

BEN HUR-7 1/2'  
SUR. EL. - 1640' GR.

API Well No. 45 - 105 - 20628  
State County Permit

Date: February 20, 19 85

Operator's Well No. 104

LE-137

VIRGINIA OIL AND GAS CONSERVATION COMMISSION  
Virginia Oil and Gas Inspector  
Department of Labor and Industry  
Oil and Gas Section  
205 West Main Street  
Abingdon, Virginia 24210  
Phone 703-628-8115



NOTICE OF COMPLETION OF A JURISDICTIONAL WELL

Pursuant to Regulation 2.02 of the Regulations under the Virginia Oil and Gas Act, applicable to "each jurisdictional well completed or recompleted...in a pay zone deeper than 3,000 feet from the surface", the undersigned well operator hereby notifies the Commission of the completion of the referenced well, as completion is defined in Regulation 1.02(4), on November 2, 19 84, in Jonesville District, Lee County, Virginia, as follows:

- The completion was to perform all those acts which resulted in the well being capable of producing oil or gas.
- The well proved to be incapable of commercial production, and was plugged and abandoned.

The undersigned will also file with the Inspector a Report of Completion of Well Work (Form 18) within the time period provided in Regulation 4.06(a).

Other well operators, if any, who have an interest in the well have been mailed a copy of this Notice. The names and addresses of such other operators are typed below.

N/A

APPLICANT: Penn Virginia Resources Corporation

By [Signature]  
Its Vice-President - Exploration

Address: P.O. Box 386 Duffield, VA 24244

Telephone: 703-431-2831

API Well No. 45 - 105 - 20628  
State County Permit

Date: February 20, 1985

Operator's  
Well No. 104

VIRGINIA OIL AND GAS INSPECTOR  
DEPARTMENT OF LABOR AND INDUSTRY  
OIL AND GAS SECTION  
205 W. Main Street  
Abingdon, Virginia 24210  
Phone 703 628-8115

REPORT OF COMPLETION OF WELL WORK

Pursuant to Regulation 4.06 of the Regulations under the Virginia Oil and Gas Act, the undersigned well operator reports completion of the type(s) of well work specified below on the referenced well in Jonesville District, Lee County, Virginia on 2nd day, November Month, 19 84.

WELL TYPE: Oil  / Gas  / Enhanced recovery  / Waste disposal  /  
If "Gas", Production  / Underground storage  /

Exempt by Code § 45.1-300.B.1 from general oil and gas conservation law: Yes  / No  /

WELL WORK: Drill  / Deepen  / Redrill  / Stimulate  /  
Plug off old formation  / Perforate new formation  /  
Plug  / Replug  /  
Other physical change in well (specify) \_\_\_\_\_

The well work was done as shown in the Appendix(es) applicable to the type(s) of well work involved.

CONFIDENTIALITY STATUS UNDER CODE OF VIRGINIA § 45.1-332:

Ninety days from the filing of this report,

or

Two years from \_\_\_\_\_, 19\_\_\_\_, the date on which the referenced well was completed, the well being an exploratory well as defined in Code of Virginia § 45.1-288.21.

APPLICANT: Penn Virginia Resources Corporation

By [Signature]  
Its Vice-President - Exploration

Address: P.O. Box 386, Duffield, VA 24244

Telephone: 703-431-2831

FORM 16  
APPENDIX A,  
SHEET 1, (OBVERSE)

API WELL NO. 45 - 105 - 20628  
State County Permit  
Date: February 20, 1985  
Operator's Well  
Name Castle Daugherty 104

REPORT OF COMPLETION OF WELL WORK  
IF DRILLING, REDRILLING, OR DEEPENING IS INVOLVED

DRILLING CONTRACTOR Falcon Drilling Corporation  
ADDRESS Sissonville, West Virginia  
TELEPHONE 304-988-3003

GEOLOGICAL TARGET FORMATION Trenton Limestone  
DEPTH OF COMPLETED WELL 2657 FEET  
DATE DRILLING COMMENCED 10-4-83  
DATE DRILLING COMPLETED 10-23-83  
DRILLING RIG: ROTARY X / CABLE TOOL \_\_\_\_\_ /

GEOLOGICAL DATA      Depth      Thickness  
                            Top      Bottom

Fresh Water      268'      2" stream

Salt water      N/A

Coal Seams      N/A

MINING IN AREA  
Name      Yes      No      Mined      Out  
N/A      .

Oil      2037'      Formation  
                            2646'      Trenton Limestone  
  Trenton Limestone

Gas      2037'      Formation  
                            2646'      Trenton Limestone  
  Trenton Limestone

below:      The data on depth of strata is based on the source(s) checked

\_\_\_\_ Applicant's own drilling experience in the area  
\_\_\_\_ Information supplied by the coal operator in the area  
\_\_\_\_ Information already in possession of the Inspector  
X Other (as follows) Wire line logs, drillers' logs

OTHER GENERAL INFORMATION

An electric log survey was \_\_\_/ was not x/ conducted pursuant to Code of Virginia § 45.1-333.B.2, at the coal owner's or operator's request.

An electric log survey was x/ was not \_\_\_/ run for other purposes. This survey did \_\_\_/ did not x/ disclose the vertical location of a coal seam.

Note: If a coal seam was located, the part of the survey from the surface through the coal is attached in accordance with Code of Virginia § 45.1-333.B.3.

Deviation surveys were \_\_\_/ were not x/ required under Code of Virginia § 45.1-333.C "to the bottom of the lowest published coal seam depth".

Note: If deviation surveys were required, the survey results are attached.

A continuous survey was \_\_\_/ was not x/ required under Code of Virginia § 45.1-333.C.

Note: If a continuous directional survey was required, the survey results are attached.

CHANGES IN THE PERMITTED WELL WORK

The well operator did x/ did not \_\_\_/ make any change(s) in the permitted well work, verbally approved by the Inspector or Assistant Inspector under Regulation 4.03 of the Regulations under the Virginia Oil and Gas Act, for the purpose of insuring successful completion of the well work.

Note: The nature and purpose of each such change, if any, is set out below or on additional sheets if such are required.

Well was completed in the Trenton Limestone, rather than drilling to the Knox as originally permitted.

CASING AND TUBING PROGRAM

PRELIMINARY INFORMATION

Is the subject well underlaid by the red shales? Yes \_\_\_ / No X /  
 If "Yes", was a coal protection string set to the red shales? Yes \_\_\_ / No \_\_\_ / N/A

PROGRAM DETAILS

Size	Top	Bottom	Length	Perforated	
				From	To
<u>Conductor</u>					
13-3/8"	0'	81'	81'	-	-
<u>Casing circulated and cemented in to the surface:</u>					
7"	0'	797'	797'	-	-

Cemented with 135 sks

Coal protection casing set under the special rule of Code of Virginia § 45.1-334.B:

N/A

Other casing and tubing left in the well:

9-5/8"	0'	224'	224'	-	-
--------	----	------	------	---	---

Run because of lost circulation in cave. Cemented from surface with 10 sks  
Liners left in well, under Code of Virginia § 45.1-336 or otherwise:

N/A

Other casing used in drilling but not left in the well:

N/A

<u>Packers or bridge plugs:</u>	<u>Kind</u>	<u>Size</u>	<u>Set At</u>
	Bridge Plug	6 1/4"	1017' (drilled out)

REMARKS (SHUT DOWN DEPTHS, DATES; FISHING JOB DEPTHS, DATES; CAVING; ETC.)

SAMPLES AND CUTTINGS

will X / will not \_\_\_ / be available for examination by a member of the  
 Virginia Geological Survey;  
 will X / will not \_\_\_ / be furnished the Virginia Geological Survey upon  
 request;  
 will \_\_\_ / will not X / require sacks to be furnished by the Survey.

DRILLER'S LOGCompiled by William W. Kelly, Jr.

<u>Geologic Age</u>	<u>Formation</u>	<u>General Lithology</u>	<u>Color</u>	<u>Depth (feet)</u>		<u>Thickness</u>	<u>Remarks</u>
				<u>Top</u>	<u>Bottom</u>		
Cambrian	Copper Ridge Maynardville	Dolomite Limestone	Tan	0'	609'	609'	Overthrust
Pine Mountain Fault Zone				609'	615'	6'	
Silurian	Hancock	Dolomite	Tan	615'	675'	60'	
	Clinton	Shale	Gray, Red	675'	1007'	332'	
	Clinch Hagan	Sandstone Shale	White Gray	1007' 1149'	1149' 1197'	142' 48'	
Ordovician (Upper)	Sequatchie	Calcareous Siltstone	Green, Red	1197'	1525'	328'	
	Reedsville	Shale & Limestone	Dk-Med Gray	1525'	1920'	395'	
Ordovician (Middle)	Trenton	Limestone	Med- Gray- Tan	1920'	2650'	730'	Oil Pay @ 2037' Oil Pay @ 2646'
	Eggleston	Limestone	Tan	2650'	2657' T.D.	7'	

(Complete on supplemental sheets as necessary.)

APPENDIX TO REPORT OF COMPLETION OF WELL WORK  
ON A WELL DRILLED IN SEARCH OF OIL OR GAS

DISCOVERY OF OIL OR INDICATIONS THEREOF

Indicated potential flow before stimulation 60 BOD  
Gravity and grade: @ 44 gravity

DISCOVERY OF GAS OR INDICATIONS THEREOF

Indicated potential flow before stimulation N/A MCFD  
Rock pressure: N/A psig N/A hour test

RECORD OF STIMULATION

Full description of stimulation:

Zone 1: Trenton Formation  
Attempted open hole treatment @ 2037' with 2000 gal. 15% Hcl. Acid came around packer and circulated -- no results  
Perforated N/A # Perfs. N/A Perf. Size N/A  
Breakdown 250 psig. Avg. Injection 250 psig.  
Avg. I.R. 2.5 BPM Init. S.I.P. 0 psig 15 Min. S.I.P. 0 psig

Zone 2: Trenton Formation  
Open hole shot 2617' - 47' with 120 quarts liquid nitroglycerine  
Perforated N/A # Perfs. N/A Perf. Size N/A  
Breakdown N/A psig. Avg. Injection N/A psig.  
Avg. I.R. N/A BPM Init. S.I.P. N/A psig 15 Min. S.I.P. N/A psig

Zone 3: \_\_\_\_\_ Formation  
Perforated \_\_\_\_\_ # Perfs. \_\_\_\_\_ Perf. Size \_\_\_\_\_  
Breakdown \_\_\_\_\_ psig. Avg. Injection \_\_\_\_\_ psig.  
Avg. I.R. \_\_\_\_\_ BPM Init. S.I.P. \_\_\_\_\_ psig 15 Min. S.I.P. \_\_\_\_\_ psig

Final production ( ) natural (X) after stimulation

	BOD	MCFD	Hours Tested	Rock Pressure	Hours Tested
Zone 1:	<u>0</u>	<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>
Zone 2:	<u>1</u>	<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>
Zone 3:	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

Final production if gas zones are comingled: N/A MCFD  
N/A hours tested: N/A psig. N/A hours tested

Oil zone at 2037' filled hole with 1000' of oil when drilled then exhausted itself. Zone at 2646' filled hole and produced @ 60 BOPD for a few days before declining to a small amount. Attempts to increase both zones by stimulation failed. Settled production only about 1 BOPD after cleanup.

7-09-82)

(FOR OFFICE USE ONLY: API Well No. 45 - 105 - 20628  
State County Permit

Date: \_\_\_\_\_, 19\_\_

Operator's Well No. 104

VIRGINIA OIL AND GAS INSPECTOR  
DEPARTMENT OF LABOR AND INDUSTRY  
DIVISION OF MINES  
219 Wood Avenue  
Big Stone Gap, Virginia 24219-1799  
Phone 703-523-0335

LE-137

Longitude

9106

WELL PLAT

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000. Latitude and longitude lines are represented by border lines as shown.

This plat is new X / updated \_\_\_ /

This plat is \_\_\_ / is not X / based on a mine coordinate system established for the areas of the well location.

Well operator CONTROLLED RESOURCES OIL & GAS

Address P.O. Box 43, Duffield, VA

Farm CASTLE DAUGHERTY

Tract \_\_\_\_\_ Acres 184 Lease No. \_\_\_\_\_

Elevation 1640.00

Quadrangle BEN HUR

County LEE District JONESVILLE

Registered Engineer \_\_\_\_\_ Registration No. \_\_\_\_\_

Certified Land Surveyor \_\_\_\_\_ Cert. No. \_\_\_\_\_

File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

Date \_\_\_\_\_ Scale 1" = 400'

Certification of Well Plat

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 of the Virginia Well Review Board.

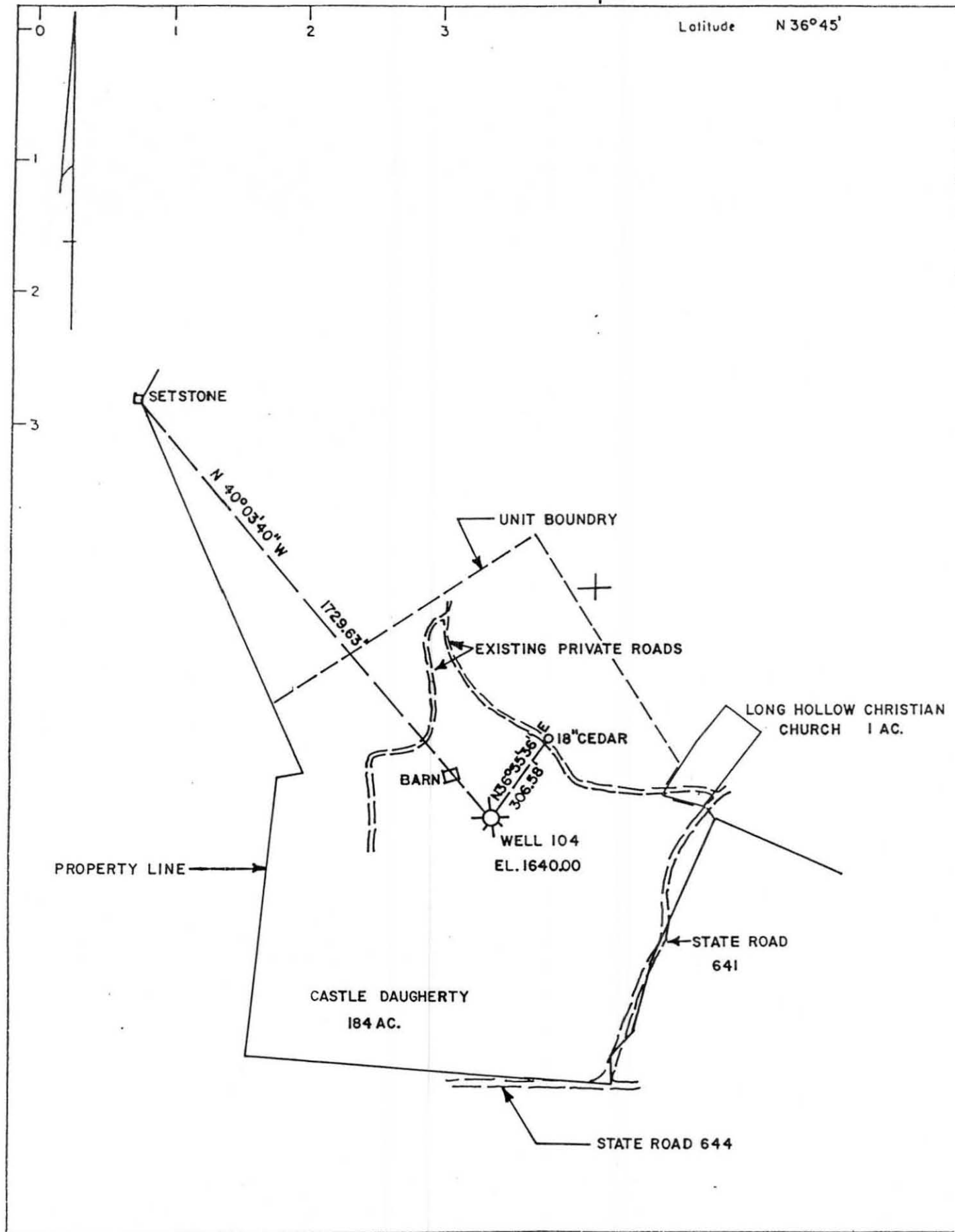
*John J. Gemback* #11439  
Registered Engineer or Certified Land Surveyor  
in Charge

STIAN



6100'

Latitude N 36°45'



LE-137