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

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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.

F₂(Zn, Cd, Pb, As, Sb, Hg) refers to element association of mineralization, F₃(Mo, Ni, Cr) may refer to the element association of medium-high temperature, and F₅(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 inferred ore-finding targets.

2 Tectono-geochemical characteristics

According to the characteristics of the main elements(SiO₂, Al₂O₃, 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-Fe₂O₃-Sn-In-Co-Ge-Hg-Cd-As-U→P-Sr-Mo-Ni→Cr-Mn-CaO-MgO→Sb-Bi-Ba-Ga→Tl-W-Cu-Na₂O-Zn. According to aforementioned studies, concealed ore-bodies have been predicted in seven prospecting target areas.

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