



ANTARCTICA MAPS AND AIR PHOTOGRAPHS

SEPTEMBER 1980



The Division of National Mapping (NATMAP) carries out surveys and makes maps of Antarctica, mainly to assist the Australian National Antarctic Research Expeditions (ANARE) mounted by the Antarctic Division. Apart from the small scale general reference maps, the maps and related products available from NATMAP are restricted to areas in the Australian Territory containing features not obscured by the ice-sheet.

All printed maps can be purchased at NATMAP Sales Offices. Other products can be ordered at the offices in Canberra and Melbourne. All products can be ordered by mail through the Canberra office. Addresses of NATMAP Sales Offices are given on the back page.

GENERAL REFERENCE MAPS

Two maps showing the whole of the Antarctic continent have been produced by NATMAP.

The 1:10 million scale map (Figure 1 is an extract) also shows Heard and Macquarie Islands as insets at 1:250 000 scale. Scientific stations of the Antarctic Treaty nations operating in 1979 and territorial claims are included. In addition to the major rock features, the shape of the ice-cap is shown by contours, spot-heights, ice-thicknesses and relief shading. Depth contours depict the bathymetry of the adjacent seas. A gazetteer is printed on the back.

The smaller map of Antarctica, at 1:20 million scale, shows information similar to that on the 1:10 million map, but the insets, relief shading, bathymetry and gazetteer are omitted.

Sheets of the 1:1 million *International map of the world* show coastal areas of the Australian Antarctic Territory in greater detail (see Figure 2). Index 1 (inside) shows the progress of publication so far in this series. Preliminary editions are printed in only two colours, without relief shading, and do not show bathymetry.

One-colour operation maps at 1:1 million scale have been produced for ANARE scientific operations in certain areas and are shown on Index 1. They are similar to 1:1 million preliminary editions, but also show the magnetic variation, and do not follow standard sheet lines and are not printed but dyeline copies are produced on demand.

TOPOGRAPHIC MAPS

Special large scale topographic maps of the Framnes Mountains (near Mawson station), the Vestfold Hills (near Davis station), Heard Island and Macquarie Island have been produced by NATMAP (see price list on back page).

Apart from these special maps, the 1:250 000 scale series of topographic maps (Index 2) are the most detailed maps of the Australian Antarctic Territory available. The maps, which are printed in four colours, show rock and ice features, all feature names approved up to the date of publication, routes of ANARE sledge traverses and approximate contours of the ice-sheet at 200 metres intervals.

The 1:250 000 maps were compiled from air reconnaissance photographs. They are best used in conjunction with the satellite imagery photomaps, because the photography shows some features poorly and a few not at all, whereas the satellite imagery provides a less distinct but more consistent view of all features.

PHOTOMAPS

Two similar series of photomaps, at 1:500 000 and 1:250 000 scales have been produced by fitting together the highest quality band 5 Landsat imagery available. Feature names and latitudes and longitudes have been added but no other enhancement or interpretation of the imagery has been made (Figure 3).

The maps are in half-tone and dyeline copies are made on demand—there are no printed stocks. Indexes 3 and 4 (inside) show which maps are available in each series.

A 1:3600 scale orthophotomap of Casey station has been made from vertical air photographs taken in 1972. Black and white prints are made on demand.



Figure 1. Extract from the 1:10 million map *Antarctica*, sixth edition 1979 (full size 760 x 840 mm). For a more detailed map of part of the area shown, see Figure 2.

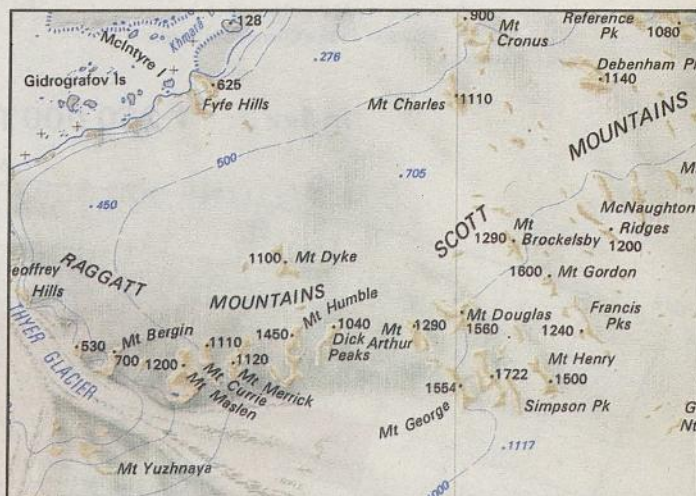


Figure 2. Extract from the *Napier Mountains* sheet (first edition) of the 1:1 million *International map of the world*. For larger scale satellite imagery of part of the area shown, see Figure 3.

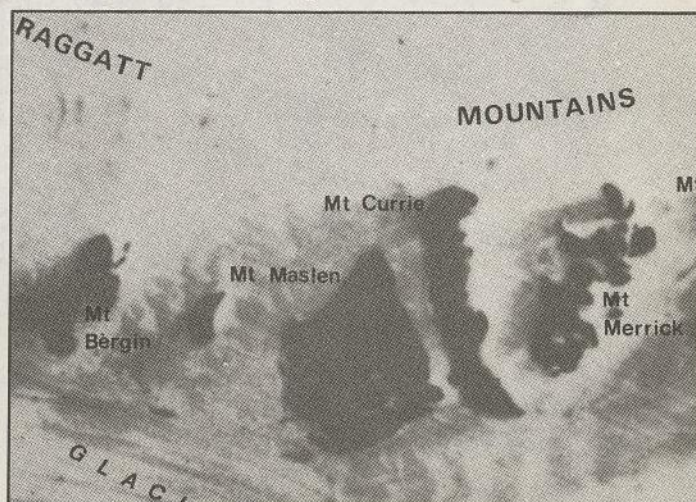


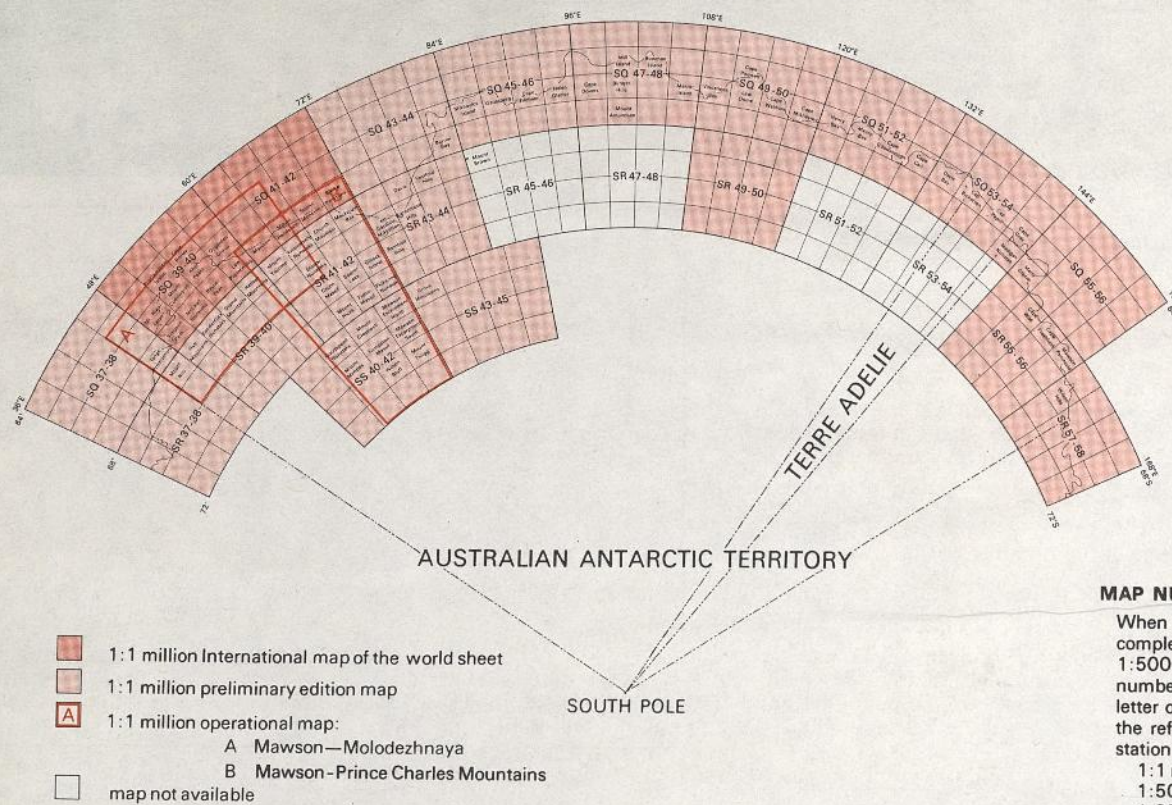
Figure 3. Extract from 1:250 000 satellite imagery photomap SQ39-40/13. Photomaps are described above.

LEAFLETS IN THIS SERIES INCLUDE

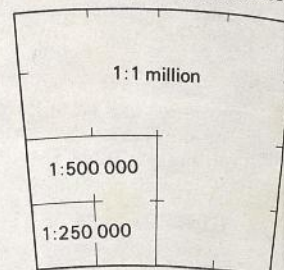
- 1:25 000 and 1:50 000 topographic maps—Australia (including obsolescent 1:63 360 series)
- 1:100 000 topographic maps—East and south-central Australia
- 1:100 000 topographic maps—West and north-central Australia
- 1:250 000 topographic maps—Australia
- General reference and thematic maps—Australia (1:1 000 000 and smaller scales including *Atlas of Australian resources*)
- Bathymetric and coastline maps—Australia
- Maps and air photographs—Antarctica
- Air photographs—Australia
- Air photographs—Australia (supplement)
- Photomaps—Australia
- Miscellaneous publications
- Price list, ordering procedure and sales outlets
- Digital data

All leaflets are updated as work progresses. The latest copy of each is available free from any NATMAP Sales Office. Please use the mail order address if requesting by mail.

Index 1: 1:1 MILLION MAPS



SCALE COMPARISON
The diagram below shows the relative size of areas covered by NATMAP maps at various scales.



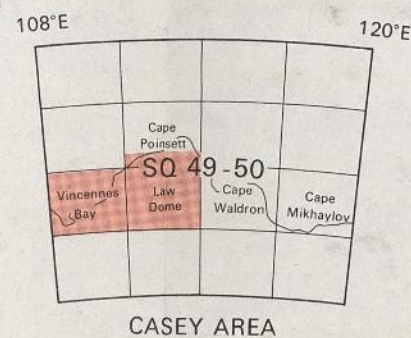
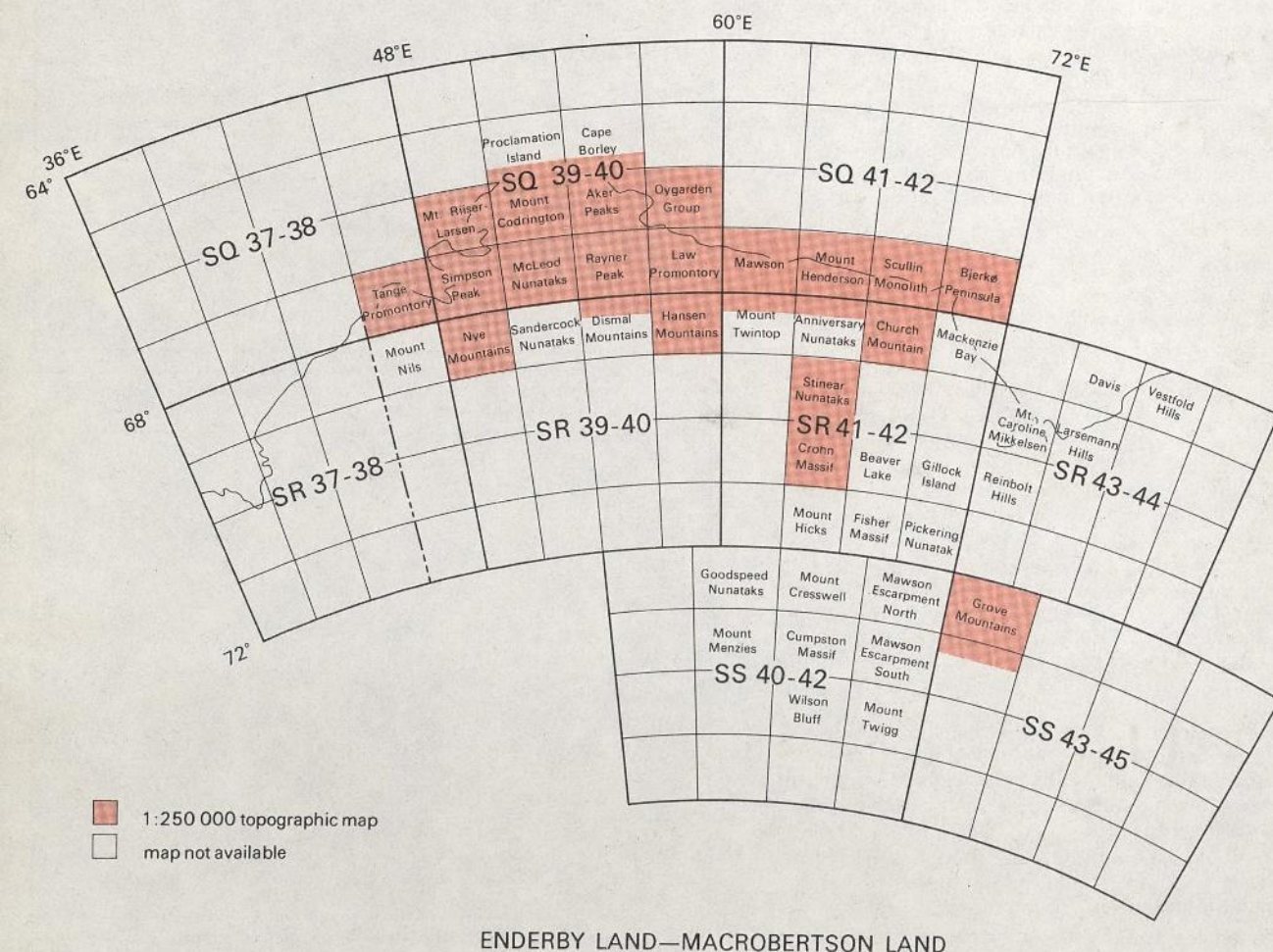
MAP NUMBERING SYSTEM

When ordering photomaps and 1:1 million series maps the complete reference number of each map should be quoted. For a 1:500 000 or 1:250 000 photomap the reference number is the number of the 1:1 million map on which it falls followed by the letter or number shown for the map on the index. For example, the reference numbers of the various maps on which Mawson station appears are:

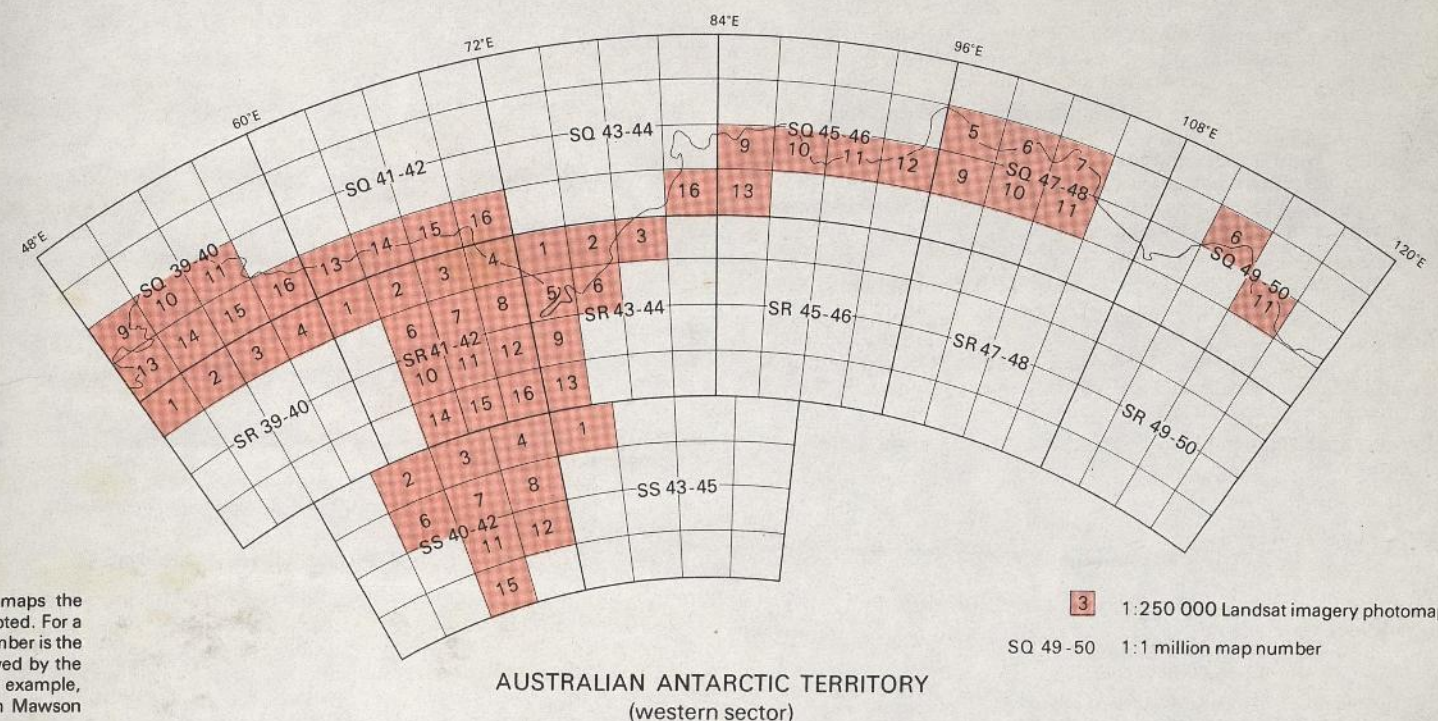
1:1 million map SQ41-42
1:500 000 photomap SQ41-42/c
1:250 000 photomap SQ41-42/13

Topographic and operational maps are referred to by name only.

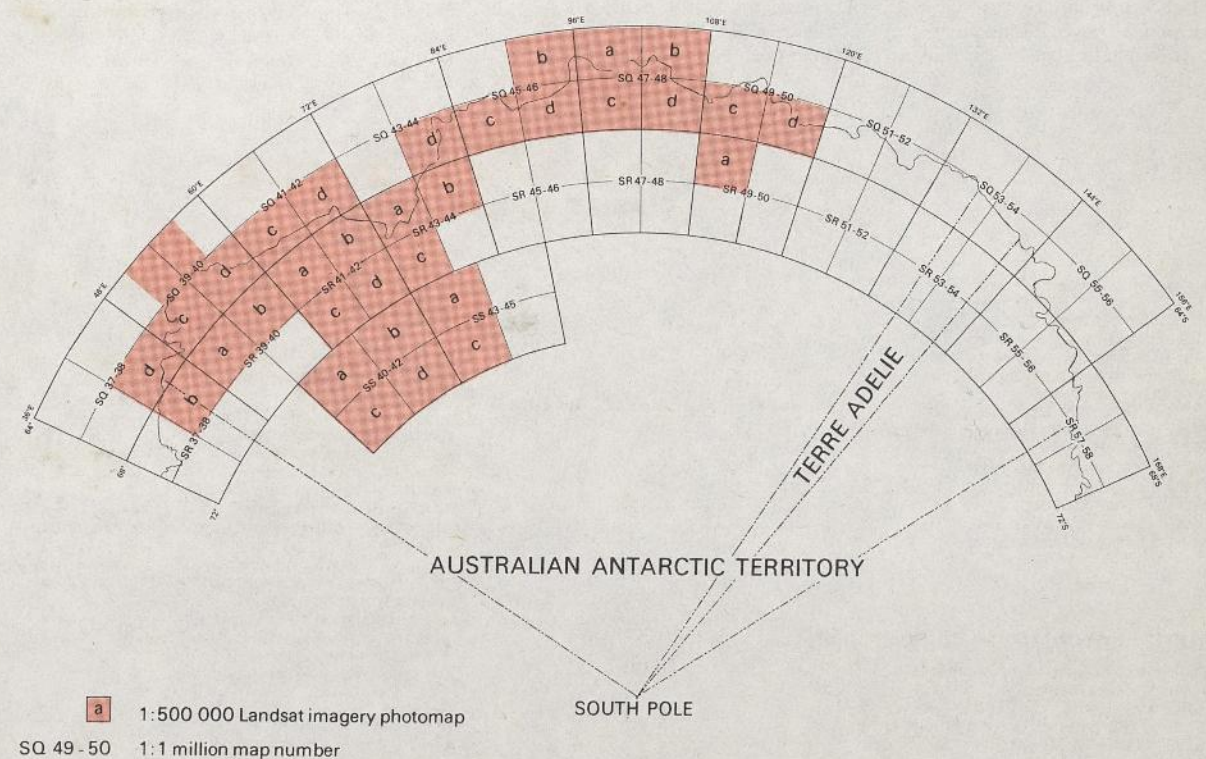
Index 2: 1:250 000 TOPOGRAPHIC MAPS



Index 3: 1:250 000 PHOTOMAPS



Index 4: 1:500 000 PHOTOMAPS



HOW TO ORDER BY MAIL

Select method A, B or C as indicated in the price list (back page).

Method A (Printed maps and publications)

Quote scale, type and name and/or reference number of each map in your order. Prices shown for these items include postage by surface mail *. Full payment by cheque or money order payable to Division of National Mapping should be sent with your order to OIC Map Sales (address overleaf).

Method B (Dyeline maps)

Quote scale, type and name and/or reference number of each map in your order. Prices shown for these items include postage by surface mail *. Full payment by cheque or money order payable to Microdata Pty Ltd should be sent with your order to OIC Public Information, at the same address as OIC Map Sales (overleaf).

Method C (Photographic prints)

For air photographs, quote film, run and photo numbers. Give detailed instructions for any enlargements and, for colour photographs, indicate whether prints in colour or black-and-white are required.

Orders should be made out to Air Photographs Pty Ltd (NATMAP's contractor) but sent to the OIC Public Information, at the same address as

OIC Map Sales (over), who will arrange processing by the contractor. The contractor will send the prints, together with an invoice, direct to the customer by certified mail (unless otherwise requested). Prices shown for these items do not include postage, for which an additional charge will be added on the invoice.

* If delivery by air is required, include the additional cost in your remittance—but not for microfiche publications, for which no additional payment is necessary. (For 1-10 maps, allow 50 grams per map plus 200 grams for the packaging tube; for more than 10 maps allow 50 grams per map, plus 750 grams.)

AIR PHOTOGRAPHS

Three types of air photographs of the Australian Antarctic Territory are available from NATMAP: reconnaissance, block coverage and miscellaneous project photographs.

Black and white air reconnaissance photographs were taken by the RAAF in the 1950s and 1960s. The reconnaissance flights covered nearly all the coastal areas and inland features of Australian territory. Using three cameras, photographs simultaneously recorded the view below, to the left and to the right of the aircraft at intervals during each run. Figure 4 is an example of a side view.

Vertical air photographs on colour film in regular blocks have been taken of the Prince Charles Mountains region (south of Mawson) and Enderby Land. The scale of the photographs is about 1:60 000.

Miscellaneous projects include vertical photography of the immediate vicinity of Mawson, Davis and Casey stations, the Vestfold Hills and Macquarie Island. Most of these photographs have been taken in colour with a small camera attached to a helicopter.

For more information about NATMAP air photographs, see Leaflet 8.

SATELLITE IMAGERY

Much of the Australian Antarctic Territory is covered by Landsat imagery which is available from:

Australian Landsat Station
14-16 Oatley Court
BELCONNEN ACT 2617

Scenes are available in any one of the four spectral bands or as a false-colour composite. Each scene covers an area of 185 km by 185 km and has been allotted a unique number which can be used to order a copy. A diagram showing scene numbers can be inspected and orders placed at the Australian Landsat Station.

TECHNICAL REPORTS

Reports written by several NATMAP surveyors about their work in Antarctica have been published in the *Technical Report* series, described in Leaflet 12. See the price list below for titles.



Figure 4. Aerial view from the south of: (l-r) Mounts Maslen, Currie and Merrick (see maps in Figures 2 and 3). Fyfe Hills appear near the horizon (top right). Height of aircraft 3300 m. (Extract from photo 9048R, run 101A, film ANT 59).

MAPS AVAILABLE ONLY FROM OTHER AGENCIES

Geological maps of Antarctica, mostly at 1:250 000 scale, are produced by the Bureau of Mineral Resources, Geology and Geophysics (BMR). Requests for the brochure describing the geological and geophysical activities of BMR in Antarctica and enquiries about the maps and reports published should be directed to the BMR Information Section, PO Box 378, Canberra City, ACT 2601—telephone (062) 499620.

Maps of Antarctica, including parts of the Australian Territory, are also produced by other Antarctic Treaty nations. A complete catalogue of topographic maps and navigational charts has been compiled from information furnished by member nations of the Scientific Committee on Antarctic Research (SCAR). Copies of SCAR's *Catalogue of Antarctic maps and charts* on microfiche (set of 11 frames) are available from NATMAP.

Many of the maps listed in the *Catalogue*, together with related material—for example, ANARE station plans—can be inspected in the Reference Library, Antarctic Division, 568 St Kilda Road, Melbourne—telephone (03) 510271.

PRICE LIST

AS AT SEPTEMBER 1980

MAPS

	\$	Order method*
1:20 million Antarctica	0.75	A
1:10 million Antarctica	2.10	A
1:1 million International map of the world sheets and preliminary editions	2.10	A
1:1 million operational	1.70	B
1:500 000 Landsat imagery photomap	1.50	B
1:250 000 Landsat imagery photomap	1.50	B
1:250 000 topographic	2.10	A
1:100 000 Framnes Mountains	2.10	A
1:100 000 Vestfold Hills	2.10	A
1:50 000 Heard Island	2.10	A
1:50 000 Macquarie Island	2.10	A
1:3 600 Casey orthophotomap	6.35	C

MISCELLANEOUS PUBLICATIONS

Catalogue of Antarctic Maps and Charts (microfiche)	6.00	A
Technical Report Series:		
TR 5 MacRobertson Land - Kemp Land Tellurometer Traverse (microfiche)	1.00	A
TR 7 Framnes Mountains - Depot Peak Tellurometer Traverse (microfiche)	1.00	A

*see ordering instructions (inside)

AIR PHOTOGRAPHS

Black and white prints

From 230mm negatives—

	\$	Order method*
contact print on paper	1.80	C
contact diapositive on film	4.70	C
projected diapositive on film	5.20	C
contact diapositive on glass	8.00	C
enlargement x2 on paper	8.00	C
enlargement x3 on paper	12.40	C
enlargement x4 on paper	20.10	C
enlargement x5 on paper	27.80	C
part of frame enlargement up to 460mm on paper:		
up to x4 enlargement	8.00	C
greater than x4 enlargement	10.80	C
part of frame enlargement up to 690mm on paper:		
up to x4 enlargement	12.40	C
greater than x4 enlargement	14.00	C
part of frame enlargement up to 920mm on paper:		
up to x4 enlargement	20.10	C
greater than x4 enlargement	21.80	C

Colour prints

From 230mm negatives—

	First frame from a roll	Others on same order from same roll	
contact print on paper	15.70	5.50	C
contact diapositive on film	17.90	10.20	C
enlargement x2 on paper	44.30	37.70	C
duplicate enlargement x2 printed at same time	31.10	31.10	C
enlargement x3 on paper	63.00	51.00	C
duplicate enlargement x3 printed at same time	37.70	37.70	C

NATMAP SALES OUTLETS

YOUR AGENT

SYDNEY	MELBOURNE AREA	CANBERRA	MAIL ORDERS
NATMAP Sales Office Ground Floor 309 Pitt Street Tel (02) 2394 181	NATMAP Sales Office Ground Floor 280 Thomas St Dandenong Tel (03) 7915555 ext 212	NATMAP Sales Office Ground Floor, Unit 3 Cameron Offices Belconnen Tel (062) 526383	O I C Map Sales Division of National Mapping P.O. Box 31 Belconnen, ACT 2616 Australia

For enquiries about air photographs and photomaps, telephone Canberra (062) 526381 or Melbourne (03) 7915555 ext 213.

Prices quoted in this leaflet may change without notice. The latest edition of Leaflet 13 contains Current Prices and a complete list of NATMAP Retailers. NMP/78/062.7