

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF GEOLOGY

OPEN-FILE REPORT 212

GEOLOGIC MAP

of the

TAYLORSVILLE QUADRANGLE

Smith, Covington, and Jones Counties, Mississippi



Geology by D. Kenneth Davis and James E. Starnes, GIT

2006

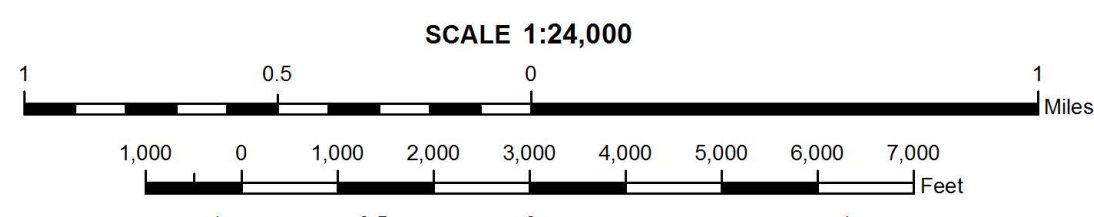
DESCRIPTION OF MAP UNITS

QUATERNARY	Qal	ALLUVIUM
		Flood plain sands, silts, gravels, and clays.
PLIO-PLEISTOCENE	QtC	CITRONELLE FORMATION
		Sand, yellow, orange, purple, red, pink, fine- to coarse-grained, predominantly quartzose, cross-bedded to massive; graveliferous, pea to cobble size, predominantly chert with lesser amounts of vein quartz, metaquartzite, agate, and sandstone, clay, pink to white, generally occurring as discontinuous lenses and as rip-up clasts, clasts may be boulder size. Conglomeratic ironstone ledges are common in the graveliferous sands at the base of the formation, which overlies the Catahoula and Hattiesburg Formations unconformably.
TERTIARY	Tha	HATTIESBURG FORMATION
		Clay, green, gray, brown, weathers white to brown and contains opaline concretions in places, silty to sandy (sils commonly weather to mottled reddish-purple and gray, dense, ferruginous concretionary masses), locally lignitic; sand, gray, pale yellow to white, fine- to coarse-grained, cross-bedded to massive, containing pea gravel in basal portion, often indurated to sandstones and siltstones at the surface, predominantly quartzose with lesser amounts of chert, metaquartzite, mica, and heavy minerals, silicified and coalified wood common; gravel, well-rounded quartz (white, yellow, brown, pink, and clear), agate (gray, yellow, white, banded, quartz druse or chalcedony), and subangular to well-rounded chert (white, gray, black). Some chert clasts are oolitic, banded, or contain marine Paleozoic fossils such as crinoids, brachiopods, bryozoans, rugose and tabulate corals, and gastropods. The base of the Hattiesburg Formation is designated at the base of a sand unit of regional extent that occurs at the approximate horizon of the base of the Fleming Formation in Louisiana and the middle-Miocene Amos Sand in Alabama.
OLIGOCENE - MIOCENE	Tca	CATAHOULA FORMATION
		Sand, gray, pale yellow to white, fine- to coarse-grained, cross-bedded to massive with rare thinly-bedded pea gravels (gravels consist of black chert and milky quartz, are highly polished, subangular to well rounded), often indurated to sandstones at surface, predominantly quartzose with lesser amounts of chert, metaquartzite, mica, and heavy minerals, slightly glauconitic in places, silicified wood and fossil palm common; clay, green, gray, brown, weathers white to brown, silty to sandy, lignite common in basal clays.

R - 13 Drill-hole locality and identification number



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Smith, Covington, and Jones Counties, Mississippi



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Geology field checked in 2006 using the 1975, U.S. Geological Survey 7.5-minute topographic quadrangle, 1927 North American datum, contour interval 10 feet. Universal Transverse Mercator projection, 1983 North American datum, GRS80 spheroid, 1000-meter Universal Transverse Mercator grid ticks, zone 16; 1983 datum shown in red. January 2006, magnetic north declination in quadrangle center is 0°6' west of true north.

Sources: Road features, USGS Digital Line Graph data, 1:100,000 scale. Water features, USGS National Hydrography Dataset, 1:24,000 scale. Public Land Survey System and contours, Mississippi Automated Resource Information System (MARIS), 1:24,000 scale. Declination, National Oceanic and Atmospheric Administration (NOAA).

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 Geologic Mapping Program, under STATEMAP grant #05HQAG0021.

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

