

GEOLOGY OF THE ULUKIŞLA-ÇAMARDI (NİĞDE) BASIN

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ABSTRACT.- The studied area is restricted by the Niğde group at the north, Bolkar group at the south and Ecemiş fault zone at the east. The Niğde group is composed of Aşığediği and Çamardı formations in the studied area. Üçkapılı granodiorite is intruded into all of these rock units. Yeniköy formation which consists of sedimentary rocks, overlies the Niğde group. The Bolkar group is made of Permian aged marbles and schists. The Alihoca ophiolite complex overlies this group with a tectonic contact. The Horoz granodiorite intrudes into the Bolkardağı marbles and quartz-porphyr dykes cut the ophiolitic rocks. The Aladağ group, which is located at the eastern part of Ecemiş fault, is composed of Akdağ and Gökbel formations. The Aladağ ophiolitic melange has a sedimentary contact with the carbonaceous rocks that forms the basement. The Aladağ ophiolitic nappe overlies the former with a tectonic contact. The Ulukışla-Çamardı Tertiary basin overlies many different tectonic units. The volcano-sedimentary and plutonic rocks which crop out at the north are developed on the Niğde massif sedimentary rocks cropping out at the south are developed on the Bolkardağı marbles and the volcano-sedimentary rocks of the central part, are developed on the Alihoca ophiolite complex. All the three sections came in conjunction with the Upper Eocene tectonic movements. The basement of the Tertiary basins starts with Bolkardağı marbles and Kalkankaya formation, which overlie the ophiolite complex with angular unconformity, at the southern section. It ends with Yağbağ and Kırkpınar formations. The Plio-Quaternary actual sediments cover these units. The rock units of Cretaceous to Middle Eocene are observed in the central section. This section is made of Kırkgeçit, Tabaklı, Ardıçlı, Hasangazi formations and their members. The Zeyvegediği anhydrite, which is diagenetic, overlies these units with angular unconformity. The Kurtulmuş, and Kızılöz formations, Ilıcadere basalt and actual sediments cover all the former units. North section also consists of Cretaceous to Middle Eocene rock units. This section is composed of Ömerli, Yeniköy, and Unlukaya formations, Başmakçı limestone, Karlık basalt, Alıçlı andesite, South and Çaykavak formations, Elmalı syenite-Porphyr, diabase dyke and Kaletepe trachyte. Finally, the Kaletepe trachyte cuts all of these units. Oligo-Miocene aged Fındıklı formation covers them with an angular unconformity and proceeds with Miocene Burç formation. It ends up with Çanaktepe formation. Havuzlu tuffite, Gökbez formation, İkiştepe ignimbrite and actual sediments at the top. The basin has experienced three different compression stages, which occurred in Upper Eocene-Lower Oligocene, Upper Miocene and Upper Pliocene.