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Colchester Coal Depth MARION County

County Coal Map Series Andrew Louchios, Scott Elrick, Chris Korose, David Morse

Map construction: October 26, 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:

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

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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

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

These data are not intended for use in site-specific screening or decision-making.

conceptual model of the geology of the area on which to base further work.

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Data included in this map are suitable for use at a scale of 1:100,000.

basis of the information presented here.

300 to 400 ft

400 to 500 ft

500 to 600 ft

600 to 700 ft

700 to 800 ft

800 to 900 ft

900 to 1000 ft

1000 to 1100 ft

1100 to 1200 ft

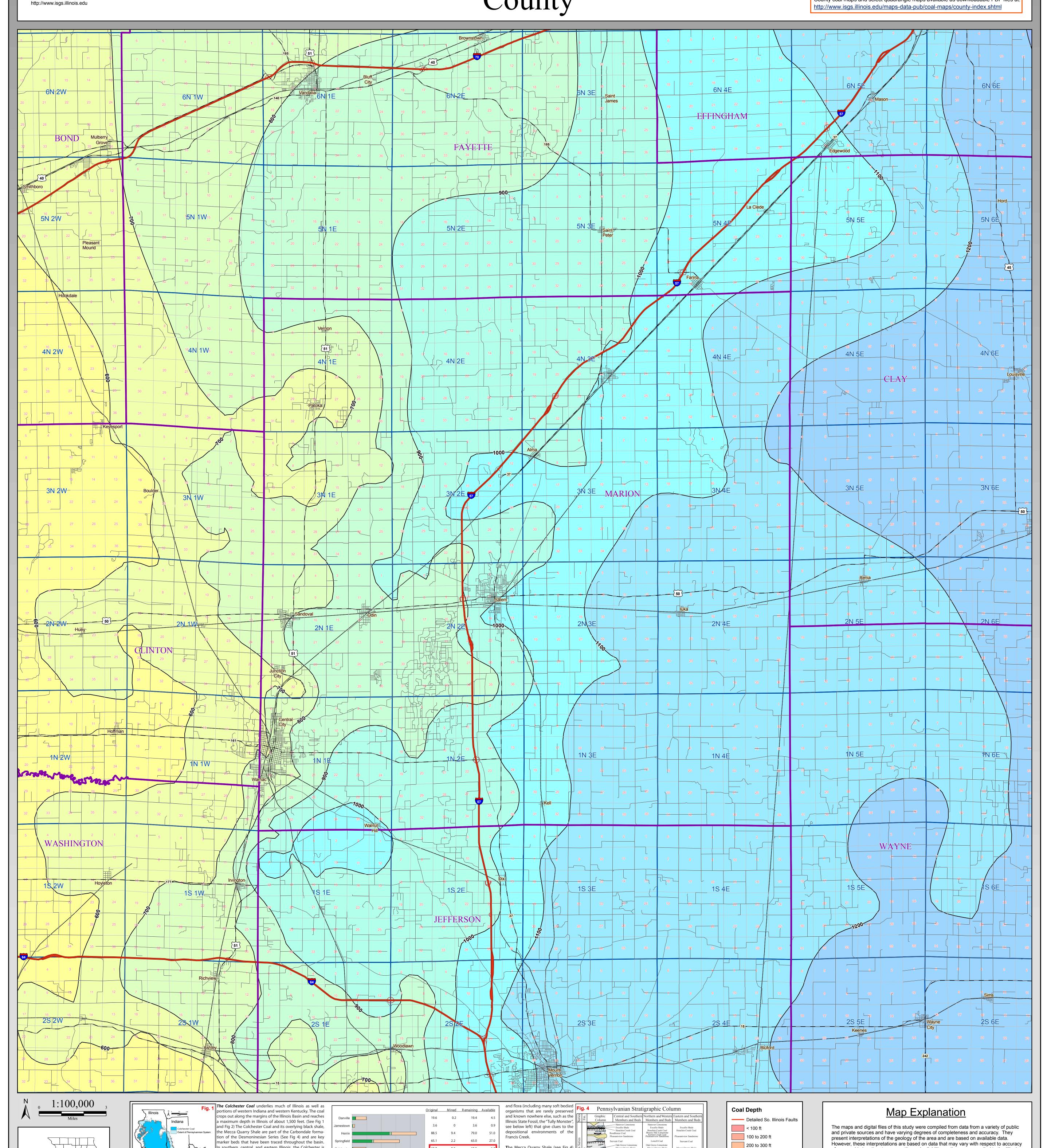
1200 to 1300 ft

1300 to 1400 ft

1400 to 1500 ft

1500 to 1600 ft

Greenbush Coal Wiley Coal



The Mecca Quarry Shale (see Fig 4)

overlies the Francis Creek Shale and

rests directly on the Colchester Coal

where the Francis Creek is absent. It is

a hard, fissile, black shale that locally

reaches 4 feet in thickness but gener-

ally ranges from 1 to 2 feet thick. The

Mecca Quarry is a transgressive marine

deposit that is even more widespread

References:

(All text modified from ISGS Pub. IM 127, Korose, et.al)

because of its distinctive low resistivity signature on electric logs and very high gamma-ray log readings.

been mined. Approximately 5% of the original resources, 0.5 billion tons, were considered available for mining

- Christopher P. Korose, Scott D. Elrick, and Russell J. Jacobson, 2003, Availability of the Colchester Coal for mining in

Northern and Western Illinois: Illinois State Geological Survey Illinois Minerals 127, 21 p.

southern, central, and eastern Illinois, the Colchester is

generally thin, ranging from less than one inch to 18 inches

thick. Throughout most of its northern and western extent,

the Colchester is 2 to 3.5 feet thick (locally 4 feet) where it has

been mined. The Colchester Coal is perhaps the most wide-

pread minable seam in North America and is correlated with

tures thinning to 1 to 2 feet along the

strong relationship to geologic struc- higher, dryer anticlinal crests.

top of the anticlinal crests versus that the basin. It is best known for the famous Mazon Creek

found in the troughs. The flora varia- sideritic concretions found in the northeastern part

tion is interpreted as drier conditions of the basin and in Fulton County. These concretions

stemming from higher topographic el- have yielded a remarkably well preserved fossil fauna

the Croweburg Coal of Missouri and Kansas, the Schultztown

of western Kentucky, the Broken Arrow (or Croweburg) of Oklahoma, the Whitebreast of Iowa, the Colchester

Coal Member (IIIa) of Indiana, the Lower Kittanning Coal of Ohio, the Princess No. 6 of eastern Kentucky, and

North-south cross section of the Pennsylvanian System in Illinois

■ Avail. w/ potential restr.

patterns of the Colchester show a peat formation and that the deeper, wetter synclinal troughs accumulated more peat than the states and is a stratigraphic marker

221.1 12.5 208.6 96.1

LaSalle Anticlinorium crests and thick- Directly overlying the Colchester Coal in many parts of western and northern Illinois is the The original resource of the Colchester coal in the State of Illinois totals 19 billion tons, 0.5 billion of which has

In much of northern Illinois, thickness Colchester swamp. This finding implies that these geologic structures were developing during out most of the basin and adjacent Colchester show a contraction of the colchester show a

evations that resulted from structural uplift and its effect on the paleoenvironment of the local than the Colchester, present through-

■ Restricted or mined

ening to as much as 3 or 4 feet in basinal Francis Creek Shale, a medium gray, silty shale that locally exceeds 80 feet thick. The Francis

in the flora of the Colchester Coal on and thins out to the west and south in the western part of Illinois State Fossil - "Tully Monster"

troughs. There is significant variation Creek forms a large clastic wedge that extends across the northern part of the coalfield