

**GEOLOGIC MAP**  
 of the  
**SHERMAN QUADRANGLE**

Lee, Pontotoc,  
 and Union Counties,  
 Mississippi

Geology by Darrel W. Schmitz, RPG  
 and Ernest E. Russell, PhD

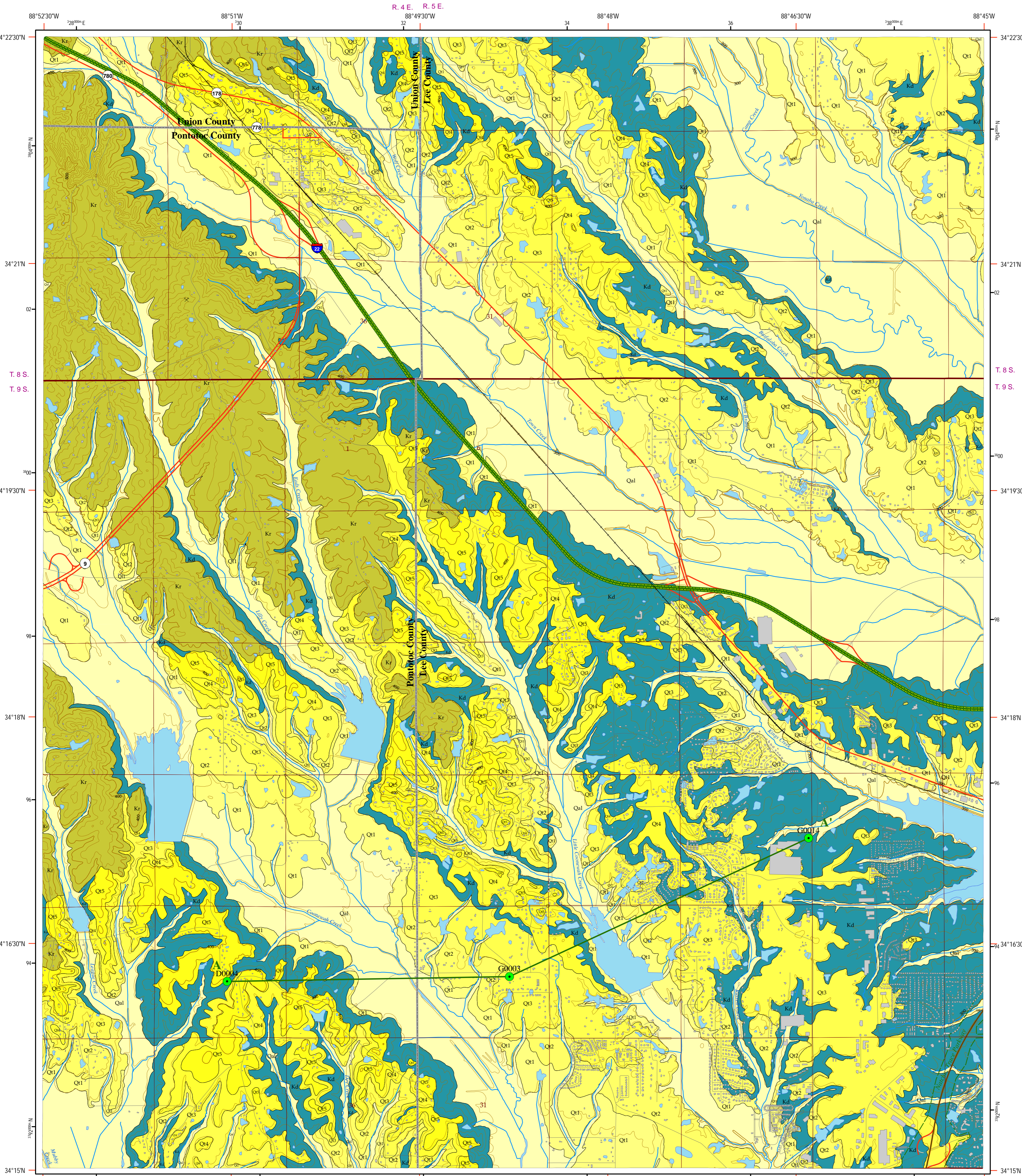
Cross-Section by Darrel Schmitz, RPG  
 and Jonathan R. Leard, GIT

2019

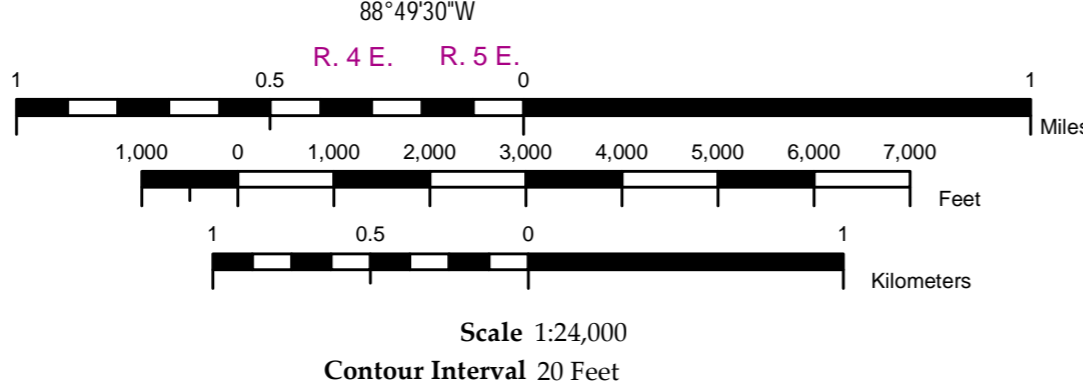
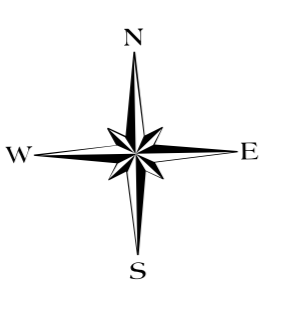
**DESCRIPTION OF MAP UNITS**

QUATERNARY	HOLOCENE	
	Qal	<b>ALLUVIUM</b> Floodplain deposits of clay, silt, and sand. Generally gray, yellowish-orange, orange, and tan. Approximately 25 feet thick along larger streams, thinning up tributaries.
PLEISTOCENE	Qt1	<b>TERRACE ALLUVIUM</b> Abandoned floodplain deposits of clay, silt, and sand generally yellowish-orange, orange, and tan. Approximately 25 feet thick adjacent to larger stream Alluvium or younger terrace deposits, thinning or non-existent up tributaries. Qt1 - youngest and lowest in elevation of Terrace alluvium deposits. Qt2 - second youngest in age and elevation of Terrace alluvium deposits. Qt3 - third youngest in age and elevation of Terrace alluvium deposits. Qt4 - fourth youngest in age and elevation of Terrace alluvium deposits. Qt5 - fifth youngest in age and elevation of Terrace alluvium deposits. The older in age and higher in elevation Terrace alluvium deposits become increasingly eroded and discontinuous.
	Qt2	
	Qt3	
	Qt4	
	Qt5	
CRETACEOUS	SELMIA GROUP	
	Kr	<b>RIPLEY FORMATION</b> Clay in lower portion conformably transitioning from underlying Demopolis Chalk. Sand, Chalk and limestone above the transitional clay. Transitional clay is laminated to thin bedded; dark greenish gray, medium gray and reddish tan where highly weathered; locally sandy; and fossiliferous. Sand, chalk and limestone are interbedded lenses of sand, chalky sand, silty chalk or chalky limestone. Sands are tan to red where weathered; fine grained; micaceous; calcareous; and fossiliferous. Chalks are gray to tan; often silty and sandy; and fossiliferous. Limestones are light gray to nearly white where weathered; often sandy; and fossiliferous. Thickness ranges up to approximately 165 feet.
Kd	<b>DEMOPOLIS CHALK</b> Massive-bedded chalk and marly chalk. Medium to light gray and bluish-gray, weathers to tan. Contains subordinate amounts of pyrite, glauconite, and mica. Fossiliferous in many locations. Thickness ranges up to approximately 350 feet.	

- G0014 Drill Hole Locality and Identifier
- Surface Mine Identifier



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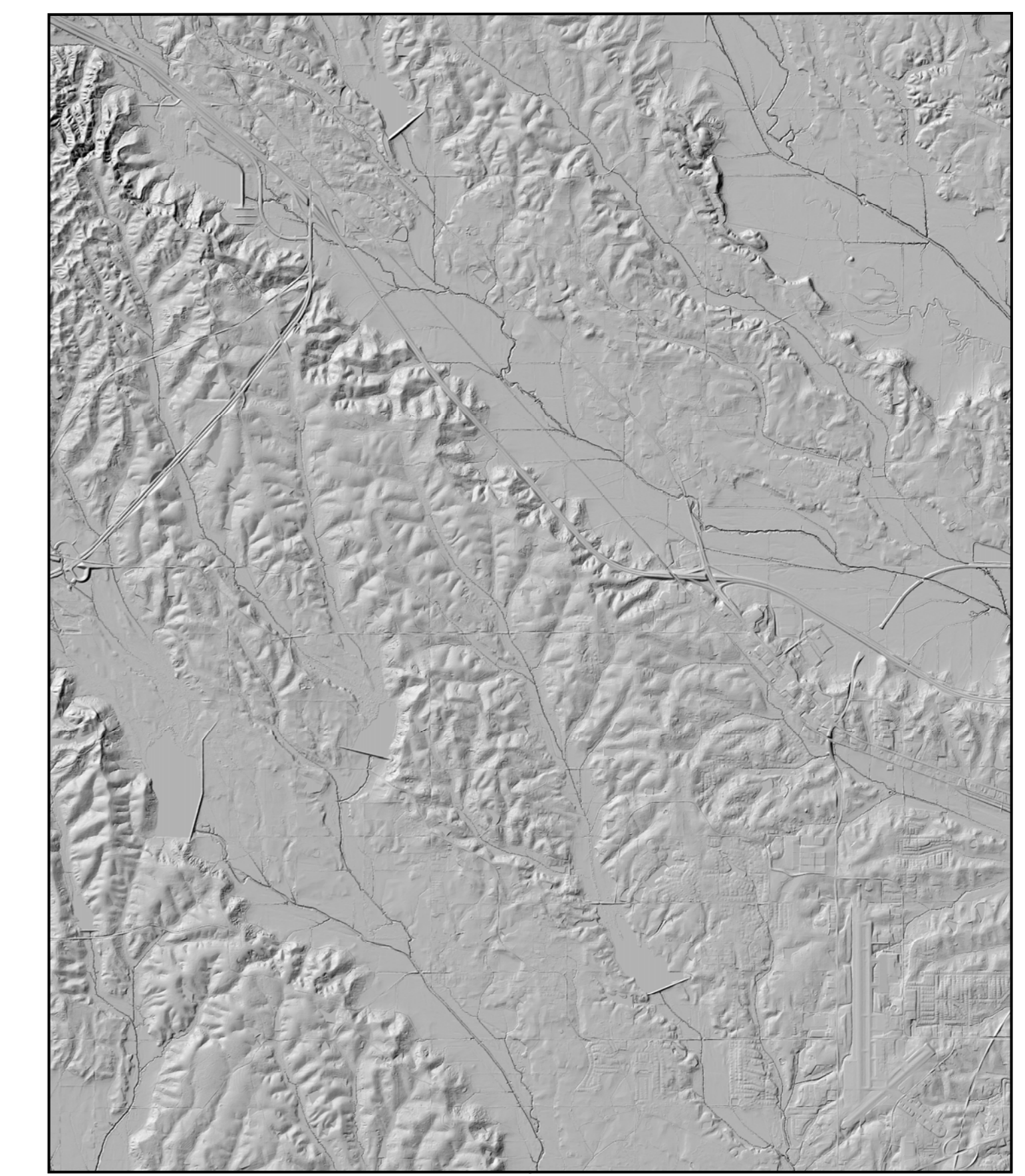


Geology field checked in 1997, 1998, 2016, and 2017 using the 1980, U.S. Geological Survey 7.5-minute topographic quadrangle, Universal Transverse Mercator projection, 1927 North American datum, contour interval 20 feet. Universal Transverse Mercator projection, 1983 North American datum, GRS80 spheroid, 1000-meter Universal Transverse Mercator 1983 datum grid ticks, zone 16, shown in red. 1995, magnetic north declination in revised quadrangle center is 2.23° W ± 0.36° changing by 0.08° W per year.

Sources: Contours obtained from Mississippi Automated Resource Information System (MARIS), Public Land Survey System, 1:24,000 scale, railroad features, and hydrologic information from MARIS. We thank the National Park Service and Mississippi State University for their cooperation and for facilitating the data collection and fieldwork necessary for this mapping project. Public Land Survey System from MARIS, 1:24,000 scale. Litter from Brad Segrest & Barbara Yassin of The Mississippi Department of Environmental Quality (MDEQ), Natural Resources Conservation Service, National Oceanic and Atmospheric Administration, United States Army Corps of Engineers, and MARIS. Building Footprint data is licensed by Microsoft under the Open Data Commons Open Database License (ODbL). Surface mine locations from MDEQ Office of Geology - Mining and Reclamation Division and USGS.

Geographic Information System by Kate Grala and Darrel Schmitz, Mississippi State University, and Jonathan R. Leard, GIT, MDEQ Office of Geology - Surface Mapping Division. 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.

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2009-2018 Mississippi Statewide LIDAR-Generated DEM and Hill Shade

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

