

HAMILTON AND KEARNY COUNTIES QUADRANGLE MAPS

The following 23 quadrangle maps represent field maps that are submitted by the Kansas Geological Survey as part of the STATEMAP Agreement #1434-HQ-97-AG-01756 for FY97 (May 1, 1997 to April 30, 1998). The following quadrangles are filed with the Kansas Geological Survey as KGS Open-File Report 97-32 "Preliminary Geologic Field Maps for portions of Hamilton and Kearny Counties, Kansas". Within the Open-File Report 97-32 there are an additional 12 geologic field maps that represent the field maps from last years STATEMAP deliverables for this project.

Quadrangles included--

Complete Quadrangles (Hamilton Co. (HA), Kearny Co. (KE))

Deerfield SW (KE)
Lakin SE (KE)
Lakin SW (KE)
Mattox Draw NE (Leoti 3 NE) (KE)
Mattox Draw NW (Leoti 3 NW) (KE)
Mattox Draw SE (Leoti 3 SE) (KE)
Mattox Draw SW (Leoti 3 SW) (KE)
Wolf NW (KE)

Partial Quadrangles (Areas of Hamilton County and Kearny County on quadrangle are mapped)

Big Bow NE (KE)
Deerfield SE (KE)
Hickok NE (KE)
Hickok NW (KE)
Leoti SW (KE)
Modoc SE (KE)
Modoc SW (KE)
Selkirk SE (HA and KE)
Syracuse East SE (KE)
North of Shirley Creek (Tribune 4 NE) (KE)
Shirley Creek (Tribune 4 SE) (KE)
Ulysses NE (KE)
Ulysses NW (KE)
Wolf (KE)
Wolf NE (KE)

EGS
OFR
97-32

Stratigraphic Column
Hamilton and Kearny Counties

William C. Johnson
University of Kansas

Quaternary System

Alluvial deposits

- Qal*** ***undifferentiated flood plain alluvium***
coarse gravel to clay; Holocene age; 0-75 ft
- Qt*** ***alluvial terrace deposits of the Arkansas River***
coarse gravel to clay; late Pleistocene to Holocene ages; 0-96 ft
- Qg*** ***upland and valley-wall alluvial deposits***
coarse gravel to clay; early and middle Pleistocene ages; 0-40 ft
- Qp*** ***upland intermittent lake (playa) deposits***
silt to clay; late Pleistocene to Holocene ages; 0-10 ft

Eolian deposits

- Qss*** ***eolian sand - sheet***
fine sand occurring in sheets; late Pleistocene to Holocene ages; 0-34ft
- Qds*** ***eolian sand - dunes***
fine sand occurring in dunes; late Pleistocene to Holocene ages; 0-75 ft
- Ql*** ***loess***
fine-grained sediments, dominantly silt-sized; Pleistocene to Holocene ages; 0-10 ft

Tertiary System

Miocene Series

- To*** ***Ogallala Formation***
calcareous gravel, sand, silt, and clay; mostly unconsolidated, but with varying degrees of cementation; members undifferentiated; 0-400 ft

Cretaceous System

Upper Cretaceous Series

- Ksh*** ***Smoky Hill chalk mbr - Niobrara Formation***
chalk and chalky shale with many limonitic concretions and shells of *Inoceramus* and *Ostrea*; 0-30 ft (?)
- Kfh*** ***Fort Hays limestone mbr - Niobrara Formation***
thick beds of cream-colored, chalky limestone separated by thin beds of gray, calcareous fissile shale; 0-61 ft
- Kc*** ***Carlile shale (Fairport chalk, Blue Hill shale, Codell sandstone mbrs)***
noncalcareous, blue-black, fissile shale; 0-250 ft
- Kgn*** ***Greenhorn limestone (Lincoln limestone, Hartland shale, Jetmore chalk mbrs)***
calcareous shale interbedded with thin layers of chalky and crystalline limestone and bentonitic clay; 0-130 ft
- Kgs*** ***Graneros shale***
gray-black fissile, argillaceous shale; 0-61 ft

Lower Cretaceous Series

- Kd*** ***Dakota Formation***
gray to buff, fine-grained, irregularly-bedded sandstone and varicolored clay; 0-314 ft