



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.

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 _____

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'

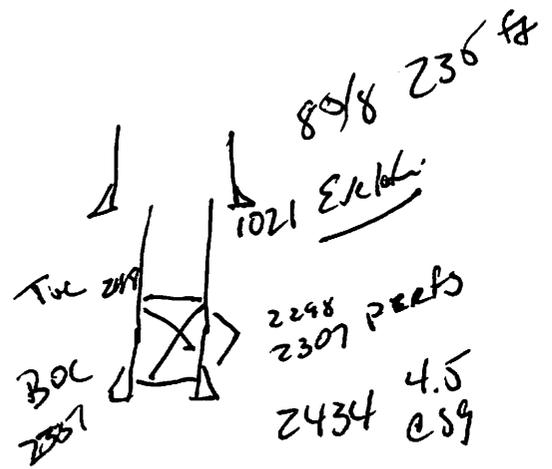
Coal @ none reported

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
Elevation Plug
@ 1021' or
1005' KB

[Signature]
2-8-15
Received

FEB 10 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 KB</u>	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.

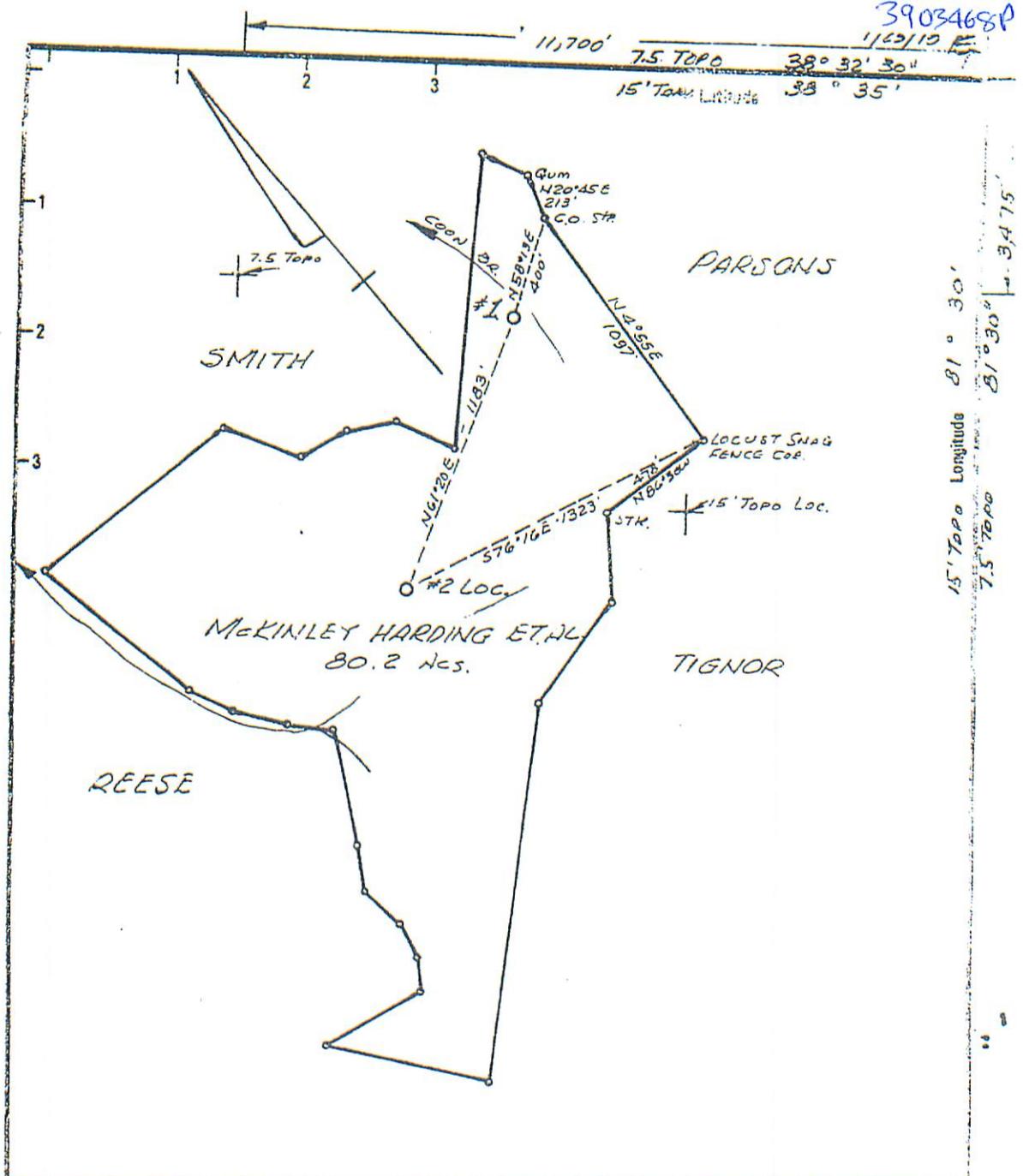
Frac Berea thru perfs 2301-2304 (10 holes) w/500 gals acid, 5000# 80/100, 30,000# 20/40, 575 bbls water

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.

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:

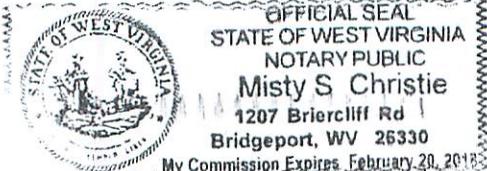
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
 - (2) The plat (surveyor's map) showing the well location on Form WW-6.
- The reason you received these documents is that you have 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.



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

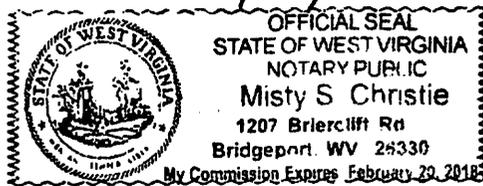
Office of Oil and Gas
WV Dept. of Environmental Protection

Company Official Title Permitting Supervisor-WV

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

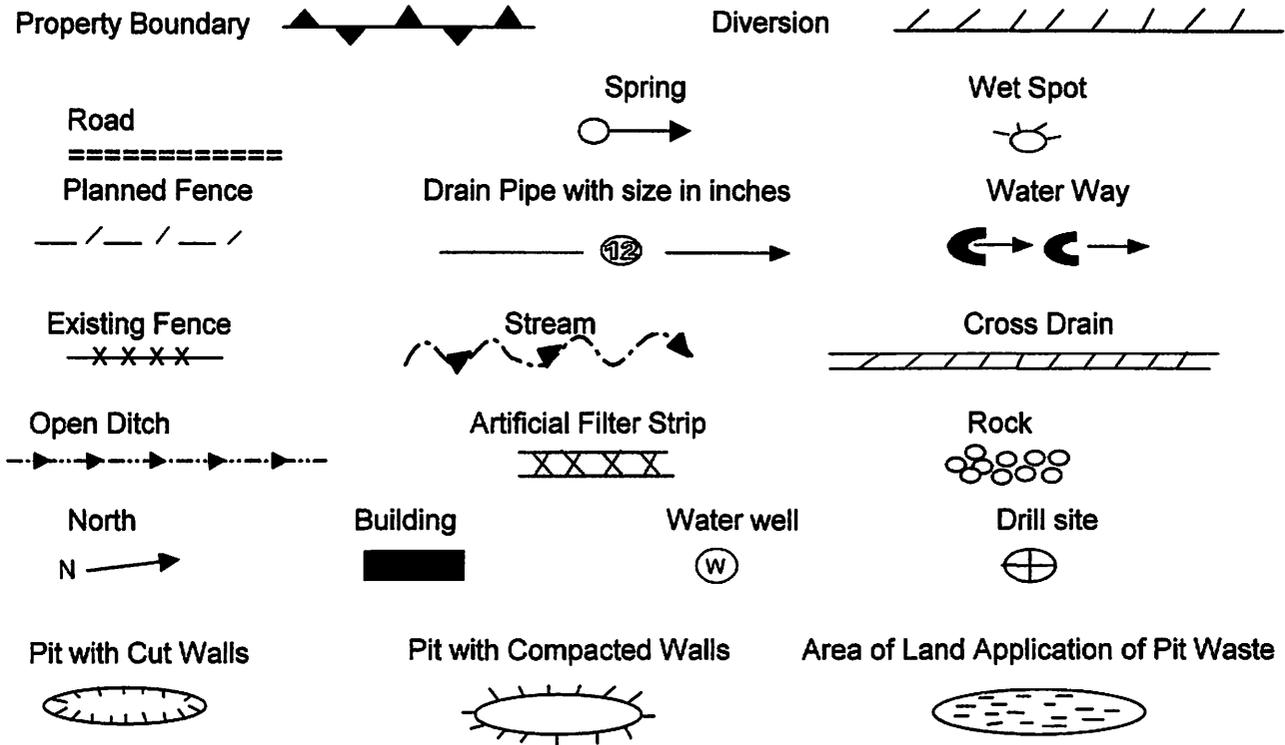
Misty S. Christie
Notary Public

My Commission Expires 2/20/18



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

3903468P

Topo Quad: Romance 7.5'

Scale: 1" = 2000'

County: Kanawha

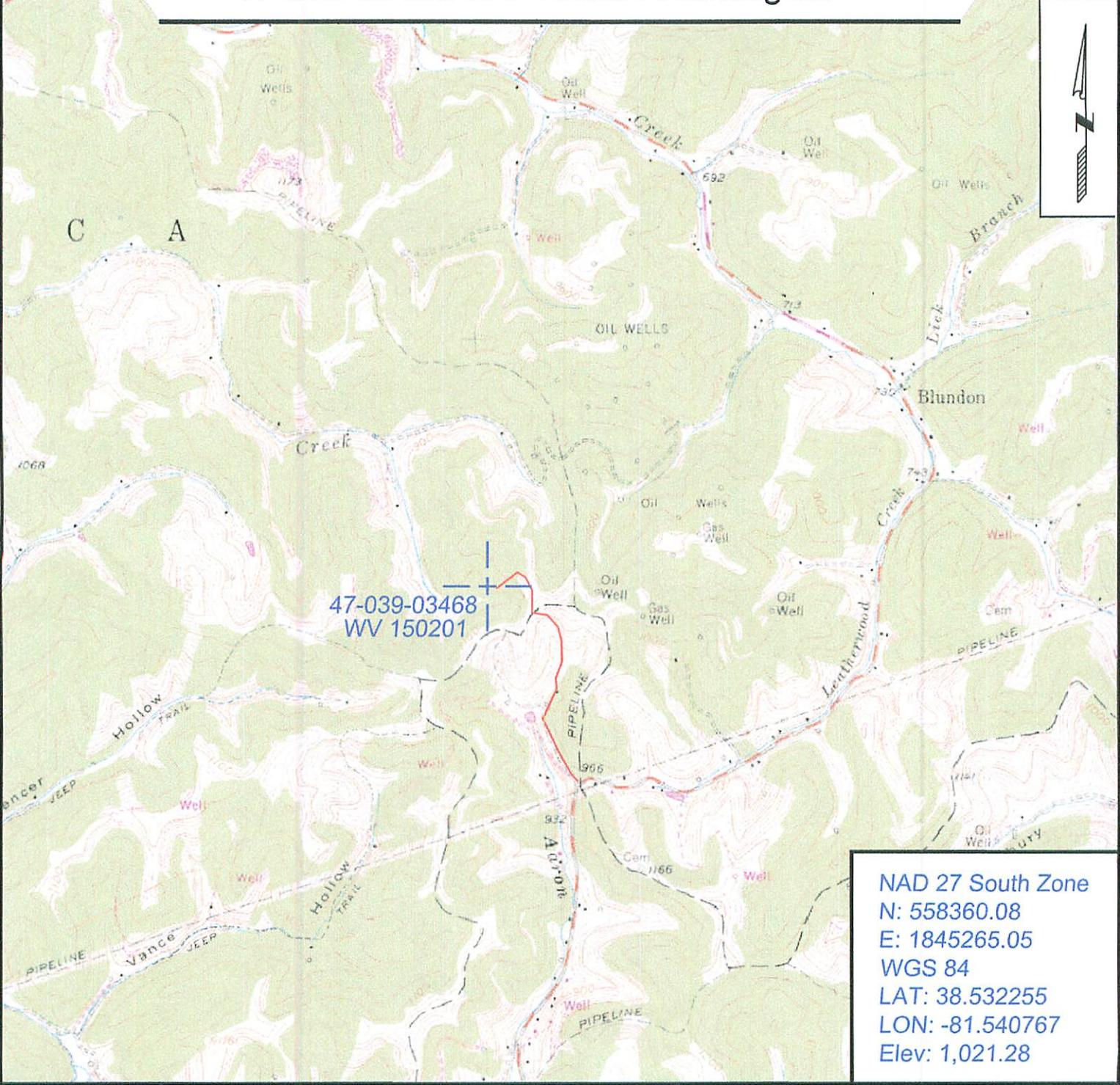
Date: January 26, 2016

District: Poca

Project No: 52-14-00-07

47-039-03468 WV 150201 Harding #2

Topo



47-039-03468
WV 150201

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

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:

- Datum: NAD 1983, Zone: 17 South, 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 X: Post Processed Differential X
Real-Time Differential

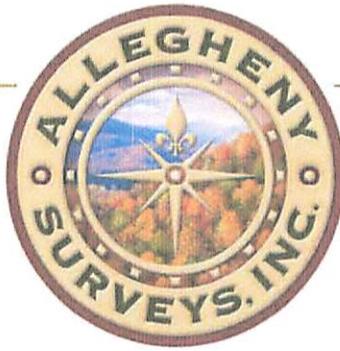
- Letter size copy of the topography map showing the well location.**

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.

Sage Brown
Signature

PS # 2180
Title

1/28/16
Date



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

Topo Quad: Romance 7.5'

Scale: 1" = 2000'

County: Kanawha

Date: January 26, 2016

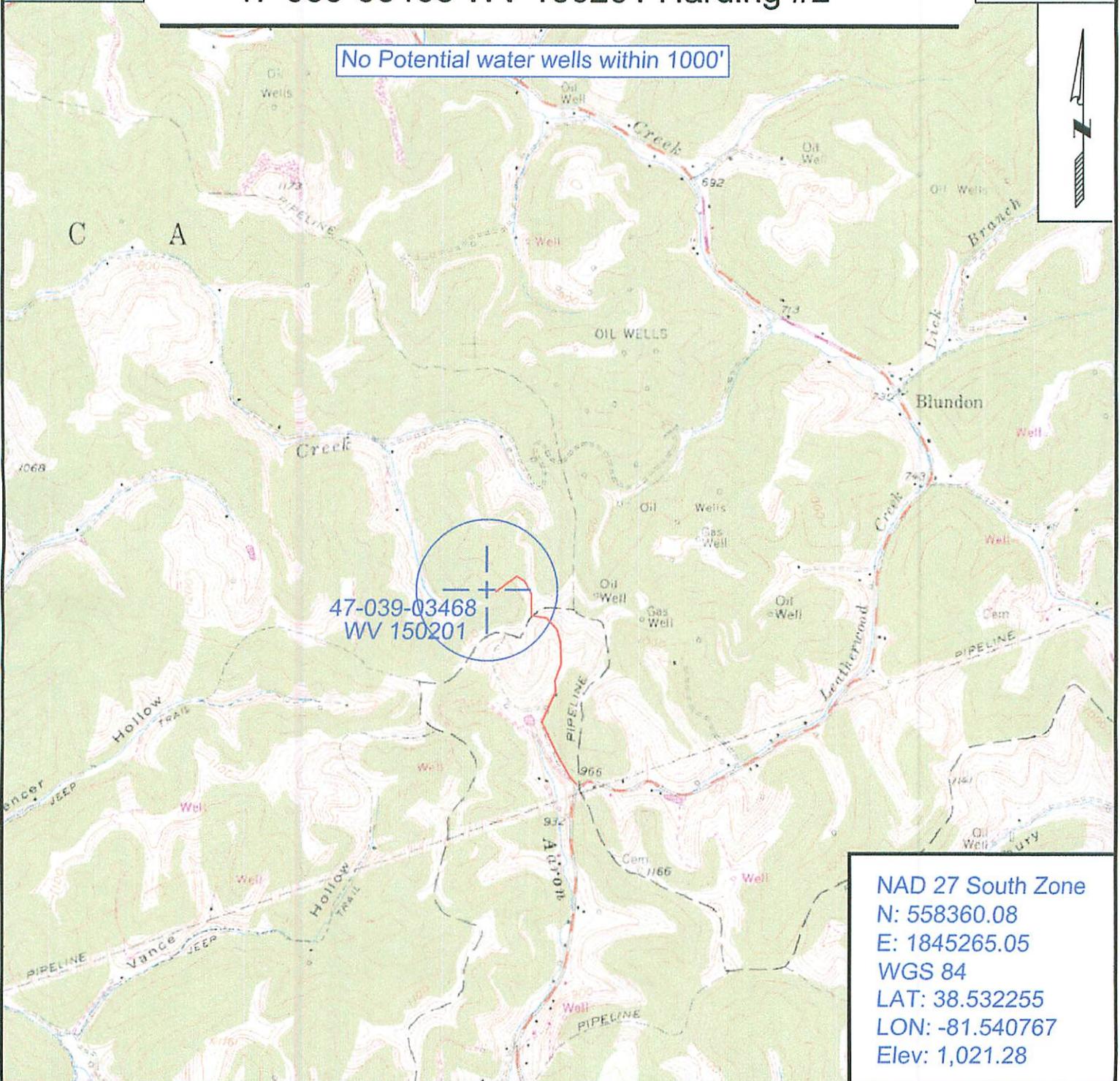
District: Poca

Project No: 52-14-00-07

Water

47-039-03468 WV 150201 Harding #2

No Potential water wells within 1000'



47-039-03468
WV 150201

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:

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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