
Current Scope of the High Resolution Biostratigraphy in Cenozoic Subsurface Sedimentary Rocks of the Gulf of Mexico Basins

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ABSTRACT

Constant development in fossil record and the plausible augmentation in the need for applying high resolution biostratigraphic data (HRB) in the oil industry, have permitted a reconsideration in the importance of the paleobiological events as well as the biogenetic relation towards the sedimentary environment. Such important relation is linked to the guide species (index fossils and other fossils with chronostratigraphic importance) occurrences which are used in chronostratigraphic analysis. Recently, Cenozoic sediments from the different oil producing Gulf of Mexico basins have been subject to numerous exploration work efforts, where biostratigraphic studies have not only been key in biochronological and paleoecological analysis but they are an essential part in multidisciplinary studies (hydrocarbon evaluation, hydrocarbon reservoir delineation, new locations for hydrocarbon reservoirs, etc.) as a strategic tool in better chronostratigraphic charts, biofacies characterization, and stratigraphically important horizons or surfaces and biochronohorizons, which could be used in more accurate correlations so as to reach more complex goals. Such scope implies not only a basic discipline in data processing but also a basic knowledge in data generation, not to be excluded shall be the technique innovation in classical methodology so that real micropaleontological tools can be developed in order to place HRB in a modern context according to the oil industry's constantly growing needs.