TR 10_121_122

R. 495

CONSOLIDATED GOLDFIELDS—RENISON LTD: MILL VANNER TAILING—TILTING DECK TESTS

Sample

The sample was received as pulp and a sample was obtained for sizing, and assayed with the following results.

Vanner Tailing

Sulphur 4.2 Per cent.
Total Tin 1.27 Per cent.
Vanned Tin 0.1 Per cent.
Tin recovered by vanning assay 7.9 per cent.

These preliminary examinations indicated that less than 10 per cent of the tin would be recoverable by gravity concentration and accordingly concentration tests were restricted to check on this low recovery.

Summary

Tilting deck tests on this material showed inverse concentration in all cases, two of which are quoted as being typical. Careful sizing to eliminate the coarser gangue from the deck feed could possibly result in some degree of concentration. The investigation was not extended to cover this modification.

Sizing analysis and vanning assay indicate little prospect of useful concentration results.

Sizing Analysis

Fraction		Per Cent Weight	Per Cent Tin	Per Cent Distribution Tin	Tin Cumulative
+200 B.S.		4.60	0.16	0.6	0.6
Cyclosizer fr.	1	4.70	0.23	0.9	1.5
	2	7.25	0.13	0.8	2.3
	3	9.50	0.14	1.1	3.4
	4	9.80	0.83	6.6	10.0
	5	7.25	2.21	13.2	23.2
	—5	56.90	1.66	76.8	100.0
Composite		100.0	1.23		

Test No.	Conc. Period Minutes	Deck Feed Gal/min/ft.	Deck Feed % Solids	Type	Deck Concentrates Per Cent Weight	Deck Concentrates Per Cent Tin	Deck Concentrates Per Cent Tin Dist.	Deck Tailings Per Cent Weight	Deck Tailings Per Cent Tin	Deck Tailings Per Cent Tin Dist.
Test at Deck Slope of 2 inches per foot										
4	6	1	20	Rougher	6.3	1.05	5.0	93.6	1.33	95.0
Test at Deck Slope of 1 inch per foot										
6	4	1	20	Rougher	17.0	0.87	11.8			
				Scavenger	6.5	0.93	4.8			
				Composite Ro.	23.5	0.89	16.6			