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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Neobvyklá žilná Cu-Zn-Ag-Pb-As-Sb-Se-Sn-Bi mineralizace z Jedové jámy u Vejprt v Krušných horách (Česká republika)

Unusual vein Cu-Zn-Ag-Pb-As-Sb-Se-Sn-Bi mineralization from Jedová jáma mine near Vejprty in the Krušné hory Mts. (Czech Republic)

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Abstract

An extraordinary rich mineral assemblage consisting of 27 minerals has been newly discovered in quartz veins of the abandoned ore deposit, once exploited by the Drei König Mine, called also Giftschacht (Jedová jáma - Toxic shaft), situated approximately 2 km SE of Vejprty town. It includes 16 sulphides (plus one unnamed) with far prevailing arsenopyrite. In addition to common sulphides (chalcopyrite, sphalerite, galena and minerals of the tetrahedrite group), a wide suite of sulphosalts with substantial Bi-content was identified. Besides common bismuthinite and emplectite, also relatively rare Bi minerals (matildite, aikinite, hammarite, wittichenite), in the Czech Republic known from few localities only, have been found here. Bi is bound also in a rather exotic selenide bohdanowitzite and native bismuth. Bi is substantially present in some domains of tetrahedrites [tetrahedrite-(Zn), tennantite-(Zn) and tennantite-(Fe)]. In addition to local Bi enrichment, also Sn-minerals occur in the ore, represented by cassiterite and rare sulphides (kësterite and stannoidite). The presence of phosphates of the plumbogummite group [plumbogummite, goyazite and florencite-(Ce)] contributes to the remarkable mineral assemblage. From geochemical point of view, very interesting is the presence of florencite-(Ce), in which REE with dominating Ce are fixed. In addition, grains of fluorite, fluorapatite, rutile, topaz and aggregates of illite and a phase from kaolinite group are present. Supergene mineralization is represented besides limonite by abundant scorodite and rare strengite.

Key words: arsenopyrite deposit, sulphidic mineralization, Bi-Sn mineralization, minerals of the plumbogummite group, Jedová jáma mine near Vejprty, Krušné hory Mts., Czech Republic

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