

Jiaojiao He, Runsheng Han<sup>1</sup>, and Peng Wu, 2017. Tectono-geochemical Characteristics at the level 1584m in Huize Zinc-Lead Deposit, Yunnan Province. *Acta Geologica Sinica* (English Edition), 91(supp. 1): 216-216.

## Tectono-geochemical Characteristics at the level 1584m in Huize Zinc-Lead Deposit, Yunnan Province

Jiaojiao He, Runsheng Han<sup>1</sup>, and Peng Wu

*Kunming University of Science and Technology; Southwest Institute of Geological Survey, Geological Survey Center for Non-ferrous Mineral Resources, Kunming, China, 650093*

### 1 Introduction

The Huize Zn-Pb district is located in the tectonic composite position, became one of the important production areas of zinc, lead and germanium in China. In the Huize lead-zinc deposit, the interlayer faults are most important ore-containing structures. By tectono-geochemical mapping at the level of 1584m, three element associations are obtained.

F<sub>2</sub>(Zn, Cd, Pb, As, Sb, Hg) refers to element association of mineralization, F<sub>3</sub>(Mo, Ni, Cr) may refer to the element association of medium-high temperature, and F<sub>5</sub>(Ge, Ag, In) refers to the element association of medium-low temperature mineralization. Through the analysis, a series of tectono-geochemical anomalous maps have been draw. These maps clearly indicate the spatial distribution of lead-zinc mineralization. It is showed that mineralization is closely related to altered dolomite and NE trend fault, and the ore-forming environment is at medium-low temperature condition. mineralization bodies or ore-bodies inclined in SW-trending in the profile. Furthermore, maps can infered ore-finding targets.

### 2 Tectono-geochemical characteristics

According to the characteristics of the main elements(SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, TFe, CaO, MgO), it shows strong dolomitization took place in various tectonics and wall-rock. It exhibits right-dipping pattern with enrichment of LREE and negative Eu anomalies. Strong altered tectonites has higher REE contents especially limonitization and mylonitization. The tectono-geochemical characteristics at level 1584m by

factor score contour map and single element content contour map. Eleven high anomalies are obtained.

At the same time, it provides important information for the source of ore-forming fluid. The tectono-geochemical anomalies at level 1584m from No. 019, 017 and 015 exploration lines to 4、8 exploration lines are Pb-Ag-Fe<sub>2</sub>O<sub>3</sub>-Sn-In-Co-Ge-Hg-Cd-As-U→P-Sr-Mo-Ni→Cr-Mn-CaO-MgO→Sb-Bi-Ba-Ga→Tl-W-Cu-Na<sub>2</sub>O-Zn. According to aforementioned studies, concealed ore-bodies have been predicted in seven prospecting target areas.

### Acknowledgements

Granted jointly by the Funds for the Programs of the National Natural Science Foundation (Noes. 41572060, U1133602), Projects of YM Lab (2011) and Innovation Team of Yunnan province and KMUST (2008, 2012).

### References

- Symons D.T.A., Lewchuck M.T., Kawasaki K., Velasco F., Leach D.L. 2009. The Reocin zinc-lead deposit, Spain: Paleomagnetic dating of a late Tertiary ore body. *Mineralium Deposita*, 44:867-880.
- David. L. Leach, Dwight C. Bradley, David Huston et al. 2010. Sediment-Hosted Lead-Zinc Deposits in Earth History. *Society of Economic Geologists*. 105:593-625.
- LI Bo; HAN Runsheng; WEN Shuming; SHENG Rui; QIU Wenlong; TANG Guo. 2014. Structural Characteristics and Fault Tectono-geochemistry of the Songliang Lead-Zinc Deposit in Northeast Yunnan, China. 38:855-865.
- HAN Runsheng. 2005. Orefield/deposit tectono-geochemical method for the localization and prognosis of concealed orebodies. *Regional Geology of China*. 24: 978-984.

\* Corresponding author. E-mail: 554670042@qq.com.