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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: 47-1500390, 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: 7977  
Farm Name: ELK RIVER COAL  
**API Well Number: 47-1500390**  
**Permit Type: Plugging**  
Date Issued: 12/08/2014

**Promoting a healthy environment.**

12/12/14

## 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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

1) Date October 15, 2014  
2) Operator's  
Well No. ERC&L 7977  
3) API Well No. 47-015 - 00390

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 1342' Watershed Turkey Run Creek  
District Buffalo County Clay Quadrangle Clay 7.5'

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 - 2272' Plug No. 1 2100-1975 *Fill SHOT Hole w/ GEL gum*  
10" 291 Free Point, cut & pull 6 5/8" casing, est 1500'  
8 1/4" 1441 Plug No. 2 1550-1450  
6 5/8" 2027 Free Point, cut & pull 8 1/4" casing, est 1300'  
Plug No. 3 1350-1250  
Plug No. 4 500-coal plug & bottom of 10" *500' - 300'*  
Plug No. 5 250-100  
Free point, cut & pull 10" casing, est 100'  
Plug No. 6 100-0  
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

**Pine Mountain Oil and Gas, Inc.****DRILLING PROGNOSIS**  
**Permit Number: 4701500390**

Well Name: **ERC&L 7977**  
 Farm Name: **Paul B. Barringer II, et al** Field Name: **Widen**  
 District: **Clay** County: **Clay** State: **WV**  
 Quadrangle: **Clay** Watershed: **Turkey Run of the Elk River**

Elevation: **1325**

**Casing Points:**

10" 291 '  
 8-1/4" 1441  
 6-5/8" 2027 '

Well TD 2275

**Well Info**

Well drilled 1944  
 Open hole below 6-5/8" casing to TD  
 Well shot from 2167-2220'  
 Fresh water @ 90'  
 Salt water @ 1330-1340'

Service rig on hole 8/2004  
 TD @ 2210'  
 FL @ 1580'

**Logging**

Run multi-fingered caliper log to locate possible hole in casing and to determine casing ID

**Ian Landon**

Office (276) 628-4189  
 Home (276) 676-0137  
 Mobile (276) 356-8578

12/12/14



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL RECORD

Permit No. CLA-390 Oil or Gas Well "GAS"  
(KIND)

Company Pittsburgh & West Va Gas Company  
Address Clarksburg, West Va.,  
Name Elk River Coal & L. Co. Acres 77,198  
Location (waters) Clay N/E. 2-2  
Well No. 7977 Elev. 1324.9 L  
District Buffalo County Clay  
The surface of tract is owned in fee by Elk River Coal & L. Co.  
Dandon, Clay Co. Address West Va.,  
Mineral rights are owned by Elk River Coal and Lumber Co.  
Dandon, Clay Co., Address West Va.,  
Drilling commenced February 19, 1944  
Drilling completed April 19, 1944  
Date Shot 4-19-1944 From 2167 To 2220'  
With 240 Quarts - Nitro Glycerine.  
Open Flow 3/4 /10ths Water in \_\_\_\_\_ Inch  
1-1/2" /10ths Merc. in \_\_\_\_\_ Inch  
Volume 444,000 Cu. Ft.  
Rock Pressure 520 lbs. 66 hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
Fresh water \_\_\_\_\_ feet \_\_\_\_\_ feet  
Salt water \_\_\_\_\_ feet \_\_\_\_\_ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13			
10	291'	291'	Size of
8 1/4	1441'	1441'	<u>1-6-5/8" Csg. Shoe</u>
6 1/2	2027'	2027'	Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
COAL WAS ENCOUNTERED AT 440 FEET 60 INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
oil	Yellow	Soft	0	16			
Sand	"	"	16	35			
Red Rock	Red	"	35	60			
Yellow Rock	Yellow	"	60	67			
Sand	White	Hard	67	124	Water	90'	Hole full.
Lime	Black	Hard&Soft	124	215			
Sand	White	Hard	215	285			
Lime	Dark	"	285	296			
Upper East Lynn	White	"	296	435			
Slate	Black	Soft	435	440			
Coal	"	"	440	445			
Lime	White	Hard	445	452			
Lower East Lynn	White	"	452	492			
Lime	Dark	Hard	492	505			
"	Black	Hard-Soft	505	551			
Homewood Sand	White	Hard	551	688			
Lime	Dark	Hard-Soft	688	717			
Fritty Lime	"	Hard	717	730			
Sand	White	"	730	763			
Broken Lime	Black	Hard-Soft	763	832			
Sand	White	Hard	832	889			
Slate	Black	Soft	889	899			
Sand	White	Hard	899	928			
Lime	Dark	Hard	928	955			
Broken Lime	"	Hard-Soft	955	1030			
Sand	White	Hard	1030	1078			
Lime	Dark	Broken	1078	1123			
Winifred Sand	White	Hard	1123	1150			
Lime	Dark	Broken	1150	1165			
Gas Sand	White	Hard	1165	1223	Sh. Gas	1190'	
Slate	Black	Soft	1223	1276			
Salt Sand	White	Hard	1276	1391	Water	1330-1340'	Hole full.
Lime	Black	Hard-Soft	1391	1550			
Rosedale Gas Sand	Sand-Wh.	Hard	1550	1678	Sh. Oil	1651'	
Slate	Black	Soft	1678	1683			
Rosedale Salt Sd.	Wh.	Hard	1683	1785	Sh. Gas	1735'	
Lime	White	"	1785	1874			
Maxon Sand	"	"	1874	1893			
Slate	Black	Soft	1893	1938			

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Little Lime	Black	Hard	1938	1974			
lus Monday	White	"	1974	1992			
late	Black	Soft	1992	2018			
ig Lime	White	Hard	2018	2118			
ig Injun	"	"	2118	2222	Gas	2169-2173'	12/10 W 1"
ed Rock	Red	Soft	2222	2267	Gas	2202-2208'	18/10 W 1-1/2
late	White	"	2267	2272			
otal Depth				2272			

12/12/14

Date May 3rd, 1944, 194  
 APPROVED PITTSBURGH & WEST VA GAS COMPANY., Owner  
 By W. C. McMasters  
 (Title)

1500390P

WW-4A

Revised 6-07

1) Date: October 13, 2014

2) Operator's Well Number

ERC&L 7977

3) API Well No.: 47 -

015

00390

Received  
Office of Oil & Gas

OCT 31 2014

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

CK 60637A  
100<sup>00</sup>

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

Kimberly Allison Eller Notary Public REG # 7040059

My Commission Expires 31 MAY 2018

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).

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Restricted Delivery Fee (Endorsement Required)	\$	
Total Postage & Fees	\$	

ABINGDON, VA 22610  
 OCT 29 2014  
 USPS

Sent to: Allegheny Rural NMTC Forestlands, LLC  
 3001 Emerson Avenue  
 Parkersburg, WV 26104

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



1500390P

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Registered Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

MAILED  
 OCT 29 2014  
 01272 VA 24210

Sent to  
 Street, Apt. or PO Box  
 City, State  
 PS 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

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- 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

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 Turkey Run Creek Quadrangle Clay 7.5'  
Elevation 1342' 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.

Company Official Signature Ian Landon

Company Official (Typed Name) Ian Landon

Company Official Title Agent

Subscribed and sworn before me this 28<sup>th</sup> day of OCTOBER, 20 14

Kimberley Allison Eller

Notary Public

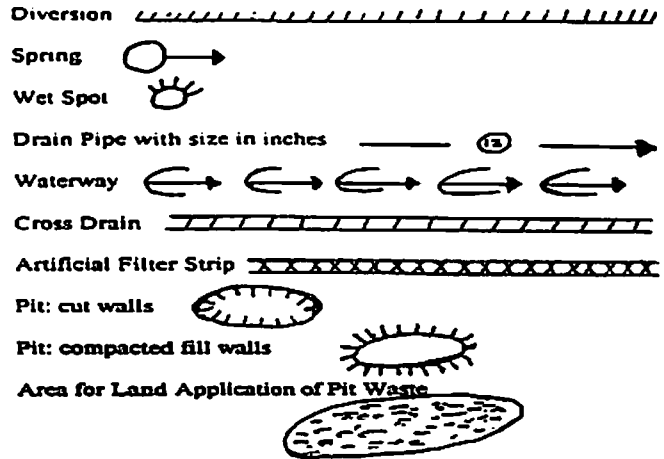
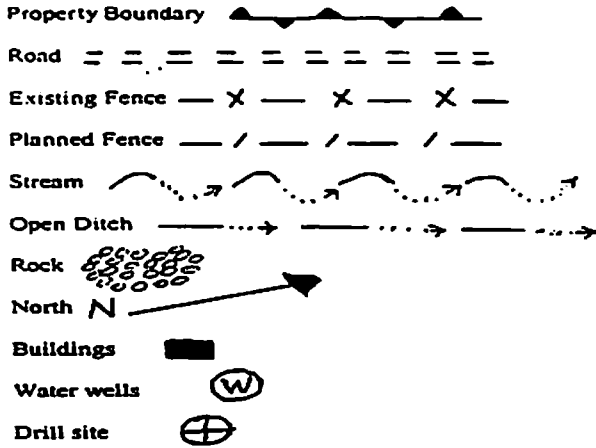
My commission expires 31 MAY 2018

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**LEGEND**



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**

Area I		Area II	
Seed Type	lbs/acre	Seed Type	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

Plan Approved by:

OCT 31 2014

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

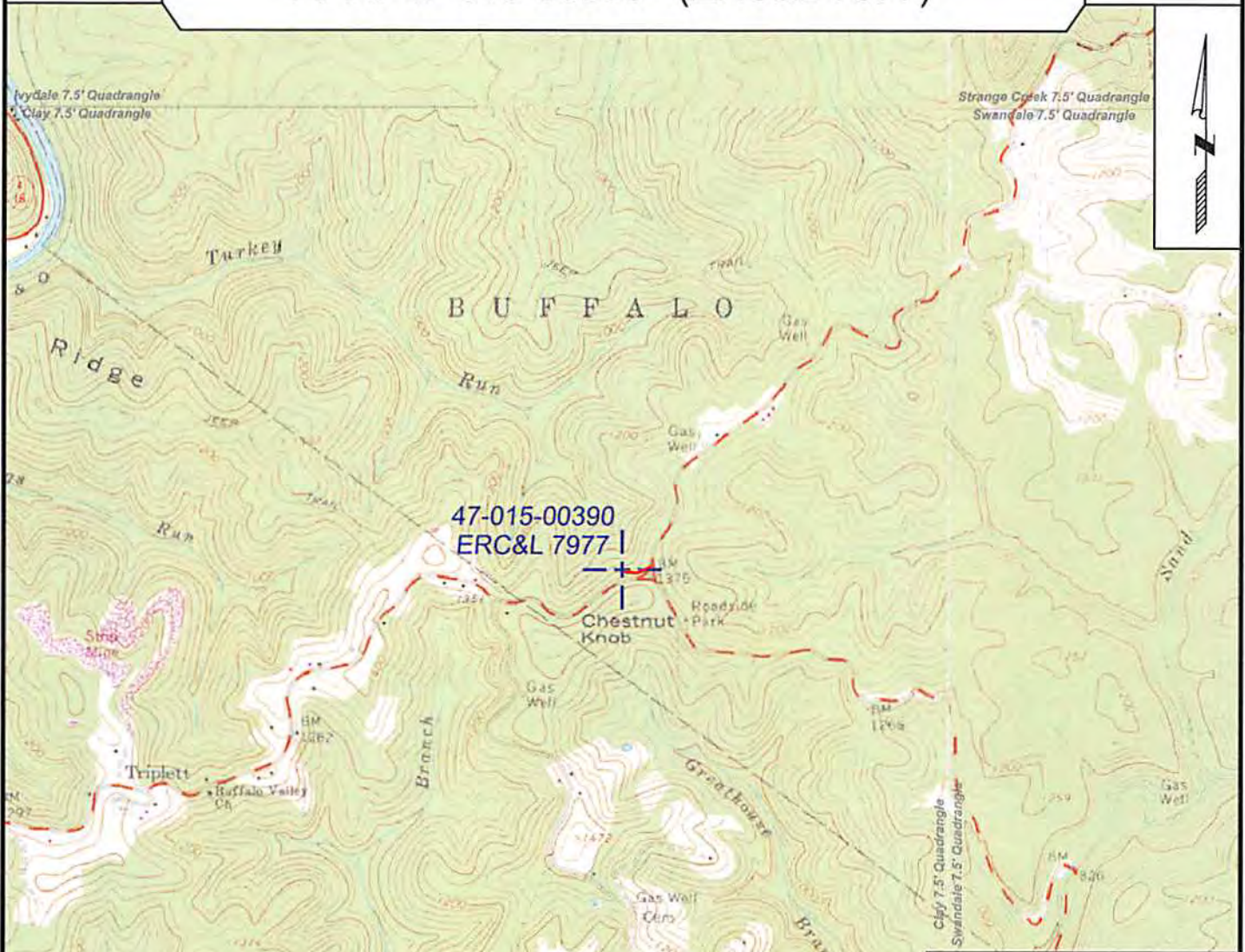
Title: Inspector Date: 10/2/14

Field Reviewed?  Yes  No

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

**API # 47-015-00390 (ERC&L 7977)**

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OCT 31 2014

**NAD 27, WV South Zone**  
 N: 540,366.11  
 E: 1,995,838.10  
 ELEV: 1,341.61  
WGS 84  
 LAT: 38.484089  
 LONG: -81.014368



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

WW-7  
8-30-06



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

API: 47-015-00390 WELL NO.: ERC&L 7977

FARM NAME: Elk River Coal

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

COUNTY: Clay DISTRICT: Buffalo 1

QUADRANGLE: Clay 7.5' 629

SURFACE OWNER: P.H. Timber, LLC

ROYALTY OWNER: Range Resources – Pine Mountain, Inc.

UTM GPS NORTHING: 4259528

UTM GPS EASTING: 498747 GPS ELEVATION: 409 m (1342 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

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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.

Signature

PS# 2180  
Title

7/16/14  
Date