

**UNDERSEA FEATURE NAME PROPOSAL**

(See NOTE overleaf)

Ocean or Sea North Pacific Ocean Name proposed CBF Rift

Coordinates : A - of midpoint or summit : Lat. \_\_\_\_\_, Long. \_\_\_\_\_

\_\_\_\_\_ kilometres in \_\_\_\_\_ direction from \_\_\_\_\_

and/or B - extremities (if linear feature) :

Lat. 19-00N } to { Lat. 15-00N  
Long. 126-30E } to { Long. 133-30E

Description (kind of feature) : **rift (this is an extinct back-arc spreading ridge in terms of geology and geophysics)**

Identifying or categorizing characteristics (shape, dimensions, total relief, least depth, steepness, etc.):

**CBF Rift is a prominent linear bathymetric feature, ~ 1000 km long, first described by Hess (1948) as a NW-SE-trending transcurrent fault. He named this feature "Central Basin Fault". Recent studies by Japanese Continental Shelf Survey completed mapping of the feature, and confirmed that this is in fact an extinct back-arc spreading ridge. It is characterized by deep rift valleys and local small basins (i.e., "nodal basin" in terms of tectonic context). The maximum water depth reaches up to ~ 7900 m and the maximum relief is up to ~ 4000 m.**

Associated features : Philippine Basin, CBF Rise

Chart reference :

Shown with name on chart No. \_\_\_\_\_

Shown but not named on chart No. \_\_\_\_\_

Not shown but within area covered by chart No. Japanese Chart No. W1004A

Reason for choice of name (if a person, state how associated with the feature to be named) : \_\_\_\_\_

**The name "Central Basin Fault" is the widely accepted name in the science community. The abbreviated version, "CBF" is also widely accepted by the science community.**

Discovery facts :

Date 1998, 1999, 2000 by (individuals or ship) R/V Yokosuka, R/V Kairei

By means of (equipment) : Multi-beam Echosounders HS-10, SEABEAM 2112

Navigation used : GPS

Estimated positional accuracy in nautical miles : +/- 30m

Description of survey (track spacing, line crossing, grid network, etc.) : \_\_\_\_\_

**Primary track lines were NW-SE survey lines with track spacing at 7 miles.**

Nature and repository of other survey activities (dredge samples, cores, magnetics, gravity, photographs, etc.) : \_\_\_\_\_

**Submersible Shinkai 6500 dives were conducted in 1996 (Fujioka et al., 1999) by JAMSTEC. French and Taiwanese group also did swath mapping surveys (e.g., Deschamps et al., 2002).**

Supporting material : enclose, if possible, a sketch map of the survey area, profiles of the features, etc.,

with reference to prior publication, if any : \_\_\_\_\_

**See attached.**

Submitted by : Japanese Committee on Undersea Feature Names

Date : 8 June 2007

Address : 5-3-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan

Concurred in by (if applicable) : \_\_\_\_\_

Address : \_\_\_\_\_

National Authority (if any) : Japanese Committee on Undersea Feature Names

Address : 5-3-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan

**NOTE** : This form should be forwarded, when completed :

- a) **If the undersea feature is located in territorial waters :-**  
to your "National Authority for Approval of Undersea Feature Names" or, if this does not exist or is not known, either to the International Hydrographic Bureau or to the Intergovernmental Oceanographic Commission (see addresses below);
- b) **If the undersea feature is located in international waters :-**  
to the International Hydrographic Bureau or to the Intergovernmental Oceanographic Commission, at the following addresses :

International Hydrographic Bureau  
4, quai Antoine 1<sup>er</sup>  
B.P. 445  
MC 98011 MONACO CEDEX  
Principality of MONACO  
Fax: +377 93 10 81 40  
E-mail: [info@ihb.mc](mailto:info@ihb.mc)

Intergovernmental Oceanographic Commission  
UNESCO  
Place de Fontenoy  
75700 PARIS  
FRANCE  
Fax: +33 1 45 68 58 12  
E-mail : [info@unesco.org](mailto:info@unesco.org)

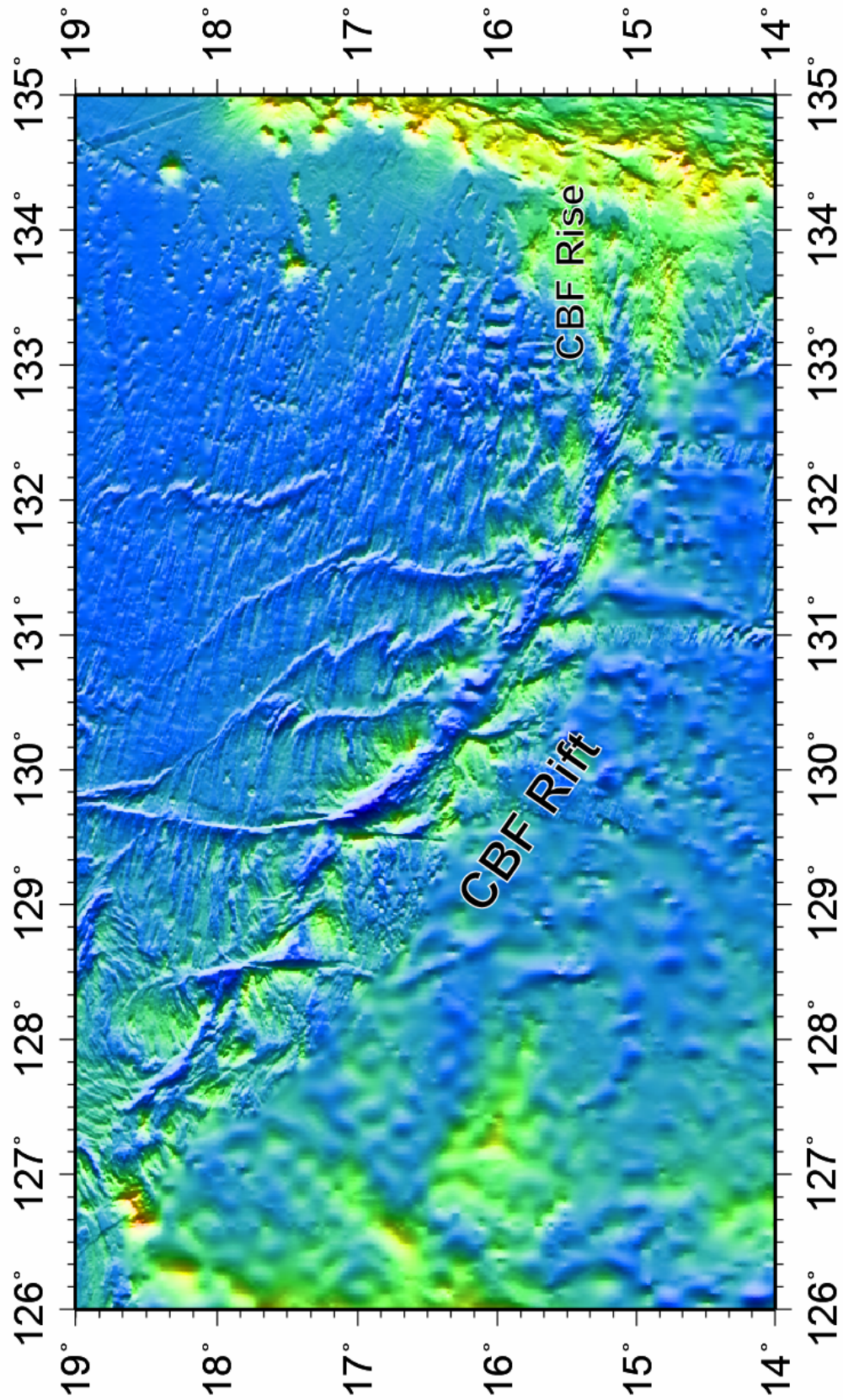


Fig. 1. Shaded color bathymetric map of CBF Rift and CBF Rise. Color scale is as same as the Index map shown in the proposal for Amami Sankaku Basin.

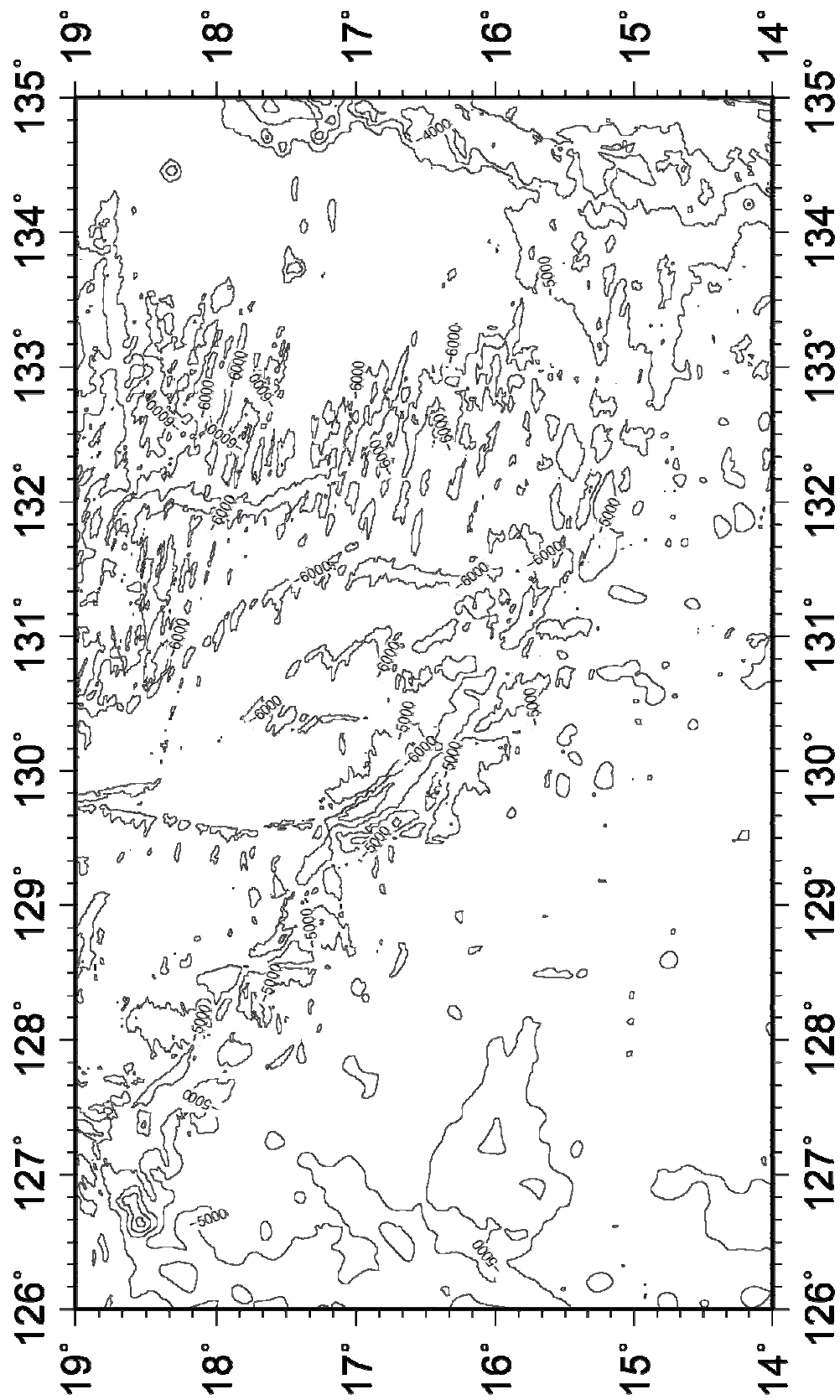


Fig. 2. Bathymetric map of CBF Rift and CBF Rise. Contours in 200 m.

## **Appendix 1. The reason for proposing “rift” as a generic name**

In page 2-21 of B-6, it reads that ‘It is realized that some named features, such as “cap”, “deep” and “swell” have widely accepted longtime usage. No attempt has been made to define them since a suitable description of these particular features is found among the present definitions.’

It may be possible for the feature (i.e., CBF Rift) to be named something like “CBF valley”, since the feature is partly characterized by valley morphology. However, this valley morphology is discontinuous at (17N, 129E). It is thus not appropriate to have a single name “CBF Valley” for describing this feature.

We would propose that “rift” will be more appropriate to describe the feature. We know that SCUFN primarily consider the name in terms of morphology, but the generic name “rift” will also well describe the feature as an extinct back-arc spreading ridge in terms of geology and geophysics. Although “rift” does not appear in the terminology section of B-6, we argue that “rift” is a widely accepted longtime usage similar to “cap”, “deep” and “swell”.

## **Appendix 2. Primary literatures describing CBF Rift**

Deschamps, A., K. Okino and K. Fujioka, 2002, Late amagmatic extension along the central and eastern segments of the West Philippine Basin fossil spreading axis, *Earth and Planetary Science Letters*, 203, 277-293.

Fujioka K., K. Okino, T. Kanamatsu et al., 1999, An enigmatic extinct spreading center in the West Philippine backarc basin unveiled, *Geology*, 27, 1135-1138.

Hess, H., 1948, Major structural features of the western Pacific, and interpretation of H.O. 5989 bathymetric chart, Korea to New Guinea, *Geol. Soc. Am. Bull.*, 59, 417-446.

Hilde, T.W.C. and C.-S. Lee, 1984, Origin and evolution of the West Philippine Basin: a new interpretation, *Tectonophysics*, 102, 85-104.

Okino, K. and K. Fujioka, 2003, The Central Basin Spreading Center in the Philippine Sea: structure of an extinct spreading center and implications for marginal basin formation, *Journal of Geophysical Research*, 108(B1), 2040, doi:10.1029/2001JB001095.

## **Appendix 3. Okino and Fujioka (2003) is attached in PDF file.**