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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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Tuesday, August 30, 2022

WELL WORK PLUGGING PERMIT  
Coal Bed Methane Well Plugging

DIVERSIFIED PRODUCTION LLC  
101 MCQUISTON DRIVE

JACKSON CENTER, PA 16133

Re: Permit approval for HENDERSON 1BR  
47-081-01421-00-00

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: HENDERSON 1BR  
Farm Name: TROY & NORMA HENDERS  
U.S. WELL NUMBER: 47-081-01421-00-00  
Coal Bed Methane Well Plugging  
Date Issued: 8/30/2022

A handwritten signature in blue ink, appearing to read 'J. Martin', is written over a blue circular stamp. The stamp contains some illegible text and a small logo.

## 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.

4708101421P

WW-4B  
Rev. 2/01

- 1) Date April 19, 2022
- 2) Operator's Henderson 1BR  
Well No. Henderson 1BR
- 3) API Well No. 47-081 - 01421

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON *FOR A CBM WELL.*

4) Well Type: Oil        / Gas X / Liquid injection        / Waste disposal        /  
(If "Gas, Production X or Underground storage       ) Deep        / Shallow X

5) Location: Elevation 1959.29 ft Watershed Clear Fork  
District Trap Hill County Raleigh Quadrangle Arnett

6) Well Operator Diversified Production, LLC 7) Designated Agent Jeff Mast  
Address 414 Summers Street Address 31 Hickory Drive  
Charleston, WV 25301 Barboursville, WV 25504

8) Oil and Gas Inspector to be notified Name Gary Kennedy  
Address 66 Old Church Lane  
Pipestem, WV 25979

9) Plugging Contractor Name R & J Well Services  
Address P.O. Box 40  
Hueysville, KY 41640-0040

10) Work Order: The work order for the manner of plugging this well is as follows:

See Attached

*THIS IS THE PRODUCTION WELL FOR A PINNATE LATELAC CBM SYSTEM.*

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

Work order approved by inspector *Gary Kennedy* Date 4/26/22

09/02/2022

**Plugging Prognosis**

API #: 4710901421

**Casing Schedule:**

13 3/8" @ 65' CTS

9 5/8" @ 515' CTS

7" @ 752' CTS

TD listed as 882'

Estimated lateral from plat

- B Hole
  - 32,500' x 4.75" Hole ID = 4,000 Cu ft = 890 BBL w/ 125% excess

Fresh Water: 385

Salt Water: None listed

Gas Shows: None listed

Oil Shows: None listed

Coal: 362', 521', 563', 787

Elevation: 1967'

1. Notify Inspector Gary Kennedy @ 304-382-8402, 48 hrs prior to commencing operations.
2. Record pressure on csg.
3. TOOH w/ rods and tbg.
4. Kill well with gel as needed. Then proceed to load wellbore with gel to a minimum of 125% capacity until wellbore is filled.
5. Proceed to load wellbore with bentonite pellets. Top is not to exceed 802'
6. TIH w/ tbg to 802'. Pump 490' C1A cement plug from **802' to 312' (7" & 9 5/8" csg shoe plug and coal shows)**. Tag TOC
7. TOOH w/ tbg to 312'. Pump 6% bentonite gel spacer from 312' to 100'.
8. Confirm 7" csg is cemented to surface. If not TOOH w/ tbg. Free point csg and set plug 50' in/out of cut for total of 100'.
9. TOOH w/ tbg to 100'. Pump 100' C1A cement plug from 100' to surface
10. Reclaim site and set monument per WV DEP regulations.



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4708101421 P

State of West Virginia  
Division of Environmental Production  
Section of Oil and Gas  
Well Operator's Report of Well Work

Farm Name TROY & NORMA HENDERSON

Operator Well No.: HENDERSON 1BR

LOCATION Elevation: 1967.43

Quadrangle: Arnett 7 1/2'

District: Trap Hill County: Raleigh  
Latitude: \_\_\_\_\_ Feet South of \_\_\_\_\_ Deg. \_\_\_\_\_ Min. \_\_\_\_\_ Sec.  
Longitude: \_\_\_\_\_ Feet West of \_\_\_\_\_ Deg. \_\_\_\_\_ Min. \_\_\_\_\_ Sec.

Company:

Penn Virginia Oil & Gas Corporation

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 2550 East Stone Drive, Suite 110	13 3/8"	65'	65'	182.9 Cu Ft.
Kingsport, TN 37660	9 5/8"	515'	515'	295 Cu Ft.
Agent: Bryant Bowman	7"	752'	752'	236 Cu Ft.
Inspector: Terry Urban				
Date Permit Issued: 12/18/2006				
Date Well Work Commenced: <u>12/18/2006</u>				
Date Well Work Completed: 01/31/2007				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 882				
Fresh Water Depth (ft): 385'				
Salt Water Depth (ft): None Reported				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft): 362; 521; 563; 787				

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OPEN FLOW DATA

Producing formation Lower Beckley Pay zone depth (ft) 792  
 Gas: Initial open flow 0 MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests: \_\_\_\_\_ Hours  
 Static rock pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests: \_\_\_\_\_ Hours  
 Static rock pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANE, TEC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed:

Martha E. Hudson

By: EVELYN HUDSON

Date: 8/28/08

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DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC.

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Sand	0000	0124	<i>Handwritten mark</i>
Shale / Sandy Shale	0124	0252	
Sand	0252	0335	
Shale / Sandy Shale	0335	0362	
Coal	0362	0364	
Sand	0364	0476	Water @ 385'
Shale	0476	0508	
Sand	0508	0514	
Shale	0514	0521	
Coal	0521	0527	
Shale	0527	0563	
Coal	0563	0565	
Shale	0565	0572	
Sand	0572	0713	
Sandy Shale	0713	0719	
Sand	0719	0721	
Shale	0721	0724	
Sand	0724	0757	
Shale	0757	0783	
Sand	0783	0787	
Lower Beckley Coal	0787	0792	Target formation, produced water
Shale / Sandy Shale	0792	0834	
Fire Creek Coal	0834	0835	
Shale / Sandy Coal	0835	0872	
Sand	0872	0882	TD Vertical Well Henderson 1BR

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Henderson 1BR

47-081-01421

Production

4708101421

Henderson 1A Access Road

Henderson 1BR  
Production Well

17 S 465924 4183122

Legend  
17 S 465924 4183122  
Henderson 1BR  
IMAGE 11/2013

09/02/2022

Google Earth

100 ft





WW-4A  
Revised 6-07

1) Date: April 19, 2022  
2) Operator's Well Number  
Henderson 1BR  
3) API Well No.: 47 - 081 - 01421

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

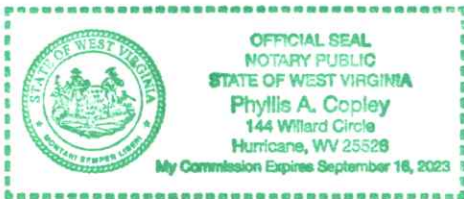
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Clint Henderson</u>	Name <u>None</u>
Address <u>P.O. Box 136</u>	Address _____
<u>Fairmont, WV 25839</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Clint Henderson</u>
_____	Address <u>P.O. Box 136</u>
(c) Name _____	<u>Fairmont, WV 25839</u>
Address _____	Name _____
_____	Address _____
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>66 Old Church Lane</u>	Name <u>Rhino Energy LLC</u>
<u>Pipestem, WV 25979</u>	Address <u>836 Euclid Avenue, Suite 302</u>
Telephone <u>304-382-8402</u>	<u>Lexington, KY 40502</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 Diversified Production, LLC  
 By: [Signature] Jeff Mast  
 Its: Director Technical Services  
 Address 414 Summers Street  
Charleston, WV 25301  
 Telephone 304-543-6988

Subscribed and sworn before me this 21st day of April 2022  
Phyllis A. Copley Notary Public  
 My Commission Expires September 16, 2023

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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).

4708101421P

47-081-01421  
Henderson 1BR

7020 2450 0001 5225 1617

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For delivery information, visit our website at [www.usps.com](http://www.usps.com)®.

Lexington, KY 40502

**OFFICIAL USE**

Certified Mail Fee	\$3.75	0523
\$	\$3.05	11
Extra Services & Fees (check box, add fees as appropriate)		
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	Postmark Here
<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	\$1.96	04/21/2022
\$	\$8.76	
<b>Henderson 1A, Henderson 1BR</b>		
Sent To	Rhino Energy LLC	
Street Address	836 Euclid Avenue, Suite 302	
City, State	Lexington, KY 40502	
PS Form		Instructions

7020 2450 0001 5225 1624

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Fairmont, WV 26037

**OFFICIAL USE**

Certified Mail Fee	\$3.75	0523
\$	\$3.05	11
Extra Services & Fees (check box, add fees as appropriate)		
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00	Postmark Here
<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	\$1.96	04/21/2022
\$	\$8.76	
<b>Henderson 1A, Henderson 1BR</b>		
Sent To	Clint Henderson	
Street Address	P.O. Box 136	
City, State	Fairmont, WV 25839	
PS Form		Instructions

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4708101421P

WW-9  
(5/16)

API Number 47 - 081 - 01421  
Operator's Well No. Henderson 1BR

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

Operator Name Diversified Production, LLC OP Code 494524121

Watershed (HUC 10) Clear Fork Quadrangle Arnett

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: Produced fluid and cement returns

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 Twin Branch 47471511 )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

Will closed loop system be used? If so, describe: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. N/A

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? N/A

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) Jeff Mast

Company Official Title Director Technical Services



Subscribed and sworn before me this 21st day of April, 2022

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 6.05

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: *[Signature]*

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

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

Title: *Inspector*

Date: *4/26/22*

Field Reviewed? ( ) Yes ( ) No

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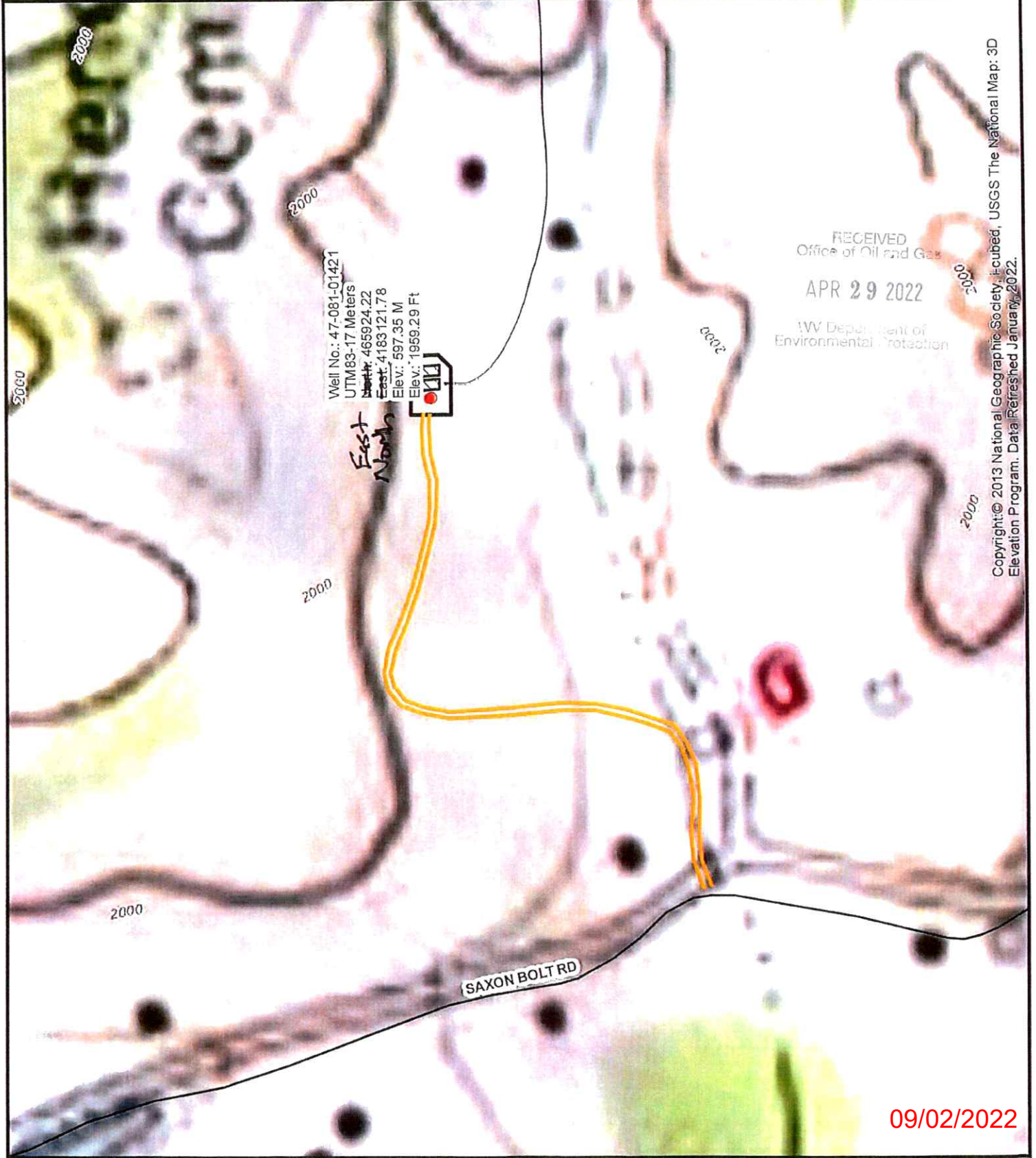
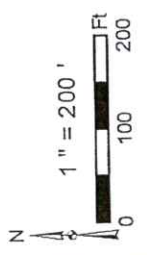
**DIVERSIFIED ENERGY**  
100 Diversified Way  
Pikeville KY, 41051

47-081-01421  
Plugging Map

**Legend**

- Well
- Access Road
- Pits
- Pad
- Public Roads

*1 pit*  
*10' W*  
*20' L*  
*8' D.*  
*285 Jbl*



Well No.: 47-081-01421  
 UTM83-17 Meters  
 North: 465924.22  
 East: 4183121.78  
 Elev.: 597.35 M  
 Elev.: 1959.29 Ft

*East North*

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Copyright: © 2013 National Geographic Society, i-cubed, USGS The National Map: 3D Elevation Program. Data Refreshed January 2022.

09/02/2022

WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas  
**WELL LOCATION FORM: GPS**

API: 4708101421 WELL NO.: 1BR  
 FARM NAME: Troy Henderson  
 RESPONSIBLE PARTY NAME: Diversified Production LLC  
 COUNTY: Raleigh DISTRICT: Trap Hill  
 QUADRANGLE: Arnett, WV  
 SURFACE OWNER: Clint Henderson  
 ROYALTY OWNER: DP Bluegrass  
 UTM GPS NORTHING: 4183121.78  
 UTM GPS EASTING: 465924.22 GPS ELEVATION: 1959.29'

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

Digitally signed by Austin Sutler  
Date: 2022.04.12 17:07:41  
-04'00'

Sr. Proj. Manager

Title

4/12/2022

Date

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Kennedy, James P <james.p.kennedy@wv.gov>

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## Plugging permits issued 4708101421, 08101408

1 message

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**Kennedy, James P** <james.p.kennedy@wv.gov>

Tue, Aug 30, 2022 at 11:26 AM

To: Gary L Kennedy <gary.l.kennedy@wv.gov>, raleigh@wvassessor.com, Phyllis Copley <pcopley@dgoc.com>, Austin Sutler <asutler@dgoc.com>


To whom it may concern, plugging permits have been issued for 4708101421, and 08101408.


James Kennedy

WVDEP OOG

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### 3 attachments

 **4708101408.pdf**  
2840K

 **4708101421.pdf**  
2882K

 **IR-8 Blank.pdf**  
237K

09/02/2022