GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES TRANSACTIONS VOL.XLVII 1997

ABSTRACTS

Gulf Coastal Plain Marker Fossils in the Revised Miliolidae

Harold V. Andersen
LSU Geology & Geophysics Department, Professor emeritus, Baton Rouge, LA

The foraminiferal family Miliolidae no longer includes the genera with a porcellaneous wall as seen in reflected light. The genera comprising the miliolids, as recently defined, have a three-fold, pitted wall and the potential of becoming the best marker genera, stratigraphically and/or environmentally, in the Gulf Coastal Plain Tertiary. The genera with the preceding characteristics are: *Miliola, Neaguites, Texina, Picouina, Helentappanella, Hemimiliola, Heteromiliola,* and *Miliolacostata*.

Of the samples studied, the Moodys Branch Formation (Eocene) and the Byram Formation (Oligocene) in Mississippi bear the largest number of individual specimens — six of the eight genera of the miliolids in the Gulf Coastal Plain. The Crystal River Formation (Eocene) and the Chipola Formation (Miocene) in Florida have a lesser number of miliolids with most having a quinqueloculine chamber arrangement that is similar to the many genera in the Lutetian of France.

The Weches Formation (Eocene) in Texas and the Cane River Formation (Eocene) in Louisiana, also in the samples studied, have two different miliolid genera, *Texina* and *Heteromiliola* respectively. The pelagic foraminifera present in the Cane River indicates that its sediment was deposited in deeper water than the Weches. The Yazoo Formation (Eocene) and the Rosefield Formation (Oligocene) in Louisiana, and the Red Bluff and Byrum Formations (Oligocene) in Mississippi also bear the miliolid genus *Heteromiliola* thus adding credence to it being an environmental marker genus for the Miliolidae.

Marker genera for the basal Eocene appears to be *Hemimiliola* and *Helentappanella*; and for the Oligocene the genera *Neaguites, Miliolacostata* and *Picouina*.

High Resolution Seismic and Core Data from Northern Gulf of Mexico Shelf Used to Develop Self-Instructional Web Sites in Sequence Stratigraphy and Reservoir Analysis

John Anderson, Laura Banfield, Philip Bart, Brenda Eckles, Michelle Fassel, Antonio Rodriguez Julia Smith and Jennifer Snow
Department of Geology and Geophysics, Rice University, Houston, TX

Over 20,000 kilometers of high resolution seismic data and several hundred oil company platform borings and cores from the northern Gulf of Mexico continental shelf and upper slope are used to examine the response of different depositional systems to rising and falling sea levels during the last few glacial eustatic cycles. The study area extends from the west Florida shelf to the Rio Grande and includes a number of different fluvial valleys, deltas, paleoshoreline deposits, shelf-sand bodies and other depositional systems with different fluvial input, shelf gradient, and climatic and oceanographic settings.

A series of paleogeographic maps, coinciding with prominent seismic stratigraphic surfaces, and representative seismic sections and cores are used to illustrate how deposition varied from area to area during the last highstand, lowstand and transgression. Variations between deposits are profound. In some areas the stratigraphic section is dominated by highstand deposits while other areas are dominated by transgressive and/or lowstand deposits. Potential time equivalent reservoirs also vary along the shelf. Within a given area there is reasonable repetition of depositional patters over the several glacial eustatic cycles, so predictable trends in reservoir shape and stratigraphic position are observed. (These results are being used to develop a series of self-instructional modules on sequence stratigraphy and reservoir analysis that will soon be available on the Rice University web site.)

Examinations of MWD Wireline Replacements by Decision Analysis Methods: Two Case Histories

Gary F. Beck
Chevron Production Co., New Orleans, LA

Decision analysis (DA) methods were used to analyze the costs vs. benefits for MWD wireline replacement programs on two 6-well platform projects in the Gulf of Mexico. The DA on the first project indicated a cost savings between $0 - $50,000 per well could be expected, with a median probability of saving $21,000. The wells were drilled with MWD replacing wireline with total cost savings of over $240,000 for the project. The DA on the second project indicated that there was virtually a 100% chance of not realizing any cost savings, and that we could incur additional costs of up to $70,000 per well with a median probability of an additional $29,000 cost per well. It was decided to not use MWD to replace wireline on this project, which turned out to be a prudent decision as drill pipe was stuck in several of the wells and a bottom hole assembly (BHA) was lost in one well.