

20 August 2012

Prof. Hans-Werner Schenke, Chairman
GEBSCO Sub-Committee on Undersea Feature Names (SCUFN)
International Hydrographic Bureau (IHB)
4, Quai Antoine 1er
B.P. 445
MC 98011 MONACO CEDEX
Principality of MONACO

Re: Proposed naming of Barker Bank [preferred name although Barker Plateau will do]

Dear Hans-Werner:

We discussed this with you at the SCAR meeting in Portland last month but this is the official application for a naming of Barker Bank. We attach an application to name a seafloor feature on the North Scotia Ridge for Peter Barker. When we started this application, Peter was in hospice care but as you know, he passed away in July. Peter surveyed this feature and has published it as Aurora Bank (Cunningham et al., 1998). Consultation with the gazetteer for seafloor names reveals that there are already three official Aurora Banks, one off Heard Island in the southern Indian Ocean. Apparently banks are considered shallow platforms with depths of less than 200 m. The feature that we are proposing to be named Barker Bank or Plateau has never been officially named that we can determine. Unofficially, it has been called Aurora Bank based on the presumption that it may have been related to the sighting of "three islands" by the Spanish ship *Aurora* in 1762 and again in 1774. The Spanish ship *San Miguel* fixed their location at 52°37'S, 47°49'W which is roughly the northwest corner of what we propose as Barker Bank. It is most probable that the three islands that the early Spanish explorers saw were in fact Black and Shag Rocks and possibly South Georgia calculating the correct latitude but an incorrect longitude. Black and Shag Rocks are actually named *Islas Auroras* in Spanish. We feel that by naming this bank or plateau, Barker Bank, we will not only be honoring Peter Barker's extraordinary amount of work in this region but also reducing confusion. Currently there are no Barker Banks listed in the official guide to seafloor features although Barker Bank is a variant for Toraka Barker at Lat: 15° 42' 00" S Long: 045° 26' 00" E, Madagascar (MA) ADM1 Name (Code): Mahajanga (03).

We attach a fragment of the GEBSCO 5•16 chart that shows the approximate location of the plateau we are proposing to be named Barker Bank, circled in red. We also attach a copy of the multibeam coverage of the feature with a red line approximating the outline of the proposed Barker Bank. We realize that proposing the name Aurora Bank for the platform on which Black and Shag rocks reside requires a separate application but we show that proposed feature as a black oval on the GEBSCO 5•16 fragment.

We have contacted Norm Cherkis of the US Board of Geographic names and he has indicated that he would favorably consider the designation Barker Bank rather than the possibly more appropriate Barker Plateau. Please let us know if there is any additional information that your committee requires.

Yours truly,

Lawrence A. Lawver
University of Texas at Austin, Institute for Geophysics

Ian W.D. Dalziel

Robert Larter
British Antarctic Survey

UNDERSEA FEATURE NAME PROPOSAL
(Sea NOTE overleaf)

Note: The boxes will expand as you fill the form.

Name Proposed: Barker Bank **Ocean or Sea:** Scotia Sea, southern oceans

Geometry that best defines the feature (Yes/No) :

Point	Line	Polygon	Multiple points	Multiple lines*	Multiple polygons*	Combination of geometries*
		Multiple points forming a polygon				

* Geometry should be clearly distinguished when providing the coordinates below.

Coordinates:

Lat. (e.g. 63°32.6'N)	Long. (e.g. 046°21.3'W)
52°45'S, 047°30'W; 52°52'S, 046°07'W; 53°05'W, 045°40'W; 53°34'S, 045°47'W;	
53°40'S, 045°57'W; 53°17'S, 047°40'W; 53°03'S, 047°45'W	

Feature Description:

Maximum Depth: ~3000 m	Steepness: Moderate
Minimum Depth: ~<1000 m	Shape: ~rectangular
Total Relief: ~2100 m	Dimension/Size: ~60 km x 140 km

Associated Features: feature is a component of the North Scotia Ridge

Chart/Map References:

Shown Named on Map/Chart: Unnamed on official charts
Shown Unnamed on Map/Chart: GEBCO 5•16 (vaguely)
Within Area of Map/Chart: GEBCO 5•16

Reason for Choice of Name (if a person, state how associated with the feature to be named): Barker Bank is proposed to honor Peter F. Barker (deceased) who wrote extensively on the tectonics of the Scotia Sea and mapped this feature, see (Cunningham et al., 1996; Barker, 2001)

Discovery Facts:

Discovery Date: Unknown, first discussed in Cunningham et al.
Discoverer (Individual, Ship): Multibeam mapped by RRS <i>James C. Ross</i>

Supporting Survey Data, including Track Controls:

Date of Survey: Multiple multibeam cruises 2001-2010
Survey Ship: RRS <i>James C. Ross</i> ; RVIB <i>N.B. Palmer</i> ; RV <i>Hesperides</i>
Sounding Equipment: Simrad EA 500; Simrad EK 500
Type of Navigation: Satellite navigation
Estimated Horizontal Accuracy (nm): <100 meters
Survey Track Spacing: variable, dependent on water depth
Supporting material can be submitted as Annex in analog or digital form.

Proposer(s):

Name(s): Lawrence Lawver; Ian W.D. Dalziel; Rob Larter (BAS)
Date: 20 August 2012
E-mail: lawver@ig.utexas.edu; ian@ig.utexas.edu
Organization and Address: UTIG, 10100 Burnet Rd-R2200, Austin, TX, USA
Concurrer (name, e-mail, organization and address): Robert Larter, rdl@BAS.ac.uk, BAS, High Cross, Madingley Road, CAMBRIDGE, CB3 0ET, UK

Remarks: Supplementary material attached. Fragment of GEBCO 5•16; multibeam map of proposed feature; letter explaining reasons for name, list of cruises supplying multibeam data for attached feature.

NOTE : This form should be forwarded, when completed :

- a) **If the undersea feature is located inside the external limit of the territorial sea :-**
to your "National Authority for Approval of Undersea Feature Names" (see page 2-9) or, if this does not exist or is not known, either to the IHB or to the IOC (see addresses below);
- b) **If at least 50 % of the undersea feature is located outside the external limits of the territorial sea :-**
to the IHB or to the IOC, at the following addresses :

International Hydrographic Bureau (IHB) 4, Quai Antoine 1er B.P. 445 MC 98011 MONACO CEDEX <u>Principality of MONACO</u> Fax: +377 93 10 81 40 E-mail: info@ihb.mc	Intergovernmental Oceanographic Commission (IOC) UNESCO Place de Fontenoy 75700 PARIS France Fax: +33 1 45 68 58 12 E-mail: info@unesco.org
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Multi-beam cruises used in preparation of Barker Bank chart:

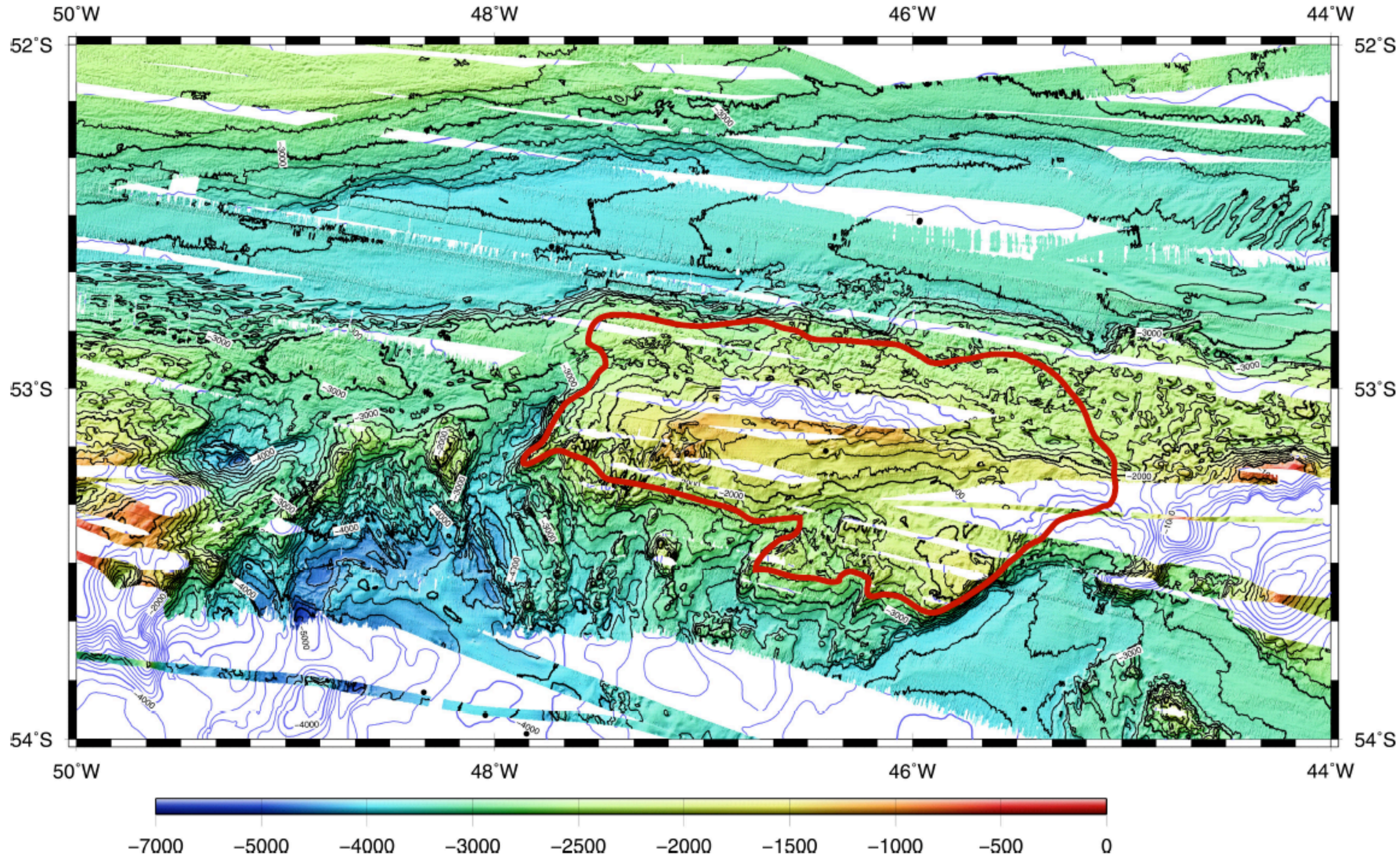
/data/multibeam/JR60/mb/JR60/processing/proclist -1
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/data/multibeam/JR70/mb/filelist -1
/data/multibeam/JR72/mb/JR72/processing/proclist -1
/data/multibeam/JR82/mb/filelist -1
/data/multibeam/JR92/xyz/JR92/proclist -1
/data/multibeam/JR93z/mb/filelist -1
/data/multibeam/JR100/xyz/filelist -1
/data/multibeam/JR103/mb/filelist -1
/data/multibeam/JR107/xyz/JR107/proclist -1
/data/multibeam/JR109/xyz/filelist -1
/data/multibeam/JR114-121/xyz/filelist -1
/data/multibeam/JR116/mb/JR116/processing/proclist -1
/data/multibeam/JR130z/xyz/JR130z/proclist -1
/data/multibeam/JR134/mb/filelist -1
/data/multibeam/JR159/mb/filelist -1
/data/multibeam/JR168-167/mb/filelist -1
/data/multibeam/JR184/mb/JR184a/processing/proclist -1
/data/multibeam/JR186/mb/JR186 b/processing/rawlist -1
/data/multibeam/JR188/mb/filelist -1
/data/multibeam/JR206/mb/filelist -1
/data/multibeam/JR224/mb/filelist -1
/data/multibeam/JR228/mb/raw_filelist -1
/data/multibeam/JR239-235-236/mb/filelist -1
/data/multibeam/non_BAS_cruises/NBPalmer/AMLR95/mb/process/proclist -1
/data/multibeam/non_BAS_cruises/NBPalmer/NBP0506/mb/process/proclist -1
/data/multibeam/non_BAS_cruises/Hesperides/hesant923/xyz/xyz_edited/proclist -1

JR represents a RSS *James C. Ross* cruise. Those cruises that are underlined represent the majority of the data incorporated into the bathymetric chart.

References

Barker, P.F., 2001. Scotia Sea regional tectonic evolution; implications for mantle flow and palaeocirculation. *Earth-Science Reviews* **55**, 1-39.

Cunningham, A.P., Barker, P.F. & Tomlinson, J.S., 1998. Tectonics and sedimentary environment of the North Scotia Ridge region revealed by side-scan sonar. *Journal of the Geological Society* **155**, 941 – 956. doi: 10.1144/gsjgs.155.6.0941

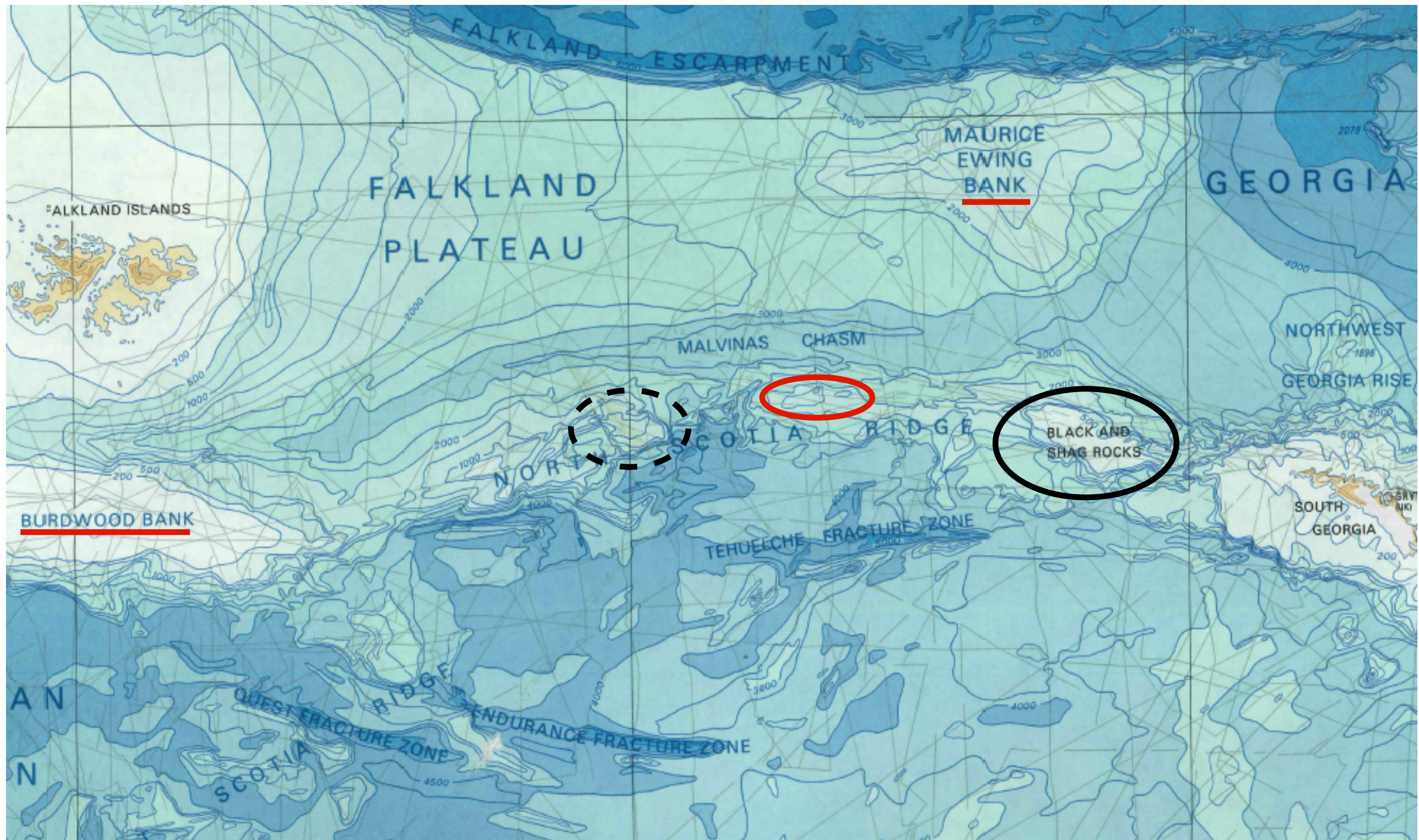


Possible outline of Barker Bank shown in **RED**.

60°W

50°W

40°W



50°S

Taken from GEBCO 5-16 (fifth edition, June 1981)

Red oval = proposed Barker Bank

Black oval = suggested Aurora Platform [aka Islas Auroras], the "sighted" Aurora Islands being Black and Shag Rocks

Black dashed oval = suggested Davis Bank