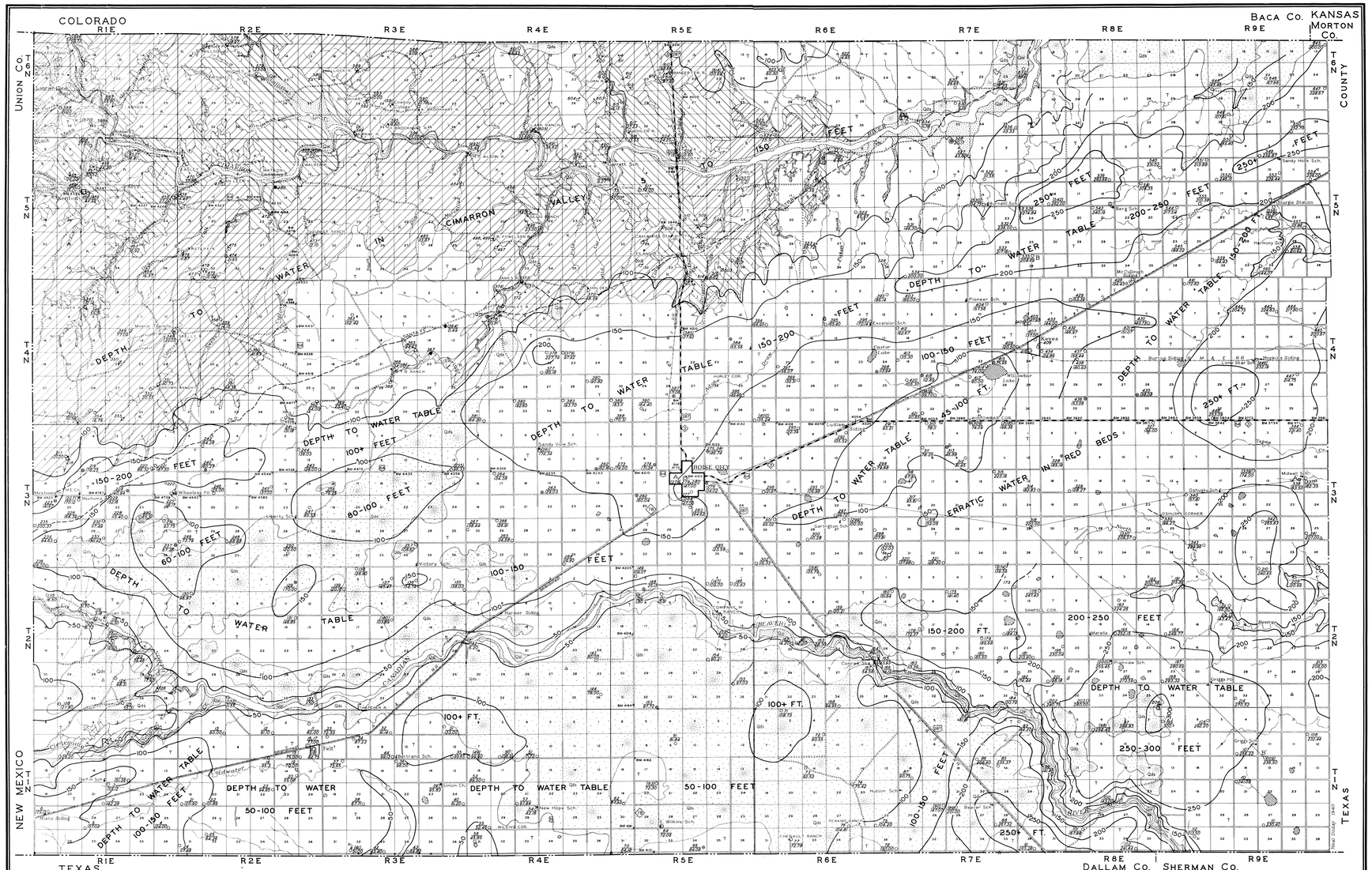
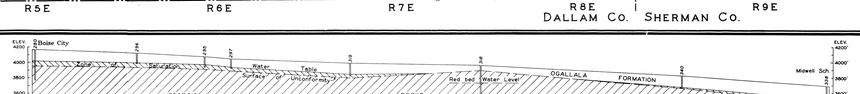


Base Map from State Wide Highway Planning Survey
Checked in field and from Aerial Photographs, 1937

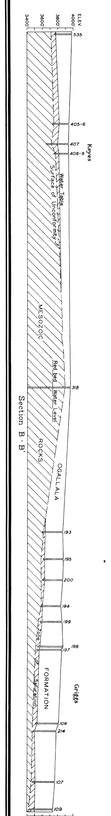
Geology Modified after Rothrock by Schoff and Stovall.
Hydrology by S. L. Schoff, 1939

Scale
0 1 2 3 4 5 6
Miles

MAP OF CIMARRON COUNTY, OKLAHOMA, SHOWING GEOLOGY AND DEPTHS TO WATER IN WELLS



Section A-A'



EXPLANATION

Qal

STREAM DEPOSITS

Sand, silt, and gravel on flood plains. Coarse portions yield adequate supplies of water which generally is of good quality. In places probably would supply a limited amount of water to irrigation wells.

Qds

DUNE SAND

Sand. Sand dunes absorb all the rainfall and are areas favorable to recharge of the ground water reservoir, but are above the water table and do not supply water directly to wells.

T

TERTIARY

Calcareous sands, gravels, silts, and clays of the "Ogallala" formation, in Cimarron County, Oklahoma. Principal aquifer. Formerly adequate supplies of water of good quality for domestic, municipal, and railroad wells, generally from depths greater than 100 feet. Gravels and coarser sands probably would supply water to irrigated wells in parts of Beaver County, Oklahoma, and areas of Dockum Beds forming the cap rock of Black Mesa.

K

CRETACEOUS

Lower Cretaceous Purgatoire formation, Cheyenne sandstone and Kiowa shale members; Upper Cretaceous Dakota sandstone and Colorado group. Consist of massive sandstones and shales, exposed in Cimarron canyon and in Cimarron County generally to Sandstones furnish water to wells and springs in canyon area, and probably to some wells drilled through the "Ogallala" formation.

J

JURASSIC

Exeter sandstone and Morrison formation, the latter consisting of variegated shale and some sandstone. Exposed in northwestern part of county. Probably would yield water to wells near the outcrop area. "Erratic Water in Red Beds" in east-central part of county probably is from the Morrison. Water likely to be mineralized.

Ꞧ

TRIASSIC

Red and variegated shale with some sandstone and conglomerate. Dockum or shale Dockum group. Exposed in northwestern part of county near Kenton, and south of Boise City. Few wells in area draw water from the Dockum.

TEMPORARY LAKE OR POND

1901
WINDMILL WELL

Number above the line is number used on well tables. Lower number is depth to water below measuring point (We) indicates water analysis.

FLOWING WELL

Well with power plant, for irrigation, stamping, or industrial use

OBSERVATION WELLS

Producing gas well — Unproductive gas test

—50—

Line showing approximately equal depths of water table below land surface.

BITUMINOUS SURFACED ROAD

GOOD GRAVEL OR DIRT ROAD

POOR ROAD

BM 3773

U. S. Coast and Geodetic Survey Bench Mark, with Elevation