

The Metamorphism and Deformation of “Lancang Group” in Fengqing County, Western Yunnan

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Evolutionary history of Changning-Menglian Suture Zone is always the geological research hot spots in home and abroad. There are still many doubts about the stratigraphic subdivision, rock characteristics and metamorphic characteristics of "Lancang Group" in the eastern edge of the southern zone, in Fengqing region of western Yunnan.

Based on the field geological profile, survey routes, rock slices research and data of components analysis with comprehensive comparison: "Lancang Group" The main lithology includes garnet biotite schist, biotite schist, biotite quartz schist, muscovite schist, phyllite, there is a small amount of Granitic mylonite and tectonic schist inside, which experienced the late metamorphism and deformation transformation. There is the invasion of Variscan - Indosinian Permian quartz diorite granite vein. Petrochemical characteristics suggest that its original rocks are felsic rocks and aluminum-rich argillaceous rocks of sedimentary rock.

"Lancang Group" has a long and complex history of the metamorphism and deformation evolution. There are three period deformations and three period metamorphism:

The first period of D1M1: forming sharp edge - thick top - tight folds, regional foliation S1 is formed; metamorphic grade is strong. The main metamorphic mineral paragenetic association is: (Schists): Garnet (Gar) + plagioclase (Pl) + biotite (Bi) + quartz (Q); (phyllite class): sericite 1 (Ser) + albite (Ab) + quartz (Q).

The second period of D2M2: forming regional fold axial plane cleavage and slip cleavage S2, metamorphic grade is weak. The main metamorphic mineral paragenetic association is: (Schists): albite (Ab) + muscovite (Mus) + chlorite (Chl) + quartz (Q); (phyllite class): sericite 2 (Ser) + chlorite (Chl) + quartz (Q).

The third period is deformation before metamorphism (D3M3): The small superimposed folds and crenulation lineations developed well, shear foliation S3 has a non-penetrative characteristics. Metamorphic grade is uneven, fault zone is mainly on brittle - ductile dynamic metamorphism, it belongs to low greenschist facies, The main metamorphic mineral paragenetic association is: sericite 3 (Ser) + quartz (Q).