# OIL AND GAS WELL SUMMARY REPORT

API No. 45-051-20815-00-03	Rep. No.
	DMQ File No. DI-245
Operator PHILADELPHIA OIL COMPANY	A MERCHANIA
Farm J. M. COLLEY	AND TO SERVICE AND ADDRESS OF THE PROPERTY OF
Co. Well No. P-197	
County DICKENSON	Quadrangle NORA - 75'
Location (UTM) N4,107,070; E381,950	UTM Zone 17
(Lat. and Long.)	The address of the second of t
Field .	Province APPALACHIAN PLATEAU
Elev. (specify) 1818.7' GR TD 605	Form. at TD CORNIFEROUS
INITIAL FLOW - 40,000 CU. FT.	Age DEVONIAN
Date compl. or abandoned DECEMBER 2, 1	985
Result GAS WELL	
Gas Shows	The state of the s
Gas Pays	and the state of t
Main Production	Prod. Form. BEREA; DEVONIAN
FINAL FLOW - ESTIMATED 1,489,000 CU.FT.	Age MISSISSIPPIAN; DEVONIAN
40,000 POUNDS OF SAND, AND 795,000 SCF O	JE INZ •
Oil shows	4. 美国的
Water FW <u>YES</u> at <u>881</u> at	at
SWatat	at
Coal 201-203; 208-212; 243-245; 6a47-650;	
2032-2034 Plat Plotted Comple	etion Report X
Orillers Log X Geologic Log	
Samples Interval Sheet	the state of the control of the cont
Sample Interval	
Remarks .	
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Geophysical Logs S.P Res	Gamma Neutron
Remarks Res Res Other	Gamma Neutron
Geophysical Logs S.P Res	Gamma Neutron

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F	ormation.	Top.	(Subsea)		Thickness
TOP	GREENBŔIER	3845	_ 2017		
BASE	GREENBRIER	4264	2836	graf di est se celera pe sego e magnispo di la liga cidade	and the second s
SUNB	URY~	4614	- 2986		
BERE	A	4928	3100		
DEVO	NIAN SHALE	5025	= 3197		The second secon
CORN	IFEROUS	5896	_ 4068		manager 110th 12th
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FORM 16

API WELL NO. 45 - 051 - 20815
State County Permit
Date: lanuary 2, 1986
Operator's Well
Name J. M. Colley, No. P-197

VIRGINIA OIL AND GAS INSPECTOR 205 W. MAIN STREET ABINGDON, VA 24210 703-628-3115 PHICADELPHIA OIL CO, J.M. COLLEY P-197 SUR. EL, -1918, 40' NORA 712'

### 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 <a href="Ervinton">Ervinton</a> District, <a href="Dickenson">Dickenson</a> County, Virginia on <a href="2">2 day, <a href="December">December</a> month, <a href="month">19 85</a>.</a>
WELL TYPE: Oil / Gas _ X / Enhanced recovery / Waste  Disposal / If "Gas", Production _ X / Underground  Storage /  Exempt by Code Section 45.1-300.B.l. 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 / 156789)
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 45.1232.  X Ninety days from the filing of this report  OR  Two years from, 19, the date on which the date of the content
referenced well was <u>COMPLETED</u> , 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 Rd., Kingsport,	TN	37664
TELEPHONE	615/246-4332		

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  $\chi$  / was not \_\_\_ / run for other purposes. This survey did \_\_ / did not \_\_  $\chi$  / 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  $\chi$  / 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  $\chi$  / 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.

FORM 16
APPENDIX A,
SHEET 1, (OBVERSE)

API WELL NO. 45 - 051 - 20815
State County Permit
Date: lanuary 2, 1986
Operator's Well
Name J. M. Colley, No. P-197

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

	*	
DRILLING CONTRACTOR	Union Drilling	
ADDRESS	P. O. Drawer 40, Buckhannon, V	v. Va. 24201
TELEPHONE	304/472-4610	
GEOLOGICAL TARGET FORM	ATION Brown Shale	
DEPTH OF COMPLETED WELL		
DATE DRILLING COMMENCE	D 10-15-85	**
DATE DRILLING COMPLETE	D10-28-85	
DRILLING RIG: ROTARY_	X CABLE TOOL	
	epth Thickness Bottom	
Fresh Water 88'		
00		
Salt water		
	Name Yes [ No 208-212, 243-245, 647-650, 1109-1112, , 1560-1563, 2032-2034	] Mined Out
Oil	Formation	
Gas	Formation	
965	TOTAL CLOSE	
The data on	depth of strata is based on the so	urce(s) checked
below:	utto and deilling ourselones in the	
Intorma	nt's own drilling experience in the tion supplied by the coal operator tion already in possession of the I	in the area
	as follows)	in peccor

Form 16 Appendix A, Sheet 2 (Obverse) API NO. 45- 057 20815

#### CASING AND TUBING PROGRAM

#### PRELIMINARY INFORMATION

Is the subject well underlaid by the red shales? Yes $_{X}$ / No $_{Z}$ / If Yes, was a coal protection string set to the red shales? Yes $_{X}$ / No $_{Z}$ /

	SIZE	TOP	BOTTOM	PERFORATIONS LENGTH FROM TO	
CONDUCTOR:	11-3/4"		221		
CASING CIRCULATED AND CEMENTED IN TO SURFACE:	8-5/8"		2151'		
COAL PROTECTION CASING SET UNDER SPECIAL RULE OF CODE OF VIRGINIA 45.1-334.B:			*		
OTHER CASING AND TUBING LEFT IN WELL;	4-1/2"		6017'	4932 - 5020 5728 - 5894	
LINERS LEFT IN WELL UNDER CODE OF VIRGINIA SECTION 45.1-336 OR OTHERWISE:	2-3/8"		5800'		

PACKERS OR BRIDGE PLUGS: KIND SIZE SET AT

Larkin-Tension 4-1/2" X 2-3/8" 5202

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

#### SAMPLES AND CUTTINGS

WILL X	WILI.	NO1,	BE AVAILABLE FOR EXAMINATION BY A MEMBER OF THE
			VIRGINIA DIVISION OF MINERAL RESOURCES
WILL X	WILL	NOI.	BE FURNISHED THE VIRGINIA DIVISION OF MINERAL
			RESOURCES UPON REQUEST
<b>^ILL</b>	WILL	NOI, X	REQUIRE SACKS TO BE FURNISHED BY THE VIRGINIA
			DIVISION OF MINERAL RESOURCES.

FORM 16 Appendix A, Sheet 2 (Reverse)

## DRILLER'S LOG P-197

Campiled	by	Brint	Camp				
Geolo- gocal		General		Dent	h (feet)	`	
-	Formation		Color			mh i alan a a a	Domewico
Age	Formation	Lithology	Color	Top	Bottom	Thickness	Renarks
	Sand & Shale			0	2592	2592	
	Ravencliff		_	2592	2720	128	
	Little Stone	Gap		2720	2792	72	
	Shale		-	2792	2860	60	
	Maxon Sands			2860	3493	6330	
	Shale		-	3493	3646	152	
	Little Lime			3646	3700	54	
	Lime and Sha	le		3700	3845	115	
	Big Lime			3845	4264	110	
	Keener			4264	4352	700	
	Weir		-	4352	4854	502	
	Coffee Shale			4854	4928	300	
	Berea			4928	5032	101	
	Brown Shale		-	5032	5898	104	
						866	
	White Slate		_	5898	6053	155	
	Logger's T. [	J.		6053			

## 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 BC Gravity and grade:	)D
DISCOVERY OF GAS OR INDICATIONS THEREOF	
Indicated potential flow before stimulation 40 MCF Rock pressure: N/A psig hour test RECORD OF STIMULATION	יסי
Full description of stimulation:  Zone 1: Berea Formation  was stimulated with a 75 Q foam using 393 Bbl. fluid.  945,000 scfN. and 59,000# sand  Perforated 2 4932-5020 # Perfs. 18 Perf. Size 4  Breakdown 1880 psig. Avg. Injection 2180 psig.  Avg. I.R.10 BPM Init. S.I.P.2080psig 15 Min. S.I.P. psig	
Zone 2: Brown Shale Formation Lymnwas stimulated with a 75 Q foam using 350 Bbl. fluid,  40,000# sand and 795,000 scfN2  Perforated 5728-5894 # Perfs. 21 Perf. Size 4  Breakdown 3500 psig. Avg. Injection 2900 psig.  Avg.I.R. 9 BPM Init. S.I.P.1800 psig 15 Min. S.I.P. psi	ig
Zone 3:Formation	
Perforated# PerfsPerf. Size Breakdownpsig. Avg. Injectionpsig. Avg.1.RBPM Init. S.I.Ppsig 15 Min. S.I.Ppsi Final production ( ) natural (X) after stimulation	g
BOD MCFD Tested Pressure Tested Zone 1: - 1320 7 500 48	
2one 2: - 169 7 785 48	
Zaie 3:	
Final production if gas zones are comingled:MCFU	

# DIRECTIONAL SURVEY

# P-197

Depth	Degrees
201' 415' 599' 818' 1005' 1224' 1318' 1412'	1/16° 1/2° 1/2° 1-1/2° 1-1/2° 2-1/2° 2-1/2° 2-1/4° 1/2°
1599' 1818' 2004'	1/4° 1/2°

(FOR OFFICE APL ell No. 45 - County Pe

Date: July 16 / . 19 85

Operator's Well No.

P-197

DI-245

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 newX / 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 Kingsport, TN. 37664 Address J. M. Colley T-18 Acres 647.88 Lease No. PO-148 Elevation 1818.40' Quadrangle Nora, VA. County Dickenson District Ervinton Registered Engineer Registration No. Cert. No. Certified Land Surveyor File No. Drawing No. 7-16-1985 Scale 1"=400' Date

#### 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.

Fully adjacer of Certified Land Survey in Charge