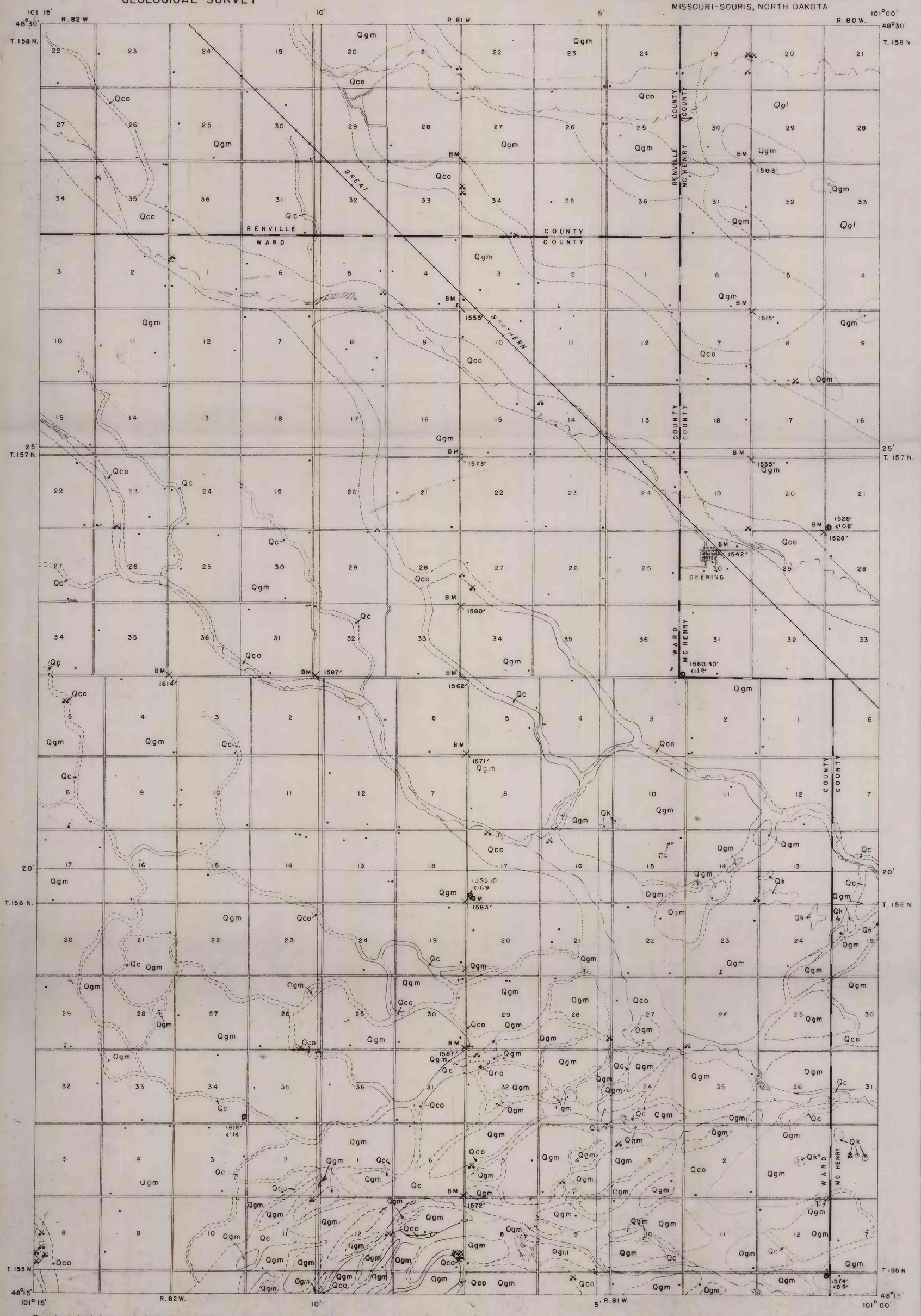
47-8

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared as a part of the Department of Interior's program for development of the Missouri River Basin

MISSOURI RIVER BASIN
GEOLOGIC MAPPING AND MINERAL RESOURCE INVESTIGATION
MISSOURI-SOURIS, NORTH DAKOTA




Base compiled from U. S. Geological Survey planimetric 7½ quadragle maps 1947.

Geology mapped in 1947 by Richard W. Lemke, Fred S. Jensen and J. Hiram Smith. Taken in part from mapping done in 1945 by Chilton E. Prouty and Richard W. Lemke.

*PRELIMINARY*

# GEOLOGIC MAP OF THE DEERING QUADRANGLE, NORTH DAKOTA

Scale 1:48000

1 .5 0 1 2 3 MILES

TRUE NORTH
14°
MAGNETIC NORTH

Approximate mean declination 1945

North Dakota.
Deering quadrangle. Geology. 1:48,000.

## EXPLANATION

**Qgl**

**Glacial lake deposits**

Chiefly moderately to well sorted sand and fine-grained gravel constituting deltaic, beach, and other shallow-water deposits of glacial Lake Souris. Contact is approximate outline of highest stage of lake.

**Qco} Qc**

**Outwash channel deposits**

Deposits in channels incised by glacial meltwater. (Qco) consists of gravel, sand, and silt generally 5 to 15 feet thick. (Qc) consists chiefly of silt and clay ranging in thickness from a few feet to less than a foot; in places includes thin veneer of Recent alluvium deposited by small intermittent streams incised in the floors of the channels; also includes slope wash. (Qco) and (Qc) intergrade.

**Qk**

**Kames**

Irregular-shaped mounds and ridges, generally less than 15 feet high, consisting of gravel, sand, and silt with minor amounts of till.

**Qgm**

**Ground moraine**

Chiefly compact, highly impervious, stony, clay-rich till locally mantled by sand, silt, and clay deposited by glacial meltwater and wind action. Commonly 100 to 150 feet thick. Includes small deposits of alluvium and colluvium deposited in numerous kettles and other undrained depressions.

Pleistocene — Wisconsin stage — Late Wisconsin — QUATERNARY

Contact, sharply defined

Contact, approximate

Contact, indefinite or gradational

Intermittent stream

Lake or pond

Intermittent lake or pond

Sand and gravel pit

Section line

County line

Road, secondary

BM ✕ 1624'
Bench mark and altitude, approximate location

Farm buildings

Church

School

1640'
⊙ 104'
Approximate location of test hole drilled by U. S. Geological Survey. Top figure gives surface altitude (precise levels are in hundredths of a foot; aneroid determinations are to nearest foot). Bottom figure is interpreted depth to bedrock. In some holes depth to bedrock may be considerably less than indicated.

Note: Culture interpreted from aerial photographs and planimetric sheets.