CENOZOIC METALLOGENY IN CHINA, AS A KEY TO PAST MINERALIZATION AND A CLUE TO FUTURE EXPLORATION

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Many Cenozoic metal deposits have been found during the past decade. Among them, the Fuwan Ag deposit in Guangdong is the lagerst Ag deposit in China. Besides, the largest Cu deposit of China in Yulong, Xizang, the largest Pb-Zn deposit of China in Jinding, Yunnan, and the largest Au deposit of China in Jin'guashi, Taiwan were also formed at the Himalayan stage. So, why so many important present deposits formed during such a short period of geological history is a key preblem to the past. The major reason is that different tectonic settings control different kinds of magma activity and metallization at the same time. In the southwest China, the porphyry-type deposits such as the Yulong deposit were formed during the early stage of Himalayan orogeny, the sediment-hosted Pb-Zn deposits such as the Jinding formed within intramountain basins and related to deep faults, the carbonatites and alkalic igneous rocks related deposits such as the Maoniuping REE deposit in Sichuan and the Beiya Au deposit in Yunnan were originated from mantle source. In the Southeast China, the Fuwan and other deposits were related to continental rifting which was triggered by mantle plume. In Taiwan, the Jin'guashi superlarge gold deposit was formed during the subduction process of oceanic plate beneath continental plate.