

The specimens of coal lately tested included samples from all parts of the local mines, and the results showed the Westport article to be one of the purest in the world. They also revealed the important fact that dip coal contains very little sulphur as compared with other kinds.

The school aims at acquiring the fullest possible information on this subject, and will prove as useful in connection with the coal industry as with other branches of mining. The laboratory is well supplied with apparatus and chemicals, and there is a good collection of mineral specimens, which is being constantly added to. A second-hand theodolite for teaching surveying is still a desideratum.

The want of a building of our own is a great drawback, as the rent of the present premises is a heavy tax on the resources of the school. A site was granted to our institution for this purpose, but we have since been informed that the Justice Department intend to use it for the extension of the Court buildings, and the committee are anxiously awaiting definite information on this point.

The text-books used in the school and the fees charged to students and members are the same as stated in last annual report.

NELSON SCHOOL OF MINES.

Mr. W. F. Worley, the Instructor, reports as follows :—

BLOWPIPE ANALYSIS CLASSES.

Two classes, an upper and a lower, were in session from 18th February to 25th November. With the exception of one or two unavoidable breaks, each class met weekly. The total number of boys belonging to these classes during the year was nineteen; two left during the year, leaving seventeen on the roll at the end of the year. The average attendance was rather more than twelve. The curriculum of study was similar to that of past years, and included the testing for gold by panning off in the dish, and when necessary the treating of the heavy residues with nitric acid; amalgamating the free gold with mercury, and thus recovering the gold in one piece after the mercury had been distilled off. Each boy was also taught how to use the blowpipe for the identification of ores of lead, tin, bismuth, arsenic, zinc, copper, manganese, chrome, antimony, iron, nickel, and cobalt. The boys in the upper class were also instructed how to take the specific gravity of a piece of metal, an ore, or a rock.

ASSAYING.

Only three assays were made for the public during the year, and not one of these calls for special mention.

ASSAYING CLASS.

I have long wished to hold a class for instruction in assaying, but the smallness of my laboratory has made it impossible. This year, however, a former pupil of my blowpipe analysis class was so anxious to learn assaying that I undertook to give him a course of lessons. By the end of the year he was about half-way through the intended course, and had been taught how to sample ores ready for assaying, and the usual fire assay of gold-bearing ores. If my laboratory were larger there would be no difficulty in getting several young men to take up this work.

LECTURES.

Two lectures on agricultural science were delivered before members of the Farmers' Union. The first lecture was given at Wakefield, and the other at Waimea West. In each of these lectures special stress was laid on the law of "minimum supply" of plant-food, or, in other words, it was clearly demonstrated that a satisfactory crop could not be produced if only *one* element of plant-food was missing in the soil. The importance of chemistry to agriculture was emphasized, and farmers were advised to find out what elements of plant-food were needed by each crop, and to see that the soil contained or got those elements in sufficient quantities. As an outcome of these lectures, one Wakefield farmer was induced to manure his hop-field with all the chemicals needed to produce a good crop of hops. As a result he had a good crop, and his hops have been declared by an expert to be the best in the district for this year.

OTAGO UNIVERSITY SCHOOL OF MINES.

Professor James Park, F.G.S., Director, reports as follows :—

The mining school for the session ending the 31st October, 1902, showed the satisfactory attendance of thirty-two registered students, and one casual student for one subject only—namely, practical assaying. The registered students attended with the intention of going through one or more of the courses prescribed in the calendar for the several divisions of the school. Of these, seven entered for their first year, leaving twenty-five in their second or third year.

Of students who entered for their final year, four completed their studies with success, and, having presented satisfactory certificates of time spent in practical mining or metallurgical operations, as required by Regulation 9, were awarded the diplomas and certificates to which they were entitled, as follows: John McKinlay, certificate of Metallurgical Chemist and Assayer; George Edward D. Cotton, diploma of Associate in Mining and certificate of Metallurgical Chemist and Assayer; John Porteus, diploma of Associate in Mining and certificate of Metallurgical Chemist and Assayer; John Henderson, B.Sc., diploma in Mining and certificate of Metallurgical Chemist and Assayer.

Diplomas and certificates were issued during the year to eight students who had previously passed their class examinations, on the production of the necessary certificates relating to practical work, as follows: Norman R. Fisher, diploma of Associate in Mining; George H. Royse, diploma of Associate in Metallurgy; William Shand Watt, diploma of Associate in Metallurgy; Adam Hay, diploma of Associate in Metallurgy; William E. Barron, diploma of Associate in Metallurgy;