

Surface Geology Indian Butte, North Dakota Quadrangle

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UNIT DESCRIPTIONS

QUATERNARY SYSTEM

RECENT

Manmade Features or Deposits

- s Sand Pit
- g Gravel Pit

QAHE FORMATION

- Qal **Alluvium**
Brownish gray to black sand, silt, clay, and lenses of gravel; floodplain deposits along recent drainages. Includes lower terrace deposits. Typically less than 50 feet thick.

RECENT/PLEISTOCENE

- Qw **Wind-blown Deposits**
Silt and sand transported and deposited by wind. Generally found as small dune fields or blowouts in upland areas.
- Qs **Land Slide Deposits**
Variable mixture of strata and deposits that have slid to the base of steep slopes.

PLEISTOCENE

COLEHARBOR GROUP

- 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.
- 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.

TERTIARY SYSTEM

PALEOCENE

GOLDEN VALLEY FORMATION

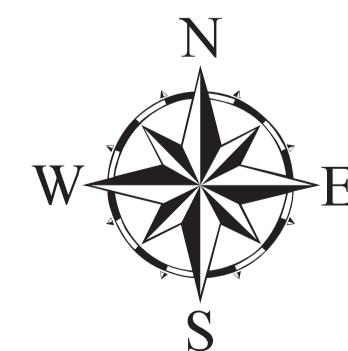
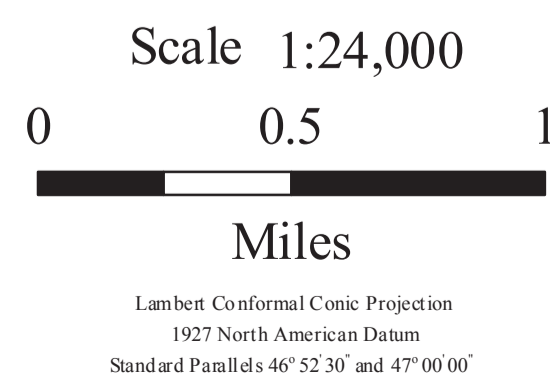
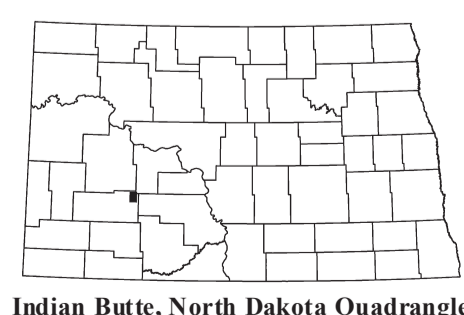
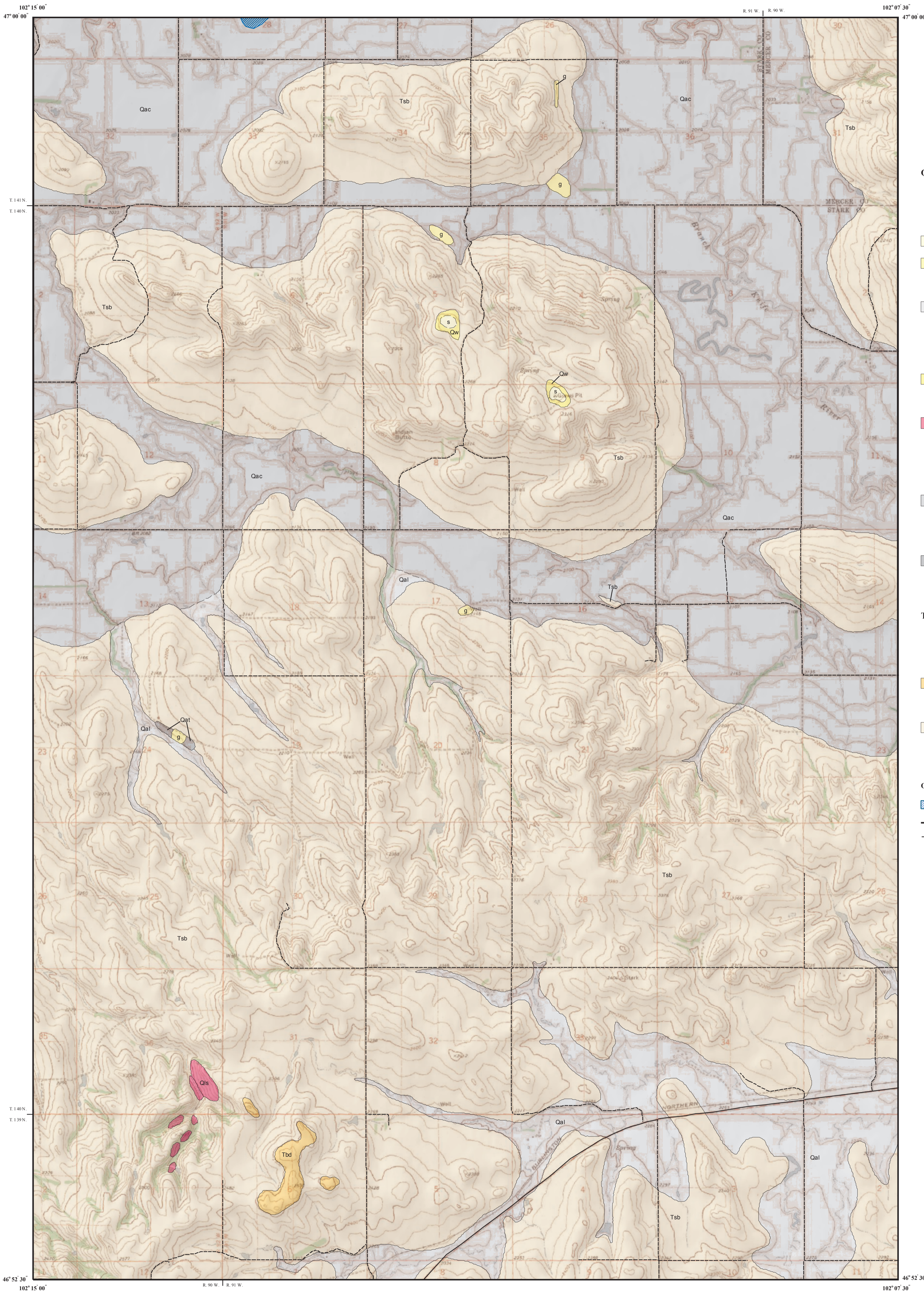
- Tbd **Bear Den Member**
Brightly colored, kaolinitic claystone, mudstone, and sandstone typically overlain by a thin silicious bed (silcrete) or lignite.
- Tsb **SENTINEL BUTTE FORMATION**
Alternating beds of grayish brown to gray sandstone, siltstone, mudstone, claystone, and lignite.

Other Features

- Water - Intermittent
- Paved Road
- Unpaved Road

Geologic Symbols

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



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