



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Friday, September 15, 2017
WELL WORK PERMIT
Vertical / Plugging

CNX GAS COMPANY LLC
POST OFFICE BOX 1248

JANE LEW, WV 263786506

Re: Permit approval for ROWLAND 29
47-081-01155-00-00

This well work permit 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 any additional specific 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: ROWLAND 29
Farm Name: ROWLAND LAND CO.
U.S. WELL NUMBER: 47-081-01155-00-00
Vertical / Plugging
Date Issued: 9/15/2017

Promoting a healthy environment.

09/15/2017

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.

1) Date 8/10, 2017
2) Operator's Well No. Rowland 29 (11785)
3) API Well No. 47-081-01155

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 2265 ft. Watershed Workman Creek
District Clear Fork County Raleigh Quadrangle Dorothy

6) Well Operator CNX Gas Company LLC 7) Designated Agent Chris Turner
Address 627 Claypool Hill Mall Road Address One Dominion Drive
Cedar Bluff, VA 24609 Jane Lew, WV 26378

8) Oil and Gas Inspector to be notified Name Gary Kennedy
Address 252 Circle Avenue
Rainelle, WV 25962
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

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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 8/14/17

09/15/2017

API 47-081-01155 Plugging ProcedureWell Rowland #29 (11785)

1. Verify total depth 3480'.
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 or a point at least 100' above the Maxton Perforations (2306' – 2312').
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. 982') Pull remaining 4-1/2" out of well.
6. Run free-point survey on 7" casing.
7. Run tubing to previous cement top (982'). Cement from 982' to surface if the 7" is CTS. If not, the free 7" will be pulled before cementing to surface.
9. Install 6" 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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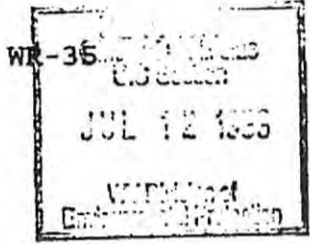
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81 01155 P

11785



22-Oct-98
API # 47- 81-01155

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

Reviewed [Signature]

Well Operator's Report of Well Work

Farm name: ROWLAND LAND CO Operator Well No.: ROWLAND #29

LOCATION: Elevation: 2,265.00 Quadrangle: ODD

District: RICHMOND County: RALEIGH
Latitude: 12380 Feet South of 37 Deg. 55Min. 0 Sec.
Longitude 1740 Feet West of 81 Deg. 22 Min. 30 Sec.

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

Agent: JOHN T. HASKINS

Inspector: RODNEY DILLON
Permit Issued: 10/20/98
Well work Commenced: 11/07/98
Well work Completed: 11/16/98
Verbal Plugging
Permission granted on: _____
Rotary Cable Rig
Total Depth (feet) 3580'
Fresh water depths (ft) 100'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
9 5/8"	75'	75'	
7"	882'	882'	130 sks
4 1/2"	3480'	3480'	235 sks

Salt water depths (ft) 1550', 2897'

Is coal being mined in area (Y/N)? N
Coal Depths (ft): None reported

OPEN FLOW DATA: 3282-3410

Producing formation Weir, Big Lime Pay zone depth (ft) 3078-3082
Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 421 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 22 Hours
Static rock Pressure 450 psig (surface pressure) after 24 Hours

Second producing formation Lower Maxton Pay zone depth (ft) 2580-2586
Middle Maxton Pay zone depth (ft) 2306-2312
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: 7/2/98

09/15/2017

RAL 1/55

[Signature]

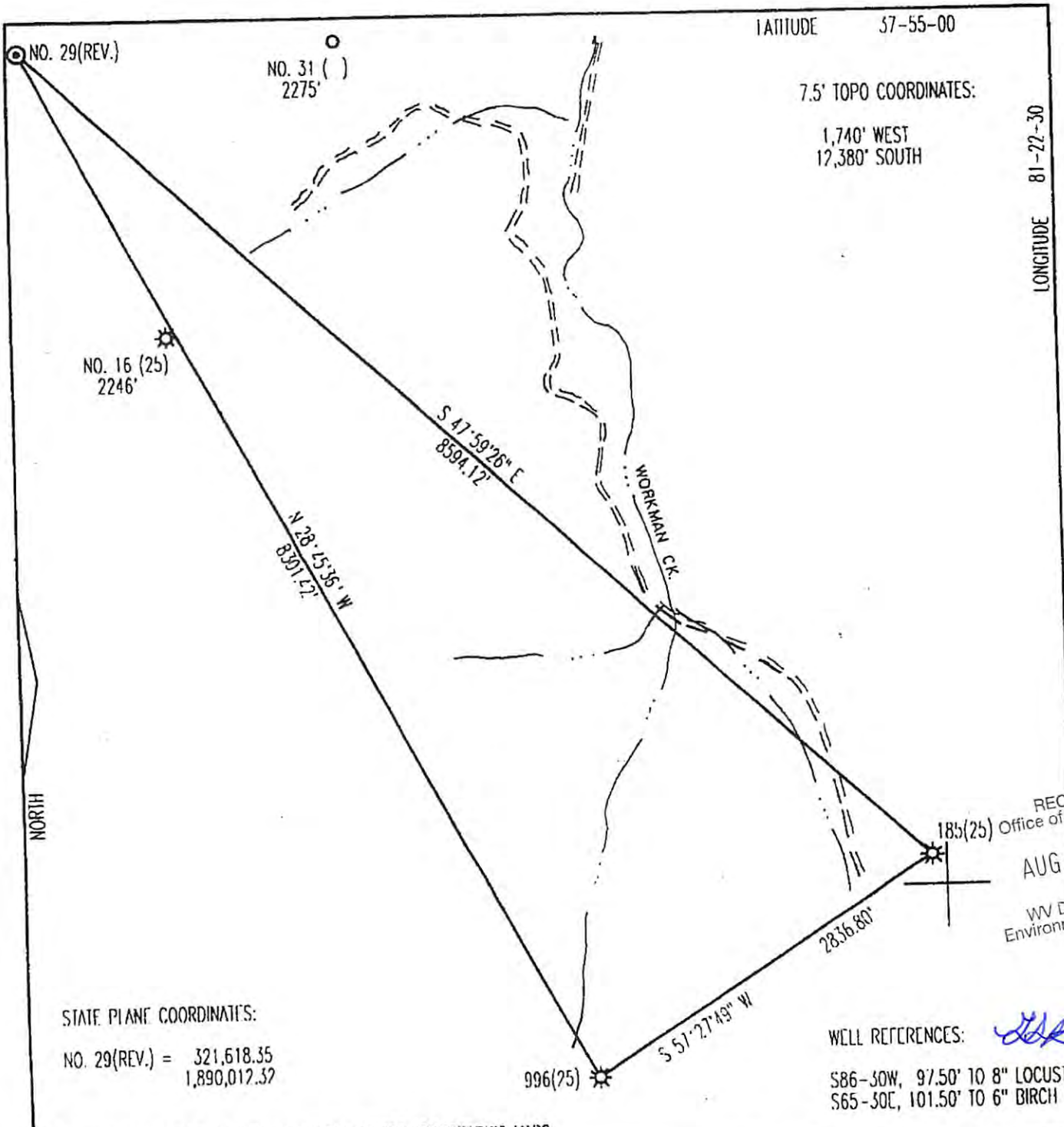
4	STAGE(S) 750 foam & acid	FRAC	DATE	11/15/98	
ZONES	PERFS	HOLES	BBL	BP	ISIP
Weir	3282-3410	16	388 foam	1420	1650
Big Lime	3078-3082	6	59 28% HCL	2120	547
Lower Maxton	2580-2586	16	298 foam	1440	1816
Middle Maxton	2306-2312	16	344 foam	2831	821

FORMATION	COLOR	HARD/SOFT	TOP	BOTTOM	REMARKS
OVERBURDON			0	40	
SANDY SHALE			40	75	
SANDSTONE			75	120	
SANDY SHALE			120	410	
SANDSTONE			410	500	
SANDY SHALE			500	810	
SANDSTONE			810	1770	
SANDY SHALE			1770	1912	
RAVENCLIFF			1912	1960	
SANDY SHALE			1960	2065	
UPPER MAXTON			2065	2130	
SANDY SHALE			2130	2260	
MIDDLE MAXTON			2260	2310	
SANDY SHALE			2310	2545	
OVER MAXTON			2545	2650	
SANDY SHALE			2650	2680	
BIG LIME			2680	3120	
BIG INJUN			3120	3150	
SANDY SHALE			3150	3180	
SANDSTONE			3180	3220	
POCONO			3220	3280	
SANDY SHALE			3280	3340	
WEIR			3340	3390	
SANDY SHALE			3390	3570	
TD				3580'	



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STATE PLANE COORDINATES:
NO. 29(REV.) = 321,618.35
1,890,012.32

WELL REFERENCES:
S86-30W, 97.50' TO 8" LOCUST
S65-30E, 101.50' TO 6" BIRCH

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

FILE NUMBER: _____
DRAWING NUMBER: DOMRL29.PCS
SCALE: 1" = 1000'
MINIMUM DEGREE OF ACCURACY: 1 IN 2500
PROVEN SOURCE OF ELEVATION: EXISTING WELL #996
ELEVATION = 2571.04'

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 ENERGY.

(SIGNED)
STEPHEN D. LOSII, P.S. #674



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
110 McJUNKIN ROAD
NITRO, WV 25143-7506

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

DATE: SEPTEMBER 11, 1998
OPERATORS WELL NO.: ROWLAND LAND #29 (REV.)
API WELL NO. _____
STATE 17 COUNTY 081 PERMIT 01155

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

LOCATION: ELEVATION 2264.87' WATERSHED WORKMAN CREEK
DISTRICT CLEAR FORK COUNTY RAIFIGH
QUADRANGLE DOROTHY LEASE NUMBER _____

SURFACE OWNER ROWLAND LAND COMPANY ACREAGE 8962.16
OIL & GAS ROYALTY OWNER ROWLAND LAND COMPANY LEASE ACREAGE 33,000

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___
PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE (SPECIFY) _____

TARGET FORMATION GORDON PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
ESTIMATED DEPTH 4050'

WELL OPERATOR DOMINION APPALACHIAN DEVELOPMENT DESIGNATED AGENT JOHN HASKINS
ADDRESS P. O. BOX 1248 JANI LEW, WV 26378 ADDRESS P. O. BOX 1248 JANI LEW, WV 26378

COUNTY PLANE
PERMIT
1155

WW-4A
Revised 6-07

1) Date: 8/10/17
2) Operator's Well Number Rowland 29 (11785)
3) API Well No.: 47 - 081 - 01155

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>Rowland Land Company</u>	Name <u>Republic Energy LLC</u>
Address <u>405 Capitol Street Suite 609</u>	Address <u>898 Workman's Creek Road</u>
<u>Charleston, WV 25301-1778</u>	<u>Beckley, WV 25801</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
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	<u>AUG 18 2017</u>
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>252 Circle Avenue</u>	Name _____
<u>Rainelle, WV 25962</u>	Address _____
Telephone <u>304-382-8402</u>	WV Department of Environmental Protection

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: [Signature]
 Its: Manager - Gas Permitting
 Address 1000 Consol Energy Drive
Canonsburg, PA
 Telephone 276-596-5137

Commonwealth of Pennsylvania County of Washington
 Subscribed and sworn before me this 16th day of August 2017
Lori L. Walker Notary Public
 My Commission Expires February 23, 2019

COMMONWEALTH OF PENNSYLVANIA
 NOTARIAL SEAL
 Lori L. Walker, Notary Public
 Richhill Twp., Greene County
 My Commission Expires Febr. 23, 2019
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

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.

WW-9
(5/16)

API Number 47 - 081 - 01155
Operator's Well No. ROWLAND 29 (11785)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX Gas Company LLC OP Code 494495754

Watershed (HUC 10) 0505000901 Quadrangle Dorothy

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP) *MLK*
- Underground Injection (UIC Permit Number 2D0550319)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: in lieu of a pit, a 80 bbl flow back tank will be used to contain all liquids.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

-If oil based, what type? Synthetic, petroleum, etc.

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc.

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

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Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, 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 *Matthew Hanley*

Company Official (Typed Name) Matthew Hanley

Company Official Title Manager - Gas Permitting

Commonwealth of Pennsylvania County of Washington

Subscribed and sworn before me this 16th day of August, 2017

Lori L. Walker Notary Public

My commission expires February 23, 2019

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Lori L. Walker, Notary Public
Richhill Twp., Greene County
My Commission Expires Feb. 23, 2019

Proposed Revegetation Treatment: Acres Disturbed 1.0 Prevegetation pH to be determined

Lime based on pH Tons/acre or to correct to pH 7

Fertilizer type 10-20-20

Fertilizer amount 550 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
orchard grass	25	same	
birdsfoot trefoil	15	same	
lidino clover	10	same	

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

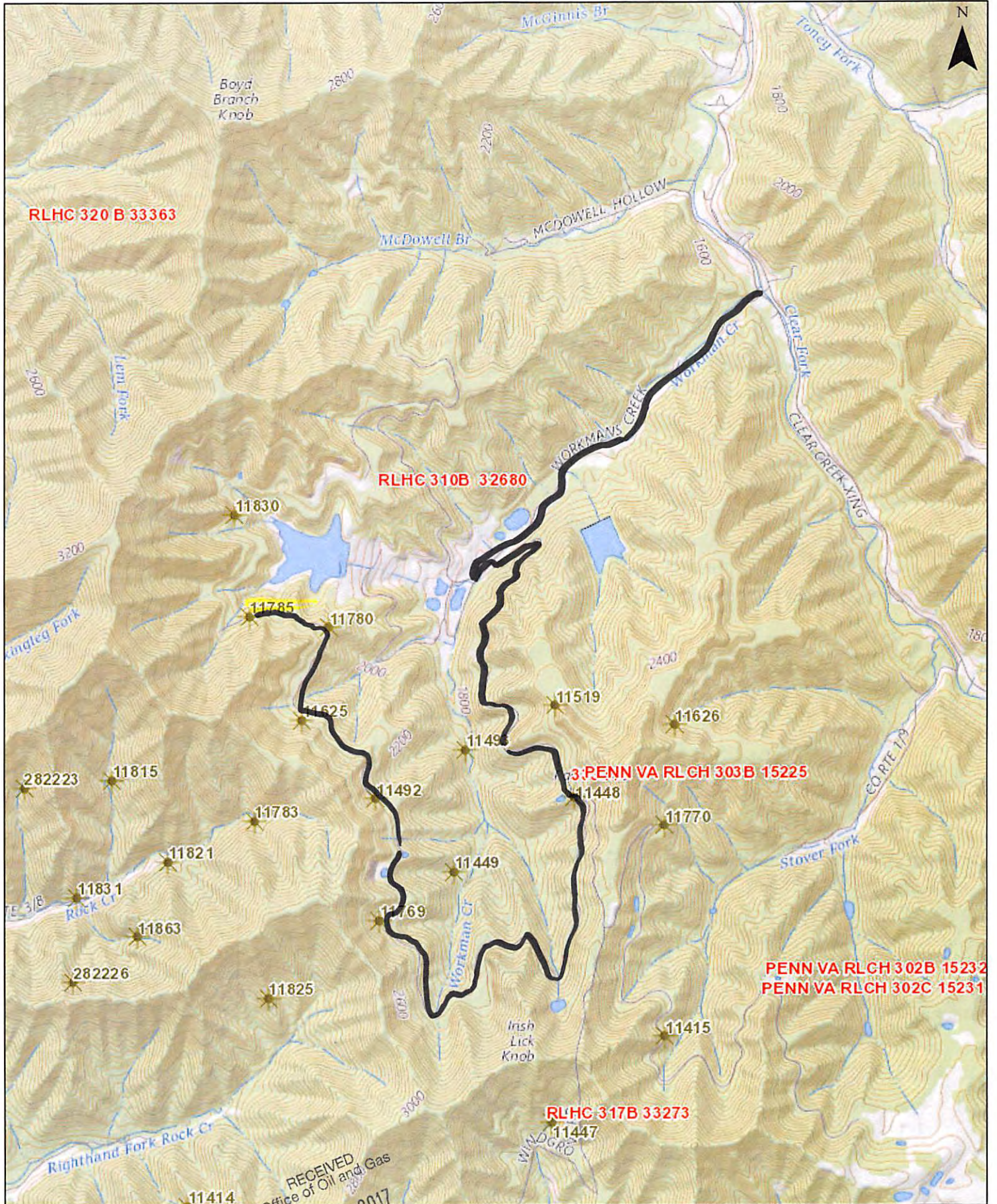
Comments: _____

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Title: Inspector

Date: 8/15/17

Field Reviewed? Yes No



Legend
 * CNX Marcellus Well Pad Centers - Drilled
 * CNX Utica Well Pad Centers - Drilled
 ~ - access road
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 WV Department of Environmental Protection

0 750 1500 3000 4500 Feet
 Date: 8/10/2017 Prepared By: CNX Web Map
 This product was generated by
 CONSOL Energy's WEB Map
 Intended for Internal Use Only.

EMPOWER ENERGY
 General Reference Map
 ROWLAND 29
 09/15/2017
 (11785)

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-081-01155 WELL NO.: Rowland 29 (11785)

FARM NAME: Rowland Land Holding Company

RESPONSIBLE PARTY NAME: CNX Gas Company LLC

COUNTY: Raleigh DISTRICT: Clear Fork

QUADRANGLE: Dorothy

SURFACE OWNER: Rowland Land Holding Company

ROYALTY OWNER: Rowland Land Holding Company

UTM GPS NORTHING: 4,192,885.0 (m)

UTM GPS EASTING: 466,515.2 GPS ELEVATION: 2,265 (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: 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

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.

Jason Riley
Signature

Production Foreman
Title

8/16/17
Date

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