

PAIRED METAMORPHIC BELTS FROM LATE- PRECAMBRIAN TO LOWER PALEOZOIC IN NW ARGENTINA: MAGMATISM AND METAMORPHISM

TOSELLI, A. J., ROSSI, J. N., ACEÑOLAZA, F. G., Instituto Superior de Correlación Geológica - CONICET, Tucumán, Argentina.

The compositions and metamorphic facies in The Puna, Sierras Pampeanas, and Cordillera Oriental according to their relationships with the granitoides, permit to characterize four belts: the Western Metamorphic; the Batholithic-Metamorphic Central; the Central Metamorphic - Igneous, and the Eastern Metamorphic. The Western Metamorphic belt is formed by schists, gneisses, amphibolites and marbles, from amphibolite to granulite facies, associated with Garnet-Sillimanite-Kyanite, of medium P/T ratio. Basic-ultrabasic rocks and granites are also present. The east boundary, situated in the W of Famatina, delimites two terranes with different protolithes, following a strike-slip area that controls essentially metaluminous granitic intrusions. In the Central Batholithic belt, there is a prevalency of peraluminous granite-tonalite batoliths which intrude in the Cordierite-Andalusite-Sillimanite metamorphites in low P/T ratio. The East Metamorphic-igneous belt is formed by greenschists- to granulite- facies that contain Staurolite-Garnet belonging to the Kyanite-Sillimanite series with medium P/T ratio. In the Cordillera Oriental, we can find Andalusite-Sillimanite series of low P/T ratio. Peraluminous granites and epidote-bearing tonalites are common. A zone of gneisses, with sinkynematic granites, limits these belts. The East Metamorphic belt is constituted by greenschists facies of the Puncoviscana Formation, with alkaline volcanic and epizone plutons. It gradually changes to the previous belt. The differences in the P/T ratio allow us to interpret a diachronous geotectonic evolution within a scheme of paired autochthonous and para-autochthonous belts, under the magmatic influence of an active continental margin related to subduction and strike-slip movements.