



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 CKP-7
47-039-01168-00-00

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: CKP-7
Farm Name: RAYMOND CITY COAL
U.S. WELL NUMBER: 47-039-01168-00-00
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.

3901168 P

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

Date: April 12, 2017
Operator's Well _____
Well No. 416391 (Raymond City Coal CKP-7)
API Well No.: 47 039 - 01168

CK 22708
\$100

**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: 858 ft. Watershed: Pocatalico River
Location: _____ Union _____ County: Kanawha Quadrangle: Pocatalico 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.

RECEIVED
Office of Oil and Gas
MAY 5 2017

WV Department of
Environmental Protection

[Handwritten Signature]
5-8-17

OFFICE USE ONLY

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.
Date _____
Work order approved by inspector _____

07/14/2017

PLUGGING PROGNOS

416391
CKP-7
API# 47-039-01168
District, Union
Kanawha County, WV

BY: R Green
DATE: 02/08/17

CURRENT STATUS:
TD @ 4950'
Elevation @ 865'

16" casing @ 16'
13 3/8" casing @ 113'
10" casing @ 684'
8 1/4" casing @ 1744'
7" casing @ 1988'
5 1/2" casing @ 4848' (Cemented with 10 sks).
Shot with 70 qts. nitroglycerin 4916' to 4950'

Fresh Water @ 1382'
Saltwater @ None Reported
Oil Show @ 1175' (Big Injun)
Gas shows @ 1822', 1836', 4710', 4918'
Coal @ 100'

RECEIVED
Office of Oil and Gas

MAY 5 2017

WV Department of
Environmental Protection

1. Notify inspector, Terry Urban, @ 304-549-5915, 24 hours prior to commencing operations.
2. Check pressures on all tubing and casing strings in well.
3. Rig up and pump 75 bbl. of gelled water down annulus of any casing/tubing strings with pressure on them, displace with fresh water. Monitor pressures on all casings for 24 hrs.
4. Once well is killed, TIH to 4900', set a 500' C1A cement plug, 4900' to 4400'. WOC 8 hrs., TAG TOC, add additional C1A cement if necessary.
5. Free point 5 1/2" casing, cut casing @ free point, TOOH casing.
6. 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.
7. TOOH to 3500', set 300' C1A cement plug 3500' to 3200'.
8. TOOH to 2800', set 300' C1A cement plug 2800' to 2500'.
9. TOOH to 2100', set 200' C1A cement plug, 2100' to 1900'.
10. TIH and perforate 7" casing with 4 holes each @ 1875', 1850', 1800', 1750', & 1700'.
11. TIH and set a 400' C1A cement plug, 1900' to 1500'. WOC 8 hrs. TAG TOC, add additional C1A cement if necessary.
12. Free point 7" casing, cut casing @ free point, TOOH casing.
13. 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.
14. Free point 8 1/4" casing, cut casing @ free point, TOOH casing.
15. 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.
16. TOOH to 1000', set a 400' C1A cement plug 1000' to 600'.
17. Free point 10 3/4" casing, cut casing @ free point, TOOH casing.
18. 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.
19. TOOH to 400' set 300' C1A cement plug 400' to 100'.
20. Free point 13 3/8" casing, cut casing @ free point, TOOH casing.
21. Set 100' C1A cement plug 50' in casing cut to surface. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
22. *Note if unable to cut and pull 13 3/8" casing, perforate 13 3/8" casing with 4 holes each @ 90', 75', & 50'. Set 100' C1A cement plug 100' to surface
23. Erect monument with API#, date plugged, company name, and company 6-digit ID#.
24. Reclaim location and road to WV-DEP specifications.

OK
OK
This plug will be larger

OK

[Signature]
5-8-17

47-039-01168

416391

3901168P

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No. Kan 1168
Charleston Quad

Company
Address
Farm
Location
Well No
District
Surface
Mineral
Commenced
Completed
Date shot

Cumberland Gas Corp
Box 2386, Charleston, W.Va.
Raymond City C & T Corp A-5000
Pocatalico River
CKP-7 Elev. 865
Union Kanawha County
Raymond City Coal & Transp. North Bend, O
Same
Aug. 31, 1944
Dec. 20, 1944
Dec. 21, 1944
50/10ths W in 3" Big Lime
26/10ths W 5 1/2" 17# Oriskany
671 M Big Lime, 1,286 M. Oriskany
390 B.L. 24 B.L.
1550 Oriskany 42 lbs. Oriskany
1382

Gas Well
CASING & TUBING

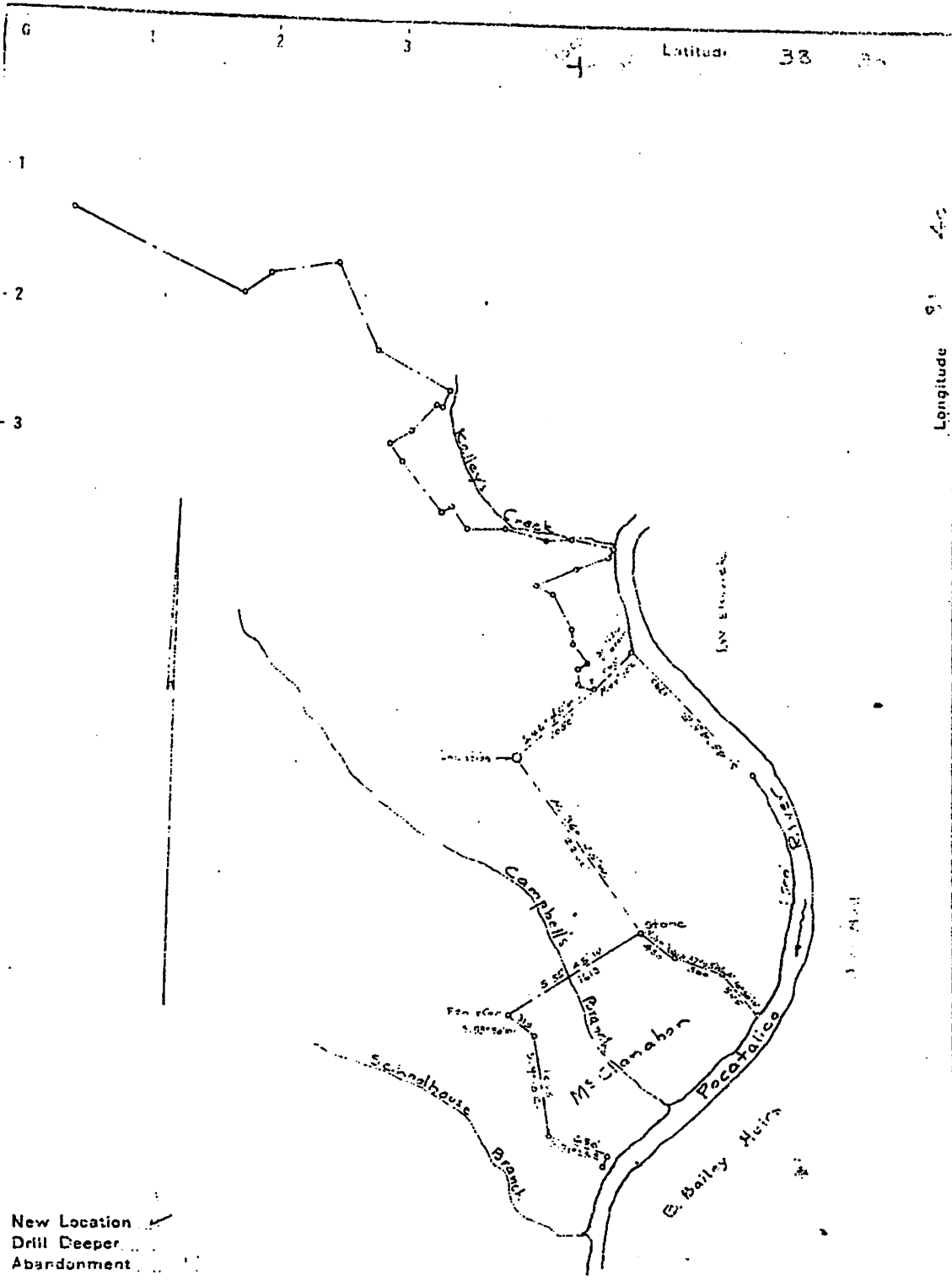
16 16 16
13 3/8 113'11 113'11
10 1/2 684'4 684'4
8 1/2 1744' 1744'
7 1988'2 1988'2
5 1/2 4848'10 4848'10
3 1/2 1864'3 None
1-7" x 85/8 x 16" B.H.
1-7" x 8 5/8 x 16" Screw-
down Packer
1-85/8 x 10 1/2 x 16"
Size 3 x 85/8 x 16"
(3) 1768'5
(8) 1732-(7) 1988'
(7) 1879'
Perf. top 4924
" bot 4931
Coal at 100' 72"

Casing cemented 5 1/2" 30' 12-5-44
10 bags cement 15 bags aquagel

Soil	0	10	White Slate	3670	3925
Sand	10	60	Brown Shale	3925	4130
Blue Slate	60	100	White Slate	4130	4562
Coal	100	106	Brown Shale	4562	4813
Blue Slate	106	150	Corn Lime	4813	4916
White Slate	150	180	Oriskany	4916	4949
Red Rock	180	225	Black Lime	4949	4950
White Slate	225	280	TOTAL DEPTH		4950
Sand	280	300	Small show gas	4710	
Red Rock	300	310			
Slate & Shells	310	330	Gas 4918-4920	4/10 W 5 1/2" 17#	504 M
Red Rock	330	340	Gas 4920-4926	5/10 W 5 1/2" 17#	564 M
Slate	340	370	Gas 4926-4931	8/10 W 5 1/2" 17#	713 M
Sand	370	390	Shot 12-21-44	with 70 qts Nitro-	
Slate	390	445	glycerine from 4916-4950.	Test before	
Red Rock	445	465	shot 1 1/2/10 W 5 1/2" 17#	304 M. Tamp	
Lime	465	495	bridged with shot. Hole filled with		
Slate & Shells	495	510	Water to clean out and was bailed		
Sand	510	585	down. Test 7 hrs. after water began		
Slate	585	592	to blow 26/10 W 5 1/2" 17#	1,286 M	
Gritty Lime	592	625	42 hr. Rock Pressure	1550#	
Slate	625	680			
Gritty Lime	680	725			
Slate & Shells	725	760			
Sand	760	900			
Slate & Shells	900	978			
Sand	978	1005			
Slate	1005	1100			
Lime	1100	1130			
Slate & Shells	1130	1170			
Sand	1170	1230	Show of oil	1175	
Lime	1230	1270			
Slate	1270	1319			
Sand	1319	1570			
Slate	1570	1578			
Sand	1578	1615			
Slate	1615	1622			
Sand	1622	1714	Show gas	1822-1823	
Big Lime	1714	1870			
Injun	1870	1928			
Black Lime	1928	1934	Gas 1836-1844	10/10 W 2" 133 M	
Slate	1934	1940	Acidized 10-13-44	1500 Gals.	
Sand	1940	1972	50/10 W 3" 671 M		
Slate & Shells	1972	2337	24 hr. R.P.	590#	
Brown Shale	2337	2352			
Berea Sand	2352	2367			
Slate & Shells	2367	3592			
Brown Shale	3592	3670			

2352
165
- 1487

39 01168P



New Location
 Drill Deeper
 Abandonment

Company CUMBERLAND GAS CO
 Address Charleston, West Va.
 Farm Raymond City Coal & Transportation Corp
 Tract _____ Acres 5000 Lease No. C.K.P.-1
 Well (Farm) No. 7 Serial No. C.K.P. 7
 Elevation (Spirit Level) 865
 Quadrangle Charleston
 County Kanawha District Union
 Engineer H.V. Carper Jr.
 Engineer's Registration No. 738
 File No. _____ Drawing No. _____
 Date 10 August 1944 Scale 1" = 1250'

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

WELL LOCATION MAP
 FILE NO. KAN-1168

+ 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

07/14/2017

3901168P

WW-4-A
Revised 6/07

1) Date: April 12, 2017
2) Operator's Well Number
416391 (Raymond City Coal CKP-7)
3) API Well No.: 47 039 - 01168
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 Kanawha County Commission
Address 409 Virginia Street
Room 230
Charleston, WV 25301
(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 Robert Cunningham
c/o W. B. Cunningham
Address P. O. Box 7146
Charleston, WV 25356-7146
Name _____
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.

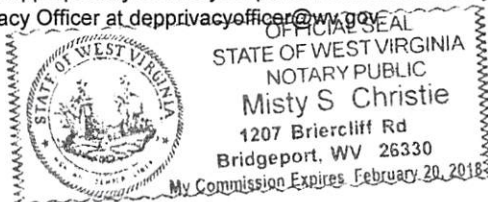
The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

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 12th 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



07/14/2017

3901168 P

JUL 11 2017

WW-9
Revised 5/16

WV Department of
Environmental Protection

Page _____ of _____
2) Operator's Well Number
416391 (Raymond City Coal CKP-7)
3) API Well No.: 47 039 - 01168

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): Pocatalico River Quadrangle: Pocatalico 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: _____

Will a synthetic liner be used in the pit? Yes X No ___ Is so, what ml.? 2010 ml

- Proposed Disposal Method for Treated Pit Wastes:
- NO LAND APPL. 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 11th day of July, 2017

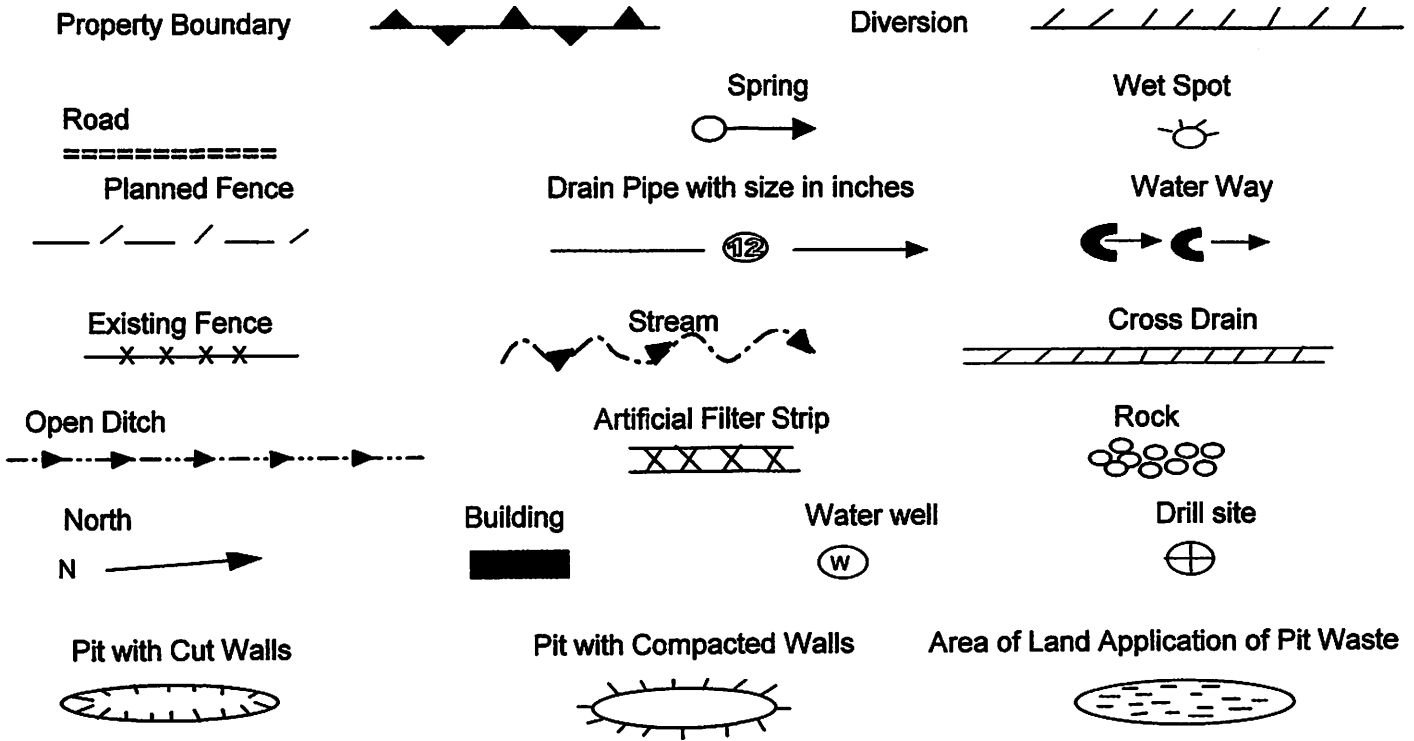
My Commission Expires 2/20/18



07/14/2017

OPERATOR'S WELL NO.:
416391 (Raymond City Coal CKP-7)

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 1/2' topographic sheet.

Plan approved by: [Signature]

Comments: Well @ 4H Camp in Spring Field

Title: [Signature] Date: 5-8-17

Field Reviewed? Yes No

Received
Office of Oil & Gas

MAY 5 2017 07/14/2017

3901168P

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

07/14/2017

3901168P

Topo Quad: Pocatalico 7.5' Scale: 1" = 200'

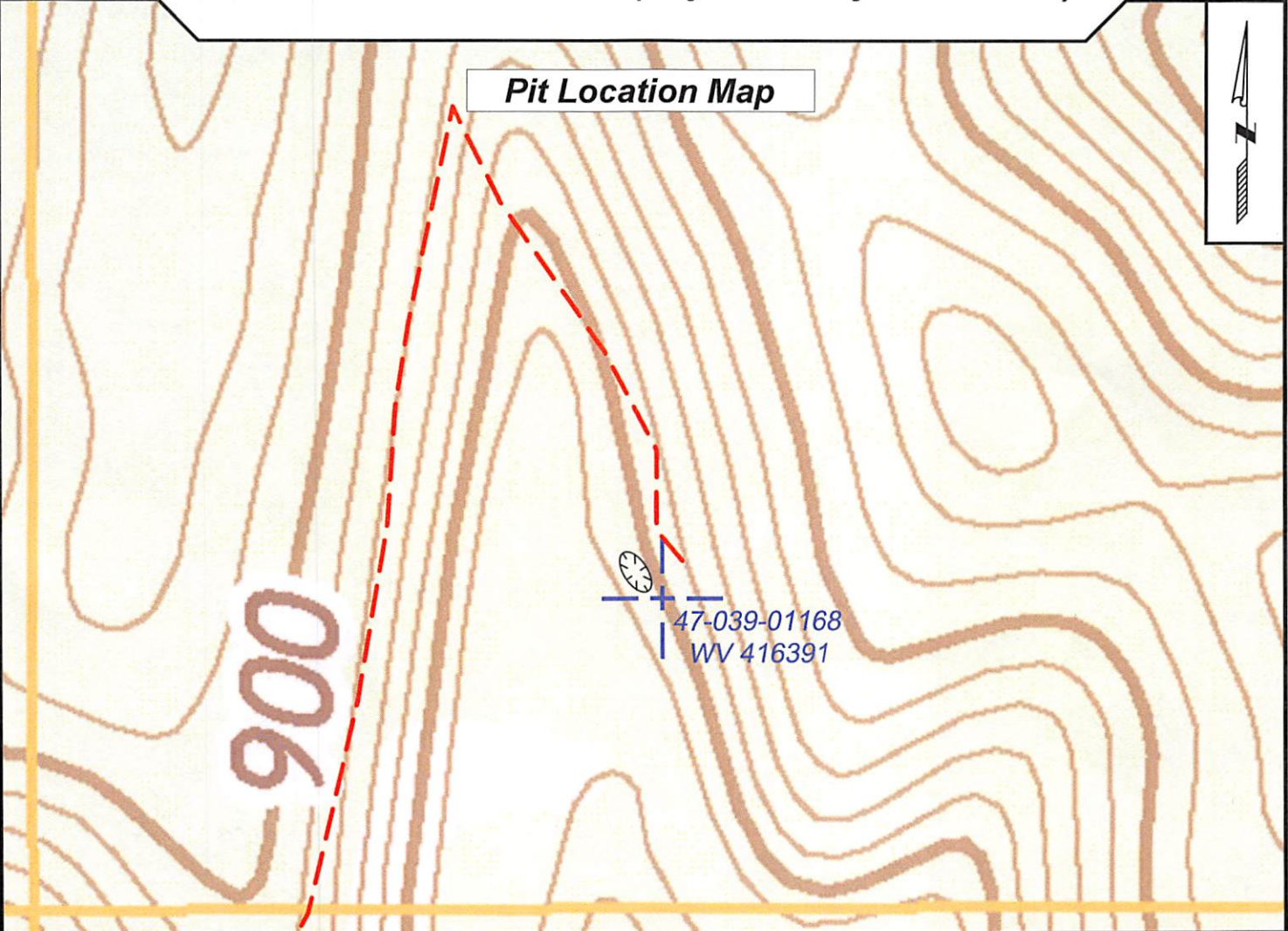
County: Kanawha Date: March 30, 2017

District: Union Project No: 52-14-00-07




47-039-01168 WV 416391 (Raymond City Coal CKP-7)

Topo

Pit Location Map



LEGEND

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

No LAND APPLICATION.

NAD 27, South Zone
N:545320.45
E:1794169.68

WGS 84
LAT:38.495493
LONG:-81.719030
ELEV:858.33



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

3901168P

Topo Quad: Pocatalico 7.5' Scale: 1" = 500'

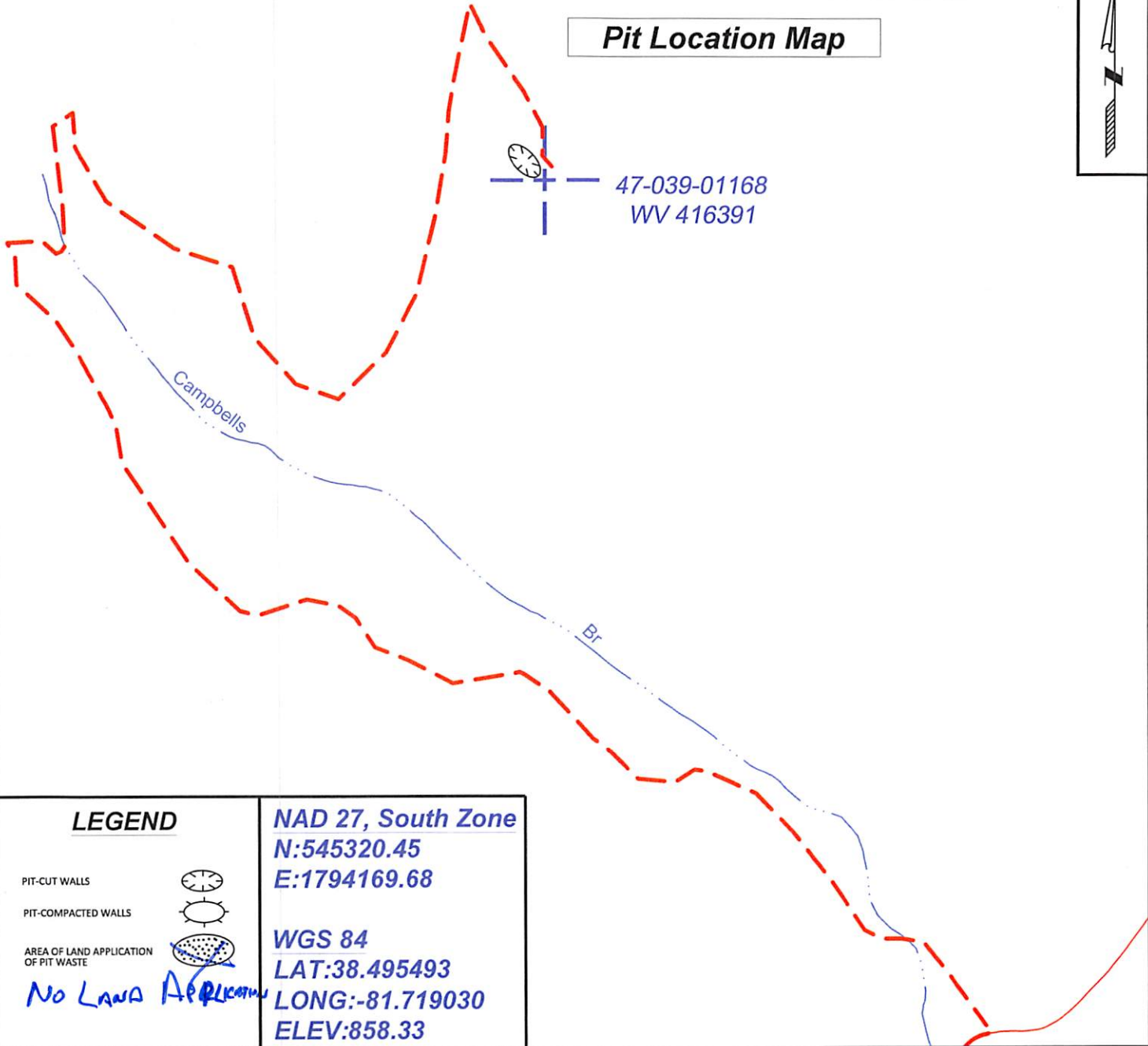
County: Kanawha Date: March 30, 2017

District: Union Project No: 52-14-00-07

Highway

47-039-01168 WV 416391 (Raymond City Coal CKP-7)

Pit Location Map



LEGEND

PIT-CUT WALLS



PIT-COMPACTED WALLS



AREA OF LAND APPLICATION OF PIT WASTE



No Land Application

NAD 27, South Zone

N:545320.45

E:1794169.68

WGS 84

LAT:38.495493

LONG:-81.719030

ELEV:858.33



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

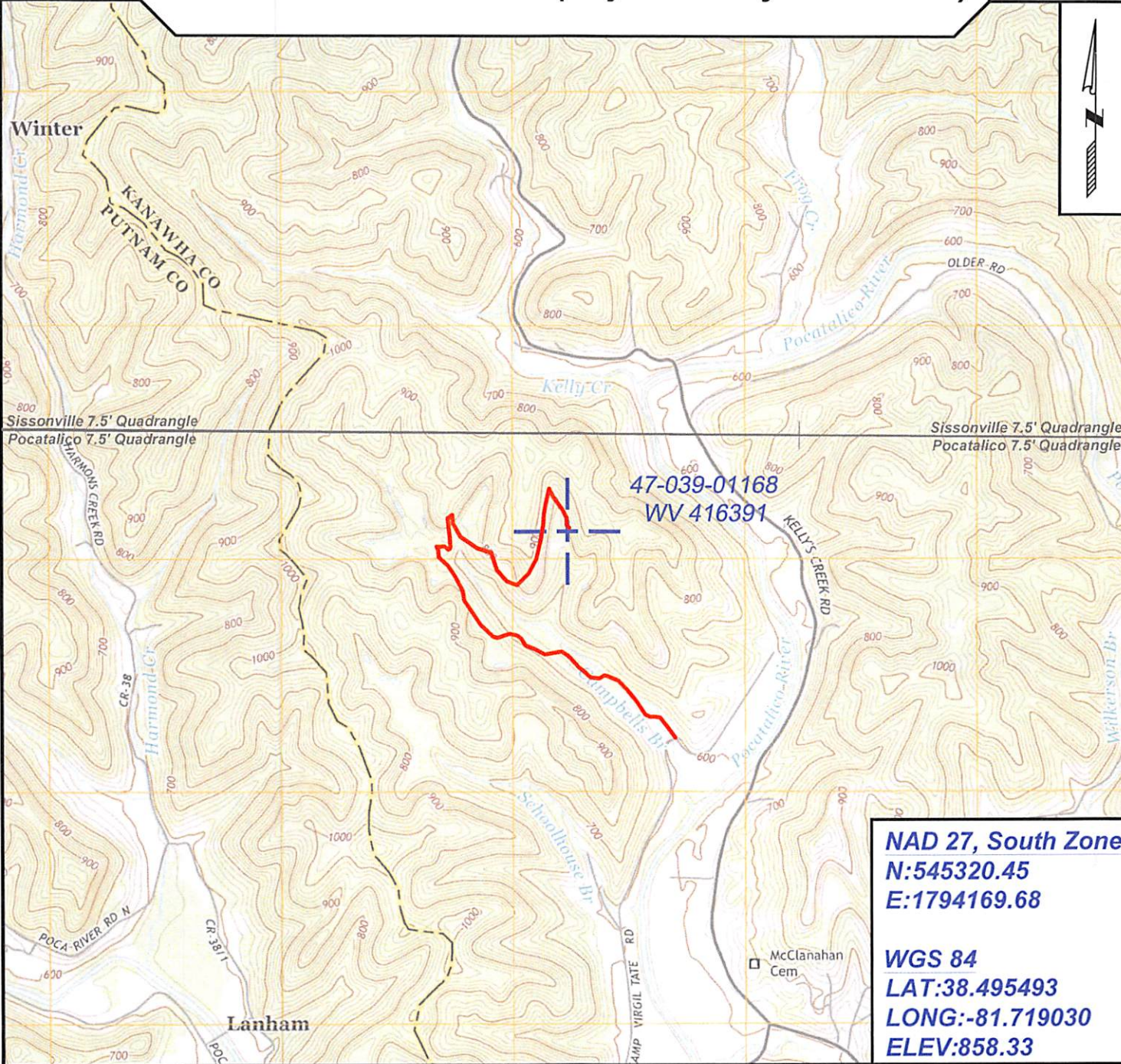
Topo Quad: Pocatalico 7.5' Scale: 1" = 2000'

County: Kanawha Date: March 30, 2017

District: Union Project No: 52-14-00-07

47-039-01168 WV 416391 (Raymond City Coal CKP-7)

Topo



47-039-01168
WV 416391

NAD 27, South Zone
N:545320.45
E:1794169.68

WGS 84
LAT:38.495493
LONG:-81.719030
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FAX: (304) 649-8608

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



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY

LEASE NAME AND WELL No. Raymond City Coal CKP-7 - WV 416391 - API No. 47-039-01168

POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 416391.

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

3901168P

Topo Quad: Pocatalico 7.5' Scale: 1" = 2000'

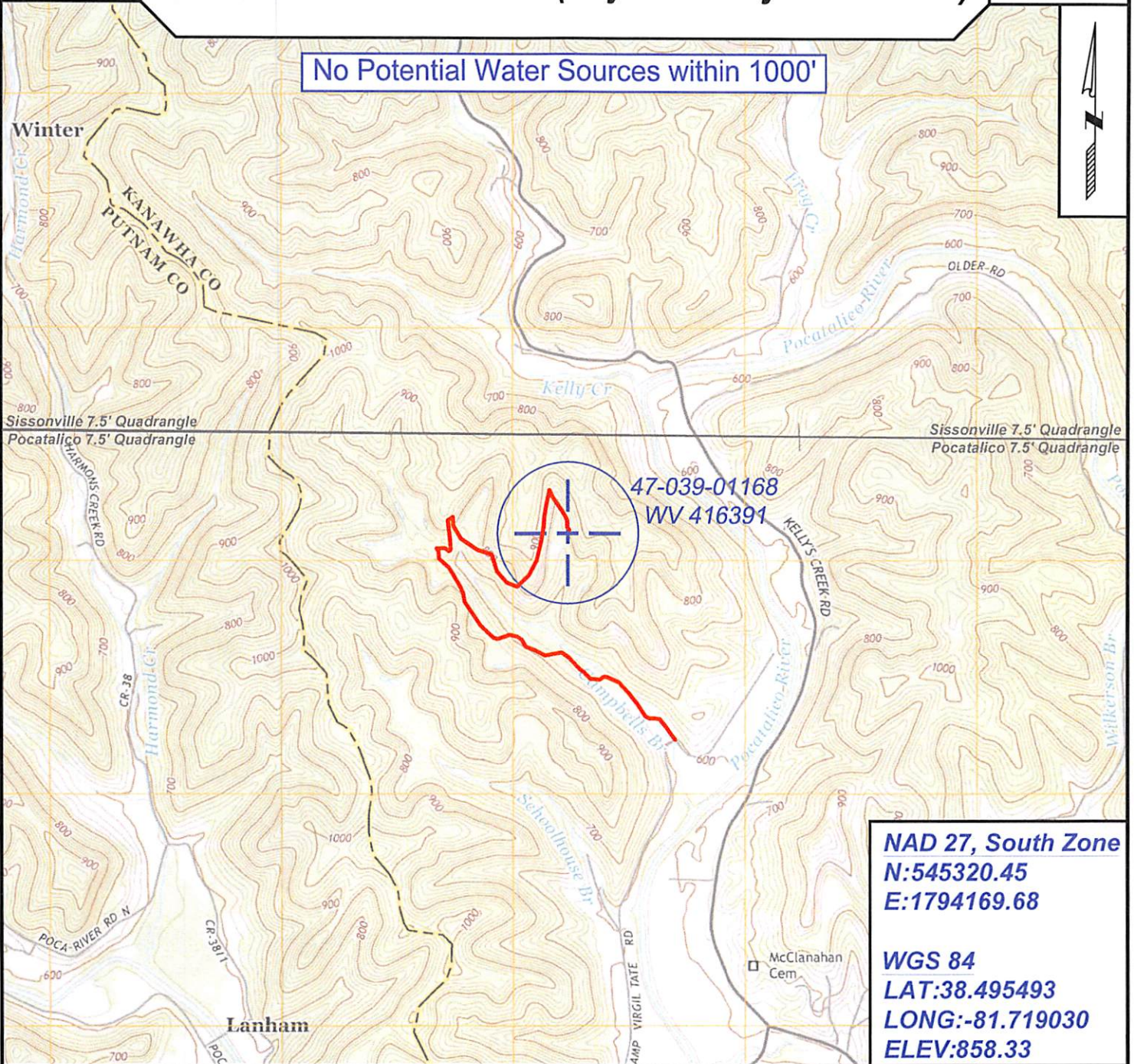
County: Kanawha Date: March 30, 2017

District: Union Project No: 52-14-00-07

Water

47-039-01168 WV 416391 (Raymond City Coal CKP-7)

No Potential Water Sources within 1000'



NAD 27, South Zone
N:545320.45
E:1794169.68

WGS 84
LAT:38.495493
LONG:-81.719030
ELEV:858.33



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

