

## **Evidence of magma mingling in the Brazilian northeast**

I. DA C. T. MOTA<sup>1</sup>\* V. M. PINTO<sup>2</sup> AND R. G. LIMA<sup>1</sup>

<sup>1</sup>University Federal of Sergipe, Sergipe, Brazil

(\*correspondence: ingrid.dacunha@hotmail.com)

<sup>2</sup>Univerdity Federal of Pelotas, Pelotas, Brazil

(viter.pinto@gmail.com)

The Domain Caninde, located in Sergipe Fold Belt, in the southern portion of the Borborema Province, is a collisional orogenic belt of the Precambrian collision between the Pernambuco – Alagoas Block and Craton of São Francisco, referred as the Brasiliana Pan – African orogemeis.

The lithostratigraphic units that show a bimodal magmatism occurring are: Gentileza Unit, and Curralinho type granitoid.

The Gentileza Unit consists of amphibolitic rocks, composed of hornblende, plagioclase, quartz, biotite and titanomagnetite as essential minerals, and presents geochemical affinity with tholeiitic basalts.

The granitogenesis Curralinho has its mineralogy composed of quartz, plagioclase, K-feldspar, hornblende and biotite, with rapakivi texture, mirmequitization, poiquilitic texture, ocellar texture, and chemical composition demonstrates the predominant presence of granites to granodiorites with high levels of K.

Both units occur often separated, but there are portions that occur interdigitated, with excellent features of magma mingling, sometimes as compounds dikes intruded into the other units of the Caninde Domain, or even hybrid rocks, forming a quartz - diorite porphyry rich in Fe. Major and trace elements plotted against silica demonstrate the model of magma mingling, where rocks of hybrid composition are in an intermediate position between mafic and felsic. According to the data obtained in this field and geochemical work is possible to identify the comagmatismo between volcanism Gentileza and Curralinho.