



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

July 30, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4701021, 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: CNGD 3437
Farm Name: CONSOLIDATION COAL CO.
API Well Number: 47-4701021
Permit Type: Plugging
Date Issued: 07/30/2015

Promoting a healthy environment.

07/31/2015

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 _____, 20____
2) Operator's
Well No. 3437
3) API Well No. 47-047 - 01021

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 2564 ft. Watershed Indian Grave Branch
District Adkin County McDowell Quadrangle Anawalt

6) Well Operator CNX Gas Company LLC 7) Designated Agent Joe Berry, Jr.
Address 627 Claypool Hill Mall Road Address One Energy Drive
Cedar Bluff, VA 24637 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
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.

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JUN 25 2015

WV Department of
Environmental Protection

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

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Work order approved by inspector *Gary Kennedy*

Date JUN 25 2015
5/29/15

WV Department of
Environmental Protection

07/31/2015

4701021P

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API 47-047-01021 Plugging Procedure

Well # 3437

1. Pull 2-3/8" tubing and verify total depth 4726'.
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 (2858' – 2879') utilizing a 100' gel spacer at approximately 100' above the Maxton Perforations.
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 8-5/8" casing shoe. (Approx. 1056') Pull remaining 4-1/2" out of well.
6. Run bond log on 8-5/8" casing.
7. Run tubing to previous cement top (1056'). Cement across the 8-5/8" shoe to a minimum of 50' above shoe, bringing cement top to approximately 50' below the 8-5/8" free-point or to surface, whichever is necessary.
8. If necessary, cut and pull free 8-5/8" casing.
9. Repeat free-point and cutting procedures for 11-3/4" if 8-5/8" is cut and pulled.
10. Cement from 50' below 11-3/4" shoe to surface.
11. Install ~~4-1/2"~~^{6"} 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.

IF 8-5/8" & 11-3/4" ARE CEMENTED TO SURFACE, DO NOT CUT, RIP OR PERFORATE THOSE CASING STRINGS.

gmm


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07/31/2015

WR-35

25-Jun-93
API # 47- 47-01021 F

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

Well Operator's Report of Well Work

Farm name: CONSOLIDATION COAL CO. Operator Well No.: CNGD 3437

LOCATION: Elevation: 2,564.00 Quadrangle: ANAWALT

District: ADKIN County: MCDOWELL
Latitude: 3750 Feet South of 37 Deg. 22Min. 30 Sec.
Longitude 12025 Feet West of 81 Deg. 22 Min. 30 Sec.

Company: CNG PRODUCING COMPANY
ROUTE 2, BOX 698
BRIDGEPORT, WV 26330-0698

Agent: RODNEY J. BIGGS

Inspector: OFIE HELMICK
Permit Issued: 06/28/93
Well work Commenced: 08/16/93
Well work Completed: 10/21/93
Verbal Plugging
Permission granted on:
Rotary Cable Rig
Total Depth (feet)
Fresh water depths (ft)
Salt water depths (ft)

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
No Additional Casing Ran in Well			
2 3/8"		4618	

OPEN FLOW DATA

Producing formation Maxton Pay zone depth (ft) 2858-2879

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/
 Final open flow * 200 MCF/d Final open flow NA Bbl/
 Time of open flow between initial and final tests _____ Hour
 Static rock Pressure 270 psig (surface pressure) after 48 Hour

* Commingled with existing production

Second producing formation _____ Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/
 Final open flow _____ MCF/d Final open flow _____ Bbl/
 Time of open flow between initial and final tests _____ Hour
 Static rock Pressure _____ psig (surface pressure) after _____ Hour

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

Approved: TMG
Recorded: _____

For: Rodney J. Biggs, Manager
CNG PRODUCING COMPANY

By: 1277/2/93
Date: October 27, 1993

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4701021P

47-01021 F

Perf. Maxton 2858-2879, 25 holes.
Frac with N₂ Assist.
Total Fluid 454 bbls, 23# gel, Total Sand 30,000# 20/40
Total N₂ 75,250 SCF, Ave Rate 25 BPM, Ave PRes. 950#

1742

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WV Department of
Environment & Natural Resources
07/31/2015

47 01021A

WR-35

20-Sep-88
API # 97-47-01021

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

Well Operator's Report of Well Work

Farm name: CONSOLIDATION COAL CO. Operator Well No.: CNGR 3437

LOCATION: Elevation: 2564.00 Quadrangle: ANAWALT
Watershed: Indian Grave Branch
District: ADKIN County: MCDOWELL
Latitude: 3750 Feet South of 37 Des. 22Min. 30 Sec.
Longitude 12025 Feet West of 81 Des. 22 Min. 30 Sec.

Company: CNG DEVELOPMENT CO., A DE
P. O. BOX 15746
PITTSBURGH, PA

Agent: RODNEY J. RIGGS

Inspector: ARTHUR ST. CLAIR

Permit Issued: 09/20/88

Well work Commenced: 10/10/88

Well work Completed: 10/17/88

Verbal Plugging

Permission granted on:

Rotary Cable Rod

Total Depth (feet) 4757

Fresh water depths (ft)

Salt water depths (ft)

Is coal being mined in area (Y/N)? N
Coal Depths (ft): 38-40; 72-76; 450-455;
505-510

Size	Casing Used in Tubing	Drilling in Well	Left in Well	Cement Fill Use
11 3/4"	227	227	To Surf.	
8 5/8"	956	956	To Surf.	
4 1/2"	4726	4726	100 sks	

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NOV 08 1988

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

OPEN FLOW DATA

Producing formation: Weir Pay zone depth (ft) 4638-4662
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
10/29/88 Final open flow 2.7 M MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 385 psia (surface pressure) after L 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 psia (surface pressure) after Hours

Mc Dow.

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORMED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS INCLUDING LOG ENCOUNTERED BY THE WELLBORE.

Rodney J. Riggs, Manager
For: CNG DEVELOPMENT CO., A DELAWARE CORP.

By: *Rodney Riggs*
Date: November 1, 1988

Office of Oil and Gas
JUN 25 2015
WV Department of Environmental Protection

07/31/2015

47-01021 P

Perforated Weir 4638-62, 24 holes; 4667-69, 2 holes, .39 dia.
Foam Frac - Break 1000, Ave HHP 2 pumps, Ave Rate 20 BPM, Ave Pres. 1480, Max Tr Pr 1600#,
500 gal 15% HCL, 75,000# 20/40 Sand, Max Conc. 5#, Total Fl. 237 bbl, SL Fl. 156 bbl,
ISIP 1000#, 5 min 880#, Tot

Sand Stone	0	38
Coal	38	40
Sand Stone	40	72
Coal	72	76
Sand Stone	76	168
Open Mine	168	173
Sand & Shale	173	450
Coal	450	455
Sand & Shale	455	505
Coal	505	510
Sand, Shale & RR	510	1474
Ravencliff	1474	1514
Sand & Shale	1514	2810
Maxon Sand	2810	2883
Shale	2883	3179
L. Lime	3179	3275
B. Lime	3275	4295
Sand & Shale	4295	4757

LOG TOPS

Ravencliff	1466	1744
Avis Ls.	1834	1882
Maxton	2856	2880
L. Maxton	3022	3068
L. Lime	3177	3291
Big Lime	3400	4372
Weir	4635	4670

JK
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NOV 08 1988

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DEPARTMENT OF ENERGY

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07/31/2015

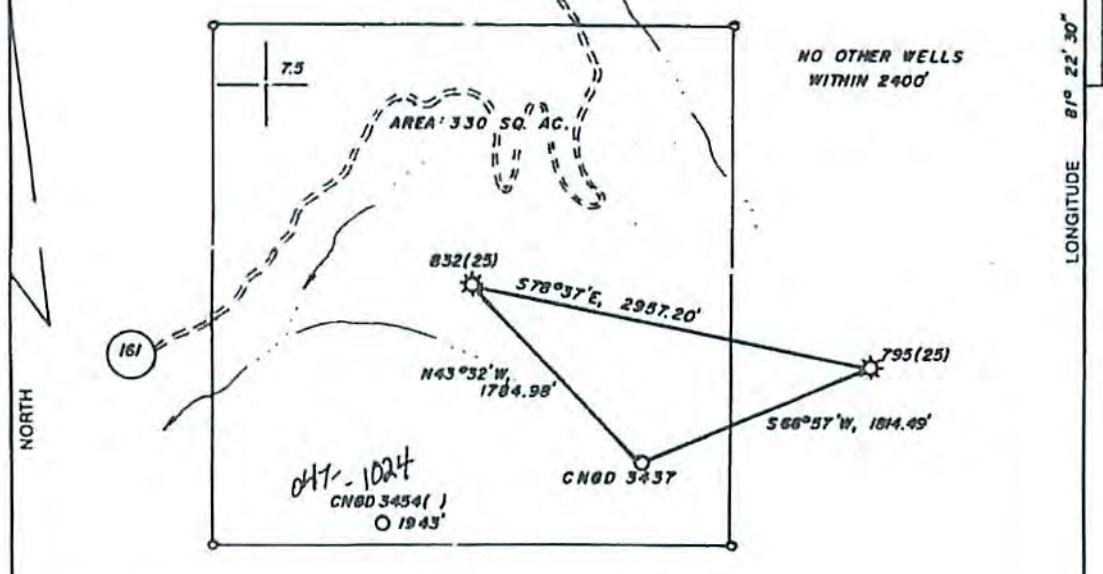
2121

Survey 9/7/88
11 6/25/93

12025

LATITUDE 37° 22' 30"

LONGITUDE 81° 22' 30"



NO OTHER WELLS WITHIN 2400'

CNOB 3437 COOR: 133,077.85
1,879,097.93

047
1081

840(25)1885

WELL REFERENCES:
N4°E, 126.50' TO 6" RED MAPLE
S77°30'E, 115' TO 4" POPLAR

LAND SURVEYING SERVICES
21 CEDAR LANE
BRIDGEPORT, WV 26330
PHONE: 504-842-2018

plat approved 7/26/88

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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 IN 2500
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 490'
 NE OF LOC. AT ELEV. 2658

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) [Signature]
 R.P.E. _____ I.L.S. NO. 674
STEPHEN D. LOSH

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE AUGUST 10 19 88
 OPERATOR'S WELL NO. CNOB-3437W
 API WELL NO. _____
47-047-1021-F

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 2564' WATERSHED INDIAN GRAVE BRANCH
 DISTRICT ADKIN COUNTY MCDOWELL
 QUADRANGLE ANAWALT 7.5'
 SURFACE OWNER CONSOLIDATION COAL CO. ACREAGE 1352.61
 OIL & GAS ROYALTY OWNER CONSOLIDATION COAL CO. LEASE ACREAGE 11,000
 LEASE NO. TC 87829
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) None
 PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION WEIR ESTIMATED DEPTH 4750'
 WELL OPERATOR CNO DEVELOPMENT CO. DESIGNATED AGENT RODNEY V. BASS
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698
PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

HT. HALL 54871 FORM WW-5

McDowell
1021-F
PERMIT

Office of Oil and Gas

JUN 25 2015

Department of Environmental Protection

4701021P

WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number _____
3437
3) API Well No.: 47 - 047 - 01021

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>Imperial Resources LLC</u>	Name <u>Mid-Vol Coal Sales</u>
Address <u>640 Clover Dew Dairy Road</u>	Address <u>640 Clover Dew Dairy Road</u>
<u>Princeton, WV 24740-6828</u>	<u>Princeton, WV 24740</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Imperial Resources LLC</u>
(c) Name _____	Address <u>640 Clover Dew Dairy Road</u>
Address _____	<u>Princeton, WV 24740</u>
6) Inspector <u>Gary Kennedy</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 268</u>	Name <u>Mid-Vol Coal Sales, Inc.</u>
<u>Nimitz, WV 25978</u>	Address <u>640 Clover Dew Dairy Road</u>
Telephone <u>304-382-8402</u>	<u>Princeton, WV 24740</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: Attorney-in-Fact
 Address 627 Claypool Hill Mall Road
Cedar Bluff, VA 24637
 Telephone 276-596-5137

Subscribed and sworn before me this 2 day of June, 2015
Bethany Candice Elkins Notary Public
 My Commission Expires 8/31/15

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.



WV Department of Environmental Protection
07/31/2015

4701021P

WW-9
(2/15)

API Number 47 - 047 - 01021
Operator's Well No. 3437

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 494448046

Watershed (HUC 10) 0507020102 Quadrangle Anawalt

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: yes, a flowback tank will be used in lieu of a pit.

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

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

Additives to be used in drilling medium? N/A

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

-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 *Ed Fanning*

Company Official (Typed Name) Ed Fanning

Company Official Title Attorney-in-Fact

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Office of Oil and Gas

JUN 25 2015

Subscribed and sworn before me this 2 day of June, 2015

Bethany Candice Elkins

Notary Public

My commission expires 8/31/15



47-047-01021P

Operator's Well No. 3437

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 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		
Lindo 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: loggers have destroyed well roads

Title: Inspector

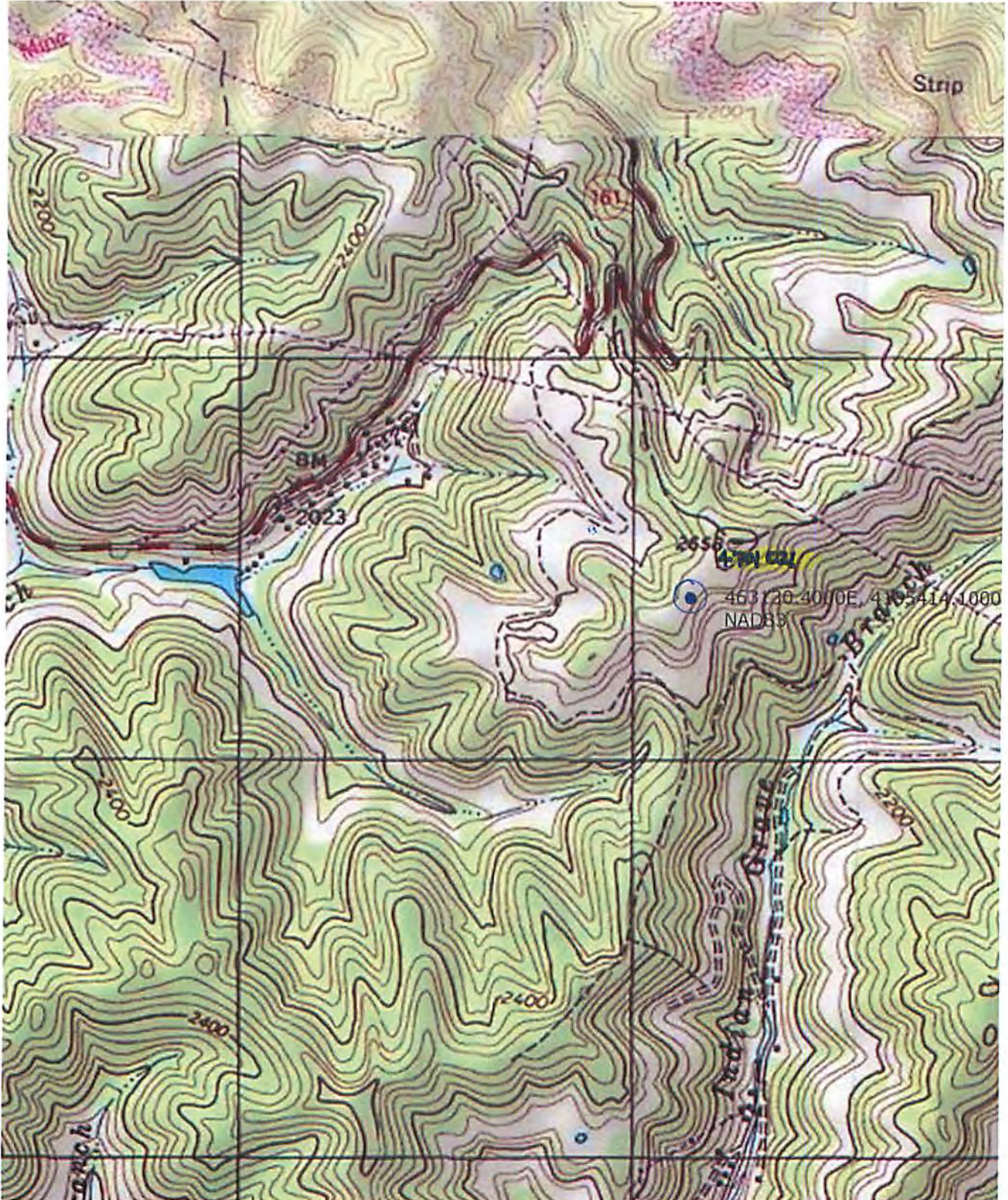
Date: 5/25/15

Field Reviewed? (X) Yes () No

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WV Department of Environmental Protection 07/31/2015



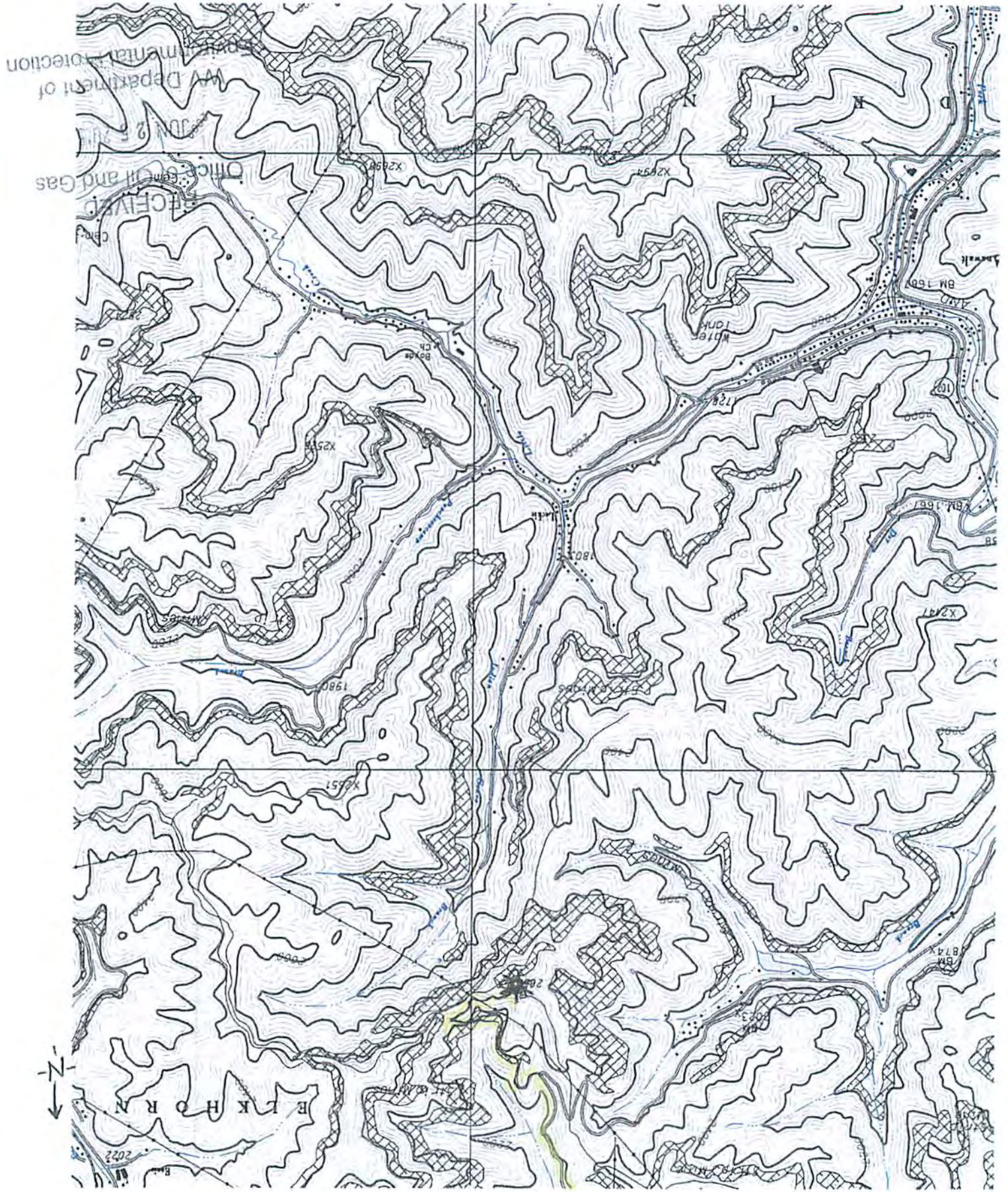
07/31/2015

4701021A



07/31/2015

1" = 2000'
Anawak, WV 7.5' Quad



4701021f

WELL 47-047-01021

07/31/2015

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-047-01021 WELL NO.: 3437

FARM NAME: Imperial Resources LLC

RESPONSIBLE PARTY NAME: CNX Gas Company LLC

COUNTY: McDowell DISTRICT: Adkin

QUADRANGLE: Anawalt

SURFACE OWNER: Imperial Resources LLC

ROYALTY OWNER: Imperial Resources LLC

UTM GPS NORTHING: : 463130.39

UTM GPS EASTING: 4135414.09 GPS ELEVATION: 801 m (2627')

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.

Bela Staton
Signature

Permit Agent
Title

05/29/15
Date

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Office of Oil and Gas

JUN 25 2015

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