

Chemical fine structure of Franciscan jadeitic pyroxene from Ward Creek, Cazadero area, California

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ABSTRACT

Jadeitic pyroxenes in two Franciscan samples, one, a possible segregation vein in metabasite, and another, a metabasite, both from Ward Creek, Cazadero area, western California, were examined with the electron microprobe. The samples were collected from the area of Type III rocks, the highest-grade portion of the pumpellyite zone. Jadeitic pyroxenes from both samples are very heterogeneous and cannot be ascribed to crystallization under conditions of surface equilibrium with the coexisting phases. Two possibilities for their origin are suggested: one is as tectonic blocks, and the other as the highest-grade rocks from the zone that crystallized close to or within the *P-T* stability field of pure jadeite + quartz.