

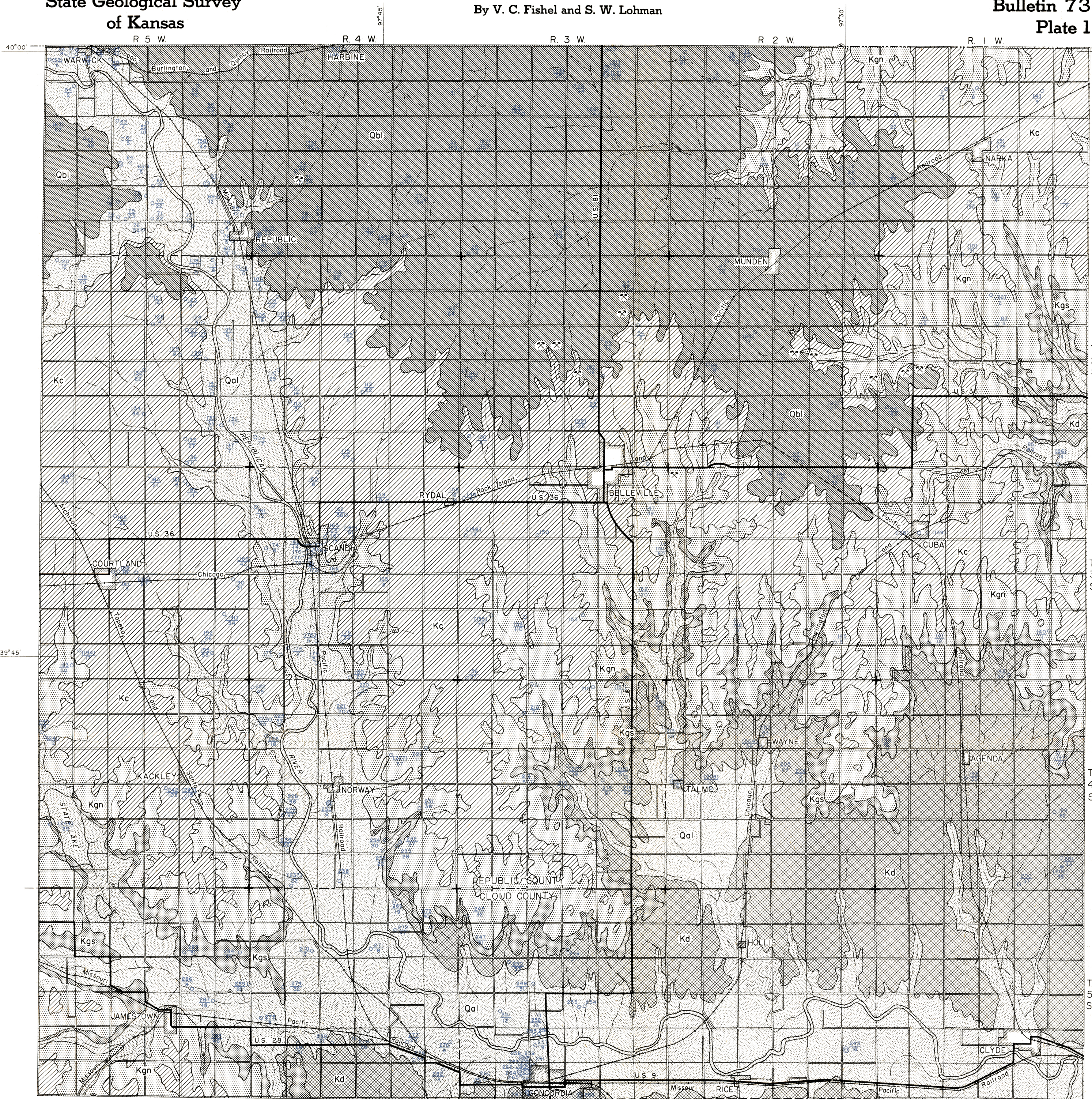
MAP OF REPUBLIC COUNTY AND NORTHERN CLOUD COUNTY, KANSAS

Showing Geology and Location of Wells, 1942

State Geological Survey
of Kansas

By V. C. Fishel and S. W. Lohman

Bulletin 73
Plate 1



EXPLANATION



Qal

Alluvium

Gravel, sand, silt, and clay, principally in Republican River Valley, yields large quantities of hard water to domestic, stock, municipal, and irrigation wells. Yields brackish water in parts of Cloud County.



Qbl

"Loess"

Belleville formation

"Loess" overlies most of the Belleville formation and, locally, older formations; consists mainly of relatively impermeable silt but contains sand and gravel locally at base which may yield small supplies of ground water. Belleville formation consists largely of gravel and sand but contains some beds of silt and clay; yields large supplies of hard water to domestic, stock, and municipal wells, waters generally being superior in quality to those from the alluvium. Includes a few small areas northeast of Republic City which are covered by dune sand.



Kc

Carlile shale

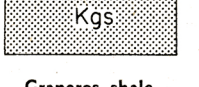
A lower calcareous part and an upper noncalcareous part. Weathered zone yields small quantities of water to stock and domestic wells.



Kgn

Greenhorn limestone

Thin-bedded chalky limestone and gray limy shale. Yields small quantities of hard water to a few wells in southern and northeastern Republic County.



Kgs

Graneros shale

Dark gray fissile shale. Yields little or no water to wells.



Kd

Dakota formation

Buff, brown, and tan fine-grained sandstone and variegated shale and clay. Sandstones yield moderate quantities of moderately hard water to stock and domestic wells in the eastern and southeastern parts of Republic County and northeastern Cloud County. Generally yields brackish water in the western half of Republic County.

- Federal or State highway
- Graded road
- Ungraded road
- Section line (no road)
- Township line (no road)
- Railroad
- Perennial stream
- Intermittent stream
- Gravel pit or stone quarry

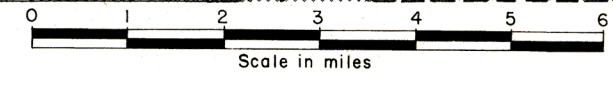
Upper number is well number used in well tables. Brackets around upper number, [63], indicate that analysis of water is given. Lower number is depth to water level below land surface, in feet.

- Domestic and stock well
- Irrigation well
- Public supply well
- Observation well

QUATERNARY

CRETACEOUS

Base modified from map prepared by Kansas State Highway Department



Geology After Monta E. Wing