



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

Tuesday, September 18, 2018
WELL WORK PLUGGING PERMIT
Vertical Plugging

ROSS AND WHARTON GAS COMPANY, INC.
RT. 5, BOX 29

BUCKHANNON, WV 262010000

Re: Permit approval for N. PULLIAM 2
47-007-00686-00-00

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: N. PULLIAM 2
Farm Name: PULLIAM, MATHEW - HEIRS
U.S. WELL NUMBER: 47-007-00686-00-00
Vertical Plugging
Date Issued: 9/18/2018

I

47-007-00686P

09/21/2018

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 August 1, 09/21/2018
2) Operator's
Well No. Pulliam Heirs
3) API Well No. 47-007-00686

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 957' Watershed Copen Run
District Salt Lick County Braxton Quadrangle Burnsville

6) Well Operator Ross & Wharton Gas Co. Inc. 7) Designated Agent Mike Ross
Address 354 Morton Ave. Address P.O. Box 219
Buckhannon, WV 26201 Coalton, WV 26257

8) Oil and Gas Inspector to be notified Name Danny Mullins 9) Plugging Contractor
Address 220 Jack Acres Rd. Name R & R Well Service
Buckhannon, WV 26201 Address 42 Lynch Ridge
Walton, WV 25286

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

Free point and recover casing's & tubular's

6% Gel between plug's

Set cement plug 1897' to TD (2080') Plug 100' above top perf

Set 100' cement plug across casing cut

Set 100' cement plug 1650' to 1750' (Lime, Blue Monday) Set 100' cement plug 950' to 1050' gas show

Set 100' cement plug 500' to 600' (salt bearing strata)

Set cement plug 254' to surface, (8" casing plug, freshwater protection plug and
and surface plug) Tag plug's as necessary Set monument with API number

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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 Danny Mullins Date 8-6-18



47-057-0026 P 09/21/2018

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 4

Quadrangle Burnsville SW 1/4

WELL RECORD

Oil or Gas Well Gas
(KIND)

Permit No. Braxm 686

Company The Waverly Oil Works Company
Address 4 E. Locust Street, Newark, Ohio 43055
Farm Mathew Pulliam Heirs Acres 19.45
Location (waters) Copen Run
Well No. Two Elev. 957'
District Salt Lick County Braxton
The surface of tract is owned in fee by Mathew Pulliam Heirs
Address Copen, W. Va.
Mineral rights are owned by Mathew Pulliam Heirs
Address Copen, W. Va.

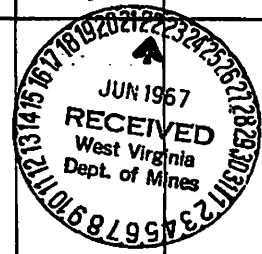
Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
18	21'	21'	
13			
10	204'	204'	Size of
8 1/2 - 5/8"	718'	Pulled	
6 1/4"			Depth set
XXXXX 4 1/2"	2080'	2080'	
3			Perf. top 1997
2			Perf. bottom 2005
Liners Used			Perf. top
			Perf. bottom

Drilling commenced 5/11/67
Drilling completed 6/6/67
Date Shot From To
With
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume 15,000 Cu. Ft.
Rock Pressure N.T. lbs. hrs.
Oil Show bbls., 1st 24 hrs.
WELL ACIDIZED

CASING CEMENTED 4 1/2 SIZE 400 No. Ft. 6/6/67 Date
80 sks. - Dowell
COAL WAS ENCOUNTERED AT None FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

WELL FRACTURED Yes - Dowell (6/12/67) - Used 2000 gal. acid, 1000 bbls. water, 60,000 10/20 sand
RESULT AFTER TREATMENT 950,000
ROCK PRESSURE AFTER TREATMENT 500# 24 hrs.
Fresh Water None Feet Salt Water None Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Red Clay			0	18			
Sand			18	60			
Slate			60	75			
Red Rock			75	95			
Slate & Shells			95	145			
Red Rock			145	195			
Slate & Shells			195	205			
Sand			205	270			
Slate			270	290			
Red Rock			290	325			
Slate			325	345			
Red Rock			345	350			
Sand			350	370			
Red Rock			370	440			
Slate			440	460			
Red Rock			460	470			
Slate			470	550			
Sand			550	640			
Slate			640	645			
Lime			645	725			
Slate			725	755			
Sand			755	775			
Slate			775	790			
Sand			790	800			
Slate			800	825			
Sand			825	920			
Slate			920	938			
Sand			938	1000	Show Gas	974-977	



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Formation	Color	Hard or Soft	Top $\frac{1}{4}$	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate			1000	1005			
Lime			1005	1057			
Slate			1057	1068			
Lime			1068	1094			
Slate			1094	1340			
Sand			1340	1390			
Lime			1390	1410			
Lime-Sandy			1410	1425			
Slate & Shells			1425	1468			
Sand			1468	1542			
Lime			1542	1550			
Sand			1550	1582			
Slate			1582	1600			
Sand			1600	1640			
Slate			1640	1648			
Red Rock			1648	1665			
Lime			1665	1693			
Red Rock			1693	1715			
Lime			1715	1730			
Red Rock			1730	1758			
Little Lime			1758	1774			
Slate			1774	1775			
Lime			1775	1785			
Sand			1785	1791			
Slate			1791	1795			
Sand			1795	1812			
Big Lime			1812	1876			
Sand-Keener			1876	1932			
Lime			1932	1980	Show oil	1932-1943	
Sand-Injun			1980	2022			
Siltstone			2022	2070	Show gas	1997-2010	
Total Depth				2070	Show oil	2000-2010	

Additional Data:

Logs by Basin Surveys: G. D/C. Insp. Perf.
 6/6/67 - Ran and cemented 2080' of 4 1/2" 9.5# J-55 casing, using totem float shoe and 4 centralizers. Cemented by Dowell; used following materials - 80 sks. Portland Cement, 20 sks. gel, 4 sks. lime
 6/12/67 - "Fraced" by Dowell using 2 jet pumps
 Materials used: 2000 gal. acid
 1000 bbls. treated water
 60,000 - 10/20 sand

Breakdown Pressure - 1000#
 Av. treating pressure - 900#
 Av. injection rate - 40 BPM
 Perforations: 1997-2005 - 16 1/2 holes

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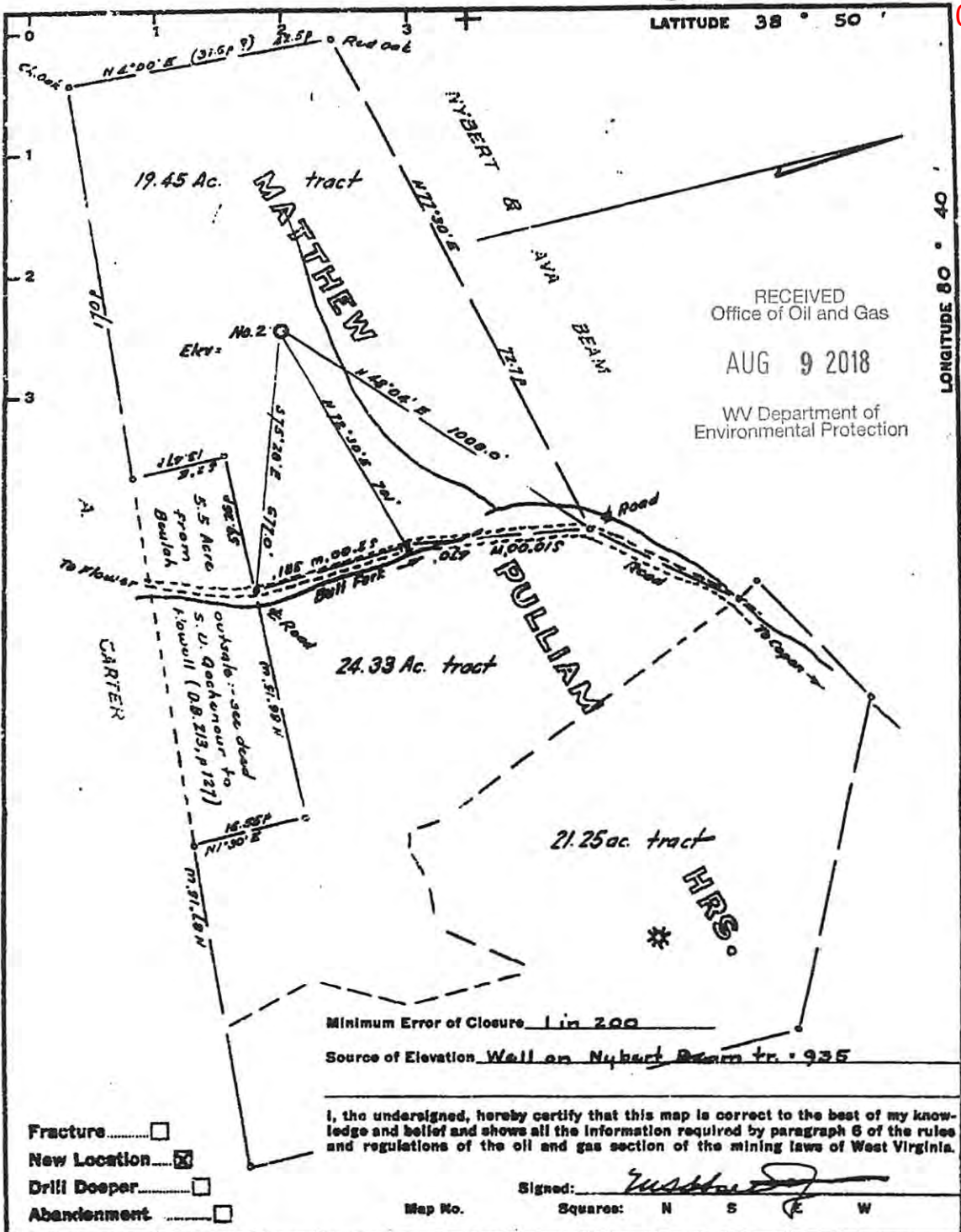
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Date June 21, 1957

APPROVED The Waverly Oil Works Company, Owner

By  R.L. Veckel - Pres
 (Title)



Company WAVERLY OIL WORKS
 Address No 4 East Leavitt St. Newark, Ohio
 Farm Matthew Pulliam Hairs
 Tract _____ Acres 19.45 Lease No. _____
 Well (Farm) No. Two Serial No. _____
 Elevation (Spirit Level) 957
 Quadrangle Burnsville SW
 County Braxton District Salt Licks
 Engineer [Signature]
 Engineer's Registration No. 1227
 File No. _____ Drawing No. _____
 Date April 26, 1967 Scale 1" = 200' = 330'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP

FILE NO. BRAX - 686

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.

09/21/2018

WW-4A
Revised 6-07

1) Date: August 1, 2018

2) Operator's Well Number

3) API Well No.: 47 - 007 - 00686 f

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>Lewis E. & Mary Wine</u>	Name <u>N/A</u>
Address <u>468 Walker Fork Rd.</u>	Address _____
<u>Copen, WV 26615</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>N/A</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Danny Mullins</u>	(c) Coal Lessee with Declaration
Address <u>220 Jack Acres Rd.</u>	Name <u>N/A</u>
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>1-304-932-6844</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 reverse 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 Ross & Wharton Gas Co. Inc (Mike Ross Inc.)
 By: [Signature]
 Its: President
 Address 354 Morton Ave.
Buckhannon, WV 26201
 Telephone 1-304-472-4289

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Subscribed and sworn before me this 7th day of August 2018
Brenda K Bush Notary Public
 My Commission Expires Sept 27, 2020

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.

47-007-00686P

09/21/2018

WW-9
(5/16)

API Number 47 - 007 - 00686
Operator's Well No. _____

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

Operator Name Ross & Wharton Gas Co. Inc. OP Code 306580

Watershed (HUC 10) Copen Run Quadrangle Burnsville

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: _____

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 _____)

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Will closed loop system be used? If so, describe: _____

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

-If oil based, what type? Synthetic, petroleum, etc. _____

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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 Mike Ross

Company Official (Typed Name) Mike Ross

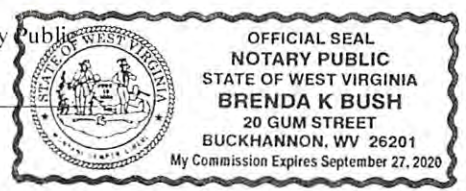
Company Official Title President

Subscribed and sworn before me this 7th day of August, 2018

Brenda K Bush

Notary Public

My commission expires Sept. 27, 2020



Proposed Revegetation Treatment: Acres Disturbed 1 Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount _____ lbs/acre

Mulch Hay Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Fescue 30

Fescue 30

Contractor's Mix

Contractor's Mix

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: Danny Mullin

Comments: _____

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Title: OOG Inspector

Date: 8-6-18

Field Reviewed? () Yes () No

09/21/2018

WW-9- GPP
Rev. 5/16

Page 1 of 2
API Number 47 - 007 - 00686
Operator's Well No. _____

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

Operator Name: Ross & Wharton Gas Co. Inc.

Watershed (HUC 10): Copen Run Quad: Burnsville

Farm Name: _____

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

N/A

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

N/A

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

Copen Run

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

N/A

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

N/A

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

No material will be used

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.

N/A

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

N/A

Signature: Trike Ross

Date: 8-7-18

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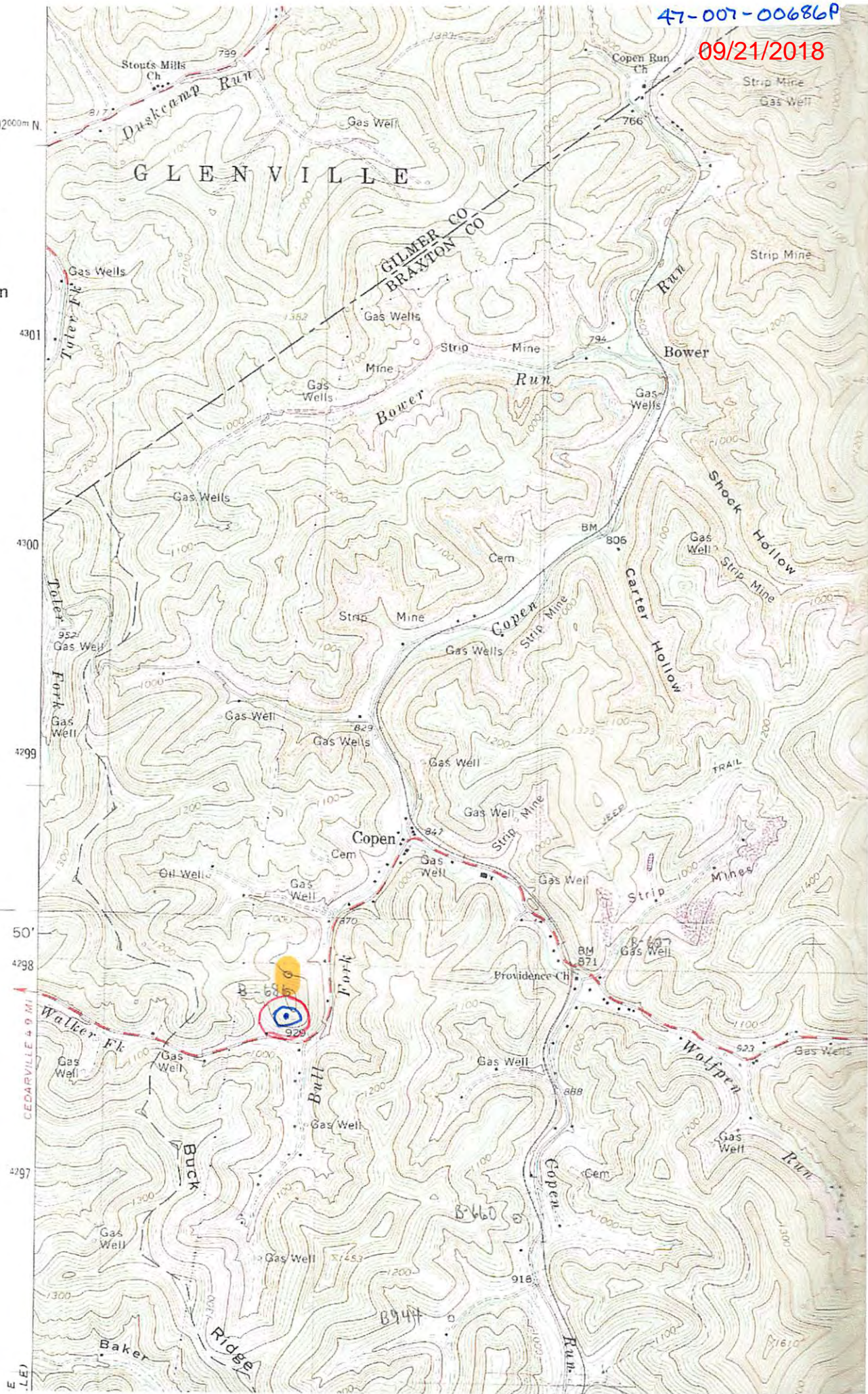
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DM

4302000m N
4301
4300
4299
50'
4298
4297
E (LE)

WW-7
8-30-06



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

API: 47-007-00686 WELL NO.: 2

FARM NAME: Pulliam Heirs

RESPONSIBLE PARTY NAME: Mike Ross

COUNTY: Braxton DISTRICT: Salt Lick

QUADRANGLE: Burnsville

SURFACE OWNER: Lewis E. & Mary Wine

ROYALTY OWNER: Nellie Pulliam, Agent

UTM GPS NORTHING: 4297944.9

UTM GPS EASTING: 522853.4 GPS ELEVATION: 957'

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 ____: Post Processed Differential ____
Real-Time Differential ____

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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.

Mike Ross
Signature

President
Title

8-9-18
Date