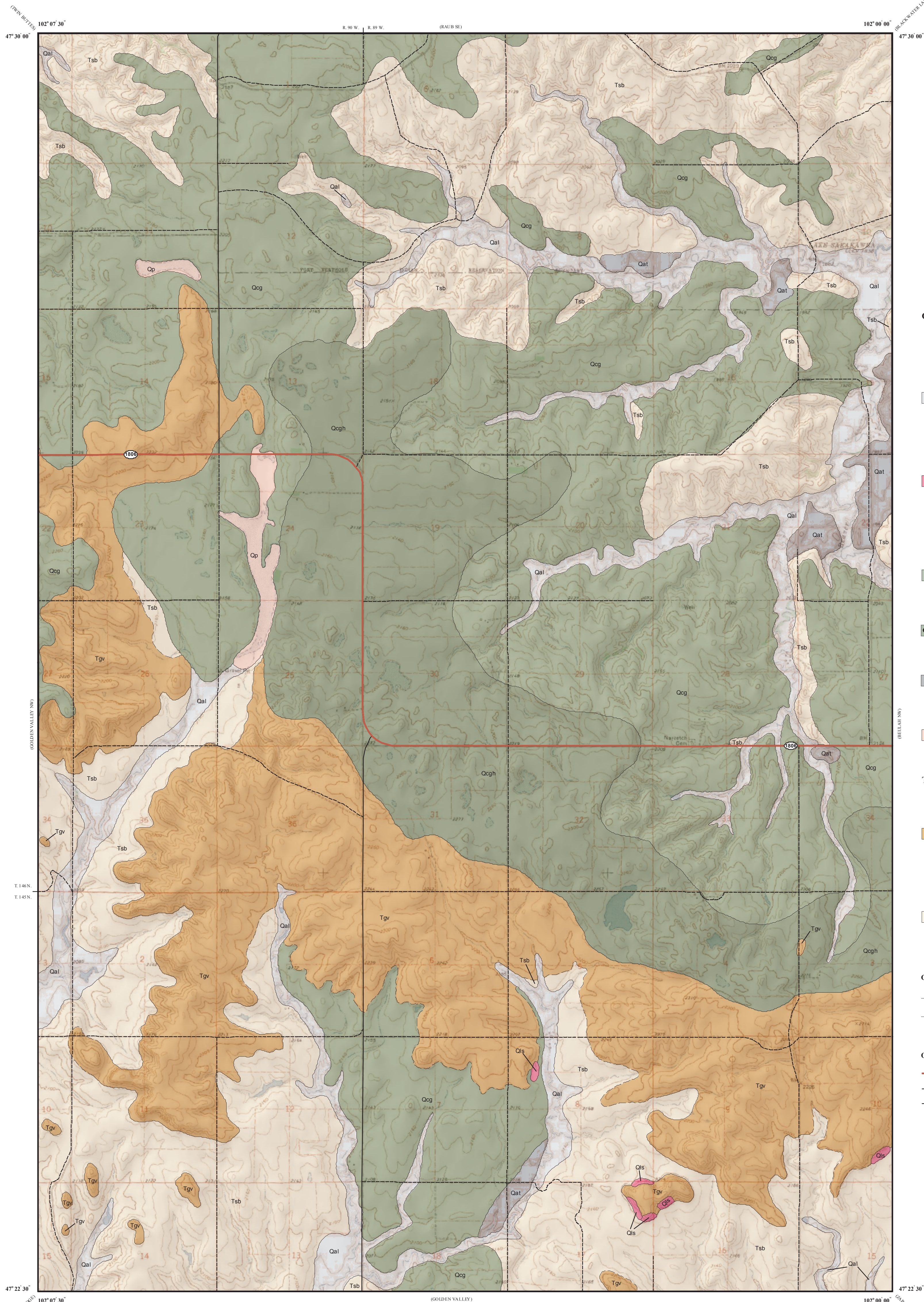


Surface Geology

Golden Valley NE Quadrangle, North Dakota

Edward C. Murphy

2004



UNIT DESCRIPTIONS

QUATERNARY SYSTEM

RECENT

OAHE 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.

RECENT/PLEISTOCENE

Qk Landslide Deposits
Variable mixture of strata and deposits that have slid to the base of steep slopes.

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.

Qcgh Hummocky Glacial Deposits
Glacial deposits which have an irregular surface that contains numerous, small undrained depressions (hummocks). The hummocks are easily identified on aerial photographs.

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

Qp Pediment Deposits
Slopes inclined away from the Killdeer Mountains, capped with layers of gravel consisting primarily of carbonate and chert cobbles and gravel.

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, kaolinic claystone, mudstone, and sandstone typically overlain by a thin siliceous bed (silcrete) or lignite.

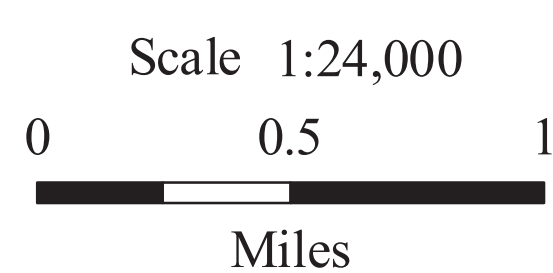
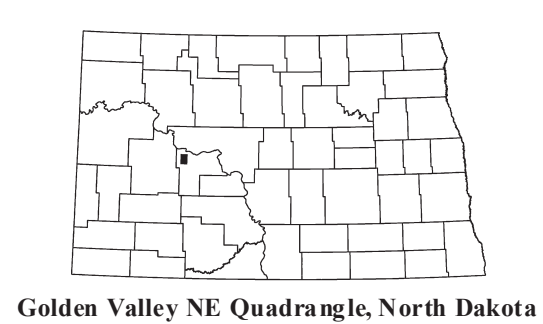
Tsb SENTINEL BUTTE FORMATION
Alternating beds of grayish brown to gray sandstone, siltstone, mudstone, claystone, and lignite.

Geologic Symbols

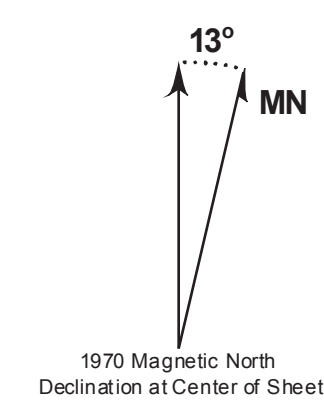
- Known contact between two geologic units.
- - - Approximate contact between two geologic units.

Other Features

- State Highway
- Paved Road
- Unpaved Road



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



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