MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF GEOLOGY

OPEN-FILE REPORT 288

GEOLOGIC MAP

of the

THREE RIVERS QUADRANGLE

Jackson County, Mississippi

Geology by James E. Starnes, RPG
and Lindsey Stewart

2018

DESCRIPTION OF MAP UNITS

HOLOCENE

QUATERNARY

ALLUVIUM

Qal — Flood plain sands, silts, gravels, and clays.

PLEISTOCENE

PAMLICO COASTAL TERRACE

Qtpc — Sand, orange to tan colored, fine- to coarse-grained, predominantly quartzose, cross-bedded to massive; graveliferous, pea-to cobble-size, predominantly leached to chalky brown, gray, and white-colored chert and milky quartz; clay, kaolinitic, pink to white, generally occurring as discontinuous lenses. Ferruginous sandstone and pyrolusite common in basal contact with the underlying Graham Ferry Formation.

BIG RIDGE COASTAL TERRACE

Qtbrc — Sand, orange to tan colored, fine- to coarse-grained, predominantly quartzose, cross-bedded to massive; graveliferous, pea-to cobble-size, predominantly leached to chalky brown, gray, and white-colored chert and milky quartz; clay, kaolinitic, pink to white, generally occurring as discontinuous lenses. Ferruginous sandstone and pyrolusite common in basal contact with the underlying Graham Ferry Formation.

WADE RIVER TERRACE

Qtwr — Sand, orange to tan colored, fine- to coarse-grained, predominantly quartzose, cross-bedded to massive; graveliferous, pea-to cobble-size, predominantly leached to chalky brown, gray, and white-colored chert and milky quartz; clay, kaolinitic, pink to white, generally occurring as discontinuous lenses. Ferruginous sandstone and pyrolusite common in basal contact with the underlying Graham Ferry Formation.

BIG POINT RIVER TERRACE

Qtbpr — Sand, orange to tan colored, fine- to coarse-grained, predominantly quartzose, cross-bedded to massive; graveliferous, pea-to cobble-size, predominantly leached to chalky brown, gray, and white-colored chert and milky quartz; clay, kaolinitic, pink to white, generally occurring as discontinuous lenses. Ferruginous sandstone and pyrolusite common in basal contact with the underlying Graham Ferry Formation.

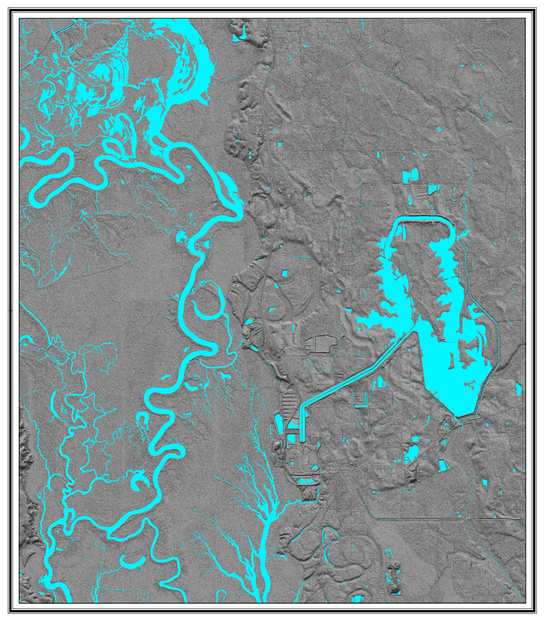
TERTIARY

PLIOCENE

GRAHAM FERRY FORMATION

Tgf — Sand, dark greenish-gray, yellow to tan, micaceous and glauconitic (exclusively in the fine-grained sands), fine- to coarse-grained, predominantly quartzose, cross-bedded to massive. Weathers to orange, purple, red, pink with reddish-brown colored pebbly ironstone residuum; Clay, green, gray, brown, weathers mottled purple to pink and white to reddish-brown, silty to fine-sandy, locally lignitic and contains pyrite nodules in places.

H-0241 — Drill-hole locality and identification number



Composite Bare Earth LIDAR 2015 VE X10 Hillshade of the Three Rivers Quadrangle

GEOLOGIC MAP

THREE RIVERS QUADRANGLE

Jackson County, Mississippi

SCALE 1:24,000

1 0.5 0 1 Mile

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometer

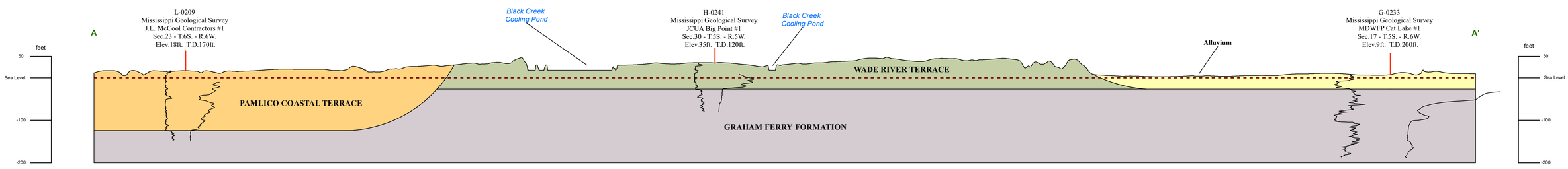
Geology field checked in 2016 - 2017 using the 1982, Provisional Edition, United States Geological Survey (USGS) 7.5-minute topographic quadrangle, Universal Transverse Mercator projection, 1927 North American Datum, contour interval 5 feet. Universal Transverse Mercator projection, 1983 North American Datum. GRS80 spheroid. 1000-meter Universal Transverse Mercator 1983 datum grid ticks, zone 16, shown in red. January 01, 2018, magnetic declination in quadrangle center is 1°55' west of true north, ± 0°20' uncertainty, changing by 0°7' west per year.

Sources: Contours derived from Mississippi Automated Resource Information System (MARIS); Public Land Survey System, 1:24,000 scale, from MARIS; water features from the MS Coordinating Council for Remote Sensing and Geographic Information Systems (MCCRSGIS) MDEM 2007 Coastal Region Dataset; road features derived from the Mississippi Department of Transportation (MDOT) 2015 road centerlines; Declination, National Oceanic and Atmospheric Administration (NOAA). We thank the Jackson County Utility Authority, Mississippi Department of Wildlife Fisheries and Parks, and J.L. McCool Contractors, Inc. for their cooperation and for facilitating the data collection and field work necessary for this mapping project. Light Detection and Ranging (LIDAR) 2015 (0.7-meter nominal point spacing) project from the Mississippi Department of Environmental Quality (MDEQ), Mississippi State University (MSU), USGS, NOAA, and Natural Resources Conservation Service (NRCS).

Geographic Information System by Daniel W. Morse. MDEQ does not warrant the accuracy or completeness of the source data. Geologic maps are only a guide to current understanding and do not eliminate the need for detailed investigations of specific sites for specific purposes.

This map was produced by the Mississippi Office of Geology in cooperation with the United States Geological Survey, National Cooperative Geologic Mapping Program, under STATEMAP grant #G17AC00196.

Structural Cross-Section of the Three Rivers 7.5-Minute Geologic Quadrangle



Vertical Exaggeration X20

1 0.5 0 1 2 3 Miles