

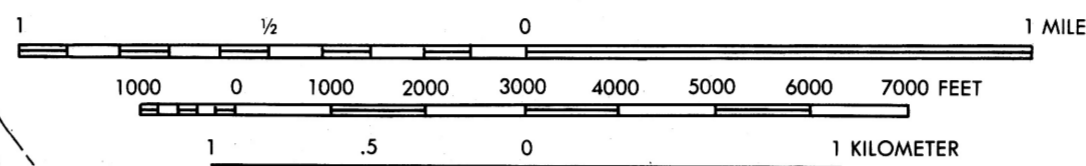
MISSISSIPPI BUREAU OF GEOLOGY  
OPEN FILE REPORT 8

**GEOLOGIC MAP  
OF  
MISSISSIPPI PORTIONS OF THE YELLOW CREEK  
(MISSISSIPPI-ALABAMA-TENNESSEE)  
AND WATERLOO  
(MISSISSIPPI-ALABAMA)  
QUADRANGLES**

Geology by Robert K. Merrill

1988

SCALE 1:24,000



Quadrangle map locations.  
Mapped portions are shaded.

**DESCRIPTION OF MAP UNITS**

QUATERNARY	<b>Qal</b>	<b>ALLUVIUM</b> Sand, medium- to brownish-gray, very fine- to very coarse-grained, subangular to subrounded quartz, silty, clayey; commonly contains organic matter; chert and quartzite pebbles common at base.
	<b>Qtl</b>	<b>LOW ELEVATION TERRACE DEPOSITS</b> Sand, light-gray to dark reddish-brown, very fine- to very coarse-grained, subangular to subrounded quartz, silty, clayey; lower portions contain layers and lenses of flattened quartzite and quartz pebbles interspersed with rounded chert pebbles; iron staining common on pebbles. Distributed adjacent to present stream courses, at and above flood plain elevation.
	<b>Qtt</b>	<b>TENNESSEE RIVER TERRACE DEPOSITS</b> Gravel, moderate reddish- to dark yellowish-brown, very well rounded chert and smooth, flattened quartzite pebbles; iron staining common on outer surfaces; beds and lenses of sand, silt, and clay occur frequently in upper portions. Irregular bedding, occasional cross-bedding; ironstone cementation common. Mainly occur at elevations above 600 feet. Erosional contact at base.
SELMA GROUP	<b>Kc</b>	<b>COFFEE FORMATION</b> Sand, light- to medium-gray, very fine- to medium-grained, subangular quartz, glauconitic, micaceous; frequently interbedded with silt, light- to medium-gray, clayey; thinly bedded with occasional intervals of irregular- to massive-bedded sand; occasional lenses and stringers of small chert gravel at base. Frequent thin ironstone beds; weathers to shades of reddish-brown. Unconformity at base.
	<b>Ket</b>	<b>EUTAW FORMATION TOMBIGBEE SAND MEMBER</b> Sand, medium light- to olive-gray, very fine- to medium-grained, subangular to subrounded quartz, well sorted, massive-bedded, glauconitic, micaceous, silty, clayey; weathers to various shades of reddish-brown. Frequent occurrence of ferruginous cemented sand molds of <i>Callianassa</i> sp. burrows.
EUTAW GROUP	<b>Ke</b>	<b>LOWER EUTAW MEMBER</b> Sand, medium- to olive-gray, fine- to medium-grained, subangular to subrounded quartz, glauconitic, micaceous, horizontal- and cross-bedded; commonly thinly interbedded and interlaminated with clay, medium-gray, locally carbonaceous; isolated occurrences of petrified wood in lower portions. Weathers to various shades of reddish-brown. Contains chert gravel in lowermost portions. Unconformity at base.
	<b>Kt</b>	<b>TUSCALOOSA GROUP (UNDIFFERENTIATED)</b> Gravel, chert white to dark-gray, very well rounded; frequent silt and clay matrix; sand, light- to moderate reddish-brown, very fine- to very coarse-grained, subrounded to angular quartz and chert grains, poorly sorted, with frequent gravel lenses and stringers; clay, white- to medium-gray with occasional occurrences of carbonaceous dark-gray clays; zones of multi-colored chert gravel; frequent well-cemented chert pebble conglomeratic zones. Laterally traceable silt and clay intervals occur most frequently in uppermost and lowermost intervals. Unconformity at base.
TUSCALOOSA GROUP	<b>Mfp</b>	<b>FORT PAYNE FORMATION UPPER PORTION</b> Chert, very light- to dark-gray, thin-bedded; locally weathered to clay, silty, white to very light-gray, and tripolitic silt, white to very light-gray; locally stained shades of brown.
	<b>Mdp</b>	<b>LOWER PORTION</b> Limestone, medium- to dark bluish-gray, finely crystalline, wackestone, and mudstone, thin- to massive-bedded, occasional shaly texture when weathered; occasionally glauconitic. Isolated occurrences of very thin interval of grayish-green shale (Maury Shale) at base. Contains isolated lenses of chert.
MISSISSIPPIAN	<b>Mdc</b>	<b>CHATTANOOGA FORMATION</b> Shale, brownish-gray to grayish-black, carbonaceous, silty, sandy, calcareous, very thinly bedded and laminated; isolated occurrences of thin sandstone laminae. Unconformity at base.
	<b>Dr</b>	<b>ROSS FORMATION</b> Limestone, light- to medium bluish-gray, light brownish-gray when weathered; contains intervals of grainstone, mudstone, and shale; sparsely glauconitic; thin- to massive-bedded. Uppermost exposed portions consist of chert, light brownish-gray, granular, fractured, fossiliferous, and thin-bedded.
BRADFORDIAN-KINDERHOOKIAN SERIES	<b>Mfp</b>	<b>MISSISSIPPIAN</b>
	<b>Mdp</b>	<b>MISSISSIPPIAN</b>
LINDEN KINDERHOOKIAN GROUP	<b>Mfp</b>	<b>MISSISSIPPIAN</b>
	<b>Mdp</b>	<b>MISSISSIPPIAN</b>
DEVONIAN	<b>Mfp</b>	<b>MISSISSIPPIAN</b>
	<b>Mdp</b>	<b>MISSISSIPPIAN</b>

Base map prepared from the Yellow Creek (Mississippi-Alabama-Tennessee) and Waterloo (Mississippi-Alabama) Quadrangles, Tennessee Valley Authority-United States Geological Survey, 1953, photorevised 1969 and 1970. 1927 North American datum.

