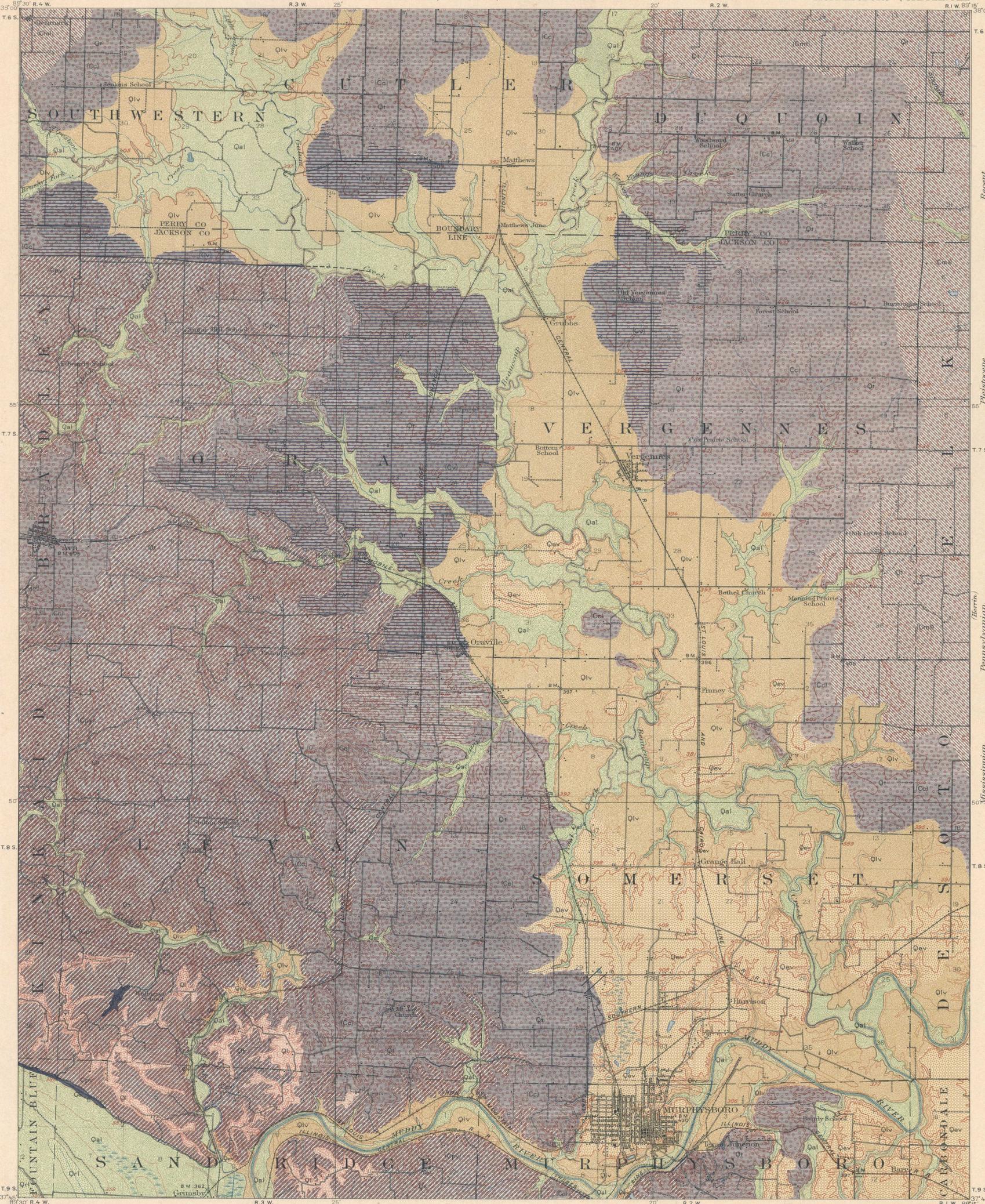


AREAL GEOLOGY

U.S. GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

STATE OF ILLINOIS
GOVERNOR C.S. DENEN, T.C. CHAMBERLIN, E.J. JAMES, COMMISSIONERS
FRANK W. DE WOLF, DIRECTOR, STATE GEOLOGICAL SURVEY

ILLINOIS
MURPHYSBORO QUADRANGLE



LEGEND

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

Recent
Recent lake deposits
(peat and silt in beds of drained lakes in flood plain of Mississippi River)

Qal
Alluvium
(in flood plains of present streams)

Qlv
Later valley fill
(fluvio-lacustrine clay and silt on terraces of Mississippi River including fine clay sand and small delta deposits)

Ql
Thick loess
(loess calcareous very fine sand and clay containing shells and concretions thin non-calcareous non-fossiliferous clay from Mississippi River mapped with glacial till)

Qev
Earlier valley fill
(fluvio-lacustrine sand, clay and silt, apparently older than Qlv on terraces of Mississippi River including fine clay sand at Murphysboro and other small delta deposits)

Illinoian stage
Glacial till
(drift overlies by thin loess and locally by fine wash with numerous boulders coarse in the western part of the quadrangle)

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

Carboniferous
Carbondale formation
(shale, sandstone, and limestone with two or more workable coal beds; Herrin No. 2 coal at base; Vermilion sandstone near base; Co mapped only where previously developed)

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

Birdsville formation
(gray limestone, shale and sandstone)

Faults

QUATERNARY

CARBONIFEROUS

Perry/Herron

Mississippi group

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.

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

Geology by E.W. Shaw.
Surveyed in 1908.
SURVEYED IN COOPERATION WITH THE STATE OF ILLINOIS.

SURVEYED IN COOPERATION WITH THE STATE OF ILLINOIS.
APPROXIMATE MEAN DECLINATION 1908.

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