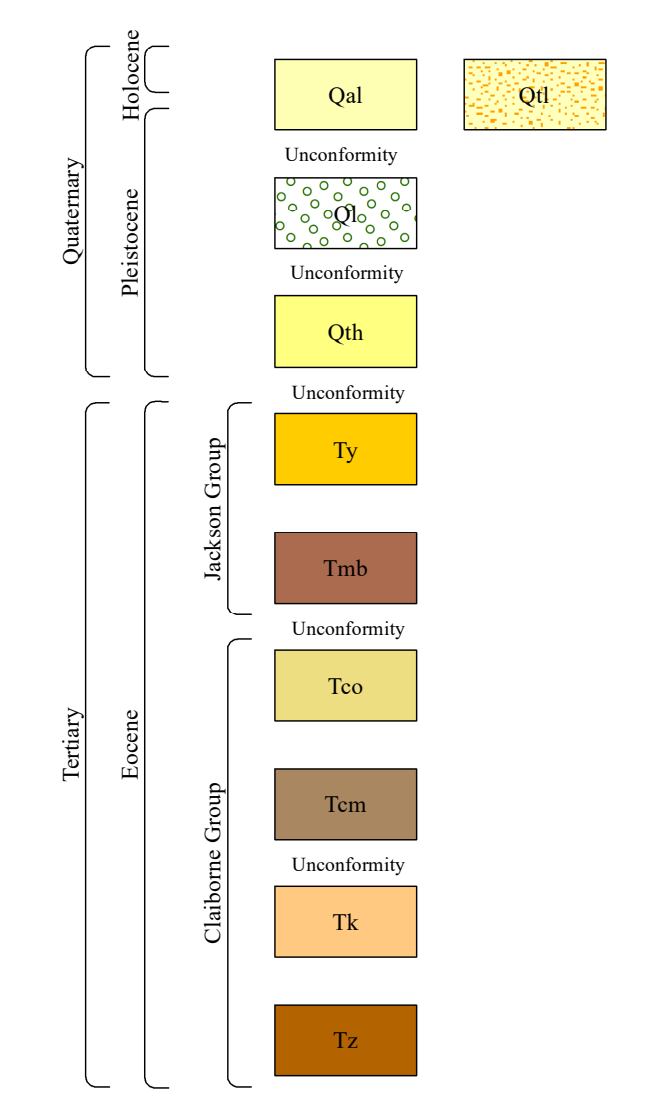


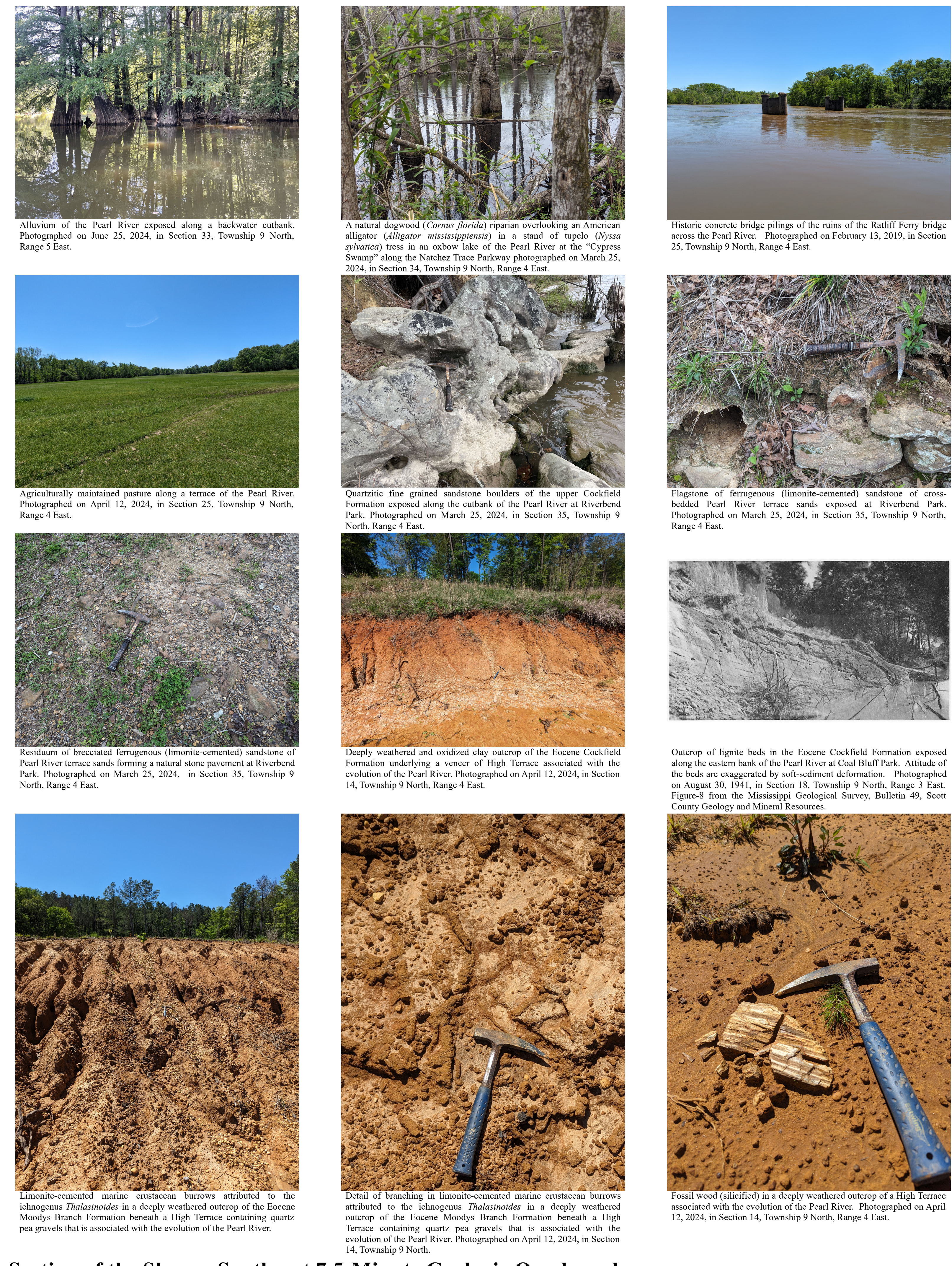
**Correlation of Map Units**



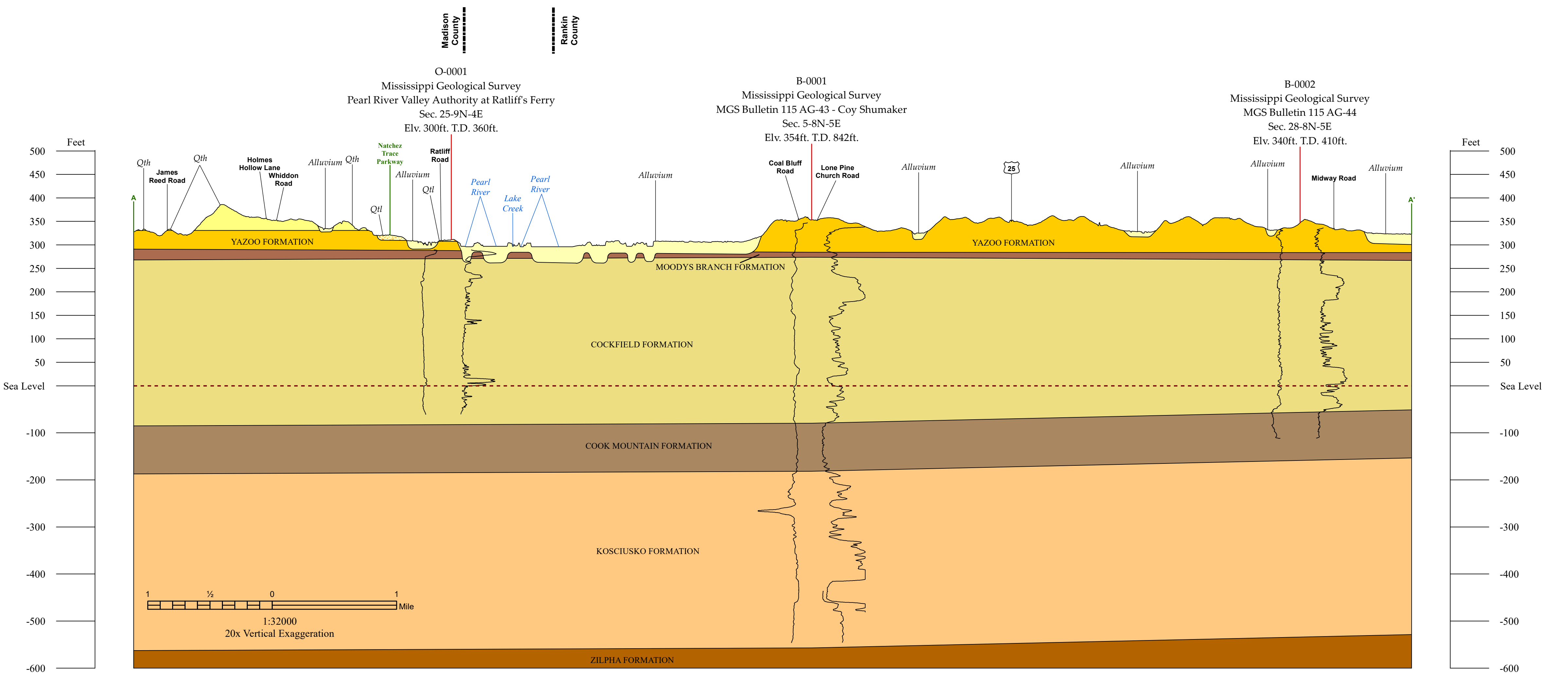
**Descriptions of Map Units**

- Alluvium (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.
- Stream Terrace (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 archaeological deposits.
- Loess (Pleistocene)**  
Silt, buff to tan, pale yellow, red, grey to grey-green where in anoxic conditions, quartzose to feldspathic. Loess is considered an eolian 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.
- 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**
- 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 *Pycnodonte trigonalis* are common throughout along with fossil vertebrate remains of Archaeocete whales, sharks and fish.
- 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.
- Claiborne Group**
- 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.
- Cross Section Units Not Exposed at the Surface**
- Cook Mountain Formation (Eocene)**  
Clay, brown, carbonaceous with local occurrences of glauconitic sands. Underlies the Cockfield Formation conformably. Total thickness is approximately 100 feet.
- Kosciusko Formation (Eocene)**  
Sand, grey to white, fine- to medium-grained, cross-bedded to massive with rare quartz pea gravel, predominately quartzose, micaceous, and trace heavy minerals; silicified and calcified 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.
- Zilpha Formation (Eocene)**  
Clay, brown, with local occurrences of glauconitic sand. Underlies the Kosciusko Formation conformably.

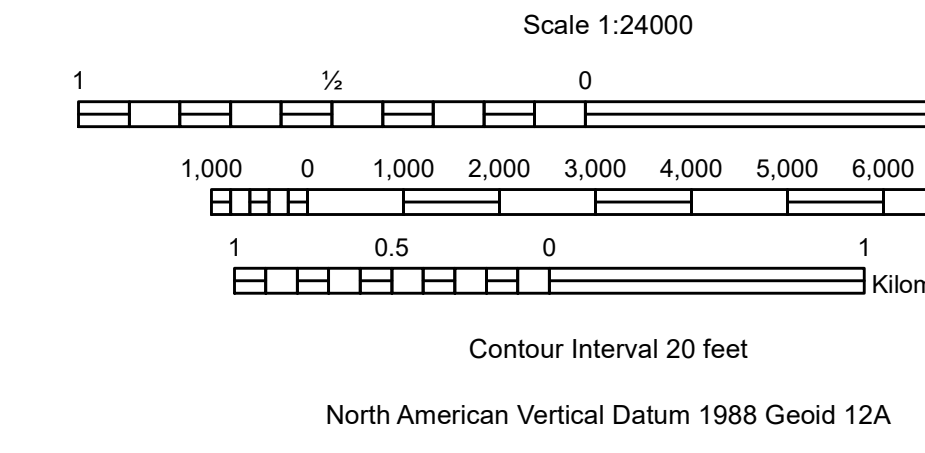
**Field Photographs**



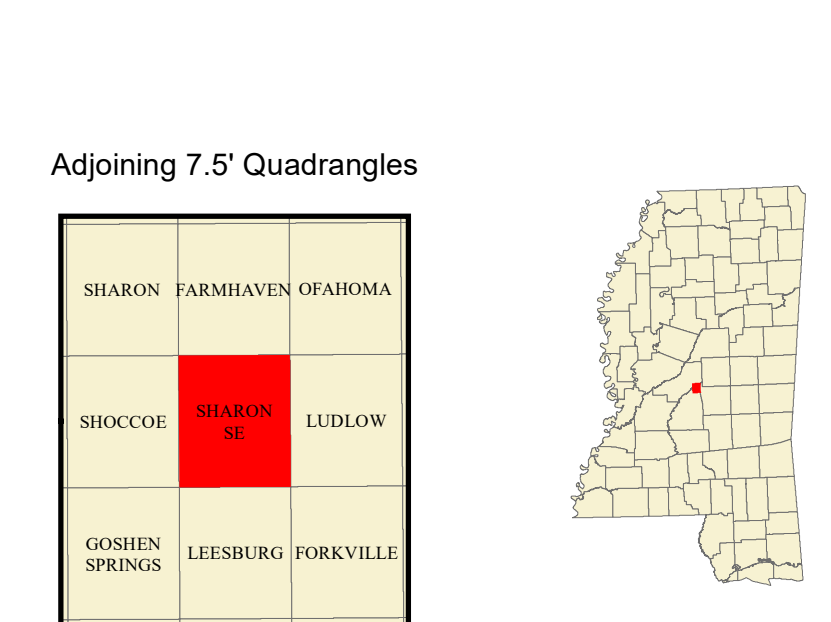
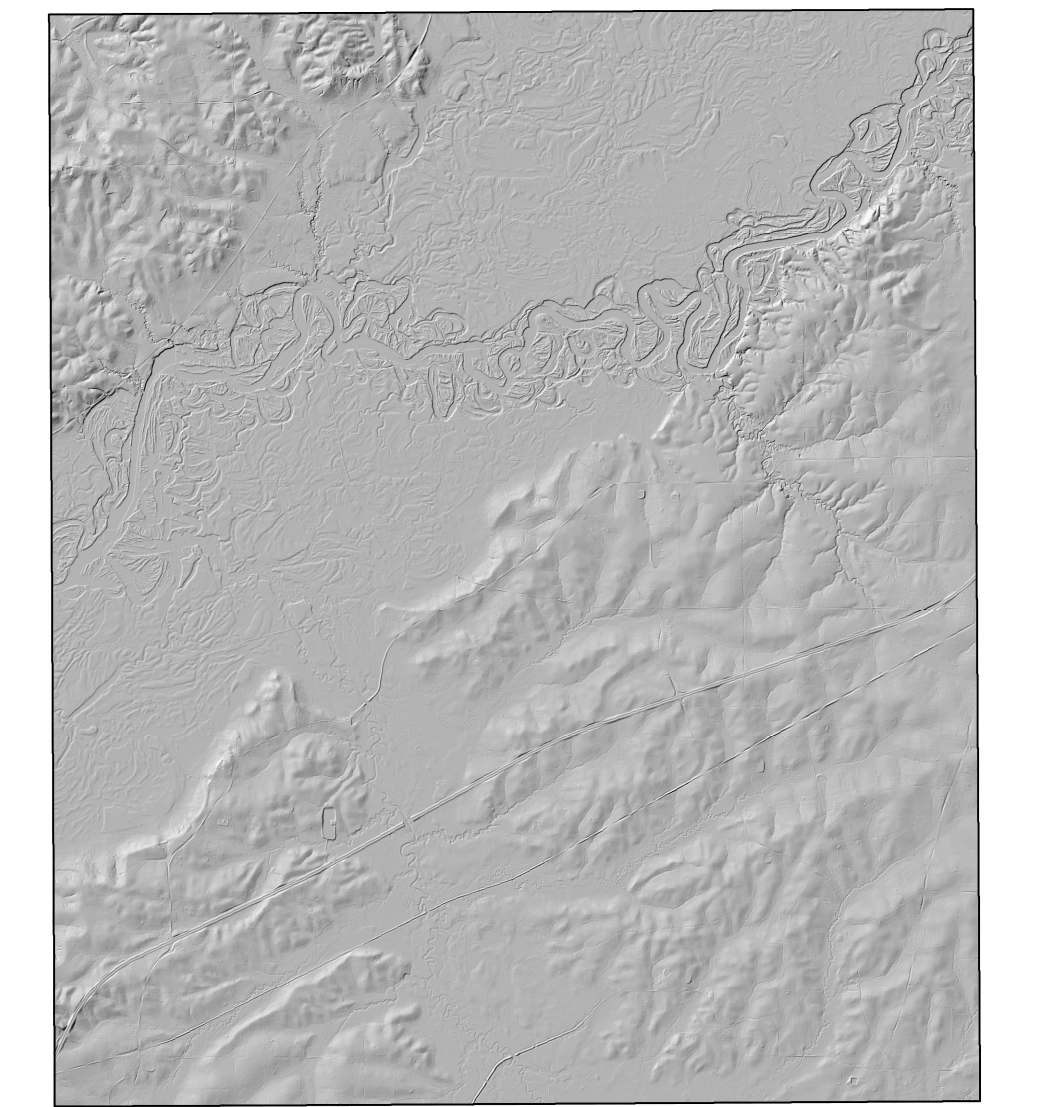
**Structural Cross-Section of the Sharon Southeast 7.5-Minute Geologic Quadrangle**



Base Map produced by the Mississippi Geological Survey  
Coordinate System: NAD 1983 UTM Zone 15N  
Projection: Transverse Mercator  
Datum: North American 1983  
Units: Meter  
Declination: World Magnetic Model, December 31, 2024, estimated Magnetic North declination in 7.5-Minute Sharon SE Quadrangle center area is 1.75° 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.



- Surface Mine
- Drill Hole Locality and Identification Number
- Unconformable Contact
- Line of Section



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

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

Mississippi Department of Environmental Quality  
Mississippi Office of Geology - Surface Mapping Division  
Mississippi Geological Survey  
700 North State Street  
Jackson, Mississippi 39225

LIDAR derived Bare Earth Hillshade  
Geologic maps are only a guide to current understanding and do not eliminate the need for detailed investigations of specific sites for specific purposes. The views and conclusions contained in this Open-File Report are those of the geologists and should not be interpreted as representing the official policies, either expressed or implied, of the State of Mississippi or of the United States Government.