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Sedimentologic and Stratigraphic Evolution of the Cacheuta Basin: Constraints on the Development of the Miocene Retroarc Foreland Basin, South-Central Andes

Lithosphere

Sedimentary basins supply natural resources, including oil, gas and economic minerals that are vital for society, and understanding the origin and evolution of these systems is critical for sustainable resource development. This project focused on the temporal and spatial linkage between mountain building and basin subsidence in the retroarc of the south-central Andes. Retroarc foreland basins contain evidence of temporal and spatial variations in magmatic activity, deformation, and exhumation along the continental margin. The integration of sedimentologic, stratigraphic, geochronology and sediment provenance data from the Cacheuta basin documents sedimentation rates, magmatic events and thrust episodocity that constrain the upper crustal response to subduction dynamics during Miocene (5-20 million years) time.

