

KHANJAR PB-AG-(ZN) DEPOSIT,SOUTH OF DAMGHAN AS A MVT DEPOSIT

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Kanjar Pb-Ag(Zn) deposit is one of the many Cretaceous stratabound deposits of central Iran. The basement rocks are Silurian-Devonian phyllites, quartzschists, dolomites and marbles. The upper Cretaceous shale and carbonate rocks, overlies with a basal conglomerate the basement. The ore bodies are of two geometric types: (1) Lenses congruent with the bedding, (2) Ores as open space filling or with breccia fabric due to faulting. The two types mentioned occur in limestone. Three ore bearing facies have been distinguished: (1) Siliceous limestone facies; galena and sphalerite and pyrite with minor amounts of chalcopyrite. (2) Mollusca, Echinoderm Wackstone facies galena and sphalerite with minor amounts of pyrite. (3) Rudist limestone facies, with large amounts of galena. The mineral association, being galena, sphalerite, pyrite, barite, some tetrahedrite and minor amounts of copper minerals similar to the MVT stratabound and stratiform Pb-Zn deposits. Fluid inclusions investigations on saddle dolomite, located in fractures with galena and sphalerite demonstrated the homogenization temperature of 145 to 230 °C and salinity of 17.5-23 wt% NaCl equivalent. Field observations, ore geometry and paragenesis studies with geochemical results, lead to genetic interpretation that Kanjar deposit is formed in two stages, syngenetic and epigenetic.