

quarries and mines, relative strengths, action, gases evolved, composition; charging bore-holes; firing explosives; quantity to be used. Hauling and winding—safety-cages; man-engines; strength of ropes; strength of timbers. Water-power—turbines, pelton-wheels, calculation of horse-power and flow of water from boxes and nozzles.

“Text-book used: Gordon’s “*Miner’s Guide*,” 5s.; Government Printer.

“*Land- and Mine-surveying.*”

“Adjustments of theodolite, dial, level; chain and steel tapes; traversing with theodolite and dial; connecting survey with standard meridian; ranging lines; division of land; computation of areas by latitudes and departures; reduction of slope-measurements; off-sets; chaining; computation of co-ordinates; balancing survey; plotting survey and off-sets. Mine-surveying: Different methods of connecting underground with surface meridian; magnetic variation; to reduce magnetic meridian to true meridian; conducting underground traverse with theodolite and dial; correcting magnetic survey by method; back- and fore-sights; holing. Mathematics: Equations; logarithms; plane trigonometry; solution of triangles; calculation of last or connecting line; of distance from working-face to nearest point on boundary of lease. Levelling: Recording levels; practice with level and staff; grading roads, tramways, and water-races; plotting and striking grades.

“*Practical Astronomy.*”

“The ecliptic; equinoxes; solstices; meridians; longitude; latitude; altitude; declination; right ascension; azimuth; use of nautical almanac; polar distance; zenith distance; hour-angle; sidereal time; mean time; solar time; parallax; refraction; retardation; acceleration; convergence of meridian; determination of meridian by star- and sun-observations, by single altitudes, equal altitudes, greatest elongation of circumpolar stars; use of star-charts; calculation of hour-angle, azimuth, and altitude of celestial bodies; determination of latitude by meridian altitudes; determination of time by star transits and sun-observations.

“*Mechanical Drawing.*”

“Use of scales; printing and lettering; shading; colouring; drawing to scale from copies and objects; portions of engines and other machinery; plans; sections; elevations.

“SCALE OF CHARGES FOR ASSAYS AND ANALYSES.

	£	s.	d.
“Bullion assays	...	0	5 0
Assay of quartz, pyrites, tailings	...	0	5 0
“ gold and silver ores, with parting assay	...	0	5 0
Examination and determination of minerals, rocks, or fossils, each	...	0	5 0
Assay of lead- and tin-ores, each	...	0	5 0
“ iron- and manganese-ores	...	0	10 0
“ copper- and antimony-ores	...	0	10 0
Analysis of limestone {complete	...	1	0 0
“ {partial	...	0	10 0
“ coals and fuels, each	...	0	10 0
“ rocks and soils {complete	...	2	0 0
“ {partial	...	1	0 0
“ fireclays and slags	...	1	0 0
“ waters {exhaustive	...	3	0 0
“ {partial	...	2	0 0
“ nickel-, cobalt-, chrome-ores, each	...	0	10 0

“*Class-fees.*”

“Registration or membership, 10s. for a year; all class-fees, 5s. per quarter for each subject, excepting mechanical drawing, 21s. per quarter.

“Students are supplied with crucibles, glassware, apparatus, chemicals, &c., free of charge.

“*Experimental Plant.*”

“Parcels of gold- and silver-ores up to three tons are treated and exhaustively reported upon at from £3 to £5 per ton, or part of a ton, according to the nature of the treatment required to extract the bullion. All expenses connected with the working-tests are paid by the school, and the bullion is returned to the owners.

“In concluding my report, I have to express my great obligation to the School Committee for their hearty co-operation in forwarding the interests of the school, and for the ready and generous manner in which they have at all times endeavoured to supply all the appliances and requisites for efficiently conducting the classes, so far as the funds at their disposal permitted. I have also to thank the different mine-managers for the facilities they have always placed in the way of myself and the students for visiting the mines under their charge; and also Mr. George Wilson, and many others, for rocks, minerals, and ores for the collection of the School of Mines.”

REEFTON SCHOOL OF MINES.

The Reefton School has been better attended last year, and the Instructor speaks more hopefully of the future results likely to be obtained. A very large attendance could not be expected, as most of the mines are situated some distance from Reefton, and the workmen do not have the same opportunities of attending the night classes as they have at the Thames School. The following