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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Mineralogická charakteristika hydrotermální mineralizace ze starých těžebních pozůstatků v oblasti Mladoňov - Nový Malín (silezikum)

Mineralogy of hydrothermal mineralization from remnants of old mining in the area Mladoňov - Nový Malín (Silesicum, Czech Republic)

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Abstract

In the area north of Mladoňov, which is built by phyllites and quartzites of the Vrbno Group and granite-derived phyllonites of the Desná Group (Silesicum, northern part of the Bohemian Massif), there were found two types of hydrothermal ore mineralization in vein material sampled from remnants of old mining/prospection. The Cu(-Bi-Au) mineralization hosted by quartz gangue was found at the locality Husarčina šachta. A main ore mineral is chalcopyrite, which contains inclusions of pyrite, native bismuth, bismuthinite, a phase close to bismite, and native gold with fineness of 717 - 818. Baryte, recorded in part of collected samples, probably represents a significantly younger hypogene mineralization. Supergene minerals include malachite, azurite, a phase close to chrysocolla, bornite, Cu-sulphides, tenorite, native copper, limonite and probably also cuprite. A quartz-pyrite-pyrrhotite mineralization with accessory arsenopyrite and xenotime-(Y) and supergene limonite and baryte was recorded at localities Husarčina šachta and Kopka. Sporadically, Fe-sulphides contain elevated contents of Au (measurable by means of an electron microprobe), probably due to submicroscopic inclusions of native gold. Gold could be leached from wall rocks by ore fluids and/or remobilized from older mineralization to the younger one. The presence of traces of Cr, Co and Ni in some ore minerals implies for wider circulation of parent fluids involving probably also basic or ultrabasic rocks.

Key words: Mladoňov, old mining, hydrothermal mineralization, chalcopyrite, bismuth, gold, Vrbno Group, Desná Group, Bohemian Massif

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