

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1"=1000'  
 MINIMUM DEGREE OF ACCURACY 15000  
 PROVEN SOURCE OF ELEVATION USGS BM NO. 35-AFK  
ELE. 1796

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) [Signature]  
 R. P. E. \_\_\_\_\_ L. L. S. 736

BRENT W. BOWMAN  
 LICENSED  
 NO. 736  
 STATE OF WEST VIRGINIA  
 LAND SURVEYOR  
 PLACE SEAL HERE

WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 #10 McJUNKIN ROAD  
 NITRO, WEST VIRGINIA 25143-2506



DATE 04-19, 19 97  
 OPERATOR'S WELL NO. 10C-227  
 API WELL NO. 47-109-01657-C  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS \_\_\_ LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS", PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_)  
 LOCATION: ELEVATION 2061.90 WATER SHED LEFT FORK OF ROCKCASTLE CREEK  
 DISTRICT CENTER COUNTY WYOMING  
 QUADRANGLE MATHENY, WV 7.5'  
 SURFACE OWNER GEORGIA PACIFIC CORPORATION ACREAGE 30582±  
 OIL & GAS ROYALTY OWNER JAGUAR OIL & GAS CORPORATION LEASE ACREAGE 30582±  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR  
 STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW  
 FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
U. Beckley Beckley Area 5 lower, 1000 ft  
 PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION \_\_\_\_\_ ESTIMATED DEPTH 1250' SEP 22 1997  
 WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT DANA BLACKSHIRE  
 ADDRESS 999 EXECUTIVE PARK BLVD., SUITE 300 ADDRESS PO BOX 460  
KINGSPORT, TN 37660 RAVENCLIFF, WV 25913

CHARLESTON BLUEPRINT 04/16/97

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

Well Operator's Report of Well Work

Farm name: GEORGIA-PACIFIC CORP. Operator Well No.: 10-C-227

LOCATION: Elevation: 2,061.90 Quadrangle: MATHENY

District: CENTER County: WYOMING  
Latitude: 14400 Feet South of 37 Deg. 42Min. 30 Sec.  
Longitude 2850 Feet West of 81 Deg. 30 Min. 0 Sec.

Company: PENN VIRGINIA OIL AND GAS  
999 EXEC. PARK BLVD., STE. 300  
KINGSPORT, TN 37660-0000

Agent: ~~DANA-BLACKSHIRE--~~  
Harry Jewell

Inspector: OFIE HELMICK  
Permit Issued: 08/20/97  
Well work Commenced: 10/15/97  
Well work Completed: 02/12/98  
Verbal Plugging  
Permission granted on:  
Rotary  Cable \_\_\_\_\_ Rig  
Total Depth (feet) 1276'  
Fresh water depths (ft) Damp at 76'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13 3/8"	22'	22'	0
9 5/8"	221'	221'	94
4 1/2"	1244'	1244'	378

Salt water depths (ft) \_\_\_\_\_  
Is coal being mined in area (Y/N)? N  
Coal Depths (ft): \_\_\_\_\_

OPEN FLOW DATA

L Poca 4, Poca 5,  
Producing formation Beckley, Little Raleigh coal Day zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow 0 MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow show MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure N/A psig (surface pressure) after \_\_\_\_\_ 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 \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ 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 GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: PENN VIRGINIA OIL AND GAS CORPORATION

By: William M. Ryan  
Date: 9/15/98

WYO 1657C

FORM WR-35R  
(REVERSE)

PERMIT #: 47-109-01657-C  
WELL#: 10C-227

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC

- Stage 1 Perforated the Lower Poca 4 coal from 1079' - 1082' with 12 holes. Breakdown with 250 gallons of 15% HCL acid and gelled water. Treated with 104 barrels of water and 1100 lbs 20/40 sand.  
ATR: 11.8 BPM ATP: 3480 psi ISIP: 4000 psi
- Stage 2 Perforated the Poca 5 coal from 960' - 964' with 16 holes. Breakdown with 4% KCL water. Treated with 324 barrels water and 7,600 lbs 20/40 sand.  
ATR: 15 BPM ATP: 1575 psi ISIP: 750 psi
- Stage 3 Perforated the Beckley coal from 720' - 724' with 16 holes. Breakdown with 4% KCL water. Treated with 137 barrels water and 1,750 lbs 20/40 sand.  
ATR: 13.3 BPM ATP: 2800 psi ISIP: 4000 psi
- Stage 4 Perforated the Little Raleigh coal from 616' - 619' with 12 holes. Breakdown with gelled water. Treated with 195 barrels water and 5,800 lbs 20/40 sand.  
ATR: 12.5 BPM ATP: 3000 psi ISIP: 1700 psi

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Shale	0	260	
Sand	260	390	
Shale	390	400	
Sand	400	442	
Coal	442	446	
Sand & Shale	446	617	
Little Raleigh Coal	617	618	
Sand & Shale	618	720	
Beckley Coal	720	723	
Shale	723	760	
Sand	760	960	
Poca 5 Coal	960	963	
Sand & Shale	963	1080	
Lower Poca 4 Coal	1080	1081	
Sand & Shale	1081	1281	Gas checks - No shows reported

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

- 1) Well Operator: PENN VIRGINIA OIL & GAS CORPORATION 37355 (3) 363
- 2) Operator's Well Number: 100-227 3) Elevation: 2061
- 4) Well type: (a) Oil\_\_\_/ or Gas X/  
(b) If Gas: Production X/ Underground Storage\_\_\_/  
Deep\_\_\_/ Shallow\_\_\_/
- Proposed Target Formation(s): U. Beckley, Beckley, Poca 5, ~~Poca~~ Poca 4  
*Issued 08/20/97  
Expires 08/20/99*
- Proposed Total Depth: 1250 feet
- Approximate fresh water strata depths: 170'
- Approximate salt water depths: N/A
- 9) Approximate coal seam depths: 448-451 open mine, 614-615, 717-720, 858-962, 1142-1144\*
- 10) Does land contain coal seams tributary to active mine? Yes\_\_\_/ No X\_/\_
- 11) Proposed Well Work: Drill and complete a CBM well in the coals listed above
- 12) \* Coal depths based on coal log ran on Well 227

RECEIVED  
WV Division of  
Environmental Protection  
AUG 01 1997  
Permitting  
Office of Oil & Gas

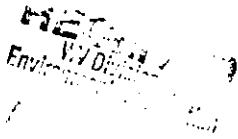
CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT Fill-up (cu. ft.)
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						
Fresh Water	9 5/8	L.S.	26	230	230	72
Coal	7	L.S.	17	550	550	89
Intermediate						
Production	4 1/2	M-65	9.5	1250	1250	128
Tubing						
Liners						

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

For Office of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond \_\_\_\_\_  Agent  
(Type)



1) Date: 04-19-1997  
2) Operator's well number  
100-227  
3) API Well No: 47 - 109 - 1657-C  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS**

**NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

- 4) Surface Owner(s) to be served: 5) (a) Coal Operator:
- (a) Name Georgia Pacific Corp Name \_\_\_\_\_  
Address PO Box 105605 Address \_\_\_\_\_  
Atlanta, GA 30348
- (b) Name \_\_\_\_\_ (b) Coal Owner(s) with Declaration  
Address \_\_\_\_\_ Name Wyoming Pocahontas Land Co., Inc.  
Address 39 Robin Place  
Beckley, WV 25801
- (c) Name \_\_\_\_\_ Name \_\_\_\_\_  
Address \_\_\_\_\_ Address \_\_\_\_\_
- 6) Inspector Mr. Ofie Helmick (c) Coal Lessee with Declaration  
Address PO Box 398 Name \_\_\_\_\_  
Brenton, WV 24818 Address \_\_\_\_\_  
Telephone (304)- 543-0764

**TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:**

       Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas **OR**

  X   Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through        on the above named parties, by:

- Personal Service (Affidavit attached)  
  X   Certified Mail (Postmarked postal receipt attached)  
  X   Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

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, 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 and imprisonment.

Well Operator PENN VIRGINIA OIL & GAS CORPORATION  
By: *Russell Clark*  
Its: Vice President  
Address 999 Executive Park Blvd., Suite 300  
Kingsport, TN 37660  
Telephone 1-423-392-0500

Subscribed and sworn before me this 14<sup>th</sup> day of July, 1997

*Kita Wilson* Notary Public  
My commission expires 2-13-99

WW-7  
5-02



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

API: 47-109-01657P WELL NO.: 10C-227

FARM NAME: Georgia Pacific Corporation

RESPONSIBLE PARTY NAME: Mr. Richard Waddell

COUNTY: Wyoming DISTRICT: Center

QUADRANGLE: Matheny

SURFACE OWNER: The Forest Land Group, LLC

ROYALTY OWNER: Penn Virginia Oil & Gas Corporation

UTM GPS NORTHING: 4169170.84

UTM GPS EASTING: 455012.58 GPS ELEVATION: 629.53

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 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

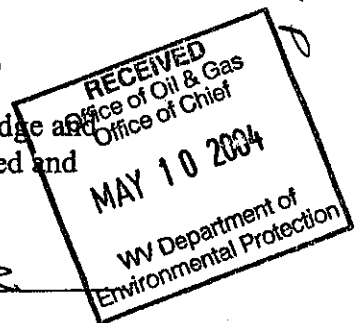
Mapping Grade GPS  : Post Processed Differential   
Real-Time Differential

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.

Richard Waddell  
Signature

OPNS MGR  
Title

5-6-04  
Date



WYO 1657P