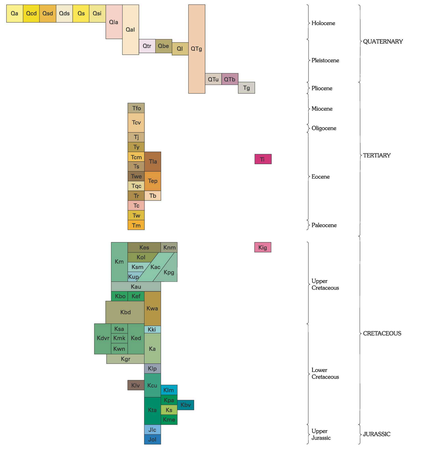
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 2009-1015
SHEET 1 OF 2
VERSION 1.0
Pamphlet accompanies map

CORRELATION OF MAP UNITS



LIST OF MAP UNITS

- w — Water
- Qal — Modern alluvium (Holocene)
- Qsd — Clay to sand dunes (Holocene)
- Qad — Active dunes (Holocene)
- Qds — Stabilized sand dunes (Holocene)
- Qs — Sand sheet (Holocene)
- Qsi — Silt sheet (Holocene)
- Qla — Lacustrine deposits (Holocene)
- Qal — Alluvium, undivided (Holocene and Pleistocene)
- Qtr — Travertine deposits (Pleistocene)
- Qbe — Beaumont Formation (Pleistocene)
- Ql — Lissie Formation (Pleistocene)
- QTg — Quaternary and Tertiary gravel, undivided (Holocene to Pliocene)
- QTu — Uvalde Gravel (Pleistocene or Pliocene)
- QTb — Pleistocene and Pliocene basalt
- Tg — Goliad Formation (Pliocene)
- Tfo — Fleming Formation and Oakville Sandstone, undivided (Miocene)
- Tcv — Catahoula (Miocene and Oligocene) and Frio and Vicksburg (Oligocene) Formations, undivided
- Tj — Jackson Group, undivided (Eocene)
- Ti — Tertiary igneous rocks (Eocene)

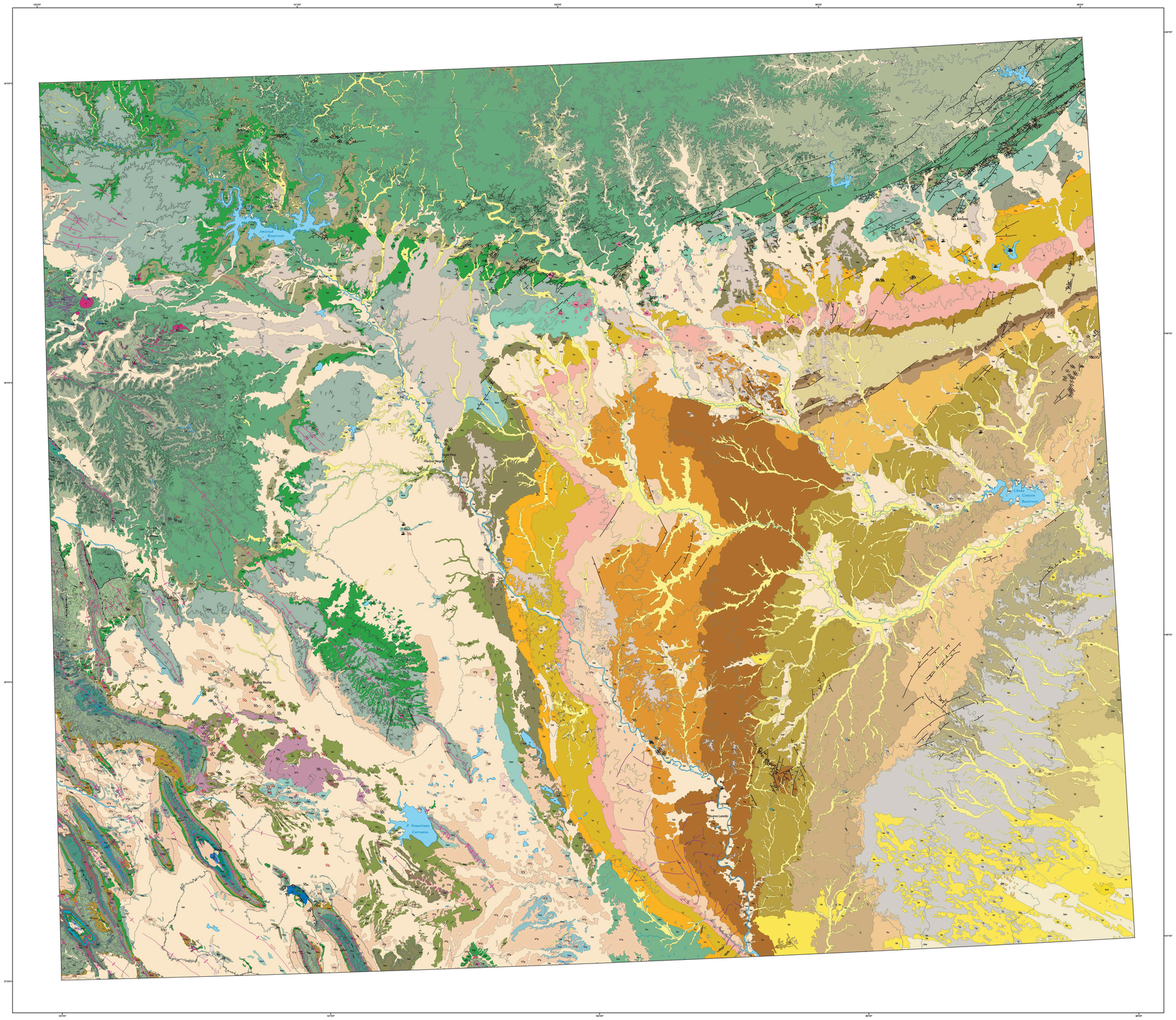
Claiborne Group (Eocene)

- Ty — Yegua Formation (Eocene)
- Tcm — Cook Mountain Formation (Eocene)
- Ts — Sparta Sand (Eocene)
- Tsg — Laredo Formation (Eocene)
- Tsw — Weches Formation (Eocene)
- Tqc — Queen City Sand (Eocene)
- Tep — El Pico Clay (Eocene)
- Tr — Reklaw Formation (Eocene)
- Tb — Bigford Formation (Eocene)
- Tc — Carrizo Sand (Eocene)
- Twr — Wilcox Group, undivided (Eocene)
- Tmk — Midway Group, undivided (Paleocene)
- Kig — Late Cretaceous igneous rocks
- Km — Mendez Shale (Upper Cretaceous)
- Kea — Escondido Formation (Upper Cretaceous)
- Kol — Olmos Formation (Upper Cretaceous)
- Ksm — San Miguel Formation (Upper Cretaceous)
- Kup — Upson Clay (Upper Cretaceous)
- Knm — Navarro Group and Marlbrook Marl, undivided (Upper Cretaceous)
- Kac — Anacacho Limestone (Upper Cretaceous)
- Kpg — Pecan Gap Chalk (Upper Cretaceous)
- Kau — Austin Chalk (Upper Cretaceous)
- Kbo — Boquillas Formation (Upper Cretaceous)
- Kef — Eagle Ford Group (Upper Cretaceous)
- Ksd — Buda Limestone and Del Rio Clay, undivided (Upper Cretaceous)
- Kwa — Washita Group, undivided (Upper and Lower Cretaceous)
- Kdvr — Devils River Limestone (Lower Cretaceous)
- Kas — Salmon Peak Limestone (Lower Cretaceous)
- Kmk — McKnight Formation (Lower Cretaceous)
- Kwn — West Nueces Formation (Lower Cretaceous)
- Ked — Edwards Limestone, undivided (Lower Cretaceous)
- Kki — Kiamichi Formation (Lower Cretaceous)
- Ka — Aurora Formation (Lower Cretaceous)
- Kgr — Glen Rose Formation (Lower Cretaceous)
- Klp — La Pena Formation (Lower Cretaceous)
- Kcu — Cupido Formation (Lower Cretaceous)
- Klv — La Virgen Formation (Lower Cretaceous)
- Klm — La Mula Formation (Lower Cretaceous)
- Kpd — Padilla Limestone (Lower Cretaceous)
- Kta — Taraises Formation (Lower Cretaceous)
- Kbv — Barril Viejo Formation (Lower Cretaceous)
- Ks — San Marcos Formation (Lower Cretaceous)
- Kmc — Menchaca Formation (Lower Cretaceous)
- JKc — La Casita Formation (Upper Jurassic)
- Jof — Olivila Formation (Upper Jurassic)

EXPLANATION OF MAP SYMBOLS

- Contact—Certain
- Facies boundary
- Fracture
- Map boundary
- Normal fault—Certain
- Normal fault—Concealed
- Reverse or thrust fault—Approximately located
- Reverse or thrust fault—Certain
- Shoreline
- Strike-slip fault, left lateral—Certain
- Strike-slip fault, left lateral—Concealed
- Strike-slip fault, right lateral—Certain
- Strike-slip fault, right lateral—Concealed
- Anticline
- Anticline—Concealed
- Inverted anticline
- Inverted anticline—Concealed
- Overturned anticline
- Overturned anticline—Concealed
- Plunging anticline
- Plunging syncline
- Syncline
- Syncline—Approximately located
- Syncline—Concealed
- Inclined bedding—Showing strike and dip
- Lava flow direction
- Active mine—b, barite; c, coal; f, flourite
- Inactive mine—b, barite; c, coal; ch, chlorite; f, flourite; mg, magnesium; mn, manganese; p, phosphorite; pb-zn, lead-zinc; u, uranium
- Prospect/occurrence—ch, chlorite; mn, manganese; pb-zn, lead-zinc; ze, zeolite
- Inactive antimony smelter
- Powerplant—c, coal burning; g, gas fired

Index map showing location of map area.



Universal Transverse Mercator projection, zone 13
Clark Spheroid of 1866
North American Datum of 1927

0 25 50 MILES

0 25 50 KILOMETERS

Scale 1:350,000
CONTOUR INTERVAL 100 METERS

Geology compiled by W.R. Page and M.E. Berry in 2006.
GIS work by D. Paco VanSistine and S.R. Snyders.

MAP A. GEOLOGY, MINES, PROSPECTS/OCCURRENCES, AND POWER PLANTS

PRELIMINARY GEOLOGIC MAP OF THE LAREDO, CRYSTAL CITY–EAGLE PASS, SAN ANTONIO, AND DEL RIO 1° x 2° QUADRANGLES, TEXAS, AND THE NUEVO LAREDO, CIUDAD ACUÑA, PIEDRAS NEGRAS, AND NUEVA ROSITA 1° x 2° QUADRANGLES, MEXICO

By
William R. Page, Margaret E. Berry, D. Paco VanSistine, and Scott R. Snyders

2009

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