

THE QUATERNARY SEDIMENTATION IN A TROPICAL, SEMI-ENCLOSED BIGHT IN UBATUBA REGION, SOUTH-EASTERN BRAZIL

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In the south-eastern coast of Brazil, the interaction among pre-Cambrian structures, late Quaternary sea-level changes and present hydrodynamic processes control the morphology and sedimentation of several semi-enclosed bights. In this work we aim to analyse the late Quaternary sedimentary sequences of one of these bights, named Fortaleza, as a case the study of application of seismic stratigraphy concepts in this type of environment. The study area is located in Ubatuba region, northern coast of São Paulo State and covers an area of about 25 sq. km. In this area we have performed approximately 70 km of seismic lines, covering the whole area, using boomer type equipment. Results allowed to the identification of 3 seismic units, separated by regional reflectors, located between the present bottom surface and the acoustic basement. Unit 1 consists mainly of low acoustic impedance sediments, which represent the late Holocene sedimentation. Its contacts with Unit 2 is abrupt but quite regular. Unit 2 can be divided as two sequences, being the uppermost represented by parallel reflectors and the lowermost characterised by frequent irregular and truncated reflectors as well as many cut-and-fill structures. Its contacts with Unit 3 is very irregular. Unit 2 was interpreted as the depositional sequence developed during the Würm-Wisconsin event until the subsequent sea-level rise. Unit 3 is a heterogeneous sequence, lying directly over the acoustic basement and characterised by complex irregular internal reflection patterns. This Unit was interpreted as the transgressive deposits developed before the last glacial event, corresponding, in Brazil, to the Cananéia transgressive sediments.