

Norte Brasileira Ridge System, an example of natural component or natural prolongation of the Brazilian Continental Margin?

Author 1: Luiz Carlos, TORRES, BRAZILIAN
FEMAR - Fundação de Estudos do Mar
torres.luizcarlos@gmail.com

Author 2: Helio Heringer, VILLENA, BRAZILIAN
UERJ – University of State of Rio de Janeiro
hvillena@gmail.com

Author 3: Ângela Alonso, RANGEL, BRAZILIAN
DGN – Directorate of General Navigation – Brazilian Navy
angelaarangel@gmail.com

Abstract

The anomalous morphology of the seafloor is an evidence which provide a clear idea of how dynamic the underwater world is and how often changes occur in geologic time scale. So, volcanic underwater chains linear or not appear as a common and sometimes distinctive submarine features. Additionally, tectonic and sedimentary processes, in conjunction or isolated, are responsible by the continental margin building and morphology.

The UNCLOS in Article 76 mentioned about underwater features and Scientific and Technical Guidelines (STG) present details regarding the types of features cited on UNCLOS. The STG presents three types of underwater features: oceanic ridge, submarine ridge and submarine elevation and also introduce the approach of natural prolongation and natural component in which these features maybe entitled.

The Norte Brasileira (NBR) and Fernando de Noronha (FNR) ridges are two conspicuous submarine features in the Equatorial Brazilian Continental Margin (EBCM). Both ridges present segments parallels and orthogonal to the coastline and this geometry associated with tectonics and sedimentary process observed since South American and Africa plates break up affected and shaped the margin in these region and provided special hole in its building. This study will treat this issue as a combination of events which maybe better understood if considering the Norte Brasileira Ridge and inner seabed surrounded by it as an integrated system.

In conclusion, we suggest that the Norte Brasileira Ridge (NBR) System, supported by geomorphologic and geophysics data and scientific bibliography maybe, at least, entitled as a natural prolongation of the EBCM.