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Crustal growth and deformational processes in the northern Gondwana margin: Constraints from the Évora Massif (Ossa-Morena zone, southwest Iberia, Portugal)

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ABSTRACT

The aim of this article is to present a compilation of available information on the Évora Massif based on structural mapping, whole-rock geochemistry, recognition of metamorphic mineral assemblages, and geothermobarometry. In our view, trans-current movements responsible for strong orogen-parallel stretching were dominant and had a major role in the geodynamic evolution of this part of Ossa-Morena zone (southwest Iberian Massif). Cadomian and Variscan orogenic events separated by a period of intense rifting were the cause for the composite distribution of zones with contrasting metamorphic paths, the structural complexity, the variety of lithological associations, and the sequence of deformation events and magmatism. The proposed geodynamic reconstruction for this segment of the northern Gondwana continental margin includes three main stages in chronological order: (1) Neoproterozoic accretion and continental magmatic arc developing, dismantling, and reworking, followed

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