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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

November 04, 2013

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-1700243, 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: 10579 (A-5)  
Farm Name: SQUIRES, R. LEGGETT  
**API Well Number: 47-1700243**  
**Permit Type: Plugging**  
Date Issued: 11/04/2013

**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.

1) Date 10/08, 2013  
2) Operator's  
Well No. 10579  
3) API Well No. 47-017 - 00243

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 1,168.11 Watershed Cabin Run  
District Central 01 County Doddridge 17 Quadrangle Oxford 526

6) Well Operator CNX Gas Company LLC 7) Designated Agent Jeremy Jones  
Address P.O. Box 1248 Address P.O. Box 1248  
Jane Lew, WV 26378 Jane Lew, WV 26378

8) Oil and Gas Inspector to be notified Name Douglas Newlon 9) Plugging Contractor  
Address 4060 Dutchman Road Name See Attached List  
McFarlan, WV 26148 Address \_\_\_\_\_

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

1. Load hole with gel and circulate @ 2200'
2. Spot 300' cement plug in 5.5" csg 2200'-1900'
3. Cut and pull 5.5" csg @ 1850'
4. Gel hole
5. Spot 100' cmt plug over cut 1850'-1750'
6. Spot 100' cmt plug over hole change 1400'-1300'
7. Spot 100' cmt plug over hole change 750'-650'
8. Spot 100' cmt plug to surface 100'-0'. 9. Set monument

*DCW*  
*10-16-2013*  
**Received**  
OCT 18 2013

Office of Oil and Gas  
WV Dept. of Environmental Protection

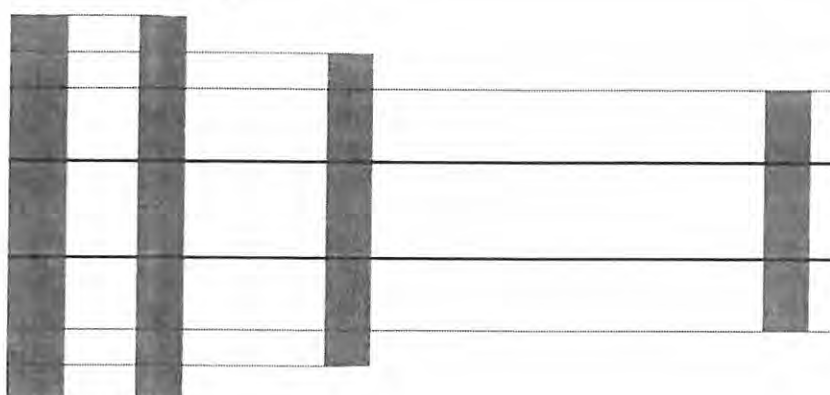
Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Douglas Newlon Date 10-16-2013

1700243P

**PLUGGING PLAN**

CSG CSG  
SIZE SET



10 695 Pulled

COALS None

8.625 1357 Pulled

7 2005 Pulled

5.5 2190

2275

TD

WELL NUMBER 10579  
WELL NAME Leggett

**CEMENT TOPS**

Csg	TOP, FT
5.5	2140

**WORK ORDER**

1	Load hole w/ gel and circulate @ 2200'
2	Spot 300' cmt plug in 5.5" csg 2200' - 1900'
3	Cut and pull 5.5" csg @ 1850'
4	Gel hole
5	Spot 100' cmt plug over cut 1850' - 1750'
7	Spot 100' cmt plug over hole change 1400' - 1300'
8	Spot 100' cmt plug over hole change 750' - 650'
9	Spot 100' cement plug to surface 100' - 0'
10	set monument

HOLE	BBL/FT	CU.FT./FT	100' plug, sks cmt(25% excess)
12	0.13987	0.7854	83
10	0.09714	0.5454	58
8	0.06217	0.3491	37
6.5	0.04104	0.2304	24
5.5	0.02938	0.1650	17
4.5	0.01967	0.1104	12
2.375" TBG	0.00387	0.0217	2

CEMENT PLUGS			
BOTTOM	TOP	HOLE SIZE	CMT, sks
2200	1900	5.5	52
1850	1750	6.5	24
1400	1300	8	37
750	650	10	58
100	0	12	83
CLASS A CEMENT			TOTAL SKS 255

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WV Dept. of Environmental Protection

1700243P

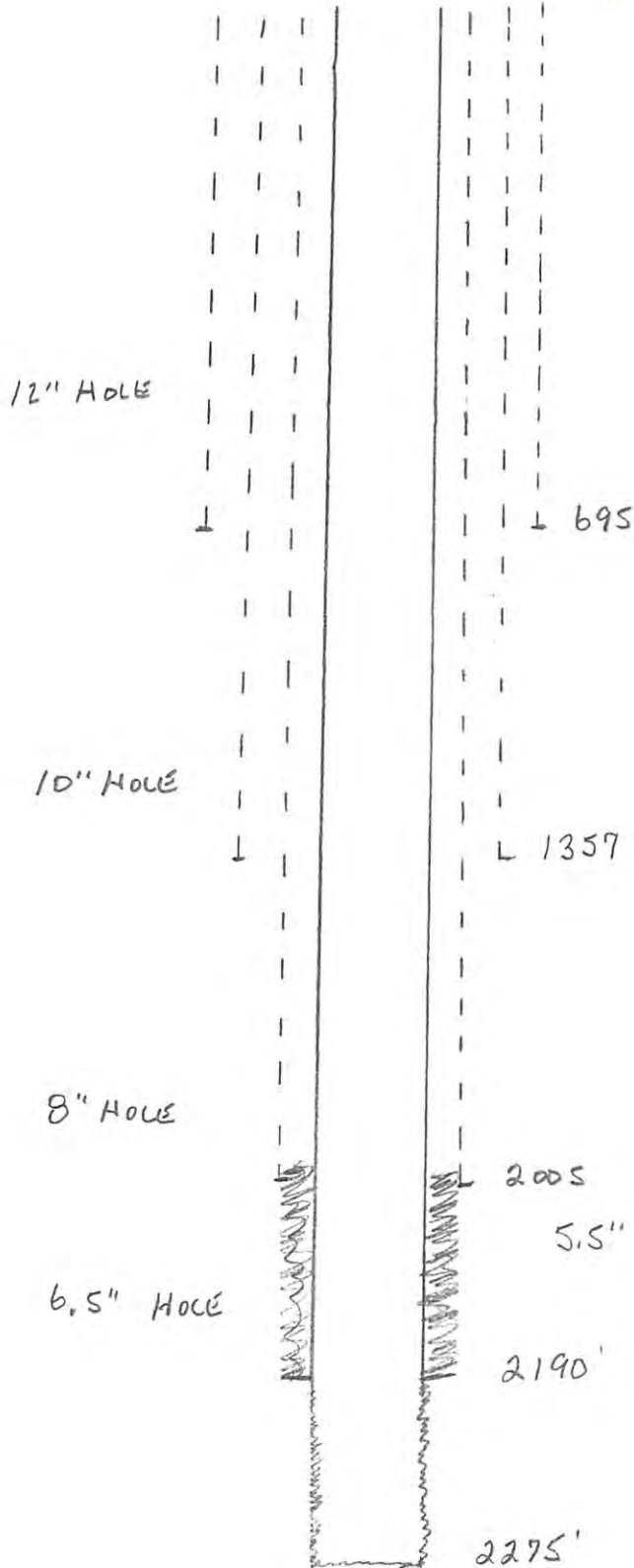
WN 10579

PERMIT 47-17-0243

ELEV. 1147

NO COAL

WATER 2000' ?



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Office of Oil and Gas  
WV Dept. of Environmental Protection

**Attachment – Form WW-4B for Well 10579:**

**Potential Plugging Contractors:**

Yost Drilling  
313 Steel Hill Rd.  
Mount Morris, PA 15349

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Viking Well Service  
8113 Sissonville Drive  
Sissonville, WV 25320

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Coastal Drilling  
130 Meadow Ridge Rd, STE 24  
Mount Morris, PA 15349

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WV Dept. of Environmental Protection



1700243P

*Cops*

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Quadrangle HOLBROOK

Permit No. DOD-243

Rotary \_\_\_\_\_ Oil \_\_\_\_\_  
Cable X Gas \_\_\_\_\_  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind) \_\_\_\_\_

Company Allegheny Land & Mineral Co.  
Address Clarksburg, WV 26301  
Farm Ralph Leggett Acres 187  
Location (waters) \_\_\_\_\_  
Well No. A-5 Squires Hrs. Elev 1175'  
District Central County Doddridge  
The surface of tract is owned in fee by \_\_\_\_\_  
Mr. & Mrs. Ralph Leggett  
Address Oxford, WV  
Mineral rights are owned by Squires Hrs. & Ralph Leggett  
Address \_\_\_\_\_  
Drilling Commenced March 11, 1958  
Drilling Completed May 5, 1958  
Initial open flow 134 M cu. ft. \_\_\_\_\_ bbls.  
Final production 300 M cu. ft. per day \_\_\_\_\_ bbls.  
Well open \_\_\_\_\_ hrs. before test 425# RP.  
Well treatment details:

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 33 10"	695'	0	
9 5/8			
8 5/8	1357'	0	
7	2005'	0	
5 1/2	2190'	2190'	- 10 sacks
4 1/2			
3			
2			
Liners Used			

Attach copy of cementing record.

Coal was encountered at \_\_\_\_\_ Feet \_\_\_\_\_ Inches  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand \_\_\_\_\_ Depth \_\_\_\_\_

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Red Rock			50	170		
Sand			170	205		
Lime			205	285		
Red Rock			285	300		
Slate & Shell			300	460		
Red Rock			460	545		
Sand			545	565		
Slate			565	600		
Lime			600	620		
Red Rock			620	710		
Sand			710	720		
Slate & Shell			720	734		
Sand			734	770		
Slate & Shell			770	1230		
Sand			1230	1245		
Slate & Shell			1245	1510		
Sand			1510	1552		
Slate			1552	1580		
Lime			1580	1620		
Slate			1620	1645		
Slate & Shell			1645	1670		
Sand			1670	1735		
Slate			1735	1835		
Sand			1835	1865		

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OCT 18 2013

Office of Oil and Gas  
of Environmental Protection

\* Indicates Electric Log tops in the remarks section.

(over)

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Slate & Shell			1865	1970		
Maxson Sand			1970	2010		
Lime			2010	2068		
Slate			2068	2080		
Little lime			2080	2105		
Pencil Cave			2105	2108		
Big Lime			2108	2205		
Sand			2205	2245		
Break			2245	2247		
Squaw Sand			2247	2256		
Shale			2256	2275		
		total depth		2275		

**Received**

OCT 18 2013

Office of Oil and Gas  
 WV Dept. of Environmental Protection

Date .....

19

APPROVED .....

General

By .....

Title



1706243P

WW-4A  
Revised 6-07

1) Date: 10/08/2013  
2) Operator's Well Number 10579

3) API Well No.: 47 - 017 - 00243

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

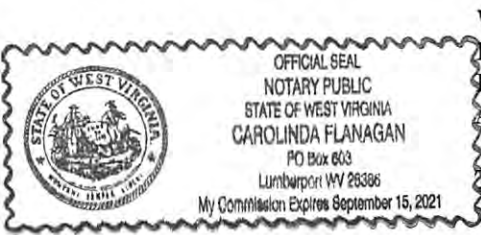
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Jan L. and Phyllis A. Grace</u> ✓	Name <u>None of Declaration</u>
Address <u>236 24th Street</u>	Address _____
<u>Des Moines, IA 50265</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>None of Declaration</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Douglas Newlon</u>	(c) Coal Lessee with Declaration
Address <u>4060 Dutchman Road</u>	Name <u>None of Declaration</u>
<u>McFarlan, WV 26148</u>	Address _____
Telephone <u>304-932-8049</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 Company LLC  
 By: Jeremy Jones *[Signature]*  
 Title: Designated Agent - General Manager, WV Gas Operations  
 Address P.O. Box 1248  
Jane Lew, WV 26378  
 Telephone 304-884-2009

Received

Subscribed and sworn before me this 10<sup>TH</sup> day of OCT. 2013  
*[Signature]* Notary Public  
My Commission Expires 09/15/2021

OCT 18 2013

**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).

Office of Oil and Gas  
Dept. of Environmental Protection

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 Company LLC OP Code 494458046

Watershed Cabin Run Quadrangle Oxford

Elevation 1168' County Doddridge District Central

Description of anticipated Pit Waste: Fluids associated with the plugging of existing gas wells

Will a synthetic liner be used in the pit? Yes \_\_\_\_\_ 20 mil.

*DCM*  
*10-16-2013*

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 *Jeremy Jones*

Company Official (Typed Name) Jeremy Jones

Company Official Title Designated Agent - General Manager, WV Gas Operations

*Received*

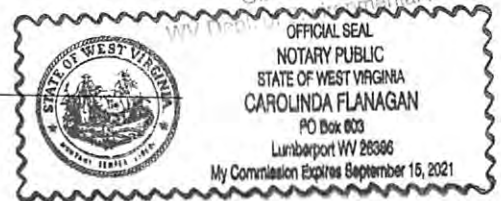
Subscribed and sworn before me this 10th day of OCT, 2013

*Carolina Flanagan*

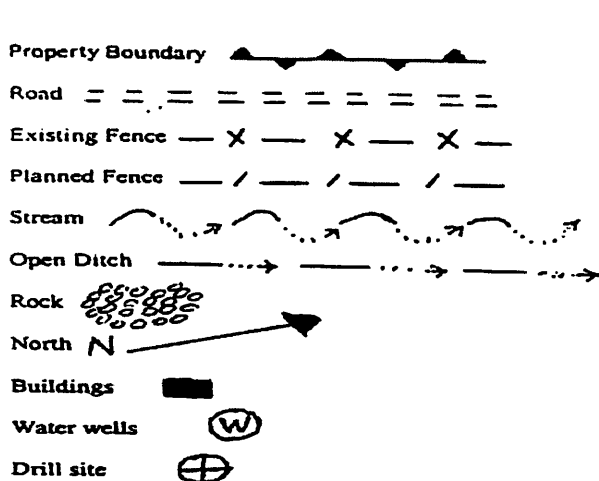
Notary Public

*OCT 18 2013*

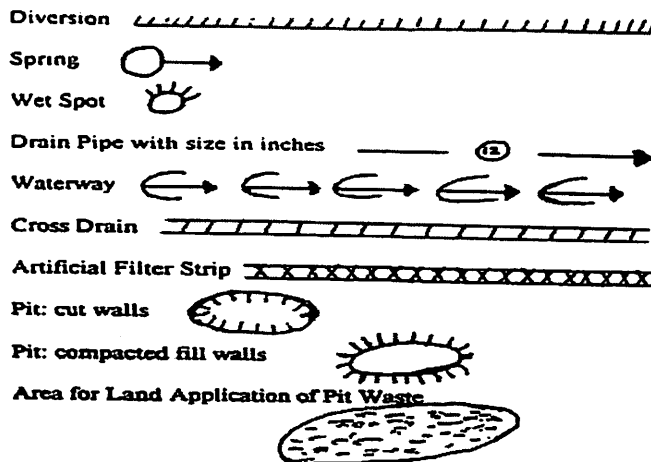
Office of Oil and Gas  
Department of Environmental Protection



My commission expires 9/15/2021



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 55.83 Prevegetation pH 6.5  
 Lime according to pH test Tons/acre or to correct to pH 7.0  
 Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)  
 Mulch hay or straw @ 2 Tons/acre

Seed Mixtures

Seed Type	Area I lbs/acre
Orchard Grass	25
Birdsfoot Trefoil	15
Ladino Clover	10

Seed Type	Area II lbs/acre
Orchard Grass	25
Birdsfoot Trefoil	15
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: Douglas Newber

Comments: Install pits reclaim as WV Dep regulations

Received

Title: Oil & Gas Inspector

Date: 10-16-2013

Field Reviewed? ( ) Yes ( / ) No

OCT 18 2013

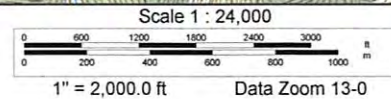
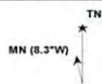




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1700243P

WW-7  
5-02



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

API: 47-017-00243 WELL NO.: 10579

FARM NAME: RALPH LEGGETT

RESPONSIBLE PARTY NAME: CNX GAS COMPANY LLC

COUNTY: DODDRIDGE DISTRICT: CENTRAL

QUADRANGLE: OXFORD 7.5'

SURFACE OWNER: JAN L. & PHYLLIS A. GRACE 236 24TH ST., WEST DES MOINES, IA 50265

ROYALTY OWNER: APPALACHIAN ROYALTIES, INC., ET. AL.

UTM GPS NORTHING: 4,343,510.01 METERS

UTM GPS EASTING: 513,076.58 METERS GPS ELEVATION: 356.04 METERS 1168.11 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 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 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  : Post Processed Differential  Real Time Differential

I the undersigned hereby state this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulation issued and prescribed by the Office of Oil and Gas.

Signature J. Michael Evans  
J. Michael Evans, PS

Title WV Professional Surveyor #90001

Date 05/22/13

Received  
Received  
Office of Oil and Gas  
WV Dept. of Environmental Protection  
WV Dept. of Environmental Protection  
Office of Oil and Gas  
WV Dept. of Environmental Protection

CNX USE: NAD 27 WV NORTH SPC: 10579 = 272,651.63' 1,618,027.33' ELEV. = 1,168.11'

1700243A



Carolinda Flanagan  
Permitting Analyst  
P.O. Box 1248  
Jane Lew, WV 26378  
(304) 884-2057



October 8, 2013

Jan L. and Phyllis A. Grace  
236 24<sup>th</sup> Street  
Des Moines, IA 50265

**Re: Well # 10579; API # 47-017-00243  
Central District, Doddridge County**

To Whom It May Concern:

CNX Gas Company LLC is in the process of applying for a permit to **Plug** a well on the above noted lease of which you are the Surface/Coal Owner.

Enclosed are copies of the Notice and Application, Permit and the Location Plat.

Please note the instructions on the Surface/Coal Owner Waiver form. If you have no objection to the **Plugging** being done, please follow instructions as they are given, sign and date the waiver and return it to us in the self addressed envelope.

Sincerely,

  
Carolinda Flanagan

Enclosures

**Received**  
OCT 18 2013  
Office of Oil and Gas  
WV Dept. of Environmental Protection