west virginia department of environmental protection

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

January 08, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-5500189, 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 penalities 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: V. SHREWSBURY 2
Farm Name: SHREWSBURG, V. & G.
API Well Number: 47-5500189
Permit Type: Plugging
Date Issued: 01/08/2015

5500189P

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

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.

5500189P

WW-4B
Rev. 2/01

1) Date _____, 20_____
2) Operator's
Well No. Shrewsbury 2
3) API Well No. 47- 055 - 00189

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 2518 ft. Watershed Marsh Fork
District Rock 5 County Mercer Quadrangle Matoaka 464

6) Well Operator CNX Gas Company LLC
Address 627 Claypool Hill Mall Road
Cedar Bluff, VA 24609

7) Designated Agent Matthew Imrich
Address One Dominion Drive
Jane Lew, WV 26378

8) Oil and Gas Inspector to be notified
Name Gary Kennedy
Address PO Box 268
Nimitz, WV 25978

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:

see attached work order procedures

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Office of Oil & Gas
NOV 12 2014

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 Date 10/29/14

5500189P

API 47-055-00189 Plugging Procedure

V. Shrewsbury #2

1. Verify total depth 4837'.
2. Run free-point survey on 4-1/2" casing.
3. Run tubing to TD. Set plug of Class A. 3%CaCl cement from established TD to approximately 50' below free point, utilizing a 100' gel spacer at approximately the half-way point of the wellbore. MAKE SURE 100' GEL SPACER IS ABOVE 2388' (ELEV.) (MAYTON PERFS.)
4. Cut 4-1/2" casing at free-point.
5. Cement through 4-1/2" csg. while pulling 4-1/2", from top of bottom plug to approximately 100' below the 7" casing shoe. (Approx. 579') Pull remaining 4-1/2" out of well.
6. Bond log 7" casing. SHOULD SHOW CTS.
7. Run tubing to previous cement top (579'). Cement across the 7" shoe to a minimum of 50' above shoe, bringing cement top to approximately 50' below the 7" free-point or to surface, whichever is necessary.
8. If necessary, cut and pull free 7" casing. 7" IS PROBABLY CTS.
9. Repeat bond log and cutting procedures for 9-5/8" if 7" is cut and pulled.
10. ~~Cement from 50' below 9-5/8" shoe to surface.~~ PULL 9 5/8" CASING.
11. Install 4-1/2" X 4' steel monument with API# and Date.

NOTE: A 100' gel spacer will be placed at approximately half the well depth.

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WR-35

07-May-98
API # 47- 55-00189

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

Well Operator's Report of Well Work

Farm name: V & G Shrewsbury Operator Well No.: V Shrewsbury #2

LOCATION: Elevation: 2,518.00 Quadrangle: MATOAKA

District: ROCK County: MERCER
Latitude: 2700 Feet South of 37 Deg. 30Min. 0 Sec.
Longitude 5300 Feet West of 81 Deg. 7 Min. 30 Sec.

Company: DOMINION APPALACHIAN DEVE
P. O. BOX 1248
JANE LEW, WV 26378-0000

Agent: JOHN T. HASKINS

Inspector: RODNEY DILLON
Permit Issued: 05/07/98
Well work Commenced: 6/17/98
Well work Completed: 7/01/98
Verbal Plugging
Permission granted on: N/A
Rotary X Cable ____ Rig
Total Depth (feet) 4837'
Fresh water depths (ft) 93'

Salt water depths (ft) N/A

Is coal being mined in area (Y/N)? N
Coal Depths (ft): ____

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
9 5/8	19'	19'	0
7"	479	479	80 sacks
4 1/2"	4837'	4837'	300 sacks

Office of Oil & Gas
JAN 22 1999
WV Division of Environmental Protection

OPEN FLOW DATA

Producing formation Weir Pay zone depth (ft) 4340-4380
Gas: Initial open flow 762 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 1283 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 26 Hours
Static rock Pressure 405 psig (surface pressure) after 72 Hours

Second producing formation Lower Maxton Pay zone depth (ft) 2438-2470
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

* Commingled

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.

Larry J. Cavallo

For: DOMINION APPALACHIAN DEVELOPMENT, INC.

By: Larry J. Cavallo; Manager of Engineering
Date: 1/19/99

MER 0189

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5500189A

2 STAGE(S) 75 Q foam FRAC DATE 6/26/98

ZONES	PERFS	HOLES	BBL	BP	ISIP
Weir	4340-4380	16	434 (foam)	915	1870
Lower Maxton	2438-2470	16	392 (foam)	1607	1207

ORMATION	COLOR	HARD/SOFT	TOP	BOTTOM	REMARKS
OVERBURDEN			0	5	
SANDSTONE			5	93	
SANDY SHALE			93	653	
SAND STONE			653	685	
SANDY SHALE			685	782	
SANDSTONE			782	901	
SANDY SHALE			901	950	
RAVENCLIFF			950	1065	
SANDY SHALE			1065	1350	
SANDSTONE			1350	1380	
SANDY SHALE			1380	1840	
UPPER MAXTON			1840	2004	
RED SHALE			2004	2055	
SAND & SHALE			2055	2065	
RED SHALE			2065	2080	
SANDY SHALE			2080	2305	
LOWER MAXTON			2305	2460	
SANDY SHALE			2460	2490	
BIG LIME			2490	3800	
SANDY SHALE			3800	4080	
SANDSTONE WEIR			4080	4140	
SANDY SHALE			4140	4150	
SANSTONE WEIR			4150	4210	
SANDY SHALE			4210	4650	
BEREA			4650	4675	
SANDY SHALE			4675	4837	
TD				4837	

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JAN 22 1999
Protection

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WW-4A
Revised 6-07

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NOV 12 2014

1) Date:
2) Operator's Well Number
Shrewsbury 2

3) API Well No.: 47 - 055 - 00189

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Georgia Shrewsbury
Address: 191 Horner Lane
Spanishburg, WV 25922-8916

(b) Name:
Address:

(c) Name:
Address:

6) Inspector: Gary Kennedy
Address: PO Box 268
Nimitz, WV 25978
Telephone: 304-382-8402

5) (a) Coal Operator
Name: none
Address:

(b) Coal Owner(s) with Declaration
Name: same as surface owner
Address:

Name:
Address:

(c) Coal Lessee with Declaration
Name: none
Address:

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:
Its: Attorney-in-Fact
Address: 627 Claypool Hill Mall Road
Cedar Bluff, VA 24609
Telephone: 276-596-5075

Subscribed and sworn before me this 10th day of November 2014
Notary Public
My Commission Expires 10/30/15

BEVERLY A. WEBB
NOTARY PUBLIC
Commonwealth of Virginia
Reg. #7502381
My Commission Expires June 30, 2015

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 depprivacyoffier@wv.gov.

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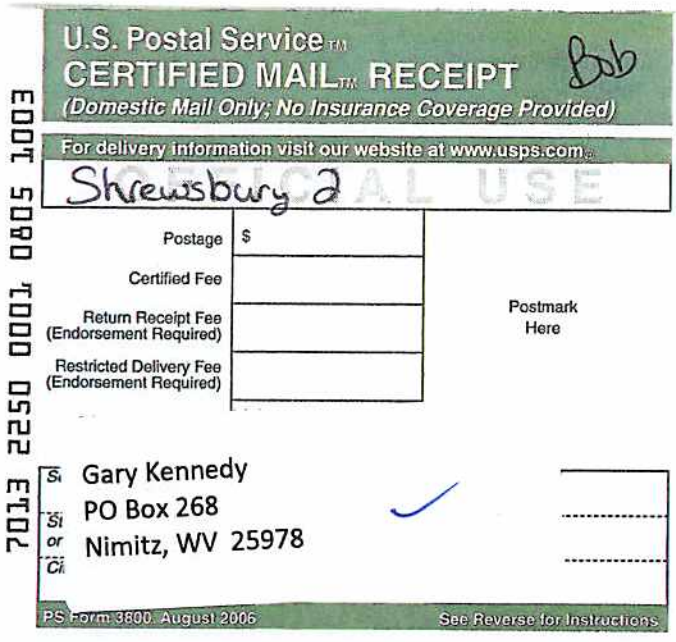

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Shrewsbury 2

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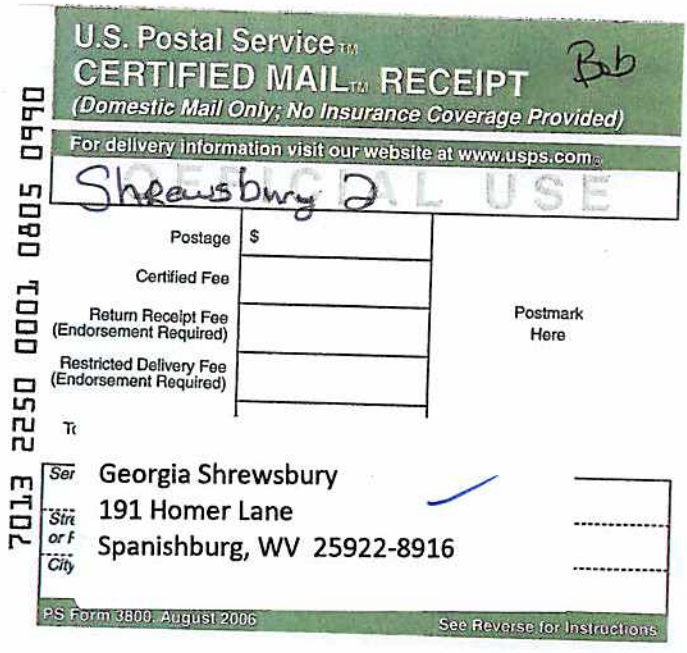
Return Receipt Fee (Endorsement Required)
Restricted Delivery Fee (Endorsement Required)
Postmark Here

7013 2250 0001 0805 1003

Gary Kennedy
PO Box 268
Nimitz, WV 25978

PS Form 3800, August 2006 See Reverse for Instructions



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Postage $
Certified Fee
Return Receipt Fee (Endorsement Required)
Restricted Delivery Fee (Endorsement Required)
Postmark Here

7013 2250 0001 0805 0990

Georgia Shrewsbury
191 Homer Lane
Spanishburg, WV 25922-8916

PS Form 3800, August 2006 See Reverse for Instructions

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NOV. 12 2014

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 055 - 00189
Operator's Well No. Shrewsbury 2

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 Marsh Fork Quadrangle Matoaka, WV

Elevation 2518 ft. County Mercer District Rock

Description of anticipated Pit Waste: water for plugging of will be contained in a flowback tank and properly disposed.

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

Proposed Disposal Method For Treated Pit Wastes:

_____ Land Application
X Underground Injection (UIC Permit Number 2D0550319)
_____ Reuse (at API Number _____)
_____ Off Site Dispposal (Supply form WW-9 for disposal location)
_____ Other (Explain _____

Proposed Work For Which Pit Will Be Used:

_____ Drilling _____ Swabbing
_____ Workover _____ Plugging
X Other (Explain a pumper truck with flowback tank will be used in lieu of a pit.

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 Ed Fanning

Company Official (Typed Name) Ed Fanning

Company Official Title Supervisor Permitting

Subscribed and sworn before me this 10th day of November, 20 14

Beverly A. Webb Notary Public

BEVERLY A. WEBB
NOTARY PUBLIC
Commonwealth of Virginia
Reg. #7502381
My Commission Expires June 30, 2015

My commission expires 6/30/15

5500189P

Form WW-9

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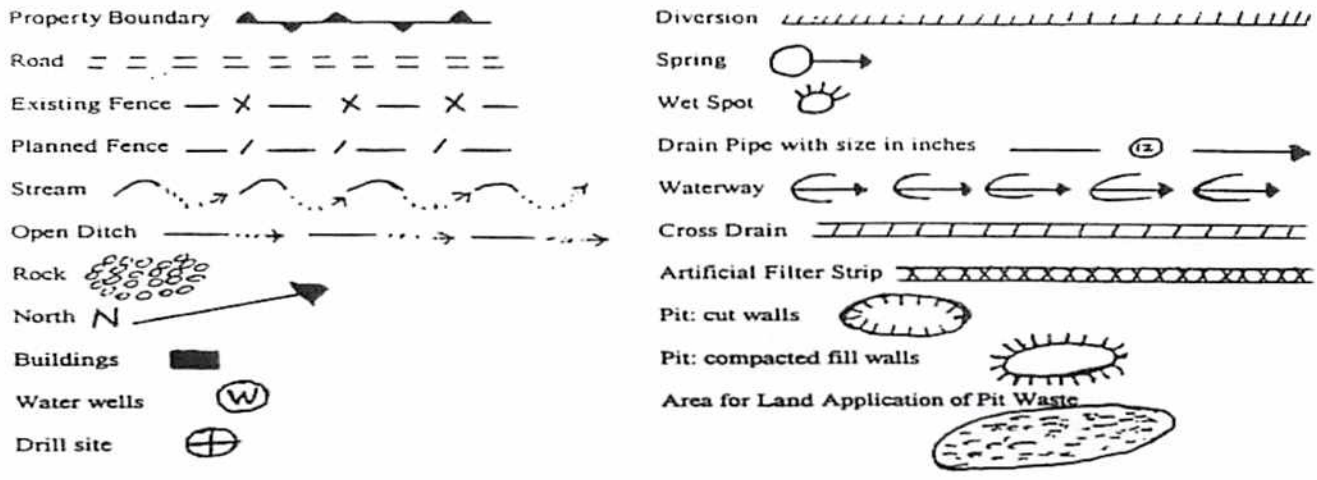
Operator's Well No. Shrewsbury 2

LEGEND



Proposed Revegetation Treatment: Acres Disturbed 1.5 Prevegetation pH 6.5

Lime based on pH Tons/acre or to correct to pH 7.0

Fertilizer (10-20-20 or equivalent) 550 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchard grass	25	same as Area I	
Birdsfoot trefoil	15		
Lidino clover	10		

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

Photocopied section of involved 7.5' topographic sheet.

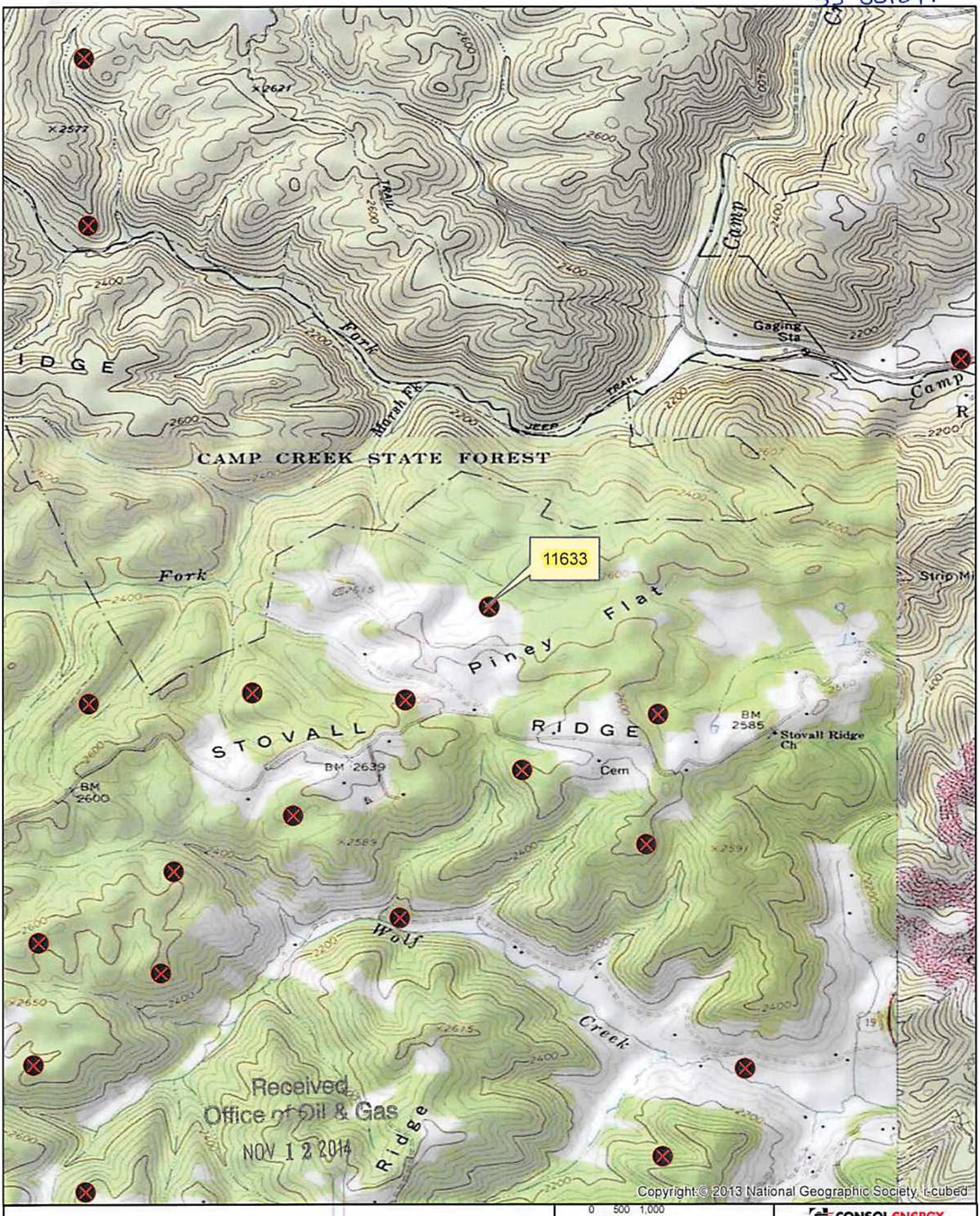
Plan Approved by: [signature]

Comments:

Title: Inspector Date: 10/29/14

Field Reviewed? (✓) Yes ( ) No

55 00189 P



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N

0 500 1,000 Feet

Date: 10/8/2014	Prepared By: KK
Revisions:	Approved By: BS

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PROPOSED PLUGGING
WELL NUMBER 11633
API# 47-055-00189
GENERAL LOCATION MAP

\\Cxobiu01\gis\project areas\business unit support\gas permitting\arcgis\maps\wv_plugging.mxd - bkk0uc6

55 00189P

WW-7
8-30-06

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

API: 47-055-00189 **WELL NO.:** Shrewsbury 2

FARM NAME: Virgil Shrewbury

RESPONSIBLE PARTY NAME: CNX Gas Company LLC

COUNTY: Mercer **DISTRICT:** Rock

QUADRANGLE: Matoaka, WV

SURFACE OWNER: Georgia Shrewsbury

ROYALTY OWNER: Georgia Shrewsbury

UTM GPS ~~NORTHING~~: 487,352 m Easting

UTM GPS ~~EASTING~~: 4,149,540 m Northing **GPS ELEVATION:** 766 m (2512.0')

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: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS X: Post Processed Differential _____

Real-Time Differential X

Mapping Grade GPS ____: Post Processed Differential _____

Real-Time Differential _____

4. **Letter size copy of the topography map showing the well location.**

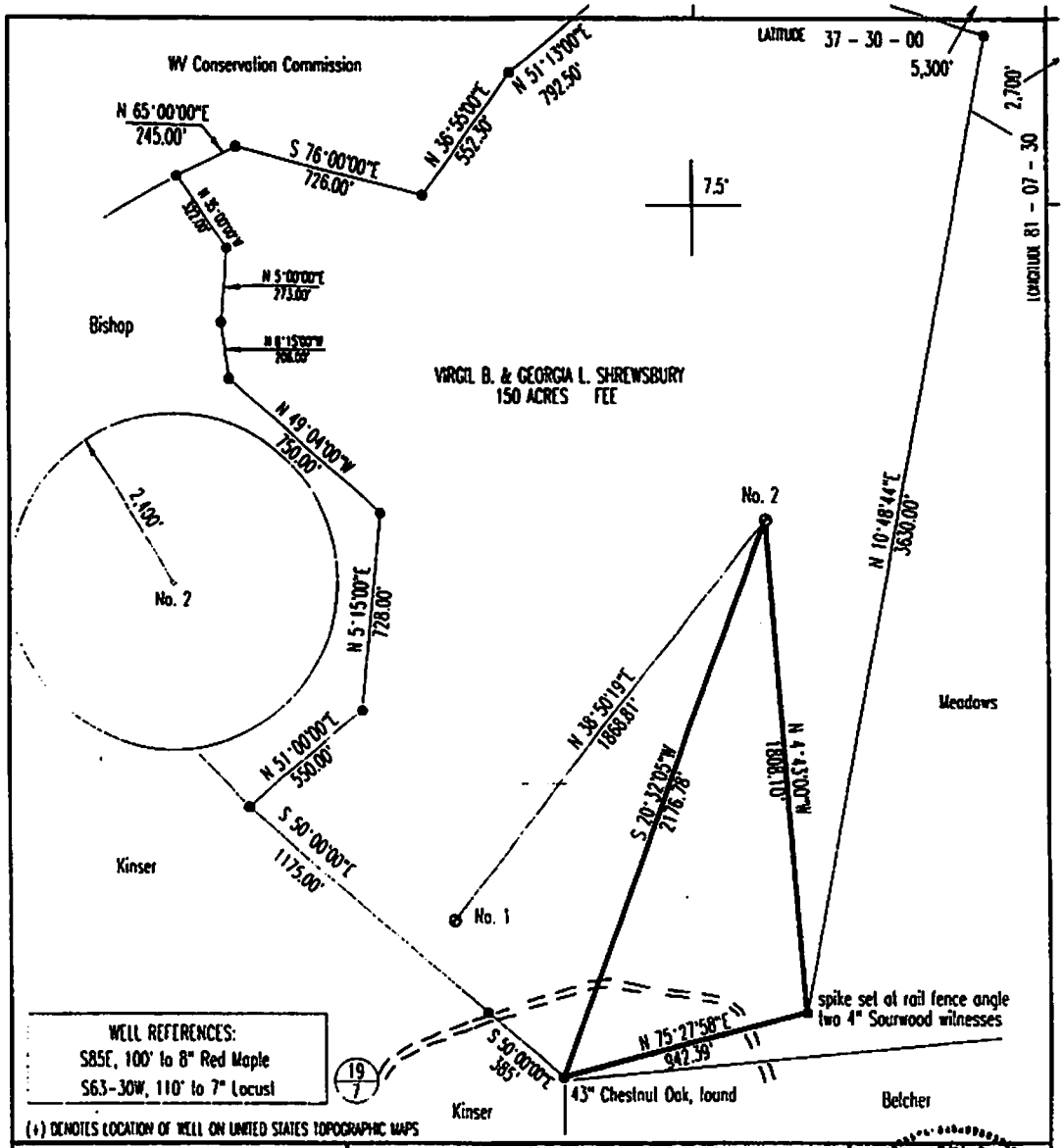
I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Bob Stalton — Signature

Permit Agent — Title

10-10-14 — Date

5500189P



FILE & DRAWING NO. _____

SCALE 1" = 500'

MINIMUM DEGREE OF ACCURACY 1 in 2500

PROVEN SOURCE OF ELEVATION Bench Mark 3159' SW at elev. 2639' AMSL

FORM WV-6 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 DIVISION OF ENVIRONMENTAL PROTECTION.

(SIGNED) J. Michael Evans

PROFESSIONAL SURVEYOR # 900

MICHAEL EVANS LICENSE No. 900 STATE OF WEST VIRGINIA

LAND SURVEYING SERVICES
21 CEDAR LANE
BRIDGEPORT, WV 26330
PHONE: 304-842-2018 OR 842-5762

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
#10 McJUNKIN ROAD, NITRO, WV 25143-2506

DATE April 23, 1998

OPERATORS WELL NO. Virgil Shrewsbury No. 2

API WELL NO.
047 _ 055 _ 00189
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS",) PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION: ELEVATION 2,518' WATERSHED Marsh Fork
DISTRICT Rock COUNTY Mercer
QUADRANGLE Matoaka 7.5'

SURFACE OWNER Virgil B. & Georgia L. Shrewsbury ACREAGE 150.
OIL & GAS ROYALTY OWNER Virgil B. & Georgia L. Shrewsbury LEASE ACREAGE 188.00

PROPOSED WORK: DRILL X 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 Berea ESTIMATED DEPTH 5,000'
WELL OPERATOR Dominion Appalachian Development DESIGNATED AGENT John Hoskins
ADDRESS P. O. Drawer R, Jane Lew, WV 26378-0080 ADDRESS P. O. Drawer R, Jane Lew, WV 26378-0080

MER COUNTY NAME 00189 PERMIT

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CONSOL ENERGY
AMERICA'S ENERGY STARTS HERE.

627 Claypool Hill Mall Road
Cedar Bluff, VA 24609

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NOV 12 2014

November 10, 2014

Mr. Jeff McLaughlin
WVDEP **Office of Oil and Gas**
601 57th Street, SE
Charleston, WV 25304-2345

RE: well # 47-055-00189

Dear Jeff;

Please find enclosed the plugging application for the above referenced well. Feel free to contact me if you require any additional information.

Thank you for your consideration in this matter.

Bob Staton

Bob Staton, M.S., P.G.
Permitting Agent

enclosures