

O T T A W A

September 2nd, 1941.

R E P O R T

of the

ORE DRESSING AND METALLURGICAL LABORATORIES.

Investigation No. 1085.

Graphite Ore from Lot 22, Range X,
Lochaber Township, Papineau County, Quebec.

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Graphite Ore from Lot 22, Range X,
Lochaber Township, Papineau County, Quebec.

Shipment:

A shipment of graphite ore, weighing 20 pounds, was received on August 27th, 1941. The ore was taken from the south half of Lot No. 22, Range X, 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 soft grey graphitic schist which has been somewhat oxidized and contains minor quantities of iron oxide. The material was obviously taken from or near the surface of the deposit.

Sampling and Analysis:

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

Carbon - 21.17 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, :	Assay, :	Distribution :	Ratio of
	per :	C, :	of carbon, :	concen-
:	cent :	per cent :	per cent :	tration
Feed	:100.00	21.67	100.00	
Concentrate	: 32.60	60.13	90.38	3.1:1.
Middling	: 16.49	9.51	7.23	6.1:1.
Tailing	: 50.91	1.02	2.39	
:	:	:	:	:

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(Results, cont'd) -

Screened Concentrate.					
Product	Weight, per cent	Weight per cent in terms of feed	Assays, per cent		
			C	Insol.	
+ 65 mesh	34.37	11.20	87.16	8.40	
- 65 +120 "	32.88	10.72	51.74		
-120 +150 "	2.86	0.94	38.24		
-150 "	29.89	9.74	40.39		
Total conc.	100.00	32.60	60.13		

The coarse flake +65 mesh graphite assayed 87 per cent carbon, but owing to 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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