

Surface Geology

Drake Quadrangle, North Dakota

John P. Bluemle
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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.

PLEISTOCENE

COLEHARBOR GROUP

Silt Facies

Lake sediment. Laminated silty clay, clayey silt, and fine sand of glacier-dammed lakes; yellowish-brown to dark gray in exposures depending on weathering intensity.

Qest Offshore to Nearshore Sediment

Silt to fine sand overlying glacial sediment (till)

Sand and Gravel Facies

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

Qerf Uncollapsed 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. Mainly along minor valleys.

Qerw Sand or Gravel Patches

Gravel or sand overlying glacial sediment; water-worn till surface.

Qerh Collapsed Fluvial Plains

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

Qcdg Thin Layer of Till

Venue 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).

Qccu Collapsed Glacial Sediment-Undulating

Gently undulating to undulating surface with poorly integrated drainage; local relief generally less than 10 feet.

Qccr Collapsed Glacial Sediment-Rolling

Rolling surface with kettles, partially to nonintegrated drainage, and numerous ice-disintegration features.

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.

Qcer River-Eroded Glacial Sediment

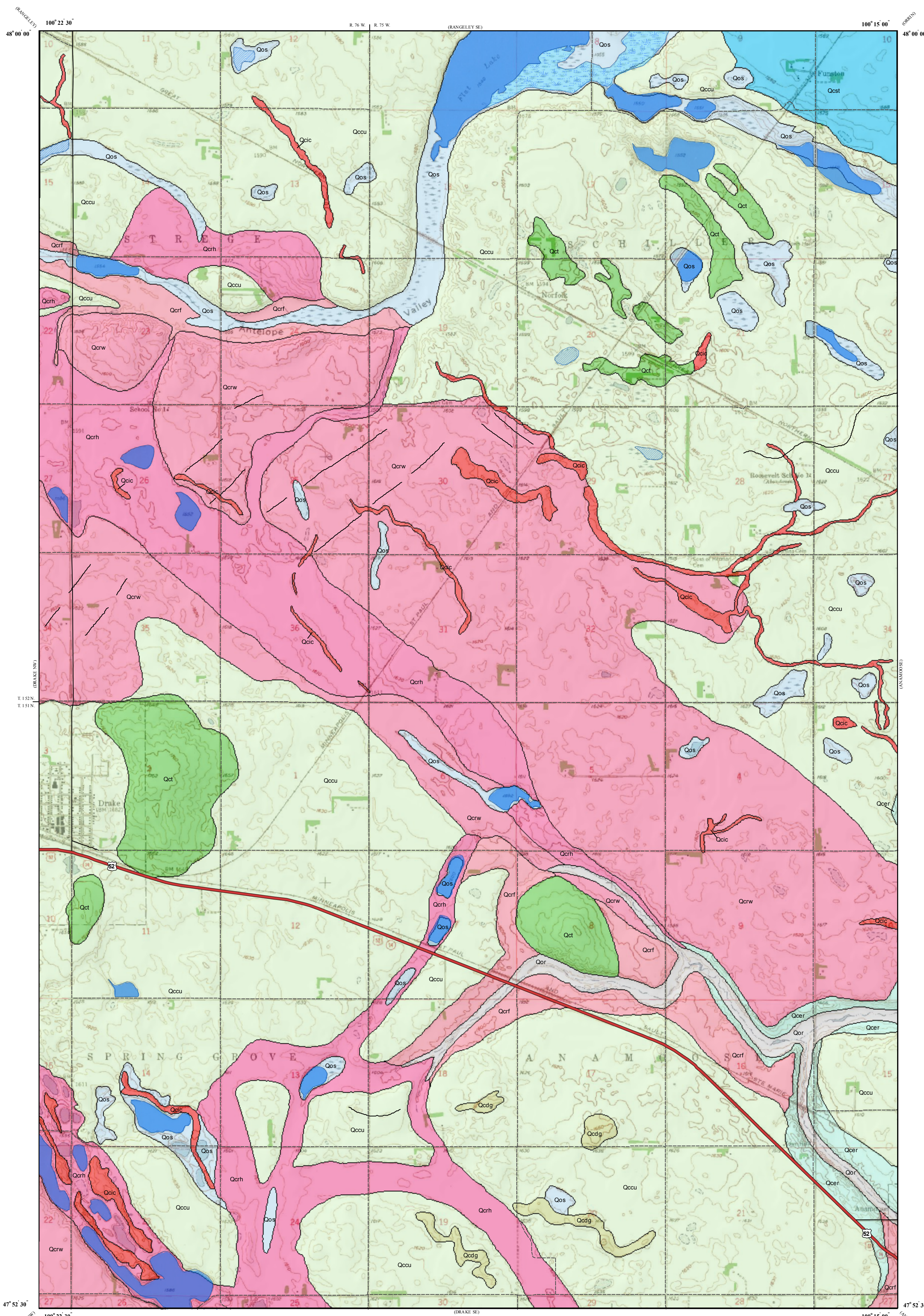
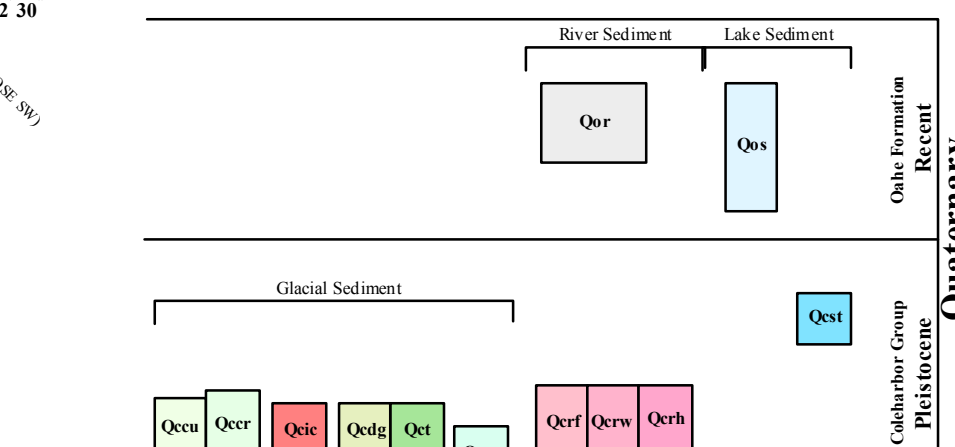
Glacial sediment with flat to undulating topography resulting from stream erosion in the bottom of large meltwater trenches or overboard areas of till that have been washed by running water; overlain by a thin layer of fluvial sediment of the Coleharbor group or Oahe Formation in places.

Geologic Symbols

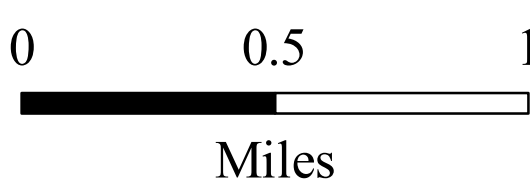
— Known contact between two geologic units
— Transverse Ridge

Other Features

Water
Water - Intermittent
Marsh or Wetland
Federal Highway
Paved Road
Unpaved Road

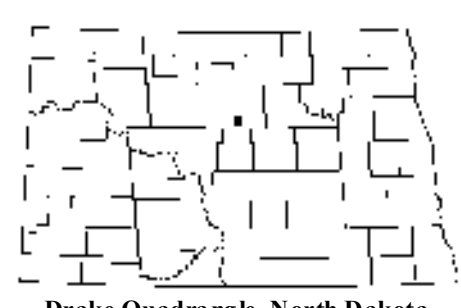
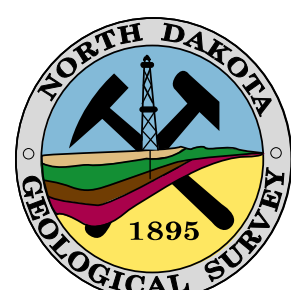
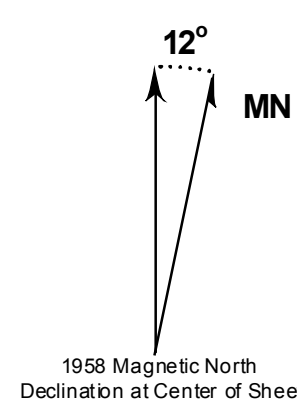


Scale 1:24,000



Miles

Lambert Conformal Conic Projection Standard Parallel 47° 52' 30" and 48° 00' 00"
1927 North American Datum NGVD 1929
USGS 7.5 Minute Topographic Map Contour Interval 10 Feet
Roads and Hydrologic Layers Rectified to 2003 NAIP Digital Orthophoto



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