

Surface Geologic Unit Descriptions for Mississippi

(after Geologic Map of Mississippi, Bicker, 1969)

Qa - Alluvium

(Quaternary, Holocene)

Loam, sand, gravel, and clay; mapped on in Mississippi River Alluvial Plain.

Qc - Coastal Deposits

(Quaternary, Holocene)

Loam, sand, gravel, and clay

UNCONFORMITY

Ql - Loess and brown loam

(Quaternary, Pleistocene)

Grayish to yellowish-brown massive silt; the pattern indicates the area within which the loess is generally thicker than ten feet; remnants of the mantle are present many miles farther east.

UNCONFORMITY

Pc - Citronelle formation

(Quaternary, Pleistocene)

Red sand and gravel and white clay; may be of Pliocene age; the formation mapped is equivalent to the Willis sand and does not include the terrace deposits, colluvium, and residuum commonly considered "Citronelle".

UNCONFORMITY

Mph - Pascagoula and Hattiesburg formation

(Tertiary, Miocene)

Green and bluish-green clay, sandy clay, and sand; gray siltstone and sand; locally fossiliferous.

Mc - Catahoula formation

(Tertiary, Miocene)

Irregularly bedded gray sand and sandstone; mottled red and gray, green, and chocolate-colored clay; some quartzite; and some gravel; the Paynes Hammock sand, sandy limestone cross-bedded fine green sand, and thin-bedded sand and clay, is mapped with the underlying Chickasawhay limestone in eastern Mississippi.

UNCONFORMITY

Ov - Vicksburg group and Chickasawhay limestone

(Tertiary, Oligocene)

Chickasawhay limestone, sandy limestone and sand, present only in eastern Mississippi (mapped with it is the overlying Paynes Hammock sand of Miocene age); Vicksburg

group, predominantly limestone and marl, but contains some bentonite and near the top chocolate-colored clay and some sand.

UNCONFORMITY

Of - Forest Hill formation and Red Bluff clay
(Tertiary, Oligocene)

Forest Hill sand, cross-bedded fine gray sand, laminated fine sand and clay, and a little lignite; in Wayne and Clarke counties lower part merges eastward into Red Bluff clay, blue-green glauconitic, gypsiferous, fossiliferous clay and thin limestone beds.

UNCONFORMITY

Ej - Jackson group
(Tertiary, Eocene)

Yazoo clay, green and gray, calcareous clay containing some sand and marl; Moodys Branch formation at base, shells embedded in glauconitic clayey quartz sand.

UNCONFORMITY

Ec - Cockfield
(Tertiary, Eocene, Claiborne group)

Irregularly bedded, more or less laminated lignitic clay, sand, and lignite; sparingly glauconitic.

Ecm - Cook Mountain formation
(Tertiary, Eocene, Claiborne group)

Southeast of Pearl River, marl, limestone, glauconitic sand, and chocolate-colored clay; northwest of Pearl River, predominantly chocolate-colored clay with some glauconitic sand.

Ek - Kosciusko formation
(Tertiary, Eocene, Claiborne group)

Irregularly bedded sand, clay, and some quartzite.

Ezw - Zilpha formation and Winona formation
(Tertiary, Eocene, Claiborne group)

Zilpha clay, chocolate-colored clay containing some glauconitic sand, not recognized north of Yalobusha River; Winona sand, highly glauconitic sand, more or less clayey.

Et - Tallahatta formation and Neshoba sand
(Tertiary, Eocene, Claiborne group)

Southeast of Pearl River predominantly more or less glauconitic claystone and clay with lenses of sand and some sandstone; highly cross-bedded sand at base; northwest of Pearl River predominantly sand, locally glauconitic, containing claystone and clay lenses and abundant clay stringers; Neshoba sand, sparingly glauconitic fairly coarse sand not recognized southeast of Newton County or north of Yalobusha River.

UNCONFORMITY

Ew - Wilcox formation

(Tertiary, Eocene)

Irregularly bedded fine to coarse sand, more or less lignitic clay, and lignite; includes bauxite bearing Fearn Springs sand member at base; Ewb, Bashi marl member, glauconitic fossiliferous sand containing large calcareous fossiliferous concretions; Ewn, fossiliferous marl bed which in Alabama occurs near middle of Nanafalia formation of Alabama.

UNCONFORMITY

Pan - Naheola formation

(Tertiary, Paleocene, Midway group)

Fine to coarse micaceous sand, kaolin, and bauxitic clay.

Pap - Porters Creek formation

(Tertiary, Paleocene, Midway group)

Dark-gray clay, north of Clay County contains slightly glauconitic, micaceous sand lenses.

Pac - Clayton formation

(Tertiary, Paleocene, Midway group)

Upper part, greenish-gray coarsely glauconitic sandy clay and marl; lower part, crystalline sandy limestone and loose sand, represented south of Houston by a discontinuous bed of indurated calcareous sandstone.

UNCONFORMITY

Kp - Prairie Bluff chalk and Owl Creek formation

(Cretaceous, Upper Cretaceous, Selma group)

Prairie Bluff chalk, compact brittle chalk, sandy chalk, and calcareous clay; at base contains many phosphatic molds of fossils; in Pontotoc and Union counties merges northward into Owl Creek formation, tough blue glauconitic sandy clay.

UNCONFORMITY

Kr - Ripley formation

(Cretaceous, Upper Cretaceous, Selma group)

Gray to greenish-gray fine glauconitic sand, clay, and sandy limestone; south of Oktibbeha County is very sandy micaceous chalk; Krm, McNairy sand member, red and white cross-bedded micaceous sand and white sandy clay.

Kd - Demopolis chalk

(Cretaceous, Upper Cretaceous, Selma group)

Chalk and marly chalk containing fewer impurities than underlying and overlying formations.

Km - Mooreville chalk

(Cretaceous, Upper Cretaceous, Selma group)

Marly chalk and calcareous clay; Kma, Arcola limestone member at top, hard buff-colored limestone.

Kc - Coffee sand

(Cretaceous, Upper Cretaceous, Selma group)

Light-gray cross-bedded to massive glauconitic sand, sandy clay, and calcareous sandstone.

UNCONFORMITY

Ke - Eutaw formation

(Cretaceous, Upper Cretaceous)

More or less cross-bedded and thinly laminated glauconitic sand and clay; basal part includes the McShan formation, greenish-gray, micaceous, locally very glauconitic, very fine-grained sand and thin-bedded light-gray clay, small chert gravels may be present in basal beds, not recognized in northern Tishomingo County; Ket, Tombigbee sand member, massive fine glauconitic sand.

UNCONFORMITY

Kt - Tuscaloosa formation

(Cretaceous, Upper Cretaceous)

Light and vari-colored irregularly bedded sand, clay, and gravel; gravel is mostly in lower portion.

UNCONFORMITY

Cc - Chester group

(Carboniferous, Mississippian)

Sandstone, shale, and limestone

Cm

(Carboniferous, Mississippian)

Limestones, chert and shale of Meramec, Osage, and Kinderhook age.

D

(Devonian)

Chattanooga shale (Carboniferous or Devonian) and underlying limestones of early Devonian age.