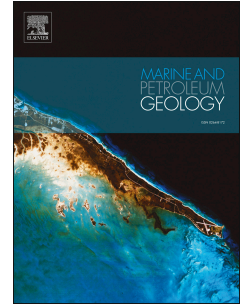


Accepted Manuscript

Structure of the Northern Bay of Bengal offshore Bangladesh: Evidences from new multi-channel seismic data

Claude Rangin, Jean-Claude Sibuet



PII: S0264-8172(17)30106-X

DOI: [10.1016/j.marpetgeo.2017.03.020](https://doi.org/10.1016/j.marpetgeo.2017.03.020)

Reference: JMPG 2858

To appear in: *Marine and Petroleum Geology*

Received Date: 20 June 2016

Revised Date: 16 March 2017

Accepted Date: 20 March 2017

Please cite this article as: Rangin, C., Sibuet, J.-C., Structure of the Northern Bay of Bengal offshore Bangladesh: Evidences from new multi-channel seismic data, *Marine and Petroleum Geology* (2017), doi: 10.1016/j.marpetgeo.2017.03.020.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1 **Structure of the Northern Bay of Bengal offshore Bangladesh:**

2 **Evidences from new multi-channel seismic data**

3 Rangin Claude* and Sibuet Jean-Claude **

4 *GEOAZUR, Université Nice Sophia Antipolis, Av. A. Einstein, Valbonne, France.

5 ** 44 rue du Cloître, 29280 Plouzané, France and Ifremer Centre de Brest, BP 70, 29280 Plouzané Cedex,
6 France.

7 **Abstract**

8 New multi-channel seismic data were acquired in the northern part of the Bay of Bengal and at
9 the northernmost termination of the 90°E Indian Ridge offshore Bangladesh. This survey was
10 coupled with a seismic refraction experiment indicating this offshore basin is here floored by a
11 thinned (15-km thick) continental crust, injected by Mesozoic volcanism. This attenuated
12 continental crust is interpreted as formed during Gondwana super-continent fragmentation
13 during a syn-rift period. The dominant tectonic pattern is marked by NE-SW trending tilted
14 blocks filled by syn-rift sediments clearly identified on seismic profiles. The uppermost part of
15 this continental crust (3 to 4 km thick) shows a complex assemblage of dipping reflectors and
16 west-facing tilted blocks injected by volcanic build-ups. The lower crustal sequence (11 to 12 km
17 thick) does not reveal significant reflectors. This syn-rift fabric is attributed to the Mesozoic up
18 to the Early Cretaceous by correlation with published seismic data along the eastern coast of
19 India. Opposite normal faults vergency on the Indian and Burma sides indicate an asymmetrical
20 rifting (simple shear) creating a wide COT on the Burma side and a short COT on the opposite
21 Indian side, a geometry typical of continental crust stretching.

Download English Version:

<https://daneshyari.com/en/article/5782049>

Download Persian Version:

<https://daneshyari.com/article/5782049>

[Daneshyari.com](https://daneshyari.com)