

Surface Geology

West Fargo South Quadrangle, North Dakota

Fred J. Anderson

2008

EXPLANATION

QUATERNARY SYSTEM

HOLOCENE

OAHE FORMATION

Hfr Fluvial Sediment (Recent)

Black-brown, clay, silt and sand with organics common. Commonly less than three feet in depth. Deposited in recent drainages.

Hoas Alluvial Sediment (Sheyenne River)

Brown-gray, bedded to massive, sands, silts, gravels, and clays deposited as reworked and recent channel alluvium. Constrained to areas within the Sheyenne River meander belt and along adjacent tributary drainages. Prone to slumping and cutbank erosion.

PLEISTOCENE

COLEHARBOR GROUP

Qcs SHERACK FORMATION

Yellow-gray, laminated (varved) to obscurely bedded, silt, clay, and silty-clay, cohesive, plastic. Commonly near 20 feet in thickness. Glaciolacustrine-deposited as offshore sediments of Glacial Lake Agassiz. Prone to slumping and cutbank erosion along the Sheyenne River channel.

Geologic Symbols

— Known contact between two geologic units

— Glaciofluvial Compaction Ridge Sediments (Sheyenne Ridge)

Approximate boundary of fluvial channel compaction ridge sediments found in the shallow subsurface. Sediments typically consist of brown-gray, water-bearing, silts, sands, and silty clayey sands. Commonly found at depths of 27 feet or less and capable of flow. Compaction ridge sediments range from one to 20 feet in thickness, thinning towards lateral channels boundaries. Occasional peat layers encountered in borings within the medial portions of the ridge at depths of 12 feet. Sediments deform easily and are capable of flow which has proven to be problematic for the construction of shallow foundations and footings. Sediments are of the West Fargo member of the Poplar River Formation and are likely to be in a state of delayed hydraulic connectivity with local hydrology. Occasional pelecypods, gastropods, and wood have been encountered just above basal sands within the compaction ridge sediments.

Control Points

Control Points containing measureable thicknesses of compaction ridge sediments.

Control Points

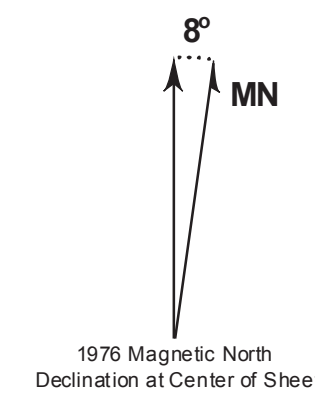
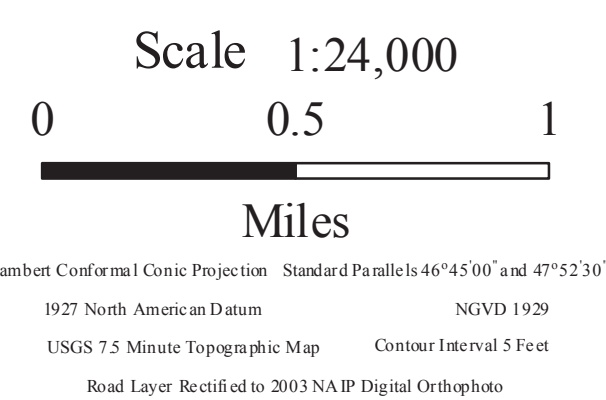
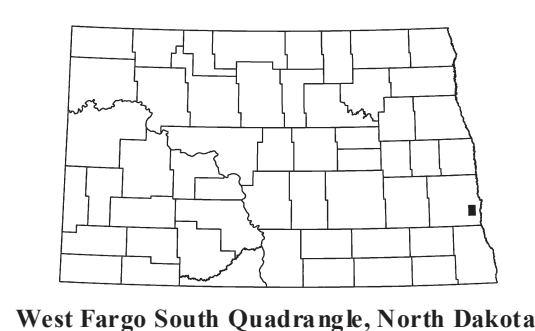
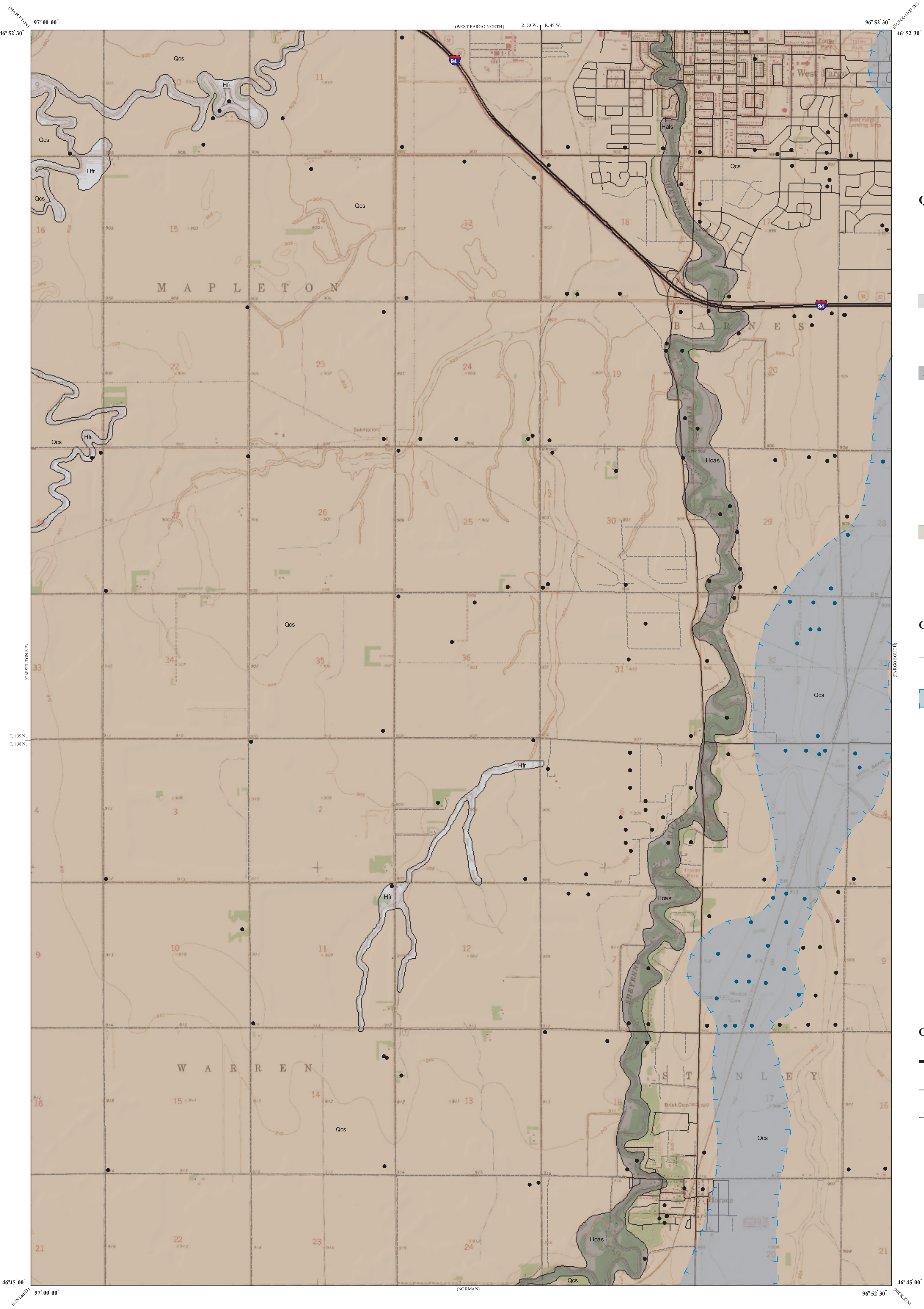
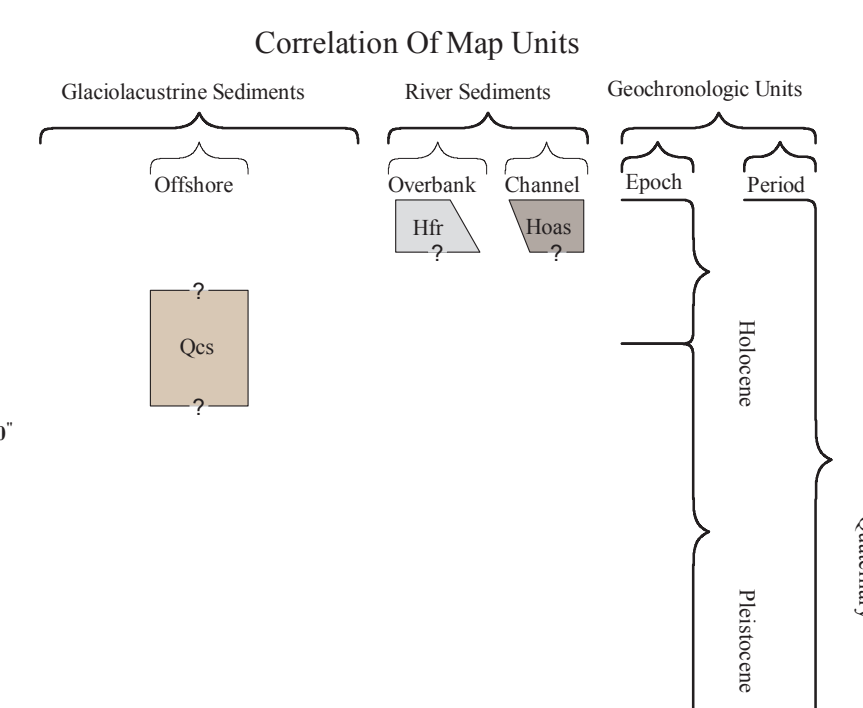
Test holes, observation wells, irrigation wells, private wells, industrial wells, municipal wells, rural water wells, soil probes, hand auger borings, and outcrops.

Other Features

— Interstate Highway

— Paved Road

--- Unpaved Road



This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program.