

## Revize sulfidické mineralizace z alpských žil od Markovic u Čáslavi (kutnohorské krystalinikum): minerální asociace a chemické složení

### Sulphidic mineralization from Alpine-type veins from Markovice near Čáslav (Kutná Hora Crystalline Complex) revisited: mineral assemblage and chemical composition

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#### Abstract

A revision of accessory sulphidic mineralization of Alpine-type veins from the amphibolite quarry at Markovice (Kutná Hora Crystalline Complex) led to finding of the following five sulphides: marcasite, pentlandite, siegenite, millerite and cobaltite, and, in addition, one selenide mineral - naumannite. Moreover the presence of most formerly described sulphides (sphalerite, pyrite, pyrrhotite, chalcopyrite) and clausthalite was confirmed. The ore assemblages hosted by vein samples rich in mafic silicates (pyroxene, amphibole) appear to be mineralogically more variable in terms of number of ore phases than those within samples composed mainly of quartz, feldspars, and/or calcite. The same trend is observed also in terms of amount of isomorphic admixtures in sulphides. These findings are probably related to different temperature of parent fluids giving rise to various samples. The studied ore mineralization displays a specific geochemical signature (rich in Cu, Ni, Co, Se), which might be associated with leaching of at least a part of ore elements from (meta)ultrabasic rocks. The observed wide variability in both mineral composition of individual samples as well as chemical composition of individual mineral phases suggests significant changes of physico-chemical parameters of the parent fluid, namely temperature, pH, oxygen fugacity and sulphur fugacity.

**Key words:** *Alpine-type veins, selenides, sphalerite, pyrrhotite, chalcopyrite, pyrite, millerite, siegenite, cobaltite, naumannite, clausthalite, Kutná Hora unit, Bohemian Massif, Czech Republic*

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