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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, May 25, 2021  
WELL WORK PLUGGING PERMIT  
Vertical Plugging

DIVERSIFIED PRODUCTION LLC  
101 MCQUISTON DRIVE  
JACKSON CENTER, PA 16133

Re: Permit approval for PERKINS 510782  
47-035-02818-00-00

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: PERKINS 510782  
Farm Name: MEANS, FREEMAN  
U.S. WELL NUMBER: 47-035-02818-00-00  
Vertical Plugging  
Date Issued: 5/25/2021

Promoting a healthy environment.

05/28/2021

## 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 within two years of the date of issuance of this permit.

47-035-02818P

WW-4B  
Rev. 2/01

1) Date March 23, 2021  
2) Operator's  
Well No. 510782  
3) API Well No. 47-035 - 02818

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 X or Underground storage \_\_\_ ) Deep \_\_\_ / Shallow X

5) Location: Elevation 720.33 ft Watershed Spruce Run  
District Washington County Jackson Quadrangle Kentuck

6) Well Operator Diversified Production, LLC 7) Designated Agent Jeff Mast  
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 Joe Taylor Name R & J Well Services, Inc.  
Address 1478 Claylick Road Address P.O. Box 40  
Ripley, WV 25271 Hueysville, KY 41640-0040

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

See Attached

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

Work order approved by inspector  Date 5-12-21

05/28/2021

## PLUGGING PROGNOSIS

West Virginia, Jackson County

API # 47-035-02818

38.6425284205873, -81.5536942920741

**Nearest Emergency Room:** Jackson General Hospital: 122 Pinnell Street, Ripley, WV 25271**Casing Schedule**

13 3/8" csg @ 33'

9 5/8" csg @ 711' cemented to surface 2 320 sks

7" csg @ 1995' cemented to surface w/ 209 sks.

4 1/2" csg @ 5056' cemented w 200 sks @ 1.89 yld. Estimated TOC at 1380'

TD @ 5056'

**Completion**

Marcellus frac 5011'-5024'

**Fresh Water:** 114'**Saltwater:** 1475', 1562'**Coal:** none reported**Oil Show:** none reported**Gas Show:** Marcellus 5011'-5024'**Elevation:** 756'

1. Notify inspectors, Allen Flowers @ 304-522-8308 and Joe Taylor @ 304-380-7469, 48 hrs. prior to commencing operations.
2. Tag TD w/ wireline.
3. Pull stretch on 4 1/2" csg and estimate free point.
4. TIH w/ tbg to 5024'. Kill well as needed with 6% bentonite gel.
5. Pump 113' Class A cement plug from 5024'-4911' (**Marcellus completion**)
  - a. Tag TOC and top off as needed.
6. TOOH w/ tbg to 4911'. Load hole with 6% bentonite gel from: 4911'-3500'
7. TOOH w/ tbg to 3500'. Pump 100' Class A cement plug from 3500'-3400' (**Spacing Plug**).
8. TOOH w/ tbg to 3400'. Pump 6% bentonite gel from 3400'-2045'.
9. TOOH w/ tbg to 2045'. Pump 100' Class A cement plug from 2045'-1945' (**7" csg st**).
10. TOOH w/ tbg to 1945'. Pump 6% bentonite gel from 1945'-1612'.
11. TOOH w/ tbg to 1612'. Pump 187' Class A cement plug from 1612'-1425' (**saltwater**)
  - a. Perforations will be added if free point determined lower than plug depth/
12. TOOH w/ tbg to 1425'. Pump 6% bentonite gel from 1425'-756'. TOOH LD tbg
13. Perforate 4 1/2" csg @ 756', 716', and 660'.
14. TIH w/ tbg to 756'. Load wellbore with 6% bentonite gel and attempt to establish circulation on 7" csg.
15. Pack off tbg in 2x4 head. Pump 100' Class A cement plug from 756'-656' (**elevation**). Monitor circulation on 7". TOOH LD tbg.
16. Perforate 4 1/2" csg at 154'.
17. TIH w/ tbg to 154'. Pack off tbg in 4x2 wellhead. Pump 154' Class A cement plug from 154'-0' (**freshwater and surface**). Monitor for continued circulation on 7".
18. Erect monument with API#, date plugged, & company name.
19. Reclaim location and road to WV-DEP specifications.

All plugs will be Tagged, with wire line,  
4 hrs after they are set. 

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05/28/2021

4703502818P

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

API # 4703502818

Farm Name Means, Freeman Well Number 510782  
Location Elevation 756 Quadrangle KENTUCK  
District Washington County Jackson, WV  
Latitude 8800 FSL Degree 38.00 Minute 40.00 Second 0.00  
Longitude 3530 FWL 81.00 32.00 30.00

Company Equitable Production Company  
1710 Pennsylvania Avenue Charleston,  
WV 25328  
Agent Cecil Ray  
Inspector Jamie Stevens  
Permit issued 09/19/2007

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cubic Ft
13 3/8	33	33	
9 5/8	711	711	320.35
7	1,995	1,995	208.60
4 1/2	5,056	5,056	378.00

Well Work Commenced 09/26/2007

Well Work Completed 10/24/2007

Verbal Plugging  
Permission granted or \_\_\_\_\_

Rotary Rig  Cable Rig \_\_\_\_\_

Total Depth 5,043

Water Encountered

Type	From
Fresh water	1-1/2" @ 114'
Salt Water	damp @ 1475'
Salt Water	4" @ 1562'

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Coal & Open Mines

Type	From
Coal	None reported

Open Flow Data  
Producing Formation Marcellus ; Pay Zone Depth (ft): See attached for details

Gas: Initial Open Flow 0 MCF 9/30/07 Date  
Final Open Flow 174 MCF 10/24/2007 Date  
Time of open flow between initial and final tests 0 hours  
Static Rock Pressure 24 after 0 hours

Oil: Initial Open Flow \_\_\_\_\_ Bbl/d  
Final Open Flow \_\_\_\_\_

Second Producing Formation \_\_\_\_\_ Pay Zone Depth (ft) \_\_\_\_\_

Gas: Initial Open Flow \_\_\_\_\_ MCF \_\_\_\_\_ Date  
Final Open Flow \_\_\_\_\_ MCF \_\_\_\_\_ Date  
Time of open flow between initial and final tests \_\_\_\_\_ hours  
Static Rock Pressure \_\_\_\_\_ after \_\_\_\_\_ hours

Oil: Initial Open Flow \_\_\_\_\_ Bbl/d  
Final Open Flow \_\_\_\_\_

NOTE: On back of this form put the following

- 1) Details of Perforated intervals, fracturing or stimulating, physical change, etc.
- 2) The well log, a systematic detailed geological record of all formations including coal encountered in the well bore

For Equitable Production Company  
By Wale Burt  
Date 4-8-08

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05/28/2021

Well Number 510782

**Equitable Production Company  
WR-35 Completion Report - Attachment  
Well Treatment Summary**

API # 4703502818

Stage 1	
Date	10/10/2007
FracTyp	70Q Foam
Zone	Marcellus
# of Perfs	38
From/To	5,011- 5,024
BD Press	3,942
ATP Psi	3,467
Avg Rate	30
Max Press Psi	3,621
ISIP Psi	2,951
10min SIP	2,346 5 min.
Frac Gradient	0.81
Sand Proppant	527.69
Water-bbl	293
SCF N2	926,900
Acid-gal	600 gal 7.5%

Formation Name	Depth To	Depth Bottom	Formation Thick
Fill	0.00	9	9.00
Sand	9.00	40	31.00
Sand & Shale	40.00	100	60.00
Shale	100.00	160	60.00
Sand	160.00	200	40.00
Shale	200.00	220	20.00
Sand	220.00	260	40.00
Sand & Shale	260.00	735	475.00
Sand & Shale	735.00	1,462	727.00
SALT SAND	1,462.00	1,702	240.00
BIG LIME	1,702.00	1,840	138.00
BIG INJUN	1,840.00	1,937	97.00
WEIR	1,937.00	2,051	114.00
SUNBURY	2,309.00	2,321	12.00
BEREA	2,321.00	2,324	3.00
UPPER DEVONIAN	2,324.00	3,543	1,219.00
GORDON	2,583.00	2,772	189.00
LOWER HURON	3,543.00	4,212	669.00
JAVA	4,212.00	4,378	166.00
ANGOLA	4,378.00	4,637	259.00
RHINESTREET	4,637.00	5,002	365.00
MARCELLUS	5,002.00	0	0.00

Gas Tests	
Depth	Remarks
1,280	odor
2,035	odor
2,350	odor
2,734	odor
4,208	odor
4,720	No Show
4,900	No Show
5,043	odor

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05/28/2021

4703502818P

WW-4A  
Revised 6-07

1) Date: March 23, 2021  
2) Operator's Well Number: 510782  
3) API Well No.: 47 - 035 - 02818

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>Douglas and Sandra Smith</u>	Name <u>None</u>
Address <u>85 Gladewood Lane</u>	Address _____
<u>Hurricane, WV 25526</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>None</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Joe Taylor</u>	(c) Coal Lessee with Declaration
Address <u>1478 Claylick Road</u>	Name <u>No Declaration</u>
<u>Ripley, WV 25271</u>	Address _____
Telephone <u>304-380-7469</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: Jeff Mast  
 Title: Director Production  
 Address P.O. Box 6070  
Charleston, WV 25362  
 Telephone 304-543-6988

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MAY 13 2021

WV Department of Environmental Protection

Subscribed and sworn before me this 29th day of March, 2021  
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).

05/28/2021

4703502818P

510782

47-035-0288

7019 1640 0000 1003 4954

U.S. Postal Service™  
**CERTIFIED MAIL® RECEIPT**  
Domestic Mail Only

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

Hurricane, WV 25526

Certified Mail Fee	\$3.60
\$	<del>\$2.85</del>
Extra Services & Fees (check box, add fee as appropriate)	\$0.00
<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 \$1.40

Total \$5.00

Se Douglas and Sandra Smith  
Str 85 Gladewood lane  
Cit Hurricane, WV 25526

PS Instructions

0523  
03

Postmark  
Here

05/03/2021

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Environmental Protection

05/28/2021

WW-9  
(5/16)

API Number 47 - 035 - 02818  
Operator's Well No. 510782

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) Spruce Run (0505000801) Quadrangle Kentuck

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.? \_\_\_\_\_

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection ( UIC Permit Number 47-119-00724 )
- 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

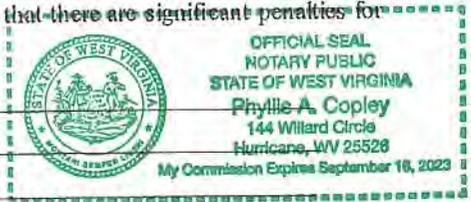
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WV Department of  
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Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice 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 Production



Subscribed and sworn before me this 29<sup>th</sup> day of March, 2021

Phyllis A. Copley Notary Public

My commission expires September 16, 2023

[Signature]  
5-12-21 05/28/2021

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: [Signature]

Comments: Sediment control will be in place at all time. All pits will be tagged, after 4 hours of wait-time.

Title: OOC Inspector Date: [Signature] 6-12-21

Field Reviewed? ( ) Yes (X) No

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

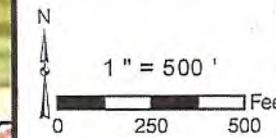
47-035-02818

Plugging Map

**Legend**

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

*John F. [Signature]*  
 5-12-21



Well No.: 47-035-02818  
 UTM83-17, Meters  
 North: 451799.88  
 East: 4277259.9  
 Elev.: 219.61 M  
 Elev.: 720.33 Ft

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 MAY 16 2021

4703502818

WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas

**WELL LOCATION FORM: GPS**

API: 47-035-02818 WELL NO.: 510782

FARM NAME: Means, Freeman

RESPONSIBLE PARTY NAME: Diversified Production LLC

COUNTY: Jackson DISTRICT: Washington

QUADRANGLE: Kentuck

SURFACE OWNER: Douglas and Sandra Smith

ROYALTY OWNER: Ed C. Perkins and M.E. Cox Trust

UTM GPS NORTHING: 4,277,259.9

UTM GPS EASTING: 451,799.9 GPS ELEVATION: 720.33

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

Director Production  
Title

03/19/2021  
Date

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