

Transpressive Dextral Fault Zone at Rio Doce valley, Minas Gerais, Brazil.

OLIVEIRA, M.J.R. Geological Survey of Brazil-CPRM, Belo Horizonte, Brazil.

The study area (Conselheiro Pena Sheet: SE.24-Y-C-II) is located approximately 450 km from Belo Horizonte, eastern Minas Gerais State, Brazil. The geological setting consists of Neoproterozoic rocks belonging to metasedimentary sequence (Rio Doce Group); calc-alkaline tonalites (Galiléia Intrusive Suite); kinzigitic gneisses; and late to post-tectonic granites from Aimorés Intrusive Suite (I type granites) and from Urucum Intrusive Suite (S type granites). A NW strike-slip fault zone an important structure that truncates all the other structures. This fault zone coincides approximately with Rio Doce valley, which bisects the Conselheiro Pena Sheet. The dominant tectonic structures, in this NW fault zone, are a pervasive NW high-angle shistosity with a sub-horizontal stretching mineral lineation. Asymmetric and sigmoidal quartz veins are the best tectonic markers and indicate dominantly dextral kinematics. A few kilometers to the northeast and southwest from this fault zone, NW thrusts were recognized. All these evidences indicate a transpressive NW dextral zone probably developed during the late stages of Brasiliano/Pan-African Cycle in a collisional event. This tectonics exposes the basement rocks (gneisses) in the SW of the area. Some mineralised pegmatitic bodies occurring associated to granitoids (Urucum and Galiléia Intrusive Suites) and shists of Rio Doce Group, are structurally controlled by the high-angle transpressive NW fault zone.