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Geological Characteristics and Genesis of the Yunnan Zhongdian Ming rent lead-zinc deposit

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Zhongdian, Yunnan is located in the the Ganzi - Litang combined with the west side of Dege - Zhongdian land mass eastern edge of. The main structure in the area for a duplex anticline structure in the region is divided into three sets of four stratigraphic framework. Ming rent mine is located east of Xiaozhongdian North, the Napa Lake fault zone in the west, the east A thermal fault. Complex tectonic setting provided favorable conditions for the enrichment and mineralization of silver, lead and zinc and other mineral resources. In this paper, the regional geological setting of the study area, geological characteristics and their geochemical Analysis genesis, which provide the basis for prospecting direction. Regional Geology and Mineral Deposits:

Yunnan Ming rent lead-zinc the beds we micro-continental block and Ganzi - Litang plate combination with the west side of the small Zhongdian. The mine stratigraphy: Mines exposed the Upper Triassic the Kazakh workers group (T_3ha^1) and Early Triassic system Buren group for some (T_1b^1), and Sec (T_1b^2). Kazakh workers group mainly slate, carbonaceous slate, sandstone, metamorphic sandstone, siliceous rocks, as the main high-grade ore formations. Buren group master continental margin of the carbonate-containing clastic sediments, the lower part of the layered marl, mudstone, lithic sandstone; upper siltstone, silty mudstone interbedded with argillaceous limestone. By wild hand specimens and indoor rock thin sections, rock fabric mainly fine-grained structure, the unequal grain structure, Aphanitic structure, euhedral - subhedral structure, and berry group structure; massive structure, brecciated structure, laminar structures, layered - like layered structure, and birds-eye structures. The main ore mineral flash zinc ore, galena, chalcopyrite, pyrite; gangue

minerals are quartz, feldspar, chlorite. Ore galena, sphalerite was fine vein-like infection, stockwork, agglomerate. Magmatic rocks pyroclastic rocks, andesitic basalt breccia. The surrounding rock carbonate, silicification, chlorite. Ore Deposit Geochemistry : Sphalerite and galena within the next rent mine sulfur isotopes, rare earth elements and trace elements analysis of the following characteristics. Different ore sulfide sulfur isotopic composition: to between -6.41‰ -0.79‰, the range is relatively small, single sulfur source δS^{34} . S isotope dating its equilibrium temperature between 213-436. The enrichment series more than galena, pyrite and sphalerite. Pyrite ore total REE change is greater than galena and sphalerite, pyrite showed a negative Eu anomaly sphalerite and galena positive anomaly. $(La / Yb)_N$ is greater than 1, the distribution curve to the right tilt illustration, light rare earth enrichment. Trace elements of the ore, lead and zinc content in the carbonaceous slate was significantly lower than the siliceous rocks and sandstone content of lead and zinc content of the gold, silver and bronze higher than slate. Pyrite in the Co / Ni is approximately equal to 0.175031, less than 1, the value of Co is less than 100, it should belong to the sedimentary deposits. Genesis Analysis : Through field observation and indoor identified that the deposit is subject to be significantly affected by the formation and fracture control. The ore fabric the depositional structure characteristics and hydrothermal alteration features. The ore sulfur isotopes, trace, rare earth, for magmatic hydrothermal and reworked sedimentary deposits of foregoing the deposit should belong to the compound deposit.

Key words: Ming Rent geochemical characteristics of lead-zinc deposit genesis Analysis

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