

(1) *Printing-costs.*

Although the expenditure on map printing has slightly decreased on last year's costs, there has been an increase of approximately 40 per cent. in the number of maps issued.

With the receipt of fresh supplies of lithographic paper, the Government Printer was able to reduce considerably the accumulated arrears of survey district maps.

The experimental work carried out in connection with the printing of the proposed Centennial Atlas has proved of great value in the publication of the 1 in 25,000 military topographical map series. The standard of printing in these series reflects credit on the efficiency of the printer and compares more than favourably with similar maps published overseas.

(2) *Map Sales.*

The sale for departmental maps has increased approximately 40 per cent. over the past year, while there has been a marked decrease in the free issue of maps to the Public Works Department and for departmental use.

The increase in sales is due to demand from the public and defence units for suitable maps for defence purposes, while the relative drop in free issue is largely due to the decline in routine work.

As there is uncertainty in obtaining regular supplies of lithographic paper from overseas, every endeavour is being made to economize in the use of maps.

(3) *Lithographic Draughting.*

(a) *Centennial Atlas.*—Unfortunately it was necessary at the beginning of the year to put aside all Centennial Atlas drawings, and transfer the draughting staff on to the preparation of military maps, aeronautical charts, and aerial map strips. The specialized training obtained by the draughtsmen on the Centennial Atlas drawing has proved of great value in this mapping-work.

It is proposed to proceed with the preparation of the Centennial Atlas as soon as a favourable opportunity occurs and staff are available for the purpose.

(b) *Special Feature Maps.*—(i) Pasture Maps: Four special maps illustrating the pasture survey carried out by the Scientific and Industrial Research Department in Hawke's Bay have been completed. Owing to war conditions both field and office work has been held in abeyance.

(ii) Air Plotting Charts: A series of three air plotting charts for the training of pilots in the R.N.Z.A.F. were drawn and published.

(iii) Air Training Maps: In addition to the 8 mile to an inch aerial strip maps previously prepared for civil aviation, a special series of 4 mile to an inch air training maps covering five selected areas have been prepared. These maps embody special features for aeronautical purposes and have been drawn in accordance with R.A.F. specifications. It is proposed to use these maps for the training of R.N.Z.A.F. pilots.

(iv) Aerial Map Strips: It has been necessary to revise the original drawings of the 8 mile to an inch aerial strip maps for reissue, this work being at present in hand.

(c) *Aerial Survey Mapping (Military Maps).*—Work in connection with the preparation of the 1 in 25,000 military map series has been intensified during the year to meet the urgent needs of Defence authorities for maps in the Auckland, Wellington, and Christchurch areas.

Contracts for the aerial photography of 6,000 square miles were let to the New Zealand Aerial Mapping, Ltd., Hastings, 1,230 square miles of which have been completed to date. Special staffs have been set up in the districts concerned to supplement the work carried out by the Head Office staff.

As the two plotting-machines in Head Office were not sufficient to cope with the increased programme of mapping-work, the major portion of the area mapped during the year (see table below) has been carried out by plane table methods supplemented by aerial photographs.

It is not possible to give a complete summary of the cost of this work for individual areas. In all the sum of £6,572 has been expended during the year, which amount is distributed over the two map sheets already published and a number of sheets in the course of preparation.

An index of all aerial surveys carried out in New Zealand has been completed which gives particulars as to the areas covered by photography, the scale of the photographs, and their suitability for mapping and other purposes. As required, series of prints are added to the photographic library for inspection by other Departments.

District.	Area flown.	Area mapped.	Published.	Scale.	Mapping in Hand.
	Square Miles.	Square Miles.	Square Miles.		Square Miles.
Auckland	683	320	60	1/25000	300
Hawke's Bay	120	90	60	1/25000	146
Wellington	1/25000	240
Canterbury	426	60	..	1/63360	420
Totals	1,229	470	120	..	1,106

This mapping-work has been considerably intensified during the year, the number of staff engaged being doubled. It is anticipated that still further increase in the staff will be required during the coming year.