



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 22, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-1900703, 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: ELKEM 9
Farm Name: ELKEM METALS CO.
API Well Number: 47-1900703
Permit Type: Plugging
Date Issued: 04/22/2016

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.

1) Date _____, 20_____
2) Operator's
Well No. Elkem 9
3) API Well No. 47-019 - 00703

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 ____/ ShallowX

5) Location: Elevation 966 ft. Watershed Kanawha River
District Valley - 9 County Fayette Quadrangle Montgomery 481

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 Name Terry Urban
Address PO Box 1207
Clendenin, WV 25045
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 plugging procedures

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

Work order approved by inspector 

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APR 14 2016
Date 4-8-16
WV Department of Environmental Protection
04/22/2016

API 47-019-00703 Plugging ProcedureWell Elkem #9

1. Verify total depth 2172'.
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 (1542' – 1554') .
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. 1180') Pull remaining 4-1/2" out of well.
6. Run bond log on 7" casing. 7" appears to be CTS.
7. Run tubing to previous cement top (1180'). Cement from 1180' to surface if the 7" is CTS. If not, the free 7" will be pulled before cementing to surface.
9. 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. Class A 3% CaCl cement will be utilized throughout the entire cementing process.

Angus Miller
4-8-16

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WV Department of
Environmental Protection 04/22/2016

Elkem #9

1900703P
(12952)

Reviewed TM6
Recorded _____

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: ELKEM METALS CO.

Operator Well No.: ELKEM #9 (B67)

LOCATION: Elevation: 966.00 Quadrangle: MONTGOMERY

District: VALLEY County: FAYETTE
Latitude: 8290 Feet South of 38 Deg. 10 Min. 0 Sec.
Longitude 2400 Feet West of 81 Deg. 15 Min. 0 Sec.

Company: BOWIE, INC.
132 WALDECK STREET
CLARKSBURG, WV

Agent: WILLIAM H. BOWIE

Inspector: STEVE CASEY
Permit Issued: 04/06/92
Well work Commenced: 05/12/92
Well work Completed: 05/18/92
Verbal Plugging _____
Permission granted on: _____
Rotary Cable _____ Rig _____
Total Depth (feet) 2250
Fresh water depths (ft) _____
5, 69
Salt water depths (ft) _____
N/A
Is coal being mined in area (Y/N)? N
Coal Depths (ft): 770-771, 806-811

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Cu. Ft
9 5/8"	Conductor		
7"	1080'	1080'	175 sks
4 1/2"	2172'	2172'	25 sks

OPEN FLOW DATA

Producing formation Weir, Injun, Big Lime Pay zone depth (ft) 1885-2136
Gas: Initial open flow 103 MCF/d Oil: Initial open flow --- Bbl
Final open flow 263 MCF/d Final open flow --- Bbl
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 545# psig (surface pressure) after 72 Hours

Second producing formation Maxton Pay zone depth (ft) 1542-1554
Gas: Initial open flow --- MCF/d Oil: Initial open flow --- Bbl
Final open flow comingled MCF/d Final open flow --- Bbl
Time of open flow between initial and final tests --- Hours
Static rock Pressure comingled psig (surface pressure) after --- Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATION 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.



For: BOWIE, INC.
By: William H. Bowie
Date: June 27 1992

FAY 0703

Stage I (2114-2136) 11 holes, 750 gal HCL, 275 BBL H₂O, 25,000 #sand, 68 MCF N₂

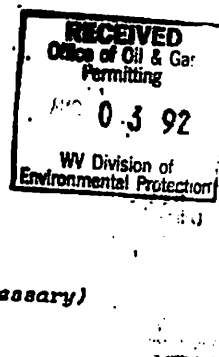
Stage II (1989-2000) 15 holes, 500 gal 15% HCL, 420 BBL H₂O, 40,000 # sand, 69 MCF N₂

Stage III(1885-1928) 9 holes, 2500 gal HCL, 30 MCF N₂

Stage IV (1542-1554) 15 holes, 500 gal HCL, 115 BBL 75Q Foam, 25,000 # sand

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS including indication of all and salt water, coal, oil an
Sand			0	71	2" H ₂ O @ 5', 1" H ₂ O @ 69'
Sand & Shale			71	770	
Coal			770	771	
Sand & Shale			771	806	
Coal			806	811	
Sand & Shale			811	872	
Sand			872	1018	
Sand & Shale			1018	1200	
Ravencloff			1200	1246	
Sand & Shale			1246	1545	
Maxton			1545	1607	Gas Show
Shale & Lime			1607	1705	
Big Lime			1705	1950	Gas Show
Sand & Shale			1950	1975	
Shale			1950	2074	
Weir Sand			2074	2156	Gas Show
Shale			2156	2250	DTD



(Attach separate sheets as necessary)

EBXSI

1900703P

WELL REFERENCES:
N51°E, 139' TO 6" SYCAMORE
S50°W, 133' TO 3" W. ASH

LATITUDE 38° 10' 00"

2400

LONGITUDE 81° 15' 00"

8290

APPALACHIAN LAND CO.

ELKEM METALS CO.
649.82 AC.

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

NORTH

CONC. MON. 300

CONC. MON. 301

NO. 8

NO. 9

JARRETT BRANCH

APPALACHIAN LAND CO.

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1 in 2500
PROVEN SOURCE OF ELEVATION BM 6150' S.W. OF LOCATION ELEV. 678

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. Losh
R.P.E. _____ L.L.S. 674
STEPHEN D. LOSH

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



DATE MARCH 19, 1992
OPERATOR'S WELL NO. ELKEM NO. 9
API WELL NO. 47-019-00703 P
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 966' WATERSHED JARRETT BRANCH
DISTRICT VALLEY COUNTY FAYETTE
QUADRANGLE MONTGOMERY 7.5 min.

SURFACE OWNER ELKEM METALS CO. ACREAGE 635.93
OIL & GAS RYALTY OWNER ELKEM METALS CO. LEASE ACREAGE 2253.32

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 WEIR ESTIMATED DEPTH 2400'

WELL OPERATOR BOWIE, INC. DESIGNATED AGENT WILLIAM BOWIE
ADDRESS P.O. BOX 1430 ADDRESS P.O. BOX 1430
CLARKSBURG, WV 26302-1430 CLARKSBURG, WV 26302-1430

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Office of Oil and Gas

APR 14 2016
04/22/2016
WV Department of Environmental Protection

COUNTY NAME
PERMIT

WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number _____
Elkem No. 9
3) API Well No.: 47 - 019 - 00703

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>WV Environmental Services Inc. /</u>	Name _____
Address <u>PO Box 266</u>	Address _____
<u>Alloy, WV 25002-0266</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>same as above</u>
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Terry Urban</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 1207</u>	Name _____
<u>Clendenin, WV 25045</u>	Address _____
Telephone <u>304-549-5915</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.

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

Well Operator CNX Gas Company LLC
By: Matthew Hanky
Its: Permitting Manager
Address 627 Claypool Hill Mall Road
Cedar Bluff, VA 24609
Telephone 276-596-5137

Subscribed and sworn before me this 13th day of April, 2016
Katherine L. Jursa Notary Public
My Commission Expires 10-29-2017

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Office of Oil and Gas

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.

APR 14 2016
Environmental Protection
04/22/2016

1900703P

WW-9
(2/15)

API Number 47 - 019 - 00703
Operator's Well No. Elkem 9

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 494458046

Watershed (HUC 10) 0505000603 Quadrangle Montgomery

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 _____)

14

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 [Signature]

Company Official (Typed Name) Matt Hanley

Company Official Title Manager Gas Permitting

Subscribed and sworn before me this 13th day of April, 20 16

Katherine L. Jursa

My commission expires 10-29-2017

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Office of Oil and Gas

APR 14 2016

Notary Public
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

1900703P

CNX Gas Company LLC

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: _____

[Handwritten Signature]

Comments: _____

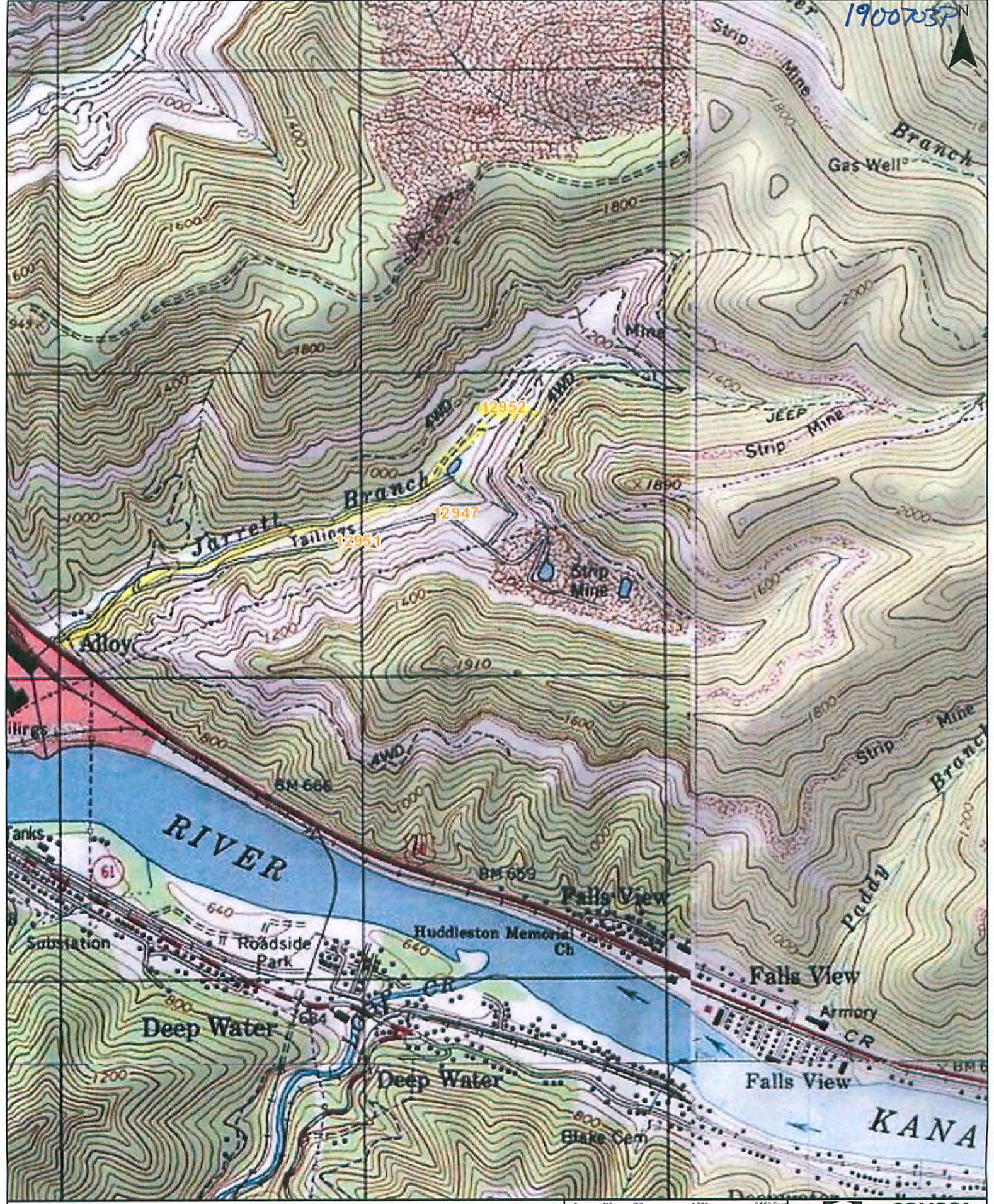
Title: Field Insp. Oils Gas

Date: 4-8-16

Field Reviewed? Yes No

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04/22/2016

190073P



Legend

- Labels
- CNX Access Road
- Sealed Gob Units

0 425 850 1700 2550 Feet

Date: 3/1/2016 Prepared By: Web App Builder for ArcGIS

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

EMPPOWER ENERGY

General Location File #9
04/22/2016
12952

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-019-00703 WELL NO.: Elkem 9

FARM NAME: Elkem Metals Company

RESPONSIBLE PARTY NAME: CNX Gas Company LLC

COUNTY: Fayette DISTRICT: Valley

QUADRANGLE: Montgomery

SURFACE OWNER: WV Environmental Services Inc.

ROYALTY OWNER: WV Environmental Services Inc.

UTM GPS NORTHING: 4,221,840.05 m.

UTM GPS EASTING: 477,390.2 m. GPS ELEVATION: 966 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 X : Post Processed Differential _____
 Real-Time Differential X _____

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 Steton
Signature

Permitt Agent
Title

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4/12/16
Department of Environmental Protection

04/22/2016