

the Auckland Province, while prospecting-work was undertaken at Mossburn, in Southland, in order to produce serpentine for use in the southern districts.

Asbestos.—During the year considerable progress was made by the Hume Pipe Co. in preparing their mine at Upper Takaka for production. Their efforts have been concentrated mainly on the completion of the motor access road, the provision of housing accommodation, and the reconstruction of the treatment plant. It is hoped that in the near future this mine will be able to make a substantial contribution of asbestos fibre required in the manufacture of asbestos-cement products.

Copper.—Owing to the demand for diamond drills for urgent work in the exploration of more important mineral deposits, such as the Clarendon phosphate deposits, it has been impossible to commence drilling operations at Kawau Island.

Manganese.—A small production of manganese-ores, both of metallurgical grade and of chemical grade, was made from the Cloudeley Mine at Moumoukai. Another company is endeavouring to produce ore for shipment to America, while prospecting operations are also being undertaken on a manganese occurrence in the North Auckland district.

Non-metallic Minerals.—Increased interest was shown during the year in the prospecting and development of these minerals. In particular, 500 tons of bentonite were produced, and there are indications that overseas markets will absorb more of the New Zealand material after the war. A small production of magnesite used in finely ground form as a fertilizer in the tobacco industry in place of dolomite is also to be noted.

In connection with the development of non-metallics, it is of interest that a firm in the Nelson district has been for some time producing with modern equipment a range of finely ground products. In particular, the firm has been able to supply the requirements of the glass industry for pure calcium carbonate, which was previously imported from Australia.

Ore-dressing Tests.—Recently considerable additions have been made to the Thames School of Mines equipment in respect of ore-dressing apparatus, and the laboratory is now equipped with miniature ball-mill, classifier, jig, concentrating-table, and flotation plant, which allows of reasonably complete investigation being made into the dressing of various ores. Already this equipment has been placed in active use investigating problems in connection with the phosphate deposits of Clarendon and the scheelite deposits of Glenorchy.

LABORATORY INVESTIGATIONS

Laboratory work connected with the mining industry has been undertaken by the Dominion Laboratory along similar lines to that reported in previous years.

Samples examined included scheelite concentrates for export, gold and silver assays, mine airs and gases, stone-dusts, and brattice cloths. Analyses of coal and other fuel samples and a large amount of investigational work in connection with fuel problems were carried out by the Coal Survey Division of the Laboratory, in addition to further systematic work on the physical and chemical survey of the coal resources of the Dominion.

GEOLOGICAL SURVEY

During the year 1942-43 officers of the Geological Survey were chiefly engaged in examining and sampling deposits of possible economic value. These included phosphate at Clarendon, serpentine in North Auckland and near Mossburn, limestone in the Waimumu and Lumsden districts, diatomite at Akaroa, mica in South Westland, and clay in the Whangarei and Wyndham districts. Subsurface water-supplies are being increasingly used, and many bore-sites have been selected for the military authorities and others.

The possibility of utilizing volcanic steam was considered, and the Tokaanu and Whakatane districts were explored. Geophysical work was carried out and trial bores sunk. Geophysical examinations were also made in the Clarendon and Whakamaru districts.

The only new regional survey undertaken was that of D'Urville Island. The detailed mapping of the Grey Coalfield is nearly completed, and that of the Nightcaps-Ohai Coalfield was begun this field season.

The oil companies freely used the services of the palaeontological experts of the staff, and the petrologist made many determinations for the Railways, Dominion Laboratory, and Public Works.

No bulletins or lengthy reports were issued, publications for the most part being short papers of economic interest.

SCHOOLS OF MINES

The value of the scholarships offered annually by the Department for competition among students attending Schools of Mines within the Dominion has been increased to £65 per annum in the case of students who have to reside away from home while attending the University of Otago, and to £45 in the case of students who are able to reside at home while attending the University.

At the annual examination held in November, 1942, seven scholarship candidates presented themselves for examination. Scholarships were awarded to three candidates from the Dunedin School, and one from the Reefton School. Two candidates from the Thames School completed the examination.

The expenditure in the Schools of Mines for the year ended 31st March, 1943, was £3,695, as compared with £3,390 for the previous year.

MINERS' BENEFITS

The provision for payment of a miner's benefit is contained in the Social Security Act, which has been operative since the 1st April, 1939. One of the necessary conditions precedent to payment of the benefit is that the applicant should be seriously and permanently incapacitated by miners' phthisis or totally incapacitated by heart or other occupational disease associated with the mining service in New Zealand.