

**Lake Theo Quadrangle, Caprock Canyons State Park**

(1:24,000)

**QUATERNARY**

**Holocene**

**Qal—Alluvium.** Sand, silt, gravel, and mud along drainageways. Includes some undivided low terrace deposits and some local bedrock outcrops.

**Qt—Terrace deposits.** Sand, silt, gravel, and mud along drainageways. Mostly above flood level along entrenched drainages.

**Pleistocene**

**Qbd—Blackwater Draw Formation.** Sand, silt, and sandy mud. Thickness up to ~70 ft.

**Qli—Lingos Formation.** Sand, silt, mud, and gravel. Thickness locally up to ~180 ft.

**TERTIARY**

**Pliocene and Miocene**

**To—Ogallala Formation.** Sand, silt, gravel, mud, and caliche. Thickness in map area as much as ~120 ft. Upper caliche is massive to laminated and has a stage V morphology.

**TRIASSIC**

**TRd—Dockum Group, undivided.** Sandstone, mudstone, and conglomerate. Dockum includes four undivided units (following Lehman, 1994): the older Santa Rosa, Tecovos, Trujillo, and younger Cooper Canyon Formations. Thickness between ~200 and ~300 ft.

## PERMIAN

**Pq—Quartermaster Formation.** Sandstone, siltstone, and mudstone. Gypsum veins common in lower part. Reddish color. Ash beds (Fracasso and Kolker, 1985a, b). Minor folds due to subsurface evaporite dissolution and associated subsidence of lower Quartermaster strata. Thickness is ~300 ft.

**Pwh—Whitehorse and Cloud Chief Formations, undivided.** Sandstone, siltstone, mudstone, and gypsum beds. Gypsum veins common. Minor folds due to subsurface evaporite dissolution and associated subsidence of strata. Some small-scale folds of gypsum beds due to conversion of anhydrite to gypsum. Only upper part of unit exposed.

### Map Symbols



Strike and dip of beds.



Horizontal to nearly horizontal beds; beds dipping  $<2^\circ$ .



Minor anticline.



Minor syncline.



Ash in Permian Quartermaster Formation.