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MAIN GEOLOGICAL FEATURES OF THE AREA AROUND TOKAT (DUMANLI DAĞI) AND SIVAS
(ÇELTEKDAĞI) AND SETTING OF OPHIOLITIC MELANGE

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ABSTRACT.— In the region between Dumanlı dağı (Tokat) and Çeltekdağı (Sivas) there are three pre-Eocene tectonic units. These are from north to south: Tokat metamorphics, ophiolitic melange with its cover rocks and Akdağmadeni metamorphics. Tokat metamorphics comprise a metavolcano-sedimentary sequence with olistoliths and has undergone metamorphism in the greenschist facies. Calcschist, marble, quartzite with local intercalations of albite-chlorite micaschist and amphibolite makes up the Akdağmadeni metamorphics which has undergone epidote-amphibolite facies metamorphism. The Upper Cretaceous-Paleocene ophiolitic melange and its cover rocks is a complex sedimentary-tectonic unit, which consist of two closely related parts: the tectonic part consist of juxtaposed tectonic slices of rocks with different origin; the olistostromal part is made up of magmatic, metamorphics, sedimentary and volcanic blocks in a matrix of pelitic sandstone, siltstone, tuff and volcanic rocks. Some volcanic with pillow lavas appear to be of Upper Cretaceous age. This unit has undergone lower graded metamorphism. The thrusts separating the tectonic slices dip northwards at 30°-55°. The metamorphic blocks within the ophiolitic melange are partly derived from the Tokat metamorphics and partly from Akdağmadeni metamorphics; furthermore Jurassic-Lower Cretaceous limestones, which are transgressive over the Tokat metamorphics in the north also occur as blocks in the ophiolitic melange. Ophiolitic melange is covered with local disconformity by the Upper Senonian rocks with pelajik foraminifera which passes upwards gradually to Paleocene neritic carbonates. Eocene sediments sit with a unconformity over all the older units of the area. In addition, there are gabbro, basalt and andesite which formed during Eocene. Thrusts have developed along the northern contacts of the Eocene and unconformably overlying Miocene sediments which contain ophiolitic olistostromes. The olistostromes are derived from the previously emplaced ophiolitic melange.