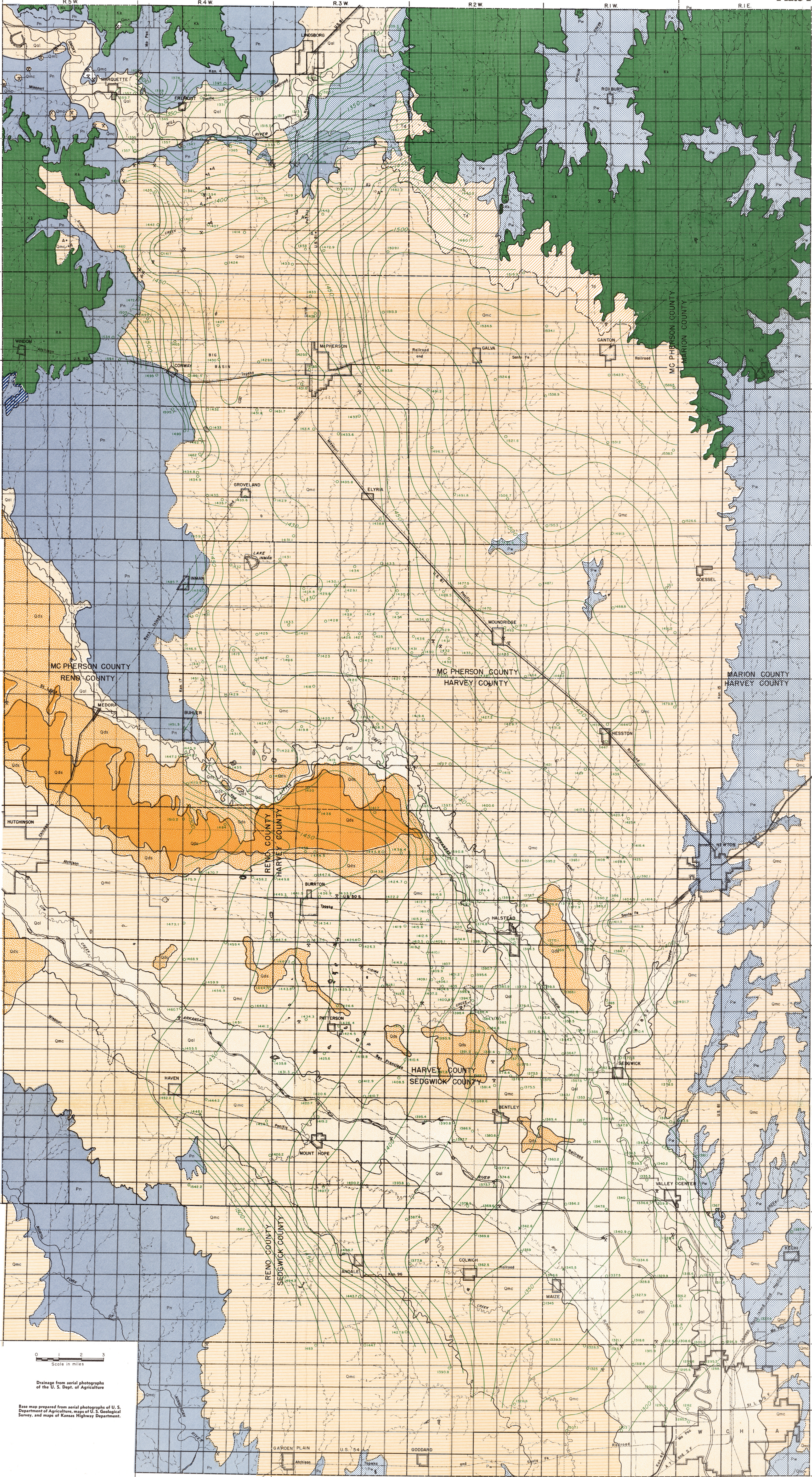


# AREAL GEOLOGY OF A PART OF SOUTH-CENTRAL KANSAS AND WATER-TABLE CONTOURS, 1940-1944

State Geological Survey  
of Kansas

by Charles C. Williams and Claude W. Hibbard

Bulletin 79  
Plate 1



## EXPLANATION

Qal

Alluvium  
Silt, clay, and coarse sand and gravel. Yields very large quantities of moderately hard to hard water to wells in Arkansas and Little Arkansas River Valley; smaller quantities in Smoky Hill Valley.

Qds

Dune sand  
Fine to medium grained eolian quartz sand. Recently formed dunes subject to shifting and blow-out are above water table in most places, but constitute valuable intake area.

Qdc

Dune sand  
Fine to medium grained eolian quartz sand. Subdued dunes yield small quantities of relatively soft water to stock and domestic wells. Important catchment areas for recharge of the ground-water reservoir.

Qmc

McPherson formation  
Silt, clay, and coarse sand and gravel. Contains volcanic ash. Coarse channel deposits yield large quantities of moderately hard water to domestic and municipal wells. Smaller quantities available from other parts of the formation.

Ts

Delmore formation  
Silt, clay, carbonate, sand and gravel, largely derived from Cretaceous and Permian rocks. Yields small supplies of moderately hard water to domestic and stock wells.

Ks

Kiowa shale  
Dark grayish-brown shale, gray sandy shale, soft cross-bedded sandstone, "sandy shale", and thin fossiliferous limestone. Sandstones yield small supplies of hard water to small springs and stock wells.

Sc

Stone Corral dolomite  
Gray, cellular, thin-bedded dolomite on outcrop in McPherson County. Contains anhydrite and gypsum in subsurface westward. Yields no water to wells in this area.

Pn

Niamez shale  
Soft to hard brick-red shale. Contains some beds of gray and green shale, thin argillaceous limestone and gypsum. Yields meager supplies of very hard water to wells.

Pw

Wellington shale  
Gray, calcareous shale, containing gypsum, anhydrite, salt, and thin beds of argillaceous limestone. Yields meager supplies of very hard water to stock and domestic wells.

Contour interval 10 feet

1500

Water-table contours based on instrumental levels

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Well location. Number refers to altitude of water level

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