



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

January 12, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3301648, 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: 111
Farm Name: KELLY, G. W.
API Well Number: 47-3301648
Permit Type: Plugging
Date Issued: 01/12/2016

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.

*OK # 19904
100.00*

Date: October 26, 2015
Operator's Well _____
Well No. 650231 (Kelley #111)
API Well No.: 47 033 - 01648

**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: 1068 ft. Watershed: Camp Run
Location: Sardis County: Harrison Quadrangle: Wallace 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 Sam Ward
Name: P. O. Box 2327
Address: Buckhannon, WV 26201

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.

OK fwm

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 _____

**Received
Office of Oil & Gas
OCT 26 2015**

PLUGGING PROGNOSIS (revised)
G.W. Kelley #1 (650231)

API# 47-033-01648
 District, Sardis
 Harrison Co., WV

BY: R Green
 DATE: 1/5/16

CURRENT STATUS:

10" @ 218' (pulled)
 8 1/4" @ 1062' (pulled)
 6 5/8" @ 1976'
 3" tbg @ 1960', set on 3"x 6 5/8" packer @ 1960'
 Elevation @ 1068

T. D. -2882'

Fresh Water, none reported
Oil Shows, none reported
Gas shows @ 2460' to 2465', & 2547'
Coal @ 570' to 577'

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 Office of Oil and Gas

JAN 11 2016

WV Department of
 Environmental Protection

- OK
 JWW
1. Notify inspector, **Sam Ward**, @ 304-389-7583, 24 hrs. prior to commencing operations.
 2. RIH wireline, locate packer, and check TD.
 3. RIH wireline, shoot 3" tbg off at top of packer.
 4. Set 300' C1A cement plug 1960' to 1660'. TOO H Tbg.
 5. WOC 8hrs, tag TOC @ 1660'.
 6. Add additional C1A cement if necessary, to achieve TOC @ 1660'
 7. RIH wireline to 1600', perforate 6 5/8" casing with a minimum of 3 holes each @ 1600', 1400', 1200'.
 8. Set 400' C1A cement plug 1600' to 1200'.
 9. WOC 4hrs. Tag TOC, add additional C1A cement if necessary.
 10. RIH wireline, perforate 6 5/8" casing with 3 holes each @ 1100', 900', 700'.
 11. Set 450', C1A cement plug 1150' to 700'. (Elevation @ 1068')
 12. WOC 4hrs. Tag TOC, add additional C1A cement if necessary.
 13. RIH wireline, perforate 6 5/8" casing with 3 holes each @ 600' 500' 400'.
 14. Set 350' C1A cement plug 700' to 350'.
 15. WOC 4hrs, tag TOC, add additional C1A cement if necessary.
 16. RIH wireline, perforate 6 5/8" casing with 3 holes @ 300'.
 17. Set 150' C1A cement plug 350' to 200'.

01/15/2016

18. WOC 4hrs. Tag TOC, add additional C1A cement if necessary.
19. RIH wireline, perforate 6 5/8" casing with 3 holes @ 150'.
20. Set 200' C1A cement plug 200' to surface , top off with C1A cement if necessary
21. Erect monument with API#, company name, and date plugged.
22. Reclaim location and road to WV-DEP specifications.

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JAN 11 2016

WV Department of Environmental Protection

CARNEGIE NATURAL GAS COMPANY

Map Sheet No. *Clark Co. 19 NW* RECORD OF WELL Well No. *111*
 Drilled on *G. H. Kelley #1* Farm of *7 1/2* Acres, situate in
Bardis Township *Harrison* County *WVa* Lease No. *7099*
 Shipping Point District Foreman *M. R. McInnis*
 R I G WELL

Located _____ Commenced Drilling *Nov 22-1909*
 Notified Gen'l Office _____ Notified Gen'l Office _____
 Commenced _____ Completed Drilling *Jan 29-1910*
 Completed _____ Notified Gen'l Office _____
 Contractor _____ Contractor *J. H. Agnew*
 Address _____ Address _____

ROCK FORMATION	TOP	BOTTOM	REMARKS	PRESSURE AND VOLUME
Conductor		16		1/2 Minute Lbs.
Mapleton Coal				1 " "
Pittsburgh Coal	570	577		2 " "
Little Dunkard	910	950		3 " "
Big Dunkard	1090	1166		4 " "
Gas Sand	1332	1357		5 " "
1st Salt Sand	1670	1710		10 " "
2nd Salt Sand				15 " "
Maxton Sand	1730	1750		30 " "
Little Lime	1790	1807		1 Hour "
Pencil Cave				Rock "
Big Lime	1840	1885		Size of { Tubing Inch Casing "
Big Injun	1885	1998		
Gantz Sand				Vol. by Water
50 Foot Sand	2457	2502	<i>Gas at 2460-2465</i>	" " Mercury
30 Foot Sand	2541	2560	<i>Gas at 2547</i>	" " Pressure
Gordon Stray	2600	2664		
Gordon Sand	2681	2703		CONNECTED TO MAIN LINE
4th Sand	2706	2720		
5th Sand	2840	2847		Length of Line Feet
Boyard Sand				Size of Line Inch
Elizabeth				DISCONNECTED FROM LINE
Speechley				
Bradford				Notified Lessor
				Abandoned
				Repacked
				With Foot Tubing

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Total Depth *2882* Feet at \$ _____ per Foot \$ _____
 Gas Furnished at _____ Cents per Foot

CASING RECORD

SIZE	CHANGED 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			218		218								Kind <i>Hoops Shell</i> Size <i>6 3/8 x 3 1/2</i> Set at <i>90</i> Feet WELL SHOT By _____ With <i>30</i> Qts. at <i>50 ft.</i> Feet
<i>8 1/2</i>			1062		1062								
<i>6 3/8</i>			1976				1976						
<i>3</i>			1960										

Casing Cemented in Well _____ by _____ Company Employee

WW-4-A
Revised 6/07

1) Date: October 26, 2015
2) Operator's Well Number
650231 (Kelley #111)
3) API Well No.: 47 033 - 01648
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 Billy J. Shaw, et al.
Address 247 Camp Run Road
Wallace, WV 26448
(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 Attention: Alex O'Neill
Murray Energy Corporation
Address 46226 Murray National Road
St. Clairsville, OH 43950
Name Samuel J. Cann
Address 21 Maple Lane
Bridgeport, WV 26330
(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.



OFFICIAL SEAL Well Operator:
STATE OF WEST VIRGINIA
NOTARY PUBLIC
By: Misty S. Christie
1207 Briercliff Rd Address:
Bridgeport, WV 26330
My Commission Expires February 2018 Telephone:

EQT Production Company
Victoria J. Roark
Permitting Supervisor
PO Box 280
Bridgeport, WV 26330
(304) 848-0076

Received
Office of Oil & Gas

Subscribed and sworn before me this 23rd
Misty S. Christie
My Commission Expires: _____

day of October, 2015 OCT 26 2015
Notary Public

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 deprivacyofficer@wv.gov.

WW-9
Revised 2/03

Page _____ of _____
2) Operator's Well Number
650231 (Kelley #111)
3) API Well No.: 47 033 - 01648

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: Camp Run Quadrangle: Wallace 7.5'

Elevation: 1068 ft. County: Harrison District: Sardis

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

Proposed Disposal Method for Treated Pit Wastes:

- Land Application
- Underground Injection - UIC Permit Number _____
- Reuse (at API Number) _____
- Offsite Disposal Permit #. _____
- 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? _____

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OCT 26 2015

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.

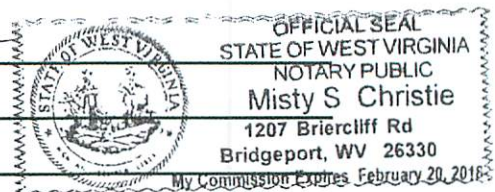
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Victoria Roark*

Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV

Subscribed and sworn before me this 23rd day of October, 2015



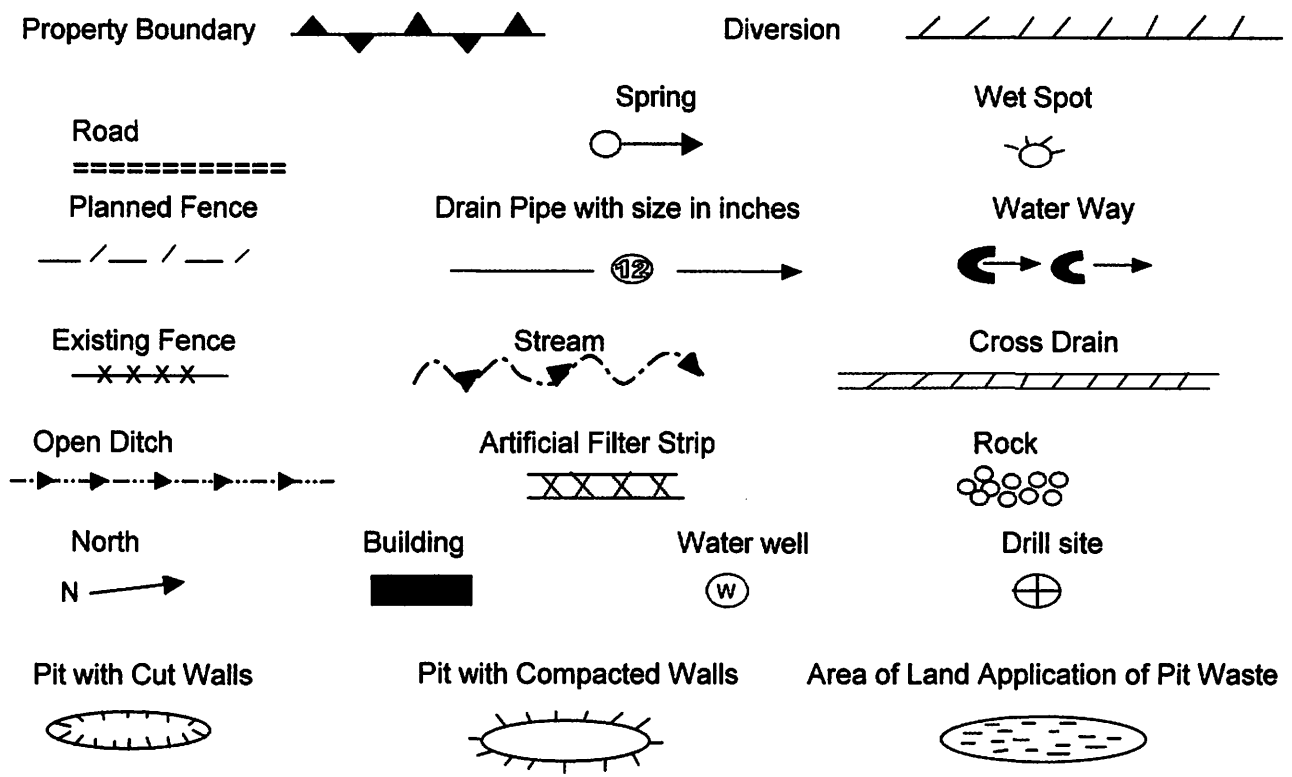
Misty S. Christie Notary Public

My Commission Expires 2/20/18

01/15/2016

OPERATOR'S WELL NO.:
650231 (Kelley #111)

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		

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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: _____ Date: _____

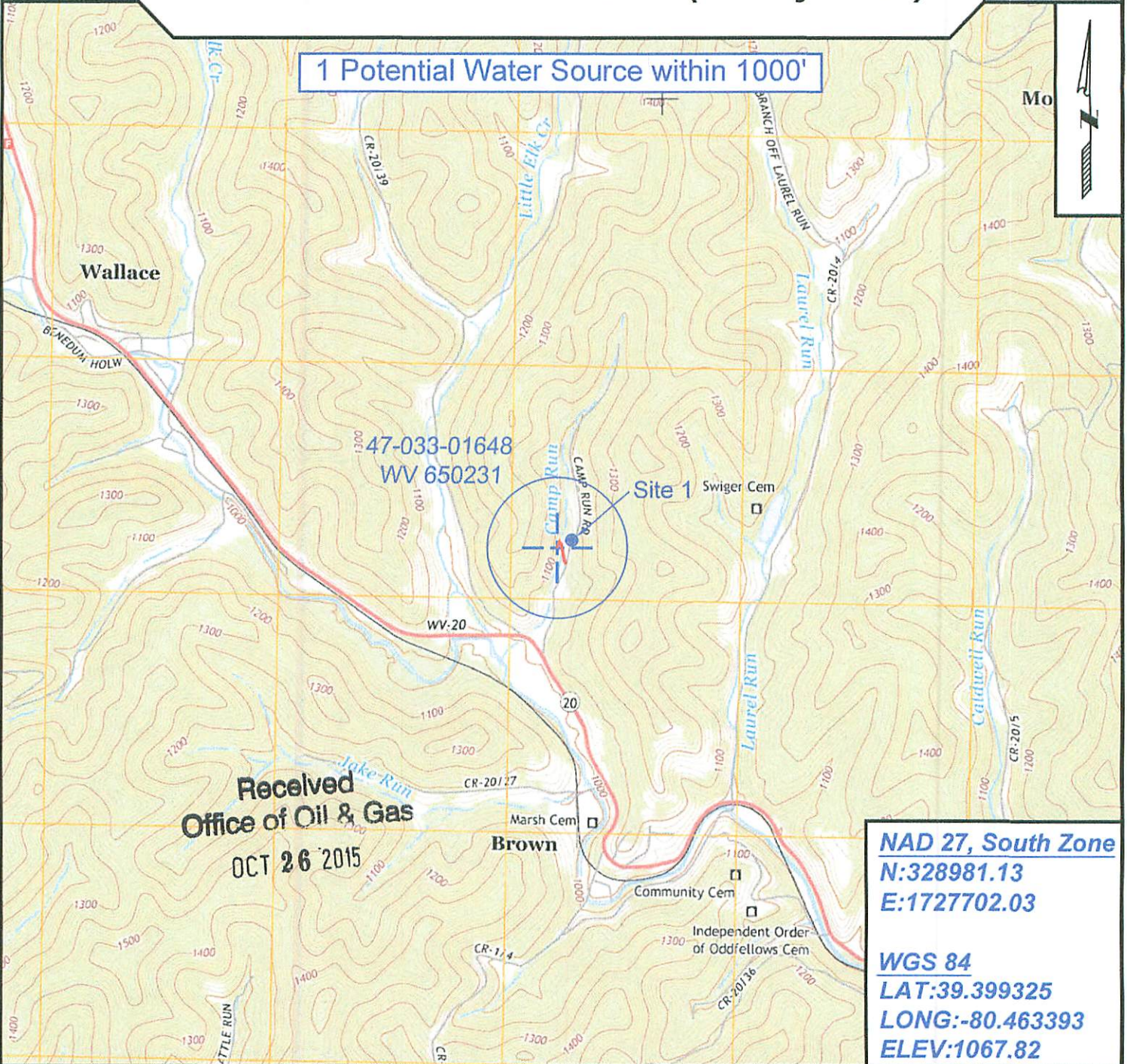
Field Reviewed? Yes No

Topo Quad: Wallace 7.5' Scale: 1" = 2000'
 County: Harrison Date: September 29, 2015
 District: Sardis Project No: 70-36-00-08

Water

47-033-01648 WV 650231 (Kelley #111)

1 Potential Water Source within 1000'



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NAD 27, South Zone
 N:328981.13
 E:1727702.03

WGS 84
 LAT:39.399325
 LONG:-80.463393
 ELEV:1067.82



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

01/15/2016



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY
 LEASE NAME AND WELL No. Kelley #111 - WV 650231 - API No. 47-033-01648

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 229 +/- Owner: Billy Joe Shaw
 Address: 247 Camp Run Road, Wallace, WV 26448 Phone No. (304) 796-4995
 Comments: Water Well for Irrigation of Garden.

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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

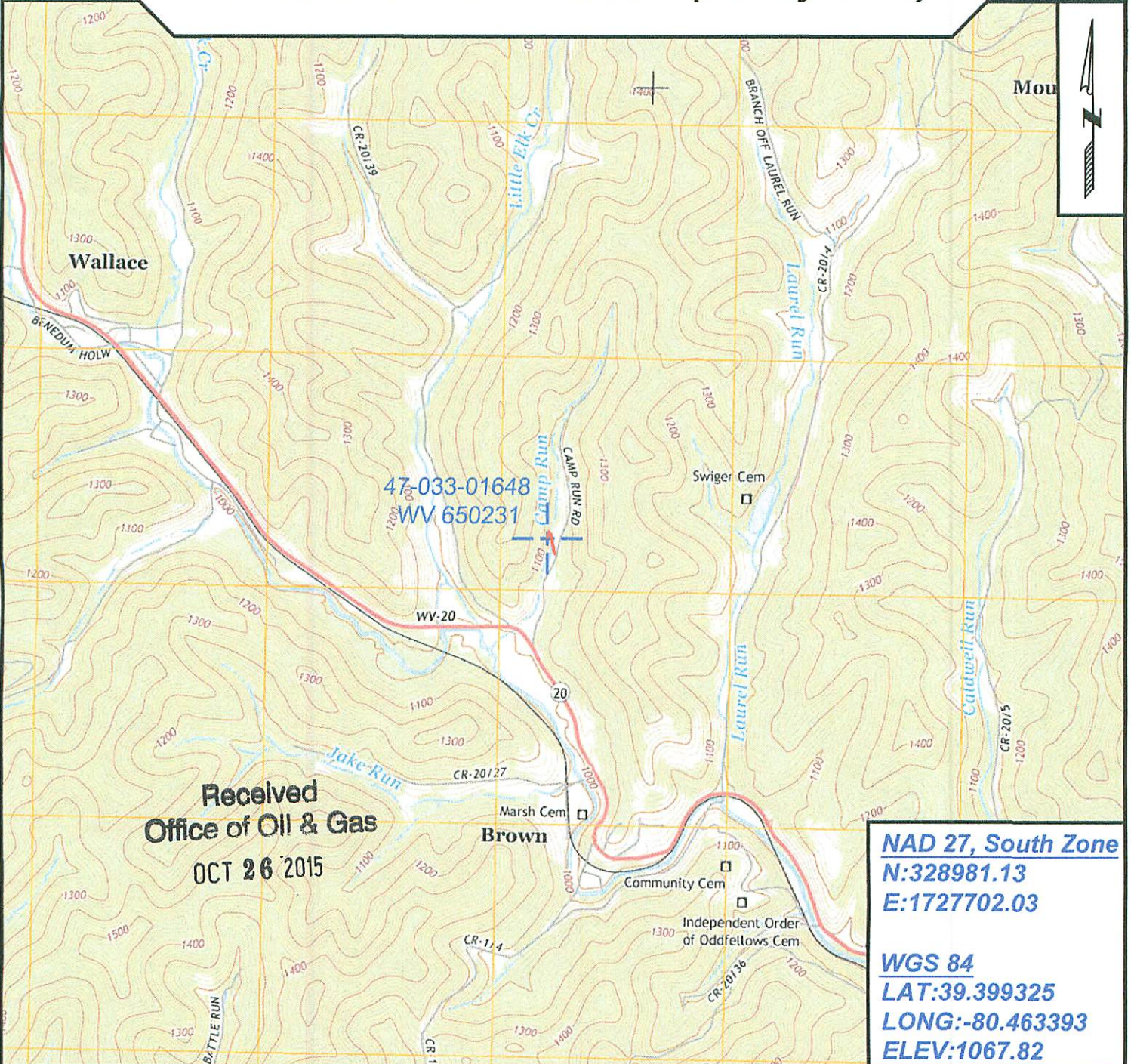
ALUM CREEK OFFICE
 P.O. Box 108 • 1413 Childress Rd
 Alum Creek, WV 25003
phone: 304-756-2949
fax: 304-756-2948

RANSON OFFICE
 401 South Fairfax Blvd, Suite 3
 Ranson, WV 25438
phone: 304-724-5008
fax: 304-724-5010

Topo Quad: Wallace 7.5' Scale: 1" = 2000'
 County: Harrison Date: September 29, 2015
 District: Sardis Project No: 70-36-00-08

47-033-01648 WV 650231 (Kelley #111)

Topo



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NAD 27, South Zone
N:328981.13
E:1727702.03

WGS 84
LAT:39.399325
LONG:-80.463393
ELEV:1067.82



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1-800-482-8606
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 PH: (304) 649-8606
 FAX: (304) 649-8608

PREPARED FOR:

EQT Production Company

P.O. Box 280
 Bridgeport, WV 26330

01/15/2016

WW-7
8-30-06



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

API: 47-033-01648 WELL NO.: WV 650231 (Kelley #111)

FARM NAME: G. W. Kelley

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Harrison DISTRICT: Sardis

QUADRANGLE: Wallace 7.5'

SURFACE OWNER: Billy Joe Shaw, et al.

ROYALTY OWNER: Samuel J. Cann, et al.

UTM GPS NORTHING: 4361229

UTM GPS EASTING: 546204 GPS ELEVATION: 325 m (1068 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:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:
Survey grade GPS : Post Processed Differential
Real-Time Differential
Mapping Grade GPS X : Post Processed Differential X
Real-Time Differential

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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.

Steph Oberon
Signature

PS # 2180
Title

10/7/15
Date