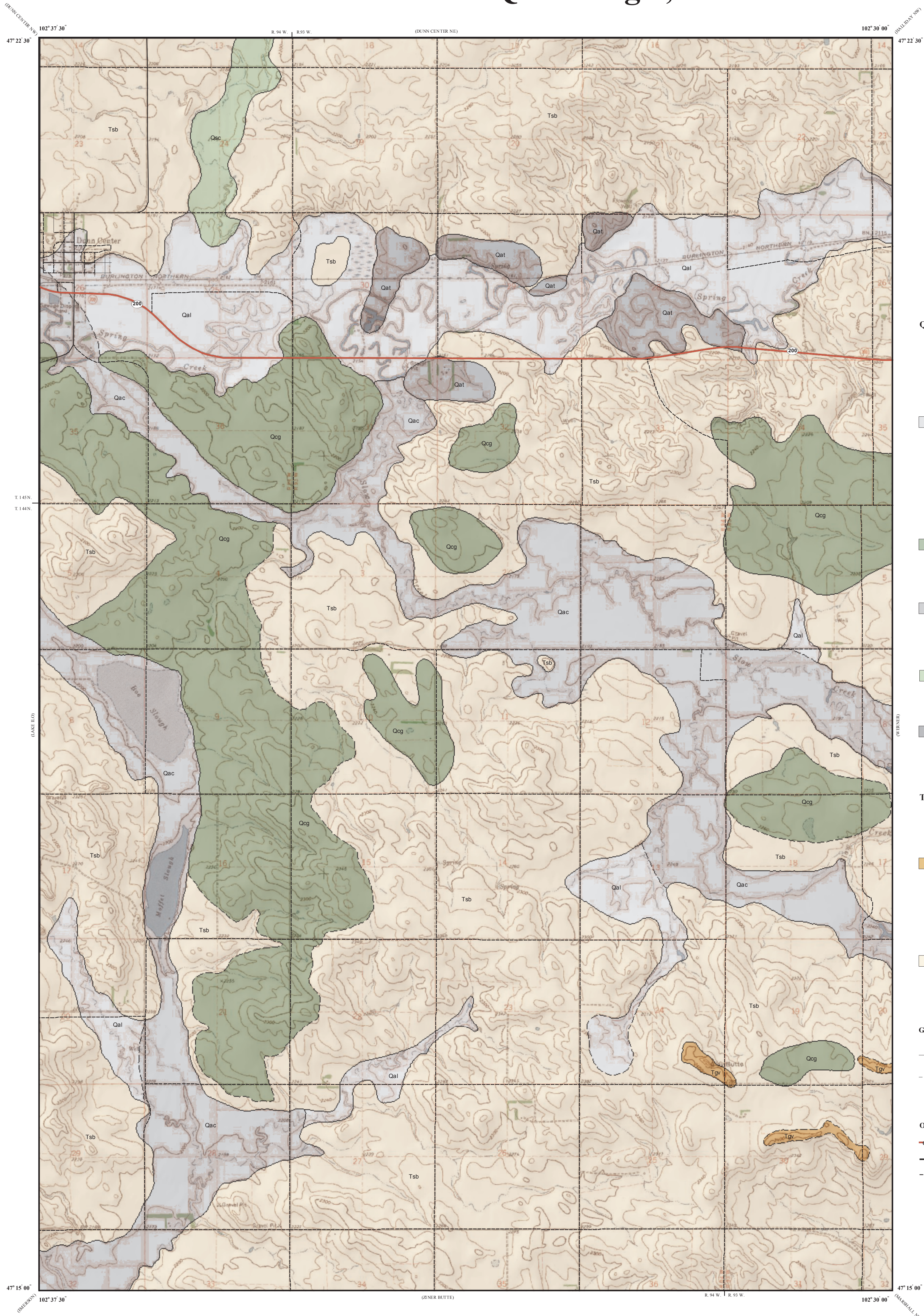


Surface Geology

Dunn Center Quadrangle, North Dakota

Edward C. Murphy

2004



UNIT DESCRIPTIONS

QUATERNARY SYSTEM

RECENT

QAHE FORMATION

Qal Alluvium
Brownish gray to black sand, silt, clay, and lenses of gravel; floodplain deposits (typically less than 30 feet thick) along recent drainages. Not differentiated where it overlies Qac.

PLEISTOCENE

COLEHARBOR GROUP

Qcg Glacial Deposits
Grayish brown, sandy, silty, bouldery clay with lenses of sand and gravel (glacial till). May occasionally include thick deposits of glacial outwash. Generally preserved as a veneer in the uplands.

Qac Proglacial Channels
Generally contain 50 to 200 feet of sand and gravel, silt, clay, and till (meltwater-channel fill). Overlain by Recent alluvium (Qal) of variable thickness. This map unit was created to distinguish between these very thick channel deposits and the moderate to thin deposits mapped as Qal.

Qsc Glacial Channels
Generally contain less than 50 feet of channel fill deposits (sand and gravel, silt, and clay) typically much narrower than the proglacial channels. Overlain by Recent alluvium of variable thickness.

Qat Terrace Deposits
Five- to 20-foot-thick layers of sand and gravel (consisting primarily of siltcrete, chert, flint, agate, petrified wood, siltstone) found beneath flat to gently undulating slopes adjacent to many of the major creeks and rivers.

TERTIARY SYSTEM

EOCENE-PALEOCENE

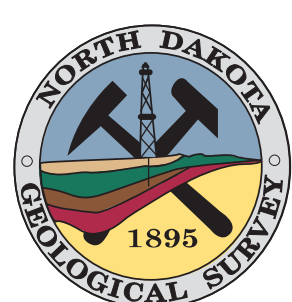
Tgv GOLDEN VALLEY FORMATION
Camels Butte Member:
Alternating beds of yellowish brown to brown, micaceous sandstone, siltstone, mudstone, claystone, and lignite.
Bear Den Member:
Brightly colored, kaolinitic claystone, mudstone, and sandstone typically overlain by a thin silicious bed (siltcrete) or lignite.

Tsb SENTINEL BUTTE FORMATION
Alternating beds of grayish brown to gray sandstone, siltstone, mudstone, claystone, and lignite.

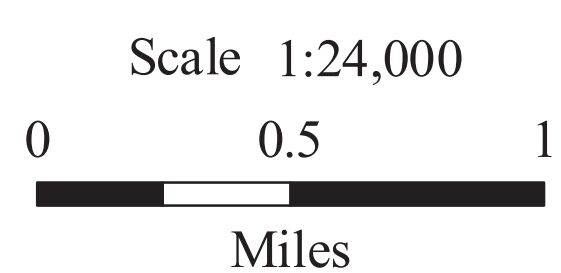
Geologic Symbols
— Known contact between two geologic units.
- - - Approximate contact between two geologic units.

Other Features

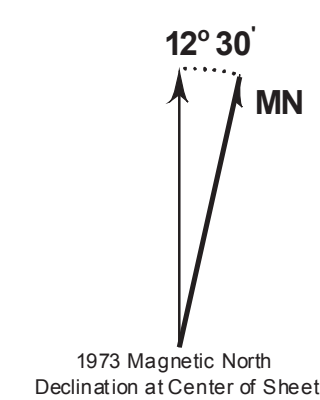
— State Highway
— Paved Road
— Unpaved Road



Dunn Center Quadrangle, North Dakota



Lambert Conformal Conic Projection
Standard Parallels 47° 15' 00" and 47° 22' 30"



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