

OIL AND GAS WELL
SUMMARY REPORT

API No. 45-051-20816-00-03 VDMR Well Rep. No. _____
DMQ File No. DI-244

Operator PHILADELPHIA OIL COMPANY
Farm A. A. SKEEN
Co. Well No. P-191

County DICKENSON Quadrangle NORA 7 1/2'
Location (UTM) N4,106,800; E383,400 UTM Zone 17
(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2295.44' GR. TD 6462 Form. at TD DEVONIAN SHALE

INITIAL FLOW 67,000 CU. FT. Age DEVONIAN

Date compl. or abandoned NOVEMBER 11, 1985

Result GAS WELL

Gas Shows _____

Gas Pays 5559': 6463

Main Production _____ Prod. Form. DEVONIAN: BEREA: BIG LIME

FINAL FLOW ON 400,000 CU. FT. Age DEVONIAN: MISSISSIPPIAN

Treatment: DEVONIAN SHALE-FRACED WITH 75 QUALITY FOAM, 60,000 POUNDS OF SAND, 1,200,000 SCF OF N2, 406 BARRELS OF FLUID. BEREA-FRACED WITH 75 QUALITY FOAM USING 60,000 POUNDS OF SAND, 770,000 SCF OF N2, 406 BARRELS FLUID. BIG LIME-ACIDIZED WITH 3700 GALLONS OF 15% HCL AND 75,000 SCF OF N2.

Initial Production _____

Oil shows _____

Water FW YES at 90' at _____ at _____
SW _____ at _____ at _____ at _____

Coal 325' TO 328'; 355' TO 357'; 376' TO 379'; 511' TO 513'; 720' TO 723'; 857' TO 860'; 1080' TO 1084'; 1343' TO 1346'; 1630' TO 1634'; 1950' TO 1955'; 2145' TO 2147'

Plat _____ Plotted _____ Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____
Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

<u>Formation</u>	<u>Top</u>	<u>Datum (Subsea)</u>	<u>Thickness</u>
SAND AND SHALE	0	+ 2295.44	2954
RAVENCLIFF	2954	- 658.56	158
LITTLE STONE GAP	3112	- 816.56	70
SHALE	3182	- 886.56	298
MAXON	3480	-1184.56	373
SHALE	3853	-1557.56	150
LITTLE LIME	4003	-1707.56	57
LIME AND SHALE	4060	-1764.56	72
BIG LIME	4132	-1836.56	544
KEENER	4676	-2380.56	44
WEIR	4720	-2424.56	519
COFFEE SHALE	5239	-2943.56	61
Remarks BEREA	5300	-3004.56	84
BROWN SHALE	5384	-3088.56	926
WHITE SLATE	6310	-4014.56	152

References

Released to Open File: Completion APRIL 10, 1986Samples NO

(Note: UTM measurements in meters, all others in feet)

DT 244

API WELL NO. 45 - 051 - 20816

State County Permit

Date: January 2, 1986

Operator's Well

Name A. A. Skeen, No. P-191

VIRGINIA OIL AND GAS INSPECTOR
205 W. MAIN STREET
ABINGDON, VA 24210
703-628-3115

PHILADELPHIA OIL CO.
A.A. SKEEN
P 191
SUR. EL. - 2295.44'
NDRA 7 1/2'

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 Ervinton District, Dickenson County, Virginia on 11 day, November month, 19 85.

WELL TYPE: Oil ___/ Gas X/ Enhanced recovery ___/ waste Disposal ___/ If "Gas", Production X/ Underground Storage ___/

Exempt by Code Section 45.1-300.B.1. from general oil and gas conservation law: yes ___/ no ___/

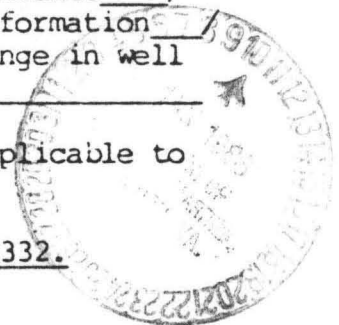
WELL WORK: Drill x/ Deepen ___/ Redrill ___/ Stimulate ___/ Plug off old formation ___/ Perforate new formation ___/ Plug ___/ Replug ___/ Other physical change in well (specify ___)

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 SECTION 45.1-332.

X 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 Section 45.1-288.21.



APPLICANT: Philadelphia Oil Company
BY Brint Camp
ITS District Geologist
ADDRESS 1101 N. Eastman Road, Kingsport, TN 37664
TELEPHONE 615-246-4332

CASING AND TUBING PROGRAM

PRELIMINARY INFORMATION

Is the subject well underlaid by the red shales? Yes x/ No ___/
If Yes, was a coal protection string set to the red shales? Yes x/ No ___/

	SIZE	TOP	BOTTOM	LENGTH	PERFORATIONS	
					FROM	TO
<u>CONDUCTOR:</u>	11-3/4"		23'			
<u>CASING CIRCULATED AND CEMENTED IN TO SURFACE:</u>	8-5/8"		2476'			
<u>COAL PROTECTION CASING SET UNDER SPECIAL RULE OF CODE OF VIRGINIA 45.1-334.B:</u>						
	4-1/2"		6440'		6133-6305	
					5306-5377	
<u>OTHER CASING AND TUBING LEFT IN WELL;</u>	2-3/8"		6204		4566-4622	

LINERS LEFT IN WELL UNDER CODE OF VIRGINIA SECTION 45.1-336 OR OTHERWISE:

<u>PACKERS OR BRIDGE PLUGS:</u>	<u>KIND</u>	<u>SIZE</u>	<u>SET AT</u>
	Larkin-Tension	4-1/2" X 2-3/8"	4825

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 DIVISION OF MINERAL RESOURCES
 WILL x WILL NOT ___ BE FURNISHED THE VIRGINIA DIVISION OF MINERAL RESOURCES UPON REQUEST
 WILL ___ WILL NOT x REQUIRE SACKS TO BE FURNISHED BY THE VIRGINIA DIVISION OF MINERAL RESOURCES.

Form 16
Appendix A, Sheet 1 (Reverse)
Continued from Obverse side

OTHER GENERAL INFORMATION

An electric log survey was ___/ was not ___/ conducted pursuant to Code of Virginia Section 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 Section 45.1-333.B.3.

Deviation surveys were X/ were not ___/ required under Code of Virginia Section 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 Section 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 ___/ did not X/ 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.

DRILLER'S LOG - P-191

Compiled by Brint Camp

Geolo- gical Age	Formation	General Lithology	Color	Depth (feet)		Thickness	Remarks
				Top	Bottom		
	Sand & Shale			0	2954	2954	
	Ravencliff			2954	3112	158	
	Little Stone			3112	3182	70	
	Shale			3182	3480	298	
	Maxon Sands			3480	3853	373	
	Shale			3853	4003	150	
	Little Lime			4003	4060	57	
	Lime and Shale			4060	4132	72	
	Big Lime			4132	4676	544	
	Keener			4676	4720	44	
	Weir			4720	5239	519	
	Coffee Shale			5239	5300	61	
	Berea			5300	5384	84	
	Brown Shale			5384	6310	926	
	White Slate			6310	6462	152	
	Logger's T.D.			6462			

Complete on supplemental sheet 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 _____ BOD
Gravity and grade: _____

DISCOVERY OF GAS OR INDICATIONS THEREOF

Indicated potential flow before stimulation 67 MCFD
Rock pressure: N/A psig _____ hour test

RECORD OF STIMULATION

Full description of stimulation:

Zone 1: Brown Shale Formation LHumer
_____ was fraced with a 750 foam using 60,000# sand, 1,200,000 scfN₂
and 406 Bbl. fluid
Perforated 6133-6305 # Perfs. 21 Perf. Size .4
Breakdown 3100 psig. Avg. Injection 3200 psig.
Avg. I.R. 9 BPM Init. S.I.P. 2200 psig 15 Min. S.I.P. _____ psig

Zone 2: Berea Formation
_____ was fraced with a 750 foam using 60,000# sand, 770,000 scfN₂
and 406 Bbl. fluid
Perforated 5306-5377 # Perfs. 18 Perf. Size .4
Breakdown 1900 psig. Avg. Injection 2150 psig.
Avg. I.R. 8 BPM Init. S.I.P. 1800 psig 15 Min. S.I.P. _____ psig

Zone 3: Big Lime Formation
_____ was acidized with 3700 gal. 15% HCL and 75,000 scfN₂
Perforated 4566-4622 # Perfs. 10 Perf. Size .4
Breakdown 1500 psig. Avg. Injection 1200 psig.
Avg. I.R. 10 BPM Init. S.I.P. 0 psig 15 Min. S.I.P. _____ psig

Final production () natural () after stimulation

	BOD	MCFD	Hours Tested	Rock Pressure	Hours Tested
Zone 1:	_____	_____	_____	Co-Mingled	_____
Zone 2:	_____	_____	_____	Co-Mingled	_____
Zone 3:	_____	<u>119</u>	<u>7</u>	<u>700#</u>	<u>48</u>

Final production if gas zones are comingled: 400 MCFD

7 hours tested: 700 psig. 48 hours tested

DIRECTIONAL SURVEY

P-191

<u>Depth</u>	<u>Degrees</u>
206'	1°
419'	3/4°
610'	1°
794'	1/2°
982'	1°
1200'	1°
1418'	1°
1637'	1/2°
1885'	1-1/4°
2068'	1/2°
2257'	1°

(FOR OFFICE USE ONLY: API Well No. 45 - -
State County Pa

Date: July 2 / , 1985

Operator's Well No. P-191 DF-244

VIRGINIA OIL AND GAS INSPECTOR
DEPARTMENT OF LABOR AND INDUSTRY
DIVISION OF MINES
OIL AND GAS SECTION
205 W. MAIN STREET
ABINGDON, VIRGINIA 24210
PHONE 703 628-8115



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

Well operator Philadelphia Oil Company
1101 N. Eastman Road
Address Kingsport, TN. 37664
Farm A. A. Skeen
Tract T-401 Acres 101.19 Lease No. PO-148
Elevation 2295.44'
Quadrangle Nora, VA.
County Dickenson District Ervinton
Registered Engineer Registration No.
Certified Land Surveyor Cert. No.
File No. Drawing No.
Date 7-2-1985 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.

Luther Adkins, Jr. Va. #871
Registered Engineer or Certified Land Surveyor
in Charge

5980'

Latitude 37° 07' 30"

8370'
Longitude: 82° 17' 30"

LS. PO-148 (LT-377)
W. B. STRAS
459.42 AC.
Rocky Top Dev, Inc. OR
CLINCHFIELD COAL CO. SURFACE & COAL

LS PO-148 (LT-401)
A. A. SKEEN
101.19 AC.

LOC. P. 191
N. 769.1297
E. 20779.5576

