

In conformity with the practice of the banks here, the value of the bullion is reckoned on the basis of—Gold, £4 per ounce; silver, 2s. per ounce; and this custom has been carried out in the tabulated statement of the ores treated in the experimental plant. Thirty parcels, of an aggregate weight of 32½ tons, have been treated in the battery attached to the school—namely, fifteen parcels, weighing 50,100 lb., were treated by pan-amalgamation; eleven parcels, weighing 20,810 lb., by the cyanide process; and four others, of a total weight of 1,170 lb., passed through the berdan. The average percentage extractions were 87·1 of the value by amalgamation, and 73·5 by the cyanide process. These extractions, owing to the different nature of the ore forwarded for treatment, are higher than usual, and there has been an increase in the number of parcels of ore which could be successfully treated by cyanide. The receipt of several rich parcels has made the total value of bullion recovered—namely, £834—much higher than usual, the richest ores being those from Guntown and Omahu, containing large quantities of silver-sulphides, and a rich mispickel ore from Coromandel. The whole of the bullion saved by the different processes has been returned to the respective owners of the parcels.

Appended hereto is a tabulated statement showing the method of treatment, percentage extraction, and other details relating to the separate parcels treated in the experimental plant.

Several additions and alterations have this year been made to the school-buildings, which are now the most extensive of any school of mines in the colony. An office and store-room have been built between the main building and the battery, and have proved very useful and convenient. The office was very much needed for the proper conduct of that part of the business of the school which lies outside of the teaching department, and the store-room has greatly relieved the previous overcrowding of the school class-rooms with assay materials, mineral samples, &c.

During January the metallurgical plant was overhauled and various necessary repairs executed, notably the renewal of the drying-furnace, which has been supplied with a new hearth and bridge, and is now again in good working-order.

The most noteworthy addition is the museum building, with a frontage to the Beach Road. It has been well built upon a broad concrete foundation, is 60 ft. in length, 25 ft. in breadth, and its appearance reflects credit upon the architect and builder. Gas has been laid on, and it is the intention of the Council to throw the museum open to the public at stated times during the day and evening. In accordance with plans and specifications drawn up by myself, some 70 ft. of wall show-cases, standing 7 ft. high, have been placed in the museum. These cases, which are ebonized outside and painted grey inside, have been provided with sloping and sliding shelves for the easy display of the exhibits, and have been built dust-proof; they contain 800 running feet of shelf-room, and I have just commenced the preparation of the necessary samples of rocks and minerals to fill the shelves. Already about a thousand samples of different kinds, as well as a number of models illustrating mining machinery and underground workings, have been placed in the museum, and I have more in readiness. The collection of suitable samples, their labelling and classification, will occupy much time, and, as the school staff is already fully occupied in other work, the museum will not be opened to the public view for several months. When fairly well stocked the museum should prove extremely useful to the prospector, the student, and the mining community generally. The Council deserve the thanks of the public for carrying the idea of a museum into execution, for the gathering-together of samples of the country-rock, the vein-stones and the minerals associated with the gold in this district, as well as the collection of similar specimens from other parts of the colonies, must prove of great benefit and assist in the further search for the precious metal. Already numerous samples have been donated to the school, and no doubt by gifts and exchanges from time to time the store of samples will gradually increase, and finally form a valuable collection. It is the immediate intention of the Council to build a series of centre show-cases to stand along the middle line of the building.

A picket-fence has been erected along the front and side of the museum building; the remainder of the old fence has been repaired, and a new cart-bridge has been laid down for the more convenient cartage of ore into the battery.

The general work of the school has been carried on as in previous years. While devoting due attention to theoretical work in the classes, I have endeavoured as far as possible to give prominence to the practical side of each subject, and the proximity of the mines and batteries is of invaluable assistance in this direction. Many excursions into the mines and across country have been made with the mining-geology classes, and much practical knowledge has been thereby gained by the students. Regular practice is taken each week in surveying, and the use of the instruments used in land- and mine-surveying thoroughly explained in the field. A new 4 in. Y theodolite has lately been acquired for the use of this class.

A number of the students in the metallurgy, assaying, and chemistry classes have throughout the year availed themselves of the opportunities afforded them of gaining practical experience in ore-treatment in the school experimental plant. The treatment of trial parcels of ore for the public is conducted under my personal supervision, and all the assays, valuation of bullion, and laboratory experiments are made by the staff of the school; but when no test for the public is in progress the students are allowed to run a parcel through the battery themselves, and by thus performing all the practical operations of the treatment they obtain an insight into working details which can be acquired in no other way. The number of students attending the classes during the different terms is given in the following tabulated statement. A very pleasing feature of the attendance was that several pupils—eight in number—took advantage of the Thames-Paeroa Railway to attend the evening classes at the Thames School. These students, after their day's work in the batteries at Karangahake, Komata, &c., was done, came down at considerable inconvenience and attended the school-classes, returning to their work again on the following morning. All the students sat at the end of the year for battery-superintendents' certificates.