



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

June 16, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3301590, 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: 8137
Farm Name: SMITH, M.
API Well Number: 47-3301590
Permit Type: Plugging
Date Issued: 06/16/2016

Promoting a healthy environment.

06/17/2016

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.

3301590P
CR 20463
100⁰⁰

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

Date: May 10, 2016
Operator's Well
Well No. 152501 (M. Smith #8137)
API Well No.: 47 033 - 01590

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: 1107 ft. Watershed: Buffalo Creek
Location: Union County: Harrison Quadrangle: West Milford 7.5'
District:
- 6) Well Operator EQT Production Company 7) Designated Agent: Rex C. Ray
120 Professional Place Address: 120 Professional Place
Address: Bridgeport, WV 26330 Bridgeport, WV 26330
- 8) Oil & Gas Sam Ward 9) Plugging Contractor:
Name: P. O. Box 2327 Name: HydroCarbon Well Service
Address: Buckhannon, WV 26201 Address: PO BOX 995
Buckhannon, WV 26201 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 6/10/2016

06/17/2016

PLUGGING PROGNOSIS

M.W. Smith (152501)
 District, Union
 Harrison Co. WV
 API # 47-033-01590

BY: R. Green
 DATE: 10/6/15

CURRENT STATUS:
 Elevation @ 1100'(est.)
 TD at 3048'

7" csg @ 1474'
 5" csg @ 2235'

Fresh Water @ none reported
 Coal @ none reported
 Saltwater @ none reported
 Gas show @ 1933', 2014', 2326' & 3020''

1. Notify State Inspector, Sam Ward, 304-389-7583, 24 hrs. in advance of commencing operations.
2. RIH wireline, find packer and determine TD.
3. Shoot off 2" X 5" packer @ 2910'. *SPOT GEL TO BOTTOM. gum*
4. THH tbg to 2900' set 300' C1A cement plug 2900' to 2600'. (Gas show @ 3020', & 2" X 5" packer at 2910')
5. TOOH tbg to 2600', gel hole 2600' to 2400'.
6. TOOH tbg to 2400', set 300' C1A cement plug 2400' to 2100'. (Gas show at 2326' & 5" casing seat). TOOH tbg
7. Free point 5" casing, cut casing at free point. TOOH casing.
8. Set 100' C1A 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 tbg to top of cement, gel hole to 1500'.
10. TOOH tbg to 1500', set 300' C1A cement plug 1500' to 1200'. TOOH tbg. (7" casing seat).
11. Free point 7" casing, cut casing at free point. TOOH casing.
12. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
13. TOOH tbg to top of plug, gel hole to 300'.
14. TOOH tbg to 300', set 300' C1A cement plug 300' to surface.
15. Erect monument with API # and date
16. Reclaim location and road to WV-DEP specifications.

SDW 6/10/2016

06/17/2016

3301590P

Record of RESERVE GAS Company
 Well No. 8137 Located on M. W. Smith District Harrison Farm
 District Union County Harrison State W. Va.
 Location Made 8-15-18 First Work Done 9-4-18
 Rig Commenced 10-9-18 Rig Completed 10-16-18
 Drilling Commenced 10-20-18 Drilling Completed 1-16-19
 Rig Contractor Reserve Gas Co. Drilling Contractor Mike Huber
 Drillers John Glesmen and William Quirk If H. N. Co. Top, String No.
 Tool Dressers Brenna McDonald and Harley Wolf

FORMATION	Open or Close Hard or Soft	TOP	BOTTOM	Steel Line Measurements	Water Found Depth	Oil Found Depth	Gas Found Depth	REMARKS
Native Coal		None						
Pittsburgh Coal		None						
Little Dunkard		320	440					
Big Dunkard	Hard	480	585					
Gas Sand	Hard	500	640					
First Salt	Hard	680	775					
Second Salt	Hard	795	840					
Maxon	Hard	1300	1330					
Little Lime	Hard	1395	1410					
Pencil Cave		1410	1431					
Big Lime		1431	1500					
Big Injun	Hard	1500	1600					
Squaw								
Berea								
Gantz								
Fifty Feet	Hard	1925	1955				1933	
Thirty Feet		2012	2022			Little	2014	
Gordon Stray								
Gordop		2180	2214					
Fourth	Shells hard	2244	2261					
Fifth	hard	2324	2340				2326	
Payard								
Speechley		3018					3020	
Total Depth		3048						

SIZE	Charged to Well		Put in Well		Pulled Out		Left in Well		Transferred Before Completing		Left at Well Not in Use		If more than two strings of casing are left in hole, give reasons for leaving additional strings.
	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	
10" Csg.													
10" "	305	5	110	--	110	11					305	5	
8 1/2" "	1044	3							1044	3			
8 5/8" "	1729	8	1474				1474	-			255	8	
6 3/4" "	2302	3	2235	3			2235	3			67	-	
2" Tbg.	3355	8	3060				3060				295	8	
2" Perf.	16		16				16						

PACKER RECORD

SIZE	KIND	Amount Anchor	Amount Above Anchor	REMARKS
8 1/2 x 6 1/2	Bottom Hole			
6 3/4 x 5 1/2	" "			
5 1/2 x 4 1/2	Anchor	138	2910	

SHOOTING RECORD (If shot before or upon completion of well)

DATE	Quarts	Top of Shot	Bottom of Shot	Diameter	Case	Test Before Shot			Test After Shot			Test Taken After Shot No. Hours	By Whom Shot
						Reading	Liquid	Opening	Reading	Liquid	Opening		
1/18	16	3019	3025	4" Speechley	5/10	Merc.	2"	46/10	Water	5 1/2"	1 hr.	Marietta	
								18/10	"	5 1/2"	24 hr.	Tornado Co.	

CEMENTING RECORD

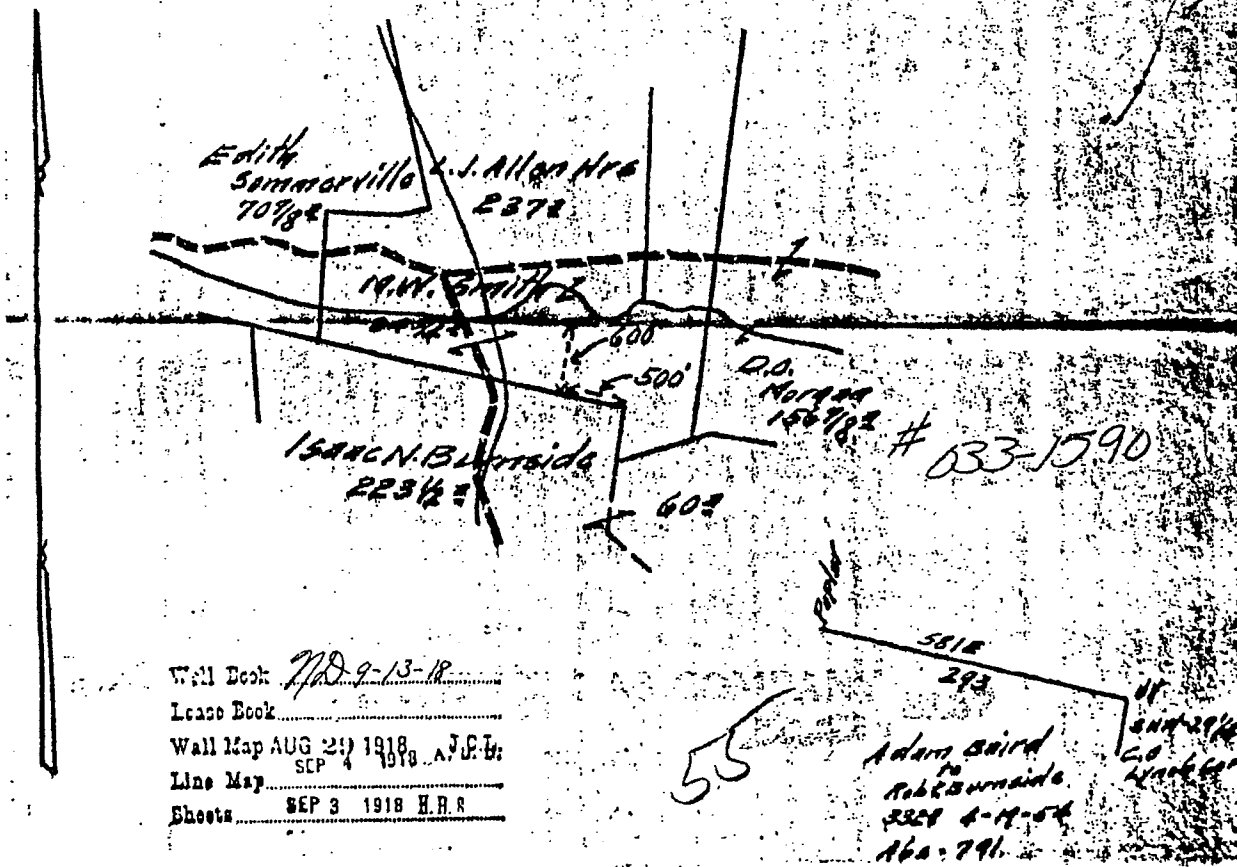
Date Cemented..... Size Hole Cemented..... Size Casing Cemented.....
 Top Pittsburgh Coal..... Top Cementing..... Amount Cement Used.....
 Bottom Pittsburgh Coal..... Bottom Cementing..... Amount Sand Used.....
 Mr..... of..... Coal Company on ground when coal was cemented
 Remarks..... Signature of persons who cemented well

033-1590

Approved by J. P. DeV... 06/17/2016 Foreman

LOCATION FOR WELL No. 807 DISTRICT Buffalo Creek
 Farm, on waters of Buffalo Creek
 District Marion County, West Virginia
 No. 838 Acres 9.5 N. 17 E. 8 W.
 one inch equals 80 feet Location made in Pittsburgh Aug 1-18 Sent to Clarksburg Aug 1-18
 Location to be 600 feet from Isaac N. Burnside farm at a point
500 feet from Smith-Burnside corner as per plat

Elev. 1100 est.



TITLE _____ RESERVE 300 feet around the dwelling
 Office of Oil and Gas
 SPECIAL INSTRUCTIONS: COMPLETE WELL ON OR BEFORE MAY 1, 2010
 Same Lease on which Located Well No. _____
 WV Department of
 Location made 8-15-18 by A. Reynolds As per plat, ~~except as noted~~. On field map
8-16-18 Returned to Pittsburgh 8-16-18
 Location changed on account of _____
 Authorized by _____ Date _____ Signed J. H. Bradley
062172046
Talley
 022-1490

WW-4-A
Revised 6/07

1) Date: May 10, 2016
2) Operator's Well Number
152501 (M. Smith #8137)
3) API Well No.: 47 033 - 01590
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 Kevin J. Poth
Address RR 1 Box 199
Lost Creek, WV 26385

(b) Name _____
Address _____

(c) Name _____
Address _____

6) Inspector Sam Ward
Address P. O. Box 2327
Buckhannon, WV 26201
Telephone (304) 389-7583

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

(b) Coal Owner(s) with Declaration
Name Sandra Piearcy
9205 County Road 1540
Address Ada, OK 74820

Name _____
Address _____

(c) Coal Lessee with Declaration
Name None
Address _____

Name _____
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 May
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.



06/17/2016

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: Buffalo Creek Quadrangle: West Milford 7.5'
Elevation: 1107 ft. County: Harrison District: Union

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.? 10 ml 20 ml minimum

Proposed Disposal Method for Treated Pit Wastes:
 Land Application
 Underground Injection - UIC Permit Number _____
 Reuse (at API Number) - Various _____
 Offsite Disposal Permit #. See attached _____
 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.

Victoria Roark RECEIVED
Office of Oil and Gas

Company Official Signature _____

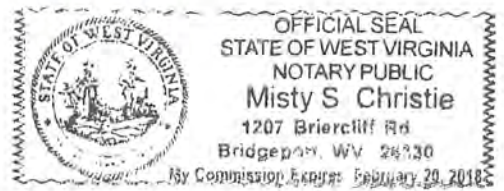
Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV MAY 17 2016

Subscribed and sworn before me this 12th day of May 2016

Misty S. Christie Notary Public

My Commission Expires 2/20/18



06/17/2016

EQT Production Water plan Offsite disposals
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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

RECEIVED
Office of Oil and Gas

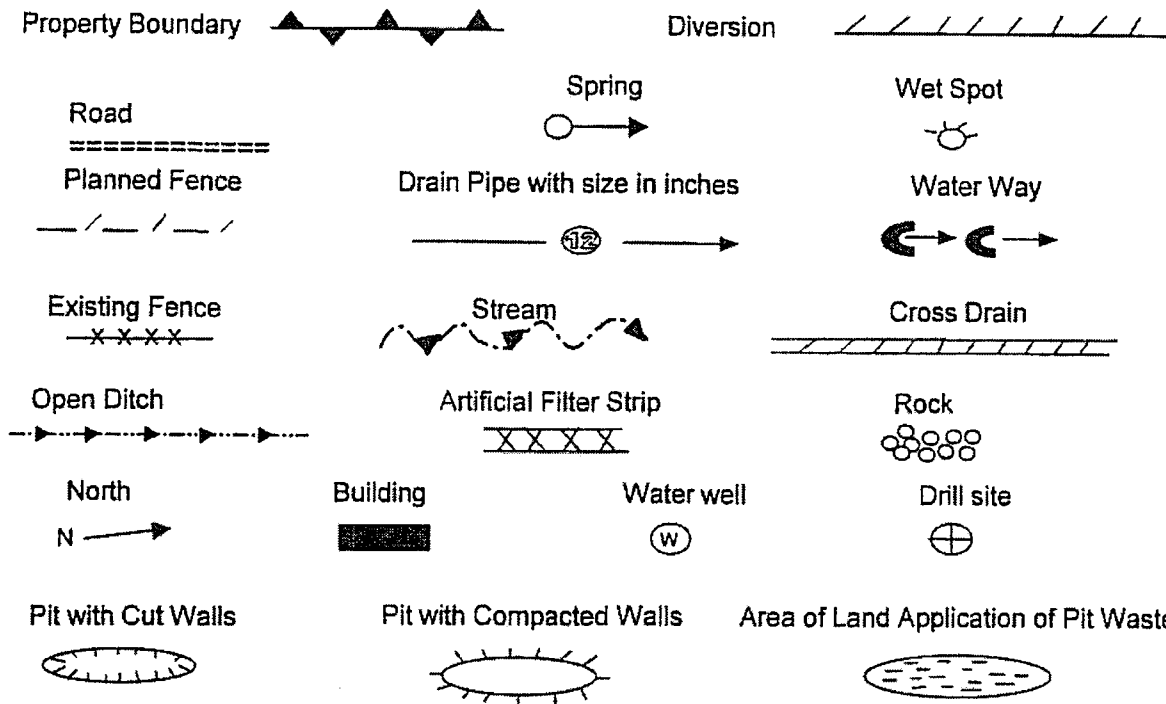
MAY 17 2016

WV Department of
Environmental Protection

06/17/2016

OPERATOR'S WELL NO.:
152501 (M. Smith #8137)

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: *S. A. Schwartz*

Comments: _____

Title: COG Inspector Date: 6/10/2016
 Field Reviewed? Yes No

06/17/2016

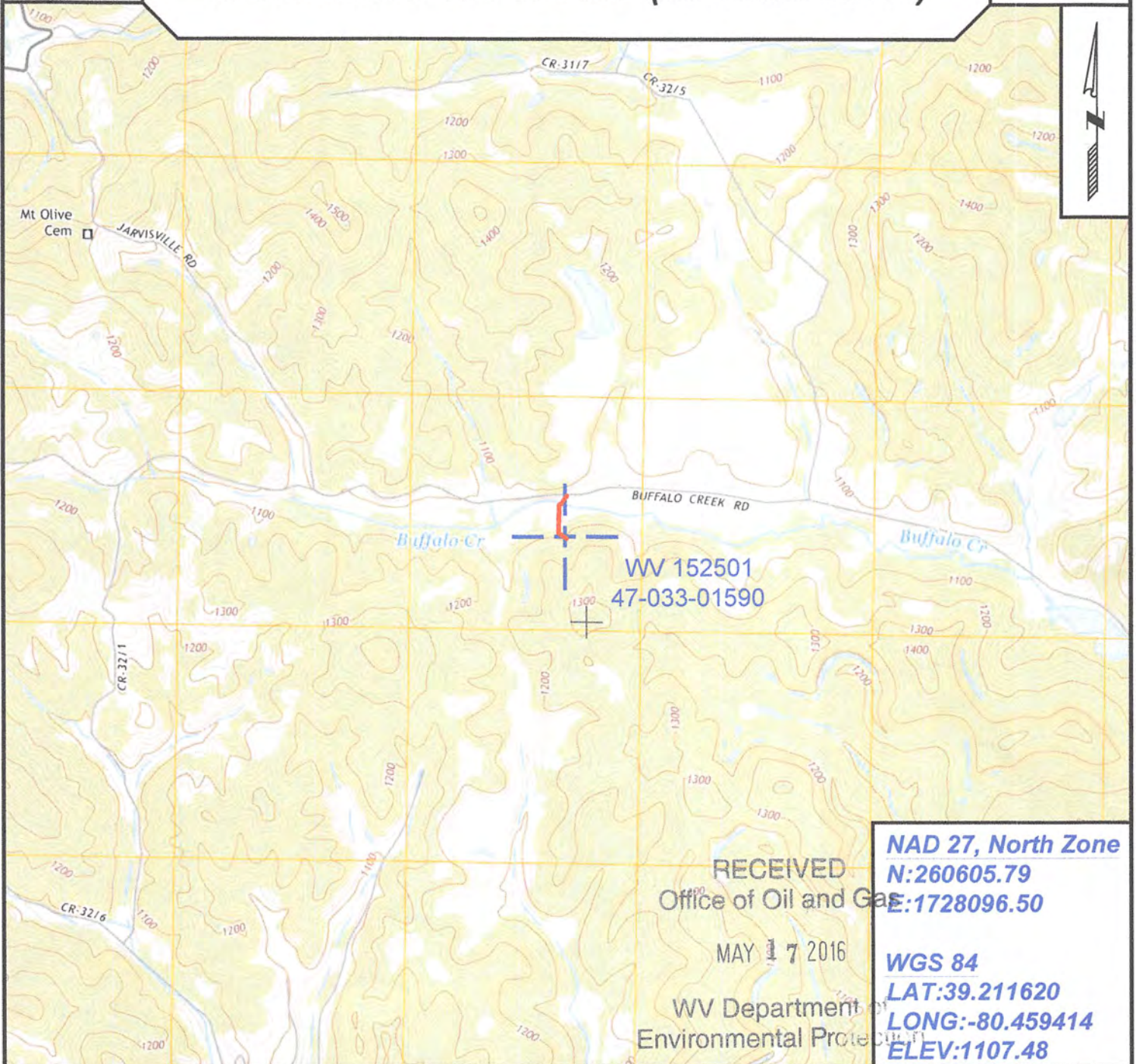
Topo Quad: West Milford 7.5' Scale: 1" = 2000'

County: Harrison Date: April 7, 2016

District: Union Project No: 70-36-00-08

47-033-01590 WV 152501 (M. Smith #8137)

Topo



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Office of Oil and Gas

MAY 17 2016

WV Department of
Environmental Protection

NAD 27, North Zone
N:260605.79
E:1728096.50

WGS 84
LAT:39.211620
LONG:-80.459414
ELEV:1107.48



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

06/17/2016

WW-7
8-30-06



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

API: 47-033-01590 WELL NO.: WV 152501 (M. Smith #8137)

FARM NAME: M. Smith

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Harrison DISTRICT: Union - 06

QUADRANGLE: West Milford 7.5' - 669

SURFACE OWNER: Kevin J. Poth

ROYALTY OWNER: EQT Production Company, et al.

UTM GPS NORTHING: 4340400

UTM GPS EASTING: 546671 GPS ELEVATION: 337m (1107 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:

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.

Steve Brown
Signature

PS-2180
Title

WV Department of Environmental Protection
2/17/2016
Date



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY

LEASE NAME AND WELL No. M. Smith #8137 - WV 152501 - API No. 47-033-01590

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 953 +/- Owner: Carolyn Hurst
 Address: 2965 Buffalo Creek Rd., Lost Creek, WV 26385 Phone No. _____
 Comments: _____

Site: 2 Spacing: 901 +/- Owner: Linda Webb
 Address: 1321 N 18th St., Clarksburg, WV 26301 Phone No. _____
 Comments: _____

Site: 3 Spacing: 942 +/- Owner: Nate Percy
 Address: 2888 Buffalo Creek Rd., Lost Creek, WV 26385 Phone No. _____
 Comments: _____

Site: 4 Spacing: 818 +/- Owner: Kevin Poth
 Address: 2732 Buffalo Creek Rd., Lost Creek, WV 26385 Phone No. _____
 Comments: _____

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Office of Oil and Gas

MAY 17 2016

WV Department of
Environmental Protection

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: West Milford 7.5' Scale: 1" = 2000'

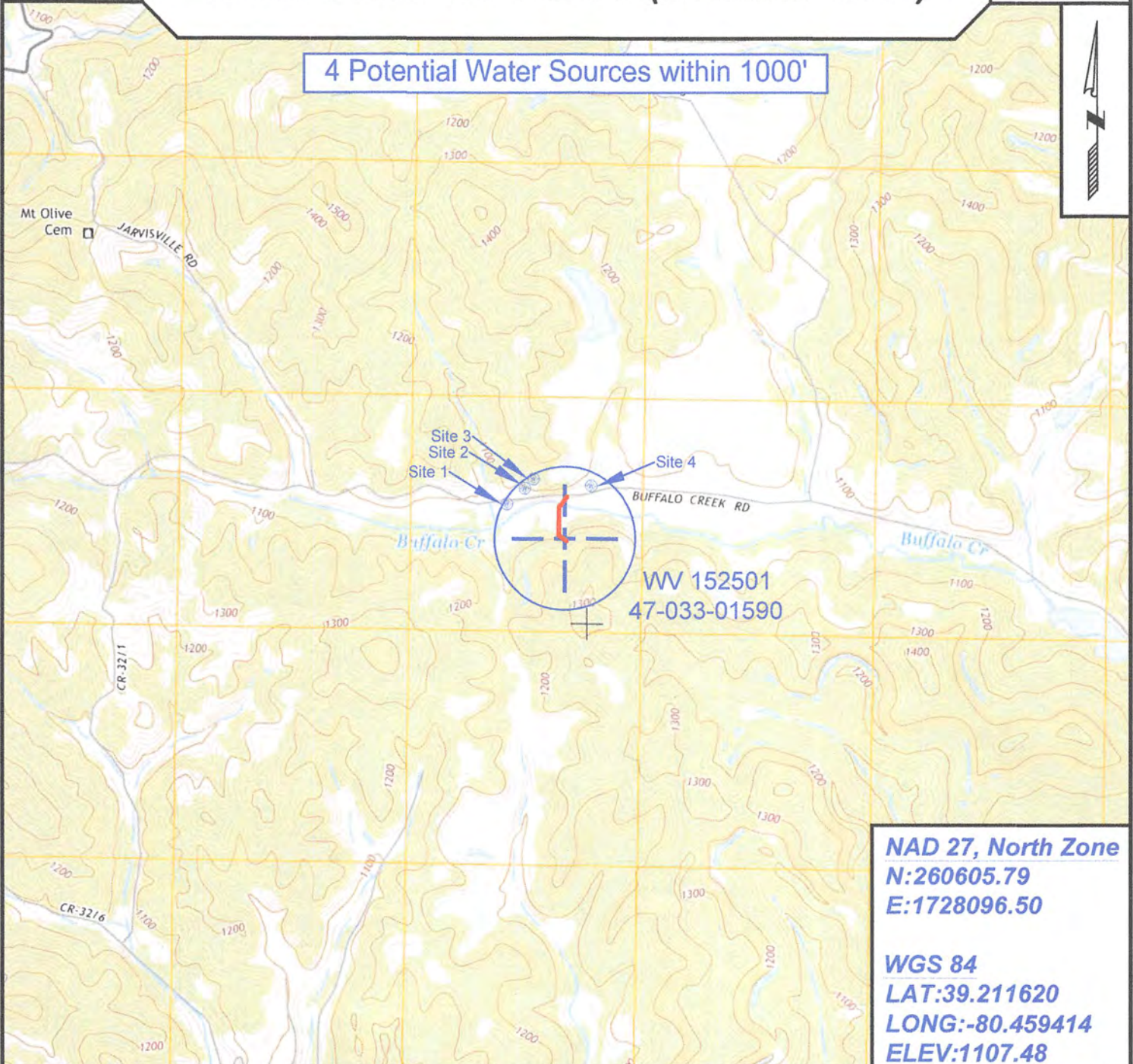
County: Harrison Date: April 7, 2016

District: Union Project No: 70-36-00-08

Water

47-033-01590 WV 152501 (M. Smith #8137)

4 Potential Water Sources within 1000'



NAD 27, North Zone
N:260605.79
E:1728096.50

WGS 84
LAT:39.211620
LONG:-80.459414
ELEV:1107.48



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