Table 1. Summary of the geologic framework, hydrostratigraphy, ichnology, of the Blanco, Payton, and Rough Hollow 7.5-minute quadrangles, Blanco, Comal, Hays, and Kendall Counties, Texas.

[Period, Epoch, Group, Formation, Members, and lithology modified from Whitney (1952), Lozo and Stricklin (1956), Stricklin and others (1971), Rose (1972), Stricklin and Smith (1973), Amsbury (1974), Inden (1974), Perkins (1974), Clark and others (2010), Blome and Clark (2014), Clark and others (2014), and the U.S. Geological Survey National Geologic Map Database, GEOLEX (http://ngmdb.usgs.gov); aquifers from Maclay and Small (1976), Ashworth (1983); thickness from outcrop, Clark and others (2009), Weirman and others (2010), and Clark and others (2014); hydrogeologic function modified from Clark and others (2009), Weirman and others (2010), Clark and others (2014), Clark and Morris (2015); Porosity types modified from Choquette and Pray (1970). Fabric selective, I = Interparticle porosity, SH = Shelter porosity, MO = Moldic porosity, BU = Burrowed porosity, BP = Bedding plane porosity. Not-fabric selective, FR = Fracture porosity, CH = Channel porosity, BR = Breccia, VUG = vug porosity, CV = Cave porosity; *previously published identification for the hydrostratigraphic unit; **not aerially exposed in the study area.]

Geologic framework							Hydrostratigraphy					
Period	Epoch	Group	Formation	Members	Approximate thickness (feet)[1]	Lithology	Aquifer	Hydrostratigraphic unit (*)	Thickness (feet; measured at outcrop)	Hydro-geologic function	Porosity type	Field identification
		Edwards	Kainer	basal nodular	40–60	Shaly, nodular limestone; burrowed mudstone and miliolid grainstone: In western Comal County contains oyster reefs of *Ceratostreon [Exogyra] texana* and caprinid biostromes which is the transition to the Walnut Clay	Edwards	VIII	40–60	Confining, locally water bearing	BP, FR, CV	Massive, nodular and mottled limestone, BRBs[2] and orange wisps in freshly broken rock, *Ceratostreon [Exogyra] texana*
Cretaceous	Early Cretaceous	Trinity		Upper	348–380 (typically 360)	Argillaceous wackestone, packstone to miliolid grainstone, argillaceous limestone; burrowed	Upper Trinity	Camp Bullis (B)	220–230	Confining	BU, BP, FR, occasional CV	Alternating beds of limestone and argillaceous limestone; fossils rare; stair-step topography
						Dissolved evaporites, highly altered crystalline limestone and chalky mudstone, breccia; commonly contains boxwork voids where the evaporites have been dissolved		Upper evaporite (C)	0–10	Aquifer	I, MO, BR	Weathers to an orangish red pebbly texture, often has less cedar growth and hardier, more abundant grasses, boxwork structure, springs and seeps
						Alternating wackestone, packstone, clay, and mudstone; thin, silty "platy" mudstone at base, *Orbitolina minuta* (Douglas, 1960), *Porocystis golobularis, Tapes decepta, Protocardia texana*, *Hemiaster* sp., *Neithea* sp., *Turritella*, gastropods and mollusks		Fossiliferous (D)	120	Confining	MO, FR, CV near top	Alternating beds of limestone and marls with *Orbitolina minuta* (Douglas, 1960) common
						Dissolved evaporites, highly altered crystalline limestone and chalky mudstone, breccia; up to three *Corbula* sp. beds; lower Corbula bed up to 1 foot thick with ripples common, commonly contains boxwork voids where evaporites have been dissolved		Lower evaporite (E)	8–10	Aquifer	I, MO, BR	Weathers to an orange; is red pebbly texture, often has less cedar growth and hardier grasses, boxwork structure, *Corbula* sp., springs and seeps
			Glen Rose Limestone	Lowerr	195–330 (typically 200–225)	Wackestone to grainstone, agrillaceous wackestone, shale, evaporites; *Salenia texana, Macraster* sp., *Orbitolina texana* (Roemer, 1852), *Nerinia* sp., pecten, gastropods, pelecyopods	Middle Trinity	Bulverde (A)	30–40 (typically 30)	Confining	BP, FR, MO and BR where evaporites have been removed	*Salenia texana* bed immediately below Corbula bed, abundant fossils including Protocardia, pectin, *Orbitolina texana* (Roemer, 1852), Porocystis, gastropods, echinoids, grades into marls, bioturbated limestone beds, and evaporite beds
						Mudstone to wackestone, argillaceous wackestone, boundstone; *Orbitolina texana* (Roemer, 1852), caprinid, toucasia, monopleurid, pectens, pelecypods, gastropods		Little Blanco (B)	30–40 (typically 30)	Aquifer	MO in patch reefs, BP, FR	Limestone beds thicker and more resistive to erosion than overlying and underlying units, *Orbitolina texana* (Roemer, 1852), rudist patch reefs
						Argillaceous wackestone and shale; *Orbitolina texana* (Roemer, 1852), pelecypods, gastropods		Twin Sisters (C)	10–40 (typically 30)	Confining shale beds	I	Thick marl beds, thin shale beds, *Orbitolina texana* (Roemer, 1852), often contains ponds and seeps, often little vegetation; steeper slopes often have "badlands" type weathering, thinner in areas of patch reefs in the underlying Doeppenschmidt Hydrostratigraphic unit
						Mudstone to grainstone, argillaceous wackestone to packstone, boundstone, miliolid grainstone; pectens, oysters, pelecypods, *Nerinia* sp., *Orbitolina texana* (Roemer, 1852), *Tylostoma* sp., caprinid, toucasia, monopleurid		Doeppenschmidt (D)	40–80 (typically 40)	Aquifer	I, MO, BU, BP, FR, CV	*Orbitolina texana* (Roemer, 1852), limestone beds thicker and more resistive than overlying and underlying, patch reefs formed on rudist, reefal talus
						Alternating beds of argillaceous wackestone to packstone and mudstone to grainstone, miliolid grainstone; pectens, oysters, pelecypods, *Nerinia* sp., *Orbitolina texana* (Roemer, 1852), *Tylostoma* sp., monopleurid		Rust (E)	40–70 (typically 40)	Confining	I, FR, CV	Tends to form stair-step topography with soils, *Orbitolina texana* (Roemer, 1852)
						Wackestone to grainstone, boundstone, burrows, *Orbitolina texana* (Roemer, 1852), *Trigonia* sp., toucasia, caprinid, shell fragments, pectens, miliolids, *Turritella*, and various corals		Honey Creek (F)	45–60 (typically 55)	Aquifer	I, MO, BU, BP, FR, CH, CV	Thick beds of wackestone to grainstone; corals, caprinid, *Trigonia* sp., cliff forming; outcrop often contains large limestone float with large channel and moldic porosity; caves and springs
			Pearsall	Hensell Sand	0–40	Claystone, siltstone, terrigenous sand; red sandstone conglomerate/breccia at base of unit; oysters, quartz geodes		Hensell	0–40	Aquifer	I, MO, SH, CV	Quartz geodes, large oyster shells, reddish sandy soil with good grass growth, red sandstone conglomerate/breccia at base
				Cow Creek Limestone	26–58	Very fine-grained to fine grained carbonate sand (grainstone) with localized cross-bedding; Areas of coral and rudist biostromes (boundstone) overlain by rippled, cross-bedded grainstone		Cow Creek	40–72	Aquifer	I, MO, BU, VUG, BP, FR, CH, CV	Carbonate sands, cross-bedding near top, biostrome composed of corals and rudist, talus slopes
					14	Dolomitic mudstone to packstone; oysters						
				Hammett Shale	50	Upper: Claystone, with siltstone lenses, overlain by fossiliferous dolomitic limestone; Lower: siltstone and dolomite	Confining unit	Hammett	50	Confining	**	Holds surface water; springs at contact with Cow Creek

[1]Thickness range based on minimum and maximum thickness of individual members (from field measurements and geophysical logs). The actual thickness range near the median of the possible thickness.

[2]Black rotund bodies (BRBs) probably from oxidation of Foraminifera (Small and Maclay, 1982).