



Pangea break-up: from passive to active margin in the Colombian Caribbean Realm

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The break-up of Western Pangea has led to a back-arc type tectonic setting along the periphery of Gondwana, with the generation of syn-rift basins filled with sedimentary and volcanic sequences during the Middle to Late Triassic. The Indios and Corual formations in the Santa Marta massif of Northern Andes were deposited in this setting. In this contribution we elaborate a stratigraphic model for both the Indios and Corual formations, based on the description and classification of sedimentary facies and their architecture and a provenance analysis. Furthermore, geotectonic environments for volcanic and volcanoclastic rock of both units are postulated. The Indios Formation is a shallow-marine syn-rift basin fill and contains gravity flows deposits. This unit is divided into three segments; the lower and upper segments are related to fan-deltas, while the middle segment is associated to offshore deposits with lobe incursions of submarine fans. Volcanoclastic and volcanic rocks of the Indios and Corual formations are bimodal in composition and are associated to alkaline basalts. Volcanogenic deposits comprise debris, pyroclastic and lava flows of both effusive and explosive eruptions. These units record multiple phases of rifting and reveal together a first stage in the break-up of Pangea during Middle and Late Triassic in North Colombia.