



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 16, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3904691, issued to PANTHER, 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: CLAY/BERWIND 77
Farm Name: CARBON FUEL CO.

API Well Number: 47-3904691

Permit Type: Plugging

Date Issued: 07/16/2014

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

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.

WW-4B
Rev. 2/01

1) Date July 10, 2014
2) Operator's
Well No. Clay/Berwind 77
3) API Well No. 47-028 - 0483

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 ___ or Underground storage ___) Deep ___ / Shallow ___
- 5) Location: Elevation 1376.7' Watershed Mill Branch
District Cabin Creek County Kanawha Quadrangle Belle
- 6) Well Operator Panther, LLC 7) Designated Agent Gary Acord
Address 500 Lee St., E., Suite 900 Address 500 Lee St., E., Suite 900
Charleston, WV 25301 Charleston, WV 25301
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Terry Urban Name C.J. Well Service
Address PO Box 1207 Address PO Box 133
Clendenin, WV 25045 Rowe, VA 24646

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

The purpose of this plugging is to allow for cover up of the well within an existing refuse area.

Work Order

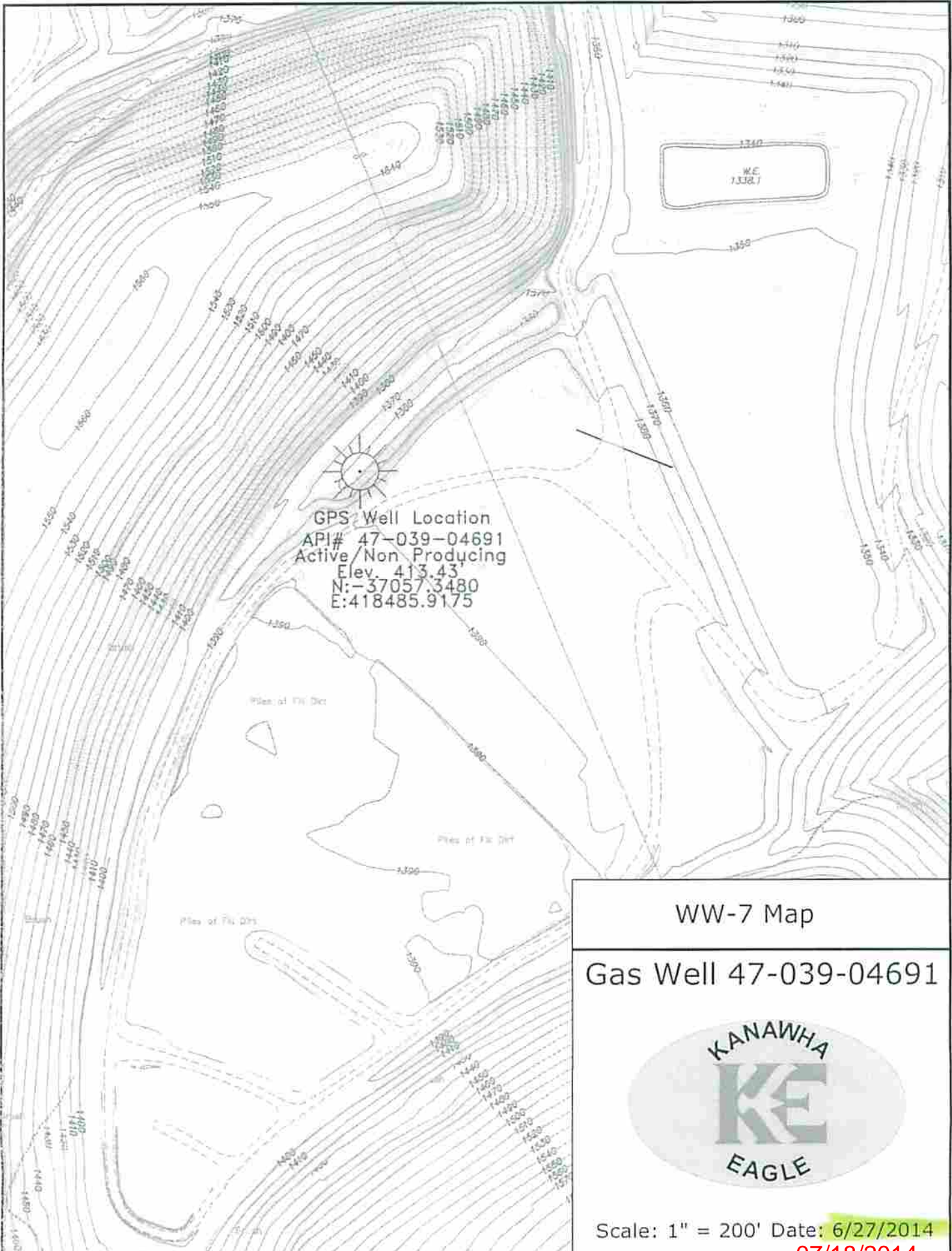
- Move in and rig up.
- Pull tubing to the greatest depth possible
- Set cement plug from bottom depth (beginning of 4 1/2" casing) to 3900'
- Gel hole from 3900' to 3100'
- Cement from 3100' to 2000' (4 1/2" casing cut at 2000')
- Check the freepoint, retrieve 4 1/2" casing
- Set 100' cement plug at 4 1/2" casing cut (2000' to 2100')
- Gel hole from 2100' to 1466'
- Cement from 1466' to 1266'
- Gel hole from 1266' to 200 ft below lowest mineable coal seam (Eagle Seam at 520' - seam thickness approx. 8'), therefore gel hole from 1266' to 720'
- Set expandable cement from 720' to 412' (100' above Eagle Seam)
- Gel hole and set cement plug 150' to surface.
- Install monument with API ID #

Note: Cement will be set at any perforation made in the pipe.

* Cement - API Class A Portland Hydraulic Cement to be utilized Gel - 6% Bentonite to be utilized

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

Work order approved by inspector  Date 7-11-14



GPS Well Location
 API# 47-039-04691
 Active/Non Producing
 Elev. 413.43
 N:-37057.3480
 E:418485.9175

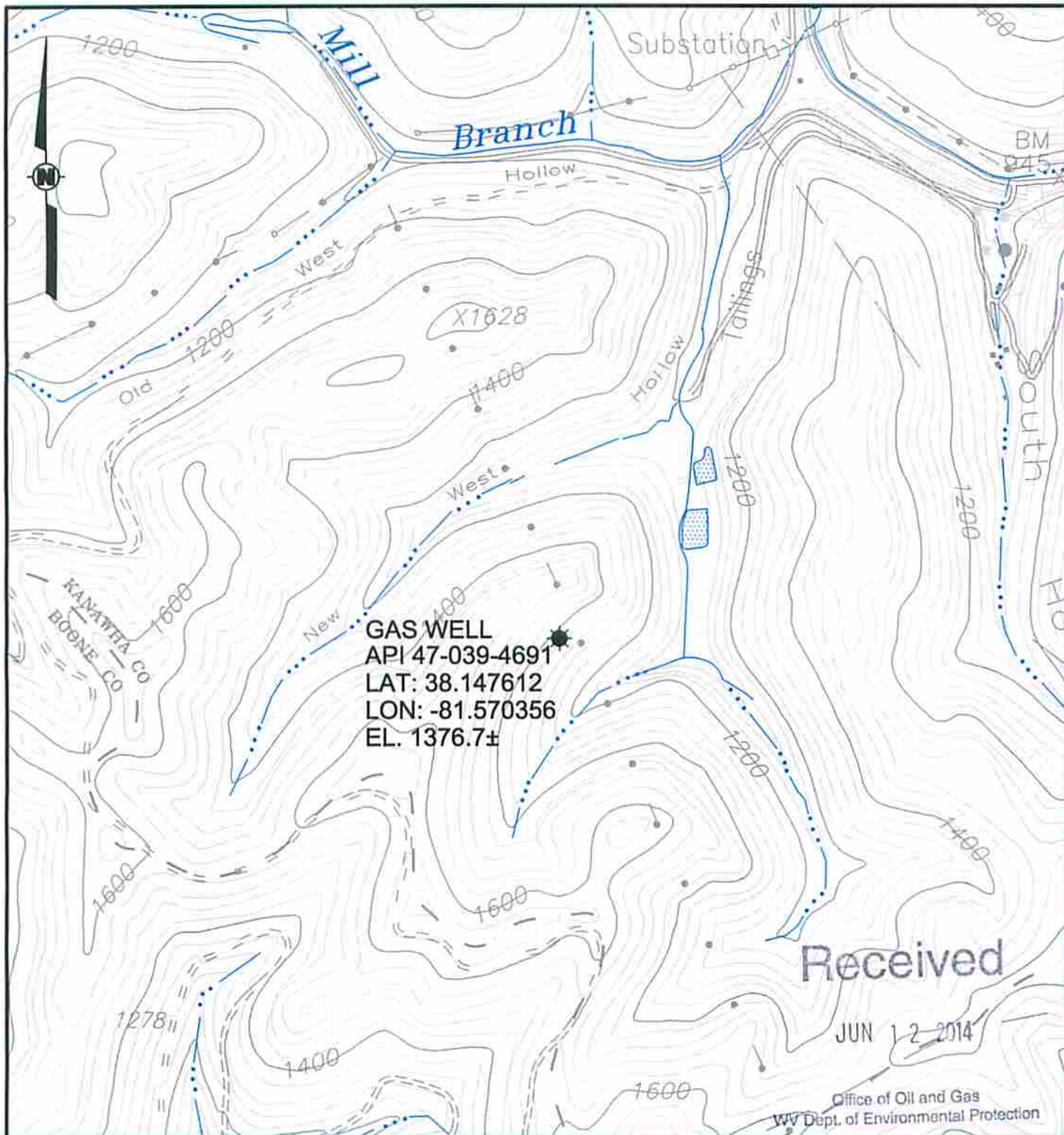
WW-7 Map

Gas Well 47-039-04691



Scale: 1" = 200' Date: 6/27/2014

07/18/2014



REFERENCES:

1. 7.5 MIN. U.S.G.S TOPOGRAPHIC MAP OF THE BELLE QUADRANGLE, WEST VIRGINIA
2. COORDINATES WEST VIRGINIA SOUTH-NAD 83

SCALE



Alliance Consulting, Inc.
Engineers
Constructors
Scientists

BECKLEY, WV (304) 255-0461
 CANONSBURG, PA (724) 745-3630
 SUMMERSVILLE, WV (304) 883-2361

GAS WELL LOCATION MAP
API NO. 047-039-04691

CABIN CREEK DISTRICT
 KANAWHA COUNTY, WEST VIRGINIA
 PREPARED FOR
 PANTHER, LLC
 CHARLESTON, WEST VIRGINIA

DRAWN BY	JSC	02/05/14
CHECKED BY		
APPROVED BY		
DRAWING NUMBER	FIGURE NUMBER	
B14-060-A1		

07/18/2014

Received

JUN 12 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

WR-35

DATE: 22-AUG-89
API # 47-039-04691

RECEIVED
DEC 18 1989

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

Well Operator's Report of Well Work

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

Farm Name: CABON FUEL COMPANY

Operator's Well No: Clay/Berwind #77

LOCATION: Elevation: 1366.00

Quadrangle: Belle 7.5

District: Cabin Creek County: Kanawha
Latitude: 7090 Feet South of 38 Deg. 10 Min. 00 Sec.
Longitude: 8320 Feet West of 81 Deg. 32 Min. 30 Sec.

Company: ALLEGHENY & WESTERN ENERGY
P.O. BOX 2587
CHARLESTON, WV 25301

Agent: Dennis L. Mann

Inspector: CARLOS W. HIVLEY
Permit Issued: 8/22/89
Well work Commenced: 8/30/89
Well work Completed: 9/05/89
Verbal Plugging
Permission granted on:
Rotary X Cable Rig
Total Depth (feet) 4876'
Fresh water depths (ft) None

Salt water depths (ft) None

Is coal being mined in area (Y/N)? N
Coal depths (ft): 398', 690'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Cond.	35'	35'	
9 5/8"	758'	758'	240 Sks.
7"	2129'	2129'	210 Sks.
4 1/2"		4845'	280 Sks.
2 3/8"		3237'	

OPEN FLOW DATA

Producing formation BL/WR/BE/GD Pay zone depth (ft) 2156'-2998'
Gas: Initial open flow S/G Mcf/d Oil: Initial open flow 0 bbl/d
Final open flow 315 Mcf/d Final open flow 0 bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 385 psig (surface pressure) after 72 Hours

Second producing formation Devonian Shale Pay zone depth (ft) 4038'
Gas: Initial open flow S/G Mcf/d Oil: Initial open flow 0 bbl/d
Final open flow 400 Mcf/d Final open flow 0 bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 395 psig (surface pressure) after 72 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 GEOLOGIC RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: ALLEGHENY & WESTERN ENERGY COMPANY

By: [Signature] V.P. Operations
Date: 07/18/2014

CAN 4691

DETAILS OF PERFORATIONS, FRACTURING OR STIMULATION, ETC.

47-039-4691

9/22/89 - Stage 1: Perforated from 4038' to 4761' (60 holes)
N2 Frac with 1,500,000 Scf N2. BDP-1750# ATP-2240#
ISIP-1500# Rate: 80,000 Scf/min.

> plug (s)

Stage 2: Perforated from 2763' to 2998' (32 Holes)
90Q foam frac. 1000 gal 15% HCL, 50,000# 20/40 sand,
994,800 Scf N2, 167 bbl total fluid, BDP-2520#,
ATP-3100# ISIP-2100# Avg. Rate: 80 bpm

> plug (s)

Stage 3: Perforated from 2420' to 2647' (39 Holes)
75Q Foam frac. 1000 gal 15% HCl, 50,000# 20/40 sand,
472,000 Scf N2, 200 bbl total fluid, BDP-1650#
ATP-1830# ISIP-1150# Avg. Rate: 40 bpm

> plug (s)

Stage 4: Perforated from 2156' to 2394' (39 Holes)
Acidized with 500 gal 28% HCL, 10,000 gal 15% HCl.
195,600 Scf N2, BDP-2810# ATP-1230# ISIP-1500#
247 bbl total fluid. Rate: 5 bpm

> plug (s)

RECEIVED
DEC 18 1989

WELL LOG

DIVISION OF OIL AND GAS
DEPARTMENT OF ENERGY

FORMATION	TOP	BASE	REMARKS
Sand & Shale	0	790	
Sand	790	950	
Sand & Shale	950	1830	
Shale	1830	1880	
Maxton	1880	1970	
Shale	1970	2074	
Little Lime	2074	2146	
Shaley Lime	2146	2214	
Big Lime	2214	2412	
Injun Sand	2412	2438	S/G
Sand & Shale	2438	2637	
Shale	2637	2858	
Siltstone(Berea)	2858	2894	
Silt & Shale	2894	3110	
Gordon	3110	3114	
Devonian Shale	3114	4456	
Brown Shale	4456	4702	S/G
Shale	4702	TD	

Received

JUN 12 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

DTD - 4902'
LTD - 4902'

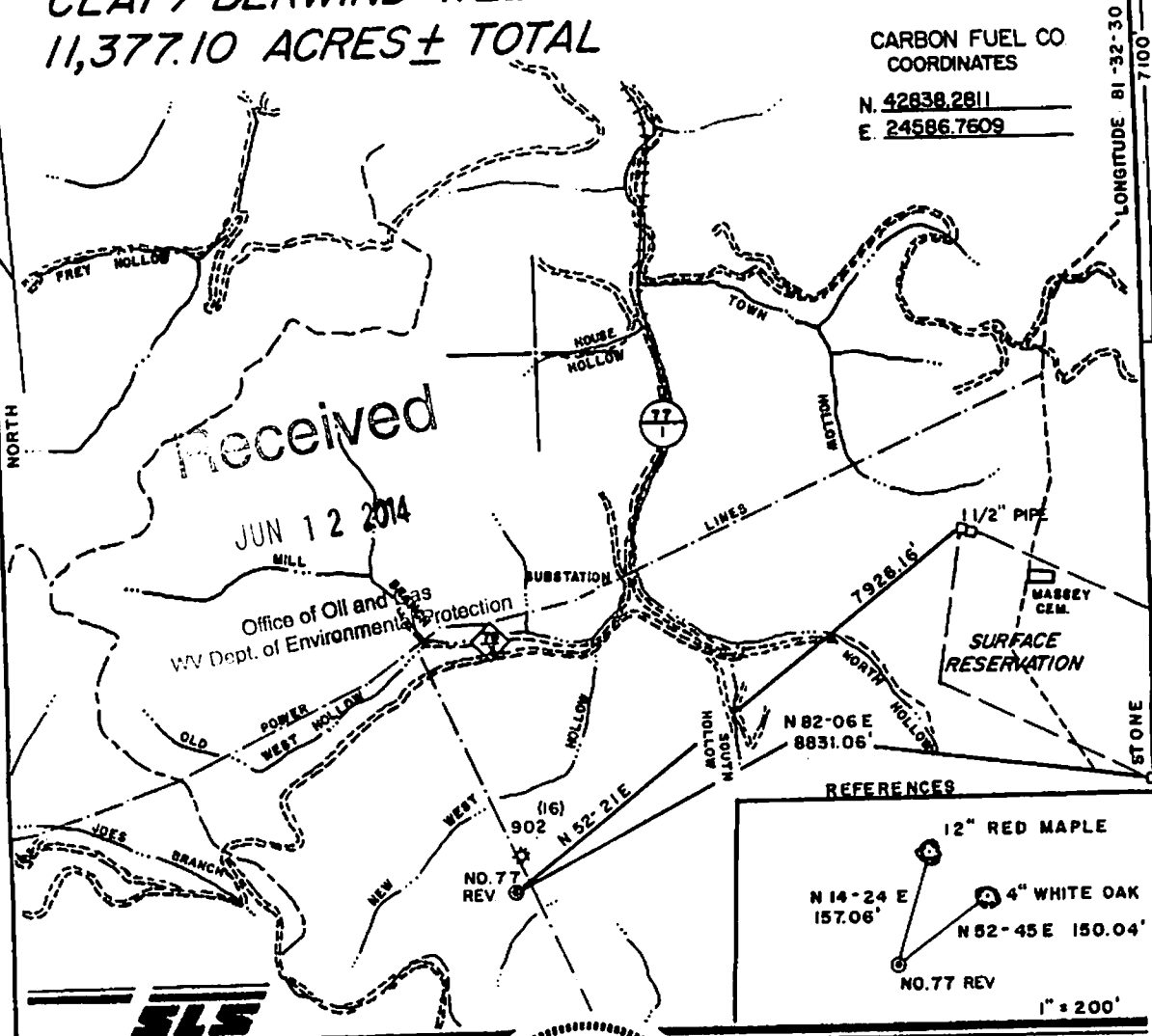
All depths measured
from 10' KB elev.

497

39 0461P

CLAY / BERWIND LEASE CLAY / BERWIND WELL NO. 77 REV. 11,377.10 ACRES± TOTAL

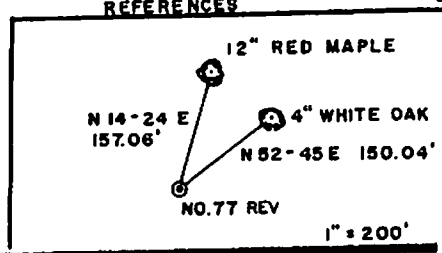
CARBON FUEL CO
COORDINATES
N. 42838.2811
E. 24586.7609



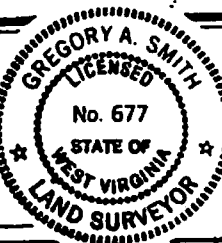
Received

JUN 12 2014

Office of Oil and Gas
WV Dept. of Environmental Protection



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.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE AUGUST 28, 19 89
 OPERATORS WELL NO. CLAY/BERWIND NO. 77
 API WELL NO. 47 - 039 - 4691
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 1706 ABW(23-63)
 SCALE 1"=2000'
 PROVEN SOURCE OF ELEVATION PERM. STAT. NO. 12,794 ELEV. 1458.28' (CARBON FUEL CO.)

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION

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

LOCATION: ELEVATION 1357' WATERSHED NEW WEST HOLLOW
 DISTRICT CABIN CREEK COUNTY KANAWHA QUADRANGLE BELLE 7.5'
 SURFACE OWNER CARBON FUEL COMPANY ACREAGE P/O 4301.22
 ROYALTY OWNER CLAY COUNTY BERWIND LIMITED PARTNERSHIP LEASE ACREAGE 11,377.10
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
 PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS SHALE
 ESTIMATED DEPTH 5290'

WELL OPERATOR ALLEGHENY & WESTERN ENERGY CORP DESIGNATED AGENT DENNIS L. MANN
 ADDRESS P.O. BOX 2597, CHARLESTON, WV. 25329 ADDRESS P.O. BOX 2597, CHARLESTON, WV. 25329

07/18/2014

3904691P

WW-4A
Revised 6-07

1) Date: 03/20/14
2) Operator's Well Number
Clay/Berwind 77

3) API Well No.: 47 - 039 - 04691

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

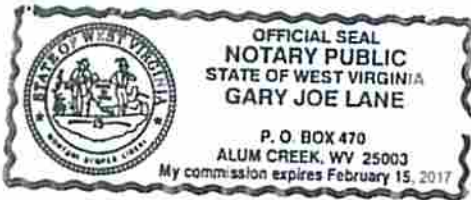
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Penn Virginia Coal Company</u> ✓	Name <u>Kanawha Eagle Coal, LLC</u> ✓
Address <u>One Carbon Center, Suite 200</u>	Address <u>PO Box 189</u>
<u>Chesapeake, WV 25315</u>	<u>Comfort, WV 25049</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Penn Virginia Coal Company</u> ✓
(c) Name _____	Address <u>One Carbon Center, Suite 200</u>
Address _____	<u>Chesapeake, WV 25315</u>
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-1B, 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 may be summarized in the following: 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 named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator Panther LLC
 By Gregory A. Boggs
 Title Gregory A. Boggs - President
 Address 500 Lee Street, E. Suite 900
Charleston, WV 25301
 Telephone 304-380-0200

Received

JUN 12 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

Subscribed and sworn before me this 6th day of MAY 2014
Gary Joe Lane Notary Public
My Commission Expires February 15, 2017

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 depprivacy@office2.wv.gov

07/18/2014

3904691P

SURFACE OWNER WAIVER

Operator's Well
Number

Clay/Berwind 77

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

Received

JUN 12 2014

Office of Oil and Gas
Department of Environmental Protection

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION.

_____	Date _____	Name _____	_____
Signature		By <u>Gary L. Stover</u>	Date <u>5-7-2014</u>
		Its <u>VP Operations</u>	Date <u>5-7-2014</u>
		Signature <u>Gary L. Stover</u>	Date <u>5-7-2014</u>

Operating Co., LLC

Penn Virginia ~~Coal Company~~

07/18/2014

API No.	<u>47-039-04691 P</u>
Farm Name	<u>Carbon Fuel Co.</u>
Well No.	<u>Clay/Berwind 77</u>

**INSTRUCTIONS TO COAL OPERATORS
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

The undersigned coal operator X / owner _____ / lessee _____ / of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: MAY 6, 2014

Kanawha Eagle Coal, LLC
 By: *[Signature]*
 Its PRESIDENT

Received

JUN 12 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

07/18/2014

3904691A

WW-9
Rev. 5/08

Page 1 of 1
API Number 47 - 039 - 04601
Operator's Well No. City Belmont??

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: Panther, LLC OP Code: _____

Watershed Mill Branch Quadrangle Belle

Elevation 1376.7' County Kanawha District Cabin Creek

Description of anticipated Pit Waste: _____

Will a synthetic liner be used in the pit? Yes 30 mil min
TW 7-10-14

Proposed Disposal Method For Treated Pit Wastes:
 Land Application
 Underground Injection (UIC Permit Number _____)
 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
 Workover
 Other (Explain _____)
 Swabbing
 Plugging

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: Gregory A. Boggs
Company Official (Typed Name) Gregory A. Boggs
Company Official Title President

Received

JUN 12 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

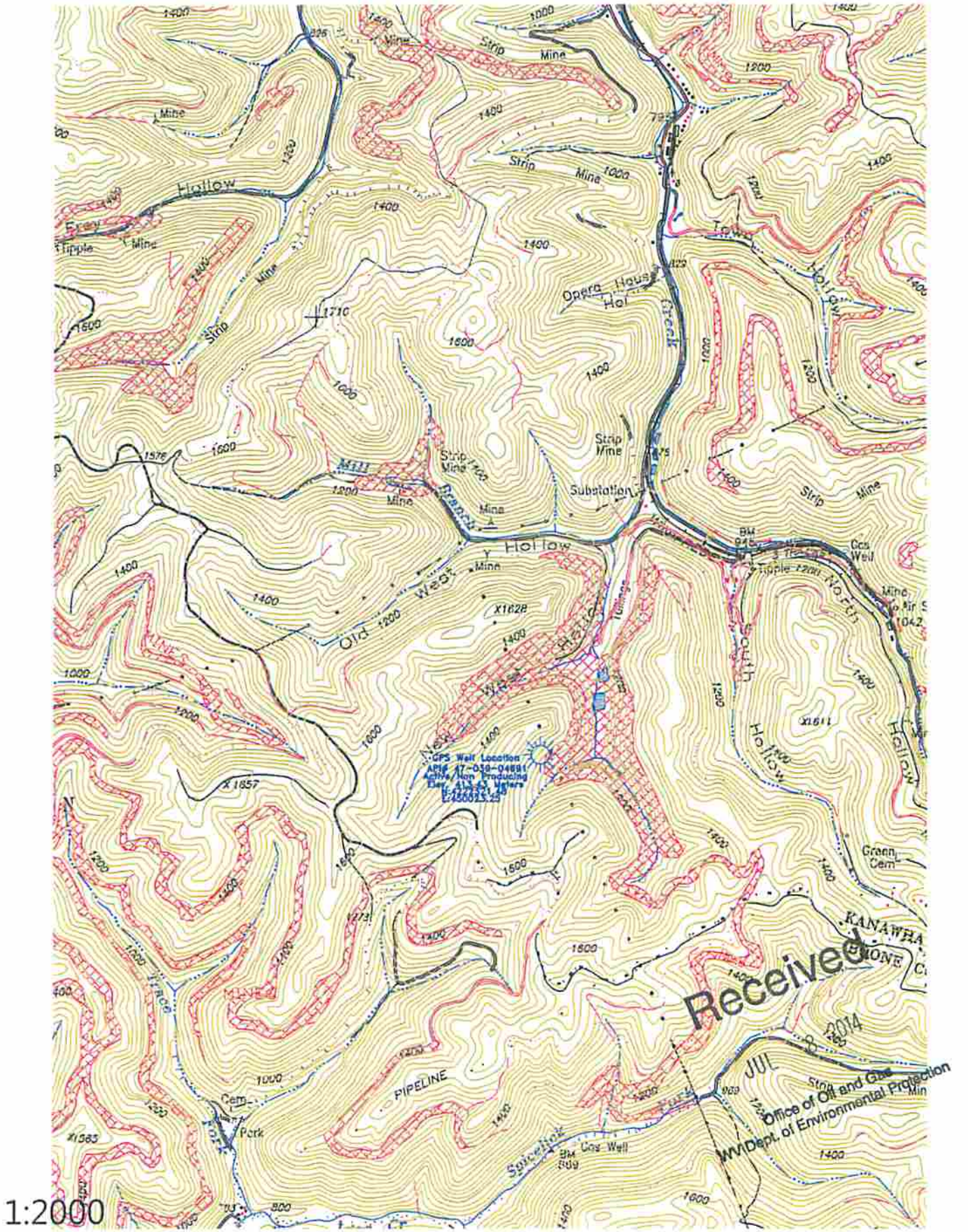
Subscribed and sworn before me this 6th day of MAY, 2014

GARY JOE LANE

Notary Public

My commission expires February 15 2017





1:2000

Received
JUL 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-039-04691 WELL NO.: Clay/Berwind 77

FARM NAME: Carbon Fuel Co.

RESPONSIBLE PARTY NAME: Panther, LLC

COUNTY: Kanawha DISTRICT: Cabin Creek

QUADRANGLE: Belle Quandrangle

SURFACE OWNER: Regency Energy Partners, LP

ROYALTY OWNER: Regency Energy Partners, LP

UTM GPS NORTHING: 4222321.48

UTM GPS EASTING: 450023.25 GPS ELEVATION: 413.43 13561 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:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:

Survey grade GPS : Post Processed Differential
Real-Time Differential

Mapping Grade GPS : Post Processed Differential
Real-Time Differential

- 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

Engineering Manager
Title

7/8/2014
Date

Received
JUL 8 2014
Office of Oil and Gas
WV Dept. of Environmental Protection