For a class of twelve in petrography, and for any larger number than this in mineralogy, an assistant demonstrator would be necessary, for the reason that in these subjects, more especially in petrography, each student requires special individual attention and instruction in microscopic examination and the preparation of rock-sections, and one man cannot possibly do this work and yet cover the ground prescribed in the calendar in the time available during the session. From the foregoing it will be seen that should, of the large number of students to be admitted for next session, more than twelve qualify for entering the session after next any of the above three classes, by passing the annual examination in mathematics and chemistry according to the Council's ruling, and the entry up to twelve goes by priority of application for entry to the school, then those above that number will have to wait for admittance to these classes till the succeeding session. Being free, however, to take other classes included in the curriculum, they can so arrange that their time for study is fully occupied during the interval. From conversation I had with many of the new applicants I found that a number of them are very deficient in necessary preliminary knowledge, and have, I am afraid, little chance of passing in mathematics and chemistry at the end of the first year's course; but, though I pointed this out to them, their intention of joining the school remained unshaken. On consideration of all circumstances, the pressure for entry to the school will most probably be confined to next session; but, should it be repeated to the same extent for the session after next, a limit would have to be placed on the number of admittances, otherwise the resources of the school in accommodation, apparatus, instruments, &c., would be totally inadequate: they would, in fact, require to be more than doubled in order to meet all the necessary demands for proper teaching.

For the purpose of rendering his lectures more interesting and instructive to the students, the lecturer in general geology, Dr. Don, prepared at his own expense about two hundred lantern-slides, illustrating geological features and occurrences in various parts of the world, many of them, as he informed me, being copied from the admirable reports and monographs of the United States Geological Survey. He also followed the same valuable course as last year regarding practical instruction in field geology, by making, with his students, three field excursions, of which he most liberally paid the greater portion of the expenses. The first excursion during one day took in various places of interest on the Otago Peninsula, especially the Blowhole and the limestone quarries of Sandymount, and the interesting occurrence of auriferous volcanic rock at Hooper's Inlet. The second excursion, which occupied five days during the midwinter vacation, was to Catlin's River and Kaitangata. At the former place three days were spent in the study of the fossiliferous beds of Cannibal Bay, Catlin's River, and Owaka, and of the remarkable results of marine erosion on the neighbouring sea-coast. On the return journey a day was devoted to the inspection of the celebrated Kaitangata Coal-mine and the very fine and large mining machinery connected therewith. The third excursion, occupying two days, had for its object the study of interesting geological features around Palmerston, of the Hampden beds enclosing the celebrated Moeraki boulders—gigantic septaries, so far unique in the world—next, of the fossiliferous series of Oamaru and of the Devil's Bridge. Dr. Don, on behalf of himself and the students, expresses thanks to the General Manager of Railways for extending the concession in railway return fares from three days to eight days, so as to allow a longer stay at Catlin's; next, to Mr. W. P. Watson, the general manager of the Kaitangata Company, for permission to inspect the mine; and to Mr. J. Shore, the mining manager, for conducting the party through the workings, and in supplying sections of the workings illustrating the faulting of the coal-measures in that district. Dr. Don and the students are also very grateful to Mr. J. Paterson, the librarian of the Dunedin Athenæum, for permission to occupy his cottage during their stay at Catlin's River.

The resignation of Mr. P. Fitzgerald of his post as lecturer in assaying and metallurgy again deprives this department of the school of an able and energetic teacher, who performed his duties with exactness and conspicuous success. As one of our past students he certainly sets, however, a good example by his self-confidence and enterprise in trying to better his position by entering into private practice as an expert, and taking the principal active part in an undertaking to develop some of the neglected gold resources of this province.

Although the new testing plant has been specially reported on to the mining committee of the Council by Mr. W. Cutten, the lecturer on applied mechanics, under whose supervision it was erected, and also by Mr. Fitzgerald, who conducted its working since its completion, still I may be permitted to add here a few remarks concerning some alterations and additions which I consider would much improve its gold-saving facilities by amalgamation, and next in explanation of the objects of the plant—in fact, its value to the mining public. Regarding the amalgamating appliances in direct connection with the mortar-box at present in use, they consist of two silver-plated and amalgamated copper-plates divided by a very shallow and narrow quicksilver riffle, and at the end of the second plate of a deeper quicksilver riffle from which the crushed material runs on to two blanket strakes. In the working it has now invariably been found that the shallow dividing riffle and the succeeding copper-plate retained but a small percentage of gold, while the deeper quicksilver riffle at the end caught a much larger quantity. This points distinctly to the advisability of interposing between the copper-plates, instead of the present shallow riffle, a so-called deep-drop riffle, say, of 8 in. drop, such as are used in sets of three with great satisfaction in some of the best crushing-mills in Victoria, and in cases quite to the exclusion of copper-plates. The second copper-plate would need to be only a few inches broad, and be followed by a shallow catch-riffle, following which again would come the blanket strake, some 4 ft.–5 ft. larger than at present—an addition much needed for a more satisfactory saving of pyritous material. All these alterations and additions, which I beg strongly to recommend, can easily be effected, and at but a small expense—say, about £3. Regarding the value of the plant to the mining public, it consists, in my opinion, not so much in extracting the highest possible percentage of gold from any parcel of ore sent, but rather in the information imparted to the sender in the report accompanying the gold extracted. For he will find indicated in this report, as deducible from the results of the