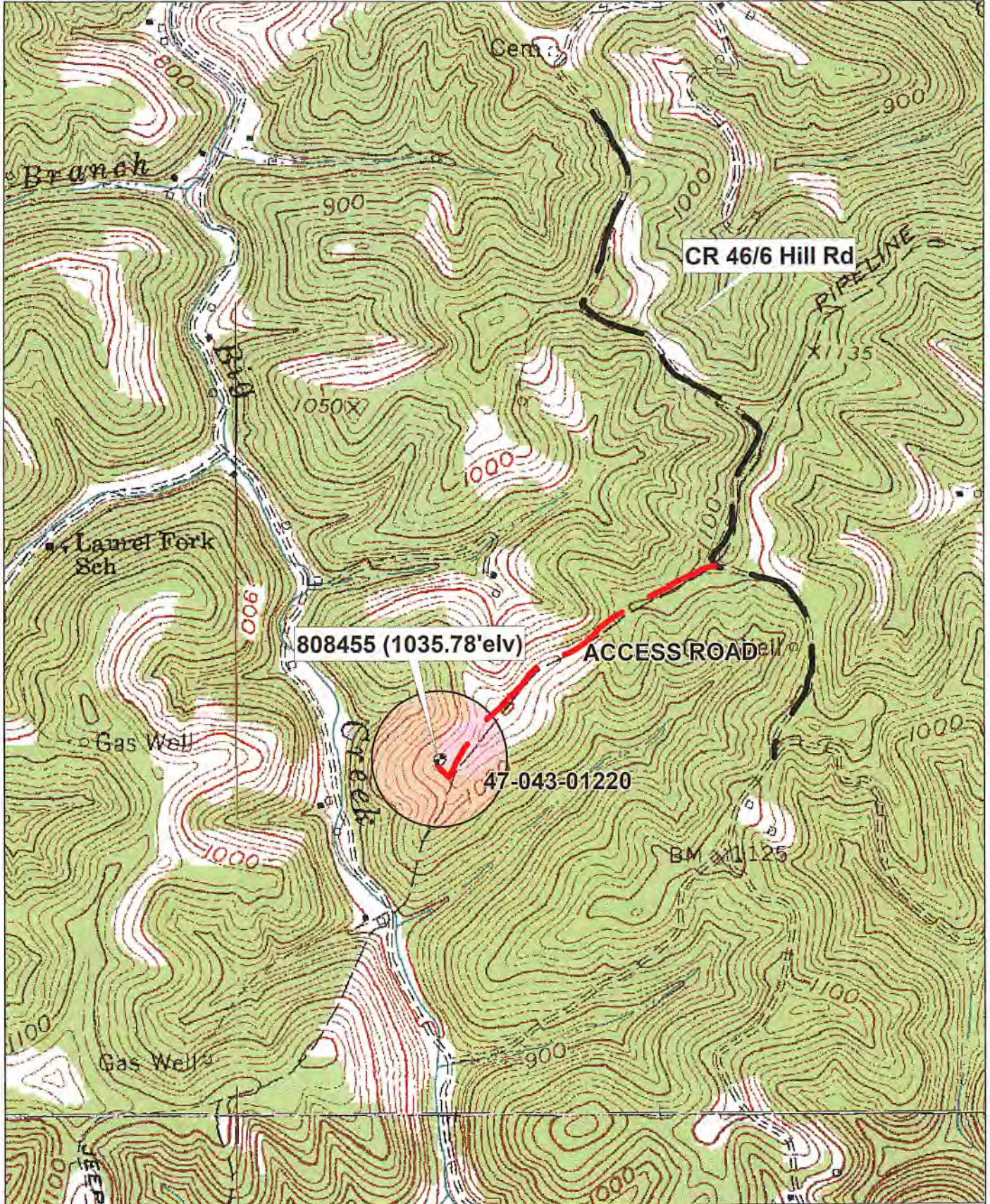
Note: No Land Application if pit is used

# Site Plan

Prepared by: Kris Aldridge  
Date: 2/18/2019

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No Scale

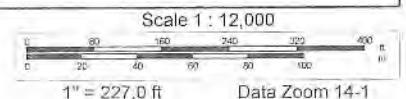
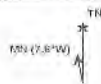


# WELL 808455 P&A TOPO MAP

Data use subject to license.

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www.delorme.com



WW-7  
8-30-06



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

API: 47-043-01220 WELL NO.: 808455

FARM NAME: TCO MIN TR 7

RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC

COUNTY: Lincoln DISTRICT: Laurel Hill

QUADRANGLE: Hager

SURFACE OWNER: Jerry G. Umhoefer

ROYALTY OWNER: Core Appalachia Production, LLC

UTM GPS NORTHING: 405543.85m

UTM GPS EASTING: 4221066.85m GPS ELEVATION: 315.71m [1035.78']

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

2/18/19  
Date

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