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TITULO DE LA PONENCIA

Low-Temperature Thermochronology and its Contribution to Understanding the Cenozoic Morpho-Tectonics of the Northwestern Colombian Andes

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Categoría del resumen

ÁREA TEMÁTICA

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Geodesia y geomática

Resumen

PALABRAS CLAVE

Central Cordillera, Colombian Andes; thermal modeling, low-temperature thermochronology (LTT); Romeral Fault Zone, Mande Batholith.

CONTENIDO DEL RESUMEN

We present thermal history models derived from trans-dimensional Bayesian modeling (QtQT) using new AHe and ZHe ages for samples from two tectonic domains in the Northern Andes: the western flank of the Central Cordillera and the western flank of the Western Cordillera. The results indicate a very well-defined thermal event in paleocene times for the western Cordillera, including the El Cairo and Belmira zones that define a Pre-Andean tectonic event probably related to final docking of the Western Cordillera against the Central Cordillera. The collisional history of the Panamá Chocó Block (PCB) probably begins in lower Miocene times, defining the

Eu-Andean tectonic phase as evidenced by cooling episodes at this time within the Belmira and Mandé zones. Subsequent accommodation phases of the PCB in its ongoing collisional history are observed in tMiddle Moocene evidenced in the Belmira and Mandé batholiths. This tectonic phase developed east-verging faults in the area.