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The Deep Shelf Play—A Bright Future without Bright Spots

The Deep Shelf Play in the Gulf of Mexico represents the logical evolution of exploration in a world-class basin. Once obvious salt-related features were exploited, evolving seismic technology created an HCI-driven exploration effort utilizing closely spaced 2-D and then regional 3-D coverage to illuminate low-risk “anomalies.” The method was effective but required little in the way of insightful geologic analysis. After years of diligent effort, the waning availability of shallow “anomalies,” decreasing reserve sizes, and increasing decline rates have caused exploratory attention to shift to the deeper, predominantly Miocene section. This new exploration venue has tremendous potential but its prosecution requires a higher level of geoscience integration coupled with state-of-the-art drilling technology. Successful exploration of this trend demands careful attention to regional geology: documenting depositional fairways and structural timing. The necessity of reliable seismic imaging requires rigorous re-processing of surface seismic and the integration of borehole seismic for a scalable interpretation. Prospect analysis and risking techniques are the key to creating a deep shelf portfolio that will generate consistent results and provide the opportunity for “company maker” discoveries. The confluence of high gas prices, advanced technology, and a prospect trend rich in potential and covered with infrastructure creates an opportunity set unique in our careers. ■

Biographical Sketch

KEVIN J. McMICHAEL is senior vice president of El Paso Production Company, a subsidiary of El Paso Corporation. Building upon El Paso's commitment to finding and developing solutions for increasing energy demands, El Paso Production is one of the most active drillers for natural gas in North America. The company has extensive natural gas reserves and manages a large portfolio of domestic and international acreage. El Paso Production's drilling inventory and technological leadership will play a vital role in fulfilling El Paso Corporation's commitment to finding energy solutions.



McMichael assumed his present position with El Paso Production following El Paso's 2001 merger with The Coastal Corporation. Most recently, he served as vice president of exploration. Prior to joining El Paso Corporation, McMichael served as executive vice president for Meridian Resource Corporation. He began his career with Texaco in 1978. In 1981, McMichael began working for Louisiana Land & Exploration Company, where he held several managerial positions before being promoted to vice president of exploration in 1995.

He earned a Bachelor of Science degree in geology and anthropology from Tulane University.

McMichael is a Certified Petroleum Geologist with the American Association of Petroleum Geologists. He also is a registered geologist in the states of Arkansas and Mississippi. In addition, McMichael is a member of the New Orleans Geological Society, Southern Geophysical Society, Southwest Louisiana Geophysical Society, and the Houston Geological Society. *kevin.mcmichael@elpaso.com*