The Araçuaí Belt is the Brazilian counterpart of the West Congo Belt. Both belts compose the Neo-Proterozoic Araçuaí-West Congo Orogen. Remnants of an oceanic lithosphere, formed at about 816 Ma ago, are related to the passive margin stage of the Araçuaí-Brazilian passive margin in Neoproterozoic time. During the Brasiliano Event (650-500 Ma), widespread melting of a pre-existing crust produced a considerable amount of granitoid magma in the internal tectonic domain of the Araçuaí-Brazilian passive margin. The G1 suite consists of late-tectonic, S-type granitoid bodies emplaced mainly in the G1 domain. The G4 suite consists of late-tectonic, I-type calc-alkaline granitoids. The G3 suite comprises late-tectonic, S-type granitoid bodies emplaced mainly in the G4 domain. The G1 and G4 suites show a N-S trend and a west to east zoning, suggesting successive stages of maturation of calc-alkaline magmatism. In this scenario, G2 may represent the root of a continental volcanic arc related to an east-dipping subduction zone. G4 granitoids represent the post-collisional, high-K calc-alkaline melts evolved from the lowermost crust, probably with mantle contributions. Finally, the post-collisional, S-type granites of the G5 suite were generated and emplaced in shallow levels of the orogen.

**Keywords:** Araçuaí-West Congo Orogen, Araçuaí Belt, Neo-Proterozoic granitoids, Brasiliano granites

**INTRODUCTION**

The Araçuaí Belt (eastern Brazil) and West Congo (southwestern Africa) belts are counterparts of the same Neo-Proterozoic orogen, located between the São Francisco and Congo cratons (e.g., Brito-Neves & Cordani 1991, Trompette 1994).

The external tectonic domain of the Araçuaí-West Congo Orogen makes up an arch-shaped belt that includes the western zone and the northern part of the Araçuaí Belt, and the West Congo Belt. The northern segment of the polyacyclic Atlantic Metamorphic Belt (Leonardos & Fyle 1974) corresponds to the major portion of the internal tectonic domain of the Araçuaí Belt. This tectonic domain also encompasses the distal portion of the Macaúbas Group (Fig. 1). The Brasiliano-Pan-African metamorphic plutonism of the Araçuaí-West Congo Orogen is confined to the internal tectonic domain of the Araçuaí Belt (cf. Trompette 1994).

The geotectonic significance of the Brasiliano granitic magmatism in the northern sector of the Araçuaí Belt is discussed in this paper based on new data and on a concise overview of the regional geologic scenario (Fig. 2). For this purpose, our interpretation is also based on new geologic maps that cover the studied region (Faria 1997, Grossi-Sadet al. 1997, Pinto et al. 1997).

**GEOLOGIC SETTING**

This synthesis focuses on the internal tectonic domain of the northern sector of the Araçuaí Belt (Fig. 2). The eastern portion of the Guanabara block and the southwestern border of the Itabuna block represent the ancient gneissic basement reworked during the Brasiliano Event, in the internal tectonic domain of the belt (e.g., Diniz 1994, Barbosa & Donnatz 1996). The Juiz de Fora Complex comprises the high-grade amphibolite to granulite facies rocks of the polyacyclic basement of the Atlantic Belt in Minas Gerais State (cf. Pedrosa-Soares et al. 1994a,b). The Transamazonian and Brasiliano tectonic events are recorded by the Juiz de Fora Complex (cf. Figueiredo & Teixeira 1996). In the study region, this complex consists of garnet-biotite gneiss, kinkzitie (sernis stricto), and graphite-rich gneiss, with minor intercalations of calc-silicate granulite and quartzite (Fig. 2). Widespread signs of magmatization indicate ultrametamorphic conditions in this complex. The available geochronological data are not conclusive, but suggest that the northern Juiz de Fora Complex includes rocks older than the Brasiliano Cycle (synthesis in Faria 1997).

The Macaúbas Group represents a megasequence deposited on a continental passive margin in Neo-Proterozoic time (cf. Pedrosa-Soares 1995, Uhlein et al. 1997, Noce et al. 1997). TheSalinas Formation represents the Macaúbas Group in the internal tectonic domain of the Araçuaí Belt (Fig. 2). Quartz-mica schist (pelitic graywacke) and quartzose metagraywacke dominate in this formation. Sedimentary, petrographic and geochemical data show that the Salinas Formation is a distal turbidite deep-sea sand-mud sequence. This formation also includes the Bireirão da Folha Fades, a typical ocean-floor rock assemblage. These facies consists of metamorphosed volcanic-exhalative sediments (banded iron formation, metachert, drop-sidite and massive sulfide) and ocean-floor basalts (amphibolites), intercalated with deep-sea pelites. A Sm-Nd whole-rock isochron yielded an age of 816 ± 72 Ma for the magmatic crystallization of the MORB-type protoliths of the ortho-amphibolites of the Bireirão da Folha Fades (Pedrosa-Soares 1995). The positive εNd values from 3.4 to 4.8 indicate a depleted mantle source for this MORB-type magmatism. Regional metamorphism took place at about 630 ± 30 Ma (Rb-Sr isochron, five samples of biotite schist; Siga Jr. 1986), when syn-tectonic slabs of ultramafic rocks were thrust over the Bireirão da Folha Fades, and over the Salinas Formation along the eastern edge of the Guanabara block (Fig. 2). The Bireirão da Folha Fades and the coeval slabs of ultramafic rocks represent Neo-Proterozoic oceanic remnants in the Araçuaí Belt (Pedrosa-Soares et al. 1992, 1997).

The continuation of the Salinas Formation along the eastern border of the Guanabara block (Fig. 2) was correlated to the Rio Doce Group by Pedreira et al. (1997). This group is the host unit of various...
Neoproterozoic granitoid intrusions to the south of the study region (Pinto et al. 1997).

The Jequitinhonha Complex (cf. Pedrosa-Soares et al. 1994a,b) consists of high metamorphic grade quartzite and pelitic schists, containing variable amounts of graphite. Field data suggest that these sediments were deposited on the Juiz de Fora Complex (Faria 1997).

The Capelinha Formation (cf. Grossi-Sad et al. 1997, Noce et al. 1997) includes graphite schist, mica schist, and quartzite deposited on the Salinas Formation and on the Guanhaes block. This formation may be a chronocorrelative of the Jequitinhonha Complex.

During the Brasiliano Event, the regional metamorphic temperature increased from west to east and from north to south in the northern sector of the Araçuaí Belt (Almeida et al. 1978, Costa 1989, Pedrosa-Soares 1996, Pedrosa-Soares et al. 1996, Carvalho & Pereira 1997a). Progressive isograds outline this metamorphic pattern and converge to the nucleus of intense granitic anatexis of the orogen, which will be further considered below.

THE GRANITOID SUITES

The granitoid bodies of the northern Araçuaí Belt were grouped into five suites, according to their field relations to host rocks, internal structures, mineralogical compositions, geochemical signatures, radiometric ages, depths of emplacement, and related mineralizations. The geochemical diagrams presented here illustrate data from Pedrosa-Soares et al. (1987, and a paper in preparation), Fernandes (1991), and Faria (1997).

G1 suite

The G1 suite makes up the anatetic nucleus of the northern sector of the Araçuaí Belt (Fig. 2). It comprises bitholithic bodies of tectonically foliated, S-type, biotite granitoids. Locally, these orthogneisses enclose minor "rafts" of banded paragneisses and migmatites. The G1 orthogneisses are fine to coarse grained rocks, with equigranular to porphyroblastic or porphyroclastic textures. Garnet is a common accessory mineral. Sillimanite and cordierite are scarce. The gneissic foliation follows the regional trend of the Araçuaí Belt, indicating metamorphic recrystallization during the main deformation phase. Samples of gneisses from the G1 suite yielded metamorphic ages from 655 to 591 Ma (Fernandes, 1991, and Faria, 1997).

The G1 orthogneisses have a granitic composition and a subalkalic to calc-alkalic, peraluminous signature (Fig. 3, 4 and 5). They carry high contents of light REE and very low contents of heavy REE (Fig. 6). The scarce geochemical data also suggest that G1 granites formed at a medium to low crustal level (Fig. 7).

G2 suite

The G2 granitoid suite corresponds to the northernmost extremity of the Galleita Intrusive Suite (in the sense of Pinto et al.)
Intrusive bodies composed of tectonically foliated granodiorite, granite and tonalite represent this suite in the northern sector of the Araçuaí Belt (Fig. 2). They commonly show a porphyritic texture characterized by orthoclase megacrysts in a biotite-rich, foliated matrix. These rocks are inferred as met aluminous, I-type granitoids by Carvalho & Pereira (1997b). Regionally, these granitoids present a sharp gneissic foliation and additional ductile deformation features, marking the syn-tectonic character of this suite (e.g., Pinto et al. 1997).

The Galiléia Suite continues for at least 300 km southward Teófilo Otoni. Nalini Jr. et al. (1996, 1997) conclude that this suite is composed of met aluminous, calc-alkalic granitoids, crystallized from hybrid magmas formed by mantle-derived and crustal components. According to Nalini Jr. et al. (1997), the magmatic crystallization of the Galiléia Suite took place at about 594 ± 6 Ma (upper intercept of an U-Pb discordia diagram; abraded zircons).

G3 suite The G3 suite comprises a series of small coalescent or isolated peraluminous leucogranitic bodies emplaced in larger migmatite slabs of ultramafic rocks (not to scale).

Figure 2 - Simplified geological map of the northern sector of the Araçuaí Belt (geology compiled from Pedrosa-Soares et al. 1994a, Pedrosa-Soares 1995, Barbosa & Dominguez 1996, Faria 1997, Grossi-Sad et al. 1997, Pinto et al. 1997). The location of the study region is indicated in relation to Figure 1.
tic areas mainly in the G1 domain. Their contacts with the enclosing gneisses and migmatites are poorly defined or gradational. A profusion of migmatitic ghost structures as well as nebulitic remnants of metasediments reveals their diatexitic nature.

Garnet, cordierite and/or sillimanite are typical mineral assemblages in these granites. Generally, they form megacrysts disseminated in the leucogranitic matrix, or concentrated along ghost migmatitic banding.

G3 granites represent predominantly peraluminous, subalkalic melts (Fig. 3,4 and 5). In the Rb/Sr plot they plot from the field of late orogenic to syn-collisional granites (Fig. 9). The U-Pb age of 590 ± 28 Ma (zircons from sillimanite-garnet-biotite migmatite) probably dates the anatectic episode that generated G3 granitoids (Siga Jr. 1986). This author also refers to the Rb-Sr isochron age of 586 ± 13 Ma ([87Sr/86Sr]i = 0.718) obtained from samples of leucosome bands of the same migmatite.

Field relations and geochemical attributes including REE patterns (Fig. 6) reinforce the assumption of consanguinity between G3 granites and the enclosing G1 gneisses and migmatites. Considering their internal structural features, relations to G1 suite, geochemical attributes, and the U-Pb and Rb-Sr ages, G3 granites are considered to be late-tectonic, S-type melts.


The Pedra Azul, Caladao, and Padre Paraíso batholiths represent the northern granitoid bodies of the Aimores Intrusive Suite (in the sense of Pinto et al. 1997). This suite includes granitoid batholiths with charnockitic (e.g. Padre Paraíso, Charnockite and Caladao Granite) or eucrite (e.g. Mangalo Enderbite) nucleus or borders (Pinto et al. 1997, Carvalho & Pereira 1997b).


For the purpose of this paper, granitoids of the Aimores and Guaratinga suites were grouped in the G4 suite. Coalescent intrusive G4 bodies of megaporphyrhic granites grading into granodiorites form large polidiapiric structures, with the metamorphic foliation of the host rocks wrapped around them. Their occasional strong border foliation is related to diapiric emplacement at a late to post-tectonic stage. Finer-grained biotitic granodiorite, biotite monzo- to syenogranite are late bodies intruded as stocks, dikes and in some places form the uppermost portions of the plutons. G4 plutons cut G1 and G3 granitoids as well as the Juiz de Fora Complex (Fig. 2).

Quartz, K-feldspar, sodic plagioclase, biotite and hornblende are the essential minerals of the matrix of G4 porphyritic granitoids. Large phenocrysts of orthoclase/microcline may be very abundant. Allanite, sphene, apatite, zircon and magmatic are common accessory minerals. Garnet is scarce or absent. Hypersthene and dark green phenocrysts of perthitic K-feldspar characterize the charnockitic portions. Both porphyritic granitoids and charnockites have the same texture and structure. Green charnockite grading into light-colored granitic facies is regionally a very often feature.

The geochemical data used in this work are from Pedra Azul (Fernandes 1991), Santo Antônio do Jacinto and Caujita batholiths and Guaratinga stock (Faria 1997). They indicate high-K, calc-alkalic and predominantly met-aluminous granites, granodiorites and syeno-diorites (Fig. 3, 4 and 5). REE signatures show a consistent pattern for Pedra Azul, Santo Antônio do Jacinto and Caujita batholiths and the Guaratinga stock (Fig. 6). These magmatite-series, I-type granitoids were originated in the lowermost continental crust with probable mantle contributions (Fig. 7). Dark-colored microgranular enclaves have dioritic to tonalitic compositions. Further geochemical attributes suggest that G4 suite represents a late-orogenic phase of the post-collisional stage (Fig. 8 and 9). In fact, all G4 plots in Figure 8 fall within the post-collisional field of Pearce (1996).

Siga Jr. (1986) presented a Rb-Sr age of 575 ± 10 Ma [thole-rock isochron, initial Sr ratio = 0.7064] for the magmatic crystallization of the Santo Antônio do Jacinto batholith. Faria (1997) obtained the Rb-Sr isochron age of 582 ± 16 Ma (initial Sr ratio = 0.7067) from six samples of fine-grained, magnetite-allanite granite of the Guaratinga stock. This age dates the magmatic crystallization of this stock.
Structural features, geochemical data and ages of magmatic crystallization are strong evidence that G4 granitoids represent late to post-tectonic melts, emplaced during the post-collisional stage of the orogen.

The southern part of the G4 suite was interpreted by Campos Neto & Figueiredo (1995) as representative of the "pre-collisional" granitoids of the Rio Doce Orogeny (560-530 Ma). However, the geochronological data here synthesized contradict this supposition.

G5 suite: Detailed studies on G5 granitoids, their residual pegmatites and associated tungsten mineralizations are found in Correia-Neves et al. (1987), Pedrosa-Soares et al. (1987, 1990), Monteiro et al. (1990), Pedrosa-Soares & Oliveira (1997) and Pedrosa-Soares 1997a,b.

The G5 suite crops out along the western limit of the Salinas Formation (Fig. 2) and comprises balloon-like, post-tectonic intrusive plutons. They are the source of a myriad of lithium- and/or tourmaline-rich pegmatites. The plutons are zoned and contain biotite-granite centers grading into two-mica or muscovite-garnet leucogranites towards their upper borders. The cupolas of the intrusions consist of residual pegmatoid granite. Xenoliths of the host rocks are commonly found in the outer parts of the intrusions. The plutons forced the regional schistosity to accommodate around them, forming post-tectonic curvilinear structures clearly detected in aerophotographs and satellite images.

Biotite granite has fine to medium-grained equigranular texture, grading locally to subporphyritic texture with K-feldspar phenocrysts. Its essential composition is very simple, consisting of quartz, K-feldspar, sodic plagioclase and biotite. Scarce accessory minerals are zircon, apatite and ilmenite. Leucogranites are deuteric metasomatic products of biotite granites (Pedrosa-Soares et al. 1987). Towards the upper portions of the plutons, muscovite gradually replaces biotite and microcline, generating fine-grained two-mica and muscovite-garnet leucogranites. Small crystals of garnet are also products of this metasomatic process. Towards the upper portions of the plutons, muscovite gradually replaces biotite and microcline, generating fine-grained two-mica and muscovite-garnet leucogranites. Small crystals of garnet are also products of this metasomatic process. Albitization is absent or incipient, being more important in the cupolas where minor saccharoidal albite-tourmaline granite is associated to pegmatoid granite. The last mentioned is made up of graphic intergrowth of coarse-grained perthite and quartz, and accessory minerals such as black tourmaline, garnet, albite, apatite, beryl and biotite.

G5 granites (Fig. 3) are predominantly peraluminous (Fig. 5) with K2O/Na2O ratios close to 1. The REE diagrams reveal a wide range of variation related to the metasomatic processes that affected these granites (Fig. 6). Compared to the other studied suites, G5 suite derived from shallower crustal melts (Fig. 7). The (Y + Nb) versus Rb as well as R1-R2 diagrams are consistent with post-collisional setting (Fig. 8 and 9).

Mineral associations of contact metamorphism and mineralization of petalite instead of spodumene in some residual pegmatites indicate depths of emplacement between 12 to 6 km (Pedrosa-Soares et al. 1987; Monteiro et al. 1990).

The Rb-Sr age of 525 ± 30 Ma dates the post-tectonic magmatic crystallization of G5 granites (Siga Jr. 1986; whole-rock isochron, five samples of biotite granite, initial Sr ratio = 0.711). This high initial 87Sr/86Sr ratio also indicates that G5 granites are S-type of the ilmenite series.

Figure 7 - Distribution of granitoid samples from the Araguai Belt in the Sr versus Rb diagram of Condie (1973). (in km, depths of magma generation).

Figure 6 - Rare-earth element patterns (chondrite normalized) of granitoid samples from the Araçuaí Belt.
Tectonic interpretation of the granitoid suites
Granitoids displaying penetrative tectonic foliation crystallized during pre-collisional and/or collisional stages of the orogenic evolution. The former stage refers to the accretionary or subduction-related orogen (sensu stricto), that may be followed by a subsequent collision with a continent, arc-continent or arc-arc collision.

Pre-collisional generation of normal calc-alkalic, I-type granitoids indicates development of volcanic arcs in oceanic or continental active margin settings. Such granitoids usually form by mantle asthenosphere melting involving a subduction component. Interactions of the mantle-derived magmas with melts formed by anatectic of continental crust (hybridization) may be very significant in continental active margins (e.g., Pitcher 1993, Cobbing 1996, Pearce 1996).

The syn-collisional stage is linked to the process of crustal thickening, generally by the underthrusting of one crustal slab beneath another, after ceasing the subduction of oceanic crust (Harris et al. 1986). The generation of syn-collisional granitoids results from extensive subduction of terrigenous sediment into the mantle, or incorporation of crustal melt into the mantle wedge. Generally, collisional settings involve a continent and an oceanic or a continental volcanic arc, or two continents that were separated by insufficient oceanic crust to generate a volcanic arc before the collision (e.g., Pearce 1996). The syn-tectonic increase of temperature, due to the ascent of magmas and crustal thickening, triggers partial melting of recycled sediments by ultrametamorphic anatexis, resulting in the extensive formation of S-type orthogneisses.

Post-collisional granitoids form some time after ceasing the collision stage itself, and are generally linked to rapid, post-closure uplift and/or to the subsequent collapse of the orogen (e.g., Harris et al. 1986, Pitcher 1993, Pearce 1996). Post-collisional granitoids generally show no penetrative, ductile tectonic foliation, forming roughly circular plutons with the pre-existing regional structures deformed and accommodated around them. Their foliated bodies result from diapiric ascent combined or not to the latest imprints of the regional compressional stresses. They also constitute autochthonous to parautochthonous bodies enclosed by migmattes (e.g., Cobbing 1996). These anatectic bodies are generally isotropic, but incipient tectonic foliation may be present. In fact, the collision/post-collision boundary is difficult to identify precisely because of its gradational and diachronic nature from place to place in the orogen. Thus, the origin of post-collisional granitoids (sensu lato) takes place from the late-tectonic (orogenic) to post-tectonic (orogenic) phases. High-K calc-alkalic, I-type granite to tonalite (the so-called Caledonian I-type in Pitcher's classification), as well as the peraluminous, subalkalic to alkalic S-type leucogranite are usually post-collisional granitoids (Pitcher 1993, Roberts & Clemens 1993, Pearce 1996). Also, some

A-type granitoids may be post-collisional instead of anorogenic (Eby 1992).

There are two main geotectonic scenarios where the high-K calc-alkalic, I-type granitoids may be generated (Pitcher 1993, Roberts & Clemens 1993, Cobbing 1996, Pearce 1996): a) in continental settings similar to that of the Andes by the crustal contamination of mantle-derived magmas; and b) the post-collisional settings where melting of the source rocks occurs as a consequence of decompression subsequent to crustal thickening, followed by mantle upwelling and underplating of the lower crust by mafic magmas. Roberts & Clemens (1993) suggest “that high-K, I-type magmas can be derived only from the partial melting of hydrous calc-alkalic to high-K calc-alkalic, mafic to intermediate meta-igneous rocks in the crust”, instead of being generated by the direct interaction of mantle and crustal magmas. Nevertheless, Roberts & Clemens’ model equally involves heating of the lower continental crust by underplating and/or intraplating of mafic magma.

As cited above, G1, G3 and G5 suites are composed of S-type granitoids, whereas G2 and G4 suites comprise I-type ones. In relation to the regional ductile foliation, G1 and G2 are syn-tectonic suites, whereas G3 and G4 are late post-tectonic, and G5 is a post-tectonic suite.

In general, the progressive increase of the regional temperature is related to both magma rising (in particular during the pre-collisional stage) and crustal thickening (especially during the collisional stage).

The regional metamorphic grade increases from west to east and from north to south in the Araçuaí Belt (Almeida et al. 1978, Costa 1989, Pedrosa-Soares 1996, Carvalho & Pereira 1997a). The pattern depicts a converging nucleus for progressive metamorphic temperatures, located to the north of the 20º parallel in eastern Brazil (Fig. 1). In the field, this nucleus is delineated by increasing migmatization of the regional gneisses, culminating to the appearance of large masses of autochthonous leucogranites rich in peraluminous minerals such as almandine garnet, cordierite and/or sillimanite.

The alignment of the G1 batholiths is roughly parallel to the distribution of regional metamorphic isograds and represents the convergence nucleus with metamorphic temperatures decreasing away from it. It is thought that extensive anatexis under high-H2O-pressure conditions generated G1 granitoids from kinzigitic gneisses, and maybe from the Salinas Formation. These granitoids display the regional gneissic foliation, indicating that they underwent the main deformation phase of the collisional stage. Nevertheless, the production of S-type melts could have begun during the pre-collisional stage.

The G2 suite comprises the foliated, I-type granitoids known in the northern sector of the Araçuaí Belt (Fig. 2). The penetrative tectonic foliation of these granitoids is an evidence that they underwent the main
deformational phase of the collisional stage, but they could be formed in the pre-collisional stage. The lack of geochemical data precludes a more precise interpretation. Considering the regional scenario and the available data from the southern prolongation of this suite, we suggest that G2 calc-alkalic granitoids may represent the root of a continental volcanic arc related to the consumption of a Neo-proterozoic oceanic crust.

At a late ergogenic stage the release of the regional pressure may have produced the homogeneous G3 leucogranites by anatexis of the G1 orthogneisses.

The high-K calc-alkalic, I-type G4 granitoids are late to post-tectonic intrusions among the main anatexic nucleus of the orogen. They clearly cut G1, G2, and G3, and the post-collisional partial melts originated at the lowest crustal levels (Fig. 7, 8). The origin of G4 granitoids is linked to direct interactions of crustal melts and mantle components. Net veined and pillow-like structures, formed by the interfingering between megaporphyrhic granitoids and more mafic contrasting magmatites, are evidence of magma mingling and/or mixing processes in their generation. Their dark microgranular envelopes show typical magmatic textures with the foliation parallel to the border, mantled feldspars and large rounded quartz as xenocrysts, as well as acicular apatites pointing towards the evidence of interaction of two contrasting magmas. Initial 87Sr/86Sr values around 0.706 suggest an origin from partial melting of lowermost crust with possible restricted mantle contribution.

The G5 granites were emplaced at higher crustal levels (ca. 6 to 12 km). These granitoids represent S-type melts evolved from shallower crustal levels than those where G1, G3 and G4 granitoids were formed (Fig. 7). The post-kinematic character in relation to the regional tectonic structures and the Rb-Sr age (~ 525 Ma) are the best evidence that G5 suite record the post-orogenic (relaxation) phase of the orogen.

**A MODEL AND SOME PERTINENT QUESTIONS** Based on the geochronological and Sr isotopic data, Siga Jr. (1986) proposed a Neoproterozoic ensialic evolution for the Araúaí-West Congo Orogen. Following this work, Pedrosa-Soares & Siga Jr. (1987) suggested that the generation of the G5 granitoids was related to an A-type subduction. At that time, oceanic remnants were unknown in the Araúaí Belt and the knowledge on the described I-type granitoids was very poor.

The characterization of Neo-proterozoic oceanic remnants in the Araúaí Belt appears in Pedrosa-Soares et al. (1992). Considering the MORB-type signature of the Ribeira do Folha Facies, Pedrosa-Soares (1995) proposed a B-type subduction model for the evolution of the Araúaí Belt. The remnants of oceanic lithosphere found in this belt are evidence that a branch of the Neo-proterozoic Adamastor-Brazilide Ocean (Dalziel 1997) developed between the São Francisco paleopeninsula and the Congo paleocontinent at around 816 Ma (Pedrosa-Soares et al. 1997).

Moreover, Correia-Gomes & Oliveira (1997) proposed that at about 1000 Ma an asthenospheric plume began to act beneath the Araúaí-West Congo region. This plume would have induced the process of continental rifting followed by oceanic spreading, required to allow for the deposition of the passive margin megasequence of the Mucábas Group and its MORB-type volcanism.

The proposal of this work to explain the origin of the granitoids found in the Araúaí Belt will be summarized thereafter (Figs. 1 and 2).

- The development of the Araúaí ocean basin would be followed by the subduction of the oceanic lithosphere, continental convergence and crustal thickening.

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**References**


