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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)

Monday, April 8, 2019

WELL WORK PLUGGING PERMIT  
 Vertical Plugging

CORE APPALACHIA OPERATING LLC  
 414 SUMMERS STREET

CHARLESTON, WV 25301

Re: Permit approval for 806778  
 47-059-00259-00-00

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: 806778  
 Farm Name: WAYNE COUNTY LAND &   
 U.S. WELL NUMBER: 47-059-00259-00-00  
 Vertical Plugging  
 Date Issued: 4/8/2019

## 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 15, 2019  
2) Operator's Well No. 806778 **04/12/2019**  
3) API Well No. 47-059 - 00259

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 1223.02' Watershed Stonecoal Creek  
District Kermit County Mingo Quadrangle Webb

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 Name Allen Flowers  
Address 165 Grassy Lick Lane  
Liberty, WV 25124  
9) Plugging Contractor Name Precision Drilling (BOSS)  
Address 3978 N Elmdale Road  
Olney, IL 62450

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

SEE ATTACHED SHEET

**GEL SPACERS BETWEEN ALL CEMENT PLUGS.**  
*JWM*

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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 *[Signature]* Date 3-11-2019

## PLUGGING PROCEDURE

806778

MINGO COUNTY, WEST VIRGINIA

API# 47-059-00259

BY: DMC

DATE: 3/7/2019

Current Status

10" @ 624'

8 5/8" @ 1394' Pulled

7" @ 1682'

Shale: Shot 2367-3370'

TD @ 3370'

Water @ 350'

Salt Water @ 1075', 1100'

Coal @ 61-65', 591-596'

Gas Shows @ 1068', 1870', 2527', 2908', 3243'

Elevation 1211.15'

2/5/2004 Swab FL @ 583', TD @ 2172'

**Objective: Plug and abandon**

- 1) Prepare road and location.
- 2) MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- 3A) Spot 100' cement plug at TD, ~ 2347-2247'
- 5) TIH and tag cement plug.
- 6) TIH to TD and spot 6% gel from 2247 - 1925'
- 7) Spot 100' cement plug from 1925 - 1825'.
- 8) Cut 7" at free point and pull. SET 100' CEMENT PLUG ACROSS CUT.
- 9) Spot 6% gel from 1825 - 1732'.
- 10) Spot 100' cement plug from 1732 - 1632'.
- 11) Spot 6% gel from 1632 - 1450'.
- 12) Spot 100' cement plug from 1450 - 1350'.
- 13) Spot 6% gel from 1350 - 1261'.
- 14) Spot 100' cement plug from 1261 - 1161'.
- 15) Spot 6% gel from 1161 - 1100'.
- 16) Spot 100' cement plug from 1100 - 1000'.
- 17) Spot 6% gel from 1000 - 675'.
- 18) Spot 134' cement plug from 675 - 541'.

GEL HOLE FROM TD TO ABOVE SHOT  
HOLE ≈ 2300'

- 19) Attempt to pull 10" csg. If unsuccessful, shoot or rip holes @ 350', 100', 62'.
- 20) Spot 6% gel from 541 - ~~400'~~ 350'.
- 21) Spot ~~100'~~ cement plug from 400 - 300'.
- 22) Spot 6% gel from 300 - ~~100'~~ 350'.
- 23) Spot ~~100'~~ cement plug from 100' - Surface. *J. W. M.*
- 24) Pull work string and top off w/cement.
- 25) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

806778  
47-059-00259 P  
B-1

WELL RECORD

Permit No. MIN-259

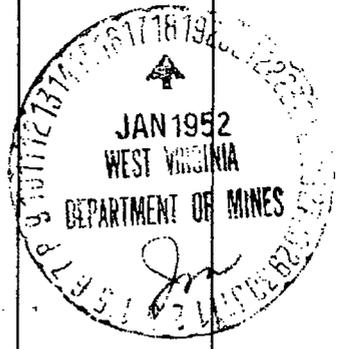
Oil or Gas Well Gas  
04/12/2019

Company United Fuel Gas Company  
Address P.O. Box 1273, Charleston 25, W. Va.  
Farm F. D. Caldwell #60 Acres 13,500  
Location (waters) Stone Coal Br. of Tug River  
Well No. 6778 Elev. 1211.15  
District Kernit County Mingo  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by Wayne Co. Land & Min. Co.  
1st Huntington Nat'l Address Huntington, W. Va.  
Bank Bldg.  
Drilling commenced 9-4-51  
Drilling completed 12-19-51  
Date Shot 12-21-51 From 2367 To 3370  
With 3333-1/3# DuPont Gelatin  
Open Flow 10/10ths Water in 2 Inch  
/10ths Merc. in Inch  
Volume 133 M Cu. Ft.  
Rock Pressure 280 lbs. 48 hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
Fresh water \_\_\_\_\_ feet  
Salt water \_\_\_\_\_ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
18			
13			
10		624'	Size of
<del>8-5/8"</del>		1394' Pulled	ed
<del>7"</del>		1682'	Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ 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	10			
Sand			10	40			
Slate			40	61			
Coal			61	65			
Slate			65	72			
Sand			72	370	Water 350'		2 bailers per hour
Slate			370	412			
Sand			412	436			
Slate			436	470			
Sand			470	507			
Slate			507	523			
Sand			523	540			
Slate			540	591			
Coal			591	596			
Slate			596	695			
Sand			695	740			
Slate			740	785			
Sand			785	830			
Slate			830	955			
Salt Sand			955	1253	Show gas in Salt Sand		1068'
					Water Sand		1075'
					Hole full water		1100'
Slate			1253	1258			
Sand			1258	1321			
Slate			1321	1371			
Red Rock			1371	1383			
Slate & shells			1383	1535	Reduced hole at 1394'		
Sand			1535	1554			
Red Rock			1554	1567			
Slate			1567	1628			
Maxon			1628	1657	Water in Maxon, 1		bailer per hour
Little Lime			1657	1672			
Big Lime			1672	1868			
Injun Sand			1868	1920	Snow gas in Injun		1870'
Slate & shells			1920	2406			
Coffee Shale			2406	2424			
Berea Grit			2424	2521			



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Department of Environmental Protection

806778

47-059-00259P

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Brown Shale			2521	2606	Show gas	2527'	
Gray Shale			2606	2792			
Brown Shale			2792	2963	Gas	2908'	4/10 W 1" 21 M
Gray Shale			2963	3060			
Brown Shale			3060	3358	Show Gas	3243'	
Slate			3358	3370			
Total depth			3370'				
							04/12/2019
							Test before shot 4/10 W 1" 21 M
							Shot 12-21-51 with 3333-1/3# DuPont
							Gelatin from 2367-3370'
							Test 18 hours after shot 10/10 W 2" 133 M
							FINAL OPEN FLOW - 133 M - Br. Shale
							48 Hr. R.P. 280#
							Shut in 12-22-51 in 7" casing.

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WV Department of  
Environmental Protection

Date January 17, 19 52

APPROVED United Fuel Gas Company, Owner

By \_\_\_\_\_  
(Title)  
Mam Civil Engineering Dept

1) Date: February 15, 2019  
2) Operator's Well Number 806778 **04/12/2019**

3) API Well No.: 47 - 47-059 - 00259

**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>Wayne County Land &amp; Mineral Co</u>	Name <u>None</u>
Address <u>C/O Gaddy Engineering</u>	Address _____
<u>303 Washington Street, West</u>	
(b) Name <u>Charleston, WV 25302</u>	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Wayne County Land &amp; Mineral Co.</u>
	Address <u>C/O Gaddy Engineering</u>
	<u>303 Washington Street, West</u>
(c) Name _____	Name <u>Charleston, WV 25302</u>
Address _____	Address _____
6) Inspector <u>Allen Flowers</u>	(c) Coal Lessee with Declaration
Address <u>165 Grassy Lick Lane</u>	Name <u>Southeastern Land, 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 - HSE & Administration Services  
 Address P.O. Box 6070  
Charleston, WV 25362  
 Telephone 304-353-5240

Subscribed and sworn before me this 20<sup>th</sup> 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](mailto:depprivacyofficer@wv.gov).

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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) Stonecoal Creek Quadrangle Webb

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.

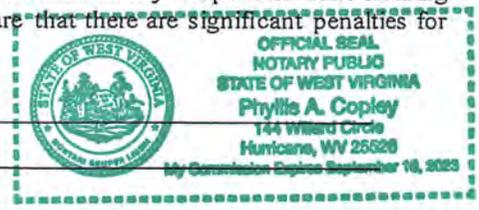
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations 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 20<sup>th</sup> 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**

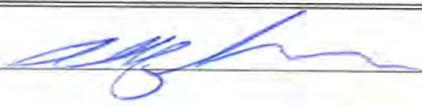
Seed Type	lbs/acre
Red Fescue	40
Alsike	5
Annual Rye	15

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: Inspected Date: 3-11-2019

Field Reviewed? ( 6 ) Yes ( ) No

# CORE APPALACHIA OPERATING, L.L.C.

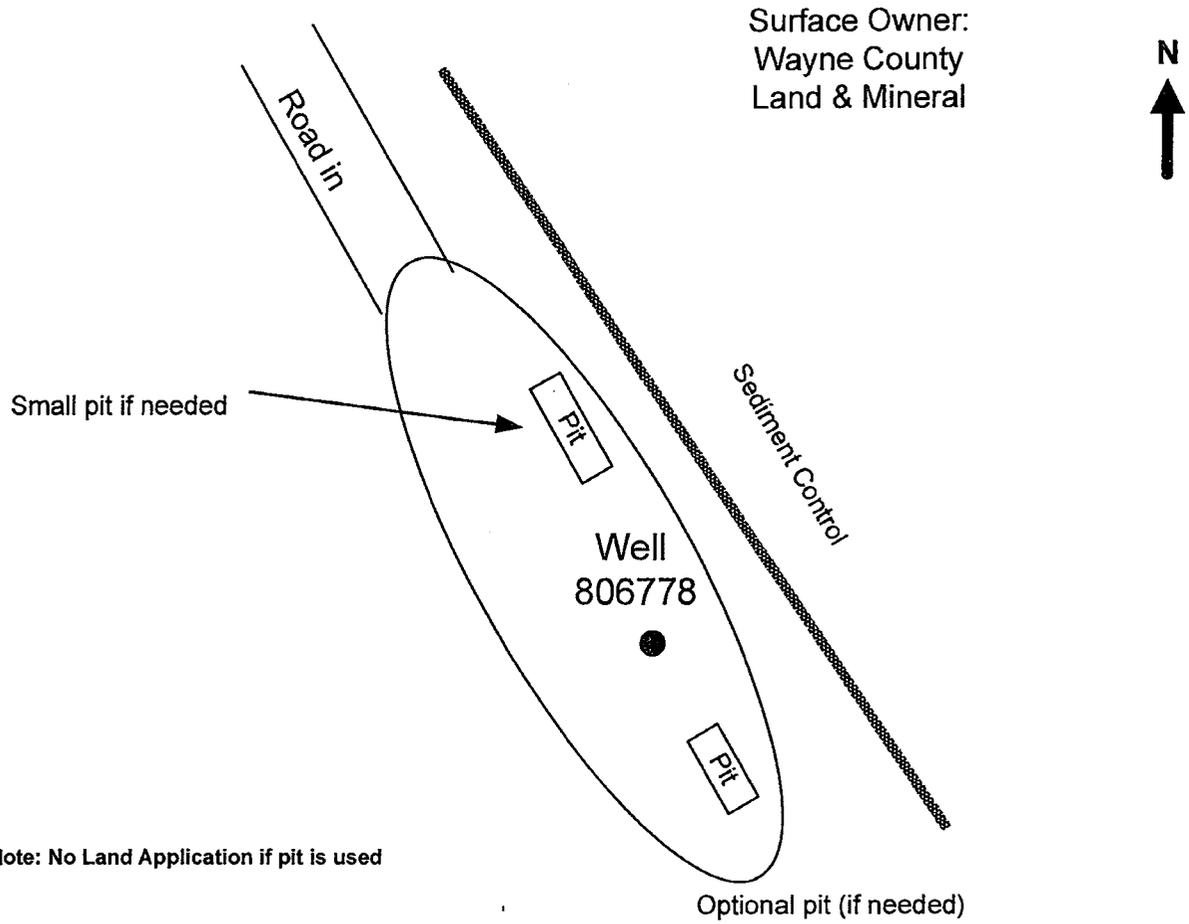
04/12/2019

Diagram of Well 806778

API 47-059-00259

Field Office - Kermit

County - Mingo



Surface Owner:  
Wayne County  
Land & Mineral

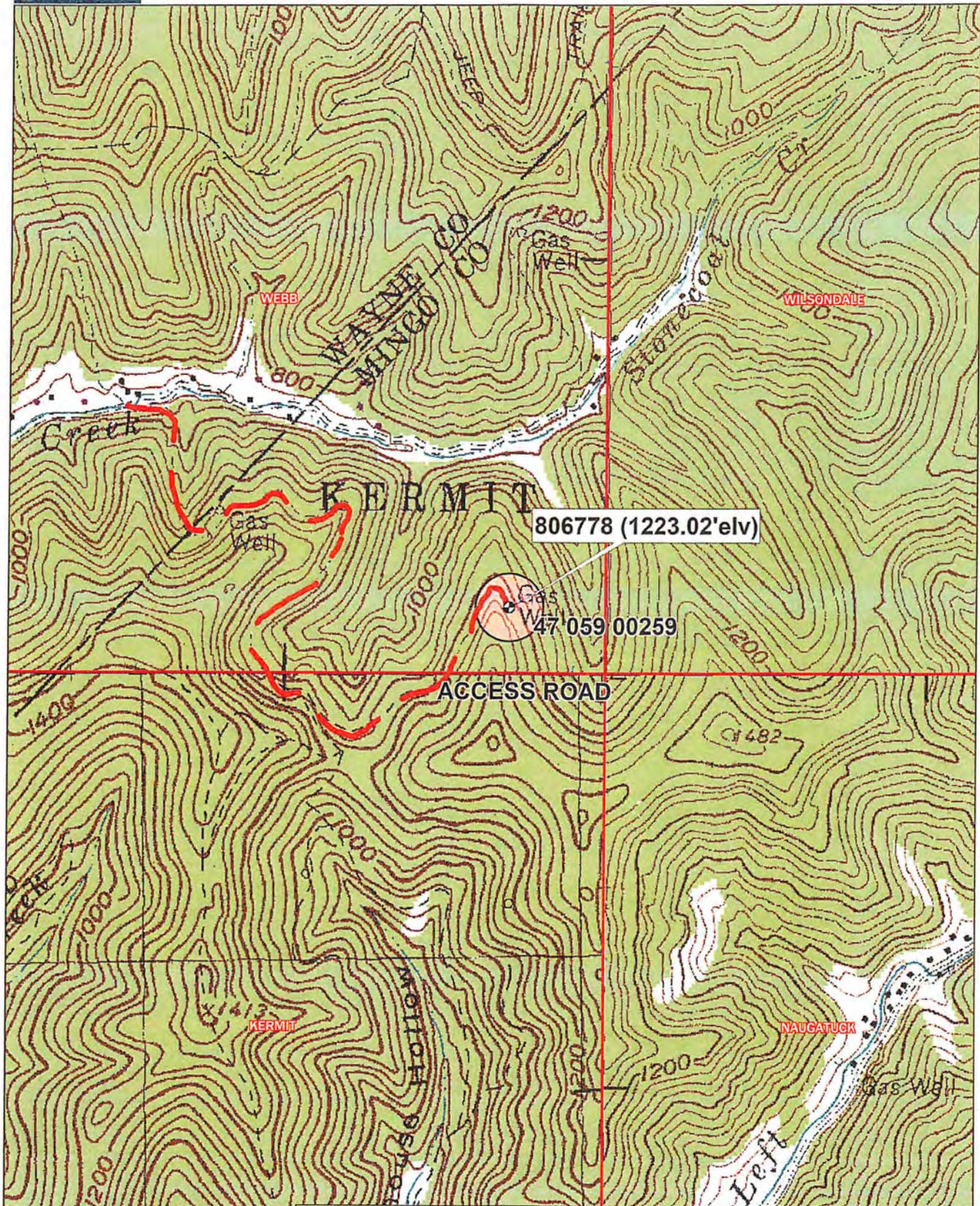
Note: No Land Application if pit is used

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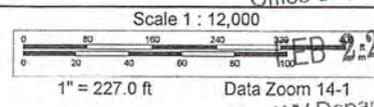
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## Site Plan



# WELL 806778 P&A TOPO MAP

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www.delorme.com



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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: 47-059-00259 WELL NO.: 806778  
 FARM NAME: F.D Caldwell 60  
 RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC  
 COUNTY: Mingo DISTRICT: Kermit  
 QUADRANGLE: Webb  
 SURFACE OWNER: Wayne County Land & Mineral Co.  
 ROYALTY OWNER: Wayne County Land & Mineral Co.  
 UTM GPS NORTHING: 4192997.28m  
 UTM GPS EASTING: 378866.68m GPS ELEVATION: 372.78m [1223.02']

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

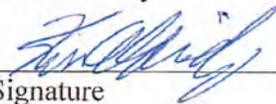
Real-Time Differential

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.

  
Signature

EHS Specialist

Title

2/11/19

Date

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