

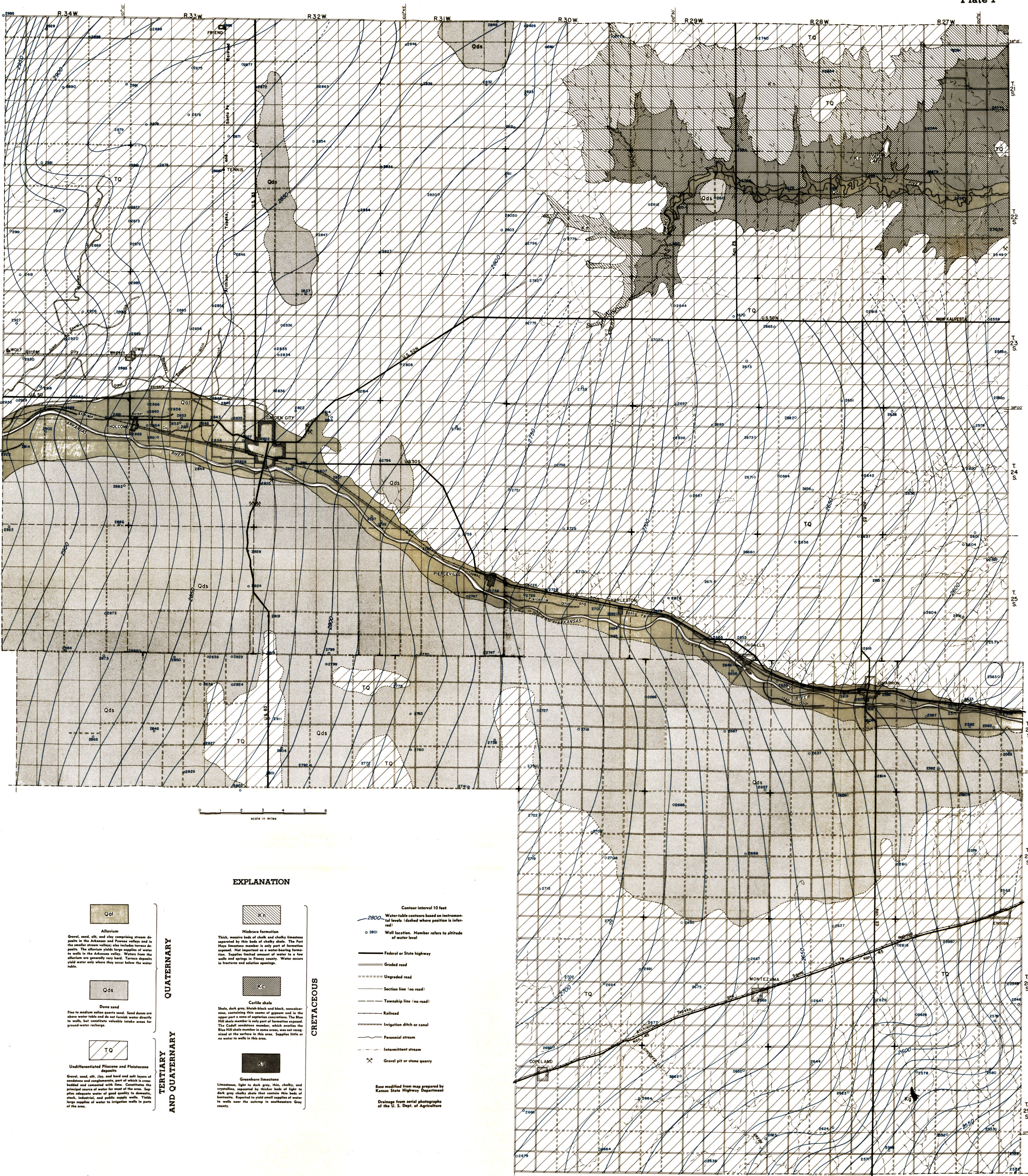
# MAP OF FINNEY AND GRAY COUNTIES, KANSAS

Showing Geology and Water-Table Contours, 1940

By Bruce F. Latta

Bulletin 55  
Plate 1

State Geological Survey  
of Kansas



0 1 2 3 4 5 6  
scale in miles

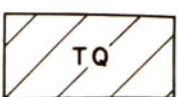
## EXPLANATION



**Alluvium**  
Gravel, sand, silt, and clay comprising stream deposits in the Arkansas and Pawnee valleys and in the smaller stream valleys; also includes terrace deposits. The alluvium yields large supplies of water to wells in the Arkansas valley. Waters from the alluvium are generally very hard. Terrace deposits yield water only where they occur below the water table.



**Dune sand**  
Fine to medium yellow quartz sand. Sand dunes are above water table and do not furnish water directly to wells, but constitute valuable intake areas for ground-water recharge.



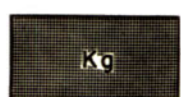
**Undifferentiated Pliocene and Pleistocene deposits**  
Gravel, sand, silt, clay, and hard and soft layers of sandstone and conglomerate, part of which is cross-bedded and cemented with lime. Constitutes the principal source of water for most of the area. Supplies adequate water of good quality to domestic, stock, industrial, and public supply wells. Yields large supplies of water to irrigation wells in parts of the area.



**Niobrara formation**  
Thick, massive beds of shaly and cherty limestone separated by thin beds of cherty shale. The Fort Hays limestone member is only part of formation exposed. Not important as a water-bearing formation. Supplies limited amount of water to a few wells and springs in Finney county. Water occurs in fractures and solution openings.



**Carlisle shale**  
Shale, dark gray, bluish-black and black, monoclinic, containing thin seams of gypsum and in the upper part a zone of supergene concretions. The Blue Hill shale member is only part of formation exposed. The Carlisle sandstone member, which overlies the Blue Hill shale member in some areas, was not recognized or the surface in this area. Supplies little or no water to wells in this area.



**Greenhore limestone**  
Limestone, light to dark gray, thin, cherty, and crystalline, separated by thicker beds of light to dark gray cherty shale that contain thin beds of bentonite. Reported to yield small supplies of water to wells near the outcrop in southeastern Gray county.

- Contour interval 10 feet
- Water-table contours based on instrumental levels (dashed where position is inferred)
- Well location. Number refers to altitude of water level
- Federal or State highway
- Graded road
- Ungraded road
- Section line (no road)
- Township line (no road)
- Railroad
- Irrigation ditch or canal
- Perennial stream
- Intermittent stream
- Gravel pit or stone quarry

Base modified from map prepared by Kansas State Highway Department  
Drainage from aerial photographs of the U. S. Dept. of Agriculture