

SUMMARY

Ore deposits of the Krásná Hora ore district are the main representative of the Sb-Au mineralization in the Czech Republic. It can be classified genetically as epizonal subtype of orogenic gold deposits. Spatially and partly temporally are associated with the intrusion of the Central Bohemian Pluton. The ore bodies are related to quartz veins that follow the course of E-W striking lamprophyre dykes, which are usually heavily crushed and altered. Ore shoots with massive stibnite are located mainly at the intersections of these E-W trending veins with the NW-SE striking tectonic fault zones. Au-Sb ores at Krásná Hora ore district formed in an area of repeatedly activated fault zones.

Three generations of hydrothermal quartz were identified on microscopic scale. Earliest quartz (Qtz₁), which was considered in the literature auriferous originated from low-salinity H₂O - CO₂ fluids at ~350 °C and at a depth of about 5 km. The younger quartz (Qtz₂) originated at lower temperatures of about 260 °C and lower depth of about 3-4 km from low/saline aqueous fluids. Both older (Qtz₁) and younger quartz (Qtz₂) are not auriferous.

The gold is associated with younger paragenetic formation (Anti + Au + Cc + Qtz₃) that fills in intergranular spaces and fractures in Qtz₁ and Qtz₂. Due to the partial exhumation of the Variscan orogen this younger formation developed at depths ~1-2 km and at 130-200 °C. Only low-salinity aqueous fluids were identified.

I am considering the studied Sb-Au mineralization as a single Au-Sb formation, similar in many aspects to Sb-Au deposits of the French Massif Central.