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ALL OFFICIAL CORRESPONDENCE SHOULD BE ADDRESSED TO THE DIRECTOR.

DIVISION OF ORE DRESSING AND METALLURGY

G. C. MACKENZIE, B.SC., CHIEF OF DIVISION
W. B. TIMM, B.SC., 1ST ENGINEER
C. S. PARSONS, B.SC., 2ND ENGINEER
H. C. MABEE, B.SC., CHEMIST
R. J. TRAILL, ASST. CHEMIST
B. M. DERRY, MILLMAN

DEPARTMENT OF MINES
CANADA

MINES BRANCH

EUGENE HAANEL, PH. D.
Director.

OTTAWA, Ont., July 25th, 1918.

Report of Ore Dressing and Metallurgical Laboratories.

Test No. 98

Two shipments of Titaniferous Iron Ore were received, one on March 21st, 1918, and the other on March 26th, 1918, from Dr. Goodwin, Kingston, Ont.

No. 1 Shipment----------2 Bags.
Gross Wt.----------125 pounds.
Analysis------Fe------46.23%
------TiO_2----27.56%

No. 2 Shipment----------2 Bags.
Gross Wt.----------150 pounds.
Analysis------Fe------46.63%
------TiO_2----28.51%

Test work was conducted on these two lots to make a separation of the Iron from the Titanium. The results obtained were not promising, showing that it is not possible to affect a separation by mechanical means of Ore Dressing. The results are given in the following tables.

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Test No. 1 ---Separation by means of a horse-shoe Magnet, with sheath on, under water.

Mesh	Wt. of Ore Taken Grams.	Product	Wt. of Products Grams	Analysis % Fe	% TiO_2
20	2000	Magnetic	790	50.05	24.40
		Non Magnetic	186	32.29	40.15
35	1000	Magnetic	154	50.45	24.20
		Non Magnetic	47	31.86	39.75
80	1000	Magnetic	161	49.60	25.20
		Non Magnetic	38	32.05	38.35
150	1000	Magnetic	159	49.38	32.08
		Non Magnetic	41	25.22	35.80

Test No. 2--- Separation by Water Concentration on Sand Table after crushing to 30 mesh.

Product	Weight Lbs.	% Fe. Analysis.	% TiO_2
Concentrates	82.0	46.30	29.67
Middlings	16.0	42.26	24.20
Tailings	4.0	35.79	24.00

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"3"

Test No. 3.--- Magnetic Separation (Wet) on the Ullrich Magnetic Separator-- after crushing to 35 mesh.

Product	Weight Lbs.	Analysis % Fe.	% TiO_2
Ring # 1	27.5	50.95	22.93
Ring # 2	5.5	50.35	23.44
Ring # 3	2.0	48.22	27.65
Ring # 4	6.5	29.72	44.24
Middlings	0.5	31.44	35.36
Tailings	4.0	30.43	34.75