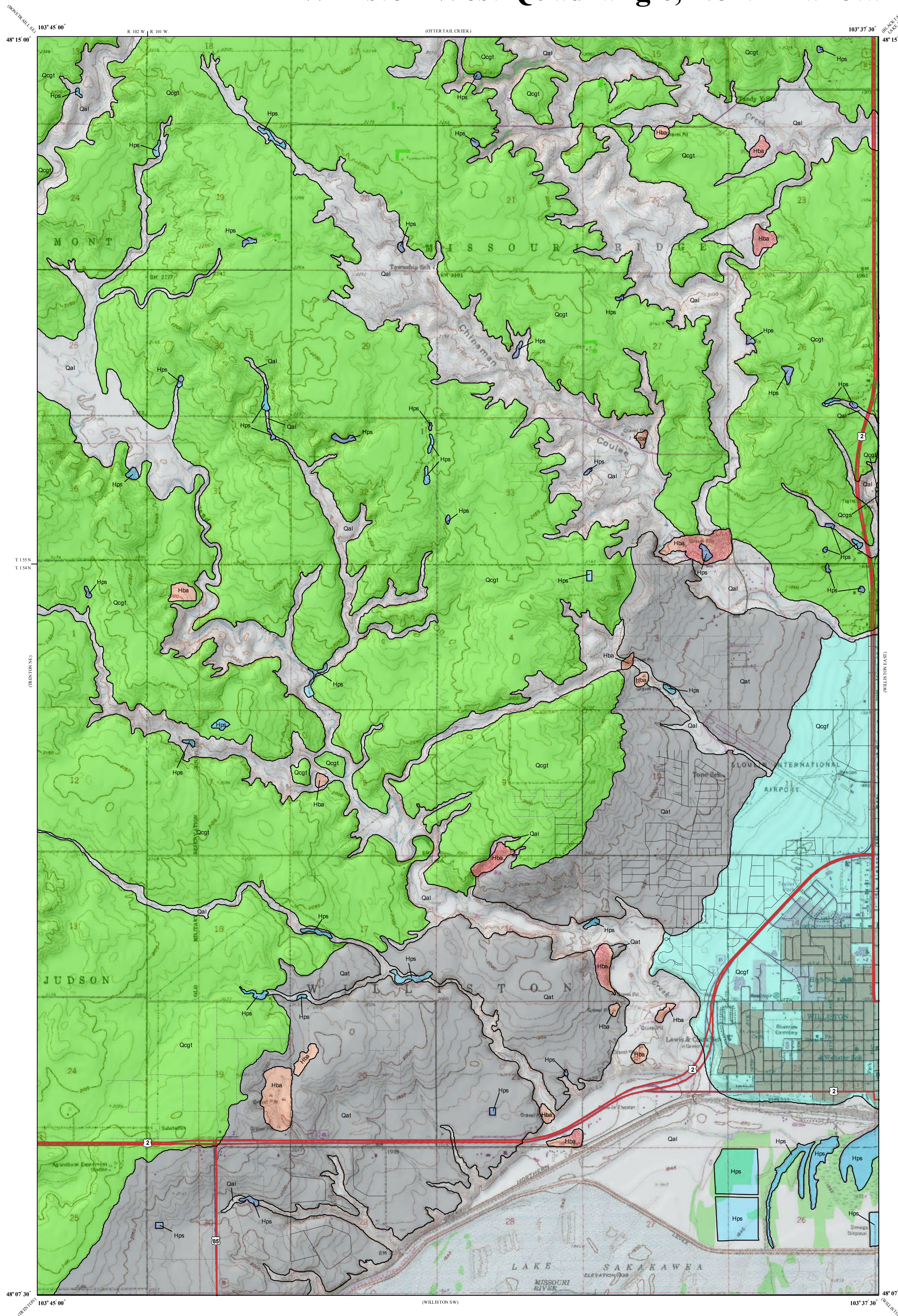


Surface Geology

Williston West Quadrangle, North Dakota

Mark R. McDonald

2014



QUATERNARY

HOLOCENE

ANTHROPOGENIC DEPOSITS

Hba Borrow Area
Sand and gravel pits. Includes active and abandoned or reclaimed.

OAHE FORMATION

Hps Modern Pond, Slough, and Oxbow Sediments
Typically consist of silt and clay with high concentration of organics.

HOLOCENE/PLEISTOCENE

Qal Alluvium
Sand, silt, clay and pebbles with occasional cobbles and boulders deposited under fluvial conditions (by rivers and creeks). Organic content is variable but often contain paleosols (soil horizons). Bedding typically ranges from small scale cross-bedding to planar to obscurely bedded. These deposits are found with the flood plains of the Missouri and Little Muddy Rivers and associated tributaries and drainages.

Qcgs Slope Washed Deposits
Colluvium consisting principally of clay with silt. Massive at outcrop with clay matrix diamiction with pebbles, cobbles and boulders.

PLEISTOCENE

COLEHARBOR GROUP

Qcgt Glaciofluvial Deposits
Sand, silt and clay with occasional cobbles and boulders deposited by outwash from glacial meltwater. In this area flow is presumed to have followed the ancestral channel of the Yellowstone River.

Qcgt Glacial Till
Poorly sorted mixture of clay, silt, sand, pebbles, cobbles and boulders transported and deposited primarily as subglacial deposits. Generally massive silt and clay matrix supporting diamiction although occasional lenses of sand and gravel may occur. Present in areas of low to moderate relief with undulating topography.

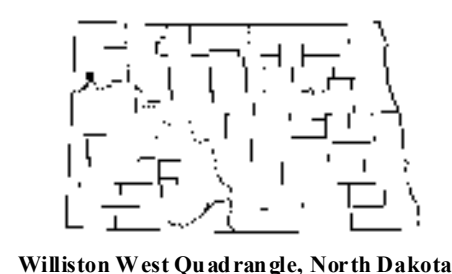
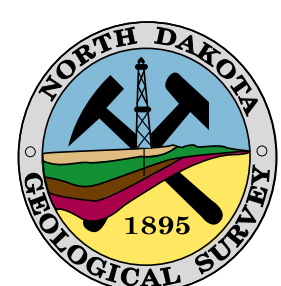
Qat Alluvial Terrace
Gently sloping bench above and adjacent to the floodplain of the ancestral Yellowstone River or the subsequent glacial outwash channel. Predominantly alternating layers of silt and fine to medium sand, and sandy gravel consisting of igneous and metamorphic rock, with some lignite and clinker.

GEOLOGIC SYMBOLS

— Known Geologic Contact

OTHER SYMBOLS

— US Highway
— Paved Road
— Unpaved Road



Williston West Quadrangle, North Dakota

