



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF GEOLOGY  
OPEN-FILE REPORT 289

**GEOLOGIC MAP**  
of the  
**HARLESTON QUADRANGLE**

Jackson and George Counties,  
Mississippi

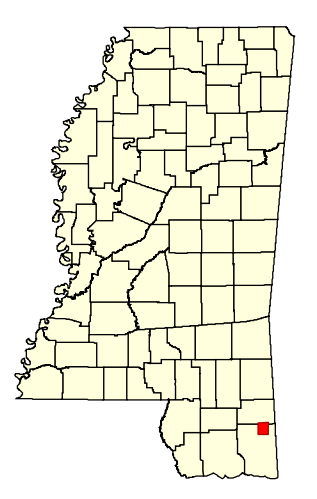
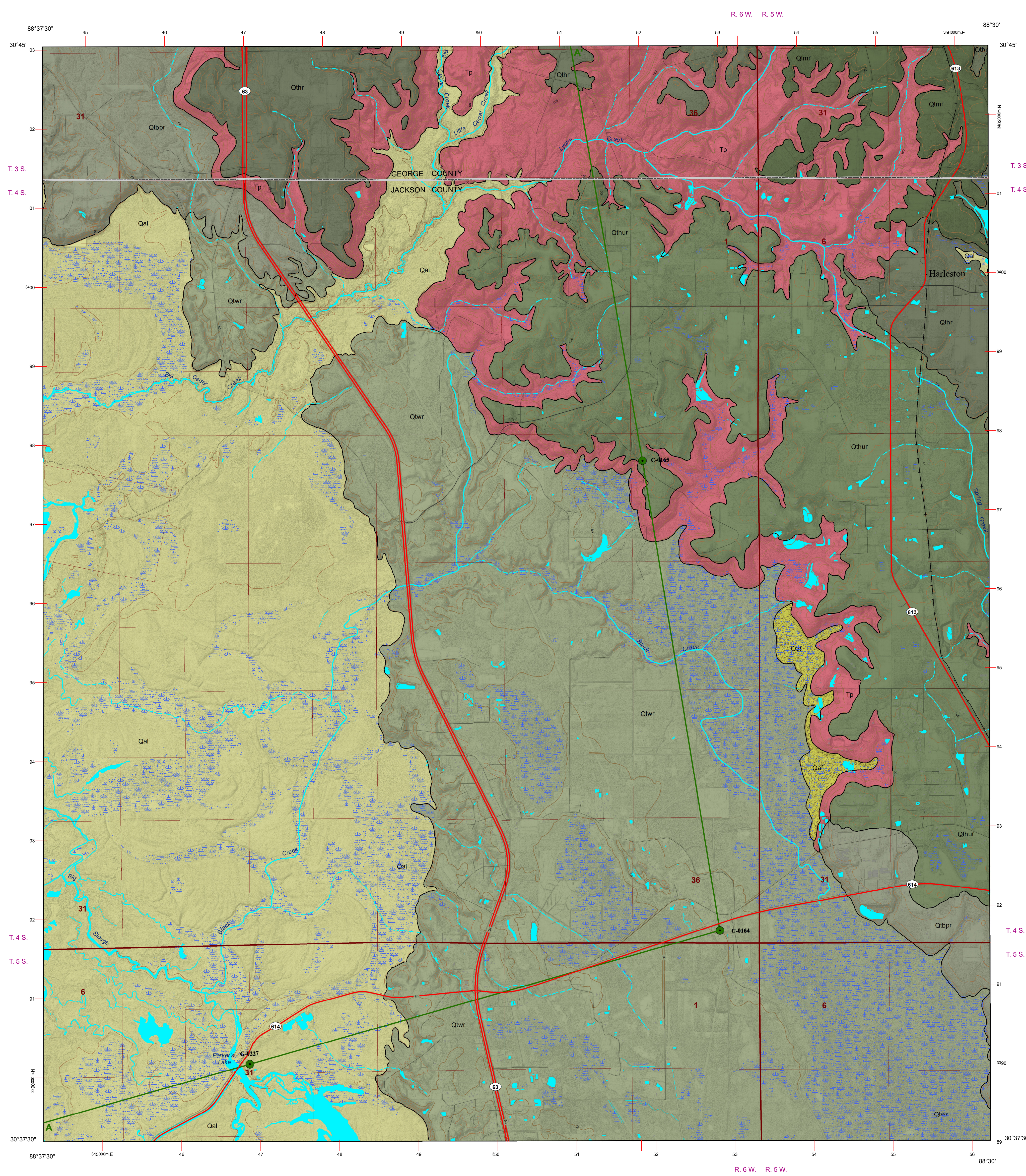


Geology by James E. Starnes, RPG  
and Lindsey Stewart

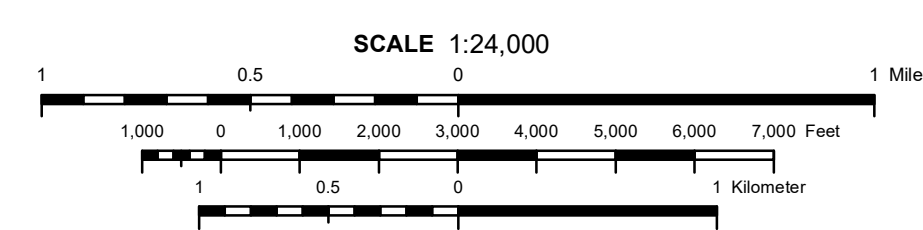
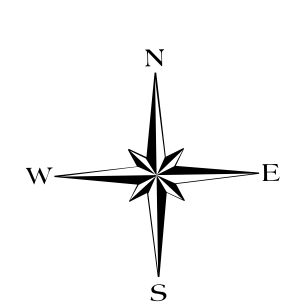
2018

**DESCRIPTION OF MAP UNITS**

Geologic Unit	Description
<b>ALLUVIUM</b>	
Qal	Flood plain sands, silts, gravels, and clays.
Qaf	Alternating silts, sands, and gravels. Coarsest at the apex of the fan, fining laterally (radially) from the apex of the fan.
<b>QUATERNARY</b>	
<b>PLEISTOCENE</b>	
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 pyroclastic common in basal contact with the underlying Pascagoula Formation.
Qtbr	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 pyroclastic common in basal contact with the underlying Pascagoula Formation.
Qthr	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 pyroclastic common in basal contact with the underlying Pascagoula Formation.
<b>QUATERNARY</b>	
<b>MIocene</b>	
TP	Shallow marine to intertidal and deltaic deposits, contains the marker fossil, <i>Rangia johnsoni</i> . Clay, green, gray, brown, and white; locally lignitic, locally calcareous and fossiliferous. Weathers mottled purple to pink and white to reddish-brown, silty to fine-sandy. Sand, dark greenish-gray and glauconitic, micaceous, locally lignitic, fine- to coarse-grained, predominantly quartzose; graveliferous, pea- to small-cobble size consisting of black, brown, and gray-colored chert and milky quartz, subangular to well rounded. Silicified wood common.
C-0165	Drill-hole locality and identification number



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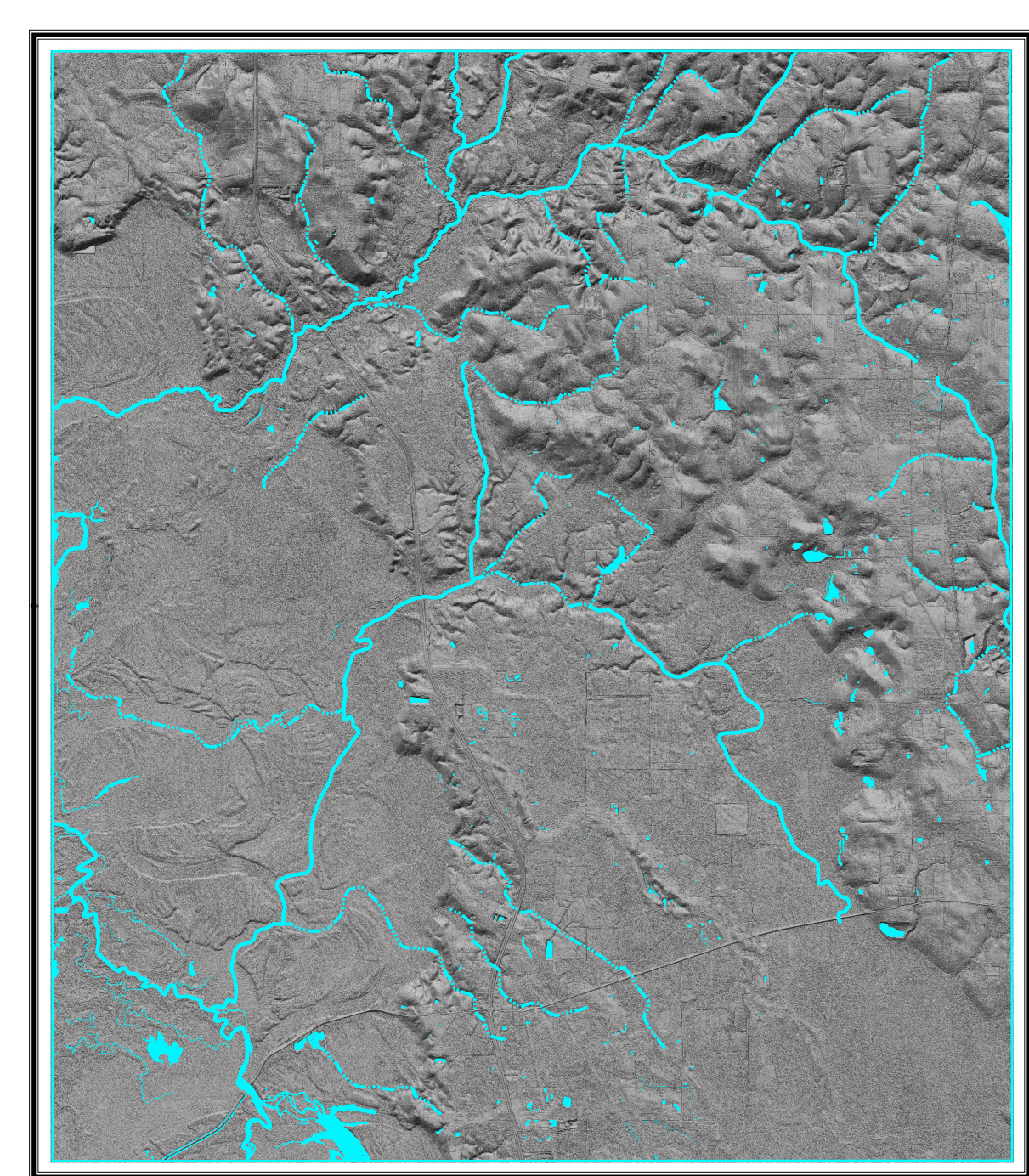
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Geology field checked in 2016 - 2017 using the 1982, Provisional Edition, United States Geological Survey (USGS) 7.5-minute topographic quadrangle, Universal Transverse Mercator projection, 1927 North American Datum, contour interval 10 feet. Universal Transverse Mercator projection, 1983 North American Datum, GRS80 spheroid, 1000-meter Universal Transverse Mercator 1983 datum grid lines, zone 16, shown in red. January 01, 2017, magnetic north declination in quadrangle center is 1°55' west of true north, ± 0°20' uncertainty, changing by 0°6' 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 (MCRSGIS) 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 and Mississippi Department of Wildlife Fisheries and Parks 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.



Composite Bare Earth LIDAR 2015 Hillshade VE X10 of the Harleston Quadrangle

**Structural Cross-Section of the Harleston 7.5-Minute Geologic Quadrangle**

