

The Type of Mafic-Ultramafic Complexes in the Baotan Area, Northern Guangxi Province, China: the Indication from Cr-Spinels

ZHANG Hang¹, WANG Zong-qi^{1*}, QIN Xiao-feng²,
GONG Jiang-hua¹, FU Zhen-yang³, TIAN Wei-lun³

(1. *Institute of Mineral Resources, Chinese Academy of Geological Sciences, Beijing 100037, China;*

2. *College of Earth Sciences, Guilin University of Technology, Guilin 541006, China;*

3. *School of Earth Sciences and Resources, China University of Geosciences (Beijing), Beijing 100083, China)*

Abstract: Many mafic-ultramafic complexes are distributed in the Baotan area of the western Jiangnan Orogenic Belt. Due to the importance of the tectonic location, the research on those complexes becomes a hot topic in the Rodinia research, as their tectonic environment is strongly debated. The Xiarulong, Dapoling mafic-ultramafic complexes in the Baotan area intruded into the Sibao Group. They consist of serpentized peridotite, serpentized olivine-pyroxenite, and hornblende, with gabbro locally. No volcanic lava phase has been observed. They are different to ophiolite and komatiite. The complexes are rich in hornblende with occasional gersdorffite, demonstrating fluid-rich characteristics. The spinel of the complexes is relatively rich in Fe, Cr, and Ti, but poor in Al. In the diagram of chemical composition of spinel, most samples are plotted into or near the field of the Alaska type complex. This indicates that the Baotan mafic-ultramafic complexes have characteristics like those of the Alaskan-type complex, and were formed in the subduction-related environment.

Keywords: Jiangnan orogen; spinel; Alaskan-type ultramafic-mafic complex; subduction-related environment