

Sequence Stratigraphy of Passive Margin: Agadir and Essaouira Basins (Morocco) during Berriasian - Aptian and Maestrichtian Oligocene

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In the basins of Essaouira and Agadir, the Berriasian - Aptian and Maestrichtian - Oligocene intervals exhibit respectively 15 and 7 Lithostratigraphic Units defined by a main lithological changes.

The spatial distribution, the thicknesses variations as well as the general evolution of the depositional sequences testify of an important mobility of the basement during sedimentation. In the Berriasian – Aptian period, the distensive reactivation of NNE-SSW and E-W striking paleo-faults induces a differential tectonic subsidence with highs and grabens. The earliers are characterized by reduced series exclusively of high stand system tracts. The seconds present a thickest and most complete series with transgressive and high stand system tracts.

For the Maestrichtian-Oligocene period, the sedimentation occurred during the deceleration of the oceanic expansion and the beginning of the Western High Atlas uplift. These tectonic movements confer to the sedimentation a discontinuous character and a contrasted lithology with alternation of carbonates and clastics.

The evolution of the series attests of eustatic and tectonic interference in distensive and compressive general context, respectively for the Berriasian – Aptian and Maestrichtian - Oligocene intervals.

In this study we propose, for each Lithostratigraphic Unit, a depositional sequence (3rd order) subdivision compared to those presented in the literature (Vail and al., 1987; Van Wagoner and al., 1987; Haq and al., 1987).

Key words: Sequence stratigraphy, Passive margin, Cretaceous, Oligocene