

Geochemical characteristics and origin of dolomite in Late Jurassic-Early Cretaceous platform carbonates, Ayralaksa Yayla (Trabzon, NE Turkey)

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The Upper Jurassic-Cretaceous deposits are widely distributed and superbly exposed in southern zone of the Eastern Pontides (NE Turkey). This work represents the depositional environments and tectono-sedimentary evolution of Tithonian - Campanian succession from the Mescitli area (Gümüşhane, NE Turkey) based on microfacies characteristics, including depositional texture, grain composition, and fossil content. The studied stratigraphic sections are characterized by the following three units: 450 m medium-thick to massive neritic limestone including dolostone, benthic foraminiferal packstone, allochthonous skeletal/ peloidal grainstone, sponge spicule packstone / wackestone, and allochthonous skeletal packstone facies, which are deposited in low-middle energetic shallow tidal, lagoon to deep shelf during the Tithonian–Early Santonian time. The 15 m yellowish sandstone to sandy limestone derived mainly from neritic limestone that was broken up by Albian-Santonian extensional tectonic regim, deposited in the fault-slope environment during Turonian-Santonian. The 5 m red *Globotruncana*-bearing pelagic limestone deposited in basin environment during the Campanian.

The microfacies analyses of the studied stratigraphic section indicates that shallow marine conditions were present during the Tithonian - early Santonian in the Mescitli area (Gümüşhane, NE Turkey). However, these conditions ended during the Albian extensional tectonic regim, when the carbonate platform was broken up, and the basin was deepened and yellowish sandstone to sandy limestone was deposited in the fault-slope environment. Deepening of the basin was continued until the deposition of red *Globotruncana*-bearing pelagic limestones which are represented by the maximum flooding surface sediments, during the campanian entire study area had became a deep-marine depositional environment.

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