

running 19 ounces per ton the sands will run 22 ounces and the slimes 18 ounces per ton.

The tails from 6 Wilfley sand tables, which will run 5 ounces, are re-ground in one 5 x 20 tube mill and re-treated on 5 Deister tables. The tails from four sand tables treating the finer sands are retreated on old style Deister slimers. The tails from the 4 vanners are retreated on No. 3 Improved Deister slimers. The total tailings from the Deister floor pass over 28 canvas sheets before going to waste. Over the canvas tables the pulp is allowed to flow for about one hour, when the top is washed off and elevated to a Deister table, where it is cleaned. The underlying mineral is then washed off and settled.

The final tailings from a mill feed of 43 ounces will average 4.1 ounces, ratio of concentration 20-1, thus

FEED...			PRODUCT.		
	Mesh	%		Mesh.	%
On	8	.70	On	40	1.3
	10	2.10		60	12.
	20	34.		80	27.
	40	34.70		100	17.1
	60	14.		120	4.
	80	11.10		150	2.6
Through 80		3.40		200	22.0
			Through 200		14.0

Mill, 8-foot Hardinge Conical. H.P. used, 50. Speed, 27 R.P.M. Tons of ore treated per 24 hours, 48. Water used, 70 per cent. It should be mentioned that this 50 h.p. includes motor inefficiency.

EXTRACTION AND GRADE OF PRODUCT.

Unit	Feed Assay. ounces.	Tail Assay.	% of Extraction	Grade of product. Assay per ton.
Hand picking	43	41.4	.35	1500
Coarse jigs.	39	19.	51.30	1200
Fine jig.	40	18.	55.	1450
Wilfley sand tables	23	5.	78.30	975
Deister sand tables	21	6.	71.50	1150
Vanners	19	9.	52.20	500
Deister Slimers ...	9	5.5	40.	250
Canvas Sheets	4.5	4.	13.	200
				Bed skimmed (smaltite).
				Jigging through screen bed of.
				Treating sizes 8-40 mesh.
				Treating sizes 40-120 mesh.
				Treating sizes 120-slime.
				Retreating vanner tails.
				Tailings from Deister tables.

showing an extraction of 90.55 per cent. The sand in tailings will run 2 to 2½ ounces and the slimes 5 to 7 ounces.

COSTS.

Average costs will run:

	Per ton of ore milled.	Per ounce Recovered.
Concentrating	.670	.007
Power.....	.300	.008
Power plant repairs ..	.007	
Mill repairs	.326	.016
	1.303	.031

Fine grinding in tube mills. Mill—5-foot x 20-foot tube mill. Horse-power used, 55. Speed, 19 r.p.m. Tons of ore treated per 24 hours, 60. Water used, 60 per cent.

FEED.			PRODUCT.		
	Mesh	%		Mesh.	%
On	8	58.	On	40	1.
	10	10.		60	4.
	20	20.8		80	13.
	40	1.6		100	13.
	60	.8		120	4.
Through 60		.8		150	17.
				200	36.
			Through 200		12.

Improvements.

At present a hand picking section is being installed to increase the quantity of high grade, and reduce the values going to the stamps, also to get a better screening efficiency and reduce the quantity of fine material going to the stamps. This is illustrated on flow sheet.

OUR EUROPEAN LETTER

Electricity in British Mines — Government report on the Hulton Explosion and earlier reports — Interesting new electrical winding plant in Durham — South African mines still out in favour with the investor despite continuous growth of gold output — Substantial interest evidenced in the Giesecke ball mill — What it may do on the Rand — Oil market dull — Slow petroleum developments in Russia — Falling production in Galicia — Reasons and results of extraordinary London tin fluctuations —

(Exclusive correspondence of CANADIAN MINING JOURNAL.)

London, June 21, 1911.

Electricity in mines is one of the questions that is always being debated now and the definite statement

just published in the Government report on the Hulton colliery explosion is particularly interesting and important because of its bearing on the use of electricity in coal mines. The Government inspector says that he is perfectly satisfied that the use of electricity in the mine has no bearing on the disaster. Although this definite opinion is not read as absolving electricity from being a source of risk under any circumstances it will go a long way to reassure working miners and their leaders who have not been at all backward in declaring that the electric switch at the conveyor face was the initial cause of the explosion.

A Government committee was appointed to look into the whole of this class of operation as far back as 1902 and a second committee in 1909 revised the rules sug-