

Brazilian undersea features: A Gazetteer of geographical names

Koji Jinno and Jairo Marcondes de Souza

PETROBRAS/E&P, Brazil

Abstract

"You f(ool) yourself quite, if you don't communicate *rite*". It is problematic when everybody does not speak the same language. As a matter of fact, a word does not have the same meaning for different people or distinct names can be assigned to a particular thing. A recent survey shows different names for some submarine features of the Brazilian continental margin and thus the need to establish a *Gazetteer* of Brazilian undersea feature names.

INTRODUCTION

"Quem não se comunica se trumbica" – "You f(ool) yourself quite, if you don't communicate *rite*", used to say the late Brazilian TV entertainer "Chacrinha".

For a good communication, however, everybody has to speak or understand the same language. But the meaning of a word varies with people and circumstances. Likewise, different names can be assigned to the same fact, object, situation, anything whatsoever. Wrong or inadequate names can cause huge troubles.

Some years ago, a drilling location offshore Brazil was designated, according to the rules of the company, with the name of the state it was assumed the territorial waters belonged to. The authorities of the neighbour state argued that the limits of the waters were actually wrong and the well had to be named after their state so that the royalties would be theirs; the location had two names, depending on the officers of each state. The company had to give neutral names to future locations.

UNDERSEA FEATURE NAMES

The mention of Sao Paulo Plateau can bring two thoughts to the participants in an international oceanography meeting:

- Is it the name of the feature in southern Brazilian continental margin known world over and listed as Santos Plateau in the *Gazetteer* (IHO/IOC, 1997)? (Brazilian geologists are unfamiliar with the latest);
- Is it a feature not yet described near the Saint Paul Fracture Zone? (Known in Brazil as São Paulo Fracture Zone).

Rio Grande Rise, according to the *Gazetteer*, is the name that appears in some international bathymetric charts to designate Rio Grande Plateau (Rio Grande Rise is the name used in Brazil). And what about Recife Plateau, that is listed in the *Gazetteer* as the name assigned to the Pernambuco Plateau? (Brazilian geologists are familiar with Pernambuco Plateau).

These examples show the need to review the Brazilian undersea names as they appear in the *Gazetteer*. In Geology, these kind of problems are settled by the International Union of Geological Sciences based upon the International Stratigraphic Guide (IUGS, 1994), whereas the International Hydrographic Organization and the Intergovernmental Oceanographic Commission are both responsible for the undersea features geographic names.

As a by-product of LEPLAC – the Brazilian government plan to establish its Legal Continental Shelf -, bathymetric maps of northern (figure 1), southern (figure 2) and eastern (figure 3) continental margins of Brazil were produced (Jinno, 1998); the names of the main submarine features were drawn from the *Gazetteer* database and from data by REMAC (Damuth e Palma,1979; França,1979; Palma, 1979; Zembruscki, 1979), DNPM (Schobbenhaus et alii, 1981) and NRL/DHN (Cherkis et alii, 1989).

There are some inconsistencies, like the ones mentioned above, as well as the absence in the *Gazetteer* of some features described by REMAC (Brazilian Continental Margin Global Reconnaissance Program), DNPM (Brazilian Geological Survey) and NRL/DHN (Naval Research Laboratory-USA/Directorate of Hydrography and Navigation-Brazil). Brazil has acquired geophysical data to extend its Legal Continental Shelf beyond the 200 miles limit, as stated in the United Nations Convention on the Law of the Sea (United Nations, 1983) and references should be made to undersea features. The correct descriptive name is of utmost importance since it is related to the nature of the feature.

OTHER INCONSISTENCIES

Gazetteer NameREMAC/DNPM NameAmazon FanAmazon ConeCeara PlateauCeara GuyotCeara RidgeCeara RiseVitoria-Trindade SeamountsVitoria-Trindade Ridge

<u>Gazetteer Name</u> Para Abyssal Plain Trindade Seachannel REMAC/DNPM Name Ceara North Abyssal Plain Columbia Canyon Vitoria Canyon (NRL/DHN)

FEATURE NAMES ABSENT IN THE GAZETTEER

<u>Feature</u>	Named by	<u>Feature</u>	Named by
Almirante Saldanha Seamount	NRL/DHN	Bahia Plateau	DNPM
Besnard Bank	REMAC/DNPM	Congress Seamount	REMAC/DNPM
Jean Charcot Seamounts	REMAC/DNPM	Maceio Terraces	REMAC
Natal Terrace	REMAC	Rio Grande Cone	REMAC/DNPM
Rio Grande do Norte Plateau	REMAC/DNPM	Rio Grande do Norte Seamount	REMAC
Rio Grande Terrace	REMAC/DNPM	Rio Grande West Rise	DNPM
Royal Charlotte Bank	REMAC/DNPM/NRL	São Paulo Ridge	REMAC/DNPM
Sao Tome Seamount	(Dr. Isa Brehme)	· ·	

CONCLUSIONS

Until 2004 Brazil has to present to the United Nations the limits of its Legal Continental Shelf; thus the need to establish the appropriate names of undersea features, as they can be used by the UN experts in the analysis of the Brazilian submission.

For this purpose, a special team of the LEPLAC operating committee is preparing a Brazilian *Gazetteer* of geographical names of undersea features to submit for approval of the Joint IHO-IOC Guiding Committee for the GEBCO (General Bathymetric Chart of the Oceans).

REFERENCES

Cherkis, N.Z., Fleming, H.S. and Brozena, J.M., 1989. **BATHYMETRY OF THE SOUTH ATLANTIC OCEAN -** 3° S to 40°S. Scale 1:5,737,447. Naval Research Laboratory/Directorate of Hydrography and Navigation. Pub. by The Geological Society of America.

Damuth, J.E. e Palma, J.J.C., 1979. Geomorfologia do Fundo Atlântico Equatorial Oeste. In: Chaves, H.A.F. (ed.). **Geomorfologia da Margem Continental Brasileira e das Áreas Oceânicas Adjacentes** (Relatório Final). Rio de Janeiro: PETROBRÁS/CENPES/ DINTEP, p. 53-88 (Série Projeto REMAC), v. 7.

França, A.M.C., 1979. Geomorfologia da Margem Continental Leste Brasileira e da Bacia Oceânica Adjacente. In: Chaves, H.A.F. (ed.). **Geomorfologia da Margem Continental Brasileira e das Áreas Oceânicas Adjacentes** (Relatório Final). Rio de Janeiro: PETROBRÁS/CENPES/ DINTEP, p. 89-128 (Série Projeto REMAC), v. 7.

International Hydrographic Organization - Intergovernmental Oceanographic Comission (IHO-IOC), 1997. **GAZETTEER of Geographical Names of Undersea Features Shown (or which might be added) on the GEBCO and on the IHO Small Scale international Chart Series**. 125 p., 2nd ed. (DRAFT). (Also available in 3 ½ " disks). International Hydrographic Bureau, Monaco.

International Union of Geological Sciences (IUGS), 1994. **International Stratigraphic Guide** (A Guide to Stratigraphic Classification, Terminology, and Procedure.). 214 p., Second Edition. Amos Salvador (Editor). Mon. nr. 30 in the IUGS Publication Series. Avail. from GSA (IUG001).

Jinno, K., 1998. **Toponímia Submarina Brasileira**. PETROBRAS/E&P/GEREX/GECON. (Company Report). 15 p. Rio de Janeiro, Brazil.

PALMA, J.J.C., 1979. Geomorfologia da Plataforma Continental Brasileira. In: Chaves, H.A.F. (ed.). **Geomorfologia da Margem Continental Brasileira e das Áreas Oceânicas Adjacentes** (Relatório Final). Rio de Janeiro: PETROBRÁS/CENPES/ DINTEP, p. 25-52 (Série Projeto REMAC), v. 7.

Schobbenhaus, C., Campos, D.A., Derze, G.R. e Asmus, H.E., 1981. MAPA GEOLÓGICO DO BRASIL e da Área Adjacente Incluindo Depósitos Minerais. Escala 1:2.500.000. Departamento Nacional da Produção Mineral (DNPM). Brasilia, Brazil.

UNITED NATIONS, 1983. **The Law of the Sea.** (United Nations Convention on the Law of the Sea. 226 p. United Nations, New York.

Zembruscki, S.G., 1979. Geomorfologia da Margem Continental Sul Brasileira e das Bacias Oceânicas Adjacentes. In: Chaves, H.A.F. (ed.). **Geomorfologia da Margem Continental Brasileira e das Áreas Oceânicas Adjacentes** (Relatório Final). Rio de Janeiro: PETROBRÁS/CENPES/ DINTEP, p. 129-177 (Série Projeto REMAC), v. 7.

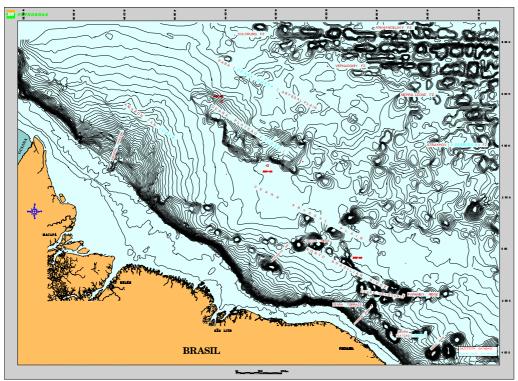


Figure 1.- Northern Brazil continental margin undersea features

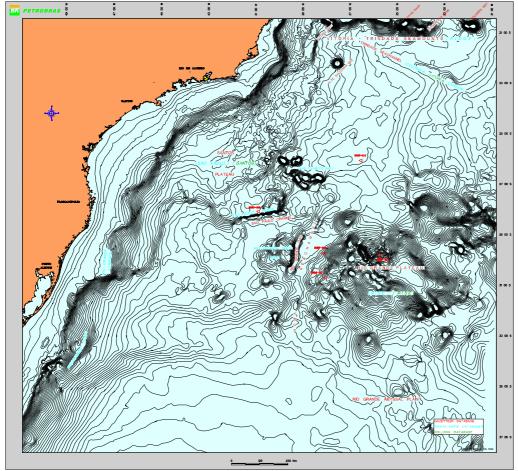


Figure 2- Southern Brazil continental margin undersea features

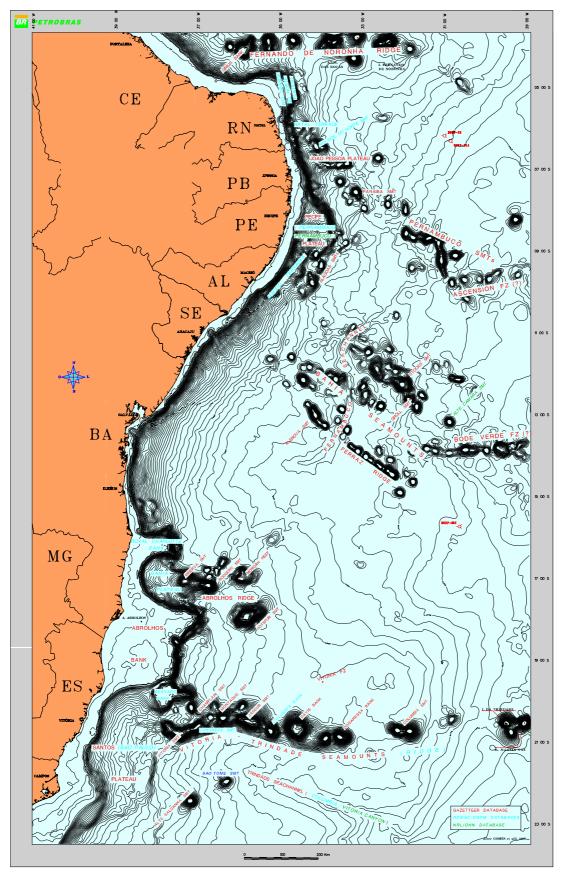


Figure 3.- Eastern Brazil continental margin undersea features