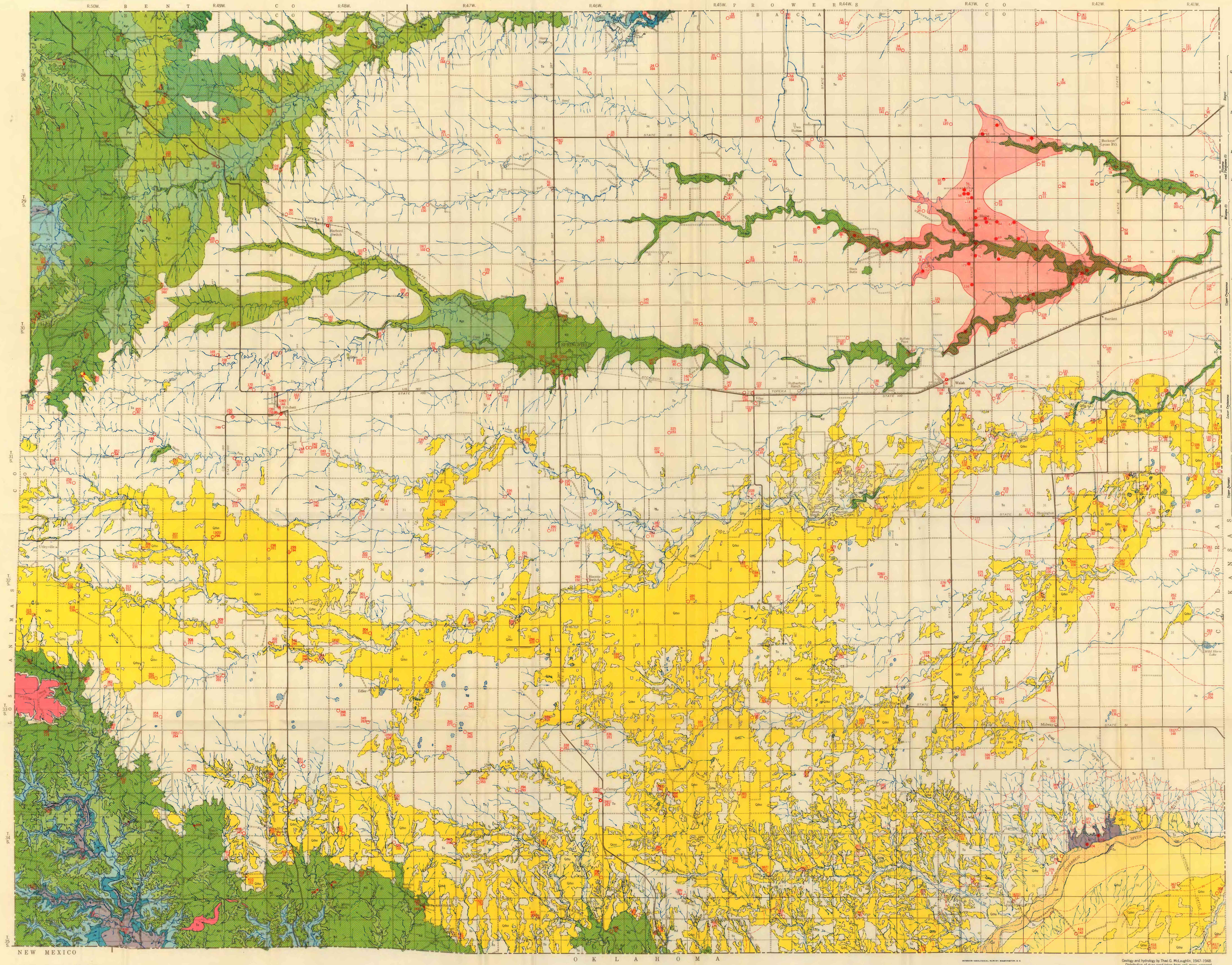
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER-SUPPLY PAPER 1256 PLATE 1



EXPLANATION

Dune sand (Qdsy, Qdso)
Qdsy, youthful and mature dunes. Qdso, old-age dunes. Dune sand lies above water table and yields no water to wells. Forms catchment area for recharge of the ground-water reservoirs

Alluvium (Qal)
Sand and gravel contaning silt and clay. Yields water to domestic and stock wells in many stream valleys. Capable of yielding large quanties of water in parts of Cimarron Valley

Recent — QUATERNARY

Extrusive rocks (Te)
Dense olivine basalt. Yields no water to wells

Ogallala formation (To)
Sand, gravel, silt, clay, and caliche. Yields water to domestic and stock wells in many parts of the county. Mapped area includes terrace deposits and Meade (?) formation

Pliocene and Pleistocene (?)

Intrusive rocks (Ti)
Basalt and porphyry dikes. Yields no water to wells

Miocene (?) — TERTIARY AND QUATERNARY (?)

Niobrara formation (Kn)
Thick-bedded chalky limestone. Yields small quantities of water to a few springs in northwestern part of county

Carlile shale (Kc)
Shale, chalky limestone, and bituminous limestone. Yields small quantities of water to a few springs in northwestern part of county

Greenhorn limestone (Kgn)
Thin-bedded limestone and platy shale. Yields small quanties of water to a few springs, seeps, and wells in northwestern part of county

Graneros shale (Kgs)
Gray to black platy shale. Yields no water to wells

Upper Cretaceous

Dakota sandstone (Kd)
Thin-bedded to massive sandstone and platy sandy shale. Yields small to moderate quantities of water to domestic, stock, industrial, and municipal wells

Purgatoire formation (Kp)
Upper member, Kiowa shale, gray to black platy calcareous shale; lower member, Cheyenne sandstone, massive to buff fine-grained sandstone. Cheyenne sandstone yields small to large quantities of water to domestic, stock, industrial, municipal, and irrigation wells

Lower Cretaceous — CRETACEOUS

Morrison formation (Jm)
Varicolored marl containing sandstone and platy limestone. Not known to yield water to wells

Entrada sandstone (Je)
Massive white to buff fine- to medium-grained sandstone. Yields water to one well in Baca County

Upper Jurassic — JURASSIC

Dockum group (Td)
Shale, sandstone, and limestone. Yields small quantities of very hard water to a few wells

TRIASSIC

Taloga formation (of Cragin) (Pt)
Red siltstone and sandstone. Yields no water to wells in Baca County

PERMIAN

Contact
Dashed where approximately located

Inferred contact

Domestic and stock wells

Flowing well

Spring

Municipal well

Industrial well

Irrigation well

Observation wells

[223]
87

Upper figure is well number used in table 9. Brackets [223] indicate that analysis of water from well is given in table 6. Lower figure is depth in feet to water level below land surface

—100—

Isobath lines, drawn along points of equal depth to water
Data adequate for showing isobaths only in the eastern part of the county

Approximate area of artesian flow in the Walsh artesian area

Base modified from maps prepared by the Soil Conservation Service and Colorado State Highway Department

MAP SHOWING AREAL GEOLOGY AND LOCATION OF WELLS AND SPRINGS AND DEPTH TO WATER IN BACA COUNTY, COLORADO

1 0 6 Miles

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.

Geology and hydrology by Thad G. McLaughlin, 1947-1948. Distribution of dune sand taken from soil maps prepared by United States Department of Agriculture