Cu-Ni-PGE Mineralization of Melanocratic Rock in Panxi Rift, Southwest China*

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The Panxi Rift Zone is a famous metallogenic province in Southwest China. Continental rifting developed in Hercynian period (P_2, 260Ma ~ 250Ma) accompany with a series of basic-ultrabasic rocks. Various in lithologies, such as layered intrusions (V-Ti-Fe formation), small-sized mafic-ultramafic bodies (stocks) and large-scale basalt (Emeishan Basalt) are constituted of a complete melanocratic rock system.

Most of Cu-Ni-PGE sulfide deposits are related to small-sized ultramafic rock bodies. It is a perfect possibility for them to be an affinity of basic eruptive lava and for the neck facies. But in ① Panzhihua district, the Tongde as a large stratiform basic-ultrabasic complex used to be thought that is older one intruded to basement rocks in Precambrian. However, new evidences suggest it is similar with the small-sized ultramafic rock bodies containing Cu-Ni-PGE, and also the both are affinity of the Emeishan Basalt; ② Miyi district, Cu-Pt mineralization was discovered in the Xinjie bedded basic complex, and in where ophitic olivine-pyroxenite-peridotite facies are exactly Pt-bearing layers; ③ Longzhoushan district, we have recently researched basic-ultrabasic clusters which intruded into fracture zones, and Cu-Ni-Pt, Pd mineralization developed at the salbands.

Generally, the basalt is poor PGE and rich Cu. It is suggested as the result of PGE dispersion-concentration processing in the melanocratic rock system when rifting happened.

(*the project supported by NNSF of China)