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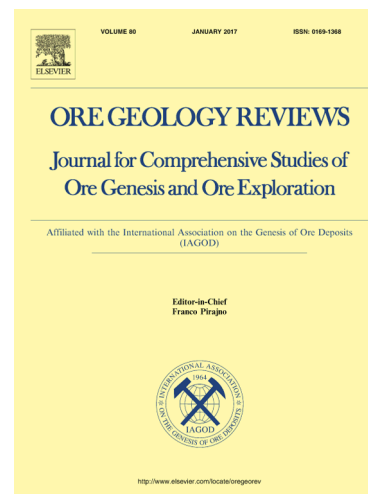
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Abstract

The Tumanny Au-Ag-Te-Hg epithermal prospect, Chukchi Peninsula, Russia is located in the near contact zone of the large Vuknei pluton, part of the Early Cretaceous Egdykgych Complex, which is related to the Peschanka porphyry copper deposit and the Nakhodka porphyry-epithermal ore district located 45 km north of Tumanny. Mineralization at Tumanny is characterized by an early carbonate-base metal and a late gold-silver-sulfosalt mineral assemblage. Pyrite of the first assemblage is unzoned and As-poor, and tennantite-tetrahedrite solid solutions (Ttr_s) are characterized by a weak oscillatory zoning caused by variable contents of Sb and As, low Ag content, and the widely variable $Sb/(Sb + As)$ values. Pyrite of the second assemblage is zoned and As-rich (up to 5.2 wt. %) and Ttr_s is weakly zoned and Ag-rich (up to 10.35 apfu) and has a comparatively narrow range of $Sb/(Sb + As)$ value. Electrum, Au-Ag alloy ("küstelite"), Au-Ag-S phases, hessite, polybasite, and imiterite recognized at the prospect belong to the second mineral assemblage. The homogenization temperature of primary fluid inclusions in quartz ranges from 340 to 210°C and decreased during the mineralizing process; fluid salinity varying from 0.8 to 5.2 wt % NaCl equiv is not evolved during the process. Cores of quartz crystals formed from a boiling fluid, whereas crystal rims appear to have formed from a

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