

## SEDIMENTARY INFILL AND GEOLOGICAL EVOLUTION OF ÇAMELİ NEOGENE BASIN, DENİZLİ-SW TURKEY

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ABSTRACT.- Çameli basin is one of the western Anatolian grabens formed during the neotectonic period. The basin contains data which may enlighten neotectonic stage of the region due to its setting and successions. Characteristics of the basin fill are determined by the facies analysis and key data related to time interval of the deposition are provided by using mammalian faunas. NE-SW trended Çameli basin begins to open as a graben under the control of the Dirmil fault at the east and Bozdağ fault at the west during the Late Miocene (10.8-8.5 Ma). Growth faults seen intensively in the preliminary sediments of the basin composed of alluvial fan, river and lacustrine deposits point out an effective extension. After this period, the basin is divided into two parts by an intensive faulting at the Early-Middle Pliocene (3.8-3.2 Ma). Later, the impression of extensional tectonics relatively decrease and the basin turn into a large lacustrine environment. The lacustrine deposits overlap both fault that separate the basin into two parts, and marginal faults and this stage continues until Middle to Late Pliocene (3.5-2.5 Ma). While the lake basin become shallow by filling of alluvial fan and river delta progradation. lacustrine carbonates precipitate in the central part of the basin. After this stage the basin is broken again in Late Pliocene (2.6-1.8 Ma) by two fault systems that are parallel to marginal basin faults indicated with a travertine layer. The final deposits of the basin are alluvial sediments deposited by this faulting stage. According to the growth faults seen in the sediments accumulated after the latest faulting stage, the extension has been reactivated and the Çameli basin more or less has taken recent form.

Key words: Çameli, Neogene, graben infill, Neotectonics, facies analysis, southwest Turkey