

MAP OF LOGAN COUNTY SHOWING AREAL GEOLOGY,

Water-Table Contours, and Contours at Base of Ogallala Formation

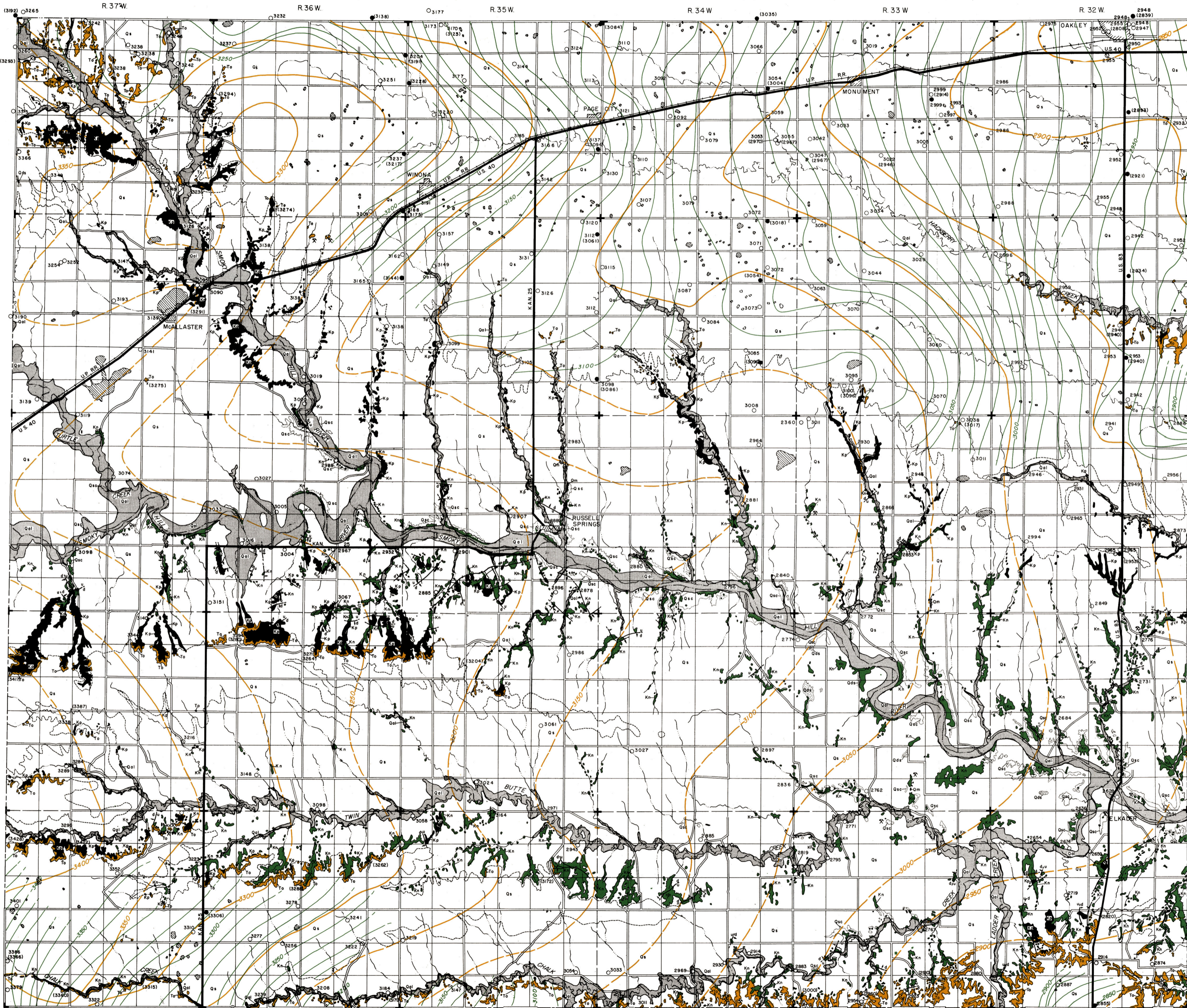
Bulletin 129

State Geological Survey of Kansas

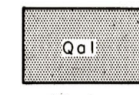
By Carlton R. Johnson

Plate 1

1954

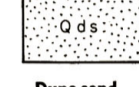


EXPLANATION



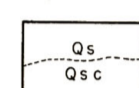
Alluvium

Sand, gravel, silt, and clay along major valleys. Yields moderate to large amounts of water to wells.



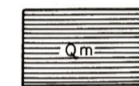
Dune sand

Fine sand and silt on high ridges on south side of major valleys. Does not yield water to wells in Logan County.



Sanborn group

In upper part, yellowish-gray silt (Qs) grading downward in some localities to fine to coarse sand; chiefly Bignell and Peoria formations; generally above the water table but yields water to some wells in valleys. In lower part, fine to coarse sand and some reddish-gray silt (Qsc), chiefly Crete formation; mapped along valleys where sufficiently thick to be of probable economic value; generally above the water table but yields water to some wells in valleys.



Meade group

Fine sand, shale, and volcanic ash along tributaries to major valleys. Generally is above the water table but may yield water to wells in some localities.



Ogallala formation

Calcareous sandstone and interbedded reddish-gray clayey silt and persistent shale layers. Yields moderate to large amounts of water to wells in upland areas.



Pierre shale

Shale, medium gray, fissile. Not known to yield water to wells in Logan County.



Niobrara formation

Shaly chalk, yellow grayish orange to light gray. Yields water to a few wells where fractured.

Inferred contact between Ogallala formation and Cretaceous rocks.

Well location. Number without parentheses refers to altitude of water table. Number in parentheses refers to altitude of base of Ogallala formation.

Test-hole location. Number without parentheses refers to altitude of water table. Number in parentheses refers to altitude of base of Ogallala formation.

Location of known altitude of base of Ogallala formation.

Contours connecting points of equal altitude of water table based on instrumental levels (limited where water table is discontinuous). Contour interval 10 feet.

Contours connecting points of equal altitude of base of Ogallala formation based on instrumental levels (dashed where erosion has removed Ogallala formation). Contour interval 50 feet.

- Federal or State Highway
- Graded road
- Railroad
- County line (no road)
- Township line (no road)
- Section line (no road)
- Intermittent stream
- Intermittent lake
- Fault (arrow indicates direction of dip)
- Quarry or pit

PLEISTOCENE
QUATERNARY
PLIOCENE
TERTIARY
GULFIAN
CRETACEOUS