Morphotectonics of the São Carlos, Rio Claro and Piracicaba Regions, SP-Brazil*

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The main objective of this work is to present the results of investigations of the neotectonic structures within the Periférica Depression, the Basática Cuesta and Interior Plateau (of the São Carlos, Rio Claro and Piracicaba region, São Paulo State-Brazil). The investigation based on geological and geomorphological maps, with emphasis on the drainage pattern and its anomalies, of photolineaments and digital terrain modeling, with the intent to the establish the overall morphoestrutural and morphotectonic picture of the region. The main structural features identified and dealt with in this study are two groups of discontinuous faults. The older group is represented by normal faults, oriented preferentialy the NE-SW, that mark the oldest limits of the tertiary sequences. They represent a tensional stress regime where $\sigma 1$ vertical, $\sigma 2$ NE-SW and $\sigma 3$ NW-SE. The younger group is characterized by transcurrent faults oriented preferentialy E-W. The tensional framework is marked by $\sigma 2$ vertical, $\sigma 1$ NW-SE and $\sigma 3$ NE-SW. Other faults, oriented NE-SW and N-S, are also associated with this transcurrent stress regime. In the investigated area deposits are characterized by basal conglomerate and upper sandy argilaceous units, associated with debris flows, with free aqueous flow; being distributed in a discontinuous way from the tops of the interfluvial through structural steps and lithologies, controlled by the main lineaments NW-SE, NE-SW, E-W and N-S. These lineaments impose tectonic "landforms" through tilting, creating escarpments, triangular or trapezoidal facets, abandoned meanders, captures, lateral migrations, arches and elbows, related the activity neotectonic, function of the rotation of the South American Plate towards the west.