

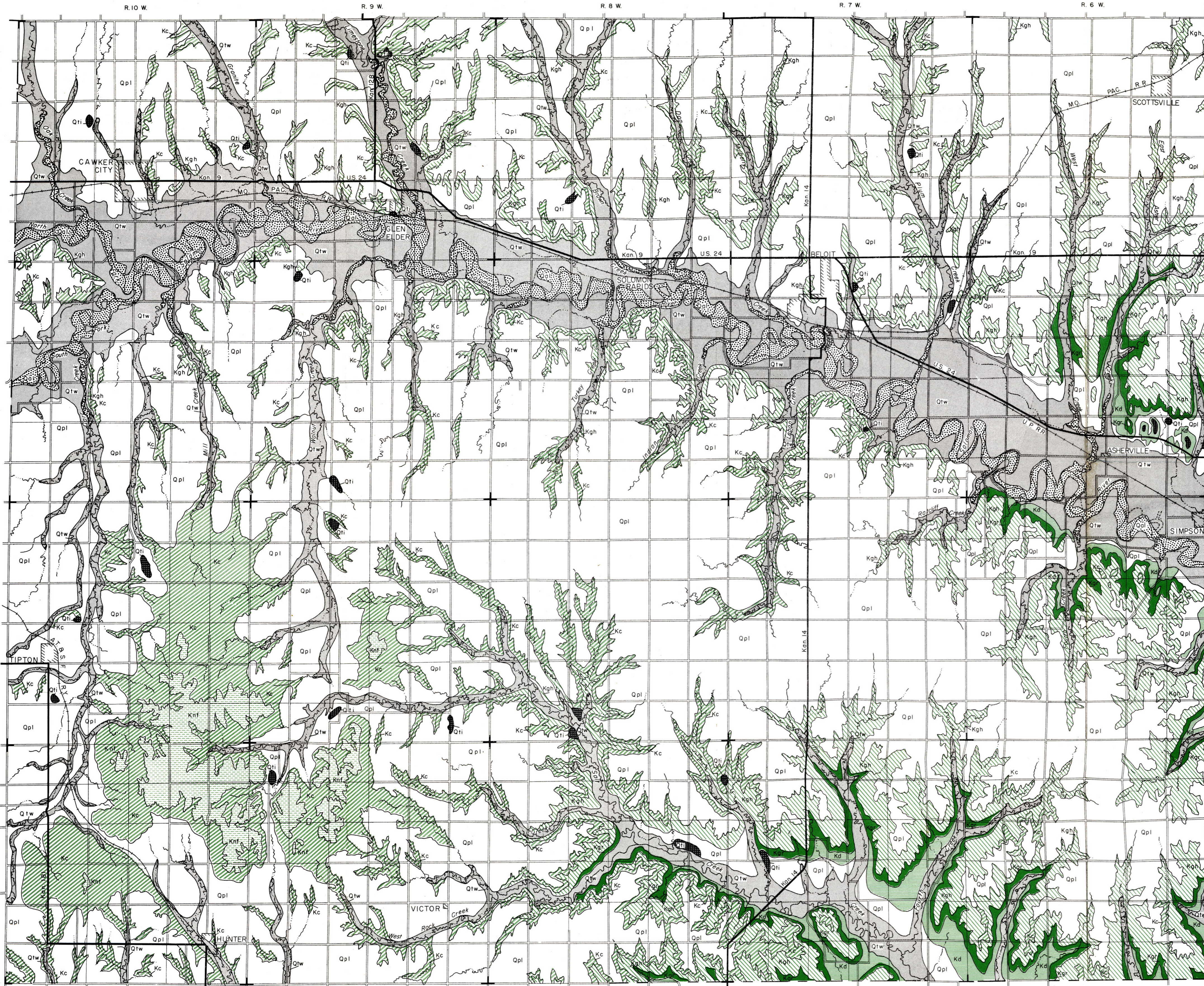
AREAL GEOLOGY OF MITCHELL COUNTY, KANSAS

By Warren G. Hodson
1957

Bulletin 140

Plate 1

State Geological Survey
of Kansas



EXPLANATION



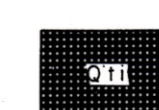
Alluvium
Unconsolidated sand, gravel, silt, and clay of Recent age. Underlies Recent flood plain in stream channels. Dashed lines indicate minor terrace scarp. Yields moderate quantities of water to wells along Solomon Valley and smaller quantities along tributary valleys.



Terrace deposits
Unconsolidated sand and gravel grading upward into clay and silt of late Wisconsin age. Underlies terraces in valleys of larger streams. Yield moderate quantities of water to wells along Solomon Valley and smaller quantities along tributary valleys.



Peoria and Loveland Formations of Sanborn Group
Silt and sandy silt, mostly silt, of Wisconsin and Illinoian age. Blanket much of the upland. Include colluvium in upland draws. Yield little or no water to wells.



Creta Formation
Remnants of alluvial deposits consisting of sand, gravel, and silt of Illinoian age in a high terrace position along Solomon Valley and its major tributaries. Yields no water to wells.



Fort Hays Limestone member of Niobrara Formation
Massive beds of cream-colored cherty limestone separated by thin partings of cherty shale. Forms prominent buttes. Yields no water to wells.



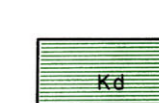
Carlile Shale
Gray to black shale containing large spheroidal concretions near top and thin silty sandstone (Codell Sandstone zone) at top. Lower part consists of alternating beds of cherty shale and thin cherty limestone. Yields no water to wells.



Greenhorn Limestone
Alternating beds of calcareous shale and cherty limestone. Contains thin bentonite beds; thin bed of hard crystalline limestone at base. Yields meager to small quantities of water of variable quality from place to place.



Graneros Shale
Dark-blue-gray shale that weathers gray and tan. Locally contains thin layers of bentonite and thin lenses of silty red-brown sandstone. Yields little or no water to wells.



Dakota Formation
Clay, shale, siltstone, and sandstone. Contains lignite and "ironstones". Yields small to moderate quantities of water, potable in eastern part of county, too mineralized for use in central and western parts.

- Federal or state highway
- Township or county road
- Section line (no road)
- Railroad
- Perennial stream
- Intermittent stream

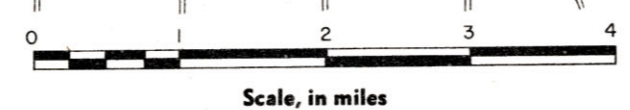
PLEISTOCENE

GULFIAN

QUATERNARY

CRETACEOUS

Base compiled from maps prepared by the Soil Conservation Service



Drainage from map prepared by U. S. Dept. of Agriculture