

Surface Geology

Karlsruhe NW Quadrangle, North Dakota

John P. Bluelme
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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.

Qou Windblown Sediment

Well-sorted, fine sand and black silt with obscure bedding and weak paleosols; undulating to slightly rolling.

Qod Windblown Sediment

Well-sorted, fine sand and black silt with obscure bedding and weak paleosols; undulating to rolling dunes with up to 75 feet of local relief.

PLEISTOCENE

COLEHARBOR GROUP

Silt/Clay Facies

Laminated silt and clay of glacier-dammed lakes.

Qosl Shoreline Sediment

Well-sorted sand.

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. Mainly along minor valleys.

Qcrf1 Uncollapsed Flat Fluvial Plains (lower)

A lower level of Qcrf; the lower level was formed after the upper level.

Qcrfu Uncollapsed Flat Fluvial Plains (upper)

An upper level of Qcrf. This upper level formed before the lower level.

Qcrh Collapsed Fluvial Plains

Faulted and contorted gravel and sand; hilly topography; relief up to 50 feet.

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.

Qcdg Thin Layer of Till

Veneer of till draped over and only slightly modifying the pre-existing topography (pre-glacial bedrock, older till, or gravel surface); relief up to 75 feet locally.

Qcer River-Eroded Glacial Sediment

Deeply eroded glacial sediment along scarps.

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.

Geologic Symbols

— Known contact between two geologic units

Other Features

Water

Water - Intermittent

Paved Road

Unpaved Road

