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New insights on sedimentology, sequence stratigraphy and palaeogeographic reconstruction of the Tortonian-Early Messinian Kechabta series

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1 **New insights on sedimentology, sequence stratigraphy and palaeogeographic**  
2 **reconstruction of the Tortonian-Early Messinian Kechabta series**  
3 **In Kechabta Foreland Basin (Northern Tunisia)**

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15 **Abstract**

16 The Kechabta Basin is part of the Tunisian Foreland Basin in front of the Numidian and  
17 Tellian nappes. During the Tortonian, this basin records a strong subsidence rate due to  
18 flexural process, in front of the nappes. Contrary to previous interpretations, a  
19 sedimentological investigation of the thick Tortonian-Early Messinian Kechabta Formation  
20 (over 1300 m) reveals that this siliciclastic series corresponds to a complex deltaic shorelines  
21 deposit dominated by waves and influenced by tides. This formation is mainly made of a large  
22 number of high frequency, mudstone to sandy prograding parasequences representing  
23 repeated progradational phases of the coastal wedge. Facies successions within many of the  
24 parasequences show normal regressive trends. These parasequences present offshore grey-  
25 brown mudstone, followed by transition offshore sandy storm beds alternating with mudstone,  
26 then by shoreface sandstones bearing hummocky-cross stratification and wave ripples, then  
27 by foreshore facies or tidal flat facies. However, many other parasequences reveal forced

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