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**Microfilming Maps of Abandoned
Anthracite Mines**

Mines in the Western Middle Anthracite Field

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**Microfilming Maps of Abandoned
Anthracite Mines**

Mines in the Western Middle Anthracite Field

By G. B. Gait



UNITED STATES DEPARTMENT OF THE INTERIOR
Rogers C. B. Morton, Secretary

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Elbert F. Osborn, Director

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CONTENTS

| | <u>Page</u> |
|---|-------------|
| Abstract..... | 1 |
| Introduction..... | 1 |
| Acknowledgment..... | 4 |
| Anthracite region..... | 4 |
| Location and size..... | 4 |
| Geology..... | 4 |
| Western Middle field..... | 4 |
| Microfilming mine maps..... | 6 |
| Confidentiality statement..... | 6 |
| Identification of maps..... | 8 |
| Catalog of maps and cross sections..... | 8 |
| References..... | 11 |

ILLUSTRATIONS

| | |
|---|---|
| 1. General vicinity map..... | 2 |
| 2. The four anthracite fields shown in relation to counties of north-eastern Pennsylvania..... | 3 |
| 3. The four anthracite fields shown in relation to index to U.S. Geological Survey quadrangle maps in northeastern Pennsylvania..... | 5 |
| 4. Map of Western Middle anthracite field showing location of mines and microfilm index numbers of mines in relation to U.S. Geological Survey quadrangle maps..... | 7 |

TABLE

| | |
|---|---|
| 1. Catalog of microfilmed maps of mines in the Western Middle anthracite field..... | 9 |
|---|---|

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MICROFILMING MAPS OF ABANDONED ANTHRACITE MINES

Mines in the Western Middle Anthracite Field

by

G. B. Gait¹

ABSTRACT

This report is the fourth in a series concerning the Bureau of Mines program for microfilming maps of abandoned mines in the Pennsylvania anthracite region; a catalog of the microfilmed maps of 76 mines in the Western Middle field is presented. Previous reports were catalogs of microfilmed maps of mines in the Eastern Middle field and in the Wyoming and Lackawanna Basins of the Northern anthracite field. Additional catalogs will be published as the microfilming of significant mining areas is completed.

INTRODUCTION

The anthracite measures underlie about 484 square miles of northeastern Pennsylvania and are divided geologically into four separate fields; namely, Northern, Eastern Middle, Western Middle, and Southern. Heavily populated metropolitan centers (including Carbondale, Scranton, Pittston, Wilkes-Barre, Nanticoke, Hazleton, Mahanoy City, Shenandoah, Mount Carmel, Shamokin, Tamaqua, and Pottsville) are located in this area (figs. 1-2).

Over 5 billion tons of prepared anthracite have been mined to date from deposits in northeastern Pennsylvania, and it is estimated that over 6 billion tons of anthracite recoverable by current methods of mining remain (1).² However, because most of the mines are abandoned and flooded to various levels by enormous pools of water, the economically recoverable tonnage has not been determined. For many years, the annual value of anthracite produced has exceeded \$100 million, and the vast unmined reserve of high-grade carbon is still important to the economy and to the fuel requirements of the northeastern United States.

A general decreasing demand for anthracite during the last 25 years has resulted in the closing and abandonment of most of the mines in the four fields. With the abandonment of the mines, loss or destruction of the mine

¹Mining engineer technician, Environmental Affairs Field Office, Bureau of Mines, Wilkes-Barre, Pa.

²Underlined numbers in parentheses refer to items in the list of references at the end of this report.

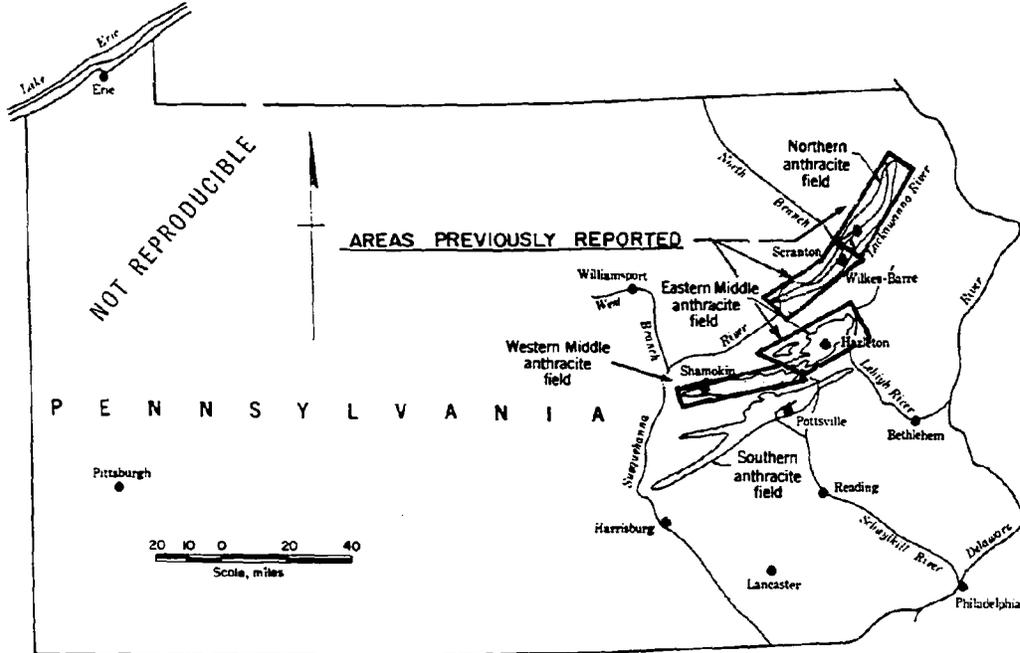


FIGURE 1. - General Vicinity Map.

maps and records usually occur. Microfilming of the maps and cross sections before they are lost or destroyed will preserve indispensable information for use in determining remaining reserves and in the possible unwatering and reopening of mines, should an urgent need arise for this energy source. The maps are also essential for studies of subsidence, for mine fire control, and for evaluating the stability of present and future building sites in the anthracite region.

The Bureau of Mines program for microfilming maps of abandoned mines in the Pennsylvania anthracite region and for publishing catalogs of the films as work progresses was described in the first report in this series, which presented a catalog of microfilmed maps of mines in the Eastern Middle field (4). The second report presented a catalog of microfilmed maps of mines in the Wyoming Basin in the Northern anthracite field (2), and the third report presented a catalog of microfilmed maps of mines in the Lackawanna Basin in the Northern anthracite field (3). The present report contains a catalog of films covering 75 of the 76 major mines and one independent mine in the Western Middle anthracite field. Maps of active mines are not included when these mines are abandoned; their maps will be microfilmed and cataloged in a supplementary report together with maps that were unavailable or unknown at the time of the initial inventory. The films will be stored at a central location and readily available when needed; however, the Bureau's microfilm record of mine maps is confidential and for use only by Federal

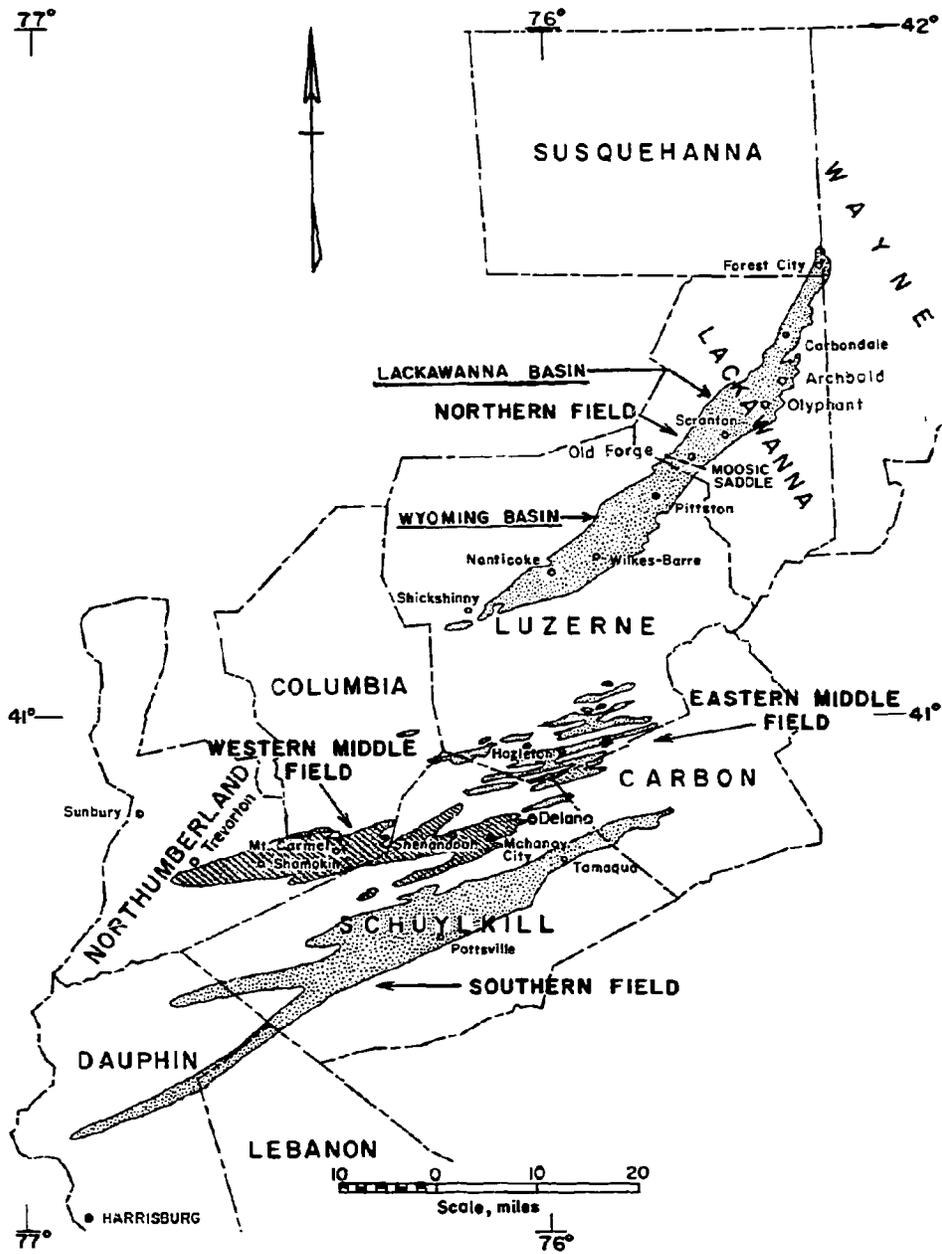


FIGURE 2. - The Four Anthracite Fields Shown in Relation to Counties of Northeastern Pennsylvania.

agencies for technical, economic, and statistical studies not related to taxation, investigation, regulation, or litigation purposes. The microfilm will be released to others by the Bureau of Mines only with permission of the owners of record at the time the request is made. Advice on the procedures for obtaining access to the files may be obtained by writing to the Chief, Environmental Affairs Field Office, U.S. Bureau of Mines, 19 North Main Street, Wilkes-Barre, Pa. 18701.

ACKNOWLEDGMENT

The generous assistance and cooperation of mine operators and property owners in furnishing the maps and cross sections of the underground workings in their mines is gratefully acknowledged.

ANTHRACITE REGION

Location and Size

The Pennsylvania anthracite region contains about 95 percent of the known reserves of anthracite in the United States and is located in 10 counties in the northeastern part of the State: Carbon, Columbia, Dauphin, Lackawanna, Lebanon, Luzerne, Northumberland, Schuylkill, Susquehanna, and Wayne (fig. 2). The location of the anthracite region in relation to U.S. Geological Survey quadrangle maps in northeastern Pennsylvania is shown in figure 3.

The anthracite formations, which underlie a surface area of 484 square miles, are divided by geologic conditions into four fields: Northern, 176 square miles; Eastern Middle, 33 square miles; Western Middle, 94 square miles; and Southern, 181 square miles (figs. 2-3). The anthracite fields lie in a series of parallel basins running northeast-southwest and conforming to the mountain ranges of the area.

Geology

Anthracite occurs as superimposed beds separated by varying thicknesses of rock strata. The beds may number as many as 26, with an aggregate thickness of about 100 feet. The rock strata separating the anthracite beds vary in thickness from a few feet to as much as 200 feet. Movable thicknesses of the beds range from 2 to 100 feet. The altitude of the lowest mining in each of the four fields is as follows: Northern, 1,037 feet below sea level; Eastern Middle, 599 feet above sea level; Western Middle, 788 feet below sea level; and Southern, 1,292 feet below sea level. The coalbeds in the Northern and Southern fields, especially the Southern field, extend to much lower depths. The beds lie in synclinal troughs that are comparatively flat at the center and pitch moderately to steeply along the limbs.

Western Middle Field

The Western Middle field is in the west-central portion of the anthracite region, situated in the northern section of Schuylkill County, the southeastern part of Northumberland County, and the southern part of Columbia County (fig. 2).

This field is 42 miles in length, extending from the towns of Delano on the east to Trevorton on the west, and covers an area of approximately 94 square miles. It is 2 to 5 miles wide and consists of many irregularly shaped coal basins with their major axes tending northeast-southwest, generally paralleling the mountain ranges. The six major basins are the Mahanoy, Shenandoah, Centralia, Shamokin, Coal Run, and Mount Carmel. These basins are separated by major anticlines and faults, and in some localities the mine workings in two or more basins are interconnected. The dips of the beds range from 0° to 90° and in some places are inverted. The altitude of the lowest mine workings is minus 788 feet, and the lowest altitude of the bottom anthracite bed is estimated to be minus 1,700 feet.

All the major deep mines in this field have been abandoned and contain mine-water pools. Some of the pools overflow to the surface in their immediate mine areas, while others overflow into adjacent mines through abrogated or permeable barrier pillars and become part of a large mine-water pool complex, which may overflow to the surface many miles distant from the location of some of the individual mine-water pools. The entire Western Middle field is in the Susquehanna River drainage basin except for an area containing the Morea and New Boston Mines in Schuylkill County that lies in the Schuylkill River drainage basin.

MICROFILMING MINE MAPS

Microfilming not only provides a convenient method of storing maps and similar bulky records, but it also lends itself to high-speed information retrieval and reproduction. Microfilmed mine maps, because they will be available at short notice, will be a distinct asset to anyone with the responsibility of dealing with mine problems, such as surface subsidence, at a time long after abandonment of the mine and probable loss or destruction of the original maps and records.

The equipment and procedure used in microfilming were discussed in detail previously (4) and are not repeated here.

Confidentiality Statement

An important aspect of the microfilming program involves obtaining the consent of the mine owners for the Bureau to photograph the mine maps. A letter is sent to the mine owners, explaining the purpose of the project and requesting permission to microfilm their maps. The letter also explains that the microfilm record is confidential and for use only by Federal agencies in technical, economic, or statistical studies not related to taxation, investigation, regulation, or litigation purposes and that the film will be released to others only by permission of the owners of record at the time the request is made.

Enough statements of confidentiality are attached to each letter to cover all mines under the jurisdiction of the owner or company. Each statement is signed by the Chief, Environmental Affairs Field Office, U.S. Bureau of Mines; spaces are provided for the name of the mine, name of the company, signature

NOT REPRODUCIBLE

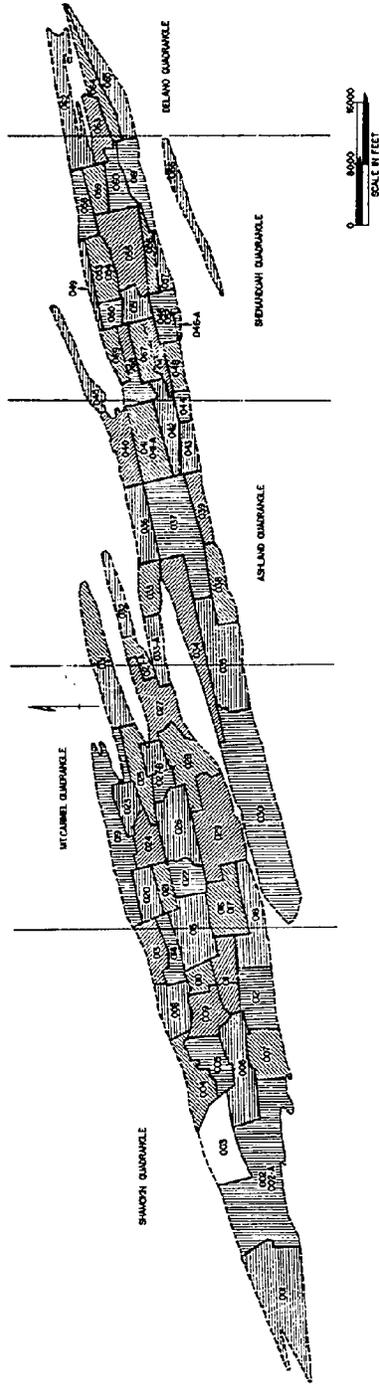


FIGURE 4. - Map of Western Middle Anthracite Field Showing Location of Mines and Microfilm Index Numbers of Mines in Relation to U.S. Geological Survey Quadrangle Maps. Mine 003 is active, and no data pertaining to it were microfilmed.

and title of the presiding officer, and date. The signed statement of confidentiality represents the Bureau's authority to microfilm the maps, cross sections, etc., of the mine and is recorded on microfilm in the same roll with photographs of the maps.

Identification of Maps

The method of identification and location of any mine despite possible widespread and drastic change in the terrain that may occur in the interim between the microfilming and the subsequent use of the maps is of vital importance. Proper identification and indexing of each segment of a mine map which appears on a single microfilm photographic frame with the proper bed, mine, and field is necessary so that the maps of any one mine can be restored in their entirety. The Bureau uses the following system to insure accurate identification of the microfilmed maps: The outline of the four fields of the anthracite region is shown superimposed on the index map to the U.S. Geological Survey maps of northeastern Pennsylvania (fig. 3). From this map the location of any portion of any of the four fields can be oriented readily upon the proper U.S. Geological Survey map. The four fields occupy portions of 38 U.S. Geological Survey 7.5-minute quadrangle sheets (1 inch equals 2,000 feet) and one 15-minute sheet (1 inch equals 5,208 feet). The geographic boundaries of each mine have been plotted on quadrangle maps (fig. 4). The mines in each field are numbered from west to east.

CATALOG OF MAPS AND CROSS SECTIONS

Microfilming of mine maps started in June 1963. As of August 1970, maps of 298 major mines and 19 independent mines in various parts of the four anthracite fields had been microfilmed, requiring the handling of 8,348 maps and 20,788 frames. Microfilming of maps of major mine properties for various fields, exclusive of abandoned independent mines, is approximately 95 percent completed. Abandoned independent mines will be microfilmed as maps become available.

Catalogs covering the microfilm records of each field or portion thereof have been published as the work progressed (2-4). This publication catalogs the microfilm records of maps of mines in the Western Middle anthracite field as listed in table 1. Figure 4 is a map of the Western Middle anthracite field, plotted on the U.S. Geological Survey maps, showing the location of mines and the microfilm index number of the mines.

TABLE 1. - Catalog of microfilmed maps of mines in the Western Middle anthracite field

| Mine | Mine index number | Location of mine ¹ | Maps micro-filmed | Number of frames | Roll number |
|------------------------------|-------------------|-------------------------------|-------------------|------------------|-------------|
| North Franklin..... | W001 | Shamokin..... | 42 | 183 | 36 |
| Bear Valley..... | W002 |do..... | 54 | 199 | 40 |
| Ashio Coal Co..... | W002-A |do..... | 1 | 4 | 47 |
| Glen Burn ² | W003 |do..... | - | - | - |
| Cameron..... | W004 |do..... | 56 | 185 | 9 |
| Neilsen..... | W005 |do..... | 13 | 33 | 45 |
| Stirling..... | } W006 |do..... | 51 | 202 | 40-41 |
| Henry Clay..... | |do..... | 33 | 92 | 41 |
| Burnside..... | W007 |do..... | 20 | 48 | 8 |
| Luke Fidler..... | W008 |do..... | 9 | 23 | 41 |
| Royal Oak..... | W009 |do..... | 16 | 28 | 41 |
| Buck Ridge No. 2..... | W010 |do..... | 5 | 9 | 41 |
| Buck Ridge No. 1..... | } W011 |do..... | 31 | 93 | 41 |
| Greenback..... | |do..... | 38 | 102 | 8 |
| Big Mountain..... | W012 | Shamokin-Mount Carmel.. | 11 | 36 | 8 |
| Hickory Swamp..... | W013 |do..... | 30 | 71 | 32 |
| Colbert..... | W014 |do..... | 30 | 92 | 41 |
| Maysville 1 and 2..... | W015 |do..... | - | - | 41 |
| Corbin..... | W016 |do..... | 42 | 134 | 41 |
| Excelsior ³ | W017 |do..... | 9 | 33 | 11 |
| Enterprise..... | W018 |do..... | 34 | 80 | 8 |
| Natalie..... | W019 | Mount Carmel..... | 42 | 123 | 7 |
| Hickory Ridge..... | W020 |do..... | - | - | 7 |
| Scott Ridge..... | W021 |do..... | 34 | 62 | 8 |
| Scott ⁴ | W022 |do..... | 13 | 43 | 8 |
| Richards Water Level.... | W023 |do..... | 38 | 102 | 8 |
| Greenough..... | W024 |do..... | 38 | 145 | 7 |
| Richards Shaft..... | W025 |do..... | 34 | 97 | 6 |
| Pennsylvania..... | W026 | Mount Carmel-Ashland... | 11 | 19 | 6 |
| Sayre..... | W027 |do..... | 24 | 52 | 32 |
| Morris Ridge..... | W027-A | Mount Carmel..... | 41 | 135 | 42 |
| Sioux 1 and 3..... | W027-B |do..... | 36 | 111 | 42 |
| Reliance..... | W028 |do..... | 95 | 344 | 42 |
| Alaska..... | W029 |do..... | 27 | 51 | 6 |
| Locust Gap..... | W030 | Mount Carmel-Ashland... | 16 | 23 | 6 |
| Midvalley 1 & 2 Basins.. | W031 | Ashland..... | 31 | 52 | 5 |
| Midvalley No. 2..... | W032 |do..... | 16 | 31 | 5 |
| Centralia..... | W033 | Mount Carmel-Ashland... | 32 | 88 | 6 |
| Logan..... | W033-A |do..... | 34 | 118 | 43 |
| Germantown..... | W034 |do..... | | | |
| Potts..... | W035 |do..... | | | |

See footnotes at end of table.

TABLE 1. - Catalog of microfilmed maps of mines in the Western Middle anthracite field--Continued

| Mine | Mine index number | Location of mine ¹ | Maps micro-filmed | Number of frames | Roll number |
|------------------------------------|-------------------|-------------------------------|-------------------|------------------|-------------|
| Continental..... | WO36 | Ashland..... | 16 | 28 | 15 |
| Bast..... | WO37 |do..... | 37 | 106 | 43 |
| Bacroft and Tunnel..... | WO38 |do..... | 10 | 32 | 45 |
| Preston No. 3..... | WO39 |do..... | 8 | 22 | 43 |
| Raven Run or Mammoth..... | WO40 |do..... | 11 | 40 | 45 |
| Hammond..... | WO41 |do..... | 34 | 51 | 16 |
| Do..... | WO41-A |do..... | 41 | 94 | 43 |
| Packer No. 5..... | WO42 | Ashland-Shenandoah.... | 42 | 66 | 16 |
| Girard..... | WO43 | Ashland..... | 22 | 30 | 15 |
| West Bear Ridge..... | WO44 | Ashland-Shenandoah.... | 23 | 26 | 15 |
| Weston..... | WO45 |do..... | 28 | 44 | 16 |
| Draper ⁵ | WO46 | Shenandoah..... | - | - | 45 |
| Kimberly-Draper..... | WO46-A |do..... | 9 | 9 | 16 |
| East Bear Ridge..... | WO47 |do..... | 25 | 37 | 15 |
| Lawrence..... | WO48 |do..... | 35 | 52 | 47 |
| Kehleys Run..... | WO49 |do..... | 24 | 34 | 16 |
| Kohinor..... | WO50 |do..... | 22 | 37 | 43 |
| West Shenandoah..... | WO51 |do..... | 22 | 50 | 43 |
| Gilberton..... | WO52 |do..... | 18 | 43 | 45 |
| Indian Ridge..... | WO53 |do..... | 27 | 63 | 44 |
| Shenandoah City ⁶ | WO54 |do..... | - | - | 44 |
| Maple Hill..... | WO55 |do..... | 43 | 154 | 44 |
| Saint Nicholas..... | WO56 |do..... | 19 | 48 | 44 |
| Boston Run..... | WO57 |do..... | 27 | 61 | 44 |
| Knickerbocker..... | WO58 |do..... | 23 | 59 | 44 |
| North Mahanoy..... | WO59 |do..... | 25 | 71 | 44 |
| Mahanoy City..... | WO60 |do..... | 25 | 54 | 44 |
| Tunnel Ridge..... | WO61 |do..... | 24 | 96 | 44-45 |
| Park 1 and 2..... | WO62 | Shenandoah-Delano.... | 45 | 140 | 10 |
| Primrose..... | WO63 |do..... | 24 | 73 | 32 |
| Park 3 and 4..... | WO64 |do..... | 23 | 63 | 32 |
| Vulcan-Buck Mountain..... | WO65 |do..... | 37 | 94 | 32 |
| Morea-New Boston..... | WO66 | Shenandoah..... | 23 | 41 | 45 |
| William Penn..... | WO67 |do..... | 16 | 28 | 15 |
| Packer 2 and 4..... | WO68 | Ashland-Shenandoah.... | 37 | 59 | 15 |
| Packer No. 3..... | WO69 | Shenandoah..... | 23 | 33 | 15 |

¹Names in this column refer to U.S. Geological Survey quadrangle maps.

²Active, not microfilmed.

³Included in Corbin (WO16).

⁴Included in Scott Ridge (WO21).

⁵Included in Gilberton (WO52).

⁶Included in Indian Ridge (WO53).

REFERENCES

1. Dierks, H. A., W. L. Eaton, R. H. Whaite, and F. T. Moyer. Mine Water Control Program; Anthracite Region of Pennsylvania. July 1955-December 1961. BuMines Inf. Circ. 8115, 1962, 63 pp.
2. Eaton, W. L., and G. B. Gait. Microfilming Maps of Abandoned Anthracite Mines. Mines in the Wyoming Basin, Northern Anthracite Field. BuMines Inf. Circ. 8379, 1968, 13 pp.
3. Gait, G. B. Microfilming Maps of Abandoned Anthracite Mines. Mines in the Lackawanna Basin, Northern Anthracite Field. BuMines Inf. Circ. 8453, 1970, 11 pp.
4. Whaite, R. H. Microfilming Maps of Abandoned Anthracite Mines. Mines of the Eastern Middle Field. BuMines Inf. Circ. 8274, 1965, 18 pp.