

## FEATURES AND ORIGIN OF THE KOÇKALE-ELAZIĞ MANGANESE MINERALIZATIONS

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ABSTRACT.- Koçkale and its vicinity (Elazığ) is composed of four different units. These are; Upper Jurassic-Lower Cretaceous Guleman Group, Campanian-Maastrichtian Yüksekova Complex, Maastrichtian-Lower Eocene Hazar Group and Middle Eocene Maden Complex. The Mn mineralizations of Koçkale are situated in volcanosedimentary rocks of Maden Complex and occur in two types: (1) The mineralizations conformable with volcanosedimentary rocks, are syngenetic and volcanosedimentary type. This type of mineralizations occur within mudstone and as a constituent of this unit. The mineralized bodies are tense and stratiform shaped. Any alteration related to mineralization is absent. Ore mineral assemblage is pyroiusite, psilomelane, rodokrosite, braunttite, manganite, limonite, hematite, magnetite, chromite, pyrite and baryite. In places baryite forms silica rich lenses. (2) Vein type mineralizations are epigenetic and are products of hydrothermal solutions circulating through fault and openings. The vein type mineralizations are also situated in different levels and places of mudstone. The mineral assemblage is; pyrolusite, psilomelane, rodokrosite, limonite, hematite, magnetite, chromite and a significant alteration associated with the mineralizations is present.