

EXPLANATION

Altitude, in feet above mean sea level

Drainage divide

Isohyal

Shore average annual precipitation, interval in 0.5 inch

Weather Bureau precipitation station

Number in square annual precipitation in inches

Stream gaging station

Limestone quarry

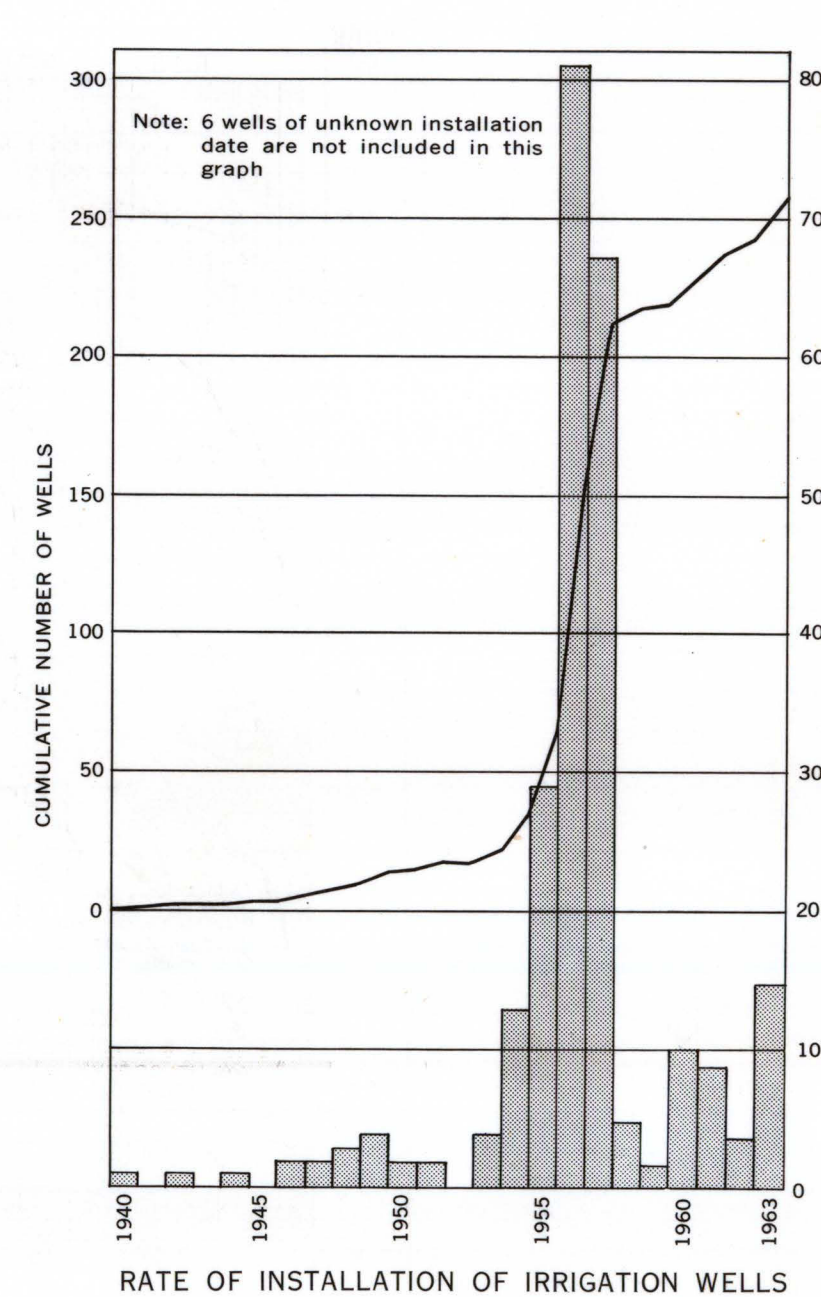
1665 x 1275

Highest and lowest altitude in county

Epithermal

Perennial

Stream



EXPLANATION

Quaternary

Recent

Silt and clay

Sand and gravel

Till

Clay shale

Greenhorn Limestone and Graneros Shale

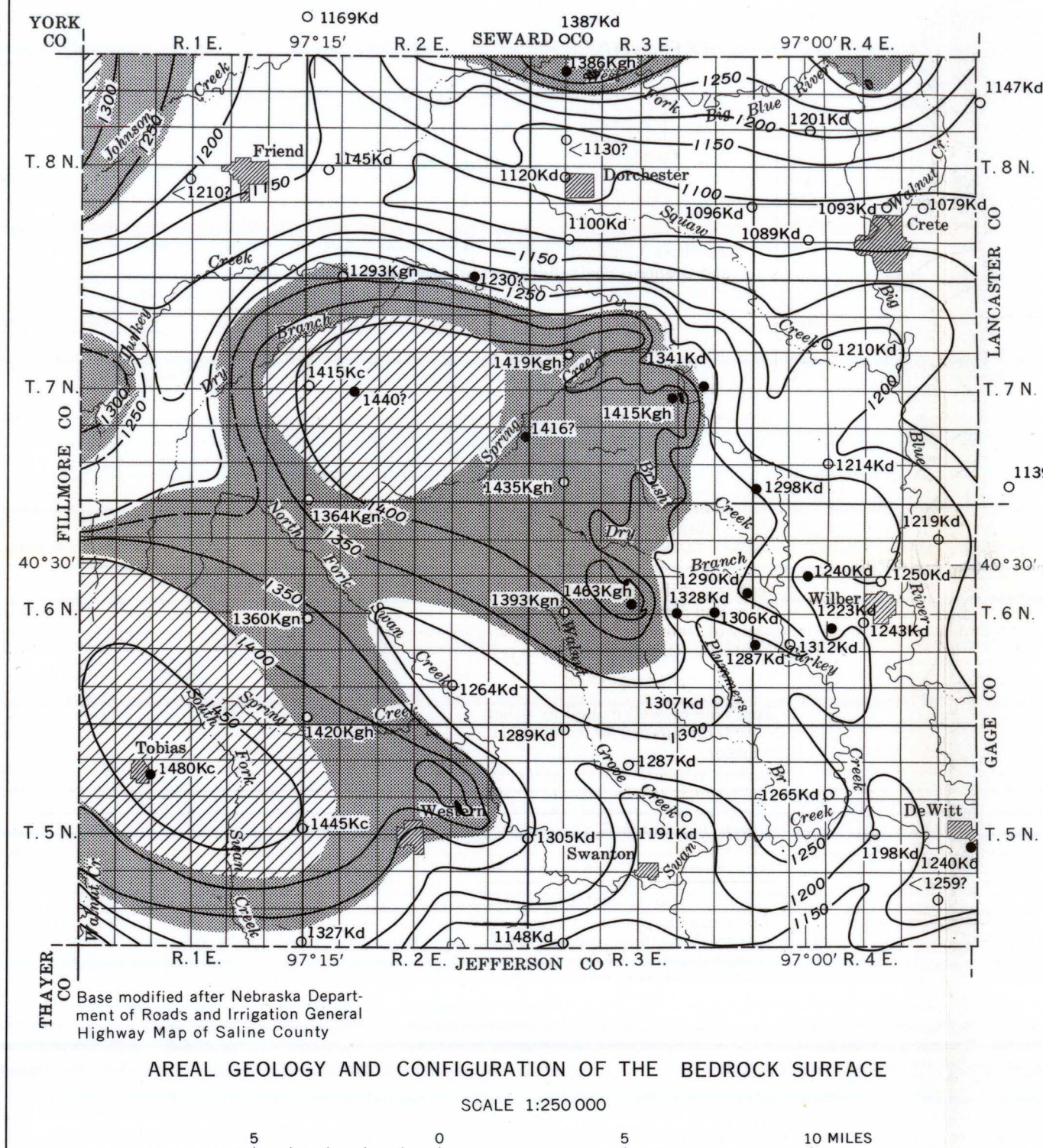
Dakota Sandstone

Chase Group

Water table

Dashed where questionable

Blue area below water table is zone of saturation



EXPLANATION

Quaternary

Recent

Clay shale

Greenhorn Limestone (Kgh) and Graneros Shale (Kgn)

Dakota Sandstone

Bedrock outcrop

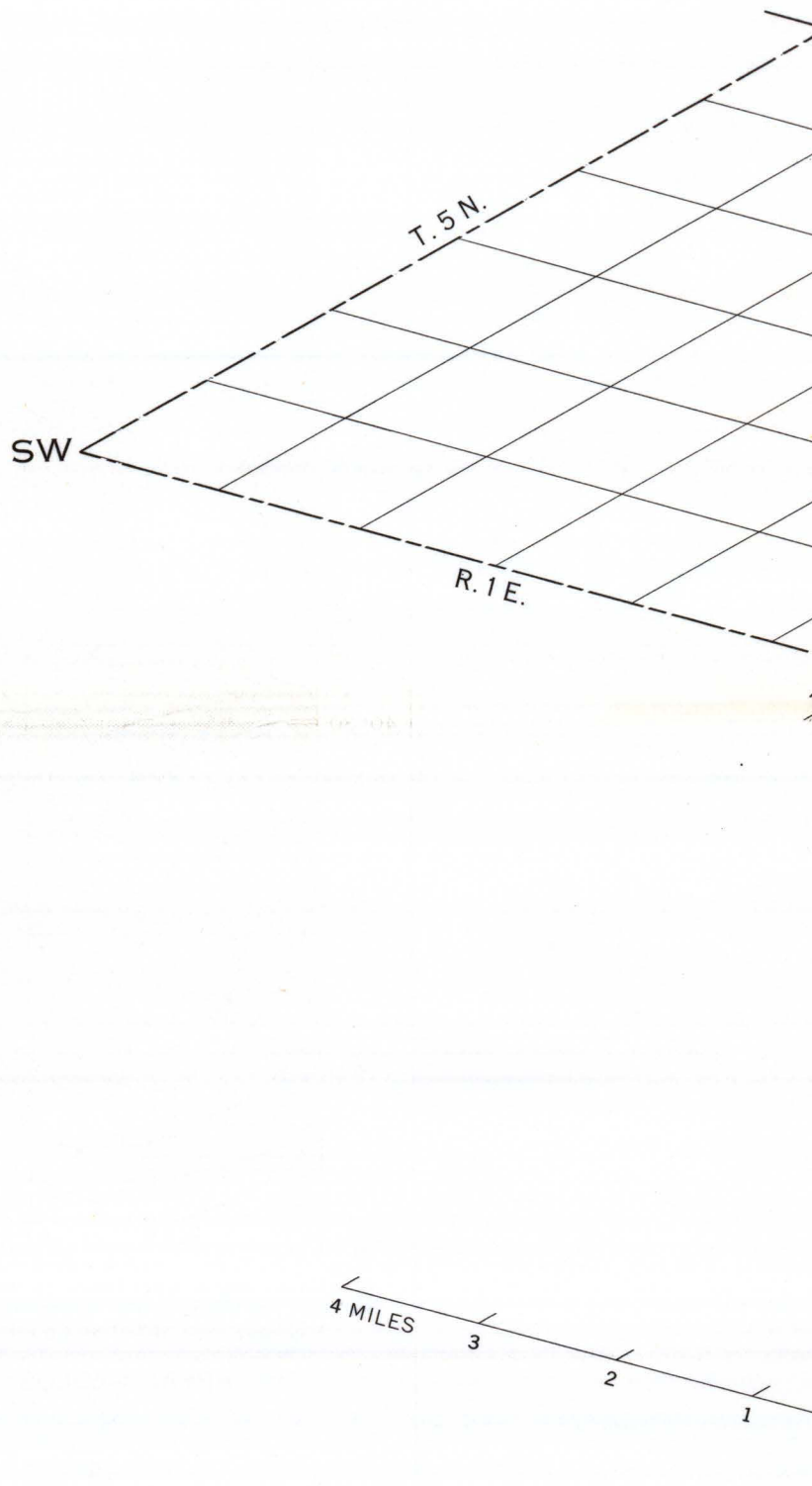
Bedrock reported to be at or near the surface

Test hole drilled by the Conservation and Survey Division, University of Nebraska, in cooperation with the U.S. Geological Survey

Numbers indicate altitude of the top of bedrock; letters indicate stratigraphic unit; question marks indicate where bedrock not reached or well not identified

Bedrock contours

Lines showing outer of continuous bedrock surface; dashed where approximate; contour interval, 50 feet; datum is mean sea level



EXPLANATION

Quaternary

Recent

Silt and clay

Sand and gravel

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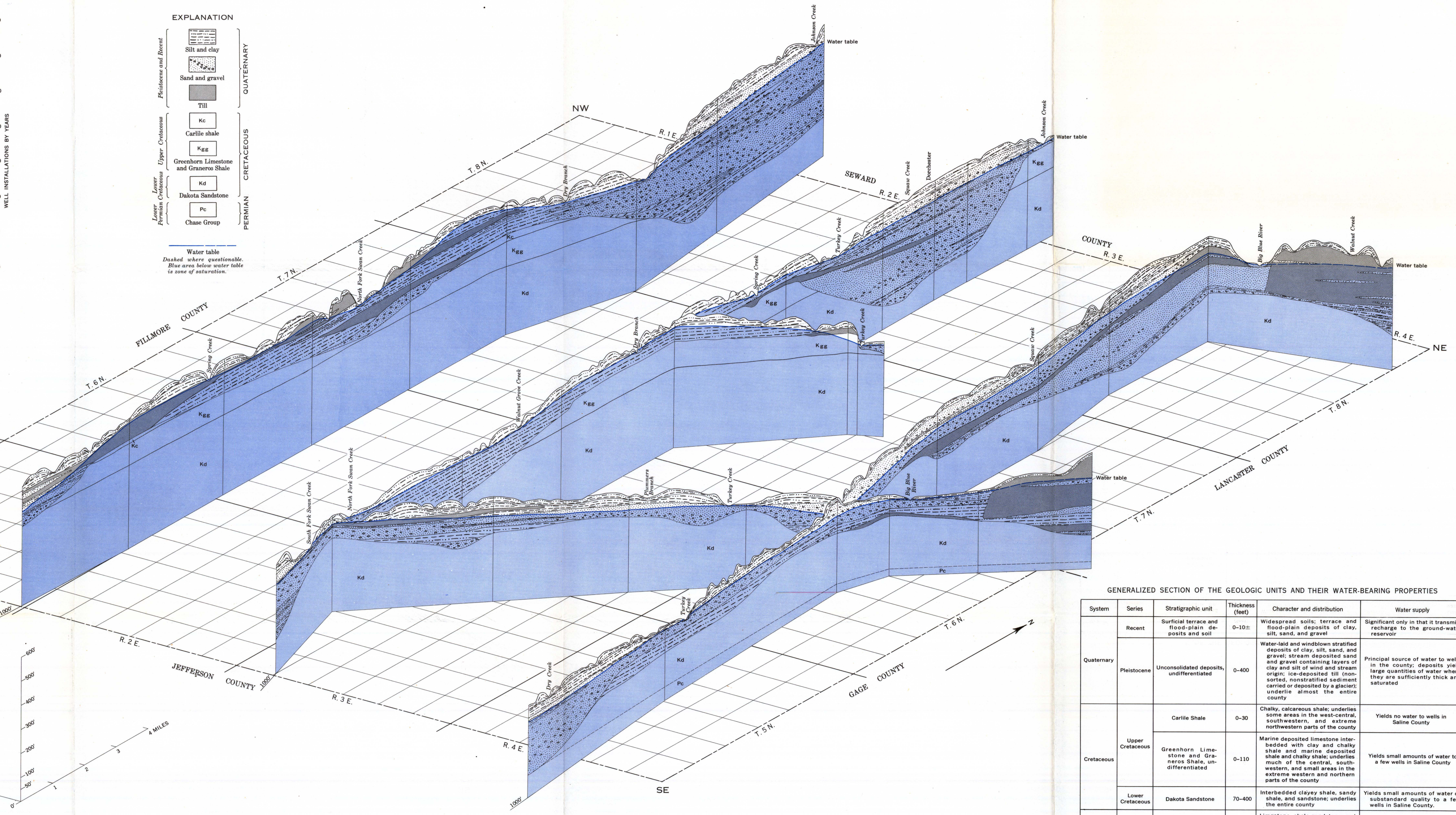
Dakota Sandstone

Chase Group

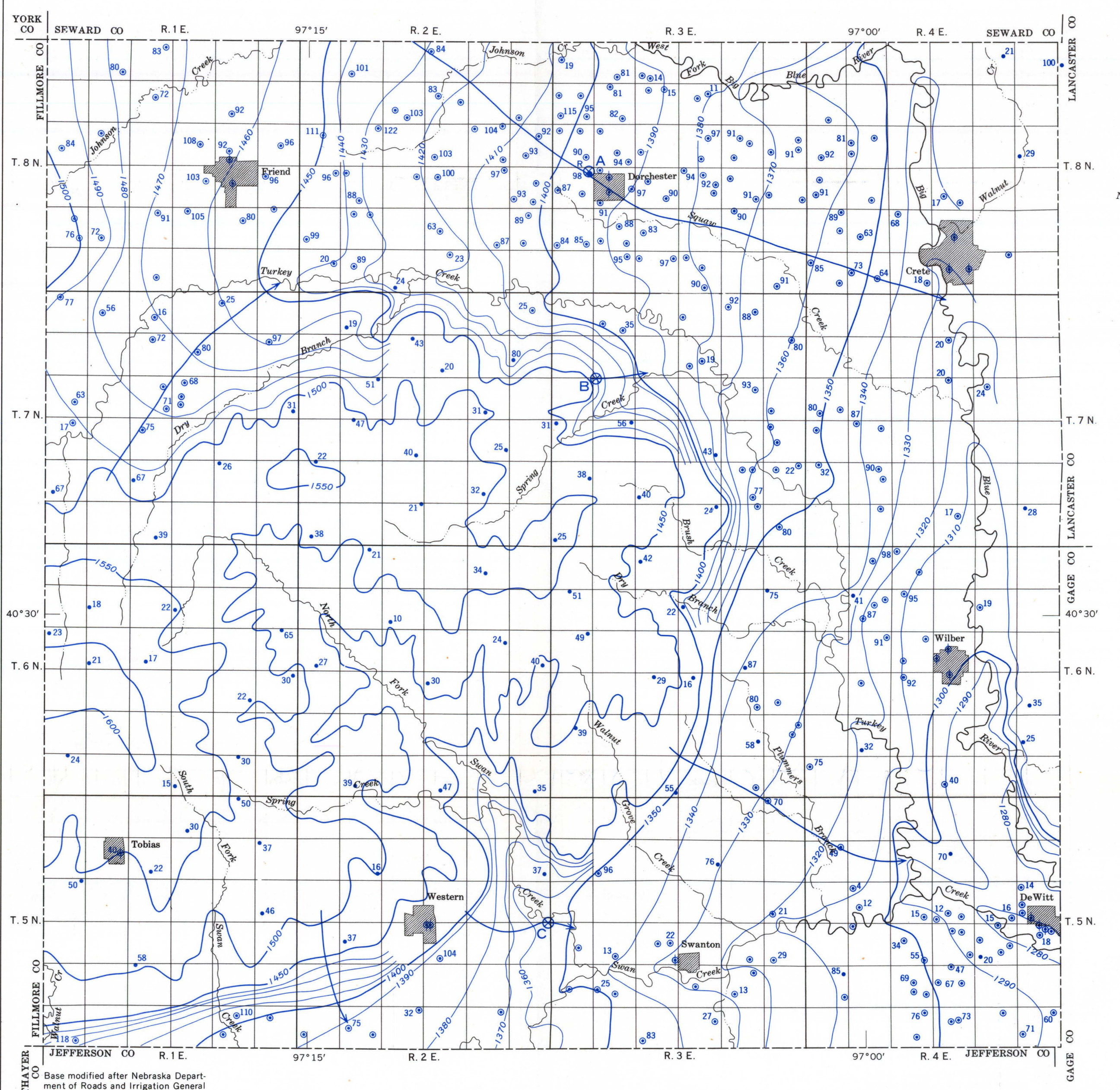
Water table

Dashed where questionable

Blue area below water table is zone of saturation



System	Series	Stratigraphic unit	Thickness (feet)	Character and distribution	Water supply
Recent	Recent	Surficial terrace and flood-plain deposits of clay, silt, sand, and gravel	0-100	Widespread; terrace and flood-plain deposits of clay, silt, sand, and gravel	Significant only in that it transmits recharge to the ground-water reservoir
Quaternary	Pleistocene	Unconsolidated deposits, undifferentiated	0-400	Water-laid and windblown stratified deposits of clay, silt, sand, and gravel; stream deposited sand and gravel; ice-deposited till (unsorted, nonstratified sediment carried or deposited by a glacier) underlies almost the entire county	Principal source of water to wells in the county; deposits yield large quantities of water where they are sufficiently thick and saturated
Cretaceous	Upper	Carlile Shale	0-30	Chalky, calcareous shale; underlies some areas in the west-central, southwestern, and extreme northwestern parts of the county	Yields no water to wells in Saline County
		Greenhorn Limestone and Graneros Shale, undifferentiated	0-110	Marine deposited limestone interbedded with clay and chalky shale and marl; deposited shale and chalky shale; underlies much of the central, southwestern, and small areas in the extreme western and northern parts of the county	Yields small amounts of water to a few wells in Saline County
Permian	Lower	Dakota Sandstone	70-400	Interbedded clayey shale, sandy shale, and sandstone; underlies the entire county	Yields small amounts of water of substandard quality to a few wells in Saline County
		Chase Group	?	Limestone, shale sandstone, and siltstone; underlies the entire county	Yields no water to wells in Saline County



EXPLANATION

Irrigation well

Public supply well

Domestic or stock well

Observation well equipped with recorder

Number in depth to water, in feet below land surface; measurements made November 1963 through January 1964

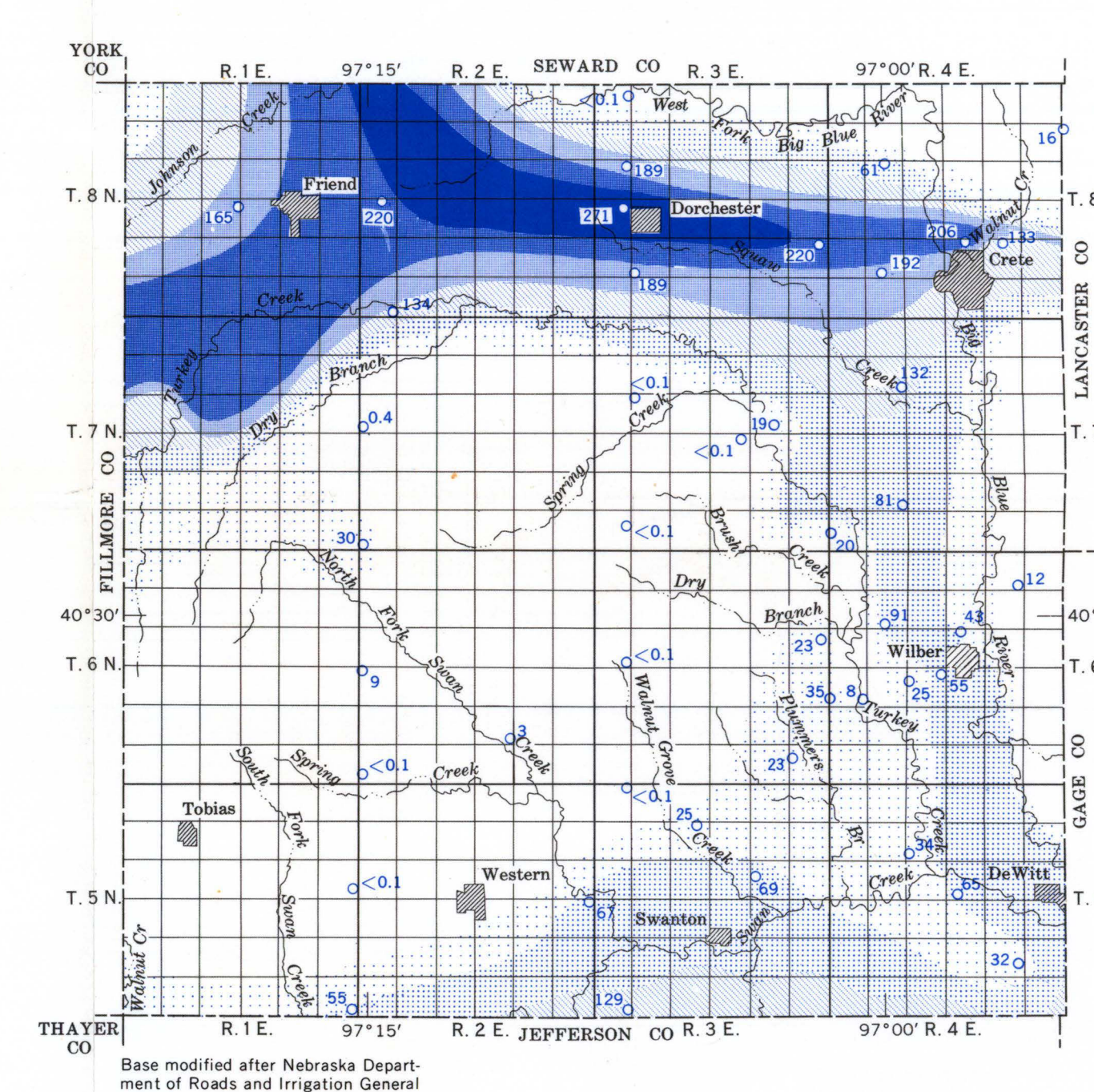
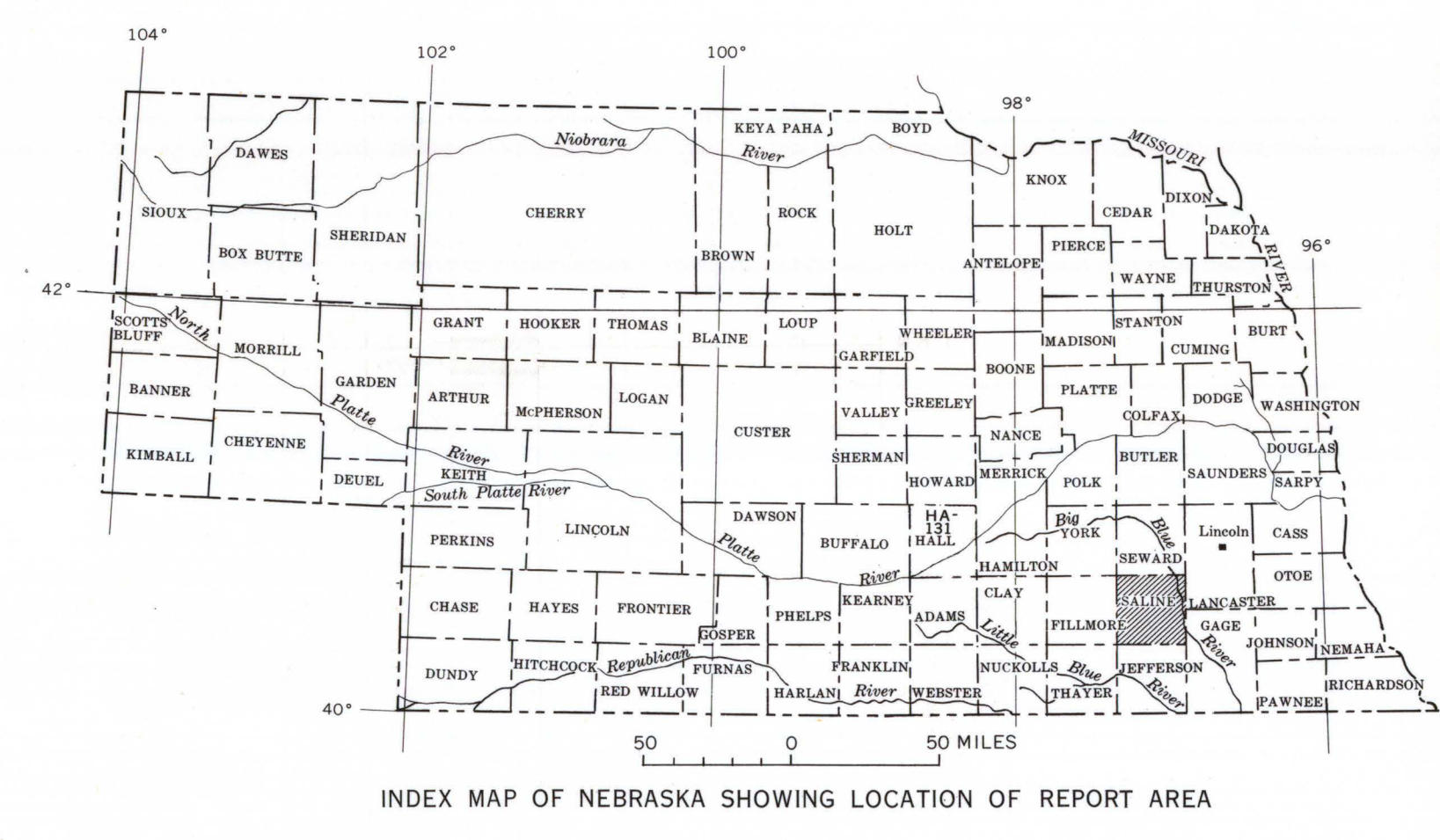
Water-table contours

Contour interval 20 and 30 feet; datum is mean sea level

Point where ground-water velocity has been calculated

Flow line

Showing direction of ground-water movement



EXPLANATION

Estimated coefficient of transmissibility, in gallons per day per foot

Potential well yield, if full saturated thickness of aquifer is utilized, in gallons per minute

Less than 20,000

20,000-50,000

50,000-100,000

100,000-150,000

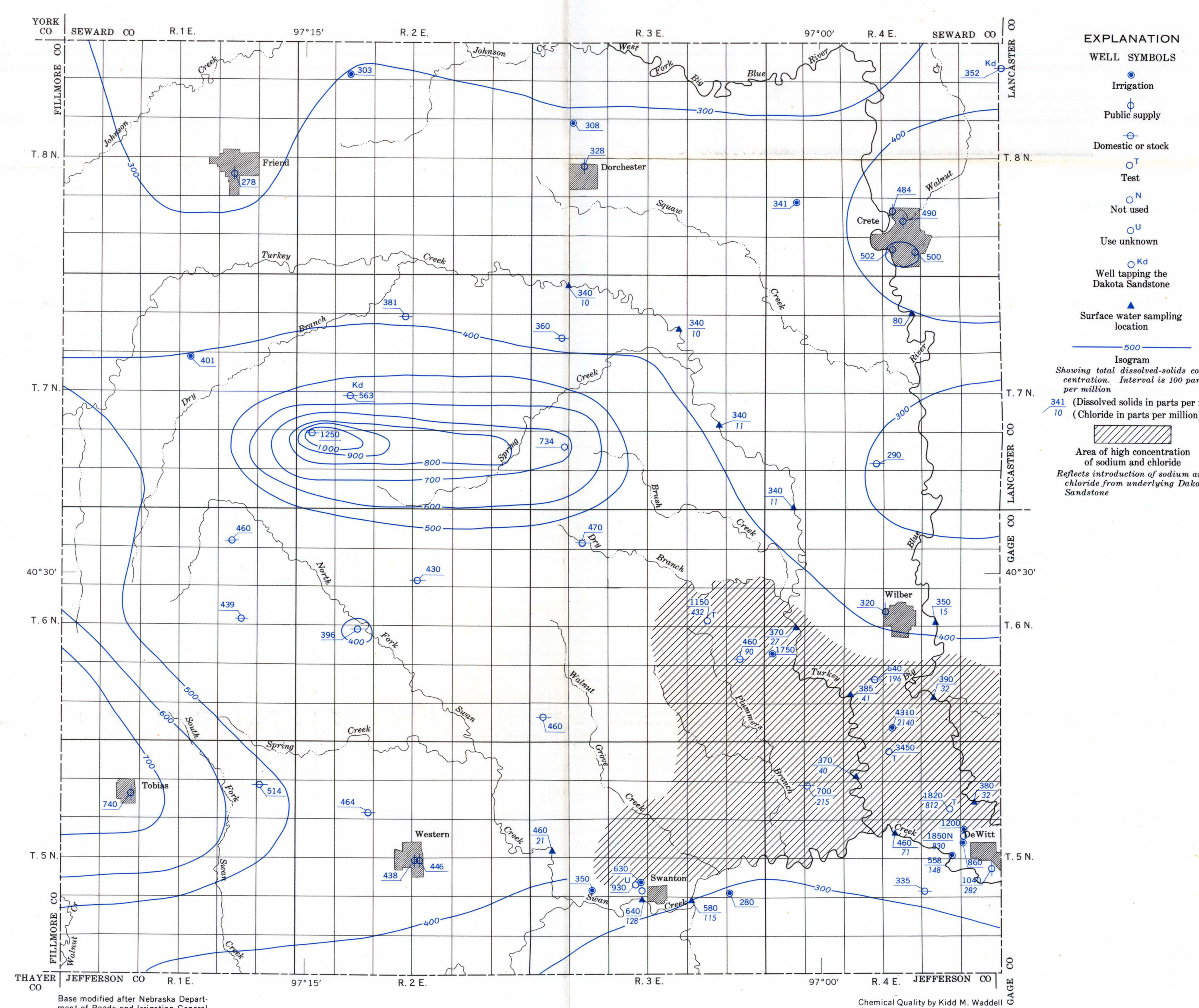
150,000-200,000

200,000-250,000

More than 250,000

Test hole

Number in estimated coefficient of transmissibility of saturated deposits, in thousands of gallons per day per foot



EXPLANATION

WELL SYMBOLS

Irrigation

Public supply

Domestic or stock

Test

Not used

Use unknown

Well tapping the Dakota Sandstone

Surface water sampling location

Isogram

Showing total dissolved-solids concentration. Interval is 200 parts per million

341 (Dissolved solids in parts per million)

341 (Chloride in parts per million)

Area of high concentration of sodium and chloride

Reflects introduction of sodium and chloride from underlying Dakota Sandstone