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THE GEOLOGY AND PETROGRAPHY OF THE LATE NEOPROTEROZOIC - EARLY PALEOZOIC UNITS OF WESTERN TAURIDES (SW OF SANDIKLI, AFYON)

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Abstract.- The investigated area including the region of the junction of the Middle and Western Taurides, comprise distinctive Middle Taurides stratigraphy and tectonic features. The units, cropped out in Sandıklı, Karadirek, Başağaç, Akharım, Taşoluk and surrounding areas are divided into three parts as Sandıklı Basement Complex, Early Paleozoic Cover Units and Mesozoic Cover Units. Sandıklı Basement Complex is composed of Güvercinoluk formation and Kestel Çayı Porphyroid Suite from bottom to top; Early Paleozoic cover units consist of Göğebakan, Hüdai, Çaltepe and Seydişehir formations respectively; İlyaslı and Derealanı formations represent Mesozoic cover units. Mesozoic Cover Units is technically overlain by Sandıklı Basement Complex in the western part of the Sandıklı. Sandıklı Basement Complex is formed an overturned antiformal structure within NNW - SSW direction. Meta-sedimentary and meta-magmatic rocks of Sandıklı Basement Complex are described as Güvercinoluk formation and Kestel Çayı Porfiroid Suite. Kestel Çayı Porphyroid Suite is composed of meta-rhyolite/meta-dacite and meta-quartz porphyry dikes. Meta-quartz porphyry dikes of Kestel Çayı Porphyroid Suite intrude the meta-sedimentary rocks of SBC (Güvercinoluk formation) and meta-rhyolite/meta-dacite rocks which formed rhyolitic composition carapace. Sandıklı Basement Complex are cut by green-dark green colored continental tholeiitic basalt compositions dikes. Sandıklı Basement Complex rocks are unconformably overlain by Early Cambrian Göğebakan formation. Upward, the formation is transitional to Celiloğlu member of Hüdai forma tion. The unit's age indicate Tommotian (Early Cambrian) age according to trace fossils at the transition between Celiloglu member of Hüdai formation and Göğebakan formation. Celiloğlu member is made up of alternation of green colored meta-mudstone/meta-siltstone and green-beige colored meta-sandstone and is transitional to Örenkaya quartzite member with slate bearing meta-sandstone (quartzite). Hüdai formation is conformably overlain by Lower-Middle Cambrian Çaltepe formation, which is made up of reddish-brown colored recrystalized dolomite and pink colored nodular limestones. The unit continues Middle Cambrian - Early Ordovician Seydişehir formation including anchi-metamorphic milstone, nodular limestones, shales and sandstones, which have a narrow contact in the investigated area. Mesozoic cover units are represented by Early Liassic İlyaslı formation with Early Liassic-Early Malm Derealanı formation. It is considered that the unconformity of Sandıklı Basement Complex and Early Cambrian cover units correspond to Main Pan-African unconformity in Menderes Massif (Şengör et. al., 1984) and Menderes Massif, Eastern Taurides and similar units are pertaining to parts of Pan-African basement.

Key words: Cadomian basement, Early Palaezoic cover, geology, petrography, Sandıklı

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