

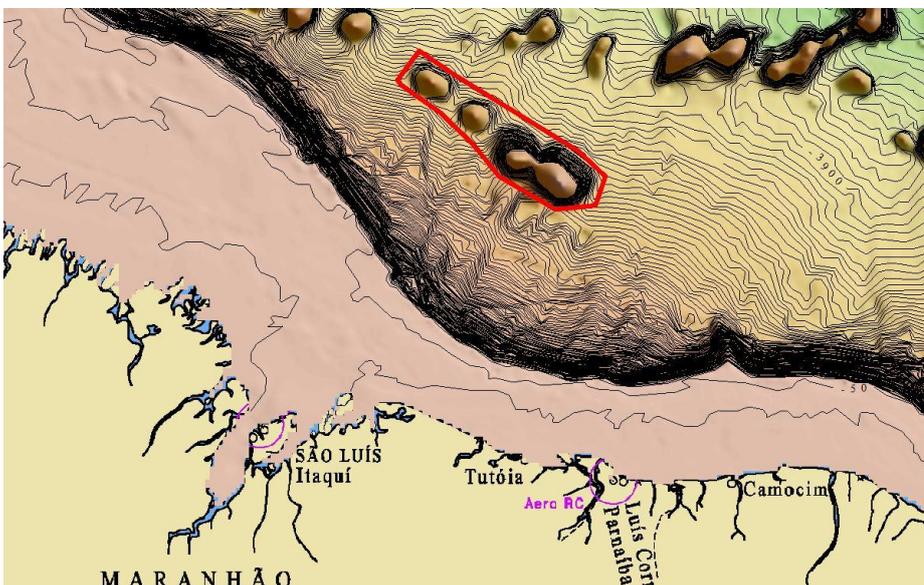
## Report to 27<sup>th</sup> SCUFN meeting.

Directorate of Hydrography and Navigation - DHN, Brazil, 14th May 2014.

1. After a review over on-line GEBCO Gazetteer it was observed that are nine undersea features located at the Brazilian continental margin which are represented by line, point or polygon that does not reflect the full feature. The Brazilian Digital Terrain Model - DTM can be used to better define these features in order to update de GEBCO Gazzetter shape files dataset.

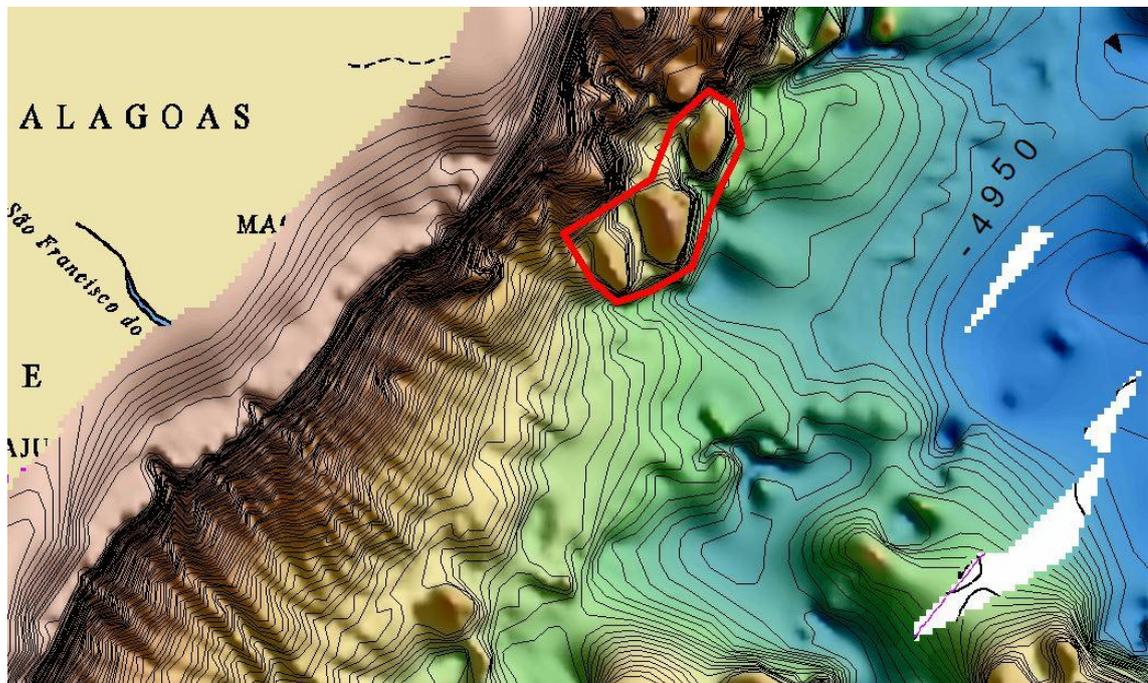
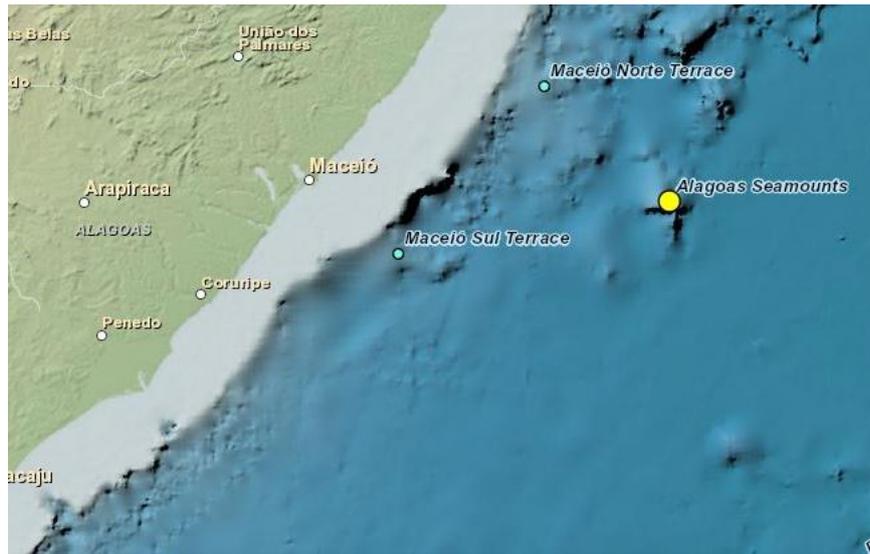
### 1.1. Maranhão Seamounts: POINT (-42 -0.583333) (on-line GEBCO Gazetteer position).

Regarding the Action SCUFN26/62A. A polygon shape file (red line) will be provided to define the full feature.



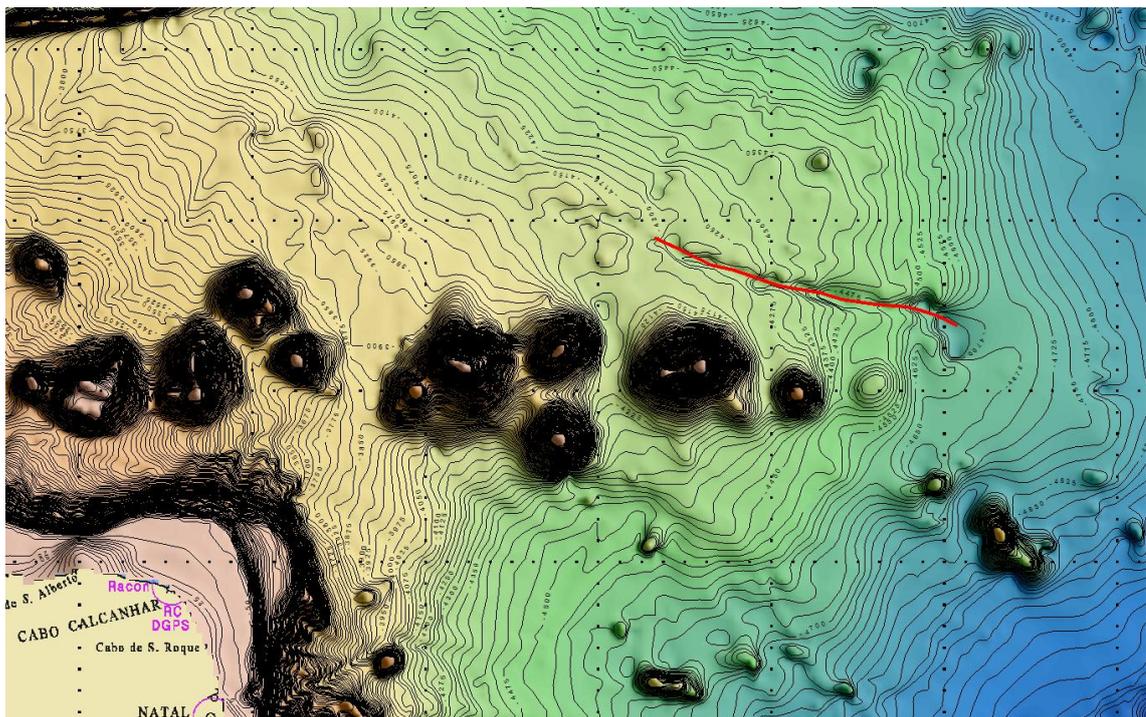
**1.2. Alagoas Seamounts: POINT (-34.25 -9.75) (on-line in GEBCO Gazetteer position)**

The feature is identified at on-line GEBCO gazetteer by only one point (yellow circle). A polygon can be defined using the Brazilian Digital Terrain Model - DTM (red line line). A polygon shape file (reed line) will be provided.



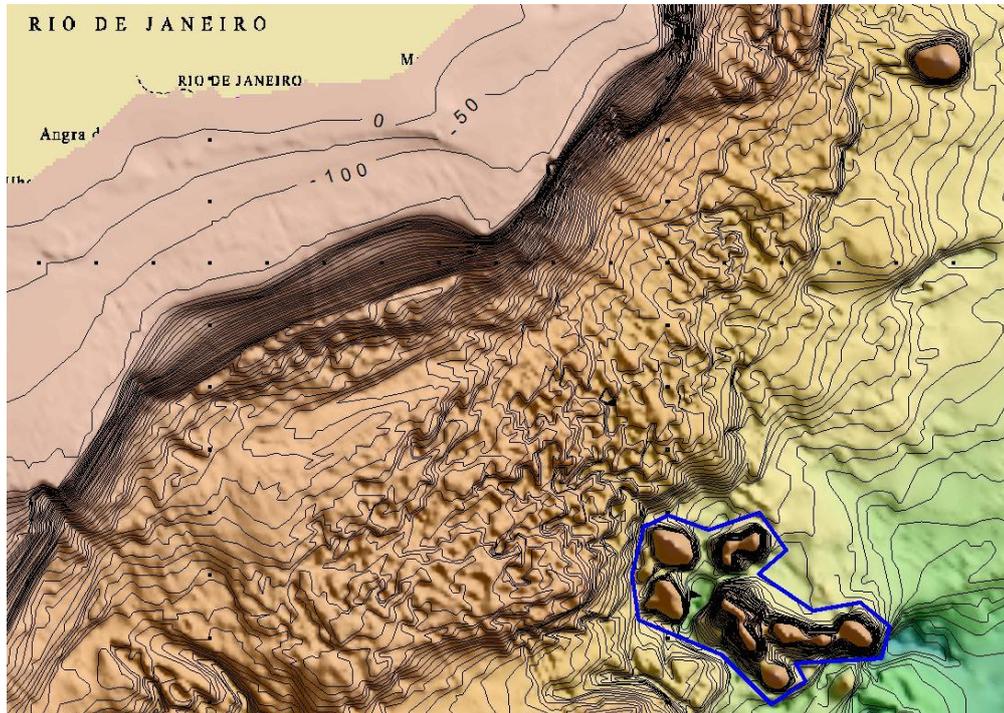
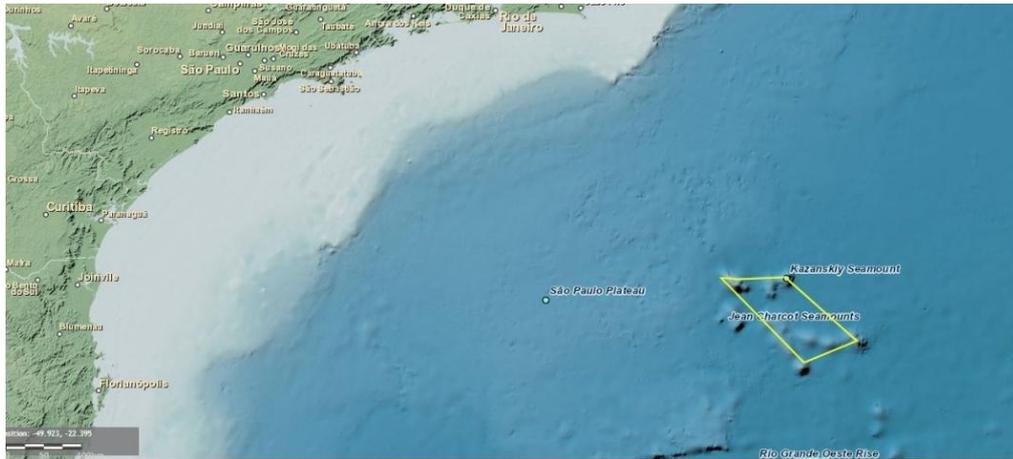
### 1.3. Equatorial Seachannel: POINT (-32 -3.5) (on-line GEBCO Gazetteer position)

The feature is identified at on-line GEBCO gazetteer by only one point (yellow circle). This is a long feature and it should be better define it as a line using the Brazilian Digital Terrain Model - DTM (red line). A line shape file will be provided.



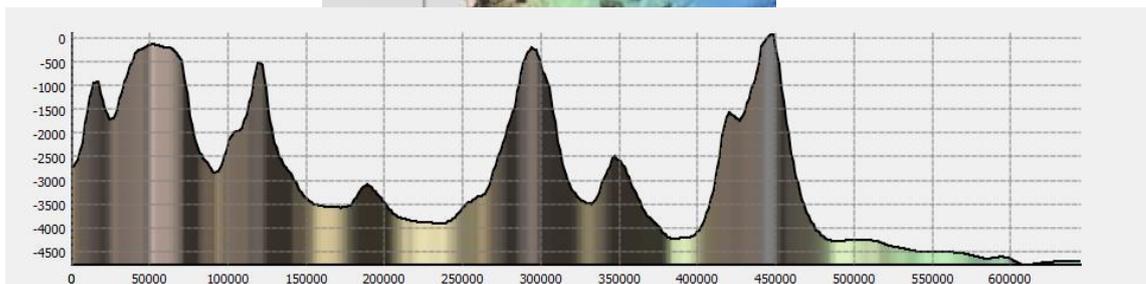
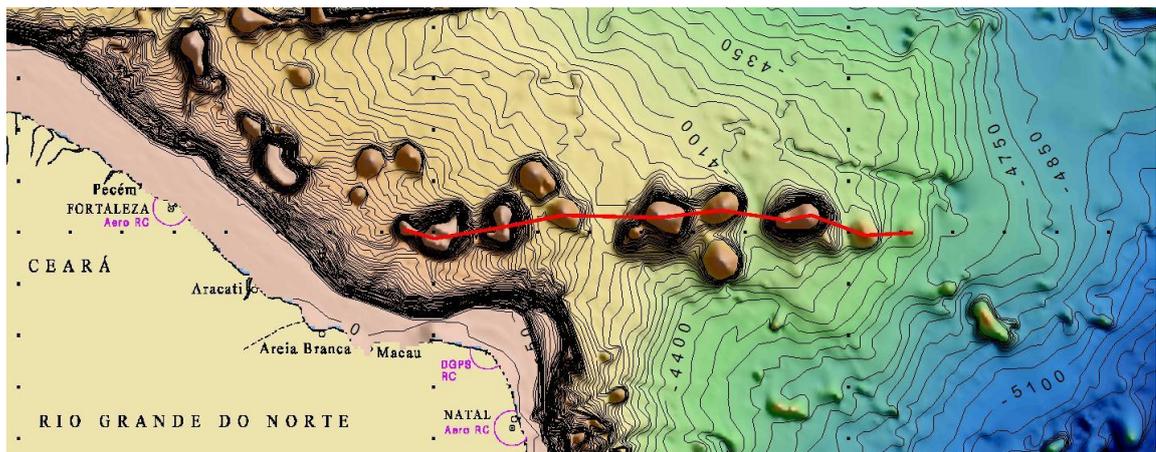
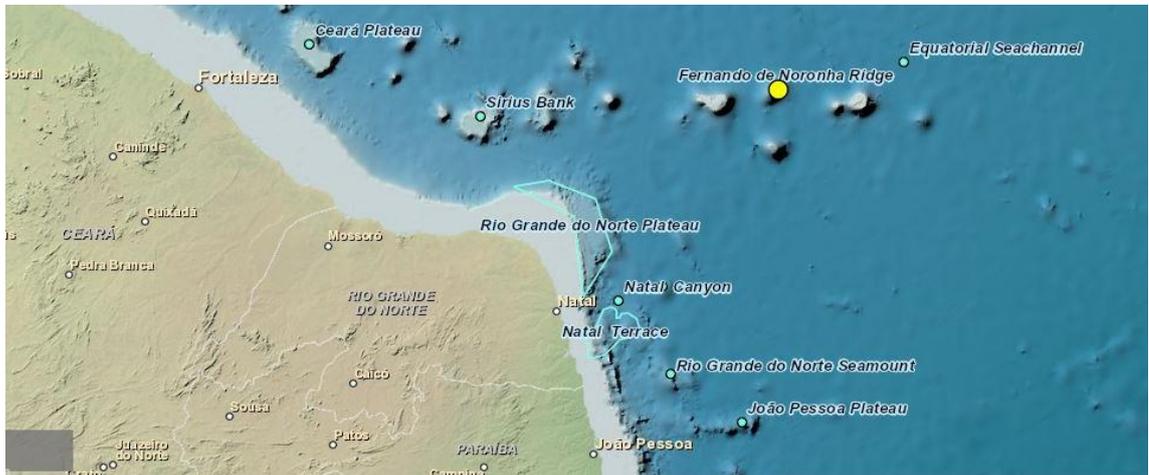
**1.4. Jean Charcot Seamounts:** POLYGON ((-39.95216667 -26.24083333, -40.13416667 -26.227, -39.01166667 -27.25416667, -38.302 -26.99333333, -39.26883333 -26.22366667, -39.95216667 -26.24366667, -39.95216667 -26.24083333)) (on-line GEBCO Gazetteer position).

The coordinates listed at on-line GEBCO gazetteer (yellow polygon) does not encompass all seamounts. A polygon can be defined using the Brazilian Digital Terrain Model - DTM (blue polygon). A polygon shape file will be provided to replace this one.



### 1.5. Fernando de Noronha Ridge: POINT (-33.166667 -3.75 (on-line GEBCO Gazetteer position)

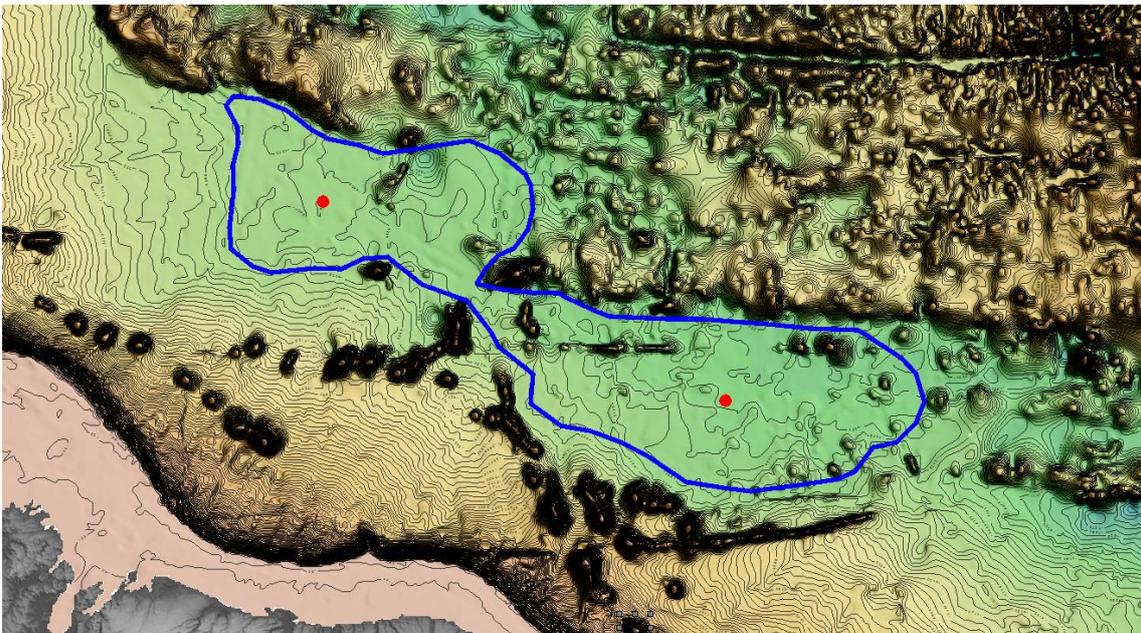
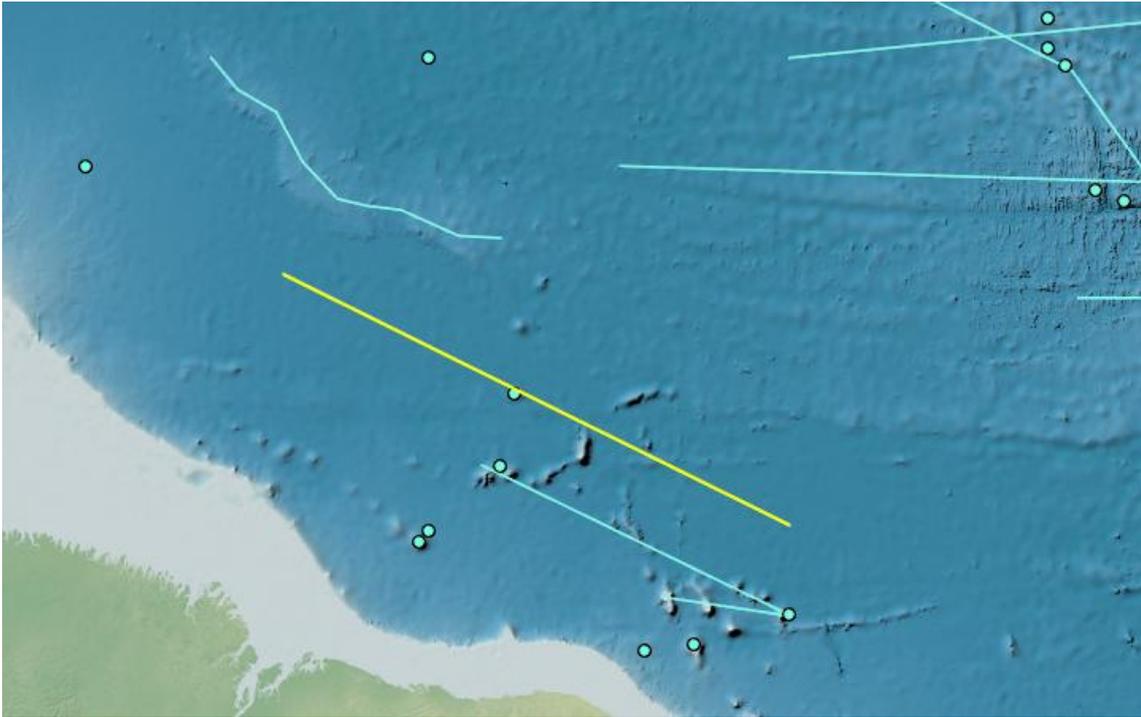
The feature is identified at on-line GEBCO gazetteer by only one point (yellow circle). This is an elongated feature and it is possible to better define it as a line using the Brazilian Digital Terrain Model - DTM (red line). A line shape file (red) will be provided.



Bathymetric Profile extracted from the Brazilian Digital Terrain Model - DTM

**1.6. Ceará Abyssal Plain: `LINestring (-44 3, -37 -0.5` (on-line GEBCO Gazetteer position)**

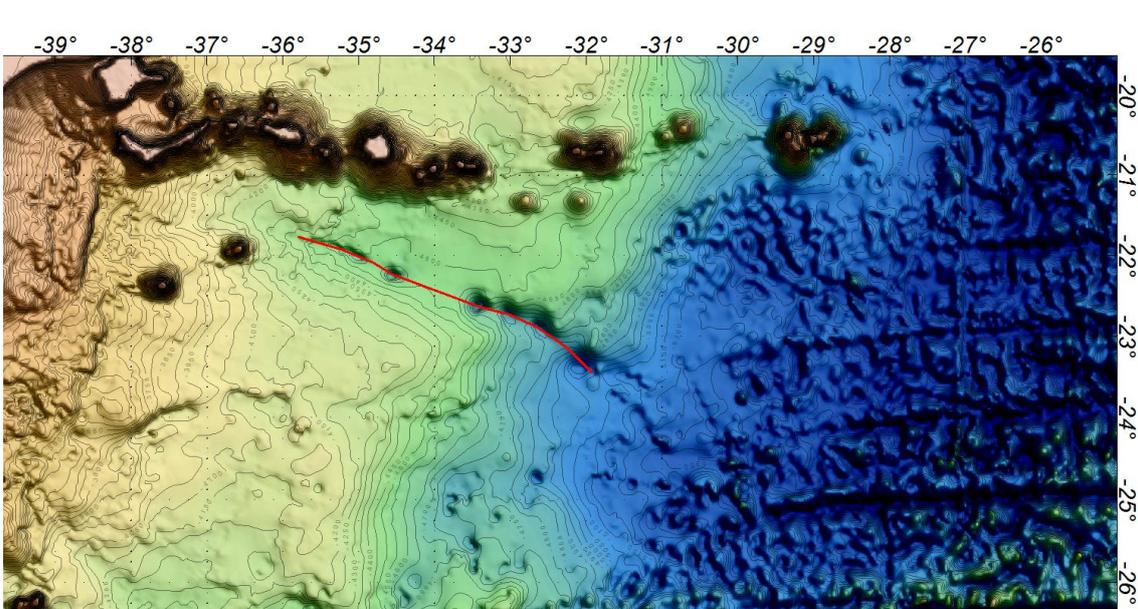
The coordinates listed on-line GEBCO gazetteer form a line that does not represent the feature (yellow line). The Ceará Abyssal Plain is composed by two distinguished portions and it should be defined as two points using the Brazilian Digital Terrain Model - DTM (red circles) or a polygon (blue line). The points and the polygon shape file will be provided to replace the line.



**1.7. Trindade Seachannel / Columbia Channel: POINT (-32.6 -23) (on-line GEBCO Gazetteer position)**

The feature is identified at on-line GEBCO gazetteer by only one point (yellow circle). This is a long feature and it should be defined as a line using the Brazilian Digital Terrain Model - DTM (red line). A line shape file will be provided.

The name of this feature should be changed to Columbia Channel, since it is mostly used in scientific papers and maps. A complementary text in the gazetteer remarks "also Known as Trindade Seachannel" should be included.



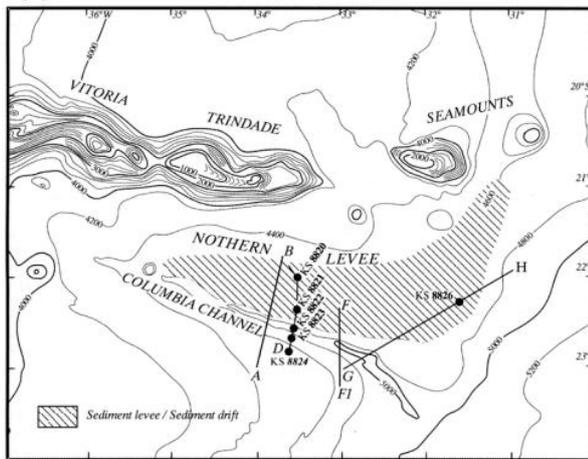
# The Columbia Channel–levee system: a fan drift in the southern Brazil Basin

J.-C. FAUGÈRES<sup>1</sup>, A. FRANCA LIMA<sup>2</sup>, L. MASSÉ<sup>1</sup> & S. ZARAGOSI<sup>1</sup>

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**Abstract:** The Columbia Channel is a turbiditic channel elongated W–E on the rise of the south Brazilian basin (4200 to 5000 m water depth). The whole area is swept by the northward flowing Antarctic Bottom Water. As a consequence, depositional processes have built a fan drift system. This system displays a levee along the northern flank of the channel while no levee occurs on its southern flank due to the Coriolis effect. The levee (400 km in length and 100 to 200 km in width) is bounded to the north by the Vitória–Trindade Seamounts. It shows, first, a W–E trend parallel to the channel axis and predominantly turbiditic pattern, and then a S–N trend parallel to the rise contours with a predominant contouritic pattern. Its thickness is up to 1000 m. The distribution of sedimentary processes and associated deposits were investigated on the basis of water gun seismic and 3.5 kHz echosounding profiles, and core lithology. On the lower S–N part of the levee, the deposits consist of muddy contourites. On the shallowest part, turbidites that originate from the upper continental margin in the channel and on the southern part of the levee close to the channel, and from the Vitória–Trindade Seamounts on the northern part of the



**Fig. 1.** (a) Location map of the study area, with DSDP site 515 and Byblös core KS8803; (b) bathymetric map of the Columbia Channel–Levee System (depths are in metres), and location of the cores and seismic and 3.5 kHz echosounding profiles (AB, FF1, GH).

*J. Soil. Nature. 3 (1):04-15 (March 2009)*

## SEDIMENT DISTRIBUTION OF CONTINENTAL MARGIN OF THE SOUTHERN BRAZIL BASIN IN THE SOUTHWEST ATLANTIC OCEAN

M.H. MAHABUB<sup>1</sup>, S. M. RAHMAN<sup>2</sup>, M.I. MEHEDI<sup>1</sup> and M.O. FARUK<sup>3</sup>

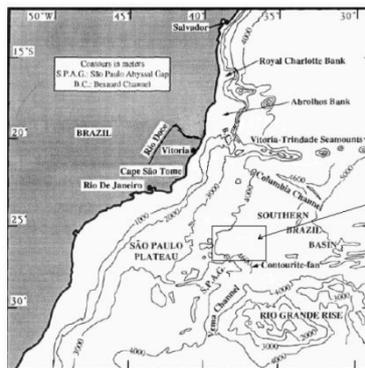
<sup>1</sup>Lecturer, Department of Telecommunication & Electronic Engineering, Hajee Mohammad Danesh Science & Technology University, Dinajpur, Bangladesh. <sup>2</sup>Associate Professor, Department of Applied Physics and Electronic Engineering, University of Rajshahi, Rajshahi-6205, Bangladesh. <sup>3</sup>Instrument Engineer, Science Workshop, University of Rajshahi, Rajshahi-6205, Bangladesh.

Accepted for publication March 15, 2009

### ABSTRACT

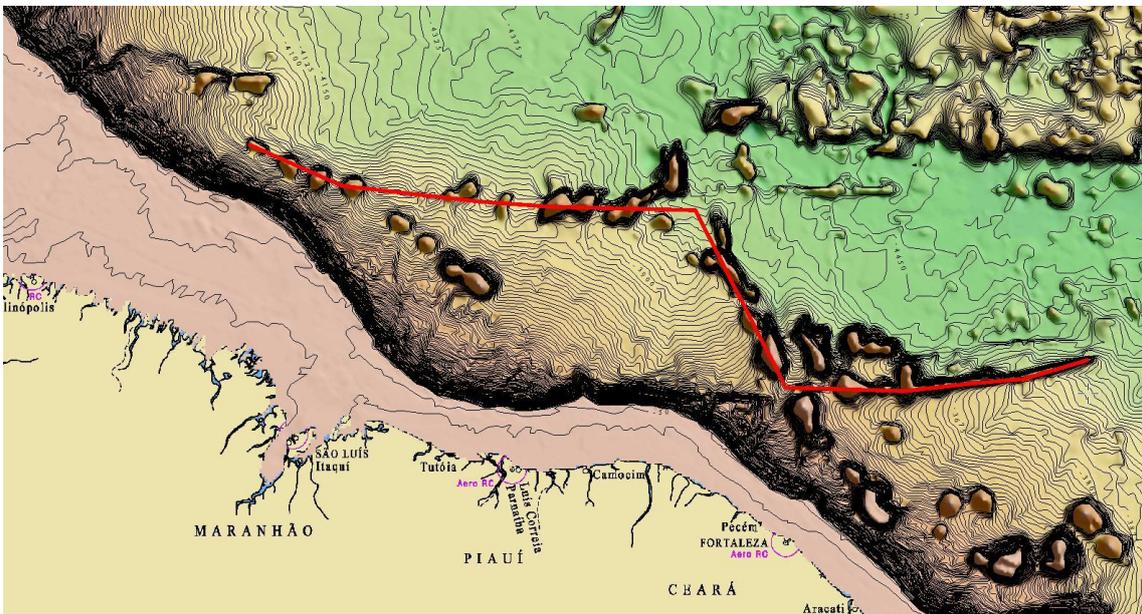
Mahabub, M.H., Rahman, S.M., Mehedi, M.I., Faruk, M.O. 2009. Sediment distribution of continental margin of the southern Brazil basin in the southwest atlantic ocean. *J. Soil. Nature. 3 (1):04-15.*

The present analysis is an approach to use the seismic attributes to extract the geologic information of the Southern Brazil Basin, located on a passive continental margin in the south-west Atlantic, near the Rio Grande Rise. Attributes are computed seismic sections of NGDC data of the area. The implemented amplitude and frequency attributes images of seismic sections have been tried to use for the characterization with the geology of the area. The attributes images reveal that discontinuous sequences are better readable than that of the seismic sections. Remarkable sequences are drawn as to be the indication of the continuing process of deposition of the area. The recent depositional overview is found as: terrigenous fluxes are higher at the beginning region of line 29A on the middle continental rise using characterization with frequency anomaly of the frequency attributes images. Deposition is little higher at shallow depths according to the slope of the oceanic crust but ends with all most straight and horizontal manner. Geologic compositions are seemed as almost uniform particularly in the deeper region.

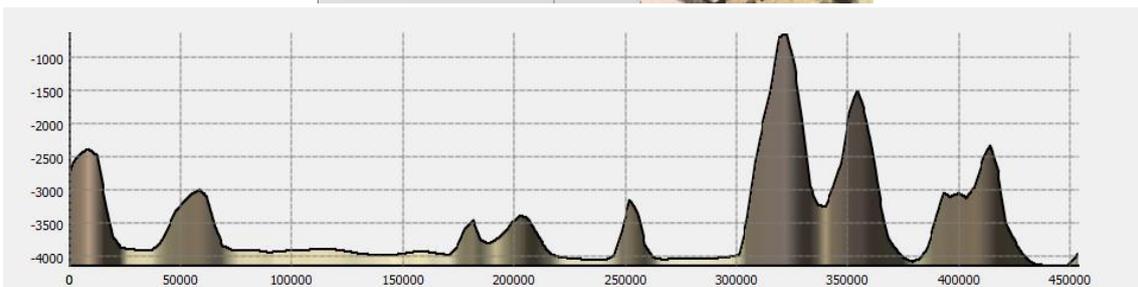
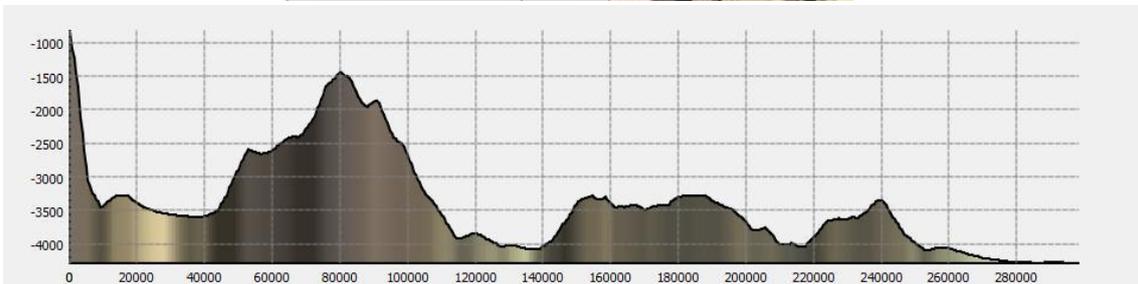
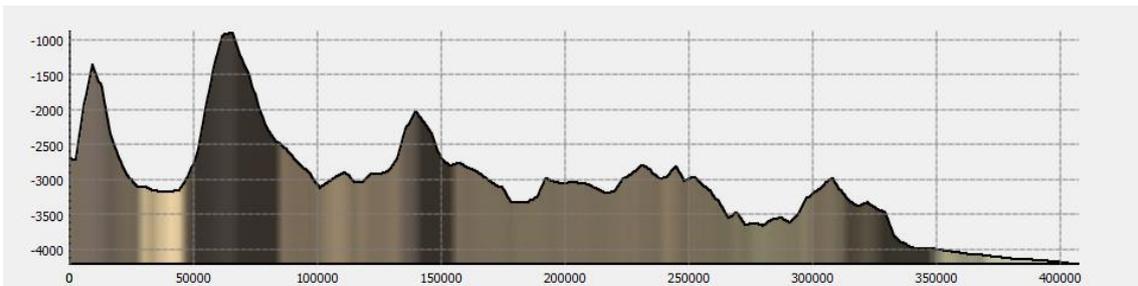
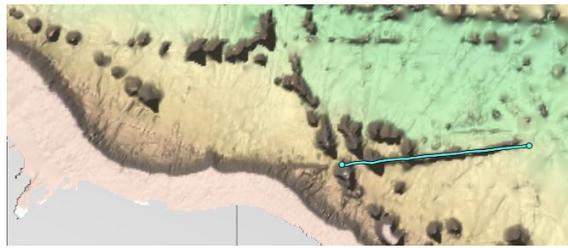


**1.8. North Brazilian Ridge / Norte Brasileira Ridge: LINestring (-41.25 0.333333, -37 - 1.75) (on-line GEBCO Gazetteer position)**

The coordinates listed on-line GEBCO gazetteer form a line that does not represent the feature (yellow line). The North Brazilian Ridge (Norte Brasileira Ridge) is composed by three segments, two are W-E and one NW-SE (REMAC, 1981; Hayes&Ewing, 1970). All these segments are better defined as a composed line using the Brazilian Digital Terrain Model - DTM (red line). A line shape file will be provided to replace the yellow one.



# Bathymetric Profiles extracted from the Brazilian Digital Terrain Model - DTM



# Projeto REMAC - Reconnaissance of the Brazilian Continental Margin - 1981

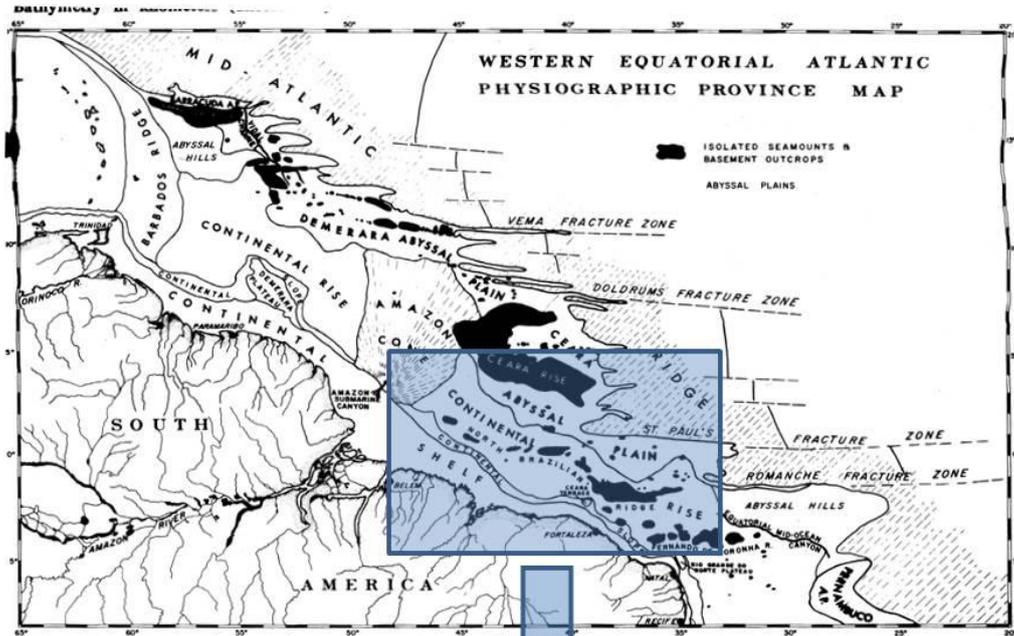


Fig. 51  
Physiographic Province Map of the Western Equatorial Atlantic (after DAMUTH, 1975).



Volume: 54 (1970)

Issue: 11. (November)

First Page: 2120

Last Page: 2150

Title: **North Brazilian Ridge and Adjacent Continental Margin**

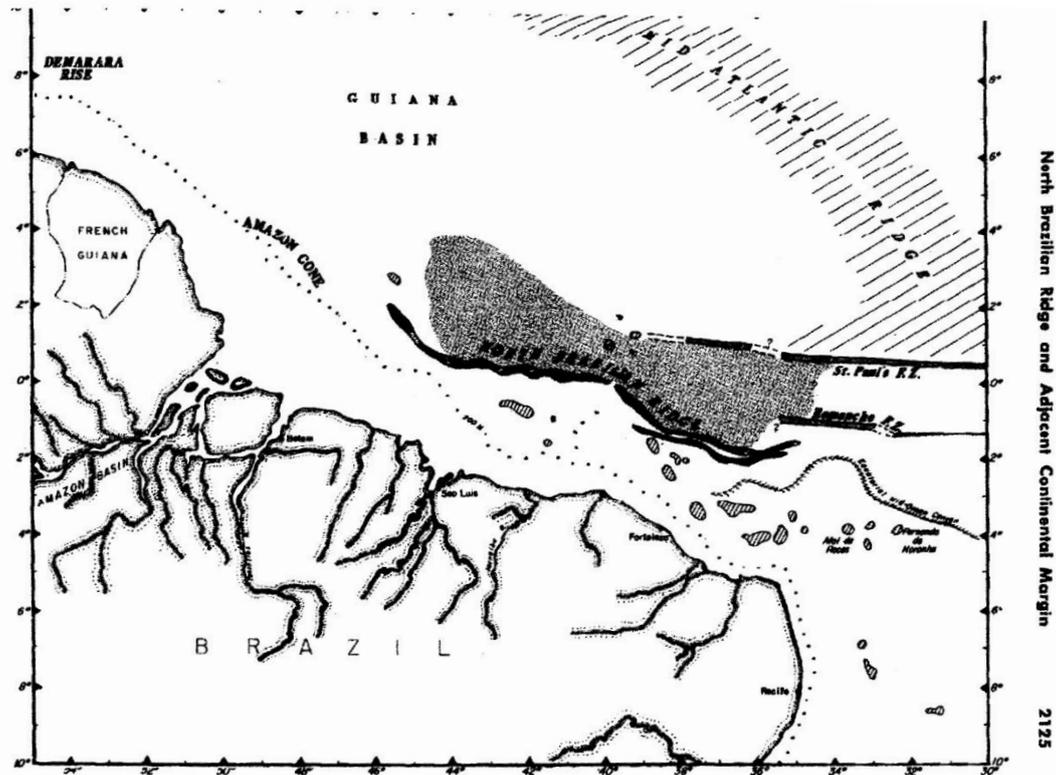
Author(s): Dennis E. Hayes (2), Maurice Ewing (2)

Abstract:

A geologic and geophysical reconnaissance of the continental margin of the north coast of Brazil led to the discovery of a narrow basement ridge, herein called the North Brazilian Ridge. The ridge closely parallels the coast of Brazil between the Amazon cone and the easternmost tip of Brazil and is essentially a continuous topographic and/or structural feature across a distance of 1,300 km. The ridge lies 150-200 km seaward from the base of the continental slope. Its topographic relief ranges from about 300 m to about 4 km.

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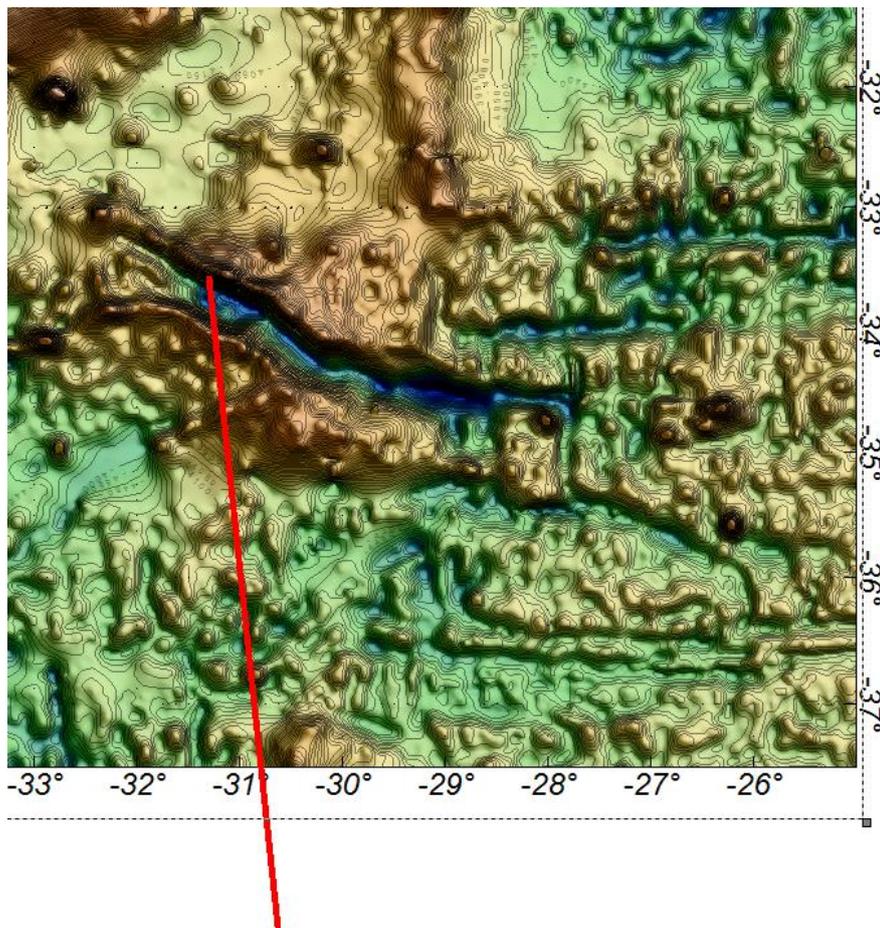
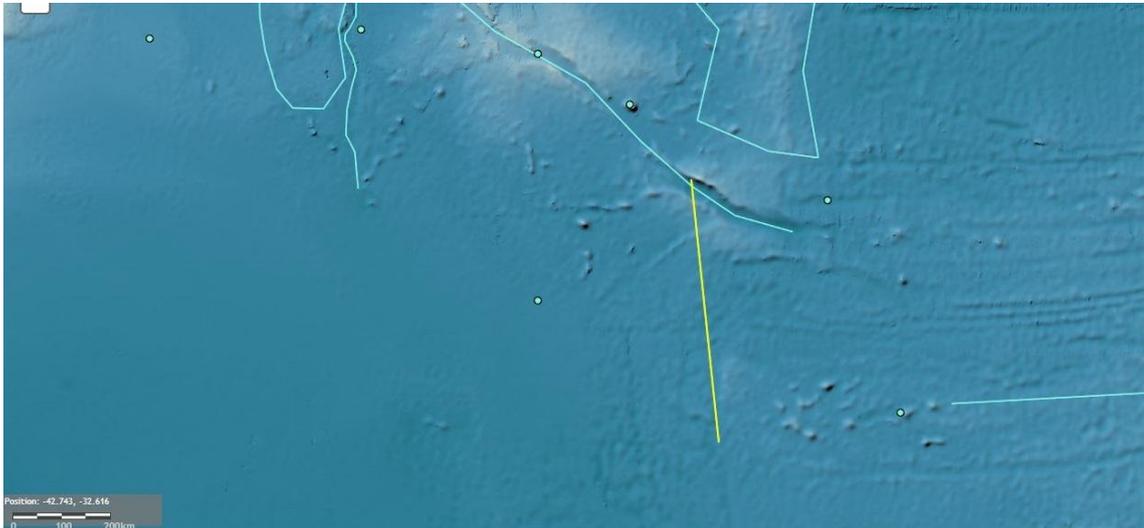
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Hayes and Ewing, 1970

**1. 9. Konstantinov Ridge: LINESTRING (-31.3 -33.583333, -30.633333 -38.733333) (on-line GEBCO Gazetteer position)**

There is no ridge placed on this region represented at on-line GEBCO Gazetteer by a linestring (yellow). The red line over the Brazilian Digital Terrain Model - DTM does not show also any ridge . What is the correct place of this ridge?.



## **2. The Recife Plateau ( Change to Pernambuco Plateau)**

During the 25<sup>th</sup> meeting, document SCUFN25-07.3, it was proposed to change this name to Pernambuco Plateau based on Brazilian and international literature.

According to item 7.3.4, SCUFN25\_Report\_rev1," it was agreed to defer consideration of changing this name to allow discussion with N. Cherkis, who was the reviewer for the relevant GEBCO sheet (5.12)". No action for this subject has been done.