

High-resolution Biostratigraphy and Paleoecology of early Miocene Foraminiferal Assemblages from Turbidite Reservoirs in the Campos Basin.

¹MESQUITA, A. ¹PETROBRAS/CENPES, RJ, Brazil

The microforaminiferal fauna in 16 core samples from deep water turbidite reservoirs of the Campos Basin, Marlim Field, have analyzed qualitative and semi-quantitatively.

The planktonic foraminiferal assemblage belongs to the *Globorotalia kugleri* biozone, of early Miocene age (23.8 to 21.7 Ma). Besides the presence of the *Globorotalia kugleri*, common and stratigraphically important species are *Catapsydrax dissimilis*, *Globigerina ciperoensis angustiumbilitata*, *Globigerinoides primordius*, *Globoquadrina dehiscens praedehiscens* and *Globorotalia fohsi peripheroronda*.

Four distinct benthonic foraminiferal biofacies A to D, could be defined and correspond to the pre-turbidite, early turbidite pulse, turbidite and post-turbidite sections respectively. Biofacies A, associated to high sea-level hemipelagic sediments of the pre-turbidite section, is characterized by calcareous and agglutinated forms of the middle Bathyal paleobathymetric zone (501-1000 m). *Trochammina* spp. and *Bolivina* spp. dominate this biofacies. The agglutinated foraminifera, e. g., *Cyclammina* sp., *Haplophragmoides* spp. and *Rhizammina* sp. have smooth, finely finished testes and are epifaunal and suspension feeders. These characteristics reflect a relatively tranquil environment with weak bottom currents.

Biofacies B contains exclusively calcareous forms as *Cibicidoides* spp., *Cibicides* spp., *Hanzawaia* spp., *Osangularia* sp., *Pullenia bulloides* and *Sphaeroidina bulloides*, of the undifferentiated upper Bathyal (201-500 m). Reworked shallower-water species like *Amphistegina* sp. and *Lenticulina* sp., are together with autochthonous fauna, indication of the high hydrodynamic energy conditions and transport of the material from the platform.

Biofacies C is also calcareous and is characteristic of the shallow part of the upper Bathyal zone (201-300 m). The common taxa present are *Cassidulina* sp., *Cibicidoides* spp., *Globocassidulina* sp., *Gyroidinoides* sp., *Hanzawaia* spp., *Melonis pompilioides* and *Siphonina tenuicarinata*. The preservation state denotes transport and/or dissolution.

Biofacies D, from the rich sandy lobes from the core top section, has abundant calcareous and frequent agglutinated taxa, coarse infaunal and epifaunal detrital and suspension feeders. The assemblage contains *Ammobaculites* sp., *Bathysiphon* spp., *Bolivina* spp., *Bulimina* spp., *Eggerella* sp., *Globocassidulina* spp., *Gyroidina* sp., *Gyroidinoides* spp., *Pullenia bulloides* and *Trochammina* sp. They are of the upper Bathyal zone, deep part (301-500 m) and can tolerate higher bottom current intensities than those of the basal section.