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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: 47-1502753, 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: CBM 7  
Farm Name: BARRINGER, PAUL B. II  
**API Well Number: 47-1502753**  
**Permit Type: Plugging**  
Date Issued: 12/08/2014

**Promoting a healthy environment.**

## 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.

1502753P

WW-4B  
Rev. 2/01

1) Date October 15, 2014  
2) Operator's  
Well No. CBM 7  
3) API Well No. 47-015 - 02753

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 912.05' Watershed Whetstone Creek  
District Buffalo County Clay Quadrangle Swandale 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 - 1104'  
13 3/8" 12  
7" 305 143 sks CTS  
4 1/2" 1064 304 sks CTS  
2 3/8" 1021  
6% gel between cement plugs  
No pipe recovery - all casing cemented to surface

Plug No. 1 1000-900  
Plug No. 2 710-270  
Plug No. 3 100-0

TD - 900  
(1104')

REMOVE 2 3/8" TUBING  
SET PLUG 1 FROM TD (1104')  
TO 900'

SET MONUMENT

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Office of Oil & Gas  
OCT 31 2014

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



1502753A

WR-35

047-015-02753C

**Completion**

	Stage 1	Stage 2	Stage 3	Stage 4
<b>Date</b>	10/3/2006	10/3/2006	10/3/2006	10/3/2006
<b>Frac Formation(s)</b>	75Q N2 Foam Lower Sewell	75Q N2 Foam X Seam	75Q N2 Foam Eagle Lower Eagle	75Q N2 Foam #2 Gas
<b>Interval</b>	977.5-981.5	497.5-668	389.5-434.0	319-323
<b># of Perf</b>	11	11	11	
<b>BD Press</b>	3865 psi	1163 psi	1041 psi	1580 psi
<b>Avg Treating Press</b>	2760 psi	2427 psi	1743 psi	2550 psi
<b>Max Treating Press</b>	4000 psi	2592 psi	2533 psi	3045 psi
	bp	bp	bp	bp
<b>Avg Rate (dh)</b>	m	8.8 m	m	m
<b>ISIP</b>	3610 psi	838 psi	920 psi	1083 psi
<b>5 min SIP</b>	3068 psi	673 psi	762 psi	812 psi
<b>Total Acid</b>	0 gal	500 FE gal	500 FE gal	0 gal
<b>Total N2</b>	143,117 scf	377,920 scf	272,000 scf	185,000 scf
<b>Total H2O</b>	123.77 bbl	204.5 bbl	374 bbl	116 bbl
<b>Total Sand</b>	28.4 sx	238.1 sx	205 sx	122 sx

**WELL LOG**

Formation	Top (ft)	Bottom (ft)
Overburden	0	15
Sand and Shale	15	320
Coal	320	322
Sand and Shale	322	393.5
Coal	393.5	395
Sand and Shale	395	409
Coal	409	409.5
Sand and Shale	409.5	434
Coal	434	435.5
Sand and Shale	435.5	500.5
Coal	500.5	501.5
Sand and Shale	501.5	520
Coal	520	522
Sand and Shale	522	610.5
Coal	610.5	611
Sand and Shale	611	668
Coal	668	668.5
Sand and Shale	668.5	900
Sand	900	930
Sand and Shale	930	981
Coal	981	983
Sand and Shale	983	990
Sand	990	1020
Sand and Shale	1020	1050
Sand	1050	1080
Sand and Shale	1080	1100

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 OCT 29 2014  
 ABINGDON, VA 24210

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

Allegheny Rural NMTC Forestlands, LLC  
 3001 Ermerson Avenue  
 Parkersburg, WV 26104

PS Form 38  
 WV 2014

7013 0600 0002 1047 3004

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  
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- 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

1502753P

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 Total Postage & Fees \$ \_\_\_\_\_

Stamp: ARBINGDON VA 22210 OCT 29 2014

Sent to: CNX Land Resources  
 1000 Consol Energy Drive  
 Cannonsburg, PA 15317

PS Form 3841, 10/2013

7013 0600 0000 2047 2991

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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- Notice of Application to Plug and Abandon a Well (WW-4A)
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- 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

1502753P

WW-9  
Rev. 5/08

Page \_\_\_\_\_ of \_\_\_\_\_  
API Number 47 - 015 - 02753  
Operator's Well No. CBM 7

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 Whetstone Creek Quadrangle Swandale 7.5'

Elevation 912.05' 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 ft

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

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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, 2014

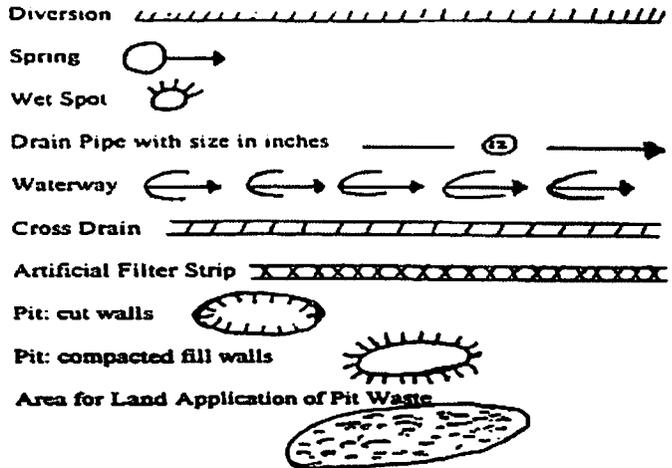
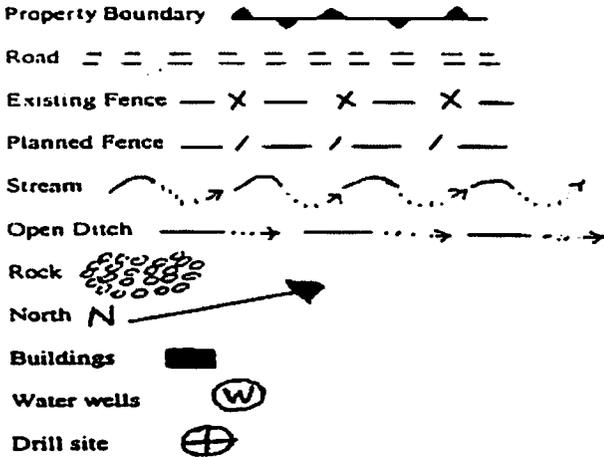
*Kimberly Allison Eller*

Notary Public  
REG # 7040059

My commission expires 31 May 2018



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 0.5 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	lbs/acre
Tall Fescue		40
Ladino Clover		5

Seed Type	Area II	lbs/acre
Tall Fescue		40
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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Plan Approved by:

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

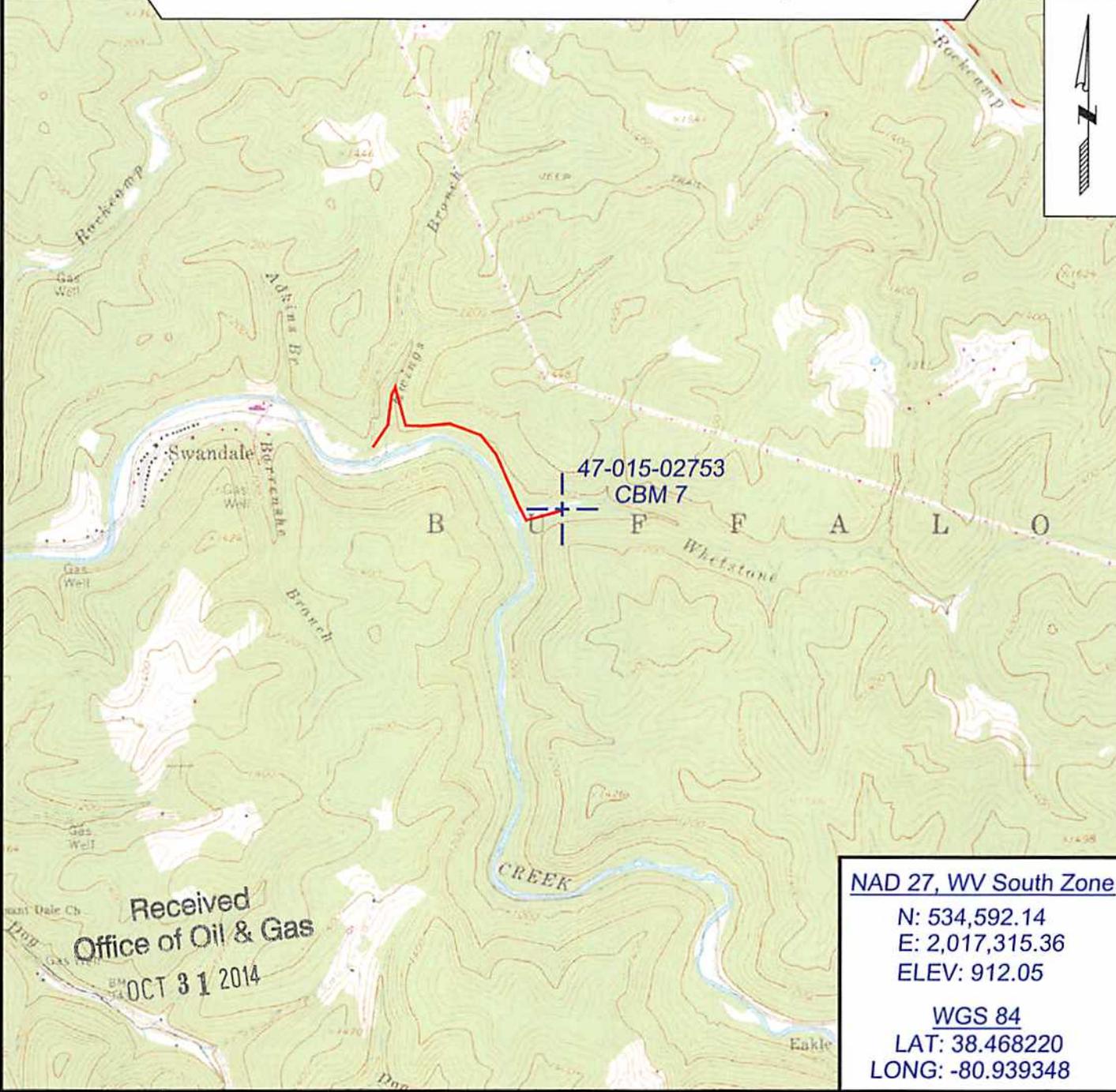
Title: Inspector Date: 10/2/14

Field Reviewed?  Yes  No

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

### API # 47-015-02753 (CBM 7)

Topo



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NAD 27, WV South Zone  
 N: 534,592.14  
 E: 2,017,315.36  
 ELEV: 912.05  
 WGS 84  
 LAT: 38.468220  
 LONG: -80.939348



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: 47-015-02753 WELL NO.: CBM 7

FARM NAME: Paul B. Barringer II

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

COUNTY: Clay DISTRICT: Buffalo

QUADRANGLE: Swandale 7.5' 629

SURFACE OWNER: Allegheny Rural NMTC Forestlands, LLC

ROYALTY OWNER: Range Resources – Pine Mountain, Inc.

UTM GPS NORTHING: 4257769

UTM GPS EASTING: 505291 GPS ELEVATION: 278 m (912 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: **Received**  
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  : Post Processed Differential   
Real-Time Differential

Office of Oil & Gas

OCT 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

PS# 2180  
Title

7/16/14  
Date