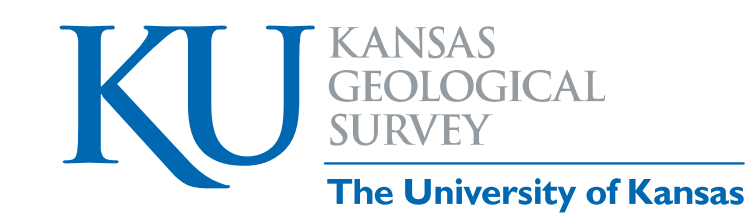


PRELIMINARY SURFICIAL GEOLOGY OF THE PAOLA EAST QUADRANGLE, MIAMI COUNTY, KANSAS

Geology by Rolfe D. Mandel and K. David Newell

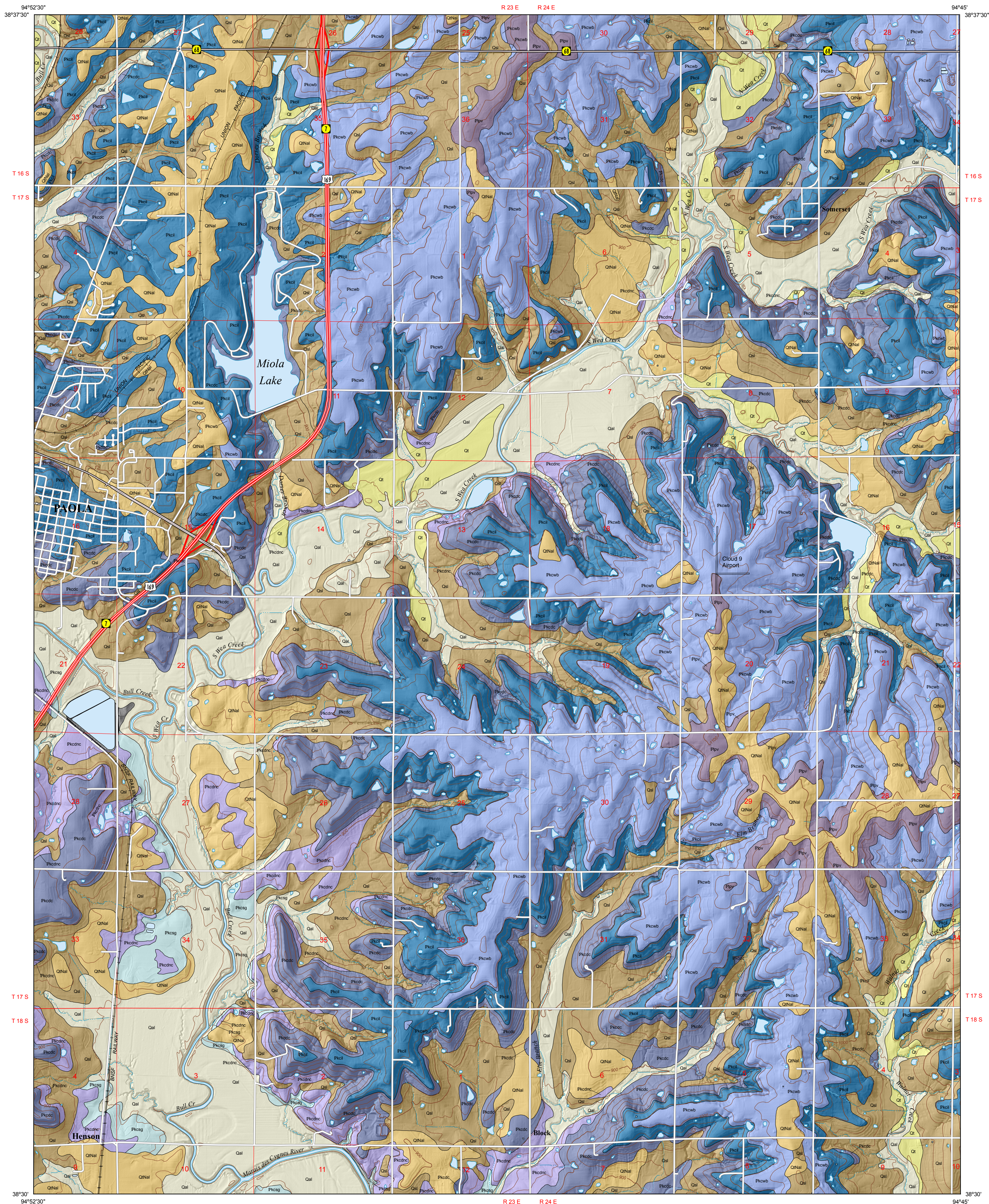
2015

Computer compilation and cartography by John W. Dunham, Hillary C. Crabb, and Anthony L. Layzell



Open-file Report 2015-11

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CENOZOIC Quaternary System

Undifferentiated alluvium — Undifferentiated alluvium that typically is less than 4,000 years old...

Quaternary and Neogene alluvium — Clayey alluvium often interbedded with cherty gravel is common beneath high terraces...

Colluvial apron and alluvial fan deposits — Deposits of clay, silt, sand, and gravel occur on footslopes and toeslopes in valley landscapes...

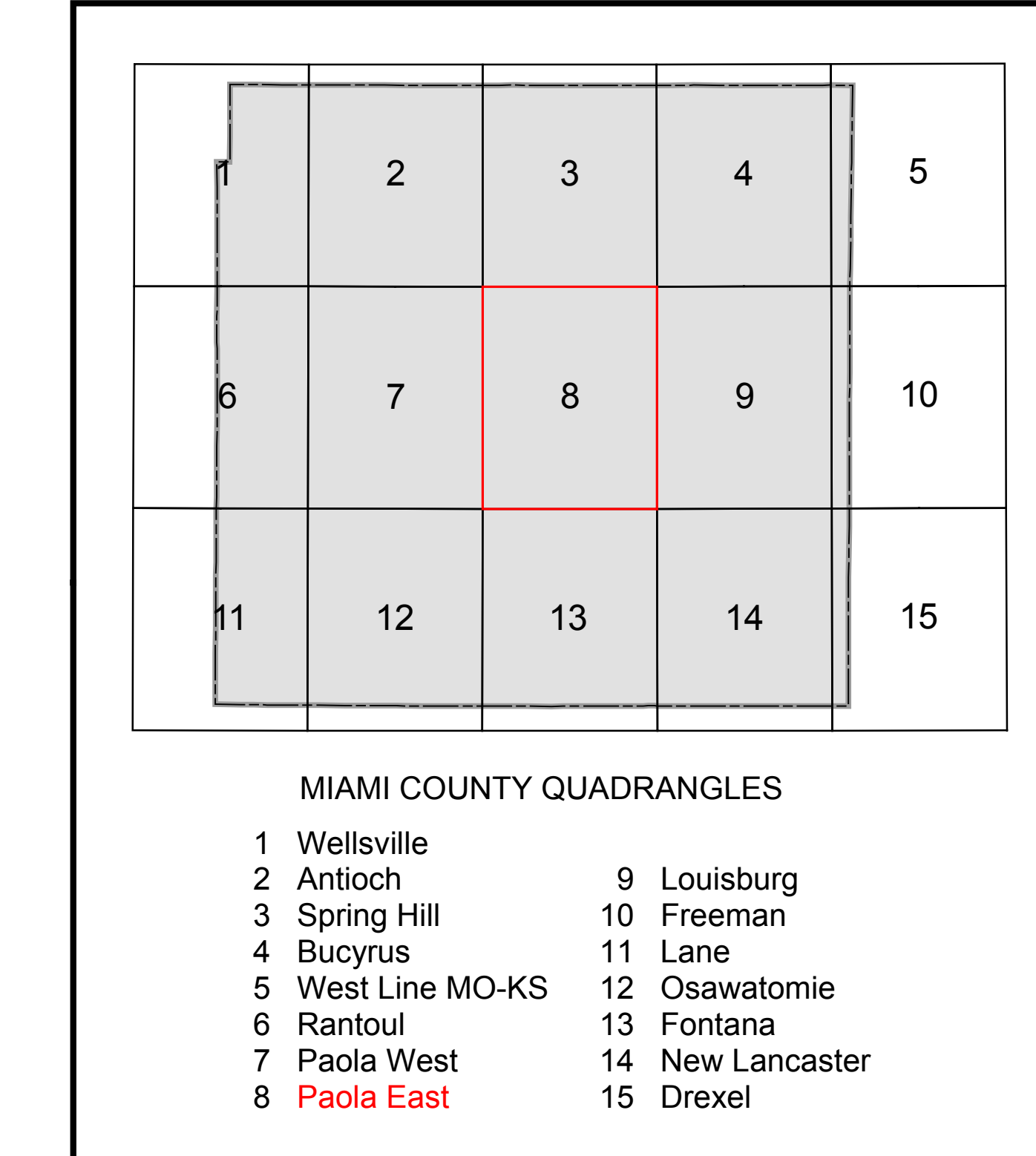
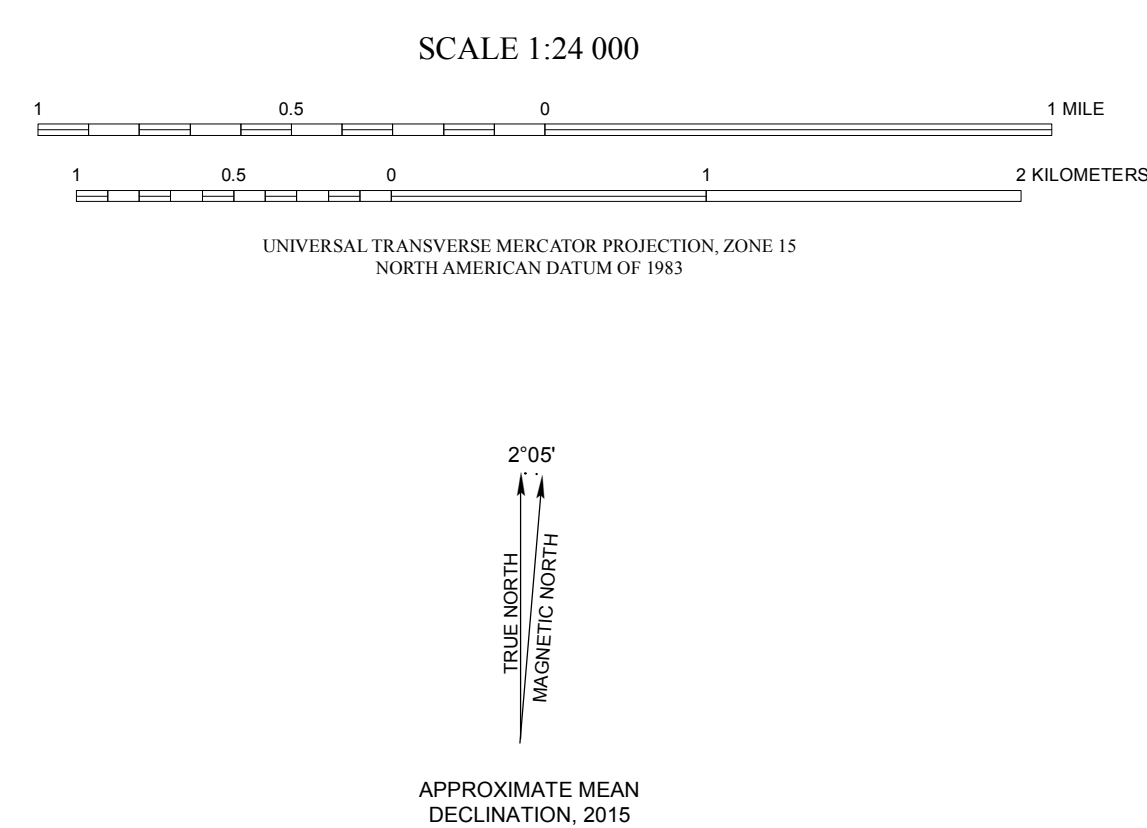
Loess — Deposits of grayish brown and reddish-brown loess cover hillslopes and high alluvial terraces in portions of Miami County...

PALEOZOIC Carboniferous System—Pennsylvanian Subsystem

Lansing Group Lansing Group Vilas Shale — The lower part of the Lansing group is composed of the Plattsburg Limestone and overlying Vilas Shale...

EXPLANATION

- Boundaries and Locations: Township/range line, Section line, Transportation: U.S. and state highway, State highway, Local road, Railroad, Airport runway, Geologic Unit Boundaries: Observed contact, Hydrology and Topography: Perennial stream, Intermittent stream, Water body, Water body - manmade shoreline, Elevation contour (100-foot interval), Depression contour (100-foot interval), Elevation contour (20-foot interval), Depression contour (20-foot interval)



Qal

Qt

QtNal

Qsl

Ql

Ppvp

Pkdc

Pkdcnc

Pkcsdg

Wyanadotte Limestone/Bonner Springs Shale — The uppermost part of the Kansas City Group is composed of the Wyanadotte Limestone and the overlying Bonner Springs Shale...

Iola Limestone/Lane Shale — The Iola Limestone (10-12 ft; 3-3.7 m) is composed of two limestone members and an intervening shale member — the lower limestone is the Paola Limestone...

Drum Limestone/Chanute Shale — The Drum Limestone (1.7-8 ft; 0.5-2.4 m) consists of a single massive bed of yellowish-gray to reddish-brown fine to medium-grained cross-bedded limestone...

Dennis Limestone/Cherryvale Shale — The Dennis Limestone (~32 ft; 10 m) is resistant, forming prominent scarps. It is composed of three members, which, in ascending order, are the Canville limestone, Stark shale, and Winterest limestone...

Swope Limestone/Galesburg Shale — The Swope Limestone (34 ft; 10 m), the lower part of this map unit, is composed of two limestone members and an intervening shale member...

REFERENCES: Aber, J. S., 1998. Chert Gravel and Neogene Drainage in East-Central Kansas... Miller, D. E., 1966. Geology and ground-water resources of Miami County, Kansas...