

RELATIONSHIPS BETWEEN DIFFERENT DEPOCENTERS OF TRIASSIC - JURASSIC RIFT SYSTEMS IN THE MAIN ANDES OF ARGENTINA AND CHILE

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A series of rift systems along the western margin of Gondwana were formed during Late Triassic - Early Jurassic times. Their inception was controlled by major crustal boundaries usually associated with Early Paleozoic terrane sutures. Examples of these systems are the Mercedario rift in the Ramada basin and the La Valenciana - Río Atuel, Nieves Negras - Alvarado depocenters in the Neuquén basin, along the Cordillera Principal. Both areas were separated by a paleogeographic high located around the 33° SL. Basin infill of the different rifts shares a common history, mainly controlled by eustatic sea level changes, though some diachronism may be related to local tectonic events. Thus, at La Ramada basin, thermal subsidence begun in the Late Pliensbachian, while in the La Valenciana - Río Atuel, located between 35° and 36°SL, thermal sag sequences were deposited only since Toarcian-Aalenian times. The Nieves Negras-Alvarado Early? to Middle Jurassic depocenters, located between 33°47'- 34° 10' LS, crop out in an anticlinorium formed by tectonic inversion of a half-graben system. Further north, at Yeguas Muertas, a second depocenter of similar age has been identified in the Chilean slope of the Cordillera Principal. The structure of the La Valenciana - Río Atuel depocenter is more complex and polarity of its half-graben system is highly variable, with deposits preserved in unconnected centers, inverted during the Cenozoic deformation. These Cordillera Principal depocenters define a conspicuous northwest trend, similar to other extra-Andean Late Triassic-Early Jurassic rift systems, emphasizing strong basement control of pre-Andean structures in their inception.