

350-352

LAUNCESTON, 12th September, 1914

N<sup>o</sup> 123.MT. BISCHOFF

Three samples were submitted for sizing analyses by Mr. L. G. Wilkins, H. Q. Metallurgist, Department of Supply & Shipping, Waratah.

The samples were labelled, Battery Discharge, Concentrate, and Tailing and were stated to be mill samples from the "40" mill at Waratah and obtained during the treatment of "Greisen" ore.

ASSAYS.

Reg. No. 350	Battery Discharge	1.02 percent Tin
" " 351	Concentrate	2.42 " "
" " 352	Tailing	0.52 " "

Recovery and ratio of concentration calculated from the assay values are 62.51 and 3.8 respectively.

SIZING ANALYSES.

(B.S. Screens to 200 mesh and minus 200 mesh by Infra-sizer)

Reg. No. 350. Battery Discharge.

Screen Size.	Percent.		Tin	Tin Distribution	
	Weight	Weight Cum.		Percent	Percent Cum.
+ 22	2.69	2.69	0.43	1.13	1.13
+ 30	6.61	9.30	0.55	3.56	4.69
+ 44	8.16	17.46	0.55	4.40	9.09
+ 60	10.91	28.37	0.67	7.17	16.26
+ 85	13.51	41.88	0.99	13.11	29.37
+ 100	2.94	44.82	1.37	3.98	33.32
+ 120	4.35	49.17	1.32	5.63	38.95
+ 150	6.19	55.36	1.48	8.98	47.93
+ 200	5.90	61.26	1.61	9.31	57.24
I.S. 1	7.92	69.18	3.36	26.09	83.33
2	4.84	74.02	1.22	5.79	89.12
3	5.72	79.74	0.73	4.09	93.21
4	4.47	84.21	0.59	2.59	95.80
5	3.47	87.68	0.45	1.53	97.33
6	3.18	90.86	0.31	0.97	98.30
7	9.14	100.00	0.19	1.70	100.00
Composite	100.00		1.02	100.00	

Reg. No. 351. Concentrate.

<u>Screen Size.</u>	<u>P e r c e n t</u>			<u>Tin Distribution</u>	
	<u>Weight</u>	<u>Weight</u>	<u>Tin</u>	<u>Percent</u>	<u>Percent Cum.</u>
		<u>Cum.</u>			
+ 22	0.90	0.90	0.75	0.28	0.28
+ 30	3.07	3.97	0.95	1.21	1.49
+ 44	5.75	9.72	1.01	2.40	3.89
+ 60	14.45	24.17	1.27	7.59	11.48
+ 85	20.27	44.44	1.67	14.01	25.49
+ 100	5.83	50.27	2.08	4.97	30.46
+ 120	7.05	57.32	2.21	6.45	36.91
+ 150	11.22	68.54	2.60	12.07	48.98
+ 200	10.06	78.60	3.45	14.36	63.34
I. S./1	10.40	89.00	7.22	31.08	94.42
2	3.43	92.43	2.66	3.77	98.19
3	3.37	95.80	0.98	1.37	99.56
4	1.58	97.38	0.26	0.17	99.73
5	0.90	98.28	0.19	0.07	99.80
6	0.62	98.90	0.26	0.07	99.87
7	1.10	100.00	0.29	0.13	100.00
Composite	100.00		2.42	100.00	

REG. No. 352.

Tailing.

<u>Screen Size</u>	<u>PERCENT</u>			<u>Tin Distribution</u>	
	<u>Weight</u>	<u>Weight Cum.</u>	<u>Tin</u>	<u>Percent</u>	<u>Percent Cum.</u>
+ 22	4.10	4.10	0.52	4.12	4.12
+ 30	9.27	13.37	0.49	8.79	12.91
+ 44	8.43	21.80	0.49	7.99	20.90
+ 60	11.50	33.30	0.49	10.92	31.82
+ 85.	10.89	44.19	0.48	10.12	41.94
+ 100	2.30	46.49	0.48	2.13	44.07
+ 120	3.12	49.61	0.44	2.65	46.72
+ 150	4.61	54.22	0.46	4.10	50.82
+ 200	5.55	59.77	0.25	2.69	53.51
I. S./1	6.87	66.64	0.92	12.23	65.74
2	5.86	72.50	0.68	7.72	73.46
3	6.61	79.11	0.66	8.44	81.90
4	5.14	84.25	0.66	6.56	88.46
5	4.09	88.34	0.54	4.28	92.74
6	3.46	91.80	0.42	2.81	95.55
7	8.20	100.00	0.28	4.45	100.00
Composi te	100.00		0.52	100.00	

TIN RECOVERIES IN SIZINGS.

Table showing tin distribution in Battery Discharge and calculated recovery in each sizing.

<u>Size.</u>	<u>Battery Discharge Percent Tin Distribution</u>	<u>Percent Tin Recovered in each sizing</u>
+ 22 mesh	1.13	15.48
+ 30 "	3.56	21.12
+ 44 "	4.40	34.05
+ 60 "	7.17	66.02
+ 85 "	13.11	66.56
+ 100 "	3.85	78.42
+ 120 "	5.63	71.37
+ 150 "	8.98	83.75
+ 200 "	9.31	96.10
I. S. 1	26.09	74.22
2	5.79	40.62
3	4.09	20.79
4	2.59	4.10
5	1.53	2.88
6	0.87	4.26
7	1.70	4.84

CHIEF CHEMIST & METALLURGIST.