This work presents a seismostratigraphic correlation model for the South and Southwest Portuguese Margins and a paleogeographic and tectonics reconstitution model for these two margins from Late Cretaceous through Pleistocene-Holocene.

These models are based on Seismic Stratigraphic interpretation of multichannel seismic lines calibrated with oil-industry wells data, gravity and piston cores.

The seismostratigraphic correlation the South and Southwest Portuguese Margins since the Late Cretaceous allowed the recognition of the major tectonostratigraphic episodes, as follows:

a) Late Cretaceous and Paleogene – the Algarve Basin and the Sagres Plateau suffered tectonic inversion. The occurrence of three major events of uplift and erosion are testified by the following hiatus/unconformities: \( C_z \) (between Early Cretaceous and Paleocene/Eocene deposits), \( C_z' \) (Eocene and Oligocene deposits), \( M \) (that erodes the deposits of Oligocene, Eocene or Mesozoic age);

b) Miocene – the Algarve Basin was affected by flexural subsidence during Neogene. In the Early Miocene the subsidence was more important in the western sector of the basin. Meanwhile the eastern sector evolved together with the Guadalquivir Basin. The MPF was reactivated as thrust fault in the Miocene, showing more intense activity during the Late Miocene. The structural highs Gorringe Bank, Sagres Plateau, Marquês de Pombal Plateau, CPR and the Portimão Bank experienced uplift in the Late Miocene;

c) Pliocene and Pleistocene-Holocene – The subsidence increased in the Algarve Basin during the Pliocene, shown by the occurrence of various episodes: in the Early Pliocene; at the end of Early Pliocene-beginning of Late Pliocene; two episodes in Late Pliocene; at the end of Late Pliocene; in the Late Pliocene/Pleistocene transition. During the Pliocene the Gulf of Cadiz accretionary wedge (CCGC) moved towards the west, and it showed evidences of activity, at least, until the beginning of the Late Pliocene. The CCF and its sedimentary cover were deformed by thrust faults, some of them showing superficial rupture. The CPR was probably uplifted until the Late Pliocene.

Key words: Tectonostratigraphy, Seismostratigraphy, Cenozoic, South and Southwest Margins