

## U-Pb ZIRCON AGES FROM BIMODAL MAGMATIC ROCKS IN THE SOUTHEASTERN CENTRAL CORDILLERA OF THE COLOMBIAN ANDES: IMPLICATIONS FOR REGIONAL CORRELATIONS AND TECTONIC MODELS DURING PANGEA ASSEMBLY

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During the final stages of Pangea assembly and the initiation of its fragmentation 320 - 230 Ma, the proto-Pacific margin of South America was subject to contemporaneous magmatism and metamorphism. Former arc-related Permian I-type magmatism followed by a major Triassic sin to post-tectonic crustal anatexis has been recognized in northern Colombia as part of this major event. The extension of these tectonomagmatic events to the southern segment of the Central Cordillera and details on the nature of the Triassic magmatism are still elusive. We present new geochronological U-Pb results from basic and felsic rocks exposed in the southeastern segment of the Central Cordillera, which based on imprecise  $1360 \pm 270$  Ma K-Ar hornblende ages have been considered as Precambrian roof pendants within Jurassic magmatism of the eastern Colombian Andes. The new results include zircon ages from a quartz-grabbro:  $236.3 \pm 1.8$  Ma (SHRIMP II) and a granodiorite:  $243.13 \pm 5.4/6.8$  Ma (LA-ICP-MS). These new results are similar to those recorded by other S-type granitoids and amphibolites found along most of the Central Cordillera, northern Colombia and Ecuador and confirmed previous suggestion that this Triassic magmatism is apparently of bi-modal mantelic and continental signature, the former possible contributing also in the heat input for partial melting. The regional sin-tectonic nature of this magmatism following the former Permian arc magmatism seems to have taken place within the Pacific margin outside major Alleghanian sutures. Two possible scenarios for the origin of this magmatism are: (a) Some kind of south to north escape tectonics associated to a the agglutination of Pangea or (b) a Baja California type setting associated to transtension. The new Triassic ages from formerly considered Precambrian high grade metamorphic rocks along the eastern flank of the Central Cordillera also suggest that regional correlations of Grenvillian age metamorphism in this area has to be reviewed.