Mineralogical studies of Darreh – Zerreshk copper deposit SW of YAZD

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(Received: 17/11/2008, in revise form: 14/5/2009)

Abstract: Loco-granite and granodiorite intrusive bodies have cut the Naiband and Sangestan Formations in Darreh-Zerreshk area in southwest margins of Shirkooh batholite. This intrusion has caused weak metamorphism and copper hydrothermal mineralization in permeable Sangestan Formation. The characteristics minerals are magnetite, chalcopyrite, pyrite, bournite and dyajenite. The studied area is composed of sedimentary strata of Lower Cretaceous up to present. These rocks have been cut by a great variety of extrusive and intrusive rocks. Intrusion of porphyric granitoide of Miocene in volcanic units and Cretaceous limestone units caused Copper mineralization in different parts of studied area. In Darreh-Zerreshk, four different mineralization zones can be recognized as: oxide, leaching, supergene and hypogene. Alteration zones in Darreh- Zerreshk area are potassic, propylitic and phyllic thet can be correlated with Lovell and Gilbert model. This research was carried out for mineralogical, texture and geneses studies of this ore deposit.

Keywords: Copper Deposit Supergene, Hypogene, Lovell and Gilbert.

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