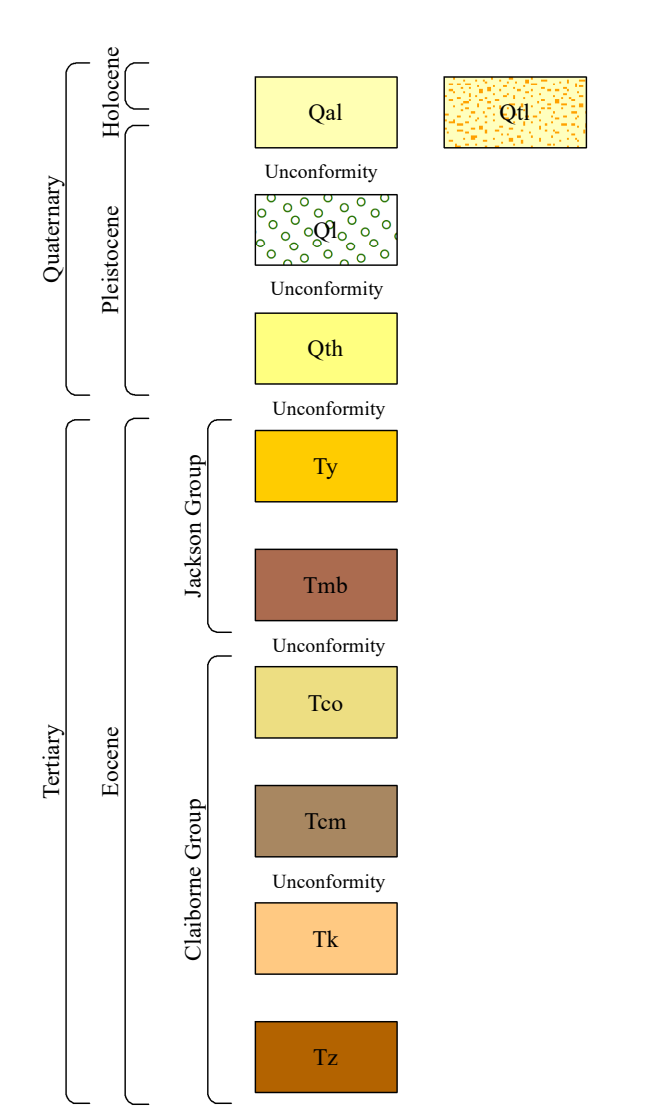


Correlation of Map Units



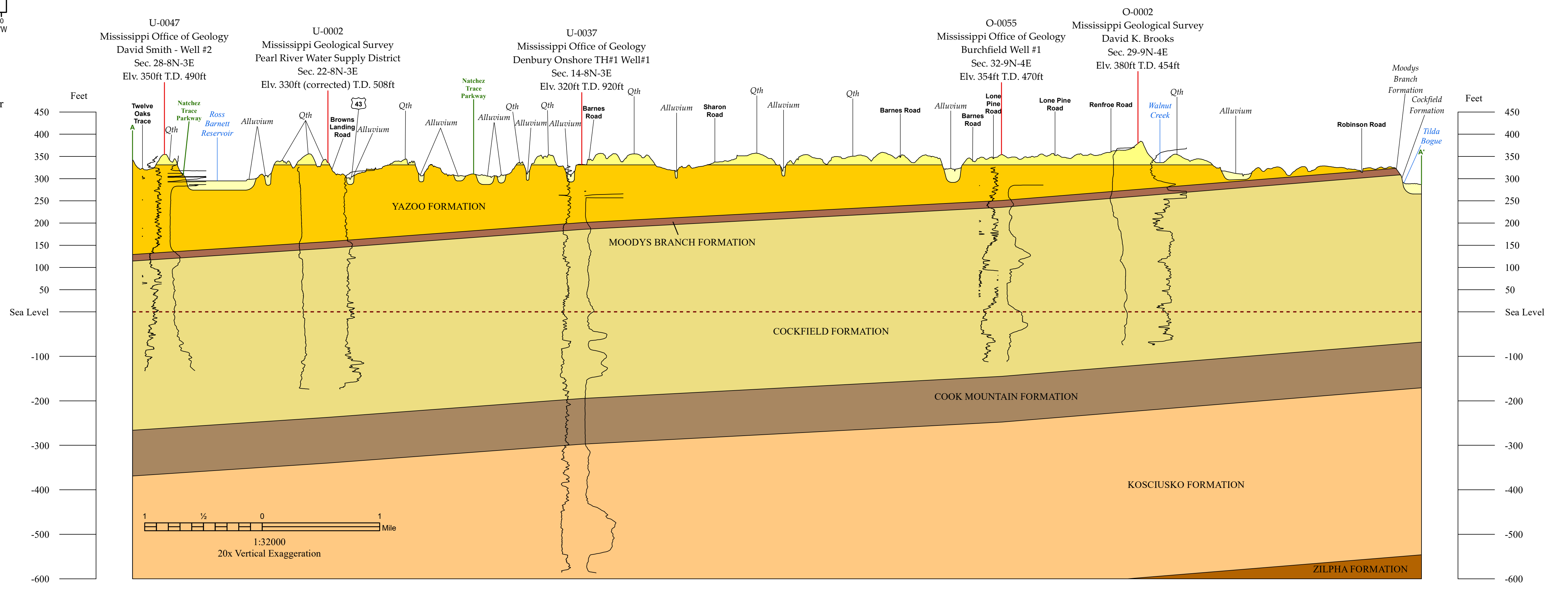
Descriptions of Map Units

- Qal (Holocene to Pleistocene)**
Sand, yellow- to brownish-white in color, fine- to coarse-grained, subrounded to rounded, predominately quartzose, locally graveliferous containing aggregate derived from the Pre-loess Terrace deposits, silty to clayey; humus lenses common; floodplain deposits are heavily loess-derived. Silicified wood common. Tributaries have narrow alluvial valleys and are deeply incised through the loess terrain.
- Qtl (Holocene to Pleistocene)**
Stream terrace deposits; Sand, yellow- to brownish-white in color, fine- to coarse-grained, subrounded to rounded, predominately quartzose, locally graveliferous containing aggregate derived from the Pre-loess Terrace deposits, silty to clayey; humus lenses common; floodplain deposits are heavily loess-derived. Silicified wood common. These terraces are known to contain important pre-historic archeological deposits.
- Ql (Pleistocene)**
Silt, buff to tan, pale yellow, red, grey to grey-green where in anoxic conditions, quartzose to feldspathic. Loess is considered a colian deposit derived from glacial outwash. Loess is typically calcareous with dolomite and calcite; however, the upper portion of the loess can be deeply weathered, leached / noncalcareous, and has been commonly referred to as "brown loam." Loess deposits unconformably blanket the pre-loess topography with substantial local variations in thickness but generally thickening towards the west. In places, weathered loess contains secondary deposits of small calcareous concretions (caliche, loess dolls). Loess can be locally and sparingly fossiliferous, commonly containing tests or stinkerns of pulmonate gastropods and less commonly containing fossils of Pleistocene vertebrates.
- Qth (Pleistocene)**
High Terrace (Pleistocene)
Stream terrace deposits associated with the Pearl River drainage; Sand, red to khaki, fine- to coarse-grained, rounded, quartzose; Pea gravel, clear, white, red, orange, grey, quartz. Silicified wood common.
- Jackson Group**
- Yz (Eocene)**
Yazoo Formation (Eocene)
Locally referred to as the Yazoo Clay. Clay, bluish-green to bluish grey, weathers yellowish brown to tan, montmorillonitic, calcareous, silty, locally fossiliferous, locally contains framboidal pyrite. The fossil oyster *Pyenodonte trigonalis* are common throughout along with fossil vertebrate remains of Archæocete whales, sharks and fish.
- Tmb (Eocene)**
Moody's Branch Formation (Eocene)
Sandy fossiliferous marl containing an abundance of marine invertebrates typically, *Glycymeris* and *Venericardia* shells. Conformably grades into the overlying Yazoo Formation. Total thickness is approximately 15 feet.
- Clairborne Group**
- Tco (Eocene)**
Cockfield Formation (Eocene)
Clay, brown, reddish-brown to grey in color; silty to fine sandy; strongly carbonaceous to lignitic, slightly micaceous, pyritic. Carbonized and silicified plant fossils common. Underlies the Moody's Branch Formation unconformably. Total thickness is approximately 350 feet.
- Tcm (Eocene)**
Cook Mountain Formation (Eocene)
Clay, brown, carbonaceous with local occurrences of glauconitic sands. Underlies the Cockfield Formation conformably. Total thickness is approximately 100 feet.
- Tk (Eocene)**
Kosciusko Formation (Eocene)
Sand, grey to white, fine- to medium-grained, cross-bedded to massive with rare quartz pea gravel, predominantly quartzose, micaceous, and trace heavy minerals; silicified and coalified wood common. Clay, carbonaceous, brown to grey-green, weathers off-white to brown, silty to sandy, locally micaceous, locally lignitic. Underlies the Cook Mountain Formation unconformably. Total thickness is approximately 375 feet.
- Tz (Eocene)**
Zilpha Formation (Eocene)
Clay, brown, with local occurrences of glauconitic sand. Underlies the Kosciusko Formation conformably.

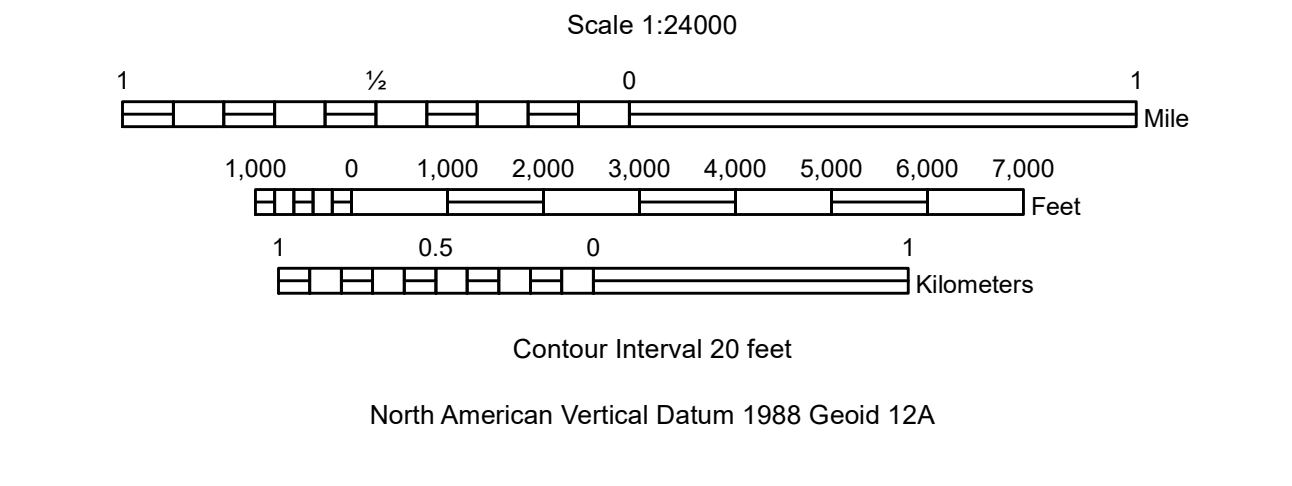
Field Photographs



Structural Cross-Section of the Shoccoe 7.5-Minute Geologic Quadrangle



Base Map produced by the Mississippi Geological Survey
Coordinate System: NAD 1983 UTM Zone 16N
Projection: Transverse Mercator
Datum: North American 1983
Units: Meter
Declination: World Magnetic Model, December 31, 2024, estimated Magnetic North declination in 7.5-Minute Shoccoe Quadrangle center area is 1.70° W ± 0.36". Annual rate of declination change is approximately 0.09" west per year.
Basemap Data sourced from <https://maris.mississippi.edu/>.
Contours are derived from LIDAR data.
Borehole data from Mississippi Office of Geology.



Mississippi Office of Geology
Open-File Report 348

**GEOLOGIC MAP of the SHOCCOE
7.5-MINUTE QUADRANGLE**
Madison and Rankin Counties, Mississippi
2024

Geology by
Jonathan R. Leard, RPG, Timothy J. Palmer, RPG, James E. Starnes, RPG, and Bailee M. Ozbirn

Adjoining 7.5' Quadrangles

