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STRUCTURAL, DEFORMATION, AND TEMPORAL EVOLUTION OF THE OTU-PERICOS SHEAR ZONE (NORTHERN ANDES, COLOMBIA): TERRANE ACCRETION OR ARC-RELATED DEFORMATION.

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RESUMO:

The northern Andes of Colombia have been considered as a typical accretionary orogen, where subduction and terrane accretion have shaped the margin since the Jurassic. While the accretion of oceanic terranes and the magmatic response to subduction dynamics have been relatively well-constrained, the recognition of para-autochthonous terrane accretion associated with the oblique convergence of the margin, as well as identification of deformation phases related to the magmatic record, have remained more elusive.

The Central Cordillera of Colombia is traversed by the Otu-Pericos shear zone whose nature and tectonic significance have been inferred from geochronological, geochemical, and isotopic data from rocks within the blocks it separates, whereas shear zone rocks have been scarcely studied. Therefore, it has been subject to ambiguous interpretations including i) a suture zone resulting from the collision of allochthonous terranes ii) a transform fault juxtaposing southern para-autochthonous terranes, and iii) an intra-deformational zone within a magmatic arc setting.

As a consequence, this master project aims to understand the deformational history and tectonic significance of the Otu-Pericos shear zone by characterizing its ductile deformation record, investigating its structural, kinematic, and metamorphic evolution, and establishing the ages of deformation. The research will involve fieldwork, microstructural analysis, mineral chemistry, thermobarometry, and geochronology with the aim of gaining insights into the temporal evolution of the shear zone, its connection to metamorphism, and its implications for tectonic and paleogeographic reconstructions of the northern Andes.

PALAVRAS-CHAVE: SHEAR ZONE, ARC-RELATED DEFORMATION, TERRANE ACCRETION, TECTONIC SIGNIFICANCE.