

## **SEQUENCE STRATIGRAPHY APPLIED TO HOMOCLINAL CARBONATE RAMPS: EXAMPLE OF THE LOWER JURASSIC OF PORTUGAL**

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In the Lusitanian basin (Central Portugal), the Middle-Upper Liassic (early Pliensbachian - early Aalenian) is characterized by an expressive marly limestone accumulation, sometimes with a clear rhythmic style. The weak lateral facies variation observed at the basin scale, suggests that these sediments were deposited in an homoclinal carbonate ramp. Considering the Upper Triassic-Upper Calovian large cycle (pre-rift phase), those sediments correspond to the maximum transgressive facies which are observed widespread in all the succession. The aim of this work is to present a sequential scheme interpreted in terms of sequence stratigraphy, including the hierarchisation of the stratigraphic cycles (3rd to 5th order sequences). This is achieved by assembling all the available information about the series such as facies and sequential evolution, paleontological record, mineralogical (clay minerals) and geochemical parameters (carbon stable isotopes, TOC and strontium). The large number of portuguese outcrops, always controlled by an accurate ammonite biostratigraphic scale, allows to configure the geometry of the stratal packages of five third-order depositional sequences. As common in this type of facies (distal carbonate setting), those sequences generally begin by a fast flooding phase, followed by a transgressive and highstand system tracts. Controlled by the shelfal accommodation changes (eustasy, sediment supply, tectonics and subsidence), the transgressive systems are more expressive during the Pliensbachian stage. During the Toarcian, the series are thicker, suggesting an increase of the subsidence and sediment supply in the basin. In this case, prograding systems are well developed.