O T T A W A July 23rd, 1940.

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of the

ORE DRESSING AND METALLURGICAL LABORATORIES.

Investigation No. 869.

Concentration of Nickel-Copper Ore from
the Pacific Nickel Mines Limited,
Choate, British Columbia.

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Shipment:

A shipment of 2,500 pounds of copper-nickel ore was received on June 28th, 1940, from the Pacific Nickel Mines Limited, situated at Choate, British Columbia. This property formerly was known as the B. C. Nickel

Mines Limited.

This shipment was made for the purpose of obtaining a quantity of nickel-iron concentrates for special research at the Mellon Institute of Industrial Research, University of Pittsburgh, Pittsburgh, Pa. The ore was somewhat old and oxidized.

Concentration:

This shipment was crushed and sampled and was then milled under the conditions that were found most suitable in former concentration of B. C. Nickel ore. Two concentrates were recovered, the second being chiefly the result of a scavenging of the flotation tailing.

Results:

Product	Weight, per cent	Assays, per cent			Distribution, per cent	
		Cu	Ni	Co	Cu	Ni
Feed	100.00	0.36	1.41	0.20	100.0	100.0
Concentrate No. 1	26.11	1.50	4.58	0.44	88.3	84.8
Tailing No. 1	-	0.06	0.29	0.10	-	-
Concentrate No. 2	3.29	0.50	1.79	0.42	3.7	4.2
Tailing No. 2	70.60	0.05	0.22	0.17	8.0	11.0
Combined concentrates	29.40	1.39	4.27	-	92.0	89.0

The concentrates that were recovered were dried, sampled, and analysed as shown below:

Concentrate Analysis:

	Weight, pounds	Cu, per cent	Ni, per cent
Concentrate No. 1	167	2.52	4.55
Concentrate No. 2	12	0.90	1.74
Combined concentrates	179	2.41	4.36

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The oxidized condition of the ore made the flotation slow, and also resulted in a decreased recovery.

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