

**Relevance for W Gondwana  
Assembly of Syn-Collisional  
Ediacaran Granitic Plutonism with  
 $^{18}\text{O}/^{16}\text{O}$  Crustal Signature, Borborema  
Province, NE Brazil**

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The Borborema Province, is a collisional orogen built up during Gondwana amalgamation. It is located between the W Africa and Congo-São Francisco cratons at pre-Gondwana reconstitutions. Voluminous plutonism of metaluminous composition occur within the 10,000 sq Km Águas Belas-Canindé batholith, SE margin of the province. Tanquinho suite is comprised of amphibole, ± pyroxene bearing diorites and granodiorites. Serra do Catú suite is comprised of amphibole bearing monzonites and syenites. They are high-K calc-alkaline to ultrapotassic suites of shoshonitic to ultrapotassic affinity, that evolved by fractional crystallization. They show U-Pb ages (625 Ma and 630 Ma); Nd  $T_{DM}$  from 1.0 to 1.4Ga and  $\epsilon Nd(0.60Ma)$  +0.2 to -5; geologic charater of collision-related plutons; trace elements signature typical of magma generated at active margin. However their  $^{18}\text{O}/^{16}\text{O}$  in zircon signature, with values from 6.00 to 9.60 permil, strongly suggests an origin from reworking of Meso to Early Neoproterozoic protolith. These data points for an evolution of Borborema Province, during Gondwana amalgamation, with scarce or no involvement of juvenile crust.