

Relationships Between Prograding and Sharp-Based Depositional Sequences of Onshore to Offshore Miocene Series of Eastern Tunisia

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In Central Tunisia (N-S Axis), outcropping Serravalian and Tortonian deposits are made of two formations, Beglia at base and Saouef at top. The Beglia Fm. is represented by a thick package of tide-dominated sandstone units separated by thin clayey intervals. The thicker Saouef Fm. is mostly argillaceous with minor sandstone beds usually representing the top of wave-dominated prograding sequences. The two Formations are easily recognizable.

Eastward, in the wells and scattered outcrops of the Sahel, The two Formations can still be clearly identified. Beglia is still overall sandy but Saouef is different. It is made of a complex alternation of sandstones and clays in which are represented either mostly clayey, wave-dominated, prograding sequences similar to those of the N-S Axis, or thick, tide-dominated sandstone units that are laterally continuous in wells. These are sharp-based, and supposed to represent relative lowstand deposits vs. some of the wave-dominated sequences of the NS Axis. The interstratification of prograding and sharp-based sequences can be explained by complex fluctuations of the shoreline.

In offshore wells, off Mahdia and Monastir ports, the distinction between the two formations is hard or impossible to make because the Serravalian-Tortonian is represented by a rather homogenous succession of thin sandstone bed and clays. That is the reason why the use of the Oum Douil Group is preferred although the term of Birsia Fm. is used in place of Beglia Fm. The reason why the succession is so undifferentiated is because the offshore, storm-beds-bearing facies of both types of the sequences evidenced in wells of the Sahel are stacked.

Key words: Miocene, Prograding sequence, Sharp-based sequence, Eastern Tunisia.