

MESOZOIC BASE LEVEL CYCLES IN THE PARANÁ BASIN ON THE CENTRAL REGION OF RIO GRANDE DO SUL STATE, BRAZIL: A HYPOTHESIS

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Hypothetical base level curves corresponding to second and third order cycles are herein presented, based on the stratigraphic analysis of Late Permian and Mesozoic continental deposits. These curves are supported by facies analysis and petrological data. Age constrains were mainly obtained by paleovertebrates biozones. The second order cycles were mostly controlled by basin depocenters shifts, which have conditioned the development of three sedimentary sequences: (1) Late Permian-Early Triassic sequence, including the Rio do Rasto and Sanga do Cabral Formations (lacustrine, eolian, braided rivers and braid plain deposits; *Daptocephalus* and *Lystrosaurus* Biozone); (2) Middle to Late Triassic sequence composed by the Santa Maria and Caturrita Formations (braided channels and lacustrine deposits; rincosaurian reptiles); and (3) Early Cretaceous sequence, including the Botucatu Formation (eolian dunes) and volcanic rocks of the Serra Geral Formation (132 Ma). The depositional cycles are signed by changes of their provenance signature. Therefore, second order cycles were ascribed to tectonic movements whereas third order cycles, which can be recognized mostly within permo-triassic and Middle/Late Triassic successions, owing their origin to climatic and tectonic processes.