



 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

Monday, April 8, 2019

WELL WORK PLUGGING PERMIT
 Vertical Plugging

CORE APPALACHIA OPERATING LLC
 414 SUMMERS STREET

CHARLESTON, WV 25301

Re: Permit approval for 808954
 47-059-00667-00-00

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: 808954
 Farm Name: FIRST CENTURY BANK INC.
 U.S. WELL NUMBER: 47-059-00667-00-00
 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

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 13, 2019
2) Operator's Well No. 808954 **04/12/2019**
3) API Well No. 47-059 - 00667

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 1399.30 Watershed West Fork Twelvepole Creek
District Harvey County Mingo 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 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

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 [Signature] Date 3-11-2019

PLUGGING PROCEDURE
808954
MINGO COUNTY, WEST VIRGINIA
API# 47-059-00667

BY: DMC
DATE: 3/7/2019

Current Status

10 3/4" @ 18'
8 5/8" @ 545'
7" @ 1711' – Pulled
3 1/2" @ 3400' w/ hookwall pkr @ 1970'; perforated @ 1860', 1918'
Shale: Shot 2553-3634'
Big Injun: Fracture
TD @ 3643'
Fresh Water @ 374', 580', 625'
Salt Water @ Not Reported
Gas Shows @ 1857', 3490'
Elevation 1193.24'
9/18/2018 Echometer FL @ 799'

Objective: Plug and abandon

- 1) Prepare road and location.
- 2) PISA. MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- 4) Cut 3 1/2" tbg at freepoint and pull.
- 5) Spot 100' cement plug @ TD, ~ 2530 – 2430'. TD WAS 3643'
- 6) TIH and tag cement plug.
- 7) Spot 6% gel from 2430' – 1907'.
- 8) Spot 100' cement plug from 1907' - 1807'
- 9) Spot 6% gel from 1807' - 1760'
- 10) Spot 100' cement plug from 1760-1660'.
- 11) Spot 6% gel from 1660 – 1250'.
- 12) Spot 100' cement plug from 1250 – 1150'.
- 13) Spot 6% gel from 1150 – 675'.
- 14) Attempt to pull 8 5/8" csg. If unsuccessful, shoot or rip holes @ 374', 100'
- 15) Spot 175' cement plug from 675' – 500'.
- 16) Spot 6% gel from 500 – 425'.
- 17) Spot 100' cement plug from 425 – 325'.

(GEL HOLE FROM TD TO ABOVE SHOT ≈ 2500')

JMA

- 18) Spot 6% gel from **325 – 100'**.
- 19) Spot 100' cement plug from **100' – Surface**.
- 20) Pull work string and top off w/cement.
- 21) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.



808954
47-059-00667P

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 27

Quadrangle Holden

Permit No. MIN-667

WELL RECORD

Oil or Gas Well Oil **04/12/2019**
(KIND)

Company United Fuel Gas Co.
Address P.O. Box 1273; Charleston 25, W. Va.
Farm Central Trust Co. #34 Acres 6852.4
Location (waters) West Fork of 12 Pole Creek
Well No. 8955 8954 Elev. 1193.24
District Harvey County Mingo
The surface of tract is owned in fee by _____
Address _____

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			<u>Hookwall</u>
13			Size of
10 <u>3/4</u>		18'	<u>3 1/2" x 7"</u>
8 5/8		545	Depth set
6 7/8	1711'	Pulled	1970'
5 3/16			Perf. top
3 1/2		3400'	Perf. bottom
2			Perf. top
Liners Used			Perf. bottom

Mineral rights are owned by First Nat'l. Bank of Bluefield
R.A. Yarbrough, Trust Officers Bluefield, W. Va.

Drilling commenced June 11, 1960
Drilling completed Aug. 2, 1960
Date Shot From _____ To _____
With _____

Open Flow 12 /10ths Water in _____ 2 Inch
/10ths Merc. in _____ Inch
Volume 146 M - Injun & Shale Cu. Ft.
Rock Pressure 430 lbs. 48 hrs.

CASING CEMENTED	SIZE	No. Ft.	Date
COAL WAS ENCOUNTERED AT		FEET	INCHES
		FEET	INCHES
		FEET	INCHES

Oil _____ bbls., 1st 24 hrs.
WELL ACIDIZED _____
WELL FRACTURED _____

RESULT AFTER TREATMENT _____
ROCK PRESSURE AFTER TREATMENT _____
Fresh Water 374' 580' Feet. 625' Salt Water _____ Feet.

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface			0	4	Water	374'	2-10" bailers per hour
Rock			4	17			
Broken Sand			17	70	Water	580'	9-8" bailers per hour
Slate			70	130			
Sand			130	230			
Slate			230	255			Hole full water 625'
Sand			255	334			
Slate			334	415	Gas	1857'	3/10 W 1" 18 M
Sand			415	450			
Slate			450	483	Gas	3490'	increased to 5/10 W 1" 24 M
Sand			483	545			
Slate			545	554			Test before shot 6/10 W 1" 26 M
Sand			554	584			Shot 8-4-60 with 11,500# DuPont Gelatin from 2553-3634'
Slate			584	626			Test 18 hrs. after shot 20/10 W 1" 47 M
Sand			626	708			
Slate			708	822			
Sand			822	875			Perforated 3 1/2" tubing at 1860' and 1918
Slate			875	894			
Salt Sand			894	1110			Test before fractured 4/10 W 1" 21 M
Slate			1110	1224			Fractured Injun 8-16-60 with 26,000# sand and 400 bbls. water
Sand			1224	1580			Test 5 hrs. after fracture 40/10 W 1" 6 M
Slate			1580	1630			
Red Rock			1630	1634			Test 16 hrs. after fracture 12/10 W 2" 146 M - Injun and Shale
Slate & Shells			1634	1678			
Big Lime			1678	1820			
Red Injun			1820	1938			
Gray Injun			1938	1986			FINAL OPEN FLOW - 146 M - Injun & Shale 48 Hr. R.P. 430#
Slate & Shells			1986	2080			
Packer Shell			2080	2150			
Slate & Shells			2150	2470			Shut in 8-20-60 in 3 1/2" tubing.



(over)

Formation	Color	Hard or Soft	Top 27	Bottom	Oil, Gas or Water	Depth Found	Remarks
Coffee Shale			2470	2487			
Berea Grit			2487	2508			
Slate & Shells			2508	2553			
Brown Shale			2553	2603			
Slate & Shells			2603	3370			
Brown Shale			3370	3631			04/12/2019
Slate			3631	3643			
Total Depth			3643				

Date November 23, 19 60

APPROVED UNITED FUEL GAS COMPANY, Owner

By *S. L. Sewell*
(Title)

Supt., Civil Engineering Dept.

04/12/2019

WW-4A
Revised 6-07

1) Date: February 13, 2019
2) Operator's Well Number
808954
3) API Well No.: 47 - 47-059 - 00667

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 Henry R. Closterman Estate, C/O First Century Bank	Name None
Address P.O. Box 1559	Address
Bluefield, WV 24701	
(b) Name	(b) Coal Owner(s) with Declaration
Address	Name Henry R. Closterman Estate, C/O First Century Bank
	Address P.O. Box 1559
	Bluefield, WV 24701
(c) Name	Name
Address	Address
6) Inspector Allen Flowers	(c) Coal Lessee with Declaration
Address 165 Grassy Lick Lane	Name Southeastern Land, LLC
Liberty, WV 25124	Address 81 Enterprise Drive
Telephone 304-552-8308	Debord, KY 41214

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* 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

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.

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Office of Oil and Gas

FEB 15 2019

WV Department of
Environmental Protection

47-059-00667P

04/12/2019

WW-9
(5/16)

API Number 47 - 059 00667
Operator's Well No. 808954

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) West Fork Twelvepole 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 14th day of February, 2019

Phyllis A. Copley Notary Public

My commission expires September 16, 2023

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Office of Oil and Gas

FEB 15 2019

WV Department of
Environmental Protection



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.

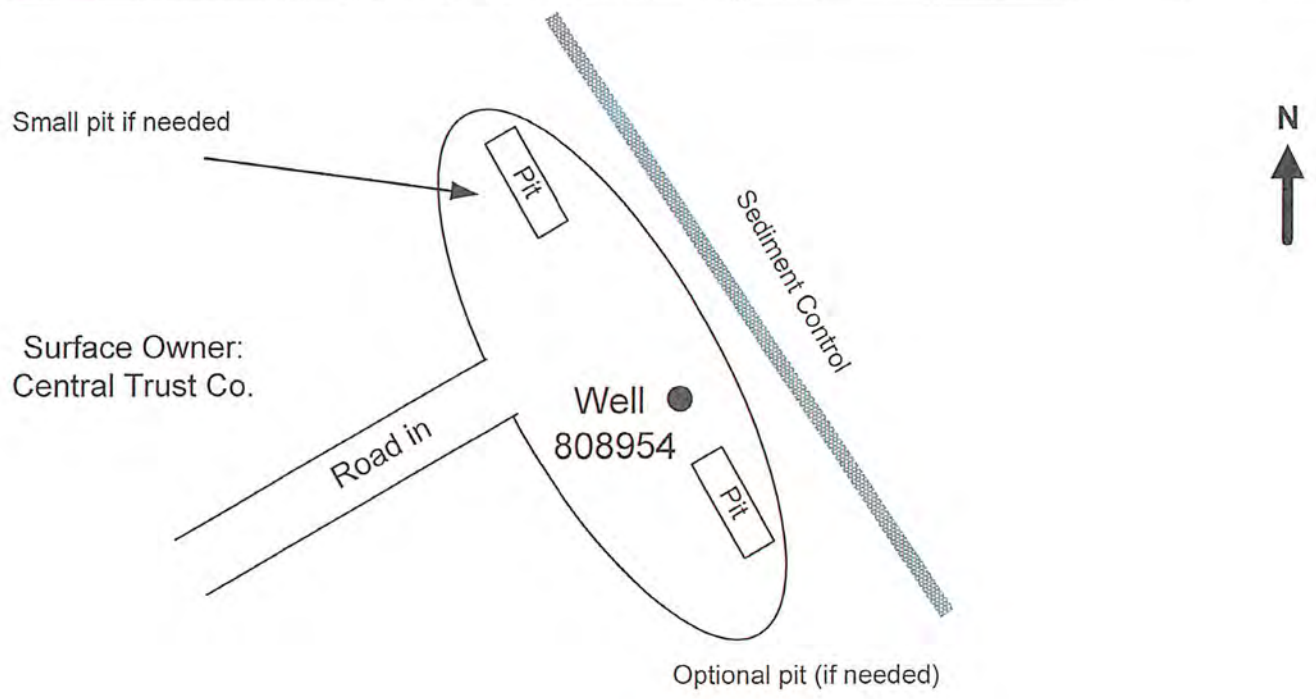
Plan Approved by: 

Comments: _____

Title: Inspector Date: 3-11-2019

Field Reviewed? Yes No

Diagram of Well 808954
API 47-059-00667
Field Office - Kermit
County - Mingo

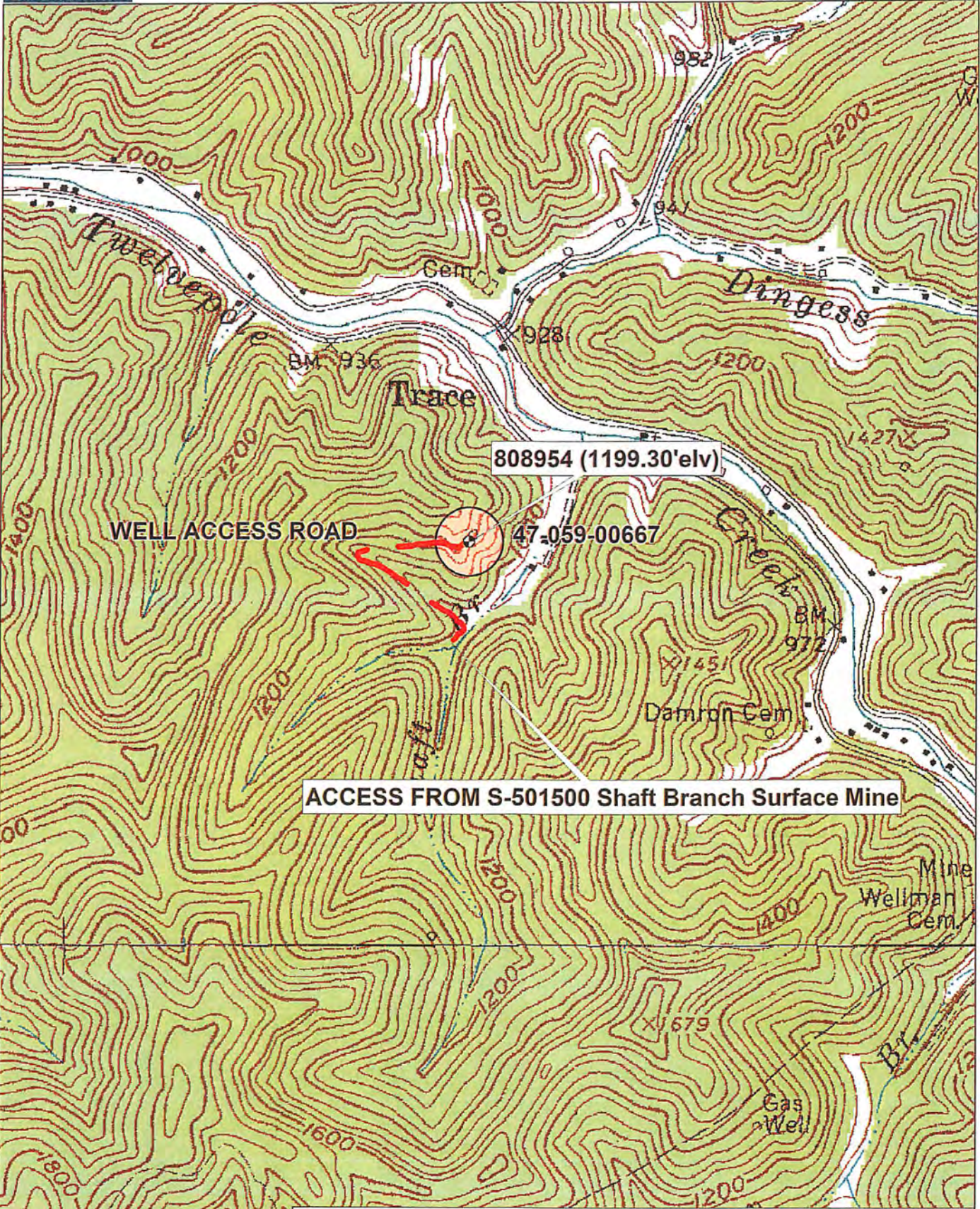


Note: No Land Application if pit is used

Site Plan

Well 808954
47-059-00667P

04/12/2019

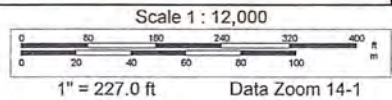
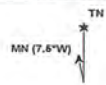


WELL 808954 P&A TOPO MAP

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: 47-059-00667 WELL NO.: 808954
 FARM NAME: Central Trust Co. 34
 RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC
 COUNTY: Mingo DISTRICT: Harvey
 QUADRANGLE: Trace
 SURFACE OWNER: First Century Bank Inc.
 ROYALTY OWNER: Henry R Closterman Estate
 UTM GPS NORTHING: 4193530.07m
 UTM GPS EASTING: 394669.46m GPS ELEVATION: 365.55m [1199.30]

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.

Travis
Signature

EHS Specialist
Title

2/11/19
Date

RECEIVED
Office of Oil and Gas

FEB 15 2019

WV Department of
Environmental Protection