



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

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Tuesday, July 11, 2017
WELL WORK PERMIT
Vertical / Plugging

EQT PRODUCTION COMPANY
120 PROFESSIONAL PLACE
BUILDING II
BRIDGEPORT, WV 26330

Re: Permit approval for 1615
47-103-00828-00-00

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.

Please be advised that form WR-35, Well Operators Report of Well Work 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: 1615
Farm Name: MILLS
U.S. WELL NUMBER: 47-103-00828-00-00
Vertical / Plugging
Date Issued: 7/11/2017

Promoting a healthy environment.

07/14/2017

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.

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

Date: April 12, 2017
Operator's Well _____
Well No. 601615 (John Mills #1615)
API Well No.: 47 103 - 00828

CK # 22708
\$100.00

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: 987 ft. Watershed: North Fork
Location: Grant County: Wetzel Quadrangle: Big Run 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 Derek Haught
Name: P. O. Box 85
Address: Smithville, WV 26178

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 5-9-17

PLUGGING PROGNOS

601615
 John Mills
 API# 47-103-00828
 District, Grant
 Wetzel County, WV

BY: R Green
 DATE: 04/20/17

CURRENT STATUS:**TD @ 2837'****Elevation @ 986'****13" casing @ 203'****10" casing @ 1201'****8 1/4" casing @ 1839'****6 5/8" casing @ 1942'****4 1/2" casing @ 2837' (set on 4" X 6 5/8" packer @ 2774')*****Note, 4 1/2" casing perforated from 2780' to 2805' Gordon Sand****Fresh Water @ None Reported****Saltwater @ None Reported****Oil Show @ None Reported****Gas shows @ 1959', & 2780'****Coal @ 210'-212' & 682'-687'**

1. Notify inspector, Derek Haught, @ 304-206-7613, 24 hours prior to commencing operations.
2. Check TD @ or below 2800'.
3. TIH, spot 30 bbl. of 6% gelled water, followed by a 300' C1A cement plug 2800' to 2500'. (Gordon Perfs) WOC 8 hrs., TAG TOC, add additional C1A cement if necessary.
4. Free point 4 1/2" casing, cut casing @ free point. TOOH casing.
5. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
6. TIH wireline and perforate 6 5/8" & 8 1/4" casing with 6 holes each @ 1935', 1900', 1850', 1800', 1750'.
7. Set 250' C1A cement plug 1950' to 1700', (6 5/8" casing seat & 8 1/4" casing seat.)
8. Free point 6 5/8" casing, cut casing @ free point. TOOH casing.
9. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
10. Free point 8 1/4" casing, cut casing @ free point. TOOH casing.
11. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
12. TOOH to 1300', set 400' C1A cement plug 1300' to 900' (10" casing seat, & elevation).
13. Free point 10" casing, cut casing @ free point. TOOH casing.
14. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
15. TOOH to 700' set 550' C1A cement plug, 700' to 150'. (13" casing seat & coal)
16. Free point 13" casing, cut casing @ free point. TOOH casing.
17. Set C1A cement plug 50' in casing cut to surface.
18. ***Note, if unable to cut and pull 13" casing TIH and perforate 13" casing with 6 holes each @ 150', 100', and 50', TIH and set 150' C1A cement plug 150' to surface.**

07/14/2017

19. Erect monument with API#, date plugged, company name, and company 6-digit ID#.
20. Reclaim location and road to WV-DEP specifications.

WW-4-A
Revised 6/07

- 1) Date: April 12, 2017
- 2) Operator's Well Number
601615 (John Mills #1615)
- 3) API Well No.: 47 103 - 00828
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 Coastal Lumber Co.
Address P. O. Box 709
Buckhannon, WV 26201

(b) Name _____
Address _____

(c) Name _____
Address _____

6) Inspector Derek Haught
Address P. O. Box 85
Smithville, WV 26178
Telephone (304) 206-7613

5) (a) Coal Operator:
Name None
Address _____

(b) Coal Owner(s) with Declaration
Name Mills Wetzel Land, Inc.
Attn: Michael Beemer
Address 222 N. LaSalle St., Suite 2400
Chicago, IL60601

Name Murray Energy Corporation
Address Attn: Alex O'Neill
46226 National Road
St. Clairsville, OH 43950

(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.

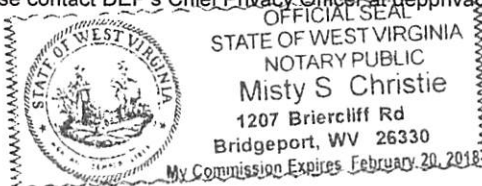
The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

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 24th day of April, 2017
Misty S. Christie Notary Public
 My Commission Expires: 2/22/18

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.



07/14/2017

WW-9
Revised 5/16

Page _____ of _____
2) Operator's Well Number
601615 (John Mills #1615)
3) API Well No.: 47 103 - 00828

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

Operator Name: EQT PRODUCTION COMPANY OP CODE: _____

Watershed (HUC 10): North Fork Quadrangle: Big Run 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes___ No X

Will a pit be used? Yes X No___

If so, please describe anticipated pit waste:

Formation Fluids

Will a synthetic liner be used in the pit? Yes X No ___ Is so, what ml.? 20 ~~40~~ ml

Proposed Disposal Method for Treated Pit Wastes:

- _____ Land Application (if selected provide a completed form WW-9-GPP)
- _____ Underground Injection (UIC Permit Number _____)
- X _____ Reuse (at API Number -- Various _____)
- X _____ Off Site Disposal Permit (Supply form WW-9 for disposal location. See attachment)
- _____ Other: (Explain _____)

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

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

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

Additives to be used in drilling medium? _____

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? _____

Permittee shall provide written notice to the Office of the 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 Division 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

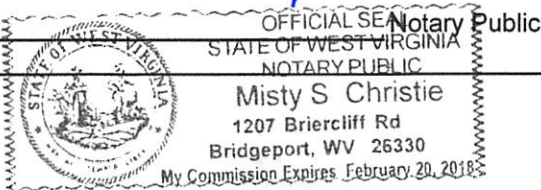
Company Official Signature _____

Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor - WV

Subscribed and sworn before me this 24th day of April, 2017

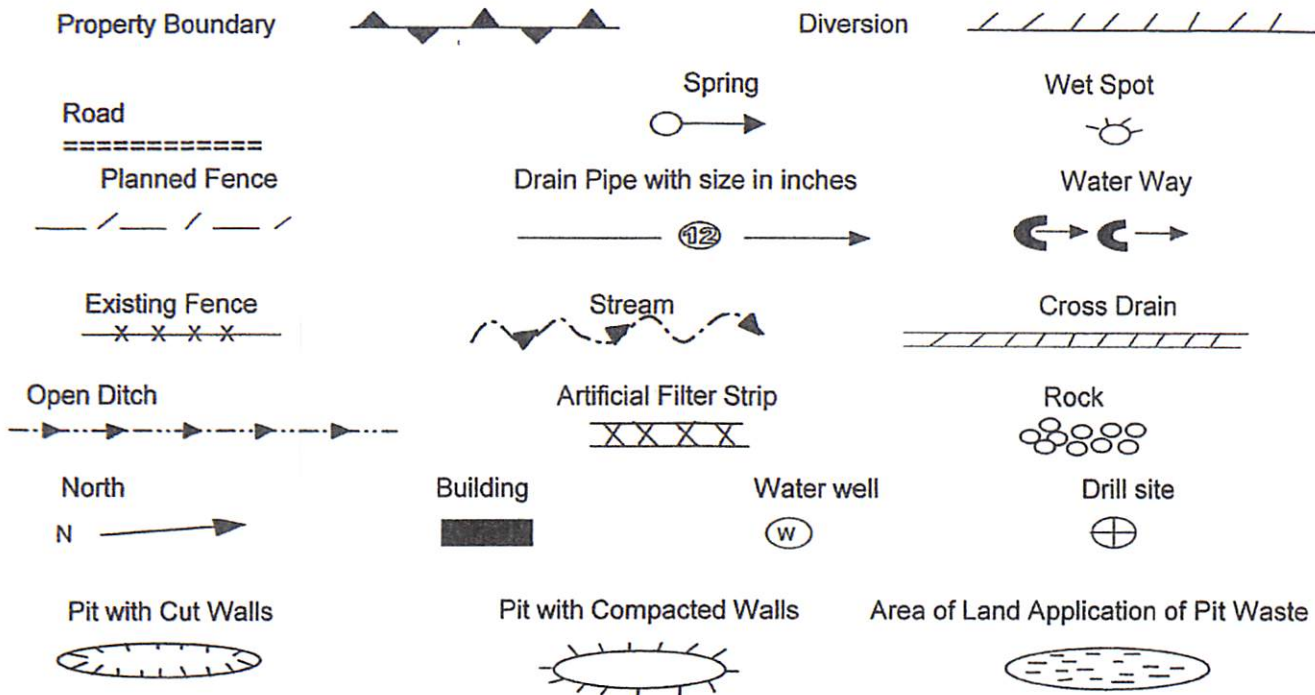
Misty S. Christie
My Commission Expires 2/20/18



07/14/2017

OPERATOR'S WELL NO.:
601615 (John Mills #1615)

LEGEND



Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH
 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
Red Fescue	40	Red Fescue	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: Oil & Gas Inspector Date: 5-9-17
 Field Reviewed? Yes No

EQT Production Water plan Offsite disposals
--

Waste Management - Meadowfill Landfill

Rt. 2, Box 68 Dawson Drive
Bridgeport, WV 26330
304-326-6027
Permit #SWF-1032-98
Approval #100785WV

Waste Management - Northwestern Landfill

512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

Topo Quad: Big Run 7.5' Scale: 1" = 500'

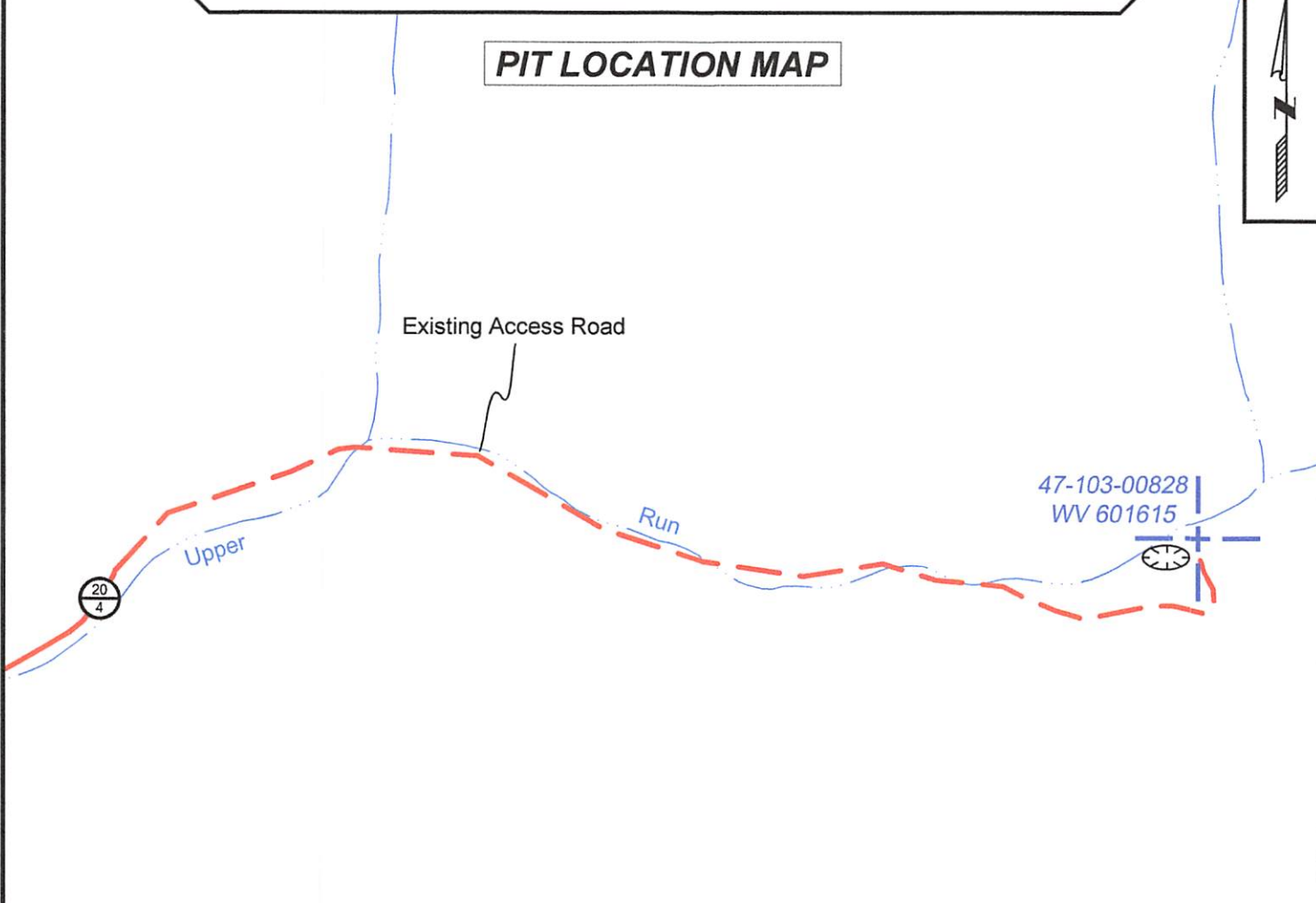
County: Wetzel Date: April 4, 2017

District: Grant Project No: 40-34-00-09

Highway

47-103-00828 WV 601615 (John Mills #1615)

PIT LOCATION MAP



LEGEND

- PIT-CUT WALLS
- PIT-COMPACTED WALLS
- AREA OF LAND APPLICATION OF PIT WASTE

NO LAND APPLICATION

NAD 27, North Zone
N:386274.80
E:1686677.30

WGS 84
LAT:39.555312
LONG:-80.611063
ELEV:986.73



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

07/14/2017



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

ALLEGHENY SURVEYS, INC.

SURVEYING AND MAPPING SERVICES PERFORMED BY:

PREPARED FOR:

EQT Production Company

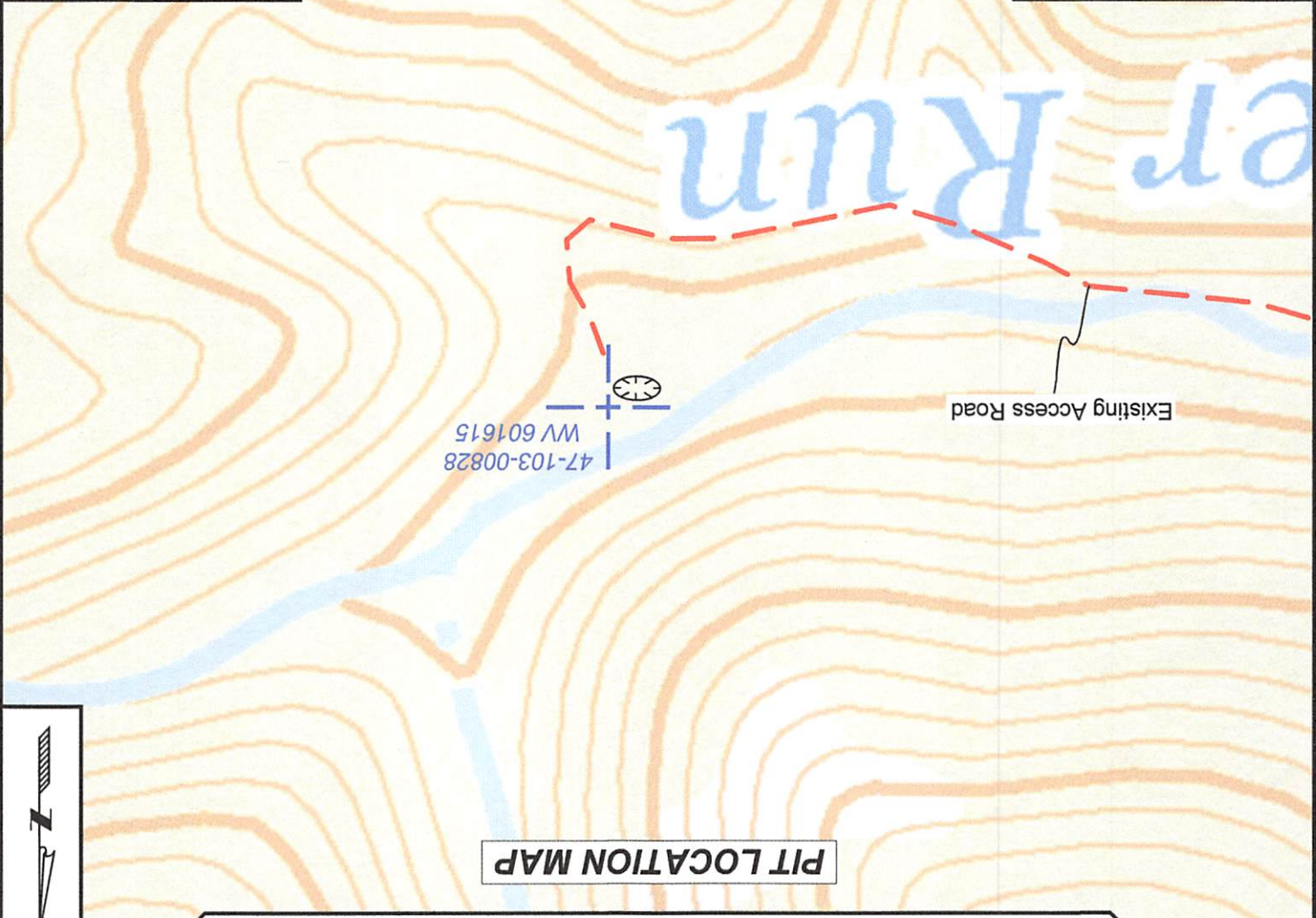
P.O. Box 280
Bridgeport, WV 26330

LEGEND

- PIT-CUT WALLS
- PIT-COMPACTED WALLS
- AREA OF LAND APPLICATION OF PIT WASTE

NO LAND APPLICATION

NAD 27, North Zone
N: 386274.80
E: 1686677.30
WGS 84
LAT: 39.555312
LONG: -80.611063
ELEV: 986.73



PIT LOCATION MAP

47-103-00828 WV 601615 (John Mills #1615)

Topo

Topo Quad: Big Run 7.5
 County: Wetzel
 District: Grant
 Date: April 4, 2017
 Project No: 40-34-00-09
 Scale: 1" = 200'

1707/14/2017

10 300 828 f

Topo Quad: Big Run 7.5' Scale: 1" = 2000'

County: Wetzel Date: March 24, 2017

District: Grant Project No: 40-34-00-09

47-103-00828 WV 601615 (John Mills #1615)

Topo



47-103-00828
WV 601615

NAD 27, North Zone
N:386274.80
E:1686677.30

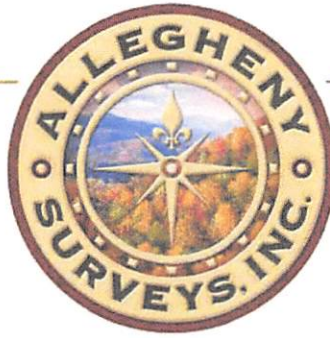
WGS 84
LAT:39.555312
LONG:-80.611063
ELEV:986.73



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 Birch River, WV 26610
 PH: (304) 649-8606
 FAX: (304) 649-8608

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

07/14/2017



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EOT PRODUCTION COMPANY

LEASE NAME AND WELL No. John Mills #1615 - WV 601615 - API No. 47-103-00828

POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 601615.

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: Big Run 7.5'

Scale: 1" = 2000'

County: Wetzel

Date: March 24, 2017

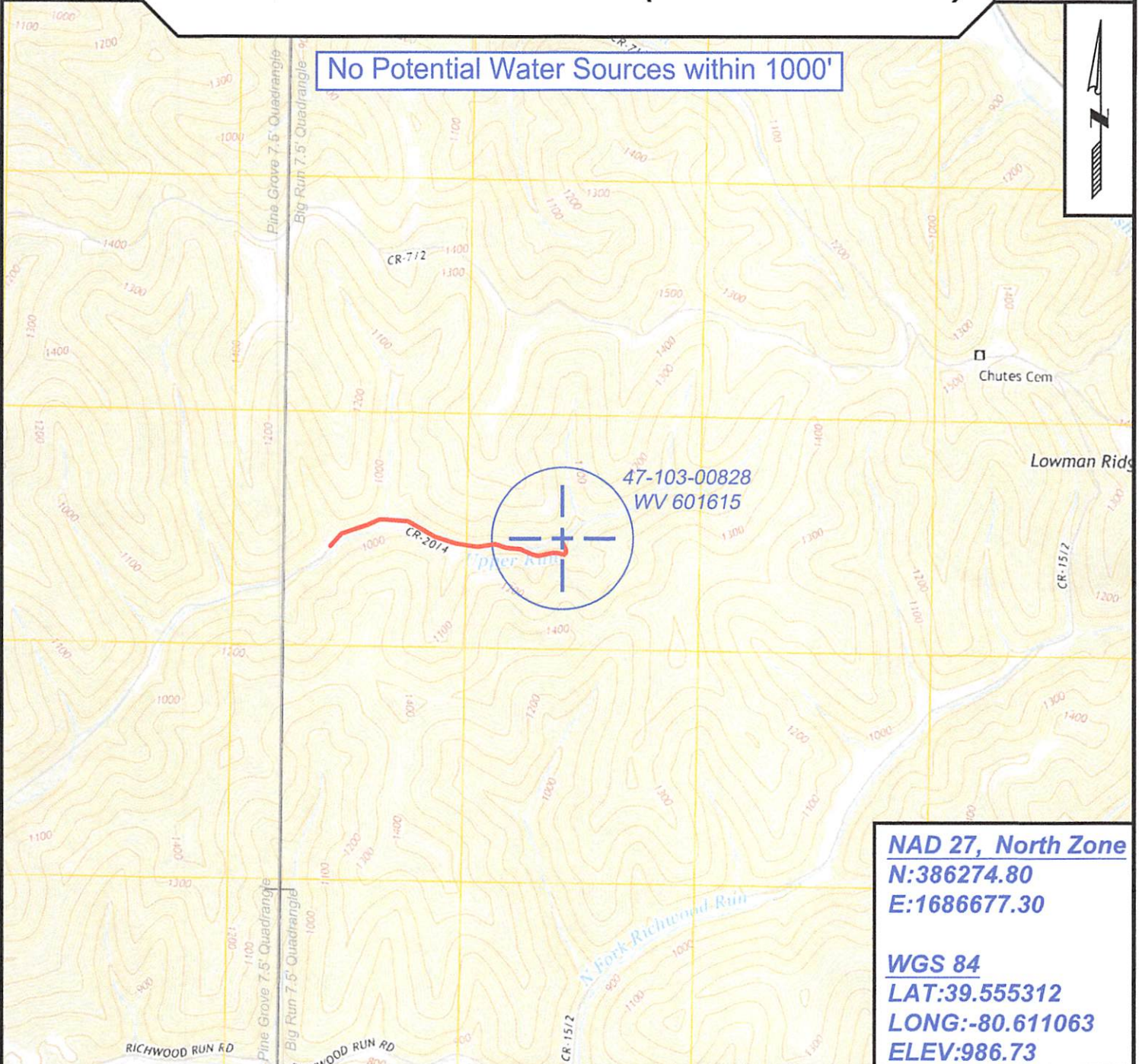
District: Grant

Project No: 40-34-00-09

Water

47-103-00828 WV 601615 (John Mills #1615)

No Potential Water Sources within 1000'



NAD 27, North Zone
N:386274.80
E:1686677.30

WGS 84
LAT:39.555312
LONG:-80.611063
ELEV:986.73



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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

07/14/2017

WW-7
8-30-06



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

API: 47-103-00828 WELL NO.: WV 601615 (John Mills #1615)

FARM NAME: John Mills

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Wetzel DISTRICT: Grant

QUADRANGLE: Big Run 7.5'

SURFACE OWNER: Coastal Forest Resources Co. (formerly Coastal Lumber Co.)

ROYALTY OWNER: Mills Wetzel Lands, Inc.

UTM GPS NORTHING: 4378475

UTM GPS EASTING: 533414 GPS ELEVATION: 301m (987ft)

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.

Step O Burr
Signature

PS# 2180
Title

4/4/17
Date