

Coal Mines in Illinois Harco Quadrangle Williamson & Saline Counties, Illinois

Womac & Danville Coals

This map accompanies the Coal Mines Directory for the Harco Quadrangle and maps of mines in the Herrin Coal and mines in the Springfield Coal. 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 permitting)

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 <https://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 associated 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. This 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 1:400 to 1:150,000, and some mine locations 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 shown 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.

ILLINOIS
Illinois State Geological Survey
PRAIRIE RESEARCH INSTITUTE

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

Mine Outlines Compiled by
Alan R. Myers & Jennifer M. Obrad

Revised:
July 25, 2012
Alan R. Myers 05-10-2024

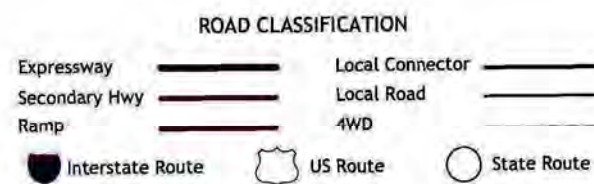
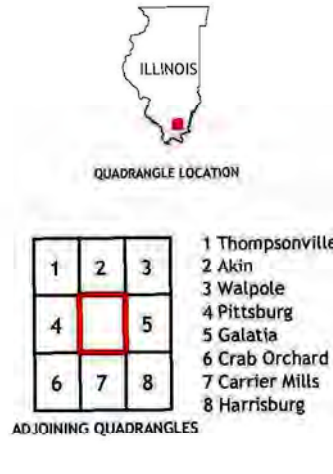
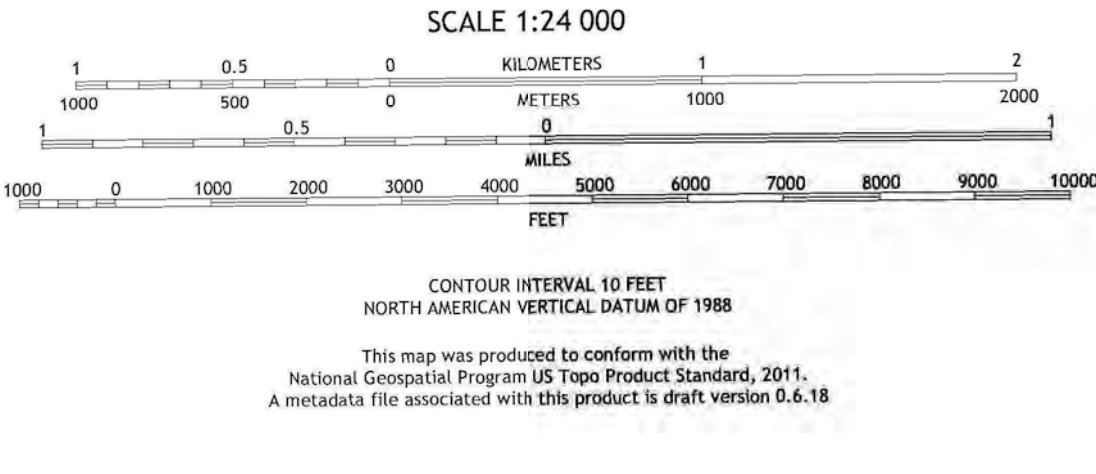
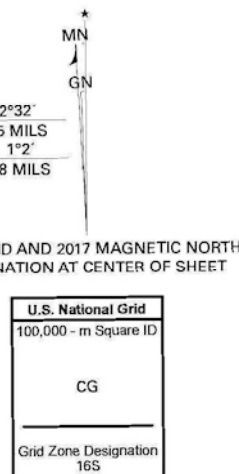
October 10, 2005



Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1 000-meter grid/Universal Transverse Mercator, Zone 16S
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery: N.A.P., August 2015 - October 2015
Roads: U.S. Census Bureau, 2017
Hydrography: National Hydrography Dataset, 2002 - 2016
Contours: National Elevation Dataset, 2014
Boundaries: see metadata file 2014 - 2016
Public Land Survey System: BLM, 2017
Wetlands: PWS National Wetlands Inventory 1983 - 1984

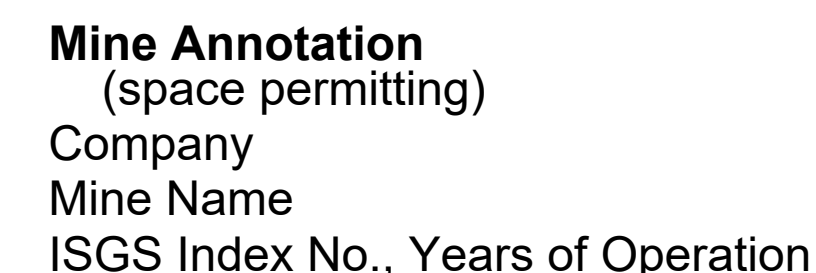
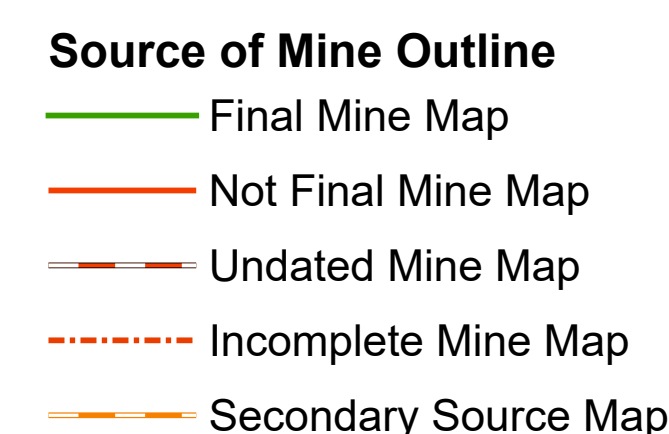


HARCO, IL
2018

Coal Mines in Illinois Harco Quadrangle Williamson & Saline Counties, Illinois

Herrin Coal

This map accompanies the Coal Mines Directory for the Harco Quadrangle and map of mines in the Womac & Danville Coals and mines in the Springfield Coal. Consult the directory for a complete explanation of the information shown on this map.



Location



Disclaimer
Please check the Coal Section at the Illinois State Geological Survey's web site at <https://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 associated 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. This 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 data does not eliminate the need for detailed information 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 1:400 to 1:150,000, and some mine locations 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 shown may still be undetermined; 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.

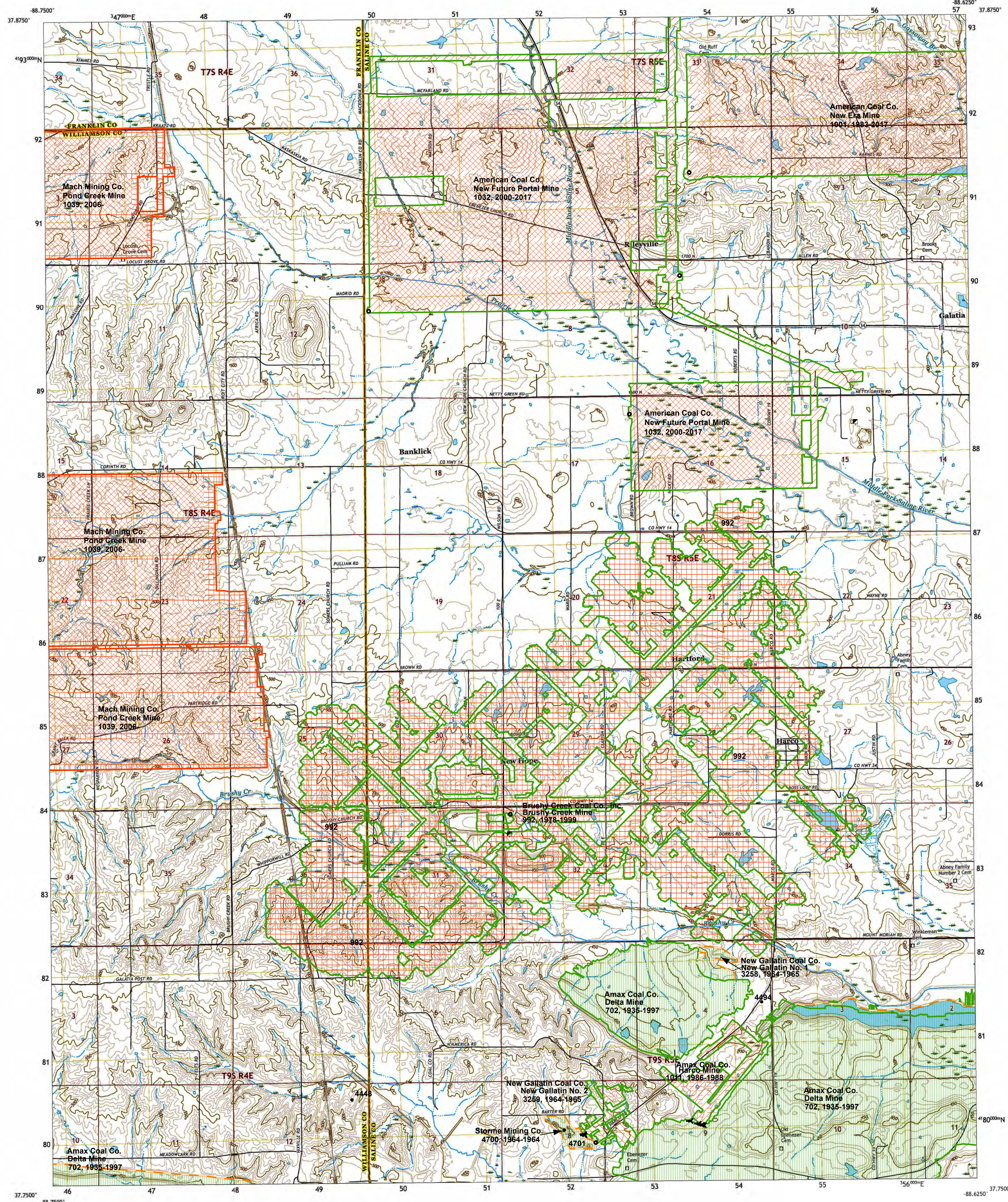
I ILLINOIS
Illinois State Geological Survey
PRAIRIE RESEARCH INSTITUTE

**Prairie Research Institute
Illinois State Geological Survey
615 E. Peabody Dr.
Champaign, IL 61820**

**Mine Outlines Compiled by
Alan R. Myers & Jennifer M. Obradovich**

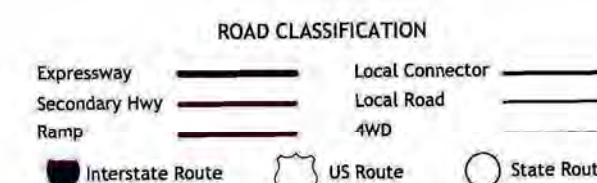
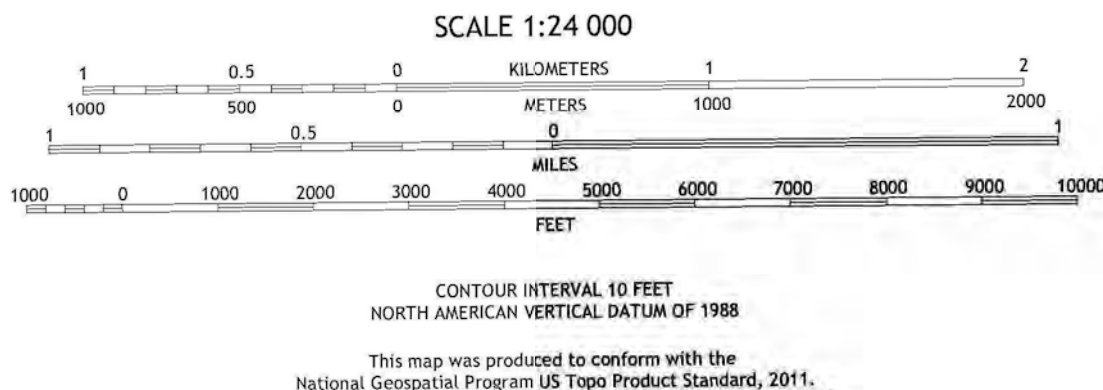
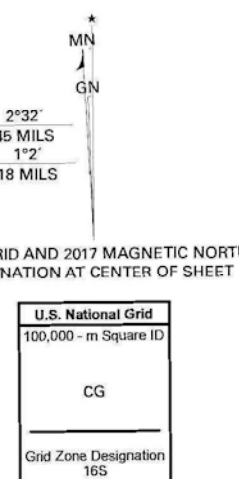
Revised:
d July 25, 2012
Alan R. Myers 05-10-2024

October 10, 2005



Produced by the United States Geological Survey
 North American Datum of 1983 (NAD83)
 World Geodetic System of 1984 (WGS84) Projection and
 1 000 meter Grid/Universal Transverse Mercator, Zone 165
 This map is not a legal document. Boundaries may be
 generalized for this map scale. Private lands within government
 reservations may not be shown. Obtain permission before
 entering private lands.

Imagery.....U.S. NIP, August 2
 Roads.....U.S. Census
 Names.....U.S.
 Hydrography.....National Hydrography Data
 Contours.....National Elevation
 Boundaries.....Multiple
 Public Land Survey system.....metadata file
 wetlands.....FWS National Wetlands Inventory

HARCO, IL
2018

Coal Mines in Illinois Harco Quadrangle Williamson & Saline Counties, Illinois

Springfield Coal

This map accompanies the Coal Mines Directory for the Harco Quadrangle and maps of mines in the Womac & Danville Coals and mines in the Herrin Coal. 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 permitting)

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 <https://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 associated 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. This 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 1:400 to 1:150,000, and some mine locations 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 shown 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.

ILLINOIS
Illinois State Geological Survey
PRAIRIE RESEARCH INSTITUTE

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

Mine Outlines Compiled by
Alan R. Myers & Jennifer M. Obrad

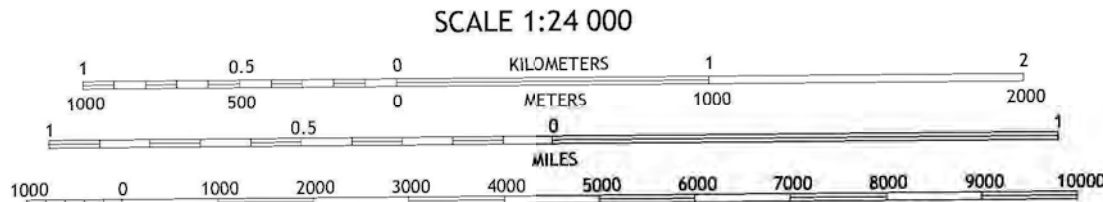
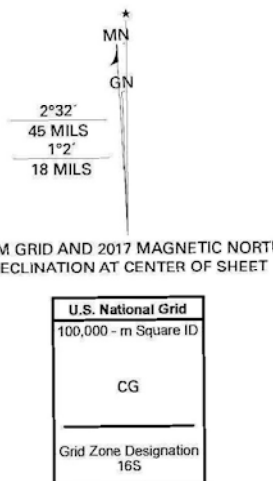
Revised:
July 25, 2012
Alan R. Myers 05-10-2024

October 10, 2005



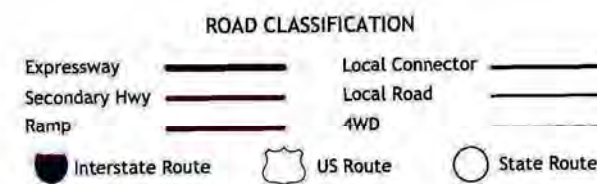
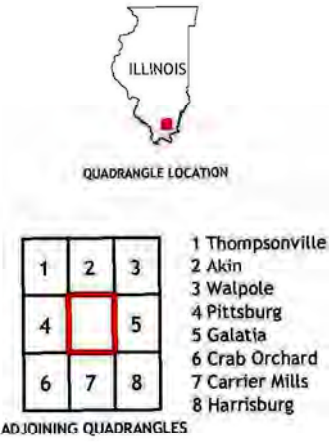
Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1 000-meter grid/Universal Transverse Mercator, Zone 16S
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery.....NAP, August 2015 - October 2015
Roads.....U.S. Census Bureau, 2017
Hydrography.....National Hydrography Dataset, 2002 - 2016
Contours.....National Elevation Dataset, 2014
Boundaries.....see metadata file 2014 - 2016
Public Land Survey System.....BLM, 2017
Wetlands.....FWS National Wetlands Inventory 1983 - 1984



CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18



HARCO, IL
2018

DIRECTORY OF COAL MINES IN ILLINOIS 7.5-MINUTE QUADRANGLE SERIES HARCO QUADRANGLE WILLIAMSON AND SALINE COUNTIES

Alan R. Myers & Jennifer M. Obrad



Department of Natural Resources
ILLINOIS STATE GEOLOGICAL SURVEY
2005
REVISED 2012, 2024

**DIRECTORY OF COAL MINES IN ILLINOIS
7.5-MINUTE QUADRANGLE SERIES
HARCO QUADRANGLE
WILLIAMSON AND SALINE COUNTIES**

2005
REVISED 2012, 2024

ILLINOIS STATE GEOLOGICAL SURVEY
William Shilts, Chief

Natural Resources Building
615 East Peabody Drive
Champaign, Illinois 61820

Phone 1-217-244-4610
Fax 1-217-333-2830

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.

Printed by authority of the State of Illinois/2005

CONTENTS

INTRODUCTION	1
MINING IN THE HARCO QUADRANGLE	1
PART I EXPLANATION OF MAP AND MINE SUMMARY SHEET	2
INTERPRETING THE MAP	2
Mine Type and Mining Method	2
SOURCE MAPS	3
POINTS AND LABELS	3
INTERPRETING A MINE SUMMARY SHEET	6
REFERENCES	8
PART II DIRECTORY OF MINES IN THE HARCO QUADRANGLE	9
MINE SUMMARY SHEETS	9
Mine Index 124	
Peabody Coal Company, Peabody No. 47 Mine	9
Mine Index 702	
Amax Coal Company, Delta Mine	10
Mine Index 751	
Peabody Coal Company, Peabody No. 43 Mine	11
Mine Index 798	
Big Creek Coals, Inc., Big Creek No. 5 Mine	12
Mine Index 801	
Sahara Coal Company, Inc., Sahara No. 16 Mine	13
Mine Index 909	
Sahara Coal Company, Inc., Sahara No. 20 Mine	14
Mine Index 911	
Sahara Coal Company, Inc., Sahara No. 21 Mine	15
Mine Index 939	
Malone Coal Company, Malone No. 1 Mine	16
Mine Index 981	
Phoenix Mining Company, Phoenix No. 1 Mine	17
Mine Index 992	
Brushy Creek Coal Company, Inc., Brushy Creek Mine	18
Mine Index 1001	
American Coal Company, Galatia Mine	19
Mine Index 1011	
Amax Coal Company, Harco Mine	21
Mine Index 1029	
Nubay Mining, LLC, Liberty Mine	22
Mine Index 1032	
American Coal Company, New Future Portal Mine	23
Mine Index 1039	
Mach Mining Company, LLC, Pond Creek Mine	24
Mine Index 3258	
New Gallatin Coal Company, New Gallatin No. 1 Mine	25
Mine Index 3259	
New Gallatin Coal Company, New Gallatin No. 2 Mine	26
Mine Index 3353	
Peabody Coal Company, Peabody No. 40 Mine	27
Mine Index 4087	
Blue Bird Coal Company, Blue Bird No. 7 Mine	28
Mine Index 4448	
J. G. Thomas, Thomas Mine	29
Mine Index 4700	
Storme Mining Company, Storme No. 1 Mine	30
OTHER MINES SHOWN ON HARCO QUADRANGLE	31

Mine Index 4493	31
Mine Index 4494	31
Mine Index 4701, Knickerbocker (Roger)	31
MINES WHOSE LOCATIONS ARE NOT KNOWN, HARCO QUADRANGLE	31
INDEX OF MINES IN THE HARCO QUADRANGLE	32

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 HARCO QUADRANGLE

Mining began in the Harco quadrangle in 1902 and has continued to the present, with the Pond Creek Mine (mine index 1039) active in the Herrin Coal. Most of the mining in the Harco Quadrangle was of the Herrin and Springfield Coals. The Herrin Coal ranged from 60 to 350 feet deep. Consequently, this seam was both surface- and underground-mined. The Springfield Coal was 100 feet or more below the Herrin Coal, and was only underground-mined in this area. This coal was generally 4 to 5.5 feet thick, with a maximum local thickness of 10 feet. The Danville and Womac Coals were also surface-mined locally.

Faulting and roof falls were the main problems of the abandoned mines. The Cottage Grove Fault System extends through this quadrangle, with the master fault running generally east-west between Peabody No. 47 Mine (mine index 124) and Peabody No. 43 Mine (mine index 751). An associated fault zone curves southward along the western limit of Peabody No. 43 Mine. The indications of these faults can be seen on the accompanying map of the Springfield Coal. Subsidiary faulting also occurs, and some traces of this can be seen in the mining patterns. In many areas, the displacements are relatively small and do not represent a serious obstacle to mining. For more detailed information on the Cottage Grove Fault System, see ISGS Circular 522, *The Cottage Grove Fault System in Southern Illinois* (Nelson and Krausse, 1981).

The Galatia Channel is about a mile east of the Harco Quadrangle. Associated with the channel is the Dykersburg Shale Member, a unit of light to dark gray shales, siltstones and sandstones deposited directly on the Springfield Coal. The Dykersburg Shale Member makes a stable mine roof, except where abrupt changes of thickness occur and in certain facies near the Galatia Channel. The sandy gray Energy Shale over the Herrin Coal causes similar difficulties.

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 USGS 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 a 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 tippie locations Locations of all known former entry points to underground mines or the location of coal cleaning, tippie, 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 tippie. 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 tippie for underground mines was generally located near the main shaft or slope. At surface mines, coal was sometimes hauled to a central tippie 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.

Nelson, W. J. and H.-F. Krausse, 1981, The Cottage Grove Fault System in Southern Illinois, Illinois State Geological Survey, Circular 522, 65p.

Treworgy, C. G., C. Chenoweth and M. H. Bargh, 1995, Availability of Coal Resources for Mining in Illinois; Galatia Quadrangle, Saline County, Southern Illinois, Illinois State Geological Survey, Illinois Minerals 113, 38p.

Treworgy, C. G., C. P. Korose, C. A. Chenoweth and D. L. North, 1999, Availability of the Springfield Coal for Mining in Illinois, Illinois State Geological Survey, Illinois Minerals 118, 43p.

PART II DIRECTORY OF MINES IN THE HARCO QUADRANGLE

MINE SUMMARY SHEETS

A summary sheet on the geology and production history of each mine in the Harco 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 124

Peabody Coal Company, Peabody No. 47 Mine

Type: Underground Total mined-out acreage shown: 4,595

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main shaft	Saline	8S 5E	27	SE SE SW
Air shaft	Saline	8S 5E	27	NE SE SW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Springfield	418	4.5	8.0	4.67-6.0	RPP

Geologic Problems Reported: A 1921 gas explosion killed 12 miners and a 1920 gas explosion killed 1 man. Faults were present throughout the mine, most trending northwest-southeast. Some halted mine expansion, whereas others were mined through. The amount of fault displacement was not noted on the source map. Above the coal was a shale that made a competent roof, except during the humid summers when the shale "sweated" and slabbed off, producing many falls. The northernmost part of the mine had several areas identified as bad top. This same area was also shown on the source map to have a two-foot split of rock in the middle of the coal. In the southern part of the mine, an area was labeled 'squeeze'. Some pyrite concretions and lenses were found in the coal. The floor, which was 2 to 3 feet of shale, heaved some, but was underlain by hard limestone.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Harrisburg Colliery Company	Harco	1916-1923 **	2,256,378
Saline County Coal Corporation	Saline County No. 7	1923-1927	2,865,728
Saline County Coal Corporation	Saline County No. 47	1928-1928	897,606
Peabody Coal Company	Peabody No. 47	1929-1951	14,991,905
			21,011,617

** Idle 1921

Last reported production: April 1951

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
State archive, IL_2590	4-27-1951	1:12000	1:12000	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, geologic problems.

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

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

State archive, IL_2590- Shaft locations, mine outline, mining method, depth, geologic problems.

Mine Index 702
Amax Coal Company, Delta Mine

Type: Surface Total mined-out acreage shown: 12,942 (2,892 in Danville Coal, 7,668 in Herrin Coal and 2,382 in Springfield Coal)

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Tipple	Williamson	9S 4E	33	NW NW NE

Pits were located in all or parts of Sections 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 26, 27, 28, 29, 26, 33, 34, 35, 36 of T9S-R4E, 2, 3, 4, 5, 8, 9, 10, 11, 31 of T9S-R5E, and 2, 3 of T10S-R4E.

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Danville	43			1.83	Surface
Herrin (1943-1997)	28-120			4.58-7.0	Surface
Springfield (1935-1943)	75-101			4.17-4.33	Surface

Geologic Problems Reported: The coal had a steep pitch near the Cottage Grove fault, which prevented mining in its immediate proximity. Subsidiary faults were encountered, with up to 12 feet of displacement. Near the faults, the coal's topography and thickness varied, but in some pits, the thickness had little variation. Other fault-related features were noted, including pulverized or shattered zones and slips. Coal balls were locally abundant. The top of the Herrin Coal was irregular and interbedded with shale. Three lenses of shale that were up to 4 feet thick were noted in a one-half mile face. The coal contained pyrite nodules.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Delta Coal Mining Company	Delta	1935-1946	5,817,335
Delta Collieries Corporation	Delta	1946-1956	6,312,742
Carmac Coal Company	Delta	1957-1962	4,937,465
Thunderbird Collieries Corporation	Delta	1963-1966	3,901,411
Ayrshire Collieries Corporation	Delta	1967-1968	1,860,290
Ayrshire Coal Company, Div. AMAX	Delta	1969-1971	2,804,014
Amax Coal Company	Delta	1972-1997	<u>37,454,266</u>
			63,087,523 *

* Some production is from Saline County.

Last reported production: 1997

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, Coal Section files	2-6-1996	—	—	Final
USGS topographic map	1961, PR 1990	1:24000	1:24000	Secondary source
USGS topographic map	1965, PR 1990	1:24000	1:24000	Secondary source
Department of Mines & Minerals	Undated			Secondary source
Department of Mines & Minerals	Undated			Secondary source

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, seam, depth, thickness.
 Directory of Illinois Coal Mines (Williamson County) - Mine names, mine index, ownership, years of operation.
 Mine notes (Williamson County) - Mine type, mine location, seam, geologic problems.
 Company map, Coal Section files, digital file - Mine outline, mining method.
 USGS topographic map, Carrier Mills 7.5-minute Quadrangle, 1961, Photorevised 1990 - Mine outline.
 USGS topographic map, Crab Orchard 7.5-minute Quadrangle, 1965, Photorevised 1990 - Mine outline.
 Department of Mines & Minerals, 7a-02-13, aerial photograph base with surface mines identified - Mine outline.
 Department of Mines & Minerals, 7a-02-12, aerial photograph base with surface mines identified - Mine outline.

Mine Index 751**Peabody Coal Company, Peabody No. 43 Mine**

Type: Underground Total mined-out acreage shown: 1,419

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Saline	9S 5E	5	NE NE SE
Air shaft	Saline	9S 5E	5	NW SE SE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Springfield *	230			4.5-5.6	RPP

* An area approximately 200 feet square was mined in the Herrin Coal along the main slope. Apparently the workings in the upper seam were not more fully developed, and this area was later surface-mined by the Delta Mine (index 702). Consequently, this mine is not shown on the accompanying map of the Herrin Coal.

Geologic Problems Reported: This mine encountered extensive faulting throughout. Faults trended predominantly northwest-southeast, but some subsidiary faulting trended perpendicular (northeast-southwest). The entire northern edge of the mine, as well as some areas in the southwestern part of the mine, encountered problems with bad top and water. Rolls were also reported in the southwestern portion of the mine.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Peabody Coal Company	Peabody No. 43	1947-1957	<u>6,663,550</u> 6,663,550

Last reported production: April 1957

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
State archive, IL_346_01	4-17-1957	1:12000	1:12000	Final

Annotated Bibliography (data source, brief description of information)

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

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

Mine notes (Saline County) - Mine type, slope location, seam, depth, thickness.

State archive, IL_346_01 - Slope & shaft locations, mine outline, seam, mining method, geologic problems.

Mine Index 798**Big Creek Coals, Inc., Big Creek No. 5 Mine**

Type: Underground Total mined-out acreage shown: 126 (67 Herrin Coal, 59 Springfield Coal)

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main shaft (Herrin)	Saline	8S 5E	11	SW NW SE
Air shaft (Herrin)	Saline	8S 5E	11	SW NW SE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin (1902-1916)	340-367	5.5	6.5	5.5-5.83	RPB
Springfield (1917-1923)	485.5	2.0	7.5	6.0	RPB

Geologic Problems Reported: Two dikes were reported, 3500 feet east of the mine, trending northwest, and the other south of the mine, trending east-west. The Herrin Coal had some gas. The Springfield Coal was very dirty, and sandstone lenses rolled into the coal. Pyrite was present as thin lenses. The roof was good, mostly of limestone, but the shale beneath the limestone fell where it was thin.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Galatia Coal Company	Galatia	1902-1911 *	154,914
St. Louis Coal & Coke Company	Galatia No. 1	1911-1912	20,000
Galatia & Saline Coal Company	Galatia No. 1	1912-1913	14,000
Galatia Coal Company	Galatia	1913-1914	21,950
Brown & Jones Coal Company	Galatia	1914-1915	4,893
Durham Coal Company	Durham	1915-1917	66,870
Saline County Coal Company	Saline County No. 5	1917-1918	56,918
Galatia Colliery Company	Galatia No. 5	1918-1919	30,794
Big Creek Coals, Inc.	Big Creek No. 5	1919-1923 **	210,356
Peabody Coal Company	Peabody No. 45	1923-1923	<u>none reported</u> *** 580,695

* Idle 1904

** Production was not reported in 1922; idle or production was less than 10,000 tons

*** Peabody Coal Company was listed as the successor to Saline County Coal Company on the map, but no production was reported under this name.

Last reported production: June 1923

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
State archive, IL_2575_01	6-1-1918	1:2400	1:2400	Final
State archive, IL_2576_01	6-18-1929	1:2400	1:2400	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation.

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

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

ISGS Field notes (Saline County) - Geologic problems.

State archive, IL_2575_01 (Herrin coal) - Shaft locations, mine outline, mining method, seam.

State archive, IL_2576_01 (Springfield coal) - Mine outline, mining method, seam, geologic problems.

Mine Index 801**Sahara Coal Company, Inc., Sahara No. 16 Mine**

Type: Underground Total mined-out acreage shown: 2,861

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Saline	9S 5E	13	SE SW SW
Air shaft *	Saline	9S 5E	13	SW SW SW
Escape (old air) shaft	Saline	9S 5E	13	SE SW SW

* The old shaft was converted to an air shaft in 1941, when the new slope was constructed.

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Springfield	189-200	5.0	7.0	6.5	RPP

Geologic Problems Reported: The mine had many faults, trending northwest-southeast. These faults controlled the mine plan to some extent, specifically in the southeastern part of the mine, where a large block was left unmined. The roof was not good, the seam "hilly", and the floor heaved slightly.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Elder & Bixler Coal Company	Elder & Bixler	1913-1920	41,322
Harrisburg Coal Mining Company	Blue Bird	1920-1924	598,492
Harrisburg Coal Mining Company	Harrisburg No. 1	1924-1927	285,917
Idle		1927-1941	
Bankston Creek Collieries Company	Bankston Creek No. 16	1941-1950	4,359,557
Sahara Coal Company, Inc.	Sahara No. 16	1951-1971	<u>12,115,092</u>
			17,400,380

Last reported production: 1971

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
State archive, IL_356_06	12-23-1971	1:2400	1:2400	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth.

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

Mine notes (Saline County) - Mine type, slope location, seam, depth, thickness, geologic problems.

State archive, IL_356_06 - Slope & shaft locations, mine outline, mining method, geologic problems.

Mine Index 909**Sahara Coal Company, Inc., Sahara No. 20 Mine**

Type: Underground Total mined-out acreage shown: 1,200

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Saline	9S 5E	10	SE NW SW
Air shaft	Saline	9S 5E	10	SW SW NW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Springfield	223	4.0	10.0	4.58-5.83	RPP, some HER *

* The source map shows what appears to be some pillar removal in the south half of 9-T9S-R5E.

Geologic Problems Reported: Faulting throughout the mine displaced the coal bed in many areas. The amount of displacement was not specified in the ISGS mine notes nor on the source map. In general, the roof was good, but the source map shows "bad top" that apparently halted southward expansion in the southwest quarter of 9-T9S-R5E. Bad top was also a problem in a small area in the NE SW 9-T9S-R5E. Some areas of the mine also displayed rolls.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Sahara Coal Company, Inc.	Sahara No. 20	1969-1983	5,586,580 5,586,580

Last reported production: May 1983

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 10-5-55	6-1983	1:1200	1:1200	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness.

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

Mine notes (Saline County) - Mine type, slope location, seam, thickness, geologic problems.

Company map, ISGS Coal Section files, 10-5-55 - Shaft & slope locations, mine outline, mining method, geologic problems.

Mine Index 911
Sahara Coal Company, Inc., Sahara No. 21 Mine

Type: Underground Total mined-out acreage shown: 3,333

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Saline	9S 5E	17	NE SE SE
Air shaft	Saline	9S 5E	17	SE SE SE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Springfield	210-280		6.0	4.3-5.0	RPP, some LW and HER *

* Longwall mining was done in the northwestern part of the mine. Pillars were pulled in several areas in the northern and southwestern parts of the mine.

Geologic Problems Reported: The roof was good throughout. Falls occurred only along faulted or sheared roof areas. There were many discontinuous faults and fractures.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Sahara Coal Company, Inc.	Sahara No. 21	1970-1993	12,487,858
			12,487,858

Last reported production: 1993

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
State archive, IL_793_08	7-1-1993	1:2400	1:2400	Final
Company, 10-5-50	10-20-1994	1:12000	1:12000	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness.
 Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.
 Mine notes (Saline County) - Mine type, slope location, seam, thickness, geologic problems.
 State archive, IL_793_08 - Shaft & slope locations, mine outline, mining method.
 Company map, ISGS Coal Section files, 10-5-50 - Mining method.

Mine Index 939**Malone Coal Company, Malone No. 1 Mine**

Type: Surface Total mined-out acreage shown: 80 The area shown is disturbed land that appears to have been surface-mined by Malone No. 1 Mine and the Corinth/Phoenix Mine (mine index 981). The production of the Malone No. 1 Mine indicates that approximately 3 acres were mined and approximately 50 acres were mined by the Phoenix Mine.

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Tipple / pit	Williamson	8S 4E	15	NE SE NE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Womac	15-40			2.0-2.5	Surface

Geologic Problems Reported: Mining uncovered an old underground mine (including timber supports). The rock immediately overlying the coal was a thick, gray, silty shale. The coal was very low in sulfur content.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Malone Coal Company *	Malone No. 1	1976-1979	<u>10,687</u> 10,687

* The ISGS mine notes indicate E. & B. Coal Company, Corinth Mine (mine index 981) bought this mine, but the mine notes gave different locations for the pits. Two index numbers are used, since it appears the mine was shut down and a new mine begun nearby. These three-digit index numbers relate to chemical analyses in other databases and are retained, even when the separate mines cannot be distinguished on the accompanying map and their histories are intertwined.

Last reported production: December 1979

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
USGS digital ortho-photo quadrangle	1998-1999	1:12000	1:12000	Secondary source

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness.
 Directory of Illinois Coal Mines (Williamson County) - Mine names, mine index, ownership, years of operation.
 Mine notes (Williamson County) - Mine type, mine location, seam, thickness, geologic problems.
 USGS digital ortho-photo quadrangle map, Harco Quadrangle - General mine outline.

Mine Index 981**Phoenix Mining Company, Phoenix No. 1 Mine**

Type: Surface Total mined-out acreage shown: 80 The area shown is disturbed land that appears to have been surface-mined by Malone No. 1 Mine (mine index 939) and the Corinth/Phoenix Mine. The production of the Malone No. 1 Mine indicates that approximately 3 acres were mined and approximately 50 acres were mined by the Phoenix Mine.

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Tipple / pit	Williamson	8S 4E	14	NW SW NW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Womac	15-35			2.5-2.9	Surface

Geologic Problems Reported: The overburden was soft and thin. The coal had very low sulfur content, as low as 0.6%, and was used by the Sahara Coal Company to blend with their higher sulfur coals. The lower bench of the coal (2 inches thick) was not mined because the quality was low, with high ash and sulfur contents.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
E. & B. Coal Company *	Corinth	1980-1983 **	37,093
Phoenix Mining Company	Corinth No. 1	1990-1991	86,995
Phoenix Mining Company	Phoenix No. 1	1992-1993	100,189
			<u>224,277</u>

* The ISGS mine notes indicate E. & B. Coal Company bought the Malone No. 1 Mine (mine index 939), but the mine notes gave different locations for the pits. Two index numbers are used, since it appears the Malone Mine was shut down and a new mine begun nearby. These three-digit index numbers relate to chemical analyses in other databases and are retained, even when the separate mines cannot be distinguished on the accompanying map and their histories are intertwined.

** Idle 1984-1989

Last reported production: 1993

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
USGS digital orthophoto quadrangle	1998-1999	1:12000	1:12000	Secondary source

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, seam, depth, thickness.

Directory of Illinois Coal Mines (Williamson County) - Mine names, mine index, ownership, years of operation.

Mine notes (Williamson County) - Mine type, tipple / pit location, seam, geologic problems.

USGS digital ortho-photo quadrangle, Harco Quadrangle - General mine outline.

Mine Index 992
Brushy Creek Coal Company, Inc., Brushy Creek Mine

Type: Underground Total mined-out acreage shown: 4,307

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Saline	8S 5E	32	SW NW NW
Air shaft	Saline	8S 5E	32	NW NW NW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin	230-300			5.33-6.5	CRP

Geologic Problems Reported: This mine is about 100 feet above old works in the Springfield Coal, the Peabody No. 47 Mine (mine index 124). Some faults were found, with displacement up to 30 feet. The roof around the air shaft bottom consisted of 6 feet of Energy Shale overlain by 2 feet of Anna Shale, and in turn overlain by Brereton Limestone. The Energy Shale made a competent roof generally, but slaked badly in north-south-directed entries. For this reason, the general mine plan was offset about 45 degrees from a north-south orientation, which avoids the regional compression that causes falls in north-south oriented entries. Some areas of the Energy Shale had discontinuous faults that did not extend down into the coal. In other areas, the Anna Shale was the immediate roof and the Energy Shale was present only as thin, discontinuous, lenticular deposits. Some of the Energy Shale lenses were large, 1,000 feet or more across. The Anna Shale generally made a competent roof, even though numerous wide joints occurred in some areas. Coal balls were also present in the Anna Shale, and they generally were predictors for the limestone being present within 3.5 feet above the shale. Roof falls occurred in areas with high angle fractures. The coal contained calcite along cleat fractures and pyrite as "goatbeards" and fracture fillings. The bed had no noticeable dip and was practically free of undulations and rolls.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Midwest Mining & Construction Company	Brushy Creek	1978-1978	none reported
Kenellis Energies, Inc.	Brushy Creek	1979-1990	11,448,119
Brushy Creek Coal Company, Inc.	Brushy Creek	1991-1999	<u>8,755,334</u>
			20,203,453

Last reported production: November 1999

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 6-348	1-31-2000	1:12000	1:12000	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, mining method.
 Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.
 Mine notes (Saline County) - Mine type, slope & shaft locations, seam, depth, thickness, geologic problems.
 Company map, Coal section files, 6-348 - Mine outline, slope & shaft locations, mining method.

Mine Index 1001**American Coal Company, Galatia Mine**

Type: Underground Total mined-out acreage shown: 20,054 (7,899 in the Herrin Coal, 12,155 in the Springfield Coal) This mine does not extend onto the Harco Quadrangle, but is included because all production for the Millennium Portal (mine index 1032) is reported with the Galatia Mine.

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main shaft	Saline	8S 6E	7	SE NW SE *
Main slope	Saline	8S 6E	7	SW NW SE
Shaft	Saline	7S 6E	29	SW SE NE
Air shaft	Saline	7S 6E	29	NW SE NE
Air shaft	Saline	8S 6E	6	SW NE NE
Air shaft	Saline	8S 6E	11	NE NE SW
Air shaft	Saline	8S 6E	14	NE SW SE
Air shaft	Saline	8S 6E	27	NE NE NE
Air shaft	Saline	7S 5E	24	SW NW SW
Air shaft	Saline	8S 5E	1	NW NW NE
Air shaft	Saline	7S 5E	35	NE NW NE
Air intake/return shaft	Saline	7S 6E	30	SW SE SE
Air shaft	Hamilton	7S 6E	18	SE NE NE
Air shaft	Hamilton	7S 5E	13	NW NW SE
Air shaft	Hamilton	7S 5E	10	SW NE SE
Air shaft	Hamilton	7S 5E	10	SW NE NW
Air shaft	Hamilton	7S 6E	7	NE NW SE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin *	450			6.0	CRP, LW
Springfield	550			6.5	CRP, LW

* The Herrin seam was inactive from 1995 to 2003.

Geologic Problems Reported: In the Herrin Coal workings, the roof was firm, well laminated, finely micaceous and silty, with abundant plant fossils. Roof falls were a problem, with some as much as 25-30 feet high. They occurred suddenly, with no warning, several weeks or months after mining. Many were attributed to roof rolls, slip fractures, and small local faults, but some appeared unrelated to roof structures or discontinuities. These falls occurred under a thinly-laminated, micaceous siltstone probably the result of bedding plane separation. Large masses of coal balls were also encountered in the coal, sometimes replacing most or all of the coal seam. The floor was typically siltstone or firm silty shale, but locally more claylike. It was generally firm, abrasive, and not prone to heave. The mine was usually dry. In the Springfield workings, the roof was gray shale, very carbonaceous and nearly black at the base. The coal was split in some locations by as much as 5 feet of massive siltstone. The floor was rooted claystone grading down to siltstone.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Kerr-McGee Coal Corporation	Galatia	1983-1997	47,226,632
American Coal Company	Galatia **	1998-2017	<u>133,418,031</u> ***
			180,644,663

**In 2006, the portion of the mine in the Herrin seam became known as New Era Mine, and the portion of the mine in the Springfield seam became known as Galatia North Mine.

*** Production from 2000-2017 includes production for the Millennium Portal (mine index 1032).

Last reported production: 2017

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 6-374aa	1-12-2018	1:24000	1:24000	Final
Company, 6-374s	2-6-2012	1:24000	1:24000	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation.

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

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

Company map, Coal section files, 6-374aa (Herrin Coal) - Shaft & slope locations, mine outline, mining method.

Company map, Coal section files, 6-374s (Springfield Coal) - Shaft & slope locations, mine outline, mining method.

Mine Index 1011
Amax Coal Company, Harco Mine

Type: Underground Total mined-out acreage shown: 106

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main drift *	Saline	9S 5E	9	NE SE NW
Air drift *	Saline	9S 5E	9	NE SE NW
Air drift *	Saline	9S 5E	9	NE SE NW
Air drift *	Saline	9S 5E	9	NW SE NW

* The entrance to the mine was in the highwall of the Delta Mine (mine index 702).

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin	120-140			5.25	RP

Geologic Problems Reported:

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Amax Coal Company	Harco	1986-1988	<u>484,549</u> 484,549

Last reported production: 1988

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 4103.S32 i5.1-94	2-15-1991	1:12000	1:12000	Final
State archive, IL_566_01	8-31-1988	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 (Saline County) - Mine names, mine index, ownership, years of operation.
 Company map, ISGS map library, 4103.S32 i5.1-94 - Drift locations, mine outline, mining method.
 State archive, IL_566_01 - Drift locations, mine outline.

Mine Index 1029
Nubay Mining, LLC, Liberty Mine

Type: Underground Total mined-out acreage shown: 753

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Saline	8S 5E	32	SW NW NW
Air shaft (22 ft. circular)	Saline	8S 5E	32	NW NW NW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Springfield	362 (385, air shaft)			4.0	CRP

Geologic Problems Reported:

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Nubay Mining, LLC	Liberty	2002-2006	2,586,365
			2,586,365

Last reported production: 2006

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 6-423	1-25-2007	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 (Williamson County) - Mine names, mine index, ownership, years of operation.
 Company map, Coal Section files, 6-423 - Mine type, slope & shaft locations, mine outline, mining method.

Mine Index 1032**American Coal Company, New Future Portal Mine**

Type: Underground Total mined-out acreage shown: 3,535 acres in the Herrin Coal and 2,198 acres in the Springfield Coal

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Saline	8S 5E	15	SW NW NE
Air shaft	Saline	8S 5E	2	SE NE SW
Air shaft	Saline	8S 5E	8	NE NE NE
Air shaft	Saline	8S 5E	17	SE NE NE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin *					LW
Springfield *					LW

*The Springfield Coal was mined from the mine's opening until 2011. The Herrin Coal began being worked in 2010, and was worked until the mine closed.

Geologic Problems Reported: The roof material is largely medium gray silty shale to siltstone. In some parts of the mine, NE-trending vertical joints were present. In areas where this jointing was intense, large roof falls and water problems were encountered. Fracture zones were also encountered that produced water which created mud issues for the miners, sometimes requiring cribs to deal with roof falls. Numerous rolls were present throughout the mine, sometimes appearing in swarms.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
American Coal Company	Millennium Portal	2000-2005	none reported **
American Coal Company	New Future Portal	2006-2017	none reported **

** No production has been reported under this name. Production for this mine is included in the totals for American Coal Company, Galatia Mine (index 1001).

Last reported production: 2017

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 6-374aa	1-12-2018	1:24000	1:24000	Final
Company, 6-374s	2-6-2012	1:24000	1:24000	Final

Annotated Bibliography (data source, brief description of information)

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

Mine notes (Saline County) - Geologic problems.

Company map, Coal section files, 6-374aa (Herrin Coal) - Shaft & slope locations, mine outline, mining method.

Company map, Coal section files, 6-374s (Springfield Coal) - Shaft & slope locations, mine outline, mining method.

Mine Index 1039**Mach Mining Company, LLC, Pond Creek Mine**

Type: Underground Total mined-out acreage shown: 12,599

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Williamson	8S 3E	12	SE NW NW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin	460			6..5	LW

Geologic Problems Reported: Geologic problems are not reported for active mines.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Williamson Energy	Mach 1	2006-2006	none reported
Mach Mining Company, LLC	Pond Creek	2006-	<u>93,612,297</u> *
			93,612,297

* Production shown is through 2022, the latest available Coal Report.

Last reported production:

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 6-388v	4-1-2024	1:9600	1:9600	Not final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, seam depth, thickness.

Directory of Illinois Coal Mines (Williamson County) - Mine names, mine index, ownership, years of operation.

Company map, Coal section files, 6-388v - Slope location, mine outline, mining method.

Mine Index 3258**New Gallatin Coal Company, New Gallatin No. 1 Mine**

Type: Surface Total mined-out acreage shown: 38 Production indicates approximately 17 acres were mined. The larger area may include some portions of the Delta Mine (mine index 702) or other unlocated mines at the back of this report, or may be an outline of disturbed, but unmined, land.

SHAFT, SLOPE, DRIFT or TIPPLe LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Pit	Saline	9S 5E	4	NW NE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin	60			5.0	Surface

Geologic Problems Reported:

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
New Gallatin Coal Company	New Gallatin No. 1	1964-1965	<u>137,724</u> 137,724

Last reported production: December 1965

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Department of Mines & Minerals	Undated			Secondary source

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness, mining method.

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

Mine notes (Saline County) - Mine type, pit location, seam.

Department of Mines & Minerals, 7a-02-07, aerial photographic base with surface mines identified - Mine outline.

Mine Index 3259
New Gallatin Coal Company, New Gallatin No. 2 Mine

Type: Underground Total mined-out acreage shown: 63

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main drift	Saline	9S 5E	8	SW SW NE
Drift	Saline	9S 5E	8	SW SW NE
Air / escape drift	Saline	9S 5E	8	SE SW NE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin	70			5.25	MRP

Geologic Problems Reported: Faults are shown on the source map throughout the mine. The faults trended southwest-northeast and northwest-southeast. In two areas, 5 feet of displacement was noted. In one area, an entry was driven through a faulted zone only to meet with more faulting beyond. Faulting appeared to halt advancement in most parts of the mine. "Bad top" prevented advances into the southeastern part of the mine, an area later very near the surface Delta Mine (mine index 702). An area was labeled 'soft shale no lime' on the source map in the western part of the mine, likely indicating bad roof conditions.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
New Gallatin Coal Company	New Gallatin No. 2	1964-1965	<u>321,013</u> 321,013

Last reported production: December 1965

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Microfilm, document 352817	12-28-1965	1:1200	1:2566	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness.
 Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.
 Mine notes (Saline County) - Mine type, drift location, seam.
 Microfilm map, document 352817, reel 03140, frame 375 - Drift locations, mine outline, mining method, seam, geologic problems.

Mine Index 3353**Peabody Coal Company, Peabody No. 40 Mine**

Type: Underground Total mined-out acreage shown: 597

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Saline	8S 5E	31	NW SW NW
Air slope	Williamson	8S 4E	36	NE SE NE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Springfield	328			4.17	RPP

Geologic Problems Reported: Roof problems were common. Bolting was extensive, but the roof problems persisted even after bolting.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Peabody Coal Company	Peabody No. 40	1950-1954	<u>2,176,003</u> 2,176,003

Last reported production: March 1954

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
State archive, IL_347_01	3-9-1954	1:4800	1:4800	Final

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation, depth, thickness, mining method.

Directory of Illinois Coal Mines (Saline County) - Mine names, mine index, ownership, years of operation.

Mine notes (Saline County) - Mine type, slope location, seam, geologic problems.

State archive, IL_347_01 - Slope locations, mine outline, mining method.

Mine Index 4087**Blue Bird Coal Company, Blue Bird No. 7 Mine**

Type: Underground Total mined-out acreage shown: 502

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Williamson	9S 4E	14	SE NE SE
Air shaft	Williamson	9S 4E	13	NW NW SW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Springfield	185			4.17-4.83	MRP

Geologic Problems Reported: Poor roof conditions may have halted mining to the south and east, since all entries are designated "bad top". Bad top was also noted in NE NW SW and NW SW SW 13-T9S-R4E.

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Blue Bird Coal Company	Blue Bird No. 7	1946-1955	2,037,325
			2,037,325

Last reported production: March 1955

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Company, 4103.W52 i5.1-91	9-28-1950	1:2400	1:2400	Not final *
Coal section files, 10-5-50	10-20-1994	1:12000	1:12000	Secondary source *

* The mined area shown on the accompanying map is the approximate size expected for the reported production. This suggests that the mine outline is complete.

Annotated Bibliography (data source, brief description of information)

Coal Reports - Production, ownership, years of operation.

Directory of Illinois Coal Mines (Williamson County) - Mine names, mine index, ownership, years of operation.

Mine notes (Williamson County) - Mine type, slope location, seam, depth, thickness, geologic problems.

Company map, ISGS map library, 4103.W52 i5.1-91 - Slope & shaft locations, mine outline, mining method, geologic problems.

Coal section files, 10-5-50, map of Sahara No. 21 Mine (mine index 911) - Mine outline (north, southwest).

Mine Index 4448**J. G. Thomas, Thomas Mine**

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

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Main slope	Williamson	9S 4E	12	NE NE

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin	45			8.0	Underground

Geologic Problems Reported:

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
J. G. Thomas	Thomas	1937-1937	<u>2,925</u> 2,925

Last reported production: 1937

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Coal Section mine database	Undated	(text only)	1:24000 *	Secondary source

* The mine location was plotted on a 1:24000 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 (Williamson County) - Mine names, mine index, ownership, years of operation, mine location.

Mine notes (Williamson County) - Mine type, seam, depth, thickness.

Mine Index 4700**Storme Mining Company, Storme No. 1 Mine**

Type: Surface Total mined-out acreage shown: 26 This outline was labeled Knickerbocker Mine (index 4701) on the surface mine updates, but no production was reported for the Knickerbocker Mine, while the production reported for the Storme Mine is consistent with the mine outline. Knickerbocker may have extended mining in this pit.

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type	County	Township-Range	Section	Quarters-Footage
Pit	Saline	9S 5E	8	NE SE NW

GEOLOGY

Seam(s) Mined	Depth (ft)	Thickness (ft)			Mining Method
		Min	Max	Ave	
Herrin	47			4.5	Surface

Geologic Problems Reported:

PRODUCTION HISTORY

Company	Mine Name	Years	Production (tons)
Liberty Coal Company	Liberty No. 2	1964-1964	34,510
Storme Mining Company	Storme No. 1	1964-1964	61,740
			96,250

Last reported production: October 1964

SOURCES OF DATA

Source Map	Date	Original Scale	Digitized Scale	Map Type
Department of Mines & Minerals	Undated			Secondary source
Coal Section files	Undated	1:4800	1:4800	Secondary source

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 (Saline County) - Mine names, mine index, ownership, years of operation, location.
 Department of Mines & Minerals, 7a-02-08, aerial photographic base with surface mines identified - Mine outline.
 Coal Section files, surface mine updates, outline shown for Knickerbocker Mine (mine index 4701) - Mine outline.

OTHER MINES SHOWN ON HARCO QUADRANGLE

Mine Index 4493 SE SE NW 14-T8S-R4E, shaft, Womac Coal source: ISGS field notes (A. J. Ellis, 1907)

Mine Index 4494 SE SE NE 4-T9S-R5E, surface mine, Herrin Coal source: ISGS field notes (G. H. Cady, 1928)

Mine Index 4701, Knickerbocker (Roger) SW NE 8-T9S-R5E, surface mine, Herrin Coal source: Coal Section files
(surface mine updates)

MINES WHOSE LOCATIONS ARE NOT KNOWN, HARCO 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 Harco 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 11,391 (695 underground and 10,696 surface mined), which would represent approximately 1 to 3 acres, depending on the recovery factor, mining method, and numerous other factors. (Note: 1 square mile = 640 acres)

ELIZABETHTOWN

Adams Coal Company, 1957-1957, surface	4,172 tons
--	------------

SOUTH AMERICA

Curtner (John), 1889-1891, surface, Herrin, 10, 5.0	730 tons
Curtner (Daniel), 1891-1893	<u>852</u> tons
	1,582 tons

Speare (Philip), 1889-1891, surface, Herrin, —, 5.0	1,000 tons
---	------------

Harris (W. W.), 1889-1890, surface, Herrin, —, 5.33	320 tons
Harris & Motsinger, 1890-1891	<u>560</u> tons
	880 tons

Rush (W. V.), 1889-1890, surface, Herrin, —, 5.0	600 tons
Rush & Shanks, 1890-1891	<u>2,206</u> tons
	2,806 tons

Thompson (Bryant), 1890-1891, surface, Herrin, —, 5.0	256 tons
---	----------

Stiff (Noah), 1895-1899, drift, Herrin, 10-15, 5.0, RP	695 tons
--	----------

INDEX OF MINES IN THE HARCO QUADRANGLE

Adams Coal Company	31
Amax Coal Company, Delta Mine	10
Amax Coal Company, Harco Mine	21
American Coal Company, Galatia Mine	19
American Coal Company, Millennium Portal Mine	23
American Coal Company, New Future Portal Mine	23
Ayrshire Coal Company, Div. AMAX	10
Ayrshire Collieries Corporation	10
Bankston Creek Collieries Company, No. 16 Mine	13
Big Creek Coals, Inc., No. 5 Mine	12
Bixler (Elder & Bixler Coal Company)	13
Blue Bird Coal Company	
No. 7 Mine	28
Blue Bird Mine	13
Brown & Jones Coal Company	12
Brushy Creek Coal Company, Inc.	18
Carmac Coal Company	10
Corinth Mine	17
Curtner (Daniel)	31
Curtner (John)	31
Delta Coal Mining Company	10
Delta Collieries Corporation	10
Durham Coal Company	12
E. & B. Coal Company, Corinth Mine	17
Elder & Bixler Coal Company	13
Galatia & Saline Coal Company	12
Galatia Coal Company	12
Galatia Colliery Company	12
Galatia Mine	19
Galatia North Mine	19
Harco Mine	9, 21
Harris (W. W.)	31
Harris & Motsinger	31
Harrisburg Coal Mining Company, Blue Bird Mine	13
Harrisburg Coal Mining Company, No. 1 Mine	13
Harrisburg Colliery Company, Harco Mine	9
Jones (Brown & Jones Coal Company)	12
Kenellis Energies, Inc.	18
Kerr-McGee Coal Corporation	19
Knickerbocker (Roger)	31
Liberty Coal Company, No. 2 Mine	30
Liberty Mine	22
Mach 1 Mine	24
Mach Mining Company, LLC	24
Malone Coal Company	16
Midwest Mining & Construction Company	18
Millennium Portal Mine	23
Motsinger (Harris & Motsinger)	31
New Era Mine	19
New Future Portal Mine	23
New Gallatin Coal Company, No. 1 Mine	25
New Gallatin Coal Company, No. 2 Mine	26
Nubay Mining, LLC	22
Peabody Coal Company	
No. 40 Mine	27
No. 43 Mine	11
No. 45 Mine	12
No. 47 Mine	9
Phoenix Mining Company	17
Pond Creek Mine	24
Rush (W. V.)	31
Rush & Shanks	31
Sahara Coal Company, Inc.	

No. 16 Mine.....	13
No. 20 Mine.....	14
No. 21 Mine.....	15
Saline County Coal Company, No. 05 Mine.....	12
Saline County Coal Corporation, No. 07 Mine.....	9
Saline County Coal Corporation, No. 47 Mine.....	9
Shanks (Rush & Shanks).....	31
Speare (Philip).....	31
St. Louis Coal & Coke Company.....	12
Stiff (Noah).....	31
Storme Mining Company.....	30
Thomas (J.G.).....	29
Thompson (Bryant).....	31
Thunderbird Collieries Corporation, Delta Mine.....	10
Williamson Energy.....	24

Funding for this project was supplied by the Illinois Department of Transportation.