



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

Wednesday, May 17, 2017
WELL WORK PERMIT
Vertical / Plugging

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

Re: Permit approval for 727
47-103-00814-00-00

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: 727
Farm Name: FURBEE, J. H., ETUX
U.S. WELL NUMBER: 47-103-00814-00-00
Vertical / Plugging
Date Issued: 5/17/2017

Promoting a healthy environment.

05/19/2017

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. 652166 (Mary (J.H.) Furbee #727)
API Well No.: 47 103 - 00814

(4) 400⁰⁰
CK # 22708

**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: 1294 ft. Watershed: Fishing Creek
 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 [Signature] Date 5-9-17

PLUGGING PROGNOS

652166
Furbee
API# 47-103-00814
District, Grant
Wetzel County, WV

BY: R Green
DATE: 04/11/17

CURRENT STATUS:

TD @ 3191'
Elevation @ 1293'

10" casing @ 267'
8 1/4" casing @ 1446'
6 5/8" casing @ 1972'
2" tubing @ 2190' (set on 2" X 6 5/8" hook wall packer @ 1976')

Fresh Water @ None Reported
Saltwater @ 1480' & 1660' (1850-1867)

OH Show @ None Reported
Gas shows @ 1725', 1982', 2295', 2335', 3099'

Coal @ 867' to 872', Mapleton,
962' to 972' Pittsburgh

PH
5-4-17

1. Notify inspector, Derek Haight @ 304-206-7613, 24 hours prior to commencing operations.
2. Release 2" X 6 5/8" packer, TOOH tubing & packer.
3. TH wireline check TD @ or below 3100'. If TD @ or below 3100', proceed to next step.
4. TH tubing to 3100', spot 30 bbl. of 6% gelled water, followed by a 300' CIA cement plug 3100' to 2800'. WOC 8 hrs., Tag TOC, add additional CIA cement if necessary. (Gordon gas show @ 3099')
5. TOOH to 2400', set 200' CIA cement plug 2400' to 2200'. (Big Injun gas show)
6. TOOH to 2000', set 200' CIA cement plug 2000' to 1800'. (6 5/8" casing seat).
7. Free point 6 5/8" casing, cut casing @ free point. TOOH casing.
8. Set 100' CIA cement plug 50' in/out of casing cut, perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
9. TOOH to 1500', set 300' CIA cement plug, 1500' to 1200'. (Elevation & 8 1/4" casing seat).
10. Free point 8 1/4" casing, cut casing @ free point. TOOH casing.
11. Set 100' CIA cement plug 50' in/out of casing cut, perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
12. TOOH to 1000', set 200' CIA cement plug 1000' to 800' (Coal @ 867' & 972').
13. TOOH to 400', set 200' CIA cement plug 400' to 200'. (10" casing seat).
14. Free point 10" casing, cut casing @ free point. TOOH casing.
15. Set CIA cement plug 50' in casing cut to surface.
16. Note * If unable to cut and pull 10" casing, TH wireline and perforate 10" casing with 6 holes each @ 150', 100', 50'. TH tbg to 200', set 200' CIA cement plug 200' to surface. Top off with CIA cement as necessary.
17. Erect monument with API#, date plugged, company name, and company 6-digit ID#.
18. Reclaim location and road to WV-DEF specifications.

CARNEGIE NATURAL GAS COMPANY

Map Sheet No. 41 Littleton RECORD OF WELL Well No. 727
 Drilled on J. N. Furber #4 Farm of 400 Acres, situate in
Grant Township Netzel County W Va Lease No. 3716-74
 Shipping Point _____ Foreman Jack Toothman. WELL

Located Mar. 20-1917 Commenced Drilling Nov. 12-1917
 Notified Gen'l Office " 27-1917 Notified Gen'l Office _____
 Commenced Apr. 23-1917 Completed Drilling Feb. 6-1918
 Completed " 30-1917 Notified Gen'l Office " 14-1918
 Contractor A. P. Cunningham Contractor J. C. Murphy
 Address Mannington W Va Address Zanesville O.

ROCK FORMATION	TOP	BOTTOM	REMARKS	PRESSURE AND VOLUME
Conductor		16		1/2 Minute 30 Lbs.
Mapleton Coal	867	872		1 " 45 "
Pittsburgh Coal	962	972		2 " 55 "
Little Dunkard	1440	1480	<u>Valid 11-13, 1850</u>	3 " 65 "
<u>Big Gas Sand</u>	1590	1660	<u>Valid 18-19-1867</u>	4 " 75 "
<u>Big Dunkard</u>	1705	1775	<u>show Gas. 1725</u>	5 " 80 "
<u>Gas Sand</u>	1845	2006	<u>Blow down to 7/8" - 2"</u>	10 " 115 "
1st Salt Sand	- None -			15 " 137 "
2nd Salt Sand	- None -			30 " 175 "
Maxton Sand	- None -			1 Hour 200 "
Little Lime	- None -			Rock "
Pencil Cave	2169	2172		Size of Tubing 2 Inch
Big Lime	2172	2264	<u>All</u>	Casing "
Big Injun	2264	2433	<u>Gas. 7/8" - 2" 2295-2335</u>	Vol by Water
Gantz Sand			<u>Blow down to 7/8" - 2"</u>	" " Mercury 10/10 in 2"
50 Foot Sand <u>All Shells</u>	2860	2910		" " Pressure
30 Foot Sand	2955	2985		.CONNECTED TO MAIN LINE
<u>Campbell River Sand</u>	3002	3072		<u>Turned in line 7/9/18</u>
Gordon Stray	3048	3072		Length of Line 1634 Feet 15
Gordon Sand	3075	3103	<u>Gas. 10" M. - 2" 3099-3102</u>	Size of Line 3 Inches 2
4th Sand	3127	3189	<u>(All Gas)</u>	DISCONNECTED FROM LINE
5th Sand				Notified Lessor
Bayard Sand				Abandoned
Elizabeth				Repacked
Speechley				With Feet Tubing
Bradford				

Total Depth 3191 Feet at \$ 1.65 per Foot \$ 5265.15
Carnegie Gas Furnished at 12 Cents per Foot 427.92

CASING RECORD 8/16/18

SIZE	CHARGED TO WELL		PUT IN WELL		PULLED		LEFT IN WELL		TRANSFERRED		LEFT AT WELL		PACKER
	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	
10	288		267				267		21				Kind <u>Hook Shell</u> Size <u>6 7/8 X 2</u> Set at <u>1976-2190</u> Feet WELL SHOT By _____ With _____ Oil _____ Feet
8 1/2	1509		1446	6			1446	6	62	6			
6 7/8	2113		1972				1972				141		
2	3025		2190				2190				835		

Casing Cemented in Well _____ by _____ Company Employee

10300814P

WW-4-A
Revised 6/07

1) Date: April 12, 2017
2) Operator's Well Number
652166 (Mary (J.H.) Furbee #727)
3) API Well No.: 47 103 - 00814
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 Murray Energy Corporation
46226 National Road
Address St. Clairsville, OH 43950

Name Coastal Lumber Co.
Address P. O. Box 709
Buckhannon, WV 26201

(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: 2/20/18

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.



05/19/2017

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): Fishing Creek Quadrangle: Big Run 7.5'
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes__ NoX

Will a pit be used? Yes X No ____
If so, please describe anticipated pit waste: _____
Will a synthetic liner be used in the pit? Yes X No ____ Is so, what ml.? 20 -10 ml

Proposed Disposal Method for Treated Pit Wastes:
NO LAND APPLICATION Land Application (if selected provide a completed form WW-9-GPP)

X 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

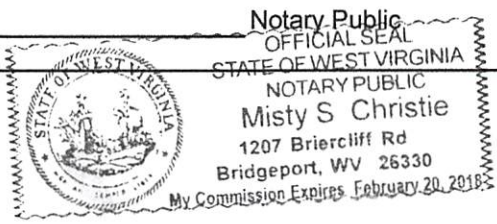
Company Official Signature _____
Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor - WV

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

My Commission Expires 2/20/18

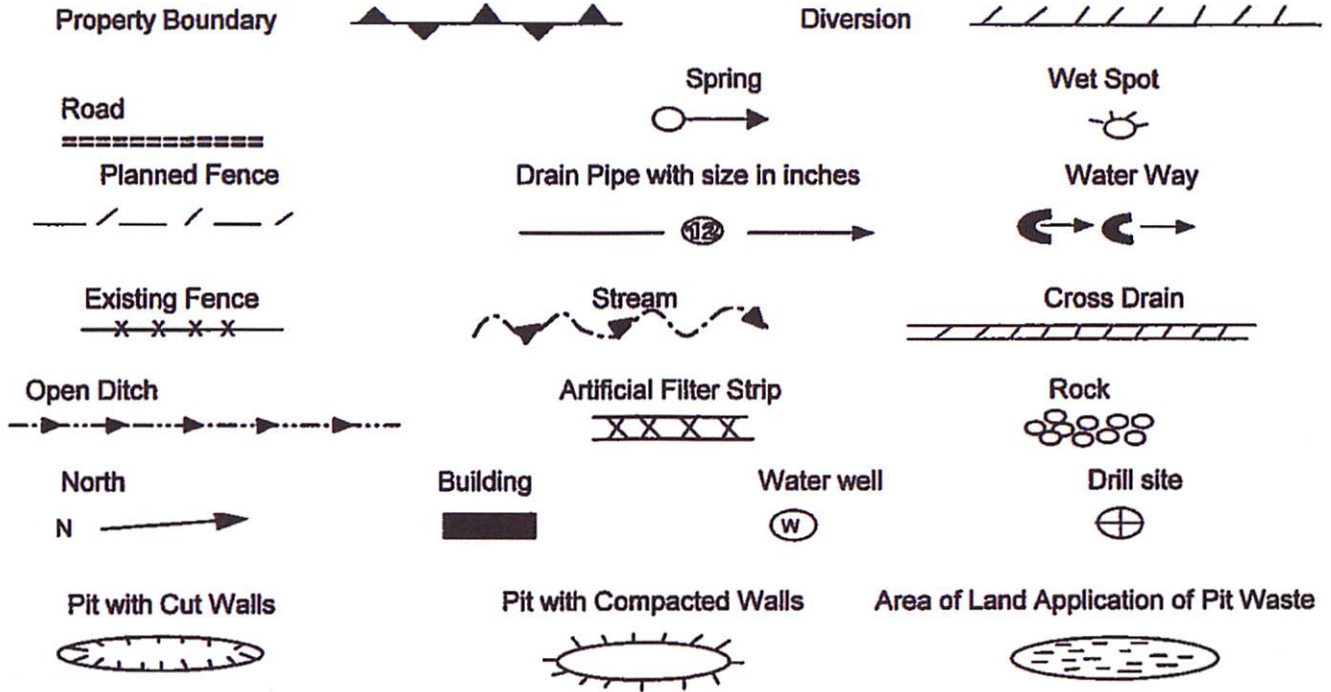
Misty S. Christie



05/19/2017

OPERATOR'S WELL NO.:
652166 (Mary (J.H.) Furbee #727)

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

10300814P

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

05/19/2017

10300814A

Topo Quad: Big Run 7.5' Scale: 1" = 200'

County: Wetzel Date: March 27, 2017

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

47-103-00814 WV 652166 (Mary (J.H.) Furbee #727)

Topo

Pit Location Map

Existing Well Access Road



47-103-00814
WV 652166

1300

LEGEND

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

NO LAND APPLICATION

NAD 27, North Zone
 N:386246.85
 E:1715259.88

WGS 84
 LAT:39.556164
 LONG:-80.509693
 ELEV:1293.94



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
 DMH
 5-9-17

05/19/2017

10300814P

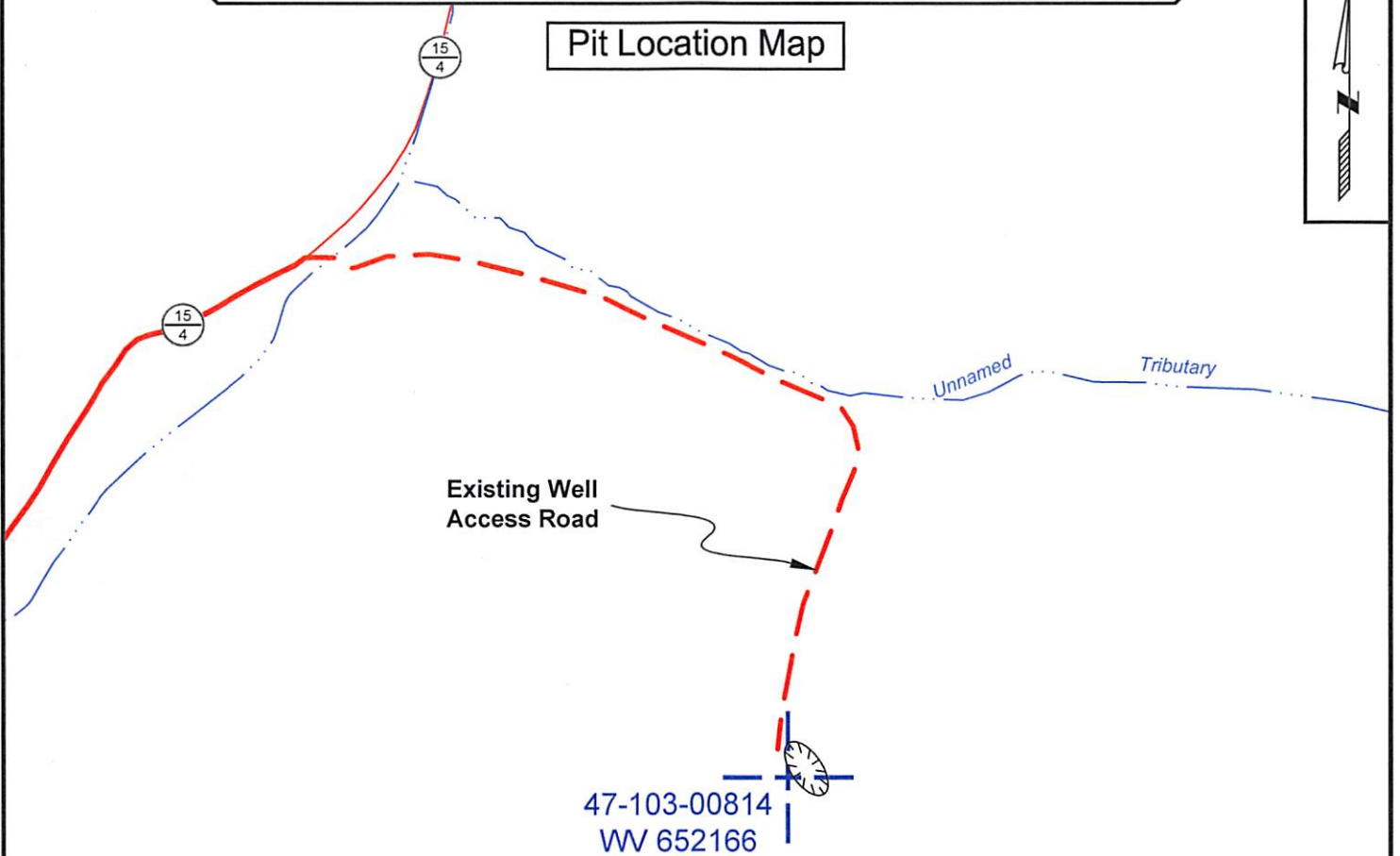
Topo Quad: Big Run 7.5' Scale: 1" = 500'

County: Wetzel Date: March 27, 2017

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

Highway **47-103-00814 WV 652166 (Mary (J.H.) Furbee #727)**

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:386246.85
E:1715259.88

WGS 84
LAT:39.556164
LONG:-80.509693
ELEV:1293.94



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

05/19/2017

10300814P

Topo Quad: Big Run 7.5'

Scale: 1" = 2000'

County: Wetzel

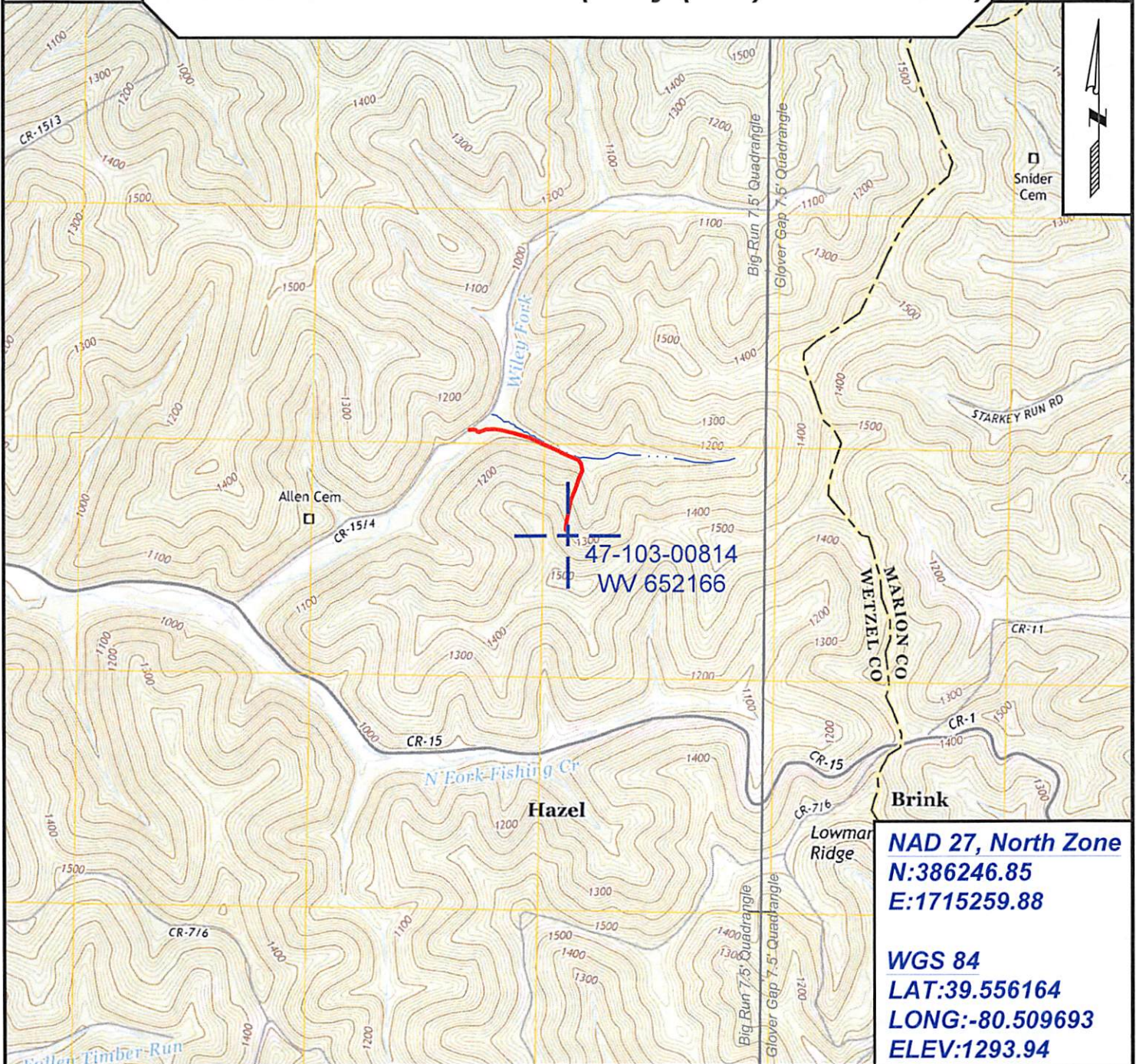
Date: March 27, 2017

District: Grant

Project No: 40-34-00-09

47-103-00814 WV 652166 (Mary (J.H.) Furbee #727)

Topo



NAD 27, North Zone
N:386246.85
E:1715259.88

WGS 84
LAT:39.556164
LONG:-80.509693
ELEV:1293.94



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

DmH
5-9-17

05/19/2017



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY

LEASE NAME AND WELL No. Mary (J. H.) Furbee #727 - WV 652166 - API No. 47-103-00814

POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 652166.

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 27, 2017

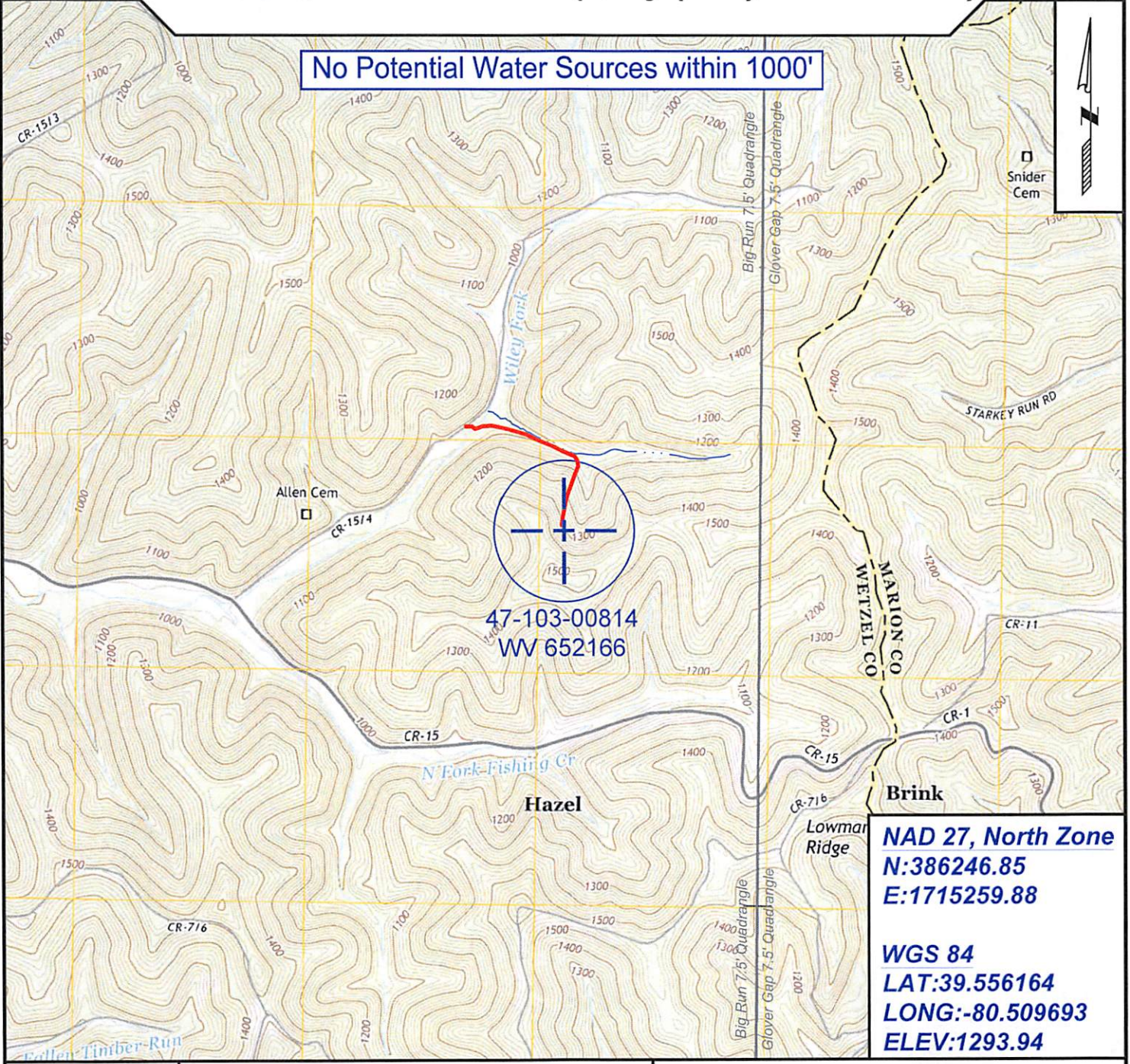
District: Grant

Project No: 40-34-00-09

Water

47-103-00814 WV 652166 (Mary (J.H.) Furbee #727)

No Potential Water Sources within 1000'



47-103-00814
WV 652166

NAD 27, North Zone
N:386246.85
E:1715259.88

WGS 84
LAT:39.556164
LONG:-80.509693
ELEV:1293.94



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: 47-103-00814 WELL NO.: WV 652166 (Mary (J. H.) Furbee #727)

FARM NAME: Mary (J. H.) Furbee

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Wetzel DISTRICT: Grant

QUADRANGLE: Big Run 7.5'

SURFACE OWNER: Coastal Forest Resources Company

ROYALTY OWNER: Newton Beaty Families Trust, et al.

UTM GPS NORTHING: 4378612

UTM GPS EASTING: 542122 GPS ELEVATION: 394m (1294ft)

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

PS # 2180

Title

4/6/17

Date