

“The classes have been carried on regularly throughout the whole year, and the beneficial results of these institutions are now freely acknowledged throughout the district, and, in fact, all over the West Coast.

“Classes have been established at Progress, Merrijigs, Denniston, Brunnerton, and Boatman’s, for the convenience of those who cannot attend the Reefton School; all these have met with fair success, and are still being carried on to advantage.

“The mining and surveying classes still continue to be the most popular, and best attended, notwithstanding an increase of students to the assaying and chemistry classes.

“The following table will show the attendance at the different classes and schools during the past year:—

Name of Class and School.	First Term.	Second Term.
“ Reefton, Assaying and metallurgy	16	14
“ “ Practical chemistry	12	13
“ “ Theoretical chemistry	12	13
“ “ Land- and mine-surveying	15	15
“ “ Mining and mathematics	15	18
Boatman’s, Mining and mathematics	14	...
Boatman’s, Chemistry	6
Progress, Mining and surveying	20
Merrijigs, Mining and mathematics	5	4
Total attendance at all classes	89	103
Total number of individuals	46	57

“This does not include Brunnerton, with from fifteen to twenty members, and Denniston with about ten.

“*Practical Assaying and Metallurgy.*—This class is well and regularly attended by students of various occupations, who are instructed in the assaying of gold, silver, lead, copper, antimony, tin, bismuth, chrome, iron, &c., both by dry and wet methods, and in the use and composition of the fluxes and re-agents. Also in the smelting, refining, and valuing of gold and silver bullion, the dressing of copper-plates, and the chemistry of amalgamation. During the year many assays have been made on the numerous heaps of tailings on the field to show their value, and also what percentage can be extracted by mechanical means. The students have also been instructed in testing the purity of the material used, and in sampling, which is very frequently the source of error. The attendance at this class has been good, it now being seen that this knowledge, with chemistry, is required for those engaged in all processes for the extraction of metals from their ores, whether mechanical or chemical.

“*Practical Chemistry.*—This class is attended by almost the same students as attend the assaying, but not as regularly. The work done during the past year has been preparing re-agents and salts, testing for metals and acids, separation and detection of metals, and mineral substances. Qualitative and quantitative analysis gravimetrically, and quantitative volumetrically. Various samples of coal, limestone, and silicates have been analysed. Various samples of tailings and cement were tested by chlorine and cyanide, the latter giving very fair extractions. Cement was also treated in lumps, but, owing to the difficulty in washing the cyanide solution out again, the experiments were only partially successful.

“*Theoretical Chemistry.*—This subject has only partly been treated on during the past year, the work being principally in the principles of chemistry, atoms, molecules, quantivalence, specific gravity, formulæ, properties of gases, solids, and liquids, and the occurrence, preparation, properties, and uses of some of the non-metallic elements, illustrated by various experiments. Text-book, ‘Bloxam.’

“*Mining and Mathematics.*—These two subjects being so closely connected with each other are taken together, and the students are instructed in logarithms, elements of plane trigonometry, mining geology, strength of materials, timbering of shafts and drives, chambers, stoping and passes; formation of lodes, leads, and veins; pumping and pitwork-engines, thickness metal in pipes and pumps; hauling and winding engines, horse-power; boilers; ventilation—natural, furnaces, fans, splitting of airways, gases met with in metal and coal-mines, composition and detection; friction; explosives—use, strength, composition gases evolved, charging and firing; water-power wheels, horse-power, measurement of water. The majority of the students attending this class are miners, who take a great interest in the work given, which embraces all subjects necessary for the examination for certificates under “The Mining Act, 1891,” excepting surveying. In August, 1892, I sent five candidates for examination: three for mine-managers and two for engine-drivers, all of whom passed first-class. In January, 1893, there were six candidates: two for mine-managers and four for engine-drivers, the result of which is not yet known.

“*Land and Mine Surveying.*—Evidence of the usefulness of this class has already been shown in this district. The practical work performed by some of the students show that they understand the subject. It is attended by most of those who attend the mining and mathematics, and is a subject in which great interest is taken. Instruction is given in the compass, miners’ dial, and theodolite with adjustments; also in tabulation of traverses, calculation of areas, plotting by protractor and rectangular co-ordinates, levelling, and the calculation of heights and distances.

“*Geology and Mineralogy.*—These classes, I regret to say, were discontinued, owing to the small attendance, occasioned by most of the students leaving the town. There is, however, every probability of a start being made again this year.

“*Boatman’s.*—The attendance at this school continued to be good until about the middle of the year, when a considerable falling-off took place, and chemistry was taken as the subject instead of