

## Selenidová mineralizace uranového ložiska Potůčky v Krušných horách (Česká republika)

### Selenide mineralization of the uranium deposit Potůčky, Krušné hory Mountains (Czech Republic)

JIŘÍ SEJKORA<sup>1)\*</sup>, VLADIMÍR ŠREIN<sup>2)</sup>, BLANKA ŠREINOVÁ<sup>1)</sup> A ZDENĚK DOLNÍČEK<sup>1)</sup>

<sup>1)</sup>Mineralogicko-petrologické oddělení, Národní muzeum, Cirkusová 1740, 193 00 Praha 9 - Horní Počernice;  
\*e-mail: jiri\_sejkora@nm.cz

<sup>2)</sup>Česká geologická služba, Klárov 131/3, 118 21 Praha 1

SEJKORA J, ŠREIN V, ŠREINOVÁ B, DOLNÍČEK Z (2017) Selenidová mineralizace uranového ložiska Potůčky v Krušných horách (Česká republika). Bull Mineral Petrolog 25(2): 306-317 ISSN 2570-7337

#### Abstract

An interesting mineral association of Pb, Ag and Bi selenides was found in samples from the abandoned uranium deposit Princ Evžen near Potůčky in Krušné hory Mountains (Czech Republic). The unnamed Se-analogue of pavonite is the most abundant Se-bearing mineral phase. It forms anhedral aggregates up to 100 µm across and veinlets in chalcopyrite or coffinite in association with bohdanowiczite or unnamed Bi-selenide. Its empirical formula (mean of 97 analyses) can be expressed as  $(\text{Ag}_{1.15}\text{Cu}_{0.02})_{\Sigma 1.17}(\text{Bi}_{2.74}\text{Pb}_{0.13}\text{Fe}_{0.01})_{\Sigma 2.88}(\text{Se}_{3.31}\text{S}_{1.62}\text{Te}_{0.01})_{\Sigma 4.94}$ . The minerals from the galena - clausthalite solid solution series are abundant as tiny (several µm) grains in coffinite, anhedral grains up to 50 µm in size in association with bohdanowiczite inclusions are much rare. Bohdanowiczite forms grains up to 30 µm in size in association with unnamed Se-analogue of pavonite, clausthalite and unnamed Bi-selenide. Its chemical composition (mean of 10 analyses) corresponds to the empirical formula  $(\text{Ag}_{0.99}\text{Fe}_{0.02}\text{Pb}_{0.01})_{\Sigma 1.02}\text{Bi}_{0.98}(\text{Se}_{1.68}\text{S}_{0.30}\text{Te}_{0.01})_{\Sigma 1.99}$ . Unnamed Bi-selenide with ideal formula  $(\text{Bi,Ag})_3(\text{Se,S,Te})_4$  was found as irregular grains up to 20 µm across in association with bohdanowiczite or unnamed Se-analogue of pavonite; its empirical formula (mean of 10 analyses) is  $(\text{Bi}_{2.62}\text{Ag}_{0.30}\text{Pb}_{0.04})_{\Sigma 2.96}(\text{Se}_{3.11}\text{S}_{0.74}\text{Te}_{0.20})_{\Sigma 4.05}$ . The description and chemical composition of coexisting Se-free sulfides (chalcopyrite, pyrite, tennantite, sphalerite) are also given.

**Key words:** selenide, unnamed Se-analogue of pavonite,  $\text{AgBi}_3\text{Se}_9$ , clausthalite, bohdanowiczite, unnamed  $(\text{Bi,Ag})_3(\text{Se,S,Te})_4$ , Potůčky, Czech Republic

Obdrženo: 2. 10. 2017; přijato: 22. 12. 2017