

Compositional variations of AU-AG telluride minerals of arinem deposit, West Java

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Abstrak

The epithermal Arinem veins system of gold-silver-base metal mineralization is located in the Arinem area in the southwestern part of Java Island, Indonesia. The veins are composed predominantly of quartz+calcite±illite±kaolinite with variable amount of manganese oxide and limonite and high amount of sulfides. The deposit contains a number of Te-bearing minerals, notably tellurides and tellurosulfide minerals. The tellurium mineral assemblages in the Arinem and Bantarhuni veins are similar in the presence of hessite (Ag₂Te), petzite (Ag₃AuTe₂), stutzite (Ag₂Te₃), tetradymite (Bi₂Te₂S₃) and altaite (PbTe). The tellurium mineral assemblages vary from sample to sample and most of the observed telluride occurrences consist of at least 2 different phases (e.g. petzite-hessite, tetradymite-hessite, petzite-hessite-altaite). Gold concentrations measured in Te-mineral of petzite from the Arinem vein are in the range between 14.24 to 18.32 wt%. Some hessite and stutzite contain gold up to 3.48 and 1.10 wt%, respectively. Some of electrum are present as inclusions in Te-mineral patches in both veins.