

# AUSTRALIAN ANTARCTIC TERRITORY

## TAYLOR ROOKERY SPECIALLY PROTECTED AREA NUMBER 1 TAYLOR GLACIER, MAWSON COAST, KEMP LAND



### MANAGEMENT PLAN

#### 1. DESCRIPTION OF VALUES TO BE PROTECTED

The area was originally designated a Specially Protected Area because it contains a colony of emperor penguins (*Aprenodytes forsteri*) which is one of the few, and probably the largest, of the known colonies of this species located wholly on land. Almost all other emperor penguin rookeries are located on sea ice. The rookery is also important because of long-term monitoring of the population of the penguins (since 1954). The colony is ideal for counting since it is surrounded by small rocky hills which make it possible to observe every bird without entering the breeding area. A photographic census program has been carried out annually since 1988, and it is believed that this method has resulted in almost complete accuracy of counting.

#### 2. AIMS AND OBJECTIVES

Management of the Area aims to:

- prevent unnecessary disturbance to the emperor penguin colony at Taylor Rookery; and
- permit research of a compelling scientific nature which cannot be undertaken elsewhere, while ensuring no significant disturbance to the ecosystem of the area including the penguin colony.

#### 3. MANAGEMENT ACTIVITIES

The management plan and activities in the Area should be kept under review to ensure that the values for which the Area was designated are being fully protected. Inspection visits may be made only when considered essential for management purposes.

#### 4. PERIOD OF DESIGNATION

Designated under ATCM Recommendation IV-1 in November 1966, for an indefinite period.

#### 5. DESCRIPTION OF THE AREA

##### (a) Geographical co-ordinates and natural features of the Area:

The area consists of the whole of the northernmost rock exposure on the east side of Taylor Glacier, MacRobertson Land (67°25'S; 60°50'E). The rookery is located on a low lying rock outcrop in the south-west corner of a bay formed by Taylor Glacier to the west, the polar ice cap to the south and the islands of the Colbeck Archipelago to the east. The Area is surrounded by sea ice to the north and east. The area is some 90 kilometres west of Mawson station. There is ice-free terrain adjacent to the glacier on the western boundary and to the south the rock rises steeply to meet the ice of the plateau. The rock itself forms a horseshoe around a central flat area of exposed rock and moraine. This area is covered with snow in winter and is occupied by the emperor penguins. The compressed snow melts in summer to form a shallow lake and stream which exists to the north-east. The sides of the horseshoe are rounded ridges of rock which are bare and smoothed by ice. Otherwise the terrain is rough and dissected with cracks and fissures. The average height of the ridges is about 30 metres. The area also has a raised beach which is typical of several found along the coast of MacRobertson Land. The beach is composed of locally derived pebbles, cobbles and boulders between 1 cm and 1 m across. It slopes upwards from the shoreline to a well defined platform several metres broad and 3 to 6 m above sea level.

There are no boundary markers since the Area is easily defined by its natural features.

##### (b) Access to the Area:

Access to the Area is only in accordance with a permit or authority issued by a contracting party or its authorised representative.

Restrictions apply to the mode of transport to and within the Area, and access points are prescribed; see Section 8(a).

##### (c) Location of structures including scientific stations, research and refuge facilities both within and near the Area:

There are no structures within the Area and no permanent structures are permitted. A four-berth refuge is located in the Colbeck Archipelago, approximately 5 kilometres to the north-east of the area (see Map B). Mawson Station (67°36'S; 62°53'E) is approximately 90 kilometres to the east.

##### (d) Location of other protected areas in or near the Area:

The Rookery Islands (Specially Protected Area No. 2) are located some 80 kilometres to the east of Taylor Rookery (see Map A).

#### 6. IDENTIFICATION OF RESTRICTED ZONES

Access to the Emperor penguin colony, marked on Map C, is prohibited unless authorised in a permit.

#### 7. MAPS OF THE AREA

Map A shows the location of the Area in relation to the Mawson region; Map B shows the location of the field hut on the Colbeck Archipelago, and access routes to the Area; and Map C shows the Area in greater detail, including the usual location of the penguin colony, and the area where all activity such as landing helicopters and installing field huts or field camps should take place, where permitted.

#### 8. CONDITIONS UNDER WHICH PERMITS MAY BE GRANTED

Criteria for issuing a permit to enter the Area are that:

- it is issued for a compelling scientific purpose which cannot be undertaken elsewhere;
- the actions permitted will not jeopardise the natural ecological system existing in the Area; and
- the actions permitted are in accordance with the Management Plan for the Area.

##### Conditions applying:

##### (a) Access to and movement within the Area:

- Wherever possible, access should be from the sea ice to the east of Colbeck Archipelago, to avoid disturbance to the birds by crossing their pathways from the rookery to the sea (see Map B). Persons in the vicinity, not approaching the colony, should also be aware of the penguins' pathways, and take care to cause as little disturbance to them as possible.
- Travel to the Area may be by over-snow vehicle, which is generally only possible during the period 1 May to 25 December, or by helicopter. Vehicle entry to the Area is prohibited. Over-snow vehicles used for transport to the Area are to be left outside the Area, to the east, end entry must be by foot. The approach route for vehicles is marked on Map B.
- Helicopters are not permitted to land in the Area unless sea ice conditions outside the Area are such that it would be hazardous for aircraft to land on ice or for personnel to walk on it. If sea ice conditions are not suitable, helicopters are authorised to land in the Area, to the north-east, where a headland to the south obscures the colony from view (see Map C). Map B shows the helicopter access route.

- The following conditions apply to the use of helicopters:
  - helicopters are to approach the Area from the east over the sea ice and, where sea ice conditions permit, land outside the Area, with access being by foot (see Map B);
  - overflight of the rookery is prohibited;
  - when landing outside the Area, helicopters should not land, take off or fly within 500 metres of the rookery;
  - if landing inside the Area is essential due to sea ice conditions, helicopters should land in the north-east of the Area, where a headland to the south obscures the colony from view (see Map C);
  - helicopters approaching to land in the Area must fly as low as possible over the sea ice to avoid disturbing the colony; and
  - helicopters are not to be refuelled within the Area.
- There are no marked pedestrian routes within the Area; pedestrians should keep well away from the penguins, unless disturbance to the penguins is authorised by permit. Movement in and around the Area should be such that, in general, the routes used by the birds are not crossed.
- Dogs are not to be used for transport to the Area.

##### (b) Activities which are, or may be, conducted within the Area, including restrictions on time and place:

- The penguins are particularly sensitive to disturbance during the following periods:
  - when they are incubating eggs, from mid-May to mid-July; and
  - from mid-July, when feeding chicks to mid-December, when the chicks fledge. However, penguins are known to be present at the rookery during every month except February, when no recorded expeditions to the rookery have been made; restrictions therefore apply year-round.
- The emperor penguin colony is ideal for counting. Normally the best vantage point for viewing and photographing the penguins is a rocky headland which runs adjacent to Taylor Glacier, on the western side of the rookery. The ideal time for a census is from 22 June to 5 July, since during this time only incubating males are present, each representing one breeding pair. An ongoing photographic census program has been carried out since 1988.
- Other activities which may be conducted in the Area:
  - compelling scientific research which cannot be undertaken elsewhere and which will not jeopardise the ecosystem of the Area; and
  - compelling management activities, which if not carried out would jeopardise the values for which the Area was designated.

##### (c) The installation, modification, or removal of structures:

No structures are to be installed in the Area unless essential for scientific purposes; any structure installed should be removed when it is no longer required. Only the minimum number of personnel necessary to install and to remove the structure should be used. Temporary field huts if permitted, should be placed well away from the penguin colony at the point marked 'X', to the north-east of the Area, where a headland to the south obscures the colony from view (see Map C).

##### (d) The location of field camps:

See (c) above.

##### (e) Restrictions on materials and organisms which may be brought into the Area:

- No poultry products, including dried food containing egg powder, are to be taken into the Area.
  - No deposits of food or other supplies are to be left within the Area beyond the season for which they are required.
  - Fuel is not to be deposited in the Area, unless required by a visitor for personal use, (ie) for cooking/heating in a field hut, and is to be removed when no longer required.
- (f) The taking of or harmful interference with native flora and fauna:
- Taking of or harmful interference with native flora and fauna is prohibited unless specifically authorised by permit issued in accordance with the Agreed Measures for the Conservation of Antarctic Fauna and Flora, or Article 3 of Annex II to the Protocol on Environmental Protection to the Antarctic Treaty, whichever is appropriate.

##### (g) The collection or removal of anything not brought into the Area by the permit holder:

There is to be no collection or removal of anything not brought into the Area by permit holder unless specifically authorised by permit for scientific or management purposes.

##### (h) The disposal of waste:

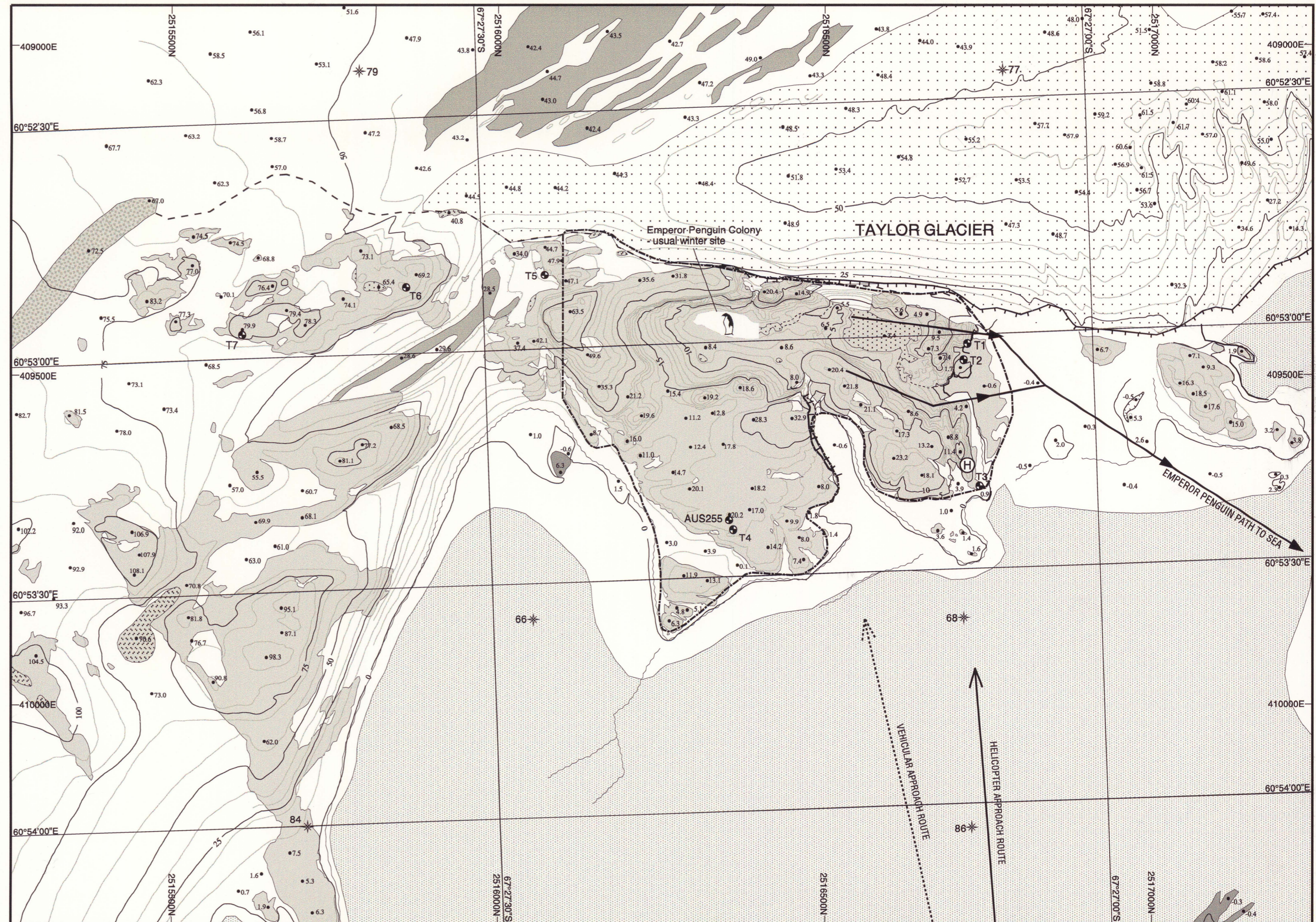
No wastes, including human wastes, are to be left in the Area.

##### (i) Measures that may be necessary to ensure that the aims and objectives of the Management Plan can continue to be met:

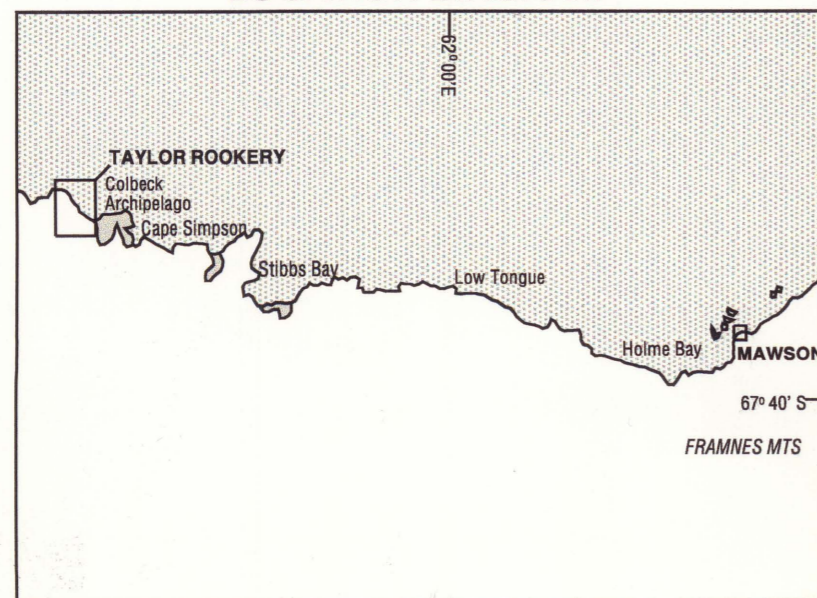
- Permits should specify the maximum number of people allowed entry at any one time.
- Visits to the Area should be kept to the minimum necessary to achieve the research and management objectives.
- Access should be permitted where necessary to place or remove structures or equipment.

##### (j) Requirement for reports:

Each permit holder shall submit a report to the permit-issuing authority detailing the activities undertaken within the Area including a summary of research findings, and comments indicating measures taken to ensure compliance with conditions. Where appropriate, the report may make recommendations relevant to the management of the Area, in particular, as to whether the values for which the Area was designated are being adequately protected. The report should be submitted as soon as practicable after the visit to the Area has been completed.



### LOCATION DIAGRAM



#### NOTE:

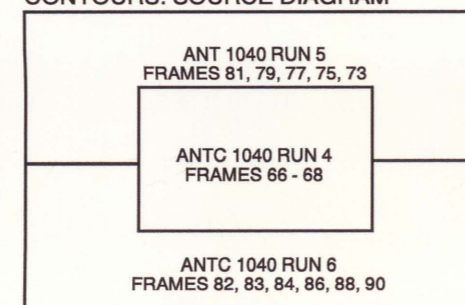
- Maps A, B & C referred to in the Management Plan text, have been revised and details from those maps have now been incorporated in the new map. Any queries, contact: Policy Section, Channel Highway, Kingston, Tasmania 7050.
- The helicopter landing site may only be used for Search and Rescue (SAR) purposes and holders of permits allowing legitimate scientific research.

### NATURAL HISTORY

The colony is one of only two emperor penguin colonies in Antarctica where the birds assemble on land to breed (the other colony is at the Dion Islands near the Antarctic Peninsula); all other emperor penguin colonies are situated on sea-ice. Although the colony at Taylor Glacier is situated on land the area used by the birds is flat and is covered in the colder months by a layer of hard-packed snow. Hence the surface on which the penguins breed resembles that at other colonies, the main difference being that at Taylor Glacier no potential exists for chicks to die if the sea-ice near the colony breaks out before the chicks reach independence.

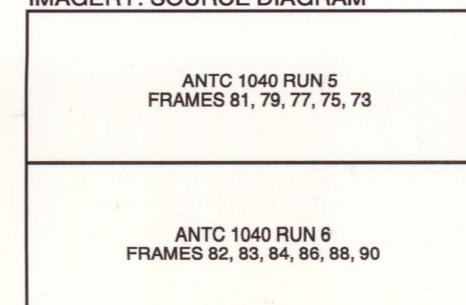
About 3,000 pairs of emperor penguins breed annually at Taylor Glacier. After arriving at the colony site in March of each year the birds spend about six weeks involved in pre-nuptial activities before mating. Egg laying occurs in mid May and is followed by the departure of the females for the sea, where they spend the winter while the male incubates alone at the colony. The females return to Taylor Glacier at hatching in mid July and brood the chicks while the males venture to sea for the first time in four months. After about a 50-day brooding period the chicks are left alone in creches while both parents conduct a shuttle service between the colony and the ice edge gathering food for themselves and their rapidly growing chicks. Chicks commence marching out of the colony for the ice edge in early December.

#### CONTOURS: SOURCE DIAGRAM



This diagram shows the film identifiers, run and frame numbers of the ANARE aerial photography from which lakes, rock edges and spot height elevations shown on this map have been derived.

#### IMAGERY: SOURCE DIAGRAM



This diagram shows the film identifiers, run and frame numbers of the ANARE aerial photography which constitute the imagery shown on this map. The image is a mosaic of eleven aerial photographs each of which has been scanned and digitally processed to form an orthophoto. The aerial photography was acquired from a Zeiss UMK 1318 metric camera. The film format is 120 mm by 166 mm.

