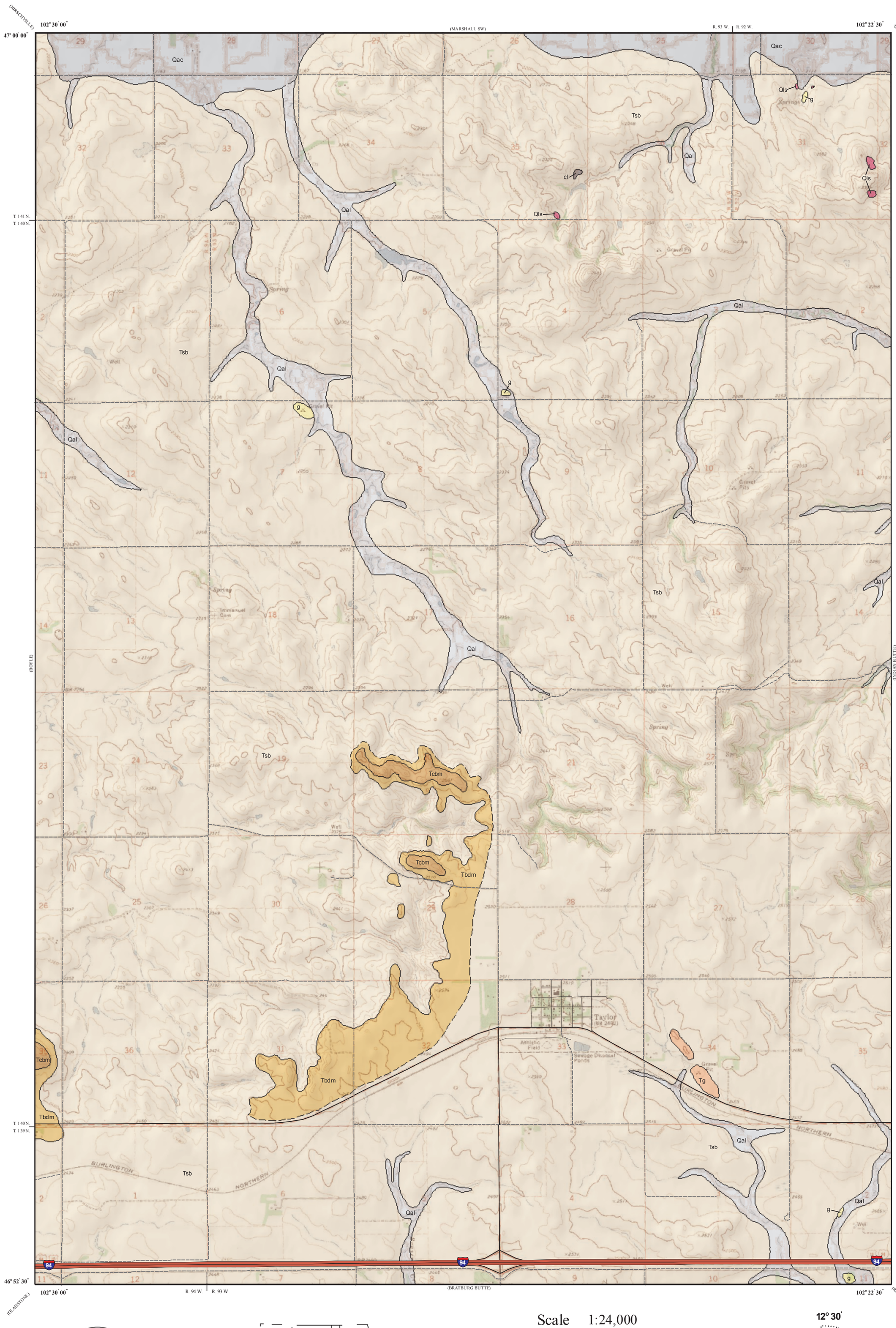
24K: Tylr - sg

North Dakota Geological Survey
Edward C. Murphy, Acting State Geologist

Surface Geology

Taylor Quadrangle, North Dakota



Edward C. Murphy
2005

EXPLANATION

QUATERNARY SYSTEM

RECENT

Manmade Features or Deposits

g — **Gravel Pit**

cl — **Clay Pit**

OAHE FORMATION

Qal — **Alluvium**

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

RECENT/PLEISTOCENE

Qls — **Landslide Deposits**

Variable mixture of strata and deposits that have slid to the base of steep slopes. Typically rotational slump blocks.

PLEISTOCENE

COLEHARBOR GROUP

Qac — **Proglacial Channels**

These channels 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 was created to distinguish between these very thick channel deposits and the moderate to thin deposits mapped as Qal.

TERTIARY SYSTEM

PLIOCENE(?)

Tg — **Sand and Gravel**

Sand and gravel deposits that generally form sinuous ridges or cap low hills. Consist of medium to coarse grained sand and small cobbles primarily comprised of Fort Union concretions, Arikaree marlstone, Knife River flint, iron stone, and petrified wood. No granitic rock fragments were observed, suggesting the deposits are pre-Pleistocene. Ten to 20 feet thick in this area.

EOCENE

GOLDEN VALLEY FORMATION

Tcbm — **Camels Butte Member**

Alternating beds of brown to grayish brown sandstone, siltstone, mudstone, claystone, and lignite. The coals are generally thinner than the underlying Sentinel Butte Formation and the siltstones and sandstones are micaceous.

PALEOCENE

Tbdm — **Bear Den Member**

Brightly colored (white, orangish yellow to purple), kaolinitic claystone, mudstone, and sandstone typically overlain by a thin silicious bed (Taylor Bed) or lignite (Alamo Bluff). Forms vertical to near vertical slopes. This member is 20 to 25 feet thick in the area.

Tsb — **SENTINEL BUTTE FORMATION**

Alternating beds of grayish brown to gray sandstone, siltstone, mudstone, claystone, and lignite. The sandstones are fine to very fine grained, moderately to poorly cemented, and contain cross- stratification.

Based on elevations and known dips on the Golden Valley Formation or the underlying Sentinel Butte Formation, the Golden Valley Formation should be present in sections 21-28 (T.140N., R.93W.). However, no outcrops of the Bear Den Member were discovered anywhere along the escarpment in this area. Though, light yellow and dark brown sandstone, typical of the Camels Butte Member, is present in a roadcut in the north half of section 22, this sandstone in not micaceous which suggests it occurs within the Sentinel Butte Formation. A northeast-trending fault or fold may be present in sections 29 and 32 (T.140N., R.93W.).

Geologic Symbols

Known contact between two geologic units

Approximate contact between two geologic units

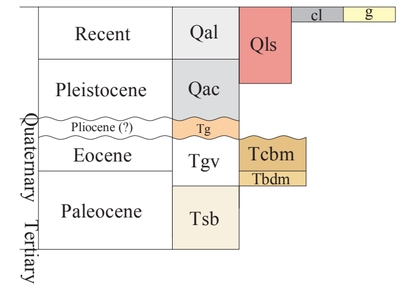
Other Features

Interstate Highway

Paved Road

Unpaved Road

Correlation of Map Units



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

Taylor Quadrangle, North Dakota

Scale 1:24,000

0 0.5 1

Miles

Lambert Conformal Conic Projection
Standard Parallels 46° 52' 30" and 47° 00' 00"
Contour Interval 20 Feet

1927 North American Datum
NGVD 1929

1973 Magnetic North
Declination at Center of Sheet

Cartographic Compilation: Elroy L. Kadrmas