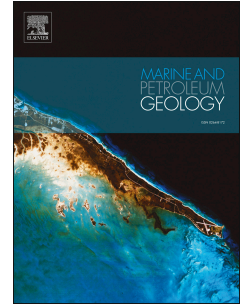


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## **Geological evolution of the offshore Tunisia (Gabes Basin, Pelagian Domain) since the Cretaceous: constraints from subsidence curves from hydrocarbon wells data**

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### **Abstract**

The comparison of subsidence curves obtained from deep wells in sedimentary basins represents a powerful tool to identify major changes in subsidence distribution, both in time and space. The construction of subsidence curves from 19 wells, covering a time interval from the Cretaceous to the present in the Gabes Basin (Pelagian Domain of the eastern Tunisian Platform), provided the opportunity to reconstruct the subsidence patterns across the basin. Changes in the subsidence rates in different wells allowed the identification of six time-intervals (stages). Stage boundaries are defined by major changes in subsidence trends in the 19 wells: each stage is characterized by changes in the subsidence pattern of groups of wells, likely reflecting episodes of re-organization of the distribution of domains with different trends (increase or decrease) of subsidence. Comparisons among the subsidence curves highlighted, for each stage, parts of the basins with higher or lower subsidence, permitting to identify highs and lows and to reconstruct their significance in the different stages identified. The basin-scale changes in the distribution of subsidence rates reflect regional events of basin re-organization, potentially controlled by syndepositional faults or, for some stages, by halokinesis, due to the presence of salt deposits in the southern part of the study area.

The comparison of the subsidence curves permitted to identify domains characterized, in different time intervals, by different patterns of subsidence rates, providing important elements for the characterization of the different stages in the stratigraphic and tectonic evolution of the basin.

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