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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)

Wednesday, May 1, 2019  
 WELL WORK PLUGGING PERMIT  
 Vertical Plugging

CORE APPALACHIA OPERATING LLC  
 414 SUMMERS STREET

CHARLESTON, WV 25301

Re: Permit approval for 802383  
 47-099-00423-00-00

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: 802383  
 Farm Name: HUNT DEV & GAS CO.  
 U.S. WELL NUMBER: 47-099-00423-00-00  
 Vertical Plugging  
 Date Issued: 5/1/2019

I

47-099-00423P

05/03/2019

## 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 22, 2019  
2) Operator's Well No. 802383  
3) API Well No. 47-099 - 00423  
05/03/2019

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 1027.28' Watershed Right Fork of Rich Creek  
District Stonewall County Wayne Quadrangle Radnor

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 Allen Flowers Name Precision Drilling (BOSS)  
Address 165 Grassy Lick Lane Address 3978 N Elmdale Road  
Liberty, WV 25124 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 3-12-2019

## PLUGGING PROCEDURE

802383

WAYNE COUNTY, WEST VIRGINIA

API# 47-099-00423

BY: J. Mast

Updated: 3/12/2019

Current Status

8 5/8" @ 336'

6 5/8" @ 1,466'

TD @ 3,084'

Shale: Shot 2532-3084'

Fresh Water @ Not Reported

Salt Water @ Not Reported

Coal @ 55-60', 140-145', 834-835'

Gas Shows @ 1403-1414', 1586', 1600', 1909', 1975', 1995'

Elevation 1000'

**9/17/2018 Echometer FL @ 483'****Objective: Plug and abandon**

- 1) Prepare road and location.
- 2) MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- \* 4) **GEL HOLE TO 2500'.**  
Spot 100' cement plug @ TD, ~ 2512 – 2412'.
- 5) TIH and tag cement plug. **ADD CEMENT IF NEEDED.**
- 6) Load hole w/ 6% gel from 2412 – 2050'.
- 7) Spot 200' cement plug from 2050 – 1850'.
- 8) Spot 6% gel from 1850 – 1650'.
- 9) Spot 114' cement plug from 1650 – 1536'.
- 10) Attempt to pull 6 5/8" csg. If unsuccessful, cut 6 5/8" at free point and pull. **SET 100' CEMENT PLUG ACROSS CASING CUT.**
- 11) Spot 6% gel from 1536 – 1516'.
- 12) Spot 163' cement plug from 1516 – 1353'.
- 13) Spot 6% gel from 1353 – 1050'.
- 14) Spot 100' cement plug from 1050 – 950'.
- 15) Attempt to pull 8 5/8" csg. If unsuccessful, shoot or rip holes @ 885', 140', 100'.
- 16) Spot 6% gel from 950 – 885'.
- 17) Spot 101' cement plug from 885'- 784' (CODE)
- 18) Spot 6% gel from 784'- 386'

- 19) Spot 100' cement plug from **386 - 286'**.
- 20) Spot 6% gel from **286 - 200'**.
- 21) Spot 200' cement plug from **200' - Surface**.
- 22) Pull work string and top off w/cement.
- 23) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.

WEST VIRGINIA DEPARTMENT OF MINES  
OIL & GAS DIVISION  
W E L L R E C O R D

802383  
47-099-00423

Permit No. Way 423 D  
Wayne Quad.  
Company  
Address  
Farm  
Location  
Well No.  
District  
Surface  
Mineral

United Fuel Gas Company  
P.O. Box 1273, Charleston, 25, W.Va.  
Huntington Dev. & Gas Co. A 33,558.18  
Camp Br. of Rich Cr.  
2383 Elev. 1000 Bar.  
Grant Wayne County

Gas Well  
CASING & TUBING

7 1460  
8 1/2 830

05/03/2019

Coal at 55' 30"  
140' 60"; 834' 12"

Commenced Deeper  
Completed  
Date shot

H.D. & G Co., Charleston, W.Va.  
4-16-46  
5-23-46  
5-30-46 Depth 2532 to 3084  
with 3700# Gel.  
333 lbs. 48 hrs.

Rock Pressure

DRILLED DEEPER

Sand	12	45
Slate	45	55
Coal	55	60
Sand	60	140
Coal	140	145
Sand	145	200
Slate	200	240
Slate & Sand	240	500
Lime Shells	500	515
Sand & Slate	515	630
Lime Shells	630	650
Sand	650	700
Slate	700	775
Lime	775	790
Slate	790	834
Coal	834	835
Salt Sand	835	1240
Slate	1240	1245
Maxon	1245	1285
Slate	1285	1318
Little Lime	1318	1343
Pencil Cave	1343	1345
Big Lime	1345	1420
Total Depth		1420

Gas 1403-1414

DRILLING DEEPER LOG

Big Lime	1345	1534
Keener	1534	1548
Red Rock	1548	1553
Injun	1553	1603
Slate	1603	1645
Shells	1645	1665
Slate & Shells	1864	1906
Shells	1906	1950
Slate & Shells	1950	2117
Brown Shale	2117	2137
Berca	2137	2146
Slate & Shells	2146	2230
Brown Shale	2230	2315
White Slate	2315	2515
Brown Shale	2515	2712
White Slate	2712	2755
Brown Shale	2755	2810
White Slate	2810	2830
Brown Shale	2830	3062
Slate	3062	3084
TOTAL DEPTH		3084

Gas 1586,1600 No gas in shale B.S.  
Gas 1909  
Gas 1975,1995

1) Date: February 22, 2019  
2) Operator's Well Number 802383 **05/03/2019**

3) API Well No.: 47 - 47-099 - 00423

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>United States Army Corps of Engineers</u>	Name <u>None</u>
Address <u>Attn: Ms. Anita Bradburn, Realty Specialist</u>	Address _____
<u>502 8th Street</u>	_____
(b) Name <u>Huntington, WV 25701</u>	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Bureau of Land Management, Rolla Solid Minerals Office</u>
_____	Address <u>Attention: Timothy W. Howell</u>
(c) Name _____	<u>1400 Independence Road</u>
Address _____	Name <u>Rolla, Missouri 65401</u>
_____	Address _____
6) Inspector <u>Allen Flowers</u>	(c) Coal Lessee with Declaration
Address <u>165 Grassy Lick Lane</u>	Name <u>None</u>
<u>Liberty, WV 25124</u>	Address _____
Telephone <u>304-552-8308</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 - EHS & Administration Services  
 Address P.O. Box 6070  
Charleston, WV 25362  
 Telephone 304-353-5240

RECEIVED  
 Office of Oil and Gas  
 FEB 25 2019  
 Department of  
 Environmental Protection

Subscribed and sworn before me this 22nd 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).

802503 05/03/2019

47-099-00423P

7015 0640 0005 7840 2810

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\$		04
Extra Services & Fees (check box, add fee as appropriate)	\$2.80	
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<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.30	
\$		02/22/2019
<b>Tot</b>	<b>\$7.80</b>	
\$		
802383 P&A		
United States Army Corps of Engineers		
Attn: Ms. Anita Bradburn, Realty Specialist		
502 8 <sup>th</sup> Street		
Huntington, WV 25701		
PS		Instructions

7015 0640 0005 7840 2803

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**ROLLA, MO 65401**

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Certified Mail Fee	\$3.50	0523
\$		04
Extra Services & Fees (check box, add fee as appropriate)	\$2.80	
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$1.30	
\$		02/22/2019
Bureau of Land Management		
Attn: Timothy Howell		
Rolla Solid Minerals Office		
1400 Independence Drive		
Rolla, Missouri 65401		
		for Instructions

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 FEB 25 2019  
 WV Department of  
 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

Watershed (HUC 10) Right Fork of Rich Creek Quadrangle Radnor

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 22nd 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: Alan Flowers

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

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

Title: IR 5000R Date: 3-12-2019

Field Reviewed? ( 8 ) Yes ( ) No

**CORE APPALACHIA OPERATING, L.L.C.**

47-099-00423 P

05/03/2019

Diagram of Well 802383

API 47-099-00423

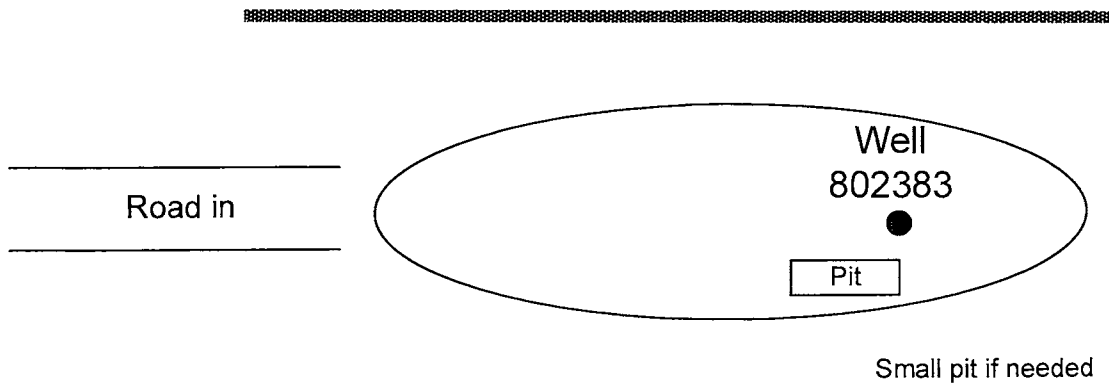
Field Office - Hamlin

County - Wayne

Surface Owner:  
US ARMY COE



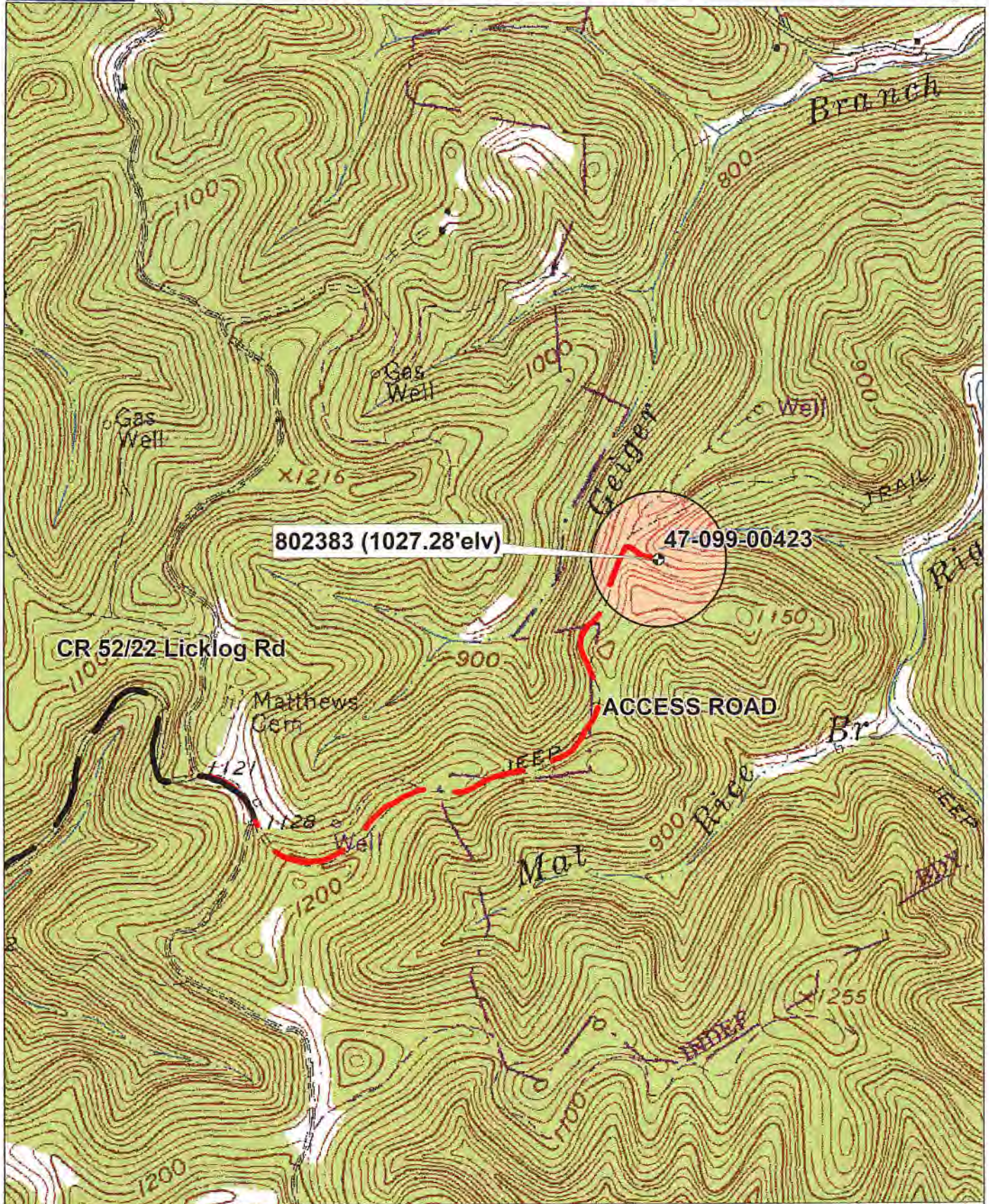
Sediment Control



Note: No Land Application if pit is used

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# Site Plan



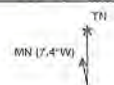
802383 (1027.28'elv)

47-099-00423

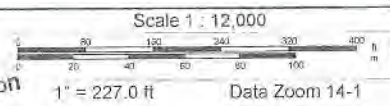
ACCESS ROAD

# WELL 802383 P&A TOPO MAP

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FEB 25 2019  
NW Department of  
Environmental Protection



WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas

**WELL LOCATION FORM: GPS**

API: 47-099-00423 WELL NO.: 802383  
 FARM NAME: Huntington Development & Gas Co. 5  
 RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC  
 COUNTY: Wayne DISTRICT: Stonewall  
 QUADRANGLE: Radnor  
 SURFACE OWNER: US ARMY COE  
 ROYALTY OWNER: Core Appalachia Production, LLC  
 UTM GPS NORTHING: 4213715.10m  
 UTM GPS EASTING: 377942.51m GPS ELEVATION: 313.12m [1027.28' 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:

- 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

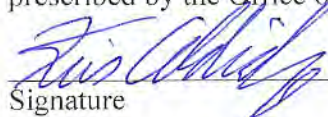
Real-Time Differential

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

2/22/19

Date

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