

"The low extraction of the silver was due to the fact that ruby silver is not a free-milling ore, and will only yield its silver after being subjected to a chloridizing roasting, the expense of which the owner did not care to incur in consequence of the low-grade character of the ore.

"No. 14.—This was a rusty-coloured, iron-stained quartz, forwarded from Waiorongomai by Newsham and party. It was dry crushed, sampled, and assayed, showing the following assay-value per ton:—

" Bullion	...	...	...	...	...	...	Oz. dwt. gr.
							14 1 6
Gold	...	...	...	...	...	...	2 1 12
Silver	...	...	...	...	...	...	11 19 18

Value, £10 2s.

"The dry pulp, weighing 1,960lb., was raw pan-amalgamated with the proper chemicals, and yielded 7oz. 2dwt. of melted bullion, 173·0 fine in gold and 810·1 fine in silver, equal to a value of 16s. 3d. per ounce, representing a saving of 69 per cent. of the gold and 55·4 per cent. of the silver, or 65·5 per cent. of the original value of the ore.

"No. 15.—This was a parcel of 1,880lb. of ore from another portion of the same reef as No. 14 was obtained. It showed the following assay-value per ton:—

" Bullion	...	...	...	...	...	...	Oz. dwt. gr.
							17 4 3
Gold	...	...	...	...	...	...	4 12 2
Silver	...	...	...	...	...	...	12 12 1

Value, £20 6s. 2d.

"This parcel at the request of the owner was crushed wet, and passed over amalgamated copper-plates, which yielded 2oz. 4dwt. of melted bullion, 540·2 fine in gold and 441·4 fine in silver, equal to a value of £2 4s. 6d. per ounce, representing a saving of 30·8 per cent. of the gold and 8·7 per cent. of the silver, or 28·5 per cent. of the value.

"The tailings and blanketings were treated by raw pan-amalgamation, and yielded 9oz. 2dwt. 12gr. of melted bullion, 228·6 fine in gold and 733·2 fine in silver, equal to a value of £1 0s. 5d. per ounce, representing a saving of 54 per cent. of the gold and 63·1 per cent. of the silver, or 54·7 per cent. of the assay-value.

" Percentage recovered from plates...	...	...	Gold.	Silver.	Value.
			30·8	8·7	28·5
Percentage recovered by pan	...	...	54·0	63·1	54·7
Total recovery	...	...	84·8	71·8	83·2

"From these results it is seen that ordinary wet crushing and pan-amalgamation in charges can save a large proportion of the precious metals contained in the ore.

"No. 16.—This was a parcel of 1,660lb. of silver-bearing ore from the new find at the Great Barrier Island. It was forwarded by Mr. Jackson Palmer, M.H.R. The ore consisted of greyish-white iron-stained, somewhat friable quartz, containing silver, principally in the form of the free-milling chloride. It also contained a little free gold, existing in the stone in an excessively fine state of division. The ore was dried, dry-crushed, sampled, and assayed, and showed the following value per ton:—

" Bullion	...	...	...	...	...	...	Oz. dwt. gr.
							50 8 5
Gold	...	...	...	...	...	...	0 7 13
Silver	...	...	...	...	...	...	50 0 16

Value, £9 0s. 3d.

"The dry pulp was raw hot pan-amalgamated with chemicals, and yielded 41oz. of melted bullion, 009·2 fine in gold, and 974·7 fine in silver, equal to a value of 3s. 8d. per ounce, representing a saving of 94 per cent. of the gold and 93 per cent. of the silver, or 93·2 per cent. of the original assay-value.

"No. 17.—This was a parcel of roughly-ground ore from Lowrie's new find at Waitekauri, forwarded by Mr. James Corbett of Hikutaia. It was crushed dry, and showed the following assay-value per ton:—

" Bullion	...	...	...	...	...	...	Oz. dwt. gr.
							32 2 9
Gold	...	...	...	...	...	...	12 0 2
Silver	...	...	...	...	...	...	20 2 7

Value, £51 0s. 8d.

"It was raw hot pan-amalgamated, and yielded 1oz. 2dwt. of melted bullion, 330·8 fine in gold and 666·8 fine in silver, equal to a value of £1 8s. 5d. per ounce, representing a saving of 75 per cent. of the gold and 91 per cent. of the silver, or 76·3 per cent. of the value of the ore.

"No. 18.—This was a parcel of concentrates from the Norfolk Mine, concentrated by the Lührig vanners under the charge of Mr. G. S. Pitcairn, at the Norfolk battery. These concentrates were forwarded by the company to ascertain if a fair proportion of their bullion contents could be extracted by roasting and amalgamation. They were subjected to a thorough oxidizing roasting in