

# Accepted Manuscript

The multistage tectonic evolution of the northeastern Carajás Province, Amazonian Craton, Brazil: Revealing complex structural patterns

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PII: S0895-9811(18)30159-7

DOI: [10.1016/j.jsames.2018.08.024](https://doi.org/10.1016/j.jsames.2018.08.024)

Reference: SAMES 1996

To appear in: *Journal of South American Earth Sciences*

Received Date: 11 April 2018

Revised Date: 30 August 2018

Accepted Date: 31 August 2018

Please cite this article as: Tavares, F.M., Trouw, R.A.J., da Silva, Cí.Maria.Gaia., Justo, A.P., Oliveira, J.K.M., The multistage tectonic evolution of the northeastern Carajás Province, Amazonian Craton, Brazil: Revealing complex structural patterns, *Journal of South American Earth Sciences* (2018), doi: 10.1016/j.jsames.2018.08.024.

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1 **The multistage tectonic evolution of the northeastern Carajás Province, Amazonian**  
2 **Craton, Brazil: revealing complex structural patterns**

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10 **Abstract**

11 Structural data collected in the Carajás Province region led to a new interpretation of  
12 the southeastern Amazonian Craton geotectonic evolution. The purpose of this article is to  
13 present a new evolutionary proposal for the region. A detailed analysis of the several  
14 extensional-compressional cycles that overprinted each other from the Archean to the  
15 Neoproterozoic-Cambrian is presented. At about 2.87-2.83 Ga, collisional processes led to the  
16 formation of a stable crustal substrate that supported the installation of an extensional basin at  
17 2.76-2.70 Ga and the deposition of the Itacaiúnas Supergroup shallow marine  
18 volcanosedimentary sequences, together with contemporary bimodal plutonism.  
19 Paleoproterozoic arc magmatism in the Bacajá Domain was followed by ~~Rhyacian~~ collision  
20 with the Carajás Province between 2.09 and 2.06 Ga, resulting in expressive tectonic  
21 thickening and low to high grade regional metamorphism, and in the deposition of the Águas  
22 Claras Formation. A second Paleoproterozoic orogenic event affected the Carajás Province  
23 ~~during the Orosirian~~, which resulted in oblique tectonism and regional counterclockwise  
24 rotation of previous associations, followed by late to post-orogenic sedimentation and 1.88 Ga  
25 anorogenic alkaline A-type magmatism. The eastern Carajás Province margin was

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