

RESERVOIR CHARACTERISTICS OF TWO MINTER OIL SANDS BASED ON CONTINUOUS CORE, E-LOGS AND GEOCHEMICAL DATA: BEE BRAKE FIELD, EAST CENTRAL LOUISIANA

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ABSTRACT

The Bee Brake Field area, located in townships 4N/6E and 4N/7E in Concordia Parish, has been one of the more prolific oil producing areas in East Central Louisiana. Production decline in various fields however, has sparked interest in the economic feasibility of locating and producing the remaining bypassed oil in the lower Wilcox. For this purpose, the Angelina BBF #1 well was drilled, and a 500-ft. conventional core together with a complete suite of state-of-the-art wireline logs were recovered. Production tests were run on the Minter interval of interest.

The 16 foot Minter interval (6742'-6758'), bounded at its top and base by lignite seams, consists of an upper 4 foot oil sand (Bee Brake) and a lower 3 foot oil sand (Angelina). The oil sands are separated by approximately 5 feet of thinly laminated silty shale and 4 feet of very fine grained silty sandstone.

Detailed sedimentological and petrographic descriptions of the Minter interval provide accurate facies determination of this lower delta plain sequence. Petrophysical evaluation, combining core plug and modern e-log data show differences between reservoir quality of the Bee Brake and Angelina sands. This data will also be useful for correlating and interpolating old e-logs. Organic geochemistry of the oil, lignites and shales provides insight as to the source of the Minter oils and the sourcing potential of the lignites.