

GEOLOGY, GEOCHEMISTRY AND GEOTECTONIC SETTING OF VOLCANICS COMPRISING KÜRE (KASTAMONU) ORE MINERALIZATION

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ABSTRACT.- The rock formations cropping out in the area have the following stratigraphic sequence: The basement rocks are commonly serpentinized peridotite of pre-Jurassic age associated with occasional pyroxenite and dunite. This is overlain by the Küre formation of pre-Lias/Lias age composed of basaltic volcanics at the lower section and a thick sedimentary portion at the upper part. Next is the Karadana formation of Upper Dogger-Lower Malm age consisting of reef limestones with interlayers of sandstone. In addition, gabbro, diorite, dacite, and basaltic dikes intruding these formations are also observed. Küre volcanics are determined as tholeiitic basalts based on their petro-chemical properties. These rocks are island-arc type volcanics produced from the mixture of continental crust and magma originated from mantle. The pyritic copper deposits are of the Kieslager-type mineralizations which were determined as Cyprus-type in the earlier studies. This new and important finding was obtained after a detailed study on the geotectonic setting, host rock types, geochemical properties, and paragenesis of the ore mineralization.