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**west virginia** department of environmental protection

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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

December 08, 2014

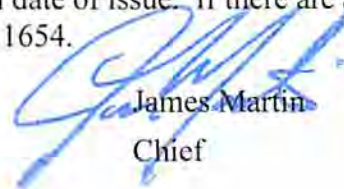
**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-1502616, issued to RANGE RESOURCES - PINE MOUNTAIN, INC., 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: PG 32  
Farm Name: BARRINGER, PAUL II - TRST  
**API Well Number: 47-1502616**  
**Permit Type: Plugging**  
Date Issued: 12/08/2014

## 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

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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.

WW-4B  
Rev. 2/01

1) Date October 15, 2014  
2) Operator's  
Well No. PMOG 32  
3) API Well No. 47-015 - 02616

STATE OF WEST VIRGINIA  
DEPARTMENT 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 \_\_\_ or Underground storage \_\_\_) Deep \_\_\_ / Shallow X

5) Location: Elevation 1056' Watershed Flat Fork Creek  
District Buffalo County Clay Quadrangle Strange Creek 7.5' 623

6) Well Operator Range Resource - Pine Mountain Inc. 7) Designated Agent Geary Legg  
Address P.O. Box 2136 Address 158 Big Sandy Road  
Abingdon, VA 24212 Newton, WV 25266

8) Oil and Gas Inspector to be notified Name Ed Gainer  
Address P.O. Box 821  
Spencer, WV 25276  
9) Plugging Contractor Name To be determined upon permit approval  
Address \_\_\_\_\_

10) Work Order: The work order for the manner of plugging this well is as follows:

Casing: TD - 2029'  
16" 32  
9 5/8" 354 175 sks CTS  
4 1/2" 1998 195 sks, est TOC @ 1000'  
2 3/8" 1915

GEL BELOW 1ST PLUG.

Plug No. 1 1950-1750  
Free point, cut & pull 4 1/2" est 1000'  
Plug No. 2 1050-950  
Plug No. 3 400-300  
Plug No. 4 100-0

6% gel between cement plugs

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Office of Oil & Gas  
OCT 31 2014

SET MONUMENT

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector

Date

10/23/14



State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: Barringer, Paul B. II Trust Operator Well No.: PMOG 32  
LOCATION: Elevation: 1056.13 Quadrangle: Strange Creek 7.5'  
District : Buffalo County : Clay  
Latitude : 12,400 Feet South of 38 Deg. 32 Min. 30 Sec.  
Longitude: 11,900 Feet West of 80 Deg. 55 Min. 0 Sec.

Company: PINE MOUNTAIN OIL AND GAS  
448 NE Main St., P. O. Box 5100  
Lebanon, VA 24266-0000

Agent: CHRISTOPHER A. FARMER

Inspector: RICHARD CAMPBELL  
Permit Issued: 5/24/2000  
Well Work Commenced: 5/31/2000  
Well Work Completed: 11/3/2000  
Verbal Plugging  
Permission Granted on:  
Rotary X Cable Rig  
Total Depth (feet): 2029 kb  
Fresh Water Depths (feet): 22, 130 kb  
Salt Water Depths (feet):  
Is coal being mined in area? (Y/N) N  
Coal Depths (feet): 62, 200, 280 kb

Casing & Tubing	Used in Drilling	Left In Well	Cement Fill Up Cu.Ft.
16	32		
9-5/8	354	354	175 sk
4-1/2		1998	195 sk
2-3/8		1915	

OPEN FLOW DATA

1929-37 kb

Production Formation Big Injun/Big Lime Pay zone depth (ft) 1801-88 kb  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow 250 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests 4 Hours  
 Static Rock Pressure 350 psig (surface pressure) after 72 Hours

Second Producing Formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ Hours  
 Static Rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELBORE.

Received  
Office of Oil & Gas  
OCT 31 2014

For: PINE MOUNTAIN OIL AND GAS, INC.  
By: \_\_\_\_\_  
Date: \_\_\_\_\_

Completion

- 1<sup>st</sup> Stage: Perf 1929 -1937 kb 17h  
 Frac Big Injun w/251 bbl 25# gel x-link, BD @ 1000# w/500 gal 15% HCl  
 Avg Rate - 21 bpm, Avg Press - 800#, Max Press - 1050#, Avg N2 - 3000 scfm  
 Total N2 - 60,500 scf, Total 20/40 sand - 33,500#  
 ISIP - 250#
- 2<sup>nd</sup> Stage: Perf 1801 - 1803 kb 3h, 1879 - 1881 kb 3h, 1884 - 1888 kb 5h  
 Acidize Big Lime w/60 bbl 28% HCl, BD @ 800# w/500 gal 15% HCl  
 Avg Rate - 13 bpm, Avg Press - 1800#, Max Press - 3100#, Avg N2 - 3500 scfm,  
 Total N2 - 55,000 scf  
 ISIP - 1100#

## Well Log

Formation	Top (ft)*	Bottom (ft)*
Sand and Shale	0	62
Coal	62	65
Sand and Shale	65	200
Coal	200	205
Sand and Shale	205	280
Coal	280	285
Sand and Shale	285	1030
Salt Sand	1030	1111
Sand and Shale	1111	1342
Upper Maxon	1342	1390
Shale	1390	1459
Middle Maxon	1459	1511
Shale	1511	1540
Lower Maxon	1540	1659
Little Lime	1659	1702
Blue Monday	1702	1711
Shale	1711	1740
Big Lime	1740	1943
Shale	1943	2029
TD	2029	

\* Depths 10 ft KB

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 Office of Oil & Gas

OCT 31 2014

12/12/14



WW-4A  
Revised 6-07

OCT 31 2014

\$100.00  
cc 600379

1) Date: October 13, 2014  
2) Operator's Well Number  
PMOG 32

3) API Well No.: 47 - 015 - 02616

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Allegheny Rural NMTC Forestlands, LLC</u>	Name _____
Address <u>3001 Emerson Avenue</u>	Address _____
<u>Parkersburg, WV 26104</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>CNX Land Resources</u>
_____	Address <u>1000 Consol Energy Drive</u>
_____	<u>Cannonsburg, PA 15317</u>
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Ed Gainer</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 821</u>	Name _____
<u>Spencer, WV 25276</u>	Address _____
Telephone _____	_____

**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 Department 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 Range Resources - Pine Mountain, Inc.  
 By: Ian Landon  
 Its: Agent  
 Address P.O. Box 2136  
Abingdon, VA 24212  
 Telephone (276) 628-9001

Subscribed and sworn before me this 28<sup>th</sup> day of OCTOBER 2014  
Kimberley Allison Eller Notary Public  
 My Commission Expires 31 MAY 2018 REG # 7040059

**Oil and Gas Privacy Notice**

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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](mailto:depprivacyofficer@wv.gov).

1502616P

7013 0600 0002 1047 3004

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**OCT 29 2014**  
 ABINGTON, VA 24210

Sent to  
 Street, Apt. 1  
 or PO Box #  
 City, State, Z

Allegheeny Rural NMTC Forestlands, LLC ✓  
 3001 Emerson Avenue  
 Parkersburg, WV 26104

PS Form 38  
 WV 2014

The following information was included in the certified mailing to Allegheny Rural NMTC Forestlands:

- Well Nos.      ERC&L 8129
- ERC&L 7977
- ERC&L 8130
- ERC&L 7976
- PMOG 32
- PMOG 23A
- CBM 7
- CBM 2

Received  
 Office of Oil & Gas  
 OCT 31 2014

- Notice of Application to Plug and Abandon a Well (WW-4A)
- Application for a Permit to Plug and Abandon (WW-4B)
- Construction and Reclamation Plan and Site Registration Application Form General Permit for Oil and Gas Pit Waste Discharge (WW-9)
- Legend (WW-9)
- Surface Owner Waiver
- WVDEP Office of Oil and Gas Well Location Form: GPS (WW-7)
- Location Map

12/12/14

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7013 0600 0000 1047 2991

APR 29 2014  
 VA 22710

Sent To  
 Street, Apt. or PO Box  
 City, State  
 PO Form 3849

CNX Land Resources  
 1000 Consol Energy Drive  
 Cannonsburg, PA 15317

WV 2014

The following information was included in the certified mailing to CNX Land Resources:

Well Nos.      ERC&L 8129  
                     ERC&L 7977  
                     ERC&L 8130  
                     ERC&L 7976  
                     PMOG 32  
                     PMOG 23A  
                     CBM 7  
                     CBM 2

Received  
 Office of Oil & Gas  
 OCT 31 2014

- Notice of Application to Plug and Abandon a Well (WW-4A)
- Application for a Permit to Plug and Abandon (WW-4B)
- Construction and Reclamation Plan and Site Registration Application Form General Permit for Oil and Gas Pit Waste Discharge (WW-9)
- Legend (WW-9)
- Coal Operators Owners and Lessee Waiver (WW-4B)
- WVDEP Office of Oil and Gas Well Location Form: GPS (WW-7)
- Location Map
- Well Record/Well Report

12/12/14



STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM  
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Range Resources - Pine Mountain, Inc. OP Code 307499

Watershed Flat Fork Creek Quadrangle Strange Creek 7.5'

Elevation 1056 County Clay District Buffalo

Description of anticipated Pit Waste: Fluids encountered while plugging subject well

Will a synthetic liner be used in the pit? Yes 20 ML

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain \_\_\_\_\_)
- Swabbing
- Plugging

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 Department 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 submitting false information, including the possibility of fine or imprisonment.

Received  
Office of Oil & Gas

Company Official Signature *Ian Landon* OCT 31 2014

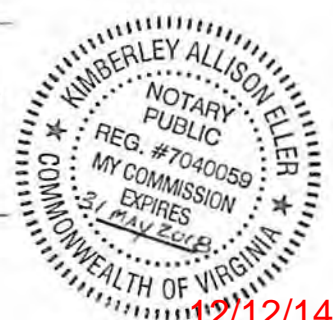
Company Official (Typed Name) Ian Landon

Company Official Title Agent

Subscribed and sworn before me this 28<sup>th</sup> day of OCTOBER, 2014

*Kimberley Allison Eller* Notary Public  
REG # 7040059

My commission expires 31 MAY 2018



12/12/14

LEGEND

- Property Boundary
- Road
- Existing Fence
- Planned Fence
- Stream
- Open Ditch
- Rock
- North
- Buildings
- Water wells
- Drill site

- Diversion
- Spring
- Wet Spot
- Drain Pipe with size in inches
- Waterway
- Cross Drain
- Artificial Filter Strip
- Pit: cut walls
- Pit: compacted fill walls
- Area for Land Application of Pit Waste

Proposed Revegetation Treatment: Acres Disturbed .5 Acres Prevegetation pH \_\_\_\_\_

Lime 2 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch Straw 2 Tons/acre

Seed Mixtures

Seed Type	Area I		Seed Type	Area II	
		lbs/acre			lbs/acre
Tall Fescue		40	Tall Fescue		40
Ladino Clover		5	Ladino Clover		5

Attach: Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

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Office of Oil & Gas

OCT 31 2014

Plan Approved by:

Comments: \_\_\_\_\_

Title: Inspector Date: 10/2/14

Field Reviewed?  Yes  No

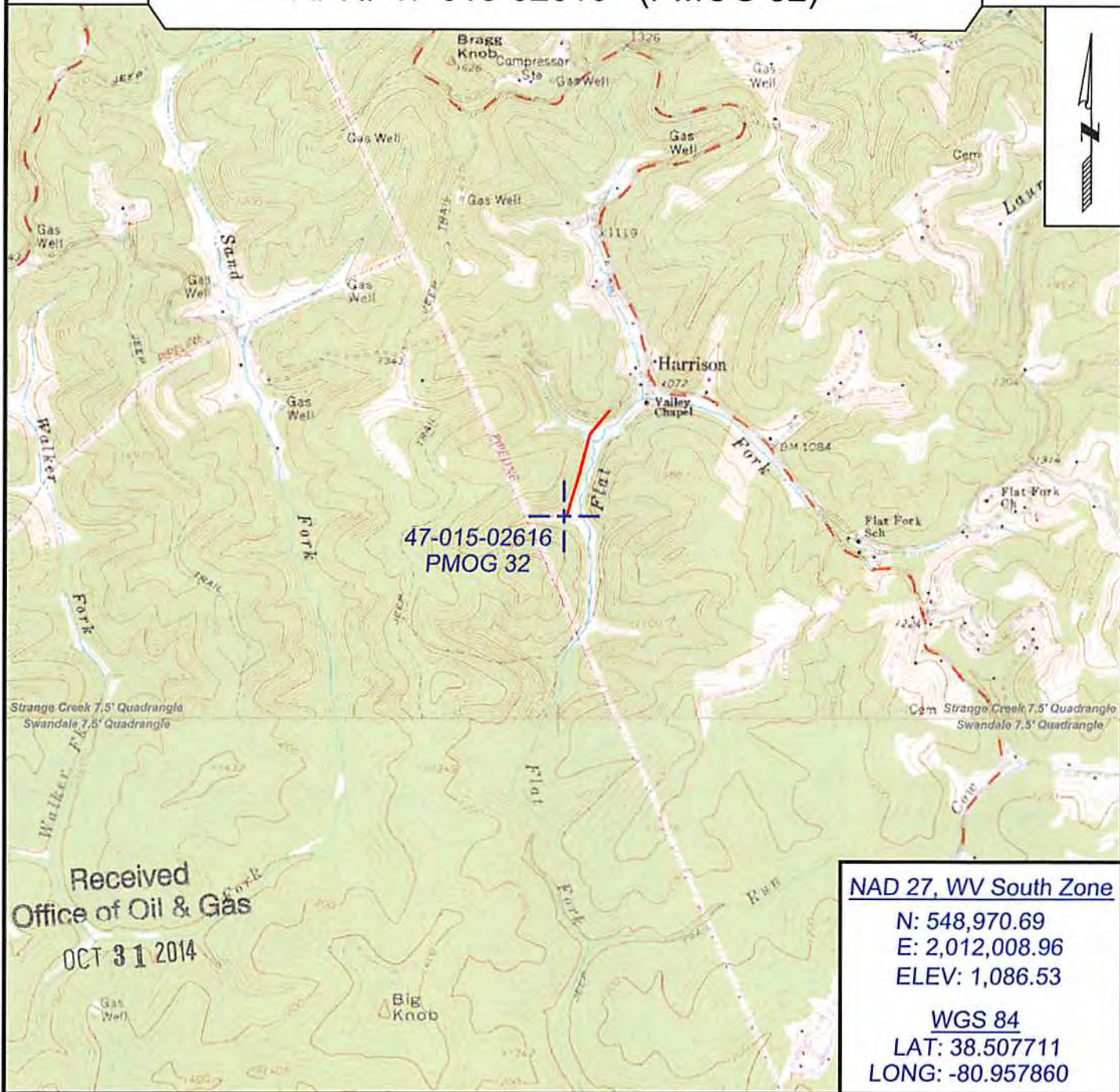


1502616P

Topo Quad: Strange Creek 7.5' Scale: 1" = 2000'  
 County: Clay Date: June 26, 2014  
 District: Buffalo Project No: 170-04-B-14

API # 47-015-02616 (PMOG 32)

Topo



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 Office of Oil & Gas  
 OCT 31 2014

NAD 27, WV South Zone  
 N: 548,970.69  
 E: 2,012,008.96  
 ELEV: 1,086.53  
WGS 84  
 LAT: 38.507711  
 LONG: -80.957860



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:  
**Range Resources - Pine Mountain, Inc.**  
 406 West Main Street  
 Abingdon, VA 24210

12/12/14



1502616 P

WW-7  
8-30-06



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

API: 47-015-02616 WELL NO.: PMOG 32

FARM NAME: Paul Barringer II - Trust

RESPONSIBLE PARTY NAME: Range Resources - Pine Mountain, Inc.

COUNTY: Clay DISTRICT: Buffalo

QUADRANGLE: Strange Creek 7.5'

SURFACE OWNER: Allegheny Rural NMTC Forestlands, LLC

ROYALTY OWNER: Range Resources - Pine Mountain, Inc.

UTM GPS NORTHING: 4262150

UTM GPS EASTING: 503674 GPS ELEVATION: 322 m (1056 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  : Post Processed Differential   
Real-Time Differential

Received  
Office of Oil & Gas  
7/31/2014

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.

[Signature]  
Signature

PS# 2180  
Title

7/16/14  
Date