

**Provenance sedimentary from Arequipa – Tarapacá Basin,
based on U-Pb detrital zircons, and Sm-Nd isotopes:
implications for southwestern of Gondwana**

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The beginning of the subduction processes began approximately ~ 530 Ma (Cawood et al., 2005), where an intense magmatism was manifested in the Ordovician that ends at the end of the Devonian (Chew et al., 2007), followed by a process of quiescence magmatic during the Pennsylvanian. The Permian is an assembly of Gondwana where heat accumulation in the Triassic led to a distensive period on a continental scale, which produced the generation of rift processes (i.e. Rift Mitu, Spikings et al., 2016). The closing of the Mitu rift is the reflection of the beginning of an oblique subduction, produced by the subduction of the Farallón oceanic plate under the South American continental plate, this subduction process is known as the beginning of the "Andean Cycle" (Romeuf et al., 1995, Boekhout et al., 2013, Haschke et al., 2006, Ramos & Aleman, 2000, Oliveros et al., 2006). This period is mainly marked by important processes of distention that gave rise to synchronous Mesozoic basins that developed in Western Gondwana. These distension processes were generated by negative roll-back processes (Ramos & Mpodozis., 1989). The Arequipa - Tarapacá basin (Vicente et al., 2006), is an extensive basin developed between 10 ° - 22 ° Lat. South. Where the present work is based on the establishment of sedimentary provenience, for the classic stratotype described by (Jenks, 1945; Vicente et al., 1981) in the valley of the Yura river where approximately ~ 5km of Mesozoic sediments emerge. The present work is based on the presentation of unpublished data of U-Pb in detrital zircons as, Sm-Nd geochemistry in total rock for said sediments. Based on this methodology, we will establish provenance of sediments of the Yura group, as well as the paleogeography of Mesozoic sediments in this portion of the Central Andes.