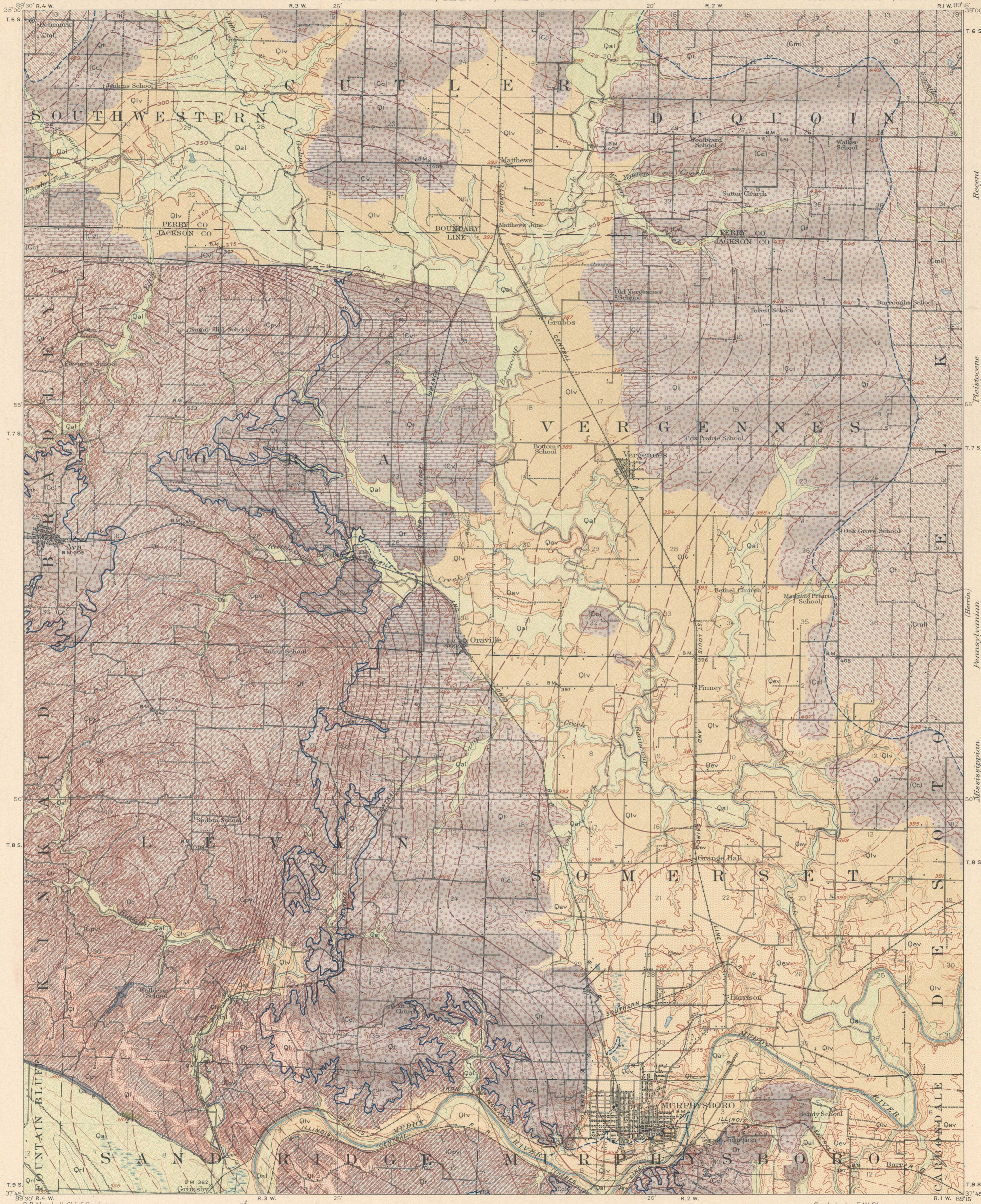


STRUCTURE AND ECONOMIC GEOLOGY

U.S. GEOLOGICAL SURVEY,
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STATE OF ILLINOIS
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ILLINOIS
MURPHYSBORO QUADRANGLE



LEGEND

SEDIMENTARY ROCKS

(Areas of subaqueous deposits are shown by patterns of parallel lines, subaerial deposits by patterns of circles) and

Qrl

Recent lake deposits
(peat and silt in beds of stream lakes in flood plains of Mississippi River)

Qal

Alluvium
(in flood plains of present streams)

Qlv

Later valley fill
(fluvio-lacustrine clay and silt on tributaries of Mississippi River includes the delta and other small delta deposits)

Ql

Thick loess
(loess contains very fine sand and clay containing shells and concretions; thin non-colourous non-fossiliferous clay beneath from Mississippi River mapped with glacial till)

Qev

Earlier valley fill
(fluvio-lacustrine sand, clay and silt, apparently older than Qlv on tributaries of Mississippi River; includes the delta mapped at Murphysboro and other small delta deposits)

Qg

Glacial till
(drift overlain by thin loess and locally by fine wash, with numerous boulders; occurs in the western part of the quadrangle)

Cml

McLeansboro formation
(shale, limestone, and sandstone with several thin coal beds)

Cc

Carbondale formation
(shale, sandstone, and limestone with two or more workable coal beds; Herrin No. 6 coal at top; Murphysboro No. 2 coal at base; Vergennes sandstone member C_v mapped only where prominently developed)

Cps

Pottsville sandstone
(massive resistant sandstone locally conglomeratic with interbedded shale and some coal)

Cb

Birdsville formation
(gray limestone, shale, and sandstone)

Faults

ECONOMIC AND STRUCTURE DATA

Outcrops of workable coals

(Murphysboro No. 2 coal, mb, and Herrin No. 6 coal, h, in Carbondale formation generally overlain by drift and loess; where deeply covered and position is doubtful, approximate outcrop is shown by dashed lines)

Structure contours on the base of Murphysboro (No. 2) coal

(doubtful position of coal indicated by dashed lines; contour interval, 25 feet)

* Coal mines

Note: The most valuable coal is the Murphysboro (No. 2) at the base of the Carbondale formation; other coals and clay and shale for brick and tile occur throughout the consolidated formation; limestone for cement material and building stone in the Carbondale and Birdsville formations. The Pottsville formation contains hard pure quartz sandstone which may be valuable for glass sand and granitic. Quaternary deposits yield sand and clay.

Recent

Quaternary

Illinoian stage

Herrin

Mississippian

T. 6 S.

T. 7 S.

T. 8 S.

T. 9 S.

R. 2 W.

R. 3 W.

R. 4 W.

R. 5 W.

R. 6 W.

R. 7 W.

R. 8 W.

R. 9 W.

R. 10 W.

R. 11 W.

R. 12 W.

R. 13 W.

R. 14 W.

R. 15 W.

R. 16 W.

R. 17 W.

R. 18 W.

R. 19 W.

R. 20 W.

R. 21 W.

R. 22 W.

R. 23 W.

R. 24 W.

T. 6 S.

T. 7 S.

T. 8 S.

T. 9 S.

T. 10 S.

T. 11 S.

T. 12 S.

T. 13 S.

T. 14 S.

T. 15 S.

T. 16 S.

T. 17 S.

T. 18 S.

T. 19 S.

T. 20 S.

T. 21 S.

T. 22 S.

T. 23 S.

T. 24 S.

T. 25 S.

T. 26 S.

T. 27 S.

T. 28 S.

Scale 62500
1 2 3 4 Miles
1 2 3 4 5 Kilometers

Contour interval 20 feet.
Datum is mean sea level.
Edition of Mar. 1912

Geology by E.W. Shaw.
Surveyed in 1909.
SURVEYED IN COOPERATION WITH THE STATE OF ILLINOIS.

R. B. Marshall, Chief Geographer,
W. H. Herron, Geographer in charge,
Topography by W. J. Lloyd,
Control by L. E. Tucker and Henry Bucher,
Surveyed in 1908.

APPROXIMATE MEAN
RECLINATION 1908.