

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

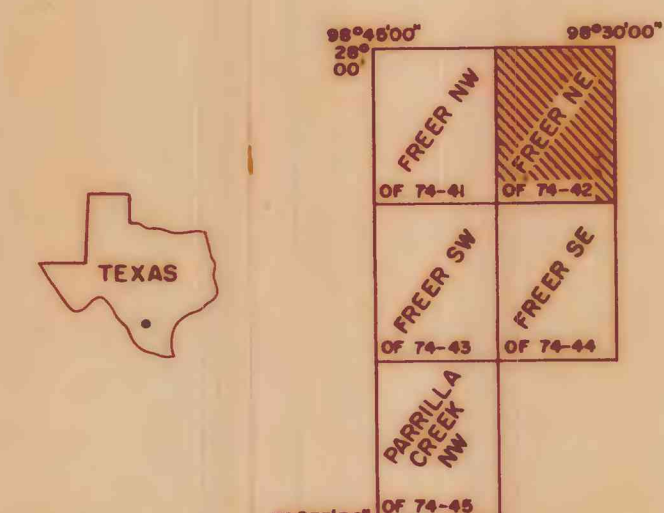
CORRELATION OF MAP UNITS

Qal	Quaternary	Quaternary
Qc	Quaternary	Quaternary
Tc	Tertiary	Tertiary
Tfo	Tertiary	Tertiary
Tg	Tertiary	Tertiary
Tcs	Tertiary	Tertiary
Tfc	Tertiary	Tertiary
T	Tertiary	Tertiary
Tef	Tertiary	Tertiary

DESCRIPTION OF MAP UNITS

- Qal** ALLUVIUM (HOLOCENE AND/OR PLEISTOCENE)--Unconsolidated gravel, sand, clay and silt along rivers and streams.
- Qc** CALICHE (PLEISTOCENE)--Caliche, fine-grained, powdery, light-gray to white, nodular texture; in places forms cement for other units at or near surface, including conglomerate, sandstone, and tuffaceous mudstone; contains land-snail shells. As much as 10 feet (3 meters) thick.
- Tg** GOLIAD SAND (PLIOCENE)--Sandstone and conglomerate, white, clayey, contains varicolored grains; some caliche cemented. Conglomerate contains volcanic pebbles of basic composition; was deposited in channels.
- Tfo** FLEMING FORMATION AND OAKVILLE SANDSTONE (MIOCENE)--Clay, brown, tuffaceous, soft, coarsely white to light-gray, fine- to coarse-grained, crossbedded sandstone; contains many varicolored grains, volcanic pebbles near base, and clayey matrix in places.
- Tfc** FLEMING FORMATION, OAKVILLE SANDSTONE, AND CATAROUA TUFF (MIOCENE)
- T** CATAROUA TUFF (MIOCENE)
- Tcs** Chusa Tuff Member--Clay, light-gray to pink, tuffaceous, massive to irregularly bedded; contains clay balls(?) 2 to 10 millimeters in diameter.
- Tes** Sealed Volcanic Conglomerate Member--Conglomerate, locally to moderately cemented; contains abundant volcanic pebbles of rhyolitic, trachytic, and trachyandesitic composition.
- Tef** Fant Tuff Member--Tuff, grayish-white, massively bedded; moderately well indurated; lumpy pisolitic texture.

- CONTACT--Approximately located
- U FAULT--Dashed where approximately located; dotted where concealed. U, upthrown side; D, downthrown side
- STRIKE AND DIP OF BEDS
- *G PIT--G, gravel; C, caliche; T, tuff

INDEX TO QUADRANGLE LOCATION (PATTERNS)
AND DESIGNATION OF OPEN-FILE REPORTSU.S. Geological Survey
OPEN FILE REPORT
This map is preliminary and has not
been edited or reviewed for conformity
with Geological Survey standards or
nomenclature.

PRELIMINARY GEOLOGIC MAP OF THE FREER NE QUADRANGLE, DUVAL COUNTY, TEXAS

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1974