



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

Earl Ray Tomblin , Governor
Randy C. Huffman , Cabinet Secretary
www.dep.wv.gov

Monday, December 12, 2016
WELL WORK PERMIT
Vertical / Plugging

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

Re: Permit approval for 7607
47-007-00020-00-00

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: 7607
Farm Name: HALL, JOHN
U.S. WELL NUMBER: 47-007-00020-00-00
Vertical / Plugging
Date Issued: 12/12/2016

Promoting a healthy environment.

12/16/2016

PERMIT CONDITIONS

COALBED METHANE WELLS

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. If this well is associated with a mine through by a coal operator, then the plugging methodology (work order) must have Mine Safety and Health Administration (MSHA) approval.

700020P

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

Date: November 14, 2016
Operator's Well
Well No. 607607 (John Hall #7607)
API Well No.: 47 007 - 00020

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

Well Type: Oil Gas Liquid Injection Waste Disposal:
If Gas, Production Or Underground storage Deep Shallow

Elevation: 1016 ft. Watershed: Slab Fork of Cowskin Fork
Location: Birch County: Braxton Quadrangle: Rosemont 7.5'
District:

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

Oil & Gas Danny Mullins
Name: 220 Jack Acres Road
Address: Buckhannon, WV 26201

9) Plugging Contractor:
Name: HydroCarbon Well Service
Address: PO BOX 995
Buckhannon, WV 26201

- 1) Work Order: The work order for the manner of plugging this well is as follows:
See Attachment for details and procedures.

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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

Danny Mullins Date 12-5-16

12/16/2016

PLUGGING PROGNOSIS

Hall, John #7607 (607607)

Braxton, County, West Virginia
API # 47-007-00020
Gassaway Quad

BY: Craig Duckworth
DATE: 2/27/13

CURRENT STATUS:

13" csg @ 52'
10" csg @ 187'
8 1/4" csg @ 807'
3" csg @ 1620'
Packer @ 1550' (8 1/4" x 3")

DM

TD @ 1620'

Fresh Water @ 35' Salt Water @ none reported

Salt Sand @ 972' Coal @ none reported

Gas shows @ 1609' Oil Shows @ none reported

Stimulation: none reported Elevation @ 1031'

SPOT GEL BEFORE CEMENTING BOTTOM HOLE PLUG. JMM

1. Notify State Inspector, Danny Mullins 304-932-6844, and 24 hrs prior to commencing operations.
2. Attempt to pull 3" with packer @ 1550'. Free point 3" if unable to pull. Shoot off at top of packer and plug from there @ 1550'
3. TOOH w/ 3" tbg @ 1550'; Set 100' C1A Cement Plug @ 1550' to 1450' (Gas Show 1609 & Packer)
4. TOOH w/ tbg @ 1450'; gel hole @ 1450' to 857'. 1030'. SET 100' C1A CEMENT PLUG FROM 1030' TO 930'. (ELEV. SALT SAND)
5. TOOH w/ tbg @ 857'; Set 100' C1A Cement Plug @ 857' to 757' (8 1/4" csg @ 807')
6. TOOH w/ tbg . Free Point 8 1/4" csg. Cut or pull 8 1/4"
7. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas Shows below 8 1/4". Do not omit any plugs.
8. TIH w/ tbg @ 757'; gel hole @ 757' to 237'
9. TOOH w/ tbg . Free Point 10" csg. Cut or pull 10"
10. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas Shows below 10". Do not omit any plugs.
11. TIH w/ tbg @ 237' ; Set 237' C1A Cement Plug @ 237' to surface' (10" set & fresh water @ 35')
12. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas Shows. Do not omit any plugs.
13. Top off as needed
14. Set Monument to WV-DEP Specifications
15. Reclaim Location & Road to WV-DEP Specifications.

★ →

★ 4a. GEL HOLE TO 857'

JMM

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WEST VIRGINIA DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL RECORD

Permit No. Brax-20

Oil or Gas Well Gas
(Kind)

Company	Pittsburgh & West Va Gas Co.			Casing and Tubing	Used in Drilling	Left in Well	Packers
Address	Clarksburg, West Va.						
Name	John E. Hall	Acres	191.35				
Location (waters)	Map Ref. Gassaway N/W.3-2			Size			
Well No.	7607	Elev.	1031	16	52	52	Kind of Packer
District	Birch	County	Braxton	13	187	187	Anchor
The surface of tract is owned in fee by				8 1/2	807	807	Size of $\frac{3}{4}$ x
Widen, West Va.				6 5/8			Depth set. 1550
Mineral rights are owned by				5 3/16			
John E. Hall				3	1620	1620	Perf. top
Address				2			Perf. bottom
Servia, W. Va.				Liners Used			Perf. top
Drilling commenced	April 12th, 1937						Perf. bottom
Drilling completed	April 29th, 1937						
Date shot	Depth of shot						
Open Flow	96	10ths Water in	1-1/2"				
		10ths Merc. in					
Volume	203,000			CASING CEMENTED	SIZE	No. FT.	De
Rock Pressure	560	lbs.	96	"NO COAL"			
Oil				COAL WAS ENCOUNTERED AT			
Fresh water	35	feet		FEET	INCHES	FEET	INCHES
Salt water		feet		FEET	INCHES	FEET	INCHES

dm

Formation	Color	Hard or Soft	Top	Bottom	Oil Gas or Water	Depth Found	Remarks
Clay	Yellow	Soft	0	10	Water	35'	
Slate	Dark	"	10	35			
Gravel	Yellow	"	35	52			
Lime	White	Hard	52	62			
Red Rock	Red	Soft	62	70			
Lime	White	Hard	70	95			
Red Rock	Red	Soft	95	120			
Lime	White	Hard	120	125			
Sand	"	"	125	165			
Slate	"	Soft	165	196			
Red Rock	Red	"	196	223			
Lime	White	Hard	223	243			
Red Rock	Red	Soft	243	273			
Sand	White	"	273	290			
Slate	"	"	290	336			
Lime	"	Hard	336	352			
Slate	"	Soft	352	375			
Red Rock	Red	"	375	385			
Lime	White	Hard	385	470			
L. Dunkard	"	"	470	578			
Lime	"	"	578	589			
Slate	"	Soft	589	610			
Lime	"	Hard	610	620			
Big Dunkard	"	"	620	684			
Slate	Black	Soft	684	722			
Sand	White	Hard	722	806			
Slate	Dark	Soft	806	819			
Lime	White	Hard	819	854			
Shale	Black	Soft	854	966			
Sand Gas	White	"	856	926			
Slate	Dark	"	926	936			
Lime	White	Hard	936	964			
Shale	Black	Soft	954	972			
lst. Salt	White	Hard	972	1030			
Slate	Dark	Soft	1030	1052			
Lime	White	Hard	1052	1074			
Shale	Black	Soft	1074	1100			
Lime	White	Hard	1100	1116			
Slate	Black	Soft	1116	1142			
Lime	White	Hard	1142	1168			
2nd. Salt	"	"	1168	1197			

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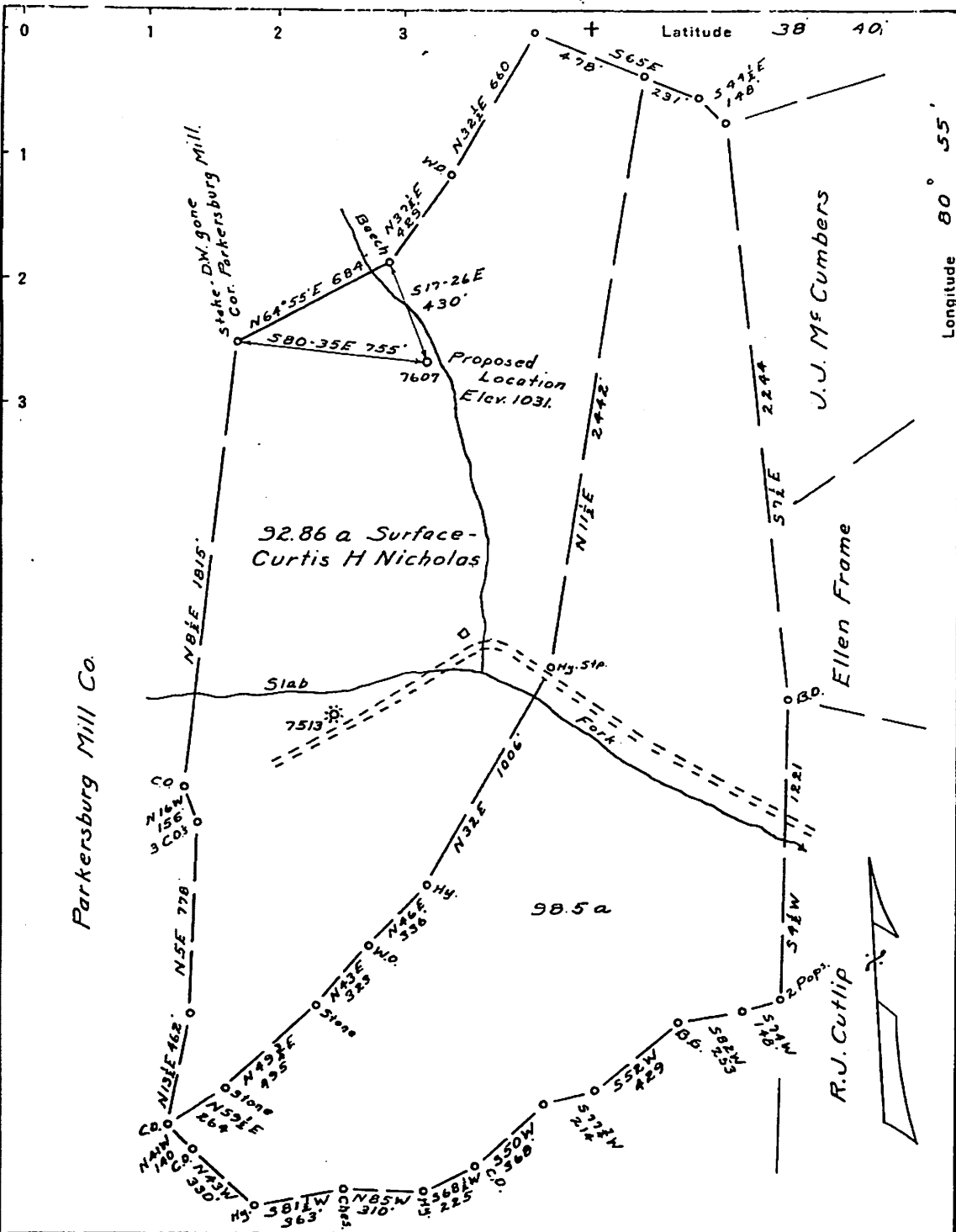
Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate	Dark	Soft	1197	1207			
Sand	White	Hard	1207	1280			
Slate	Dark	Soft	1280	1287			
Lime	"	Hard	1287	1300			
Slate	"	Soft	1300	1322			
Lime	White	Hard	1322	1340			
Slate	Black	Soft	1340	1346			
Slate&Shell	Dark	H.&.S.	1346	1442			
Lime	White	Hard	1442	1470			
Slate	Dark	Soft	1470	1503			
Sand	White	Hard	1503	1564			
Slate	Black	Soft	1564	1608			
3rd.Salt Sand	White	"	1608	1619	Gas	1609-19'	S.L.1612' Gas 96/10 W 1-1/2 Opng.
Slate			1619	1620			
Total Depth				1620			

Date May 18th, 1937 19...

APPROVED Pittsburgh & West Va Gas Co, Ow

By *[Signature]*
(Title)

12/16/2016



Company PITTSBURGH & WVA. GAS CO.
 Address 608 UNION BANK CLARKSBURG W.VA.
 Farm JOHN HALL
 Tract _____ Acres 191.36 Lease No. 21171
 Well (Farm) No. 2 Serial No. 7607
 Quadrangle GASSAWAY N.W. 3E
 County BRAXTON
 District BIRCH
 Engineer [Signature]
 Engineer's Registration No. 764
 File No. _____ Drawing No. _____
 Date 3-25-37 Scale 1"=500'

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

WELL LOCATION MAP
 FILE NO. BRAX-20

+ 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.

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WW-4-A
Revised 6/07

1) Date: November 14, 2016
2) Operator's Well Number
607607 (John Hall #7607)
3) API Well No.: 47 007 - 00020
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 Jerry and Tammy Nicholas
Address 40 Kings Drive
Warren, OH 44481
(b) Name Dana and Dorcel Nicholas
Address 40 Kings Drive
Warren, OH 44481
(c) Name See Attachment
Address _____
6) Inspector Danny Mullins
Address 220 Jack Acres Road
Buckhannon, WV 26201
Telephone (304) 932-6844

5) (a) Coal Operator:
Name None
Address _____
(b) Coal Owner(s) with Declaration
Name Randall J. Siebert
14 Twin Lakes Court
Address Arlington, TX 76016
(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.

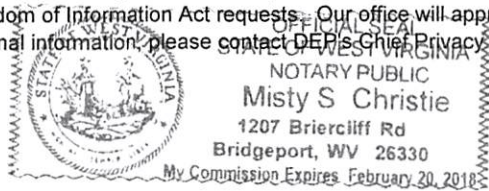
Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Division of Environmental 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 15th day of November,
Misty S. Christie
My Commission Expires: 2/20/18

Notary Public
Office of Oil and Gas
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Department of Environmental Protection

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.



12/16/2016

WW2-A

Additional Surface Owners

Susan and Larry Bennett
24 Burns Fork Road
Rosedale, WV 26636

Rose Crislip
2350 Welton Orchard Drive
Petersburg, WV 26857

Victor Arbogast
3619 Scenic Highway
Summersville, WV 26651

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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): Slab Fork of Cowskin Fork Quadrangle: Rosemont 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.? 10 ml. 20 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? _____

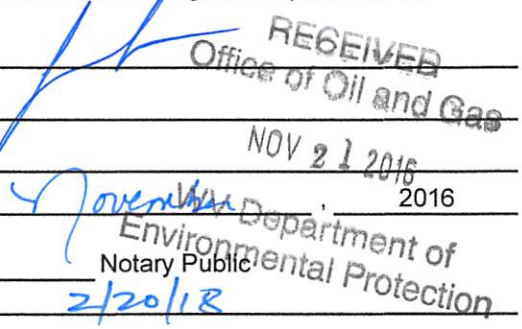
Permittee shall provide written notice to the Office of the Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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

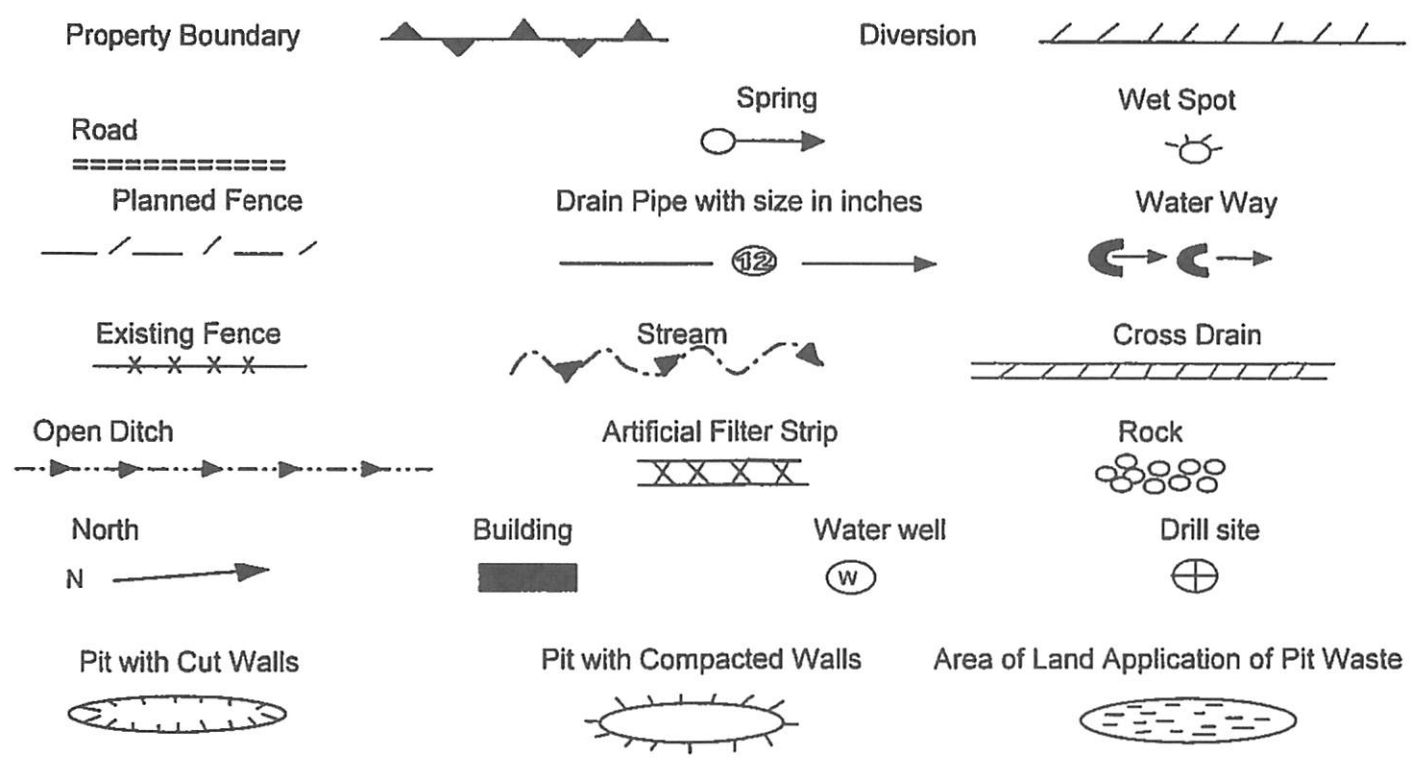
Company Official Signature _____
Company Official (Typed Name) Victoria J. Roark
Company Official Title Permitting Supervisor - WV

Subscribed and sworn before me this 15th day of November, 2016
My Commission Expires _____



OPERATOR'S WELL NO.:
607607 (John Hall #7607)

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. p^m

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.

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Plan approved by: _____

Comments: _____

DEC 7 2016

Title: _____ Date: _____
 Field Reviewed? Yes ✓ No

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 Environmental Protection

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

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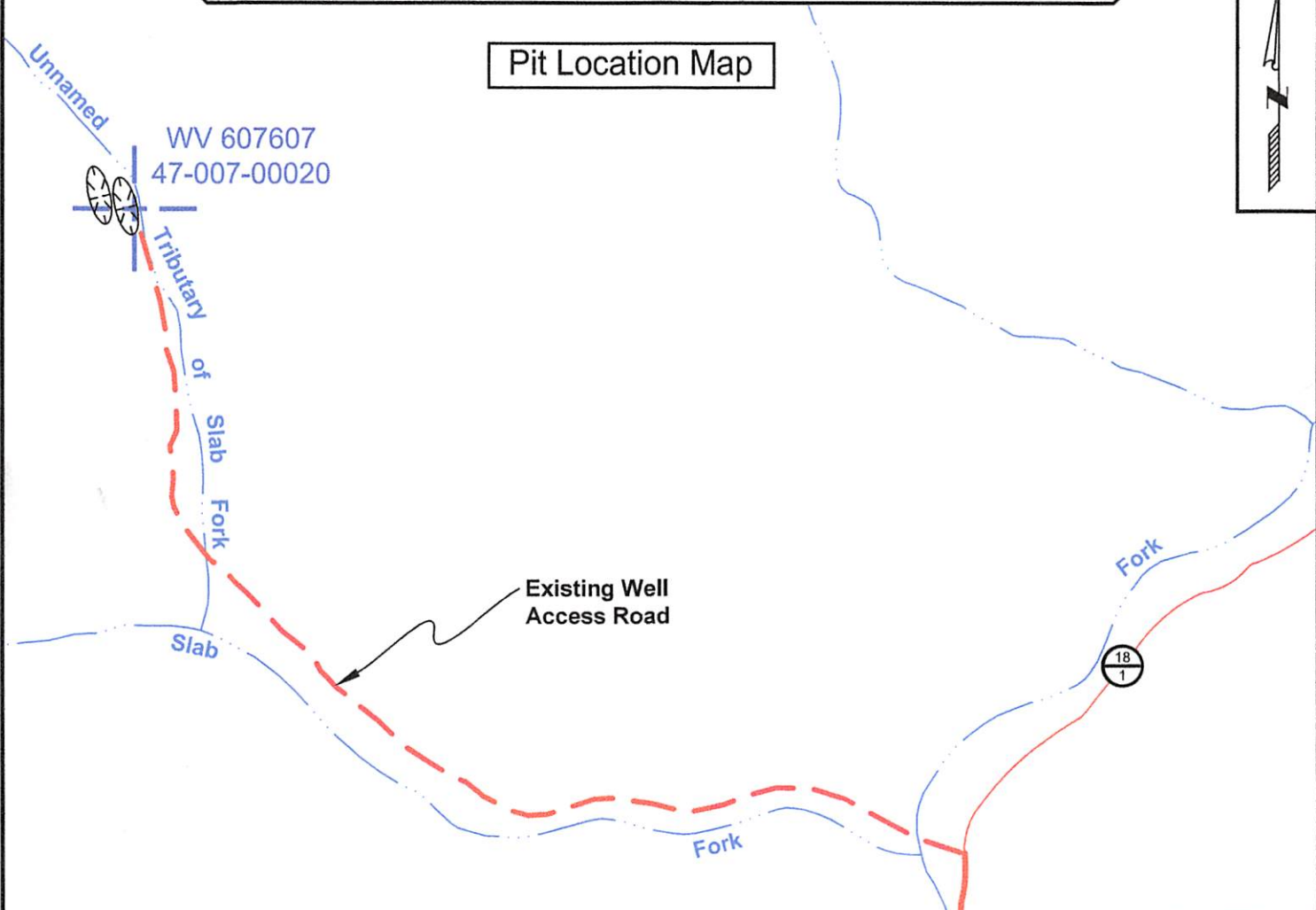
700020P

Topo Quad: Rosedale 7.5' Scale: 1" = 500'
 County: Braxton Date: October 19, 2016
 District: Birch Project No: 40-02-00-07

47-007-00020 WV 607607 (John Hall #7607)

Topo

Pit Location Map



LEGEND

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

NAD 27, South Zone
 N:606216.83
 E:2008642.00

WGS 84
 LAT: 50.664905
 LONG: -80.549563
 ELEV: 1015.73

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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

WV Department of Environmental Protection

12/16/2016

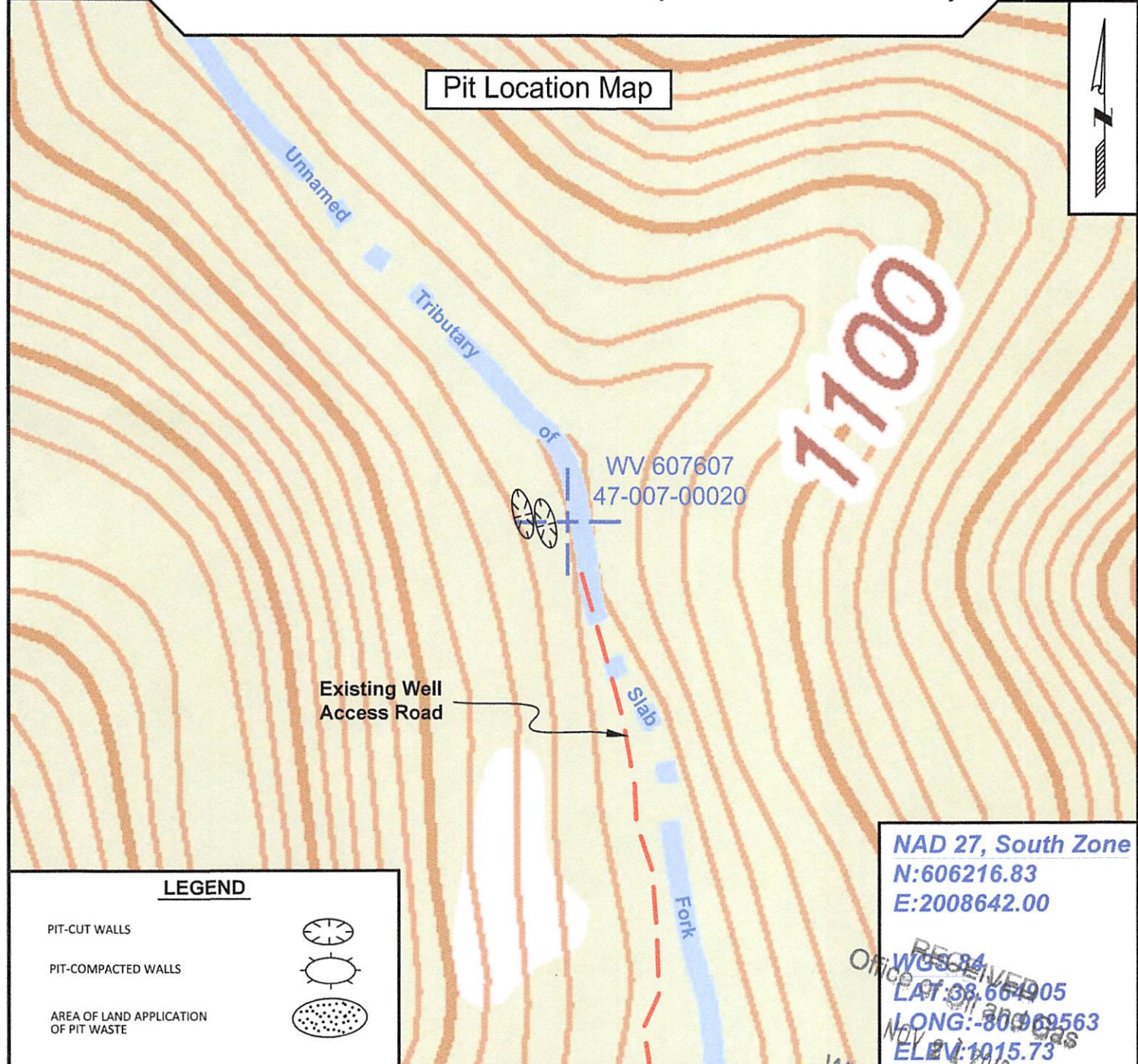
700020P

Topo Quad: Rosedale 7.5' Scale: 1" = 200'
 County: Braxton Date: October 19, 2016
 District: Birch Project No: 40-02-00-07

47-007-00020 WV 607607 (John Hall #7607)

Topo

Pit Location Map



NAD 27, South Zone
 N:606216.83
 E:2008642.00

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 Office of Oil and Gas
 NOV 16 2016
 LAT: 38.654905
 LONG: -80.969563
 ELEV: 1015.73

LEGEND

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



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

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EQT Production Company
 P.O. Box 280
 Bridgeport, WV 26330
 WV Department of Environmental Protection

12/16/2016

700020P

Topo Quad: Rosedale 7.5'

Scale: 1" = 2000'

County: Braxton

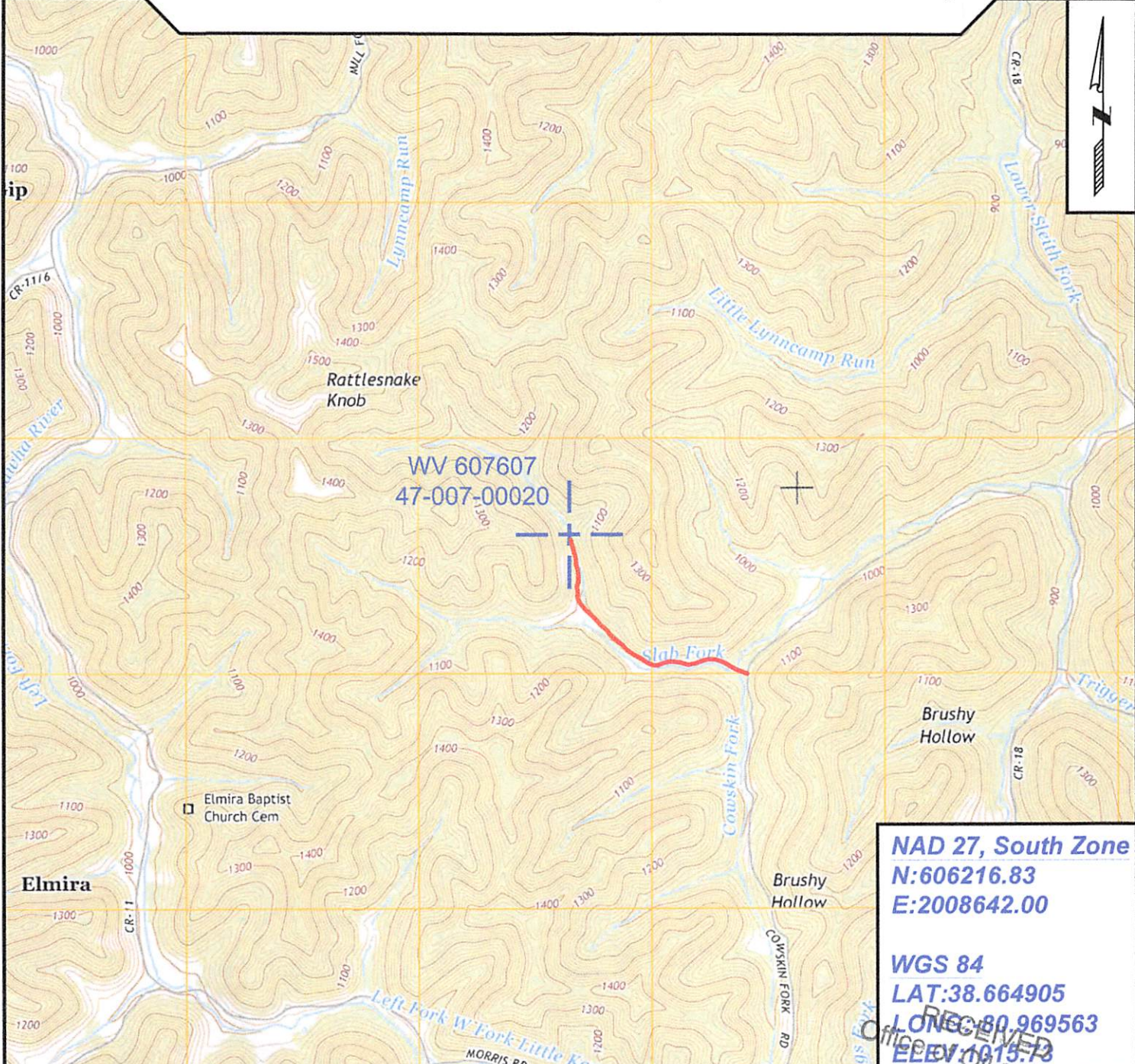
Date: October 19, 2016

District: Birch

Project No: 40-02-00-07

47-007-00020 WV 607607 (John Hall #7607)

Topo



NAD 27, South Zone
N:606216.83
E:2008642.00

WGS 84
LAT:38.664905
LONG:80.969563
ELEV:1915.3

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 FAX: (304) 649-8608

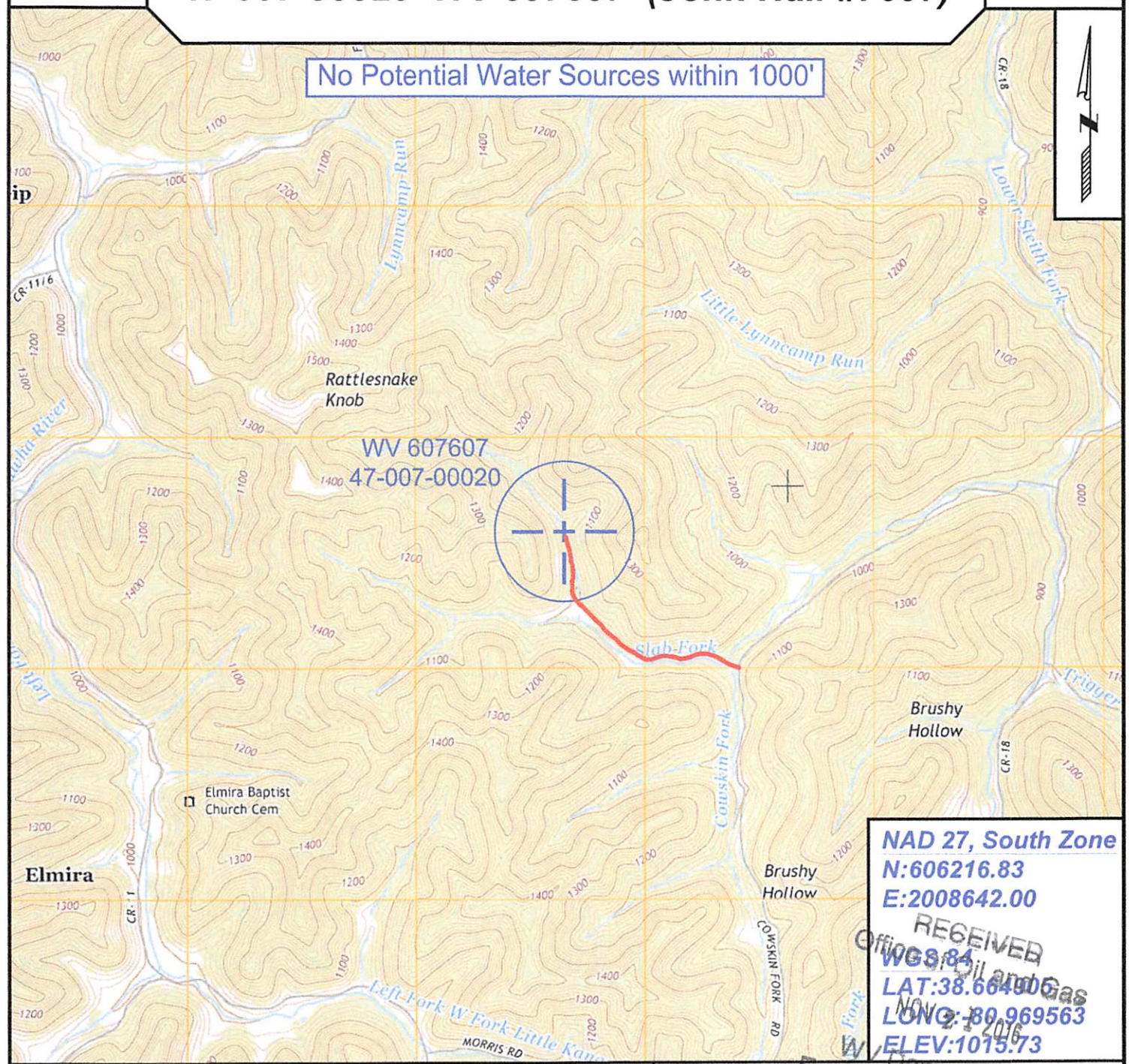
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EQT Production Company
 P.O. Box 280
 Bridgeport, WV 26330
 Department of Environmental Protection
 NOV 21 2016
 12/16/2016

Topo Quad: Rosedale 7.5' Scale: 1" = 2000'
 County: Braxton Date: October 19, 2016
 District: Birch Project No: 40-02-00-07

Water

47-007-00020 WV 607607 (John Hall #7607)

No Potential Water Sources within 1000'



NAD 27, South Zone
 N:606216.83
 E:2008642.00

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 Office of Oil and Gas
 LAT: 38.664906
 LONG: -80.969563
 NOV 1 2016
 ELEV: 1015.73



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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

12/16/2016



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY
LEASE NAME AND WELL No. John Hall #7607 - WV 607607 - API No. 47-007-00020

POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 607607.

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 Road
Alum Creek, WV 25003
phone: 304-756-2949
fax: 304-756-2948

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MARTINSBURG OFFICE
200 Addition Drive
Martinsburg, WV 26001-2162
phone: 304-201-2162
fax: 304-901-2162
WV Department of Environmental Protection