The Department of Health, in pursuance of its policy of maintaining a strict watch on foodstuffs offered for sale in the Dominion, called upon the Dominion Laboratory to analyse a large number of milks. It is very satisfactory to record that the percentage of samples not complying with the standard was very small, and the record is equally as good as in previous years. The Dominion Laboratory has for many years held the view that the reductase test for the bacteriological quality of milk gives more reliable results than the more complicated and expensive method of plating and counting. It is therefore very gratifying to note that the Ministry of Health, Great Britain, published during 1935 a report on "The Bacteriological Grading of Milk," in which it is stated that the reductase test is the most satisfactory method for controlling the bacteriological quality of milk-supplies.

As in previous years, a number of samples have been examined for the Mines Department, including samples from prospectors, and samples of mine airs. Numerous samples were analysed in connection with the purchase of stores by the Stores Control Board, Post Office, and other Government Departments.

Progress in coal research and utilization abroad is being watched, and the Fuel Chemist during his recent visit to Great Britain made direct contact with those engaged in fuel investigational work, and gained first-hand knowledge of the advances being made.

In addition to its normal technical services, the Dominion Laboratory is carrying out an increasing amount of research work. During the year under review the following investigations were in progress: Examination of volcanic material collected by the Geological Survey, for pozzolanic activity; analytical examination of mineral waters from the Rotorua-Taupo district; experiments to ascertain the effect of storage on the coking properties of bituminous coals; chemical analysis of New Zealand grapefruit juice, with a view to ascertaining a suitable maturity test; chemical examination of phormium leaf; the isolation of an alkaloid from ragwort; and the analysis of clay fractions of soils collected by the Soil Survey Division.

## METEOROLOGICAL BRANCH.

The inauguration of regular commercial air services in New Zealand, with the resulting demand for frequent reports of weather conditions along air routes and forecasts of future developments, has led to somewhat revolutionary changes in the organization of the Meteorological Office. A considerable increase of staff and an extension of the system of observation and reporting of the weather were involved. At present no service is given on Sundays or holidays, but the matter is under consideration. It will naturally take some years for the new and untrained personnel to reach their maximum efficiency, but those responsible are to be congratulated on having supplied the pilots of Cook Strait Airways and Union Airways with the necessary information prior to each flight since the inception of their services. This would not have been possible without the co-operation of the Controller of Civil Aviation, the Post and Telegraph Department, and the Marine Department. The cost of the service has been met by the Defence Department.

Schemes have also been drawn up in preparation for trans-Tasman and trans-Pacific air services.

During the year the Director visited Europe in order to attend the Conference of Directors of Meteorological Services at Warsaw in September and the Conference of Empire Meteorologists in London in August. His report, which will be read with interest, illustrates the great value of such conferences and of periodical visits by senior officers to the main centres of civilization.

The Director also draws attention to the necessity of sustained research into meteorological problems, which in most cases require for their solution a great accumulation of data covering a considerable period of years. Generally, this can only be obtained from an official service with its organized network of observatories and observing stations. Some valuable researches have been carried out by persons who are not and have never been associated with official meteorological services, but they usually refer to more or less isolated phenomena, and are generally concerned with the purely physical aspects of the subject.

During Dr. Kidson's absence the work of the Branch was carried on efficiently by Mr. B. V. Pemberton.

The usual regular publications, consisting of periodical summaries of climatological observations, have been maintained, and in addition, monographs dealing with special subjects have been published.

The Meteorological Branch has also assisted the land utilization surveys of North Auckland and Hawke's Bay by preparing notes on the climates of these regions.

The recording and discussion of climatic data, the inspection of stations, the observations of winds in the upper air, and other normal operations of the Meteorological Office have been carried on as usual. Observations of the wind in the upper air by means of pilot balloons are now made thrice daily instead of once, as previously, and the results are included in the reports furnished to air services.

The work of the many meteorological observers, most of which is of a purely voluntary character, is again gratefully acknowledged.

## GEOLOGICAL SURVEY.

This year the Geological Survey carried out field work in the Dannevirke, Reefton, and Whakaea districts. Excluding the Reefton area, which was geologically examined over twenty years ago, 450 square miles was mapped in detail.

Geological exploration of the Dannevirke Subdivision, begun this year, continues the systematic examination of the oil-bearing country along the east side of the North Island. Strong gas-vents occur in the district, but bores for oil have so far been unsuccessful.