

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF GEOLOGY

OPEN-FILE REPORT 249

## GEOLOGIC MAP of the HOUSE QUADRANGLE

Neshoba and Kemper Counties,  
Mississippi

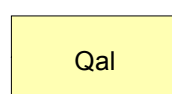


Geology by David E. Thompson, RPG

2012

### DESCRIPTION OF MAP UNITS

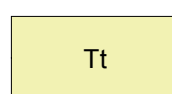
QUATERNARY  
HOLOCENE



ALLUVIUM

Sand, flood plain sands, and silts.

TERTIARY  
EOCENE  
CLAIBORNE GROUP



TALLAHATTA FORMATION

Basic City Member

Clay, silt, claystone, and quartzitic siltstone and sandstone, olive gray to brownish gray, weathers yellowish gray to very light gray or white, carbonaceous with leaf and plant impressions, faunal structures are common, locally exhibits marine fossil prints, near surface exposures may exhibit jointing with limonite infilling; claystones typically weather to lightweight and brittle rock with a subconchoidal fracture; interbedded to interlaminated with sand, gray to very light gray, weathers pale yellowish orange to reddish orange, very fine- to medium-grained, unconsolidated, massive to cross-bedded, quartzose, micaceous, carbonaceous, pyritic; also greenish yellow to buff, fine-grained, semi-consolidated, siliceous, glauconitic, and silty. The base is marked by a sandy interval, approximately 20 feet thick, which in outcrop exposures may exhibit quartzitic sandstone characteristics. Unconsolidated sands in the upper 30 to 60 feet are termed the Neshoba Sand Member. The total thickness is approximately 220 feet; however, only the lower 60 feet or so are exposed in the southwestern portion of the quadrangle.

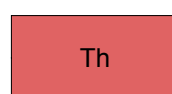
TERTIARY  
EOCENE  
CLAIBORNE GROUP



MERIDIAN SAND

Sand, gray to very light gray, weathers yellowish gray to reddish orange, very fine- to very coarse-grained, typically fining upward, quartzose, micaceous, locally carbonaceous and/or glauconitic, pyritic, interbedded to interlaminated with silt, siltstone, and clay, dark gray to white, carbonaceous, the upper beds are typically silty or argillaceous. The maximum thickness is approximately 100 feet. Unconformity at base. The Meridian Sand constitutes the upper portion of the Meridian/Upper Wilcox Aquifer.

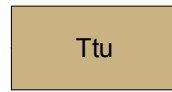
TERTIARY  
EOCENE  
WILCOX GROUP



HATCHETIGBEE FORMATION

Sand, gray to light gray, weathers reddish orange to pale yellowish orange, very fine- to very coarse-grained, quartzose, micaceous, pyritic, clay clast conglomerate, interbedded to interlaminated with clay, gray to brownish gray, weathers very light gray to white, silty, carbonaceous to lignitic, especially argillaceous in the upper beds of the formation, lignite. The basal 40 feet or so represent a non-marine equivalent to the fossiliferous, marine, Bash Formation of east-central Mississippi, mark the Paleocene/Eocene unconformity, and consist of sand, gray to light gray, weathers reddish orange to pale yellowish orange, very fine- to very coarse-grained, quartzose, micaceous, carbonaceous, slightly pyritic, locally exhibits fossil prints, commonly exhibits clay clast conglomerate with coarse-grained facies. The thickness is approximately 220 feet. The Hatchetigbee Formation constitutes the basal portion of the Meridian/Upper Wilcox Aquifer.

TERTIARY  
PALEOCENE  
WILCOX GROUP



TUSAHOMA FORMATION

Sand, dark greenish gray to light gray, weathers reddish orange to pale yellowish orange, very fine- to coarse-grained, quartzose, micaceous, carbonaceous, slightly glauconitic. Interbedded to interlaminated with clay and silt, light olive gray to brownish black, weathers to various shades of red, gray, brown, or white, lignitic, contains Red Hills Mine equivalent lignite seams H through L, along with several stratigraphically higher upper Tusahoma lignite seams. Total thickness is approximately 430 feet; however, only the upper 230 feet are exposed in the northeastern region of the quadrangle.

.....  
An informal boundary which divides the clays and silts at the top of the middle Tusahoma beds from the overlying basal sands of the upper Tusahoma Formation. The upper Tusahoma, which may be predominantly sandy locally, is approximately 140 feet thick. Argillaceous beds generally persist at the top.

PCL House #1



Drill-hole locality and identification number

### Structural Cross-Section of the House 7.5-Minute Geologic Quadrangle

