



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 13, 2020
WELL WORK PLUGGING PERMIT
Vertical Plugging

CORE APPALACHIA OPERATING LLC
101 MCQUISTON DRIVE

JACKSON CENTER, PA 16133

Re: Permit approval for 808024 (8024)
47-043-01093-00-00

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: 808024 (8024)
Farm Name: CHAPMAN, MICHAEL ET AL
U.S. WELL NUMBER: 47-043-01093-00-00
Vertical Plugging
Date Issued: 4/13/2020

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over the typed name and title.

Promoting a healthy environment.

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.

WW-4B
Rev. 2/01

1) Date February 25, 2020
2) Operator's
Well No. 808024
3) API Well No. 47-043 - 01093

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 305.02 m Watershed Little Deadening Creek (Big Ugly Creek of Guyandotte River)
District Harts Creek County Lincoln Quadrangle Mud

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 & J Well Services, Inc.
Address 5349 Karen Circle, Apartment 2101 Address P.O. Box 40
Cross Lanes, WV 25313 Hueysville, KY 41640-0040

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 Jeffery Smith Date 3-12-20

PLUGGING PROGNOSIS

808024

West Virginia, Lincoln County

API# 47-043-01093

Completed by S.T.

Updated 11/14/2019

Casing Schedule

10" csg @ 34'

8 1/4" csg @ 202'

7" csg @ 1502'

Historic TD 3713'

2009 TD 1950'

7" Fluid Level 8/28/19 @ 460'

SALT WATER @ 814', MUST HAVE
100' PLUG ABOVE 814'.**Completion:** Shot**Fresh Water:** No Shows**Oil & Gas Shows:** All Covered-Berea shallowest @ 2219'**Coal:** 56'**Elevation:** 935'

1. Notify Inspector, Jeffery Smith @ 681-313-6743, 48 hours prior to commencing operations.
2. Check and record pressures on csg.
3. Check TD w/ wireline
4. TIH w/ tbg to 1950'. Load well as needed w/ 6% bentonite gel. Pump 100' C1A cement plug from 1950'-1850' (Bottom plug). **WOC, TAG PLUG, ADD CEMENT AS NEEDED** gwh
5. TOOH w/ tbg to 1850'. Pump 6% bentonite gel from 1850'-1552'.
6. TOOH w/ tbg to 1552'. Pump 100' C1A cement plug from 1552'-1452' (7" csg st)
7. TOOH w/ tbg to 1452'. Pump 6% bentonite gel from 1452'-935'. TOOH LD tbg
8. Free Point 7" csg. Cut and Pull. Set 100' C1A cement plug across csg Cut. 50' in/out of cut. Do not omit any plugs listed below. Perforate as needed **835'-735'**
9. TIH w/ tbg to 935'. Pump 100' C1A cement plug from **935'-835'** (Elevation).
10. TOOH w/ tbg to 835'. Pump 6% bentonite gel from **835'-252'**.
11. TOOH w/ tbg to 252'. Pump 100' C1A cement plug from 252'-152' (8 1/4" csg st).
12. TOOH w/ tbg to 152'. Pump 6% bentonite gel from 152'-106'. TOOH LD tbg
13. Free Point 8 1/4" csg. Cut and Pull. Set 100' C1A cement plug across csg Cut. 50' in/out of cut. Do not omit any plugs listed below. Perforate as needed
14. TIH w/ tbg to 106'. Pump 106' C1A cement plug from 106'-0' (Coal & Surface).
15. Erect monument with API#, date plugged, and company name.
16. Reclaim location and road to WV-DEP specifications.

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WV Department of
Environmental Protection



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Well 808024
API 47-043-01093P

WELL RECORD

Permit No. LIN-1093

Oil or Gas Well Gas
(KIND)

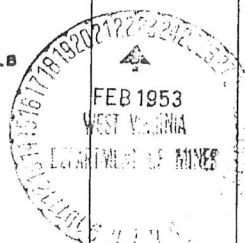
Company UNITED FUEL GAS COMPANY
Address P.O. Box 1273, Charleston 25, W.Va.
Farm H. Watson Starcher, et al #1 Acres 1100a
Location (waters) Big Ugly Creek
Well No. 8024 P.I. P.I. Elev. 935.52
District Harts Creek County Lincoln
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by United Fuel Gas Company
Address Charleston, W.Va.
Drilling commenced 7-21-52
Drilling completed 1-12-53
Date Shot 1-14-53 From 3132 To 3713
With 3800# Galatin
Open Flow 12/10ths Water in 1" Inch
_____/10ths Merc. in _____ Inch
Volume 37,000 Cu. Ft.
Rock Pressure 410 lbs. 48 hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water _____ feet _____ feet
Salt water 814 feet _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13			
10		34'	Size of
8		202'	
7"		1502'	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 56 FEET 36 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	Hole full water	814'	
Slate & Shells			10	28			
Quick Sand			28	37	Show gas	2219'	
Sand			37	47			
Slate			47	56	Show gas	2224'	
Coal			56	59			
Sand			59	350	Show gas	3345'	
Slate			350	414			
Sand			414	439	Show gas	3357'	
Slate & Shells			439	676			
Salt Sand			676	835	Show gas	3435'	
Break			835	842			
Sand			842	1029	Hole cemented from	3075	
Slate			1029	1067			
Sand			1067	1314	Not enough gas to gauge before shot		
Red Rock			1314	1321	Shot 1-14-53 with 3800# Galatin from		
Slate			1321	1338	3132-3713'		
Maxon Sand			1338	1386	Test 1 hr. after shot 20/10 W 2" 189 M		
Slate			1386	1392	Final test after shot 12/10 W 1" 37 M		
Red Rock			1392	1396			
Gray Slate			1396	1436	Shot 1-19-53 with 200# Galatin from		
Little Lime			1436	1466	2217-2238'		
Pencil Cave			1466	1469	Final open flow 12/10 W 1" 37 M		
Big Lime			1469	1624			
Red Injun			1624	1705			
Gray Injun			1705	1733			
Lime Shells			1733	1897	FINAL OPEN FLOW-37 M-Berea & Br. Shale		
Slate			1897	2204	48 Hr. R.P. 410#		
Brown Shale			2204	2216			
Berea Grit			2216	2244			
Lime Shells			2244	2340	Shut in 1-23-53 in 7" Casing		
Slate & Shells			2340	3345			
Brown Shale			3345	3405			
Gray Slate			3405	3442			
Brown Shale			3442	3510			
Gray Shale			3510	3537			
Brown Shale			3537	3702			
White Slate			3702	3713			
Total depth			3713'				

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Environmental Protection



WW-4A
Revised 6-07

1) Date: February 25, 2020
2) Operator's Well Number: 808024

3) API Well No.: 47 - 043 - 01093

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:
(a) Name: Michael Chapman
Address: 2107 Big Ugly Creek
Harts, West Virginia 25524
(b) Name: _____
Address: _____
(c) Name: _____
Address: _____
6) Inspector: Jeffery L. Smith
Address: 5349 Karen Circle, Apartment #2101
Cross Lanes, WV 25313
Telephone: 681-313-6743

5) (a) Coal Operator
Name: _____
Address: _____
(b) Coal Owner(s) with Declaration
Name: Southern Region Industrial, Inc.
Address: Three Commercial Drive
Norfolk, Virginia 23510
Name: Pocahontas Land Corporation
Address: P.O. Box 1517
Bluefield, West Virginia 24701
(c) Coal Lessee with Declaration
Name: _____
Address: _____

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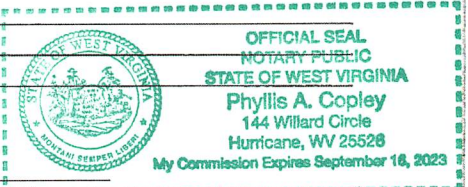
TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (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: JR Jessica Greathouse
Its: Manager - Environmental, Health, Safety
Address: P.O. Box 6070
Charleston, WV 25362
Telephone: 304-353-5240



Subscribed and sworn before me this 4th day of March 2020
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 depprivacyoffier@wv.gov.

WW-9
(5/16)

API Number 47 - 043-01093
Operator's Well No. 808024

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) Little Deadening Crk (050701020104) Big Ugly Crk of Guyandotte River Quadrangle Mud

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 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 _____)

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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? _____

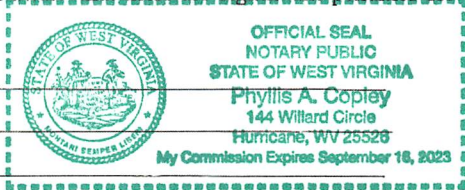
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WV Department of
Environmental Protection

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 - Environmental, Health, Safety



Subscribed and sworn before me this 4th day of March, 2020

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	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: Jeffrey Smith

Comments: All sediment control to be removed prior to release.

Title: Oil & Gas Injector Date: 3-12-20

Field Reviewed? () Yes () No

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: Core Appalachia Operating LLCWatershed (HUC 10): Little Deadening Creek HUC ID # 050701020104 (Big Ugly Creek of Guyandotte River) Quad: MudFarm Name: H. Watson Starcher et al

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

Treatment of the fluid will include adjusting pH and precipitating out solids as needed. Fluid will be discharged in a manor to eliminate sediment runoff.

The potential contaminates are class A cement, bentonite gel, and produced fluids. These contaminates are circulated to surface during plugging operations.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

The contaminants are circulated to surface and drainage controlled into a line pit. The cement and gel are allowed to settle out in the pit. The produced fluids will then be tested and if treatable treated and ground applied. Otherwise the produced fluids will be hauled to a commercial injection well.

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Closest body of water is Little Deadening Creek (200'). The discharge area is within 50' of the wellhead protection area.

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WV Department of
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4. Summarize all activities at your facility that are already regulated for groundwater protection.

There are no activities at this facility regulated for groundwater protection. The facility is a non producing gas well without a tank.

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

There is no existing ground water quality data at this site or adjacent properties

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

No waste material will be used for deicing or fill material on this property.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

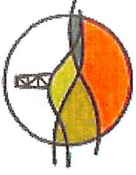
DGOC supervision will manage testing and contract employees on site. DGOC supervision will ensure testing is within all required parameters prior to discharging and utilize silt fencing as needed to eliminate erosion.

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MAR 06 2020
WV Department of
Environmental Protection

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

A job safety analysis will be completed each day on site to discuss the procedures, safety, and inspect all GPP elements and equipment.

Signature: [Signature]
Date: 2-24-2020



Diversified Gas & Oil Corporation
100 Diversified Way
Pikeville KY, 41051

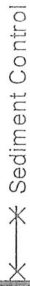
808024

Plugging Map

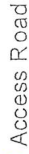
Legend



Well



Sediment Control



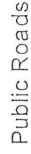
Access Road



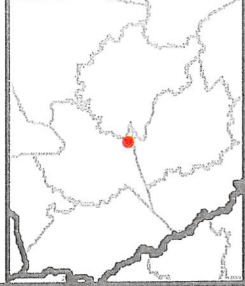
Pits



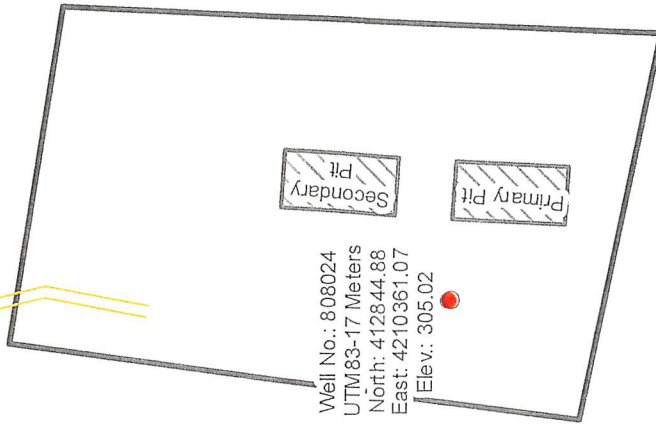
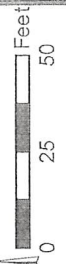
Pad

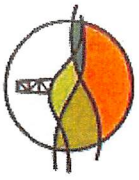


Public Roads



1" = 50'





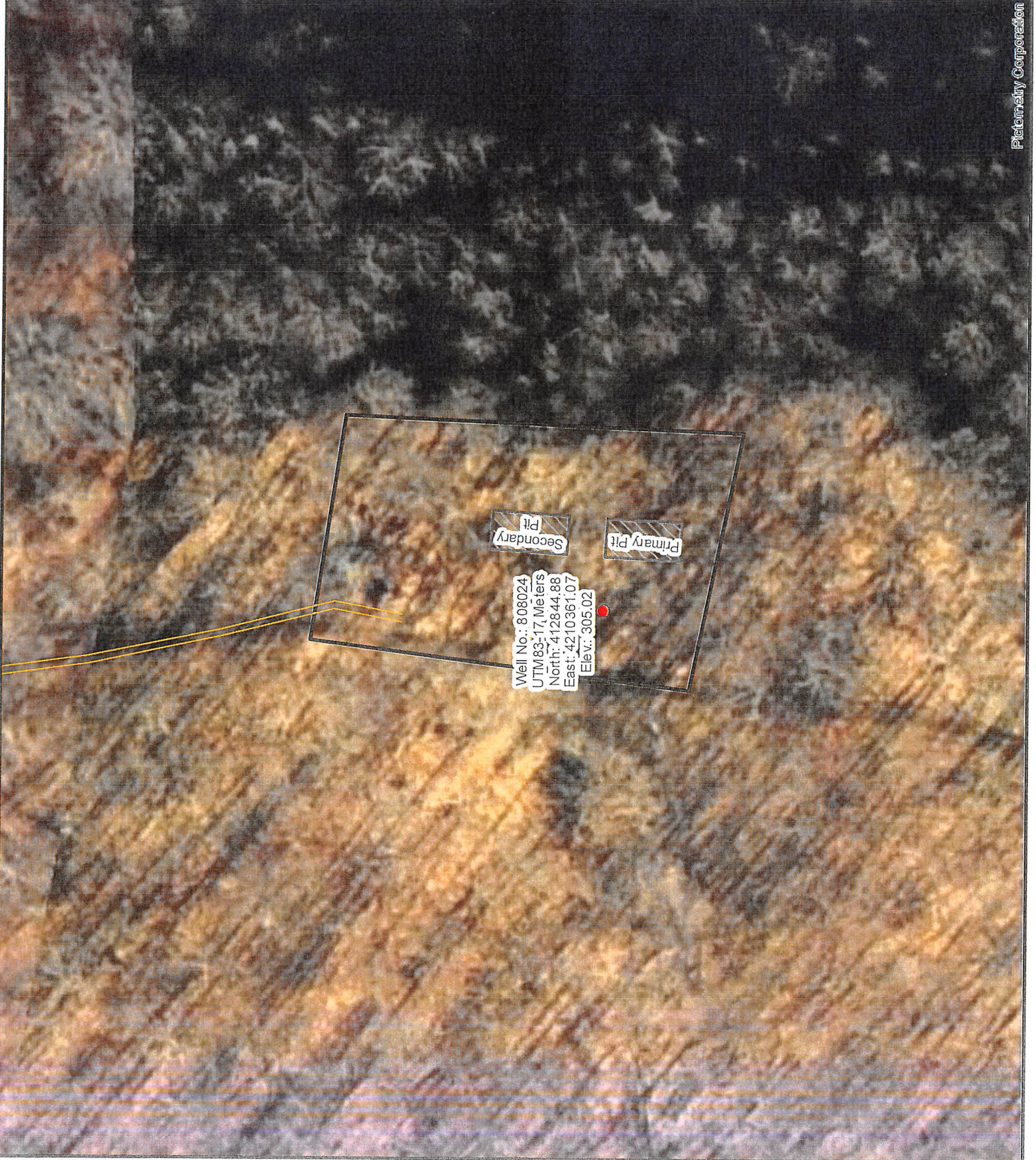
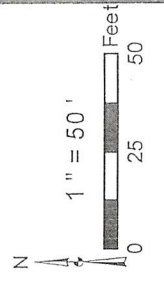
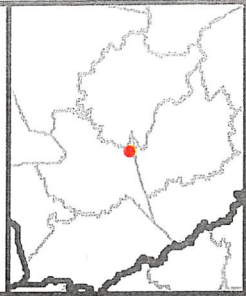
Diversified Gas & Oil Corporation
100 Diversified Way
Pikeville KY, 41051

808024

Plugging Map

Legend

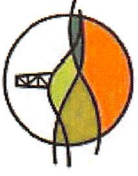
- Well
- ⊗ Sediment Control
- ▬ Access Road
- ▨ Pits
- ▭ Pad
- Public Roads



Well No.: 808024
 UTM 183-17 Meters
 North: 412844.88
 East: 4210361.07
 Elev.: 305.02

Secondary Pit

Primary Pit



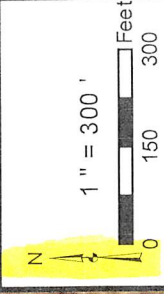
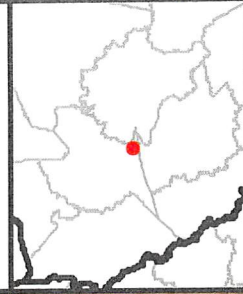
Diversified Gas & Oil Corporation
100 Diversified Way
Pikeville KY, 41051

808024

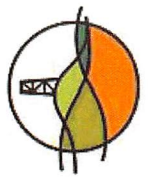
Plugging Map

Legend

- Well
- ✕ Sediment Control
- Access Road
- ▨ Pits
- ▭ Pad
- Public Roads



Well No.: 808024
 UTM 83-17, Meters
 North: 412844.88
 East: 4210361.07
 Elev.: 305.02



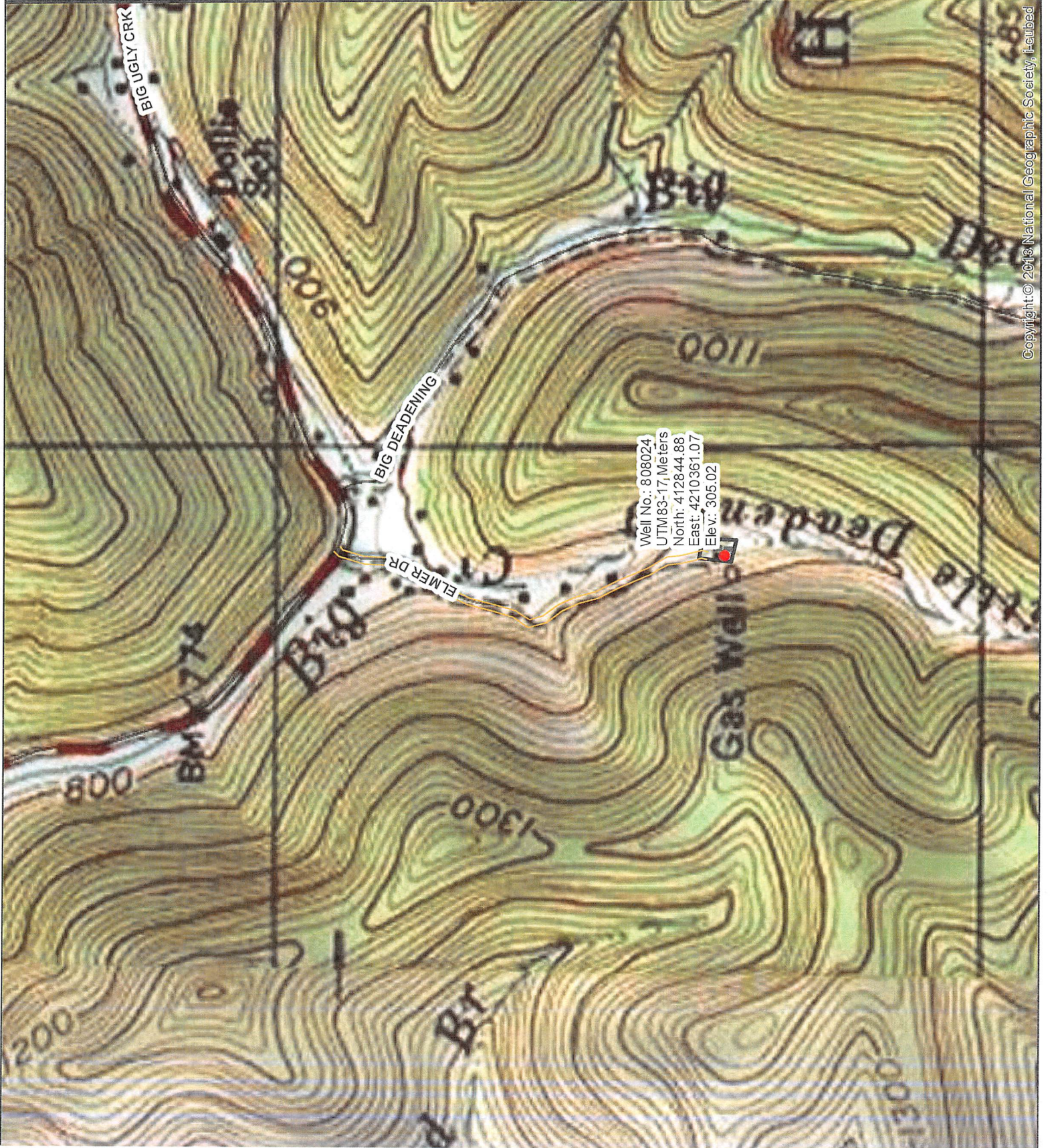
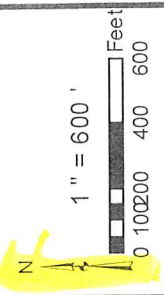
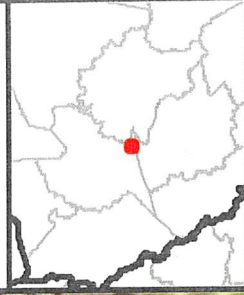
Diversified Gas & Oil Corporation
100 Diversified Way
Pikeville KY, 41051

808024

Plugging Map

Legend

- Well
- ⊗ Sediment Control
- Access Road
- ▨ Pits
- ▭ Pad
- Public Roads



WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-043-01093 WELL NO.: 808024

FARM NAME: H. Watson Starcher et al

RESPONSIBLE PARTY NAME: Core Appalachia Operating LLC

COUNTY: Lincoln DISTRICT: Harts Creek

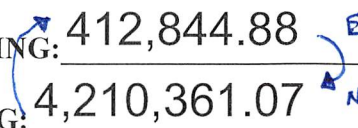
QUADRANGLE: Mud

SURFACE OWNER: Michael Chapman

ROYALTY OWNER: Core Appalachia Operating LLC & Amcox Oil & Gas LLC

UTM GPS NORTHING: 412,844.88

UTM GPS EASTING: 4,210,361.07 GPS ELEVATION: 305.02 m



≈ 922'

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 X: Post Processed Differential X

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 [Handwritten Signature]

Engineer III
Title

2-24-2020
Date

RECEIVED
Office of Oil and Gas
MAR 06 2020
WV Department of
Environmental Protection