Geochemistry and geochronology of the Banxi Sb deposit: Implications for fluid origin and the evolution of Sb mineralization in central-western Hunan, South China

Huan Li, Qian-Hong Wu, Noreen J. Evans, Zhe-Kai Zhou, Hua Kong, Xiao-Shuang Xi, Zhi-Wei Lin

PII: S1342-937X(17)30366-0
DOI: doi:10.1016/j.gr.2017.11.010
Reference: GR 1888

To appear in:

Received date: 27 July 2017
Revised date: 13 November 2017
Accepted date: 19 November 2017

Please cite this article as: Huan Li, Qian-Hong Wu, Noreen J. Evans, Zhe-Kai Zhou, Hua Kong, Xiao-Shuang Xi, Zhi-Wei Lin , Geochemistry and geochronology of the Banxi Sb deposit: Implications for fluid origin and the evolution of Sb mineralization in central-western Hunan, South China. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Gr(2017), doi:10.1016/j.gr.2017.11.010

Geochemistry and geochronology of the Banxi Sb deposit: Implications for fluid origin and the evolution of Sb mineralization in central-western Hunan, South China

Huan Li[1], Qian-Hong Wu[2*], Noreen J. Evans[3], Zhe-Kai Zhou[1], Hua Kong[2], Xiao-Shuang Xi[2], Zhi-Wei Lin[2]

1. *Department of Resources Science and Engineering, Faculty of Earth Resources, State Key Laboratory of Geological Processes and Mineral Resources, China University of Geosciences, Wuhan 430074, China*
2. *Key Laboratory of Metallogenic Prediction of Nonferrous Metals and Geological Environment Monitoring, Ministry of Education, School of Geosciences and Info-Physics, Central South University, Changsha 410083, China*
3. *John de Laeter Centre, TIGeR, Applied Geology, Curtin University, Bentley 6845, Australia*

*Corresponding author (Q.H. Wu): qhwu@csu.edu.cn

Abstract

Central-western Hunan in South China hosts the largest antimony belt in the world with two types of Sb deposits identified: Sb-Au Woxi-type and Sb only Xikuangshan-type. Banxi is the most representative deposit in the region with vein-type Sb mineralization hosted in Neoproterozoic clastic rocks, stibnite developing in ores, and arsenopyrite mainly occurring in altered country rocks.

Trace element contents (including rare earth elements; REE) and isotopic ratios (S, Pb, Sr, Nd, He and Ar) in stibnite and/or arsenopyrite were analyzed to determine