

Neobvyklý P-, Li- a Sn-bohatý pegmatit z Vernéřova u Aše, Česká republika

Unusual P-, Li- and Sn-rich pegmatite from Vernéřov near Aš, Czech Republic

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Abstract

Pegmatite from Vernéřov near Aš (W Bohemia) forms a steeply dipping, about 1 m thick, more than 1 km long dyke, examined to the depth more than 200 m. The pegmatite is homogeneous, without any type of zonality. The major pegmatite dyke is accompanied by a swarm of thin (up to 10 cm thick) veins. The minerals in dyke and veins originated in several episodes: (1) intrusion of granitic melt and crystallization of the main pegmatite dyke quartz+orthoclase+montebrasite, (2) origin of hydrothermal quartz-feldspar veins with common cassiterite and contemporary crystallization of cassiterite in the main pegmatite dyke, (3) crystallization of Sn-Zn-Fe-Cu-sulfides, namely stannite with admixtures of kesterite, (4) crystallization of Ag-Bi-Pb-sulfides, intensive replacement of primary silicates with fine-grained muscovite, replacement of stannite with young cassiterite, replacement of montebrasite by hydrous Al-phosphates, (5) crystallization of strongly hydrated Al- and Fe-phosphates. The pegmatite is rich in P, Li, and Sn, but poor in F. Minerals of B or Be were not found. The only primary Li-mineral and substantial P-host is montebrasite.

Key words: pegmatite, mineralogy, chemical composition, phosphates, montebrasite, sulfides, genesis, Vernéřov near Aš, Western Bohemia