

The following parcels were treated in berdans :—

—	Owner.	District.	Weight in Pounds.	Retorted Bullion.	Value per Ounce.
				Oz. dwt. gr.	£ s. d.
1	J. Adams ...	Thames ...	450	0 10 0	2 15 0
2	W. Marris ...	Thames ...	500	20 5 0	0 12 0
3	Hon. Mr. McCullough	Thames ...	6	0 17 4	3 0 9

The following were crushed in the battery preparatory to treatment, but after the assay-value had been obtained the treatment was discontinued :—

—	Owner.	District.	Weight in Pounds.	Assay-value.
				£ s. d.
1	E. Isaac ...	Te Parenga ...	300	0 1 0
2	E. Isaac ...	Te Parenga ...	560	0 1 1
3	Albert, G. M. ...	Tairua ...	1,000	1 5 7
4	Albert, G. M. ...	Tairua ...	1,000	0 10 6
5	E. Isaac and Thomson...	Te Parenga ...	200	Nil.
6			200	
7			200	
8	H. Reynolds ...	Coromandel ...	2,000	1 0 5
9	H. Reynolds ...	Coromandel ...	2,000	0 10 2
10	Te Puke Reefs ...	Te Puke ...	135	0 17 7
11	Te Puke Reefs ...	Te Puke ...	135	0 8 5
12	Waitara ...	...	1,200	Nil.
13	Waitara ...	...	900	Nil.

A parcel of 109½ oz. of amalgam from the Chicago Gold-mining Company, Tararu Creek, Thames, was retorted at the school for a yield of 24 oz. 7½ dwt. of bullion, worth £2 15s. per ounce.

#### WORK PERFORMED BY STUDENTS.

A large number of analyses have been made by the students, the Director, and his Assistant (Mr. W. A. MacLeod), and among them the following may be noticed as of interest :—

##### *Crystals from Una Hill (analysed by Mr. W. A. MacLeod).*

Carbonate of iron, 18·7 per cent. ; carbonate of magnesia, 25·9 per cent. ; carbonate of lime, 55·2 per cent. : total, 99·8 per cent. This was a milky-white specimen crystallizing in rhombohedrons, and affording excellent examples of twinning. The usual name given to the specimen on this field is calcite. It is sometimes called pearlspar, but, containing as it does a large percentage of carbonate of iron, it is rather ankerite, a mixture of brown and pearl spar. The samples on exposure rapidly weather and turn brown, due to the iron they contain.

##### *Waitekauri Quartz.*

SiO<sub>2</sub>, 87·75 per cent. ; MuO<sub>2</sub>, 1·83 per cent. ; Fe<sub>2</sub>O<sub>3</sub>, 4·54 per cent. ; Al<sub>2</sub>O<sub>3</sub>, 5·01 per cent. ; cobalt, trace ; nickel, doubtful : total, 99·13 per cent. From this quartz, which was the ordinary material going to the battery, the cyanide process extracted an appreciable quantity of cobalt, which coloured the slags in the melt a deep blue, and caused a certain amount of trouble.

##### *Mineral found 450 ft. below sea-level, Thames (analysed by Mr. W. H. Baker, and Mr. K. M. Graham.)*

MgO, 14·1 per cent. ; MnO, 3·8 per cent. ; H<sub>2</sub>O, 49·2 per cent. ; SO<sub>3</sub>, 32·5 per cent. : total 99·6 per cent. Name : Epsomite, containing manganese. This was bitter to the taste, coloured a faint-reddish colour, due to the manganese, and was found in incrustations 2 in. or 3 in. in thickness. The mineral is soft, H. about 2½, and effloresces on the outside. It is completely soluble in water.

##### *Mineral found at Waitekauri (analysed by Mr. F. B. Allen).*

This mineral was found in thin incrustations, with a mammillary structure, and in some instances an appearance of stalactitic forms. Resinous, brown, and honey-yellow in colour ; soft and brittle. Powder white—It proved to contain on analysis Al<sub>2</sub>O<sub>3</sub>, 40·2 per cent. ; SiO<sub>2</sub>, 22·7 per cent. ; H<sub>2</sub>O, 36·6 per cent. : total 99·5 per cent. Name : Allophane.

#### BULLION TABLE.

Herewith I forward a table for ascertaining the value of any kind of bullion by an inspection of the tables, obviating the necessity of making an arithmetical calculation for every degree of fineness as it occurs. The prices given by the banks at the Thames are £4 per ounce for gold, and 2s. per ounce for silver, and the tables have been constructed accordingly :—