

PETROLEUM EXPLORATION AND DEVELOPMENT OFFSHORE ALABAMA

The earliest exploratory wells in Alabama's offshore waters were drilled in Mobile Bay by Gulf Refining Company in late 1951 and early 1952. These two early wells were plugged and abandoned at depths of 10,000 and 11,000 feet after failing to encounter any significant shows of oil and gas. A period of more than 27 years lapsed before another test well was drilled, but this next attempt was successful and led to the active drilling and development of the large gas reserves lying more than 20,000 feet below coastal waters.

On June 21, 1978, Mobil Oil Corporation received a permit from the State Oil and Gas Board to drill a test well near the mouth of Mobile Bay to a depth of 21,500 feet. This was the first exploratory well in State offshore waters to test potential reservoirs of Jurassic age, which are the most prolific oil and gas producing horizons in the onshore region of southwest Alabama. On October 9, 1979, the well reached a total depth of 21,113 feet, and on November 28, the well was tested at a rate of 12.2 million cubic feet of gas per day from the Norphlet Formation.

Following this initial discovery, which was later named the Lower Mobile Bay-Mary Ann Field, high bonuses were paid by operators to explore and develop the hydrocarbon resources beneath State and adjacent Federal waters. In March of 1981, a total of \$449 million was received by the State in bids for the rights to develop 13 offshore tracts consisting of 55,054 acres, with one tract receiving a bid amounting to more than \$31,000 per acre. In February 1982, the Federal government leased the oil and gas rights to 17 tracts near Alabama's State waters for bonus monies totaling almost \$219 million. Another Federal lease sale of 13 tracts off the Alabama coast in May 1983 resulted in bonuses totaling almost \$41 million. In August 1984, the State received more than \$347 million from leases awarded on 19 offshore tracts consisting of approximately 75,000 acres. Special trust funds were established for income generated from the leasing of and production from Alabama's offshore tracts and these funds now total more than \$2.6 billion.

Through 2005, a total of 80 wells had been drilled in Alabama's coastal waters. Forty-seven of these wells were permitted to test the Norphlet Formation below a depth of 20,000 feet; the two earliest wells were drilled to test undifferentiated rocks of Cretaceous age; and 31 wells have targeted shallow Miocene gas reservoirs generally at depths of less than 3,500 feet. Operators have experienced a high success rate in drilling wells in Alabama coastal waters. Of 47 Norphlet wells drilled, 38 have tested gas, and of the 31 Miocene wells drilled, 27 have tested gas. Nineteen gas fields have been established in the offshore region of the State with seven being productive from the Norphlet Formation and twelve being productive from sands of Miocene age.

Production of gas from the State's coastal waters, at its peak, was more than 230 billion cubic feet annually. In 2005, offshore gas production flowed through 47 fixed structures and totaled nearly 154 billion cubic feet. This accounts for approximately 50% of the total gas

production in Alabama, which now ranks as one of the top ten gas producing states in the nation. Production capabilities for individual wells range from a few million to more than 110 million cubic feet per day, and the original recoverable reserves for the established fields are estimated to be more than five trillion cubic feet.

A number of publications regarding Alabama's offshore petroleum resources by the State Oil and Gas Board and Geological Survey of Alabama are available. A listing of these publications can be generated by clicking on "Publications" and searching by keyword for "offshore."