

(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 CLINTWOOD District CLINTWOOD QUAD. Map 01-107 File

DIVISION OF MINES

BIG STONE GAP, VIRGINIA

DEEPENED OIL AND GAS WELL COMPLETION REPORT ABANDONMENT

Well No. P-24 Permit No. 168 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 Farm Henry Keel Acres 174.79 County Dickenson District Clintwood Well No. (Company) P-24 Elevation (ground surface) 1960.79 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.)

feet of and miles miles of

Surface of tract is owned in fee simple by Clinchfield Coal Company Address Dante, Virginia Mineral rights are owned by Clinchfield Coal Company Address Dante, Virginia

Location made by Mr. B. C. Spradlin Drilling commenced September 2, 1974 Drilling contractor Union Drilling, Incorporated Drilling completed September 18, 1974 Address P. O. Drawer 40, Buckhannon, West Virginia

Well completed as gas well on November 15, 1974 Final open flow - 146 MCF - Shale

Well abandoned at feet on Reason Well plugged on 19 Affidavit filed 19 Total depth 5638 feet Steel line measurement feet Commenced producing on not connected to pipeline 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 12 /10ths. Water in 2 inch. Initial open flow, gas: Volume Show 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.

Rock pressure: Initial lbs.; after hours lbs. days
 Settled production cu. ft. per day after producing weeks

60 Hr. Rock Pressure - 4750 psig
 Gas pays at (1) feet to feet. Gas 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 feet to feet. (5) feet to feet.

Fresh water at (1) 112 feet, 75 GPM; (2) 149 feet, 100 GPM; (3) feet, GPM.
 Salt water at (1) feet; (2) feet; (3) feet; (4) feet.
 Coal: from 107 feet inches to 110 feet inches; from 267 feet inches to 269
 feet inches; from 408 feet inches, to 410 feet inches.

Well acidized from feet to feet with (quantity) of acid.
 from feet to feet with (quantity) of acid.
 from feet to feet with (quantity) of acid.
 Remarks: Sand fractured; 1468 bbls. water, 25,000# 20/40 sand, 18,000 10/20 sand, 500 gals. MA
 60 gals. F-52, 1,200 lbs. J-140.; Fracture Devonian Shale - perforated 4572-78 7 shots,
 5230 - 44, 8 shots, 5300-08, 5 shots, 5338-56, 10 shots. (See well log)

CASING AND TUBING				PACKERS		
SIZE	USED IN DRILLING	LEFT IN WELL	PERFORATED	KIND	SIZE	SET AT
(inch)	(feet)	(feet)	(feet) to (feet)			
13 3/8	49	49	hand cemented		NONE	
9 5/8	2059	2059	cemented to surface			
7	3560	4091	cemented			
4 1/2	5451	5451	Cemented 1451			
			4572-78 7 shots			
			5230-44 8 shots			
			5300-08 5 shots			
			5338-56 10 shots			
				LINERS		
SIZE	USED IN DRILLING	LEFT IN WELL	PERFORATED			
(inch)	(ft.)	(ft.)	(ft. to ft.)			
7	3560	491	None			

Casing Cemented: 13 3/8 inch. from 49 feet to surface feet. Date September 3, 1974
 9 5/8 inch. from 2059 feet to surface feet. Date September 10, 1974
 4 1/2 inch. from 5451 feet to 4000 feet. Date September 18, 1974

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) ~~(No)~~

Will be furnished the Virginia Geological Survey upon request (Yes) ~~(No)~~, if sacks for same are furnished by the Survey (Yes) ~~(No)~~

Electrical log made or not made (check which).
 Copy furnished herewith or will be submitted on or by as soon as available, 19.....

Depths Gamma Density Philadelphia Oil Company
 Temperature P. O. Box 431
 Prestonsburg, Kentucky 41653

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 (Yes) ~~(No)~~

Well No. P 29File No. DI-107Permit No. 168

LOG

Furnished by E. B. Jenkins Date 12-30-74Compiled by E. B. Jenkins Date 12-30-74

SAMPLE No.	FORMATION	COLOR	HARD OR SOFT	TOP (feet)	BOTTOM (feet)	THICKNESS (feet)	REMARKS OIL, GAS, WATER DEPTHS SHUT DOWN FISHING, ETC.
	Spoil Pile			0	49	49	
	Sand & Shale			49	107	58	
	Coal			107	110	3	
	Sand			110	267	157	
	Coal			267	269	2	
	Sand			269	330	61	
	Sand & Shale			330	408	78	
	Coal			408	410	2	
	Sand & Shale			410	735	325	
	Coal			735	740	5	
	Sand			740	776	36	
	Sandy Shale			776	800	24	
	Sand			800	905	105	
	Coal <i>jk</i>			905	910	5	
	Sand			910	966	56	
	Sand & Shale			966	1064	98	
	Coal			1064	1069	5	
	Sand			1069	1116	47	
	Sandy Shale			1116	1164	48	
	Sand			1164	1210	46	
	Sand & Shale			1210	1367	157	
	Sand			1367	1491	124	
	Coal			1491	1494	3	
	Sand			1494	1852	358	
	Coal			1852	1855	3	
	Sand			1855	1886	31	
	Sand & Shale			1886	1915	59	
	Coal			1915	1917	2	
	Sand			1917	1965	48	
	Sand & Shale			1965	2022	57	
	Sand			2022	2243	321	
	Sand			2243	2400	157	
	Red Rock			2400	2401	1	
	Sand & Shale			2401	2495	94	
	Red Rock			2495	2533	38	
	Sand & Shale			2533	2566	33	
	Shale			2566	2705	139	
	Sand			2705	2730	25	
	Shale			2730	2755	25	
	Sand			2755	2880	145	
	Sand & Shale			2880	2930	50	
	Sand			2930	3065	135	
	Sand & Shale			3065	3085	20	
	Sand			3085	3282	20	
	Sand & Shale			3282	3487	205	
	Little Lime			3487	3572	85	
	Sand & Shale			3572	3586	14	
	Big Lime			3586	4018	432	
	Injun Sand			4018	4090	72	
	Weir Shells			4090	4280	90	
	Shale			4280	4490	210	
	Coffee Shale			4290	4553	263	
	Berea			4553	4578	25	
	Berea Sand			4574	4579	4	
	Sand & Shale			4579	4640	61	
	Shale			4650	5614	964	
	Corniferous			5614	5634	20	
	Total Depth			5638			

NOTE: Driller's Log adjusted to Electric Log

VIRGINIA DIVISION OF

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MINERAL RESOURCES

OIL AND GAS WELL
SUMMARY REPORT

API No. 45-051-20168-00-03 VDMR Well
Rep. No. W-4807
DMQ File No. DI-107

Operator PHILADELPHIA OIL COMPANY
Farm HENRY KEEL
Co. Well No. P-24

County DICKENSON Quadrangle CLINTWOOD - 7-1/2'
Location (UTM) N 4,110,580; E 369,370 UTM Zone 17
(Lat. and Long.) _____

Field _____ Province APPALACHIAN PLATEAUS
Elev. (specify) 1960.79' GR. TD 5638' Form. at TD CORNIFEROUS
INITIAL FLOW - SHOW Age DEVONIAN

Date compl. or abandoned NOVEMBER 15, 1974
Result GAS WELL

Gas Shows _____
Gas Pays _____
Main Production _____ Prod. Form. _____
Age _____

Treatment: SAND FRACTURED; 1468 BARRELS OF WATER, 25,000 POUNDS OF 20/40 SAND, 18,000 POUNDS OF 10/20 SAND, 500 GALLONS OF MA; 60 GALLONS OF F-52, 1,200 POUNDS OF J-140. FRACTURED DEVONIAN SHALE; PERFORATED FROM 4572' to 4578' - 7 SHOTS; FROM 5230' to 5244' - 8 SHOTS; FROM 5300' to 5308' - 5 SHOTS; FROM 5338' to 5356' - 10 SHOTS.
Initial Production _____
FINAL FLOW - 146,000 CU. FT.

Oil shows _____
Water FW X at 112'; 75 GPM at 149'; 100 GPM at _____
SW _____ at _____ at _____ at _____
Coal 107' to 110'; 267' to 269'; 408' to 410'

Plat X Plotted X Completion Report X
Drillers Log _____ Geologic Log _____
Samples X Interval Sheet X
Sample Interval 0' to 5620'

Remarks _____
Geophysical Logs S.P. _____ Res _____ Gamma X Neutron _____
Density X Sonic _____ Other CALIPER; TEMPERATURE;

Stratigraphic Data Source _____

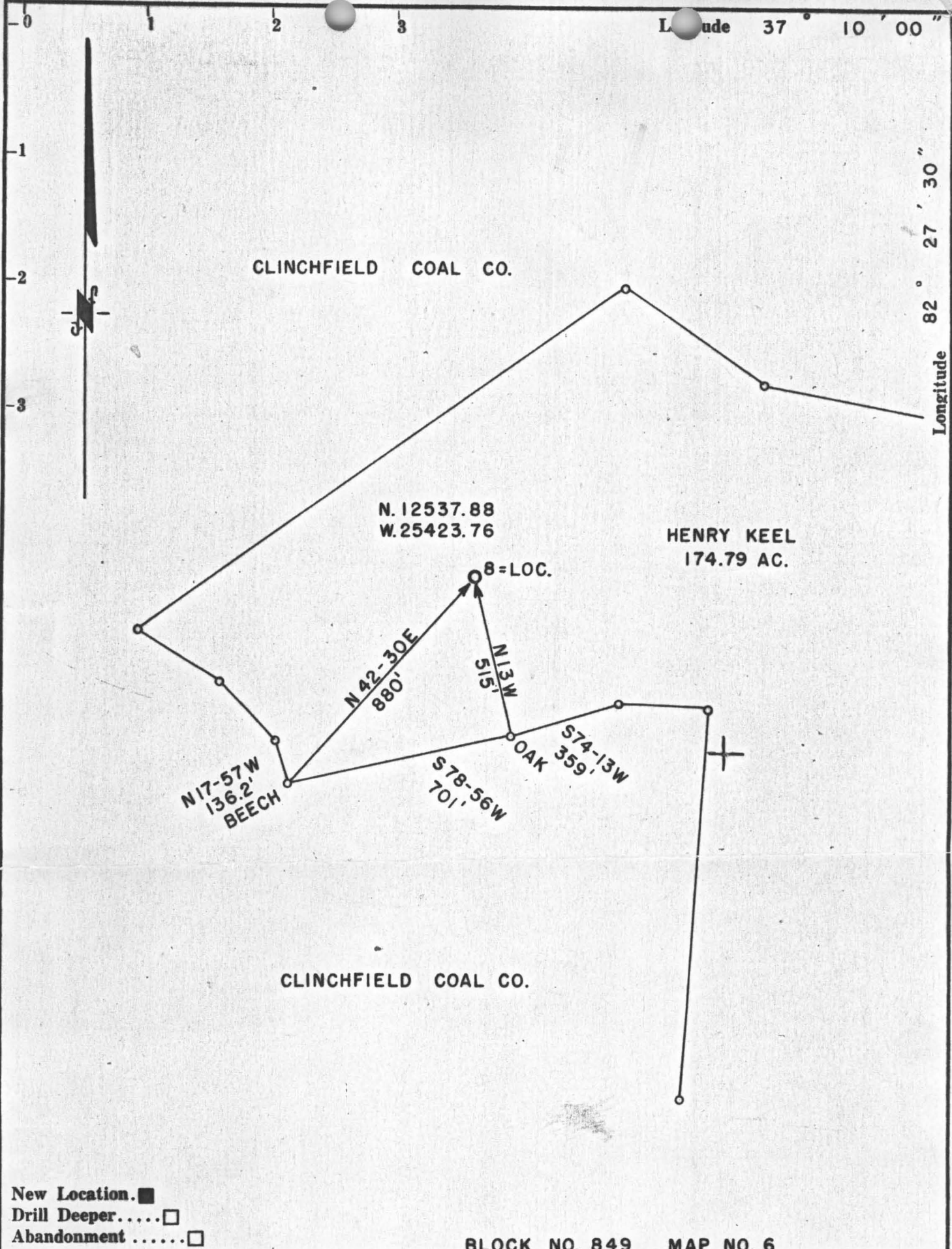
<u>Formation</u>	<u>Top</u>	<u>Datum (Subsea)</u>	<u>Thickness</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Remarks _____

References _____

Released to Open File: Completion FEBRUARY 13, 1975
Samples YES

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



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

BLOCK NO. 849 MAP NO. 6

Company	PHILADELPHIA OIL COMPANY
Address	PRESTONSBURG, KY.
Farm	HENRY KEEL
Tract	T-725 Acres 174.79 Lease No. PO 148
Well (Farm) No.	Serial No. P-24
Elevation (Spirit Level)	1960.79'
Quadrangle	CLINTWOOD, VA.
County	DICKENSON District CLINTWOOD
Engineer	
Engineer's Registration No.	3084 L.S. 534 KY.
File No.	Drawing No.
Date	3-13-74 Scale 1" = 400'

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

WELL LOCATION MAP

FILE NO. _____

+ 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.

VIRGINIA DIVISION OF

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MINERAL RESOURCES

VIRGINIA DIVISION OF MINERAL RESOURCES
 Box 3667, Charlottesville, VA 22903

INTERVAL SHEET

Page 1 of 2

Well Repository No: W-4807

Date rec'd: Date Processed: July 1977 Sample Interval: from: 0 to: 5620'

PROPERTY: Henry Keel Well No. P-24 Number of samples: 189

COMPANY: Philadelphia Oil Company Total Depth: 5638'

COUNTY: Dickenson Oil or Gas: xWater: Exploratory:

From-To	From-To	From-To	From-To
0-30	690-720	1590-1620	2430-2460
30-60	720-750	1620-1650	-
60-90	-	1650-1680	-
-	-	-	-
-	-	1710-1740	-
-	-	-	-
150-180	990-1020	1740-1770	2760-2790
180-210	1020-1050	-	2790-2820
210-240	1050-1080	-	2820-2850
240-270	1080-1110	-	2850-2890
270-300	1110-1140	-	-
300-330	1140-1170	1950-1980	2970-3000
330-360	1170-1200	2010-2040	-
-	-	2040-2070	3030-3060
-	1230-1260	2070-2100	3060-3090
-	-	2100-2130	-
420-450	1290-1320	2130-2160	3180-3210
-	1320-1350	2160-2190	-
-	1350-1380	2190-2220	3240-3270
510-540	-	2220-2250	-
540-570	-	2250-2280	-
570-600	1440-1470	2280-2310	3300-3330
600-630	1470-1500	2310-2340	-
-	-	2340-2370	3360-3390
-	-	2370-2400	3390-3420
-	-	2400-2430	3420-3450

VIRGINIA DIVISION OF MINERAL RESOURCES
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INTERVAL SHEET
 Continued

Page 2 of 2

Well Repository No.: W-4807

From-To	From-To	From-To	From-To	From-To
-	3850-3860	4570-4580	4950-4960	5350-5360
-	-	-	4960-4970	-
-	-	-	4970-4980	-
-	-	-	4980-4990	5380-5390
3490-3500	3890-3900	-	-	5390-5400
3500-3510	3900-3910	4600-4610	-	-
3510-3520	-	4610-4620	5010-5020	-
3520-3530	3920-3930	4620-4630	5020-5030	5410-5420
3530-3540	3930-3940	4630-4640	5030-5040	5420-5430
3540-3550	-	4640-4650	-	-
3550-3560	-	4650-4660	5050-5060	5450-5460
3560-3570	-	4660-4670	-	-
3570-3580	3970-3980	4670-4680	-	-
3580-3590	3980-3990	4680-4690	5080-5090	-
3590-3600	3990-4000	4690-4700	5090-5100	5490-5500
3600-3610	-	4700-4710	5100-5110	5500-5510
-	-	4710-4720	-	5510-5520
-	4020-4030	4720-4730	5120-5130	5520-5530
3630-3640	4030-4040	4730-4740	5130-5140	-
3640-3650	-	4730-4750	5140-5150	-
3650-3660	-	4750-4760	5150-5160	-
3660-3670	-	4760-4770	5160-5170	-
3670-3680	4070-4080	4770-4780	-	5570-5589
3680-3690	4080-4090	4780-4790	-	-
3690-3700	4090-4100	4790-4800	-	5590-5600
3700-3710	4100-4110	4800-4810	-	5600-5610
3710-3720	4110-4140	4810-4820	-	5610-5620
3720-3730	4140-4170	4820-4830	5220-5230	-
3730-3740	-	4830-4840	-	-
3740-3750	-	4840-4850	5240-5250	-
3750-3760	4200-4230	4850-4860	-	-
3760-3770	4230-4260	4860-4870	5260-5270	-
-	-	4870-4880	5270-5280	-
-	4290-4320	4880-4890	5280-5290	-
3790-3800	-	4890-4900	5290-5300	-
-	4380-4410	-	5300-5310	-
3810-3820	-	-	5310-5320	-
3820-3830	-	-	5320-5330	-
3830-3840	-	-	5330-5340	-
3840-3850	4560-4570	4940-4950	5340-5350	-

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Field _____ Province APPALACHIAN PLATEAU

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Date compl. or abandoned NOVEMBER 15, 1974

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FROM 5230' to 5244' - 8 SHOTS; FROM 5300' to 5308' - 5 SHOTS; FROM 5338' to 5356' - 10 SHOTS.

Initial Production 2
FINAL FLOW - 146,000 CU. FT.

Oil shows _____

Water FW X at 112'; 75 GPM at 149'; 100 GPM at _____
SW _____ at _____ at _____ at _____

Coal 107' to 110'; 267' to 269'; 408' to 410'

Plat X Plotted X Completion Report X

Drillers Log _____ Geologic Log _____

Samples X Interval Sheet X

Sample Interval 0' to 5620'

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma X Neutron _____
Density X Sonic _____ Other CALIPER; TEMPERATURE;

Stratigraphic Data Source _____

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

Remarks _____

References _____

Released to Open File: Completion FEBRUARY 13, 1975
Samples YES

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