

NECHES OIL FIELD

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ABSTRACT

The Neches field is located in northeastern Anderson and northwestern Cherokee counties, Texas. The field was discovered with the completion of Humble's Neches Oil Unit No. 1 on September 9, 1953. As early as 1934, surface work and reinterpretation of early core test data indicated a structural high northeast of the town of Neches and east of the Boggy Creek Salt Dome. Later subsurface and seismic work localized the crest of the structure. Beds ranging in age from Claiborne (Queen City) to Trinity (lower Glen Rose) have been penetrated by the drill in wells in the Neches area.

The Neches structure is a northeast-southwest trending anticline with closure in excess of 100 feet on the Woodbine. A steep syncline separates the Neches anticline from the Boggy Creek Salt Dome. The sub-Clarksville sand, with a maximum thickness of 6 feet and an average thickness of 4 feet, extends over the southern end of the anticline and pinches out northward toward the crest of the structure. The Woodbine, with an average permeability of 600 millidarcys and an average porosity of 29%, has an active water drive. The sub-Clarksville sand, with an average permeability of 250 to 300 millidarcys and an average porosity of 21%, is produced predominantly by a dissolved gas drive. The Woodbine pressure at time of discovery was 1836 pounds at 4400 feet subsea and the temperature was 125° Fahrenheit. The original estimated sub-Clarksville pressure at 4285 feet subsea was 1995 pounds and the temperature 150° Fahrenheit.

Both the Woodbine and sub-Clarksville field rules include 40-acre spacing with a 75% acreage and a 25% well allocation formula.