

THE GEOLOGY OF MISSISSIPPI: A REFERENCE FOR THE STATE'S GEOLOGY AND MINERAL RESOURCES¹

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Abstract: *The Geology of Mississippi* by David T. Dockery III and David E. Thompson, both with the Mississippi Office of Geology, is a 685-page book with compact 10-point type and 1071 figures, most in color. This book covers a broad range of geologic topics and gives the context for oil and gas occurrences in rocks of Paleozoic to late Cenozoic age, and for mineral deposits at or near the surface in rocks of Cretaceous to Recent age. Commercial lignite seams in Mississippi, which are accessible to surface mining, occur in rock units of Paleocene and Middle Eocene age. Paleocene lignite seams parallel the eastern flank of the Mississippi Embayment, making an arcuate turn at the Alabama line before trending north-south through Mississippi to the Tennessee line. Also along this trend are commercial clay mines and potentially commercial deposits of heavy minerals, bauxite, and iron ore. West of the Paleocene mineral trend are the Middle Eocene lignite seams of the Delta Star Prospect beneath the alluvial fill of the Mississippi Delta, occurring in the subcrop of the Kosciusko Formation in northern Quitman County. In the Loess Hills, east of the Delta Star Prospect, are related lignite seams of the Antioch and Butter Bowl/Peach Creek prospects in Panola County. Within the stratigraphic sequence containing Paleocene-Middle Eocene lignite seams are major aquifers, which provide water-supply sources for central and northwestern Mississippi. In ascending order, these include the Lower Wilcox, Middle Wilcox, Upper Wilcox-Meridian, Sparta, and Cockfield aquifers.

Additional Key Words: Paleocene, Middle Eocene, lignite, Mississippi Embayment, aquifers

¹ Paper was presented at the 2012 National Meeting of the American Society of Mining and Reclamation, Tupelo, MS *Sustainable Reclamation* June 8 - 15, 2012. R.I. Barnhisel (Ed.) Published by ASMR, 3134 Montavesta Rd., Lexington, KY 40502.

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