

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

Friday, September 20, 2019 WELL WORK PLUGGING PERMIT Vertical Plugging

CORE APPALACHIA OPERATING LLC 414 SUMMERS STREET

CHARLESTON, WV 25301

Re:

Permit approval for 8126 47-045-00404-00-00

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 commended 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: 8126

Farm Name: TCO FEE TR 4

U.S. WELL NUMBER: 47-045-00404-00-00

Vertical Plugging

Date Issued: 9/20/2019

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.
- 4. This well is under a consent order and must be plugged under the terms of that agreement.

WW-4B Rev. 2/01

| 1) | Date | July 2 | 22 | | , | 20 19 | | |
|----|------|--------|-------|--------|---|---------|---|--|
| 2) | Oper | ator | S | | | | | |
| | Well | No. | 80812 | 6 | | | | |
| 3) | API | Well | No. | 47-045 | | - 00404 | P | |

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 (If "Gas, Production or Und | d injection/ Waste disposal/ derground storage) Deep/ Shallow X | | | | | |
| 5) | Location: Elevation 255.43 m District Guyan | Watershed Hoover Fork of Big Harts Creek County Logan Quadrangle Trace | | | | | |
| 6) | Well Operator Core Appalachia Operating, LLC Address P.O. Box 6070 Charleston, WV 25362 | 7) Designated Agent Jessica Greathouse Address P.O. Box 6070 Charleston, WV 25362 | | | | | |
| 8) | Oil and Gas Inspector to be notified Name Jeffery L. Smith Address 5349 Karen Circle, Apartment #2101 Cross Lanes, WV 25313 | 9) Plugging Contractor Name R & J Well Service, Inc. Address P.O. Box 40 Hueysville, KY 41640-0040 | | | | | |
| LO) | O) Work Order: The work order for the manner of plugging this well is as follows: SEE ATTACHED SHEET | | | | | | |
| ok. | ું તો ક ્ય | Office of Oil and Gas Office of Oil and Gas JUL 2 4 2019 JUL Department of Protection Environmental Protection | | | | | |
| | fication must be given to the district of can commence. | .l and gas inspector 24 hours before permitted | | | | | |
| Jork | order approved by inspector | Date | | | | | |

PLUGGING PROCEDURE

808126

LOGAN COUNTY, WEST VIRGINIA

API# 47-045-00404

BY: JAM

DATE: 7/18/2019

Current Status

Csg Schedule

- 8 5/8" @ 193'
- 7" @ 1345'
- TD @ 3\165'

Completion

Not Shot

Coal @ 55'- 58

Fresh Water @ 22', 205'

Oil Show @ no shows

Gas Show @ 1517', 1628', 2925', 3000', 3160', 3165'

Elevation 821

Objective: Plug and abandon

- 1) Prepare road and location.
- 2) MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- 4) TIH w/tbg to 2925'. Load hole w/6% bentonite gel to 2925'. Pump 100' C1A cement plug from 2925' to 2825'
- 5) TOOH w/ tbg to 2825'. Pump 6% bentonite gel from **2825' to 1628'**
- 6) TOOH w/ tbg to 1628'. Pump 161' C1A cement plug from 1628'- 1467'
- 7) TOOH w/ tbg to 1528'. Pump 6% bentonite gel from 1467' to 1395'
- 8) TOOH w/ tbg to 1395'. Pump 100' C1A cement plug from 1395'- 1295'
- 9) TOOH w/ tbg. Free point 7" csg. Shoot or rip csg at free point. TOOH w/ 7" csg. A 100' C1A cement plug must be set a¢ross csg cut. Any plugs below that will remain behind 7" csg must be shot or ripped at bottom of plug and then every 50' through plug. RECEIVED Office of Oil and Gas
- 10) TIH w/tbg to 1295'. Pump 6% bentonite gel 1295'-821'
- 11) TOOH w tbg to 821'. Pump 100' C1A cement from 821'-721'
- 12) TOOH w/ tbg to 721'. Pump 6% bentonite gel from **721'- 255'**

JUL 2 4 2019

W Department of Environmental Protection

- 13) TOOH w/tbg. Free point 8 5/8" csg. Shoot or rip csg at free point. TOOH w/8 5/8" csg. Any plugs below that will remain behind 8 5/8" csg must be shot or ripped at bottom of plug and then every 50' through plug.
- 14) TIH w/tbg to 255'. Pump 255' C1A cement plug from 255' to surface
- 15) Pull work string and top off w/cement.
- 16) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.

| CHITED | FUEL | GAS | COM | PANY | |
|--------|------|------|-----|------|--|
| | | COMP | dry | 65A | |

| | TG Ac to | | LEASE NO | | B ^A A | | MAP SQUARE 32-31 |
|-------------|----------------------------|----------|--|--------------------|-------------------|----------|--|
| | AL WELL NO. 8126 PI | | LEASE NC | CABING AND | TUBING | | NO SHOT SMATURALS |
| RE | CORD OF WELL NO. 8126 PI | on the | SIIK | WEIGHT | USED IN | LEFT IN | 85 /10 of Water in 78 205 inch |
| O Co | . Et AL Fee farm of 236 | | | h0# | DRILLING | 80 | /10 of Merc, ininch |
| in | Chapmansville | District | 10-3/L" | Sp/ | 1971 | 197 9 | Volume 4. Oh2 MCF Cu., ft. |
| | Logen | County | 8-5/8** | 20# | 1345' | 13451 | TEST AFTER SHOT |
| Sta | te of: West Virginia | | 78 | a.ogr | | | /10 of Water ininch |
| Fie | | | | | | | /10 of Merc. ininch |
| Rig | Commenced By Contractor | 19 | | | | | VolumeCu, ft. |
| | Completed By Contractor | 19 | | | - | | Hours After Shot |
| Dr | lling Commenced July 26, | 1954 | | | ļ | | Rock Pressure 12 Rr. 450 |
| Dr | lling Completed October 8, | 1954 | | 1 | | | II. |
| | illing to cost | per foot | | ļ | ļ | | Date Shot |
| | ntractor is: R. H. Adkins | | | <u> </u> | | <u> </u> | Size of Torpedo. |
| | dress: Hamlin, W. Va. | | | | внит IN 10-8-5 | | Oil Flowedbbls. 1st 24 hrs. |
| | | | | Date | | Tubing o | Oil Pumpedbbls. 1st 24 hrs. |
| | iller's Name James Davis | | | 7 ⁿ in. | Casing | Casing | |
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| | 1201 1211 122 | | | Kind of Pa | acker Bott | om Hole | Plugged19 |
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| E | evation: OZI.Z) | | DRI | LLER'S RECORD | | | 4 |
| | FORMATION | TOP | воттом | THICKNESS | | | REMARKS |
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| | Sand | 7 | 7 35 | 28 | Water | . 8 55. | - Eols fall |
| | Slate | 35 | 5 55 | 20 | | | |
| | Coal | 55 | | 3 | | | |
| | Slate | 58 | | 11,0 | | | |
| | Sand | 198 | 8 225 | 27 | Water | r @ 205' | - Hole Full |
| - | Slate & Shells | 225 | 5 375 | 150 | | | |
| | Sand | 379 | 5 կին | 65 | | | |
| | Slate & Shells | lili | | | | | |
| | Sand | 514 | 0 589 | | | | |
| | Slate & Shells | 58 | 5 620 | 1 | | | |
| | Salt Sand | 62 | 0 700 | | | | |
| | Broken Samd | 70 | 0 86 | 1 | | | PECEIVED Gas Office of Oil and Gas JUL 2 4 2019 artment of an artment of the content of the co |
| | Slate & Shells | 84 | -) | | | | HE OIL OIL SIL |
| . : | Sand | 100 | | | | | 3.4 2012 |
| - | Slate & Shells | 118 | | | | | JUL 2 4 Lo WV Department of WV Department of Covironmental Protection |
| سپت. | Heron Sand | 126 | 0 129 | 0 30 | | | Dabatal Protection |
| | | • | | | • | | Witouwering |

MAP SQUARE 30-31

| | | DRILLE | R'S RECORD | |
|----------------------------|-------------|--------------|--|--|
| FORMATION | тор | воттом | THICKNESS | REMARKS |
| | 1290 | 1320 | 30 | |
| ttle Mas | 1320 | 1337 | 27 | -1-40 |
| secil Cave | 1,337 | 1540 | 203 | 7º Casing set @ 1345° |
| lg IAme | 1540 | 1560 | 20 | Show of Gas 3 1517' |
| coner Sand | 1560 | 1578 | 28 | Gas 9 1628'- 11/10 W-2" |
| njun Sand Late & Shells | 1578 | 1694 | 116 | Blee down to 18/10 H-le |
| | 169b | 1785 | 91 | Gas 6 2925'- 22/19 4-1" |
| Hig Shell | 1785 | 2100 | 33.5 | Gas 0 3000'- 26/10 W-1" |
| Rate & Shalls | 23.00 | 2112 | 12 | Ges 6 3160'- 32/10 W-7" |
| bree Sand | 2112 | 21,67 | 55 | Ges 8 31.65'-85/10 W-7" 208 Ceg. |
| Shell | 2167 | 3000 | 833 | |
| Slate & Shalls | 3000 | 31.65 | 165 | |
| Brown Shale | 31.65% | | | |
| POTAL DEFTE | 7007 | | 1 | |
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| WW-4A | |
|---------|------|
| Revised | 6-07 |

1) Date: July 22, 2019 2) Operator's Well Number 808126

3) API Well No.: 47 -

045 00404

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

| 4) Surface Own | ner(s) to be served: | 5) (a) Coal Operator | | |
|----------------|--|----------------------|----------------------------------|---|
| (a) Name | Millard and Bethal Mullins | Name | None | |
| Address | 102 Millard Mullins Drive | Address | | |
| | Harts, WV 25524 | | | |
| (b) Name | | (b) Coal Owr | ner(s) with Declaration | |
| Address | | Name | Southern Region Industrial, Inc. | |
| 11 | | Address | Three Commercial Place | |
| - 11 | | | Norfolk, VA 23510 | |
| (c) Name | | Name | | |
| Address | No. and American Control of the Cont | Address | | |
| 6) Inspector | Jeffery L. Smith | (c) Coal Less | ee with Declaration | *************************************** |
| Address | 5349 Karen Circle, Apartment #2101 | Name | Lexington Coal Company | |
| | Cross Lanes, WV 25313 | Address | P.O. 58370 | |
| Telephone | 681-313-6743 | | Charleston, WV 25358 | |
| | | | | |

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
- 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.

| OF WEST V |
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| My C |

OFFICIAL SEAL NOTARY PUBLIC TATE OF WEST VIRGINIA Phyllis A. Copley 144 Willard Circle Hurricana, WV 25528

Well Operator Core Appalachia Operating, LLC

Jessica Greathouse

Its:

Manager - Environmental, Health & Safety

Charleston, WV 25362

Address

P.O. Box 6070

RECEIVED

Telephone

304-353-5240

Subscribed and sworn before me this

day of July, 2019

Notary Public

WV Department of Environmental Protection

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@wy.gov.

WW-9 (5/16)

API Number 47 - 045
Operator's Well No. = 00407 00404
808126

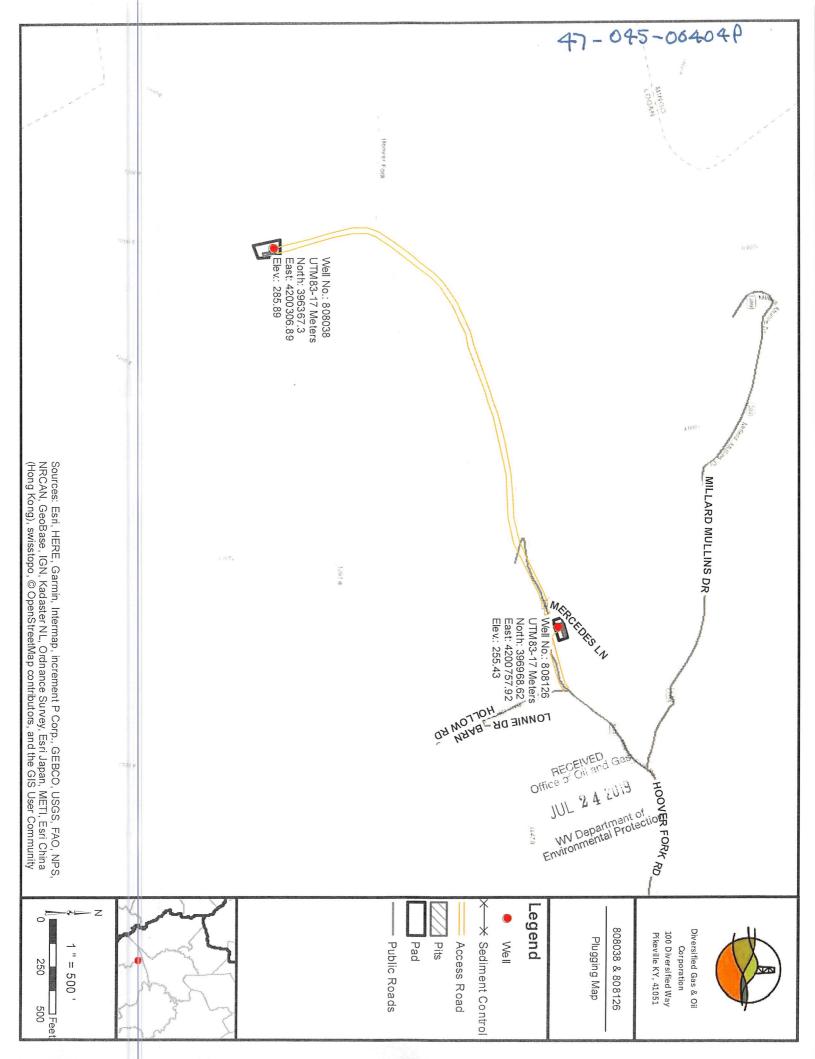
STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

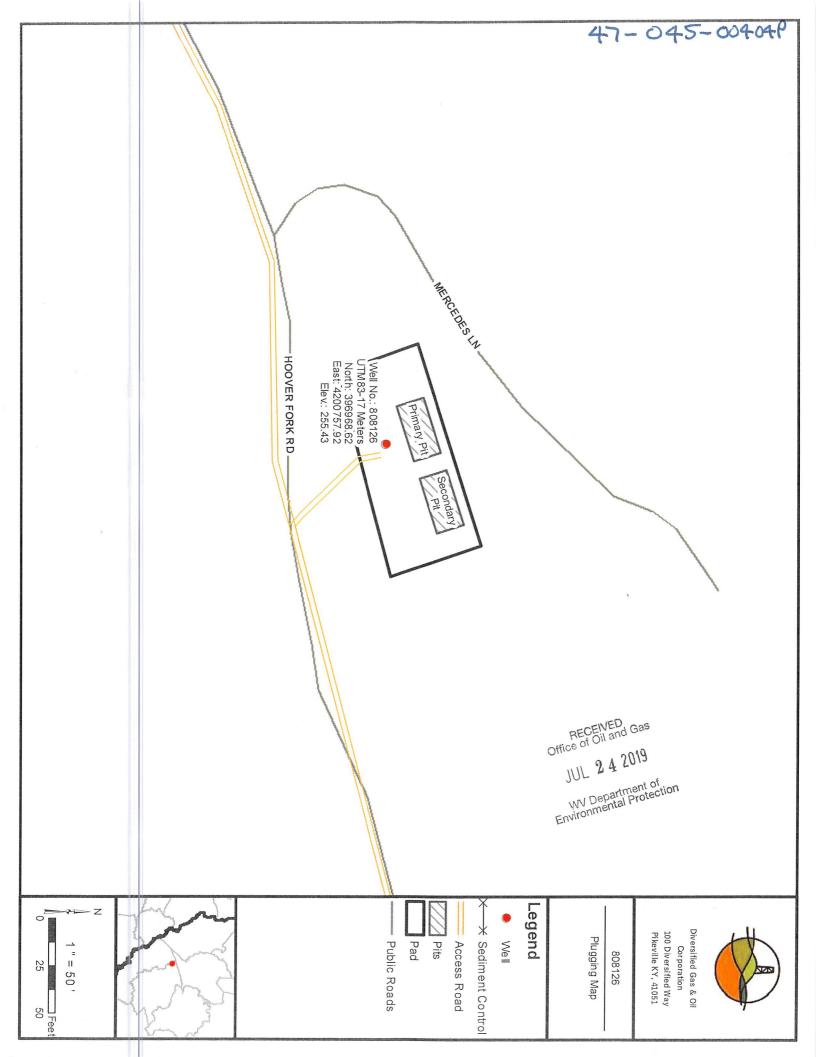
| Operator Name Core Appalachia Operating, LLC OP Code 494518671 | |
|--|-------------------|
| Watershed (HUC 10) Hoover Fork of Big Harts Creek Quadrangle Trace | |
| Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No | |
| Will a pit be used? Yes ✓ No | |
| 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.? | |
| 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. Office of Oil and Gas | |
| -ii left in pit and plan to solidity what medium will be used? (cement, lime, sawdust) 111 2 4 2019 | |
| -Landfill or offsite name/permit number? WV Department of Environmental Protection | |
| and the shall provide written notice to the office of on and the office of any load of drill cuttings of associated waste rejected at any | |
| West Virginia sold waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed. | |
| meter 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. | |
| | 100 M2 60 100 100 |
| Company Official Signature OFFICIAL SEAL NOTATIVE PUBLIC | |
| Company Official (Typed Name) Jessica Greathouse STATE OF WEST VIRGIN Phyllis A. Copley | |
| Company Official Title Manager - Environmental, Health & Safety 144 Willard Circle Hurricane, WV 25528 | |
| My Commission Expires September | 16, 2023 |
| Subscribed and sworn before me this 22nd day of July, 2019 | |
| hylas a. Copley Notary Public | |
| My commission expires September 16, 2023 | |

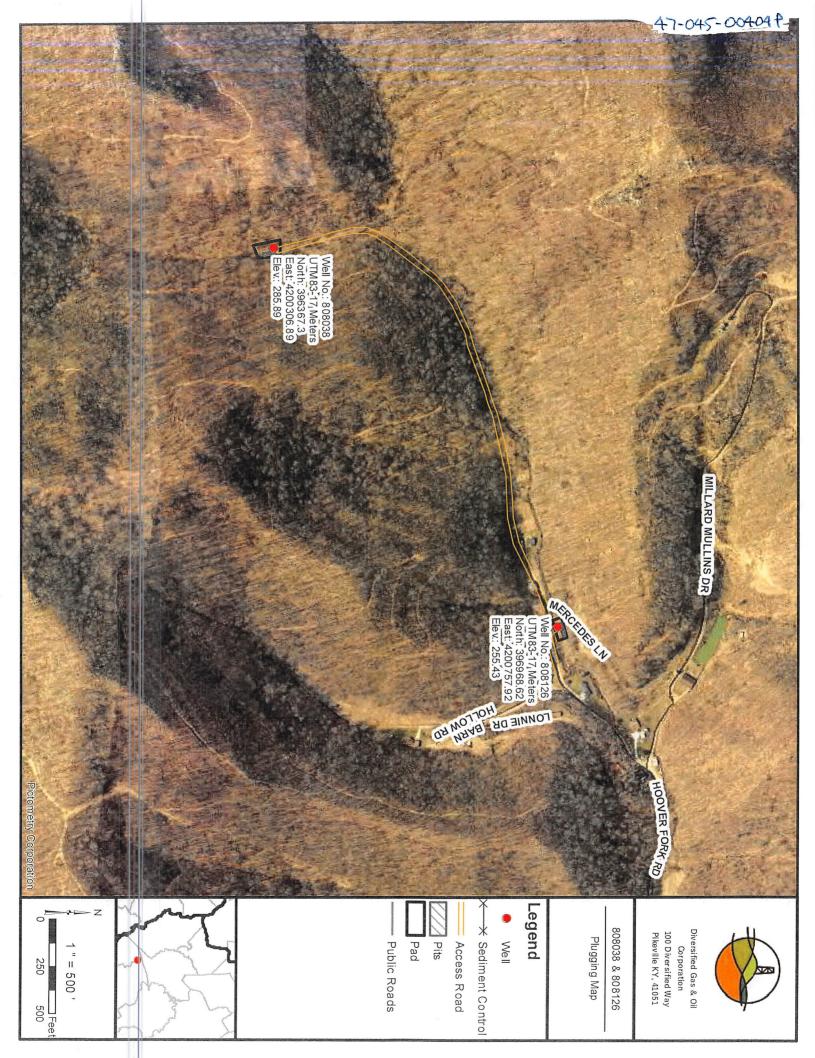
Form WW-9

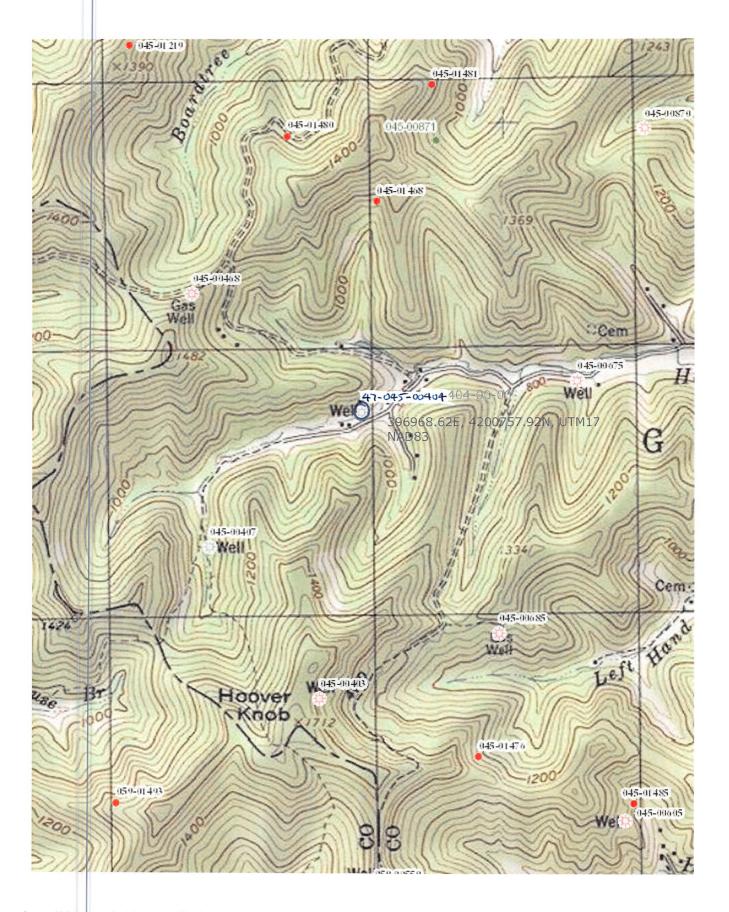
Operator's Well Number: 808126

| | | +/- Preveg etation pH | | | | |
|--|---|---|---|--|--|--|
| Lime 3 | Tons/acre or to correct | to pH | | | | |
| Fertilizer type <u>1</u> | 0-20-20 or equivalent | _ | | | | |
| Fertilizer amount_ | | lbs/acre | | | | |
| Mulch 2 | | _Tons/acre | | | | |
| | | Seed Mixtures | | | | |
| T | emporary | Perm | nanent | | | |
| Seed Type | lbs/acre | Seed Type | lbs/acre | | | |
| Red Fescue | 40 | Red Fescue | 15 | | | |
| Alsike | 5 | Alsike Clover | 5 | | | |
| Annual Rye | 15 | | | | | |
| provided). If water from the (L, W), and area in acres, or | pit will be land applied, pro f the land application area. | application (unless engineered plans incl vide water volume, include dimensions (I | | | | |
| Maps(s) of road, location, porovided). If water from the (L, W), and area in acres, or Photocopied section of invo | e pit will be land applied, profithe land application area. | | | | | |
| Maps(s) of road, location, porovided). If water from the (L, W), and area in acres, or Photocopied section of involved by: | e pit will be land applied, profithe land application area. | vide water volume, include dimensions (I | | | | |
| Maps(s) of road, location, porovided). If water from the L, W), and area in acres, or Photocopied section of involved by: | e pit will be land applied, prof the land application area. Silved 7.5' topographic sheet. | vide water volume, include dimensions (I | | | | |
| Maps(s) of road, location, porovided). If water from the L, W), and area in acres, or Photocopied section of involved by: | e pit will be land applied, prof the land application area. Silved 7.5' topographic sheet. | vide water volume, include dimensions (I | | | | |
| Maps(s) of road, location, porovided). If water from the L, W), and area in acres, or Photocopied section of involved by: | e pit will be land applied, prof the land application area. Silved 7.5' topographic sheet. | vide water volume, include dimensions (I | BECEIVED Gas | | | |
| Maps(s) of road, location, porovided). If water from the L, W), and area in acres, or Photocopied section of involved by: | e pit will be land applied, prof the land application area. Silved 7.5' topographic sheet. | vide water volume, include dimensions (I | RECEIVED Gas Office of Oil and Gas | | | |
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| Maps(s) of road, location, porovided). If water from the L, W), and area in acres, or Photocopied section of involved by: | e pit will be land applied, prof the land application area. Silved 7.5' topographic sheet. | vide water volume, include dimensions (I | RECEIVED Gas Office of Oil and Gas Office of Oil and Gas Wy 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: 47-045-00404 | WELL NO | 808126 |
|---|---|---|
| FARM NAME: United Fue | | |
| RESPONSIBLE PARTY NAME: | | Operating LLC |
| | DISTRICT: | |
| QUADRANGLE: Trace | | |
| SURFACE OWNER: Millard | and Bethel Mullins | 5 |
| ROYALTY OWNER: Core A | ppalachia Operati | ng LLC |
| 1 1 | | |
| UTM GPS NORTHING: 396,9 UTM GPS EASTING: 4,200,7 | 757.92 GPS ELEVA | _{ATION:} 255.43m |
| height above mean sea le 2. Accuracy to Datum – 3.0 3. Data Collection Method: | or a plugging permit or assigner as will not accept GPS coordinate Units: 17 North, Coordinate Units: vel (MSL) — meters. 5 meters | ed API number on the nates that do not meet meters, Altitude: RECEIVED Gas |
| Survey grade GPS: Post Pr Real-T | ime Differential | 111 2 4 2019 |
| Mapping Grade GPS X : Post | | WV Department of Environmental Protection |
| | l-Time Differential | |
| 4. Letter size copy of the to I the undersigned, hereby certify this belief and shows all the information prescribed by the Office of Oil and O | required by law and the regula | ny knowledge and |
| 11/1/4 | Engineer III | 7-18-2019 |
| Signature | Title | Date |