

Tin metallogenesis related with paleozoic granites in the northwest of Argentina.

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This paper deals about tin metallogenesis in Catamarca and La Rioja provinces, northwest of Argentina where exist several deposits related to Paleozoic granites belong to Pampean Ranges.

The deposits are located in Fiambalá, Zapata, Las Lajas and Mazán hills. In the hills outcrop metamorphic rocks (phyllites, schists, gneises and migmatites) assigned to Precambrian – Eocambrian, and granitoids. Three granitic events have been recognized: The first of Cambrian age, represented by foliated ortogneises derived from biotitic calcoalcaline granites; the second by Ordovician-Silurian aged peraluminous granites and the third by postorogenic peraluminous evolved granites enriched in silica and rubidium assigned to Carboniferous.

Alteration developed as a result of the interaction of orthomagmatic fluids with wall rocks. Ore mineral is mostly cassiterite. Accompanying minerals are scarce wolframite, arsenopyrite, pyrite, chalcopyrite and scheelite. Gangue minerals are quartz, muscovite, fluorite and topaz. They appear in quartz veins and different types of greisen (quartz-muscovite; topaz-muscovite; sericite-quartz and muscovite-quartz).

Homogeneization temperatures in fluid inclusions determined in several deposits confirm that hypothermal fluids are related to tin mineralization.

The reported features suggest a close relation between tin metallogenesis and fluids related to peraluminous magmas of *probable Carboniferous age originated in postcollisional tectonic setting.*