PREPARED BY THE UNITED STATES GEOLOGICAL SURVEY IN COOPERATION WITH THE NORTH DAKOTA STATE WATER COMMISSION, THE NORTH DAKOTA GEOLOGICAL SURVEY, AND THE McINTOSH COUNTY WATER MANAGEMENT DISTRICT

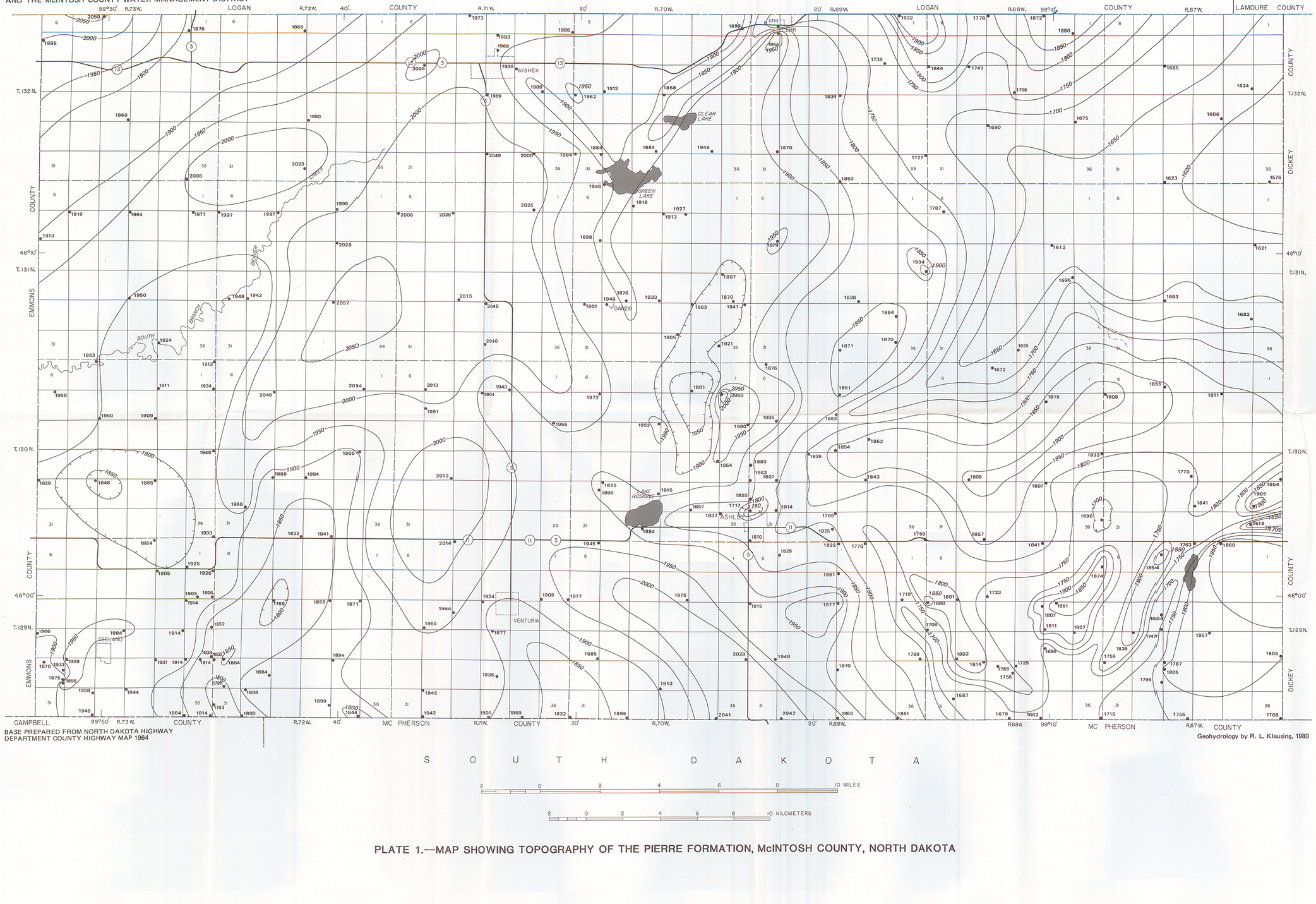
BULLETIN 73
COUNTY GROUND-WATER STUDIES 30
PART III-PLATE 1

EXPLANATION

—1600— BEDROCK CONTOUR—Shows altitude of top of Pierre Formation. Contour interval 50 feet (15 meters). National Geodetic Vertical Datum of 1929

DEPRESSION CONTOUR

1606 TEST HOLE OR WELL—Number is altitude of top of Pierre Formation, in feet. National Geodetic Vertical Datum of 1929



BASE PREPARED FROM NORTH DAKOTA HIGHWAY DEPARTMENT COUNTY HIGHWAY MAP 1964

Geohydrology by R. L. Klausing, 1980

S O U T H D A K O T A

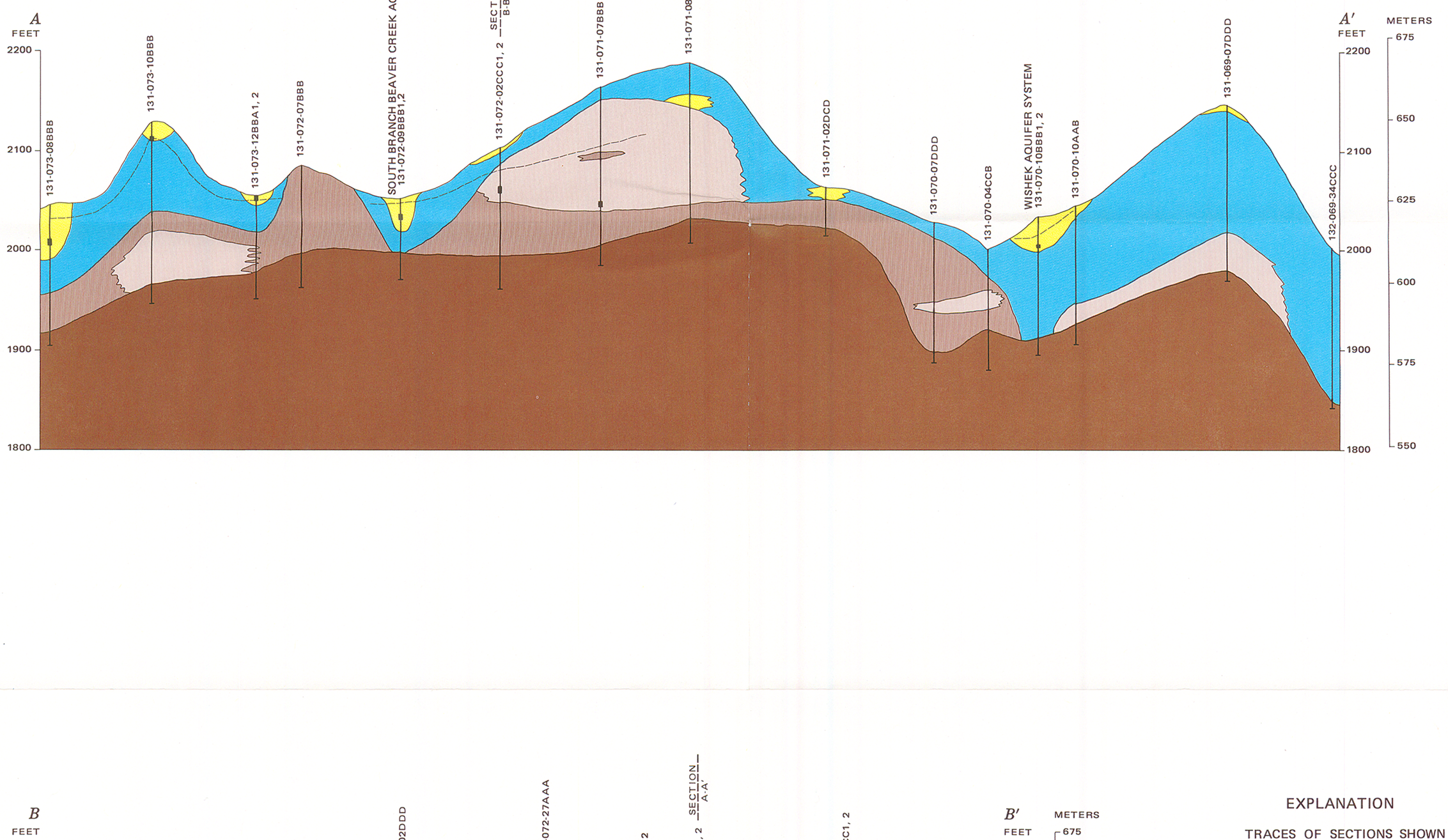
2 0 2 4 6 8 10 MILES

2 0 2 4 6 8 10 KILOMETERS

PLATE 1.--MAP SHOWING TOPOGRAPHY OF THE PIERRE FORMATION, McINTOSH COUNTY, NORTH DAKOTA

PREPARED BY THE UNITED STATES GEOLOGICAL SURVEY IN COOPERATION WITH THE NORTH DAKOTA STATE WATER COMMISSION, THE NORTH DAKOTA GEOLOGICAL SURVEY, AND THE McINTOSH COUNTY WATER MANAGEMENT DISTRICT

BULLETIN 73
COUNTY GROUND-WATER STUDIES 30
PART III-PLATE 2



Geohydrology by R. L. Klausing, 1980
Topography generalized.

0 1 2 3 4 5 6 MILES
0 1 2 3 4 5 6 7 8 KILOMETERS

VERTICAL SCALE GREATLY EXAGGERATED
NATIONAL GEODETIC VERTICAL DATUM OF 1929

EXPLANATION

TRACES OF SECTIONS SHOWN ON PLATE 3

GLACIAL DRIFT

- Sand and gravel (glacial-drift aquifer)
- Clay, till, and silt

FOX HILLS FORMATION

- Sandstone (Fox Hills aquifer)
- Semiconsolidated clay, sandy clay, silt, and claystone

PIERRE FORMATION

- Shale

CONTACT

TEST HOLE OR WELL

132-072-33DAA
- Location number
- Screened interval
- Total depth

POTENTIOMETRIC SURFACE, SEPTEMBER 1979

PLATE 2.--GEOHYDROLOGIC SECTIONS OF THE FOX HILLS AQUIFER AND UNDIFFERENTIATED GLACIAL-DRIFT AQUIFERS, McINTOSH COUNTY, NORTH DAKOTA

PREPARED BY THE UNITED STATES GEOLOGICAL SURVEY IN COOPERATION WITH THE NORTH DAKOTA STATE WATER COMMISSION, THE NORTH DAKOTA GEOLOGICAL SURVEY, AND THE McINTOSH COUNTY WATER MANAGEMENT DISTRICT

BULLETIN 73
COUNTY GROUND-WATER STUDIES 30
PART III—PLATE 3

EXPLANATION

ESTIMATED POTENTIAL WELL YIELDS, IN GALLONS PER MINUTE (LITERS PER SECOND)

- 1000 to 1500 (63 to 95)
- 500 to 1000 (32 to 63)
- 200 to 500 (13 to 32)
- 50 to 200 (3 to 13)
- 0 to 50 (0 to 3)

SELECTED TEST-HOLE AND WELL DATA

TEST HOLE OR WELL—Upper numbers are depth to top and bottom of aquifers, in feet. Number in parentheses is aggregate thickness of sand and gravel. Sand and gravel thicknesses of less than 5 feet (1.5 meters) are not shown. Lower number is depth to bedrock, in feet below land surface. Absence of lower number indicates that the test hole or well did not completely penetrate the glacial drift

13-76(30) / 306

GROUND-WATER DIVIDE—Approximately located

GENERAL DIRECTION OF GROUND-WATER MOVEMENT

A A′ LOCATION OF BURIED VALLEY AQUIFER TRACES OF SECTIONS

BASE FROM NORTH DAKOTA STATE HIGHWAY DEPARTMENT COUNTY HIGHWAY MAP 1964

Geohydrology by R. L. Klausing, 1980

SOUTH DAKOTA

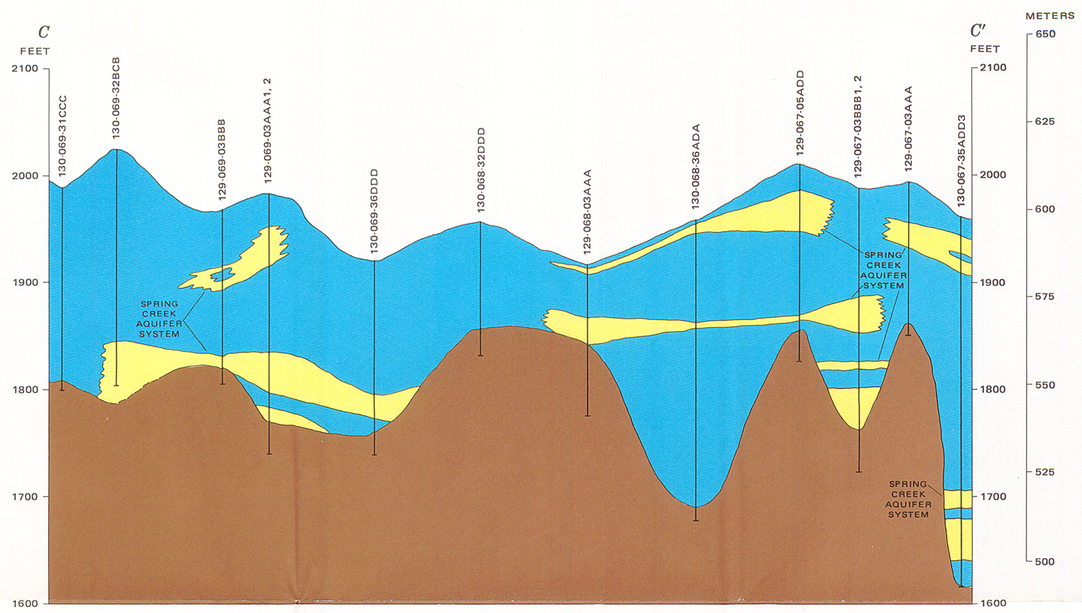
2 0 2 4 6 8 10 MILES

2 0 2 4 6 8 10 KILOMETERS

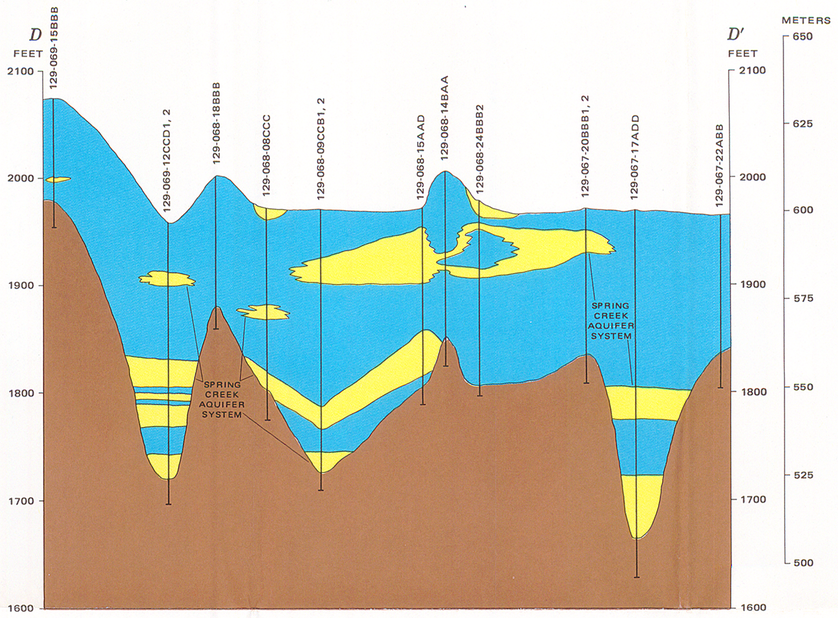
PLATE 3.—MAP SHOWING AVAILABILITY OF WATER FROM MAJOR GLACIAL-DRIFT AQUIFERS, McINTOSH COUNTY, NORTH DAKOTA

PREPARED BY THE UNITED STATES GEOLOGICAL SURVEY IN COOPERATION WITH THE NORTH DAKOTA STATE WATER COMMISSION, THE NORTH DAKOTA GEOLOGICAL SURVEY, AND THE McINTOSH COUNTY WATER MANAGEMENT DISTRICT

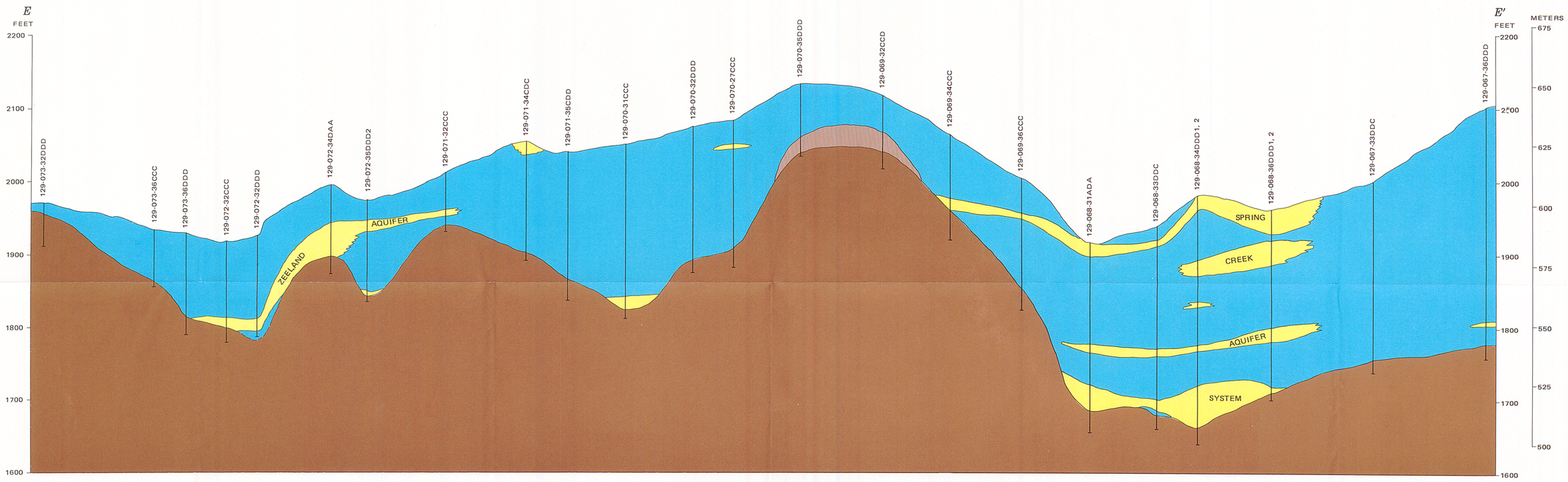
BULLETIN 73
COUNTY GROUND-WATER STUDIES 30
PART III-PLATE 4



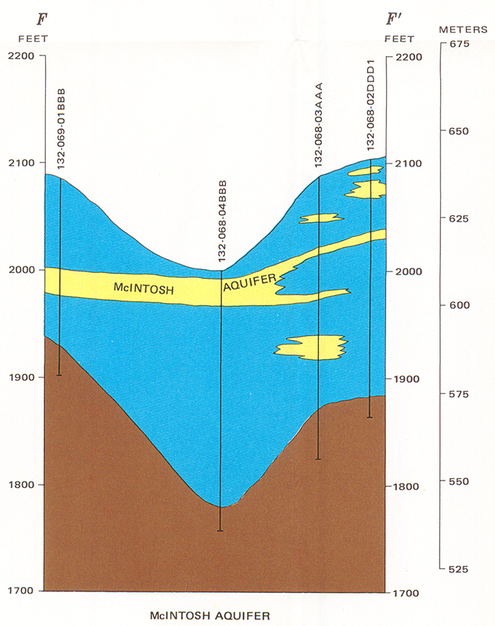
SPRING CREEK AQUIFER SYSTEM



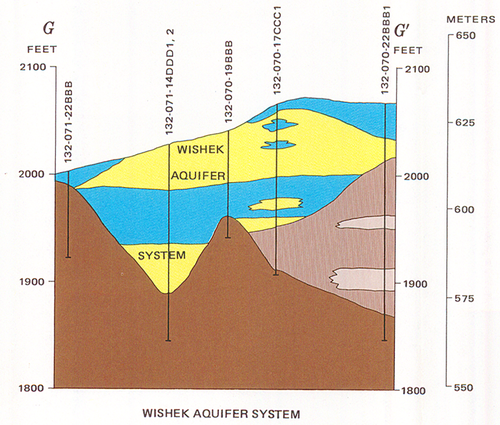
SPRING CREEK AQUIFER SYSTEM



SPRING CREEK AQUIFER SYSTEM AND ZEELAND AQUIFER



McINTOSH AQUIFER



WISHEK AQUIFER SYSTEM

0 1 2 3 4 5 6 MILES
0 1 2 3 4 5 6 7 8 KILOMETERS

VERTICAL SCALE GREATLY EXAGGERATED
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Geohydrology by R. L. Klausing, 1980
Topography generalized.

EXPLANATION

TRACES OF SECTIONS SHOWN ON PLATE 3

GLACIAL DRIFT

- Sand and gravel (glacial-drift aquifer)
- Clay, till, and silt

FOX HILLS FORMATION

- Sandstone (Fox Hills aquifer)
- Semiconsolidated clay, sandy clay, silt, and claystone

PIERRE FORMATION

- Shale

CONTACT

TEST HOLE OR WELL

132-070-19BBB
- Location number
- Total depth

PLATE 4.--GEOLOGIC SECTIONS OF GLACIAL-DRIFT AND FOX HILLS AQUIFERS, McINTOSH COUNTY, NORTH DAKOTA