

## ***COALBED METHANE RESOURCES OF ALABAMA***

Much of the early efforts to degasify coals prior to mining involved the drilling of vertical wells and the venting of the produced gas to the atmosphere. Research performed by the U.S. Bureau of Mines during the 1960s and early 1970s provided valuable information that helped to set the stage for mining companies to begin the degasification of coal seams in advance of underground mining operations. In the late 1970s and early 1980s, the U.S. Department of Energy sponsored the Methane Recovery from Coalbeds Project, and resulting research of the coal basins of our nation provided important additional data useful in the evaluations of the commercial potential of producing coalbed methane. In addition, beneficial research of coalbed methane reserves and producibility from deeply buried coal seams was performed under the sponsorship of the Gas Research Institute. On a local level, the State Oil and Gas Board and Geological Survey of Alabama have conducted a number of studies and published reports on the coals and coalbed methane resources of the State. A listing of these publications can be generated by clicking on "Publications" and searching by keyword for "coal" or "coalbed methane."

The first permit for a coalbed methane well in Alabama was issued in May 1980. The Pleasant Grove Field, which was established in July of the same year, was Alabama's first coal degasification field. In 1983, the State Oil and Gas Board of Alabama established the nation's first comprehensive rules and regulations governing the drilling for and production of coalbed methane gas resources. These rules have served as a model for other states.

A total of 22 coal degasification fields have been established by the State Oil and Gas Board to date. Twenty of the established fields are located in the Warrior basin and two are located in the Cahaba basin. The Warrior basin of Alabama has the longest development history of all basins in the U.S. for coalbed methane resources.

The Brookwood and Oak Grove Coal Degasification fields are both developed in areas of active underground mining, and both vertical drilling and horizontal drilling of wells are utilized in these underground mine operations. The remaining 20 fields have been developed for the purpose of establishing commercial production of coalbed methane in areas where underground mines are not planned in the foreseeable future.

The commercial production of coalbed methane in Alabama has increased since the earliest wells were drilled in 1980. Production now ranges between 116 and 200 billion cubic feet annually, or approximately 35% of the total gas production in the State. At the end of 2005, nearly 7,100 coalbed methane wells had been drilled in Alabama, and approximately 4,500 of these wells were producing from 13 established fields. Most of the wells are located in the Warrior basin and in Tuscaloosa and Jefferson Counties. The cumulative production of this valuable resource through 2005 was nearly 1.8 trillion cubic feet. Total reserves of coalbed methane for the State may exceed 3 trillion cubic feet.