

saving processes. His wealth of information, gleaned from many authorities, and from prolonged study under Professor Ulrich and myself, in all the departments of mineralogy, mining, petrography, physics, chemistry, metallurgy, and assaying, has stood him in good stead before many a practical, well-informed, very particular, and very critical audience. His youth and native modesty are somewhat against him, but his real worth and thorough all-round competence for his present duties, will win for him the leading place in the first school of mines in the colony.

After spending four days at the Thames, lecturing and conducting classes, I proceeded with Mr. Fenton and Mr. Goodlet to Karangahake, about fifteen miles inland, leaving Messrs. Montgomery and McLymont in charge of the Thames classes. Warden Kenrick, who, as usual, had made all necessary arrangements, accompanied me to Karangahake and presided at the first meeting, which was attended by 150 miners. As there was no room at Karangahake large enough to accommodate such a crowd, Mr. R. K. Davis put his La Monte furnace at our disposal. This building was in course of erection and nearly finished, and through the efforts of Mr. Hazlett, the foreman, it was soon put in a condition suited to the purposes of the classes.

Next day about thirty of the miners took a half-holiday to go through the assaying processes with Mr. Fenton. Mr. Smith, the professional assayer at Karangahake, very kindly put his plant at our disposal for that purpose. This was really a kindness, as we were utterly destitute of balances and crucibles, and it is an unheard-of thing for an assayer to expose his delicate balance and fine crucibles and weights to the rough handling of outsiders; but in the keenness of the interest taken by both Mr. Davis and Mr. Smith this was quite forgotten for the moment.

About 180 miners turned up at the second lecture, and on the third day from 70 to 90 of the miners were engaged in relays all the afternoon assaying with Mr. Fenton, many of them taking an active part in all the processes except the weighing of the fine metals, in which they could not participate owing to the small size of the balance-room.

In the evening at 7 o'clock we found about 220 men assembled for the testing class and lecture, and we found the furnace-room far too small to accommodate them in the usual way. Steps were immediately taken, however, to plank the rafters, and in this way 70 or 80 men had accommodation overhead, and there they remained in perfect silence, looking down on the proceedings at the testing table for four hours.

At this meeting Mr. McLaren, Mining Inspector, presided, and, by his geniality and enthusiasm and knowledge of the men, did good service in explaining from the chair the object of the classes, and urging all to avail themselves of the facilities for technical instruction in their own industry now placed at their disposal.

The meeting here was opened about 7 p.m. and it was after midnight before it broke up. It was indeed, without exception, the most enthusiastic meeting I have ever had on the goldfields. Most of the men had come with paper and pencil, and those who were not themselves taking part in the processes were taking, as well as they could, notes of the proceedings. I was never so impressed as I was that night at Karangahake with the intelligence, perseverance, and energy which the miners can bring to bear on any subject in which they are intensely interested. Here we had many of them analysing and assaying silver ores, with quite sufficient accuracy, by the usual laboratory and furnace processes, while three days before very few of them could identify silver ore when they saw it, much less could they form any idea of the proportion of silver which it contained.

While staying at Karangahake I visited, with Warden Kenrick, Messrs. Gavin, Davis, Fenton, and others, the principal mines in the district—the Woodstock, Diamond, Adeline, Golden Crown, &c. In these visits, as indeed everywhere on the goldfields, the mine managers gave, in the frankest manner, all information about their mines and operations, and thus put me in a position to compare with each other the processes employed in all parts of the colony.

I had at Karangahake also the advantage of Mr. Gavin's experience as manager of many a mine. He, like Mr. Fenton, knew every mine and miner from Coromandel to Waiorongomai, and, as the result of years of close observation, could show the outcrop and underlie of every known reef in that rough country.

I devoted a day also to the gold- and silver-bearing reefs of the Waihi and Owaharoa Districts, with Messrs. Walker, Fenton, John Moore, Humphrey, and Welsh, and visited the Martha, Silverton, Rosemount, Walker's, and other most interesting mines. The quartz here has a structural peculiarity, which leads me to think that most of the silver bearing stone in this district is of hot-water origin.

From Karangahake I returned, with Mr. Fenton and Goodlet, to take the place of Messrs. Montgomery and McLymont at the Thames, while Mr. Montgomery succeeded me at Karangahake. During my second visit to the Thames I continued, with Mr. McLymont, the testing classes and course of lectures already described for six days, Mr. Fenton being engaged with his assaying class with his usual success.

From the Thames I proceeded, with Mr. Fenton and Mr. Goodlet, to Waiorongomai and Te Aroha, where Messrs. Montgomery and McLymont had been conducting testing and blowpipe classes for three days before our arrival.

At Waiorongomai I delivered two lectures to an audience of about 150 men; and with Messrs. Montgomery and McLymont conducted a testing class for two hours each evening, Mr. Fenton meantime carrying on his assaying operations on the blacksmith's forge during the day.

At Te Aroha I delivered one lecture, and showed for two hours in the evening the process for testing metallic ores. The attendance was large and, as usual, eagerly attentive; but it is needless to say that little could be done with so large a subject in the course of one day. The majority of the audience at Te Aroha had come in from Waiorongomai, chiefly of course to attend the classes, but also to concert with the Te Aroha men measures, and to elect a local joint committee to co-operate with the Thames central committee in their efforts to form a strong comprehensive school of mines for the Hauraki.