

Surface Geology

Bygland Quadrangle, North Dakota

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2025

EXPLANATION

QUATERNARY PERIOD

HOLOCENE EPOCH

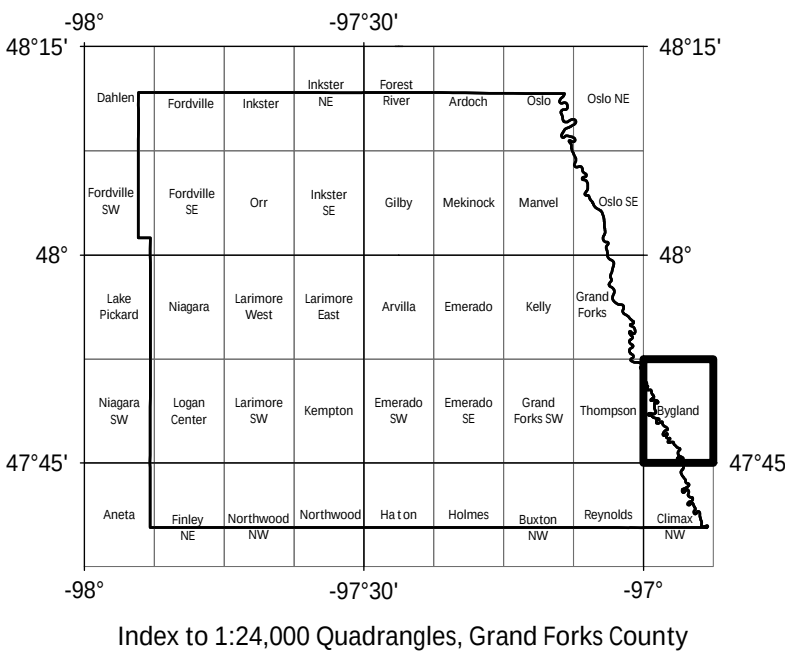
Hal ALLUVIUM
Brown-gray, bedded to massive, sands, silts, gravels, and clays deposited as reworked and fluvial deposits along the Red River and fluvial deposits along the Red River and tributary drainages.

SHERACK FORMATION

Hs GLACIOLACUSTRINE OFFSHORE SEDIMENT
Yellow-gray, laminated to obscurely bedded, silt, clay, and silty-clay, cohesive. Ranges in thickness between 15 - 25 feet (4.6 - 7.6 meters), thickening towards the east and the Red River. Glaciolacustrine sediments deposited in offshore environments of glacial Lake Agassiz.

Ice-drag marks
Established from aerial photographs and LiDAR. Low linear ridges and shallow grooves made by glacial icebergs or floating lake ice in contact with the lake bottom.

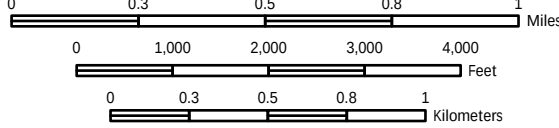
Geologic Symbols
Geologic contact (Known)



CORRELATION OF MAP UNITS

Glaciolacustrine	Fluvial	Geochronology			
		Channel & Overbank			
		Offshore	Epoch	Period	Era
Hs	Hal		Holocene	Quaternary	Cenozoic
			Pleistocene		

Scale 1:24,000

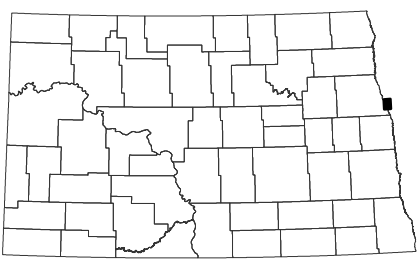
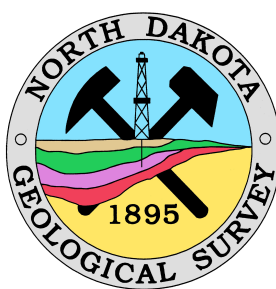


Lambert Conformal Conic Projection
North American 1983 Datum
USGS 7.5 Minute Topo Map

Standard Parallels 47°45'0"N, 47°52'30"N
LIDAR Data Originator:
International Water Institute, 2010
Red River Basin Mapping Initiative, 2010-2015
NRC's Basin and State Water Commission, 2020
James River Basin LIDAR Q2



2019 Magnetic North
Declination at Center of Sheet



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