

# Surface Geology

## Pleasant Valley Quadrangle, North Dakota

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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.

**Qcs** Shoreline Sediment

Well-sorted sand and gravel of beach-ridge complexes (individual ridges shown by line symbols); as thick as 15 feet.

**Qcof** Proglacial Lake Sediment

Flat-bedded lake sediment on low lying plains.

##### Sand and Gravel Facies

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

**Qcrf** 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. Northern end of Elk Valley Delta complex.

**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.

**Qcew** Wave Eroded Glacial Sediment

Glacial sediment with flat to gently undulating topography resulting from wave erosion along the shore of Glacial Lake Agassiz.

**Qccu** Collapsed Glacial Sediment-Undulating

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

**Qcqr** Rolling surface with kettles

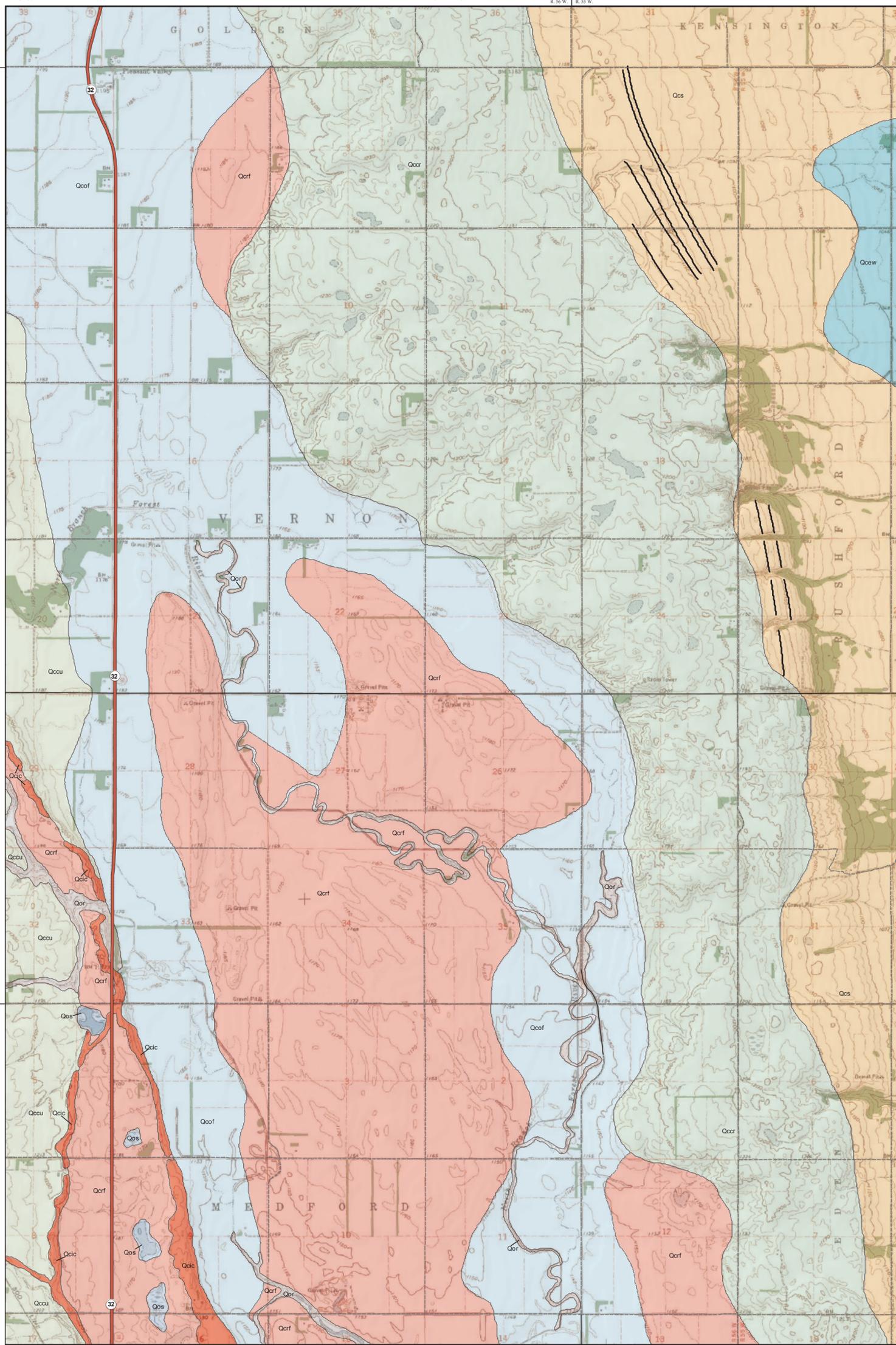
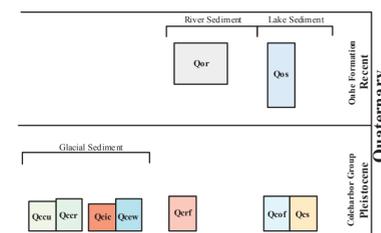
Partially to nonintegrated drainage, and numerous ice-disintegration features; "Edinburg moraine".

#### Geologic Symbols

- Known contact between two geologic units
- - - Approximate contact between two geologic units
- Individual beach - crest ridges

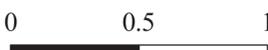
#### Other Features

- State Highway
- Paved Road
- Unpaved Road



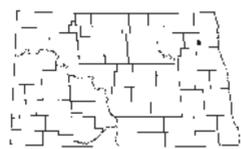
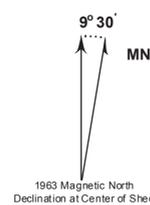
48° 15' 00" 97° 52' 30" (DANKIN) (EDINBURG) R. 56 W. | R. 55 W. 97° 55' 00" (PUSHKIN) 48° 22' 30" T. 157 N. T. 156 N. 48° 15' 00" (DANKIN) (FORDVILLE) R. 56 W. | R. 55 W. 97° 45' 00" (PUSHKIN)

Scale 1:24,000



Miles

Lambert Conformal Conic Projection Standard Parallels 48° 15' 00" and 48° 22' 30"  
1927 North American Datum NGVD 1929  
USGS 7.5 Minute Topographic Map Contour Interval 10 Feet  
Road and Hydrologic Layers Rectified to 2003 NAIP Digital Orthophoto



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