

During the year forty tests and assays were made for the public, only a few of which need special mention. Some stream-tin, said to come from one of the tributaries of the Buller River, gave good results; but some supposed tin-ore from Collingwood proved worthless. An analysis of coal from the Ennerglyn Mine gave the following results:—

Fixed carbon	...	...	...	...	...	48 per cent.
Hydrocarbons	...	...	...	...	...	41 "
Water	...	...	...	...	...	8 "
Ash	...	...	...	...	...	3 "
Total	...	...	...	...	...	100

Several stones were tested for gold, but most of them gave negative results. In some cases these worthless stones were carried fifty or sixty miles by prospectors, who, had they possessed the necessary knowledge, might have tested them upon the spot where found. Some dark-coloured crystals, found in the Takaka district, gave strong reactions for chromium, and were probably chrome garnets. A little self-imposed prospecting in the neighbourhood of the Ennerglyn Coal-mine led to useful results, which will probably prove of commercial value to the company.

Several interesting experiments were made with chemical manures, but the results of these belong more especially to agricultural science.

EXPENDITURE ON SCHOOLS OF MINES.

The following table shows the expenditure by the Government on Schools of Mines since their inauguration, exclusive of subsidies paid to the University of Otago towards the School of Mines in connection with that institution:—

Financial Years.	Subsidies towards the Erection of Schools of Mines, and Maintenance.		Chemicals and Apparatus, also Mineralogical Specimens supplied to Schools of Mines.		Scholarships.	Salaries of Teachers, and Travelling-expenses, &c.		Total Sums paid by the Department towards the Schools of Mines.	
	£	s. d.	£	s. d.		£	s. d.	£	s. d.
1885-86	...	...	36	19 9	...	1,223	9 10	1,260	9 7
1886-87	257	16 6	409	1 4	...	2,716	9 3	3,383	7 1
1887-88	253	15 9	253	14 1	...	1,714	9 6	2,221	19 4
1888-89	42	10 0	6	12 9	...	1,139	4 1	1,188	6 10
1889-90	142	2 0	181	14 10	...	716	3 10	1,040	0 8
1890-91	217	6 6	54	8 0	...	620	9 9	892	4 3
1891-92	181	14 0	...	...	...	689	5 9	870	19 9
1892-93	312	3 4	...	...	...	670	1 0	982	4 4
1893-94	197	0 5	...	...	...	858	19 4	1,055	19 9
1894-95	390	0 0	45	10 10	...	773	17 8	1,209	8 6
1895-96	820	0 0	...	...	50	849	3 0	1,219	3 0
Totals	2,814	8 6	988	1 7	50	11,971	13 0	15,324	3 1

The above statement shows the amount expended on the different Schools of Mines throughout the colony; but, in addition to this, the sum of £5,250 has to be added, as that has been paid to the School of Mines attached to the University of Otago, £500 being paid last year, which makes the total expenditure up to the 31st March last to be £20,574 3s. 1d. This expenditure has extended over a period of eleven years.

WATER-RACES.

WAIMEA WATER-RACE.

The ground that the original water-race commanded is getting pretty well washed away, at any rate as far as the fall for tailings will permit. There is still a considerable area of auriferous gravel extending further back into the range, but the distance from the valley is gradually increasing every year, and the creek-bed is steadily getting raised by the large quantity of tailings poured into the creek from the different claims, consequently both these elements, unavoidable in carrying on hydraulic-sluicing operations with success, retard the working of the back ground to advantage. There is, however, a large area of auriferous ground at the head of the Waimea Valley, as also in the middle branch, and preparations are now being made to allow this ground to be opened up.

The fluming across the Kawhaka Flat is now so decayed that an entire collapse may take place any day. The boxing is in such a condition that it is almost impossible to make any repairs. To avoid replacing this flume a deviation of the race was surveyed last year, and the construction of the work is now nearing completion. The length of the fluming that this deviation will dispense with is 70 chains, having an average height of trestles of about 30ft. To replace this flume, which is at the best of a perishable nature, and expensive to maintain, an open conduit has been constructed for a distance of 211 chains, at about 43ft. lower level than the present race. This means that, instead of having a head of 81ft. at the intake end of the siphon, there will be about 38ft., which is quite sufficient to carry all the water the race is capable of conveying. The whole of the ditching is completed, and there only remains to construct about 7 chains of low fluming, and a downtake pipe from the race at the higher level, about 11 chains in length, before the water can pass through the deviation. The cost of this deviation when completed will be about £2,300, and the expenditure on the work up to the end of March amounted to £1,284 1s. 3d.