PŮVODNÍ PRÁCE/ORIGINAL PAPER

Nový výskyt žilné W-mineralizace v tanvaldském granitu z Jablonce nad Nisou - mineralogie, chemické složení fází a fluidní inkluze

New occurrence of vein W-mineralization in Tanvald granite from Jablonec nad Nisou - mineralogy, chemical composition of minerals and fluid inclusions

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Abstract

A new locality of vein tungsten mineralization has been discovered in Jablonec nad Nisou, northern Bohemia (Czech Republic). It's the first occurrence of this type of mineralization to be hosted directly in the Tanvald granite. The W-mineralization is formed mainly by tabular black wolframite, whose chemical composition corresponds to ferberite with 0.17 - 0.37 *apfu* Mn and ≤0.019 *apfu* Mg, Nb, Ta, and Mo. Wolframite is partly replaced by scheelite, which is sometimes enriched in Mo (up to 0.35 *apfu*). Powellite rich in scheelite component (0.42 *apfu* W), hematite, cassiterite and secondary W-rich (up to 15.3 wt. % WO_3) Fe-Mn oxy-hydroxides are accessories. The gangue is formed by massive quartz. Quartz-hosted primary fluid inclusions contain low-salinity (0 - 4.6 wt. % NaCl eq.) H_2O-CO_2-N_2-CH_4 homogeneously trapped fluids with homogenization temperatures of 240 - 390 °C. Secondary fluid inclusions contain low-salinity fluids (up to 6.7 wt. % NaCl eq.) with Th = 105 - 218 °C and high-salinity (16.2 - 26.4 wt. % NaCl eq.) H_2O-NaCl-$CaCl_2$ fluids with Th = 57 - 123 °C, the latter resembling post-Variscan brines described from many other localities in the Bohemian Massif.

Key words: *wolframite, scheelite, fluid inclusions, Tanvald granite, Krkonoše-Jizera pluton*

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