

REPUBLIC OF SOUTH AFRICA

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SAN HYDROGRAPHIC OFFICE

NATIONAL REPORT

TO THE

IHO HYDROGRAPHIC COMMISSION ON ANTARCTICA (HCA)
9TH MEETING, SIMON'S TOWN, CAPE TOWN, SOUTH AFRICA

12 - 14 OCTOBER 2009

9TH HCA MEETING

REPORT BY THE REPUBLIC OF SOUTH AFRICA

1. SA Navy Hydrographic Office (SANHO)

The SA Hydrographic Service is a government-funded service and is part of the SA Navy. The major assets for the Hydrographic Service is as follows:

- a. One Hecla Class Hydrographic Survey Vessel namely **SAS PROTEA**. She carries on board two smaller survey launches that are deployed for shallow water surveys. There is an additional launch on a trailer and equipment that is used as a mobile survey unit (MSU).
- b. The Hydrographic Office, with the following principle functions: conduct hydrographic surveys, produce paper nautical charts, electronic navigational charts (ENC's) and publications including List of Lights and Radio Services, three volumes of Sailing Directions, maintain a tide gauge network and provide tidal information, collect GEBCO data, issue monthly Notices to Mariners, Radio Navigational Warnings and a Chart Depot service.
- c. The officers and ship's company of the survey vessel; and
- d. The staff members of the Hydrographic Office (SANHO) at Cape Town, in Tokai.

2. Oceanographic Activities

The South African geographical area of interest in Antarctica is concentrated in Dronning Maud Land and the South African Hydrographic Office has published chart SAN 2004 (INT 9056) – Approaches to Dronning Maud Land, covering the region between 69° 10' 00"S to 71° 41' 00"S and 05° 30' 00"W to 00° 10' 00"W at a scale of 1:30 0 000. The standard land area (buff) has been substituted with a greyscale RADARSAT image supplied by the South African Satellite Application Centre (SAC). The main purpose of the chart is to cover the approaches to the area negotiated by scientific research vessels to land scientists and equipment for deployment at the South African Research Station SANAE IV. It is the intention to update this image every 2 years with a new RADARSAT image due to the constant movement of the ice shelf.

A new edition of SAN 2004 (INT 9056) was published in March 2009 based on a much-improved geo-referenced TerraSAR-X image of 2008 (*Figure 1*).

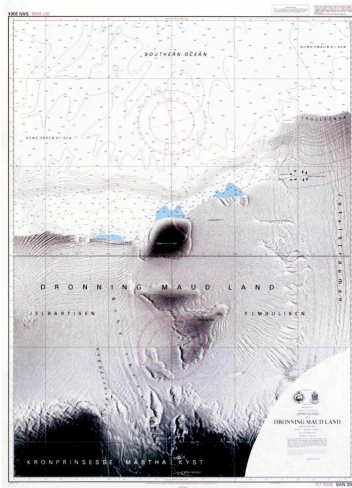


Figure 1. Chart SAN 2004-INT 9056

The bathymetric data within the area of the approaches to Dronning Maud Land is based on satellite derived altimetry and bathymetric contours from the Alfred-Wegener Institute, Germany and trackline bathymetric cruise data from the US National Geophysical Data Centre, Boulder, Colorado, USA (GEODAS) and the South African Department of Environment Affairs, Antarctic and Islands Division.

3. **SA research vessel M/V SA AGULHAS**

The SA AGULHAS is the research and supply vessel used by the South African Department of Environment Affairs and Tourism, Antarctic and Islands Division to transport equipment and supplies to the researchers at SANAE IV. The ship deploys once a year to Antarctica in the summer season and if their program allows, gathers soundings in areas on request as specified by the SA Hydrographic Office (*Figure 2*).



Figure 2. M/V SA AGULHAS

4. **Charts and Publications**

a. **Charts**

International (INT) charts. South Africa is the co-ordinator for international charting within Region H but also the producer nation of a single chart within charting Region M which is based on the WGS 84 ellipsoid.

Region M:

INT Chart No	SAN No	Title
9056	2004	Antarctica. Approaches to Dronning Maud Land.

b. **Publications**

South Africa has since 2001 published, in its South African Sailing Directions Vol III (SAN HO-23) Chapter 10, information on the Antarctic Region. The scope of this chapter encompasses that part of NAVAREA VII south of the 60° parallel and the Antarctic Coast between 20°W and 80°E. It consists of seven sections that provide essential information on the regulations/Antarctic Treaty, aircraft operations, general scientific and environmental information, natural conditions, sea ice, navigation in ice and a section on Bouvet Island (Bouvetøya).

5. **Maritime Safety Information (MSI)**

NAVAREA VII – Co-ordinator

The Co-ordinator of NAVAREA VII in association with the South African Meteorological Service currently transmits all the necessary NAVAREA VII and METAREA VII (SafetyNET) Weather Information and Shipping Safety messages via the IOR and AOR-E satellites as far south as the Antarctic coast. These messages are backed up by HF transmissions from Cape Town Radio. No

NAVAREA VII messages were transmitted during 2009 for the Antarctic Region (Sea Area A4) thus far, but it is well known for icebergs to be sighted well north of the 60° parallel during the summer season.

6. **Capacity Building**

South Africa will welcome any additional survey data including satellite imagery (geo-referenced) within their charting area from neighbouring countries to update chart SAN 2004 (INT 9056).

7. **IHO Special Publication C-55**

The South African Hydrographic Office acknowledges the importance of the constant review of C-55 to improve hydrographic services along the routes in the Antarctic. A full status assessment on the Antarctic Region was carried out in 2004 with little change emanating over the past years that will have any significant impact on the IHO database, at this time.

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September 2009