

U-Pb AGES FROM THE COLANGÜIL BATHOLITH, FRONTAL CORDILLERA OF ARGENTINA

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Frontal Cordillera of Argentina is an important locus of the Late Paleozoic Choiyoi magmatism in southwestern Gondwana. Our previous mapping established the succession of intrusive events in the Colangüil Batholith as well as their relationships with the extrusive Choiyoi volcanics between latitudes 29° and 31°S. The igneous rocks postdating the Early Permian, San Rafael compressive phase were grouped into a Lower Andesitic Section, including a mainly granodioritic plutonic unit, and an Upper Rhyolitic Section, including four granitic plutonic units and a rhyolitic subvolcanic unit. Whole rock and biotite Rb-Sr ages constrained these sections to 289-247 Ma. LA-ICP-MS U-Pb analyses on zircon crystals were carried out in the Centro de Pesquisas Geocronológicas, Universidade de São Paulo. Preliminary, mean $^{206}\text{Pb}/^{238}\text{U}$ ages are as follows. Lower Andesitic Section: León tonalitic pluton 278.8 ± 3.9 Ma; Agua Negra granodioritic pluton 271.9 ± 2.4 Ma; Romo granodioritic pluton 259.1 ± 2.4 Ma; Choiyoi Group andesitic ignimbrite 272.8 ± 3.4 Ma. Upper Rhyolitic Section: Chita granitic pluton 259.7 ± 4.7 Ma; Conconta granitic pluton 252.5 ± 1.9 Ma. The three tonalitic to granodioritic plutons belong to the Las Piedritas Granodioritic unit, while the two granitic plutons respectively to the Agua Blanca and Los Puentes granitic units. The ages obtained constrain to the Permian (279 to 253 Ma) the Choiyoi magmatism at this latitude of the Frontal Cordillera. They are consistent with the previous Rb-Sr data, and also with other U-Pb ages published by other authors to the south, in Frontal Cordillera, Precordillera and San Rafael Block, within Mendoza Province. These regions represent the main source areas for the widespread ash fall deposits interlayered in coeval, retroarc to intracontinental basins of southern Gondwana in South America, such as Paganzo, Chaco-Paraná, Sauce Grande and Paraná basins, as well as those in South Africa and Malvinas/Falkland Islands.