GEOLOGIC MAP OF CLEVELAND AND OKLAHOMA COUNTIES OKLAHOMA

(WITH HYDROLOGIC-DATA CONTROL POINTS)

by

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EXPLANATION

QUATERNARY — Recent

Qds — DUNE SAND

(Fine to coarse windblown sand, moderately to highly permeable; generally above the water table; affords good opportunity for recharge to underlying units.)

Qal — ALLUVIUM

(Sand, silt, clay, and sand and gravel in flood plains and channels of streams; moderately permeable; yields small to moderate amounts of hard water to wells. In many places, water contaminated by industrial wastes and unsuitable for domestic use.)

QUATERNARY — Pleistocene

Qt — TERRACE DEPOSITS

(Gravel, sand, silt, and clay in and along the Canadian River and North Canadian River valleys; moderately permeable; yields small to moderate quantities of water to wells. Water quality suitable for most uses but may require softening for some purposes.)

PERMIAN — Lower Permian

Ped — CHICKASHA FORMATION AND DUNCAN SANDSTONE

(Reddish-brown sandstone, siltstone, shale, and siltstone conglomerate; poorly permeable; yields small quantities of water to wells. Water is hard and in some places highly mineralized.)

Ph — HENNESSEY SHALE

(Deep-red clay shale containing thin beds of sandstone and white or greenish bands of sandy or calcareous shale; poorly permeable; yields small quantities of hard, highly mineralized water to wells.)

Pgw — GARBER SANDSTONE AND WELLINGTON FORMATION

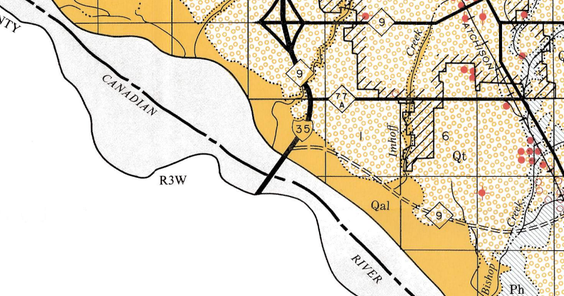
(Deep-red to reddish-orange, massive and cross-bedded, fine-grained sandstone interbedded and interfingered with lenticular masses of red or gray shale; poorly to moderately permeable; yields moderate quantities of water to deep wells in western parts of Cleveland and Oklahoma Counties. Water from shallow wells hard to very hard; water from deep wells soft to moderately hard.)

HYDROLOGIC CONTROL POINTS

- Domestic, stock, or unused well
- Public supply or institutional well
- Industrial well
- Irrigation well
- Test hole
- A — A′ Electric-log cross section (see figure 5 in text)

- U. S. highway
- Interstate highway
- State highway
- Paved road
- Proposed road
- Railroad

Geology by C. L. Jacobsen, 1943–1944, and L. C. Burton, 1953–1957. Base compiled from U. S. Geological Survey topographic maps, U. S. Department of Agriculture aerial photographs, and Oklahoma Department of Highways maps.



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