

Coal Mines in Illinois Rend Lake Dam Quadrangle

Franklin County, Illinois

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

Mining Method



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 ۰
- Uncertain Location
- . Uncertain Type of Opening

Mine Annotation

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

DISCLAIMER

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The image of the U.S.G.S. Rend Lake Dam Quadrangle used as a basemap was projected from the original UTM to Lambert Conformal Conic.



Illinois State Geological Survey 615 E. Peabody Dr. Champaign, IL 61820

Mine Outlines Compiled by Melisa L. Borino February 28, 2002 Revised April 11, 2008

Location



DIRECTORY OF COAL MINES IN ILLINOIS 7.5-MINUTE QUADRANGLE SERIES REND LAKE DAM QUADRANGLE FRANKLIN COUNTY

Cheri Chenoweth & Melisa L. Borino



Department of Natural Resources ILLINOIS STATE GEOLOGICAL SURVEY 2002 REVISED 2008

DIRECTORY OF COAL MINES IN ILLINOIS 7.5-MINUTE QUADRANGLE SERIES REND LAKE DAM QUADRANGLE FRANKLIN COUNTY

2002 REVISED 2008

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

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.

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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.

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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.

The directory serves as a key to the accompanying mine map and provides basic information on the coal mines. 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.

MINING IN THE REND LAKE DAM QUADRANGLE

Methane gas seeping from the coal was a serious problem in Franklin County; 16 men were killed in explosions in the mines that operated in the Rend Lake Dam Quadrangle. Ventilation was good at the working faces, but gas would accumulate behind stoppings that shut off the abandoned areas of the mines, and the stoppings were not always airtight. Factors that contributed to the mines' problems were open flames in miners lamps and coal dust that would promulgate the explosion throughout the mine. The open flames in the miners lamps were a known hazard, but the introduction of closed lamps caused serious labor antagonism, since the lamps only provided about 2 candlepower of illumination. The gradual development of 100-candlepower lamps eased acceptance of the battery-powered lights. Rock dusting required development also, although the process was known in 1917. Lime dust was often too coarse to apply effectively. Old Ben Coal Company worked aggressively to develop a shale dust and this was used from 1918 until 1928, when lime rock dust became available in paper bags.

The Herrin Coal was very thick in Franklin County, reaching a maximum thickness of 11.5 feet in the Rend Lake Dam Quadrangle, and was over 600 feet deep at most of the mines. Old Ben No. 14 (mine index 665) operated the longest of the mines in this quadrangle, running for 49 years.

Old Ben No. 14 (mine index 665) and Old Ben No. 24 (mine index 866) had several large faults passing through the workings. These faults are part of the Rend Lake Fault Zone, and had offsets up to 55 feet. For details on the Rend Lake Fault System, see ISGS Circular 513, noted in the Reference section on page 8 of this report.

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 guarter of the southwest guarter of the northwest guarter. 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.
- Keys, J. N., and W. J. Nelson, 1980, The Rend Lake Fault System in Southern Illinois: Illinois State Geological Survey Circular 513, 23p.

PART II DIRECTORY OF MINES IN REND LAKE DAM QUADRANGLE

MINE SUMMARY SHEETS

A summary sheet on the geology and production history of each mine in the Rend Lake Dam 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 56

Old Ben Coal Corporation, Old Ben No. 19 Mine

Type: Underground Total mined-out acreage shown: 745

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-Footage
Main shaft (10'x18')	Franklin	6S 2E	4	SE SW NE
Air/escape shaft (10'x13')	Franklin	6S 2E	4	NE NW SE

GEOLOGY

		Thick	ness (ft)		Mining
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	567-580	7.0	10.0	7.67-9.0	RPP

<u>Geologic Problems Reported</u>: Two gas explosions killed seven men in November-December 1908. The roof was gray shale over a large portion of the mine, and the roof over the remainder of the mine was 9 feet of limestone. Where gray shale made up the roof, 1.5 feet of top coal was left to support the roof. Rolls were fairly common, but not in sufficient number to seriously affect mining. The seam contained pyrite streaks and lenses, irregularly distributed. The floor clay heaved badly when wet.

PRODUCTION HISTORY

			Production	
Company	Mine Name	Years	(tons)	
W. P. Rend Coal Company	Rend	1907-1920	3,613,204	
Old Ben Coal Corporation	Old Ben No. 19	1920-1923	521,861	
			4,135,065	

Last reported production: March 1923

SOURCES OF DATA				
		Original	Digitized	
Source Map	Date	Scale	Scale	Мар Туре
Company map	6-30-1924	1:2400	1:2400	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, shaft sizes, depth, thickness, geologic problems. Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. ENR Document 85/01 - Mining method.

Mine notes (Franklin County) - Mine type, shaft location, seam, depth, thickness, geologic problems.

Company map, ISGS map library, Old Ben Coal Company Archive Collection - Shaft locations, mine outline, mining method.

Mine Index 139 United States Fuel Company, Middle Fork Mine

Type: Underground Total mined-out acreage shown: 810

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-Footage
Main shaft (12'x17')	Franklin	6S 3E	21	NE NE NE
Air shaft (12'x15')	Franklin	6S 3E	21	NW NE NE

GEOLOGY

		Thic	kness (f	t)	Mining	
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method	
Herrin	602-609	5.0	11.5	6.0-7.67	RPP	

<u>Geologic Problems Reported</u>: The roof in the northern part of the mine was light gray shale (white top) and came down readily. "Several feet" of top coal had to be left to support this roof. Other areas had 6 inches to 6 feet of black shale as roof, which drew in some places, or limestone roof. The mine manager noted that the roof in east-west entries held, while the roof in north-south entries fell in a very short time. The coal rolled considerably in the eastern and southern parts of the mine, making it difficult to maintain easy grades on the haulage roads. The roadbeds had many hills and valleys. Rolls and slips were present in the seam, but not of sufficient density to have a detrimental affect on mining. Pyrite lenses and calcite veinlets were also present in the coal. The underclay was 4 to 5 feet thick and heaved when wet.

PRODUCTION HISTORY

			Production
Company	Mine Name	Years	(tons)
Middle Fork Mining Company	Middle Fork	1915-1916	51,115
United States Fuel Company	Middle Fork	1916-1925	<u>4,016,768</u> 4,067,883

Last reported production: July 1924

SOURCES OF DATA

		Original	Digitized	
Source Map	Date	Scale	Scale	Мар Туре
Microfilm, document 351418	7-3-1924	1:3600	1:7696	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, shaft sizes, depth, thickness. Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. ENR Document 85/01 - Mining method.

Mine notes (Franklin County) - Mine type, shaft locations, seam, depth, thickness, geologic problems. Microfilm map, document 351418, reel 03136, frame 53 - Shaft locations, mine outline, mining method.

Mine Index 665 Old Ben Coal Corporation, Old Ben No. 14 Mine

Type: Underground Total mined-out acreage shown: 5,369 The area is too large for the reported production and coal thickness. It is probable that a foot or more of top coal was left to support the roof.

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-Footage
Main shaft (11'x19')	Franklin	6S 2E	20	580 FSL, 860 FEL
Air shaft (10.5'x11')	Franklin	6S 2E	20	SW SE SE

GEOLOGY

		Thick	ness (ft)		Mining
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	451			8.5-10.0	HER

<u>Geologic Problems Reported</u>: The mine had gas; eight men were killed in an explosion in 1915 and one man was killed in a gas explosion in 1931. The roof was a massive brittle shale that fell readily. The source map shows a series of north-south trending faults through the centers and east halves of sections 22 and 27 of T6S-R2E. Individual faults had offsets of up to 25 feet. These faults are part of the Rend Lake Fault System.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
United Coal Mining Company	United No. 2	1911-1915	1,667,066
United Coal Corporation	United No. 2	1915-1916	708,421
Old Ben Coal Corporation	Old Ben No. 14	1916-1960 *	33,638,787
·			36.014.274

* Idle 1933

Last reported production: March 1960

SOURCES OF DATA				
		Original	Digitized	
Source Map	Date	Scale	Scale	Мар Туре
Company map	6-24-1960	1:2400	1:2400	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, shaft sizes, thickness, geologic problems. Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. ENR Document 85/01 - Mining method.

Mine notes (Franklin County) - Mine type, shaft location, seam, depth, thickness, geologic problems.

Company map, ISGS map library, Old Ben Coal Company Archive collection - Shaft locations, mine outline, mining method, geologic problems.

Mine Index 863 Old Ben Coal Corporation, Old Ben No. 21 Mine

Type: Underground Total mined-out acreage shown: 8,696

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-Footage
Main shaft	Franklin	5S 2E	8	NE NE NE
Air shaft	Franklin	5S 2E	8	NW NE NE
D & E shafts	Franklin	5S 2E	17	NW SW NE
F & G shafts	Franklin	5S 1E	14	SW NE SE

GEOLOGY

		Thickness (ft)		Mining	
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	656-660			5.8-8.42	HER, LW, RP *

* The mine operated in RPP pattern from 1978-1986, and began some longwall panels in 1985 (the only longwall mine in the state at that time). The mine was idled from May to October 1990, and reopened with only the continuous miners working RP method. Plans were underway for longwall expansion in 1991, but the mine was idled instead and never reopened.

<u>Geologic Problems Reported</u>: Several types of structural features are common here: large, high-angle faults apparently of tectonic origin (Rend Lake Fault System) with 1 to 6 feet of displacement, steep high-angle fractures or slips in coal or roof (tectonic origin), minor slips in roof shale (soft-sediment compaction features), and "X" pattern faults (usually two faults intersecting at the top of the coal). The roof was medium gray shale, finely slity and micaceous, finely laminated, firm, with fine sideritic laminations and nodules. The northwestern corner of the property had split coal, where the blue band thickened from its normal 2 to 3 inches up to 24 inches. (This area is adjacent to the Walshville channel.) At least one large roll was present, plus a series of small rolls. About 12 inches of top coal was left to support the roof throughout the mine.

PRODUCTION HISTORY

			Production	
Company	Mine Name	Years	(tons)	
Old Ben Coal Corporation **	Old Ben No. 21	1960-1991	<u>53,797,836</u> 53,797,836	-

** Listed in the Coal Reports as Old Ben Coal Corporation, but bought by Zeigler Coal Holding Company on May 28, 1990.

Last reported production: October 26, 1991

SOURCES OF DATA

		Original	Digitized	
Source Map	Date	Scale	Scale	Мар Туре
Company map	12-1993	1:12000	1:12000	Final
Company map	12-31-1996	1:4800	1:4800	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness. Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. ENR Document 85/01 - Mining method. Mine notes (Franklin County) - Mine type, shaft location, seam, thickness, geologic problems. Company map, ISGS Coal Section files - Mine outline, mining method. Company map, ISGS Coal Section files (digital) - Shaft locations.

Mine Index 866 Old Ben Coal Corporation, Old Ben No. 24 Mine

Type: Underground Total mined-out acreage shown: 6,884

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-Footage	
A shaft, hoist	Franklin	6S 2E	11	SW SE NE	
B shaft	Franklin	6S 2E	11	NE SE NE	
C shaft, man & material	Franklin	6S 2E	2	NE SE NE	
D shaft, exhaust fan	Franklin	6S 2E	2	NE SE NE	
E shaft, fan	Franklin	5S 2E	25	SE NW NE	

GEOLOGY

		Thickness (ft)			Mining	
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method	
Herrin	625-666			6.6-8.5	HER, LW , RP *	

* The older parts of the mine were worked with RPP from 1965 to 1977. The Coal Report lists LW and RP after 1978. The source map shows areas where pillars were removed as mining ended in different areas.

<u>Geologic Problems Reported</u>: The eastern part of the mine had faults. The near western portion of the mine was hilly and had poor roof conditions.

PRODUCTION HISTORY

			FIGUUCION	
Company	Mine Name	Years	(tons)	
Old Ben Coal Corporation	Old Ben No. 24	1965-1996 **	<u>51,487,488</u> 51,487,488	

Droduction

** Idle 1981 and 1982

Last reported production: 1996

SOURCES OF DATA

		Original	Digitized	
Source Map	Date	Scale	Scale	Мар Туре
Company map	12-31-1996	1:4800	1:4800	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, seam, depth, thickness. Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. Mine notes (Franklin County) - Mine type, shaft location, geologic problems. Company map, ISGS Coal Section files (digital) - Shaft locations, mine outline, mining method.

Mine Index 879 Old Ben Coal Corporation, Old Ben No. 26 Mine

Type: Underground Total mined-out acreage shown: 7,165

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-Footage
Hoist shaft	Franklin	5S 2E	20	NE NE
Man & material shaft	Franklin	5S 2E	20	SE NE
C portal & D shaft	Franklin	5S 2E	32	NE NE
E & F shaft	Franklin	5S 2E	30	SW NW

GEOLOGY

		Thickness (ft)			Mining
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method
Herrin	640-651			8.0-8.8	RPP, LW, RP, HER *

* The mining method is recorded as RPP from 1968 to 1978, and afterwards as LW & RP. The source map shows areas where pillars were removed as mining ended in different areas.

<u>Geologic Problems Reported</u>: A fault system was encountered in the East North mains and the East South mains, which had up to 8 feet of displacement. The main fault zone was about 15 feet wide, with as much as 55 feet of displacement. Oil seeped in along the fault. The roof over most of the mine was Energy Shale, often massive and very silty. Some large (up to 12 inches long) limestone nodules were noted in the Energy Shale. Generally 6 to 10 inches of top coal was left to support and protect the Energy Shale roof. The Anna Shale was the immediate roof over the coal in some rare cases. The coal seam contained rolls 3 to 4 feet wide and smaller. Coal balls, small and elongated, occurred in places. Erosional channels were also present. Minor floor heave was seen in several places, along both entries and crosscuts (no preferred orientation).

PRODUCTION HISTORY

			Production	
Company	Mine Name	Years	(tons)	
Old Ben Coal Corporation **	Old Ben No. 26	1968-1996	<u>57,779,383</u> 57,779,383	

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** owned by British Petroleum in the 1980s; bought by Zeigler Coal Holding Company in July 1990

Last reported production: 1996

SOURCES OF DATA

		Original	Digitized	
Source Map	Date	Scale	Scale	Мар Туре
Company map	12-31-1996	1:4800	1:4800	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, seam, depth, thickness, mining method. Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. ENR Document 85/01 - Mining method.

Mine notes (Franklin County) - Mine type, shaft location, thickness, geologic problems.

Company map, ISGS Coal Section files (digital) - Shaft locations, mine outline, mining method.

Mine Index 2068 Aaron King, King Mine

Type: Surface Total mined-out acreage shown: None; production indicates less than 1 acre was mined.

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-Footage
Pit	Franklin	5S 3E	16	SE SW SW
Pit	Franklin	5S 3E	21	NE NW NW

GEOLOGY

		Thickness (ft)			Mining	
Seam(s) Mined	Depth (ft)	Min	Max	Ave	Method	
Flannigan				1.5	Surface	

Geologic Problems Reported:

PRODUCTION HISTORY

			Production
Company	Mine Name	Years	(tons)
William A. King	King	1889-1892	1,100
Aaron King	King	1892-1893	120
C C	Ū.		1,220

Last reported production: 1893

SOURCES OF DATA

		Original	Digitized	
Source Map	Date	Scale	Scale	Мар Туре
ISGS field notes (H. R. Wanless)	7-27-1932	(text only)	1:24000 *	Secondary source

* The mine location was plotted on a 1:24,000 USGS topographic map from the mine location description and digitized.

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, thickness. Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. ISGS field notes (Franklin County) - Mine type, mine location, seam, thickness.

Mine Index 2070 Franklin Mining Company, Franklin Mine

Type: Underground Total mined-out acreage shown: 792

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-Footage
Main shaft (11.33'x17.2')	Franklin	6S 3E	17	SW SW NE
Air shaft (11.33'x15.17')	Franklin	6S 3E	17	SE SW NE

GEOLOGY

		Thicknes	ss (ft)	Mining	
Seam(s) Mined	Depth (ft)	Min Ma	x Ave	Method	
Herrin	623	6.0	6.5-8.0	RPP	

<u>Geologic Problems Reported</u>: The seam contained some small slips, but the effect of these slips on mining was negligible. Pyrite stringers and calcite facings were also present. The coal contained rolls, some of which nearly cut out the coal.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)	
Franklin County Mining Company	Franklin County No. 1	1917-1920	285.824	
Franklin Coal & Mining Company	Franklin	1920-1921	334,447	
Franklin County Mining Company	Franklin County	1921-1932 *	3,174,790	
Benton-Franklin Coal Company	Ward	1933-1933	63,216	
Franklin Mining Company	Ward	1934-1934	153,925	
			4,012,202	

* Idle 1931-1932

Last reported production: October 1934

SOURCES OF DATA

		Original	Digitized	
Source Map	Date	Scale	Scale	Мар Туре
Microfilm, document 351452	4-26-1961 **	1:2400	1:4303	Final

** Mine survey extended to 11-30-1934

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, shaft sizes, thickness.

Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. ENR Document 85/01 - Mining method.

Mine notes (Franklin County) - Mine type, shaft locations, seam, depth, thickness, geologic problems. Microfilm map, document 351452, reel 03136, frames 158, 159 - Shaft locations, mine outline, mining method.

Mine Index 3985

Type: Surface Total mined-out acreage shown: None

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Туре	County	Township-Range	Section	Quarters-F	ootage
Pit	Franklin	5S 3E	21	NE SW NV	V
GEOLOGY					
		Thickne	ss (ft)	Mining	9
Seam(s) Mined	Depth (ft)	Min M	ax Ave	Metho	d
Flannigan		2.	0 1.33	Surfac	æ
Geologic Problems R	eported:				
PRODUCTION HIST	ORY				
					Production

* This mine location may have been part of the King Mine (mine index 2068). The field notes included a statement that it had been mined 16 to 18 years before, which would be in the time when Wanless visited the King Mine location.

Last reported production:

SOURCES OF DATA

		Original	Digitized				
Source Map	Date	Scale	Scale	Мар Туре			
ISGS field notes (F. E. Williams)	7-5-1949	(text only)	1:24000 **	Secondary source			

** The mine location was plotted on a 1:24,000 USGS topographic map from the mine location description and digitized.

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation.

Directory of Illinois Coal Mines (Franklin County) - Mine names, mine index, ownership, years of operation. ISGS field notes (Franklin County) - Mine type, mine location, seam, thickness.

INDEX OF MINES IN THE REND LAKE DAM QUADRANGLE

Benton-Franklin Coal Company	6
Franklin Coal & Mining Company	6
Franklin County Mining Company, No. 1 Mine	6
Franklin Mining Company	6
King (Aaron)	5
King (William A.)	5
Middle Fork Mining Company	0
Old Ben Coal Corporation, No. 14 Mine	1
Old Ben Coal Corporation, No. 19 Mine	9
Old Ben Coal Corporation, No. 21 Mine	2
Old Ben Coal Corporation, No. 24 Mine	3
Old Ben Coal Corporation, No. 26 Mine	4
Rend (W. P.) Coal Company	9
United Coal Corporation, No. 2 Mine	1
United Coal Mining Company, No. 2 Mine	1
United States Fuel Company	0
Ward Mine	6

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