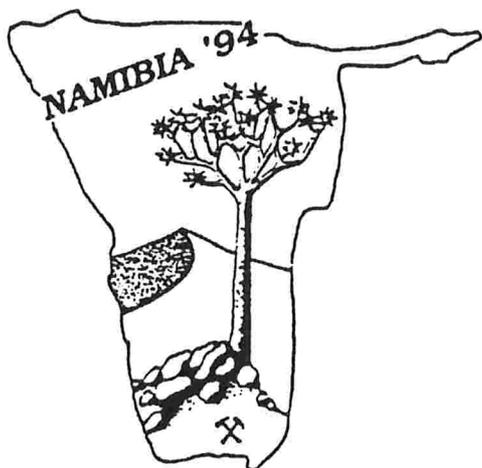


Symo = 0879209 I
0879230 II
0879203 III



PROTEROZOIC CRUSTAL & METALLOGENIC EVOLUTION

ABSTRACTS

CONTRIBUTED BY IGCP PROJECT 288

GONDWANA SUTURES AND FOLD BELTS

29 AUGUST to 1st SEPTEMBER 1994

An international conference hosted by the
Geological Society & Geological Survey of
Namibia

syms - 0879030

TECTONIC ORGANIZATION OF THE PROTEROZOIC CONTINENTAL MARGIN OF SOUTHEASTERN SOUTH AMERICA FROM EOSAT IMAGERY

G.R.Sadowski¹, R. Machado¹, A.R.S. Fragoso Cesar¹, M. Sultan², R. Unrug³.

¹ University of Sao Paulo, S. Paulo, Brasil; ² Washington University, St. Louis, Missouri, USA; ³ Wright State University, Dayton, Ohio, USA.

Tectonic features the southeastern shields of South America are clearly delineated on 1:1,000,000 scale EOSAT mosaics. They comprise Neoproterozoic mobile belts, older cratons and shear zones of the southern portion of the Brazilian and Gaúcho Shields. The shields represent the uplifted basement between the Paraná and the coastal Santos and Pelotas Basins. Below the sedimentary blankets of these basins and the Atlantic are important features such as the Parana Craton and remnants of the Adamastor Ocean. The Cretaceous basalts of the Torres Syncline, whose counterparts in Africa are the Etendeka volcanic rocks, interrupts locally the basement exposure transverse to the coastline. The coastline is usually parallel to the main tectonic structures of the basement, suggesting reactivation along lines of weakness during the opening of the Atlantic. However two important Precambrian features cut obliquely to the coast line: the Joinville-Luis Alves Terrain (with the adjacent Dom Feliciano Belt) and the Alem-Paraíba Shear Zone. The former is continuous partially below the Santos Basin. The regional structural trend is represented by longitudinal mobile belts, formerly referred to under the name Ribeira Belt, and affected by at least two main orogenies: Brasiliano I and II (750-660 and ca 550 Ma., respectively). A cratonic assemblage of terrains, represented by the Joinville-Luis Alves and the Rio de La Plata blocks divides the former belt into two. To the east lies the Dom Feliciano belt and associated foredeep basin and showing vergence towards the north and fringed on the inside by the roots of the Pelotas Arch. To the northwest is an assemblage of sheared belts cut by the doubly verging Cubatao-Alem Paraíba Megashear System. Verging towards the Sao Francisco and Parana Cratons in its central and western domains, and towards the Congo Craton in its eastern portions. This northern belt has been called Apiaí, Embu and Paraíba do Sul. It shows widespread granitoid activity, increasing metamorphism towards the coast, and slivers of basement thrust slices. Strong transcurrent shearing which affected all the mobile belts during the final stages of their evolution, renders stratigraphic correlations difficult, especially in the Apiaí-Paraíba do Sul Belts. Recent data indicate that supracrustals of the Apiaí Belt are probably Middle Proterozoic sediments affected by Brasiliano-Panafrican tectonism.

82-