

## **Geodynamic Evolution of the Mobile Belt Orós in the Pio IX Area – Piauí- (Brazil)**

LANDIM, D.F1., PARENTE, C.V1., ARTHAUD, M.H1., FETTER, A2 ., RENAUD, C3. 1-Departamento de Geologia, UFC, Fortaleza-CE, Brazil;2- University of Ukansas, USA 3-Laboratoire de Tectonophysique, Universite de Montpellier , French.

The Mobile Belt Orós, of age proterozoic (~1.8Ga), is very well-known in the Ceará State. However, its formation environment is still debatable (rife active, passive or shelf). In the Pio IX area, west of this belt, meets one of the most beautiful metavolcanics and marbles exhibitions whose knowledge is indispensable its evolution geodynamic. In that area, the metavolcanics, of low metamorphic degree, are characterized by metatrachyandesites, metabasalt-andesites or amygdaloidal-meta-andesites, porphyric meta-dacites, metarhyolites and metavolcanoclastics. The first ones happen in forms of lavas and dikes, that cut out the marbles, while the meta-rhyolites appears under form of dikes and domes, cutting out the metabasalts or meta-andesites so much with relationship to the marbles. The group rests in disagreement on an embasement gneiss-migmatitic of granodiorite composition. The metatrachyandesites shown alkaline affinity while the others metavolcanics are of tholeiitic nature. The marbles are calcitic (open sea) and the granodiorites gneiss of Embasement are calc-alkaline. U-Pb zircons datations in those gneiss and in the metarhyolites give age 2,1Ga and 1729Ma, respectively. The petrographic, geochemical and geochronological data suggest that the embasement granodiorite is sin-transamazonien, while the metavolcano-sedimentary sequence was developed, later on, inside of an environment originally stable, that went being thinned gradually (passive rife). That allowed the ascension of successive episodes of volcanism alkaline and tholeiitic intracontinental, originating from of different degrees of melt mantle, whose ascension was accompanied, in major or smaller degree, of differentiation and contamination crustal. Later on, the whole group was deformed and metamorphised in Brazilian.