90per cent. of the gold, it would save the place thousands of pounds. At present, in most instances, the tailings are allowed to run away into the rivers.

"Classes have been held during the year in the following subjects and at the following times, at Reefton:—Mining and mathematics (for mine-managers' certificate): Tuesday and Thursday, at 10 a.m.; Monday and Friday, at 8 p.m. Assaying: Monday, at 10 a.m.; Thursday, at 8 p.m. Laboratory and practical chemistry: Friday, at 10 a.m.; Thursday, at 8 p.m. General chemistry (for advanced pupils from schools): Saturday, at 10 a.m.; Wednesday, 8 p.m. (Boatman's). During the month of June, under your instruction, I held classes at Kumara, and part of August, September, and February at Denniston.

"In the mine-managers' class the surveying work taught up to the present has not been thoroughly practical. It is impossible to do this without a theodolite, as the use and adjustment of surveying-instruments and their application to mine-surveying cannot be shown. Mr. Caples kindly lent us his theodolite for some time, but, requiring it himself, it had to be returned. The Minister of Mines kindly promised to give a theodolite when in Reefton some months ago, but we have not received it yet. The subjects taught in this and the mathematical, mining, assaying, and chemical classes include arithmetic, logarithms, trigonometry, calculation of areas and co-ordinates of traverse, plotting the survey, mining geology, practical mining; how to timber, and sizes of timber for shafts, drives, stopes, &c., and proper manner to place it in position; strength of ropes, material and hydraulics; how to assay and test gold, silver, copper, lead, zinc, tin, antimony, &c.

"The number of students attending the different classes is about ten each; but I am sorry to say they do not come as regularly as I would wish. This is accounted for by their having to work on different shifts, and they cannot get away. In July six members of the school went up for the examination prescribed in the regulations attached to the Mining Act for certificates of underground manager, and five of them were successful. I have several attending the classes now who intend to go up next examination.

"My classes at Kumara were attended by about fifteen on an average. It seems a pity classes in a place like this cannot be carried on while the Instructor is away at other schools. During my visit they built an assaying-furnace; they have a nice little laboratory, and nearly all the appliances necessary for assaying and testing ores. At Denniston the School of Mines has a nice building, furnace, fair laboratory, &c. There are several students who are anxious to pass the examination necessary to qualify them for coal-mine managers, and I am certain if they had a little more instruction some of them would be successful.

"At Boatman's school there are also several members who would like to receive the instruction necessary to pass for mine-managers. I held classes here for about twenty days in early part of year. . . . I have also made a considerable number of assays and analyses during the year. The school is made use of to a large extent in this way, and it is always convenient for miners to get samples of from 1lb. to 200lb. treated for them, and to learn the result, by amalgamation, the same as a battery-test. In assays the result is always so much larger, which often leads people astray.

"In conclusion, as I leave the Government service at the end of the month, and know the wants of the Reefton School, . . . I would beg to recommend to the favourable consideration of the Hon. the Minister of Mines the question of helping it by subsidy, or supplying it with apparatus and appliances we are at present without, but which are necessary for the future carrying-on of classes. . . ."

Mr. Fenton draws attention to the want of a roasting-furnace and pans to treat pyrites in the Reefton district, some of which are rich in gold. Attention has been drawn in several of my previous annual reports to the loss of gold by not using concentrators and appliances to treat pyrites; but it is to be hoped the day is not far distant when this question will attract more attention, and when mill-proprietors and battery-managers will see the necessity of using every means of extracting the gold the pyrites contain, and will also look on the by-products as having a commercial value. But a small plant, such as Mr. Fenton recommends in connection with the School of Mines, would be of very little service to the district. The method of treating pyrites being so well known, and so largely used in the Victorian goldfields, many companies should in their own interest combine together to have pyrites works erected in the district. The test plant erected in connection with the Thames School of Mines has been utilised but very little by mining companies, only two parcels having been tested during last year; and it is questionable if one at Reefton school would meet with larger support. Such a plant would, however, be the means of instructing young students in the practical treatment of pyrites.

Mr. Park gives the results of treatment of ore tested at the School of Mines plant, Thames, by different processes of amalgamation, in which both hot and cold water was used, and also with and without chemicals; and draws attention to the use of copper-sulphate, which he states to be a mistake. The chemical action produced by the use of copper-sulphate in amalgamation is a question upon which neither chemists nor metallurgists are agreed; and yet many of them show that its use is an advantage. This subject is referred to in my remarks on mining in the Karangahake district, showing the different opinions of chemists and metallurgists as to the effects produced by the use of sulphate of copper and salt in amalgamation. The Thames School of Mines has developed into a valuable institution, eliciting a recognition of the value of such institutions by the people of the locality. That schools of mines are apprecioted in the adjacent colonies is evidenced by the encouragement to prosecute their studies given to the students attending them. Last year a silver medal was given by the Geological Society of Victoria to the student who had the highest marks in geology and mineralogy. This was awarded to Mr. R. M. Aitken, the newly-appointed Instructor in the Reefton School of Mines, who got 97·5 per cent. of the aggregate number; and for the present year Dr. Scheidel has offered a medal for the best student in chemistry and assaying. This gives the students an incentive to work hard during the year.