



Geotectonic environments and its related copper Mineralization of Mongolia

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The genetic type of copper deposits of Mongolia is closely related with tectonic environments in metallogenic provinces of Mongolia. The copper deposits are generally grouped into 10 metallogenic districts according to spatial distribution and occurrences of Cu deposits. The porphyry copper deposits in Mongolia are distributed in Nuuryn belt, Selenge belt, South Gobi belt, Saranul belt, and Herren belt. The most of deposits is connected to the active continental margin environment which is emplaced by alkali granite bodies and intra-plate rifting environment (A. Gonvosuren, 1999). Cu(Ag)-sulfide quartz type deposits related to volcanic rocks such as andesite, quartz andesite or basalt is distributed in Nuuryn belt which represent active continental margin. Cu(Ni) sulfide deposit occur as a form of small to medium scaled massive and disseminated type which is developed in deep seated faults in ophiolite complex composed of metamorphosed quartz andesite and basaltic rocks. The plutonic intrusive is composed of felsic to intermediate granitic rocks which almost emplaced along active continental margin or island arc. Basaltic Cu deposits occur not only in Barunburen ore district which belong to Selenge overlapped complex but also in Hanhohey mineralized belt which pertain to ophiolite complex belt. The deposits are exposed in Khakhiraa belt of western Altai, Khovd belts in Manhan mineralized zone and Bayanhongor mineralized area in central Mongolian ophiolite belts, tectonic environments of which belong to accretionary metallogenic province.