Bismutové minerály v křemenném valounu se zlatem z náplavů Otavy u Annína (Šumava)

Bismuth minerals in the quartz pebble with native gold from alluvial placers of Otava river near Annín (the Šumava Mts.)

VLADIMÍR ŠREIN[1)] A JIŘÍ LITOCHLEB[2)]

[1)] Ústav struktury a mechaniky hornin AV ČR, v.v.i., V Holešovičkách 41, 182 09 Praha 8
[2)] Národní muzeum, Václavské náměstí 68, 115 79 Praha 1

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Abstract

Gold of high purity (98.6 %), found in quartz pebble from alluvial placers of Otava river near Annín, north of Rejštejn at the Šumava Mountains (Czech Republic), is associated with both native bismuth and joséite A with empirical formula $(Bi_{3.92}Au_{0.03}Ag_{0.04})_{\Sigma 3.99}(Te_{0.97}S_{2.04})_{\Sigma 3.01}$. Joséite A is supposed to crystalize from reduced fluids with higher sulphur fugacity and at a relatively high temperature about 266° C. Native bismuth as well as joséite A are mostly altered into supergenic Bi and Bi-Te oxidic phases with variable chemical composition.

Key words: *native gold, bismuth, joséite A, chemical composition, alluvial placers, Otava river, the Šumava Mts., SW Bohemia*