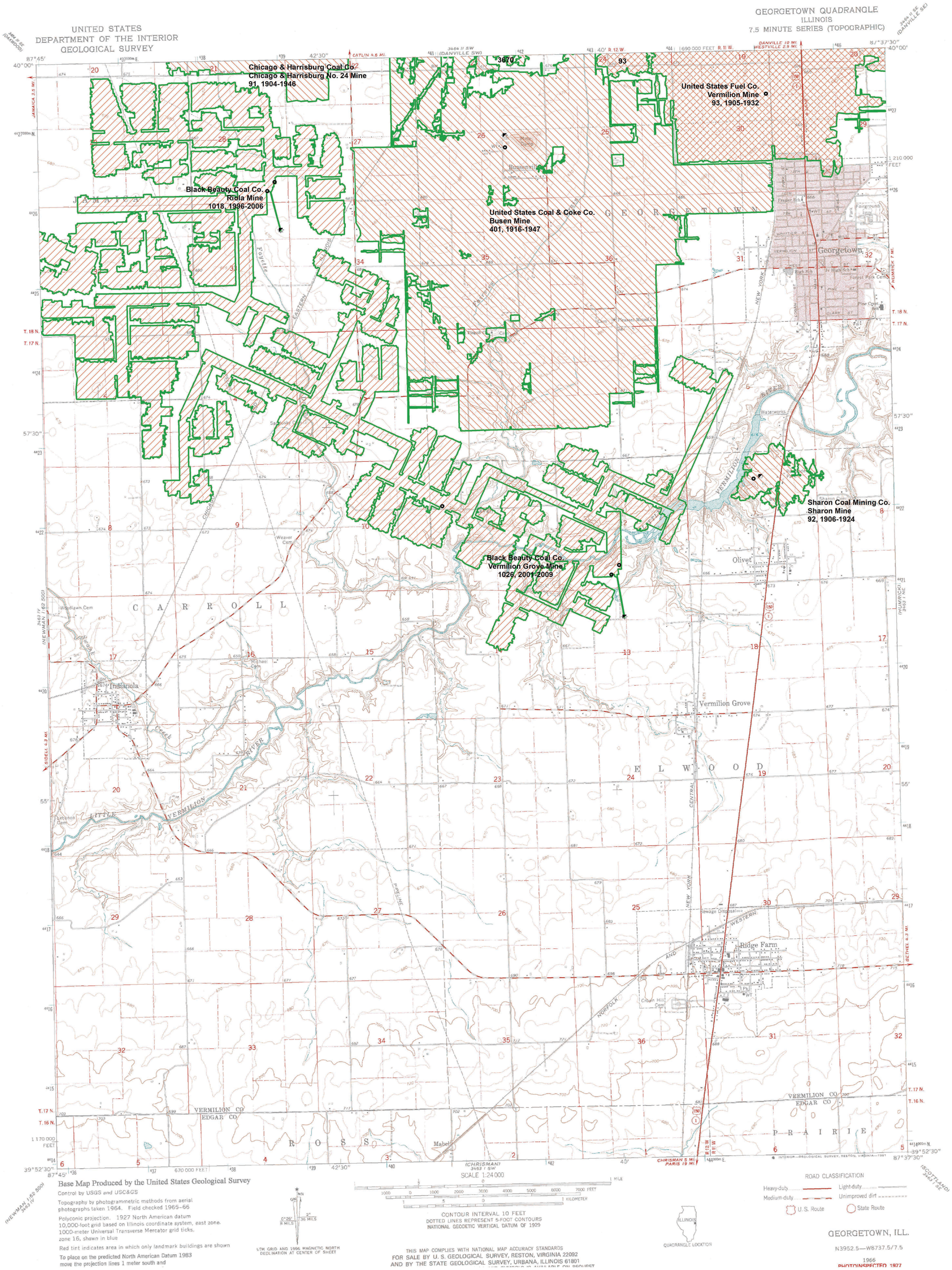
Coal Mines in Illinois
Georgetown Quadrangle
Vermilion & Edgar Counties, Illinois

This map accompanies the Coal Mines Directory for the Georgetown Quadrangle. Consult the directory for a complete explanation of the information shown on this map.



Mining Method

- Room & Pillar (RP)
- Room & Pillar Basic (RPB)
- Modified Room & Pillar (MRP)
- Room & Pillar Panel (RPP)
- Blind Room & Pillar (BRP)
- Checkerboard Room & Pillar (CRP)
- High Extraction Retreat (HER)
- Longwall (LW)
- Underground, Method Unknown
- Strip Mine
- Auger Mine
- General Area of Mining

Other Areas Depicted

- Non-Coal Mines

Source of Mine Outline

- Final Mine Map
- Not Final Mine Map
- Undated Mine Map
- Incomplete Mine Map
- Secondary Source Map

Tipple, Shaft, Slope, Drift Locations

- Strip Mine Tipple - Active
- Strip Mine Tipple - Abandoned
- Mine Shaft - Active
- Mine Shaft - Abandoned
- Mine Slope - Active
- Mine Slope - Abandoned
- Mine Drift - Active
- Mine Drift - Abandoned
- Air Shaft
- Uncertain Location
- Uncertain Type of Opening

Other Points Depicted

- Non-Coal Mines

Location

Mine Annotation

(space permiting)
Company
Mine Name
ISGS Index No., Years of Operation

Disclaimer

Please check the Coal Section at the Illinois State Geological Survey's web site at http://www.isgs.illinois.edu for the most up-to-date version of these products.

Note that each quadrangle scale mined-out area map requires the use of the asso ciated text directory for full explanation of map features and mine attributes. Also note that some quadrangles have multiple seams of mining and therefore more than one map may be available for a particular quadrangle. Please take care to check for multiple maps, as extensive mining may exist in the other seams.

The maps and digital files used for these studies were compiled from data obtained from a variety of public and private sources and have varying degrees of completeness and accuracy. T his compilation map presents reasonable interpretation of the geology of the area and is based on available data. Locations of some mine features may be offset by 500 feet or more due to errors in the original source maps, the compilation process, digitizing, or a combination of these factors. These data are not intended for use in site -specific screening or decision-making. Use of these documents does not eliminate the need for detailed studies to fully understand the geology of a specific site. The Illinois State Geological Survey, Prairie Research Institute, or the University of Illinois make no guarantee, expressed or implied, regarding the correctness of the interpretations presented in this data set and accept no liability for the consequences of decisions made by others on the basis of the information presented here.

These maps were designed for use at 1:24,000. Enlarging the map may reduce accuracy, as the original scale of the source maps used to compile the outlines shown varies from 1:4 00 to 1:150,000, and some mine lcations are known only from text descriptions. See the accompanying mine directory for the original scale of the source map used for a specific mine to check accuracy of a given portion of the map. Areas with no mines sho wn may still be undermined; see the unlocated mines list at the back of each mine directory.

The image of the U.S.G.S. topographic base map was projected from the original UTM to Lambert Conformal Conic.

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August 2010
Revised March 2017

DIRECTORY OF COAL MINES IN ILLINOIS
7.5-MINUTE QUADRANGLE SERIES
GEORGETOWN QUADRANGLE
VERMILION & EDGAR COUNTIES

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2010

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This material is based upon work supported by the Illinois Mine Subsidence Insurance Fund. Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the authors and do not necessarily reflect the views of the Illinois Mine Subsidence Insurance Fund.

Cover photo Track-mounted duckbill loading machine at a Peabody Coal Company mine, ca. 1915.

DISCLAIMER: The accuracy and completeness of mine maps and directories vary with the availability of reliable information. Maps and other information used to compile this mine map and directory were obtained from a variety of sources and the accuracy of some of the original information cannot be verified. Consequently, the Illinois State Geological Survey (ISGS) cannot guarantee the mine maps are free of errors and disclaims any responsibility for damages that may result from actions or decisions based on them.

The ISGS updates the maps and directories periodically, and welcomes any new information or corrections. Please contact the Coal Section of the ISGS at the address shown on the title page of this directory, or telephone (217) 244-4610.

CONTENTS

INTRODUCTION

Coal has been mined in 76 counties of Illinois. More than 7,400 coal mines have operated since commercial mining began in Illinois about 1810; fewer than 30 are currently active. To detail the extent and location of coal mining in Illinois, the Illinois State Geological Survey (ISGS) has compiled maps and directories of known coal mines. The ISGS offers maps at a scale of 1:100,000 and accompanying directories for each county in which coal mining is known to have occurred. Maps at a scale of 1:24,000 and accompanying directories, such as this, are available for selected quadrangles. Contact the ISGS for a list of these quadrangles.

These larger scale maps show the approximate positions of mines in relation to surface features such as roads and water bodies, and indicate the mining method used and the accuracy of the mine boundaries. The maps are useful for locating mine boundaries relative to specific properties and for assessing the potential for subsidence in an area. Mine boundaries compiled from final mine surveys are generally shown within 200 feet of their true position. As a result of poor cartographic quality and inaccuracies in the original mine surveys, boundaries of some older mines may be mislocated on the map by 500 feet or more. Original mine maps should be consulted in situations that require precise delineation of mine boundaries or internal workings of mined areas.

This directory serves as a key to the accompanying mine map and provides basic information on the coal mines in the quadrangle. The directory is composed of two parts. Part I explains the symbols and patterns used on the accompanying map and the summary data presented for each mine. Part II numerically lists the mines in the quadrangle and summarizes the geology and production history of each mine. Total production for the mine, not the portion in the quadrangle, is given.

MINING IN THE GEORGETOWN QUADRANGLE

The Herrin Coal was mined in the Georgetown Quadrangle, generally averaging between 5.5 and 6.0 feet thick. The roof was most often the Energy Shale, a silty gray shale that had layers of siltstone, and required conscientious attention to keep up. Rolls and faults were present in most of the mines as well. Mining took place between 1904 and 1947, until the Riola Mine (mine index 1018) opened in 1996. Mining appears to have ceased in the area with the closing of Vermilion Grove Mine (mine index 1026).

PART I EXPLANATION OF MAP AND MINE SUMMARY SHEET

INTERPRETING THE MAP

The map accompanying this directory shows the location of coal mines known to be present in the quadrangle. The map, corresponding to a U.S. Geological Survey (USGS) 7.5-minute quadrangle, covers an area bounded by lines of latitude and longitude 7.5-minutes apart. In Illinois, a quadrangle is approximately 6.5 miles east to west and 8.5 miles north to south, an area of about 56 square miles. The ISGS generally offers one map of mines per quadrangle. In some areas where extensive mining occurred in two or more overlapping seams, separate maps are compiled for mines in each seam to maintain readability of the map.

Mine Type and Mining Method
The mine type is indicated on the map by pattern color: green represents surface mines; red and yellow represent underground mines. The red patterns are used for areas of underground mining that are documented by a primary or secondary source map. A yellow pattern is used for cases where no map of the mine workings is available, but a general area of mining can be inferred from property maps or production figures. The patterns indicate the main mining methods used in underground mines. The methods are (1) room and pillar and (2) high extraction. The method used gives some indication of the amount and pattern of coal extraction within each mined area, and has some influence on the timing and type of subsidence that can occur over a mine.

The following discussion and illustrations of mining methods are based on Guither et al. (1984).

In room-and-pillar mines, coal is removed from haulage-ways (entries) and selected areas called rooms. Pillars of unmined coal are left between the rooms to support the roof. Depending on the size of rooms and pillars, the amount of coal removed from the production areas will range from 40% to 70%.

Room and Pillar - mining is divided into six categories:
- room-and-pillar basic (RPB, fig. 1A), an early method that did not follow a preset mining plan and therefore resulted in very irregular designs;
- modified room and pillar (MRP, fig. 1B);
- room-and-pillar panel (RPP, fig. 1C);
- blind room and pillar (BRP, fig. 1D);
- checkerboard room and pillar (CRP, fig. 1E);
- room and pillar (RP), a classification used when the specific type of room-and-pillar mining is unknown.

Blind and checkerboard are the most common types of room-and-pillar mining used in Illinois today. The knowledge of room-and-pillar mining methods gives a trained engineer information on the nature of subsidence that may occur. A more extensive discussion of subsidence can be found in Bauer et al. (1993).

High-extraction These mining methods are subdivided into high-extraction retreat (HER, Fig 1F) and longwall (LW, Fig 1G, 1H). In these methods, much of the coal is removed within well defined areas of the mine. Subsidence of the surface above these areas occurs within weeks. Once the subsidence activity ceases, the potential for further movement over these areas is low; however, subsidence may continue for several years after mining.

High-extraction retreat mining is a form of room-and-pillar mining that extracts most of the coal. Rooms and pillars are developed in the panels, and the pillars are then systematically removed (fig. 1F).

In early (pre-1960) longwall mines, mining advanced in multiple directions from a central shaft (fig. 1G). Large pillars of coal were left around the shaft, but all coal was removed beyond these pillars. Miners placed rock and wooden props and cribs in the mined-out areas to support the mine roof. The overlying rock gradually settled onto these supports, thus producing subsidence at the surface. In post-1959 longwall mines, room-and-pillar methods have been used to develop the main entries of the mine and panel areas. Modern longwall methods extract 100 percent of the coal in the panel areas (fig. 1H).

SOURCE MAPS

Mine outlines depicted on the map are, whenever possible, based on maps made from original mine surveys. The process of compiling and digitizing the quadrangle map may produce errors of less than 200 feet in the location of mine boundaries. Larger errors of 500 feet or more are possible for mines that have incomplete or inaccurate source maps.

Because of the extreme complexity of some mine maps, detailed features of mined areas have been omitted. The digitized mine boundary includes the exterior boundary of all rooms or entries that were at least 80 feet wide or protruded 500 feet from the main mining area. Unmined areas between mines are shown if they are at least 80 feet wide; unmined blocks of coal within mines are shown if they are at least 400 feet on each side. Original source maps should be consulted when precise information on mine boundaries or interior features is needed.

The mine summary sheet lists the source maps used to determine each mine outline. The completeness of map sources is indicated on the map by a line symbol at the mine boundary. Source maps are organized in five categories.

Final mine map The mine outline was digitized from an original map made from mine surveys conducted within a few months after production ceased. The date of the map and the last reported production are listed on the summary sheet.

Not a final map The mine is currently active or the mine outline was made from a map based on mine surveys conducted more than few months before production ceased. This implies the actual mined-out area is probably larger than the outline on the map. The mine summary sheet indicated the dates of source maps and the last reported production, as well as the approximate tonnage mined between these two dates (if the mine is abandoned). The summary sheet also lists the approximate acreage mined since the date of the map and, in some cases, indicates the area where additional mining may have taken place. This latter information is determined by locating on the map the active faces relative to probable boundaries of the mine property.

Undated map The source map was undated, so it may or may not be based on a final mine survey. When sufficient data are available, the probable acreage of the mined area is estimated from reported production, average seam thickness and a recovery rate comparable to other mines in the area. This information is listed in the summary sheet for the mine.

Incomplete map The source map did not show the entire mine. The summary sheet indicates the missing part of the mine map and the acreage of the unmapped area, which is estimated from the amount of coal known to have been produced from the mine.

Secondary source map The original mine map was not found so the outline shown was determined from secondary sources (e.g., outlines from small-scale regional maps published in other reports). The summary sheet describes the secondary sources.

POINTS AND LABELS

The locations of all known mine openings (shafts, slopes, and drifts) and surface mine tipples are plotted on the map. Tipples are areas where coal was cleaned, stockpiled, and loaded for shipping.

Only openings or tipples are plotted for mines without source maps. If the precise locations of these features are unknown, a special symbol is used to indicate the approximate location of the mine.

Each mine on the map is labeled with the names of the mine and operating company, ISGS mine index number, and years of operation (if known) if space permits. A seam designation is given on maps where more than one seam was mined. For a mine that operated under more than one name, only the most recent name is generally given. When a mine changed names or ownership shortly before closing, an earlier name is listed. All company and mine names are listed on the mine summary sheet in the directory, under the production history segment.

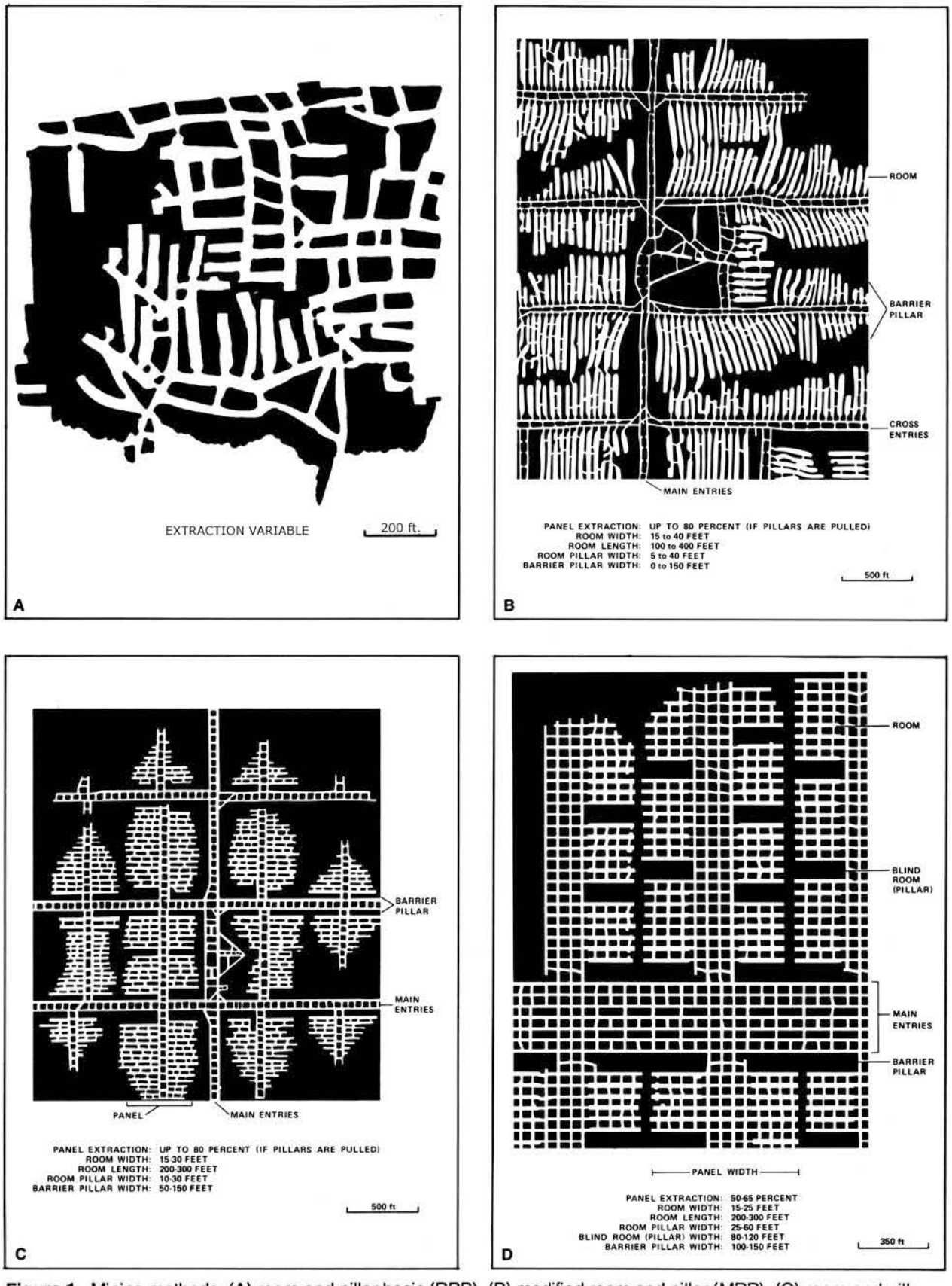
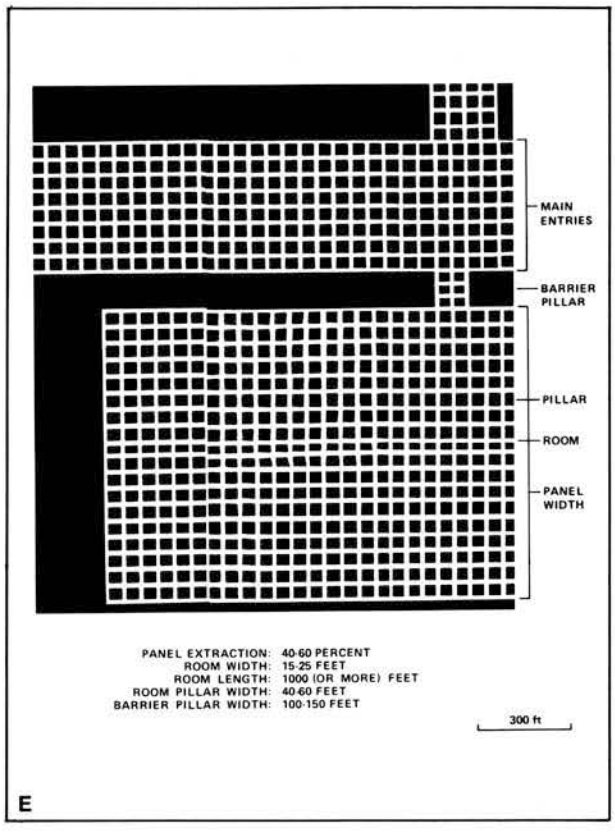
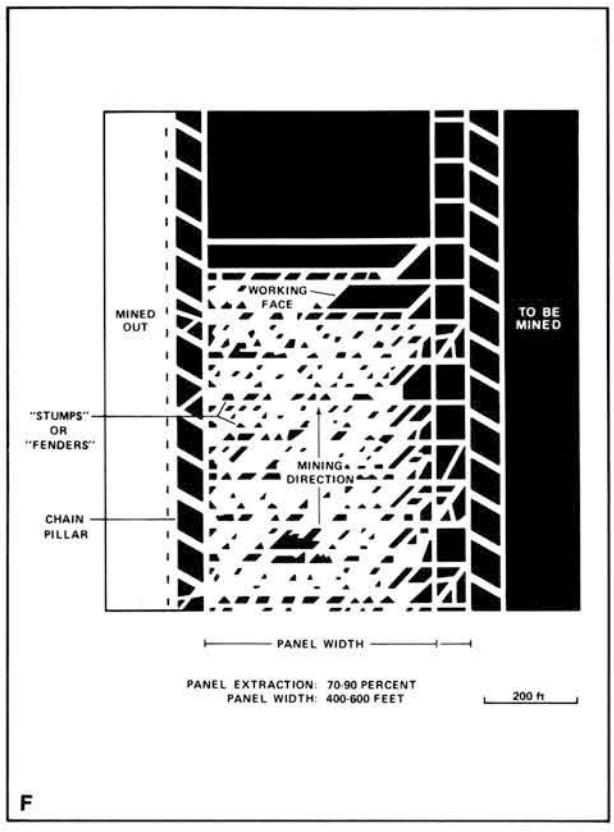
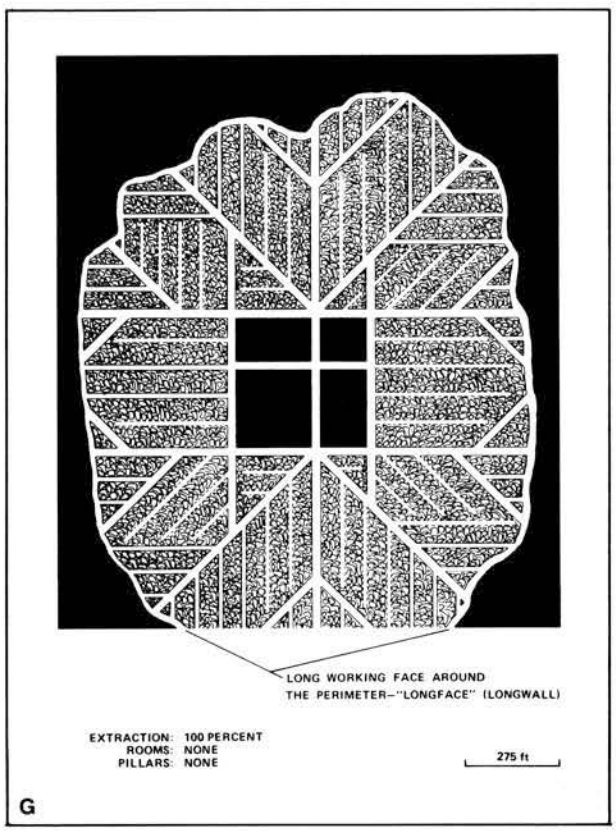


Figure 1 Mining methods: (A) room-and-pillar basic (RPB), (B) modified room and pillar (MRP), (C) room-and-pillar panel (RPP), (D) blind room and pillar (BRP).







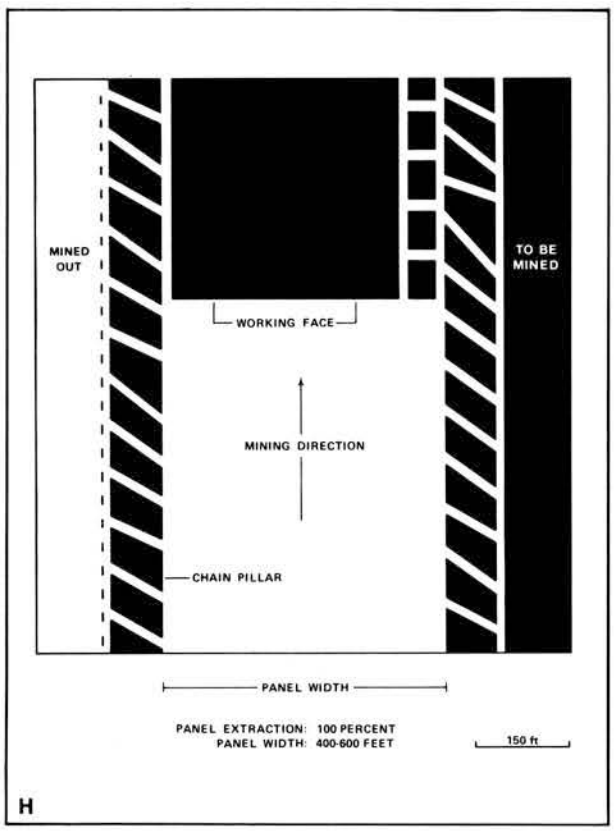


Figure 1 *(cont.)* Mining methods: (E) checkerboard room and pillar (CRP), (F) high extraction retreat (HER), (G) early (pre-1960) longwall, (H) post-1959 longwall

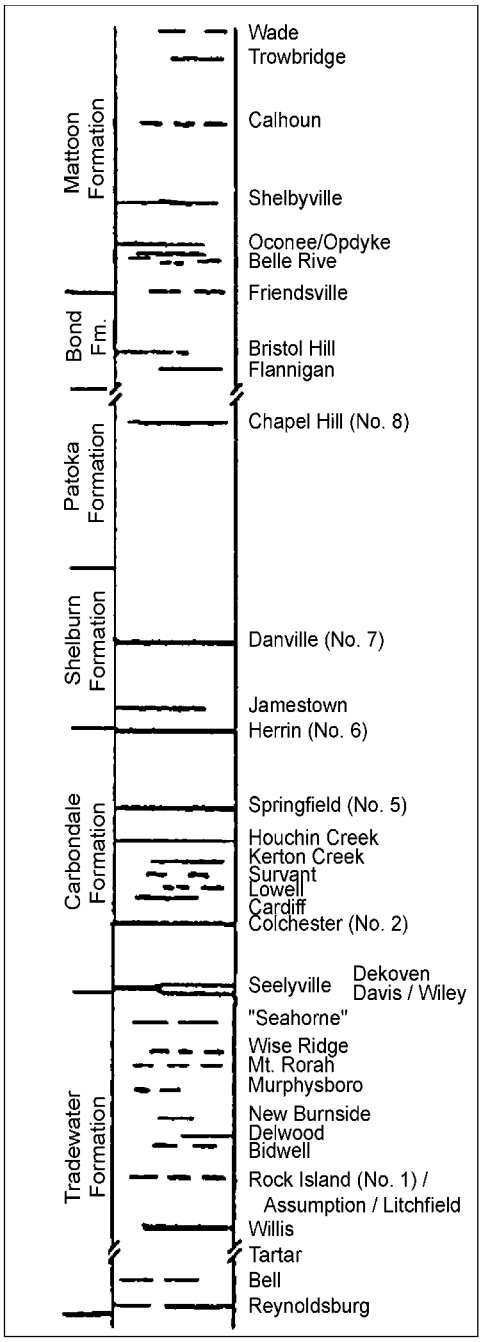


Figure 2 Generalized stratigraphic section, showing approximate vertical relations of coals in Illinois.

INTERPRETING A MINE SUMMARY SHEET

The mine summary sheet is arranged numerically by mine index number. Index numbers are shown on the map and in the mine listing. The mine summary sheet provides the following information (if available).

Company and mine name The last company or owner of the mine is used, unless no production was recorded for the last owner. In that case, the penultimate owner is listed. Mines often have no specific name; in these cases, the company name is also used as the mine name.

Type *Underground* denotes a subsurface mine in which the coal was reached through a shaft, slope, or a drift entry. *Surface* denotes a surface, open pit or strip mine.

Total mined-out acreage shown The total acreage of the mined area mapped, including any acreage mined on adjacent quadrangles, is calculated from the digitized outline of the mine. The acreage of large barrier pillars depicted on the map is excluded from the mined-out acreage. Small pillars not digitized are included in the acreage calculation. If the mine outline is not based on a final mine map, the acreage is followed by an estimate of additional acres that may have been mined. The estimate is determined from reported mine production, approximate thickness of the coal, and recovery rates calculated from nearby mines that used similar mining methods.

SHAFT, SLOPE, DRIFT OR TIPPLE LOCATIONS

Shaft, slope, drift, or tipple locations Locations of all known former entry points to underground mines or the location of coal cleaning, tipple, and shipping equipment used by the mine's facility are listed. The location is described in terms of county, township and range (Twp-Rge), section, and location within the section by quarters. NE SW NW, for instance, would describe the location in the northeast quarter of the southwest quarter of the northwest quarter. When sections are irregular in size, the quarters remain the same size and are oriented (or "registered") from the southeast corner of the section. Approximate footage from the section lines (FEL = from east line, FNL = from north line, for example) is given when that information is known; this indicates a surveyed location and is not derived from maps. Entry points are also plotted on the map and coded for the type of entry or tipple. A mine opening may have had many purposes during the life of the mine. Old hoist shafts are often later used for air and escape shafts; this information is included in the directory when known. The tipple for underground mines was generally located near the main shaft or slope. At surface mines, coal was sometimes hauled to a central tipple several miles from the mine pit.

GEOLOGY

Seam(s) mined The name of the coal seam(s) mined is listed, if known. If multiple seams were mined, they are all listed, although the mined-out area for each seam may be shown on separate maps. Figure 2 shows the stratigraphic section of the coal-bearing interval in Illinois, and the vertical relations among the coals.

Depth The depth to the top of the seam in the vicinity of the shaft is listed, if known. The depth is determined from notes made by geologists who visited the mine during its operation or from drill hole data in ISGS files. Depth generally varies little over the extent of a mine; however, reported depths for an individual mine may vary. Depth for surface-mined coals varies, and is usually represented as a range.

Thickness The approximate thickness of the mined seam is shown, if known. Thickness also comes from notes of geologists who visited the mine during its operation or from borehole data in ISGS files. Minimum, maximum, and average thicknesses are given when this information is available.

Mining method The principal mining method used at the mine (figs. 1A-H) is listed. See the mining methods section at the beginning of this directory for a discussion of this parameter.

Geologic problems reported Any known geologic problems, such as faults, water seepage, floor heaving, and unstable roof, encountered in the mine are reported. This information is from notes made by ISGS geologists who visited the mine, or from reports by mine inspectors published by the Illinois Department of Mines and Minerals, or from the source map(s). Geologic problems are not reported for active mines.

PRODUCTION HISTORY

Production history Tons of coal produced from the mine by each mine owner are totaled. When the source map used for the mine outline is not a final mine map, the tonnage produced since the date of the map is identified. For mines that extend into adjacent quadrangles, the tonnage reported includes areas mined in adjacent quadrangles.

SOURCE OF DATA

Source map This section lists information about the map(s) used to compile the mine outline and the locations of tipples and mine openings. In some cases more than one source map was used. For example, a map drawn before the mine closed may provide better information on original areas of the mine than a later map. When more than one map was used, the bibliography section explains what information was taken from each source.

Date The date of the most recent mine survey listed on the source map is reported.

Original scale The original scale of the source map is listed. Many maps are photo-reductions and are no longer at their original scale. The original scale gives some indication of the level of detail of the mine outline and the accuracy of the mine boundary relative to surface features. Generally, the larger the scale, the greater the accuracy and detail of the mine map. Mine outlines taken from source maps at scales smaller than 1:24,000 may be highly generalized and may well be inaccurately located with respect to surface features.

Digitized scale The scale of the digitized map is reported. The scale may be different from that of the original source map. In many cases the digitized map was made from a photo-reduction of the original source map, or the source map was not in a condition suitable for digitizing and the mine boundaries were transferred to another base map.

Map type Source maps are classified into five categories to indicate the probable completeness of the map. See discussion of source maps in the previous section.

Annotated bibliography Sources that provide information about the mine are listed, with the data taken from each source. Some commonly used sources are described below. Full bibliographic references are given for all other sources. Unless otherwise noted, all sources are available for public inspection at the ISGS.

Coal Reports Published since 1881, these reports contain tabular data on mine ownership, production, employment, and accidents. Some volumes include short descriptions made by mine inspectors of physical features and conditions in selected mines.

Directory of Illinois Coal Mines This source is a compilation of basic data about Illinois coal mines, originally gathered by ISGS staff in the early 1950s. Sources used for this directory are undocumented, but they are primarily Illinois Department of Mines and Minerals annual reports, ISGS mine notes, and coal company officials.

ENR Document 85/01, Guither, H. D., J. K. Hines, and R. A. Bauer, 1985 The Economic Effect of Underground Mining Upon Land Used for Illinois Agriculture: Illinois Department of Energy and Natural Resources Document 85/01, 185 p.

Microfilm map The U.S. Bureau of Mines maintains a microfilm archive of mine maps. A microfilm file for Illinois is available for public viewing at the ISGS.

Mine notes ISGS geologists have visited mines or contacted mine officials throughout the state since the early 1900s. Notes made during these visits range from brief descriptions of the mine location to long narratives (including sketches) of mining conditions and geology.

Federal Land Bank of St. Louis, Preliminary Reports on Subsidence Investigations Mining engineers working for the Federal Land Bank of St. Louis mapped areas of subsidence due to coal mining in the early 1930s. These reports often include county maps of mine properties with mined-out areas including shaft locations, as well as subsidence areas.

REFERENCES

Bauer, R. A., B. A. Trent, and P. B. Dumontelle, 1993, Mine Subsidence in Illinois: Facts for the Homeowner Considering Insurance, Illinois State Geological Survey, Environmental Geology Note 144, 16p.

Guither, H. D., J. K. Hines, and R. A. Bauer, 1985, The Economic Effects of Underground Mining Upon Land Used for Illinois Agriculture, Illinois Department of Energy and Natural Resources Document 85/01, 185p.

PART II DIRECTORY OF MINES IN THE GEORGETOWN QUADRANGLE

MINE SUMMARY SHEETS

A summary sheet on the geology and production history of each mine in the Georgetown Quadrangle is provided. These summary sheets are arranged numerically by mine index number. Consult Part I for a complete explanation of the data listed in the summary sheet.

Mine Index 91
Chicago & Harrisburg Coal Company, Chicago & Harrisburg No. 24 Mine

Type: Underground Total mined-out acreage shown: 4,049

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main shaft	Vermilion	18N 12W	15	SW NW SE
Air shaft	Vermilion	18N 12W	15	SE NW SE

GEOLOGY

		Thickness (ft)			Mining
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	204-218	4.5	10.0	5.5-6.5	MRP, some HER

Geologic Problems Reported: G. H. Cady noted that “so-called faults” were shown on the mine map, which he deduced were channel sandstones that cut down into (but not through) the coal seam. The first indication of approaching one of these channels was a thickening of the shale. Evidence indicated that the channels were contemporaneous with deposition of the upper portion of the coal or the roof shale. Horsebacks and rolls were present in the seam, generally bearing northeast-southwest.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Dering Coal Company	Dering No. 4	1904-1909 *	443,640
Brazil Block Coal Company	Brazil Block No. 4	1909-1911	209,912
Dering Coal Company	Dering No. 4	1911-1916 **	515,449
Peabody Coal Company	Peabody No. 24	1916-1944	15,060,626
Chicago & Harrisburg Coal Company	Chicago & Harrisburg No. 24	1944-1946	1,824,722
			18,054,349

* Idle 1909
** Idle 1915, 1916

Last reported production: March 1946

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Microfilm, document 352916	3-30-1946	1:1200	1:2234	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness.
Directory of Illinois Coal Mines (Vermilion County) - Mine names, mine index, ownership, years of operation.
ENR Document 85/01 - Mining method.
Mine notes (Vermilion County) - Mine type, shaft locations, seam, depth, thickness, geologic problems.
Microfilm map, document 352916, reel 03141, frames 53-54 - Shaft locations, mine outline, mining method.

Mine Index 92
Sharon Coal Mining Company, Sharon Mine

Type: Underground Total mined-out acreage shown: 121

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main shaft	Vermilion	17N 11W	7	SW NW NE
Air shaft	Vermilion	17N 11W	7	SW NW NE

GEOLOGY

		Thickness (ft)			Mining
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	235-248	4.0	5.67	5.0-5.5	MRP

Geologic Problems Reported: The immediate roof was a carbonaceous shale 3 to 4 inches thick. This held up well, but when it did come down, it was overlain by 15 feet of gray shale that caused trouble. Moisture caused the shale to swell and break and come down. The floor was over 5 feet of fire clay, but did not heave unless it got wet.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Sharon Coal & Brick Company	Sharon	1906-1910	44,864
S. N. Lankford	Sharon	1910-1911	16,102
Sharon Coal & Brick Company	Sharon	1911-1921	509,794
Sharon Coal Mining Company	Sharon	1921-1924	72,902
			643,662

Last reported production: 1924

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
State archive, MSHA_1188	4-15-1925	1:1200	1:1200	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth.
Directory of Illinois Coal Mines (Vermilion County) - Mine names, mine index, ownership, years of operation.
ENR Document 85/01 - Mining method.
Mine notes (Vermilion County) - Mine type, shaft locations, seam, depth, thickness, geologic problems.
State archive, MSHA_1188, courtesy of Robert Gibson - Shaft locations, mine outline, mining method.

Mine Index 93
United States Fuel Company, Vermilion Mine

Type: Underground Total mined-out acreage shown: 2,870

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main shaft *	Vermilion	18N 11W	19	NE NW SE
Air shaft	Vermilion	18N 11W	19	NE NW SE
Air shaft	Vermilion	18N 11W	30	SE NW NE

* Connected underground to Kelly No. 4 Mine (mine index 3660) near Kelly's auxiliary shaft in 17-T18N-R11W; connection sealed in March 1930.

GEOLOGY

		Thickness (ft)			Mining
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	180-194	0-5.5	9.5-12.0	6.0-7.5	MRP, HER **

** From the mine notes, circa 1912, "pillars were largely drawn". It is not known how long this procedure continued.

Geologic Problems Reported: Faults were noted on the company map in various parts of the mine, but particularly in Sections 19 and 20 of T18N-R11W. Some faults disturbed the mining pattern and made the coal difficult to get while others had no apparent affect. Some of these faults may have been channels or other erosional features. A 70-foot roof fall was noted southeast of the shaft. The immediate roof was gray sandy shale that ranged from 11 to 50 feet thick and was interbedded with the top layers of the coal, and came down readily. Rolls from the roof caused difficulties in mining. A small amount of pyrite and gypsum was present in cracks throughout most of the mine. The floor was clay up to 6 feet thick. The mine was dry, but the clay did swell readily upon becoming wet. Heaving was not a characteristic of this clay.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Vermilion Coal Company	Vermilion No. 1	1905-1906	9,815
Little Vermilion Coal Company	Little Vermilion No. 1	1906-1908	912,000
Bunsen Coal Company	Vermilion	1908-1916	4,764,717
United States Fuel Company	Vermilion	1916-1932	12,926,636
			18,613,168

Last reported production: March 1932

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 4103.V4 i5.1-125	4-1-1932	1:1200	1:1200	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness.
Mine notes (Vermilion County) - Mine type, shaft locations, seam, depth, thickness, geologic problems, mining method.
Company map, ISGS map library, 4103.V4 i5.1-125 - Shaft locations, mine outline, mining method, geologic problems.

Mine Index 401
United States Coal & Coke Company, Bunsen Mine

Type: Underground Total mined-out acreage shown: 3,736

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main shaft	Vermilion	18N 12W	26	NE NW SE
Air shaft	Vermilion	18N 12W	26	NE NW SE

GEOLOGY

		Thickness (ft)			Mining
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	200-240	4.0	8.0	6.0	MRP, some HER

Geologic Problems Reported: The roof was 1 to 4 feet of draw slate. The chief impurity in the coal came from the numerous horsebacks in the upper part of the seam. A few pyrite concretions and nodules were noticed. The source maps show a sandstone channel in the southwest corner of the mine, faults in the east-central and far west north-central areas, and “faulty sand rock” in the far east-central and northeastern portions of the mine.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
United States Fuel Company	Bunsen	1916-1940	17,446,759
United States Coal & Coke Company	Bunsen	1941-1947	6,265,914
			23,712,673

Last reported production: April 1947

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Microfilm, document 353017	7-1-1947	1:1200	1:2731	Final
ISGS map library, 4103.V4 i5.1-135	7-1-1947	1:42240	1:42240	Final
Company	1947	1:7200	1:7200	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation.
Directory of Illinois Coal Mines (Vermilion County) - Mine names, mine index, ownership, years of operation.
ENR Document 85/01 - Mining method.
Mine notes (Vermilion County) - Mine type, shaft location, seam, depth, thickness, geologic problems.
Microfilm map, document 353017, reel 03141, frames 164-186 - Shaft locations, mine outline, geologic problems.
ISGS map library, 4103.V4 i5.1-135 - Shaft locations, mine outline, mining method.
Company map, loaned by Peabody Coal Company - Mine outline, mining method.

Mine Index 1018
Black Beauty Coal Company, Riola Mine

Type: Underground Total mined-out acreage shown: 1,853

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Vermilion	18N 12W	33	SE NE NE
Air shaft	Vermilion	18N 12W	28	NE SE SE
Air shaft	Vermilion	18N 12W	28	SW SE SE

GEOLOGY

		Thickness (ft)			Mining
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	251	4.5		5.8-6.8	RPP

Geologic Problems Reported: Faults trending E-W were noted on the source map. Roof falls were relatively common, and were relatively large (size not given). The roof was generally silty shale and siltstone, with occasional fine sandstone beds that were 1 foot or more thick. At the base of the slope, shearing created an unstable roof that was difficult to support with roof bolting. In some instances, most of the movement along the shear was horizontal, but in other areas nearby and few feet up into the roof, the shearing dipped at various angles and trends, even along a single shear surface. There were numerous indications of soft sediment flow before complete lithification of the roof sediments or the coal. In the area at the slope bottom, the 5 foot mechanical bolts were supplemented with 8 to 12 foot resin bolts, often with “bacon strips”, thin metal bands attached to adjacent roof bolts to help support smaller pieces of roof rock. A clay dike was seen, although clay dikes are rare in the Herrin Coal. Rolls were large (across multiple entries) and mine plans were altered to leave pillars under them where possible. Pyrite and siderite in lenses and nodules were found. The lenses were up to 0.2 feet thick and more than 1 foot in diameter. The sulphur content was generally less than 2%.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Catlin Coal Company	Riola	1996-1998	1,553,745
Black Beauty Coal Company	Riola	1999-2006	6,905,132
			8,458,877

Last reported production: 2006

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 6-424	6-9-2006	1:6000	1:6000	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, thickness.
Directory of Illinois Coal Mines (Vermilion County) - Mine names, mine index, ownership, years of operation.
Mine notes (Vermilion County) - Mine type, slope location, seam, depth, thickness, geologic problems.
Company map, Coal Section files, 6-424 - Slope & shaft locations, mine outline, mining method, geologic problems.

Mine Index 1026
Black Beauty Coal Company, Vermilion Grove Mine

Type: Underground Total mined-out acreage shown: 1,891

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Vermilion	17N 12W	13	SE NE NW
Air shaft	Vermilion	17N 12W	12	SE SE SW
Air shaft	Vermilion	17N 12W	12	NE SE SW
Air shaft	Vermilion	17N 12W	11	NW SW NW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft) Min	Max	Ave	Mining Method
Herrin	251			5.5-6.0	RPP

Geologic Problems Reported: A normal fault with 3 to 4 feet of displacement was seen. Rolls were present, sometimes cutting out as much as 3 feet of coal. The roof was siltstone and gray shale that contained lenses and laminae of sandstone, coal stringers and plant debris. The bedding layers gradually thickened and thinned. In one place, a 10-foot wide zone of fractures was present in the roof, and water seeped in. Roof falls from 9 to 12 feet high were noted, and falls were more common in N-S entries. The cause was determined to be horizontal stress with E-W compression, which formed kink zones. The mine plan was altered to drive the mine headings at a 45-degree angle to the principal stress axis. Siderite was present as laminae and small nodules in the roof. The blue band was the only persistent parting in the coal, and was 1.8 to 2 feet above the floor. The blue band varied in thickness but was always less than 1 inch thick.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Black Beauty Coal Company	Vermilion Grove	2001-2009	8,836,350
			8,836,350

Last reported production: 2009

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 6-428	12-31-2009	1:6000	1:6000	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, thickness.
Directory of Illinois Coal Mines (Vermilion County) - Mine names, mine index, ownership, years of operation.
Mine notes (Vermilion County) - Mine type, slope location, seam, depth, geologic problems.
Company map, Coal Section files, 6-428 - Slope & shaft locations, mine outline, mining method.

Mine Index 3670
Dering Coal Company, Dering No. 3 Mine

Type: Underground Total mined-out acreage shown: 325

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main shaft	Vermilion	18N 12W	23	SW SE NE
Air shaft	Vermilion	18N 12W	23	SW SE NE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft) Min	Max	Ave	Mining Method
Herrin	187-204			6.0-7.0	MRP

Geologic Problems Reported: The source map indicates a fault in the southeast part of the mine.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Dering Coal Company	Dering No. 3	1905-1909	1,049,735
Brazil Block Coal Company	Dering No. 3	1909-1911	538,257
Dering Coal Company	Dering No. 3	1911-1913	445,531
			2,033,523

Last reported production: May 1913

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 10-7-15b	5-19-1913	1:2400	1:2400	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness.
Directory of Illinois Coal Mines (Vermilion County) - Mine names, mine index, ownership, years of operation.
ENR Document 85/01 - Mining method.
Mine notes (Vermilion County) - Mine type, shaft location, seam.
Company map, courtesy Vermilion County Recorder's Office, traced, Coal Section files 10-7-15b - Mine outline, mining method, shaft locations.

MINES WHOSE LOCATIONS ARE NOT KNOWN, GEORGETOWN QUADRANGLE

The locations of the following mines are unknown, but the production tonnage, operating names, and nearest town were reported in the Annual Coal Reports. The operators listed below mined in or near the Georgetown Quadrangle. The information shown is similar to that presented on the summary sheets in the previous pages of this directory. The first item is the name the mine operated under as listed in the Coal Report, then the years the mine reported. If no physical data are available, the next item listed is the total tons produced by the mine. If physical data are available, the order of presentation is as follows: type of opening for the mine (drift, slope or shaft), depth of coal in feet, and thickness of coal in feet.

The total tons mined by these unlocated mines is 45,709 (14,400 underground and 29,459 surface mined and 1,850 mined by uncertain method), which would represent approximately 6 to 10 acres, depending on the recovery factor, mining method, and numerous other factors. (Note: 1 square mile = 640 acres)

GEORGETOWN

Yankee Branch Coal Company, 1934-1935, surface	3,369 tons	mine index 6537
Chandler (M.), 1885-1885, surface	50 tons	
Crawford (George H.), 1884-1886, surface, Herrin	1,000 tons	
Crawford (George A.), 1886-1887, slope, Danville, 50, 5.0	560 tons	
Breezley (P.), 1887-1889, underground	1,595 tons	
Martin (R.), 1884-1885, surface, Herrin	600 tons	
Martin (Ambrose), 1885-1886	335 tons	
	935 tons	
Clifton (S. A. D.), 1890-1891, surface,–, 5, 4.0-5.0	750 tons	
Kennedy (George), 1891-1893	810 tons	
	1,560 tons	
Clifton (Jacob), 1890-1895, surface, Danville, 5-14, 4.0-5.0	1,485 tons	
Clifton (Andrew), 1895-1896	1,000 tons	
Hollinsworth (Samuel), 1896-1897	400 tons	
Horning (J. W.), 1897-1899	750 tons	
	3,635 tons	
Lowell (A.), 1890-1891, surface, –, 6-8, 4.0-5.5	330 tons	
Schafer (Jesse), 1891-1895	950 tons	
Lowell (A. E.), 1895-1897	1,660 tons	
	2,940 tons	
Williams (John C.), 1891-1895, surface, Danville, 4-35, 4.0-6.0	1,455 tons	
Graham (Thomas), 1896-1899	1,600 tons	
	3,055 tons	
Cook (B. F.), 1893-1894, drift, Danville, 30-40, 4.0-6.0, RP	600 tons	
Coon (John), 1894-1895	200 tons	
	800 tons	
Hawkins (Amos), 1893-1894, drift, Danville, 30, 6.0	800 tons	
Hawkins (A. J.), 1894-1895, surface, Danville, –, 4.0	1,000 tons	
Garrets & Company, 1903-1904, surface, Herrin, 10, 7.0	502 tons	
Bryant & Jumps, 1912-1913, surface, Danville, –, 6.0	650 tons	
Bryant & Jumps, 1913-1914, slope, Herrin, –, 5.0, RP	300 tons	

Hawkins (Lloyd), 1914-1917, drift, Danville, –, 4.5-5.0, RP	10,300 tons
H. & H. Coal Company, 1925-1925	335 tons
Meeks & Hawkins, 1926-1926	300 tons
Morgan, Meeks & Hawkins, 1927-1927	300 tons
	600 tons
Trosper (E. M.), 1926-1926	225 tons
Morgan (James M.), 1926-1929, surface	4,255 tons
Mannay (Frank), 1926-1926	50 tons
Lewis & Yoho, 1926-1926	40 tons
Cook (B. A.) Coal Company, 1927-1935, surface	3,223 tons
Brayeton & McCool, 1927-1927	300 tons
Brazelton & McCool, 1928-1928	150 tons
	450 tons
Poole (Raleigh), 1927-1928	150 tons
Hawkins (Edward) Coal Company, 1927-1935, surface	520 tons
Thornton Coal Company, 1929-1929, surface	350 tons
Tucker Coal Company, 1929-1929, surface	90 tons
Georgetown Community Mine, 1932-1935, surface	2,325 tons
B. & M. Coal Company, 1935-1935, underground	45 tons

INDEX OF MINES IN THE GEORGETOWN QUADRANGLE