The Yanzigou gold deposit in Danba county is located in the Songpan-Ganzi orogenic belt, on the eastern edge of the Tethys-Himalayan belt. The gold ores consist of quartz vein ore with fine-grained sulfides and layered carbonaceous slate ore which has a dense network of quartz veins and pyrite. There are two types of fluid inclusions in quartz: fluid inclusions of the main metallogenic period have the typical characteristics of metamorphic thermal solution, with medium homogenization temperature, low salinity, low density and high content of CO₂; while fluid inclusions of the later metallogenic period have the characteristics of atmospheric water, with lower homogenization temperature range, low salinity, low density and low CO₂. Gold of pre-metallogenic period is mainly transported as \([\text{Au(Cl)}_4^-]\) complex compounds, and later as \([\text{Au(HS)}_2^-]\).

The P-T conditions transformed during the process in which the structures changed from compresso-shear to tenso-shear. With the permeating of atmospheric water, these changes made the boiling action and blending action take place. These actions increased the content of gold-sulfur complex compound, changed the physical and chemical conditions of the fluid such as PH, Eh, fO₂, fS², so that the mineral deposit was formed. According to the characteristics of the ore-forming fluids, the Yanzigou gold deposit can be classified as an orogenic gold deposit.

**Acknowledgements**

This study is funded by a project support from Chengdu Institute of Geology and Mineral Resources (12120113094400). We are grateful to Dr. He-Gen Ouyang from China University of Geoscience, Prof. Mei-Fu Zhou and Dr. Xin-Fu Zhao from University of Hongkong for their constructive suggestions in modifying this paper. We also thank the kindly field assistance from Dr. Xin Zhang and Mr. Yan Zhao and the helps from Dr. Yun Zhou and with geochemical analyses.

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