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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

July 15, 2013

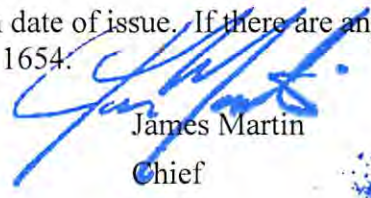
**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-4702631, issued to CNX GAS COMPANY LLC, 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: WC010101  
Farm Name: HEARTWOOD FORESTLAND  
**API Well Number: 47-4702631**  
**Permit Type: Plugging**  
Date Issued: 07/15/2013

Promoting a healthy environment.

07/19/2013

1) Date \_\_\_\_\_, 20\_\_\_\_  
2) Operator's  
Well No. WC010101  
3) API Well No. 47-047 - 02631

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 X or Underground storage \_\_\_\_\_) Deep \_\_\_\_\_/ Shallow X
- 5) Location: Elevation 1922 ft. Watershed Sandy Huff of Tug River  
District Sandy River County McDowell Quadrangle Ieager
- 6) Well Operator CNX Gas Co. LLC 7) Designated Agent Jeremy Jones  
Address 2481 John Nash Blvd Address One Dominion Drive  
Bluefield, WV 24701 Jane Lew, WV 26378
- 8) Oil and Gas Inspector to be notified Name Gary Kennedy  
Address Rt. 5 Box 301  
Bluefield, WV 24701
- 9) Plugging Contractor Name L&D Well Services  
Address PO Box 1192  
Vansant, VA 24656

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

First, the tubing will be used to determine the actual depth of the well. For this well, the total depth was reported as 1970 feet (see completion report). Next, the tubing will be removed from the well. A string of new tubing will be lowered to the bottom of the well and used to pump cement into the well. As the cement is pumped into the well, the tubing will be raised so that the cement will be evenly distributed throughout the well. At approximately one-half the depth up the well, the cement will be allowed to settle for 2-4 hours. After the time period has passed, the remainder of the well will be filled with cement in the same manner as the bottom of the well, all the way to the ground surface. Again, the cement will be allowed to settle for 2-4 hours and topped off with more cement if required. Finally, a vent pipe will be mounted to the top of the well and a identification monument will be placed at the top of the well.

Set 100' Gel plug between cement plugs. Bond log + perf + squeeze is needed.

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

Work order approved by inspector *Gary Kennedy* Received Date 6/19/13

JUL 5 2013



State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Heartwood Forestland Fund III, LP Operator Well No.: WC010101

LOCATION: Elevation: 1,922.68' Quadrangle: Iaeger

District: Sandy River County: McDowell  
Latitude: 965 Feet South of 37 Deg. 17 Min. 30 Sec.  
Longitude: 2,185 Feet West of 81 Deg. 45 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 2481 John Nash Blvd. Bluefield, WV 24701	13 3/8"	29'	29'	92 sks.
Agent: John H. Johnston	4 1/2"	1,947.15'	1,947.15'	120 sks.
Inspector:				
Date Permit Issued: 7/28/2008				
Date Well Work Commenced: 9/2/2008				
Date Well Work Completed: 9/4/2008				
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable Rig				
Total Depth (feet): 1,970.14				
Fresh Water Depth (ft.):				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)?				
Coal Depths (ft.):				

OPEN FLOW DATA

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

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 WELLBORE.

Signed: B. Myers  
By: Buford Myers Vice Pres., CNX Gas VA Operations  
Date: \_\_\_\_\_

Received

Office of Oil and Gas  
WV Dept. of Environmental Protection

07/19/2013

4702631P

WW-4A  
Revised 6-07

1) Date: \_\_\_\_\_  
2) Operator's Well Number  
WC010101

3) API Well No.: 47 - 047 - 02631

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>Heartwood Forest Fund III, L.P.</u> ✓	Name <u>N/A</u>
Address <u>c/o the Forestland Group LLC</u>	Address _____
<u>19045 Stone Mountain Road</u>	_____
(b) Name <u>Abingdon, VA 24210</u>	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Heartwood Forestland Fund III</u> ✓
_____	<u>c/o The Forestland Group LLC</u>
_____	<u>19045 Stone Mountain Road</u>
_____	Address <u>Abingdon, VA 24210</u>
(c) Name _____	(c) Nat. Gas Lessee(s):
Address _____	Name <u>Chesapeake Appalachia LLC</u> ✓
_____	Address <u>P.O. Box 6070</u>
_____	<u>Charleston, WV 25362</u>
6) Inspector <u>Gary Kennedy</u> ✓	Name <u>Dart Oil and Gas Corporation</u> ✓
Address <u>Rt. 5 Box 301 P.O. Box 268</u>	Address <u>PO Box 177, 600 Dart Road</u>
<u>Bluefield, WV 24701 Nitrite, WV</u>	<u>Mason, MI 48854</u>
Telephone <u>304-382-8402</u>	<u>25978</u>

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

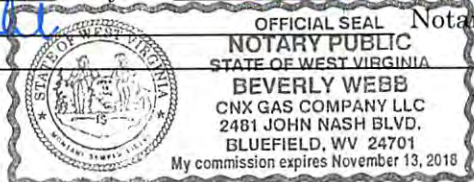
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

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 CNX Gas Co. LLC  
 By: [Signature]  
 Its: Manager Gas Permitting Southern Region  
 Address 2481 John Nash Blvd  
Bluefield, WV 24701  
 Telephone 304-323-6500

Subscribed and sworn before me this 27th day of June 2013  
Beverly Webb Notary Public  
 My Commission Expires \_\_\_\_\_



07/19/2013



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 CNX Gas Co. LLC OP Code WC010101

Watershed Sandy Huff of Tug River Quadrangle Iager 406

Elevation 1922 ft. County McDowell 47 District Sandy River 06

Description of anticipated Pit Waste: water associated with plugging of existing well

Will a synthetic liner be used in the pit? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number 2D0550319 )
- 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
- Swabbing
- Workover
- Plugging
- Other Explain a flowback tank will be used in lieu of pit

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on December 31, 1999, 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 Philip D. Lowe

Company Official (Typed Name) Philip D. Lowe

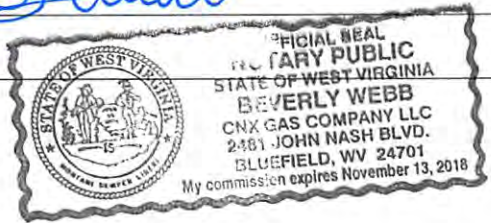
Company Official Title Manager Gas Permitting Southern Region

Subscribed and sworn before me this 27<sup>th</sup> day of June 2013

Beverly Webb

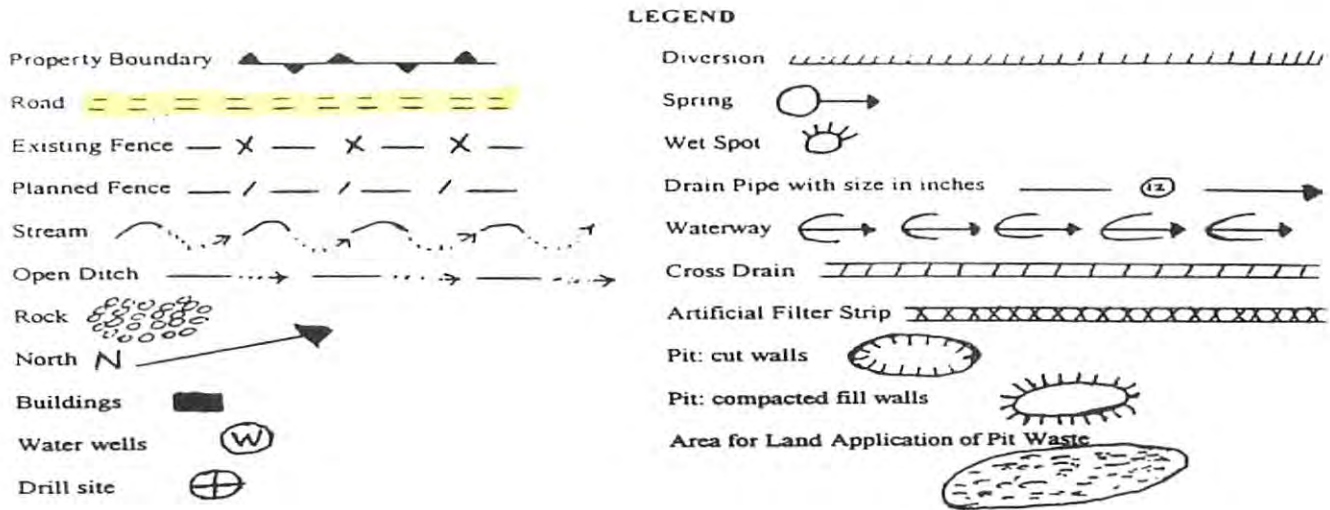
Notary Public JUL 5 2013

My commission expires \_\_\_\_\_



Office of Oil and Gas  
WV Dept. of Environmental Protection

07/19/2013



Proposed Revegetation Treatment: Acres Disturbed 3.0 Prevegetation pH 5.5  
 Lime 3 Tons/acre or to correct to pH 6.5  
 Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)  
 Mulch 1000 Tons/acre

Seed Mixtures

Seed Type	Area I lbs/acre	Seed Type	Area II lbs/acre
Tall Fescue	50	Tall Fescue	50
Ladino Clover	10	Ladino Clover	10

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

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

Received

JUL 5 2013

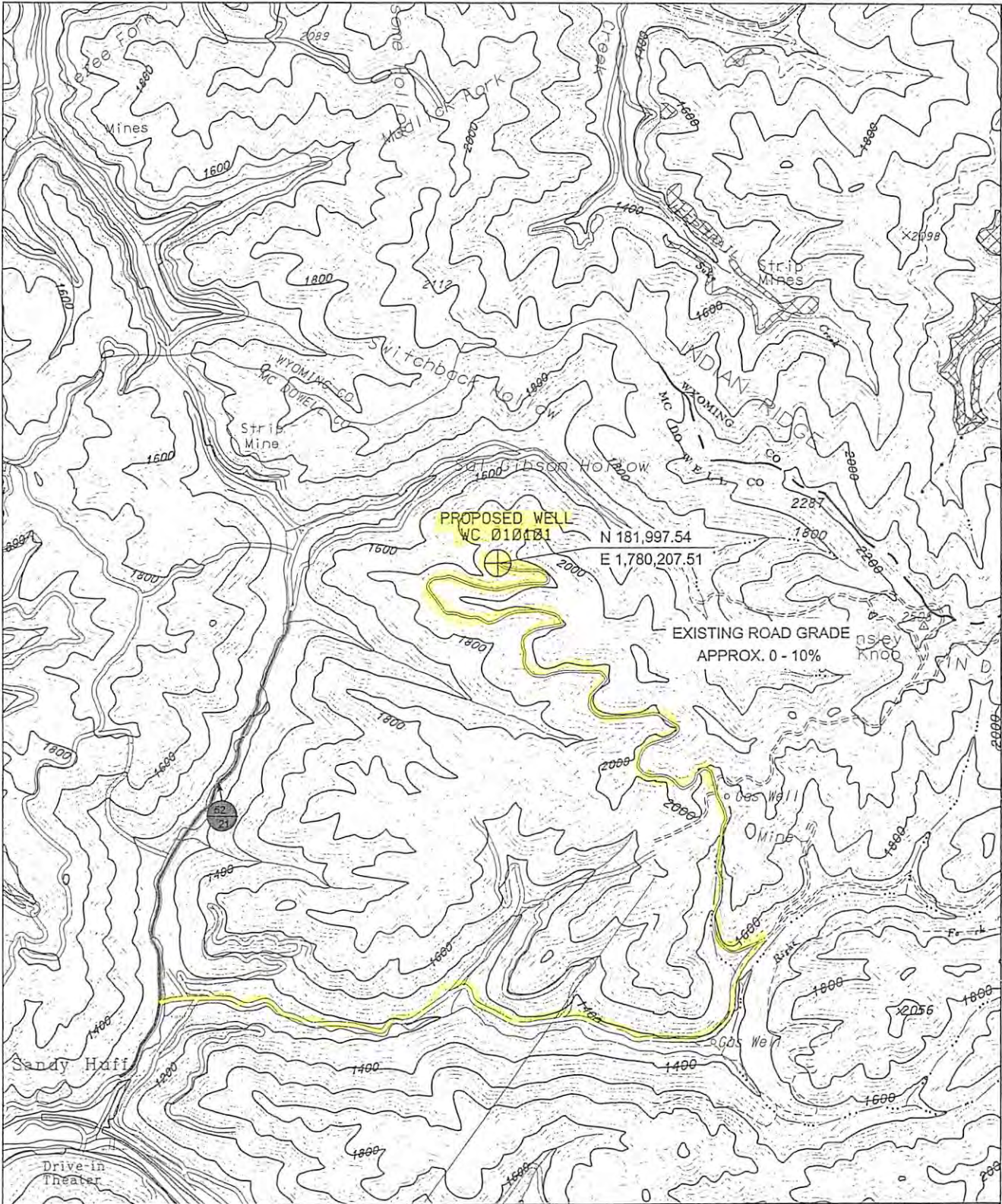
Title: Inspector

Date: 6/19/13

Field Reviewed? ( X ) Yes ( ) No

Office of Oil and Gas  
 WV Dept. of Environmental Protection





**CNX GAS COMPANY LLC**  
 2481 JOHN NASH BLVD.  
 BLUEFIELD, WV 24701

**LOCATION MAP**

WELL WC 010101

WC010101 location.dgn

DATE: 7/1/08

IAEGER QUAD

SCALE: 1" = 2000'

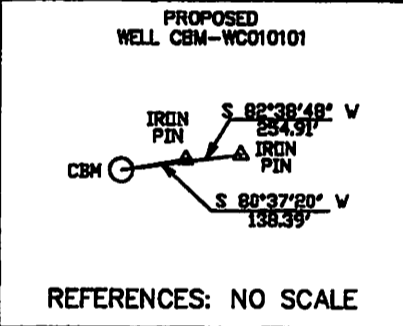
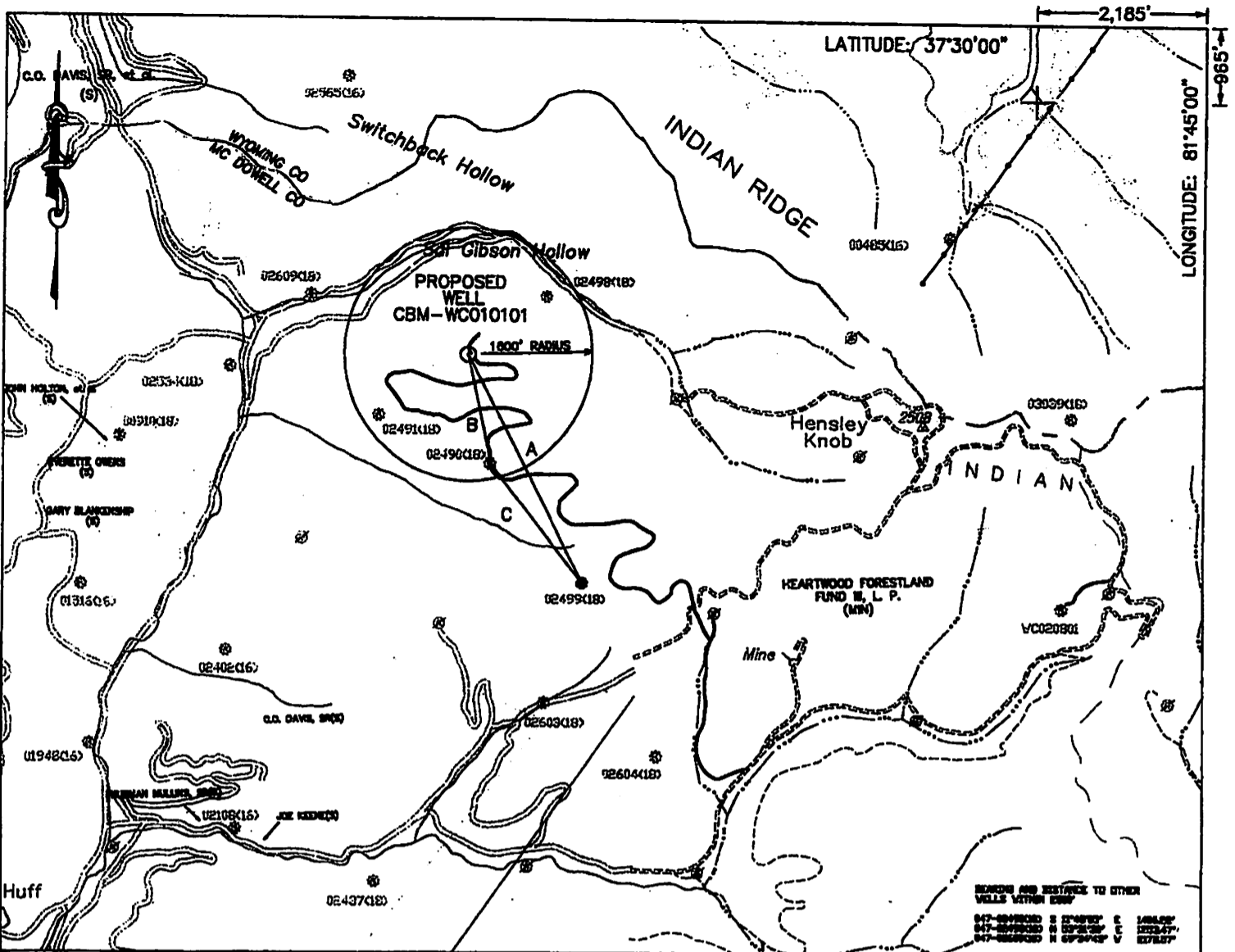
Office of Oil and Gas  
 WV Dept. of Environmental Protection

*Handwritten signature and date: 6/19/13*









**COORDINATES**  
 N 181,997.54      LAT: 37.497350  
 E 1,780,207.51      LONG: 81.757585

**WV SOUTH NAD 27**

A S 27°25'26\" E    3224.04'  
 B S 12°04'17\" E    1427.02'  
 C N 38°58'43\" W    1886.17'

NO KNOWN WATER WELLS WITHIN 1000'

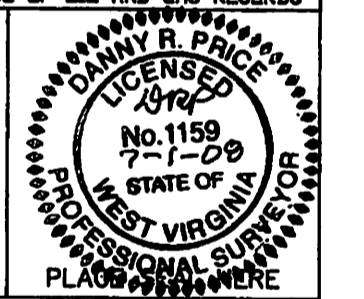
**NOTE:**  
 PROPERTY LINES SHOWN ON THIS PLAT WERE TAKEN FROM MAPS PROVIDED BY CNX LAND RESOURCES AND WERE NOT SURVEYED

**COORDINATES FOR EXISTING WELLS WERE TAKEN FROM THE OFFICE OF OIL AND GAS RECORDS**

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1: 2,500  
 PROVEN SOURCE OF ELEVATION SURVEYED

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT 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 DEPARTMENT OF MINES.

(SIGNED) Danny R. Price  
 R.P.E. \_\_\_\_\_ L.L.S.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV-6 (8-78)

DATE JULY 1, 2008

OPERATOR'S WELL NO. CBM-WC010101  
 API WELL NO. 47-047-02631C  
 STATE COUNTY PERMIT

Division of Environmental Protection  
 Office of Oil & Gas

WELL TYPE: OIL \_\_\_\_\_ GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 IF "GAS": PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW

LOCATION: ELEVATION 1922.32' WATER SHED SAL GIBSON HOLLOW OF SANDY HUFF BRANCH OF THE TUG RIVER  
 DISTRICT SANDY RIVER COUNTY MCDOWELL  
 QUADRANGLE IAEGER

SURFACE OWNER HEARTWOOD FORESTLAND FUND III, L.P. ACREAGE 3454.77  
 OIL & GAS ROYALTY OWNER HEARTWOOD FORESTLAND FUND III, L.P. LEASE ACREAGE 07,492.38  
 LEASE NO. 456595

PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_

TARGET FORMATION POCAHONTAS ESTIMATED DEPTH 2062' AUG 01 2008

WELL OPERATOR CNX GAS COMPANY LLC DESIGNATED AGENT JOHN H. JOHNSTON  
 ADDRESS 2481 JOHN NASH BLVD. BLUEFIELD, WV 24701 ADDRESS BANK ONE CENTER, 7TH FLOOR P.O. BOX 1588 CHARLESTON WV 25326-1588

McDow 2631C