

RIO DO COCO VOLCANO-SEDIMENTARY SEQUENCE: A 2.6 GA EXOTIC TERRAIN IN THE PALEOPROTEROZOIC TOCANTINS SHEAR BELT, CENTRAL-BRAZIL

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The Tocantins Shear Belt is a Paleoproterozoic (~ 2.1 Ga) terrain dominated by gneisses and granulites, and is part of the basement of the southern segment of Araguaia Belt. However, an associated volcano-sedimentary sequence occurring near Paraiso do Tocantins, named Rio do Coco Group, has been considered a remnant of an Archean greenstone belt. A metavolcanic rock of this unit was dated by single zircon Pb-evaporation technique to investigate the suggested Archean age of this sequence. The dated rock is a dark gray, fine grained metabasite, with incipient foliation. The $^{207}\text{Pb}/^{206}\text{Pb}$ age of 2618 ± 14 Ma was obtained, and it is interpreted as the age of the extrusion of the volcanic protholite. This date provides the first geochronological evidence of the Archean age of the Rio do Coco Group. This volcano-sedimentary unit is much younger than the 2.85 Ga tonalitic-trondhjemitic-granodioritic gneisses, which crop out as basement inliers in the northern portion of the Araguaia belt, and are considered as part of the Amazonian Craton. Similarly, the Rio do Coco sequence is younger than the Archean greenstone belts of this craton. It is a younger terrain accreted to the Amazonian Craton at the end of the Archean or, during the Paleoproterozoic as suggested by the ages of the associated gneissic terrain.