

OIL AND GAS WELL
SUMMARY REPORT

API No. 45-051-20270-00-03 VDMR Well
Rep. No. _____
DMQ File No. DI-148

Operator PHILADELPHIA OIL COMPANY

Farm LETCHER MULLINS

Co. Well No. P-68

County DICKENSON Quadrangle COEBURN - 7-1/2'

Location (UTM) N 4,094,360; E 374,720 UTM Zone 17

(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS

Elev. (specify) 2713.31' GR. TD 6026' Form. at TD DEVONIAN SHALE

INITIAL FLOW - Age DEVONIAN

Date compl. or abandoned DECEMBER 27, 1977

Result GAS WELL

Gas Shows 4992' to 5000'; 5193' to 5197'; 5840' to 5846'; 5875' to 5878'; 5884' to 5890'

Gas Pays 5155' to 5173'; 5828' to 5834'; 5855' to 5864'; 5900' to 5909'

Main Production 5828' to 5909' Prod. Form. BIG LIME AND BEREA

Age MISSISSIPPIAN

Treatment: WELL WATER FRACTURED IN THE BEREA FORMATION WITH 72,000 POUNDS OF SAND, 1,000 BARRELS OF WATER 900 POUNDS OF GEL, AND 500 GALLONS OF MUD ACID. WATER FRACTURE WAS ATTEMPTED ON BIG LIME FORMATION BUT WAS UNSUCCESSFUL.

Initial Production _____

FINAL FLOW - 1,968,000 CU. FT.

Oil shows _____

Water FW X at 18' _____ at 45' _____ at 650'

SW _____ at _____ at _____ at _____

Coal 18' to 20'; 23' to 25'; 134' to 136'; 165' to 166'; 1031' to 1038'; 1401' to 1404'

1679' to 1681'; 1939' to 1941'; 2298' to 2301'; 2623' to 2627'; 2755' to 2758'
Plat X Plotted X Completion Report X

Drillers Log X Geologic Log _____

Samples _____ Interval Sheet _____

Sample Interval _____

Remarks _____

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

Density _____ Sonic _____ Other _____

Stratigraphic Data Source _____

<u>Formation</u>	<u>Top</u>	<u>Datum (Subsea)</u>	<u>Thickness</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Remarks _____

References _____

Released to Open File: Completion MARCH 27, 1977
Samples NONE

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

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF LABOR AND INDUSTRY
DIVISION OF MINES AND QUARRIES
BIG STONE GAP, VIRGINIA 24219

NOTICE OF INTENTION TO (DRILL) (REDRILL) (DEEPEN) OIL OR GAS WELL

(One copy of this report and three identical copies of a plat or map, on a scale not smaller than 400 feet to the inch, and showing information required by Section 45.1-114, Code of Virginia, 1950, 1954 and the 1966 Cumulative Supplement, must be submitted to the Division of Mines and Quarries, and copies sent by registered mail to all persons defined in above law, prior to obtaining a permit to drill.)

TO: Division of Mines and Quarries
Drawer V
Big Stone Gap, Virginia 24219

Box 431
Prestonsburg, Kentucky 41653
Place

May 26, 1977
Date

Gentlemen:

The undersigned proposes to begin as soon as a permit therefor is obtained from the Division of Mines and Quarries, to drill, ~~redrill or deepen (strike out two)~~ a well for oil or gas on the Letcher Mullins Farm, comprising 70.0 acres, in the Ervinton District of Dickenson & Wise County, Virginia, having the fee title thereto, or as the case may be, under grant or lease dated August 1, 1974, made by Letcher Mullins & Opal Mullins to Philadelphia Oil Company and recorded on the 8th & 17 day of Nov. & Oct., 1974 in the office of the County Clerk for said County in Book 168 & 469 Page 105 & 306 *. The proposed location of the well, as shown on the attached plat or map, is about 1200 (feet/miles) North of Meade Chapel Church and about 2900 (feet/miles) Northwest of Edwards Cemetery in Dickenson & Wise Counties, respectively.

It is proposed to drill this well to a depth of about 5975 feet. Samples or cutting therefrom will ~~not~~ be available for examination by a member of the staff of the Virginia Geological Survey. Cuttings will ~~not~~ be furnished the Survey, upon request.

A plat or map, in triplicate, on a scale not smaller than 400 feet to the inch, showing the proposed location of the well and other information, required in Section 45.1-114, Code of Virginia, 1950, 1954 and the 1966 Cumulative Supplement is attached hereto. Copies of the plat and notice of intention to drill, redrill or deepen the aforementioned well have been sent to all interested persons as required by Section 45.1-114, above cited, as follows (list names and mail address of each. Use back of sheet if additional space is required):

1. Virginia Iron, Coal & Coke Company, Coeburn, Virginia 24230 (Coal Owner)
2. Ringley & Moncusco Coal Producers, Wise, Virginia 24293 (Coal Lessee)
3. _____
4. _____
5. _____
6. _____

Signature of ~~officer or certifying~~ party: Edward O. Ray
~~Name~~
Edward O. Ray
~~Name~~

Very truly yours,
PHILADELPHIA OIL COMPANY
Drilling Company or Operator
Box 431
Street Address
Prestonsburg, Kentucky 41653
City or Town and State

File DI-148 Date Received 5-27-77 Well No. P-68

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF LABOR AND INDUSTRY
DIVISION OF MINES AND QUARRIES
BIG STONE GAP, VIRGINIA 24219
PHONE 703-523-0335

APPLICATION FOR PERMIT TO (DRILL) (REDRILL) (DEEPEN) OIL OR GAS WELL

(Required by Section 45.1-115, Code of Virginia, 1950, 1954 and the 1966 Cumulative Supplement. To be accompanied by Permit fee of twenty-five dollars and bond and surety therefor, as specified by Section cited. To be submitted in duplicate, one copy to be returned to applicant after action by Division of Mines and Quarries.

TO: Division of Mines and Quarries
Drawer V
Big Stone Gap, Virginia 24219

Box 431
Prestonsburg, Kentucky 41653

Place
May 26, 1977

Date

Gentlemen:

The undersigned hereby makes application for a Permit to drill, ~~redrill, or deepen (strike out two)~~ a well for oil or gas on the Letcher Mullins Farm, comprising 70.00 acres, in the Ervinton District of Dickenson County, Virginia, having the fee title thereto, or as the case may be, under grant or lease dated August 1, 1974 made by Letcher Mullins and Opal Mullins to Philadelphia Oil Company and recorded on the 8th & 17th day of Nov. & Oct., 1974 in the office of the County Clerk for the said County in Book 168 & 469 pages 105 & 306 in Dickenson & Wise Counties. The proposed location of the well is shown on a location plat or map submitted to the Division of Mines and Quarries, by the undersigned, together with Notice of Intention to Drill, Redrill or Deepen a Well for Oil or Gas on the 26th day of May 1977.

The proposed well will be known as Well No. P-68 of Philadelphia Oil Company (company, etc.) It is proposed to drill this well to a depth of about 5975 feet. The proposed location is about 520 feet distant from the nearest property or lease line; about 8400 feet distant from the nearest mining opening, ~~or quarry (strike out words not applicable)~~ and/or about 3100 feet distant from the nearest ~~drilling, abandoned, producing, or unperfected for (strike out words not applicable)~~ oil or gas ~~(strike out words not applicable)~~ well.

There is enclosed herewith a certified check or U.S. Postal Money Order, in the amount of twenty-five (\$25.), payable to the Treasurer of Virginia, covering fee for a Permit to Drill a Well for Oil or Gas, as required by Section 45.1-115, Code of Virginia, 1950, 1954 and the 1966 Cumulative Supplement. Bond and Surety therefor to insure compliance with the provisions of Chapter 8, Title 45, Code of Virginia, 1950 and the 1966 Supplement, for this well, in the amount of \$9,600.00 is submitted herewith of (give status of) Blanket Bond covering P-52 to P-75 inclusive.

Correspondence regarding this well should be addressed to Mr. Edward O. Ray, Box 431
Prestonsburg, Kentucky 41653
Very truly yours,

Signature of ~~officer or certifying~~ party: Edward O. Ray
~~Name~~
Edward O. Ray
~~Title~~

PHILADELPHIA OIL COMPANY
Drilling Company or Operator
Box 431
Street
Prestonsburg
City or Town
Kentucky 41653
State

Space below this line is for the use of the Board only.
ACTION OF DIVISION OF MINES AND QUARRIES

Received on 5-27-, 1977.
Approved and Permit (no. 270) granted on 6-10-, 1977
Denied
Reasons for denial

DIVISION OF MINES AND QUARRIES
By W. Kelly, Jr. State Oil & Coal Dept.
Title
File No. DI-148 Well No. P-68 Permit No. 270

Coeburn

(To be filled in by Division of Mines)

COMMONWEALTH OF VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY DIVISION OF MINES BIG STONE GAP, VIRGINIA

(To be filled in by Division of Mines)

DICKENSON County

ERVINTON District

TOMS CREEK Map

DI-148 File

DEEPENED OIL AND GAS WELL COMPLETION REPORT ABANDONMENT

Well No. P-68

Permit No. 270

Office No.

Location Plat

(This report and a copy of electrical log, if made, must be submitted to the Division of Mines within 30 days after abandonment or completion of well, as required by Section 45-113, Code of Virginia, 1950.)

Company Philadelphia Oil Company

Address P. O. Box 313 Nora, Virginia 24272

Farm Letcher Mullins

Acres 70.00

County Dickenson

District Ervinton

Well No. (Company) P-68

Elevation (ground surface) 2713.31 ft.

Location: (Give direction and distance in feet or tenths of a mile from two (2) location reference points or map coordinates shown on location plat or map previously filed with the Division of Mines or shown on quadrangle topographic map of area.)

2830 feet East of 82° 25' and

4090 feet South of 37° 00'

Surface of tract is owned in fee simple by Letcher Mullins

Address Herald, Virginia

Mineral rights are owned by Letcher Mullins

Address Herald, Virginia

Location made by Mr. B. C. Spradlin

Drilling commenced 9-30-77 Drilling contractor Union Drilling Incorporated

Drilling completed 10-21-77 Address P. O. Drawer 40, Buckhannon, W.Va. 26201

Well completed as gas well on December 27, 1977

Well abandoned at feet on Reason

Well plugged on 19 Affidavit filed 19

Total depth 6026' (KB) feet. Steel line measurement feet.

Commenced producing on not connected to pipeline system, 19

Oil Well

Initial production, oil: 1st 24 hours bbls.; 2nd 24 hours bbls.

After shot on from feet to feet with lbs. qts.

After shot on from feet to feet with lbs. qts.

1st 24 hours bbls.; 2nd 24 hours bbls.

Settled production bbls. per day after producing days weeks

Gravity and grade of oil

Oil pays at (1) feet to feet. Oil shows at (1) feet to feet.

(2) feet to feet. (2) feet to feet.

(3) feet to feet. (3) feet to feet.

(4) feet to feet. (4) feet to feet.

Main production at feet to feet. (5) feet to feet.

Gas Well Gaged 80 /10ths. Water in 2 inch.

Initial open flow, gas: /10ths. Mercury in inch.

Volume 377 MCF cu. ft.

LOG

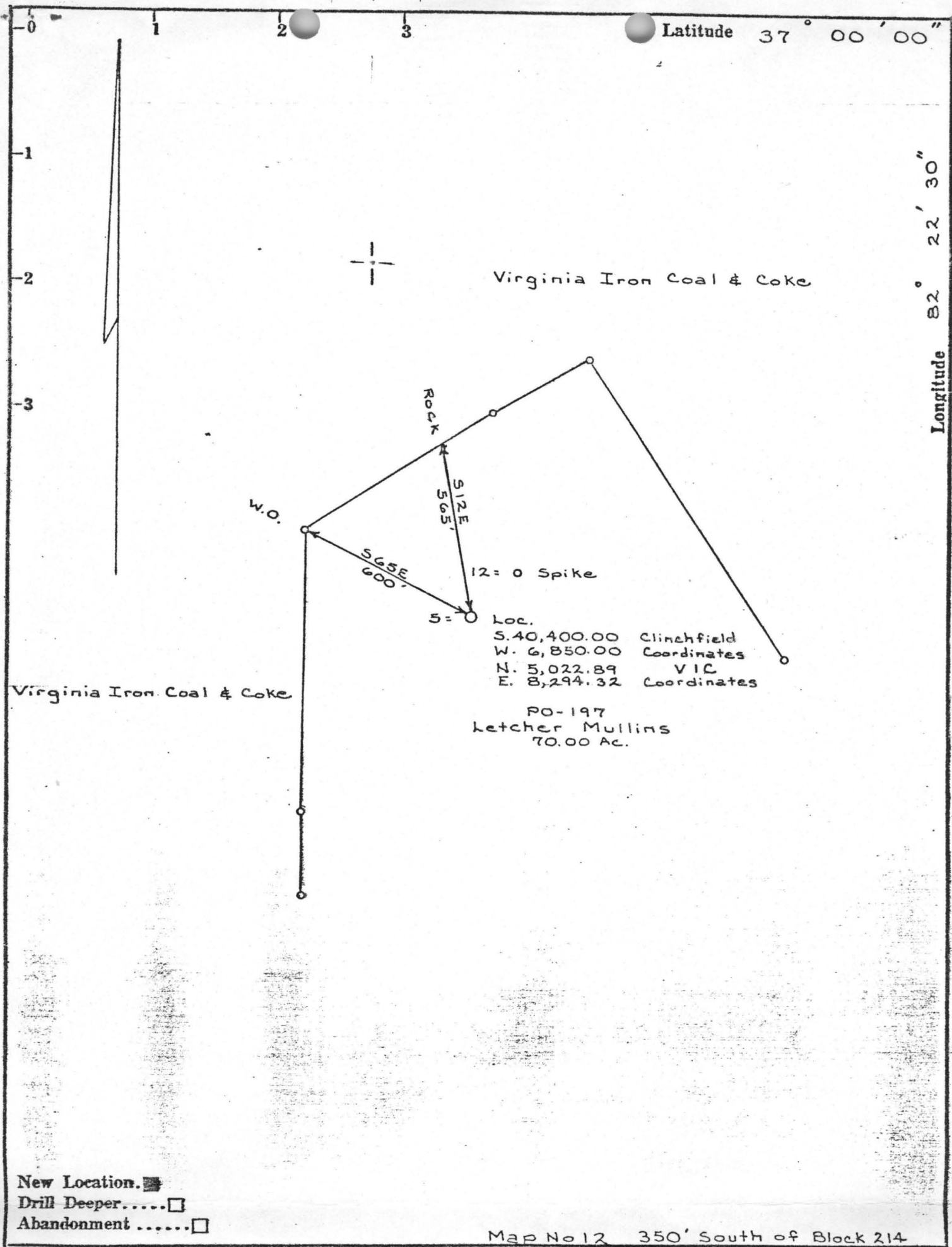
Furnished by M. Wallen Date 2-6-78

Compiled by M. Wallen Date 2-6-78

SAMPLE No.	FORMATION	COLOR	HARD OR SOFT	Top (feet)	BOTTOM (feet)	THICKNESS (feet)	REMARKS OIL, GAS, WATER DEPTHS SHUT DOWN FISHING, ETC.
	Soil			0	9	9	
	Shale			9	15	6	
	Sand			15	18	3	1" stream water @
	Coal			18	20	2	18'
	Sand			20	23	3	
	Coal			23	25	2	
	Sand			25	134	109	2" stream water
	Coal			134	136	2	@ 45'
	Shale			136	165	29	
	Coal			165	166	1	
	Sand			166	255	89	
	Sandy Shale			255	370	112	
	Sand			370	467	92	
	Sandy Shale			462	576	114	
	Shale			576	589	13	
	Sand			589	620	31	
	Sandy Shale			620	650	30	3" stream water @
	Open Mine			650	664	14	650'
	Shale			664	853	159	Open Mine @ 650'
	Sand			853	890	37	
	Shale			890	992	102	
	Sand			992	1029	37	
	Shale			1029	1031	2	
	Coal			1031	1038	7	
	Sand			1038	1080	42	
	Shale			1080	1120	40	
	Sand			1120	1187	67	
	Shale			1187	1268	81	
	Sand			1268	1318	50	
	Shale			1318	1401	83	
	Coal			1401	1404	3	
	Sand			1404	1466	62	
	Shale			1466	4192	26	
	Sand			1492	1500	8	
	Shale			1500	1633	133	
	Shale			1633	1679	46	
	Coal			1679	1681	2	
	Shale			1681	1699	181	
	Sand			1699	1798	99	
	Sandy Shale			1798	1816	18	
	Sand			1816	1939	123	
	Coal			1939	1941	2	
	Sandy Shale			1941	2165	224	
	Sand			2165	2298	138	
	Coal			2298	2301	3	
	Sand			2301	2359	58	
	Shale			2359	2483	124	
	Sandy Shale			2483	2623	140	

Shale	2359	2483	124
Sandy Shale	2483	2623	140
Coal	2623	26	4
Sandy Shale	2627	2670	43
Sand	2670	2755	85
Coal	2755	2758	3
Sandy Shale	2758	2890	132
Sand	2890	2945	55
Sandy Shale	2945	3070	125
Red Rock	3070	3093	23
Sand	3093	3190	97
Sandy Shale	3190	3250	60
Shale	3250	3510	260
Ravencliff	3510	3682	172
Sandy Shale	3682	3872	190
Maxon	3872	4030	158
Sand & Shale	4030	4075	45
2nd Maxon	4075	4215	140
Sandy Shale	4215	4380	165
3rd Maxon	4380	4446	66
Shale	4446	4510	64
Sandy Shale	4510	4628	118
Shale	4628	4690	62
Big Lime	4690	5230	540
Injun	5230	5298	68
Weir	5298	5810	512
Berea	5810	5939	129
Shale	5939	6026	87
Total Depth	6026		

/ NOTE: Driller's Log Adjusted to Electric Logs



New Location.
 Drill Deeper.....
 Abandonment.....

Map No 12 350' South of Block 214

Company Philadelphia Oil Company
 Address Nora, Va.
 Farm Letcher Mullins
 Tract Acres 70.00 Lease No. PO-197
 Well (Farm) No. _____ Serial No. P-68
 Elevation (Spirit Level) 2713.31'
 Quadrangle Toms Creek, Va.
 County Dickenson District Ervinton
 Engineer Edward Owen Ray
 Engineer's Registration No. 3084
 File No. _____ Drawing No. _____
 Date 5-4-77 Scale 1" = 400'

COMMONWEALTH OF VIRGINIA
 DEPARTMENT OF LABOR & INDUSTRY
 DIVISION OF MINES
 BIG STONE GAP

WELL LOCATION MAP

FILE NO. DT-148
 PERMIT NO. 270

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

— Denotes one inch spaces on border line of original tracing.

(To be filled in by Division of Mines)

COMMONWEALTH OF VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

(To be filled in by Division of Mines)

DICKENSON County

ERVINTON District

TOMS CREEK Map

DI-148 File

DIVISION OF MINES BIG STONE GAP, VIRGINIA DEEPEENED OIL AND GAS WELL COMPLETION REPORT ABANDONMENT

Well No. P-68

Permit No. 270

Office No.

Location Plat

(This report and a copy of electrical log, if made, must be submitted to the Division of Mines within 30 days after abandonment or completion of well, as required by Section 45-113, Code of Virginia, 1950.)

Company Philadelphia Oil Company Farm Letcher Mullins County Dickenson Well No. (Company) P-68

Address P. O. Box 313 Nora, Virginia 24272 Acres 70.00 District Ervinton Elevation (ground surface) 2713.31 ft.

Location: (Give direction and distance in feet or tenths of a mile from two (2) location reference points or map coordinates shown on location plat or map previously filed with the Division of Mines or shown on quadrangle topographic map of area.)

2830 feet East of 82° 25' and 4090 feet South of 37° 00'

Surface of tract is owned in fee simple by Letcher Mullins Herald, Virginia Mineral rights are owned by Letcher Mullins Herald, Virginia

Location made by Mr. B. C. Spradlin Drilling commenced 9-30-77 Drilling completed 10-21-77 Drilling contractor Union Drilling Incorporated Address P. O. Drawer 40, Buckhannon, W.Va. 26201

Well completed as gas well on December 27, 1977

Well abandoned at feet on Reason Well plugged on 19 Affidavit filed 19 Total depth 6026' (KB) feet. Steel line measurement feet. Commenced producing on not connected to pipeline system, 19

Oil Well Initial production, oil: 1st 24 hours bbls.; 2nd 24 hours bbls.

After shot on from feet to feet with lbs. qts. After shot on from feet to feet with lbs. qts.

1st 24 hours bbls.; 2nd 24 hours bbls. Settled production bbls. per day after producing weeks

Gravity and grade of oil Oil pays at (1) feet to feet. Oil shows at (1) feet to feet. (2) feet to feet. (2) feet to feet. (3) feet to feet. (3) feet to feet. (4) feet to feet. (4) feet to feet. Main production at feet to feet. (5) feet to feet.

Gas Well Gaged 80 /10ths. Water in 2 inch. Initial open flow, gas: Volume 377 MCF cu. ft. /10ths. Mercury in inch.

After shot on from feet to feet with lbs. qts. After shot on from feet to feet with lbs. qts.

1st 24 hours cu ft., 2nd 24 hours cu ft. Rock pressure: Initial lbs.; after hours lbs. Settled production cu. ft per day after producing weeks

Gas pays at (1) 5155 feet to 5173 feet. Gas shows at (1) 4992 feet to 5000 feet. (2) 5828 feet to 5834 feet. (2) 5193 feet to 5197 feet. (3) 5855 feet to 5864 feet. (3) 5840 feet to 5846 feet. (4) 5900 feet to 5909 feet. (4) 5875 feet to 5878 feet. Main production 5828 feet to 5909 feet. (5) 5884 feet to 5890 feet.

Fresh water at (1) 18 feet, 1" stream GPM; (2) 45 feet, 2" stream GPM; (3) 650 feet, 3" stream GPM. Salt water at (1) See log feet; (2) feet; (3) feet; (4) feet.

Coal: from See Log feet inches to feet inches; from feet inches to feet inches. Well acidized from feet to feet with (quantity) of acid.

Remarks: Well waterfractured in the Berea Sand with 72,000# sand, 1000 Bbls. water, 900# gel, 500 gals. Mud Acid. Water frac was attempted on the Big Lime formation but was unsuccessful. FINAL OPENFLOW: 1,968 BEREA # LIME

Table with columns: CASING AND TUBING (SIZE, USED IN DRILLING, LEFT IN WELL, PERFORATED) and PACKERS (KIND, SIZE, SET AT). Includes rows for 11 inch, 9 5/8 inch, 6 5/8 inch, 4 1/2 inch casing and 4 1/2 inch packers.

Casing Cemented: 9 5/8 inch from 685 feet to Surface Date October 7, 1977; 6 5/8 inch from 2961 feet to Surface Date October 11, 1977; 4 1/2 inch from 6014 feet to 4730' Date October 21, 1977

Remarks: (Shut down, depths, dates; fishing jobs, depths, dates; caving; other notes)

Samples or cuttings will be available for examination by a member of the Virginia Geological Survey (Yes) Will be furnished the Virginia Geological Survey upon request (Yes) if sacks for same are furnished by the Survey (Yes)

Electrical log made x or not made (check which.) Copy furnished herewith or will be submitted on or by previously submitted, 19 Depths Gamma-Density Temperature Philadelphia Oil Company P. O. Box 431 Prestonsburg, Kentucky 41653

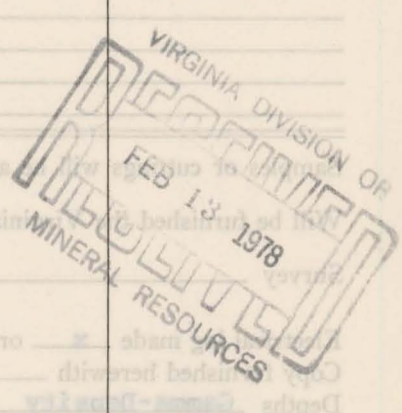
The operator requests that information given herein and log or log be kept confidential for a period of ninety days after completion of the well covered by this report (Yes)

LOG

Furnished by M. Wallen Date 2-6-78

Compiled by M. Wallen Date 2-6-78

SAMPLE No.	FORMATION	COLOR	HARD OR SOFT	TOP (feet)	BOTTOM (feet)	THICKNESS (feet)	REMARKS OIL, GAS, WATER DEPTHS SHUT DOWN FISHING, ETC.
	Soil			0	9	9	
	Shale			9	15	6	
	Sand			15	18	3	1" stream water @
	Coal			18	20	2	18'
	Sand			20	23	3	
	Coal			23	25	2	
	Sand			25	134	109	2" stream water
	Coal			134	136	2	@ 45'
	Shale			136	165	29	
	Coal			165	166	1	
	Sand			166	255	89	
	Sandy Shale			255	370	112	
	Sand			370	467	92	
	Sandy Shale			462	576	114	
	Shale			576	589	13	
	Sand			589	620	31	
	Sandy Shale			620	650	30	3" stream water @
	Open Mine			650	664	14	650'
	Shale			664	853	159	Open Mine @ 650'
	Sand			853	890	37	
	Shale			890	992	102	
	Sand			992	1029	37	
	Shale			1029	1031	2	
	Coal			1031	1038	7	
	Sand			1038	1080	42	
	Shale			1080	1120	40	
	Sand			1120	1187	67	
	Shale			1187	1268	81	
	Sand			1268	1318	50	
	Shale			1318	1401	83	
	Coal			1401	1404	3	
	Sand			1404	1466	62	
	Shale			1466	4192	26	
	Sand			1492	1500	8	
	Shale			1500	1633	133	
	Shale			1633	1679	46	
	Coal			1679	1681	2	
	Shale			1681	1699	181	
	Sand			1699	1798	99	
	Sandy Shale			1798	1816	18	
	Sand			1816	1939	123	
	Coal			1939	1941	2	
	Sandy Shale			1941	2165	224	
	Sand			2165	2298	138	
	Coal			2298	2301	3	
	Sand			2301	2359	58	
	Shale			2359	2483	124	
	Sandy Shale			2483	2623	140	
	Coal			2623	2627	4	
	Sandy Shale			2627	2670	43	
	Sand			2670	2755	85	
	Coal			2755	2758	3	
	Sandy Shale			2758	2890	132	
	Sand			2890	2945	55	
	Sandy Shale			2945	3070	125	
	Red Rock			3070	3093	23	
	Sand			3093	3190	97	
	Sandy Shale			3190	3250	60	
	Shale			3250	3510	260	
	Ravencriff			3510	3682	172	
	Sandy Shale			3682	3872	190	
	Maxon			3872	4030	158	
	Sand & Shale			4030	4075	45	
	2nd Maxon			4075	4215	140	
	Sandy Shale			4215	4380	165	
	3rd Maxon			4380	4446	66	
	Shale			4446	4510	64	
	Sandy Shale			4510	4628	118	
	Shale			4628	4690	62	
	Big Lime			4690	5230	540	
	Injun			5230	5298	68	
	Weir			5298	5810	512	
	Berea			5810	5939	129	
	Shale			5939	6026	87	
	Total Depth			6026			



THIS FORM MUST BE SIGNED BY AUTHORIZED PERSON:

B.W. Hagan

The operator requests that information given herein and log or logs be kept confidential for a period of ninety days after completion of the well covered by this report.