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Herrin Coal Sulfur
CHRISTIAN
County

County Coal Map Series

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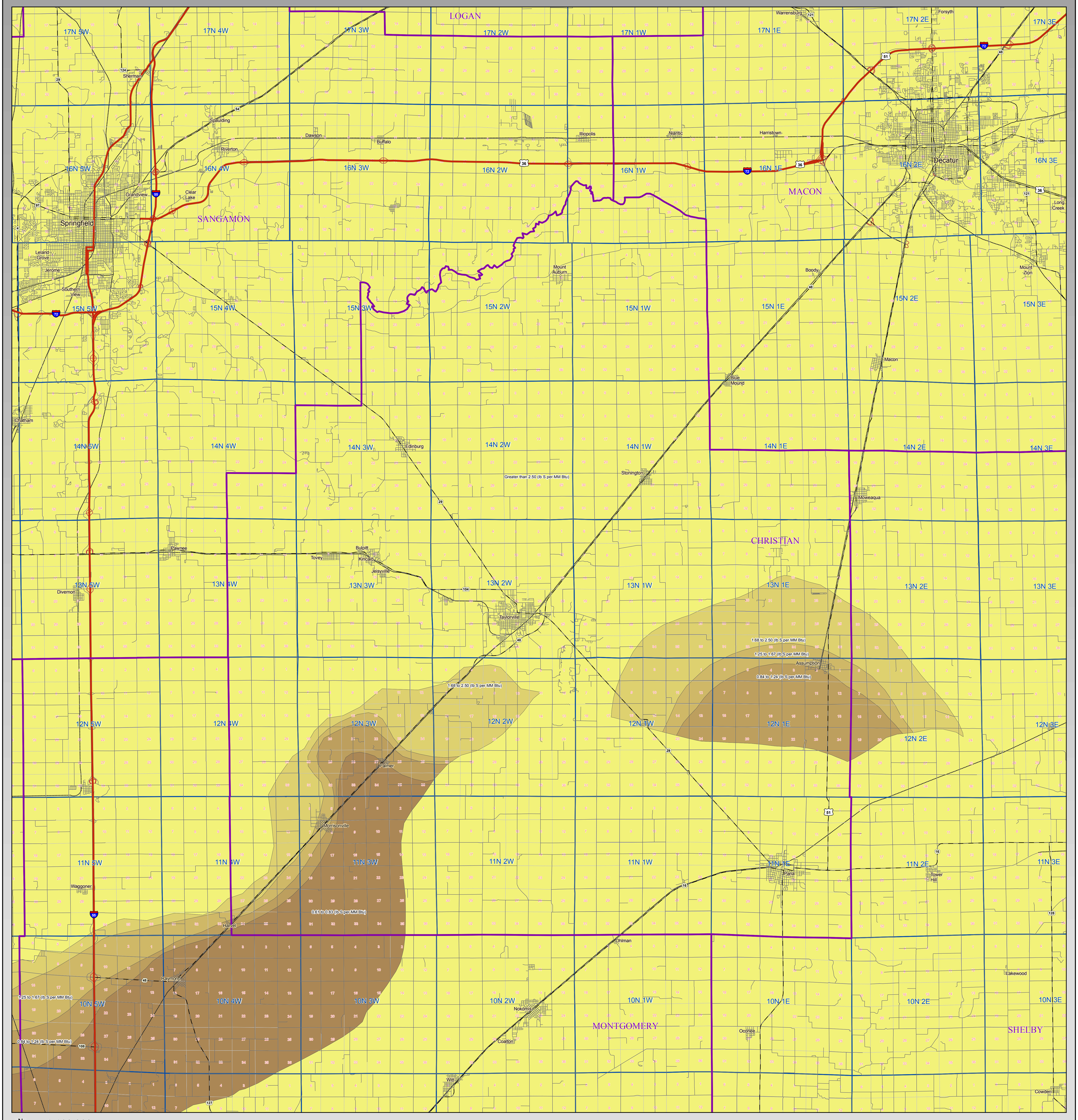
Map construction: October 29, 2009

This product is under review and may not meet the standards of the Illinois State Geological Survey.

County coal maps and select quadrangle maps available as downloadable PDF files at:
http://www.isgs.illinois.edu/maps-data-pub/coal-maps/county-index.shtml



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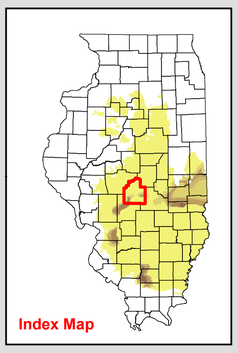


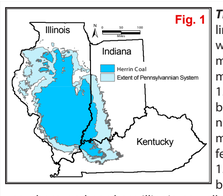


Fig. 1

The Herrin Coal underlies about two thirds of Illinois as well as portions of western Indiana and western Kentucky. The coal crops out along the margins of the Illinois Basin and reaches a maximum depth in Illinois of about 1,300 feet. (See Fig 1. and Fig 2.) The Herrin Coal is a normal bright-banded coal. Its lower portion contains a prominent claystone parting (the "blue band") that normally is 1-3 inches thick. It averages more than 6 feet thick in extensive areas and locally reaches 15 feet. It is thin in much of central Illinois but has been extensively mined in western, west-central, southern, and northern Illinois, as well as in the southern part of the Danville region of eastern Illinois. In some places the coal is cut out by channels filled with the Anvil Rock Sandstone Member. In parts of Illinois, silty gray shale as much as 100 feet thick overlies the Herrin Coal. Associated with this shale is a channel sandstone commonly as much as a mile wide and 60-80 feet thick mapped as Anvil Rock Sandstone and may be contemporaneous with the coal. In areas where the coal is overlain by relatively thick bodies of the gray shale of up to a few tens of feet it has a much lower sulfur content than elsewhere. The gray shale overlies the coal principally in parts of Williamson, Franklin, Jefferson, Madison, St. Clair, eastern Macoupin, and S. Vermilion. Generally, however the Herrin Coal is overlain by either the Anna Shale Member (black fissile shale) or the Brereton Limestone Member. (Hopkins, 1968 - B95, See Fig 4.)

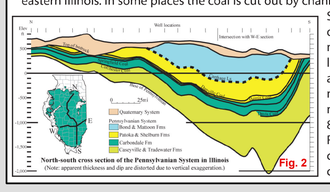


Fig. 2

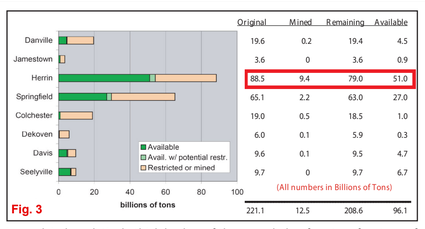
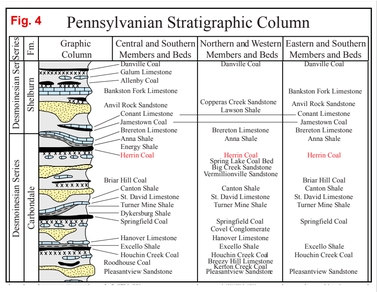


Fig. 3

The original resource of Herrin Coal in the State of Illinois totals 88.5 billion tons, of which 9.4 billion have been mined. Approximately 58% of the original Herrin Coal resources, 51 billion tons, are considered available for mining. (See Fig 3.) Available means that the surface land-use and geologic conditions related to mining of the deposit (e.g. thickness, depth, in-place tonnage, stability of bedrock overburden) are comparable to other coals currently being mined in the state. Of these resources, 21 billion tons occur in coal 42 to 66 inches thick and 30 billion tons occur in thicknesses greater than 66 inches. (Modified from ISGS Pub. IM 120, Treworgy, et al)

Fig. 4



References:

- Handbook of Illinois Stratigraphy, 1975, Illinois State Geological Survey Bulletin 95, 261p.
- Treworgy, C.G., C.P. Korose, C.A. Chenoweth, and D.L. North, 1999a, Availability of the Herrin Coal for mining in Illinois: Illinois Sta te Geological Survey Illinois Minerals 120, 54 p.

Coal Sulfur

- Less than or equal to 0.40 (lb S per MM Btu)
- 0.41 to 0.60 (lb S per MM Btu)
- 0.61 to 0.83 (lb S per MM Btu)
- 0.84 to 1.24 (lb S per MM Btu)
- 1.25 to 1.67 (lb S per MM Btu)
- 1.68 to 2.50 (lb S per MM Btu)
- Greater than 2.50 (lb S per MM Btu)

Map Explanation

The maps and digital files of this study were compiled from data from a variety of public and private sources and have varying degrees of completeness and accuracy. They present interpretations of the geology of the area and are based on available data. However, these interpretations are based on data that may vary with respect to accuracy of geographic location, type, quantity, and reliability, as they were supplied to the Illinois State Geological Survey. Consequently, the accuracy of the interpreted features shown in these files is subject to the limitations of the data and varies from place to place.

Contoured features less than 7 million square feet (about 1/2 mile square) in area may not be accurately portrayed or resolved. This data set provides a large-scale conceptual model of the geology of the area on which to base further work. These data are not intended for use in site-specific screening or decision-making. Data included in this map are suitable for use at a scale of 1:100,000.

Disclaimer

The Illinois State Geological Survey and 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.

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