

MINERALOGY AND GENESIS OF THE ZINC-LEAD DEPOSIT OF THE YAHYALI (KAYSERİ)-DEMİRKAZIK (NİĞDE-ÇAMARDI) REGION

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ABSTRACT.- The area under study is situated in region, north east of Middle Toros, where faults, thrust faults, fracture zones are commonly present. Many zinc-lead deposits, small-big occurrences in the form of vein, lode, fault and karst fillings along the Yahyalı-Demirkazık region, were deposited in the various carbonate rocks of Permian-Jurassic age. Ore minerals of the deposits are sphalerite, galena, smithsonite, anglesite and cerussite. The primary mineral parageneses are composed of pyrite, chalcopyrite, arsenopyrite, pyrrhotite, magnetite, molybdenite, bravoite, fahlore (tetraedrite, freibergite), nativ Ag, argentite and nativ gold ore. While goethite, lepidocrosite, malachite, azurite, covellite, hemimorphite and hydrozincite from the secondary minerals, the gangue minerals are made up calcite, dolomite, quartz and barite. These mineral assemblage parageneses, indicate high temperature formations. In addition to this, sphalerite and galena contain Fe, Cu, Mn, Al, Mg, Ni, V, W, Co, Cd, Ir, Ge, Ag, and Au moreover, the content of Sr is 2,13 %, a very high value. All these proofs point out that the orebodies are probably hydrothermal. According to the plate tectonic model calc alkali magma splits in to two parts due to gravitation before intrusion. One part of these, calc alkali magma, formed granitoid rocks which along Bolkar mountains and the other areas under investigation, the other has no significant mineralizations part of magma was rich in metal ions both parts were in placed in the weak zones of limestones, fractures and faults. Karstification process is continuing even today. The effect of the atmospheric conditions and underground hot water allows the ore in the area to remobilize, and provides it for sedimentation.