

Albian - Maastrichtian stratigraphic framework of the Campos Basin: A study based on calcareous nannoplankton and relationships with electric-logs and geochemical markers

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Upper Cretaceous (Albian-Maastrichtian) nannofossils of the Campos Basin (southeastern Brazil) were used to identify the ages of long known electric-logs markers. Also, Total Organic Carbon (TOC) and Hydrogen Index (HI) were determined for the same section.

A new zonation defined by 12 biozones was established in replacement to an earlier one based on 5 biozones. Since the work is based on cuttings, have been considered only the last occurrences (LOs) of the diagnostic species.

The six electric-logs markers of the Upper Cretaceous in the basin correlate well with individual biozones or groups of biozones. These include Marker B (Cenomanian), Green Marker (Cenomanian - Turonian), Acqua Blue Marker (Turonian - Coniacian), Red Marker (Santonian), Fingers Marker (Santonian to Maastrichtian) and Orange Marker (early Paleocene). Both the Green and B markers have high TOC and HI values and correspond to the global anoxic events of Cenomanian - Turonian age. The Fingers Marker is illite/smectite mudstone originated by deposition of volcanic ashes. The base of Orange Marker coincides with Cretaceous - Tertiary boundary. It has higher TOC content and low values of HI, suggestive of continental derived organic matter.