

Geologic Column chart showing Series and Stage (Holocene, Wisconsinian, Illinoian, Pre-Illinoian, Pliocene, Miocene to Paleocene, Mass-tribian), Formation (Cahokia, Peoria Silt, Roxana Silt, Loveland Silt, Pearl, Mounds Gravel, unnamed deposits, McNeily), Graphical Column (Uplands, Valleys), Thickness (m), and Description.

MAPPING PROCEDURE section detailing the methods used for mapping the geology, including bedrock mapping and stratigraphic correlation.

EXPLANATION

Legend for the geologic map symbols, including colors for various geological units like Cahokia, Peoria Silt, and Mounds Gravel.

Series and Stage, Formation, Graphical Column, Thickness (m), Description. Detailed text descriptions for each geological unit, including lithology and thickness.

Main geologic column table with columns for Formation, Graphical Column, Thickness (m), Description, and Stratigraphic Position (Quaternary, Tertiary, Cretaceous).

Detailed description of geological units, including Cahokia Fm. Silt, sand, clay, gravel, and rock debris; Peoria Silt; Roxana Silt; Loveland Silt; Pearl; Mounds Gravel; and McNeily.

MAPPING PROCEDURE: Bedrock geology of the Dongola Quadrangle was mapped by W. John Nelson from November 1992 to March 1993. In addition to outcrop study, Nelson examined all available well records for the area and logged all available sets of well logs.

STRUCTURAL GEOLOGY: The Dongola Quadrangle is located near the southwestern margin of the Illinois Basin. Bedding regionally strikes NNW and dips NE at 15°.

THE CAE VALLEY: The most prominent feature of the Dongola Quadrangle is the Cache Valley, the 2- to 3-mile-wide lowland that crosses the southern part of the map area.

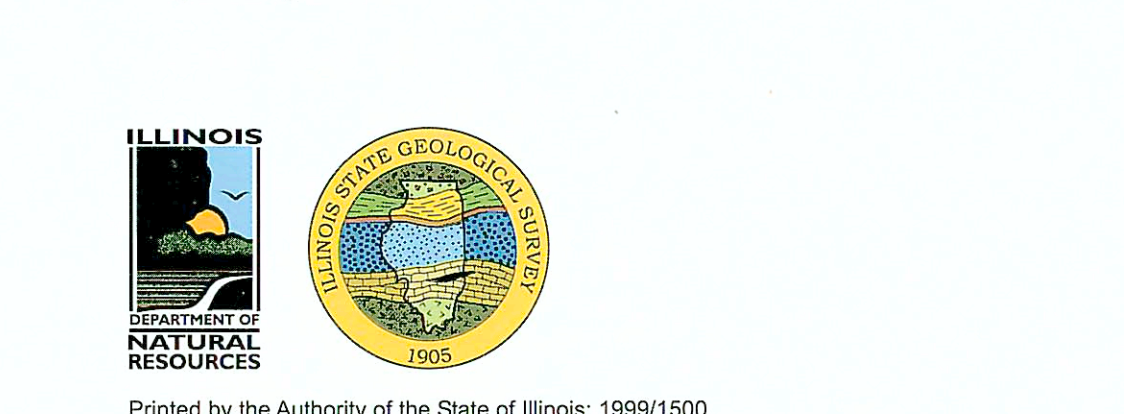
ECONOMIC GEOLOGY: Limestone is the principal economic resource of the Dongola Quadrangle. The Columbia Quarry Co. operates two quarries in the Ullin Limestone.

GROUNDWATER: Groundwater within the Cache Valley is obtained chiefly from sand and gravel aquifers in the Henry and Pearl Formations.

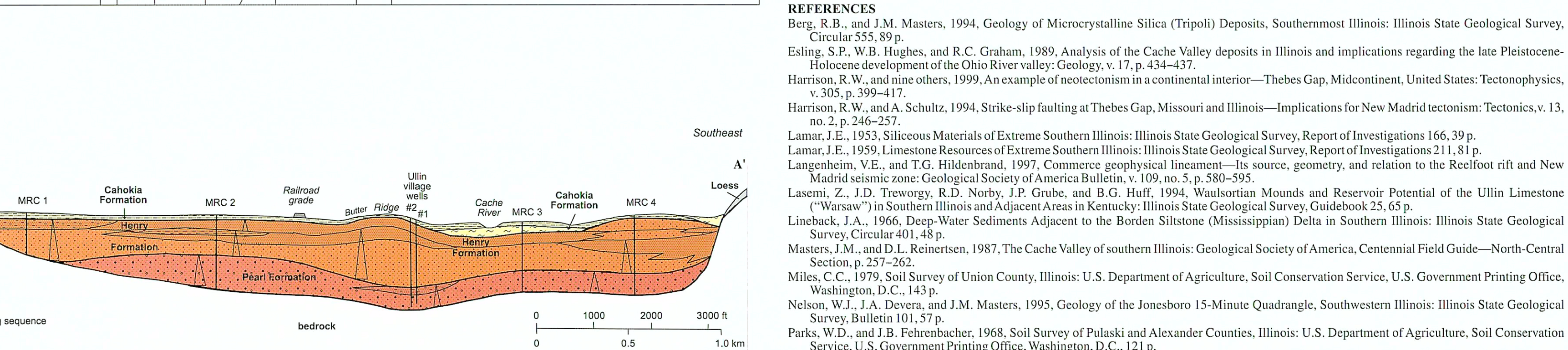
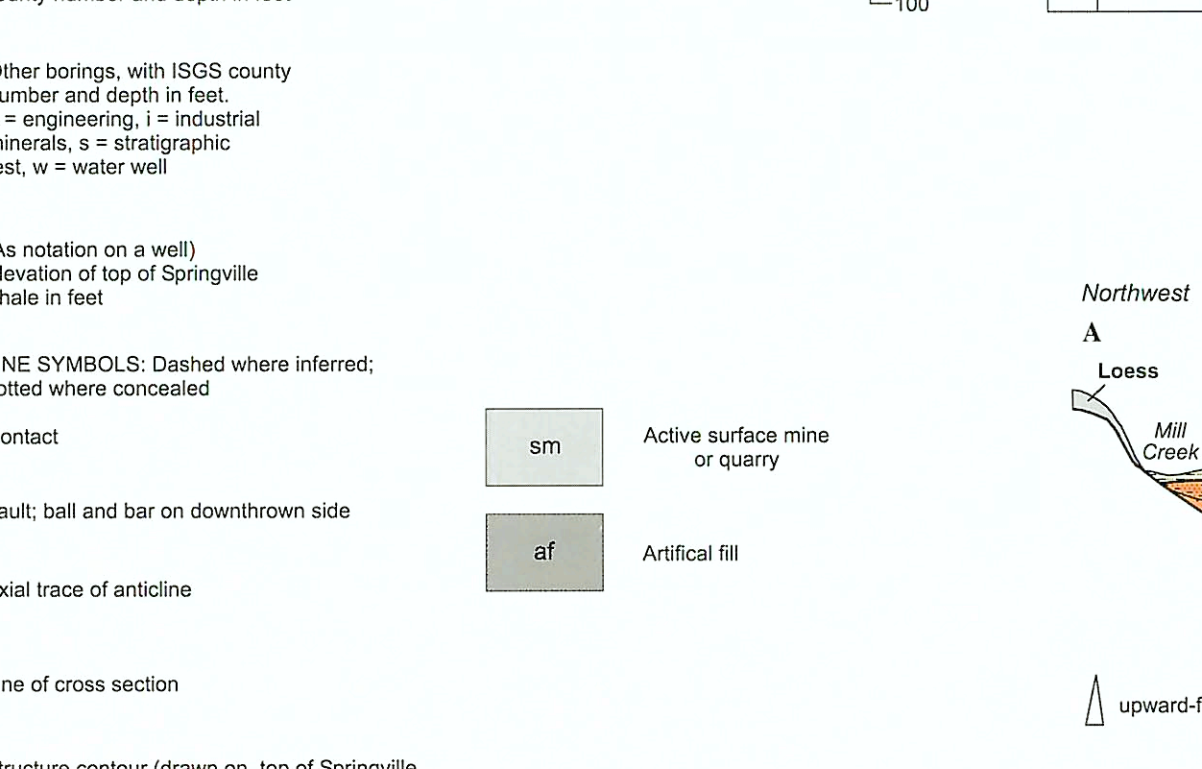
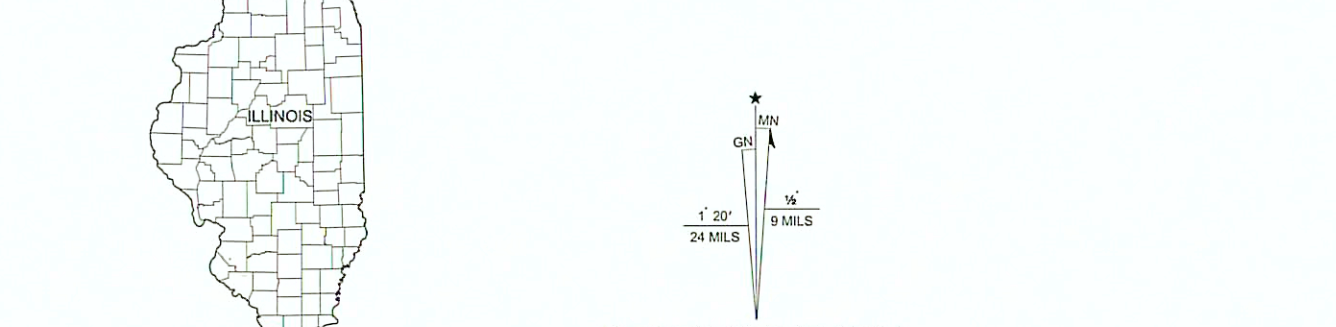
GEOLOGIC MAP OF THE DONGOLA QUADRANGLE ALEXANDER, PULASKI, AND UNION COUNTIES, ILLINOIS

W. John Nelson, Leon R. Follmer, and John M. Masters 1999

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Scale bar and coordinate information.



- REFERENCES: Berg, R.B., and J.M. Masters, 1994. Geology of Microcrystalline Silica (Trippoli) Deposits, Southernmost Illinois. Illinois State Geological Survey, Circular 555, 89 p. Esling, S.P., W.B. Hughes, and R.C. Graham, 1989. Analysis of the Cache Valley deposits in Illinois and implications regarding the late Pleistocene-Holocene development of the Ohio River valley. Geology, v. 17, p. 434-437.