

HUANG Fangfang, ZHANG Chengjiang, SONG Shiwei and Rong Xiao, 2013. An Analysis of the Geochemical Characteristics of Trace Elements of the Ag-Pb-Zn Deposit in Batang Shaxi, Sichuan Province. *Acta Geologica Sinica* (English Edition), 87(supp.):245.

An Analysis of the Geochemical Characteristics of Trace Elements of the Ag-Pb-Zn Deposit in Batang Shaxi, Sichuan Province

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Shaxi Ag-Pb-Zn deposit is a large ore deposit, which is discovered in recent years, located in Batang, Sichuan province. This area has frequent magmatic activities, drape and fracture development. Orebodies exist in bedding fracture zone of ZhangDe's anticline axis, strictly controlled by the north-north fracture zone. Its shape is complex, like layered, vein, lenticular and so on. Through the observation of thin section microscopic, determines the ore wall rock of the deposit is tuffaceous slate. The phenomenon of metallic minerals and quartz veins close symbiotic proves metal mineral have close relationship with quartz vein fluid. And through the light slice observation, finding that the main metallic mineral is galena, sphalerite, sphalerite and galena are closely linked. Minor metals mineral are chalcopyrite and pyrite. According to the trace element geochemical characteristics

of the ore deposit, we selected 24 pieces of mineral sample, using ICP-MS (American Perkin Elmer company, instrument types: ELAN 6100 DCRC-e) to analyze. Through trace element geochemical analysis of quartz, calcite, fluorite from the deposit, we think that ore containing quartz and no ore containing quartz formed in different hydrothermal fluid, no ore containing quartz are likely due to the same hydrothermalism. While the ore containing quartz can be formed in different hydrothermal process. Calcite, fluorite in ore bodies have the same material source and the hydrothermal fluid which formed of calcite and fluorite is not derived from magmatic hydrothermal.

Key words: Ag-Pb-Zn deposit, trace element, REE

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