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The Statherian El Renegado Granite Nappe (Nico Pérez Terrane, Uruguay), and its tectonic emplacement in the latest Ediacaran-Early Cambrian

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Several granite bodies occur in the southern Nico Pérez Terrane, which were previously included in the Carapé Granitic Complex of Neoproterozoic age [1]. Four synorogenic and eight late- to post-orogenic plutons were separated, with K-Ar ages ranging between 610 and 546 Ma [1]. The ages, however, do not agree with the sequence proposed by the cited authors [1].

More detailed field work has shown that all the supposed intrusions are in fact very similar, and vertical profiles show a consistent lithologic succession, namely:

(1) At the top: leucocratic, undeformed, medium- to coarse-grained granite with 30 ± 3 % quartz, 28 ± 3 % oligoclase, 38 ± 4 % orthoclase and 1 % biotite, hornblende and muscovite.

(2) The same granite as above, but showing subhorizontal joints spaced 20 cm and dipping 20° to the SE. This level shows a thickness of several meters.

(3) Below the previous level: granite with abundant microfissures filled by epidote.

(4) At the base of the granite outcrops: green to pale red, microcrystalline, subhorizontal mylonites with epidote and feldspar, which grade up section to less deformed granite.

(5) Below the mylonites: paragneisses and amphibolites of the Edén Formation and polymictic conglomerates of the Ediacaran Las Ventanas Formation.



Thus the granite bodies in fact represent erosional relicts of a single granite nappe of ca. 50 m thickness (named El Renegado Granite, [2]) and not different intrusions, as previously thought.

The age of the granite is well established by several, similar U-Pb zircon ages, the most accurate of which is 1754 ± 7 Ma (U-Pb SHRIMP, [3]). The age of the thrust, however, is not constrained by radiometric ages.

Figure 1: Granite overthrust on top of para-amphibolites [4]

Because the granite is overthrust onto the Las Ventanas Formation (see [4]), the age of this event should be younger than 573 ± 11 Ma [5] and possibly Early Cambrian.

[1] Sánchez Bettucci, L et al. (2003) *Gondwana Res.* 6: 89-115.

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[4] Gaucher, C et al.
[5] Oyhançabal, P et

