



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

April 25, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-8101203, 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: 51
Farm Name: ROWLAND LAND CO.
API Well Number: 47-8101203
Permit Type: Plugging
Date Issued: 04/25/2016

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

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

8/10/203P

- 1) Date _____, 20____
- 2) Operator's
Well No. 11894
- 3) API Well No. 47-081 - 01203

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 ____/ Liquid injection ____/ Waste disposal ____/
(If "Gas, Production ____ or Underground storage ____) Deep ____/ Shallow ____

5) Location: Elevation 2225 Watershed Drews Creek
District Marsh Fork County Raleigh Quadrangle Pilot Knob

6) Well Operator CNX Gas Company LLC 7) Designated Agent Anthony Kendziora
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 9) Plugging Contractor
Name Gary Kennedy Name L&D Well Services
Address PO Box 268 Address PO Box 1192
Nimitz, WV 25978 Vansant, VA 24656

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

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MAR 15 2016

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 3/9/16

API 47-081-01203 Plugging ProcedureWell# Rowland 51 (11894)

1. Verify total depth 3462'.
2. Run free-point survey on 4-1/2" casing. Driller's report states TOC @ 1856' per bond log.
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 Big Lime Perforations (3085' - 3116').
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. 852') Pull remaining 4-1/2" out of well.
6. Run bond log on 7" casing.
7. Run tubing to previous cement top (852'). 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.
9. Repeat free-point and cutting procedures for 9-5/8" if 7" is cut and pulled.
10. Cement from previous cement top to surface.
11. Install ~~4-1/2" X 4'~~ steel monument with API# and Date.

MINIMUM OF 6" DIAM. PIPE FILLED WITH CONCRETE SHALL BE ERECTED OVER THE WELL, NO LESS THAN 30" ABOVE SURFACE AND 10' BELOW SURFACE. gmm

NOTE: A 100' gel spacer will be placed at approximately half the well depth. Class A 3% CaCl cement will be utilized throughout the entire cementing process.

Stk

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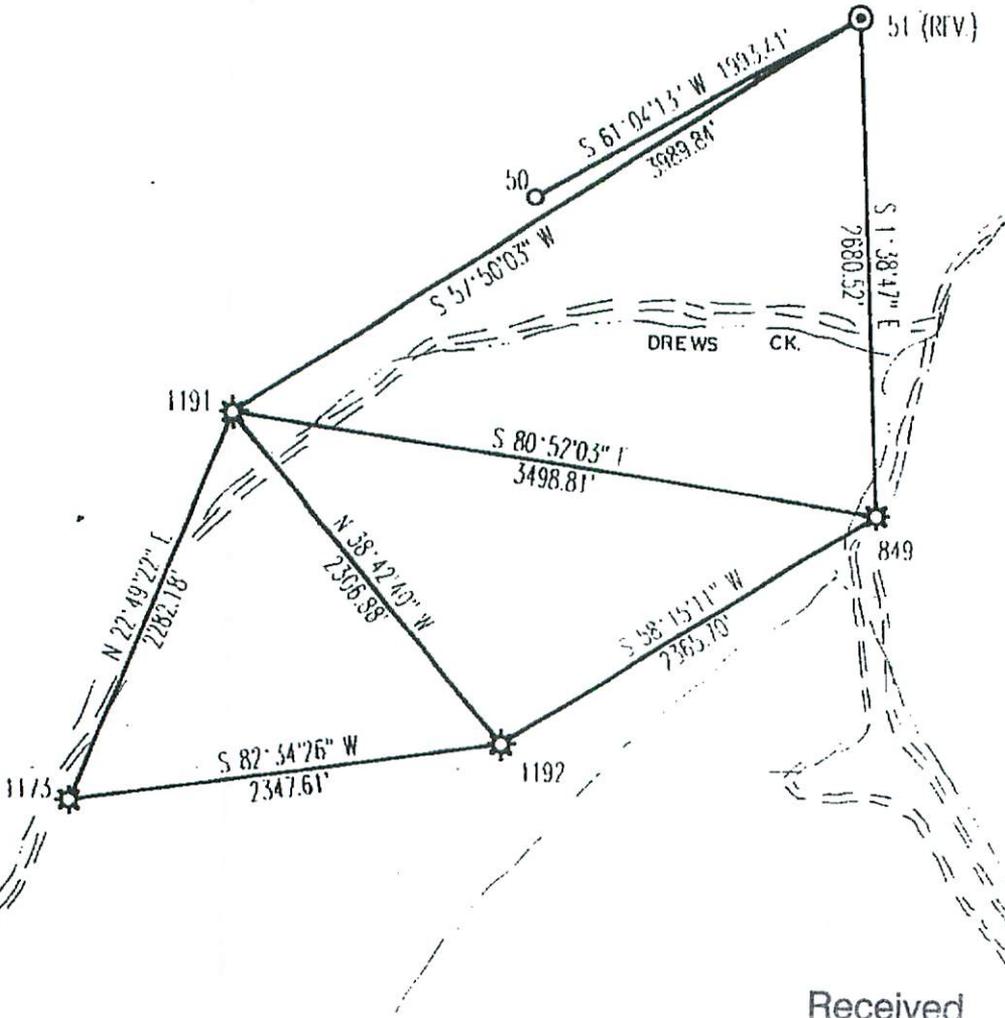
ROWLAND LAND CO. #51 (REV.)
 NAD 27 SPC (WV SOUTH)
 797,191.31'
 1,854,733.99'

LATITUDE 37 50 00

SCALED COOR.:
 6,635' SOUTH
 865' WEST

LONGITUDE

NORTH



NAD 27:
 37 48 54.55
 81 30 10.32

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WELL REFERENCES:
 S88-00W, 93.00' TO 6" RIBBUD
 N32-00W, 58.50' TO 4" C. OAK

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

FILE NUMBER: _____ DRAWING NUMBER: <u>DPRCS1R.PCS</u> SCALE: <u>1" = 1000'</u> MINIMUM DEGREE OF ACCURACY: <u>1 IN 2500</u> PROVEN SOURCE OF ELEVATION: <u>DGPS SURVEY 01/12/00</u> <u>SUBMER SYSTEM</u>	I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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. (SIGNATURE) _____ STEPHEN D. TOSHI, P.S. #674	
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STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS 110 MACJURKIN ROAD NINTH, WV 25143-2506 FORM WW 6	LAND SURVEYING SERVICES 21 CEDAR LANE, BRIDGEPORT, WV 26307 PHONE: 304 842 2018 OR 304 546 1167	DATE: <u>JULY 16, 2000</u> OPERATOR'S WELL NO.: <u>ROWLAND LAND #51 (REV.)</u> AP# WELL NO. <u>47-081-01203</u> STATE COUNTY PERMIT
WELL TYPE: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> (IF "GAS") PRODUCTION <input checked="" type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>	LOCATION: ELEVATION <u>2225.07'</u> WATERSHED <u>DREWS CREEK</u> DISTRICT <u>MARSH FORK</u> COUNTY <u>RALPH</u> QUADRANGLE <u>PILOT KNOB</u> PLAT NUMBER _____	SURFACE OWNER <u>ROWLAND LAND COMPANY</u> ACREAGE <u>2996.04</u> OIL & GAS ROYALTY OWNER <u>ROWLAND LAND COMPANY</u> LEASE ACREAGE <u>55.000</u>
PROPOSED WORK: DRILL <input checked="" type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> REFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE (SPECIFY) _____ TARGET FORMATION <u>HIG LIME</u> ESTIMATED DEPTH <u>3500'</u> WELL OPERATOR <u>Dominion Appalachian Dev., Inc.</u> SIGNATURE AGENT <u>KODNLY BIGGS</u> ADDRESS <u>P. O. BOX 1248 JANI, WV, WV 26378</u> ADDRESS <u>P. O. BOX 1248 JANI, WV, WV 26378</u>	COUNTY NAME <u>RALPH</u> PERMIT NO. <u>1203</u>	

8/01203P

Rowland #51 (11894)

WR-35

DATE: 10-04-2000
API#: 47 081 01203

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

Reviewed: RS

Well Operator's Report of Well Work

Farm name: Rowland Land Co. Operator Well No.: Rowland Land#51 (11894)

LOCATION: Elevation: 2225.07 Quadrangle: Pilot Knob

District: Marsh Fork County: Raleigh
Latitude: 6635 Feet South of 37 Deg. 50 Min. 00 Sec.
Longitude 865 Feet West of 81 Deg. 30 Min. 00 Sec.

Company: Dominion Exploration & Production, Inc.
Dominion Appalachian Development, Inc.
P O Box 1248
Jane Lew, WV 26378

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>Agent: Rodney J. Biggs</u>				
<u>Inspector: Rodney Dillon</u>				
<u>Date Permit Issued: 08/02/00</u>				
<u>Date Well Work Commenced: 09/01/00</u>	<u>12 3/4</u>	<u>21'</u>	<u>21'</u>	<u>Sand In</u>
<u>Date Well Work Completed: 09/11-13/00</u>				
<u>Verbal Plugging: N/A</u>	<u>9 5/8</u>	<u>308'</u>	<u>308'</u>	<u>88 Sks</u>
<u>Date Permission granted on: N/A</u>				
<u>Rotary X Cable Rig</u>	<u>7"</u>	<u>752'</u>	<u>752'</u>	<u>117 sks</u>
<u>Total Depth (feet): 3519'</u>				
<u>Fresh Water Depth (ft.): N/A</u>	<u>4 1/2</u>	<u>3462'</u>	<u>3462'</u>	<u>90 sks</u>
<u>Salt Water Depth (ft.): N/A</u>				
<u>Is coal being mined in area (N/Y)? N</u>				
<u>Coal Depths (ft.): 190-192, 220, 221'</u>				

RECEIVED
OCT 16 2000
WV Division of Environmental Protection

OPEN FLOW DATA

Producing formation Big Lime Pay zone depth (ft) 3085-3116'
Gas: Initial open flow 33 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 59 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 12 Hours
Static rock Pressure 500 psig (surface pressure) after 12 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: Red Biggs
By: 10/13/00 NR

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SKK
RAL 1203

COMPANY/WELL NO.: DOMINION-ROWLAND #51

09/07/2000 LOGGED TD AT 3515', RAW CAL,GR,DENS,NEU,IND,TEMP,AUDIO LOGS
 10/04/2000 RAN 81 JNTS 4.5# M-83 CSG, 3489' THRS ON, 3456' THRS OFF, SET FLT SHOE AT 3462' KB, LD BAFF AT 3452', 3 5/16" BAFF AT 2944' KB, 3 9/16" BAFF AT 2774' KB, BJ CMT W/90 SKS TUFFLITE, PLUS 44 BBLs TREAT H2O BEHIND PLUG, PLUG DOWN AT 12:15 AM 8/8/2000, WELL CIRC 24 BBL TO PIT.
 09/11/2000 RAN CBL LOG, LTD 3450', CMT TOP 1855', PERF BIG LIME 3085'-3116' 14 HOLES, ACIDIZED BIG LIME, BREAK 710#, MAX TREAT PSI 1000#, AVG RATE 8 BPM, AVG PSI 850#, JOB COMPLETE 2:25PM, USED 2500 GAL 28% ACID, 139 BBLs TREAT GEL H2O, N2 RATE 150 SCF/BBL, AVG HHP 167, DROPPED 5 PERF BALLS IN LAST HALF OF JOB, TTL N2 22,800 SCF, ISIP 125# 5 MIN 125#, OPEN TO PIT AT 3:00 PM.
 09/13/2000 DRILLED OUT FRAC BAFFLES, CHECKED TD AT 3455', SWABBING ACID H2O TO PIT, CLEAN UP AFTER FRAC.
 09/14/2000 600# PRESSURE, OPEN WELL, DID NOT FLOW, CLEANED UP WELL, WELL MAKING 350' SALT WATER EVERY 1/2 HOUR, WELL DID KICK OFF AND FLOW, WILL TAKE PRESSURE AND OPEN FLOW 8/14.
 09/15/2000 SICP = 600#. O.F. = 103 MCF. 485# CSG PSI. CORRECT OPEN FLOW IS 6/10 X 1" WW= 25 MCF/D. WAITING ON PIPELINE.
 09/19/2000 EVALUATING
 09/20/2000 EVALUATING, MOVING IN SWAB RIG.
 09/27/2000 SICP = 750#. SWABBED WELL, FIRST FLUID LEVEL 1200' FROM SURFACE
 09/28/2000 SWABBING CASING.
 09/28/2000 SWABBING CASING, WELL MAKING 150' EVERY HOUR.
 09/29/2000 SICP = 500#.
 10/03/2000 WAITING ON PIPELINE

F.O.F. = 59 MCF/D

Ravencliff	2171	-	2252'
Avis Limestone	2266	-	2306'
Upper Maxton	2528	-	2564'
Middle Maxton	2642	-	2713'
Lower Maxton	2832	-	2908'
Little Lime	2918	-	2996'
Big Lime	3008	-	3403'

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Handwritten initials

MAR 15 2016

8/01203P

WW-4A
Revised 6-07

1) Date: 3/10/2016
2) Operator's Well Number 11894

3) API Well No.: 47 - 081 - 01203

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 LLC</u>	Name _____
Address <u>405 Capitol Street Suite 609</u>	Address _____
<u>Charleston, WV 25301-1778</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>same</u>
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 268</u>	Name _____
<u>Nimtz, WV 25978</u>	Address _____
Telephone <u>304-382-8402</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: [Signature]
 Its: Permitting Manager
 Address 627 Claypool Hill Mall Road
Cedar Bluff, VA 24609
 Telephone 276-596-5137

COMMONWEALTH OF PENNSYLVANIA
 Notarial Seal
 Katherine L. Jursa, Notary Public
 Cecil Twp., Washington County
 My Commission Expires Oct. 29, 2017
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Subscribed and sworn before me this 10th day of March, 2016
Katherine L. Jursa Notary Public
 My Commission Expires 10-29-2017

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 MAR 15 2016

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.

8/01203P

WW-9
(2/15)

API Number 47 - 081 - 01203
Operator's Well No. 11884

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Consol Gas Company OP Code 494495754

Watershed (HUC 10) 0505000902 Quadrangle Arnett

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
- 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: a pumper truck with a flow back tank will be used in lieu of a pit.

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? _____

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 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 Matt Hanley

Company Official (Typed Name) Matt Hanley

Company Official Title Manager Gas Permitting

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Office of Oil & Gas

MAR 15 2016

Subscribed and sworn before me this 10th day of March, 2016

Katherine L. Jursa Notary Public

My commission expires 10-29-2017

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Katherine L. Jursa, Notary Public
Cecil Twp., Washington County
My Commission Expires Oct. 29, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

8/10/203P

Consol Gas Company

Proposed Revegetation Treatment: Acres Disturbed 1.5 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		
birdsfoot trefoil	15		
lidino clover	10		

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

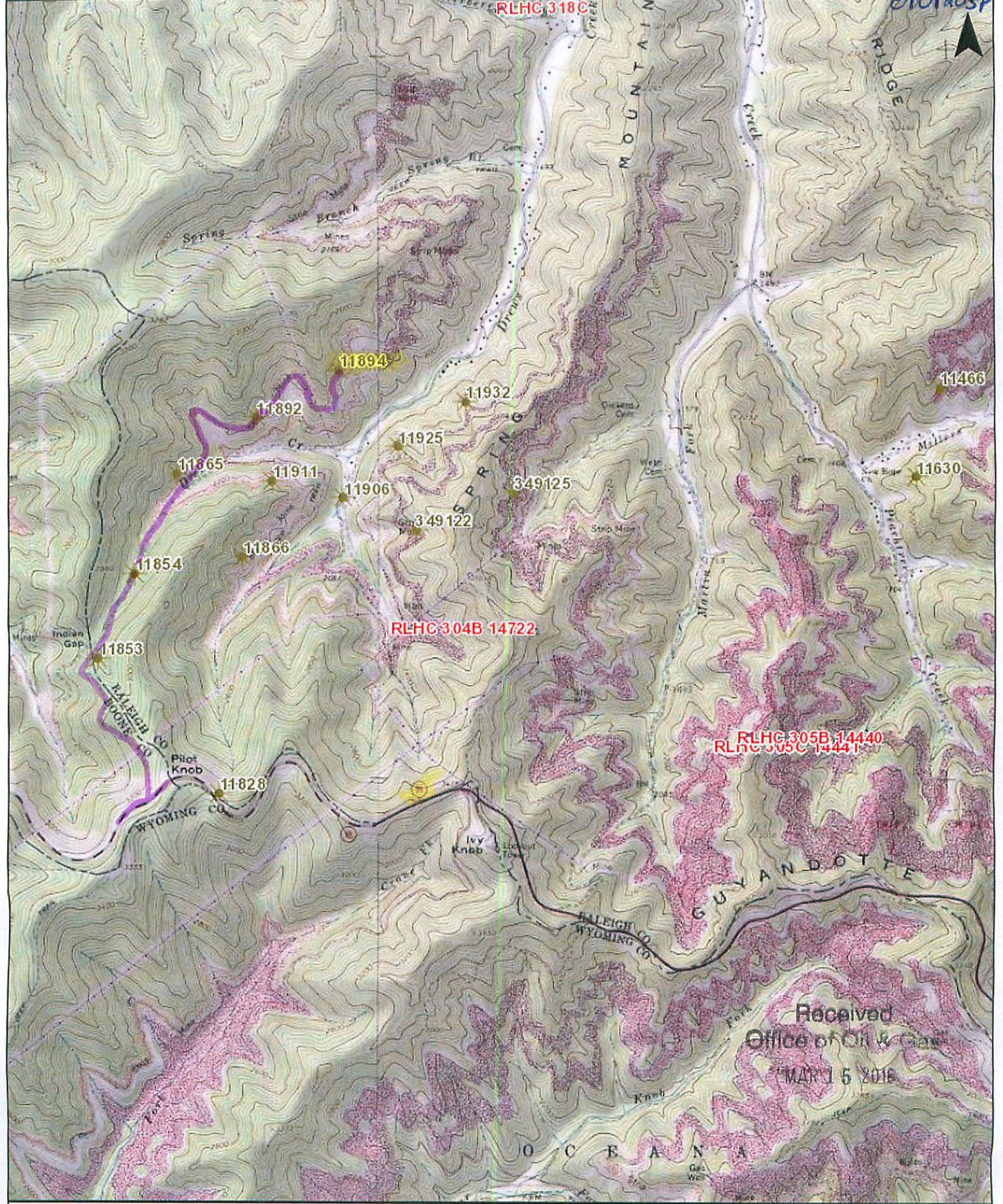
Comments:

Title: Inspector

Date: 3/7/16

Field Reviewed? (X) Yes () No

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Legend	
va_2016_thru_2020_drill_schedule	● 2018 wells Knox lease expires february 2016
● 2016 wells	● 2019 wells
● 2017 wells	● 2020 wells

0 800 1600 3200 4800 Feet
Date: 2/3/2016 Prepared By: Web AppBuilder

*This product was generated by
CONSOL Energy's WEB Map.
Intended for Internal Use Only.*

EMPSOWER **CONSOL ENERGY**
for ArcGIS
ArcGIS Web Map
[Signature]

8/0/203P

WW-7
8-30-06



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

API: 47-081-01203 WELL NO.: Roland 51 (11894)

FARM NAME: Rowland Land Company

RESPONSIBLE PARTY NAME: Consol Gas Company

COUNTY: Raleigh DISTRICT: Marsh Fork

QUADRANGLE: Pilot Knob

SURFACE OWNER: Rowland Land Company

ROYALTY OWNER: Rowland Land Company

UTM GPS NORTHING: 4,185,451.3 m.

UTM GPS EASTING: 455,761.9 GPS ELEVATION: 2225 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.


Signature

Production Foreman
Title

3/10/16
Date

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Office of Oil & Gas

MAR 15 2016