THE DUCK LAKE FIELD
ST. MARTIN PARISH, LOUISIANA

Edd R. Turner, Jr.[1]

ABSTRACT

The Duck Lake Field is located in Lower St. Martin Parish, in south central Louisiana. Installations in the field are either afloat or on pilings in dredged canals connected with Six Mile Lake, Duck Lake or Bayou Boutte.

The Duck Lake geologic structure was found sometime before the war by reflection seismograph, and an exploratory well was drilled in the area in 1941 which logged gas shows but was abandoned. The Humble Oil and Refining Company conducted gravity and seismograph surveys in the area after the war and drilled two dry exploratory wells in 1947. The discovery well was completed by Humble in 1949, and since then eighty-four oil and gas wells have been drilled.

The Duck Lake structure is a dome-shaped closure between a large down-to-the-northwest fault which limits production on the north side of the field and a smaller down-to-the-southeast fault which limits but does not completely interrupt oil and gas accumulation on the southern side of the field. This smaller fault dies out "on structure".

Oil and gas accumulations are found in Miocene Age sediments in the Bigenerina floridana, Uvigerina lirettensis, Robulus, Operculinoides and Discorbis zones. This interval extends from 8000 feet to almost 13,000 feet. There are fourteen gas sands, six oil sands and seven associated gas and oil sands (total 27). The field gas column is 1693 feet and the oil column is 430 feet.

For the past three years, the operators in the Duck Lake Field have been working toward a field-wide unitization. They are very near a unitization of the five major gas sands, UL-1, Rob-1, D-1, D-2, and D-3. These reservoirs are being unitized separately on an acre-foot of sand basis. A geological committee has been working on the field since late in 1950, and the geologic maps shown are taken directly from the committee's work.

[1] Humble Oil and Refining Co., New Orleans, Louisiana.