

THE GEOLOGY OF THE EASTERN PART OF THE PULUR MASSIF

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ABSTRACT- It is hoped that important evidences about the formation and evolution of Eastern Pontid's can be obtained from a geological study of Pular massif. Therefore, a total of 430 km² area belonging to Pular massif between Bayburt and Demirözü has been studied. The oldest basement of the area is the Pular metamorphic complexes. At the base a metamorphic schists, which has a 600 m apparent thickness and at the top 200 m thick limestones of Permo-Carboniferous age are placed. Lower Jurassic formations, which consist of basal conglomerates and sandstones, disconformably overlies the Pular massif. These formations, are conformably overlain by volcano-sedimentary series of Liassic age. During the Liassic time intensive volcanism yielded the diorite, andesite, diabase and basalt masses. Some basalts contain large analcime phenocrysts that the rock can be named analcimitite. Liassic volcano-sedimentary formations are conformably overlain by 50-60 m thick limestones of Dogger age. These limestones are also conformably overlain by another limestone facies of Malm-Lower Cretaceous age. At the top a melange facies of Aptien-Albien age are seen. These indicate that the Pular area was a marine depositional environment at least since Carboniferous or since Devonian until Upper Cretaceous, except a time gap between Permian and Lias. This marine basin was shallow at the beginning but gradually became deeper starting from Dogger time. In the region, two different type metamorphism, which are hornblende-hornfels facies of contact metamorphism and Barrowian type amphibolite facies of dynamo-thermal metamorphism, are distinguished. The structural character of the region is similar to Alpine type tectonic. Anticlines, synclines, faults and large extension of a thrust faults, which are elongated in NNE—SWW direction, are the most important features of that tectonic style.