

THE ITARERU DIORITE-TONALITE SHEET-LIKE BODY, BAHIA-BRAZIL: GEOLOGICAL EVIDENCE OF A MAJOR TERRANE BOUNDARY IN THE PALAEOPROTEROZOIC RIO ITAPICURU GREENSTONE BELT?

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Elongated tonalitic bodies, like peridotite belts and large-scale shear zones, are significant geological features that help identify tectonic discontinuities in orogenic belts. The Rio Itapicuru Greenstone Belt, located on the northeastern edge of the Palaeoproterozoic Itabuna-Curaca orogen, is an important gold producer. It is made up of metamorphosed mafic and felsic volcanics, and sediments, intruded by tonalite to granodiorite domes. Although a back-arc setting has been suggested for such greenstone belt, the location of the arc and suture zones, or the relations basement-cover, have been hampered by deformation and paucity of high-quality isotope data. Recently, based on Nd isotopes we have recognized juvenile-, arc-related tonalite to granodiorite intrusions on the southern portion of the greenstone belt (Barrocas and Teofilandia domes, cf. Barrueto et al. 1998 - Proceedings 30th Brazilian Geology Congress). New field work also helped us to recognize a NW-SE- to N-S-trending body that may mark the western boundary between the greenstone belt and an Archaean block within the orogen. It is a sheet-like body (up to 7.5 km wide and over 60 km long) composed of enclave-rich, porphyritic diorite to tonalite. Preliminary isotope studies indicated an age of 2,123 Ma (U-Pb on zircons) and positive eNd values. Interestingly, to the east of the Itareru Tonalite supracrustal rocks of the greenstone belt and foliated granitoid intrusions dominate, whereas, to the west, Archaean banded gneisses and isotropic granitoids are the main rock-types. Therefore, we believe that the Itareru Tonalite has the potential to define a tectonic discontinuity, with important metallogenetic implications.