

**GEORGIA**  
**STATE DIVISION OF CONSERVATION**  
DEPARTMENT OF MINES, MINING AND GEOLOGY  
GARLAND PEYTON, Director

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**THE GEOLOGICAL SURVEY**  
Bulletin Number 70

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**WELL LOGS OF THE**  
**COASTAL PLAIN OF GEORGIA**

by

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Prepared cooperatively by the U. S. Geological Survey

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**ATLANTA**  
**1961**

## Remarks:

On the basis of other knowledge of this area it is felt that even better water-bearing sands occur at depths below total depth of above well.

## CHATTAHOOCHEE COUNTY

Location: 0.25 mi. south of junction of Highways 26 and 280, few hundred yd. west of Highway 280, in Cusseta

Well No.: GGS 341

Elev.: 550

Owner: No 1 City of Cusseta

Driller: Layne-Atlantic Company

Drilled: May 1953

	Thickness (feet)	Depth (feet)
<b>Upper Cretaceous: Cusseta Sand:</b>		
Sand: fine to coarse-grained, angular; interbedded clay, mottled (light-gray to red), micaceous, sandy	60	60
<b>Blufftown Formation:</b>		
Clay: tan to dark-gray to black at depth, carbonaceous, micaceous; interbedded sand, fine to medium-grained, angular, micaceous	94	154
Limestone: gray, dense, crystalline, sandy, fossiliferous (macroshells)	6	160
Clay: dark-gray to black, carbonaceous, micaceous, pyritiferous, fossiliferous (macroshells, Ostracods, and Foraminifera at depth)	70	230
Clay (or marl): as above	75	305
<i>Vaginulina texana</i> at 230-240.		
<i>Kyphopyxa christneri</i> at 275-285.		
Sand: fine to medium-grained, angular; interbedded clay, as above	91	396
Clay (or marl): as above	31	427
Sand: fine to medium-grained, angular; micaceous; interbedded clay, as above	111	538
<b>Eutaw Formation:</b>		
Shale: dark greenish-gray to black, fissile, chloritic, carbonaceous, fossiliferous at certain levels (macroshells and Ostracods)	54	592

	Thickness (feet)	Depth (feet)
Sand: fine to medium-grained, indurated at depth, abundantly micaceous, phosphatic, fossiliferous (macroshells and some Ostracods at certain horizons) .....	60	652
<b>Tuscaloosa Formation: Upper Part:</b>		
Sand: medium to coarse-grained, angular, arkosic, scattered grains of "rose quartz" <sup>1</sup> ; interbedded clay, mottled (yellowish to dark-green to red), somewhat fissile and splintery, iron-stained (particularly the green-colored clay); micaceous, sandy .....	318	970
<b>Middle Part:</b>		
Clay: mottled (dark-green to tan to red), somewhat fissile and splintery, iron-stained (particularly the green-colored clay), micaceous, sandy; interbedded sand, medium to coarse-grained, angular, arkosic .....	133	1,103
<b>Lower Part:</b>		
Sand: medium to coarse-grained, rather massive, angular, arkosic; interbedded clay, as above .....	82	1,185
<b>Basement Complex (Undifferentiated):</b>		
Crystalline rock: light-gray, argillaceous (weathered), to dense, dark-gray (fresh, unweathered), abundantly micaceous <sup>2</sup> .....	20	1,205

**Summary:**

Upper Cretaceous (Cusseta sand) .....	60	60
Upper Cretaceous (Blufftown formation) .....	478	538
Upper Cretaceous (Eutaw formation) .....	114	652
Upper Cretaceous (Tuscaloosa formation) .....	533	1,185
Basement complex (undifferentiated) .....	20	1,205

**Potential Water-Bearing Zones:**

Sand: fine to medium-grained .....	111	538
Sand: medium to coarse-grained .....	318	970
Sand: medium to coarse-grained .....	82	1,185

<sup>1</sup>Not pure rose quartz, but iron-stained grains of quartz.<sup>2</sup>Mostly biotite mica.

## Remarks:

Owing to unusually deep dissection (rugged topography), it is possible that the sands above 538 feet may be dry through ground-water leakage (spring discharge). Hence, in order to be safe, water wells in this area should be completed in the more deeply-buried sands of Tuscaloosa age.

## CLAY COUNTY

Location: 0.9 mi. east of intersection of Highways 37 and 39, 0.4 mi. north of Highway 37, in Fort Gaines  
 Well No.: GGS 402  
 Elev.: 390  
 Owner: No. 1 Speight School  
 Driller: Layne-Atlantic Company  
 Drilled: August 1954

	Thickness (feet)	Depth (feet)
<b>Middle Eocene: Claiborne Group: Lisbon Formation:</b>		
Sand: fine to coarse-grained; clay, tan to red (mottled), sandy, limonitic; some limestone, yellow, much leached, iron-stained, fossiliferous at depth (bryozoan remains and Foraminifera) .....	27	27
Limestone: as in above sample .....	18	45
<i>Cibicides westi</i> at 27-35.		
Clay: yellowish-green, sandy, somewhat indurated; some limestone, gray, dense, crystalline, sandy, fossiliferous (macroshells) .....	21	66
Clay: yellowish-green, with tan to red streaks (somewhat mottled), blocky; micaceous; some limestone, as above.....	20	86
<b>Tallahatta Formation:</b>		
Clay: yellowish-green to light-gray, blocky, somewhat indurated and tough at depth, micaceous, fossiliferous (some Foraminifera); limestone, light-gray, dense, sandy, coarsely glauconitic .....	24	110
<i>Cibicides tallahattensis</i> , <i>Valvulineria jacksonensis</i> var. at 86-110.		
Sand: fine to coarse-grained, subangular grains, sparsely phosphatic, indurated at depth, fossiliferous (a coquina).....	80	190
<b>Lower Eocene: Wilcox Group (Undifferentiated):</b>		
Clay: dark-gray, sandy, carbonaceous, micaceous, pyritiferous and fossiliferous at depth (some Foraminifera); limestone, gray, dense, coarsely glauconitic, sandy.....	19	209
<i>Eponides dorfi</i> , <i>Anomalina</i> sp., <i>Asterigerina</i> sp. at 190-209.		