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 Deluth, 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.

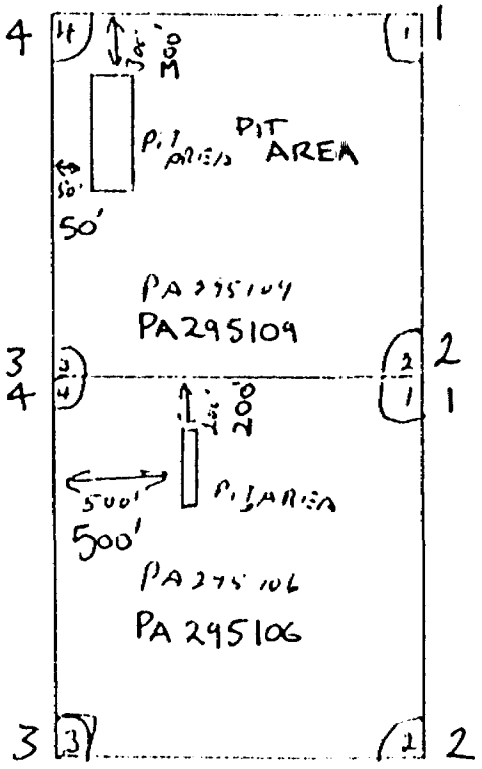
Approximately 150 lbs. was taken to Ferro-Magnetics Ltd. at Prescott, Ontario for testing on the Jones High Intensity Wet Magnetic Separator. The results of which are also submitted with this report.

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

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

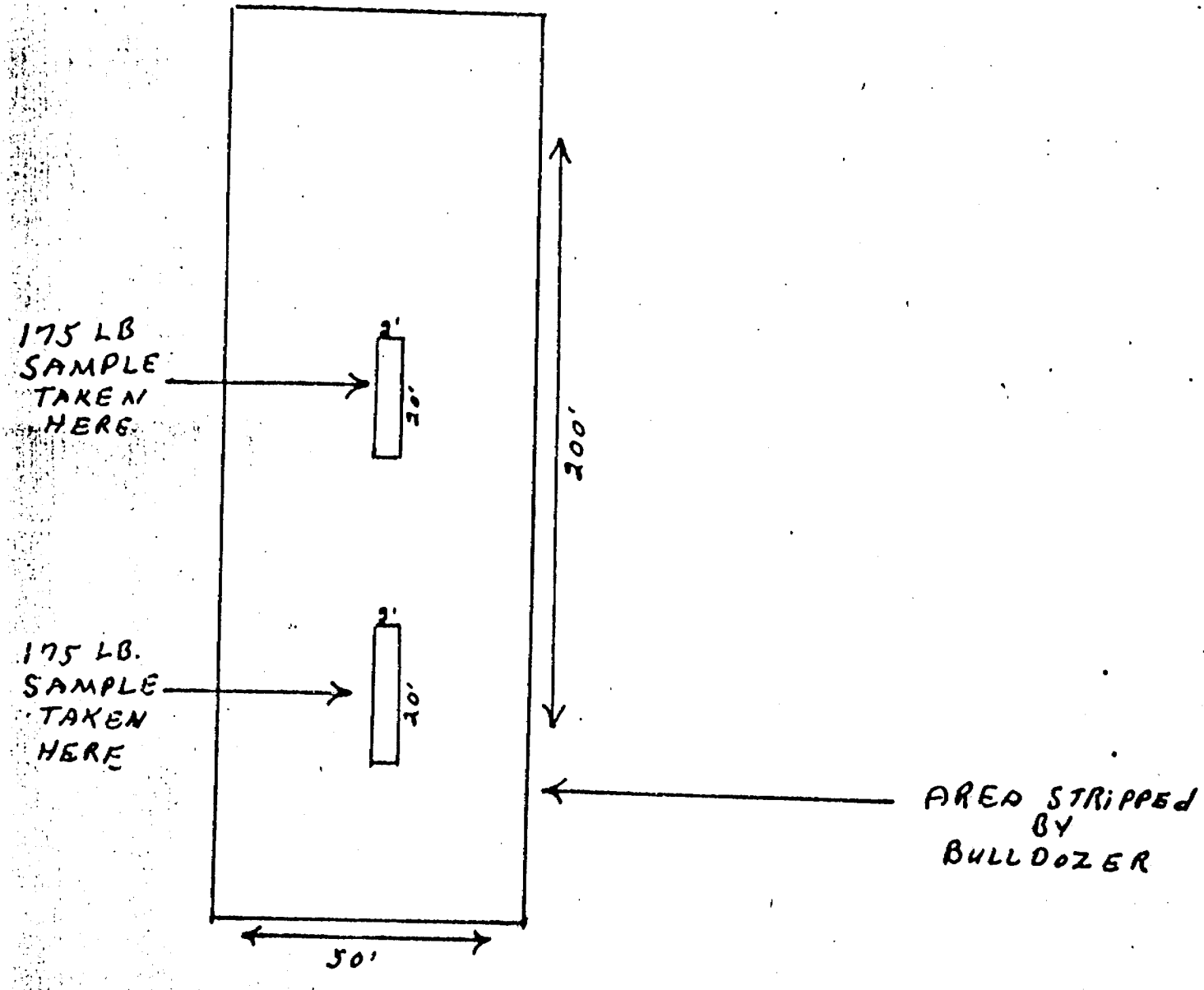
SKETCH OF CLAIMS # PA. 295106 + 295109 SHOWING PIT LOCATIONS OF BULK SAMPLE TAKEN FOR BENEFICATION TESTS.



N. S. Ames
April 17/72

SKETCH OF PITAREA
SHOWING LOCATION OF
CHANNEL SAMPLE

CLAIM #
PA. 295109

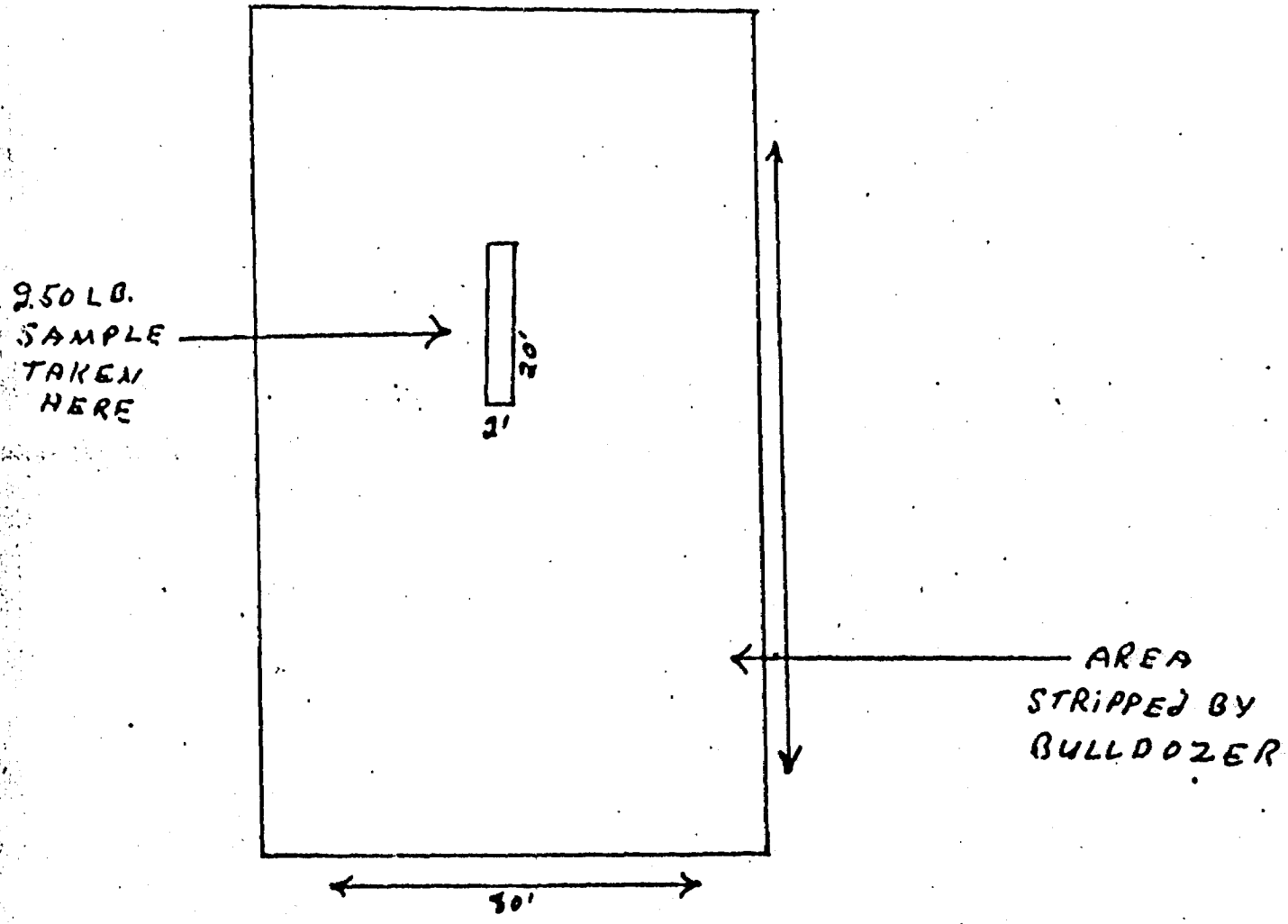


R S Ramsay April/72

2.1055

SKETCH OF PIT AREA
SHOWING LOCATION OF
CHANNEL SAMPLES

CLAIME
PA: 295106



R.S. Ramsay April/72

2.1055

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.)

TEST PROGRAM REPORT

USING THE

JONES HIGH INTENSITY WET MAGNETIC SEPARATOR

ON

IRON ORE

FOR

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

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

Date: July 10, 1972

TEST PROGRAM REPORT FOR RAYLLOYD MINES & EXPLORATION LTD.

INTRODUCTION

Mr. R. G. Ramsay, 10 Cook Street, Barrie, Ontario, contracted Ferro-Magnetics Ltd. to conduct a full scale test program on iron ore for production of superconcentrate using the Jones High Intensity Wet Magnetic Separator.

Preliminary tests reported on December 13, 1971 demonstrated excellent separation of the iron values from this ore by the Jones Separator. Consequently an agreement was reached to conduct a full scale test program to optimize the separation conditions and determine certain criteria for commercial plant operation.

It was understood from correspondence and discussions that:

1. The sample came from a deposit of iron ore in Ontario, Canada. The ore contains about 35% Fe mainly as magnetite with less than 2% hematite and the gangue being quartz. To liberate the magnetite grinding below 50 microns is necessary.

2. There is a potential sale for superconcentrate for production of metallized pellets. Anticipated initial production of this superconcentrate will be about 250,000 tons per year.

3. To produce metallized pellets with 92% metallic iron for electric steel smelting our objective calls for a concentrate with about 70% Fe and 2% silica.

4. Preliminary tests demonstrated that from ore ground -500 mesh a concentrate was produced with 1% SiO_2 and above 85% recovery by the Jones High Intensity Wet Magnetic Separator.

5. The aim should be to produce this superconcentrate at a grind as suitable as possible for pelletizing. It was likely that an acceptable superconcentrate could be produced at -325 mesh grind or -400 mesh grind.

6. The purpose of the test program is to optimize certain operating variables of the Jones Separator for efficient commercial operation. From the data obtained the separator capacity should be determined together with a process outline.

7. At Ontario Research Foundation, the best results using wet magnetic drum separator on ore ground -325 mesh produced concentrate with 64% Fe at 90% recovery. After this, the concentrate was ground -500 mesh and then in silica flotation process produced a 68.5% Fe at 75 recovery. This of course, was not a superconcentrate as defined in their objectives.

CONCLUSIONS

1. The test program demonstrates that an iron superconcentrate with above 69.5% Fe can be produced on ore ground -400 mesh in two passes of magnetics with iron recovery in excess of 90% using the Jones Separator. Summary of the test results are shown in Table I.

2. In a series of correlation tests, 51 - 60, with one exception, magnetite concentrates were produced with over 69.5% Fe. Half of the tests (5) demonstrate over 90% iron recovery.

3. Assay results report silica content in the magnetic concentrate in the series 56 - 60 about 2% SiO_2. Content of phosphorus, sulphur, vanadium and titanium are within acceptable limits (see Test #57).

4. In Test 4 iron concentrate with 64% Fe and 99.1% recovery was produced on ore ground -325 mesh in one pass.

5. It is most likely that the process using the Jones Separator for production of iron superconcentrate from this ore would be simplest and cheapest. (See Appendix B).

6. General interpretation of the results is that the Jones Separator Model DP317 has ample capacity to produce from this magnetite ore in two passes 250,000 Tons/year of the iron superconcentrate. This separator should operate with gap of 3 mm at an intensity equivalent to the lab machine of 1 Amp.

RECOMMENDATIONS

The Jones Separator is efficient, well proven, simple and most probably the cheapest process for production of iron superconcentrate from the deposit of Savant Lake iron properties. This is evident by the excellent results achieved in the test program.

Based on the test data, a flowsheet can be designed and equipment required specified for production of the iron superconcentrate. However, a meeting between the interested parties should take place to discuss various combinations of grade and recovery to arrive at an optimum process.

Subject to certain unknown factors, recommended flowsheet could be two passes of magnetics.

Primary operating costs and capital investment costs are outlined under the flowsheets. The description and further details will be provided for feasibility studies on request from Raylloyd Mines and Exploration Ltd.

MATERIAL TESTED

100 lbs. sample of the ore was brought by Mr. Ramsay in a truck to Prescott for the preliminary and full scale test program.

The ore reported to consist mainly of magnetite and quartz with less than 2% hematite. To liberate the magnetite, grinding below 50 microns is necessary. The assay on the sample showed 34.5% Fe content.

It was reported that this deposit is located in Ontario, Canada.

OBJECTIVES

The purpose of the test program was to obtain data from which a process could be designed for efficient commercial operation using the Jones Separator. As a target, a grade of 69.5% Fe to 70% Fe was specified with less than 2% SiO_2 and maximum recovery of the iron value. For obvious economical reasons the iron superconcentrate should be produced at the coarsest grind possible, i.e., -325 mesh or -400 mesh.

This iron superconcentrate is to be used for production of metallized pellets. Specification for electric furnace feed calls for at least 92% metallic iron and in order to produce this the iron ore concentrate should contain not much more than 2% SiO_2.

TESTWORK

A considerable amount of work was conducted on this material to optimize the variables in line with the objectives. To attain high efficiency correlation tests were conducted at maximum capacity at various wash.

The specified grade iron concentrate was produced with exceptionally high recovery.

TEST RESULTS

Attached is a set of test data sheets giving details of the conditions for individual tests with iron content and recovery in the magnetic fraction. Some of the magnetic concentrate were assayed for SiO_2 and on some tests all the products were assayed.

Summary of the test results are shown in Table VIII.

The results are discussed under various classifications as follows:

Effect of Intensity
Effect of % Solids in Feed
Effect of Feed Rate
Effect of Wash Water
Effect of Gap
Effect of Passes
Effect of Grind

EFFECT OF VARIABLES

INTENSITY

It is important to establish the effect of intensity on the material tested.

On this particular material it was known that fine grinding is necessary and high grade concentrate is essential. Consequently two passes of the magnetics will be required.

In the results from one pass, it has been demonstrated that with the increase of intensity there is a sharp increase in recovery up to 4 amps and considerable decrease in grade at over 4 amps intensity. This would be due to entrainment by excessive intensity.

The intensity correlation results run with two passes of magnetics, (test 51 - 54) showed that with an increase in intensity there is an increase in recovery, however, the Fe content in the magnetics is only slightly effected.

Already from test #3, it can be seen in one pass it is feasible to produce a high grade concentrate (64% Fe) with a very high recovery (99.1%).

Iron superconcentrate was produced with above 69.5% Fe in test 53 and 54 with recovery over 95% (see Table I). Consequently it is evident from the intensity tests that the superconcentrate of the specified grade can be produced with iron recovery above 90%.

PERCENT SOLIDS

It is important to determine if % solids in the feed has an appreciable effect on the metallurgy. Usually it is desirable in the plant to run as high % solids as possible or take % solids from the existing flow if such a flow exists, i.e. if dewatering or diluting can be avoided it is usually desirable.

The test results are presented in Table II.

Test results with one pass are shown at relatively low feed rate, hence the effect of % solids in the feed is magnified. The grade of concentrate slightly decreases with increased % solids and iron recovery is best at about 30% solids.

At a high feed rate with two passes there is no significant change in the grade, however, still considerably high recovery at 30% solids. Most likely the lower grade in test 55 is an anomaly. Fortunately, there is no serious decline in grade and increase in recovery with increase in density to 30% solids. This is a very desirable characteristic of this ore and is similar to other iron ores.

FEED RATE

Obviously as high a feed rate as possible is desirable. Within the limits of feed rate available on the laboratory separator, tests were conducted to determine if there is any appreciable drop in metallurgy with an increase in feed rate. The results are then interpreted into a commercial machine.

Some comparative results are given in Table III.

The test results with one pass demonstrate no decrease in grade up to feed rate of 400 lbs. and increase in recovery.

With two passes there is only slight decrease in the grade and recovery at increase in feed rate from 300 to 400 lbs.

This course could be improved by wash water adjustment, or recirculation of wash, or both.

Interpretation of overall results is that the commercial Jones Separator on this material will operate at very high capacity similar to other iron ores. The results indicate that an increase in feed rate over the range possible, shows no deterrant effect. Certainly this is a very desirable characteristic of this ore.

WASH WATER

For this type of material it is advantageous to establish that a medium/heavy wash water obtains the grade with a good recovery. If grade can be attained with the medium/heavy wash, then much leeway has been established, making the commercial operation very simple and flexible. Of course, if wash water can control the grade then the situation is even better. The effect of wash water is to increase the grade of the concentrate by washing out fine entrapped non-magnetic particles. Experience resulted in general evaluation of particular tests to determine that the sample in question remains within the general parameters established on similar ores.

Certain tests are presented in Table IV.

As expected the results show, with increase in wash water increase in grade and decrease in recovery. However, medium/heavy wash should be planned for this type of ore and the results should satisfy the parameters set by experience.

A rather sharp increase in iron content of the wash is reported with the increase from heavy/medium to heavy wash. Also the percent of iron values in the wash fraction after heavy wash is relatively high, however it could be recirculated. Consequently if laboratory tests show that medium wash gives relatively good results, and they do on this material, then the commercial operation has a lot of leeway. This is done commercially by adjusting the wash water volume, location, and launder location.

GAP

Size of gap between the plates is important in a commercial operation and always should be related to the magnetic intensity. As plate gap is increased, the compensation has to be made in the applied amps to compensate for the magnetic intensity. Selection of comparative tests is made on this basis together with experience.

Hence, generally it is important to establish the trend in grade, recovery, and intensity at various gaps.

Table V shows selected examples.

The results show that tests with gap of 2.5 mm, 3 mm, and 5 mm have a correspondingly increased current in order to have approximately the same intensity in the gap.

The results demonstrate best recovery and grade in test 54 after two passes with 3 mm gap. In this test 69.5% Fe concentrate was produced with 97.8% recovery. Test 49, with 5 mm gap, show lower recovery and grade. Since the results with 2.5 mm gap show no improvement most of tests were conducted with the larger 3 mm gap which is desirable.

Interpretation of overall results is that there is a higher iron recovery with 3 mm gap and high grade iron concentrate is produced after second pass of the magnetics, consequently 3 mm gap should be selected.

PASSES

In an easy to treat material one pass is usually all that is necessary to obtain an acceptable grade/recovery combination.

However, separation of this magnetite is known to be more difficult due to the fine grind and very high grade concentrate required. Although after -325 mesh grind the results in test 4 show grade of 64% Fe with 99.1% recovery, for production of the superconcentrate second pass of magnetics is required. Certain tests results are shown in Table VI.

Correlation tests 58 show that after -400 mesh grind and two passes a superconcentrate with over 69.5% Fe can be produced at recovery of over 85.5%. In the same test after one pass concentrate with 66.7% was produced at recovery of 91.6%.

With one exception, the series of tests, 51 to 60, show superconcentrate with iron content in excess of 69.5 Fe.

General interpretation of the results is that two passes are necessary to produce at the maximum rated capacity iron superconcentrate from this ore.

GRIND

From preliminary tests it was apparent that at least -200 mesh grind is necessary to produce superconcentrate with above 69.5% Fe. Consequently a series of tests were run with -200 mesh grind, -325 mesh grind, -400 mesh grind and -500 mesh grind. Test 20 shows that with -325 mesh grind the concentrate with 69.2% Fe was produced. Additional tests conducted confirm that finer grind was necessary to produce superconcentrate of the required grade. Test 21 shows that with -400 mesh grind, a concentrate with 71.1% Fe was already attained. Additional correlation tests confirmed that grind of at least -400 mesh is necessary to produce iron superconcentrate with more than 69.5% Fe and 2% SiO_2 at high iron recovery.

Certain test are shown in Table VII.

In test 56 at -400 mesh grind an iron superconcentrate with 1.94% SiO_2 and 70.3% Fe was produced at recovery of 90.3%.

It is evident from these results that to produce an iron superconcentrate of the specified grade a grind of at least -400 mesh is necessary.

TABLE 1

INTENSITY

1 PASS

TEST NO.	INTENSITY RHEOST. NO.	MAGNETICS % Fe	% Fe Dist.
1	1	64.7	34.9
2	2	65.6	56.8
3	4	64.0	99.1
4	8	57.7	99.5
	2 PASSES OF MAGNETICS		
51	2.5	69.9	82.4
52	3.0	69.5	87.1
53	3.5	69.6	96.3
54	4.0	69.5	97.8

TABLE II

% SOLIDS IN FEED

1 PASS

TEST NO.	% SOLIDS	MAGNETICS	
		% Fe	% Fe Dist.
5	10	65.6	56.8
1	20	64.7	71.9
6	30	64.6	81.1
7	40	64.2	76.2
	2 PASSES OF MAGNETICS		
52	10	69.5	81.1
55	20	68.4	91.1
56	30	70.0	92.4

TABLE III

FEED RATE

1 PASS

TEST NO.	CAPACITY INDEX	MAGNETICS	
		% Fe	% Fe Dist.
2	120	65.6	56.8
8	200	65.7	59.9
9	400	65.7	78.8
10	500	63.2	76.0
	2 PASSES OF MAGNETICS		
57	300	70.3	90.3
58	400	69.8	85.5

TABLE IV

WASH WATER

1 PASS

TEST NO.	WASH WATER	MAGNETICS % Fe	MAGNETICS % Fe Dist.		WASH % Fe	WASH % Fe Dist.
12	L	62.2	93.9		13.8	2.1
13	M	62.2	88.9		25.3	6.5
14	MH	64.2	82.1		38.2	12.2
8	H	65.7	59.9		50.3	26.1

2 PASSES OF MAGNETICS

52	MH	69.5	87.1	#1	34.7	6.0
				#2	62.0	2.6
59	H	70.4	76.1	#1	40.2	7.2
				#2	67.9	9.3

TABLE V

GAP

1 PASS

TEST NO.	GAP.	RHEOST NO.	MAGNETICS % Fe	MAGNETICS % Fe Dist.
17	2.5	1.5	64.6	77.5
16	3.0	2.0	64.7	76.?
27	5.0	4.0	62.5	98.1
		2 PASSES OF MAGNETICS		
49	5.0	4.0	68.6	90.2
51	3.0	2.5	69.9	82.4
54	3.0	4.0	69.5	97.8

TABLE VI

PASSES

(-325 mesh)

TEST NO.	PASSES	MAGNETICS % Fe	MAGNETICS % Fe Dist.
4	1	64.0	99.1
17	2 of Magnetics	69.2	70.0
16	2 of non-magnetics #1	64.7	76.2
	#2	63.3	20.0

CORRELATION TESTS

(-400 Mesh)

58	2 of Magnetics	69.8	85.5
58	1 (calculated)	66.7	91.6
59	2 of Magnetics	70.4	76.1
59	1 (calculated)	67.1	87.1

TABLE VII

GRIND

TEST NO.	GRIND (MESH)	MAGNETICS % SiO_2	MAGNETICS % Fe	% Fe Dist.
19	-200	--	65.9	59.5
20	-325	--	69.2	60.7
21	-400	--	71.1	69.6
22	-500	--	71.0	55.4

CORRELATION TESTS

48	-325	7.22	65.9	94.2
49	-400	3.07	68.6	90.2
50	-500	2.02	69.0	88.9
56	-400	1.94	70.3	90.3

TABLE VIII

TEST NO.	PASSES	INTENSITY RHEOST NO.	CAPACITY INDEX	% SOLIDS	WASH	MAGNETICS % SiO_2	MAGNETICS % Fe	MAGNETICS % Fe Dist.
56	2	3	400	3(	MH	2.08	70.0	92.4
57*	2	3	300	10	MH	1.94	70.3	90.3
58	1	3	400	10	MH	--	66.7	91.6
	2	3	400	10	MH	2.03	69.8	85.5
60	1	3	400	30	H	--	66.1	78.6
	2	3	400	30	H	1.85	69.9	75.5

ASSAY OF - 0.005% S
- 0.022% P
< 0.02 % V_2O_5
- 0.04% TiO_2

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

PROD NO.	% SOL Fe	PROD. NO.	% SOL Fe	PROD. NO.	% SOL Fe
634-1	34.1	634-49	64.7	634-111	67.3
2	64.7	50	63.3	116	67.5
5	65.6	51	12.2	121	67.8
8	64.0	52	2.4	126	68.1
11	57.7	53	64.6	131	67.7
14	66.1	56	63.8	136	67.6
17	64.6	59	65.9	141	67.5
20	64.2	62	69.2	142	35.4
23	65.7	65	71.1	143	63.7
24	50.3	68	71.0	144	3.4
25	12.3	71	61.2	145	25.2
26	65.7	72	49.0	146	66.3
29	63.2 63.2	73	19.5	147	30.7
32	64.6	74	60.5	148	57.6
35	62.2	77	62.8	149	2.6
36	13.8	78	50.3	150	12.7 12.7
37	4.1	79	17.0	151	65.5
38	62.2	80	63.7	156	64.3
39	25.3	83	62.5	161	67.0
40	4.0	86	63.9	166 166	65.9
41	64.2	89	62.6	171	66.0 66.0
42	38.2	92	63.4	172	28.2 28.2
43	4.9	95	65.2	173	54.5 54.5
44	69.2	96	53.9	174 174	3.1 3
45	43.8	97	7.4	175	14.0 14.0
46	64.0	98	65.8	176	65.9 65.9
47	7.8	101	67.2	177	12.9 12.1
48	22.1	106	66.9	178	41.0 41.0

CERTIFIED BY: J. C. WELSH, QUALITY CONTROL SUPERVISOR

SOURCE : R. G. Ramsay

DATE : JUNE 22, 1972

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Ferrofran Ltd.
(No Personal Liability)
P.O. Box 309, 798 Edward St., Prescott, Ont. (613) 9[illegible]3859
A Subsidiary of Magnetics International Ltd. (P.E.I.)

CERTIFIED ASSAY SHEET

PROD. NO.	% SOL Fe	PROD. NO.	% SOL Fe	
634-179	2.4	634-227	69.8	
180	10.8	228	29.5	
181	68.6	229	64.2	
182	18.6	230	2.9	
183	56.2	231	17.3	
184	3.1	232	70.4	
185	16.3	233	40.2	
186	69.0	234	67.9	
187	14.9	235	3.8	
188	61.6	236	26.8	
189	4.4	237	69.9	69.9
190	20.2	238	45.6	45.6
191	69.1	239	60.4	60.4
192	69.9	240	3.5	3.5
193	24.0	241	11.3	11.3
194	66.3	242	67.8	67.8
195	3.9	245	2.9	2.9
196	29.2	246	[illegible]5	?.5
197	69.5	247	6[illegible]3	6?.3
[illegible]14B	34.7	250	[illegible]	
199	62.0	251		
200	4.4	252	67.9	67.9
201	12.2	255	3.2	
202	69.6	256	8.1	8.1
207	69.5	257	66.2	66.2
212	68.4	258	16.9	16.9
217	70.0	259	33.5	
222	70.3	260	3.2	

56 sample

CERTIFIED BY: _____

J. C. WELSH, QUALITY CONTROL SUPERVISOR

SOURCE : R. G. Ramsay

DATE : JUNE 22, 1972

P.O. Box 309, 798 Edwa... Scott ... (613) 525-2859
A Subsidiary of Magi... Ltd. (N.P.L.)

CERTIFIED ASSAY SHEET

PROD. NO.	% INSOL
634-141	5.33
146	7.00
171	7.26
176	7.73
181	3.91
186	2.92
191 191	2.98
192	2.[illegible] 2.
197 197	3.[illegible]
227	2.84
232	2.52
237	2.53

12
12

CERTIFIED BY: _____

J. C. WELSH, QUALITY CONTROL SUPERVISOR

SOURCE : R. G. Ramsay

: JUNE 22, 1972

JUNE 22, 1971

BONDAR-CLEGG & COMPANY LTD.
geochemists • assayers • analytical chemists
768A BELFAST ROAD, OTTAWA, ONTARIO K1G 0Z5
PHONE: 237-3110 TELEX: 013-3548

CERTIFICATE OF ANALYSIS

MR. J.A. BARTNIK

... Mr. J.A. Bartnik, Exec. Vice. Pres. ...

... Ferro-Magnetics Ltd., P.O. Box 369, ...

... 793 Edward Street, Prescott, Ontario.

REPORT NO. ... A - 194 - 72 .....

DATE ..... May 30, 1972 .....

I hereby certify that the following are the results of analyses made by us upon the herein described ..... pulp ..... samples

MARKED		% SiO_2 SiO_2								
634.121										
634 - 121		4.43								
176		7.22								
181		3.07								
186		2.02								
202		2.77								
217		2.08								
222		1.94								
227		2.03								
232		1.75								
237		1.85								

10

NOTE: Rejects retained two weeks
Pulps retained three months unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.

.....

RECEIVED JUN 8 1972

BONDAR-CLEGG & COMPANY LTD.
geochemists • assayers • analytical chemists
768A BELFAST ROAD, OTTAWA, ONTARIO K1G 0Z5
PHONE: 237-3110 TELEX: 013-3548

CERTIFICATE OF ANALYSIS

TO ... Mr J.A. BARTNIK, Mr.J.A. Bartnik, ...

... FerroMagnetics Ltd., P.O. Box 309, ...
798 EDWARD STREET
... 798 Edward Street, Prescott, Ontario..

REPORT NO. A - 219 - 72 .....

DATE .....June. 7, 1972.....

I hereby certify that the following are the results of analyses made by us upon the herein described ... pulp..... samples

MARKED		% SiO_2								
634	242	5.39								
"	247	5.33								
"	252	5.33								
"	257	5.75								

NOTE: Rejects retained two weeks
Pulps retained three months unless otherwise arranged.

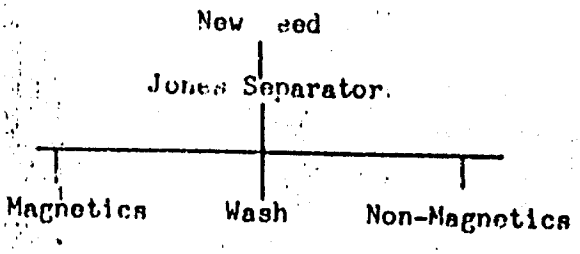
BONDAR-CLEGG & COMPANY LTD.

R.J. Pitcher

APPENDIX "B"

FLOW SHEETS

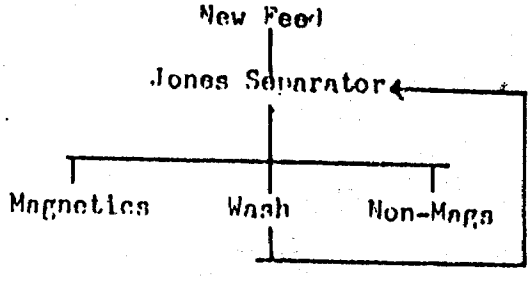
A. ONE PASS



Throughput - 100% (New Feed)

Jones Separator Budget Capital and Operating Cost - $0.128/ton feed/yr.

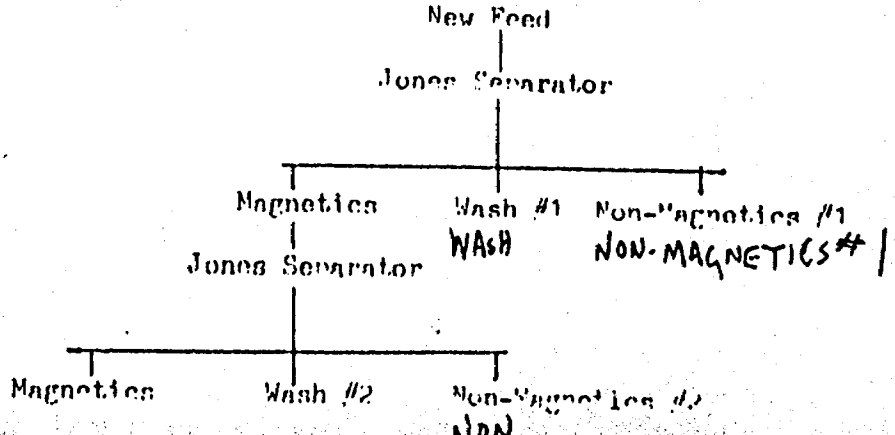
B. ONE PASS AND RECIRCULATION OF WASH



Throughput - 110% (New Feed + Wash)

Jones Separator Budget Capital and Operating Cost - $0.141/ton feed/year

C. TWO PASSES MAGNETICS



Throughput - 160% (New Feed + Magnetics #1)

160% (NEW FEED + MAGNETICS #1)

Jones Separator Budget Capital and Operating Cost - $0.190 / ton feed/year

CAPITAL AND OPERATING COST - $0.190/TON FEED/YEAR

APPENDIX "A"

EXPLANATION OF TEST DATA TERMS

On the 'Summary of Test Data' sheets some explanation of the terms used may be helpful to the reader. It is based on working out certain factors in the laboratory and applying these factors to determine parameters for commercial separation.

INTENSITY - AMPS

The laboratory Jones Separator on which the work was conducted has a maximum of 40 amperage that can be applied to the coils. From the amperage used on the laboratory machine, the size of the coils necessary for a commercial separator can be derived.

% SOLIDS

This is % Solids of the slurry feed to the separator.

CAPACITY INDEX

This is an index unit in the laboratory from which the capacity of a commercial separator can be deduced.

WASH WATER

This is classified as Light (L), Medium (M), Medium/Heavy (M/H) and Heavy (H) and from which the wash water requirements for a commercial machine can be deduced. The washing product usually represents middlings.

PLATES

There are generally two types of plates: Salient pole and high extraction. Their composition can vary.

DISPERSANT

Some materials need a dispersant and this is usually presented as lbs. / ton if used.

PASSES

This is the number of times a product has been passed through the laboratory separator. Deductions are then made for the flow sheet or a commercial operation.

GAP

The air gap between the plates can be varied, usually up to a maximum of 3.0 mm. This data collected determines the gap setting on a commercial separator.

PRO-MAGNETICS LTD

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY Mr. R.G. Ramsay MATERIAL Magnetite Ore OBJECTIVE $\simeq 2\% SiO_2$ DATE May 5, 1972

t	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
	Head	634-1	100.0	34.1	100.0										
1	Magnetics	634-2	18.4	64.7	34.9	-325	1	20	120	Heavy	S,P,ch	-	1	3.0	
	Wash	-3	22.6												
	Non-magnetics	-4	59.0												
	Head		100.0												
2	Magnetics	634-5	29.5	65.6	56.8	-325	2	20	120	Heavy	S,P,Ch	-	1	3.0	
	Wash	-6	21.3												
	Non-magnetics	-7	49.2												
	Head		100.0												
3	Magnetics	634-8	52.8	64.0	99.1	-325	4	20	120	Heavy	S,P,Ch	-	1	3.0	
	Wash	-9	6.6												
	Non-magnetics	-10	40.6												
	Head		100.0												
4	Magnetics	634-11	60.0	57.7	101.5	-325	8	20	120	Heavy	S,P,Ch	-	1	3.0	
	Wash	-12	5.2												
	Non-magnetics	-13	34.8												
	Head		100.0												
5	Magnetics	634-14	37.1	66.1	71.9	-325	2	10	120	Heavy	S,P,Ch	-	1	3.0	
	Wash	-15	16.7												
	Non-magnetics	-16	46.2												
	Head		100.0												
6	Magnetics	634-17	42.8	64.6	81.1	-325	2	30	120	Heavy	S,P,Ch	-	1	3.0	
	Wash	-18	16.0												
	Non-magnetics	-19	41.2												
	Head		100.0												
7	Magnetics	634-20	40.5	64.2	76.2	-325	2	40	120	Heavy	S,P,Ch	-	1	3.0	
	Wash	-21	18.2												
	Non-magnetics	-22	41.3												
	Head		100.0												

ERO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY Mr. R.G. Ramsay MATERIAL Magnetite Ore OBJECTIVE ≃ 2% SiO2 DATE May 5, 1972

Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mesh	Intensity RHEO %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
	Head	634-1	100.0	39.1	100.0										
1	Magnetics	634-2	18.4	69.7	34.9	-325	1	20	120	Heavy	S.P.Ch	—	1	3.0	
	Wash	-3	22.6												
	Non-magnetics	-4	59.0												
	Head		100.0												
2	Magnetics	634-5	29.5	65.6	56.8	-325	2	20	120	Heavy	S.P.Ch	—	1	3.0	
	Wash	-6	21.3												
	Non-magnetics	-7	49.2												
	Head		100.0												
3	Magnetics	634-8	52.8	64.0	99.1	-325	4	20	120	Heavy	S.P.Ch	—	1	3.0	
	Wash	-9	6.6												
	Non-magnetics	-10	40.6												
	Head		100.0												
4	Magnetics	634-11	60.0	57.7	101.5	-325	8	20	120	Heavy	S.P.Ch	—	1	3.0	
	Wash	-12	5.2												
	Non-magnetics	-13	34.8												
	Head		100.0												
5	Magnetics	634-14	37.1	66.1	71.9	-325	2	10	120	Heavy	S.P.Ch	—	1	3.0	
	Wash	-15	16.7												
	Non-magnetics	-16	46.2												
	Head		100.0												
6	Magnetics	634-17	42.8	64.6	81.1	-325	2	30	120	Heavy	S.P.Ch	—	1	3.0	
	Wash	-18	14.0												
	Non-magnetics	-19	41.2												
	Head		100.0												
7	Magnetics	634-20	40.5	64.2	76.2	-325	2	40	120	Heavy	S.P.Ch	—	1	3.0	
	Wash	-21	13.2												
	Non-magnetics	-22	41.3												
	Head		100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE $\simeq 2\% SiO_2$ DATE MAY 5, 1972

t	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
8	Magnetics	634-23	31.1	65.7	56.7	-325	2	20	200	Heavy	S,P,Ch	-	1	3.0	
	Wash	-24	18.7	50.3	26.1										
	Non-magnetics	-25	50.2	12.3	17.2										
	Head (colc'd)		100.0	36.0	100.0										
9	Magnetics	634-26	40.9	65.7	78.8	-325	2	20	400	Heavy	S,P,Ch	-	1	3.0	
	Wash	-27	14.9												
	Non-magnetics	-28	44.2												
	Head		100.0												
10	Magnetics	634-29	41.0	63.2	76.0	-325	2	20	500	Heavy	S,P,Ch	-	1	3.0	
	Wash	-30	18.8												
	Non-magnetics	-31	40.2												
	Head		100.0												
11	Magnetics	634-32	41.0	64.6	77.7	-325	2	20	500	M.H.	S,P.Ch	-	1	3.0	
	Wash	-33	16.0												
	Non-magnetics	-34	43.0												
	Head		100.0												
12	Magnetics	634-35	57.3	62.2	93.9	-325	2	20	200	Light	S,P,Ch	-	1	3.0	
	Wash	-36	5.7	13.8	2.1										
	Non-magnetics	-37	37.0	4.1	4.0										
	Head		100.0	37.9	100.0										
13	Magnetics	634-38	50.4	62.2	88.9	-325	2	20	200	Med.	S,P,Ch	-	1	3.0	
	Wash	-39	9.0	25.3	6.5										
	Non-magnetics	-40	40.6	4.0	4.6										
	Head (colc'd)		100.0	35.3	100.0										
14	Magnetics	634-41	46.1	64.2	82.1	-325	2	20	200	M.H.	S,P.Ch	-	1	3.0	
	Wash	-42	11.5	38.2	12.2										
	Non-magnetics	-43	42.4	4.2	5.7										
	Head (colc'd)		100.0	36.1	100.0										

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY M/R. R.G. RAMSAY MATERIAL Magnetite Ore OBJECTIVE ≃2% SiO_2 DATE May 5, 1972

Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe%	Grind Mesh	Intensity RHEO. %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
8	Magnetics	634-23	31.1	65.7	56.7	-325	2	20	200	Heavy	S.P.Ch	—	1	3.0	
	Wash	-24	18.7	50.3	26.1										
	Non-magnetics	-25	50.2	12.3	17.2										
	Head (calc'd)		100.0	36.0	100.0										
9	Magnetics	634-26	40.9	65.7	78.8	-325	2	20	400	Heavy	S.P.Ch	—	1	3.0	
	Wash	-27	14.9												
	Non-magnetics	-28	44.2												
	Head		100.0												
10	Magnetics	634-29	41.0	63.2	76.0	-325	2	20	500	Heavy	S.P.Ch	—	1	3.0	
	Wash	-30	18.8												
	Non-magnetics	-31	40.2												
	Head		100.0												
11	Magnetics	634-32	41.0	64.6	77.7	-325	2	20	500	M.H.	S.P.Ch	—	1	3.0	
	Wash	-33	16.0												
	Non-magnetics	-34	43.0												
	Head		100.0												
12	Magnetics	634-35	57.3	62.2	93.9	-325	2	20	200	Light	SPCh	—	1	3.0	
	Wash	-36	5.7	13.5	2.1										
	Non-magnetics	-37	37.0	4.1	4.0										
	Head (calc'd)		100.0	37.9	100.0										
13	Magnetics	634-38	50.4	62.2	88.9	-325	2	20	200	Med.	S.P.Ch	—	1	3.0	
	Wash	-39	9.0	25.3	6.5										
	Non-magnetics	-40	40.6	4.0	4.6										
	Head (calc'd)		100.0	35.3	100.0										
14	Magnetics	634-41	46.1	64.2	82.1	-325	2	20	200	M.H.	S.P.Ch	—	1	3.0	
	Wash	-42	11.5	33.2	12.2										
	Non-magnetics	-43	42.4	4.9	5.7										
	Head (calc'd)		100.0	36.1	100.0										

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE ≃ 2% SiO_2 DATE MAY 5, 1972

t	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
15	Magnetics	634-44	34.5	69.2	63.1	-325	2	20	200	Heavy	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-45	15.9	43.8	18.4										
	Wash #2	-46	4.9	64.0	8.3										
	Non-magnetics #1	-47	42.0	7.8	8.7										
	Non-magnetics #2	-48	2.7	22.1	1.5										
	Head (colc'd)		100.0	37.0	100.0										
16	Magnetics #1	634-49	43.6	64.7	76.2	-325	2	20	200	Heavy	S,P,Ch	-	2 of non-mag & wash	3.0	
	Magnetics #2	-50	11.7	63.3	20.0										
	Wash	-51	3.5	12.2	1.1										
	Non-magnetics	-52	41.2	2.4	2.7										
	Head (colc'd)		100.0	37.0	100.0										
17	Magnetics	634-53	40.9	64.6	77.5	-325	1.5	20	200	Heavy	S,P,Ch	-	1	2.5	
	Wash	-54	12.4												
	Non-magnetics	-55	46.7												
	Head		100.0												
18	Magnetics	634-56	40.8	63.8	76.3	-325	1.5	20	500	Heavy	S,P,Ch	-	1	2.5	
	Wash	-57	17.4												
	Non-magnetics	-58	41.8												
	Head		100.0												
19	Magnetics	634-59	30.8	65.9	59.5	-325	2.5	10	200	Heavy	S,P,Ch	-	3 of mags	3.0	
	Wash #1	-60	11.5												
	Wash #2	-61	6.0												
	Wash #3	-62	6.3												
	Non-magnetics #1	-63	40.7												
	Non-magnetics #2	-64	3.5												
	Non-magnetics #3	-65	1.2												
	Head		100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY Mr. R. G. Ramsay MATERIAL Magnetite Ore OBJECTIVE ≃ 2% SiO_2 DATE May 5, 1972

Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mesh	Intensity RHEO. %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
15	Magnetics	634-44	34.5	69.2	63.1	-325	2	20	200	Heavy	SPCh	—	2	3.0	
	Float #1	-45	15.9	43.8	18.4								Mean		
	Float #2	-46	4.9	64.0	8.3										
	Non-magnetics #1	-47	42.0	7.8	8.7										
	Non-magnetics #2	-48	2.7	22.1	1.5										
	Head (Calc'd)		100.0	37.0	100.0										
16	Magnetics #1	634-49	43.1	64.7	76.2	-325	2	20	200	Heavy	SPCh	—	2	3.0	
	Magnetics #2	-50	11.7	63.3	20.0								Mean		
	Float	-51	3.5	12.2	1.1								Fresh		
	Non-magnetics	-52	41.2	2.4	2.7										
	Head (Calc'd)		100.0	37.0	100.0										
17	Magnetics	634-53	40.9	64.6	77.5	-325	1.5	20	200	Heavy	SPCh	—	1	2.5	
	Wash	-54	12.4												
	Non-magnetics	-55	46.7												
	Head		100.0												
18	Magnetics	634-56	40.8	63.8	76.3	-325	1.5	20	500	Heavy	SPCh	—	1	2.5	
	Float	-57	17.4												
	Non-magnetics	-58	41.8												
	Head		100.0												
19	Magnetics	634-59	30.8	65.9	59.5	-200	2.5	10	200	Heavy	SPCh	—	3	3.0	
	Float #1	-60	11.5										Mean		
	Float #2	-60A	6.0												
	Float #3	-60B	6.3												
	Non-magnetics #1	-61	40.7												
	Non-magnetics #2	-61A	3.5												
	Non-magnetics #3	-61B	1.2												
	Head		100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE ≈ 2% SiO_2 DATE MAY 5, 1972

t	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
20	Magnetics	634-62	29.9	69.2	60.7	-325	2.5	10	200	Heavy	S,P,Ch	-	3 of mags	3.0	
	Wash #1	-63	14.1												
	Wash #2	-63A	6.2												
	Wash #3	-63B	3.4												
	Non-magnetics #1	-64	42.9												
	Non-magnetics #2	-64A	2.6												
	Non-magnetics #3	-64B	.9												
	Head		100.0												
21	Magnetics	634-65	33.4	71.1	69.6	-400	2.5	10	200	Heavy	S,P,Ch	-	3 of mags	3.0	
	Wash #1	-66	10.8												
	Wash #2	-66A	5.2												
	Wash #3	-66B	4.6												
	Non-magnetics #1	-67	43.2												
	Non-magnetics #2	-67A	2.1												
	Non-magnetics #3	-67B	.7												
	Head														
22	Magnetics	634-68	26.6	71.0	55.4	-500	2.5	10	200	Heavy	S,P,Ch	-	3 of mags	3.0	
	Wash #1	-69	12.4												
	Wash #2	-69A	7.7												
	Wash #3	-69B	5.4												
	Non-magnetics #1	-70	43.7												
	Non-magnetics #2	-70A	3.1												
	Non-magnetics #3	-70B	1.1												
	Head		100.0												
23	Magnetics	634-71	21.0	61.2	37.9	-200	2	20	200	Heavy	S,P,Ch	-	1	3.0	
	Wash	-72	19.3	49.0	27.8										
	Non-magnetics	-73	59.7	19.5	34.3										
	Head (colc'd)		100.0	34.0	100.0										
24	Magnetics	634-74	24.3	60.5	43.1	-200	2	20	500	Heavy	S,P,Ch	-	1	3.0	
	Wash	-75	21.2												
	Non-magnetics	-76	54.5												
	Head		100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL Magnetite Ore OBJECTIVE ≃2% SiO_2 DATE May 5, 1972

Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mesh	Intensity RHEO. %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
20	Magnetics	634-62	29.9	69.2	60.7	-325	2.5	10	200	Heavy	SPCh	—	3	3.0	
	Wash #1	-63	14.1										3 mags		
	Wash #2	-63A	6.2												
	Wash #3	-63B	3.4												
	Non-magnetics #1	-64	42.9												
	Non-magnetics #2	-64A	2.6												
	Non-magnetics #3	-64B	.9												
	Head		100.0												
21	Magnetics	634-65	33.4	71.1	69.6	-400	2.5	10	200	Heavy	SPCh	—	3	3.0	
	Wash #1	-66	10.8										3 mags		
	Wash #2	-66A	5.2												
	Wash #3	-66B	4.6												
	Non-magnetics #1	-67	43.2												
	Non-magnetics #2	-67A	2.1												
	Non-magnetics #3	-67B	.7												
	Head														
22	Magnetics	634-68	26.6	71.0	55.4	-500	2.5	10	200	Heavy	SPCh	—	3	3.0	
	Wash #1	-69	12.4										3 mags		
	Wash #2	-69A	7.7												
	Wash #3	-69B	5.4												
	Non-magnetics #1	-70	43.7												
	Non-magnetics #2	-70A	3.1												
	Non-magnetics #3	-70B	1.1												
	Head		100.0												
23	Magnetics	634-71	21.0	61.2	37.9	-200	2	20	200	Heavy	SPCh	—	1	3.0	
	Wash	-72	19.3	49.2	27.8										
	Non-magnetics	-73	59.7	19.5	34.3										
	Head (calc'd)		100.0	34.0	100.0										
24	Magnetics	634-74	24.3	60.5	43.1	-200	2	20	500	Heavy	SPCh	—	1	3.0	
	Wash	-75	21.2												
	Non-magnetics	-76	54.5												
	Head		100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE ≃ 2% SiO_2 DATE MAY 5, 1972

t	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
25	Magnetics	634-77	23.9	62.8	43.7	-270	2	20	500	Heavy	S,P,CH	-	1	3.0	
	Wash	-78	19.2	50.3	28.1										
	Non-magnetics	-79	56.9	17.0	28.2										
	Head (colc'd)		100.0	34.3	100.0										
26	Magnetics	634-80	18.8	63.7	35.1	-270	2	20	200	Heavy	S,P,Ch	-	1	3.0	
	Wash	-81	16.6												
	Non-magnetics	-82	64.6												
	Head		100.0												
27	Magnetics	634-83	53.5	62.5	98.1	-325	4	20	200	Heavy	S,P,Ch	-	1	5.0	
	Wash	-84	8.1												
	Non-magnetics	-85	38.4												
	Head		100.0												
28	Magnetics	634-86	52.9	63.9	99.1	-325	4	20	300	Heavy	S,P,Ch	-	1	5.0	
	Wash	-87	7.2												
	Non-magnetics	-88	39.9												
	Head		100.0												
29	Magnetics	634-89	47.2	62.6	86.6	-325	4	20	400	Heavy	S,P,Ch	-	1	5.0	
	Wash	-90	10.2												
	Non-magnetics	-91	42.6												
	Head		100.0												
30	Magnetics	634-92	53.7	63.4	99.8	-325	4	20	500	Heavy	S,P,Ch	-	1	5.0	
	Wash	-93	9.3												
	Non-magnetics	-94	37.0												
	Head		100.0												
31	Magnetics	634-95	37.3	65.2	66.4	-500	2	20	200	Heavy	S,P,Ch	-	1	3.0	
	Wash	-96	16.5	53.9	24.3										
	Non-magnetics	-97	46.2	7.4	9.3										
	Head (colc'd)		100.0	36.6	100.0										

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL Magnetite Ore OBJECTIVE ≈ 2% S.Oz DATE May 5, 1972

Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mes	Intensity GAUSS	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
25	Magnetics	634-77	23.9	62.8	43.7	-270	2	20	500	Heavy	SPCh	—	1	3.0	
	Wash	-78	19.2	50.3	28.1										
	Non-magnetics	-79	56.9	17.0	28.2										
	Head (calcid)		100.0	34.3	100.0										
26	Magnetics	634-80	18.8	63.7	35.1	-270	2	20	200	Heavy	SPCh	—	1	3.0	
	Wash	-81	16.6												
	Non-magnetics	-82	64.6												
	Head		100.0												
27	Magnetics	634-83	53.5	62.5	98.1	-325	4	20	200	Heavy	SPCh	—	1	5.0	
	Wash	-84	8.1												
	Non-magnetics	-85	38.4												
	Head		100.0												
28	Magnetics	634-86	52.9	63.9	99.1	-325	4	20	300	Heavy	SPCh	—	1	5.0	
	Wash	-87	7.2												
	Non-magnetics	-88	39.9												
	Head		100.0												
29	Magnetics	634-89	47.2	62.6	86.6	-325	4	20	400	Heavy	SPCh	—	1	5.0	
	Wash	-90	10.2												
	Non-magnetics	-91	42.6												
	Head		100.0												
30	Magnetics	634-92	53.7	63.4	99.8	-325	4	20	500	Heavy	SPCh	—	1	5.0	
	Wash	-93	9.3												
	Non-magnetics	-94	37.0												
	Head		100.0												
31	Magnetics	634-95	37.3	65.2	66.4	-500	2	20	200	Heavy	SPCh	—	1	3.0	
	Wash	-96	16.5	53.9	24.3										
	Non-magnetics	-97	46.2	7.4	9.3										
	Head (calcid)		100.0	36.6	100.0										

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE $\simeq$ 2% S_1O_2 DATE MAY 5, 1972

	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
32	Magnetics	634-98	34.7	65.8	67.0	-500	2	20	500	Heavy	S,P,Ch	-	1	3.0	
	Wash	-99	20.9												
	Non-magnetics	-100	44.4												
	Head		100.0												
33	Magnetics	634-101	41.6	67.2	82.0	-325	3	20	500	Heavy	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-102	11.9												
	Wash #2	-103	1.4												
	Non-magnetics #1	-104	42.1												
	Non-magnetics #2	-105	3.0												
	Head		100.0												
34	Magnetics	634-106	41.5	66.9	81.4	-325	3	20	500	M.H.	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-107	12.5												
	Wash #2	-108	.9												
	Non-magnetics #1	-109	41.7												
	Non-magnetics #2	-110	3.4												
	Head		100.0												
35	Magnetics	634-111	40.7	67.3	80.3	-325	3	20	400	M.H.	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-112	11.2												
	Wash #2	-113	3.2												
	Non-magnetics #1	-114	41.6												
	Non-magnetics #2	-115	3.3												
	Head		100.0												
36	Magnetics	634-116	45.4	67.5	89.9	-325	3	20	200	M.H.	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-117	8.1												
	Wash #2	-118	2.1												
	Non-magnetics #1	-119	40.9												
	Non-magnetics #2	-120	3.5												
	Head		100.0												

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R. G. RAMSAY MATERIAL Magnetite Ore OBJECTIVE ≃ 2% SiO2 DATE May 5, 1972

Test No.	Description	Number	Weight %	Assays %Fe	Distribution Fe%	Grind Mesh	Intensity RHEO %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
32	Magnetics	634-98	39.7	65.8	67.0	-500	2	20	500	Heavy	SPCh	—	1	3.0	
	Light	-99	20.9												
	Non-magnetics	-100	44.4												
	Head		100.0												
33	Magnetics	634-101	41.6	67.2	82.0	-325	3	20	500	Heavy	SPCh	—	2	3.0	
	Light #1	-102	11.9										1 mags		
	Light #2	-103	1.4												
	Non-magnetics #1	-104	42.1												
	Non-magnetics #2	-105	3.0												
	Head		100.0												
34	Magnetics	634-106	41.5	66.9	81.4	-325	3	20	500	M.H.	SPCh	—	2	3.0	
	Light #1	-107	12.5										1 mags		
	Light #2	-108	.9												
	Non-magnetics #1	-109	41.7												
	Non-magnetics #2	-110	3.4												
	Head		100.0												
35	Magnetics	634-111	40.7	67.3	80.3	-325	3	20	400	M.H.	SPCh	—	2	3.0	
	Light #1	-112	11.2										1 mags		
	Light #2	-113	3.2												
	Non-magnetics #1	-114	41.6												
	Non-magnetics #2	-115	3.3												
	Head		100.0												
36	Magnetics	634-116	44.4	67.5	89.9	-325	3	20	200	M.H.	SPCh	—	2	3.0	
	Light #1	-117	8.1										1 mags		
	Light #2	-118	2.1												
	Non-magnetics #1	-119	40.9												
	Non-magnetics #2	-120	3.5												
	Head		100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE ≃2% SO_3 DATE MAY 5, 1972

t	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rues #	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
37	Magnetics	634-121	39.6	67.8	78.7	-325	3	10	400	Heavy	S,P,Ch	-	2 of mags	3.0	634-121 - 4.43% S_1O_2
	Wash #1	-122	10.6												
	Wash #2	-123	3.1												
	Non-magnetics #1	-124	44.3												
	Non-magnetics #2	-125	2.4												
	Head		100.0												
38	Magnetics	634-126	36.1	68.1	72.1	-325	2.5	10	400	Heavy	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-127	10.0												
	Wash #2	-128	4.6												
	Non-magnetics #1	-129	45.6												
	Non-magnetics #2	-130	3.7												
	Head		100.0												
39	Magnetics	634-131	34.4	67.7	68.3	-325	2.5	10	200	Heavy	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-132	12.4												
	Wash #2	-133	3.3												
	Non-magnetics #1	-134	46.2												
	Non-magnetics #2	-135	3.7												
	Head		100.0												
40	Magnetics	634-136	41.0	67.6	81.3	-325	2.5	10	200	M.H.	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-137	7.8												
	Wash #2	-138	2.7												
	Non-magnetics #1	-139	45.8												
	Non-magnetics #2	-140	2.7												
	Head		100.0												
41	Magnetics	634-141	40.7	67.5	73.9	-325	3	10	200	Heavy	S,P,Ch	-	2 of mags	5.0	634-141 5.3% inac.
	Wash #1	-142	9.5	35.4	9.0										
	Wash #2	-143	6.6	63.7	11.3										
	Non-magnetics #1	-144	40.2	3.4	3.7										
	Non-magnetics #2	-145	3.0	25.2	2.1										
	Head (colc'd)		100.0	37.2	100.0										

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL Magnetite Ore OBJECTIVE ≃2% SO_2 DATE May 5, 1972

Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mesh	Intensity RHEO. %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
37	Magnetic	634-121	39.6	67.8	78.7	-325	3	10	400	Heavy	SPCh	—	2	30	634-12 - 4.43% SO_2
	Wash #1	-122	10.6										1 mag		
	Wash #2	-123	3.1												
	Non-magnetic #1	-124	44.3												
	Non-magnetic #2	-125	2.4												
	Head		100.0												
38	Magnetic	634-126	36.1	68.1	72.1	-325	2.5	10	400	Heavy	SPCh	—	2	30	
	Wash #1	-127	10.0										1 mag		
	Wash #2	-128	4.6												
	Non-magnetic #1	-129	45.6												
	Non-magnetic #2	-130	3.7												
	Head		100.0												
39	Magnetic	634-131	34.4	67.7	68.3	-325	2.5	10	200	Heavy	SPCh	—	2	30	
	Wash #1	-132	12.4										1 mag		
	Wash #2	-133	3.3												
	Non-magnetic #1	-134	46.2												
	Non-magnetic #2	-135	3.7												
	Head		100.0												
40	Magnetic	634-136	41.0	67.6	81.3	-325	2.5	10	200	M.H.	SPCh	—	2	30	
	Wash #1	-137	7.8										1 mag		
	Wash #2	-138	2.7												
	Non-magnetic #1	-139	45.8												
	Non-magnetic #2	-140	2.7												
	Head		100.0												
41	Magnetic	634-141	40.7	67.5	73.9	-325	3	10	200	Heavy	SPCh	—	2	50	141-36 to - 5 mag
	Wash #1	-142	9.5	38.4	9.0								1 mag		
	Wash #2	-143	6.6	63.7	11.3										
	Non-magnetic #1	-144	40.2	3.4	3.7										
	Non-magnetic #2	-145	3.0	25.2	2.1										
	Head (calc'd.)		100.0	37.2	100.0										

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE $\simeq$ 2% SiO_2 DATE MAY 5, 1972

t	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
42	Magnetics	634-146	47.6	66.3	86.1	-325	4	10	200	Heavy	S,P,Ch	-	2 of mags	5.0	634-146 7% insol ?
	Wash #1	-147	6.4	30.7	5.4										
	Wash #2	-148	3.0	57.6	4.7										
	Non-magnetics #1	-149	40.0	2.6	2.8										
	Non-magnetics #2	-150	3.0	12.7	1.0										
	Head (colc'd)		100.0	36.7	100.0										
43	Magnetics	634-151	50.7	65.5	97.4	-325	5	10	200	Heavy	S,P,Ch	-	2 of mags	5.0	
	Wash #1	-152	4.9												
	Wash #2	-153	1.7												
	Non-magnetics #1	-154	39.8												
	Non-magnetics #2	-155	2.9												
	Head		100.0												
44	Magnetics	634-156	54.4	64.3	102.6	-325	6	10	200	Heavy	S,P,Ch	-	2 of Mags	5.0	
	Wash #1	-157	2.7												
	Wash #2	-158	1.0												
	Non-magnetics #1	-159	38.6												
	Non-magnetics #2	-160	3.3												
	Head		100.0												
45	Magnetics	634-161	44.1	67.0	86.6	-325	4	20	200	Heavy	S,P,Ch	-	2 of mags	5.0	
	Wash #1	-162	8.9												
	Wash #2	-163	4.3												
	Non-magnetics #1	-164	39.5												
	Non-magnetics #2	-165	3.2												
	Head		100.0												
46	Magnetics	634-166	45.4	65.9	87.7	-325	4	30	200	Heavy	S,P,Ch	-	2 of mags	5.0	
	Wash #1	167	9.3												
	Wash #2	-168	4.6												
	Non-magnetics #1	-169	36.4												
	Non-magnetics #2	-170	4.3												
	Head		100.0												

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL Magnetite Ore OBJECTIVE ≈2% SiO2 DATE May 5 1972

Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mesh	Intensity RHEO %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
42	Magnetics	1634-146	47.6	66.3	86.1	-325	4	10	200	Heavy	SPCh	—	2	5.0	1634-140 2nd mins.
	Mids #1	-147	6.4	30.7	5.4								1 mags		
	Mids #2	-148	3.0	57.6	4.7										
	Non-magnetics #1	-149	40.0	2.6	2.8										
	Non-magnetics #2	-150	3.0	12.7	1.0										
	Head (calc'd)		100.0	36.7	100.0										
43	Magnetics	1634-151	50.7	65.5	97.4	-325	5	10	200	Heavy	SPCh	—	2	5.0	
	Mids #1	-152	4.9										1 mags		
	Mids #2	-153	1.7												
	Non-magnetics #1	-154	39.8												
	Non-magnetics #2	-155	2.9												
	Head		100.0												
44	Magnetics	1634-156	54.4	64.3	102.6	-325	6	10	200	Heavy	SPCh	—	2	5.0	
	Mids #1	-157	2.7										1 mags		
	Mids #2	-158	1.0												
	Non-magnetics #1	-159	38.6												
	Non-magnetics #2	-160	3.3												
	Head		100.0												
45	Magnetics	1634-161	44.1	67.0	86.6	-325	4	20	200	Heavy	SPCh	—	2	5.0	
	Mids #1	-162	8.9										1 mags		
	Mids #2	-163	4.3												
	Non-magnetics #1	-164	39.5												
	Non-magnetics #2	-165	3.2												
	Head		100.0												
46	Magnetics	1634-166	45.4	65.9	87.7	-325	4	30	200	Heavy	SPCh	—	2	5.0	
	Mids #1	-167	9.3										1 mags		
	Mids #2	-168	4.6												
	Non-magnetics #1	-169	36.4												
	Non-magnetics #2	-170	4.3												
			100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE $\simeq$ 2% S_1O_2 DATE MAY 5, 1972

	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rueg %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
7	Magnetics	634-171	48.0	66.0	87.4	-325	4	10	200	M.H.	S,P,Ch	-	2 of mags	5.0	634-171 - 26% insol
	Wash #1	-172	7.0	28.2	5.4										
	Wash #2	-173	1.8	54.5	2.7										
	Non-magnetics #1	-174	40.8	3.1	3.5										
	Non-magnetics #2	-175	2.4	14.0	1.0										
	Head (colc'd)		100.0	36.2	100.0										
8	Magnetics	634-176	51.7	65.9	94.2	-325	4	10	200	Mea	S,P,Ch	-	2 of mags	5.0	634-176 - 73% insol 22% S_1O_2
	Wash #1	-177	4.6	12.9	1.6										
	Wash #2	-178	.4	41.0	.5										
	Non-magnetics #1	-179	39.7	2.4	2.6										
	Non-magnetics #2	-180	3.6	10.8	1.1										
	Head		100.0	36.2	100.0										
9	Magnetics	634-181	47.4	68.6	90.2	-400	4	10	200	Mea	S,P,Ch	-	2 of mags	5.0	634-181 - 39% insol 37% S_1O_2
	Wash #1	-182	5.4	18.6	2.8										
	Wash #2	-183	1.2	56.2	1.9										
	Non-magnetics #1	-184	42.7	3.1	3.7										
	Non-magnetics #2	-185	3.3	16.3	1.4										
	Head (colc'd)		100.0	36.1	100.0										
0	Magnetics	634-186	46.9	69.0	88.9	-500	4	10	200	Mea	S,P,Ch	-	2 of mags	5.0	634-191 - ? 634-186 - 69.1% 98%/? ? 92% ?
	Wash #1	-187	5.6	14.9	2.3										
	Wash #2	-188	1.2	61.6	2.0										
	Non-magnetics #1	-189	43.5	4.4	5.3										
	Non-magnetics #2	-190	2.8	20.2	1.5										
	Head (colc'd)		100.0	36.4	100.0										
1	Magnetics	634-192	42.4	69.9	82.4	-400	2.5	10	200	M.H.	S,P,Ch	-	2 of mags	3.0	? - 96% ?
	Wash #1	-193	5.2	24.0	3.5										
	Wash #2	-194	3.6	66.3	6.6										
	Non-magnetics #1	-195	45.6	3.9	4.9										
	Non-magnetics #2	-196	3.2	29.2	2.6										
	Head (colc'd)		100.0	36.0	100.0										

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SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL Magnetite Ore OBJECTIVE ≃ 2% SiO_2 DATE May 5 1972

Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mesh	Intensity RHEO %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
47	Magnetics	634-171	48.0	66.0	87.4	-325	4	10	200	M.H.	SPCh	—	2	5.0	1634-171 52% mag
	Wash #1	-172	7.0	28.2	5.4								Pmags		
	Wash #2	-173	1.8	59.5	2.7										
	Non-magnetics #1	-174	40.8	3.1	3.5										
	Non-magnetics #2	-175	2.4	14.0	1.0										
	Head (calc'd)		100.0	36.2	100.0										
48	Magnetics	634-176	51.7	65.9	94.2	-325	4	10	200	Mod	SPCh	—	2	5.0	1634-176 72% mag 7.22% SiO_2
	Wash #1	-177	4.6	12.9	1.6								Pmags		
	Wash #2	-178	.4	41.0	.5										
	Non-magnetics #1	-179	39.7	2.4	2.6										
	Non-magnetics #2	-180	3.6	10.8	1.1										
	Head (calc'd)		100.0	36.2	100.0										
49	Magnetics	634-181	47.4	68.6	90.2	-400	4	10	200	Mod	SPCh	—	2	5.0	1634-181 ~55% mag 3.01% SiO_2
	Wash #1	-182	5.4	18.6	2.8								Pmags		
	Wash #2	-183	1.2	56.2	1.9										
	Non-magnetics #1	-184	42.7	3.1	3.7										
	Non-magnetics #2	-185	3.3	16.3	1.4										
	Head (calc'd)		100.0	36.1	100.0										
50	Magnetics	634-186	46.9	69.0	88.9	-500	4	10	200	Mod	SPCh	—	2	5.0	1634-191 effluent — 634-186 ~69.1% 2.08%
	Wash #1	-187	5.6	14.9	2.3								Pmags		
	Wash #2	-188	1.2	61.6	2.0										
	Non-magnetics #1	-189	43.5	4.4	5.3										189 ~52%
	Non-magnetics #2	-190	2.8	20.2	1.5										3.32%
	Head (calc'd)		100.0	36.4	100.0										
51	Magnetics	634-192	42.4	69.9	82.4	-400	2.5	10	200	M.H.	SPCh	—	2	3.0	192 mag
	Wash #1	-193	5.2	24.0	3.5								Pmags		
	Wash #2	-194	3.6	66.3	6.6										
	Non-magnetics #1	-195	45.6	3.9	4.9										
	Non-magnetics #2	-196	3.2	29.2	2.6										
	Head (calc'd)		100.0	36.0	100.0										

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE $\simeq$ 2% S_1O_2 DATE MAY 5, 1972

t	Description	Number	Weight %	Assays % Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
52	Magnetics	634-197	44.5	69.5	85.1	-400	3	10	200	M.H.	S,P,Ch	-	2 of mags	3.0	634-197 - 3.41% insol
	Wash #1	-198	6.3	34.7	6.0										
	Wash #2	-199	1.5	62.0	2.6										
	Non-magnetics #1	-200	45.1	4.4	5.5										
	Non-magnetics #2	-201	2.6	12.2	.8										
	Head (colc'd)		100.0	36.3	100.0										
53	Magnetics	634-202	47.2	69.6	96.3	-400	3.5	10	200	M.H.	S,P,Ch	-	2 of mags	3.0	634-202 - 2.77% S_1O_2
	Wash #1	-203	4.1												
	Wash #2	-204	1.4												
	Non-magnetics #1	-205	44.2												
	Non-magnetics #2	-206	3.1												
	Head		100.0												
54	Magnetics	634-207	48.0	69.5	97.8	-400	4	10	200	M.H.	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-208	3.1												
	Wash #2	-209	2.1												
	Non-magnetics #1	-210	43.7												
	Non-magnetics #2	-211	3.1												
	Head		100.0												
55	Magnetics	634-212	45.4	68.4	91.1	-400	3	20	200	M.H.	S,P,Ch	-	2 of mags	3.0	
	Wash #1	-213	5.0												
	Wash #2	-214	2.3												
	Non-magnetics #1	-215	43.9												
	Non-magnetics #2	-216	3.4												
	Head		100.0												
56	Magnetics	634-217	45.0	70.0	92.4	-400	3	30	200	M.H.	S,P,Ch	-	2 of mags	3.0	634-217 - 2.08% S_1O_2
	Wash #1	-218	7.3												
	Wash #2	-219	2.4												
	Non-magnetics #1	-220	41.9												
	Non-magnetics #2	-221	3.4												
	Head		100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL Magnetite Ore OBJECTIVE ≃ 2% SiO_2 DATE May 5, 1972

Test S.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mesh	Intensity RHEO %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
52	Magnetics	634-197	44.5	69.5	85.1	-400	3	10	200	M.H.	SPCh	—	2	3.0	634-197 - 3.41% Lime
	Wash #1	-198	6.3	39.7	6.0								1 mag		
	Wash #2	-199	1.5	62.0	2.6										
	Non-magnetics #1	-200	45.1	4.4	5.5										
	Non-magnetics #2	-201	2.6	12.2	.8										
	Head (Calc'd)		100.0	36.3	100.0										
53	Magnetics	634-202	47.2	69.6	96.3	-400	3.5	10	200	M.H.	SPCh	—	2	3.0	634-202 - 2.77% S
	Wash #1	-203	4.1										1 mag		
	Wash #2	-204	1.4												
	Non-magnetics #1	-205	44.2												
	Non-magnetics #2	-206	3.1												
	Head		100.0												
54	Magnetics	634-207	48.0	69.5	97.8	-400	4	10	200	M.H.	SPCh	—	2	3.0	
	Wash #1	-208	3.1										1 mag		
	Wash #2	-209	2.1												
	Non-magnetics #1	-210	43.7												
	Non-magnetics #2	-211	3.1												
	Head		100.0												
55	Magnetics	634-212	45.4	68.4	91.1	-400	3	20	200	M.H.	SPCh	—	2	3.0	
	Wash #1	-213	5.0										1 mag		
	Wash #2	-214	2.3												
	Non-magnetics #1	-215	43.9												
	Non-magnetics #2	-216	3.4												
	Head		100.0												
56	Magnetics	634-217	45.0	70.0	92.4	-400	3	30	200	M.H.	SPCh	—	2	3.0	634-217 - 2.05% SiO
	Wash #1	-218	7.3										1 mag		
	Wash #2	-219	2.4												
	Non-magnetics #1	-220	41.9												
	Non-magnetics #2	-221	3.4												
	Head		100.0												

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

COMPANY MR. R.G. RAMSAY MATERIAL MAGNETITE ORE OBJECTIVE ≃ 2% S_1O_2 DATE MAY 5, 1972

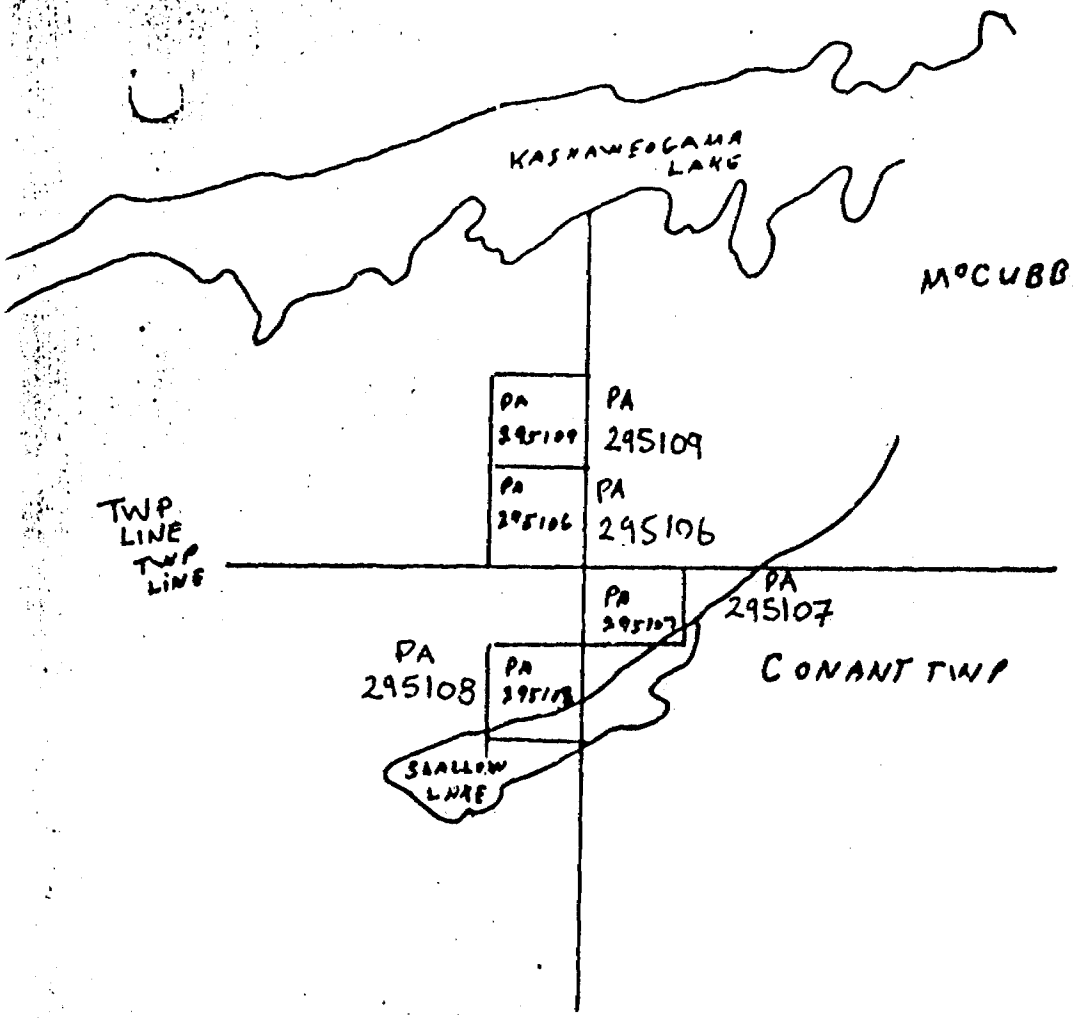
t	Description	Number	Weight %	Assays %Fe	Distribution % Fe	Grind Mesh	Intensity Rheo %	%Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
57	Magnetics	634-222	43.8	70.3	90.3	-400	3	10	300	M.H.	S,P,Ch	-	2 of mags	3.0	634-222 - 94% S_1O_2 634-222 - 00.5% S 634-222 - 02.2% P 634-222 - 0.02% U_2O_5 634-222 - 04.1% TiO_2
	Wash #1	-223	5.4												
	Wash #2	-224	3.7												
	Non-magnetics #1	-225	43.7												
	Non-magnetics #2	-226	3.4												
	Head		100.0												
58	Magnetics	634-227	44.6	69.8	85.5	-400	3	10	400	M.H.	S,P,Ch	-	2 of mags	3.0	634-227 - 84% insol - 3% S_1O_2
	Wash #1	-228	6.0	29.5	4.9										
	Wash #2	-229	2.9	64.2	5.1										
	Non-magnetics #1	-230	44.3	2.9	3.5										
	Non-magnetics #2	-231	2.2	17.3	1.0										
	Head (colc'd)		100.0	36.4	100.0										
59	Magnetics	634-232	38.8	70.4	76.1	-400	3	10	200	Heavy	S,P,Ch	-	2 of mags	3.0	634-232 - 82% insol ? % S_1O_2
	Wash #1	-233	6.4	40.2	7.2										
	Wash #2	-234	4.9	67.9	9.3										
	Non-magnetics #1	-235	46.6	3.8	4.9										
	Non-magnetics #2	-236	3.3	26.8	2.5										
	Head (colc'd)		100.0	35.9	100.0										
60	Magnetics	634-237	39.0	69.9	75.5	-400	3	30	400	Heavy	S,P,Ch	-	2 of mags	3.0	634-237 - ?% insol - ?% S_1O_2
	Wash #1	-238	13.6	45.6	17.2										
	Wash #2	-239	1.4	60.4	2.3										
	Non-magnetics #1	-240	43.4	3.5	4.2										
	Non-magnetics #2	-241	2.6	11.3	.8										
	Head (colc'd)		100.0	36.1	100.0										

FERRO-MAGNETICS LTD.

SUMMARY OF TEST DATA ---- JONES SEPARATOR

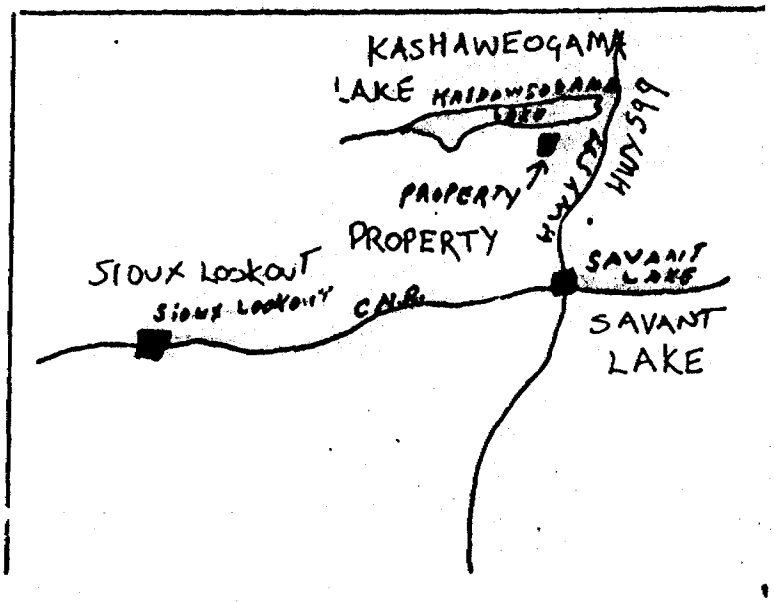
COMPANY Mr. R. G. Ramsay MATERIAL Magnetite Ore OBJECTIVE ≃2% SiO_2 DATE May 5 1972

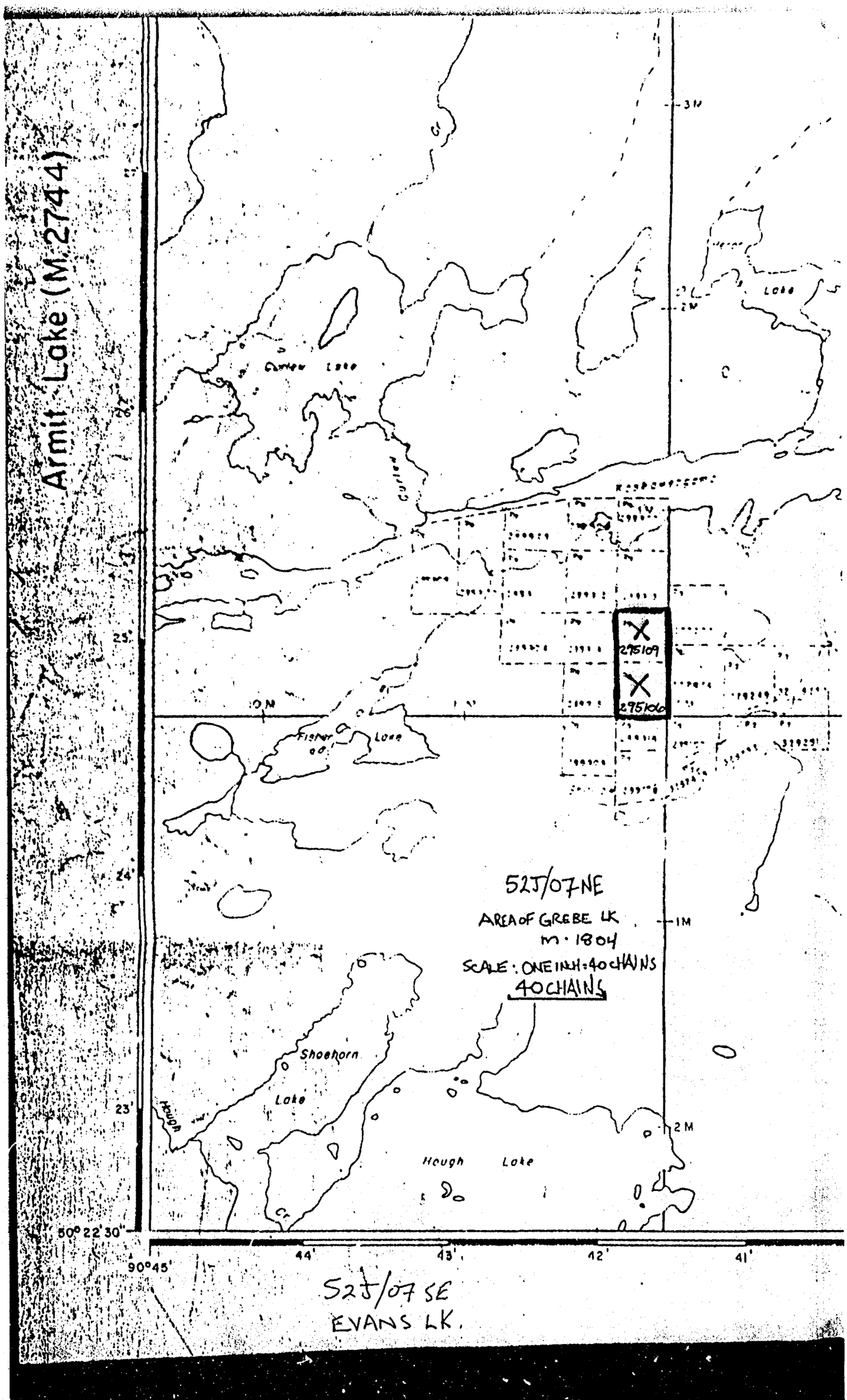
Test No.	Description	Number	Weight %	Assays % Fe	Distribution Fe %	Grind Mesh	Intensity RHEO %	% Solids	Capacity Index	Wash Water	Plates	Dispers.	Passes	Gap	Comments
57	Magnetics	634-222	43.8	70.3	90.3	-400	3	10	300	M.H.	SPCh	—	2	3.0	634-222 - 9.4% SiO_2
	Wash #1	-223	5.4										4 mags		634-222 - .005% S
	Wash #2	-224	3.7												634-222 - .022% P
	Non-magnetics #1	-225	43.7												634-222 - 0.02% V.O.
	Non-magnetics #2	-226	3.4												634-222 - .04% T.O.
	Head		100.0												
58	Magnetics	634-227	44.6	69.8	85.5	-400	3	10	400	M.H	SPCh	—	2	3.0	634-227 - 2.8% insol
	Wash #1	-228	6.0	29.5	4.9								4 mags		- 3% SiO_2
	Wash #2	-229	2.9	64.2	5.1								"		
	Non-magnetics #1	-230	44.3	2.9	3.5										
	Non-magnetics #2	-231	2.2	17.3	1.0										
	Head (Calc'd)		100.0	36.4	100.0	-									
59	Magnetics	634-232	35.3	70.4	76.1	-400	3	10	200	Heavy	SPCh	—	2	3.0	634-232 - 2% insol
	Wash #1	-233	6.4	40.2	7.7								4 mags		5% SiO_2
	Wash #2	-234	4.9	67.9	9.3										
	Non-magnetics #1	-235	46.6	3.3	4.9										
	Non-magnetics #2	-236	3.3	26.8	2.5										
	Head (Calc'd)		100.0	35.9	100.0										
60	Magnetics	634-237	39.0	69.9	75.5	-400	3	30	400	Heavy	SPCh	—	2	3.0	634-237 - 3% insol
	Wash #1	-238	13.6	45.6	17.2								4 mags		- 5% SiO_2
	Wash #2	-239	1.4	60.4	2.3										
	Non-magnetics #1	-240	43.4	3.5	4.2										
	Non-magnetics #2	-241	2.6	11.3	.8										
	Head (Calc'd)		100.0	36.1	100.0										



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

SKETCH OF CLAIMS GROUP PA. 295106-09 INCL R.G. RAMSAY APRIL/72




Armit Lake (M.2744)
Lake
Fisher Lake
Shoehorn Lake
Hough Lake
275109
275106
52J/07NE
AREA OF GREBE LK
M · 1804
SCALE: ONE INCH = 40 CHAINS
40 CHAINS
52J/07 SE
EVANS LK.
50°22'30"
90°45'
44'
43'
42'
41'
1M
2M
3M

52J07NE0046 52J07NE0029 GREBE LAKE

900

PROJECTS SECTION

MINISTRY OF NATURAL RESOURCES

FILE: 2.1055

TECHNICAL ASSESSMENT WORK CREDITS

Recorder Holder ..... Raymond G. Ramsay .....

Township or Area ..... Grebe Lake and McCubbin Township .....

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:

_____

_____

_____

_____

BENEFICIATION STUDIES

3 bulk samples taken from Mining Claims
- Pa. 295106
295109

Amount expended for this work =$3,388.00

Total assessment days credit allowed = 226

The above 2 Mining Claims may be grouped under Section 85 (6) for the purposes of recording the work credits of 226 days.

Approved - February 13, 1973

ONT. DEPT. OF MINES
RECEIVED
FEB 15 1973
Resident Geologist, Kenora, Ont.

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.

File 2.1055

ONTARIO

Ministry of Natural Resources

Room W 1617
Parliament Buildings
Toronto, Ontario
M7A 1X1

Telephone 416:965-6918

February 13, 1973

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

Dear Sir:

Re: Mining Claims Pa. 295106 et al, Grebe Lake Area, File 2.1055

The Minister has, under the provisions of Section 86 (subsection 18, 19 & 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 Unit

OJ/mw

encl.

cc: Mr. Raymond G. Ramsay

cc: Ferro-Magnetics Limited

cc: Resident Geologist
Kenora, Ontario