

## **General Neotectonic framework of the State of Rondônia and adjacent areas of the Amazon: Evolutionary aspects**

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During the Paleocene and the Oligocene, the south-western part of the Amazon Craton (State of Rondônia and adjacent regions) underwent a degree of tectonic stability that permitted the development of regional peneplain surfaces (Sul-Americana surface and mature laterite). In the Miocene-Pliocene there developed a tensional compressional field (Sigma 1), striking NE-SW, brought about by the collision of the South American and Nazca plates (Andian Orogeny). In consequence of this, there developed dextral transpressive components striking N-S, inverse faults striking NW-SE (Serra da Pacaas Novos and Serra de São Lourenço scarps) and extensional lineaments (T elements) striking NE-SW, that became important conditioners of the Guaporé sedimentary basin.

A short phase of stability dominated the interval between the Upper and Middle Pliocene, permitting the development of a new regional laterization surface (mature laterite). Tectonic activity started again in the Upper Pleistocene with the development of a tensional field having a compressive vector (Sigma 1), striking NW-SE. This was responsible for the generation of dextral transcurrent faults striking E-W with many transtensive dextral faults striking NE-SW, normal faults striking NW-SE, inverse faults striking NE-SW, and transtensive lineaments striking N-S. The structures generated or reactivated at this time controlled the distribution of the sediments on the alluvial plains during the Pleistocene and Upper Holocene. This neotectonic framework, established from the Upper Pleistocene, resulted in the intraplate deformation imposed by the dextral components of the translational and rotational movements of the South American plate. The deformational phase preferentially reactivated ancient zones of crustal weakness (resurgent or recurrent tectonics).