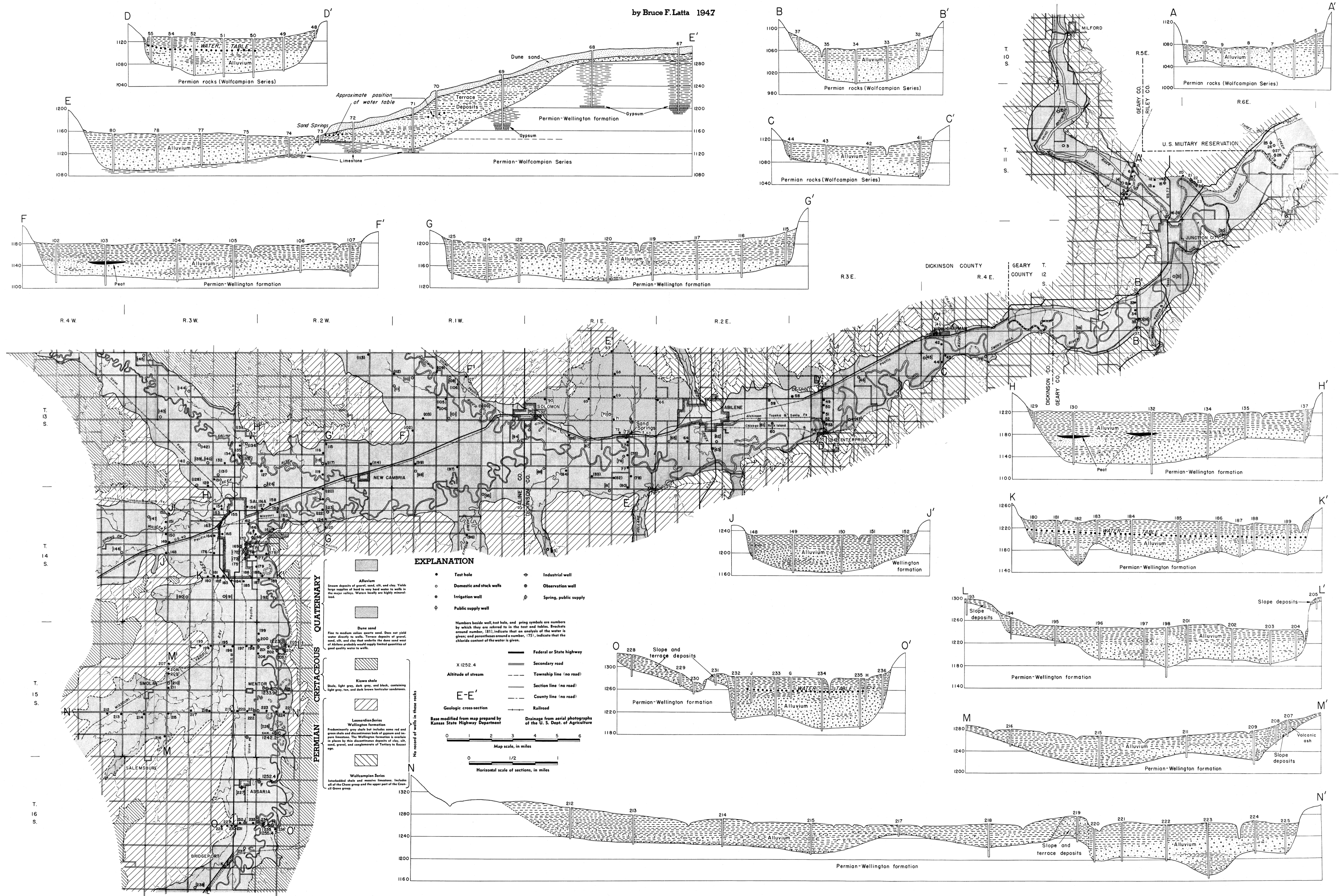


AREAL GEOLOGY OF SMOKY HILL VALLEY IN SALINE, DICKINSON, AND GEARY COUNTIES, KANSAS

With Location of Wells and Test Holes and Geologic Profiles

by Bruce F. Latta 1947



EXPLANATION

- Test hole
- Domestic and stock wells
- ◐ Irrigation well
- ◑ Public supply well
- ◒ Industrial well
- ◓ Observation well
- ◔ Spring, public supply

Numbers beside well, test hole, and spring symbols are numbers by which they are referred to in the text and tables. Brackets around number, (81), indicate that an analysis of the water is given; and parentheses around a number, (75), indicate that the chloride content of the water is given.

— Federal or State highway
— Secondary road
— Township line (no road)
— Section line (no road)
— County line (no road)
— Railroad

Base modified from map prepared by Kansas State Highway Department
Drainage from aerial photographs of the U. S. Dept. of Agriculture

Map scale, in miles
Horizontal scale of sections, in miles

QUATERNARY

- Alluvium
- Stream deposits of gravel, sand, silt, and clay. Yields large supplies of hard to very hard water to wells in the major valleys. Waters locally are highly mineralized.
- Dune sand
- Fine to medium active quartz sand. Does not yield water directly to wells. Terrace deposits of gravel, sand, silt, and clay that underlie the dune sand and of Alluvium probably supply limited quantities of good quality water to wells.
- Kiowa shale
- Shale, light gray, dark gray, and black, containing light gray, tan, and dark brown lenticles sandstone.
- Leonardian Series
- Wellington formation
- Predominantly gray shale but includes some red and green shale and discontinuous beds of gypsum and iron. Silt, and clay that underlie the dune sand and in places by thin discontinuous deposits of clay, silt, sand, gravel, and conglomerate of Tertiary to Recent age.
- Wolfcampian Series
- Interbedded shale and massive limestone. Includes all of the Chase group and the upper part of the Cass and Grege groups.

No record of wells in these rocks