

O T T A W A

August 30th, 1941.

R E P O R T

of the

ORE DRESSING AND METALLURGICAL LABORATORIES.

Investigation No. 1084.

Graphite Ore from Lot 21, Ranges X-XI,  
Lochaber Township, Papineau County, Quebec.

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Graphite Ore from Lot 21, Ranges X-XI,  
Lochaber Township, Papineau County, Quebec.

Shipment:

A shipment of graphite ore, weighing 53 pounds, was received on August 27th, 1941. The ore was taken from Lot 21, Ranges X-XI, in Lochaber township, Papineau county, Quebec.

The shipment was submitted by R. F. Kelly,  
67 Yonge Street, Toronto, Ontario.



Purpose of the Investigation:

The investigation was made to determine the grade and character of a concentrate recovered from the ore.

Character of the Ore:

The ore was a much weathered, porous material consisting chiefly of graphite and limonite. It is obviously from the surface of the deposit.

Sampling and Analysis:

The shipment was crushed and sampled by standard methods and was found to contain:

Carbon - 23.53 per cent.

INVESTIGATIVE PROCEDURE:

The ore was concentrated by flotation. The concentrate was dried and screened on 65-, 120- and 150-mesh screens, giving the following four products:

- +65 mesh concentrate.
- 65 +120 mesh concentrate.
- 120 +150 mesh concentrate.
- 150 mesh concentrate.

Each product was sampled and assayed.

Results:

Product	Flotation.			
	:Weight, : : per : : cent	: Assay, : : C, : : per cent	: Distribution : : of carbon, : : per cent	: Ratio of : concen- : tration
Feed	:100.00	23.73	100.00	
Concentrate	: 37.00	62.50	97.46	2.7:1.
Middling	: 5.86	7.28	1.79	17.1:1.
Tailing	: 57.14	0.31	0.75	

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(Results, cont'd) -

Product	Screened Concentrate.		Assays,	
	Weight, per cent	Weight per cent in terms of feed	per cent C	Insol.
+ 65 mesh	31.27	11.57	84.51	9.62
- 65 +120 "	30.07	11.13	56.72	
-120 +150 "	2.57	0.95	45.08	
-150 "	36.09	13.35	49.49	
Total conc.	100.00	37.00	62.50	

The coarse flake +65 mesh graphite assayed 84.5 per cent carbon, but owing to the excessive oxidation it is more difficult to obtain clean concentrates in the finer sizes.

A representative sample of the ore from below the oxidized zone would be required in order to show the grades of concentrate that could be expected from clean ore.

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