010

2.838

REPORT OF SAMPLING PROCEEDURES

BULK SAMPLE MAGNETITE

FROM CLAIM #PA. 295109 & PA. 295106

FOR BENEFICATION TESTS

During July 26 to 30th, 1971, a 600 lb. bulk sample was taken from Claims #PA. 295109 and PA. 295106. The sample was broken out using sand blasting techniques.

The areas had been stripped by bulldozer by the previous owners (Pershland Gold Mines Ltd.) in the fall of 1957, under the supervision of R.G. Ramsay. Pershland optioned the property to Moore Iran Ore of Duluth, Min. U.S.A. in 1960, and to Algoma Steel of Sault Ste. Marie in 1967. There was no noticable evidence of either of these companies having done any sampling in the areas stripped.

Approximately 600 lbs. of Magnetite assaying 33 to 38% iron was taken, approx. 350 lb. from claim # 295109 and 250 lb. from claim # 295106. The sample was shipped by C.N.R. from Savant Lake station to Barrie, Ontario, and taken from Barrie to Aero-Fall Mills Ltd. at Clarkson, Ontario, by truck.

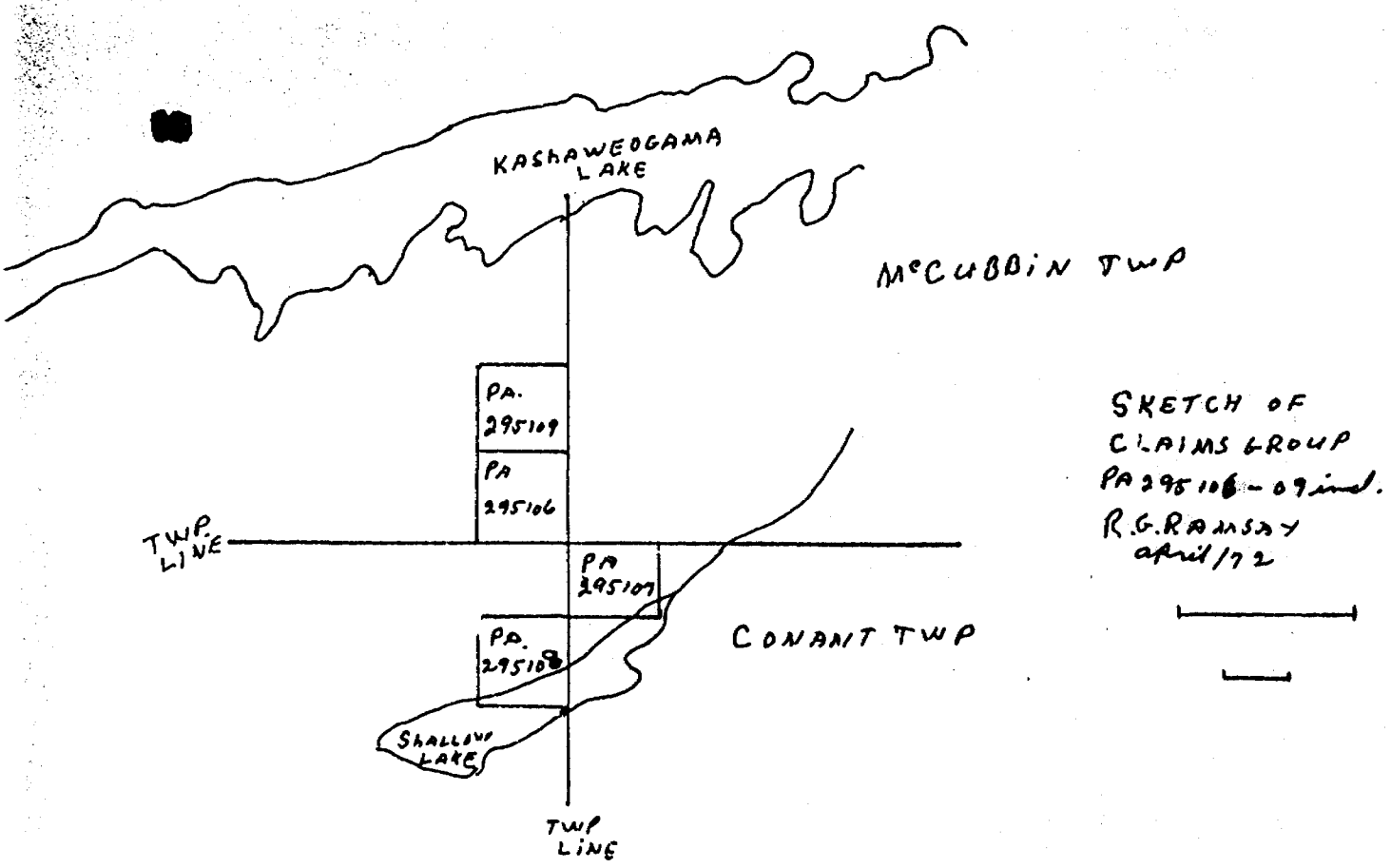
Aero-Fall Mills ground the sample to 50% - 325 mesh. Approximately 450 lbs. of the sample was then taken to Ontario Research Foundation at Sheridan Park for testing. The results of which are submitted with this report.

Approximately 150 lbs. was taken to Ferro-Magnetics Ltd. at Prescott, Ontario for testing on the Jones High Intensity Wet Magnetic Separator. The results of which are also submitted with this report.

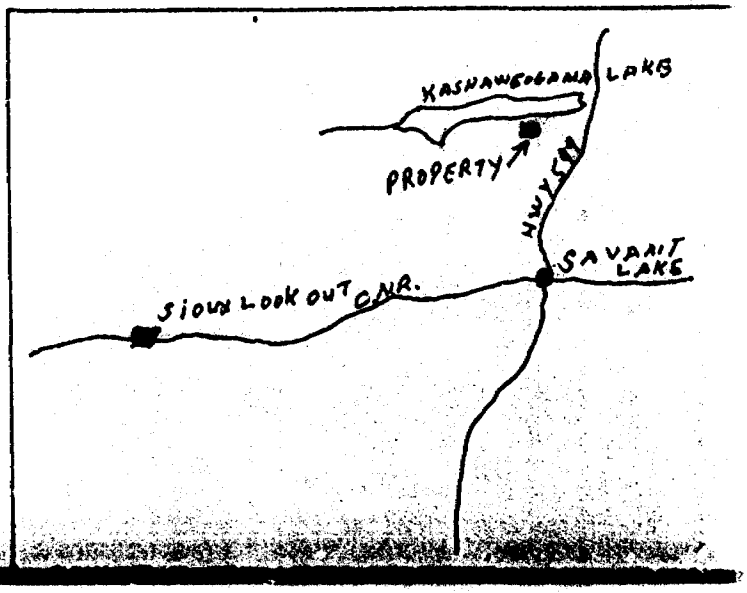
Mr. R.G. Ramsay, of Barrie, Ontario, was in charge at the property during the sampling period and he was assisted by Mr. Martin Ward of Shanty Bay, Ontario.

R. G. RAMSAY

JANUARY 18, 1972



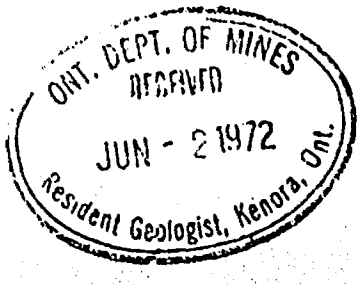
SKETCH OF CLAIMS GROUP
PA 295106 - 09 incl.
R.G. RAMSAY
april/72



copy

STATEMENT OF
COST OF RETRIEVAL
BULK SAMPLE MAGNETITE
CLAIMS # PA. 295109 & 295106

NAME:	DAYS WORKED:	PAID:
R. G. Ramsay	4	$ -
Martin Ward	4 @ $25.	100.00
COST OF SHIPPING:		
525 Lbs. Savant Lake to Barrie		25.52
(75 Lbs. shipped as baggage at no charge)		
HAULING SAMPLE FROM BARRIE TO CLARKSON :	1	
70 Miles @ 22¢ per mile		15.40
HAULING SAMPLE FROM CLARKSON TO PRESCOTT :	1	
230 Miles @ 22¢ per mile		50.60
TOTAL:	10	$ 191.52



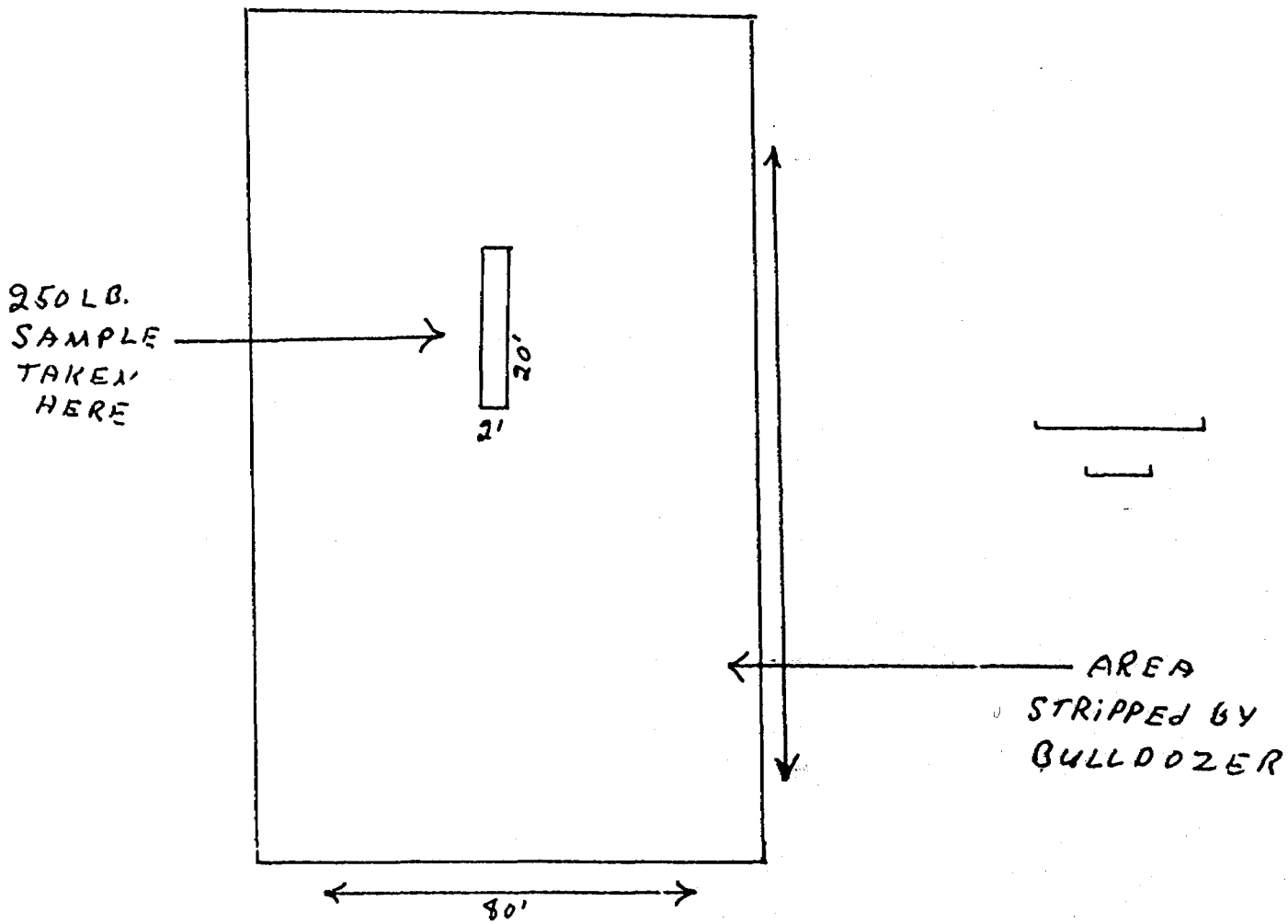
SKETCH OF PIT AREA

SHOWING LOCATION OF

CHANNEL SAMPLES

CLAIME

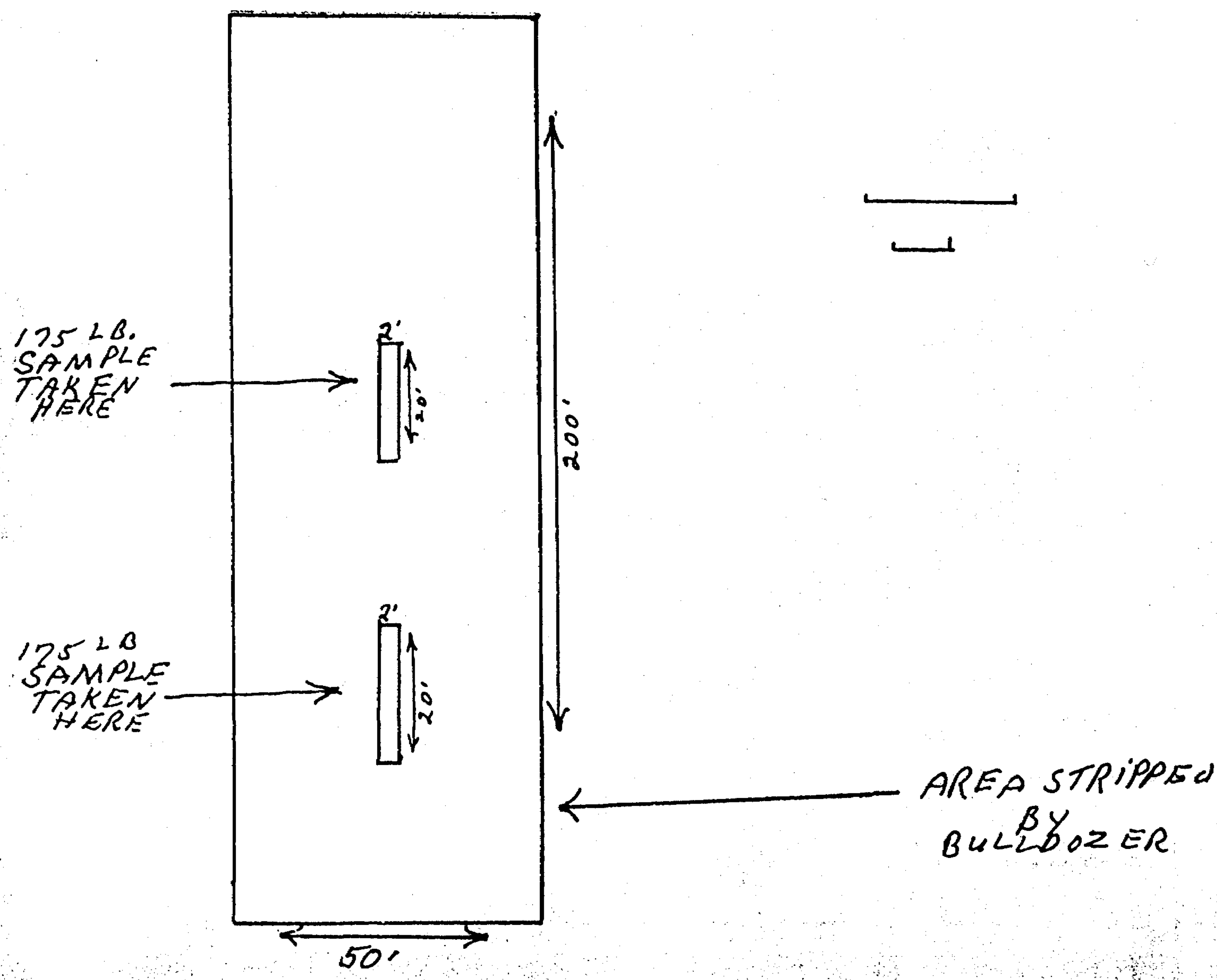
PA: 295106



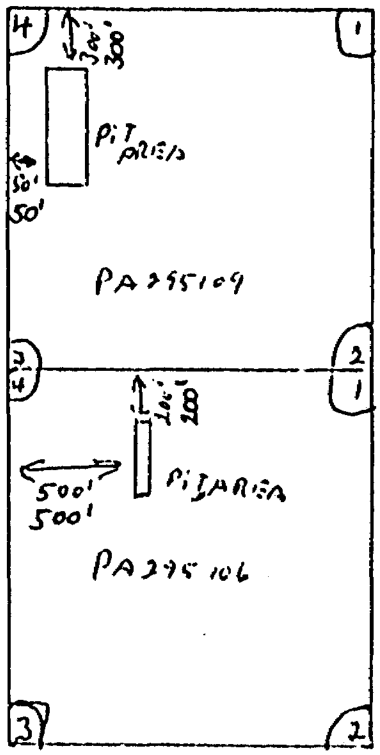
R.B. Ramsay April/72

SKETCH OF PIT AREA
SHOWING LOCATION OF
CHANNEL SAMPLES

CLAIM #
PA 295109



SKETCH OF CLAIMS # PA. 295106 + 295109 SHOWING PIT LOCATIONS OF BULK SAMPLE TAKEN FOR BENEFICATION TESTS.



R. S. [illegible]
April 17/72

Ontario Research Foundation

SHERIDAN PARK, ONTARIO, CANADA

(416) 822-4111
279-9771

020

Bench Scale Beneficiation of a Magnetite Ore

Investigation No. 0-71331

Mr. R. G. Ramsay,
109 Bayfield Street,
Barrie, Ontario.

S. A. BERKOVICH

J. MELNBARDIS

January 18, 1972.

TABLE OF CONTENTS

Bench Scale Beneficiation of a Magnetite Ore

Report of Investigation No, O-71331

Mr. R. G. Ramsay,
109 Bayfield Street,
Barrie, Ontario.

1. Introduction

This report describes a bench scale investigation conducted on Aerofall autogenous grinding products of a magnetite ore submitted by Mr. R. G. Ramsay.

The objective of the tentative testwork as scheduled in Figure 1 was to produce a batch of reduced pellets assaying over 90% total iron content from magnetic concentrates ground to 95% minus 325 mesh.

The actual test work involved the following:

1. Grinding and Davis tube tests to determine the liberation grade and recovery of magnetic concentrates.
2. Pelletizing of concentrates.
3. Reducibility test on pellets.
4. Preliminary testing to further upgrade magnetic concentrates by flotation.

The test materials were three sample lots each combining the cyclone and dust filter products from Aerofall mill runs, identified as Center Zone test 1, 2 and 3.

2. Summary

The head samples of the three Aerofall test products assayed 34.1% to 35.1% acid soluble iron and the autogenous grinding structures were 46 - 57% minus 325 mesh.

The Davis tube magnetic separation concentrates of the "as received" products assayed 48.3 - 48.8% grade at 94 - 93% iron recovery.

Considering the difference in structures, the results do not indicate any significant liberation of magnetics by finer primary grinding in this size range.

The mineralization of magnetite appears to be very fine. Although the liberation of magnetite is increased sharply by regrinding of the primary concentrate, the reground concentrate would assay 60.5% acid soluble iron at the nominal 95% minus 325 mesh. At 400 mesh the grade of 65.7% was attained with recovery just under 90%. (See Figure 2) The analysis of the 400 mesh concentrate was as follows:

Constituent	Assay %
Total Iron	65.7
Silica (SiO_2)	7.85
Acid Insolubles	8.38
Phosphorus (P)	0.01
Titania (TiO_2)	0.01
Vanadium (V)	0.01

The concentrate was pelletized with 0.75% bentonite addition and 9.7% moisture. The pellets, following firing at 2200°F, assayed 63.1% total iron. The reducibility test was conducted on fired pellets and indicated 96.2% reduction after 3 hours at 1830°F and 90% reduction after 87 minutes. (See Figure 3) The reduced pellets contained 85.7% total iron. The flowsheet for the bulk test is shown in Figure 1.

Since the reduced pellets contain a low content of iron, two experimental batch tests were conducted to upgrade the 400 mesh reground magnetic concentrate by flotation. The tests showed that the magnetic middlings may be removed by a flotation process using a cationic silica collector reagent, Aerosurf MG 83. The results based on the calculated head of the original Aerofall Test 1 product were as follows:

Flotation Test 1 concentrate - 72.0% acid soluble iron at 66% recovery
Flotation Test 2 concentrate - 70.7% acid soluble iron at 82% recovery
(See Figure 2)

3. Recommendations

Since the flotation process appears to be a necessary step to attain high grade pelletizing concentrates, further testing is recommended

to include the following:

(a) test work to evaluate the flotation process which would include the treatment of flotation middlings for additional recovery of high grade or lower grade secondary concentrates.

(b) reducibility test on the flotation concentrate.

Specifically, the flotation testing should establish:

1. the optimum structure of flotation feed,
2. the required regrind and cleaning stages of flotation middlings,
3. the flotation reagent balance,
4. locked cycle test to simulate continuous circuit conditions.

S. A. Berkovich, Ph.D.,
Head, Ore Dressing Section,
Department of Metallurgy.

J. Melnbardis,
Senior Technologist,
Department of Metallurgy.

JM:jp

4. Materials Data

Test materials were samples of three Aerofall test runs on ore identified as Center Zone. Each test run produced two products, cyclone and filter dust, which were combined for subsequent bench testing. The amount of products received and structures of the combined samples are shown in Tables 1 and 2.

5. Test Procedures and Results

5.1 Magnetic Concentration and Regrinding

Magnetic separation by Davis tube was conducted on each of the three "as received" Aerofall test samples. Davis tube test results and the size of primary grind are shown in Table 3, and these results indicate no definite gain in grade or recovery at finer primary grind.

The Davis tube concentrate obtained from Aerofall Test 1 material was reground to 95.6% minus 325 mesh, all minus 325 mesh and all minus 400 mesh. The reground concentrates were magnetically separated by Davis tube. Results are shown in Table 4.

Davis tube tests established that regrind to nominal 400 mesh is necessary to attain concentrate grade over 65% acid soluble iron.

The bulk test samples for flotation and pelletizing, shown in Table 5, were produced on the Sala magnetic separator, following a regrind in laboratory rod and ball mills. The 8" x 10" rod mill charged with 22 pounds of rods and 1.3 pounds feed material produced 95% minus 400 mesh after 35 minutes of grinding time. The Denver 12" x 5" ball mill with a charge of 35 pounds and 1.5 pounds feed produced 94% minus 400 mesh after 32 minutes. Although the structures of both products appear similar in terms of 400 mesh, the assay results indicate improved liberation in the ball mill product. However, the concentrate grade in each case is somewhat inflated because of steel pick-up during regrinding, as indicated by higher than normal (34.3% acid soluble iron) calculated head assays (35.2 - 35.8%).

The rod mill product was treated on the Sala magnetic separator in 3 passes. The additional cleaning resulted in only slightly higher concentrate grade of 66.1% while the middling assay was 61.4%. These

products were combined as pelletizing feed, assaying 65.7% acid soluble iron.

Concentrates assaying 67.3 - 67.8% grade were obtained from the ball mill product after a single separation pass. The higher grades are attributed to higher steel pick-up and improved liberation from ball mill grinding. The concentrates were further upgraded by flotation.

5.2 Flotation

Flotation tests were conducted in a Denver 250 gram cell, using 680 gram batches of the 400 mesh ball mill ground magnetic concentrate. The procedure involves two stages: (1) conditioning, which is a short (1 min.) agitation period at about 30% pulp solids density with the addition of flotation reagents, and (2) frothing stages, which removes the unliberated gangue-magnetite middlings as flotation overflow product.

The flotation reagents used were:

1. Aerosurf MG 83, a cationic silica collector, manufactured by Ashland Chemicals.

2. Dowfroth 250, a water soluble frother, manufactured by the Dow Chemical Co.

The metallurgical balance of the tests incorporating magnetic separation and flotation is shown in Table 6 and the relation of grade versus recovery is shown in Figure 2.

Flotation reagent consumption was as follows:

Test No.	Aerosurf MG 83 lbs/T	Dowfroth 250 lbs/T
31-F-1	0.12	0.044
31-F-2	0.06	0.021

The test results indicate the reagent addition to be the maximum and minimum requirements.

5.3 Reducibility Test

5.3.1 Procedure

A standard O.R.F. reducibility test, using a 50/50 mixture of CO and H_2 was conducted on the fired pellets.

A 500 gram sample of fired pellets was placed in a capsule and heated to 1832°F. On reaching temperature the reducing gas mixture was introduced into the capsule at a flow rate of 30 cf/hr. per pound of pellets. Total reduction time was three hours. During reduction, the weight loss was registered by a strain gauge recorder. Cooling of the pellets was done in nitrogen atmosphere.

5.3.2 Results

Results are shown in the following table:

% T. Fe Fired Pellets (head)	% T. Fe Reduced Pellets	% Met. Fe	% Reduction	Time 90% Reduction
63.1	85.7	79.8	96.2	94 min.

The iron content of the fired pellets, before reducing, is 63.1%. Assuming that a complete conversion of magnetite to hematite takes place during firing, the hematite content of the pellets would be 90.1%.

The weight loss was 27.8% indicating 96.2% reduction. The grade of the reduced pellets was 86.7 (corrected for carbon).

The reducibility curve, plotted in Figure 3, gives a reducibility index of 87 minutes for 90% reduction.

FIGURE 1

Flowsheet

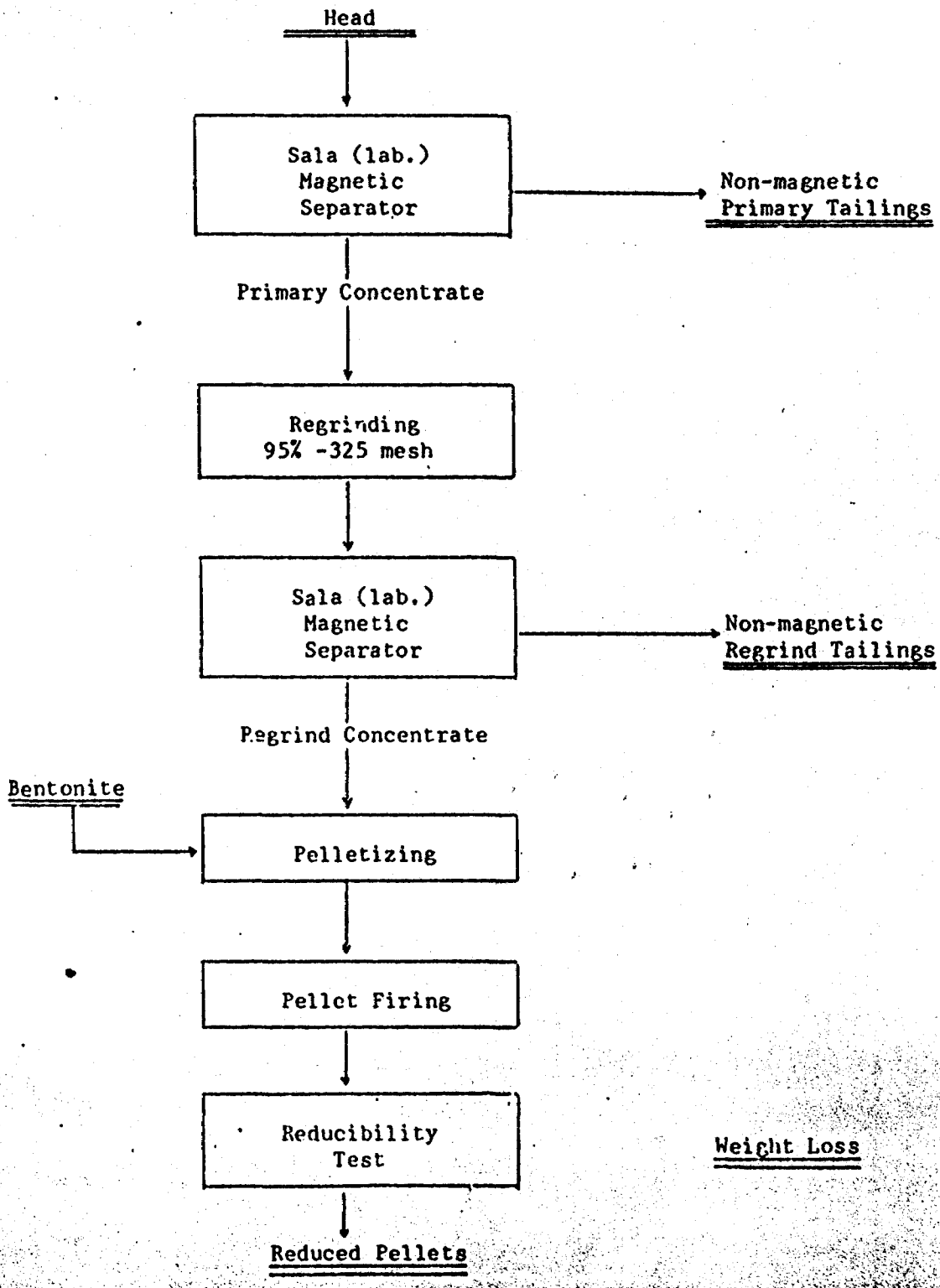


FIGURE 2

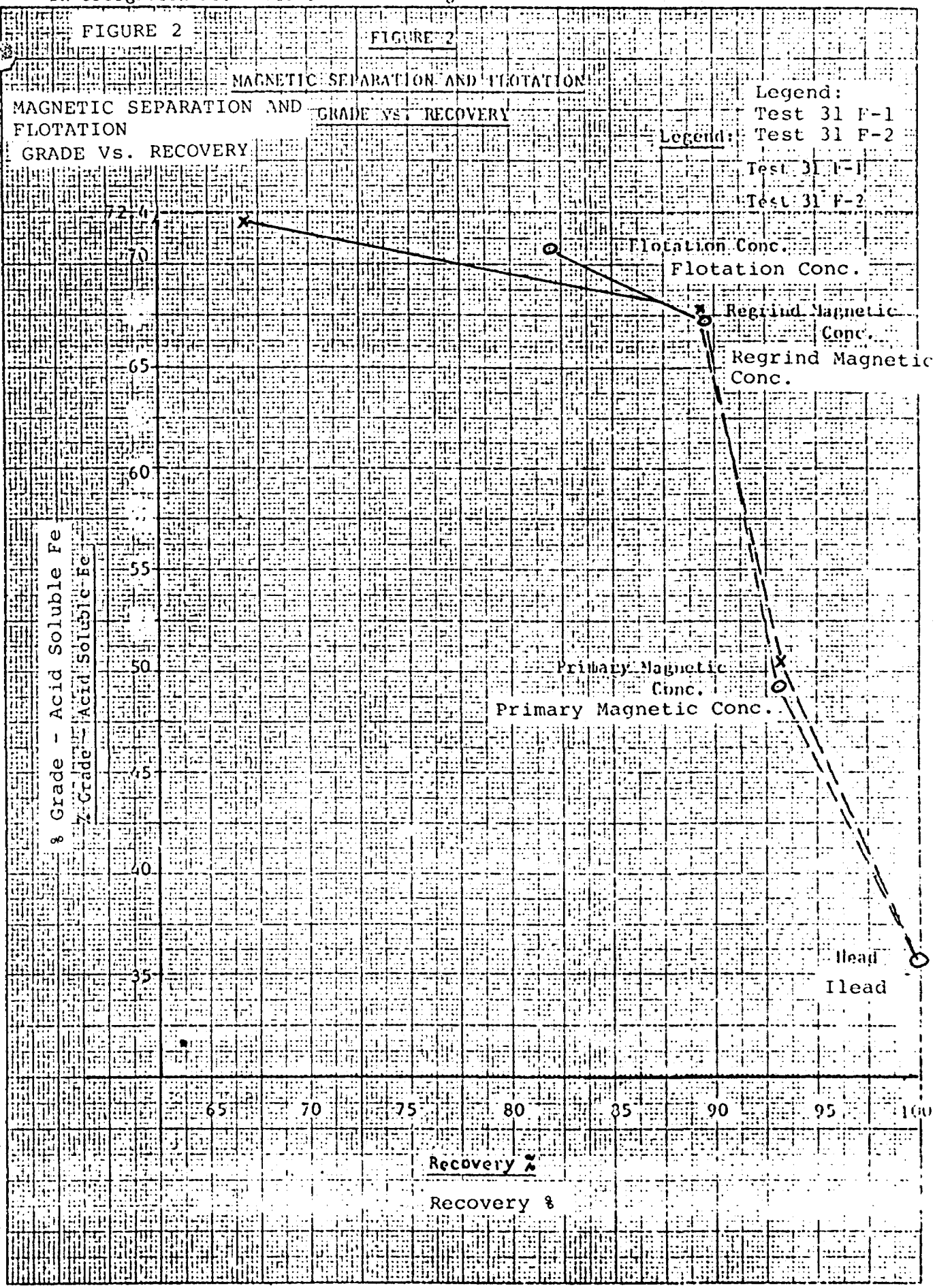


FIGURE 2
MAGNETIC SEPARATION AND FLOTATION
GRADE Vs. RECOVERY
Legend:
Test 31 F-1
Test 31 F-2
Flotation Conc.
Regrind Magnetic Conc.
Primary Magnetic Conc.
Head
% Grade - Acid Soluble Fe
% Grade - Acid Soluble Fe
70
65
60
55
50
45
40
35
65
70
75
80
85
90
95
100
Recovery %
Recovery %

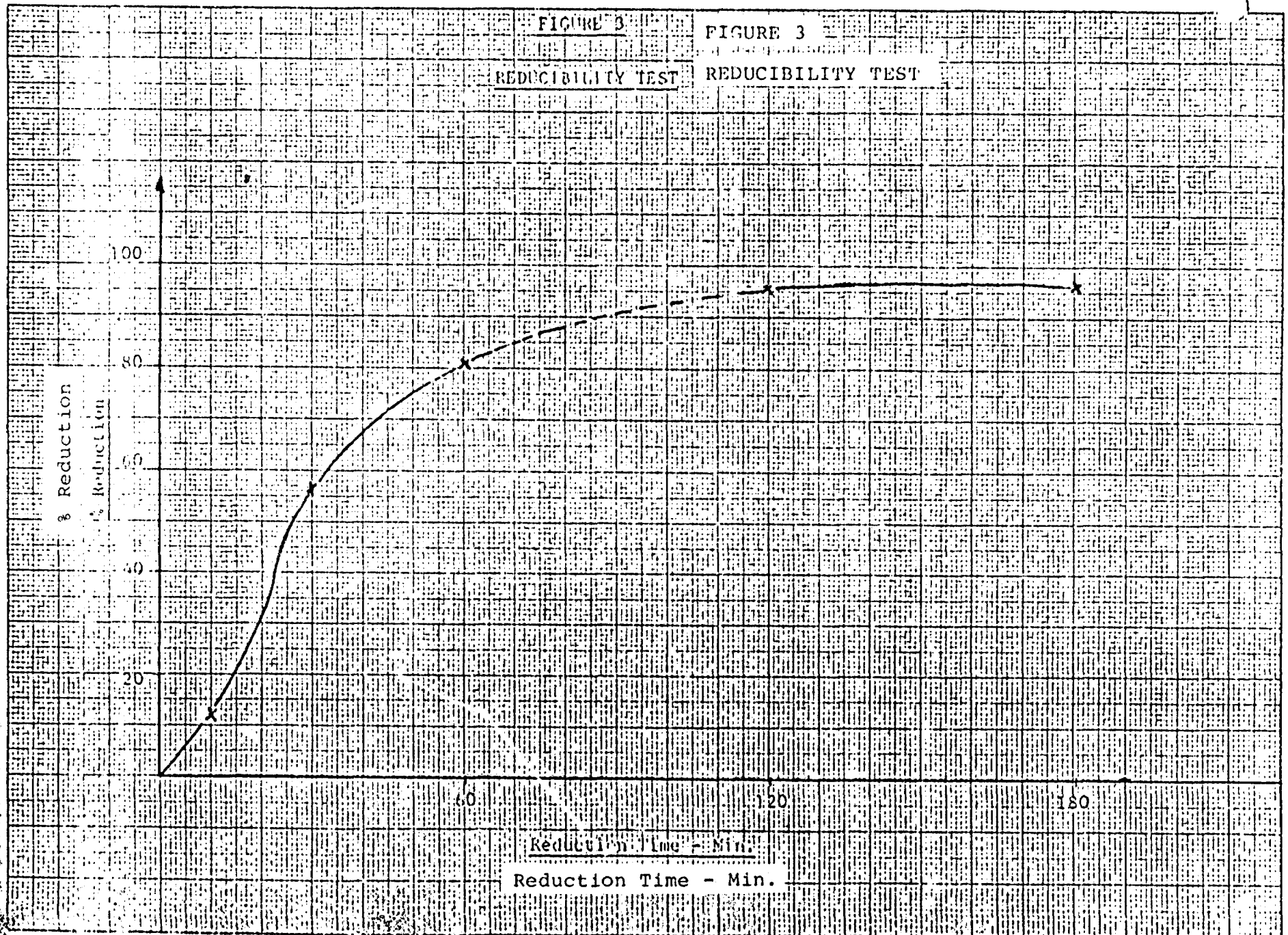
Investigation No. 0-71331

FIGURE 3

REDUCIBILITY TEST

FIGURE 3

REDUCIBILITY TEST



Reduction Time - Min.

TABLE 1

Autgenous Grinding Products

Aerofall Product	Test 1		Test 2		Test 3	
	Lbs.	%	Lbs.	%	Lbs.	%
Filter	0.55	2.7	0.25	1.6	0.43	3.4
Cyclone	19.9	97.3	15.1	98.4	12.5	96.6
Combined Total	20.5	100.0	15.4	100.0	12.9	100.0

TABLE 2

Structure of Combined Aerofall Cyclone and Filter Products

Mesh	Test 1		Test 2		Test 3	
	% Weight	% Passing	% Weight	% Passing	% Weight	% Passing
+ 100	5.4	94.6	7.5	92.5	7.7	92.3
200	15.3	79.3	16.5	76.0	19.2	73.1
325	22.7	56.6	30.1	45.9	23.3	49.8
- 325	56.6		45.9		49.8	
Total	100.0		100.0		100.0	

TABLE 3

Davis Tube Results from "As Received" Aerofall Products

Aerofall Test No Mesh of Grind	1 56.6% minus 325 mesh			2 45.9% minus 325 mesh			3 49.8% minus 325 mesh		
Davis Tube Products	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %
Concentrate	65.0	48.8	92.9	66.9	48.3	93.7	68.1	48.5	94.1
Tailings	35.0	6.9	7.1	33.1	6.6	6.3	31.9	6.5	5.9
Calc. Head	100.0	34.1	100.0	100.0	34.5	100.0	100.0	35.1	100.0

TABLE 4

Davis Tube Results on Reground Primary Concentrate of Aerofall Test 1

Mesh of Grind	95.6% minus 325 mesh			all minus 325 mesh			all minus 400 mesh		
Davis Tube Products	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %
Concentrate	72.9	60.5	96.0	69.5	63.3	95.8	67.1	65.4	95.6
Tailings	27.1	6.8	4.0	30.5	6.4	4.2	32.9	6.1	4.4
Calc. Head	100.0	45.9	100.0	100.0	45.9	100.0	100.0	45.9	100.0

TABLE 5

Regrind and Magnetic Separation Results

of Bulk Test Samples

Grinding Unit and Mesh of Grind	Rod Mill 95% minus 400 mesh			Ball Mill 94% minus 400 mesh					
Sala Magnetic Separator Product	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %	Weight %	Acid sol. Fe Assay %	Acid sol. Fe Dist. %
Regrind Concentrate	48.2	65.7	89.9	47.1	67.8	89.2	47.7	67.3	89.6
Regrind Tailings	23.6	7.4	5.0	18.9	7.2	3.8	20.1	6.2	3.5
Primary Tailings(D.T.)	28.2	6.4	5.1	34.0	7.4	7.0	32.2	7.6	6.9
Calc. Head	100.0	35.2	100.0	100.0	35.8	100.0	100.0	35.8	100.0
Primary Magnetic Concentrate (Calc.)	71.8	46.5	94.9	66.0	50.4	93.0	67.8	49.2	93.1
Usage of reground concentrate	pelletizing and reducibility test			flotation test 31 F-1			flotation test 31 F-2		

TABLE 6

Metallurgical Balance - Magnetic Separation and Flotation

Products	Test 31 F-1			Test 31 F-2		
	Weight %	A.sol.Fe %	Distr. %	Weight %	A.sol.Fe %	Distr. %
Flotation Concentrate	33.2	72.0	66.8	41.6	70.7	82.1
Flotation Middlings	13.9	57.7	22.4	6.1	43.9	7.5
Magnetic Separation:						
Regrind tailings	18.9	7.16	3.8	20.1	6.18	3.5
Primary tailings	34.0	7.39	7.0	32.2	7.65	6.9
Calculated Head	100.0	35.8	100.0	100.0	35.8	100.0
Intermediate Products:						
Primary Concentrate	66.0	50.4	93.0	67.8	49.2	93.1
Regrind Concentrate	47.1	67.8	89.2	47.7	67.3	89.6
Magnetic Separation:						
Combined tailings	52.9	7.30	10.8	52.3	7.07	10.4

- 14 -

Ferro-Magnetics Ltd.
(No Personal Liability)
P.O. Box 309, 798 Edward St., Prescott, Ontario (613) 925-3959
A Subsidiary of Magnetics International Ltd. (N.P.L.)

REPORT ON PRELIMINARY TESTWORK

ON PRODUCTION OF SUPERCONCENTRATE FROM MAGNETITE ORE

USING THE

JONES HIGH INTENSITY WET MAGNETIC SEPARATOR

F O R

MR. R. G. RAMSAY
10 COOK STREET
BARRIE, ONTARIO

Prepared by: J. A. Bartnik, P.Eng.
Exec. Vice President

Date: December 13, 1971

CONTENTS

PRELIMINARY TESTWORK REPORT

ON PRODUCTION OF SUPERCONCENTRATE FROM MAGNETITE ORE USING THE JONES HIGH INTENSITY WET MAGNETIC SEPARATOR

FOR

MR. R. G. RAMSAY

INTRODUCTION

Mr. R. G. Ramsay submitted to Ferro Magnetics Ltd. a sample of magnetite ore for preliminary tests using the Jones High Intensity Wet Magnetic Separator for production of superconcentrate.

Due to the number of variables the preliminary tests can only indicate whether or not a full scale test program is warranted. From a very wide experience we interpret the preliminary results to project the type of separation that would result from a full scale test program.

The test were conducted in the presence of Mr. Ramsay.

The following is our understanding:

The sample came from a deposit of magnetite with a potential sale for 250 tons per year of metallized pellets with at least 92% metallic Fe. Consequently it is desirable to produce from the magnetite ore iron superconcentrate with less than 2% insoluble. Such a superconcentrate would contain about 70% Fe from which metallized pellets can be made of the specified quality. For electric steel smelting the metallized pellets should contain 92% metallic iron.

The preliminary tests were to determine if it is probably feasible to produce commercially superconcentrate from the magnetite deposit and to indicate how to proceed with the full scale test program.

Thanks are extended to Mr. Ramsay for his assistance with the test program.

DECEMBER 15, 1971

CONCLUSIONS

1) Already in the preliminary test #5 a superconcentrate with 71.2% iron and 1% insoluble was produced.

2) In test #4, 98.3% of iron was recovered as high grade (69.2% Fe) concentrate in the magnetic fraction.

3) The ore responds well to the Jones Separator and the results are indeed excellent for preliminary tests.

4) Using the Jones Separator it is likely that there is no cheaper process for production of iron superconcentrate.

5) A systematic detailed test program is now necessary to optimize all the operating variables which will likely result in iron superconcentrate with +70% Fe and over 95% recovery.

MATERIAL TESTED

Mr. Ramsay brought by truck about 100 lb. sample for the preliminary test program and for a full scale test program if the test data proved that such a test program is warranted.

The ore was reported to consist mainly of magnetite and quartz with less than 2% hematite. To liberate the magnetite grinding below 50 microns is necessary.

Samples assayed 34.5% Fe.

OBJECTIVES

The purpose of the preliminary tests was to establish data that would indicate the possibilities of production of iron superconcentrate using the Jones Separator and if a full scale test program is warranted.

Hence the preliminary tests were designed to:

(a) Demonstrate that iron superconcentrate with 70% Fe and less than 2% insoluble can be produced.

(b) That over 80% of the iron values are recoverable in the superconcentrate.

The superconcentrate is to be used for production of metallized pellets with over 92% metallic Fe.

TESTWORK

Attached are test data records giving the details of the testwork performed.

The preliminary tests were designed to establish that the objective for a full scale test program was possible.

Samples were tested at various intensities and grind of -325 mesh and -500 mesh.

The head sample and all the magnetic fractions were assayed for %Fe and %insolubles.

RESULTS

From a feed of 34.5% Fe an iron concentrate was produced in test #5 with 71.2% Fe on the ore ground -500 mesh. This more than meets the objective. It is unusual to obtain the grade and recovery in the same test in a preliminary series. However, on this material it has been achieved.

In test #2 from ore ground to -325 mesh an iron concentrate with 70.2% Fe was produced at 97.2% recovery. Consequently the objectives of the preliminary test program were met.

Some of the high Fe assays were checked since it is possible that a slight standard deviation due to experimental errors migh occur, but the checks were relatively close.

COMMENTS

The results from the preliminary tests are excellent, above expectation. All the magnetic concentrates contain above 69% Fe, therefore can be called superconcentrates. Close to 100% recovery was obtained from product ground to -325 mesh. The ore responds very well to Jones separation which is possibly the cheapest process for production of the iron superconcentrate.

It is likely that in a detailed test program, superconcentrate can be produced at a coarser grind. Also two-stage concentration consisting of primary separation on ore ground to -10 mesh followed by final concentration on ore ground say -200 mesh will reduce the grinding cost and produce a high recovery with superconcentrate over 70% Fe.

The preliminary test results are indeed excellent and we strongly recommend that Ferro-Magnetics Ltd. conduct a full scale test program in order to determine optimum conditions which will enable to improve the grind and capacity as well as produce some data for commercial plant operation. Such a detailed test program should cover the effect of all variables such as gap, intensity, plates, per cent solids, feed rate, passes, wash water, grind, recirculation, and correlate the data for efficient commercial operation.

RECOMMENDATIONS

Based on the excellent test results and experience in concentration of iron ores it is recommended to proceed with a full scale test program.

The Jones Separator is efficient, well proven, simple and probably the cheapest process for production of iron superconcentrate from this magnetite ore.

The proposal for a full scale test program will follow shortly under separate cover.

Ferrox Iron Ltd.
(No Personal Liability)

P.O. Box 309, 798 Edward St., Prescott, Ontario (613) 925-2859
A Subsidiary of Magnetics International Ltd. (N.P.L.)

CERTIFIED ASSAY SHEET

Product No.	% Sol Fe	% Insol
614- 1	34.5	49.2
2	69.6	3.8
9	70.2	3.6
16	69.8	4.1
23	69.2	4.8
30	71.2	1.0
37	69.9	3.8

Certified by: James C. Welsh

J. C. Welsh, Quality Control Supervisor

Date: December 8, 1971

Source: Mr. R. G. Ramsay

FERRO-MAGNETICS LTD.

A-4

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY R. G. Ramsay MATERIAL Magnetite Ore OBJECTIVE 42% Insol DATE Dec 2, 1971

t	Description	Number	Weight %	Assays % Fe	% Fe	Distribution % Fe	Grind Mesh	Intensity Rheostat	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
	Heads	614-1	100.0	34.5	49.2	100.0										
1	Magnetics	614-2	47.6	69.6	3.8	96.0	-325	0	5	40	M.H.	S.P.Ch	-	3 of mags	2.5	614-37 is c/a on 614-2 & is 69.9% Fe 3.8% Insol
	Wash #1	-3	5.2													
	Wash #2	-4	.6													
	Wash #3	-5	.3													
	Nonmagnetic #1	-6	42.7													
	Nonmagnetic #2	-7	2.8													
	Nonmagnetic #3	-8	.8													
			100.0													
2	Magnetics	614-9	47.8	70.2	3.6	97.2	-325	1	5	40	M.H.	S.P.Ch	-	3 of mags	2.5	
	Wash #1	-10	4.8													
	Wash #2	-11	.6													
	Wash #3	-12	.5													
	Nonmagnetic #1	-13	43.1													
	Nonmagnetic #2	-14	2.6													
	Nonmagnetic #3	-15	.6													
			100.0													
3	Magnetics	614-16	48.4	69.8	4.1	97.9	-325	2	5	40	M.H.	S.P.Ch	-	3 of mags	2.5	
	Wash #1	-17	5.5													
	Wash #2	-18	.5													
	Wash #3	-19	.3													
	Nonmagnetics #1	-20	42.2													
	Nonmagnetics #2	-21	2.5													
	Nonmagnetics #3	-22	.6													
			100.0													

[redacted]

FERRO-MAGNETICS LTD. A-4

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY R.G. Ramsay MATERIAL Magnetite Ore OBJECTIVE <2% Insol DATE Dec 2, 1971

Test	Description	Number	Weight %	Assays % Fe	Assays % Insol	Distribution % Fe	Grind Mesh	Intensity Rheostat	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
	Heads	1614-1	100.0	34.5	49.2	100.0										
1	Magnetics	1614-2	47.6	62.6	3.8	96.0	-325	0	5	40	M.H.	SPCh.	—	3	2.5	614-37 is c/g on 614-2
	Wash #1	-3	52											1 mag		1 is 62.2 % Fe.
	Wash #2	-4	.6													3.8 % Insol
	Wash #3	-5	.3													
	Non-magnetics #1	-6	42.7													
	Non-magnetics #2	-7	2.8													
	Non-magnetics #3	-8	.5													
			100.0													
2	Magnetics	1614-9	47.8	70.2	3.6	97.2	-325	1	5	40	M.H.	SPCh	—	3	2.5	
	Wash #1	-10	4.8											1 mag		
	Wash #2	-11	.6													
	Wash #3	-12	.5													
	Non-magnetics #1	-13	43.1													
	Non-magnetics #2	-14	2.6													
	Non-magnetics #3	-15	.6													
			100.0													
3	Magnetics	1614-16	48.4	69.5	4.1	97.9	-325	2	5	40	M.H.	SPCh	—	3	2.5	
	Wash #1	-17	5.5											1 mag		
	Wash #2	-18	.5													
	Wash #3	-19	.3													
	Non-magnetics #1	-20	42.2													
	Non-magnetics #2	-21	2.5													
	Non-magnetics #3	-22	.16													
			100.0													

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY R.G. Ramsay MATERIAL Magnetite Ore OBJECTIVE ∠2% Insol DATE Dec 2, 1971

t	Description	Number	Weight %	Assays % Fe	% Fe Tails	Distribution % Fe	Grind Mesh	Intensity Rheostat	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
4	Magnetics	614-23	48.0	69.2	4.3	98.3	-325	3	5	40	M.H.	S.P.Ch	-	3 of mags	2.5	
	Wash #1	-24	4.1													
	Wash #2	-25	.5													
	Wash #3	-26	.8													
	Nonmagnetics #1	-27	41.8													
	Nonmagnetics #2	-28	2.2													
	Nonmagnetics #3	-29	1.6													
			100.0													
5	Magnetics	614-30	41.0	71.2	1.0	84.6	-500	2	5	40	M.H.	S.P.Ch	-	3 of mags	2.5	
	Wash #1	-31	5.6													
	Wash #2	-32	.6													
	Wash #3	-33	.5													
	Nonmagnetics #1	-34	48.0													
	Nonmagnetics #2	-35	2.8													
	Nonmagnetics #3	-36	1.5													
			100.0													

FERRO-MAGNETICS LTD.

A-4

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY R. G. Ramsay MATERIAL Magnetite Ore OBJECTIVE <2% Insol DATE Dec 2, 1971

Description	Number	Weight %	Assays % Fe	Assays % Insol	Distribution % Fe	Grind Mesh	Intensity Rheostat	%Solids	Capacity Index	Wash Water	Plates	pers.	Passes	Gap	Comments
Magnetics	614-23	49.0	69.2	4.3	92.3	-325	3	5	40	M.H.	SPCh	—	3 Mags	2.5	
Wash #1	-24	4.1													
Wash #2	-25	.5													
Wash #3	-26	.8													
Non-magnetics #1	-27	41.8													
Non-magnetics #2	-28	2.2													
Non-magnetics #3	-29	1.6													
		100.0													
Magnetics	614-30	41.0	71.2	1.0	84%	-500	2	5	40	M.H.	SPCh	—	3 Mags	2.5	
Wash #1	-31	5.6													
Wash #2	-32	.6													
Wash #3	-33	.5													
Non-magnetics #1	-34	42.0													
Non-magnetics #2	-35	2.8													
Non-magnetics #3	-36	1.5													
		100.0													

52J/07NE
AREA OF GREBE LAKE
M-1804
SCALE: ONE INCH = 40 CHAINS
40 CHAINS

CONANT TWP.
FOR STATUS REFER TO TOWNSHIP PLAN
(M.1682)

Evans Lake - M.1774

PROJECTS SECTION

MINISTRY OF NATURAL RESOURCES

FILE: 2.838

TECHNICAL ASSESSMENT WORK CREDITS

Recorder Holder: Raymond G. Ramsay

Township or Area: Grebe Lake

Type of Survey and number of Assessment Days Credits per claim	
GEOPHYSICAL	
Electromagnetic	....days
Magnetometer	....days
Radiometric	....days
Induced Polarization	....days
Section 86 (18, 19 & 20) see across	
GEOLOGICAL	....days
GEOCHEMICAL	....days
Man days ☐	Airborne ☐
Special Provision ☐	Ground ☒

NOTICE OF INTENT TO BE ISSUED

☐ Credits have been reduced because of partial coverage of claims.

☐ Credits have been reduced because of corrections to work dates and figures of applicant.

☐ NO CREDITS have been allowed for the following mining claims as they were not sufficiently covered by the survey:

_____

_____

_____

_____

Mining Claims

Beneficiation Studies

3 bulk samples taken from Mining Claims:

Pa. 295106
295109

Amount expended for this work:

291.52 + 1,920.00 = $2,211.52

Total assessment days credit allowed

= 147

The above 2 Mining Claims may be grouped under Section 85 (6) for the purposes of recording the work credits of 147 days

ONT. DEPT. OF MINES
RECEIVED
JUN - 2 1972
Resident Geologist, Kenora, Ont.

Approved May 30, 1972

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical – 80; Geological – 40; Geochemical – 40.

ONTARIO
Ministry of Natural Resources

2,838

Room W 1617
Parliament Buildings
Queen's Park, Toronto 182

416:965-6918

May 30, 1972

Mr. W. A. Buchan
Mining Recorder
Court House
Sioux Lookout, Ontario

Dear Sir:

Re: Mining Claims Pa. 295106 et al,
Grebe Lake Area, File 2.838

The Minister has, under the provisions of Section 86 (subsections 18, 19, and 20) of the Ontario Mining Act, approved assessment work credits for Beneficiation Studies as shown on the attached statement.

Please inform the recorded holder and so indicate on your records.

Yours very truly,

Fred W. Matthews
Supervisor
Projects Section

OJ/mw

encl.

cc: Mr. Raymond G. Ramsay
10 Cook Street
Barrie, Ontario

cc: Raylloyd Mines & Explorations Ltd
109 Bayfield Street,
Barrie, Ontario

cc: Resident Geologist
Kenora, Ontario

"Grinding" Toronto

INVOICE

Telephone 416-8[illegible]
Telex 023-0211
XXXXXXXXX

Telex 06-[illegible]1211

AEROFALL MILLS LIMITED

2640 South Sheridan Way, Clarkson, Ontario Canada

SOLD TO

R.G. Ramsay,
10 Cook Street,
Barrie, Ontario.

SHIPPED TO

CUSTOMER'S ORDER NO.	DATE OF ORDER	TERMS	F.O.B.	INVOICE NO.
				915
DATE SHIPPED	SHIPPED VIA		FEDERAL SALES TAX LICENCE NO.	DATE OF INVOICE
				Sept. 2, 1971

Griuding Test - Iron Ore.

18" Mill $200.00

Received payment Sept. 2/71

INVOICE

INVOICE NO. 262

FERRO-MAGNETICS LTD.

P. O. Box 309, Georgiana St., Prescott, Ontario (613) 925-3959
A Subsidiary of Magnetics International Ltd.

SOLD TO
Mr. R.G. Ramsay,
10 Cook Street,
BARRIE, Ontario.

SHIPPED TO:
SAME

DATE December 22, 1971.
YOUR ORDER No. --
OUR ORDER No. S-614
SHIPPED VIA --
REPORT SENT December 13, 1971.
SAMPLES SENT --
TERMS --

To conduct preliminary test program on a sample of Magnetite Ore on the Jones Wet Magnetic Separator.

		@ $300.00	
7	Fe Assays	@ $4.50 ea	31.50
7	Insols	@ $4.50 ea	31.50
			$363.00
Paid			300.00

BALANCE CAN. $63.00

Paid by cheque
Jan 14/72 BR

Total $363.00

ORIGINAL