



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF GEOLOGY  
OPEN-FILE REPORT 55  
**GEOLOGIC MAP**  
of the  
**REFORM QUADRANGLE**  
Choctaw County, Mississippi



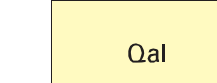
Geology by David E. Thompson

revised 2003

**DESCRIPTION OF MAP UNITS**

QUATERNARY  
HOLOCENE

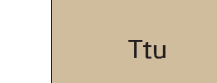
**ALLUVIUM**



Sand, flood plain sands and silts.

TERTIARY  
PALEOCENE

**TUSCAHOMA FORMATION**

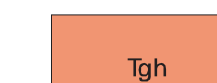


Sand, dark greenish gray to light gray, weathers reddish orange to pale yellowish orange, very fine- to coarse-grained, quartzose, micaceous, carbonaceous, glauconitic. Interbedded to interlaminated with clay and silt, light olive gray to brownish black, weathers to various shades of red, gray, brown, or white; lignite, contains Red Hills Mine lignite seams H through L. Total thickness is 400 feet; however, the thickness present in the quadrangle is approximately 200 feet in the southwest corner. Basal sandy interval constitutes the Middle Wilcox Aquifer.

TERTIARY  
PALEOCENE

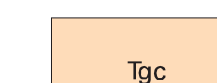
**NANAFALIA FORMATION**

**Grampian Hills Member**



Clay and silt, medium gray to pale green, weathers to various shades of red, brown, and gray, carbonaceous, lignitic, contains Red Hills Mine lignite seams C through G; interbedded to interlaminated with sand, dark greenish gray to medium gray, weathers reddish orange to pale yellowish orange, very fine- to medium-grained, quartzose, micaceous, carbonaceous, glauconitic. Basal portion is typically sandy. Thickness is 130 feet.

**Gravel Creek Sand Member**

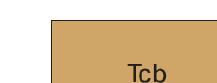


Sand, medium gray to very light gray, weathers reddish orange to pale yellowish orange, very coarse- to fine-grained, typically fining upward, quartzose, micaceous, clay clast conglomerate; upper portion consists of clay, dark gray to light gray, typically dense, occasionally silty, carbonaceous to lignitic. Contains Red Hills Mine lignite seams A and B. Thickness is 80 to 110 feet. Unconformity at base. Basal sandy interval (along with the underlying Coal Bluff sand) constitutes the Lower Wilcox Aquifer.

TERTIARY  
PALEOCENE

**NAHEOLA FORMATION**

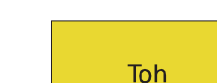
**Coal Bluff Member**



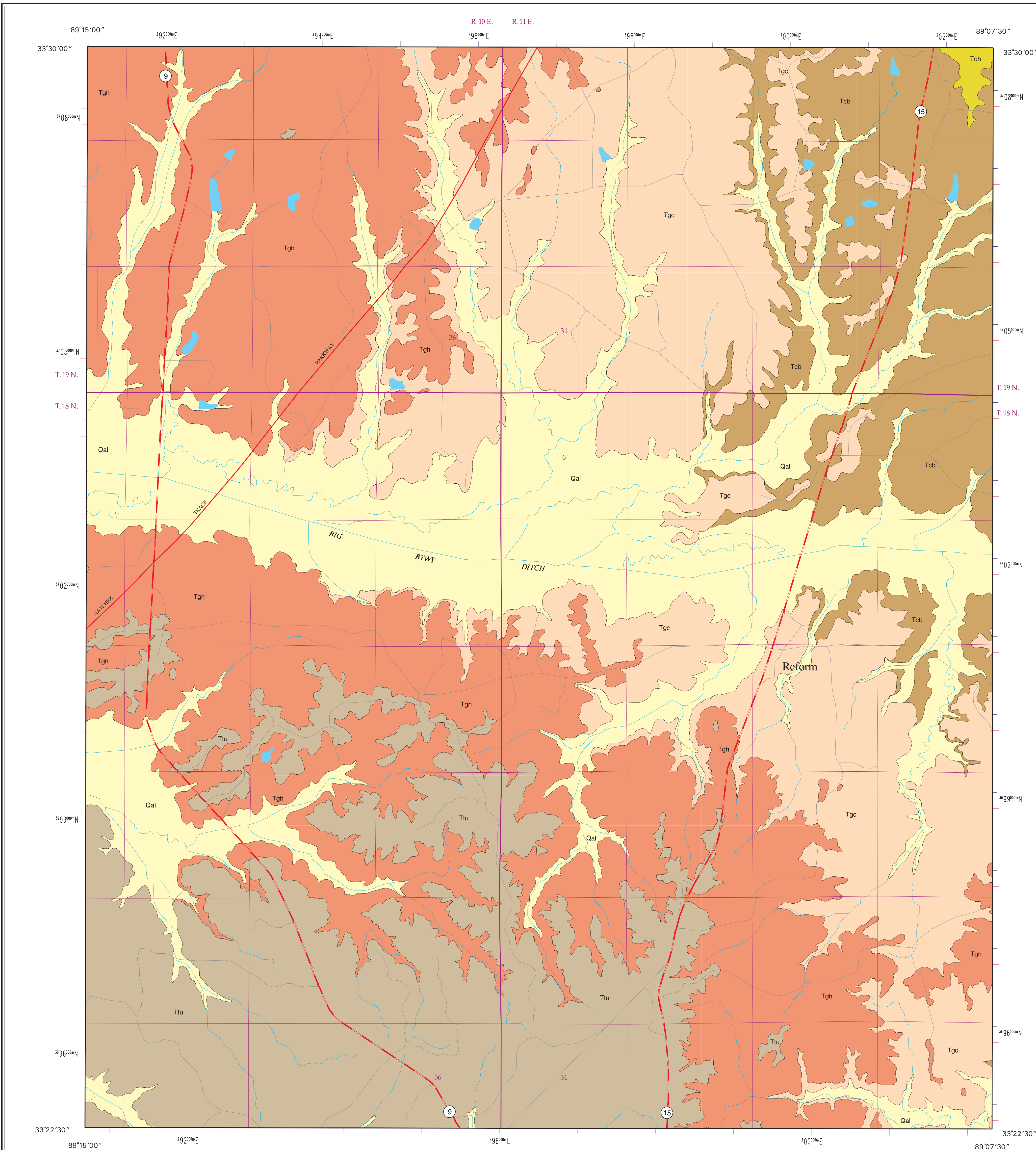
Sand, dark gray to light gray, weathers pale yellowish orange to reddish orange, very fine- to very coarse-grained, sometimes pebbly, typically fining upward, quartzose, very micaceous, carbonaceous, clay clast conglomerate; interbedded to interlaminated with clay and silt, dark gray to light gray, carbonaceous, lignitic, especially argillaceous at the top. The lower sands may contain kaolinitic to bauxitic clay clasts or beds. The thickness is 70 to 80 feet. Unconformity at base. Along with the overlying Gravel Creek sand, constitutes the Lower Wilcox Aquifer.

MIDWAY GROUP

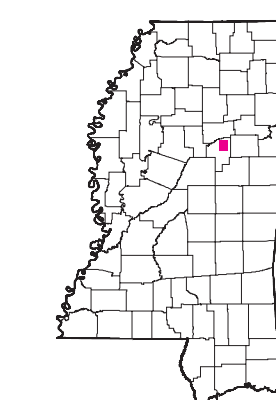
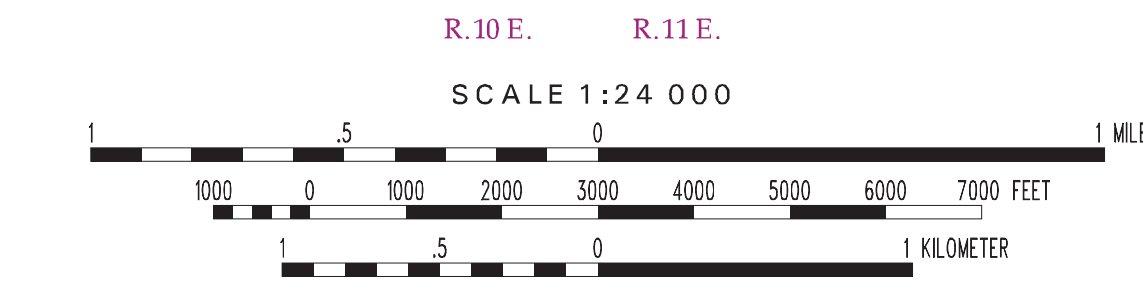
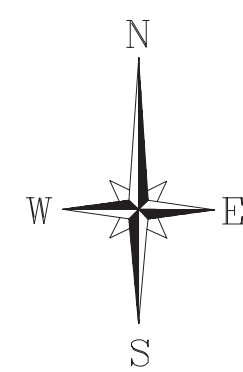
**Oak Hill Member**



Clay, brownish black to medium gray, weathers grayish brown to white, silty, carbonaceous, lignitic, kaolinitic to bauxitic; interbedded or interlaminated with sand, dark gray to greenish gray, weathers reddish orange to light yellowish orange, fine- to coarse-grained, quartzose, very micaceous, carbonaceous, locally glauconitic. The Oak Hill is locally predominantly sandy. The thickness is 100 feet; only the upper 50 feet are exposed in the northeastern portion of the quadrangle.



GEOLOGIC MAP  
REFORM QUADRANGLE  
Choctaw County, Mississippi



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Geology field checked in 1997 using the 1972 U.S. Geological Survey 7.5-minute topographic quadrangle, 1927 North American datum, contour interval 20 feet.  
Mississippi Transverse Mercator projection, 1983 North American datum, GRS80 spheroid, 1000-meter Universal Transverse Mercator grid ticks, zone 16, 1983 datum shown in red, 1927 datum shown in blue.  
Sources: Road and water features, USGS Digital Line Graph data, 1:100,000 scale. Public Land Survey System, Mississippi Automated Resource Information System (MARIS), 1:24,000 scale.  
Geographic Information System by Daniel W. Morse. Contribution by Barbara E. Yassin. First published 1998.