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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

September 27, 2013

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-2102547, issued to EQT PRODUCTION COMPANY, 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 all 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. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654

James Martin  
Chief

Operator's Well No: WV 157931 (MARSHALL #2-W172  
Farm Name: MARKS, WILLARD & REBECCA  
**API Well Number: 47-2102547**  
**Permit Type: Plugging**  
Date Issued: 09/27/2013

**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

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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.

Date: September 10, 2013  
Operator's Well  
Well No. WV 157931(Marshall #2-W172)  
API Well No.: 47 021 - 02547 P

*check #16378  
\$ 400.00*

**STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS**

**APPLICATION FOR A PERMIT TO PLUG AND ABANDON**

4) Well Type: Oil  Gas  Liquid Injection  Waste Disposal:   
If Gas, Production   Or Underground storage  Deep  Shallow

5) Elevation: 950' Watershed: Little Kanawha River  
Location: Glennville 63 County: Gilmer 21 Quadrangle: Gilmer 7.5' 365  
District:

6) Well Operator EQT Production Company 7) Designated Agent: Rex C. Ray  
120 Professional Place Address: 120 Professional Place  
Address: Bridgeport, WV 26330 Bridgeport, WV 26330

8) Oil & Gas Bryan Harris 9) Plugging Contractor:  
Name: P.O. Box 157 Name: HydroCarbon Well Service  
Address: Volga, WV 26238 Address: PO BOX 995  
Buckhannon, WV 26201

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

**See Attachment for details and procedures.**

*OK gwm*

OFFICE USE ONLY

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

Work order approved by inspector \_\_\_\_\_

Date \_\_\_\_\_

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Office of Oil & Gas  
SEP 12 2013  
WV Department of  
Environmental Protection

Plugging Prognosis – Madison District

**Marshall 2 W 172 (157931)**

**API # 47-021-02547**

Gilmer Co,  
Burnsville, Quad

Prepared by Doug Fry 8/30/2013

Current Status;

13" @ 310' CMT w/ 100 sks

8 5/8" @ 881'.

4 1/2" @ 2923' CMT w/ 195 sks

2" tubing @ 2852'

Elev. 957'

FW @ None Reported      Coal @ 275'-280'      Salt Sand estimated depth - 1594'

Gas Shows @ None Reported

Oil Shows @ 1782' – 1855' Maxton, 2851'-2870' Fifth Sand

Completion: 2860'-2870' Fifth Sand, 1782'-1855' Maxton

- 1) Notify State Inspector **Bryan Harris 304 553 6087** 24 hrs prior to commencing operations.
- 2) TOOH w/ 2" tubing and check condition.
- 3) TIH w/ 2" tubing, Tallying pipe on the way in @ 2870', set 120' C1A cement plug @ 2870' to 2750'. (Fifth Sand Perfs).
- 4) TOOH w/ tubing @ 2750', Gel Hole @ 2750' to 2232'.
- 5) TOOH w/ tubing @ 2232', set 172' C1A cement plug @ 2232' to 2060'. ( Injun Perfs)
- 6) TOOH w/ tubing @ 2060', Gel Hole @ 2060' to 1782'.
- 7) TOOH w/ 2" tubing, Free point 4 1/2" csg, Cut 4 1/2" csg @ free point, TOOH w/ 4 1/2" "csg unless casing is needed to stay in the hole to stabilize while setting any bottom hole plugs and then pull 4 1/2" csg.
- 8) Set 100' C1A cement plug 50' In/Out of cut. Perf all, Coal, Gas, Oil & FW shows below 4 1/2" cut do not omit any plugs shown below.
- 9) TIH w/ tubing @ 1782', set 288' C1A cement plug @ 1782' to 1494'. ( Salt Sand Plug, Oil Show)
- 10) TOOH w/ tubing @ 1494', Gel Hole @ 1494' to 931'.
- 11) TOOH w/ tubing @ 931', set 100' C1A cement plug @ 931' to 831'. ( 8 5/8" csg pt)
- 12) TOOH w/ tubing @ 831', Gel Hole @ 831' to 360'.
- 13) TOOH w/ 2" tubing, Free point 8 5/8" csg, Cut 8 5/8" csg @ free point, TOOH w/ 8 5/8" "csg unless casing is needed to stay in the hole to stabilize while setting any bottom hole plugs and then pull 8 5/8" csg.
- 14) Set 100' C1A cement plug 50' In/Out of cut. Perf all, Coal, Gas, Oil & FW shows below 4 1/2" cut do not omit any plugs shown below.
- 15) TIHH w/ tubing @ 360', set 360' Cement Plug to Surface.
- 16) Top off as needed.
- 17) Set Monument to WV – DEP Specifications
- 20) Reclaim Location & Roads to WV-DEP Specifications.

RECORDS SHOW 8 5/8" WAS NOT LEFT IN WELL.

OK gmm



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AUG 15 1975

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

DEPT. OF MINES

Oil and Gas Division

WELL RECORD 4

Rotary \_\_\_\_\_ Oil \_\_\_\_\_  
Cable  Gas \_\_\_\_\_  
Recycling \_\_\_\_\_ Comb.   
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind) \_\_\_\_\_

Quadrangle Burnsville  
Permit No. GIL-2547

Company Waco Oil and Gas  
Address P. O. Box 4, Glenville, WV 26351  
Farm R. M. Marshall Acres 60  
Location (waters) Little Kanawha  
Well No. 2 Elev. 957'  
District Glenville County Gilmer  
The surface of tract is owned in fee by \_\_\_\_\_  
E. Carpenter  
Address Stouts Mills, W. Va.  
Mineral rights are owned by R. M. Marshall  
Heirs Address Grantsville, W. Va.  
Drilling Commenced 6/2/75  
Drilling Completed 7/16/75  
Initial open flow \_\_\_\_\_ cu. ft. \_\_\_\_\_ bbls.  
Final production 1,002 m cu. ft. per day 3 bbls.  
Well open 4 hrs. before test \_\_\_\_\_ RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"	310'	310'	100 sks.
9 5/8			
8 5/8	881'		
7			
5 1/2			
4 1/2		2923'	195 sks.
3			
2 3/8 tubing		2852'	
Liners Used			

Well treatment details: Attach copy of cementing record.  
Allegheny Surveys logged & perforated 7/25/75. Dowell fractured Fifth Sand w/561 bbls. water, 30,000# 20/40 sand, BD 3150 psig. TP 2026-3150. ISIP-1200.  
Fractured Injun Sand w/997 bbls. water, 1000 gal. 15% HCl, 60,000# 20/40 sand. BD-1800 psig. TP-1300-1800 psig. ISIP-1000.

Coal was encountered at 275 Feet \_\_\_\_\_ Inches  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet  
Producing Sand Fifth Sand & Injun Depth 2860-70 & 2212-2232

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Red Rock			0	50		
Slate & R. Rock			50	275		
Coal			275	280		
Slate & RR			280	400		
Sand & Slate			400	450		
Red Rock			450	475		
Sand			475	560		
Slate & Shells			560	625		
Sand & RR			625	695		
Slate & Shells			695	755		
Sand & Slate			755	1375		
Slate & Shells			1375	1430		
Sand			1430	1485		
Slate & Shells			1485	1530		
Sand			1530	1570		
Slate & Shells			1570	1675		
Sand			1675	1725		
Slate & Shells			1725	1750		
Sand & Slate			1750	1782		
Maxton Sand			1782	1855		
Slate			1855	1938		
Lime			1938	1960		
Blue Monday			1960	2005		
Big Lime			2005	2117		

Show of oil  Show of gas   
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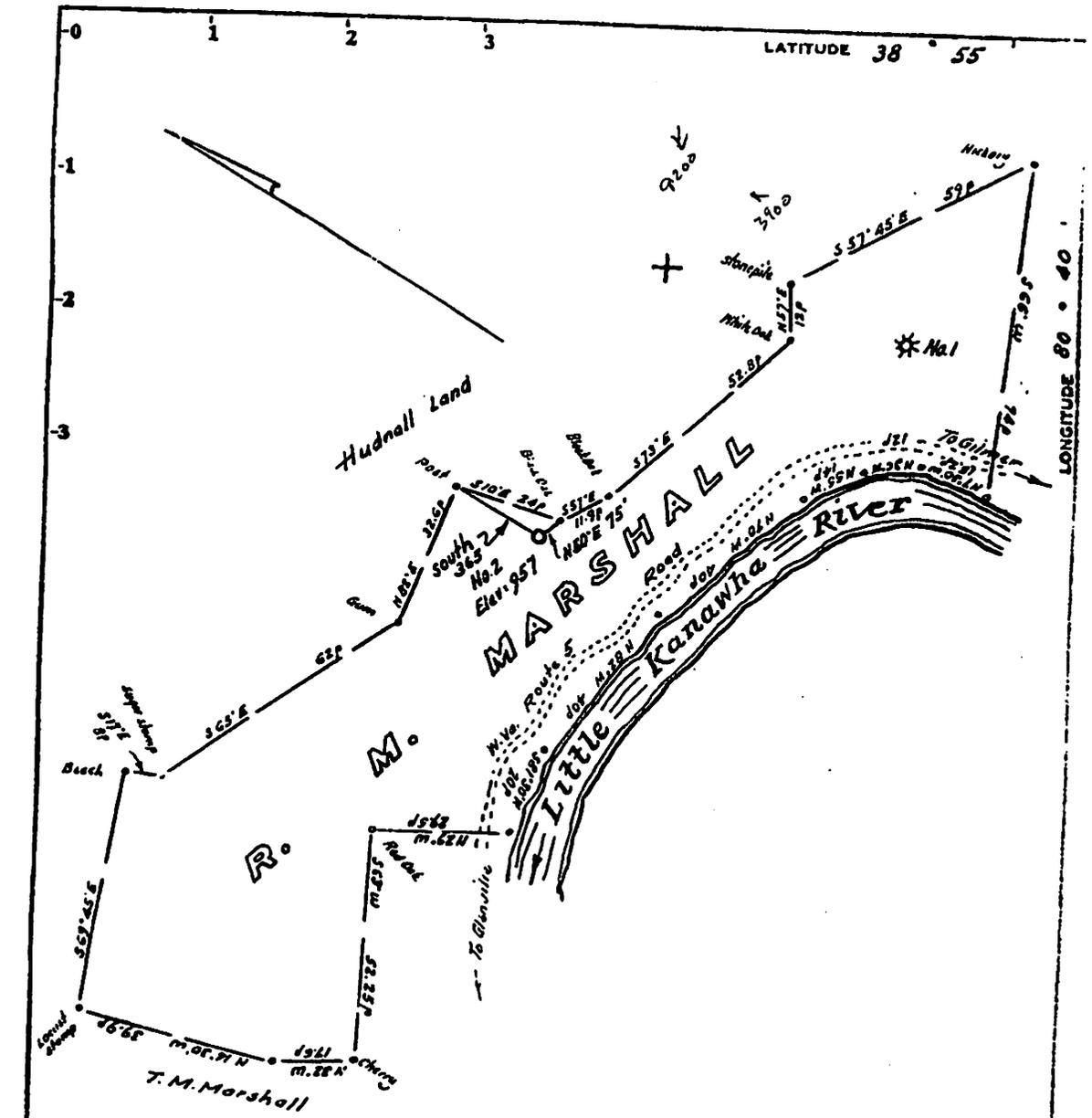
SEP 12 2013

\* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet <sup>4</sup>	Bottom Feet	Oil, Gas or Water	Remarks
Sandy Lime			2117	2212		
Injun Sand			2212	2339		
Slate & Shells			2339	2851		
Fifth Sand			2851	2870		
Slate & Shells			2870	2937		
TD				2937		
					Show oil & gas 2855'	

Date 9/12 RECEIVED  
 APPROVED [Signature] Office of Oil & Gas  
 By [Signature] SEP 12 2019  
 (Title)

WV Department of  
 Environmental Protection



Minimum Error of Closure Lin 200'

Source of Elevation Elev. Well No. 1: 928

Fracture   
 New Location   
 Drill Deeper   
 Abandonment

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Map No. \_\_\_\_\_ Signed: W. H. ...  
 Squares: N S E W

Company Waco Oil & Gas Co.  
 Address Glenville, West Va.  
 Farm R. M. Marshall  
 Tract \_\_\_\_\_ Acres 80 Lease No. \_\_\_\_\_  
 Well (Farm) No. Two Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 957'  
 Quadrangle Burnsville  
 County Gilmer District Glenville  
 Engineer W. H. ...  
 Surveyor's Registration No. 1227  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date May 28, 1975 Scale 1" = 300' = 495'

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

WELL LOCATION MAP  
 FILE NO. GIL-2547  
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+ 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.  
 WV Department of Environmental Protection  
 47-021

WW-4-A  
Revised 6/07

1) Date: September 10, 2013  
2) Operator's Well Number  
WV 157931(Marshall #2-W172)  
3) API Well No.: 47 021 - 02547  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT**  
**DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS**  
**NOTICE AND APPLICATION TO PLUG AND ABANDON WELL**

4) Surface Owner(s) to be served:  
(a) Name Willard & Rebecca Marks  
Address 253 Starling Dr.  
Burnsville, WV 26335  
(b) Name Central Energy Corporation  
Address C/O Waco Oil & Gas Co. Inc.  
P.O. Box 297  
Glennville, WV 26351  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Bryan Harris  
Address P.O. Box 157  
Volga, WV 26238  
Telephone 304-553-6087

5) (a) Coal Operator:  
Name None  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name Willard & Rebecca Marks  
253 Starling Dr.  
Address Burnsville, WV 26335  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name None  
Address \_\_\_\_\_

**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 Division 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.

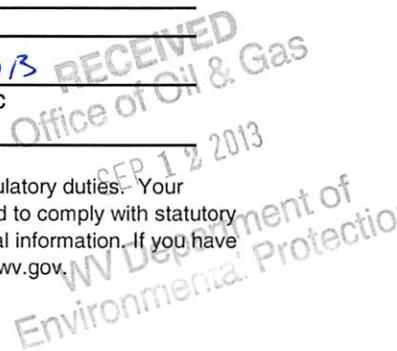


Well Operator:  
By: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_

**EQT Production Company**  
Victoria J. Roark  
**Permitting Supervisor**  
PO Box 280  
Bridgeport, WV 26330  
(304) 848-0076

Subscribed and sworn before me this 10 day of SEPTEMBER, 2013  
My Commission Expires: 6/27/2013

Notary Public



The Office of Oil & Gas processes your personal information, such as name, address and phone number, as 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).

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS**  
**CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM**  
**GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE**

Operator Name: EQT PRODUCTION COMPANY OP ID: \_\_\_\_\_  
Watershed: Little Kanawha River Quadrangle: Gilmer 7.5'  
Elevation: 950' County: Gilmer District: Glennville

Description of anticipated Pit Waste: Formation Fluids

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes \_\_\_ No X  
Will synthetic liner be used in the pit? Yes Is so, what ml.? 30 ml

Proposed Disposal Method for Treated Pit Wastes:  
X Land Application  
\_\_\_\_ Underground Injection - UIC Permit Number \_\_\_\_\_  
\_\_\_\_ Reuse (at API Number) \_\_\_\_\_  
\_\_\_\_ Offsite Disposal Permit #. \_\_\_\_\_  
\_\_\_\_ Other: Explain \_\_\_\_\_

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. \_\_\_\_\_  
If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_  
Additives to be used? \_\_\_\_\_

Will closed loop system be used? \_\_\_\_\_  
Drill Cuttings disposal method? Leave in pit, landfill, remove offsite, etc. \_\_\_\_\_  
If left in pit and plan to solidify what medium will be used? Cement, Lime, sawdust \_\_\_\_\_  
Landfill or offsite name/permit number? \_\_\_\_\_

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Division of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any terms 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.

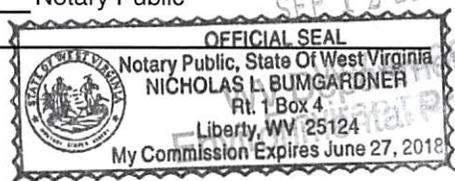
Company Official Signature *Victoria Roark*

Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV

Subscribed and sworn before me this 10 day of SEPTEMBER 2013

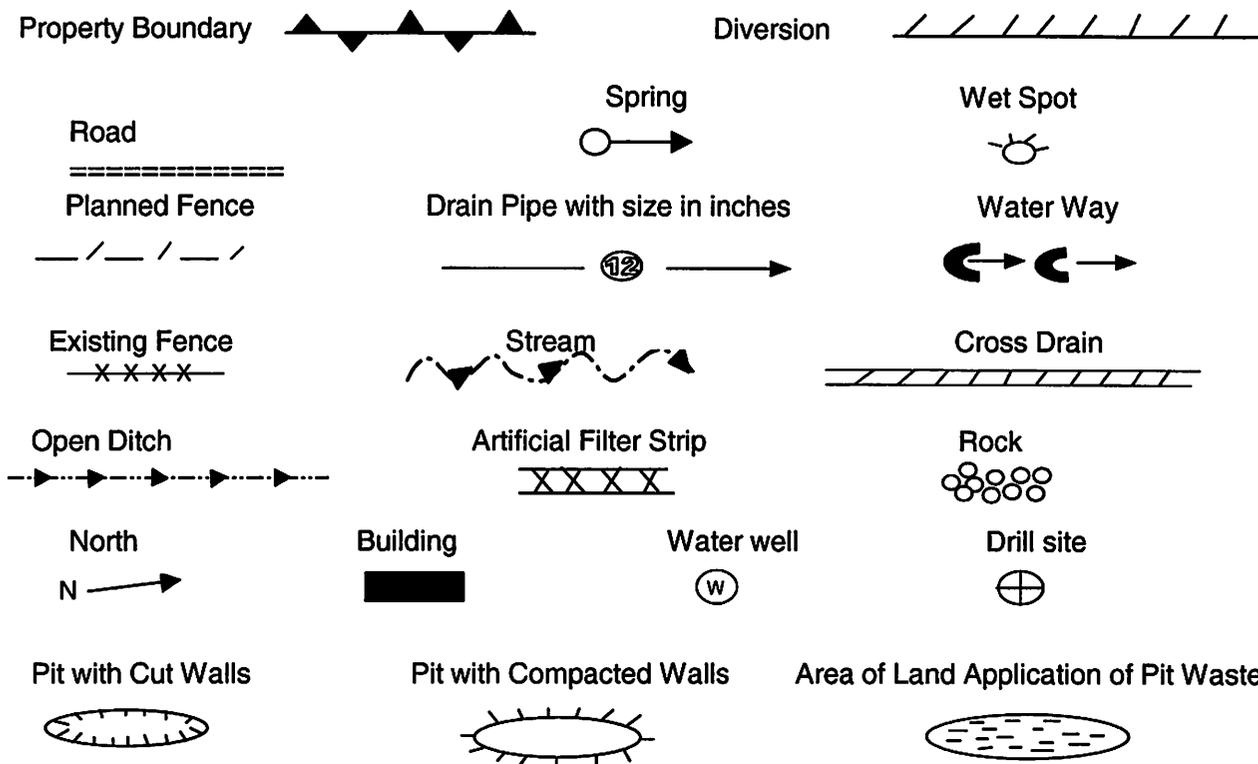
My Commission Expires 4/27/2018 Notary Public



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Department of Environmental Protection

**OPERATOR'S WELL NO.:**  
**WV 157931(Marshall #2-W172)**

**LEGEND**



Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH 5.8

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20) or equivalent 1/3 ton lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre or hydroseed.

**SEED MIXTURES**

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

**ATTACH:**

Drawing(s) of road, location, pit and proposed area for land application.

Photocopies section of involved 7.5' topographic sheet.

Plan approved by: \_\_\_\_\_

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

Title: \_\_\_\_\_ Date: \_\_\_\_\_

Field Reviewed?        Yes        No

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Environmental Protection

Topo Quad: Gilmer 7.5'

Scale: 1" = 2000'

County: Gilmer

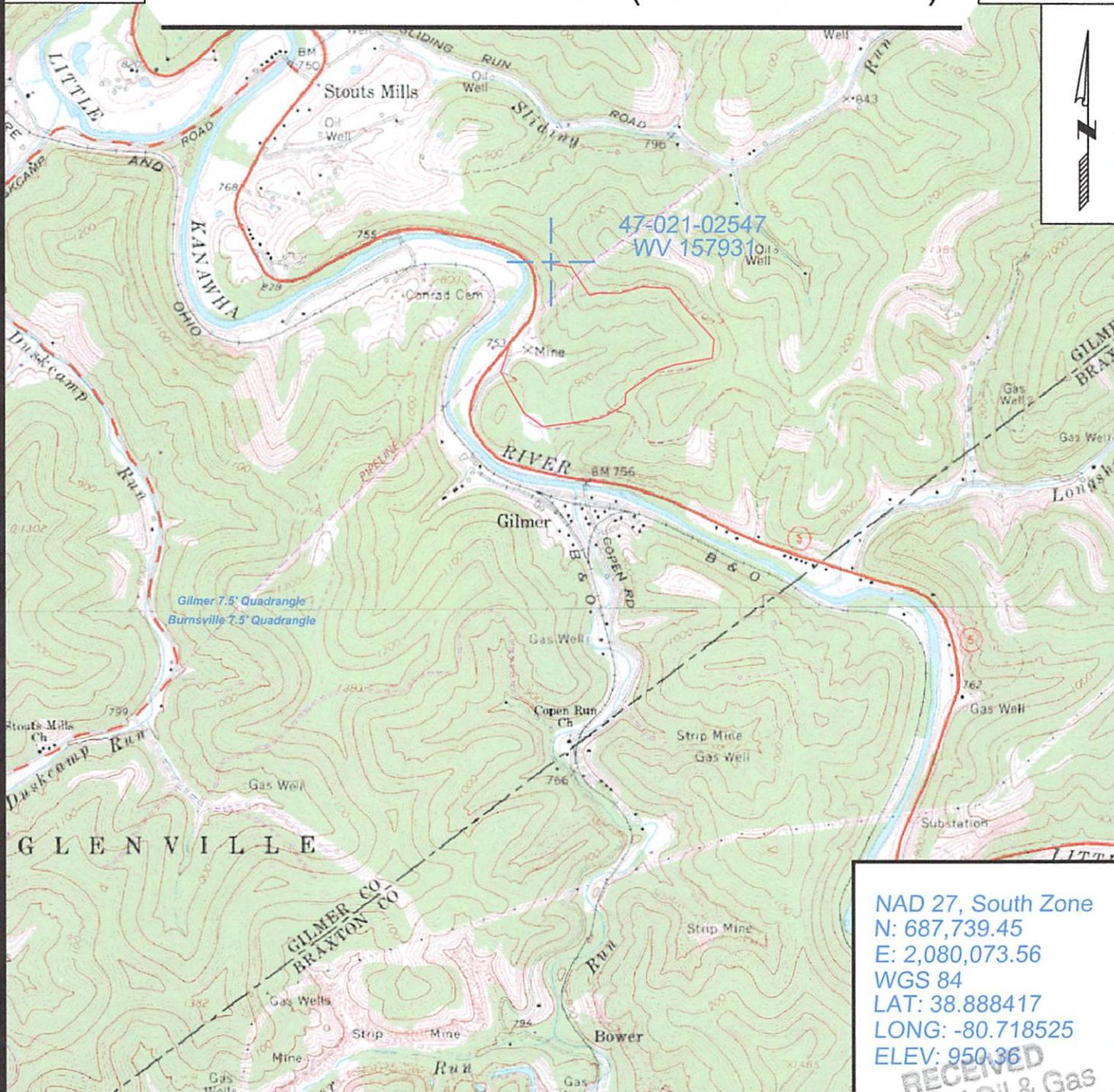
Date: August 22, 2013

District: Glennville

Project No: 25-19-00-07

**47-021-02547 WV 157931 (Marshall #2-W172)**

Topo



NAD 27, South Zone  
 N: 687,739.45  
 E: 2,080,073.56  
 WGS 84  
 LAT: 38.888417  
 LONG: -80.718525  
 ELEV: 950.36



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**  
 1-800-482-8606  
 P.O. BOX 438  
 BIRCH RIVER, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:  
**EQT Production Company**  
 P.O. Box 280  
 Bridgeport, WV 26330

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 SEP 19 2013  
 WV Department of Environmental Protection



2102577A



## POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY

LEASE NAME AND WELL No. Marshall WV 157931 (47-021-02547)

### POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the Existing Well WV 157931.

**BIRCH RIVER OFFICE**  
P.O. Box 438 • 237 Birch River Road  
Birch River, WV 26610  
phone: 304-649-8606  
fax: 304-649-8608

**BRIDGEPORT OFFICE**  
172 Thompson Drive  
Bridgeport, WV 26330  
phone: 304-848-5035  
fax: 304-848-5037

**CALDWELL OFFICE**  
212 Cumberland Street  
Caldwell, OH 43724  
phone: 740-305-5007  
fax: 740-305-5126

**ALUM CREEK OFFICE**  
P.O. Box 108 • 143 Childress Road  
Alum Creek, WV 25003  
phone: 304-756-2949  
fax: 304-756-2948

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Topo Quad: Gilmer 7.5'

Scale: 1" = 2000'

County: Gilmer

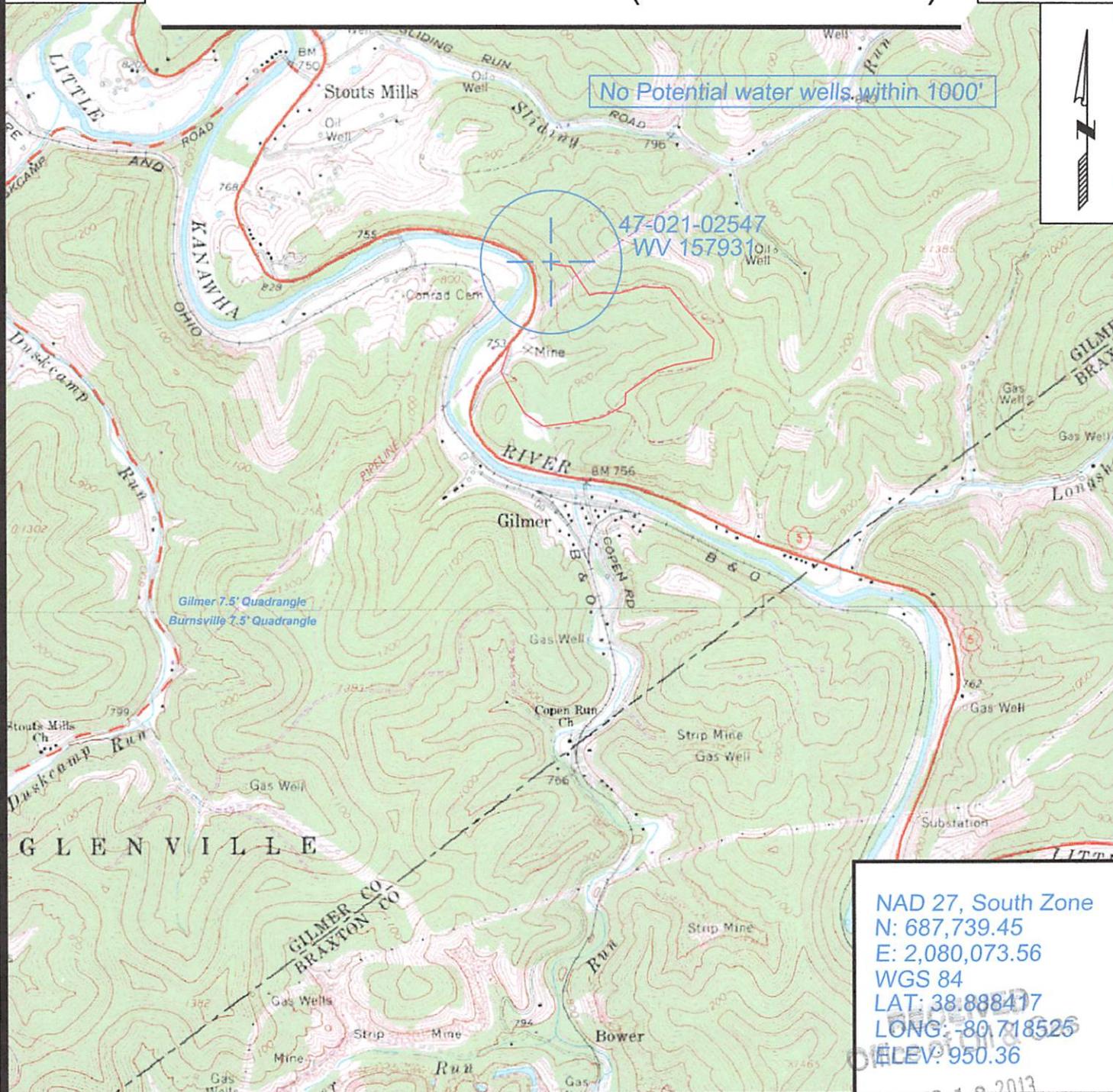
Date: August 22, 2013

District: Glenville

Project No: 25-19-00-07

Water

### 47-021-02547 WV 157931 (Marshall #2-W172)



No Potential water wells within 1000'

47-021-02547  
WV 157931

NAD 27, South Zone  
 N: 687,739.45  
 E: 2,080,073.56  
 WGS 84  
 LAT: 38.888417  
 LONG: -80.718525  
 ELEV: 950.36



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