

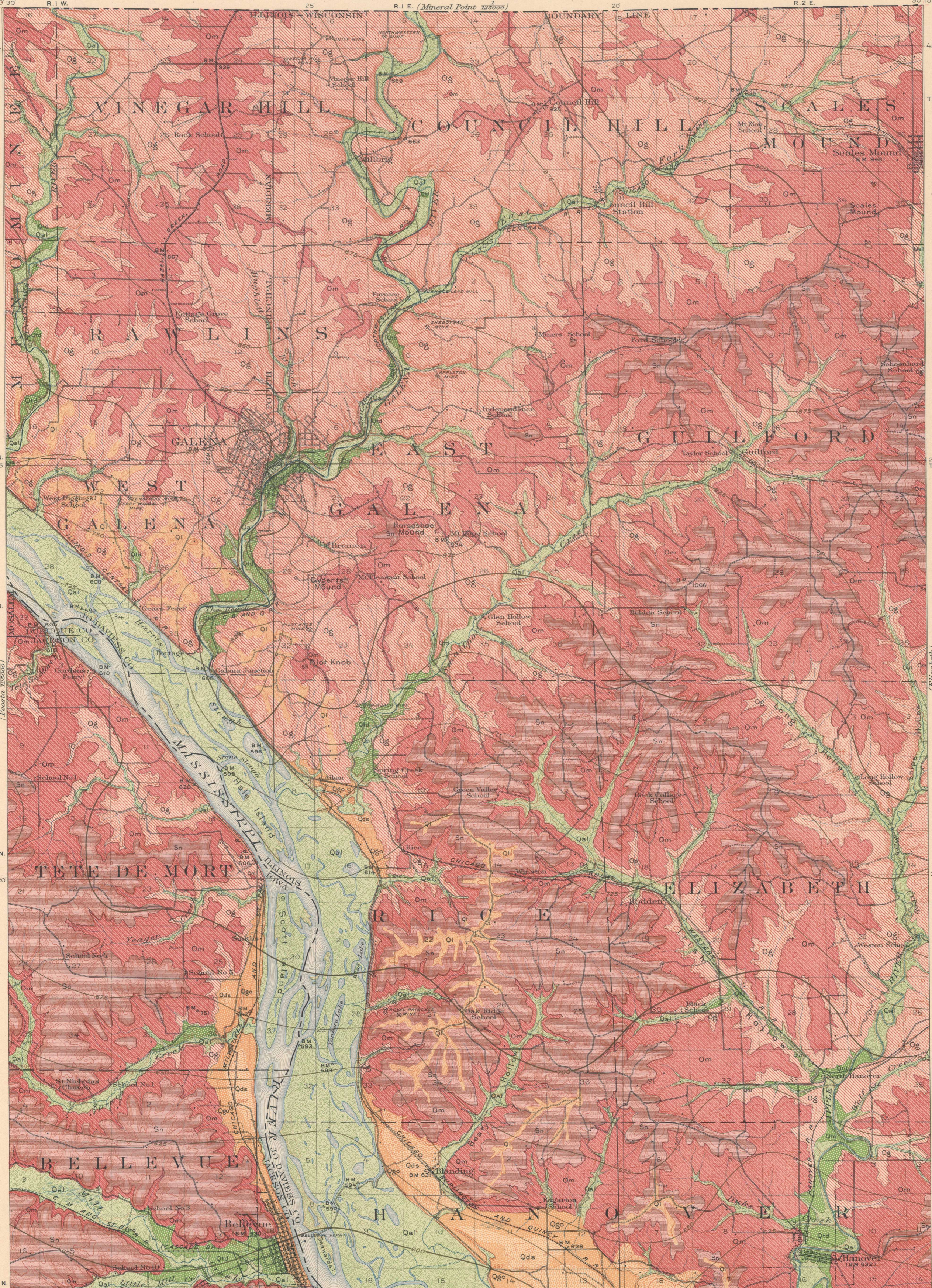
AREAL GEOLOGY

STATE OF ILLINOIS

GOVERNOR EDWARD F. DUNNE, T. C. CHAMBERLIN, E. J. JAMES, COMMISSIONERS
FRANK W. DE WOLF, DIRECTOR, STATE GEOLOGICAL SURVEY

ILLINOIS-IOWA
GALENA QUADRANGLE

U.S. GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR



LEGEND

SEDIMENTARY ROCKS

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

Qal Alluvium (silt, sand, and gravel of present streams)

Qds Dune sand (wind-blown sand, coarse to very fine, derived from local sources and adjacent to the Mississippi; only the larger areas mapped)

Ogo Glacial outwash terrace deposits (sand with some gravel and silt, forming a terrace along the Mississippi; not above the flood plain, but worn down in places)

Otd Local stream terrace deposits (laminated fine-say sand, and gravel of local derivation; lower part of valley steps, deposited under local conditions; probably by glacial outwash, along the Mississippi)

Oi Thick loess (light buff color with thin beds; covers most of the quadrangle)

Sn Niagara dolomite (light buff to gray, thin to thick bedded dolomite with chert nodules and layers; generally includes at base well-sorted, shaly dolomite, possibly Madison age)

Om Maquoketa shale (green to blue shale and clay with some beds of earthy limestone and fossiliferous limestone)

Og Galena dolomite (coarse-grained, thick-bedded dolomite with chert nodules in middle part; locally thin bedded in lower part; carries the chief productive bodies of lead and zinc ores)

Op Platteville limestone and Decatur shale (thin bedded limestone overlain by thin greenish shale; not separately mappable except only along outcrop line)

ECONOMIC AND STRUCTURE DATA

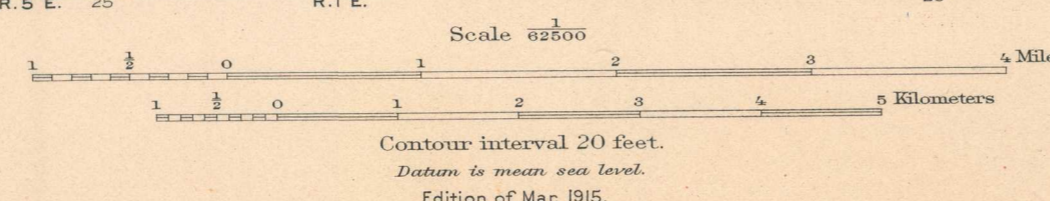
Structure contours (lines show configuration and elevation above sea of the top of the Galena dolomite; contour interval, 25 feet)

Mines, lead and zinc

Economic data: Large deposits of lead and zinc ores have been extracted from the Galena dolomite, especially from the lead and smaller deposits occur elsewhere in the Galena and other formations. Sulphuric acid is a by-product of the lead and zinc industry. Brick clays can be obtained from the lower Silurian, Maquoketa shale, and residuum from dolomite. Building stone, road material, and lime from Galena and Niagara dolomite, sand from sand dunes along the Mississippi bluffs. The flat uplands, bottomlands, and gentle slopes are suitable for general farming; the steeper slopes are largely forested but are in part suitable for pasture.

R. B. Marshall, Chief Geographer.
W. H. Herron, Geographer in charge.
Topography by Mississippi River Commission, Illinois State Geological Survey, Frank Tweedy, B. A. Jenkins, and Geo. Hoffman.
Control by Mississippi River Commission, L. E. Tucker, and Henry Bucher.
Surveyed in 1909 and 1911.
SURVEYED IN COOPERATION WITH THE STATE OF ILLINOIS.

APPROXIMATE MEAN DECLINATION 1908.



Geology by E. W. Shaw and A. C. Trowbridge, assisted by B. H. Schockel. Surveyed in 1910 and 1911. SURVEYED IN COOPERATION WITH THE STATE OF ILLINOIS.