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 penalities 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

Promoting a healthy environment.

3301648P

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.

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

Ck # 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: District: Sardis County: Harrison Quadrangle: Wallace 7.5'

6) Well Operator Address: EQT Production Company, 120 Professional Place, Bridgeport, WV 26330

7) Designated Agent: Rex C. Ray
Address: 120 Professional Place, Bridgeport, WV 26330

8) Oil & Gas Inspector Name: Sam Ward
Address: P. O. Box 2327, 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 gwm

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

3301648P

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'

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Office of Oil and Gas

JAN 11 2016

WV Department of
Environmental Protection

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

OK
gmm

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'.TOOH 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'.

3301648P

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

33016487

CARNEGIE NATURAL GAS COMPANY

Map Sheet No. Clarksburg NW RECORD OF WELL Well No. 111

Drilled on G. H. Kelley #1 Farm of 7½ Acres, situate in

Sardis Township Harrison County W Va Lease No. 7099

Shipping Point District Foreman M. R. McGinnis

RIG		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
Conductor		16	
Mapleton Coal			
Pittsburgh Coal	570	577	
Little Dunkard	910	950	
Big Dunkard	1090	1166	
Gas Sand	1332	1357	
1st Salt Sand	1670	1710	
2nd Salt Sand			
Maxton Sand	1730	1750	
Little Lime	1790	1807	
Pencil Cave			
Big Lime	1840	1885	
Big Injun	1885	1998	
Gantz Sand			
50 Foot Sand	2457	2502	Gas at 2460-2465
30 Foot Sand	2541	2560	Gas at 2547
Gordon Stray	2600	2664	
Gordon Sand	2681	2703	
4th Sand	2706	2720	
5th Sand	2840	2847	
Bayard Sand			
Elizabeth			
Speechley			
Bradford			

PRESSURE AND VOLUME		
½ Minute		Lbs.
1 "		"
2 "		"
3 "		"
4 "		"
5 "		"
10 "		"
15 "		"
30 "		"
1 Hour		"
Rock		"
Size of	Tubing	Inch
	Casing	"
Vol. by Water		
" " Mercury		
" " Pressure		
CONNECTED TO MAIN LINE		
Length of Line		Feet
Size of Line		Inch
DISCONNECTED FROM LINE		
Notified Lessor		
Abandoned		
Repacked		
With	Feet	Tubing

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Office of Oil & Gas
OCT 26 2015

Total Depth 2882 Feet at $ per Foot $

Gas Furnished at Cents per Foot

CASING RECORD

SIZE	CHARGED TO WELL Feet	In.	PUT IN WELL Feet	In.	PULLED Feet	In.	LEFT IN WELL Feet	In.	TRANSFERRED Feet	In.	LEFT AT WELL Feet	In.
10			218		218							
8⅝			1062		1062							
6⅝			1976				1976					
3			1960									

PACKER

Kind Hook Shell

Size 6⅝ x 3

Set at Feet

WELL SHOT

By

With 30 Qts. at Feet

Casing Cemented in Well ..... by ..... Company Employee

3301648P

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
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Misty S Christie
1207 Briercliff Rd
Bridgeport, WV 26330
My Commission Expires February 20, 2018

Well Operator: **EQT Production Company**
By: **Victoria J.Roark**
Its: **Permitting Supervisor**
Address: **PO Box 280**
Bridgeport, WV 26330
Telephone: **(304) 848-0076**

Received
Office of Oil & Gas
OCT 26 2015

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

3301648P

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 mil~~ 20ml

Proposed Disposal Method for Treated Pit Wastes:
- X 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? ____

Received
Office of Oil & Gas
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 ____
Company Official (Typed or Printed) Victoria Roark
Company Official Title Permitting Supervisor-WV

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Misty S Christie
1207 Briercliff Rd
Bridgeport, WV 26330
My Commission Expires February 20, 2018

Subscribed and sworn before me this 23rd day of October, 2015
Misty S. Christie Notary Public
My Commission Expires 2/20/18

3 3016487

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

LEGEND

Property Boundary

Diversion

Spring

Wet Spot

Road

Planned Fence

Drain Pipe with size in inches

Water Way

Existing Fence

Stream

Cross Drain

Open Ditch

Artificial Filter Strip

Rock

North

N

Building

Water well

W

Drill site

Pit with Cut Walls

Pit with Compacted Walls

Area of Land Application of Pit Waste

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

Seed Type	lbs/acre
Red Fescue	40
Alsike Clover	5
Annual Rye	15

Area II

Seed Type	lbs/acre
Red Fescue	15
Alsike Clover	5

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OCT 26 2015

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: _____

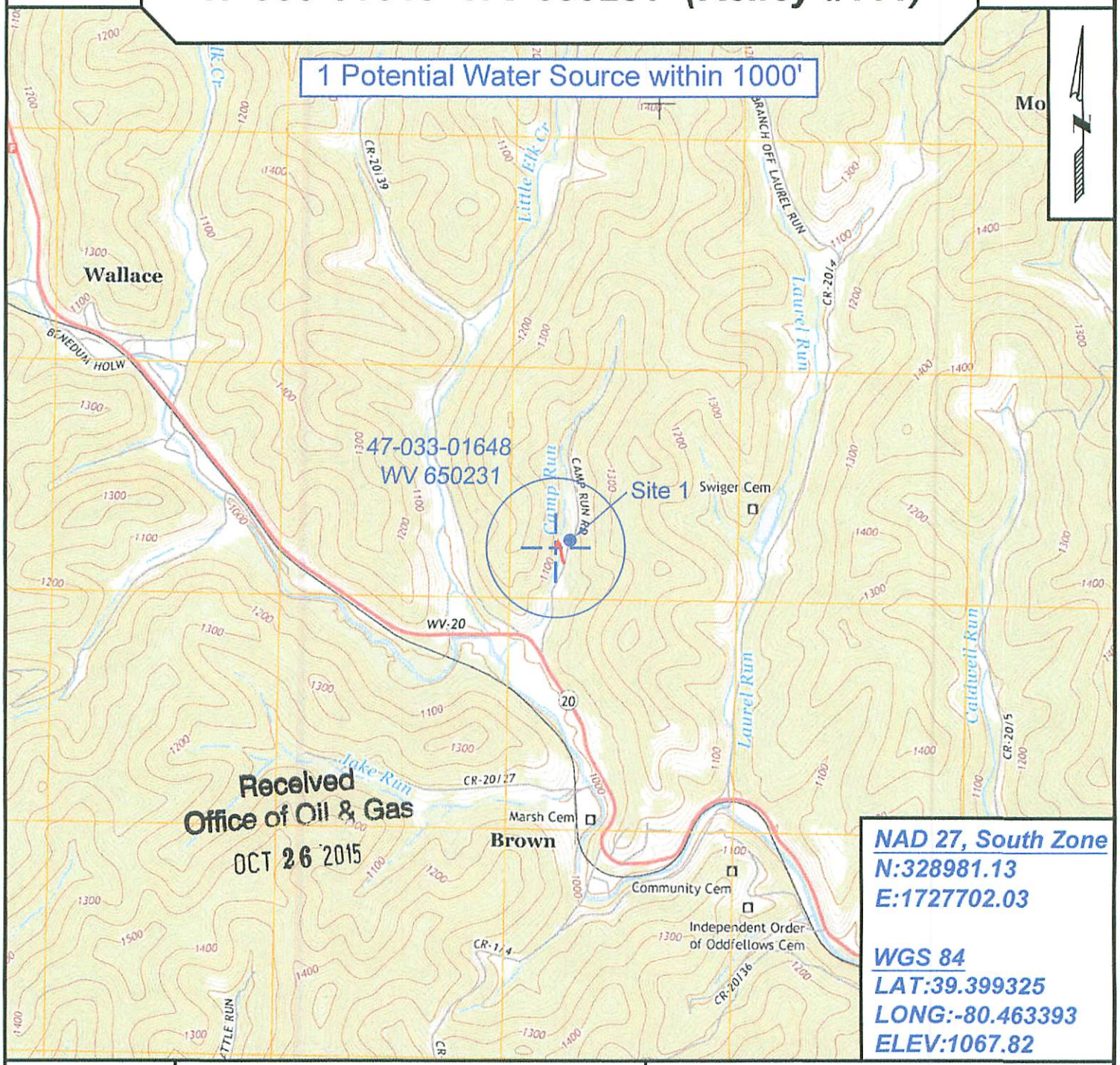
Title: _____ Date: _____
Field Reviewed? _____ Yes _____ No

33016487

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)



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

3301648P

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.

Received
Office of Oil & Gas
OCT 26 2015

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

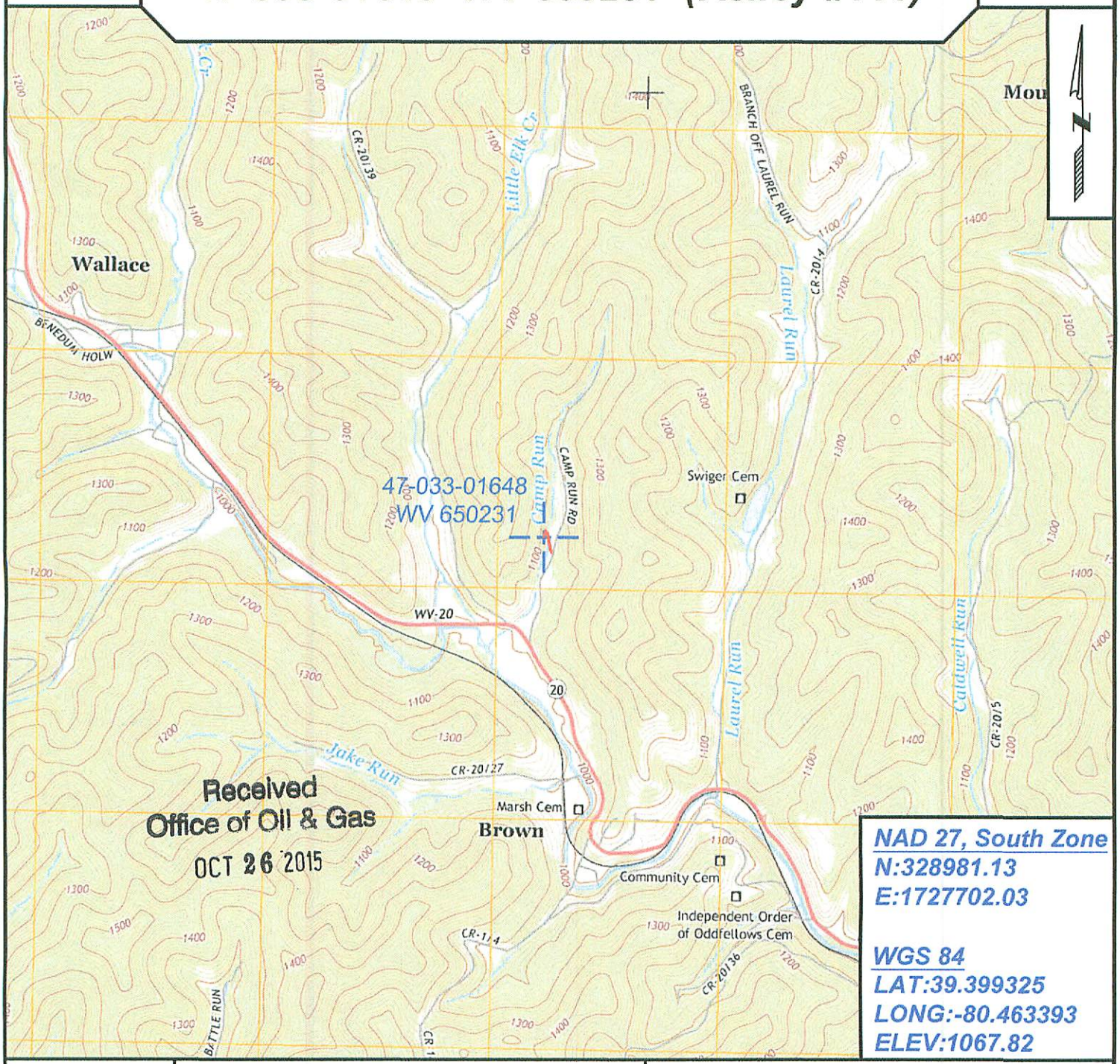
ALLEGHENYSURVEYS.COM

3301648P

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



Received
Office of Oil & Gas
OCT 26 2015

NAD 27, South Zone
N:328981.13
E:1727702.03

WGS 84
LAT:39.399325
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PH: (304) 649-8606
FAX: (304) 649-8608

PREPARED FOR:

EQT Production Company

P.O. Box 280
Bridgeport, WV 26330

3301648P

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:

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.**

Received
Office of Oil & Gas
OCT 26 2015

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	Title	Date
Stan Olson	PS # 2100	10/7/15