

## ZLATO V KŘEMENNÝCH ŽILÁCH LOKALIT HLÁSKA A VYSOKÁ HORA - SEVERNÍ ČÁST REVÍRU ANDĚLSKÁ HORA

GOLD IN THE QUARTZ VEINS OF THE HLÁSKA AND VYSOKÁ HORA,  
NORTH FIELD OF THE ANDĚLSKÁ HORA ORE DISTRICT, JESENÍKY MTS., CZECH REPUBLIC

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### Abstract

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*Gold in the quartz veins of the Hláška and Vysoká hora, north field of the Andělská Hora Ore District, Jeseníky Mts., Czech Republic*

The lenticular gold-bearing quartz  $\pm$  carbonate veins at the Vysoká hora Mt. and Hláška Mt. crosscut sericite phyllites of the Vrbno Group. The gold sheets hosted by both quartz and limonitized Mg-rich siderite reach up to 3.5 mm in size and have fineness of ~840-920. Pyrite occurs in two types: early homogeneous and younger porous. Other detected minerals include only accessories: Co-gersdorffite, galena (with ~0.9 wt. % Bi), rutile (sagenite), ilmenite, and albite. Hypergene collomorphic goethite contains grains of monazite and xenotime and rims of hydrohematite. The vugs are filled up by allophane-halloysite, gibbsite, and secondary apatite. The fluid inclusions hosted by quartz and carbonates trapped a heterogeneous mixture of low-salinity (<6 wt. % NaCl eq.) aqueous solution and carbonic phase (with 89-99 mol. % CO<sub>2</sub> and 1-11 mol. % CH<sub>4</sub>). The mineralization formed at temperatures of 200-320 °C and pressures 0.5-2.0 kbar. The elevated content of methane (up to 50 mol. %) in the sample SRS-14 can be related to the adjacent slightly metamorphosed Culmian flysch siliciclastics, or to retrograde hydration of host graphite phyllite. The vein morphology, presence of albite, rutile, and ilmenite, gold fineness, chemical composition of fluids, and interpreted PT conditions are all consistent with ore formation during a late phase of metamorphic reworking which occurred during the Variscan Orogeny in the given area. Pressure fluctuations suggest that the veins formed by crack-seal mechanism. The mineralizations from both studied sites represent temporary episodes in evolution of the ore mineralization in the Andělská hora Ore District.

*Key words:* gold, quartz veins, mineralogy, chemistry, fluid inclusions, genesis

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### Úvod

Obě lokality (Vysoká hora i Hláška), kde byly v křemeno  $\pm$  karbonátové žilovině zjištěny drobné zlatinky, se nacházejí v severním zalesněném území historického důlního revíru Andělská Hora v nadmořské výšce 920 až 1 031 m (obr. 1). Hlavní část revíru se středem kolem Suché Rudné byla po roce 1950 předmětem vyhledávacího geologického průzkumu 2 $\times$  po sobě, naposledy v 80. letech minulého století, kdy byly zjištěny ložiskově