

Surface Geology

Munster Quadrangle, North Dakota

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2007

EXPLANATION

QUATERNARY SYSTEM

RECENT

OAHE FORMATION

Qor Alluvium

River and stream sediment. Dark obscurely bedded clay and silt (mainly overbank sediment); generally overlying cross-bedded sand (channel sediment); on plains of modern streams.

Qos Pond and Slough Sediment

Dark, obscurely bedded clay and silt; in modern ephemeral ponds.

PLEISTOCENE

COLEHARBOR GROUP

Silt Facies

(Insignificant amounts of this facies on this quadrangle)

Sand and Gravel Facies

River sediment. Moderately well-sorted, cross bedded sand and plane-bedded gravel, including sediment of meltwater rivers.

Qcrf Uncollapsed Flat Fluvial Plains

Flat-bedded sediment of nearly level plains and river terraces, commonly with braided channel scars, oxbows, and other relief markings; relief of 1 to 10 feet.

Qcic Ice-Contact Deposits

Mainly gravel and sand with cobbles and boulders common; inclusions of glacial sediment common; local relief up to 50 feet; eskers and kames.

Till Facies

Glacial sediment. Unsorted, unbedded mixture of angular, subangular, and rounded blocks of rock, gravel, and sand, generally in a stiff matrix of silt and clay; yellowish-brown to olive-gray in exposures depending on weathering intensity; contains discontinuous lenses of gravel and sand.

Qcgg Collapsed Glacial Sediment

Spurglacial sediment with hummocky topography; areas of linear topography and ice-thrust topography.

Qcei Glacial Sediment-Slopewash

Glacial sediment on the sides of small valleys eroded by slopewash and other hillslope processes.

Qcel Hilly Surface With Numerous Kettles

Rolling to hilly surface with kettles, ridges, ice-disintegration features, and poorly integrated drainage; has both overall and internal linearity; moderately thick layer of till; relief of 50 to 100 feet locally ("Heimdal end moraine").

Qct Ice-Thrust Masses

Glacial sediment draped over glacial or preglacial sediment or rock that has been sheared up into thrust slabs or folds near the ice margin; hilly areas with intense internal linearity; local concentrations of gravel and boulders; local relief may exceed 150 feet.

Qcer River-Eroded Glacial Sediment

Glacial sediment with flat to undulating topography resulting from stream erosion in the bottom of large meltwater trenches or over broad areas of till that have been washed by running water; overlain by a thin layer of fluvial sediment of the Coleharbor Group or Oahe Formation in places.

Geologic Symbols

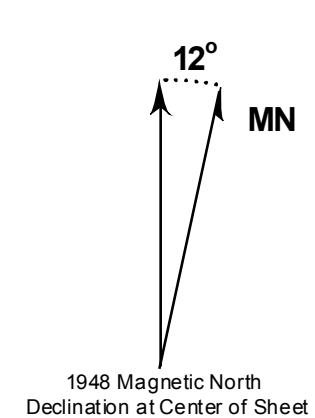
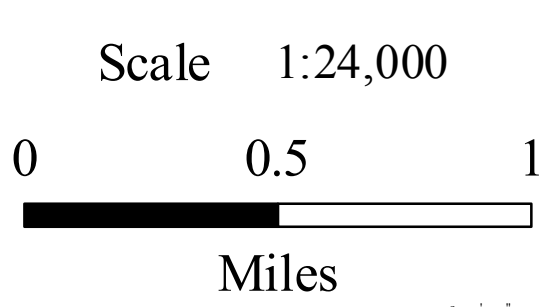
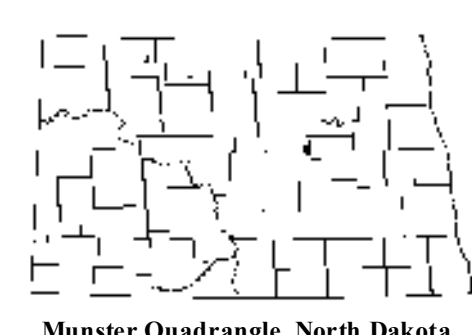
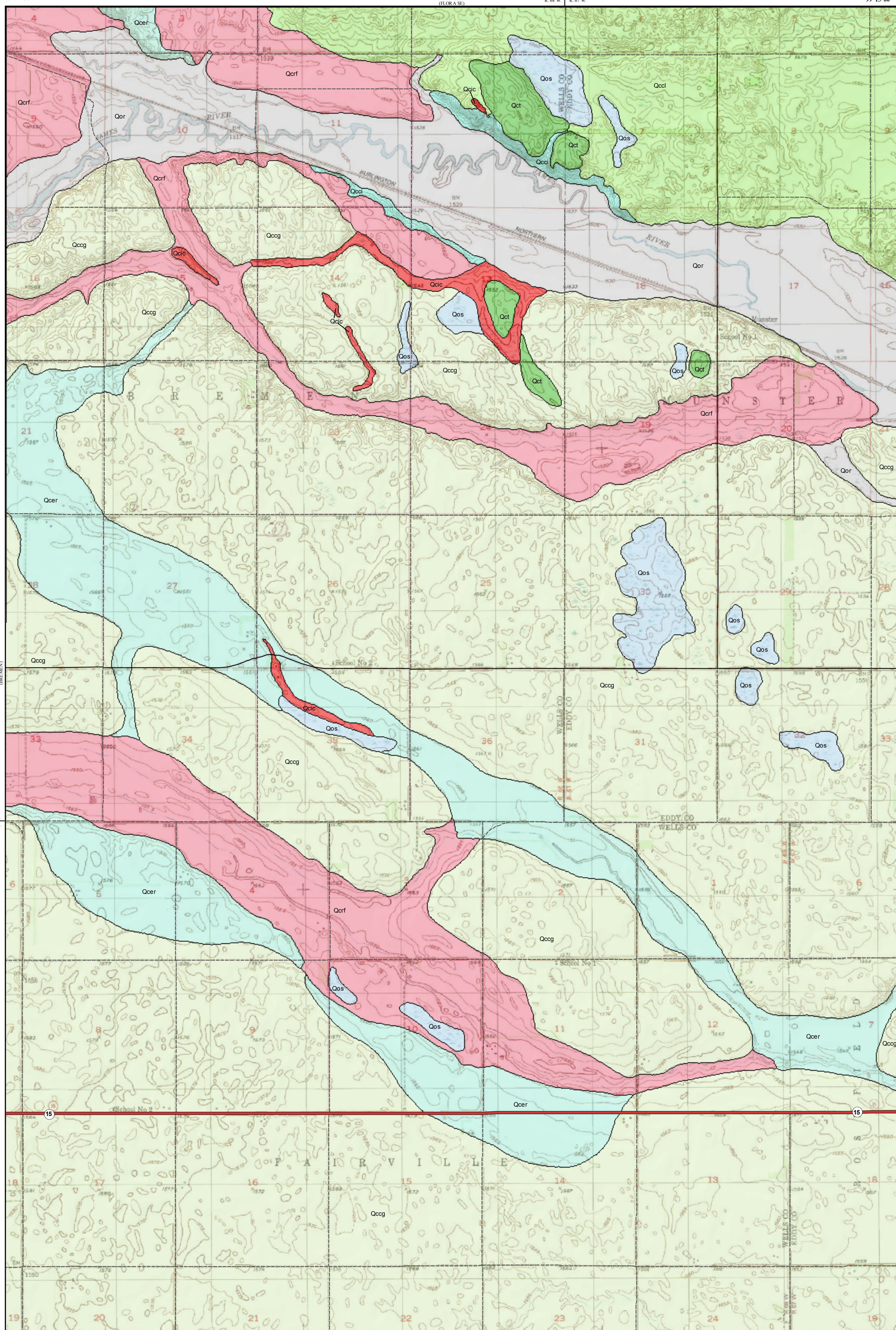
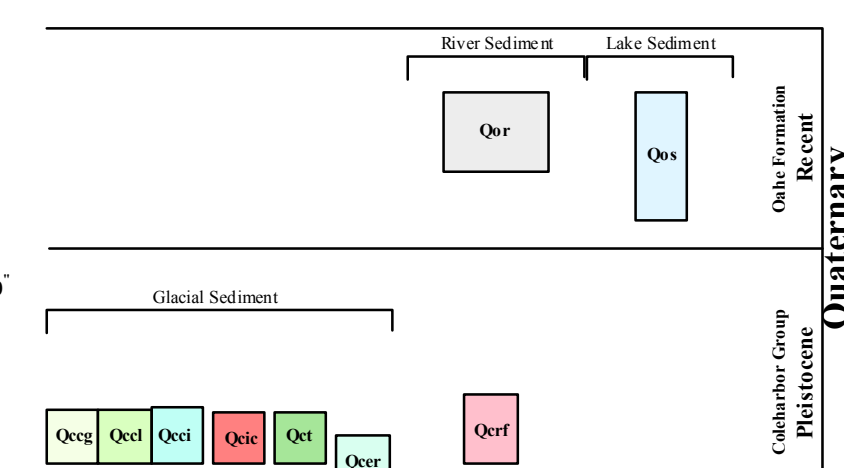
— Known contact between two geologic units

Other Features

— State Highway

— Paved Road

--- Unpaved Road



Lambert Conformal Conic Projection Standard Parallels 47° 27' 30" and 47° 45' 00"
1927 North American Datum NGVD 1929
USGS 7.5 Minute Topographic Map Contour Interval 5 Feet
Road and Hydrologic Layers Rectified to 2003 NAIP Digital Orthophoto

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