

Contrasting features of two serpentinitized belts in a long-lived convergent Margin (NW South America).

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The understanding of the distribution and characteristics of serpentinites and partially serpentinitized bodies in convergent zones is crucial for unraveling the complex processes associated with plate dynamics. Two belts of serpentinites and partially serpentinitized ultramafic bodies in NW South America (Colombia) associated with a long-lived subduction margin (> 200 m.y.) between the South American plate and oceanic plates towards the west show contrasting outcrop patterns and textural/microstructural features associated with different tectonic settings. The first belt is associated with a narrow exhumed mélangé in the Romeral Suture Zone (Fig. 1). The elongated lensoidal form bodies are immersed in low-grade metamorphic rocks in association with medium to high P metamorphic rocks and felsic to mafic igneous rocks. A large portion of the serpentinitized bodies have a ca. N-S foliation following the trend of the suture zone. In this belt, three serpentinitization events have been interpreted (Pineda et al., in press): (I) hydration within the ocean floor, (ii) prograde metamorphism, and (iii) retrogression of antigorite. This first belt is interpreted to have formed from ancient oceanic lithosphere and hydrated mantle wedge fragments subducted and mixed in a subduction channel. The second belt is associated with accreted remnants of an oceanic plateau (Caribbean-Colombian Oceanic Plateau); in comparison to the bodies in the suture zone, these are larger but more dispersed irregular outcrop form bodies with a variable degree of lithological zoning, with no foliation, lower degree of serpentinitization, and immersed in basaltic rocks.

Pineda, NA, Zuluaga, CA, Bernet, M, Amaya, S, Vargas, CA, Caneva, A. In press. Petrology of Serpentinites associated to the Romeral Suture Zone in the Central Cordillera (Colombia). In *New Insights into the Colombian Andes: Magmatism, Metamorphism and Exhumation*, Gomez, J, Zuluaga, CA, & Bernet, M. (Eds). Geological Society of London, Special Publication.

