

Recent
Pleistocene
Wisconsin stage
Late Wisconsin

Qal

Alluvium

Postglacial sand, silt, and clay constituting the floor of the river valley; also includes larger alluvial and colluvial fans.

Ql

Landslides

Areas of low subparallel ridges along walls of the Souris River valley usually with undrained depressions on the upslope sides. Material constituting the landslides is predominantly till; also includes numerous beds of silt, sand, or fine-grained gravel intercalated in the till and tilted at angles up to vertical.

Qt

Outwash terrace deposits

Remnants of glacial outwash fill left as terraces along the walls of the Souris River valley. Deposits consist of well-sorted to poorly sorted sand, gravel, and boulders; boulders are especially abundant on the surface. In places more than 15 feet thick but generally thinner; in places till underlies surface at shallow depths.

Qcc Qc

Outwash channel deposits

Deposits in channels incised by glacial meltwater. (Qcc) consists of gravel, sand, and silt generally less than 5 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 deposits of Recent alluvium deposited by small intermittent streams incised in the floors of the channels and also slope wash. (Qcc) and (Qc) intergrade.

Qk

Kames

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

Qgf

Glaciofluvial deposit, undifferentiated as to origin

Indistinct hummocky area composed chiefly of fine- to medium-grained sand mixed with some clay. Till present in places.

Qgm

Ground moraine

Chiefly a compact, highly impervious, stony, clay-rich till commonly 200 to 275 feet thick. Locally mantled by sand, silt, or clay deposited by glacial meltwater. Also includes small deposits of alluvium and colluvium deposited in numerous kettles and other undrained depressions.

Contact, sharply defined

Contact, approximate

Contact, indefinite

Terrace scarp (Separates two terrace levels)

Trend of former glacial outwash channel where outwash has been removed and channel outline modified by postglacial erosion.

Poorly drained area, intermittently marshy

Intermittent stream

Spring

Sand and gravel pit

Section line

State highway (unpaved)

Secondary road

Bench mark with altitude, location approximate

United States-Canada boundary monument

Farm buildings

School

Church

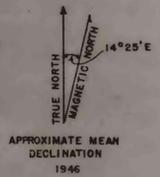
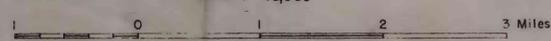
1756' 243'

Approximate location of test hole drilled by the U. S. Geological Survey. Top figure gives surface altitude (precise levels are in hundredths of a foot; aneroid determinations are in whole feet.) Bottom figure is the interpreted maximum depth to bedrock. In some holes bedrock may be considerably closer to surface than indicated.

Note: Culture interpreted from aerial photos and planimetric sheets.

PRELIMINARY
GEOLOGIC MAP OF THE PLEASANT QUADRANGLE, NORTH DAKOTA

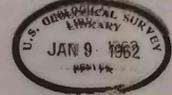
Scale 1:48,000



Geology mapped in 1947 by Richard W. Lemke and J. Hiram Smith

U. S. Geological Survey
OPEN FILE REPORT

This map is preliminary and has not been edited or reviewed for conformance with Geological Survey standards or nomenclature.



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