

Floyd & Conasauga,

Shale formations in the Black Warrior Basin and Appalachian Thrust Belt of Alabama present a diversity of opportunities for the exploration and development of natural gas. Prospective formations range in age from Cambrian through Carboniferous; they include the Middle Cambrian Conasauga Formation, a variety of Devonian shale units, and the Mississippian Neal (Floyd) Shale. Each prospective shale unit poses different challenges for development. In the Appalachian Thrust Belt, structural complexity is the principal challenge that must be met. For example, giant deformed shale masses in the Conasauga Formation contain major resources, but best practices for drilling and completion remain to be determined. A significant gas show in the Devonian section within the backlimb of a large ramp anticline are also promising, and fracturing associated with parasitic folds may enhance permeability. Organic-rich Chattanooga (Devonian) and Neal shale units in the Black Warrior Basin are enveloped by brittle carbonate formations and thus appear analogous to the prolific Barnett Shale of the Fort Worth Basin. Understanding the interplay among stratigraphic architecture, organic content, and thermal maturity are important keys to understanding the development potential of the Chattanooga Shale and the Neal shale.