

Depositional Styles from Miocene to Pleistocene in the North-central Gulf of Mexico: A Historical Reconstruction

By Jesse L. Hunt, Jr., and Grant Burgess, Minerals Management Service, U.S. Department of the Interior, New Orleans, Louisiana

During the past two years, Minerals Management Service, U. S. Department of the Interior, has classified the reservoir sands from the approximately 1,100 fields across the entire northern Gulf of Mexico into groups of genetically related plays defined by production, chronostratigraphy, lithostratigraphy, and structure. Sands within each of the 12 chronozones from lower Miocene to upper Pleistocene were classified as transgressive, aggradational, progradational, or deep-sea fan facies. Proved reserves plays, hydrocarbon extents, and facies sand limits were mapped

for each chronozone.

Dramatic changes in depositional styles from the Miocene through the Pliocene are observed in the north-central Gulf of Mexico as the ancestral Mississippi River delta moved both basinward and eastward across offshore Louisiana. The depocenter shifted back to the west and significantly basinward during the Pleistocene. Useful hydrocarbon exploration and development tools developed as a result of this study will be presented. ■



Jesse L. Hunt, Jr. is a geologist with the U. S. Department of Interior Minerals Management Service Gulf of Mexico OCS Regional Office. Mr. Hunt holds B.S. and M.S. degrees in Geology

from the University of Georgia. After his graduation in 1974, he spent two years conducting a sedimentological study of the Caribbean continental margin of Venezuela for a private Venezuelan research foundation. He joined the U. S. Department of Interior Bureau of Land Management, New Orleans OCS Office in 1976 as a geological oceanographer. Mr. Hunt worked for Gulf Oil as a senior geologist exploring for oil and gas offshore Louisiana from 1980 to 1985. Since 1985, he has been primarily evaluating tracts bid upon in offshore lease sales to ensure bid adequacy.