

The total expenditure apportioned among the various Chief Surveyors' and Head Offices is as follows :—

District.	Expenditure.		Percentage.
	£	s. d.	
Head Office	11,467	6 4	8·1
Auckland and North Auckland	44,413	14 6	31·3
Gisborne	5,689	3 2	4·0
Hawke's Bay	9,688	13 7	6·8
Taranaki	7,921	15 11	5·6
Wellington	18,318	8 7	12·9
Marlborough	4,456	8 11	3·2
Nelson	5,264	13 7	3·7
Westland	2,157	0 2	1·5
Canterbury	15,267	7 0	10·8
Otago	10,098	13 9	7·1
Southland	7,081	5 4	5·0
Total	141,824	10 10	100·0

SPECIALIZED ACTIVITIES

The following sets out brief reports on survey work of specialized nature carried out during the year :—

Triangulation

Geodetic Triangulation.—(a) Base-line Measurements: The measurement of three base lines in the South Island and the remeasurement of two old base lines in the North Island, which was commenced in February, 1947, was completed during the year. The special base-line equipment loaned by the Tanganyika Government was used and a total distance of thirty-four miles was double-taped in the period February to August, 1947. After the tapes were re-standardized by the National Physical Laboratory, Great Britain, the equipment was returned to Tanganyika.

Preliminary computations show that the results obtained were excellent and compared more than favourably with similar work carried out in other countries.

(b) La Place Longitudes: Observations for La Place longitudes at six stations in each Island will commence in April, 1948, and it is anticipated will be completed by the end of the year. This work will finalize all observations for the geodetic triangulation of the Dominion which was commenced in 1911.

Second and Third Order Triangulation.—It was possible during the year to complete the observational work of a section of the second order triangulation in the Southland District, covering an area of 1,500 square miles with thirty-six stations. This will serve to correct the large discrepancies in the old triangulation carried out in that district in the 1860's and 1870's.

Later in the year it is hoped to develop second and third order triangulation in the Rotorua - Taupo - King-Country area for the purpose of controlling the topographical mapping of that area, which is required for national development purposes.

Owing to the shortage of staff it was not possible to complete the precise-levelling traverse required for the purpose of fixing the portals of the proposed Rimutaka Tunnel. Six of the twenty-two miles had been completed up to January, 1947. Further work on this project will be put in hand during the year.

Previous reference has been made in this report to the amount of this type of work that is required by other Departments in various parts of the Dominion.