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摘要:

砂岩型铜矿床是楚雄陆相红层盆地的典型矿床类型。在构造-流体-成矿体系的动力学演化中, 该类矿床用、改造成矿作用及后期断裂作用的演化过程: 燕山中晚期形成“煤-铜-盐”三色建造”和盆地流体; 喜马拉雅与地流体, 来自基底的富铜流体沿同生断裂(隐伏断裂)上升将一些亲铜元素从深部带入煤层而被吸附, 形成富铜(C3H8-C2H6)-HSO4-HCO3-型), 还原性流体沿次级断裂、隐伏断裂和层间断裂及轴面变形带上升, 与大气降的氧化性流体(H2O-SO2-CO2-N2-CO-HSO4-型)在砂(页)岩相遇时发生水/岩相互作用, 并封闭于高孔渗的砂部的中细粒砂岩和层间断裂带中形成层状、似层状矿体; 喜马拉雅中期由于构造改造, 在更次级断裂带中形成褶皱构造圈闭盆地流体-含矿岩相和构造裂隙封闭成矿流体定位成矿的产物, 是铜矿源、构造与流体三者耦合既沿褶皱分布又沿含矿层定位及矿物、元素分带的主要原因。故建立了该类矿床的构造-流体耦合成矿模型。

关键词: [矿床模型](#) [构造-流体耦合成矿](#) [砂岩型铜矿床](#) [楚雄盆地](#)

Coupling Tectonic-fluid Metallogenic Model for Sandstone-type Copper Deposit in Chuxiong Basin, China [Download Fulltext](#)

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Abstract:

Coupling Tectonic-fluid Metallogenic Model for Sandstone-type Copper Deposit in the Chuxiong Basin (Sheng1), ZOU Hai-jun1), WU Peng1), FANG Wei-xuan2), HU Yu-zhao1), (1. Faculty of Land and Resources, University of Science and Technology; South-West Institute of Geological Survey, Geological Survey of Nonferrous Metals Resources, Kunming 650093; 2. Geological Survey Centre for Nonferrous Metals Resources, Beijing). The sandstone-type copper deposit is the typical one of ore deposit species in the continental red-bed Chuxiong Basin. The evolution processes of tectonic-fluid-mineralization system, the formation of the kind of deposit: which were sedimentation-diagenesis metallization, reformation metallization, and late faulting process. Three-colors sediment formations and basin fluid were formed in the Middle-Late Yanshan Period; With the evolution, fold traps basin fluid was formed in Early Himalayan Period. Cu-bearing fluids from basement along contemporaneous fault, and carried chalcophile elements from deep-seated to coal seam. It resulted in the formation of reductive fluid [H2O-SO2-CO2-CH4 (C3H8-C2H6)-HSO4-HCO3-] which ascended along secondary interlayer faults and deformation band of axial plane. High salinity and oxidative fluid (H2O-SO2-deep cycle meteoric water leaching gypsum bed. The two type fluid that closed in higher porosity reservoirs encountered in sandstone and shale and associated with water-rock interaction, then sandstone bodies which hosted in middle-fine sandstone could formed in flank and core of folds or interformations. Vein ore bodies or mineralization formed in the secondary faulting zone in the Middle-Late Yanshan Period. The deposit formed from an outcome that fold closed basin fluid, structural fissure and ore-bearing fluid. It was a coupling among the ore source, controlling tectonic and ore-forming fluid. In terms of deposit distribution with fold and ore-bearing strata, mineral and elements zoning were interpreted. The model of tectonic-fluid metallogenesis for sandstone-type copper deposit in Chuxiong Basin has been established. Model: Tectonic-fluid Coupled Metallogenesis; Sandstone-type Copper Deposit; Chuxiong Basin, China.

Keywords: [Deposit Model](#) [Tectonic-fluid Coupled Metallogenesis](#) [Sandstone-type Copper Deposit](#) [Chuxiong Basin](#)