SULPHIDE OCCURRENCES IN THE SERPENTINITES-CHROMITITES OF THE ERETRIA AREA

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Sulpide occurrences loceted in three chromite-bearing localities (Mavros Mine, Kastreki 3 and Eretria village) in the Eretria area, ere described end compered in this peper.

The most important sulphide mineralizetion occurs in the Mavros Mine, located in the outer pert of the chromite ore bodies, es well es, in the sliding plenes of serpentinite. The minerelizetion is cherecterized by high Cu content and consists mainly of pyrrhotite and chelcopyrite. Pentlandite (Co), valleriite, ilvaite are found in minor emounts, while sphalerite, cubenite, mackinawite, pyrite, millerite ere quite rere.

In Kestraki 3 end Eretria villege, where ore drilling was carried out by IGME, sulphide minerelization compared with thet of Mavro, is less developed, showing different mineralogical composition. The ebsence of Cu minerals and the presence of Sb and As minerals is quite characteristic. The sulphide mineralization is located in strike slip-mylonite zones of the chromite ore, as well as in the serpentinites. Its metallic paragenesis consists of pentlandite (± Co), millerite, heazlewoodite, niccolite, breithauptite, valleriite, marcasite, orcelite, Ni-cobaltite, while pyrrhotite and chalcopyrite are absent. The similarities between the sulphide concentrations occurring in the Kastraki and Eretria localities, support the opinion that in these two cases, they belong to an extension of the same chromite-bearing formation. Serpentinization solutions are responsible for the mineralization.

In the Mavro locality, the mineralization composition (high Cu/Cu + Ni ratio, incompatible with ultrabasic rocks) requires an intense meta-magmatic hydrothermal activity. The responsible solutions could be the same with those related to serpentinization, mixed with seawater. These solutions could have been helped by the intense thrusting tectonics. Alternatively, hydrothermal activity may be related to later magmatic processes (i.e. mafic dikes or igneous intrusion) into the already serpentinized peridotite.

NEOGENE AND QUATERNARY PYROCLASTICS ON THE TERRITORY OF BULGARIA – A REVIEW AND NEW DATA

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A number of occurrences of Neogene and Quaternary pyroclastics of unknown origin are established in Bulgaria.

Some tuffs and dispersed pyroclastics are found in the Sarmatian sections, and sor tuffs – in the Meotian-Pontian (?) and the Pliocene ones. The tuffs are rhyodacitic and rhy litic, and belong to the high-K calc-alkaline series. As a rule they are unevenly to strong altered into kaolinitic clays or bentonites.

The Quaternary ash tephra is trachytic and belongs to the high-K transitional serie Five occurrences are established. Three of them are located in caves. In the Prohodn Temnata dupka cave system the tephra is situated between two layers containing paleol hic artifacts. About 95% of it is composed of angular ash glass shards (N = 1,523). Accc ding to the macropetrochemical features the Quaternary ash is very close to that establi hed in Francheti cave (Peloponnesos, Greece). It belongs to the «Campanian ignimbrite series» and is connected to one of the paroxysmal freatomagmatic events which accompa nied the formation of the Neapolitan caldera (Italy) in the time span between 38,7 and 24 ka.

MINERALOGY AND MINERAL CHEMISTRY OF SULFIDE MINERALIZATIONS WITH GOLD IN THE STANOS AREA, VERTISKOS FORMATION, CHALKIDIKI

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The present paper deals with the mineralogy, texture and mineral chemistry of sulfid mineralization from the sites Paliomilos, Chalkoma, Karabogia and Kasida located in th Stanos area, Chalkidiki Peninsula. The mineral assemblages consist mainly of pyrite, arse nopyrite, chalcopyrite and in smaller proportions of sphalerite, pyrrhotite, galena, Co-Ni sul fides, bismuthinite, sulfosalts of Bi and Cu-Ag-Sb, gold-electrum, telluride of Bi, molybdenit and Fe-Ti oxides. The mineralizations in the former three sites are deformed and metamor phosed contrary to the fourth. On the basis of arsenopyrite geothermometry and sphalerit geobarometry applied in the paragenetically first assemblage pyrite + pyrrhotite (hex) + sphalerite + arsenopyrite temperatures of 460-510°C, sulfur fugacity of $10^{-4.2}$ – $10^{-5.6}$ atn and pressures 5.6 ± 0.8 kb were obtained. These conditions were found to be comparabl with those indicated by the silicate mineral assembleges of the host rocks, thus suggestin formation of early phase of mineralization before or during the peak of the Jurasic-Uppe Cretaceous amphibolite facies regional metamorphism. The remaining assemblages of th sulfide mineralization including gold in the former three sites have been formed during th retrograde greenschist metamorphic episode and subsequently the sulfide mineralization a the Kasida site.