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**west virginia** department of environmental protection

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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 05, 2014

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-4701975, 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.

A blue ink signature of James Martin, Chief, is written over the text.

James Martin  
Chief

Operator's Well No: 6781  
Farm Name: ALAWEST, INC.  
**API Well Number: 47-4701975**  
**Permit Type: Plugging**  
Date Issued: 08/05/2014

## 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

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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 within two years of the date of issuance of this permit.

4701975P

WW-4B  
Rev. 2/01

1) Date \_\_\_\_\_, 20\_\_\_\_  
2) Operator's  
Well No. 6781  
3) API Well No. 47-047-01975

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

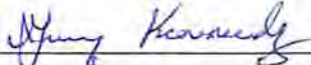
5) Location: Elevation 2345 ft. Watershed Mountain Fork  
District Big Creek County McDowell Quadrangle Gary, WV

6) Well Operator CNX Gas Company LLC 7) Designated Agent Jeremy Jones  
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 work order procedures

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

Work order approved by inspector  Date 8/20/14

08/08/2014

API 47-47-01975 Plugging Procedure

1. Verify total depth 5265'.
2. Run free-point survey on 4-1/2" casing. Drilling report states top of cement is 4900' per previous bond log.
3. Run tubing to TD. Set plug of expanding cement from established TD to approximately 50' below free point, utilizing a 100' gel spacer at approximately the half-way point of the wellbore, **BELOW 7" CASING POINT OF 1350'.**
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. 1450') Pull remaining 4-1/2" out of well.
6. Bond log 7" casing.
7. Run tubing to previous cement top (1450'). 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. **7" IS PROBABLY CTS.**
9. Repeat bond log and cutting procedures for 9-5/8" if 7" is cut and pulled. **9 5/8" IS PROBABLY CTS**
10. Cement from 50' below 9-5/8" shoe to surface.
11. Install 7" X 4' steel monument with API# and Date.

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WV Department of  
Environmental Protection

NOTE: A 100' gel spacer will be placed at approximately half the well depth. Also, Expanding cement will be utilized throughout the entire cementing process.

**ENTIRE WELLBORE MUST BE FILLED WITH CEMENT OR GEL. IF 4900' OF 4 1/2" IS PULLED, A GEL SPACER WILL BE PLACED AT ~ 3000'.**



4701975P

WR-35  
Rev (5-01)

DATE: 07/11/2005  
API #: 47 047 01975

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

*Ac 17*

Well Operator's Report of Well Work

Farm name: Alawest, Inc. Operator Well No.: 6781

LOCATION: Elevation: 2345' Quadrangle: Gary 7.5'

District: Big Creek County: McDowell  
Latitude: 9.525 Feet South of 37' Deg. 22 Min. 30 Sec.  
Longitude 11.930 Feet West of 81 Deg. 35 Min. 00 Sec.

Company: Dominion Exploration & Production, Inc

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P O Box 1248 Jane Lew, WV 26378				
Agent: Rodney J. Biggs				
Inspector: Ralph Triplett				
Date Permit Issued: 10/04/2004				
Date Well Work Commenced: 05/09/2005	12 3/4"	22'	22'	Sand In
Date Well Work Completed: 05/26/2005				
Verbal Plugging N/A	9 5/8"	550'	550'	215 sks
Date Permission granted on: N/A				
Rotary X Cable Rig	7"	1350'	1350'	470 sks
Total Depth (feet): 5518'				
Fresh Water Depth (ft.): 340', 550', 1375'	4 1/2"	5265'	5265'	75 sks
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 130-134', 440-443', 650-651', 800-801'				

OPEN FLOW DATA

Producing formation Berea Pay zone depth (ft) 5108-5118'  
Gas: Initial open flow Show MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 133 MCF/d Final open flow N/A 0 Bbl/d  
Time of open flow between initial and final tests 12 Hours  
Static rock Pressure 480 psig (surface pressure) after 12 Hours

*JK*

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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

JUL 15 2005

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.

08/08/2014  
*McDowell*

05/26/2005 BOND LOGGED, LTD 5255', TOC 4900'. PERFORATED BEREA FROM 5108' - 5118'  
W/ 21 HOLES. RU AND FRAC - 75Q FOAM FRAC - 55,500 LB 20/40 SAND, 229 BBL FLUID,  
507,100 SCF N2, BDP 2381#, ATP 2529#, AIR 25 BPM, ISIP 2160#. OPEN WELL ON 1/4" CHOKE

Fill	0	22
Sandy Shale	22	75
Sandstone	75	130
Coal	130	134
Sandy Shale	134	150
Sandstone	150	245
Sandy Shale	245	270
Sandstone	270	330
Sandy Shale	330	358
Sandy shale	358	440
Coal	440	443
Sandy Shale	443	500
Sandstone	500	650
Coal	650	651
Sandy Shale	651	800
Coal	800	801
Streaked Sandstone	801	1110
Sandy Shale	1110	1280
Open Mines	1280	1284
Sandy shale	1284	1374
Sandstone	1374	1420
Sandy Shale	1420	2030

GAMMA RAY / FORMATION TOPS				
DEPI # 6781		047-047-01975		
			<u>TOP</u>	<u>BASE</u>
PRIDE SHALE			2060	2168
RAVENCLIFF SAND			2180	2330
AVIS LIME			2417	2466
UPPER MAXTON			2876	3110
LTD				3145

*WJ*

WW-4A  
Revised 6-07

1) Date: \_\_\_\_\_  
2) Operator's Well Number \_\_\_\_\_  
6781  
3) API Well No.: 47 - 047 - 01975

**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	Alawest, Inc.	Name	none
Address	PO Box 920 Welch, WV 24801	Address	_____
(b) Name	_____	(b) Coal Owner(s) with Declaration	
Address	_____	Name	Alawest, Inc.
		Address	PO Box 920 Welch, WV 24801
(c) Name	_____	Name	_____
Address	_____	Address	_____
6) Inspector	Gary Kennedy	(c) Coal Lessee with Declaration	
Address	PO Box 268 Nimitz, WV 25978	Name	Caretta Minerals LLC
Telephone	304-382-8402	Address	P.O. Box 309 Prosperity, WV 25909

**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 24609  
 Telephone 276-596-5075

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Office of Oil and Gas  
MAY 30 2014

Subscribed and sworn before me this 29th day of May 2014

My Commission Expires \_\_\_\_\_

Oil and Gas Privacy Notice

BEVERLY A. WEBB  
 NOTARY PUBLIC  
 Commonwealth of Virginia  
 Reg. #7502381  
 My Commission Expires June 30, 2015

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](mailto:depprivacyofficer@wv.gov).

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10220 6781 6112

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Sent To: Ms. Kay Holtsclaw  
 WVDEP Office Oil and Gas  
 Street, or PO: 601 57<sup>th</sup> Street, SE  
 City, St: Charleston, WV 25304

PS Form Instructions

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6781

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Sent To: Caretta Minerals LLC  
 P.O. Box 309  
 Street, or PO: Prosperity, WV 25909 ✓

PS Form Instructions

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Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Sent To: Gary Kennedy  
 P.O. Box 268  
 Street, or PO: Nimitz, WV 25978

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Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Sent To: Alawest, Inc.  
 P.O. Box 920  
 Street, or PO: Welch, WV 24801 ✓

PS Form Instructions

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 Office of Oil and Gas  
 MAY 8 11 2014  
 WV Department of  
 Environmental Protection

4701975P



4701975P

WW-9  
Rev. 5/08

Page \_\_\_\_\_ of \_\_\_\_\_  
API Number 47 - 047 - 01975  
Operator's Well No. 6781

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

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 494458046

Watershed Mountain Fork Quadrangle Gary, WV

Elevation 2345 ft. County McDowell District Big Creek


Description of anticipated Pit Waste: water for plugging of abandoned gas well.

Will a synthetic liner be used in the pit? N/A

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 \_\_\_\_\_)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Swabbing
- Workover
- Plugging
- Other (Explain a pumper truck with flowback tank will be used in lieu of a pit. )

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 

Company Official (Typed Name) Ed Fanning

Company Official Title Supervisor Permitting

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MAY 30 2014

Subscribed and sworn before me this 29th day of May, 2014

Department of  
Environmental Protection

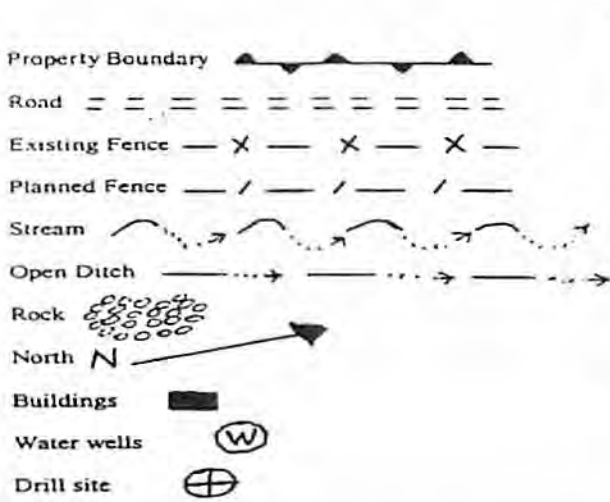


Notary Public

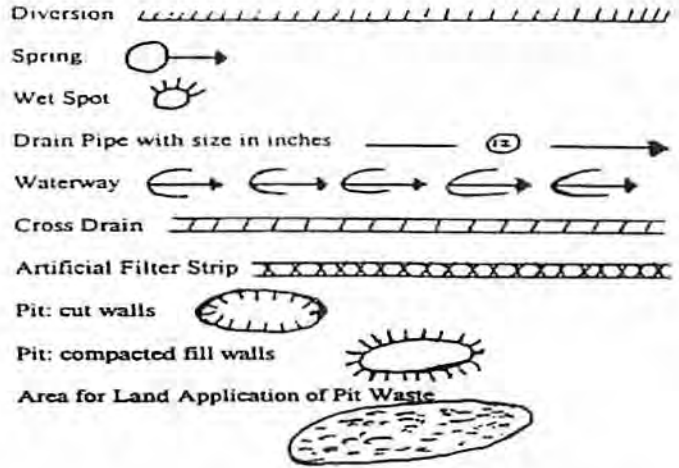
My commission expires \_\_\_\_\_

BEVERLY A. WEBB  
NOTARY PUBLIC  
Commonwealth of Virginia  
Reg. #7502381  
My Commission Expires June 30, 2015

08/08/2014



LEGEND



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 (10-20-20 or equivalent) 550 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre	Seed Type	Area II	lbs/acre
Orchard grass		25	same as Area I		
Birdsfoot trefoil		15			
Lidino clover		10			

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

Photocopied section of involved 7.5' topographic sheet.

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Environmental Protection

Plan Approved by: \_\_\_\_\_

Comments: \_\_\_\_\_

Title: Jimmy Kennedy Date: 5/20/14

Field Reviewed? ( X ) Yes ( ) No



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*SKK*



0 500 1,000 Feet	
Date: 5/9/2014	Prepared By: KK
Revisions:	Approved By: BS

**CONSOL ENERGY**

PROPOSED PLUGGING  
 WEI# 08/08/2014  
 API# 47-047-01975  
 GENERAL LOCATION MAP

This map is property of CONSOL Energy Inc. and contains information that is proprietary and confidential in nature and may not be copied or reproduced without prior written consent.



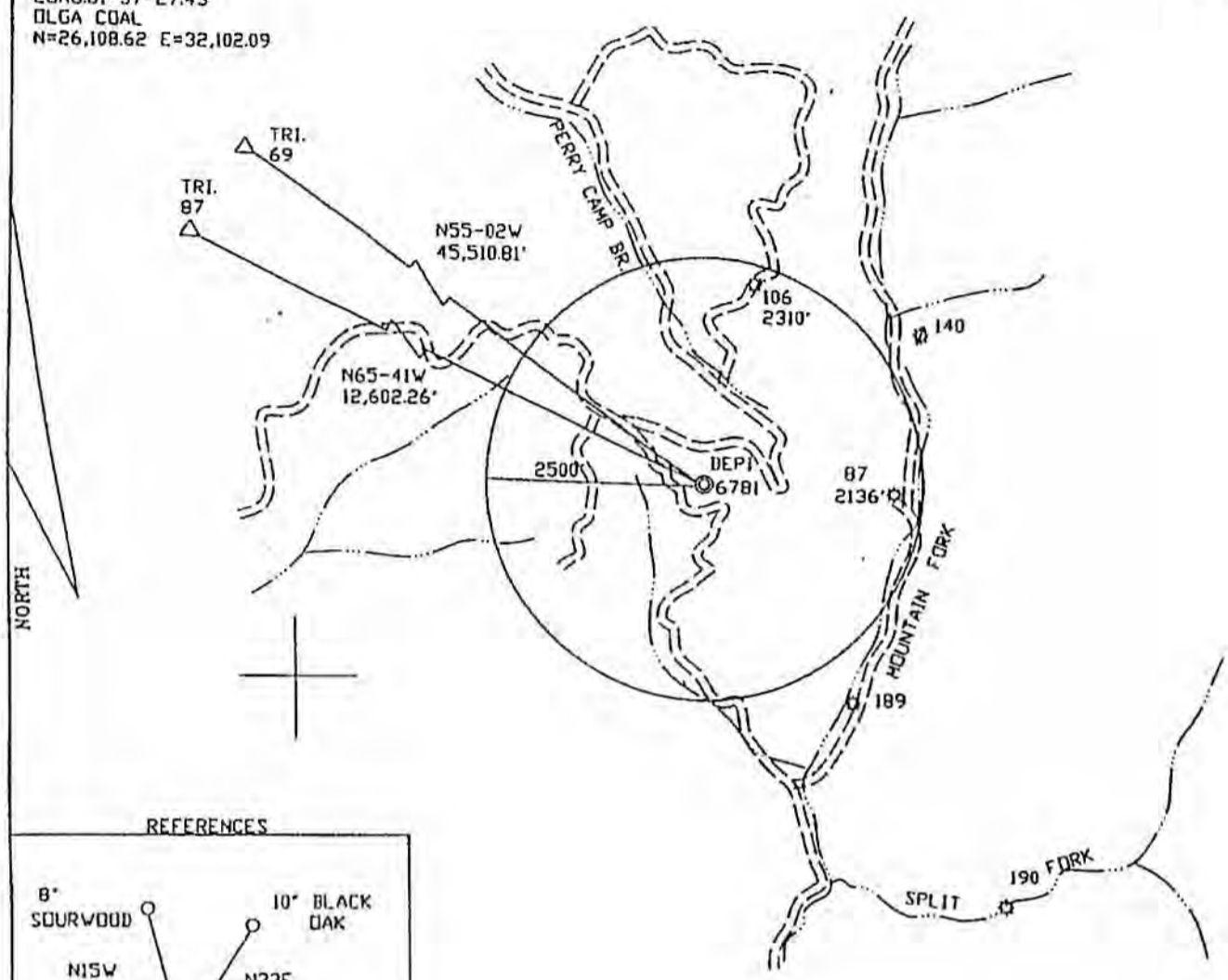
4701975P

LATITUDE 37-22-30

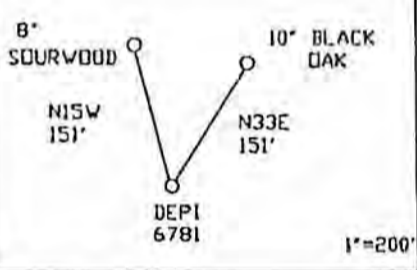
DEPI 6781  
NAD 27 WV SOUTH SPC  
N=127563.22 E=1818518.61  
LAT. 37-20-55.11  
LONG. 81-37-27.43  
DLGA COAL  
N=26,108.62 E=32,102.09

SCALED COORD.  
11,930' W  
9,525' S

LONGITUDE 81-35-00



REFERENCES



OK  
GAE

FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1"=2000'  
MINIMUM DEGREE OF ACCURACY 1/2500'  
PROVEN SOURCE OF ELEVATION DGPS SUBMETER

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 MINES.  
(SIGNED) M. Allen Justice  
R.P.E. \_\_\_\_\_ L.L.S. 959



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
FORM IV - 8 (8-78)



DATE JULY 17, 2004  
OPERATOR'S WELL NO. DEPI 6781  
47 STATE 47 COUNTY 01975 PERMIT

Division of Environmental Protection  
Office of Oil & Gas

WELL TYPE: OIL \_\_\_\_\_ GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
IF "GAS" PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW

LOCATION: ELEVATION 2345' WATER SHED MOUNTAIN FORK  
DISTRICT BIG CREEK COUNTY McDOWELL  
QUADRANGLE GARY 7.5'

SURFACE OWNER ALAWEST, INC. ACREAGE 1917.55 TAX MAP  
OIL & GAS ROYALTY OWNER ALAWEST, INC. LEASE ACREAGE 1912.37  
LEASE NO. 62042 08/08/2014

PROPOSED WORK: DRILL  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 Gordon ESTIMATED DEPTH 5470'

WELL OPERATOR DOMINION EXPLORATION AND PRODUCTION, INC. DESIGNATED AGENT RODNEY J. BIGGS  
ADDRESS ONE DOMINION DRIVE PO BOX 1248 ADDRESS ONE DOMINION DRIVE PO BOX 1248  
JANE LEW, WV 26378 JANE LEW, WV 26378

Mc Dow 1975

47 01975P



Virginia Operations  
627 Claypool Hill Road  
Cedar Bluff, VA 24609

Bob Staton, MS, PG  
Permitting Agent  
Phone: 276-596-5137

Ms. Kay Holtsclaw  
WVDEP Office of Oil and Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304-2345

RE: 47-047-01729  
47-047-00189  
47-047-01975

Dear Ms. Holtsclaw;

Please find enclosed the plugging applications for the above referenced wells in McDowell County. Please let me know if you require any additional information.

Sincerely,

A handwritten signature in blue ink that reads 'Bob Staton'.

**Bob Staton**  
Permitting Agent

enclosures

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Environmental Protection

08/08/2014