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EVOLUTION OF A PATAGONIAN MIOCENE INTERMONTANE BASIN AND ITS RELATIONSHIP WITH THE ANDEAN FORELAND: TECTONO-STRATIGRAPHIC EVIDENCES FROM THE CATÁN LIL BASIN, ARGENTINA

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ABSTRACT

The Catán Lil Basin is an intermontane basin developed on the wedge top of the Miocene North Patagonian retro-arc foreland basin. This basin is formed by the growth of a west verging thick skinned fold and thrust belt. An internal anticline divides the basin into two sub-basins: Las Coloradas and Los Remolinos, with other minor isolated depocentre (La Esperanza Syncline). Due to the structural configuration the basin evolved as a compartmentalized basin, connected with an extrabasinal drainage network. Structural and sedimentological analysis of field data enable us to determine that the basin was filled in four sequences (DS-I, DS-II, DS-III and DS-IV) that recorded three major aggradational / degradational cycles characterized by alluvial-fluvial sedimentation and a final volcanic succession of olivinic basalts. The first two sequences (DS-I and DS-II) integrate a growth wedge related to tectonic uplift and limb rotation of the main anticlines. DS-III and DS-IV were deposited under post-kinematic conditions when there was no more tectonic activity in the fold and thrust belt. There is a strong difference in composition between the first