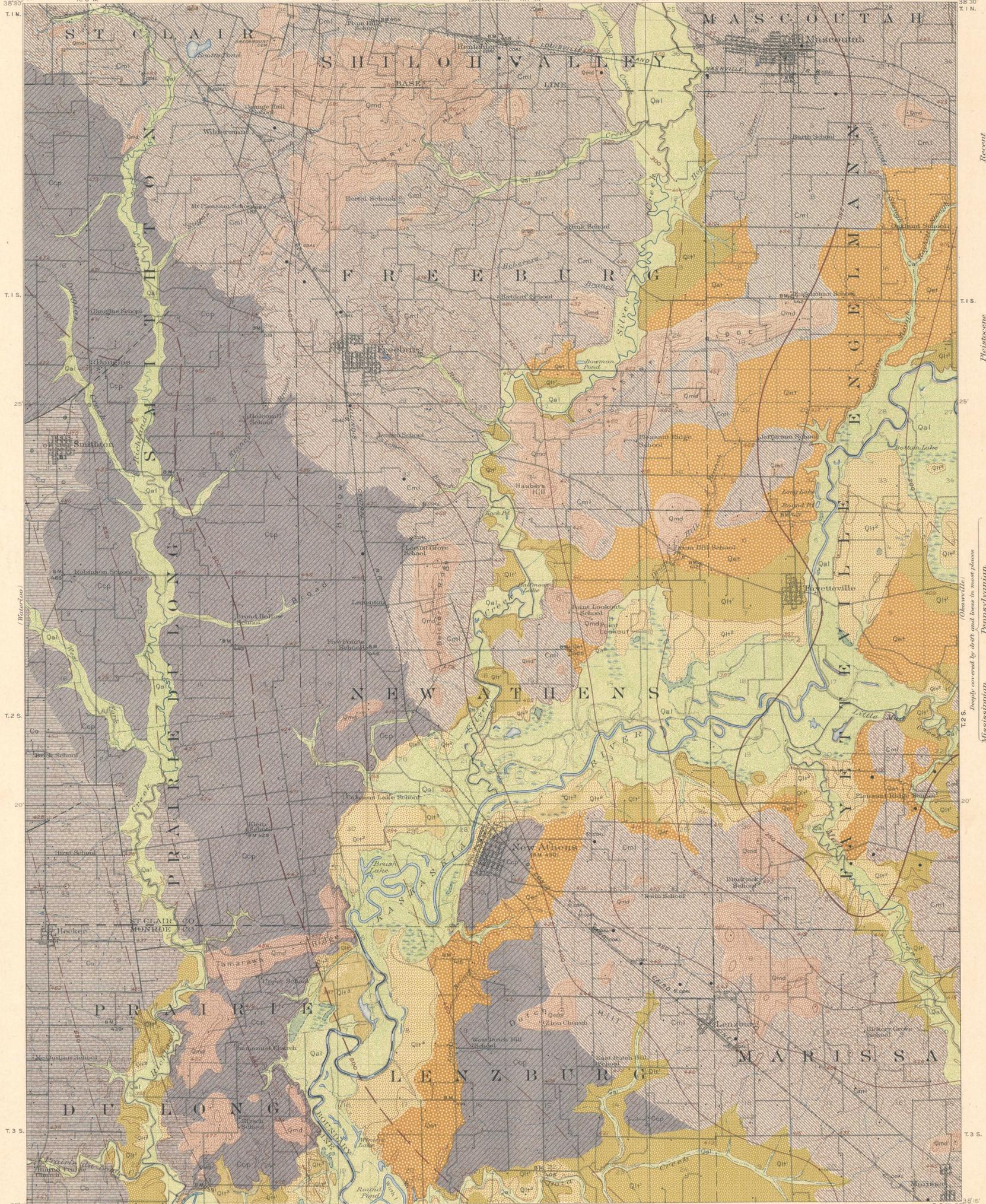


AREAL GEOLOGY

DEPARTMENT OF THE INTERIOR
FRANKLIN K. LANE, SECRETARY
U.S. GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

STATE OF ILLINOIS
DEPARTMENT OF REGISTRATION AND EDUCATION
FRANCIS W. SHEPARDSON, DIRECTOR
GEOLOGICAL SURVEY DIVISION, FRANK W. DEWOLF, CHIEF
(Belleville) R. 7 W.

ILLINOIS
NEW ATHENS QUADRANGLE
R. 6 W. 38° 30' T. 1 N.



EXPLANATION

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

Recent
Qal
Alluvium
(In flood plain present streams upper part generally fine with lower part sandy or gravelly in flood plain lower part generally coarse and shaly. Alluvium deposited between 300 to 500 feet above sea level.)

Later terrace deposits
(Usually clay and silt. Q11 highest terrace, Q12 middle terrace, Q13 lowest terrace, about 500 feet, Q14 lowest terrace about 350 feet.)

Earlier terrace deposits
(Usually clay and silt, altitude about 420 feet.)

Glacial till overlain by post-Illinoian loess; bedrock formations described below
(Generally soft sandy clay generally overlain by till to gray limestone. The larger amount of material is partly covered by water and in places are likely removed by erosion.)

Qmd
Morainal drift
(Beds of gravelly and sandy clay with some lenses of clean sand and gravel interbedded with loess.)

UNCONFORMITY
Qml
McLeansboro formation
(Generally soft shale and sandstone with some limestone and thin beds of coal.)

Ccp
Carbonade and Pottsville formations
(Sandstone, shale and clay with some limestone in Carbonade formation; sandstone, shale and clay with some limestone in Pottsville formation; all top which is porous and workable throughout quadrangle except in southeast corner.)

Co
Okaw formation
(Gray to white limestone, shale and sandstone.)

Faults

ECONOMIC AND STRUCTURE DATA
Structure contours on the base of Herrin (No. 6) coal
(dashed position of coal indicated by dashed lines; contour interval, 50 feet; datum, mean sea level.)

Local coal mines
Abandoned coal mines
Coal test borings
Wells drilled for oil

Note: The most valuable coal (Herrin (No. 6) and known in the region about New Athens and Okawville is the Belleville bed, less 50 to 100 feet below the surface throughout the area except in the southwestern part of the New Athens quadrangle; other coals occur in the Pottsville, Carbonade, and McLeansboro formations; shale for brick and tile and limestone for cement materials and building stone occur in the Okaw, Carbonade, and McLeansboro formations; loess and glacial till yield clay for brick and tile; alluvium, valley filling, and morainal drift locally carry sand and gravel.

R. B. Marshall, Chief Geographer
W. H. Haron, Geographer in charge
Topography by J. F. McBeth and E. W. McCrory
Control by J. R. Ellis, W. A. Gelbach, and Coast and Geodetic Survey.
Surveyed in 1908-1909.

APPROXIMATE MEAN SEASIDE ELEVATION 1900



Contour interval 20 feet.
Datum is mean sea level.
Edition of Mar. 1921.

Geology by E. W. Shaw.
Surveyed in 1911.
SURVEYED IN COOPERATION WITH THE STATE OF ILLINOIS.

(Cadesville)