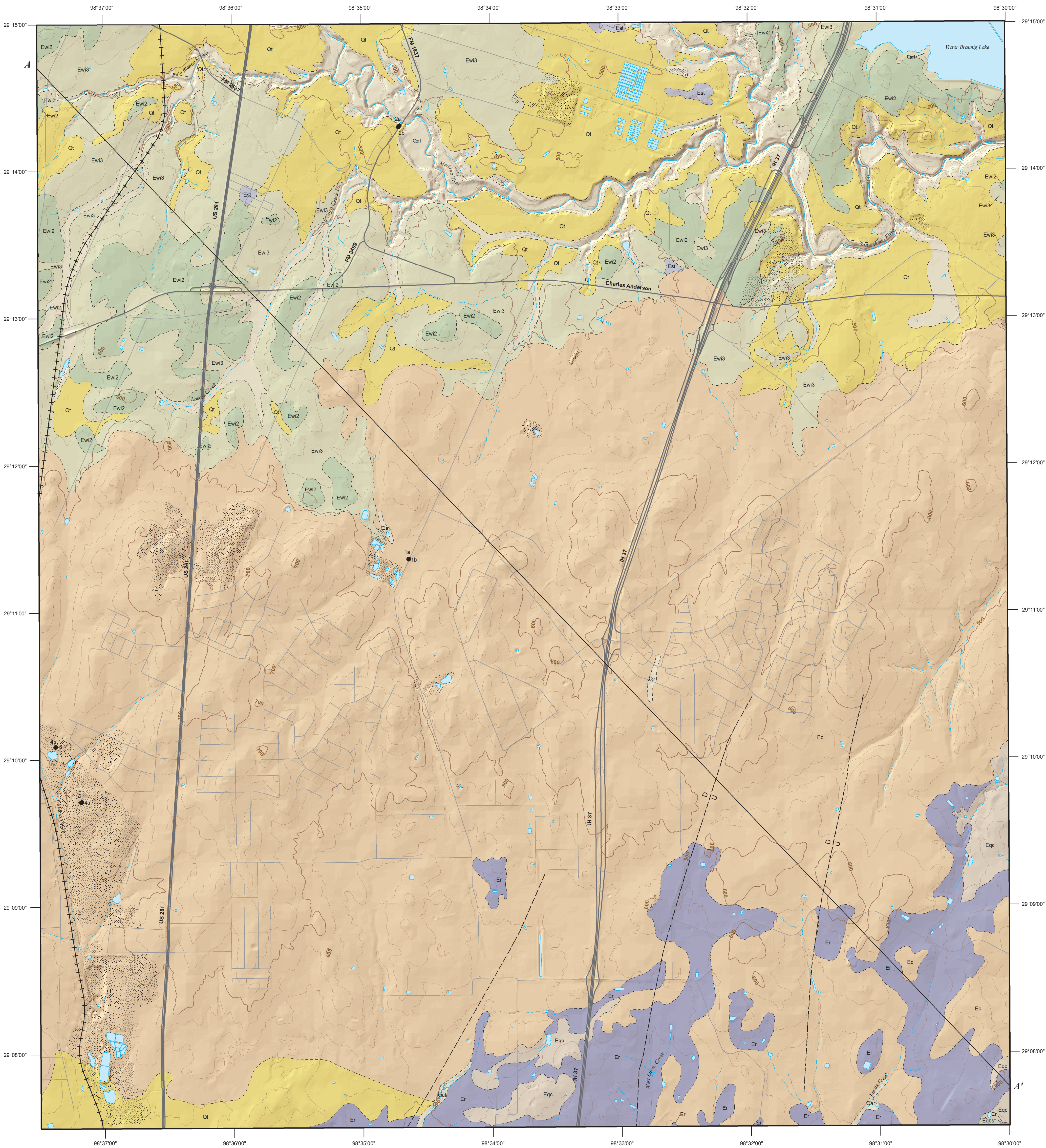
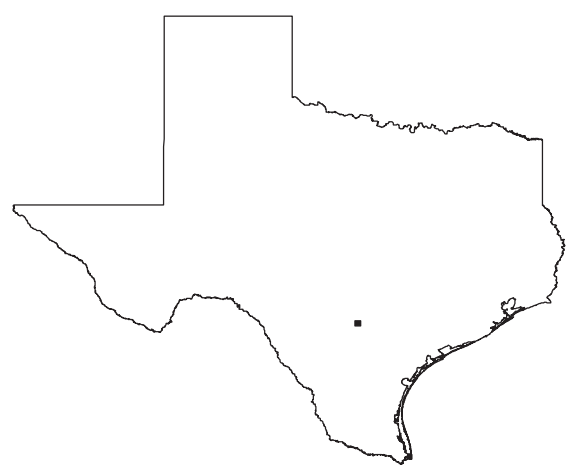
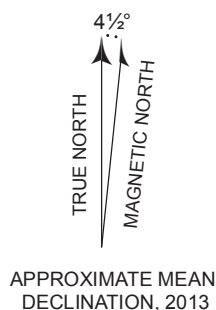
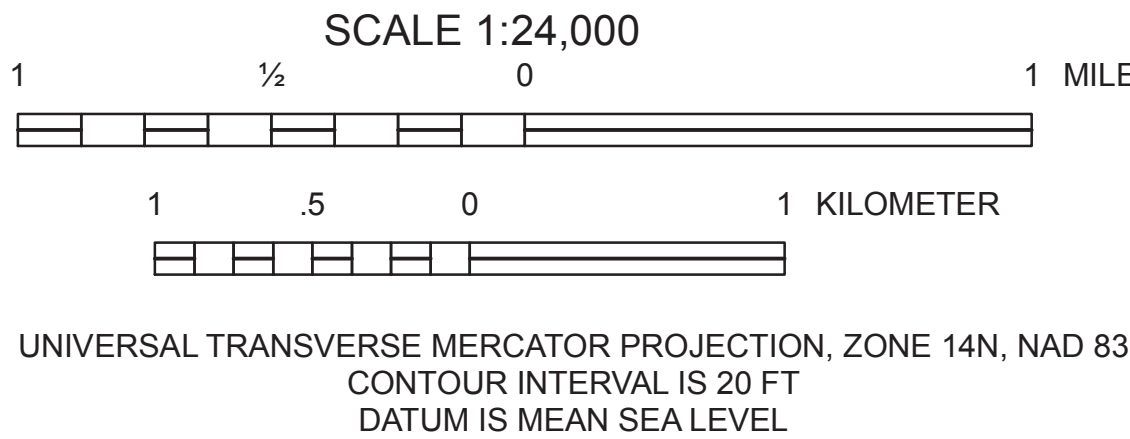


In cooperation with the STATEMAP component of the National Cooperative Geologic Mapping Program administered by the U.S. Geological Survey



UNIVERSAL TRANSVERSE MERCATOR PROJECTION, ZONE 14N, NAD 83
CONTOUR INTERVAL IS 20 FT
DATUM IS MEAN SEA LEVEL

GEOLOGIC MAP OF THE LOSOYA QUADRANGLE, TEXAS

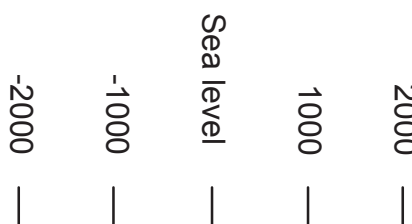
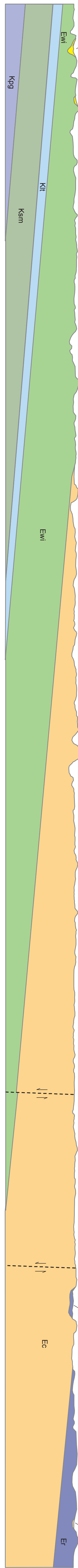
Brent A. Elliott

2014

SCALE 1:24,000

Topographic base map from:
U.S. Geological Survey (1958 — photo-revised 1984)
Projection:
Universal Transverse Mercator Zone 14N
Datum:
North American Datum of 1983
Previous bedrock geologic field investigations by:
Brown et al., 1974
Previous faults mapped by:
Amerada Petroleum (Clark, L. W., and Day, J. R., 1929-1931)
Shell Oil Company (Wright, A. C., 1963)

ELEVATION (FEET)



ELEVATION (FEET)

GEOLOGIC MAP OF THE LOSOYA QUADRANGLE, TEXAS OPEN-FILE MAP

DESCRIPTION OF GEOLOGIC MAP UNITS

This map shows the distribution of geologic units south of San Antonio between State Highway 281 and Interstate Highway 37 in the Losoya Quadrangle. Geologic units were mapped, and structural elements were measured in the field; where bedrock units are covered by surficial units and vegetation, or access is limited, units were interpreted using soil data, well-drilling records, previous mapping, and surveys.

BEDROCK UNITS

SEDIMENTARY UNITS

Quaternary or Pleistocene	Qal	Alluvium — River and stream floodplain deposits, silty sand, mud, channel gravel, rounded pebbles, and cobbles.
	Qt	Fluvial terrace deposits — Gravel, silt, sand, and clay; increasing amounts of sand, silt, and clay in the Carrizo Sand unit. These deposits are mostly above flood level along entrenched streams, except along the Medina River. Fluvial characteristics, such as point bars, oxbows, and abandoned-channel segments, are well preserved.
	Eqqs	Queen City Shale/Claystone — Local beds of fine glauconitic siltstone and claystone, greenish to brown, weathers greenish-gray and white, locally indurated with fine- to medium-grained sandstone; thin interbedded clay beds prevalent.
	Eqc	Queen City Sandstone — Quartz sand and clay; fine- to medium-grained sandstone, well-sorted, massive, occasionally indurated, light to brownish-gray, locally carbonaceous, occasionally crossbedded; weathers mottled red and white, with ironstone concretions and hematitic cement common; thickness varies between 100 and 400 ft; exposed outcrop and paralic residual cover 40–80 inches thick.
Eocene	Er	Reklaw Formation — Fine- to medium-grained sandstone, siltstone, and clay; abundant hematitic concretions, muscovite, glauconitic sands and silts; friable, highly indurated, crossbedded, with occasional mollusk and pelecypod fossils; frequent clay, siltstone, lignitic beds; thickness ranges between 50 and 80 ft.
	Ec	Carrizo Sand — Sandstone, medium- to coarse-grained, typically fining toward the top, poorly sorted, friable to locally indurated, noncalcareous, thick-bedded, light yellow to orange and brown, weathers yellowish-brown, locally iron-oxide banded, formation thickens to the west (averaging 140–200 ft), surface thickly forested with oak.
	Ew2 Ew3	Wilcox Group — Mostly mudstone with varying amounts of sandstone. Uppermost and lowermost parts are commonly glauconitic; mudstone, massive- to thin-bedded, some silt and very fine sand laminae, pale- to yellowish-brown in upper part, medium to dark gray, weathering yellowish-gray in lower part; sandstone in upper part, medium- to fine-grained, light-gray to pale yellowish-brown, in lower part very fine grained, yellowish- to moderate-brown, thickness varies between 440 and 1200 ft. Paralic residual cover 40–80 inches thick, Ew2 ; residual cover deeper than 80 inches, Ew3 .
	Est	Sabinotown Formation — Clay and sand; clay, silty, sandy, silt and sand more abundant; upward grading to mudstone and sand of Wilcox Group, light to dark gray; sand, glauconitic to very glauconitic in lower part, argillaceous, poorly sorted, phosphatic nodules and pebbles common in lowermost part, weathers to yellow and yellowish-brown soil; thickness between 100 and 400 ft.
Upper Cretaceous	Kit	Litula Formation — Shale, siltstone, and sandstone; shale, gray to bluish-gray; siltstone, brownish-yellow, thin-bedded; sandstone, fine-grained, calcareous, partly asphaltic, argillaceous, gray, flaggy, bedded; some pyroclastic material; marine megafossils common; generally poorly exposed; thickness 100–250 ft, thins westward.
	Ksm	San Miguel Formation — Clay, sandstone, coal, and fire clay; irregularly stratified, interfingering lenses of sandstone and clay, ferruginous concretions and silicified wood common; thickness up to 500 ft, feathers out eastward (Waechter, N. B., and Barnes, V. E., 1977).
Tertiary	Kpg	Pecan Gap Formation — Limestone and marl; limestone, light yellow to yellow-brown and light gray, thick-bedded, partly sandy, some volcanic rock fragments and weathered, rusty bentonite beds; marine megafossils abundant; thickness up to 500 ft, thins to a feather edge in western Bexar County (Brown, T. E., and others, 1974).

MAP SYMBOLS

(All map symbols may not appear on this sheet.)

	QUARRY / SAND-PIT AREA		CROSS-SECTION LINE
	BODY OF WATER		FAULT CONTACT — Showing local normal offset: U, upthrown block; D, downthrown block; with amount of displacement
	RIVER		SAMPLE LOCALITY — Location of sample taken for analytical work
	INTERMITTENT STREAM / CREEK		BEDDING — Sedimentary bedding plane showing strike and dip
	HIGHWAY		HORIZONTAL BEDDING
	ROAD / STREET		
	RAILROAD		
	INFERRED LITHOLOGIC CONTACT		

REFERENCES

Brown, T. E., Waechter, N. B., and Barnes, V. E., 1974, San Antonio sheet: The University of Texas at Austin, Bureau of Economic Geology, Geologic atlas of Texas, scale 1:250,000.
Clark, L. W., and Day, J. R., 1929-1931, Internal Map sheet, San Antonio sheet "B" — Areal Geology: Amerada Petroleum Corporation, Tulsa, Oklahoma, scale 1:250,000.
U.S. Geological Survey, 1973, Thelma Quadrangle, Texas [map]: USGS, 7.5 Minute Series, scale 1:24,000.
Waechter, N. B., and Barnes, V. E., 1977, Del Rio sheet: The University of Texas at Austin, Bureau of Economic Geology, Geologic atlas of Texas, scale 1:250,000.
Wright, A. C., 1963, Internal Map sheet, San Antonio: Shell Oil Co., Houston, Texas, scale 1:250,000.



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