

**COORDINATES**  
 262379.197  
 181°997.766  
 WV SOUTH  
 NAD 27

NORTH

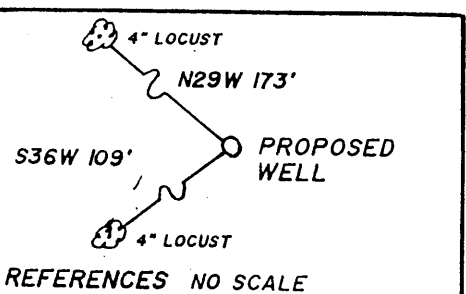
**POCAHONTAS LAND CORPORATION**

**PROPOSED WELL**

2.13S  
 .06W

TOPO LOCATION 7.5'

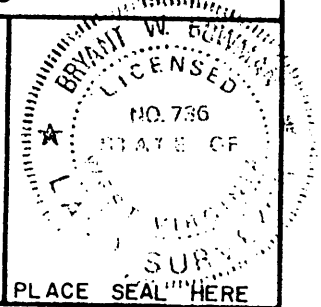
**NO KNOWN WATER WELLS WITHIN 2000'**



REFERENCES NO SCALE

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1"=2000'  
 MINIMUM DEGREE OF ACCURACY 1/10000  
 PROVEN SOURCE OF ELEVATION MONUMENT 181-21-1  
 ELEVATION 2212.52

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) *Raymond L. Bowman*  
 R. P. E. \_\_\_\_\_ L. L. S. 736



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHY  
 State of West Virginia  
 FORM IV - Division of Environmental Protection  
 (8-78) Office of Oil & Gas  
 #10 McJunkin Road  
 Nitro, WV 25143



Division of Environmental Protection  
 Office of Oil & Gas

DATE FEBRUARY 29 2000  
 OPERATOR'S WELL NO. LC-91R2  
 API WELL NO. 47-109-01882  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_\_\_ GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS", PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_)  
 LOCATION: ELEVATION 2056 WATER SHED DRY BRANCH OF CLEAR FORK  
 DISTRICT OCEANA COUNTY WYOMING  
 QUADRANGLE 181-21-1 & OCEANA 7.5'

SURFACE OWNER POCAHONTAS LAND CORPORATION ACREAGE 29500±  
 OIL & GAS ROYALTY OWNER POCAHONTAS LAND CORPORATION LEASE ACREAGE 29500±  
 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) \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 TARGET FORMATION Ray. Big Lime, Berea ESTIMATED DEPTH 4400'  
 WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT MR. HARRY JEWEL  
 ADDRESS PO BOX 387 DUFFIELD, VA 24244-0387 ADDRESS PO BOX 460 RAVENCLIFF, WV 25913

WYO 1882

WR-35

DATE: 6/27/00  
API #: 47-109-01882

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

Well Operator's Report of Well Work

Farm name: Pocahontas Land Operator Well No.: LC-91R2

LOCATION: Elevation: 2056' Quadrangle: Oceana 7.5

District: Oceana County: Wyoming  
Latitude 1200 Feet South of 37 Deg. 45 Min. 00 Sec.  
Longitude 300 Feet West of 81 Deg. 37 Min. 30 Sec.

Company:

Penn Virginia Oil & Gas Corporation

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 387	13 3/8"	33'	33'	0
Duffield, VA 24244	7"	1776'	1776'	385
Agent: Harry Jewell	4 1/2"	4171'	4171'	380
Inspector: Ofie Helmick				
Date Permit Issued: 03/29/00				
Date Well Work Commenced: 04/06/00				
Date Well Work Completed: 5/1/00				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 4211'				
Fresh Water Depth (ft.): 20'				
Salt Water Depth (ft.): None Reported				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): <u>See Reverse Side</u>				

RECEIVED  
Office of Oil & Gas  
Permitting  
JUL 03 2000  
WV Division of  
Environmental Protection

OPEN FLOW DATA

Producing formation Ravencliff, Big Lime, Berea Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 6203 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 400 psig (surface pressure) after 48 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.

Signed:

By: William M Ryan  
Date: 6/28/00

WYO  
1882

AUG 11 2000

FORM WR-35R  
(REVERSE)

PERMIT #: 47-109-01882  
WELL #: LC-91R2

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC.

Stage 1      Berea      Perforated from 4096' to 4104' with 16 holes. Breakdown with 500 gallons 15% HCL acid and water. Treated with 205 bbls water, 41200 lbs 20/40 sand and 354000 SCF N2. ISIP: 1380 psi. ATP: 1282 psi. ATR: 20 BPM.

Stage 2      Big Lime      Perforated from 3422' to 3432' with 20 holes, 3440' to 3443' with 6 holes and 3500' to 3506' with 12 holes. Breakdown with 500 gallons 15% HCL acid and N2. Treated with 2500 gallons 15% HCL acid and 219000 SCF N2. ISIP: 1410 psi. ATP: 1680 psi. ATR: 20 BPM

Stage 3      Ravencliff      Perforated from 2392' to 2402' with 30 holes. Breakdown with 500 gallons 15% HCL acid and N2. Treated with 223 bbls water, 43000 lbs 20/40 sand and 288000 SCF N2. ISIP: 2275 psi. ATP: 2259 psi. ATR: 20 BPM.

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Sand, Shale, & Coal	0	1713	Coals @ 450-53, 532-34
Sand & Shale	1713	2270	705-08, 1706-13
Shale	2270	2310	
Sand & Shale	2310	2372	
Ravencliff Sand	2372	2409	
Avi's Limestone	2409	2449	
Shale	2449	2510	Gas checks @ 2450-odor
Sand	2510	2574	
Shale & Red Rock	2574	2968	
Sand	2968	3036	
Little Lime	3036	3120	
Shale & Lime	3120	3146	
Big Lime	3146	3520	Gas checks @ 3254-1200 MCF
Shale	3520	4076	Gas checks @ 3655-760 MCF
Berea	4076	4107	Gas checks @ 4116-1075 MCF
Shale	4107	4211	Gas checks @ TD 760 MCF