ANDEAN GEODYNAMIC SETTING AND ARCHITECTURE OF THE CALINGASTA-IGLESIA INTERMONTANE VALLEY (31°-31° 40' S), ARGENTINA

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RESUMEN: El extremo austral del Valle intermontano Calingasta-Iglesia está caracterizado por una tectónica andina (Plio-Pleistocena) compresiva con una componente transcurrente dextral subordinada En esta latitud (aproximadamente 31° S), la Precordillera se superpone por retrocabalgamiento al relleno de edad triásica y neógena del Valle Calingasta-Iglesia, contrastando con el menor acortamiento expresado en el extremo septentrional del mismo valle.

KEY WORDS: Andean geodynamics, Calingasta-Iglesia Valley, ramp basin, western Argentina

The Calingasta-Iglesia Valley (**CIV**) is a N-S trending intermontane depression between the Frontal Cordillera (Paleozoic marine rocks and Permo-Triassic volcanics and associated granitoids) and the Precordillera (Paleozoic to Triassic clastic sediments and metasediments) morphostructural provinces. The **CIV** fill is mainly constituted by a Neogene sedimentary pile deposited in a foreland setting during crustal shortening and uplift of the Frontal Cordillera and the Precordillera. The preserved section, characterized by non-marine, often tuffaceous, clastic deposits, locally exceeds 4 km of thickness. The Miocene to Quaternary sediments, along with Triassic fluvial and lacustrine deposits, are extensively exposed on the western flank of the Precordillera.

In the southern part of the **CIV,** at the latitude of Calingasta (31° 30' S), excellent exposures show folds and westward-verging thrusts. Detailed structural field observations, coupled with evidence from seismic information, indicate that the eastern margin of the valley was subjected to compression by the end of the Tertiary and Quaternary. Kinematic indicators suggest a tectonic transport vector towards N 80° E. Eastward-verging backthrusts on the western flank of the Precordillera imparts a ramp basin configuration,with a subordinate right lateral component, to the **CIV.**

Contrastingly, a recent model for the northern segment of the **CIV,** at the latitud of Iglesia (30° 20' S), suggests a piggyback basin passively transported above a horizontal decollement (Beer *et al.*, 1990). This change of tectonic style may be tentatively related to depth variations in the Benioff zone (*cf.* Isacks,

1988) or shortening contrast due to cross-strike dextral transfer (Dewey & Lamb, 1992).

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