Seismic, Well Log, and Biostratigraphic Correlation of the South Marsh Island Blocks 222 and 234 and an Attempted Correlation to the "Davy Jones" Block 230 Shallow Shelf in the Gulf of Mexico

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ABSTRACT

Based on seismic data, well logs, and biostratigraphy, maximum flooding surfaces from the 7.30 to 14.20 Ma sequences were recognized in blocks 222 and 234 in South Marsh Island (SMI). Within the upper Miocene, the 7.30 Ma (BIG A), 8.80 Ma (DISC 12), and 10.20 Ma (BIG 2) were recognized. Within the middle Miocene, the 12.18 Ma (TEXT W), 13.15 Ma (BIG H) and 14.20 Ma (CIB OP) sequences were recognized. Sediments in the upper part of these wells were deposited in ecozones 2 to 3. Middle Miocene sediments were deposited in ecozone 4. Lowstand slope fan sediments were recognized in the middle Miocene portion. In blocks 222 and 224 biostratigraphy, wells logs and seismic were used in an attempt to correlate to the McMoRan "Davy Jones" well in SMI 230. Wells in blocks SMI 222 and 234 were projected below their total depth to approximately 30,000 feet on seismic data. The "Davy Jones" well was placed at the well location on a seismic line and projected to 28,530 feet. An interpretation of the stratigraphy below the Miocene was attempted in the three wells, including the salt, Oligocene, and Eocene sediments based on seismic and sequence stratigraphy. The "Davy Jones" is reported to have approximately 200 feet of pay in the reservoir section of Eocene Wilcox at approximately 400°F degrees.

Wornardt, W., 2010, Seismic, well log, and biostratigraphic correlation of the South Marsh Island blocks 222 and 234 and an attempted correlation to the "Davy Jones" block 230 shallow shelf in the Gulf of Mexico: Gulf Coast Association of Geological Societies Transactions, v. 60, p. 849.