



---

**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

February 22, 2016

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-3903468, 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: 2  
Farm Name: HARDING, McKINLEY  
**API Well Number: 47-3903468**  
**Permit Type: Plugging**  
Date Issued: 02/22/2016

**Promoting a healthy environment.**

**02/26/2016**

## 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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

3903468P

Form WW-4 (B)  
Permit Copy  
(Rev 2/01)

Date: February 1, 2016  
Operator's Well \_\_\_\_\_  
Well No. 150201 (Harding #2)  
API Well No.: 47 039 - 03468

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

10000  
CK20224

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: 1021' Watershed: Coon Creek  
Location: Poca County: Kanawha Quadrangle: Romance 7.5'  
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 Terry Urban  
Name: P.O. Box 1207  
Address: Clendenin, WV 25045

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.**

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 \_\_\_\_\_

02/26/2016

PLUGGING PROGNOSIS

**Harding #2 (150201)**  
Kanawha County, West Virginia  
API # 47-039-03468  
Romance Quad

BY: Craig Duckworth  
DATE: 1/27/16

**CURRENT STATUS:**

8 5/8" csg @ 235' cts  
4 1/2" csg @ 2351' 135sks

TD @ 2434'

Fresh Water @ none reported

Salt Water @ 1570'

Salt Sand @ 1570'

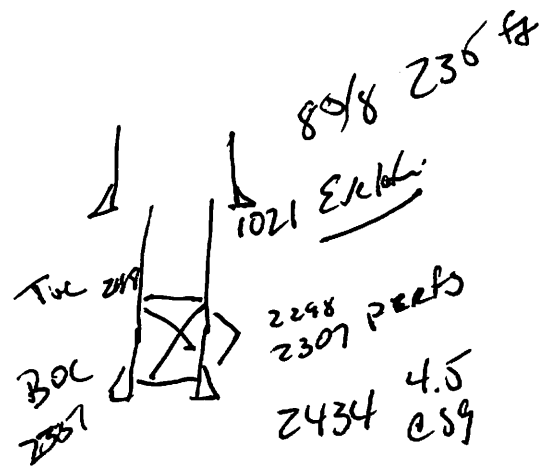
Coal @ none reported

Gas shows @ Berea 2298'-2307'

Oil Shows @ none reported

Stimulation: Berea ( 2304'-2301'Perf.)

1. Notify State Inspector, Terry Urban 304-549-5915, and 24 hrs prior to commencing operations.
2. TOOH w/ 2" tbg and check condition.
3. TIH w/ tbg @ 2351'; Set 153' C1A Cement Plug @ 2351' to 2198' (Berea 2307'-2298')
4. TOOH w/ tbg @ 2198'; Gel hole @ 2198' to 1620'
5. TOOH w/ tbg and attempt to pull 4 1/2"; Freepoint 4 1/2" cut at freepoint. Set 150' C1A Cement Plug @ 1620' to 1470' (41/2" csg cut & Salt Sand 1570')
6. Set a 150' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas shows below 41/2" cut Do not omit any plugs
7. TOOH w/ tbg @ 1470'; Gel hole @ 1470' to 285'
8. TOOH w/ tbg @ 285'; Set 285' C1A Cement Plug @ 285' to 0 (surface, 8 5/8" @ 235')
9. Top off as needed
10. Set Monument to WV-DEP Specifications
11. Reclaim Location & Road to WV-DEP Specifications



Will also set Evaluation Plug @ 1021' or 1005' KB

*Handwritten signature*  
2-8-15  
Received

FEB 10 2016

Office of Oil and Gas  
West Virginia Department of Environmental Protection

02/26/2016





3903468P  
**RECEIVED**

OCT - 9 1979

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

**Oil and Gas Division  
WELL RECORD**

OIL & GAS DIVISION  
DEPT. OF MINES

Quadrangle Romance  
Permit No. Kan 3468

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

Company <u>D. C. Malcolm, Inc.</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu ft. (Sks.)
Address <u>1006 Commerce Square, Charleston, W. Va.</u>				
Farm <u>McKinley Harding</u> Acres <u>80.2</u>				
Location (waters) <u>Coon Creek</u>				
Well No. <u>2</u> Elev. <u>1005</u> KB	Size			
District <u>Poca</u> County <u>Kanawha</u>	20-16			
The surface of tract is owned in fee by _____	Cond.			
<u>T. E. Tignor</u>	13-10"			
Address <u>Blundon, W. Va.</u>	9 5/8			
Mineral rights are owned by <u>McKinley Harding et al</u> Address _____	8 5/8	235	235	to surface
Drilling Commenced <u>8-2-79</u>	7			
Drilling Completed <u>8-10-79</u>	5 1/2			
Initial open flow _____ cu. ft. --- bbls.	4 1/2	2351	2351	135 SX thixo-tropic
Final production <u>450000</u> cu. ft. per day --- bbls.	3			
Well open <u>12</u> hrs. before test <u>400</u> RP.	2			
	Liners Used			

Well treatment details:

Attach copy of cementing record.

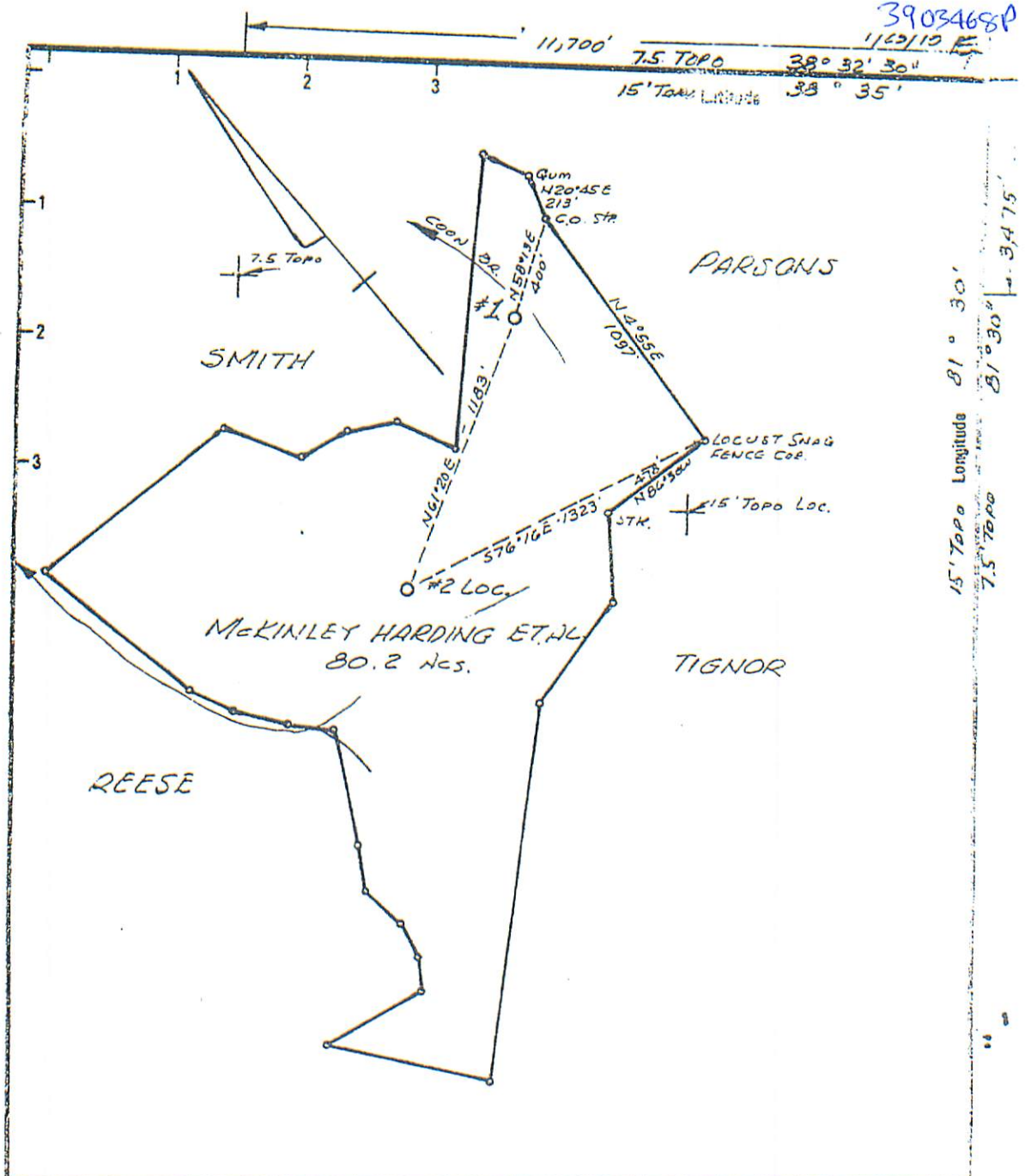
Frac Berea thru perfs 2301-2304 (10 holes) w/500 gals acid, 5000# 80/100, 30,000# 20/40, 575 bbls water

Coal was encountered at \_\_\_\_\_ Feet \_\_\_\_\_ Inches  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water 1570 Feet \_\_\_\_\_  
Producing Sand Berea Depth 2298-2307

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Sand & shale			0	250		
Shale			250	324		
Sand & Shale			324	1262		
Sand			1262	1728		
Big Lime			1728	1880		
Sand (Injun)			1880	1898		
Shale			1898	2298		
Sand			2298	2307		
Shale			2307	2434	T. D.	

(over)

\* Indicates Electric Log tops in the remarks section.



3903468P  
11/29/15 E

11,700' 7.5 TOPO 38° 32' 30"  
15' TOPO Latitude 33° 35'

15' TOPO Longitude 81° 30'  
7.5 TOPO 81° 30' 34.75'

New Location   
 Drill Deeper   
 Abandonment

Minimum Error of Closure 1 IN 200  
 Source of Elevation L' SGE EL. 995' ROAD INTERSECTION ALMONS Fc.

"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."

Company D.C. MALCOLM INC.  
 Address 1006 Commerce St. CHARLESTON, WVA  
 Farm MCKINLEY HARDING ET AL.  
 Tract \_\_\_\_\_ Acres 80.2 Lease No. \_\_\_\_\_  
 Well (Farm) No. 2 Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 995.0  
 Quadrangle 7.5 ROMANCE  
15' KENNA  
 County KANAWHA District POCA  
 Engineer H. L. Deaton  
 Engineer's Registration No. 1832  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date 7-21-79 Scale 1" = 500'

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

WELL LOCATION MAP  
 FILE NO. 47-039-3468

+ 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.

02/26/2016



WW-4-A  
Revised 6/07

1) Date: February 1, 2016  
2) Operator's Well Number  
150201 (Harding #2)  
3) API Well No.: 47 039 - 03468  
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 Theodore E. & Ilene G. Tignor  
Address 278 Thislebrook Rd  
Elkview, WV 25071  
  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
  
6) Inspector Terry Urban  
Address P.O. Box 1207  
Clendenin, WV 25045  
Telephone 304-549-5915

5) (a) Coal Operator:  
Name None  
Address \_\_\_\_\_  
  
(b) Coal Owner(s) with Declaration  
Name Lanora J. Davis  
108 Margaux Way  
Address Charleston, WV 25311-1595  
  
Name see attached listing  
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.

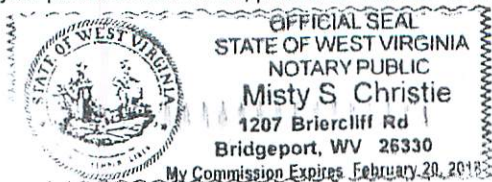
The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

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  
Its: Permitting Supervisor  
Address: PO Box 280  
Bridgeport, WV 26330  
Telephone: (304) 848-0076

Subscribed and sworn before me this 1st day of February, 2016  
Misty S. Christie Notary Public  
My Commission Expires: 2/20/18

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).



02/26/2016

WW2-A

**Additional Coal Owners:**

James K. Fisher ✓  
47 Shoal Creek Ct.  
Martinsburg, WV 24501-5746

Mary Ann Harding ✓  
Rt 5 Box 419  
Charleston, WV 25312-9804

Martha Frances Melton ✓  
2006 Cortona Lane  
Charleston, WV 25320-6040

Carolyn Sue Moore ✓  
5032 Indiana St.  
South Charleston, WV 25309

Wilma Lea Moss ✓  
Rt 5 Box 386A  
Charleston, WV 25312-9804

Joyce Nichols ✓  
49 Turner Rd.  
Elkview, WV 25071-9225

Wilma Pence ✓  
568 6th Street  
Parkersburg, WV 26101-5116

Kimberly Fisher ✓  
1904 4th Ave.  
Charleston, WV 25311-1915

Hamon Kelly ✓  
Rt 4. Box 30-15  
Charleston, WV 25312-9347



**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: Coon Creek Quadrangle: Romance 7.5'

Elevation: 1021' County: Kanawha District: Poca

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.

FEB 10 2016

Company Official Signature \_\_\_\_\_

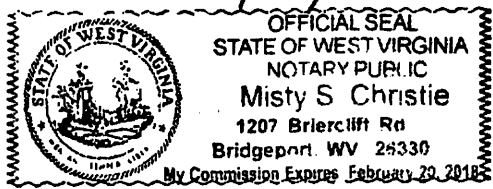
Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV

Subscribed and sworn before me this 2nd day of February, 2016

Misty S. Christie  
Notary Public

My Commission Expires 2/20/18

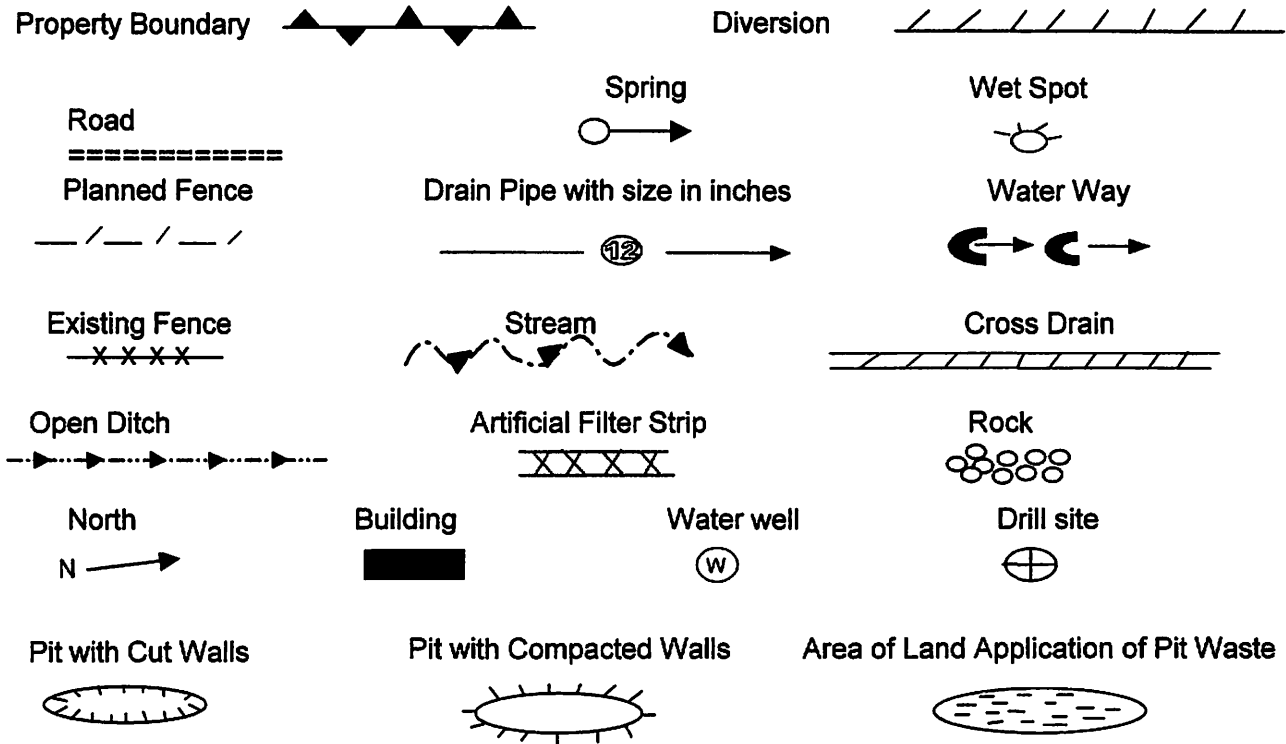


Office of Oil and Gas  
WV Dept. of Environmental Protection

02/26/2016

**OPERATOR'S WELL NO.:**  
150201 (Harding #2)

**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: [Signature]

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

Title: Field Inspections

Date: 2-8-16

Field Reviewed? Yes  No

Received

FEB 10 2016

Office of Oil and Gas  
WV Dept. of Environmental Protection



Topo Quad: Romance 7.5'

Scale: 1" = 2000'

County: Kanawha

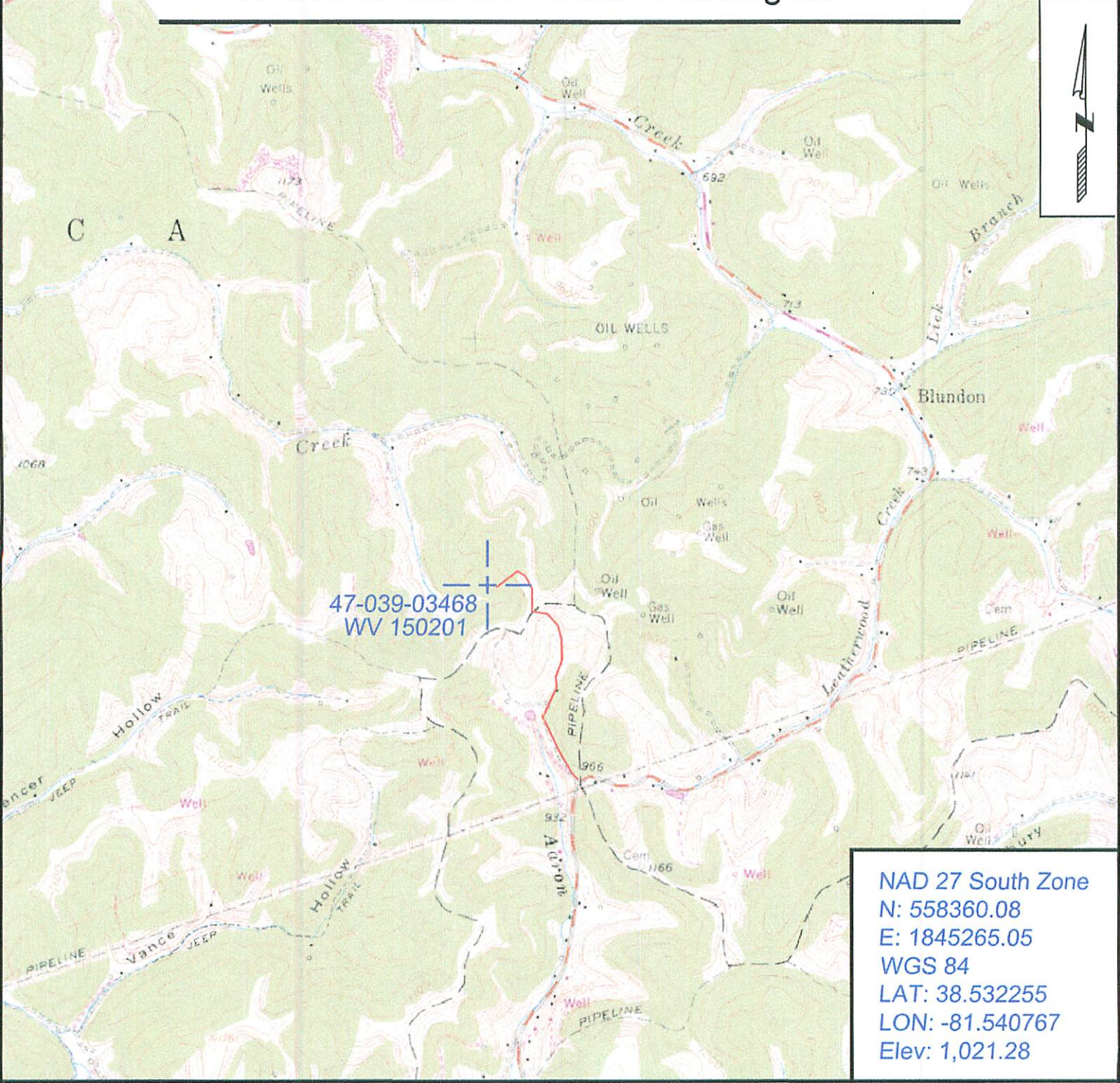
Date: January 26, 2016

District: Poca

Project No: 52-14-00-07

47-039-03468 WV 150201 Harding #2

Topo



NAD 27 South Zone  
 N: 558360.08  
 E: 1845265.05  
 WGS 84  
 LAT: 38.532255  
 LON: -81.540767  
 Elev: 1,021.28



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**  
 1-800-482-8606  
 237 Birch River Road  
 Birch River, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:  
**EQT Production Company**  
 P.O. Box 280  
 Bridgeport, WV 26330  
 02/26/2016



WW-7  
8-30-06



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

API: 47-039-03468 WELL NO.: WV 150201 (Harding #2)

FARM NAME: Harding

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Kanawha DISTRICT: Poca

QUADRANGLE: Romance 7.5'

SURFACE OWNER: James Tignor

ROYALTY OWNER: Lanora J. Davis, et al

UTM GPS NORTHING: 4265011

UTM GPS EASTING: 452867 GPS ELEVATION: 311m (1021 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 South, 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.**

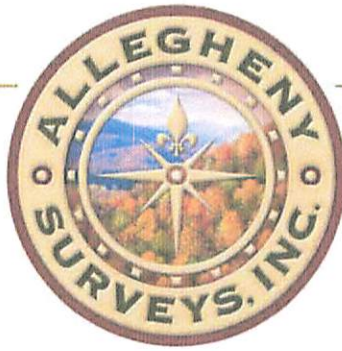
I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

*Sally Oborn*  
Signature

PS # 2180  
Title

1/28/16  
Date

02/26/2016



## POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY INC.

LEASE NAME AND WELL No. Harding #2 (47-039-03468) WV 150201

### POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 150201.

#### BIRCH RIVER OFFICE

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

#### ALUM CREEK OFFICE

P.O. Box 108 • 1413 Childress Rd  
Alum Creek, WV 25003  
*phone:* 304-756-2949  
*fax:* 304-756-2948

#### MARTINSBURG OFFICE

25 Lights Addition Drive  
Martinsburg, WV 25404  
*phone:* 304-901-2162  
*fax:* 304-901-2182

02/26/2016



Topo Quad: Romance 7.5'

Scale: 1" = 2000'

County: Kanawha

Date: January 26, 2016

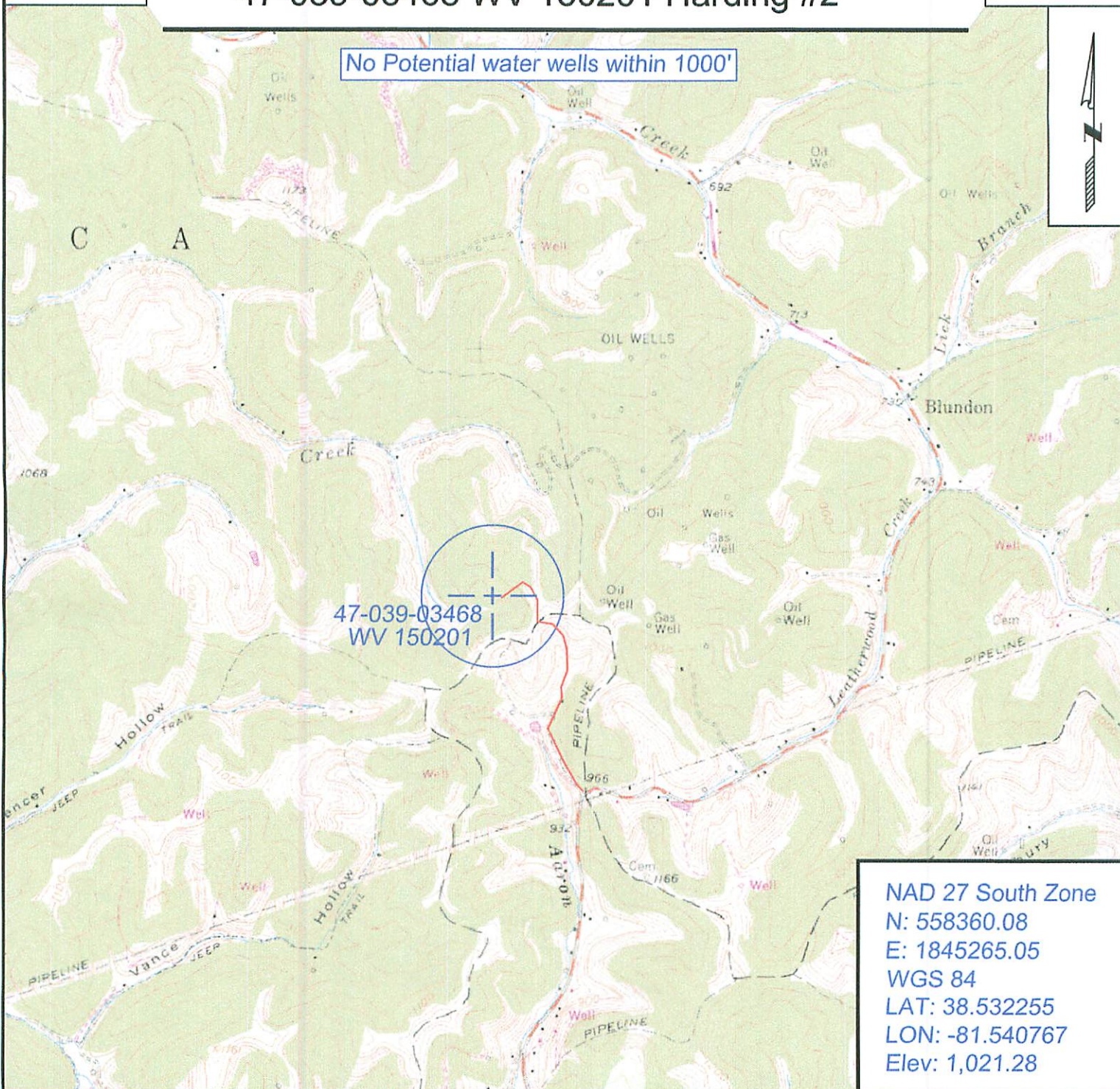
District: Poca

Project No: 52-14-00-07

Water

# 47-039-03468 WV 150201 Harding #2

No Potential water wells within 1000'



NAD 27 South Zone  
 N: 558360.08  
 E: 1845265.05  
 WGS 84  
 LAT: 38.532255  
 LON: -81.540767  
 Elev: 1,021.28



SURVEYING AND MAPPING SERVICES PERFORMED BY:

## ALLEGHENY SURVEYS, INC.

1-800-482-8606  
 237 Birch River Road  
 Birch River, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:

## EQT Production Company

P.O. Box 280  
 Bridgeport, WV 26330

02/26/2016