



NO KNOWN WATER WELLS WITHIN 1000'

FILE NO. _____ DRAWING NO. _____ SCALE 1"=1000' MINIMUM DEGREE OF ACCURACY 1:5000 PROVEN SOURCE OF ELEVATION <u>COPPER PLUG IN ROCK BY RT. 85 ELEVATION 2783.54</u>	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) <u>Bryant W. Bowman</u> R. P. E. _____ L. L. S. <u>736</u>	
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV-6 WEST VIRGINIA (8-78) DIVISION OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS #10 McJUNKIN ROAD NITRO, WEST VIRGINIA 25143-2506

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

LOCATION: ELEVATION 3162 WATER SHED POND FORK DISTRICT CROOK COUNTY BOONE QUADRANGLE PILOT KNOB, WV 7.5'

SURFACE OWNER POCAHONTAS LAND CORPORATION ACREAGE 29500± 6-6 247  
 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 Ravencliff, Big Lime, Gordon ESTIMATED DEPTH 5100'

WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT MR. HARRY JEWEL  
 ADDRESS 999 EXECUTIVE PARK BLYD. SUITE 300 ADDRESS PO BOX 460  
KINGSPORT, TN 37660 RAVENCLIFF, WV 25913

DATE AUGUST 10, 19 98  
 OPERATOR'S WELL NO. LC-201  
 API WELL NO. 47-005-01690  
 STATE COUNTY PERMIT

SEP 28 1998

Boo 1690

WR-35

25-Sep-98  
API # 47- 5-01690

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

Well Operator's Report of Well Work

Farm name: POCAHONTAS LAND CORP. Operator Well No.: LC-201

LOCATION: Elevation: 3,162.00 Quadrangle: PILOT KNOB

District: CROOK County: BOONE  
Latitude: 14700 Feet South of 37 Deg. 50Min. 0 Sec.  
Longitude 5000 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: HARRY JEWELL, III

Inspector: RICHARD CAMPBELL  
Permit Issued: 09/25/98  
Well work Commenced: 10/18/98  
Well work Completed: 11/26/98  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 3390'  
Fresh water depths (ft) 1/2" @ 731'.

Salt water depths (ft) \_\_\_\_\_

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): 380-383, 495-496,  
1013-1017, 1375-1380, 2419-2424.

Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13 3/8"	41'	41'	0
9 5/8"	1235'	1235'	419
7"	3073'	3073'	590
4 1/2"	3311'	3311'	89

OPEN FLOW DATA

Producing formation Ravencliff Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 622 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 425 psig (surface pressure) after 119 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: 5/21/99

MAY 23 1999

WV Division of  
Environmental Protection

JUN 14 1999

Boo 1690

FORM WR-35R  
(REVERSE)

PERMIT #: 47-005-01690  
WELL#: LC 201

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC

Stage 1    Ravencliff    Perforated from 3208' to 3212' with 9 holes and from 3216' to 3221' with 11 holes.  
Breakdown with 250 gallons of 15% HCL acid and N2. Treated with 157 bbls of gelled  
water, 46,700 lbs of 20/40 sand and 416,500 SCF of N2.  
ATR: 20 BPM                      ATP: 1650 psi                      ISIP: 1850 psi

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Sand & Shale	0	700	
Shale	700	760	
Sand & Shale	760	1190	
Shale	1190	1270	
Sand & Shale	1270	1340	
Shale	1340	1450	
Sand	1450	1490	
Shale	1490	1570	
Sand & Shale	1570	1820	
Sand	1820	1970	
Shale	1970	2090	
Sand & Shale	2090	2180	
Sand	2180	2420	
Shale	2420	2470	
Sand	2470	2570	
Sand & Shale	2570	2850	
Shale	2850	2980	
Sand	2980	3090	
Shale	3090	3183	
Ravencliff Sand	3183	3224	
Shale	3224	3251	
Avis Limestone	3251	3286	
Shale	3286	3398	

Gas check @ TD - 270 MCF