North Dakota Geological Survey
24K: Tpsn - sg

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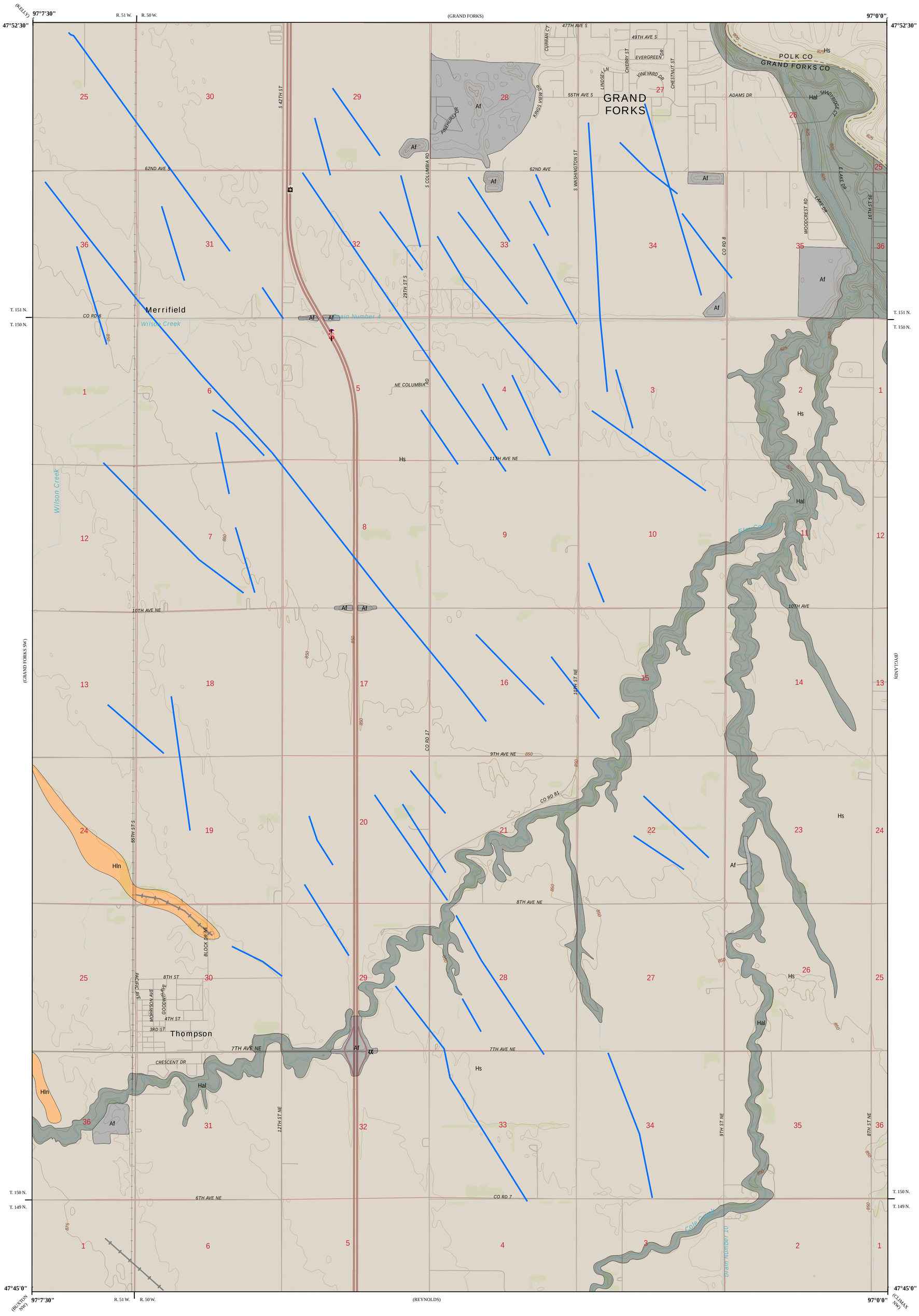
Surface Geology
Thompson Quadrangle, North Dakota



Fred J. Anderson

2025

EXPLANATION

ANTHROPOCENE

Af FILL DEPOSITS

Cut and fll materials consistng dominantly of silts, clays, and sands from adjacent nearsurface formatons shaped or placed by artfcial means. Found along drainage improvement embankments, highway overpass ramps, wastewater ponds, and recontoured recreaton areas.

QUATERNARY PERIOD

HOLOCENE EPOCH

Hal ALLUVIUM

Brown-gray, bedded to massive, sands, silts, gravels, and clays deposited as reworked and fuvial deposits along Elm Coulee, Cole Creek, and the Red River.

Hln GLACIOLACUSTRINE NEARSHORE SEDIMENT

Silt, sand, and gravel; moderately to well-sorted; planar to cross-bedded; deposited on the shoreline of glacial Lake Agassiz, ranging in thickness from 0 to 15 feet (4.6 meters). Shallow-water deposits on Ojata age beaches (~10,500 ybp). Sand and gravel may occur in washed beach ridges along with spits, and sand bars.

SHERACK FORMATION

Hs GLACIOLACUSTRINE OFFSHORE SEDIMENT

Yellow-gray, laminated to obscurely bedded, silt, clay, and silty-clay, cohesive. Ranges in thickness between 28 - 44 feet (8.5 - 13.4 meters) within the quadrangle. Glaciolacustrine sediments deposited in ofshore environments of glacial Lake Agassiz.

BEACH RIDGES

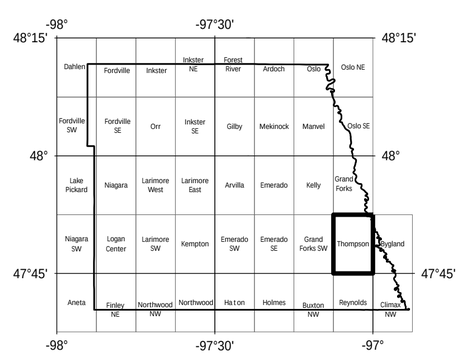
Established from LiDAR maps; line indicates the crest of the ridge or high-water line; interpreted to be a beach ridge along the lake margin or high-water level; discernable on LiDAR maps and aerial imagery.

Ice-drag marks

Established from aerial photographs and LiDAR. Low linear ridges and shallow grooves made by glacial icebergs or foatng lake ice in contact with the lake botom.

Geologic Symbols

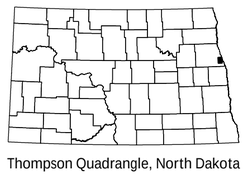
Geologic contact (Known)



Index to 1:24,000 Quadrangles, Grand Forks County

CORRELATION OF MAP UNITS

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



Thompson Quadrangle, North Dakota

Scale 1:24,000

0 0.3 0.5 0.8 1 Miles
0 1,000 2,000 3,000 4,000 Feet
0 0.3 0.5 0.8 1 Kilometers

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

Standard Parallels 47°45'0"N, 47°52'30"N

LiDAR Data Originator:
Internatonal Water Institute, 2010,
Red River Basin Mapping Initatve 2008-2010.
NRCS-Bismarck and ND State Water Commission, 2020,
James River Basin LiDAR QL2.

2°58' MN

2019 Magnetc North
Declinaton at Center of Sheet

Cartographic Compilaton: Navin Thapa