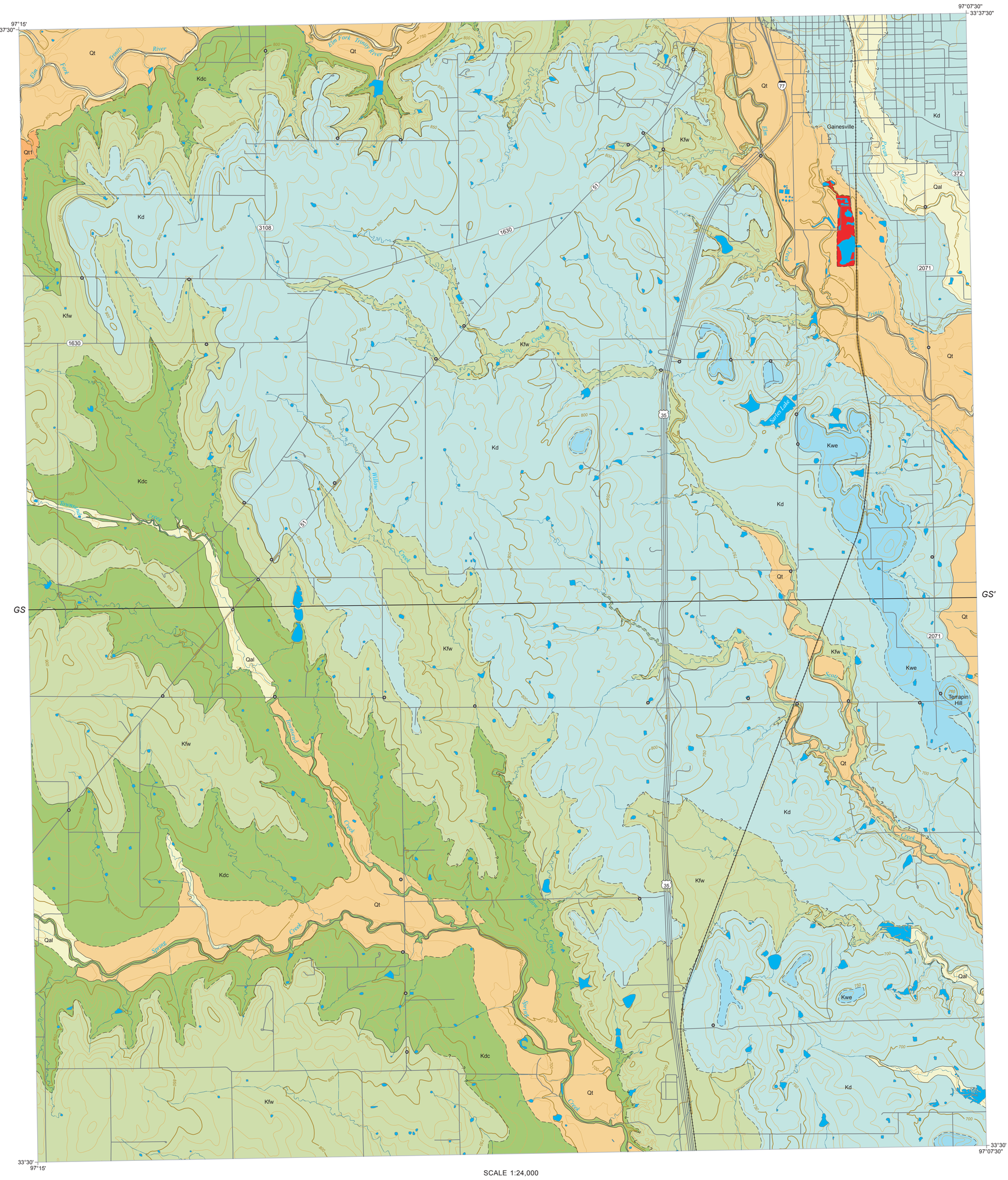
BUREAU OF ECONOMIC GEOLOGY
SCOTT W. TINKER, DIRECTOR
JACKSON SCHOOL OF GEOSCIENCES
THE UNIVERSITY OF TEXAS AT AUSTIN
In cooperation with the STATEMAP component of the
National Cooperative Geologic Mapping Program,
administered by the U.S. Geological Survey

GEOLOGIC MAP OF THE GAINESVILLE SOUTH QUADRANGLE, TEXAS
OPEN-FILE MAP 0217



SCALE 1:24,000

0 .5 1 1.5 2 MILES

0 .5 1 1.5 2 KILOMETERS

UNIVERSAL TRANSVERSE MERCATOR PROJECTION, ZONE 14N, NAD 83

QUATERNARY

Qal **Qal—Alluvium.** Sand, silt, clay, and gravel.

Qt **Qt—Terrace deposits of streams.** Sand, silt, clay, and gravel.

Qt1 **Qt1—Higher terrace deposits of streams.** Sand, silt, clay, and gravel.

LOWER CRETACEOUS

Kwe **Kwe—Weno Formation.** Marl, calcareous shale, and some thin beds of limestone and sandstone; concretions and fossils. Upper limestone, Quarry Limestone, is a quartz-rich shell packstone and is a few feet thick. Weno thickness is as much as 50 ft. Selected references include Bybee and Bullard (1927), Hendricks (1967), McGowen and others (1967), Slocki (1967), and Scott and others (1978).

Kd **Kd—Denton Clay.** Clay/shale and some limestone and sandstone; calcareous; fossils. Upper 3- to 5-ft-thick limestone contains abundant *Gryphaea*. Up to 65 ft thick. Selected references include Bybee and Bullard (1927), Hendricks (1967), McGowen and others (1967), Slocki (1967), and Scott and others (1978).

Kfw **Kfw—Fort Worth Formation.** Limestone interbedded with argillaceous limestone and marl; mostly packstone and wackestone fabric; fossils abundant; 30 to 40 ft thick. Selected references include Bybee and Bullard (1927), Hendricks (1967), McGowen and others (1967), Slocki (1967), and Scott and others (1978).

Kdc **Kdc—Duck Creek Formation.** Limestone, argillaceous limestone, and marl; mostly packstone and wackestone fabric. Lower 50 to 60 ft is limestone and lesser argillaceous limestone and marl; fossils abundant; ammonites common. Upper 40 to 60 ft is marl, argillaceous limestone, and lesser limestone; fossils abundant. Selected references include Bybee and Bullard (1927), Hendricks (1967), McGowen and others (1967), Slocki (1967), and Scott and others (1978).

Kki **Kki—Kiamichi Formation (subsurface unit; shown only in cross section).** Marl, calcareous shale, and some sandy limestone and sandstone; *Gryphaea* common in some beds; between 40 and 50 ft thick. Potential clay resource. Selected references include Bybee and Bullard (1927), Bishop (1967), Hendricks (1967), McGowen and others (1967), Slocki (1967), and Scott and others (1978).

Kgdw **Kgdw—Goodland Limestone and Walnut Clay, undivided (subsurface unit; shown only in cross section).** Limestone and less argillaceous limestone and marl. Goodland Limestone: Limestone and less argillaceous limestone; wackestone, packstone, and grainstone fabrics; massive to nodular bedding; fossils abundant; between 20 and 40 ft thick. Potential lime and crushed stone resource. Walnut Clay: Argillaceous limestone and marl; fossils include common *Exogyra texana* and *Gryphaea*; as much as 20 ft thick. Selected references include Bybee and Bullard (1927), Hendricks (1967), McGowen and others (1967).

Ka **Ka—Antlers Sand (subsurface unit; shown only in cross section**). Sand, clay, and conglomerate; lower and upper intervals mostly sand; middle interval mostly clay; thickness 500 to 650 ft. Potential sand resource. Selected references include Bybee and Bullard (1927), Hendricks (1967), McGowen and others (1967), and Fisher and Rodda (1966, 1967).

Surface area disturbed by quarry operations

Unit contact; contacts drawn as solid lines are relatively more distinct in the field and on aerial photographs than those drawn as dashed lines

Approximate contact

?— —?— Approximate contact queried

Railroad

Road

Stream, lake

Intermittent stream

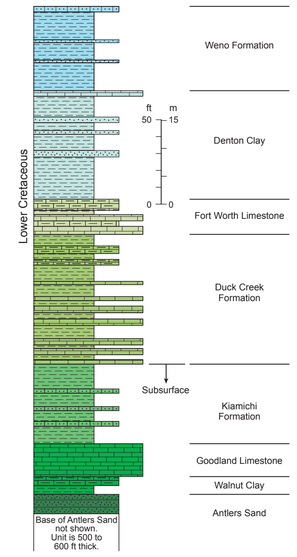
1050 Elevation; contour interval 10 ft

Selected station

Bedrock Column

Chronostratigraphic units		Time Ma	Map and cross section units
Quaternary		1.8	Qal, Qt, Qt1
Lower Cretaceous	Albian	97.5	Kwe, Kd, Kfw, Kde, Kki, Kgdw, Ka
		113	

Chronostratigraphic units adapted from Salvador and Quezada Muñeton (1989)



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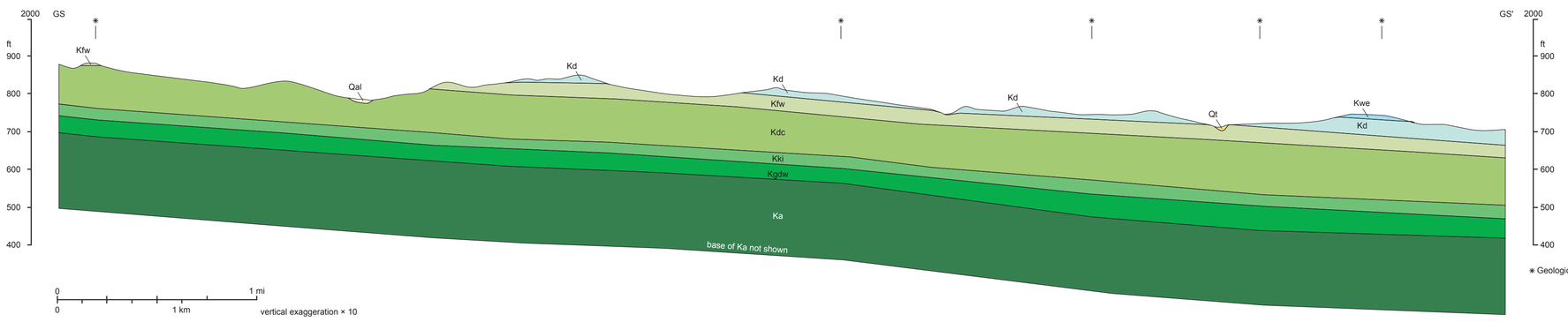
Geology illustrated on this map is based on field and aerial-photograph interpretations following a review of previous work on the area's geology. Previous regional maps include the 1:250,000-scale Sherman Sheet (McGowan and others, 1967) and the 1:250,000-scale geologic map of Cooke County (Bybee and Bullard, 1927). The topographic base was created from digital files of the Texas Natural Resources Information Services (TNRIS) for U.S. Geological Survey, Hood, Texas, 7.5-minute topographic quadrangle map. Digital files of roads, railroads, county boundaries, drainage, and lakes were also obtained through TNRIS.

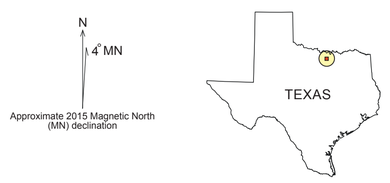
Work for this map was supported partly by the U.S. Geologic Survey, National Geologic Mapping Program, with the assistance of STATEMAP award G14AC00209, and by the Bureau of Economic Geology STARR program. This map is submitted with the understanding that the United States Government is authorized to reproduce and distribute reprints for governmental use. This study also benefited from subsurface data from the Texas Railroad Commission Groundwater Advisory Unit. Editing was by Stephanie Jones. Computer graphics work to construct this map was by Cathy Brown. Views and conclusions contained in this map should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government. The author disclaims any responsibility or liability for interpretations from this map.

GEOLOGIC MAP OF THE GAINESVILLE SOUTH QUADRANGLE, TEXAS

Edward W. Collins

2015





✳ Geological log from nearby well.

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