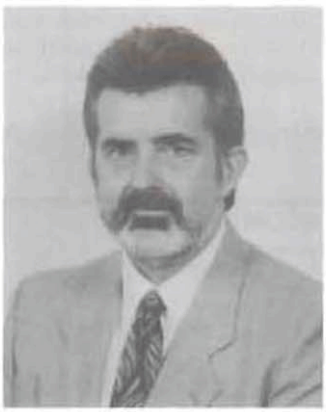
HGS LUNCHEON MEETING—JANUARY 30, 1991

MICHAEL P. PRESCOTT—Biographical Sketch



Michael P. Prescott, president of Big M Exploration Inc., received his bachelor's degree in geophysics in 1969 and a master's degree in engineering management in 1973 from the University of Tulsa.

During his nineteen years in the oil industry, he held positions of exploration geophysicist, Gulf Oil Corp., exploration geophysicist, Getty Oil Co., and consulting geophysicist, R. Brewer and Co. In 1984, he founded Big M Exploration Inc. to concentrate on play and prospect generation. More recently, he has been involved in the generation of high potential natural gas prospects in south Louisiana.

The paper to be presented has received the GCAGS 1st Place Award as well as the AAPG's A. I. Levorsen Award.

THE MAURICE FIELD: NEW GAS RESERVES FROM BURIED STRUCTURE ALONG THE OLIGOCENE TREND OF SOUTHWESTERN LOUISIANA

Significant new gas reserves have recently been discovered in the **Marginulina texana** sands along the Oligocene trend at the Maurice Field. Detailed subsurface maps and seismic data are presented to exhibit the extent and nature of this local buried structure and to demonstrate future opportunities along the Oligocene trend.

Since discovery in 1988, the MARG. TEX. RESERVOIR C has extended the Maurice field one half mile south and has established 200 feet of **Marginulina Texana** pay. Estimated reserves are in the order of 160 billion cubic feet of gas with limits of the reservoir still undefined. This reserve addition would increase the estimates of the Maurice field by over 70 percent from 220 billion cubic feet of gas to 380 billion cubic feet of gas. Cross sections across the field depict the new reservoir trap as a buried upthrown fault closure with an anticipated gas column of 720 feet.

Interpretation of the origin of this local structure is that of a buried rotated fault block within an overall larger depositional structure. Detailed subsurface maps at the **Marginulina texana** and the overlying **Miogypsinoides** level are presented. These maps indicate that one common fault block, FAULT BLOCK AB, is productive from two different levels. The deeper **Marginulina texana** sands are trapped on north dip upthrown to a southern boundary fault, FAULT B. The overlying **Miogypsinoides** sands are trapped on south dip downthrown to a northern boundary fault, FAULT A. The northern fault, FAULT A, was the **Marginulina texana** expansion fault and rotated that downthrown section to north dip. Because of the difference in dip between the two levels, the apex of the deeper **Marginulina texana** fault closure is juxtaposed by one mile south relative to the apex of the overlying **Miogypsinoides** fault closure.

Analysis indicates that important structural growth occurred during **Marginulina texana** deposition with a local unconformity covering the apex of the upthrown fault closure. State-of-the-art reconnaissance seismic data clearly exhibit this buried rotated fault block. Similar buried structures are predicted to exist along the Oligocene trend. Such occurrences will open opportunities to explorationists for the discovery of significant gas reserves throughout the 1990's.