Rifting of the Southwest and West Iberia Continental Margins

6

Pedro Terrinha, José Carlos Kullberg, Marta Neres, Tiago Alves, Adrià Ramos, Carlos Ribeiro, João Mata, Luís Pinheiro, Alexandra Afilhado, Luís Matias, Joaquim Luís, Josep Anton Muñoz, and Óscar Fernández

Abstract

The West and SouthWest Margins of Iberia started their formation as intra-continental rifts during initial break up of Pangea in Triassic times. The tectono-stratigraphic record of the Algarve, Alentejo and Lusitanian basins and their offshore prolongation documents the syn-rift, post-rift and passive margin phases of the rifting process as well as three magmatic cycles of tholeiite to alkaline affinities. Although the Ocean-Continent Transition has been investigated using deep ocean drilling, seismics, gravimetry and magnetics its nature and location are still matters of debate. The tectonic inheritance of the Paleozoic Orogeny had great influence in the geometry of the rift basins and development of the Neo-Tethys and Atlantic Oceans intersection. Salt tectonics strongly controlled both syn-rift and post-rift basin tectonics and led to the formation of an allochthonous salt nappe in the Algarve Basin.

P. Terrinha (✉) · M. Neres
Instituto Português do Mar e da Atmosfera (IPMA), Rua C Do Aeroporto, 1749-077 Lisbon, Portugal
e-mail: pedro.terrinha@ipma.pt

M. Neres
e-mail: neresmarta@gmail.com

P. Terrinha · M. Neres · J. Mata · L. Matias
Universidade de Lisboa, Faculdade de Ciências, Instituto Dom Luiz (IDL), Ed. C1, Piso 1, 1749-016 Campo Grande, Lisboa, Portugal
e-mail: jmata@fc.ul.pt

L. Matias
e-mail: lmmatias@fc.ul.pt

J. C. Kullberg
Department of Earth Sciences, Uni. NOVA Lisboa, and GeoBioTec, 2829-516 Caparica, Portugal
e-mail: jck@fct.unl.pt

T. Alves
3D Seismic Lab, School of Earth & Ocean Sciences, Cardiff University, Main Building, Park Place, Cardiff, CF10 3AT, UK
e-mail: alvest@cardiff.ac.uk

A. Ramos · J. A. Muñoz
Departament de Dinàmica de la Terra i de l'Oceà, Facultat de Ciències de la Terra, Institut de Recerca Geomodels, Universitat de Barcelona, Barcelona, Spain
e-mail: adria_ramos@outlook.com

J. A. Muñoz
e-mail: jamunoz@ub.edu

A. Ramos
Terractiva Consulting SL, Carrer de Sardenya 229, 08013 Barcelona, Spain

C. Ribeiro
Departamento de Geociências, Instituto de Ciências da Terra, Escola de Ciências e Tecnologia, Universidade de Évora, Colégio Luis António Verney, Rua Romão Ramalho, 59, 7000-671 Évora, Portugal
e-mail: cribeiro@uevora.pt

L. Pinheiro
Departamento de Geociências e CESAM, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal
e-mail: lmp@ua.pt

A. Afilhado · J. Luís
Instituto Dom Luiz, Universidade de Lisboa, FCUL- Campo Grande Edifício C1, 1749-016 Lisbon, Portugal
e-mail: afilhado@dec.isel.ipl.pt

J. Luís
e-mail: jluis@ualg.pt

A. Afilhado
Instituto Superior de Engenharia de Lisboa, Lisbon, Portugal

Ó. Fernández
Repsol Exploración, Campus Repsol, c/ Méndez Álvaro 44, 28045 Madrid, Spain
e-mail: esparita@gmail.com

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