

The Geological Evolution of Northern margin of the central part of Menderes-Tauride platform

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The area studied is about 30 kilometers north and northwest of Konya. The area is composed of metasedimentary and metaigneous rocks, which some of them belong to oceanic lithosphere, of Palaeozoic-Mesozoic age metamorphosed in low grade metamorphism.

The oldest formation exposed in the area is the Silurian-Lower Devonian age rocks. The lower part of this unit is mostly of Silurian-Lower Carboniferous age metacarbonates, which have residual complex character. These rocks relatively pass to Devonian-Lower Permian age continental margin, shallow water and pelagic character rocks. The metabasaltic andesite and metadolerite lava within plate, and the metabasaltic andesite has continental arc lava characteristics affinities, and the metabasaltic gabbro is MORB like in the metasedimentary rocks. All these rocks are variably covered unconformably by Upper Permian-Lower Triassic age continental character origin metaclastics. The metaclastics continues up to the conformably shallow water Upper Permian-Triassic age metaclastic-metacarbonate intercalations. The units relatively pass to the conformably Triassic-Lower Cretaceous age metacarbonates. The upper part of these rocks have pelagic character metacarbonate, meta-chert and metaclastic intercalation. All these rock overthrust by Mesozoic age ophiolitic rocks. The most young rock in the area is Miocene-Pliocene age neo-autochthonous lacustrine-continental and volcanic rocks.

The stratigraphy, lithology and chemical character of the rocks area studied show that there was an ocean, which probably between Menderes-Taurus and Kırşehir block, during the Devonian. This ocean is subducted under to Menderes-Taurus block, during the Middle-Late Carboniferous and the magmatic arc derived on the continental shelf. Before late Permian-Early Triassic time, the magmatic arc was finished its evolution and the continental shelf repeatedly collapsed and foundered during the Mesozoic time. During the late Cretaceous, the ocean subducted under the Kırşehir block and the oceanic rocks obducted to the other rocks. Meanwhile, all the rocks in the present area have undergone intense and polyphase deformation, metamorphism during the late Cretaceous and onwards.