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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 806408  
 47-059-00170-00-00

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: 806408  
 Farm Name: TWELVEPOLE LIMITED PARTNERSHIP  
 U.S. WELL NUMBER: 47-059-00170-00-00  
 Vertical Plugging  
 Date Issued: 4/8/2019

I

47-059-00170 P

04/12/2019

## 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.

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 1401.59' Watershed Jennie Creek  
District Kermit County Mingo Quadrangle Wilsondale

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

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

Work order approved by inspector  Date 3-5-2019

PLUGGING PROCEDURE  
806408  
MINGO COUNTY, WEST VIRGINIA  
API# 47-059-00170

BY: DMC

DATE: 2/25/19

Current Status

10" @ 661'

6 5/8" @ 1859'

Shale: Shot 3037-3597'

TD @ 3597'

Fresh Water @ 305', 500', 503'

Salt Water @ 1055', 1390'

Gas Shows @ 1602', 1973', 2010', 3087', 3315', 3437'

Coal @ 50-53', 420-422', 557-560'

Elevation 1431.03'

9/17/2018 Echometer FL @ 794'

**Objective: Plug and abandon**

- 1) Prepare road and location.
- 2) PJSA. MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- 4) Spot 100' cement plug @ TD, ~ 3017 – 2917'. → 3a. GEL SHOT HOLE TO 2900'
- 5) TIH and tag cement plug.
- 6) Spot 6% gel from 2917 – 2060'.
- 7) Spot 135' cement plug from 2060 – 1925'.
- 8) Attempt to pull 6 5/8" csg. If unsuccessful, cut 6 5/8" at free point and pull. 100' CEMENT PLUG ACROSS 6 5/8" CUT.
- 9) Spot 6% gel from 1925 – 1900'.
- 10) Spot 100' cement plug from 1900 – 1800'.
- 11) Spot 6% gel from 1800 – 1650'.
- 12) Spot 100' cement plug from 1650 – 1550'.
- 13) Spot 6% gel from 1550 – 1480'.
- 14) Spot 140' cement plug from 1480 – 1340'.
- 15) Spot 6% gel from 1340 – 1100'.
- 16) Spot 100' cement plug from 1100-1000'.
- 17) Attempt to pull 10" csg. If unsuccessful, cut 10" at free point and point. If necessary shoot holes @ 560', 500', 420', 300', 100', 50'.
- 18) Spot 6% gel from 1000 – 710'.
- 19) Spot 460' cement plug from 710-250'.
- 20) Spot 6% gel from 250 – 100'.



47-059-001708

21) Spot 100' cement plug from **100' – Surface**.

22) Pull work string and top off w/cement.

04/12/2019

23) 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

806408  
47-059-00170P

B-1

*Naugatuck*

WELL RECORD

Permit No. MIN-170

Oil or Gas Well Gas  
04/12/2019

Company United Fuel Gas Company  
Address P. O. Box 1273, Charleston 25, W. Va.  
Farm Henry Closterman Acres 3920  
Location (waters) Jennies Creek  
Well No. 6408 Elev. 1431.03  
District Harvey County Mingo  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by The Central Trust Co.  
Cincinnati Address Ohio  
Drilling commenced 11-25-48  
Drilling completed 1-28-49  
Date Shot 2-2-49 From 3037 To 3597  
With 3800 Gel.  
Open Flow 52/10ths Water in 2 Inch  
\_\_\_\_\_/10ths Merc. in \_\_\_\_\_ Inch  
Volume 304 M - Shale Cu. Ft.  
Rock Pressure 510 lbs. 48 hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
Fresh water 305, 500, 503 feet  
Salt water 1285, 1350, 1355 feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
18			
10	661'	661'	Size of
8 1/4			
8 3/8	1859'	1859'	Depth set
5 3/16			
8			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
COAL WAS ENCOUNTERED AT 50 FEET 36 INCHES  
420 FEET 24 INCHES 557 FEET 36 INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Soil			0	6			
Sand			6	50			
Coal			50	53			
Slate			53	80			
Sand			80	140			
Slate			140	255	Water	305'	2 B.P.H.
Sand			255	355			
Slate			355	405			
Sand			405	420			
Coal			420	422			
Slate			422	477	Water	500'	4 B.P.H.
Sand			477	505	Water	503'	Half Full
Slate			505	557			
Coal			557	560			
Slate			560	700			
Broken Sand			700	735			
Slate			735	763			
Sand			763	825			
Slate			825	855			
Sand			855	892			
Slate			892	940			
Sand			940	990			
Slate			990	1160			
Salt Sand			1160	1225			
Slate			1225	1230	Water	1285'	Small Amount
Sand			1230	1292			
Slate			1292	1300	Water	1350'	Sand
Sand			1300	1365	Water	1355'	Half Full
Slate			1365	1380			
Sand			1380	1462			
Slate & Shells			1462	1565			
Sand			1565	1583			
Slate			1583	1588	Gas	1602'	Show
Sand			1588	1642			
Slate			1642	1645			
Sand			1645	1656			
Slate			1656	1663			
Red Rock			1663	1668			

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WV Department of  
Environmental Protection

806408 47-059-00170<sup>A</sup>

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate & Shells			1668	1706			
Lime			1706	1712			
Slate & Shells			1712	1819			
Little Lime			1819	1845	B. Lime Gas	1973'	Show
Pencil Cave			1845	1848			
Big Lime			1848	2018	Gas	2010'	Show
Keener			2018	2065			04/12/2019
Injun			2065	2100			
Slate & Shells			2100	2598			
Sunbury Shale			2598	2617			
Berea			2617	2705			
Brown Shale			2705	2775			
White Shale			2775	3085	Shale Gas	3087'	Show
Brown Shale			3085	3160			
Gray Shale			3160	3280	Shale Gas	3315'	Show
Brown Shale			3280	3590	" "	3437'	"
White Slate			3590	3597			
Total Depth			3597'				
					Test before shot 2/10 W 1" 15 M Shot 2-2-49 with 3800# Gel. from 3037-3597'. Test 18 hrs. after shot 52/10 W 2" 304M		
					OPEN FLOW - 304 M - Shale		
					48 Hr. R.P. 510#		
					Shut in 2-3-49 in 6-5/8" Casing.		

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WM Department of  
Environmental Protection

Date March 4, 19 49

APPROVED United Fuel Gas Company, Owner

By J. H. Moore  
Chief Engineer (Title) R



04/12/2019

WW-4A  
Revised 6-07

1) Date: February 13, 2019  
2) Operator's Well Number  
806408

3) API Well No.: 47 - 47-059 - 00170

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>Twelve Pole Limited Partnership</u>	Name <u>None</u>
Address <u>P.O. Box 1956</u>	Address _____
<u>Williamson, WV 25661</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Henry R. Closterman Estate, C/O First Century Bank</u>
_____	Address <u>P.O. Box 1559</u>
_____	<u>Bluefield, WV 24701</u>
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Allen Flowers</u>	(c) Coal Lessee with Declaration
Address <u>165 Grassy Lick Lane</u>	Name <u>Ark Land, LLC</u>
<u>Liberty, WV 25124</u>	Address <u>One City Place Drive</u>
Telephone <u>304-552-8308</u>	<u>St Louis, MO 63141</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 14th day of February 2019  
Phyllis A. Copley Notary Public  
 My Commission Expires September 16, 2023

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FEB 15 2019

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](mailto:depprivacyoffier@wv.gov).

WV Department of Environmental Protection



**SURFACE OWNER WAIVER**

**04/12/2019**

Operator's Well  
Number

806408

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A**

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

**WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

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If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON  
ETC.

FOR EXECUTION BY A CORPORATION,

HENRY CLOSTER MADESTATE  
SUMMIT COMMUNITY BANK, TRUSTEE  
VICE-PRES & TRUST OFFICER  
DREW E. PORTER  
Date 3/8/19

\_\_\_\_\_  
Signature

Date

Name

By

Its

Date

Signature

Date



WW-9  
(5/16)

API Number 47 - 059\_ 01170  
Operator's Well No. 806408

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) Jennie Creek Quadrangle Wilsondale

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? \_\_\_\_\_

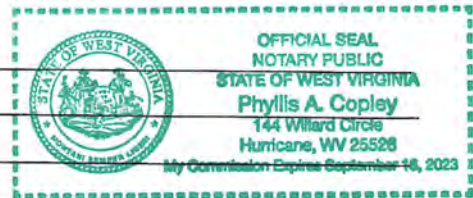
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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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 14th 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: Allen Flowers

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: 009 INSPECTION

Date: 3-5-2019

Field Reviewed?  Yes  No



CORE APPALACHIA, L.L.C.

47-059-00170P

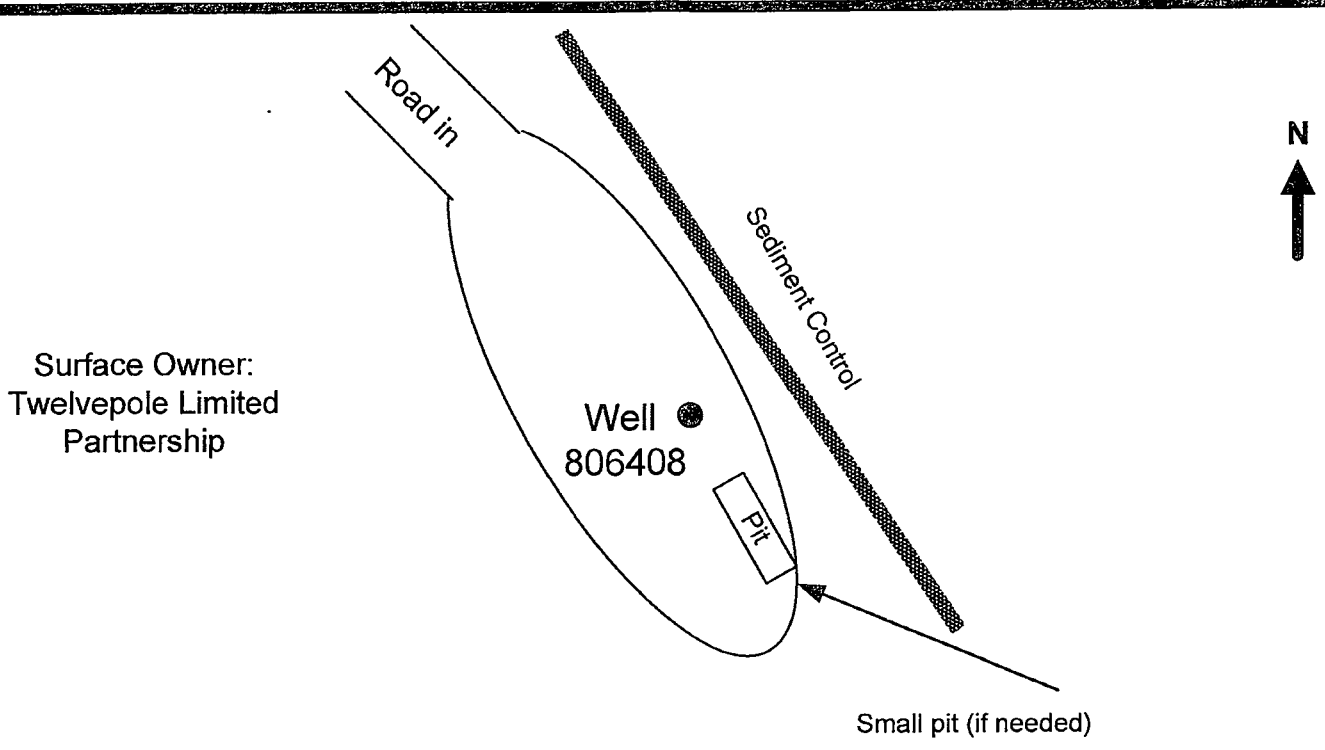
04/12/2019

Diagram of Well 806408

API 47-059-00170

Field Office - Kermit

County - Mingo



Surface Owner:  
Twelvepole Limited  
Partnership

Note: No Land Application if pit is used

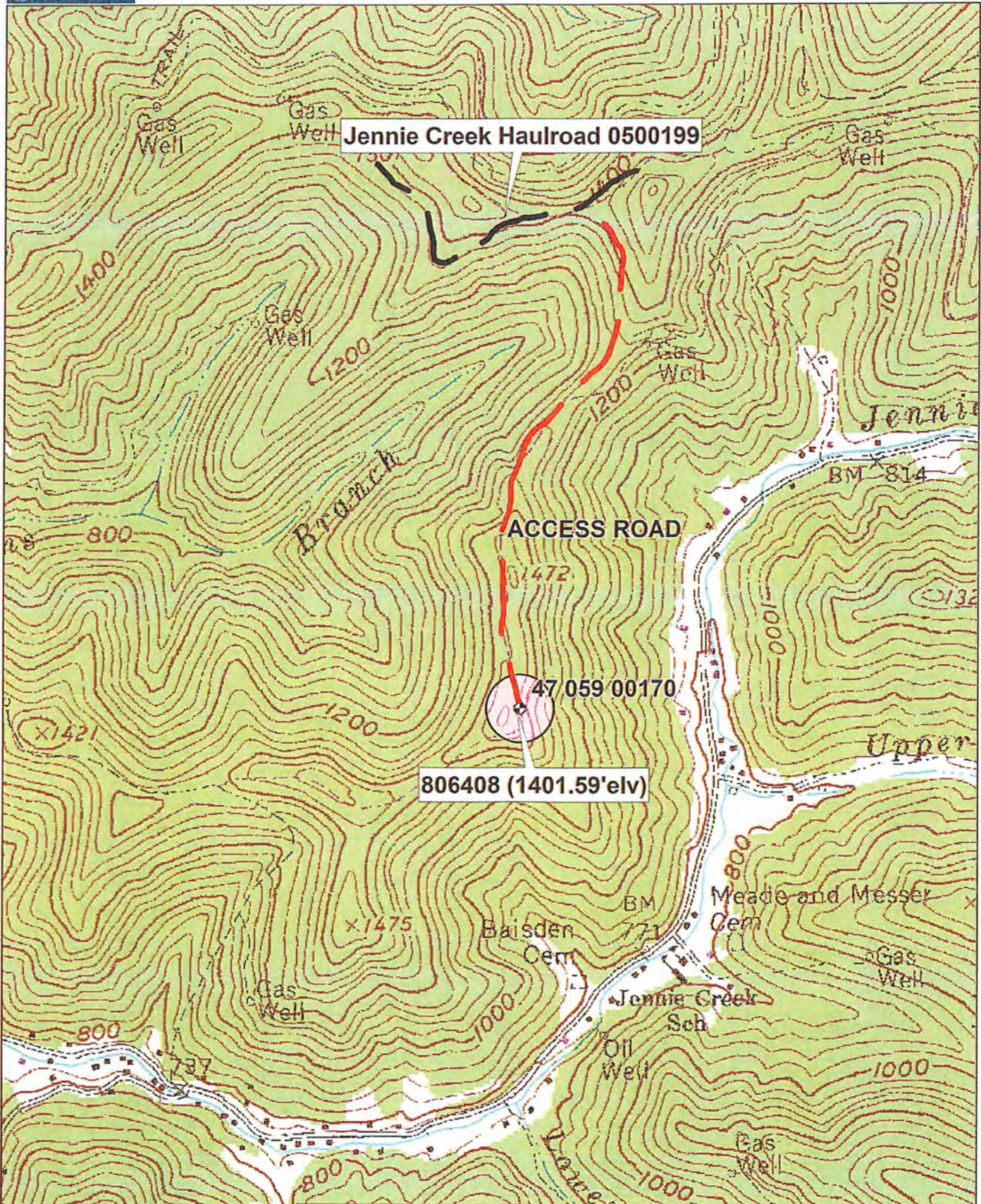
Site Plan

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XMap® 8



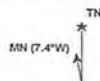
# WELL 806408 P&A TOPO MAP

FEB 15 2019

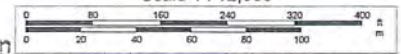
Data use subject to license.

© DeLorme. XMap® 8.

www.delorme.com



Scale 1 : 12,000



1" = 227.0 ft

Data Zoom 14-1

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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: 47-059-00170 WELL NO.: 806408

FARM NAME: H. Closterman 31

RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC

COUNTY: Mingo DISTRICT: Kermit

QUADRANGLE: Wilsondale

SURFACE OWNER: TwelvePole Limited Partnership

ROYALTY OWNER: Henry R Closterman Estate

UTM GPS NORTHING: 4194747.97m

UTM GPS EASTING: 382426.06m GPS ELEVATION: 427.21m [1401.59']

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

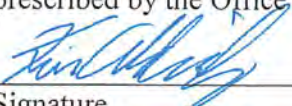
Real-Time Differential

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

2/11/19  
Date

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