INTERNATIONAL HYDROGRAPHIC ORGANIZATION
ORGANISATION HYDROGRAPHIQUE INTERNATIONALE

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
COMMISSION OCÉANOGRAPHIQUE INTERGOUVERNEMENTALE

2006:00

GENERAL BATHYMETRIC CHART OF THE OCEANS (GEBCO)
WORLD OCEAN BATHYMETRY

ARCTIC OCEAN
Polar Stereographic Projection
Scale 1:25,000,000 at 75°North Latitude

BACKGROUND

First proposed at the VII International Congress on Geography held in 1899 in Berlin, the General Bathymetric Chart of the Oceans was established in 1903 under the direction of Prince Albert I of Monaco. It was intended that bathymetric data from all cruises and expeditions, regardless of their national origin, would be brought together in one series of maps covering the entire world ocean. That intent was realized as oceanographic and hydrographic organizations and institutions, governments, commercial entities and academia have supplied the data on which five printed editions of GEBCO were produced between 1903 and 1982.

As part of the transition to digital cartography, the depth contours of the GEBCO Fifth Edition were digitized and put onto a CD-ROM (the GEBCO Digital Atlas, or GDA) in 1994. This digital data base was then improved as new bathymetric data became available, and new versions of the GDA were published in 1997 and 2003. The 2003 edition included a worldwide grid of bathymetry and topography, as well as the usual digitized contours, track-line control, and gazetteer.

Future editions of the GDA are dependent upon continuing contributions of data from the seagoing community. It is hoped that wide dissemination of this map, which is based upon the bathymetric grid of the Centenary Edition of the GEBCO GDA (2003), will highlight the importance of international collaboration in projects such as the GDA, and will result in contributions of new bathymetric data to GEBCO. Further information on GEBCO can be found at www.gebco.net.

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Mercator Projection – Scale 1:35 000 000 at the Equator
Depths in corrected meters

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Bathymetric Tints
(Depths are in corrected meters below mean sea level)

MAP PRODUCTION

With the advent of the GEBCO Digital Atlas (GDA), it was intended that the GDA would form the basis of any future printed versions of GEBCO. It is recognized that for certain audiences, such as geologists and modelers of climate or tsunamis, the GDA is the ideal means of dissemination of bathymetric information. However, for other purposes a printed version of the bathymetric map is still the preferred representation. This map, at a scale of 1:35 million is the first GEBCO printed publication based on the 2003 GDA grid.

The printed map, initiated as a laboratory workshop project of the GEBCO-Nippon Foundation Ocean Mapping Program at the Center for Coastal and Ocean Mapping of the University of New Hampshire, is a cartographic representation of the bathymetry of the world ocean floor, based upon the bathymetric grid (1 minute resolution) of the Centenary Edition of the GDA (2003). Bathymetry is portrayed as shaded relief, hypsometrically colored with tint boundaries at 200m, 500m, and every 1000m.

Bathymetric source data and compilation methods are described in the GDA.
Land imagery is from the satellite mosaic Blue Marble (NASA).
Shorelines are from World Vector Shoreline (National Geophysical Data Center). Rendition of the seafloor was done with the IVS Fledermaus software.
Data merging and cartographic projections were done with Geomedia Professional (Intergraph) and Global Mapper (Global Mapper Software).
Final layout was drafted with Adobe Illustrator.

REFERENCES

General Bathymetric Chart of the Oceans (GEBCO) www.gebco.net
GEBCO Digital Atlas (GDA) Centenary Edition, British Oceanographic Data Centre (2003) http://www.bodc.ac.uk
Blue Marble satellite mosaic, www.nasa.gov/vision/earth/features/blue_marble.html
World Vector Shoreline, National Geophysical Data Center, http://rimmer.ngdc.noaa.gov/mgg/coast/wvs.html

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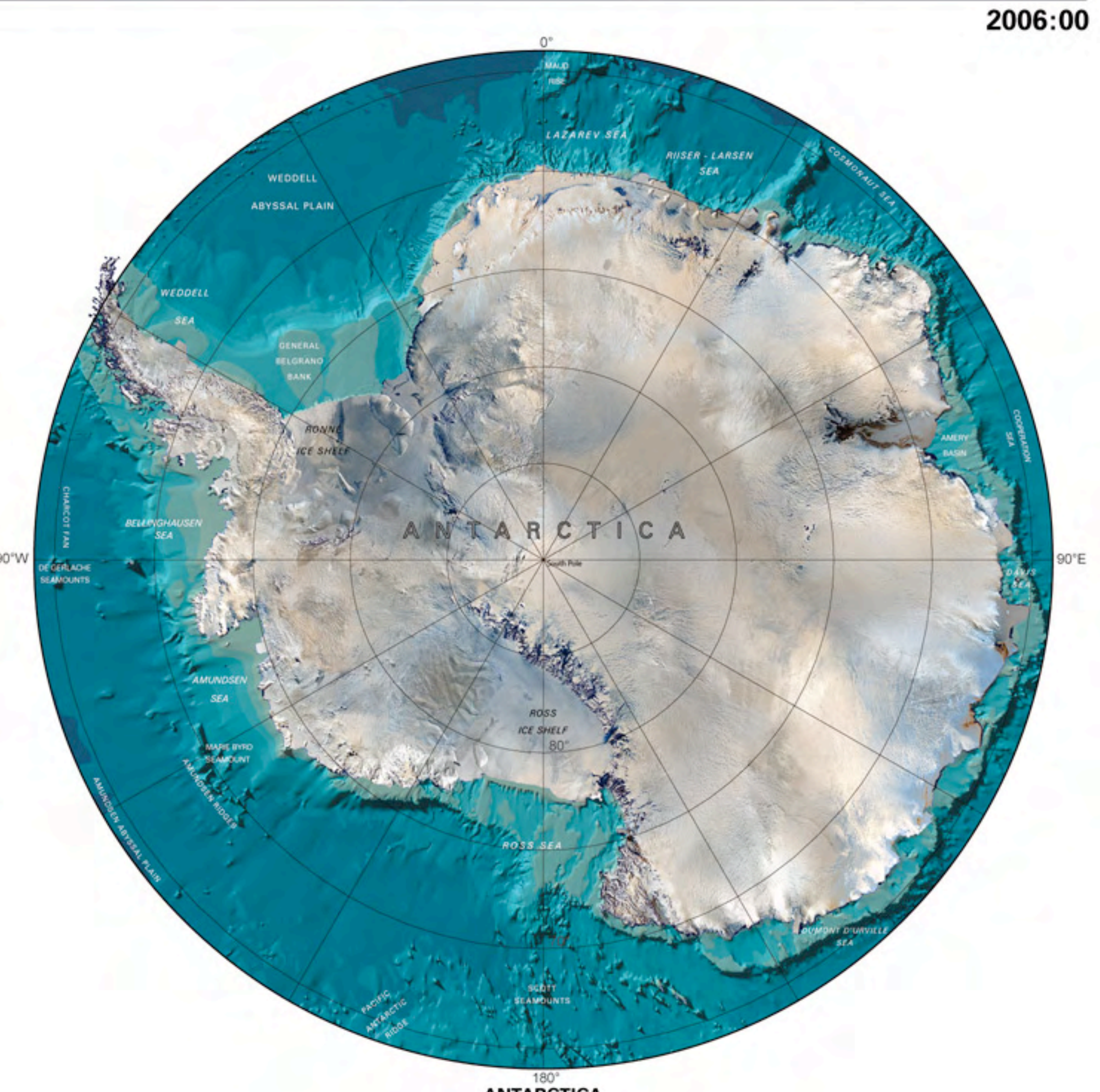

ANTARCTICA
Polar Stereographic Projection
Scale 1:25,000,000 at 75°South Latitude