

Surface Geology

Black Hammer Hill Quadrangle, North Dakota

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EXPLANATION

QUATERNARY SYSTEM

RECENT

OAHE FORMATION

Qos Pond and Slough Sediment

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

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.

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.

Qerf Flat Fluvial Plains

Flat-bedded sediment of nearly level plains and river terraces, commonly with braided channel scars, oxbows, and other relict 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.

Qccg Collapsed Glacial Sediment

Supraglacial sediment with hummocky topography; areas of linear topography and ice-thrust topography interspersed; gently undulating with 1 to 2 degree maximum slopes.

Qccl Hilly surface with numerous kettles

Poorly integrated drainage; has both overall and internal linearity; moderately thick layer of till; relief of 50 to 100 feet locally ("end moraine").

Qct Ice-Thrust Masses

Glacial sediment that has been 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.

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; some ice-thrust hills (Qct) that have been subsequently overridden by ice have a thin layer of till on top and are identified as Qcdg (hard to distinguish from Qct).

Geologic Symbols

- Known contact between two geologic units
- Abandoned channel
- Ridge-Transverse
- Ridge-Longitudinal (runs from NW to SE)

Other Features

- Water
- Water - Intermittent
- Paved Road
- Unpaved Road

