# Supergénne striebro a akantit z polymetalického ložiska Jasenie-Soviansko v Nízkych Tatrách (Slovenská republika)

## Supergene native silver and acanthite from the Jasenie-Soviansko base metals deposit, Nízke Tatry Mts. (Slovak Republic)

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### Abstract

Supergene native silver and acanthite were identified at the Jasenie-Soviansko base metals deposit, Nízke Tatry Mts., Slovak Republic. Both minerals occur in cavities of quartz-sulfide vein material together with cerussite, weathered tetrahedrite, barite and quartz crystals. Native silver forms typical wire aggregates up to 2 mm which are closely associated with heavily weathered tetrahedrite. It shows increased content of S (up to 4.02 wt. %) and As (up to 1.48 wt. %) as well as small amounts of Cu (up to 0.44 wt. %), Hg (up to 0.31 wt. %), Bi (up to 0.28 wt. %) and Cd (up to 0.15 wt. %). Small, but the stable content of Cl (up to 0.24 wt. %) was also detected in native silver. Two different forms of acanthite were observed. The first form is represented by the thin black aggregates and rims of supergene acanthite on native silver and weathered tetrahedrite. For this type small contents of Sb (up to 4.62 wt. %), Cu (up to 2.30 wt. %), As (up to 1.14 wt. %), Fe (up to 0.91 wt. %) and Cl (up to 0.12 wt. %) are characteristic. The second form of acanthite is represented by groups of spear-like crystals which completely cover wires of native silver. Native silver and the first form of acanthite are products of *in situ* decomposition of Ag-rich tetrahedrite in the supergene zone. The second form of acanthite was formed as result of interaction of native silver and hydrosulfide in the atmospheric conditions.

**Key words:** *native silver, acanthite, supergene minerals, base metals mineralization, Jasenie-Soviansko deposit, Nízke Tatry Mts., Slovak Republic*