

COORDINATES  
284396.685  
1848321291  
WV SOUTH  
NAD 27

7150'

LATITUDE 37°47'30"

1191

1610

1626

1666

1173

POCAHONTAS  
LAND  
CORPORATION 1672

RALEIGH  
COUNTY  
MARSH FORK  
DISTRICT

LONGITUDE 81°30'00"

4325'

85

99

1172

A. N67°25'46"E 2074.579'  
B. S75°24'42"E 1973.432'  
C. S85°31'40"W 3837.178'

NORTH

BOONE COUNTY  
CROOK  
DISTRICT

WYOMING  
COUNTY  
OCEANA  
DISTRICT

COPPER  
PLUG  
IN ROCK

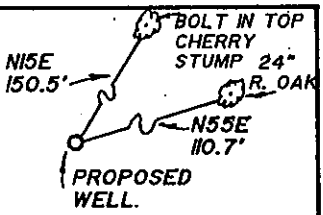
PROPOSED  
WELL

1643

1356

253

1434



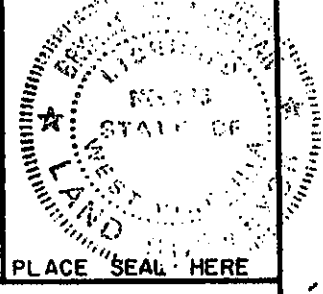
REFERENCES NO SCALE

45 3792.4  
41 81 330.5

NO KNOWN WATER WELLS  
WITHIN 1500'

FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1"=2000'  
MINIMUM DEGREE OF  
ACCURACY 1/5000  
PROVEN SOURCE OF  
ELEVATION COPPER PLUG IN ROCK  
ELEVATION 2783.54

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) Bryan D. Bowman  
R.P.E. \_\_\_\_\_ L.L.S. 736



(+) DENOTES LOCATION OF  
WELL ON UNITED STATES  
TOPOGRAPHIC MAPS  
FORM IV-6  
(8-78)



DATE APRIL 29, 20 01  
OPERATOR'S WELL NO. LC-202  
API WELL NO. \_\_\_\_\_  
47 - 109 - 020610  
STATE COUNTY PERMIT

Division of Environmental Protection  
Office of Oil & Gas

WELL TYPE: OIL \_\_\_\_\_ GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
(IF "GAS", PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_  
LOCATION: ELEVATION 3455 WATER SHED TONEY FORK & CRANE FORK  
DISTRICT OCEANA COUNTY WYOMING  
QUADRANGLE PILOT KNOB, WV 7.5'  
SURFACE OWNER POCAHONTAS LAND CORPORATION ACREAGE 29500±  
OIL & GAS ROYALTY OWNER PENN VIRGINIA OIL & GAS 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 \_\_\_\_\_ ESTIMATED DEPTH 3800  
WELL OPERATOR PENN VIRGINIA OIL & GAS CORP DESIGNATED AGENT MR. HARRY JEWEL  
ADDRESS PO BOX 387 ADDRESS PO BOX 460  
DUFFIELD, VA 24244-0387 RAVENCLIFF, WV 25913

JUL 13 2001

Charleston, WV

6-6 248

WYO 2001

CHARLESTON BLUEPRINT 092941

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

*AB*

Well Operator's Report of Well Work

Farm Name Pocahontas Land Corporation

Operator Well No.: LC-202C

LOCATION Elevation: 3455

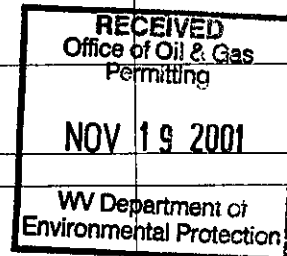
Quadrangle: Pilot Knob 7 1/2'

District: Oceana County: Wyoming  
Latitude: 4325 Feet South of 37 Deg. 47 Min. 30 Sec.  
Longitude: 7150 Feet West of 81 Deg. 30 Min. 00 Sec.

Company:

Penn Virginia Oil & Gas Corporation

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 387	13 3/8" "	28'	28'	0
Duffield, VA 24244	9 5/8"	1482'	1482'	395
Agent: Harry Jewell	7"	2394'	2394'	445
Inspector: Ofie Helmick	4 1/2"	3728'	3728'	190
Date Permit Issued: 07/10/2001				
Date Well Work Commenced: 07/21/2001				
Date Well Work Completed: 10/04/2001				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 3,784				
Fresh Water Depth (ft):				
Damp @ 80'				
Salt Water Depth (ft):				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft): 186'-189', 242'-244', 1392'-1397', 1831'-1833', 1937'-1940'				



OPEN FLOW DATA

Producing formation Beckley Coal & Ravencliff Sand Pay zone depth (ft) \_\_\_\_\_  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow Not Taken MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests: \_\_\_\_\_ Hours  
 Static rock pressure Not Taken 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 CHANE, TEC. 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: 11/16/01

NOV 30 2001

WYO 2061 C

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

PERFORATIONS AND FRACTURING

Stage 1 - Ravenclyff-Perforated from 3528' to 3536' with 16 holes. Broke down with 500 gallons 15% HLC acid and water. Treated with 174 bbls water, 44000 lbs 20/40 sand and 386000 SCF N2. ISIP: 2990 psi. ATP: 2658 psi. ATR: 20 BPM

Stage 2 - Beckley Coal-Perforated from 2970' to 2973' with 12 holes. Broke down with water. Treated with 350 bbls water and 11800 lbs 20/40 sand. ISIP: 650 psi. ATP: 1332 psi. ATR: 20 BPM

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Sand, shale, & coal	0	1940	
Shale	1940	2030	
Sand	2030	2295	
Sand & shale	2295	2466	
Sand	2466	2686	
Shale & coal	2686	2706	
Shale	2706	2752	
Sand	2752	2875	
Sand & shale	2875	2971	
Beckley coal	2971	2973	
Sand	2973	3016	
Poca 6 coal	3016	3018	
Sand & shale	3018	3338	
Shale	3338	3458	
Sand and shale	3458	3514	
Ravenclyff sand	3514	3539	
Avise limestone	3539	3574	
Shale	3574	3620	
Sand	3620	3674	
Shale	3674	3784	