

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
 OFFICE OF GEOLOGY
 OPEN-FILE REPORT 210
GEOLOGIC MAP
 of the
CENTER RIDGE QUADRANGLE
 Smith County, Mississippi



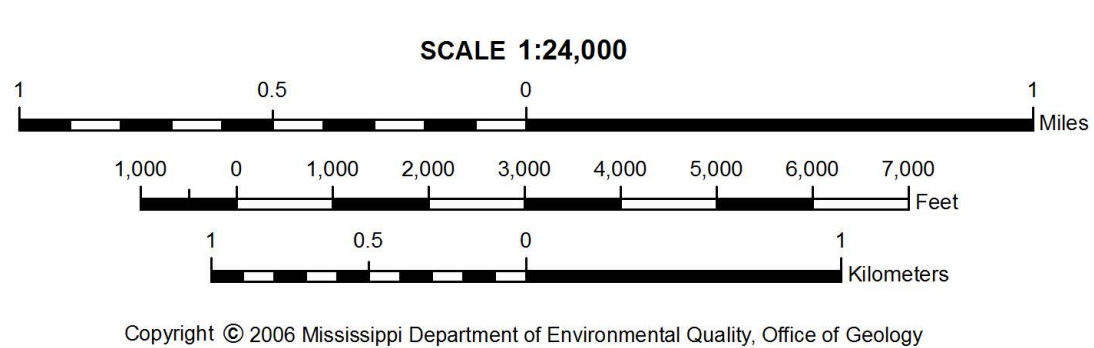
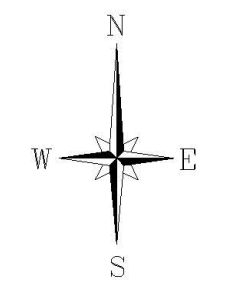
Geology by D. Kenneth Davis
 and James E. Starnes, GIT

2006

DESCRIPTION OF MAP UNITS

- | | | |
|--|----------------|--|
| QUATERNARY
HOLOCENE
PLIO-PLISTOCENE
OLI-GO-CENE - MIOCENE
TERTIARY
OLI-GO-CENE GROUP
VICKSBURG GROUP |
Qal | ALLUVIUM
Flood plain sands, silts, gravels, and clays. |
| |
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 Formation unconformably. |
| |
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. |
| |
Tv | VICKSBURG GROUP
Bucatuna Formation: Clay, brown to black, carbonaceous, micaceous in places, silty to fine-sandy (commonly glauconitic and fossiliferous where sandy), sparingly fossiliferous; thin marl beds in places; weathers tan to red-brown; gypsum and other sulfates are a common constituent of the weathering profile due to the diagenesis of abundant, highly reactive, framboidal sulfides (such as pyrite & marcasite). The Bucatuna Formation ranges from 24 to 84 feet in thickness. Byram Formation: Fossiliferous clay marl, glauconitic, slightly sandy in basal portion, light gray to pale green. The thickness of the Byram Formation ranges from less than a foot to 22 feet thick. The lower limit of the Byram is placed at the first appearance of indurated ledges of Glendon Limestone. Glendon Limestone: Hard limestone with interbedded clay and marl, fossiliferous, glauconitic, semicrystalline in places, thin bentonite layers common, gray to off-white in color, dominantly ledge-forming. |
- K - 15** Drill-hole locality and identification number

GEOLOGIC MAP
CENTER RIDGE QUADRANGLE
 Smith County, Mississippi



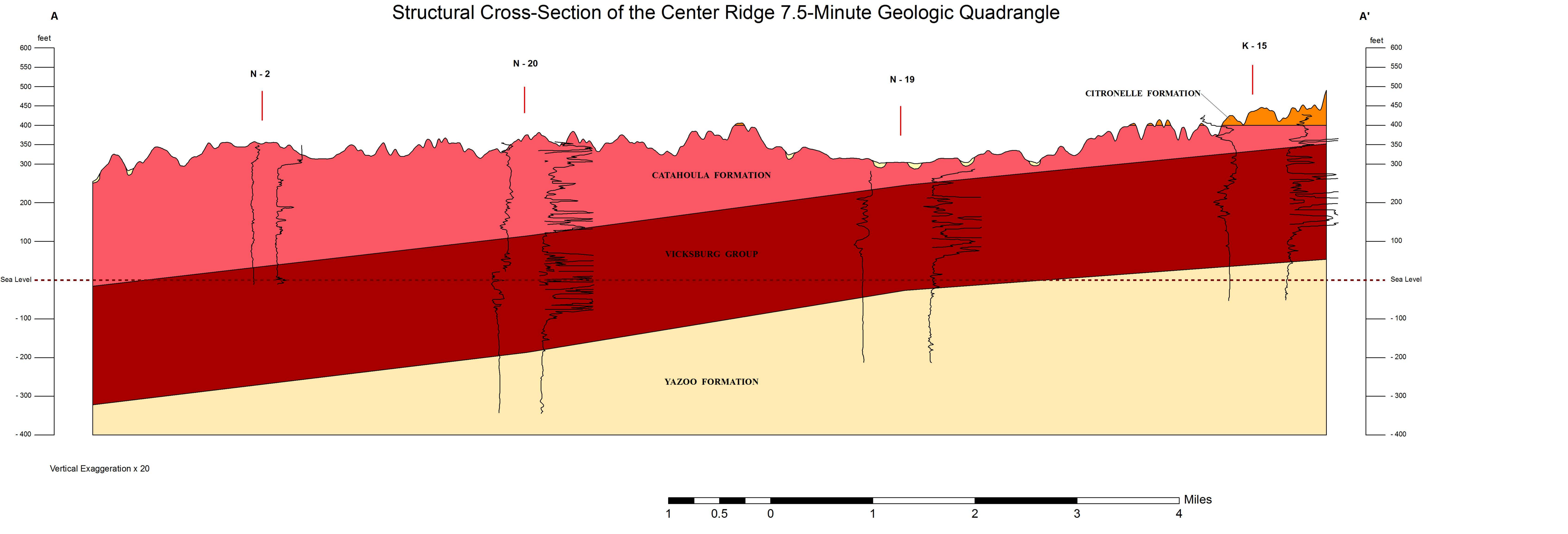
Geology field checked in 2006 using the 1975, U.S. Geological Survey 7.5-minute topographic quadrangle, 1927 North American datum, contour interval 10 feet, Universal Transverse Mercator projection, 1983 North American datum, GRS80 spheroid, 1000-meter Universal Transverse Mercator grid (tics, zone 16, 1983 datum shown in red, January 2006, magnetic north declination in quadrangle center is 0°7' 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 #05HQG0021.

Structural Cross-Section of the Center Ridge 7.5-Minute Geologic Quadrangle



Vertical Exaggeration x 20