

3900'

LATITUDE 37°47'30"

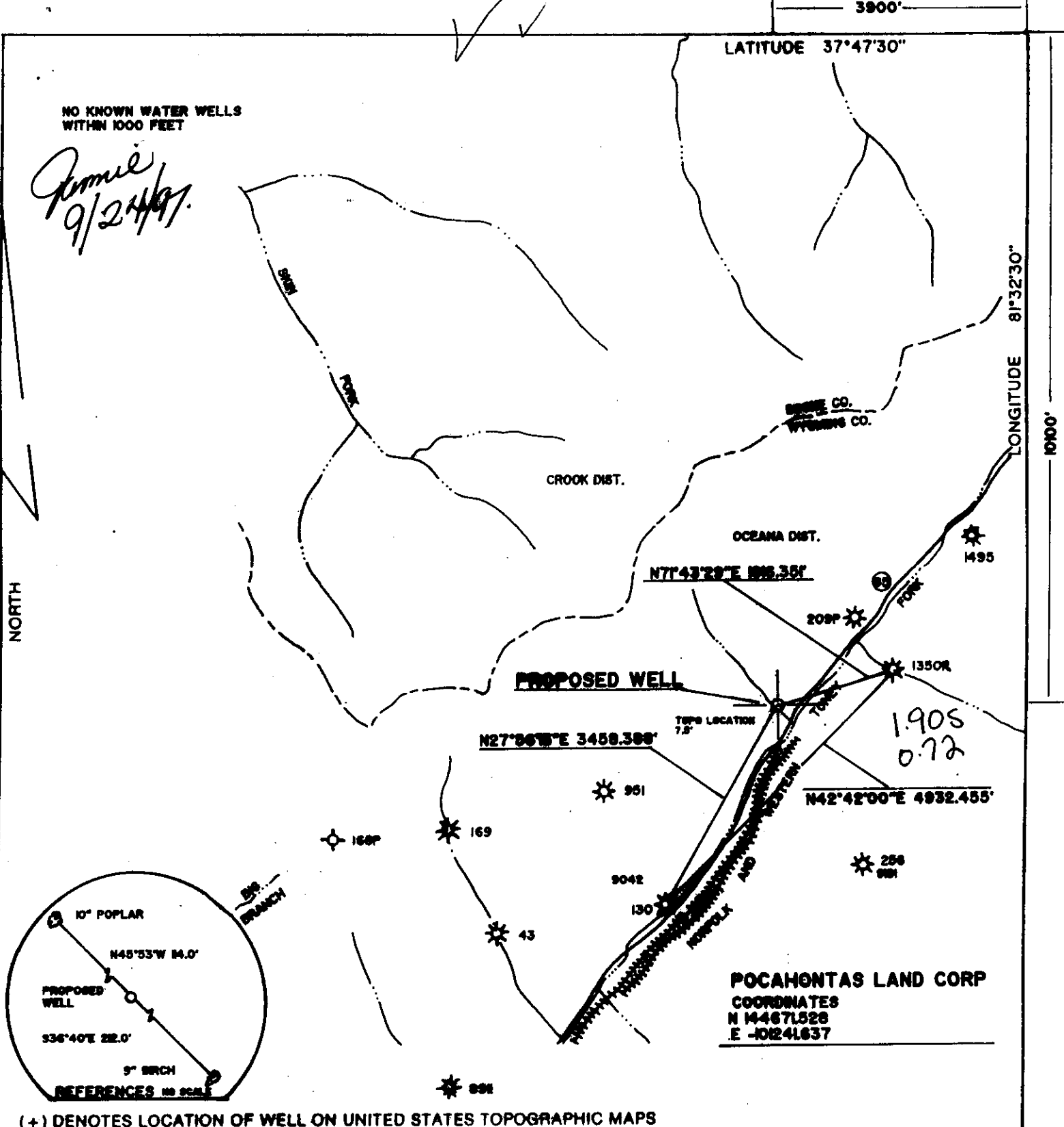
NO KNOWN WATER WELLS WITHIN 1000 FEET

*Annex  
9/24/97*

NORTH

LONGITUDE 81°32'18"

1000'



POCAHONTAS LAND CORP  
COORDINATES  
N 144671528  
E -10241637

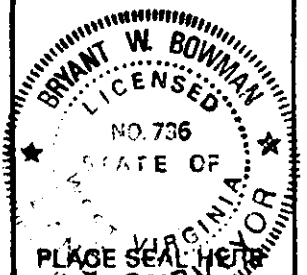
1.905  
0.72

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1:2000  
 MINIMUM DEGREE OF ACCURACY 1:2500  
 PROVEN SOURCE OF ELEVATION COPPER PLUG IN ROCK  
 NE OF LOCATION ELEVATION 2783.5

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. \_\_\_\_\_ L.L.S. 736



WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 #10 McJUNKIN ROAD  
 NITDQ WEST VIRGINIA 25142-2506



DATE 03-15  
 OPERATOR'S WELL NO. 276-67R2  
 API WELL NO. 47-109-01673C  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 1983.32 WATERSHED UT OF TONEY FORK  
 DISTRICT OCEANA COUNTY WYOMING  
 QUADRANGLE PILOT KNOB 7.5'

SURFACE OWNER POCAHONTAS LAND CORPORATION ACREAGE 29500±  
 OIL & GAS ROYALTY OWNER POCAHONTAS LAND CORPORATION LEASE ACREAGE 29500±  
 LEASE NO. \_\_\_\_\_

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 Lt. Raleigh, Berkey, Pm 3 ESTIMATED DEPTH 1050.06  
 WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT DANA BLACKSHIRE  
 ADDRESS 999 EXECUTIVE PARK BLVD, SUITE 300 ADDRESS PO BOX 460

OCT 1<sup>st</sup> 1997

COUNTY NAME PERMIT

WR-35

12-801  
API # 47-109-01673 C

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

Well Operator's Report of Well Work

Farm name: POCAHONTAS LAND CORP Operator Well No.: 27C-87-R-2

LOCATION: Elevation: 1,983.32 Quadrangle: PILOT KNOB

District: OCEANA County: WYOMING  
Latitude: 10100 Feet South of 37 Deg. 47Min. 30 Sec.  
Longitude 3900 Feet West of 81 Deg. 32 Min. 30 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: 09/26/97  
Well work Commenced: 10/14/97  
Well work Completed: 01/22/98  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary x Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 1750'  
Fresh water depths (ft) 1/2" stream  
at 130'.  
Salt water depths (ft) \_\_\_\_\_

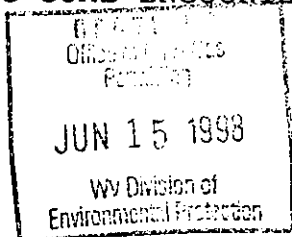
Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13 3/8"	35'	35'	--
9 5/8"	220'	220'	94
4 1/2"	1724'	1724'	586

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

OPEN FLOW DATA

Poca 4 coals, L Fire Creek sand,  
Producing formation Poca 6, Beckley coals Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ 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 5 Hours  
Static rock Pressure 280 psig (surface pressure) after 312 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: 6/17/98

JUN 22 1998

WV 1073 C

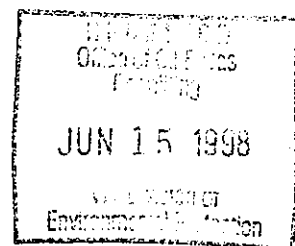
FORM WR-35R  
(REVERSE)

PERMIT #: 47-109-01673-C  
WELL#: 27C-87R2

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC

- Stage 1 Perforated the Poca 4 coal from 1640' - 1642' with 4 holes. Breakdown with 500 gallons of 7.5% HCL acid and water. Treated with 68 barrels of water, 3900 lbs 12/20 sand and 142,000 SCF of N2.  
ATR: 15 BPM ATP: 2695 psi ISIP: 2100 psi
- Stage 2 Perforated the Lower Fire Creek sand from 1474' - 1476' with 3 holes, 1486' - 1490' with 5 holes and 1497' - 1499' with 3 holes, and the Poca 6 coal from 1510' - 1512' with 3 holes. Breakdown with 750 gallons of 7.5% HCL acid and water. Treated with 156 barrels water, 24,700 lbs 20/40 sand and 215,000 SCF of N2.  
ATR: 30 BPM ATP: 2650 psi ISIP: 2325 psi
- Stage 3 Perforated the Beckley coal from 1412' - 1417' with 5 holes. Breakdown with 500 gallons of 7.5% HCL acid and water. Treated with 193 barrels of water, 8600 lbs 12/20 sand and 271,000 SCF of N2.  
ATR: 17 BPM ATP: 2655 psi ISIP: 1840 psi

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Sand	0	152	
Coal	152	155	
Sand	155	192	
Coal	192	195	
Sand	195	270	
Sand, Shale & Coal	270	610	Coals @ 310-312, 342-344, 411-413, 454-460
Sand	610	830	
Sand & Shale	830	1000	
Sand	1000	1240	
Shale	1240	1274	
Sand	1274	1370	
Shale	1370	1380	
Sand	1380	1413	
Beckley Coal	1413	1415	
Shale	1415	1430	
L Fire Creek Sand	1430	1500	
Shale	1500	1510	
Poca 6 Coal	1510	1511	
Sand & Shale	1511	1635	
Poca 4 Coal	1635	1636	
Sand & Shale	1636	1752	Gas check @ TD - 83 MCF



SEP 10 1997

109-1673-C

FORM WW-2B

Page 1 of 1

Permitting 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 <sup>3604</sup> 37358 (C) 547
- 2) Operator's Well Number: 27C-87R2 3) Elevation: 1983.32'
- 4) Well type: (a) Oil  / or Gas  /  
(b) If Gas: Production  / Underground Storage  /  
Deep  / Shallow  /  
*Issued 09/26/97  
Expires 09/26/99  
990*
- Proposed Target Formation(s): Little Raleigh, Beckley & Poca 3 Coals
- Proposed Total Depth: 1850 feet
- Approximate fresh water strata depths: 60, 650, 1200
- Approximate salt water depths: N/A
- 9) Approximate coal seam depths: 60, 130, 320, 350, 390, to be treated 1190, 1370, 1650
- 10) Does land contain coal seams tributary to active mine? Yes  / No  /
- 11) Proposed Well Work: Drill & Complete a CBM well in the coals listed above
- 12)

**CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS			CEMENT Fill-up (cu. ft.)
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						38 CSR 18 1/2
Fresh Water	9 5/8	L.S.	26	200	200	65
Coal						38 CSR 18 1/2
Intermediate						
Production	4 1/2	M-65	9.5	1850	1850	190
Tubing						38 CSR 18 1/2
Liners						

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

For Office of Oil and Gas Use Only

10/25/00

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

RECEIVED  
WV Division of  
Environmental Protection  
SEP 1 1996

1) Date: 03-15-96  
2) Operator's well number  
27C-87R2  
3) API Well No: 47 - 109 - 1673-C  
State County Permit

Permitting  
Office of Oil & Gas  
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:
- (a) Name Pocahontas Land Corporation  
Address PO Box 1517  
Bluefield, WV 24701
  - (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator:
- Name Eastern Associated Coal Corp.  
Address 800 Laidley Tower  
Charleston, WV 25324
  - (b) Coal Owner(s) with Declaration  
Name Pocahontas Land Corporation  
Address PO Box 1517  
Bluefield, WV 24701
  - Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Mr. Ofie Helmick  
Address PO Box 398  
Brenton, WV 24818  
Telephone (304)-732-9135
- (c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_

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  
 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)  
 Certified Mail (Postmarked postal receipt attached)  
 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: C. M. Randolph  
 Its: Vice President  
 Address 999 Executive Park Blvd., Suite 300  
Kingsport, TN 37660  
 Telephone 1-800-774-4645

Subscribed and sworn before me this 8th day of September, 1997  
Kita Sulson Notary Public  
 My commission expires 2-13-99