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

August 27, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-100117, 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: 10394
Farm Name: GRAY, MICHAEL H. ,. ET AL
API Well Number: 47-100117
Permit Type: Plugging
Date Issued: 08/27/2013

Promoting a healthy environment.

100117P

WW-4B
Rev. 2/01

1) Date May 7, 2013
2) Operator's Well No. 10394
3) API Well No. 47- 001 - 00117

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 1291.60' Watershed Arnold Run
District Elk 03 County Barbour 01 Quadrangle Brownton 266

6) Well Operator CNX Gas Company LLC
Address P.O. Box 1248
Jane Lew, WV 26378

7) Designated Agent Jeremy Jones
Address P.O. Box 1248
Jane Lew, WV 26378

8) Oil and Gas Inspector to be notified
Name Joe McCourt
Address 601 57th Street SE
Charleston, WV 25304

9) Plugging Contractor
Name Viking Well Service
Address 8113 Sissonville Drive
Sissonville, WV 25320

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

See attached work order

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

Work order approved by inspector JMCourt Date 5-13-13

100117 P

Plugging Work Order for Permit 47-001-00117

WN 10394

1. Verify total depth. Bottom perf @ 2441'
2. TIH with tubing to TD and circulate fluid to surface
3. Pump cement plug 2200' – TD
4. Displace with gell to 2200' and TOOH
5. Mechanical cut 7.00" casing at 2050'
6. Attempt to pull casing. Remove all casing if possible.
7. Free point 8.625" and cut casing above free point (est. 1300')
8. Attempt to pull casing. Remove all casing if possible
9. Attempt to pull 10.75" casing. If unable perforate at 200'
10. TIH with tubing to 2050'
11. Pump cement plug 1780' – 2050'
12. Displace with gell to 1780'
13. Pull tubing to cut of 8.625" casing (est. at 1300')
14. Pump cement plug 1050 - ~~1330~~ 1341' At least 50' above and 50' below elevation. AMc 5-13-13
15. Pump cement plug 400' -- 500'
16. Pump cement plug 0' – 200'
17. Install 7" x 4' monument with API 47-01-117

Work Order approved by inspector A.McCourt Date 5-13-13

Received
AUG - 1 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

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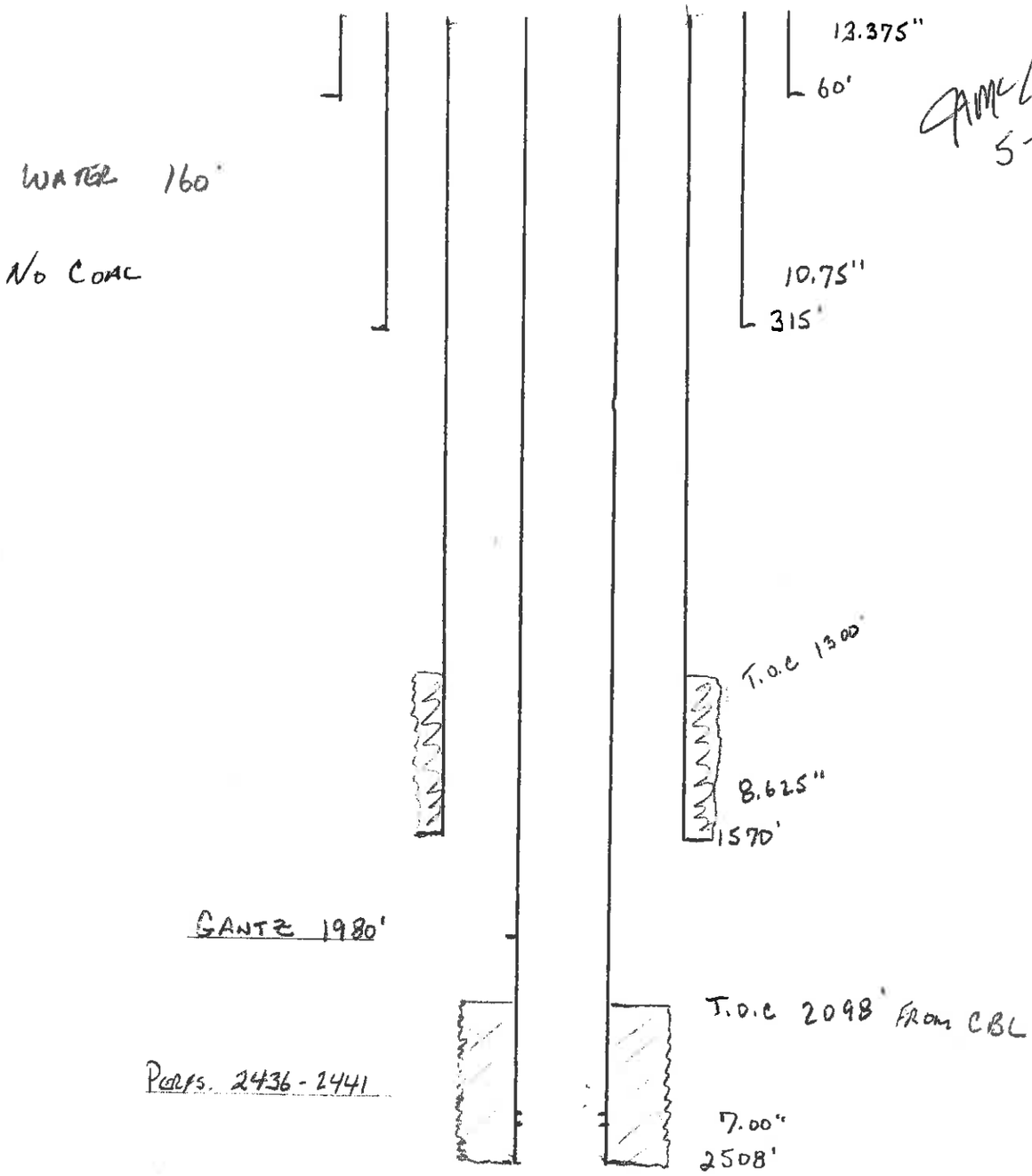
WN 10394

Permit 47-~~001-0117~~

ELEV. 1330

1291.60 el.



100117P

Form OG-10

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Quadrangle PHILIPPI

Permit No. BAR-117

WELL RECORD

Oil or Gas Well Gas (KIND)

Company Hope Natural Gas Company
Address Clarksburg, W. Va.
Farm Paul D. Pickens Acres 300
Location (waters)
Well No. 10394 Elev. 1330'
District Elk County Barbour
The surface of tract is owned in fee by
Address
Mineral rights are owned by
Address
Drilling commenced 5-2-62
Drilling completed 6-29-62
Date Shot Not From To
With
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume 1,100 M Cu. Ft.
Rock Pressure 1010# lbs. 24 hrs.
Oil None bbls., 1st 24 hrs.
WELL ACIDIZED No
WELL FRACTURED 6-6-62

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13	60	60	
10	315	315	Size of
8¼	1570	1570	
6⅝	2508	2508	Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED SIZE No. Ft. Date

COAL WAS ENCOUNTERED AT FEET INCHES
See Log FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

RESULT AFTER TREATMENT 4,966 M
ROCK PRESSURE AFTER TREATMENT Same
Fresh Water See Log Feet Salt Water See Log Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
		(O-V-E-R)					

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West Virginia
Dept. of Mines

(over)

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Bar-117 (P.2)

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Soil (Black)		0	22				
Clay		22	39				
Slate (Gray)		39	55				
Shale (Yellow)		55	70	60'			½ bailer per hour
Slate (Gray)		70	104				
Sand (Gray)		104	120	115'			Fresh - 2 bailers per hr.
Slate		120	130				
Lime		130	145				
Slate & Shells		145	178	160'			Fresh - H.F.
Red Rock		178	245				
Slate & Shells		245	264				Set 10" pipe at 315'
Red Rock		264	273				
Slate & Shells		273	432	430'			Fresh - Small Amount
Sand		432	508				
Slate & Shells		508	558				
Sand (Gray)		558	594				
Slate (Dark)		594	605				
Broken Lime		605	735				3½ bailers water over Sunday
Slate & Shells (Dark)		735	797				
Sand		797	829				
Slate & Shells (Dark)		829	839				
Sand		839	920				
Lime Broken		920	955				
Lime		955	964				
Sand (Gray)		964	990				
Lime		990	1014				
Sand (Gray)		1014	1065				
Slate & Shells (Dark)		1065	1140				
Lime		1140	1181				
THIRD SALT		1181	1247				3½ bailers water over Sunday
Lime		1247	1315				
Red Rock		1315	1332				
Red Rock & Shells		1332	1380				
MAXTON		1380	1432				
Red Rock & Shells		1432	1458				
Lime		1458	1479				
Red Rock		1479	1483				
Slate (Gray)		1483	1500				
LITTLE LIME		1500	1515				
Slate (Dark)		1515	1519				
Lime		1519	1523				
Slate		1523	1535				
Red Rock		1535	1541				
BIG LIME		1541	1749				8-5/8" csg. seat 1571'
Slate & Shells		1749	1787			1731	Small Show of Gas
Lime		1787	1805				
Lime (Gritty)		1805	1870				
Lime (Dark)		1870	1913			1900	Small Show of Gas
GANTZ		1913	1981				
Lime (Broken)		1981	1996				
50 FOOT		1996	2038				
Slate & Shells		2038	2069				
30 FOOT		2069	2127				
Sand & Shells		2127	2150				
Sand		2150	2170				
Red Rock & Shells		2170	2322				
Sand (Gray)		2322	2335				
Red Rock		2335	2362				
Lime (Gritty)		2362	2381			2376'	30/10 W. 1" F.M.
FOURTH SAND		2381	2392			2381'	21/10 W. 1" F.M.
Slate & Shells (Gray)		2392	2422				
FIFTH SAND		2422	2463			2422'	80/10 M. 2" O.F. 1,391M
Lime		2463	2490				40/10 M. 2" O.F.
Sand		2490	2500			1 hr.	24/10 M. 1" O.F.
Sand & Lime		2500	2506 Off 7"			2421'	42/10 M. 3" O.F.
TOTAL DEPTH		2512		2425'			2½ bbls. in 8 hrs.

Date 8-22-62, 19

APPROVED Hope Natural Gas Co., Owner

By Jack Bailey (Title)

100117P

WW-4A
Revised 6-07

1) Date: May 7, 2013
2) Operator's Well Number
10394

3) API Well No.: 47 - 001 - 00117

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 Michael H. Gray
Address 3646 Arnold Run Road
Philippi, WV 26416

(b) Name
Address

(c) Name
Address

6) Inspector
Address

Telephone

5) (a) Coal Operator
Name None of Declaration
Address

(b) Coal Owner(s) with Declaration
Name
Address

Name
Address

(c) Coal Lessee with Declaration
Name
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.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
CAROLINDA FLANAGAN
PO Box 803
Lumberport WV 26386
My Commission Expires September 15, 2021

Well Operator CNX Gas Company LLC
By: Jeremy Jones
Its: General Manager WV Operations
Address P.O. Box 1248
Jane Lew, WV 26378
Telephone 304 - 884 - 2000

Received
AUG - 1
Office of Oil and Gas
WV Dept. of Environmental Protection

Subscribed and sworn before me this 29TH day of JULY 2013
Notary Public
My Commission Expires 9/15/2021

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.

100117 P

WW-9
Rev. 05/10

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

Page _____ of _____

API NUMBER 47- 001 - 00117

Operator's Well No. 10394

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 494495754

Watershed ARNOLD RUN Quadrangle BROWNTON

Elevation 1291.60' County BARBOUR District ELK

Description of anticipated Pit Waste: FLUIDS ASSOCIATED WITH THE PLUGGING OF EXISTING GAS WELLS

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

Will a synthetic liner be used in the pit? YES If so, what ml.? ~~10~~ 20 MIL

Proposed Disposal Method For Treated Pit Wastes:

X Land Application

____ Underground Injection (UIC Permit Number ____)

____ Reuse (at API Number ____)

____ Off Site Disposal (Supply for WW-9 for disposal location)

____ Other (Explain) ____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. AIR

If oil based, what type? Synthetic, petroleum, etc. NOT OIL BASED

Additives to be used? NONE

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

If left in pit and plan to solidify what medium will be used? Cement, lime, sawdust CEMENT

Landfill or offsite permit number? NONE

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 Division 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 [signature]

Company Official (Typed Name) JEREMY JONES

Company Official Title GENERAL MANAGER WV OPERATIONS - DESIGNATED AGENT

Subscribed and sworn before me this 29TH day of JULY, 20 13

[signature] Notory Public

My commission expires 9/15/2021

100117P

LEGEND

Property Boundary

Road

Existing Fence

Planned Fence

Stream

Open Ditch

Rock

North

Water wells

Drill Site

Diversion

Spring

Wet Spot

Drain Pipe with size in inches

Waterway

Cross Drain

Artificial Filter Strip

Pit: cut walls

Pit: compacted fill walls

Area for Land Application of Pit Waste

Proposed Revegetation Treatment: Acres Disturbed 1.25 Prevegetation pH 6.5

Lime according to pH test Tons/acre or 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

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
ORCHARDGRASS	25	ORCHARDGRASS	25
BIRDSFOOT TREFOIL	15	BIRDSFOOT TREFOIL	15
LADINO CLOVER	10	LADINO CLOVER	10

Attach:

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

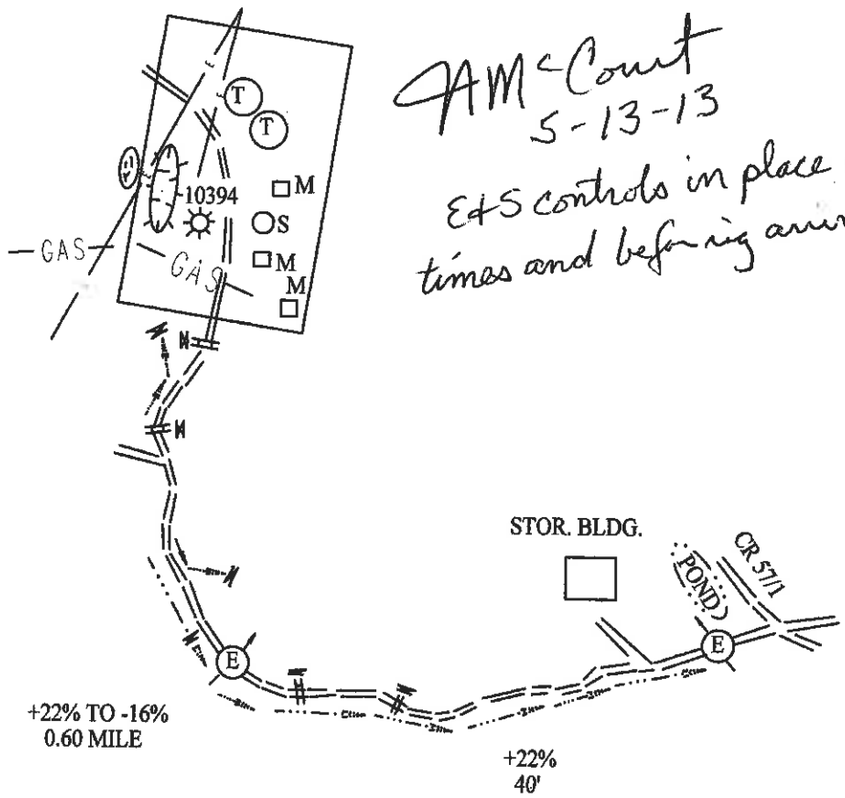
Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: JM McCourt

Title: Inspector Date: 5-13-13

Field Reviewed? ( ) Yes (X) No

100117P



AM c Court
5-13-13
E+S controls in place at all times and before rig arrives

THIS PLAN IS FOR THE PLUGGING OF AN EXISTING GAS WELL. ENTIRE LENGTH OF ROAD IS EXISTING WELL ROAD. ROCK WILL BE USED WHERE NECESSARY.

ALL GRADES OVER 20% ARE NOTED.

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

DRAWINGS TO ACCOMPANY FORM WW-9

CNX GAS COMPANY LLC

P. O. BOX 1248

JANE LEW, WV 26378

WATERSHED: ARNOLD RUN

DISTRICT: ELK COUNTY: BARBOUR

QUADRANGLE: BROWNTON WELL NO.: 10394

DATE: 05/06/13 PAGE ____ of ____

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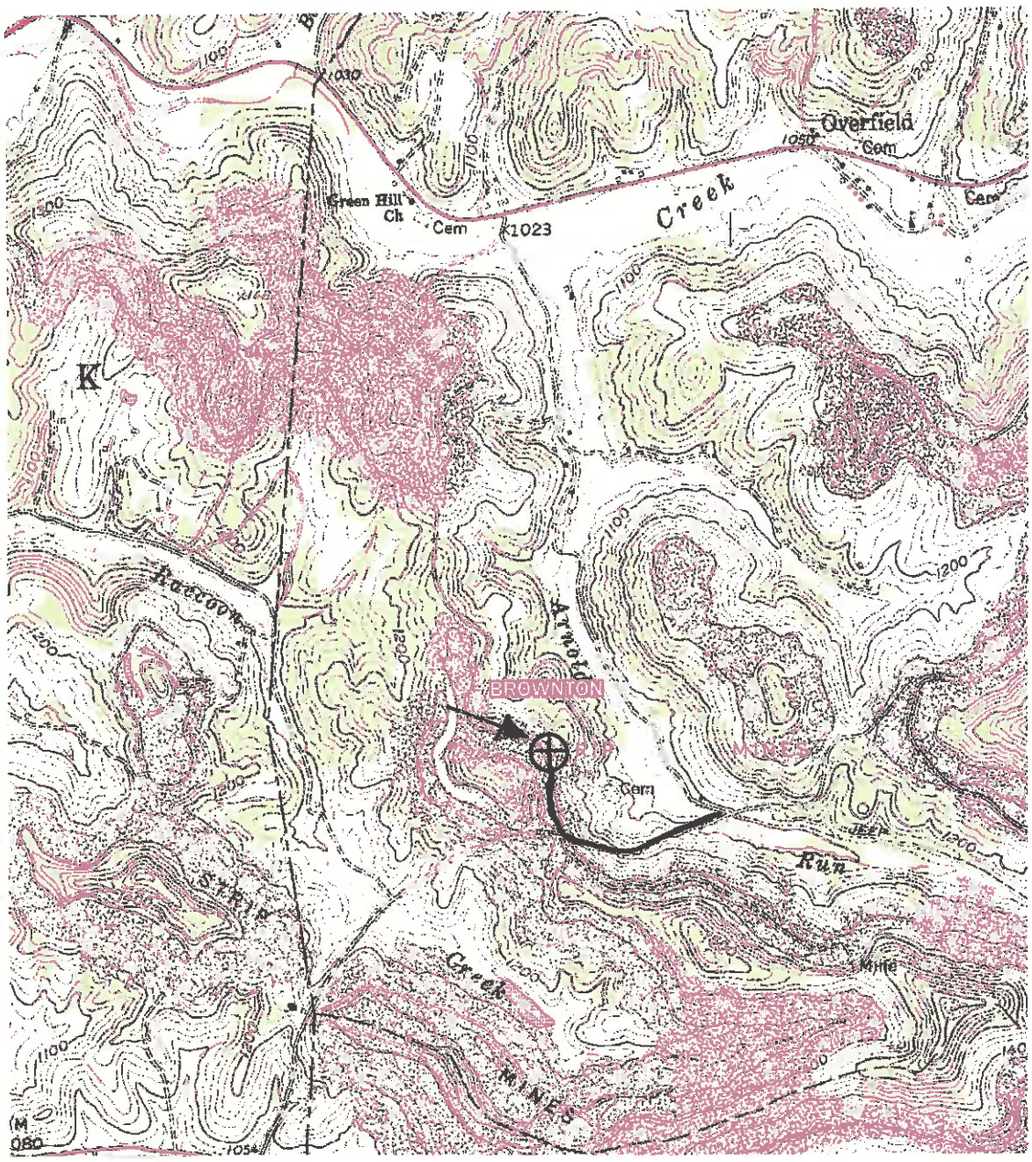

AM-Court
5-13-13

DRAWINGS TO ACCOMPANY FORM WW-9

CNX GAS COMPANY LLC

P. O. BOX 1248

JANE LEW, WV 26378

WATERSHED: ARNOLD RUN

DISTRICT: ELK COUNTY: BARBOUR

QUADRANGLE: BROWNTON WELL NO.: 10394

DATE: 05/06/13 PAGE ____ of ____

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

Received
AUG - 1 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

100117 P

WW-7
5-02

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

API: 47-001-00117 WELL NO.: 10394

FARM NAME: PAUL D. PICKENS

RESPONSIBLE PARTY NAME: CNX GAS COMPANY LLC

COUNTY: BARBOUR DISTRICT: ELK

QUADRANGLE: BROWNTON 7.5 MIN.

SURFACE OWNER: MICHAEL H. GRAY, ET. AL.

ROYALTY OWNER: PAULINE BEAMER PICKENS

UTM GPS NORTHING: 4,333,770.76 METERS

UTM GPS EASTING: 567,789.79 METERS GPS ELEVATION: 393.68 METERS 1291.6 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 X : Post Processed Differential X 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 Title WV Professional Surveyor #674
Stephen D. Losh, PS #674

Date 05/06/13

Received
AUG - 1 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

STEPHEN D. LOSH LICENSED No. 0674 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

CNX USE: NAD 27 WV NORTH SPC: 10394 = 237,698.95' 1,797,036.01' ELEV. = 1,291.60'