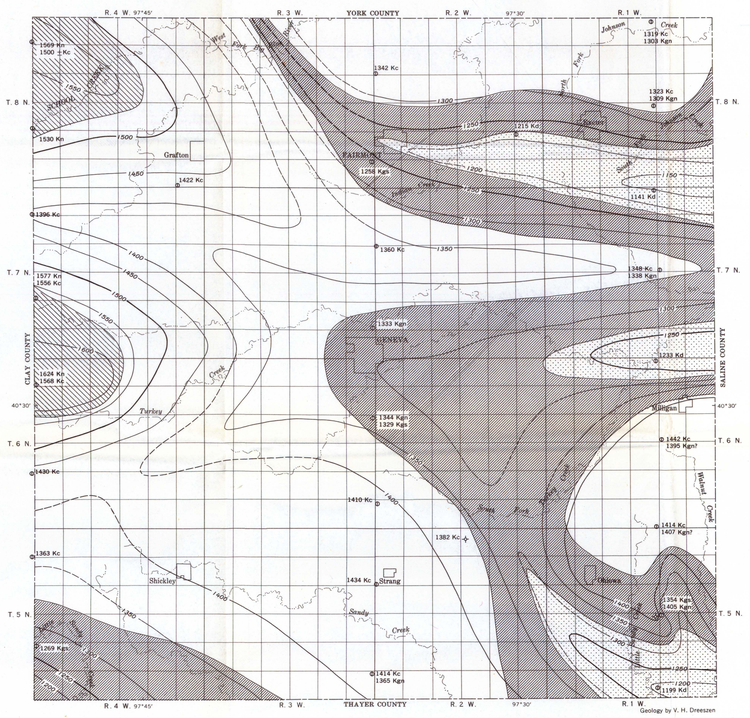
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
STATE OF NEBRASKA
CONSERVATION AND SURVEY DIVISION
UNIVERSITY OF NEBRASKA

WATER-SUPPLY PAPER 1839-L
PLATE 1



EXPLANATION

Niobrara Formation — *Chalky shale and chalk*

Carlile Shale — *Clay shale and chalky shale*

Greenhorn Limestone and Graneros Shale — *Limestone and shale*

Dakota Sandstone — *Shale and sandstone*

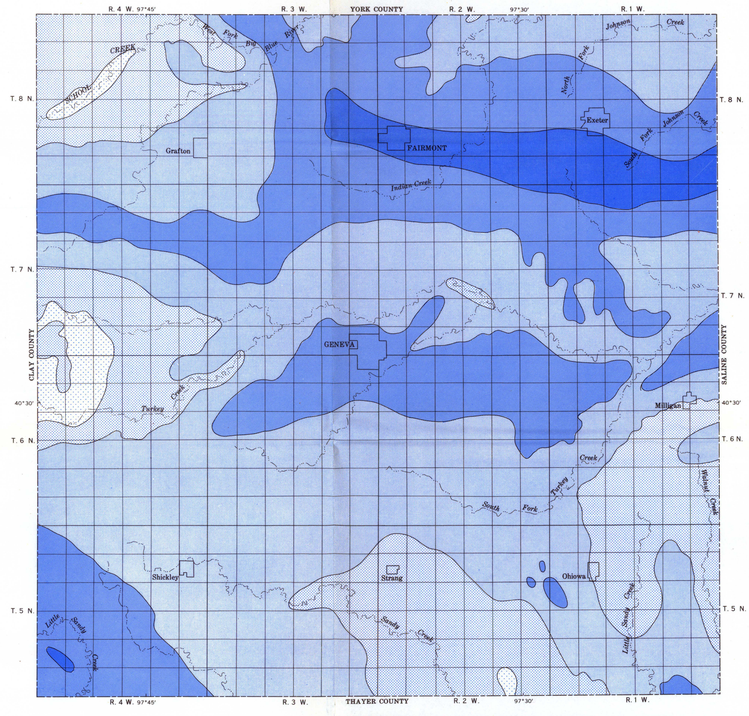
Contact

Bedrock contours — *Show altitude of top of Cretaceous bedrock. Dashed where approximately located. Contour interval 50 feet. Datum is mean sea level*

Test hole — *Number is altitude, in feet above mean sea level, of top of indicated Cretaceous formation. Bedrock formation: Kn, Niobrara Formation; Kc, Carlile Shale; Kgn, Greenhorn Limestone; Kgs, Graneros Shale; and Kd, Dakota Sandstone*

Oil and gas test well

AREAL DISTRIBUTION AND SURFACE CONFIGURATION OF THE CRETACEOUS ROCKS

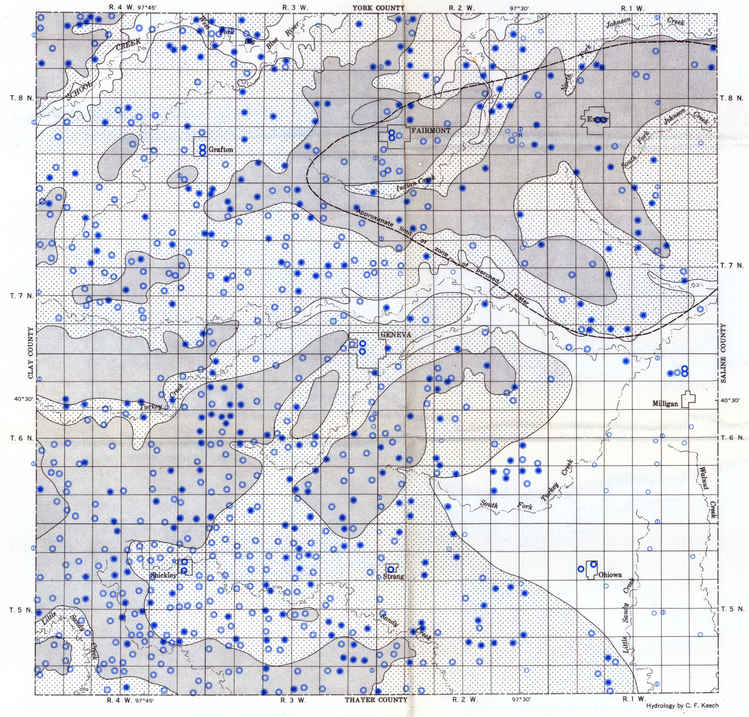


EXPLANATION

Thickness of unconsolidated deposits, in feet

Less than 100 | 100–200 | 200–300 | 300–400 | More than 400

THICKNESS OF UNCONSOLIDATED DEPOSITS OF QUATERNARY AGE



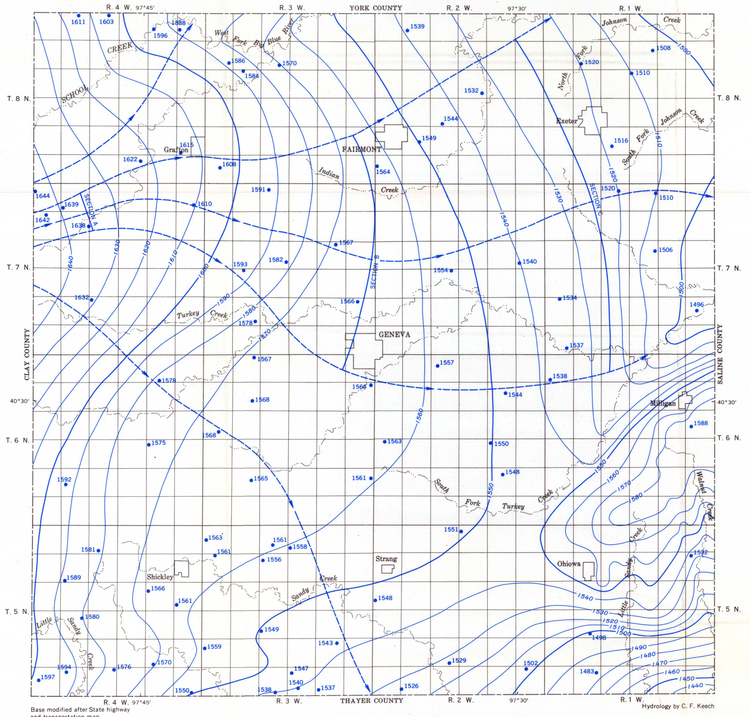
EXPLANATION

Depth to water table, in feet below land surface

Less than 60 | 60–80 | 80–100 | More than 100

Drilled before 1956 | *Drilled 1956–62* — Irrigation wells | Test hole | Public-supply well | Other well | Indicates well equipped with water-level recording gage

DEPTH TO WATER AND LOCATION OF WELLS AND TESTHOLES



EXPLANATION

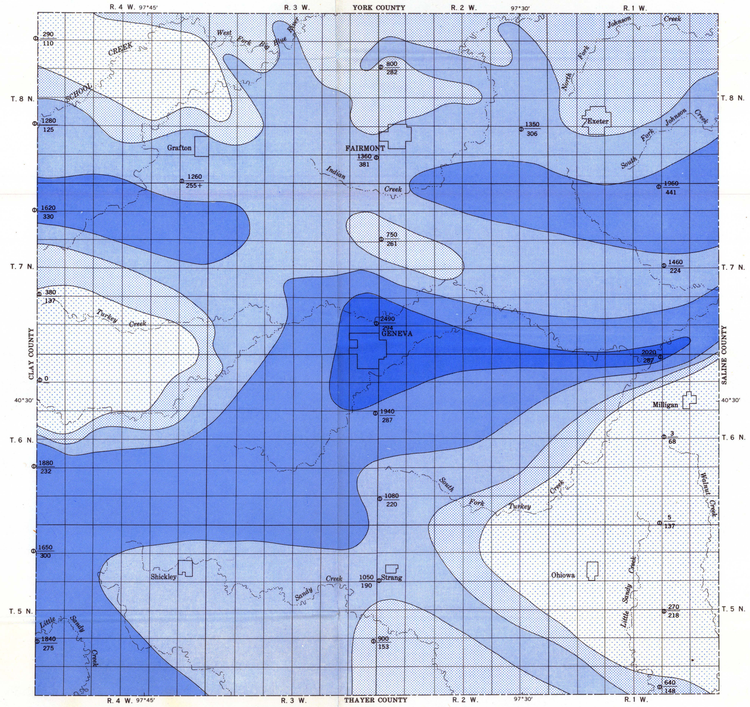
Section used to compute amount of ground-water flow

Water-table contours — *Show altitude of water table. Contour interval 10 feet. Datum is mean sea level*

Control point — *Number is altitude of water table, in feet above mean sea level*

Ground-water flow line

WATER TABLE AND DIRECTION OF GROUND-WATER MOVEMENT, 1964



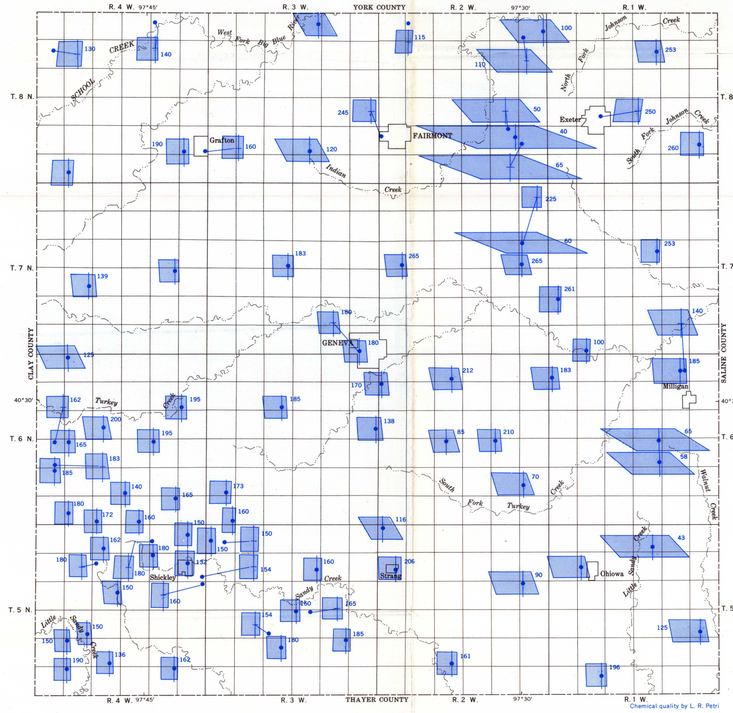
EXPLANATION

Estimated coefficients of transmissibility, in gallons per day per foot

Less than 50,000 | 50,000–100,000 | 100,000–150,000 | 150,000–200,000 | More than 200,000

1940 / 287 — Test hole — *Upper number is estimated coefficient of transmissibility, in hundreds of gallons per day per foot. Lower number is depth, in feet, to the base of deepest water-yielding material*

ESTIMATED COEFFICIENTS OF TRANSMISSIBILITY



EXPLANATION

Ca + Mg | Na + K | $CO_3 + HCO_3$ | $SO_4 + Cl$

Chemical constituents, in equivalents per million — *Circle shows well location. Horizontal dimensions from vertical line indicates concentration of constituents, in equivalents per million. Number is well depth, in feet below land surface*

WATER QUALITY OF QUATERNARY AGE DEPOSITS

GEOHYDROLOGIC MAPS OF FILLMORE COUNTY, NEBRASKA

SCALE 1:125 000

2 0 2 4 6 8 10 MILES

2 0 2 4 6 8 10 KILOMETERS

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