

APPENDIX A—EXPLANATION OF GEOLOGICAL UNITS

HILL COUNTRY TRINITY AQUIFER— PEDERNALES RIVER 30 × 60 MINUTE QUADRANGLE

Blanco, Crabapple Creek, Cypress Creek, Driftwood, Dripping Springs,
Henly, Pace Bend, Payton, Rafter Hollow, Rough Hollow,
Shingle Hills, and Whitworth Ranch Quadrangles (scale 1:24,000)

QUATERNARY

Qal—Alluvium. Gravel, sand, silt, and mud; mostly modern drainageway deposits; includes some undivided thin, local terrace deposits and local bedrock outcrops.

Qt—Terrace alluvium. Gravel, sand, silt, and mud.

LOWER CRETACEOUS

Edwards Group: Fort Terrett (Kft) and Segovia (Ks) Formations of platform setting of eastern Edwards Plateau and Kainer (Kk) and Person (Kp) Formations of platform setting of Balcones Fault Zone area.

Ks—Segovia Formation. Limestone, dolomitic limestone, dolomite, and lesser argillaceous limestone; approximately equivalent to Person Formation of Balcones Fault Zone area; only minor outcrop areas in west part of study area; west of map area as much as 360 ft thick.

Kft—Fort Terrett Formation. Limestone, dolomitic limestone, dolomite, and lesser argillaceous limestone; approximately equivalent to Kainer and Walnut Formations of the Balcones Fault Zone area; shallow subtidal to tidal-flat cycles common; crystalline limestone/dolomitic limestone common; fossils include bivalves, gastropods, rudistids, and miliolids; upper part contains some leached evaporitic intervals and breccias; lower 20 to 60 ft is equivalent to the Walnut Formation (Kw) of the Balcones Fault Zone area.

Kp—Person Formation. Limestone, dolomitic limestone, dolomite, and lesser argillaceous limestone; approximately equivalent to Segovia Formation of eastern Edwards Plateau; shallow subtidal to tidal-flat cycles common; crystalline limestone/dolomitic limestone? common; leached and collapsed intervals; local pockets of red clay in karst collapse features; fossils include bivalves, gastropods, rudistids, and miliolids; lower 20 to 30 ft composes regional dense member, a limestone to argillaceous limestone interval sometimes containing thin, flaggy beds; thickness between 130 and 150 ft.

Kft—Kainer Formation. Limestone, dolomitic limestone, dolomite, and lesser argillaceous limestone; approximately equivalent to Fort Terrett Formation of eastern Edwards Plateau; shallow subtidal to tidal-flat cycles common; crystalline limestone/dolomitic limestone common; upper part exhibits abundant beds with grainstone fabric; leached evaporitic intervals and breccias in middle part of unit; fossils include bivalves, gastropods, rudistids, and miliolids; thickness ~250 ft. Some researchers include strata composing Walnut Formation, **Kw**, with lower part of Kainer Formation.

Kw—Walnut Formation. Limestone, argillaceous limestone, marl, and dolomitic limestone; sometimes referred to as lower nodular limestone member of Kainer Formation; equivalent to lower Fort Terrett Formation of eastern Edwards Plateau; fossils common and include oyster *Exogyra texana*; thickness between 30 and 60 ft.

Kgru—Upper Glen Rose Formation. Limestone, dolomitic limestone, argillaceous limestone, and some marl; shallow subtidal to tidal-flat cycles common; alternating resistant and recessive beds form stair-step topography; dolomitic in upper and lower parts; abundant fossils include bivalves, rudistids, oysters, echinoids, and *Foraminifera (Orbitolina texana)*; leached evaporitic intervals often referred to as dissolution zones; thickness as much as 400 ft.

Kgrl—Lower Glen Rose Formation. Limestone, dolomitic limestone, argillaceous limestone, and some marl; top of unit marked by interval with one to three thin, resistant, 1- to 3-ft-thick beds containing *Corbula*; *Corbula* interval above very fossiliferous unit that often includes echinoid *Salina texana*; *Corbula* interval below a leached evaporitic interval of

Upper Glen Rose; abundant fossils include bivalves, rudistids, oysters, echinoids, and *Foraminifera* (*Orbitolina texana*); massive and thick beds common; coral reef at base of unit at Narrows of Blanco River; unit thickness between 200 and 270 ft.

Kh—Hensell Formation. Sandstone, siltstone, mudstone, conglomerate, lesser sandy to silty limestone, dolomitic limestone and dolomitic siltstone; forms shoreward facies of Glen Rose Limestone; about 60 ft thick in map area; thickness of as much as 220 ft reported outside of map area (Barnes, 1981).

Kcc—Cow Creek Formation. Limestone and sandy limestone; grainstone fabric dominant; fossil fragments abundant; some siliciclastic grains; moldic porosity; crossbeds common. Barnes (1981) described unit as coquinite in which many of the fossils are dissolved. Thickness as much as 60 ft.

Kh—Hamett Formation. Calcareous mudstone, some silt and sand; pebbles and cobbles at base. Thickness between 15 and 40 ft.

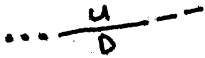
Ksy—Sycamore Formation. Sandstone, conglomerate, siltstone, and mudstone; thickness as much as 40 ft. Study area contains only minor occurrences in northwest part of Pace Bend quadrangle.

Map Symbols



Contacts

Contacts drawn as solid lines are relatively more distinct in the field and on aerial photographs than where they are drawn as dashed lines; question mark (?) indicates where contact is uncertain



Normal fault; U=upthrown block, D=downthrown block

Faults drawn as solid lines are relatively more distinct in the field and on aerial photographs than where they are drawn as dashed lines; dotted lines show where faults are covered by unfaulted deposits; question mark (?) indicates where fault is uncertain.



Strike and dip of beds dipping between 2° and 6° ; aerial-
photograph interpretation.