

Both the mining and surveying classes have been well and regularly attended, and the students have made satisfactory progress. As nearly all of the pupils are as yet not sufficiently far advanced for practical work with the instruments, no field-work has been done, but, providing suitable instruments can be obtained, it will be very soon attempted.

Theoretical Chemistry.—General principles; outlines, atomic theory, atoms, molecules, specific gravity; combining weights, quantivalence, hydrogen, oxygen, and ozone, their properties, combinations, and preparation; synthesis and properties of water; chemical arithmetic; equations; calculations of percentage composition of compound substances from formulæ, and *vice versa*; reduction of volumes of gases to normal temperature and pressure, and reverse; density or mass; comparison thermometric scales.

Text-books: Bloxam's "Chemistry," and Lupton's "Chemical Arithmetic."

Practical Chemistry.—Preparation of reagents; separation of metals into groups and from each other, proceeding step by step to simple quantitative analyses; principles of volumetric analysis, standard normal solutions of reagents; tests and analysis of cyanide-of-potassium solutions. All these processes are shown and illustrated by laboratory-work.

Practical Assaying.—Fluxes—composition and properties; furnaces and appliances used; assay of gold, silver, tin, antimony, and lead ores for their metallic contents; calculation and reporting results in proper form.

Text-book for practical chemistry and assaying: Park's "Laboratory Instructions in Assaying and Practical Chemistry," 2nd edition.

The cost of material and fluxes for assaying and chemistry classes has been a heavy drain on my resources, as the number of public assays which tend to recoup the assay-office has been small. This decrease in the number of public assays is probably to be attributed to the attention of mining investors being attracted to dredging for some time past, and hence prospecting operations for quartz reefs are more restricted. Further appliances, such as a small rock-breaker or ore-crusher, and a suitable assay-balance, are much required, also a stock of chemicals and material.

The number of assays since the 1st December, 1899, has been about twenty; berdan tests, twelve; and a number of qualitative tests of minerals submitted by prospectors and others have been performed in most cases free of charge, as conducive to further prospecting being done.

Class-fees are—Mining, 7s. 6d. per quarter; surveying, 5s. per quarter; chemistry and assaying, each 7s. 6d. per quarter. No members' fees are required. Students also have the privilege of having fire-assays performed for them at half ordinary fees.

In conclusion, I would like to respectfully draw your attention to the facts that since the school has been reopened great interest has been taken by the students in the progress of the school, as will be seen from foregoing statement; and, further, as mining in this district promises to be an industry of great magnitude, it is evident that the Reefton School should receive in future a more liberal treatment than it has previously received for some time past. Also, I respectfully submit that no subsidies or grants have been received by the committee of the school for years past. It is also important that more efficient and extensive appliances should be provided for the use of students, those now in use being incomplete.

OTAGO SCHOOL.

The following is the annual report of Professor Ulrich, Director of the Otago School of Mines, to the Otago University Council:—

With this I have the honour to submit my annual report regarding the attendance, work, results of the annual examinations of the School of Mines during the past session (1899), together with remarks on practical teaching facilities, requirements, and other points concerning the school.

The attendance number of students during the past session was forty-eight, comprising forty-three regular students for the full course of the school, one student from the Thames School of Mines holding a Government scholarship and studying for the B.Sc. degree, New Zealand University, and four students who attended in special subjects only—viz., two in general geology, one in assaying, and one in assaying, metallurgy, and general geology.

Of the forty-three regular students, thirty-four were previous ones returned for the finishing or further prosecution of their studies, whilst the remaining nine comprised fresh men. One of these latter attended for only the last half of the session in subjects which he could follow and understand, but in which he did not sit for examination, intending to take the subjects again next session. All these new students are desirous, so far as I could ascertain, of gaining the associateship in mining and the certificate of metallurgical chemist and assayer, being prepared to attend the school for four years for the purpose if required. Owing to illness, one of the older students (not reckoned in the before-given number) was obliged, on medical advice, after a few weeks' study to cease attendance at the classes; and towards the end of the session other three students became ill, and lost a number of lectures, causing two to fail in the examinations in several subjects, whilst the third was too ill to attend the examinations. His status being, however, such as to require him to pass in only two more subjects for finishing his full course of study at the school, he will be permitted to sit for special examination in these subjects as soon as he has sufficiently recovered from his illness. With the exception of the cases just mentioned, the attendance of the various classes by the students has been very satisfactory, and there have been much fewer failures in the examinations (twenty-six against forty-nine) than last year. In this connection I may mention the gratifying fact that the eleven students who failed in mining last year all passed a second examination held during the past midwinter vacation.

The eight new registered students passed through the first year's course of the mining division, except four who failed in mathematics, one who gave up this subject after a short attendance, and