

UNITED STATES BOARD ON GEOGRAPHIC NAMES

UNDERSEA FEATURE NAME PROPOSAL

**NAME PROPOSED:** Palmer Deep

**LOCATION:** Antarctic Peninsula Continental Shelf

**Ocean or Sea:** Southern Ocean, northern Bellingshausen Sea

**Coordinates:**

point feature or center point:.....Lat. \_\_\_\_\_ Long. \_\_\_\_\_

linear feature (from):.....Lat. \_\_\_\_\_ Long. \_\_\_\_\_

linear feature (to-midpoint or turning point):..... Lat. \_\_\_\_\_ Long. \_\_\_\_\_

linear feature (to):..... Lat. \_\_\_\_\_ Long. \_\_\_\_\_

areal feature\* - Northeast corner: .....Lat. 64d 52m S Long. 64d 11m W

- Southeast corner:.....Lat. 64d 53m S Long. 64d 11m W

- Southwest corner:.....Lat. 65d 02m S Long. 64d 38m W

- Northwest corner:.....Lat. 64d 55m S Long. 64d 49m W

\*based on the 600m bathymetry line

**DESCRIPTION:**

**Feature type:** Deep **Size and shape:** Irregular stretching (approximately) 30 km E/W at widest and 12 km N/S

**Depth (max. and min.):** max approx 1400m

**Associated features:** 2 (at least) distinct subbasins; this 'deep' is an inner shelf depression that appears to be located at an intersection of three ice drainage systems

**CHART OR MAP REFERENCE:**

**Name and feature shown on:** \_\_\_\_\_

**Feature shown but not named on:** GEBCO 2003 Data, spot soundings indicated depths in excess of 1200m and were noted on Defense Mapping Charts and charts of the British Admiralty since the IGY

**REASON FOR CHOICE OF NAME:**

Name has been used extensively in publications starting in a thesis by M. Kirby in 1993 at Hamilton College (*High resolution seismic stratigraphy and sedimentological analysis of Holocene glacial marine sediments in the Palmer Deep Basin, Bellingshausen Sea Antarctica*). It is also the location of drilling sites 1098 and 1099 of the ODP. Supporting materials represent a few of the several publications where this name has been used. As this feature is in a borderland it seems to meet the definition of a deep (a localized feature in the confines of a larger feature - here the borderland).

**DISCOVERY FACTS:**

**Date:** 1983-1987 (first systematic survey) **Discoverer (individual, ship):** USCGC Glacier

**Sounding equipment used:** High resolution single-channel seismic in 80's, Hunttec Deep Tow Boomer (DTB) seismic reflection system in 1992; SeaBeam swath mapped in 1999

**Navigation type:** \_\_\_\_\_

**Estimated horizontal accuracy:** ± \_\_\_\_\_ n.m./km **Track spacing, crossings:** \_\_\_\_\_

**SUPPORTING MATERIALS:** Please enclose references, reprints profiles, maps, etc.

Enclosed:

-Griffith, T.W., 1987. Late Quaternary sedimentation and glacial history in the Gerlache Strait region Graham Land, Antarctica. Ant. Journ. US, 22, 133-134.

-Leventer, A., E. W. Domack, S.E. Ishman, S. Brachfeld, C.E. McClennen, and P. Manley. 1996. Productivity cycles of 200-300 years in the Antarctic Peninsula region: understanding linkages among the sun, atmosphere, oceans, sea ice, and biota. Geol. Soc. Amer. Bull., 108 (12), p. 1626-1644.

-Rebesco, M., A. Camerlenghi, L. De Santis, et. al. 1998. Seismic stratigraphy of Palmer Deep: fault-bounded late Quaternary sediment trap on the inner continental shelf, Antarctic Peninsula Pacific margin. Marine Geology. 151, 89-110.

-Kirby, M.E., E.W. Domack, C.E. McClennen 1998. Magnetic stratigraphy and sedimentology of Holocene glacial marine deposits in the Palmer Deep, Bellingshausen Sea, Antarctica: implications for climate change? Marine Geology. 152, 247-259.

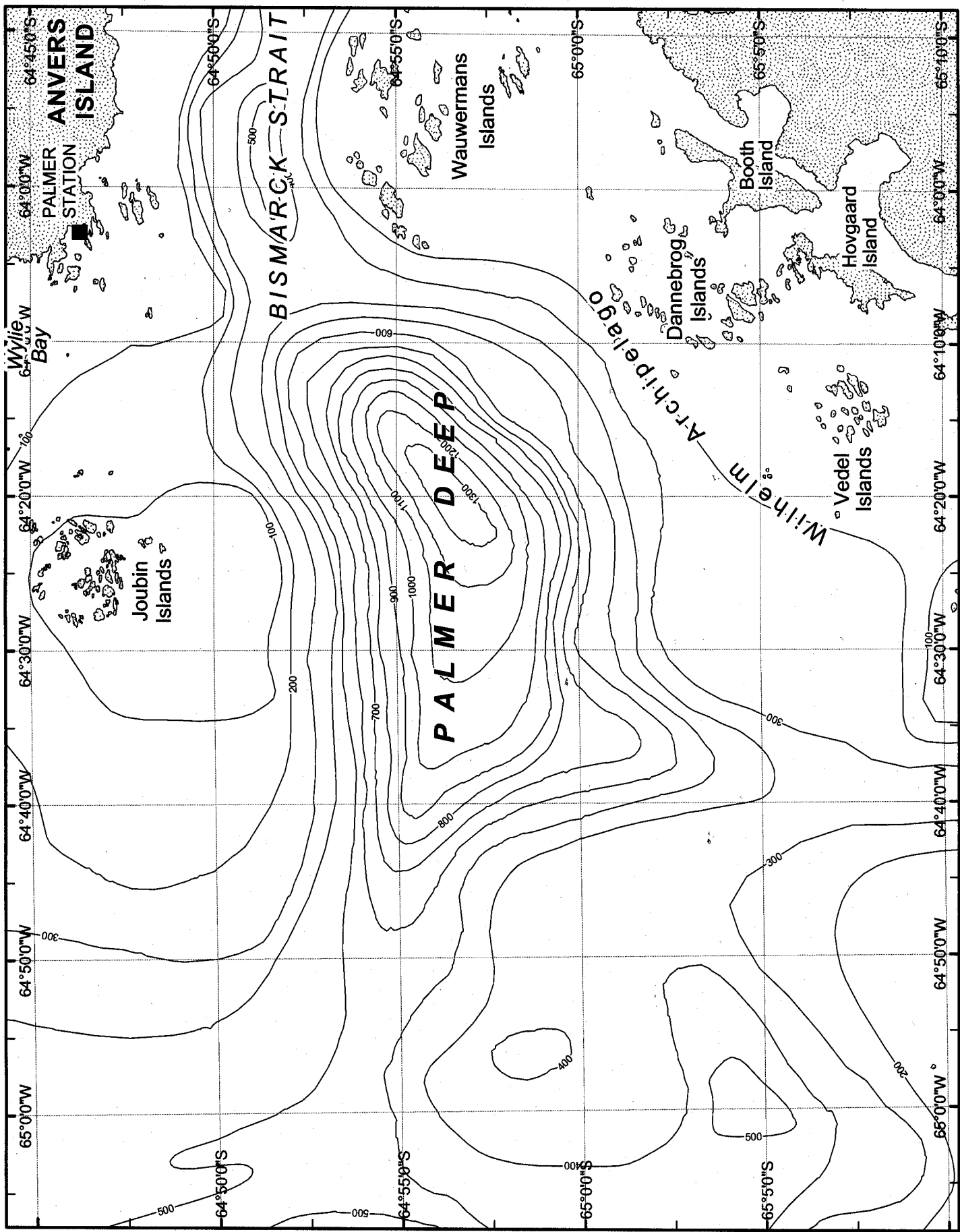
-Domack, E.W. 2002. A Synthesis for Site 1098: Palmer Deep. In Barker, P.F., Camerlenghi, A. Acton, G.D., and Ramsay, A.T.S. (Eds.), Proc ODP, Sci Results, 178, 1-14.

**SUBMITTED BY:** Margaret Knuth

**Organization and address:** National Science Foundation, Office of Polar Programs  
4201 Wilson Blvd., Arlington, VA 22230  
703.292.8033

Please mail to:

Executive Secretary  
US Board on Geographic Names  
National Geospatial-Intelligence Agency  
4600 Sangamore Road Mail Stop D-167  
Bethesda MD 20816-5003  
USA



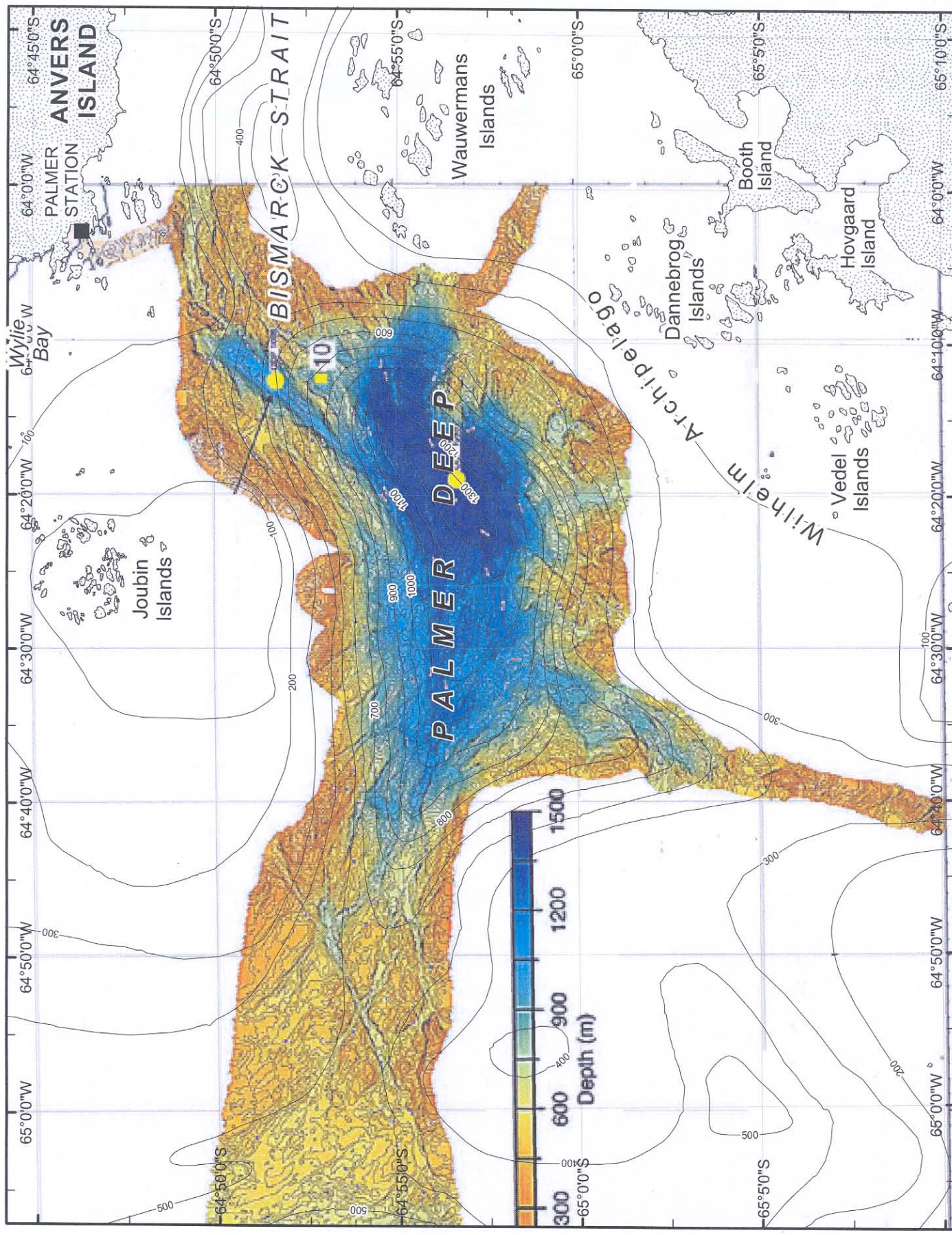
16 Nov. 2006  
 United States Antarctic Program  
 Environmental Research & Assessment

0 5 10  
 Kilometers

**Palmer Station and Palmer Deep**  
**1:250 000**

Projection: Lambert Conformal Conic  
 Spheroid: WGS84; Contour Interval: Metres - 100 m  
 Data sources: GEBCO (2003);  
 SCAR ADD Anvers & Brabant Is. SC19-20 (2004)





Projection: Lambert Conformal Conic  
 Spheroid: WGS84  
 Datum: Everest  
 Units: Meter - 100 m  
 Data sources: GEBCO (2003), International Marine - 100 m  
 SCAR ADD Anvers & Brabant Is. SQ19-20 (2004)

1:250 000

Palmer Station and Palmer Deep



16 Nov 2006  
 United States Antarctic Program  
 Environmental Research & Assessment