

## **IBERIAN VARISCAN OCEANS**

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During lower Paleozoic times Iberia underwent the Hercynian Orogeny. As a result several ophiolitic sequences and related high pressure events can be found one both northern and southern Iberian Variscan Terranes. Southern ophiolites occur, both as a thin belt along the boundary between the Ossa-Morena and South Portuguese Zones - Beja-Acebuches Ophiolite, and as dismembered, scattered allochthonous klippen on top of lower Palaeozoic sequences within the internal areas of the Ossa Morena Zone - Internal OMZ Ophiolite. Beja-Acebuches geochemical data indicates that some lithologies were originally tholeiitic gabbros/dolerites/basalts and display considerable variation in incompatible element ratios that range from MORB-type to those transitional to arc tholeiites, suggesting derivation from a back-arc basin oceanic setting. The internal ophiolitic klippen were emplaced contemporaneously with the Beja-Acebuches Ophiolite. They were imbricated within an high-pressure (eclogite/blueschist) lower Palaeozoic passive continental margin sequence and then thrust onto the Ossa-Morena Zone. Geochemical data display wide variations in incompatible element fractionation, ranging from N-MORB to T/P-MORB; contrasting with similar lithologies from the Beja-Acebuches Ophiolite, the orogenic (island arc-like) characteristics were not detected on these internal ophiolitic occurrences. The northern Morais Ophiolite comprises a relatively complete oceanic sequence. It seems to have been emplaced contemporaneously with the southern ophiolites. Both the regional geology and their geochemical characteristics suggest that Morais and the Ossa-Morena Ophiolites could represent the same oceanic basin.