# The La Trampa wedge (SE Colombia) revisited

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**THE PROBLEM** - a SLAR-derived NE-SW striking set of lineaments (Fig. 1), ca. 500 km long, in a surface pattern defining a wedge-like outcrop between the Rio Vaupes and the Rio Putumayo (Fig. 1) in a region still largely covered by dense rainforest.

The pattern extends northeastward to the Rio Negro and Rio Atabapo as a belt of multiple, parallel lineaments (Fig. 1). Total length is ca. 1300 km.
**What does this pattern mean?** A rift (graben) structure [1] or a figment of the imagination?

**A/b magnetometry suggests that the causative structure is not a graben because an infilling sediment body would, at this latitude, produce a dominantly positive anomaly [2].**

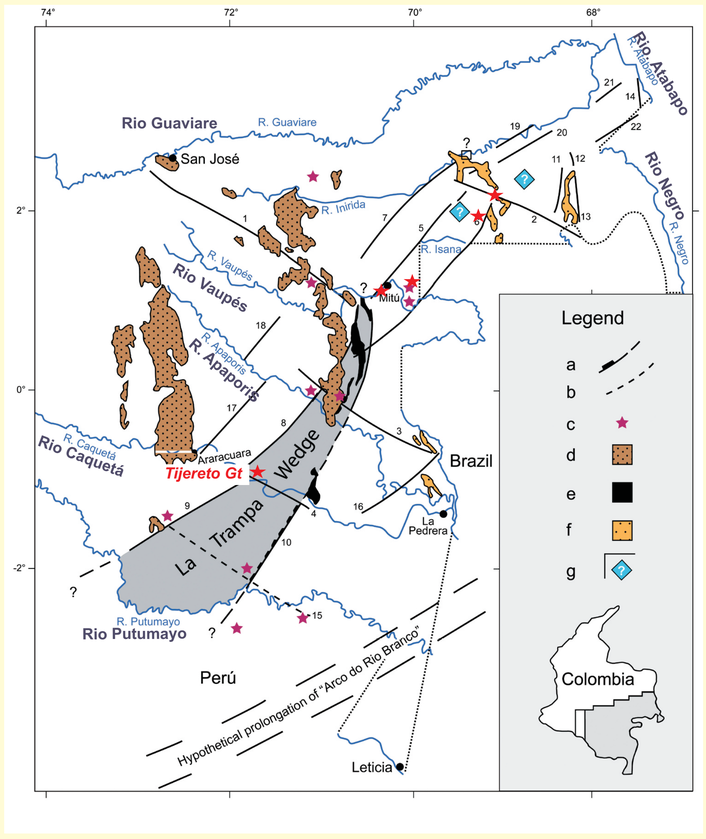


*Fig. 1 SLAR-derived lineaments of the La Trampa structure between the Atabapo and Putumayo rivers. Modified after [1]and [4].*
*⋆ - Epicentres of 200-600 km deep earthquakes[3].*
*⋆ - Anorogenic, 1495 Ma, Tijereto granite and correlates.*

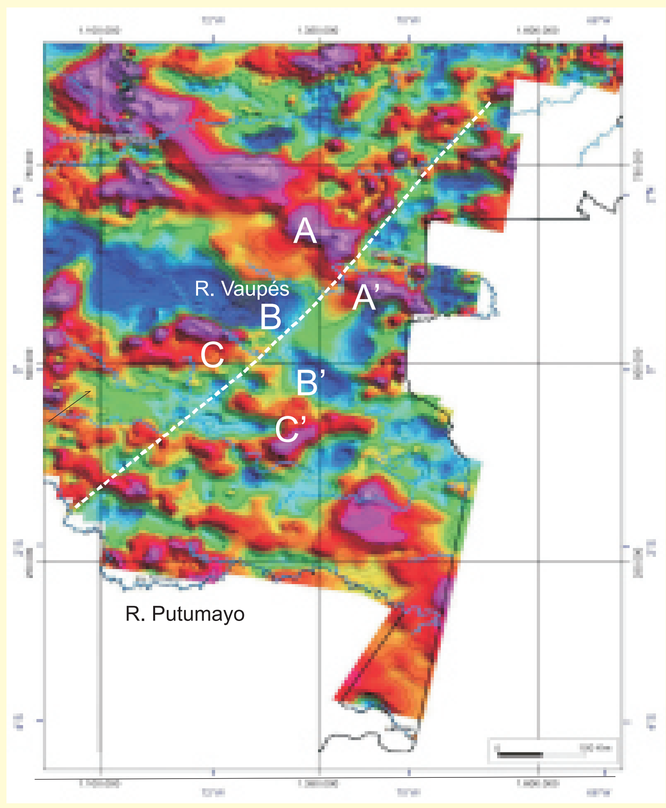


*Fig. 2 Low-resolution magnetometry of SE Colombia. Modified after [2]. The dashed, white line marks a discontinuity in the anomaly pattern between the Rio Putumayo in the SW and the Rio Atabapo in the NE. A NE-striking discontinuity (dashed white line) is expressed along which prominent NW-SE anomalies A, B and C appear dextrally displaced.*

**The length of the discontinuity (ca. 650 km) and the dextral displacement seen in Fig. 2 suggest that the underlying structure includes a major strike-slip fault. The proximity of the SLAR - derived La Trampa domain suggests they are one and the same.**

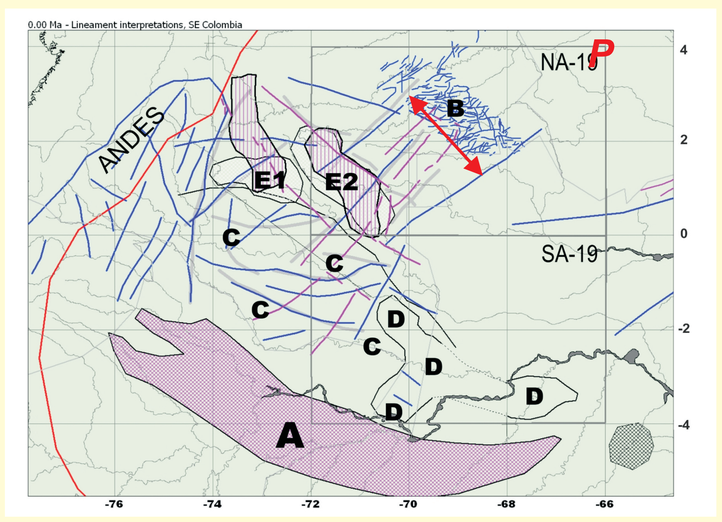


*Fig. 3 Compilation of lineaments from radar (pink), gravity (grey) and magnetic (blue) data interpretation. Modified after [2], with indication of width (red - double arrowed bar) of belt of multiple SW-NE striking regional lineaments, ca. 200 km wide, extending northeastward to the Parguaza batholith (P), and the lateral displacement of magnetic anomalies observed in Fig. 2. These lineaments may represent a major shear belt.*

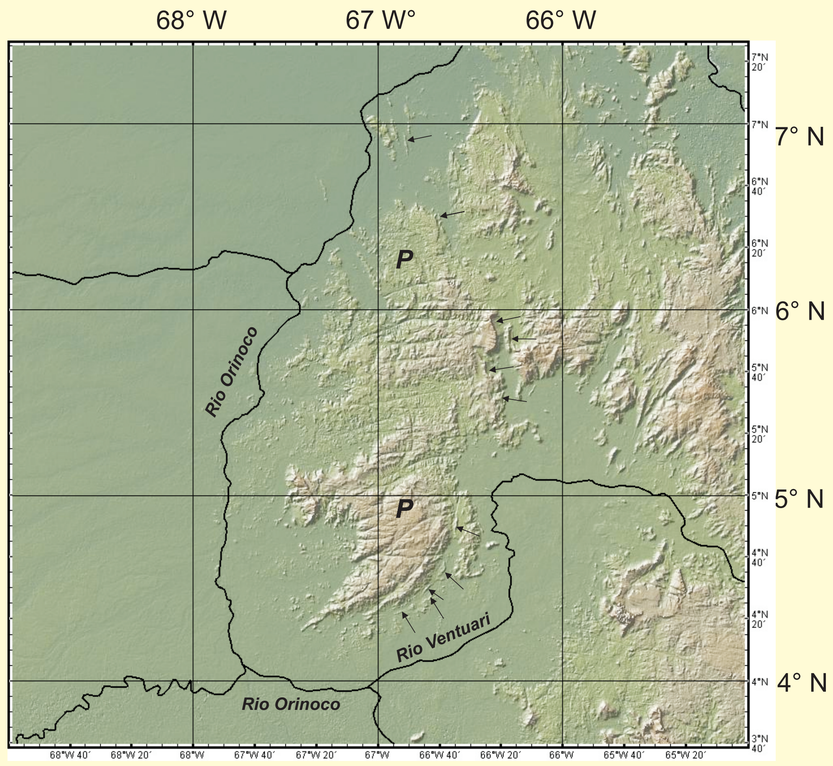


*Fig.4 The margins of the Parguaza batholith (P) of Rapakivi-type granite show short linear ridges, indicated by small arrows, whose strike grades from ENE at the southern apex of the batholith to NE and N along the eastern perimeter. I suggest these ridges may represent foliation (schistosity, gneissosity) due to deformation during consolidation of the magmas [5, 6, 7]. The extensional setting of the batholith [4] suggests the magmas were emplaced in an extensional jog of a much longer strike-slip shear. Topography after Ryan et al., http://www.geomapapp.org [8].*

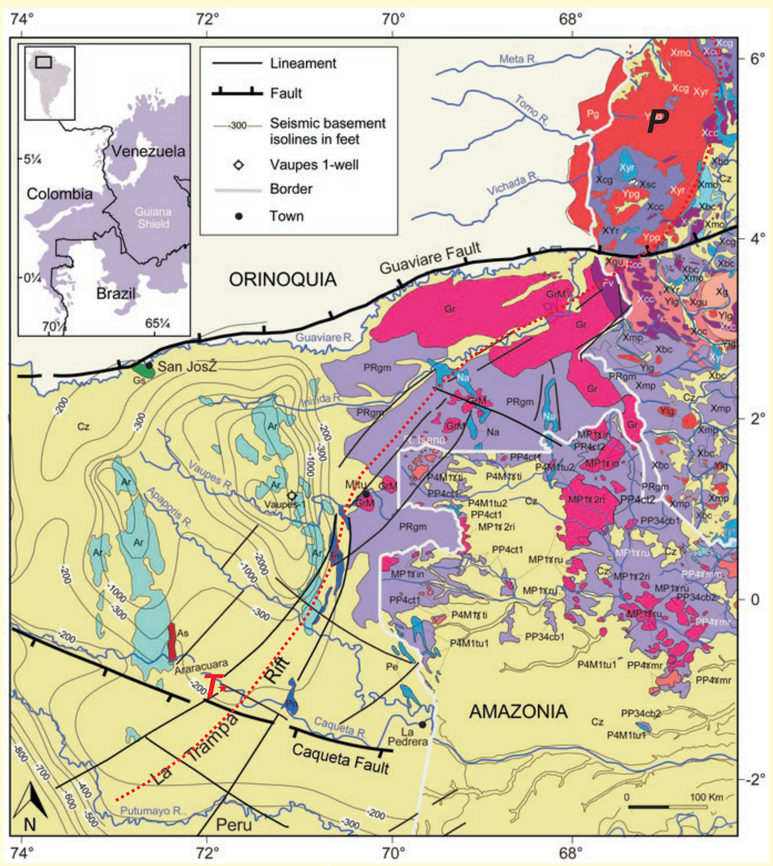


*Fig. 5 Geological map of the border area of Colombia, Venezuela and Brazil, (modified after [4]), with indication of axis of the inferred La Trampa structure (dotted red line) from the Rio Putumayo to the Rio Orinoco and continuing northward along the eastern margin of the Parguaza Batholith (P). Small plutons (GrM; T - Tijereto Granite), comparable to Parguaza granite [4], appear confined to La Trampa belt.*

## References

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**In view of the transcurrent shear belt (Fig. 2), its NE strike (Figs. 2, 3), the setting of the Parguaza batholith in an extensional jog where the shear zone turns to the north (Fig. 4), and the distribution of small anorogenic plutons (Fig. 5) limited to the La Trampa domain as far south as the Tijereto Granite on the Rio Caqueta, a major strike-slip shear belt is suggested in the western Guiana Shield (Fig. 5).**