DOC. 394

International Conference "Geochemical Evolution of the Continental Crust"

Poços de Caldas, Brazil
11-16 July, 1988

Abstracts

may be related with the Uruaçuano Cycle proposed years ago by Almeida (1968). Unfortunately regional geologic relations are still poorly understood. Additional detailed stratigraphic, structural, geochemical, and geochronologic studies are needed in order to better constrain the geodynamic events of the Precambrian evolution of Central Goiaś.

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THE AGE AND ORIGIN OF THE SANTA CATARINA GRANULITIC COMPLEX, SOUTH BRAZIL

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The Santa Catarina Granulitic Complex covers an area of about 6000 km^2 in north-west part of Santa Catarina State (Fig. 1). This domain comprises medium to high grade terranes composed by quartz feldspatic gneisses, migmatites and

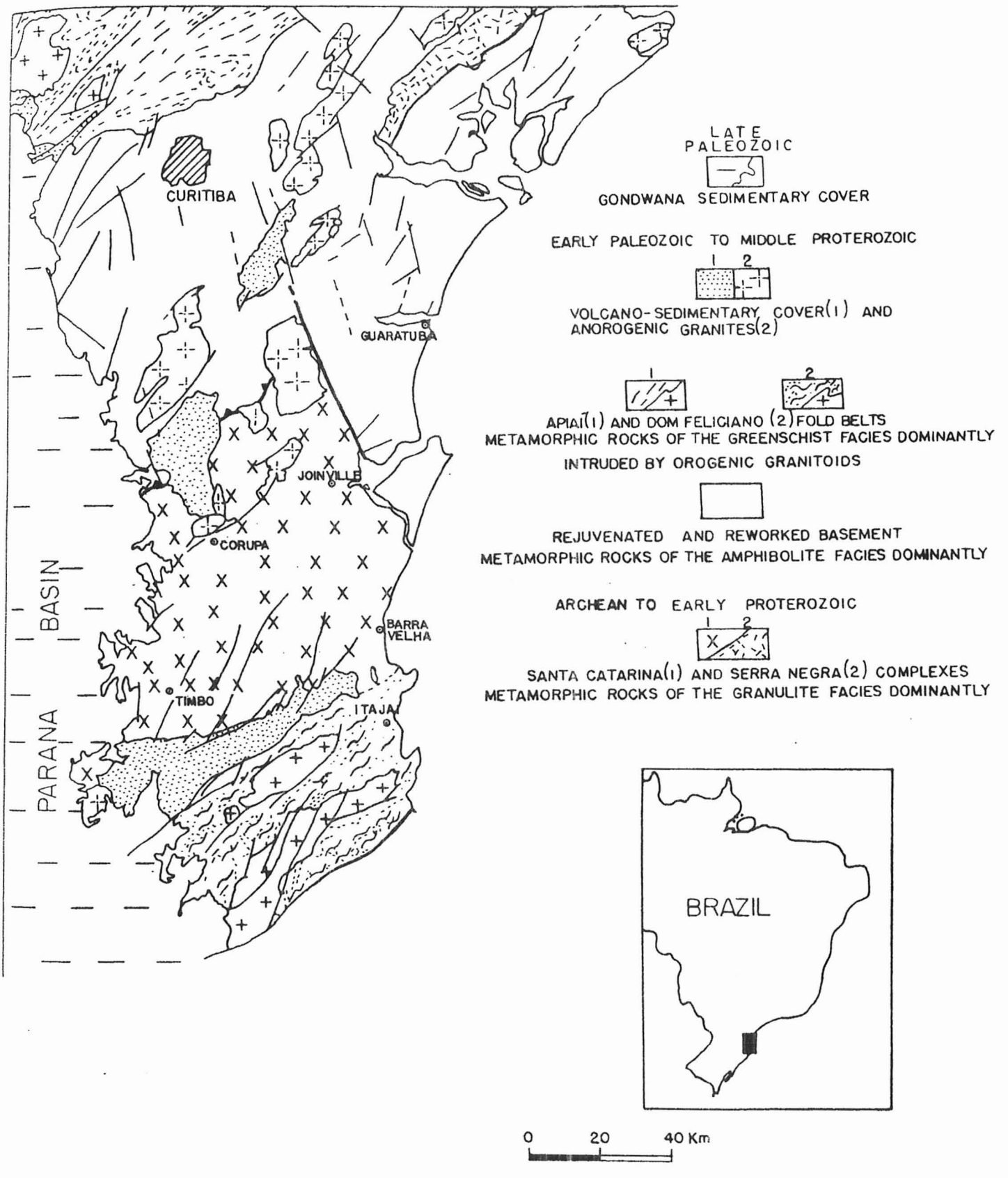

FIG.- 1 – SIMPLIFIED GEOLOGICAL MAP OF SOUTH BRAZIL

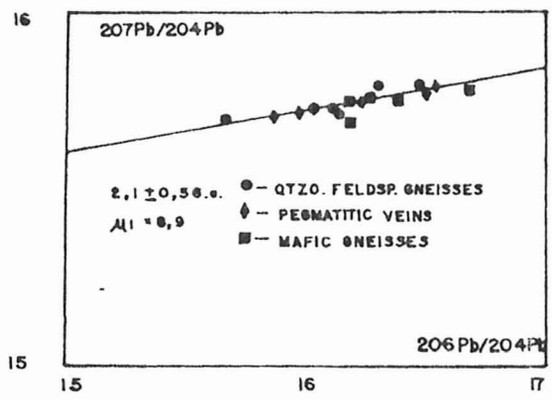

FIG.-2- WHOLE ROCK Pb-Pb ISOCHRON FOR GRANULITES FROM THE SANTA CATARINA COMPLEX

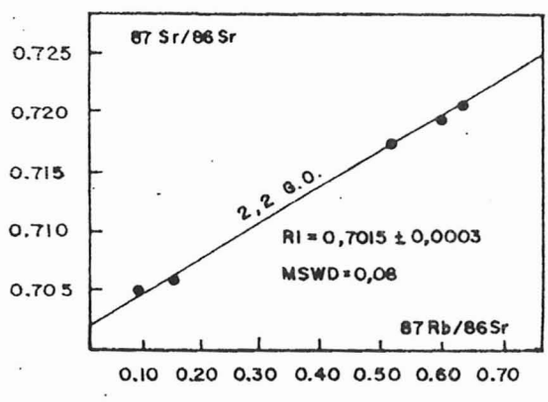

FIG.-3a-WHOLE-ROCK Rb-Sr ISOCHRON FOR GRANULITES FROM THE SANTA CATARINA COMPLEX

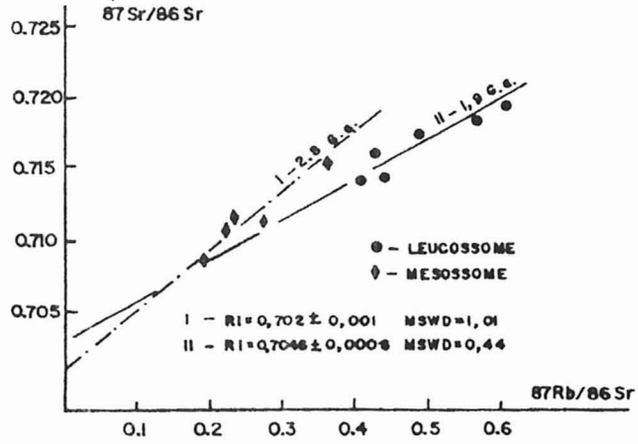

FIG.-3b- WHOLE ROCK Rb-Sr DIAGRAM FOR MIGMATITES FROM THE SANTA CATARINA COMPLEX

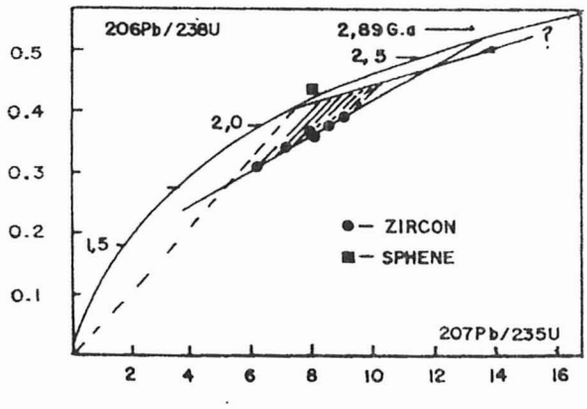

FIG.-4a-CONCORDIA DIAGRAM FOR ZIRCONS AND SPHENE. FRACTIONS FROM MIGMATITES OF THE SANTA CATARINA COMPLEX.

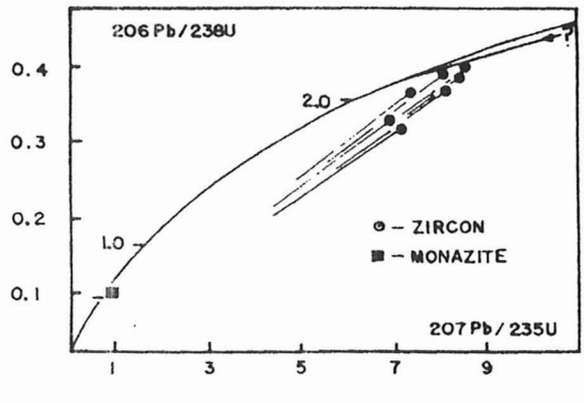

FIG.-4b- CONCORDIA DIAGRAM FOR ZIRCONS AND MONAZITE FRON GRANULITES OF THE SANTA CATARINA COMPLEX.

subordinated quartzites, banded iron formation and calc-silicatic rocks. The bulk of the Complex comprises rocks derived from a bimodal igneous suite starting with mafic to ultramafic bodies, included into tonalites and granodiorites. Those rocks are genetically connected, as demonstrated by geochemical studies.

Nd (TDM) model ages and positive ε_{Nd} values on composite samples of granulites suggest that their igneous protoliths were differentiated from the mantle during the Archean (3.2-2.6 Ga).

The field data and the available isotopic results (Pb-Pb and Rb-Sr whole rocks age diagrams) demostrated that the magmatic precursors were deformed and submitted to granulitic facies of metamorphism during the Early Proterozoic (2.2-2.0 Ga) (Figs. 2 and 3a, b). The U-Pb zircons ages are in agreement with this interpretation, although the Concordia diagrams exhibit a more complex pattern, possibly related to a multi-stage crustal history for these rocks (Figs. 4a, b).

The K-Ar radiometric pattern on biotites and amphiboles indicated that regional cooling took place at the end of the Transamazonian cycle, in the range 1.9-1.7 Ga. In addition, these K-Ar results demonstrated that the Santa Catarina granulitic terranes have remained virtually unaffected, as a stable and cool ancient crustal fragment, during the geotectonic evolution of the adjacents Late Proterozoic belts.

PRECAMBRIAN CONTINENTAL CRUSTAL EVOLUTION OF SOUTHEASTERN SÃO PAULO STATE - BRAZIL: BASED ON ISOTOPIC EVIDENCES

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The isotopic studies on granitic intrusions, orthogneissic rocks and migmatitic terranes in the southeastern São Paulo, provide an important indication of the age and geochemical nature of the continental crust of this area.

The region is very complex, because it includes five major different