

LABORATORY INVESTIGATIONS

The following is a summary of work carried out at the Dominion Laboratory during 1948 in connection with minerals and the mining industry:—

Further work was done on the possible use of greensand in phosphatic fertilizers. The use of a mixture of dolomite and greensand for this purpose was shown to be of value. The suggestion was made that slag prepared in this way might be used for the reversion of superphosphate.

The work on glass-sands was continued. Analyses and grading tests were made on samples from several localities. The possibility of improving the sands by washing, magnetic separation, and chemical treatment was investigated.

A great deal of further work is being done on the black sands for the Iron and Steel Department.

The investigation of New Zealand diatomites for filtration use was continued.

Analyses and tests were made of a large number of materials for possible use as pozzolanas in concrete. A chemical method of evaluation in which the conductivity of a solution is measured is being used.

As usual, many analyses and assays for gold and silver were made for prospectors and others.

Limestones for agricultural use were examined.

Bentonite deposits from various localities were surveyed by the Geological Survey and samples from each locality were tested and analysed by the Laboratory. The data will be published.

Many clays were analysed and tested for suitability for various purposes.

The survey of coal resources was continued, many analyses being made of core, outcrop, and mine samples of coal.

Analyses of mine airs and gases were made, and stone-dusts were tested.

SCHOOLS OF MINES

The expenditure on Schools of Mines for the year ended 31st March, 1949, was £4,069, as against £4,884 for the year ended 31st March, 1948.

Three candidates, two from Otago University School of Mines and one from Reefton School of Mines, sat the annual examination for Government Mining Scholarships. One of the candidates from Otago, who had already secured a partial pass, completed the examination, while the other two candidates obtained partial passes.

Few candidates of recent years have offered themselves for the examination for the Government Mining Scholarship, and of the scholarships awarded by far the greater portion have gone to students at Otago University School of Mines who have already completed two or even three years of their mining course. The scholarship has in consequence failed in its function as an entrance scholarship to the University and has no longer provided the means and encouragement for young men resident in mining districts to undertake a University course in mining engineering. This is, of course, due in great part to the decline of metal mining in New Zealand and the reluctance of students interested in coal-mining to proceed to the University.

To meet this position it has been decided to discontinue the award of Government Mining Scholarships and in their place institute entrance bursaries in coal-mining engineering to the Otago University School of Mines. This is an essential part of the policy of the Mines Department to pay increased attention to education in coal-mining