



west virginia department of environmental protection

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

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.

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 X Liquid Injection _____ Waste Disposal: _____
If Gas, Production _____ X Or Underground storage _____ Deep _____ Shallow X

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
120 Professional Place
Address: Bridgeport, WV 26330

7) Designated Agent: Rex C. Ray
Address: 120 Professional Place
Bridgeport, WV 26330

8) Oil & Gas Bryan Harris
Name: P.O. Box 157
Address: Volga, WV 26238

9) Plugging Contractor:
Name: HydroCarbon Well Service
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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WV Department of
Environmental Protection
09/27/2013

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

09/27/2013



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STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

DEPT. OF MINES

Oil and Gas Division

WELL RECORD

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.

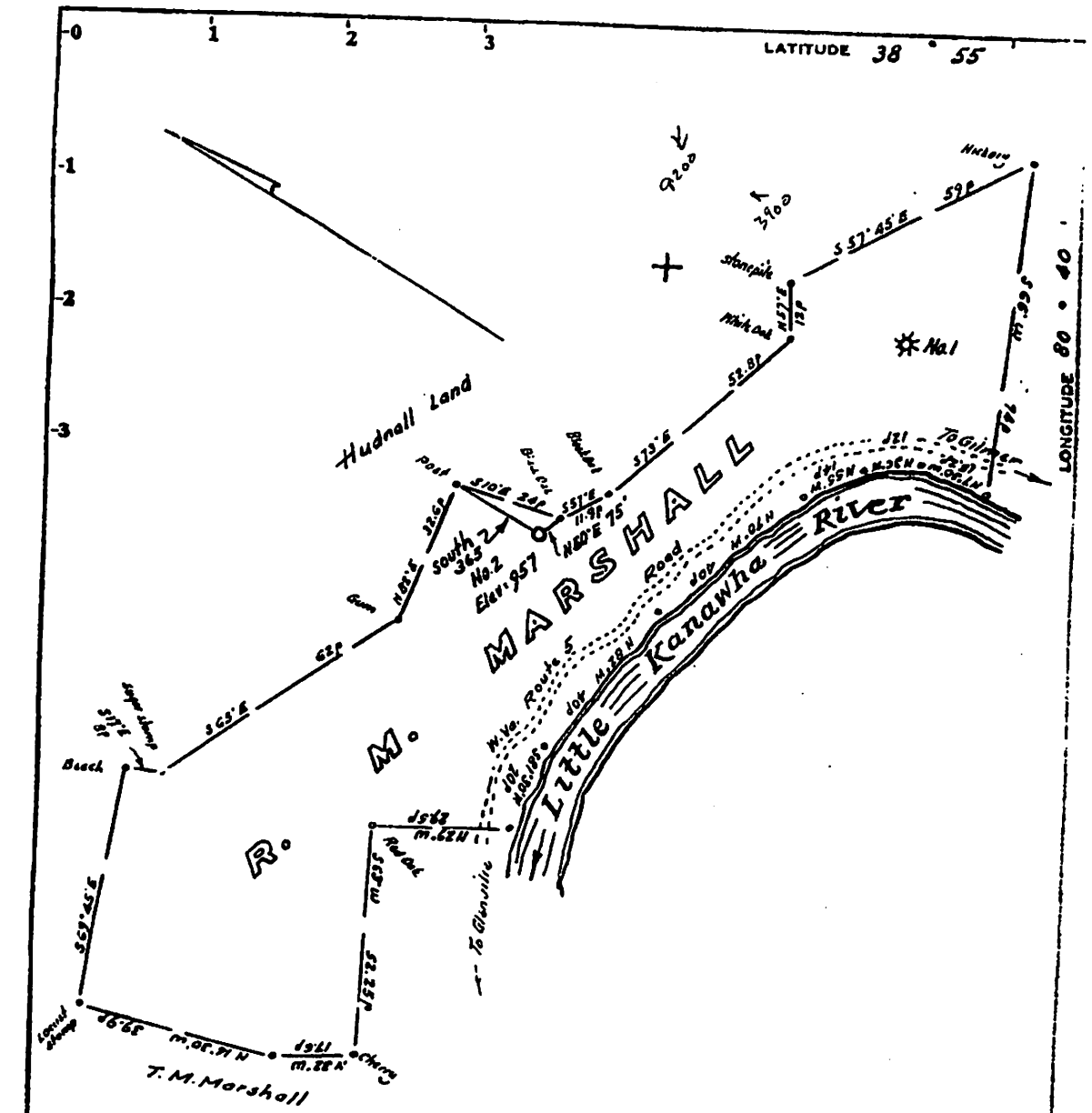
(over)

WV Department of
Environmental Protection
09/27/2013

Formation	Color	Hard or Soft	Top Feet ⁴	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 2013
 (Title)

WV Department of
 Environmental Protection
 09/27/2013



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

+ Denotes location of well on United States Topographic Maps, scale 1 to 50,000, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

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 WV Department of Environmental Protection
 47-021
 09/27/2013

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.

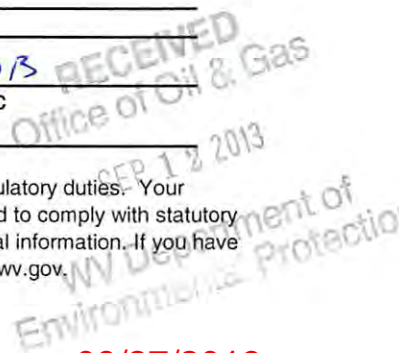
Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Division of Environmental 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: EQT Production Company
By: Victoria J. Roark
Permitting Supervisor
Address: PO Box 280
Bridgeport, WV 26330
Telephone: (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.



09/27/2013

**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.

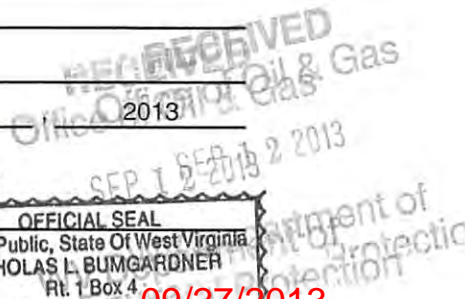
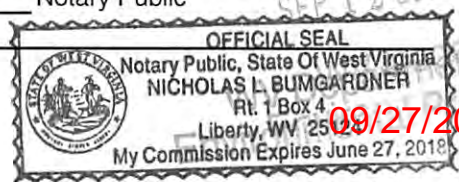
Company Official Signature *Victoria Roark*

Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV

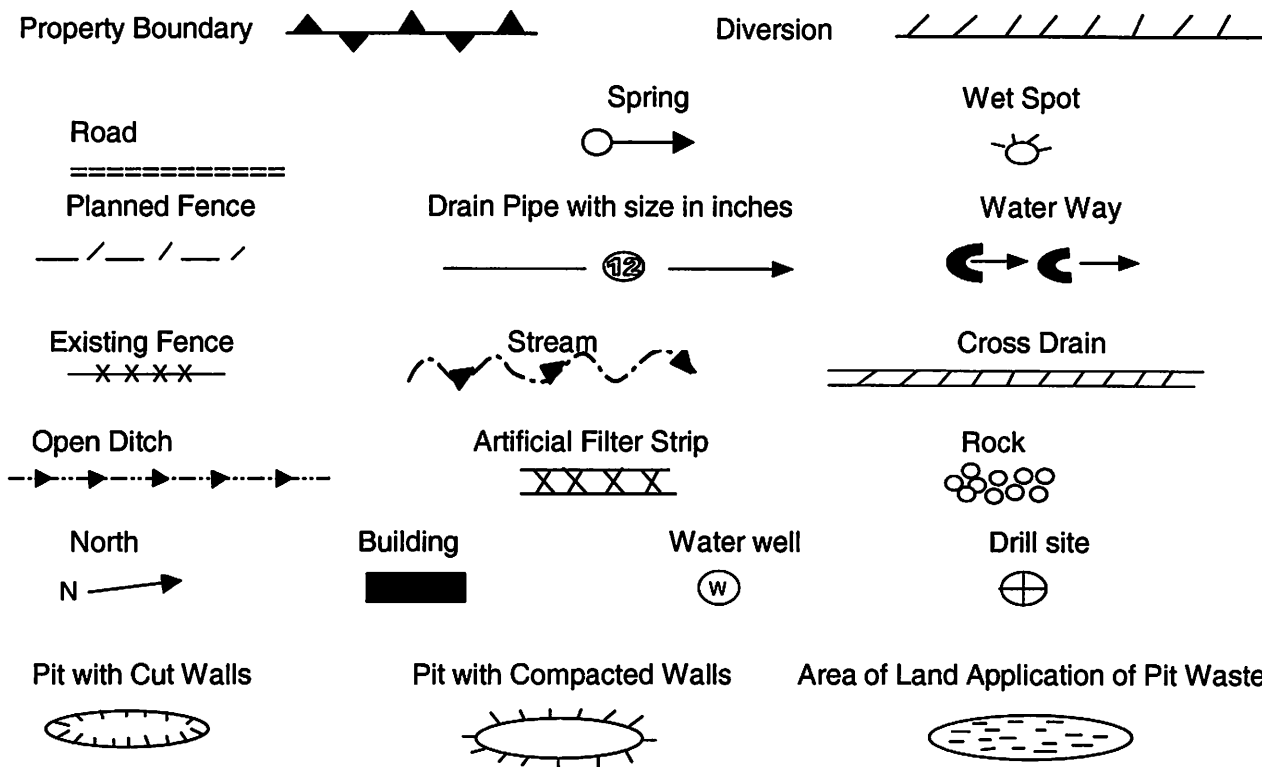
Subscribed and sworn before me this 10 day of SEPTEMBER 2013

My Commission Expires 4/27/2018 Notary Public



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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09/27/2013

Topo Quad: Gilmer 7.5'

Scale: 1" = 2000'

County: Gilmer

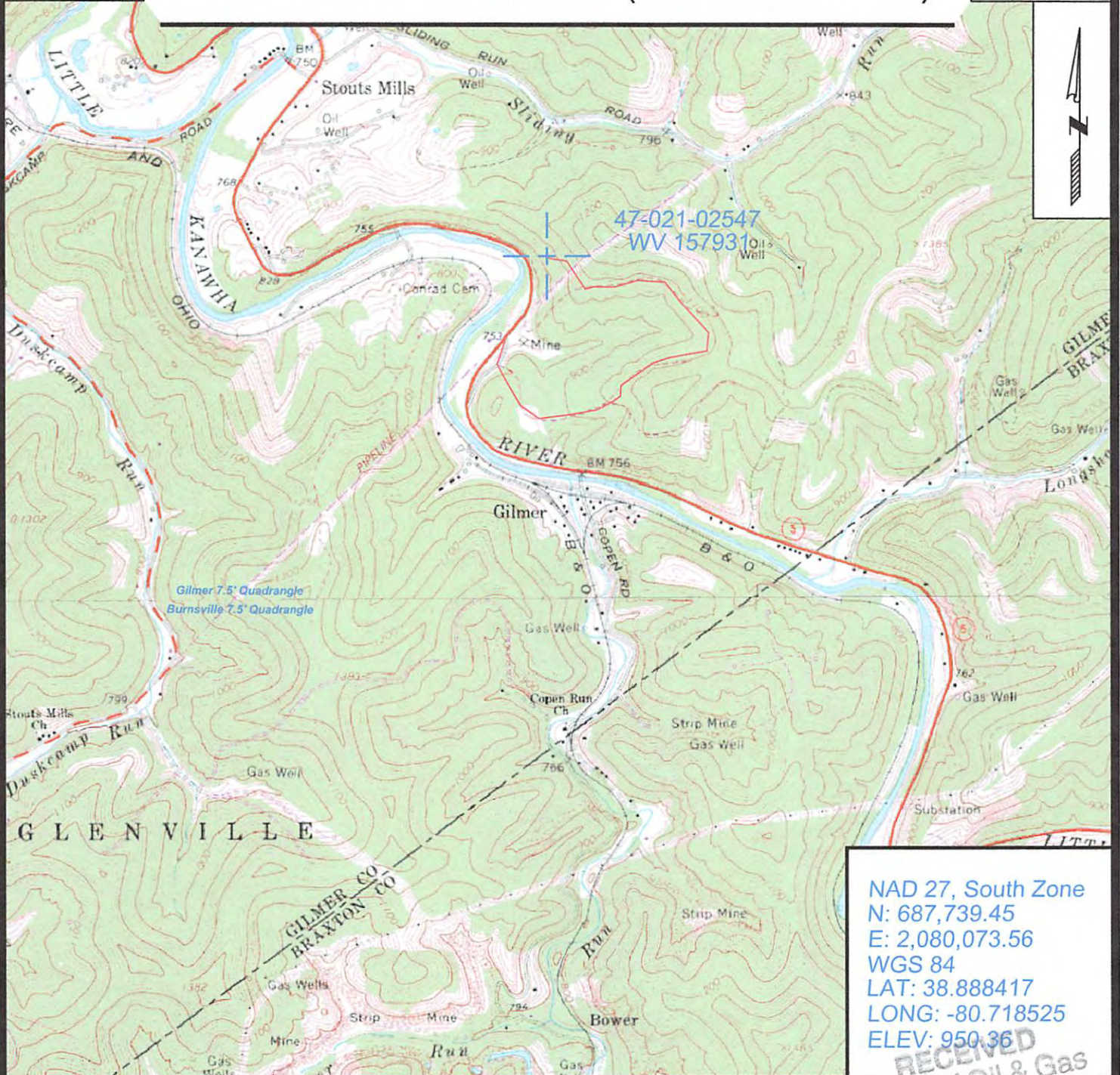
Date: August 22, 2013

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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2102547A

WW-7
8-30-06



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

API: 47-021-02547 WELL NO.: WV 157931 (Marshall #2-W172)

FARM NAME: Marshall

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Gilmer DISTRICT: Glenville

QUADRANGLE: Gilmer 7.5'

SURFACE OWNER: Willard and Rebecca Marks

ROYALTY OWNER: Douglas Morris, et al.

UTM GPS NORTHING: 4304432

UTM GPS EASTING: 524412 GPS ELEVATION: 289 m (950 ft)

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 X: Post Processed Differential X
Real-Time Differential

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.

[Signature]
Signature
8/22/13
Date

PS #2180
Title

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09/27/2013



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 • 145 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

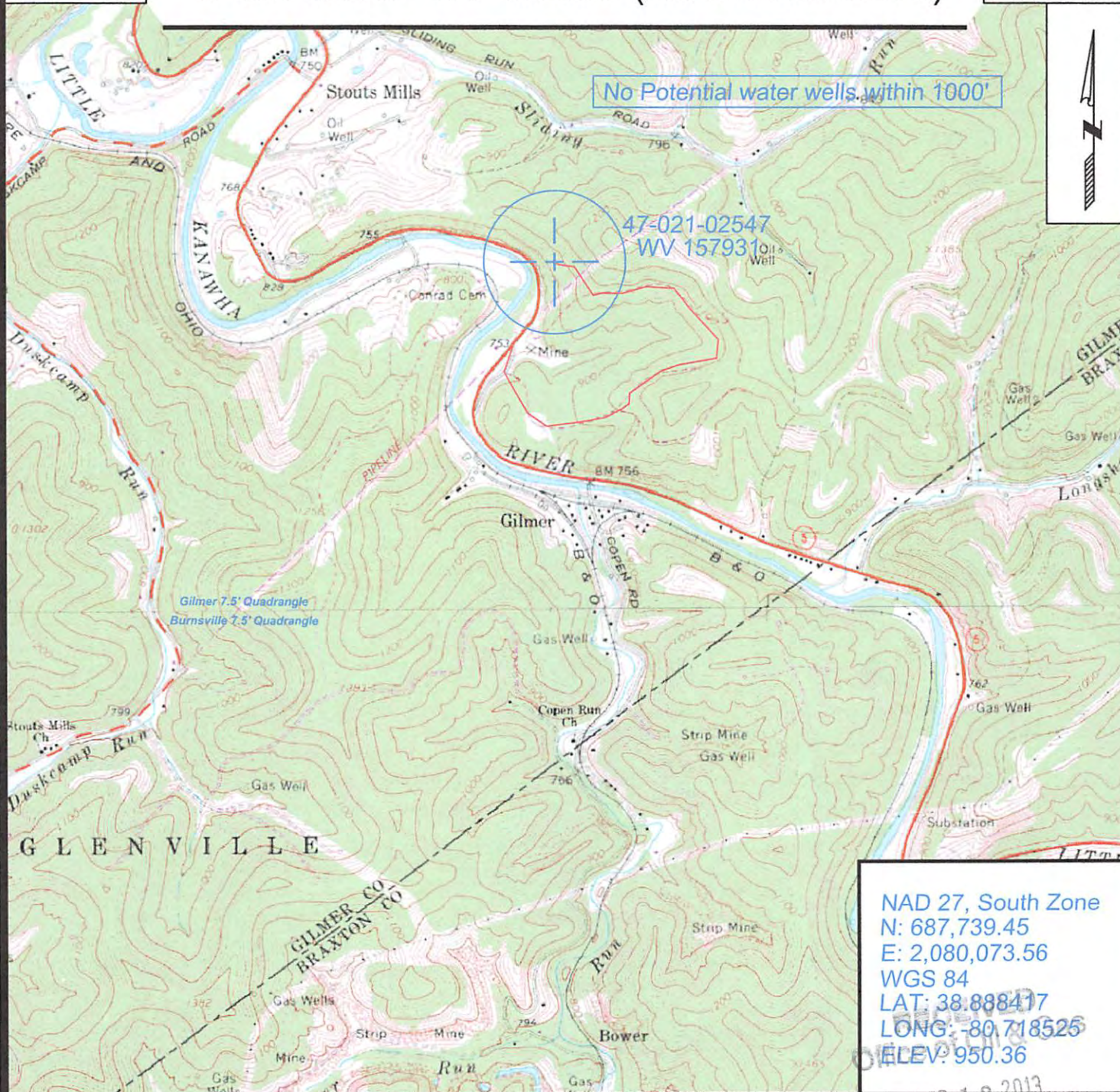
Date: August 22, 2013

District: Glennville

Project No: 25-19-00-07

Water

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



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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