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REPORT OF WORK PERFORMED

ON

MADELEINE MINES LTD.

I

SAWDO CLAIM GROUP

II

TIB LAKE PROPERTY

III

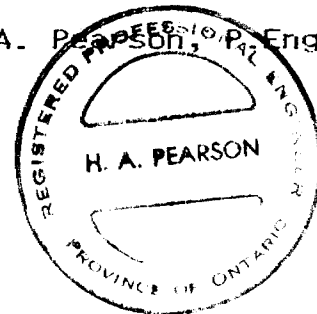
LAC DES ILES PROPERTY

Thunder Bay Mining Division
Ontario

January 1, 1988 - December 31, 1988

June 27, 1989

H.A. Pearson, P. Eng.



OM 87-4-C-311

MADELEINE MINES LTD.

I

SAWDO CLAIM GROUP

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Logs and Assays in pocket.

MADELEINE MINES LTD.

I

SAWDO CLAIM GROUP

Lac des Iles Area
Thunder Bay Mining Division
Ontario

OMEP PROGRAMME
January 1 - December 31, 1988

1. SUMMARY

A. The Property and its History

The Sawdo Property is located approximately 50 miles north of Thunder Bay, Ontario; and ties onto the northeast corner of Madeleine Mines Lac des Iles Property. It is on the east shore of Lac des Iles.

The 6 claim group is comprised of claims 864416 to 864421, inclusive.

The property is approximately 10 miles due west of mile 60 on Highway 527 and can be reached by the 12 mile access road to Madeleine Mines Lac des Iles Property and thence by Lac des Iles to the claim group. It is also accessible by a logging road that branches off the Madeleine Mines access road at a point one and one half miles east of the Madeleine Mines open pit.

It may also be reached by float-or-ski-equipped aircraft from Thunder Bay.

In 1987, a grid was out over the 6 claim group, with grid lines established at 300 foot intervals, stations at 100 foot spacing, with numerous 50 foot stations in anomalous areas.

The group was covered by a magnetic survey; and by an electromagnetic survey employing the Max-Min instrument in a horizontal-coil configuration.

The electromagnetic survey located a major Conductor A (see Figure 1 Appendix A) and a lesser conductor B. Conductor A has extremely good magnetic correlation; and was believed to represent a complex zone of sulphide mineralization.

Prospecting in the vicinity of Conductor A located sulphide bearing gabbros carrying anomalous PGM values slightly northeast of conductor A.

Diamond drilling on the adjoining Madeleine Mines Lac des Iles Property has indicated ore reserves, to a depth of 1500 feet, of 20,400,000 tons with an average grade of 0.18 ozs. per ton of platinum group metals (PGM).

B. Geology and Mineralogy

The area around Lac des Iles is underlain by rocks of Precambrian Age. Basic and ultrabasic rocks of the Lac des Iles complex are completely surrounded by younger granites and tonalites.

The Lac des Iles complex includes anorthosite, anorthositic gabbros, norite, pyroxenite, peridotite, serpentinite, quartz gabbro and their altered equivalents.

The southern section is divided into two mafic units. The Eastern Gabbro is a medium grained gabbro to norite; and is a medium grained gabbro to norite; and is oxide-rich, sulphide poor. The Western Gabbro is coarsergrained and sometimes pegmatitic consisting of gabbro (70%), norite (20%), clinopyroxenite, and minor anorthosite.

The latter are layered, steeply dipping and contain copper, nickel, iron sulphides, arsenides, antimonides and tellurides.

The principal platinum group minerals are:

Vysotskite - (Pd,Ni) S
 Braggite - (Pt,Pd,Ni) S
 Kotulskite - Pd (Te,Bi)

Isomertieite - Pd,Sb₂,As₂
 Merenskyite - Pd,Te₂
 Sperrylite - Pt,As₂
 Stibiopalladinite - Pd₅ (Sb,As,Te) ₂
 Stillwaterite - Pd₈,As₃

2. THE EXPLORATION PROGRAMME

A. The Diamond Drilling Program

During January and February, 1988, 3 holes were diamond drilled to investigate Conductor A, See Figure 1, Appendix A.

This drilling was conducted by Alex Cande Enterprises Canada Limited, Timmins, Ontario under the supervision of H.A. Pearson, P.Eng. and W.B. Murphy.

A total of 1558 feet were diamond drilled. All three holes intersected ultramafic intrusive - peridotite, pyroxenite and narrow bands of serpentinite. Up to 10 percent of terrestrial iron, in narrow bands was intersected in some sections.

A total of 157 samples were assayed. No platinum group metals were encountered. Only minor nickel values were found (up to 0.16 percent nickel). Locations and lengths of the drill holes are as follows:

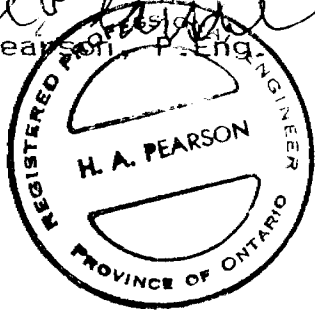
<u>Hole No.</u>	<u>Location</u>	<u>Length (feet)</u>
S88-1	10+50 E 0+50 N	580
S88-2	8+00 E 1+50 S	479
S88-3	12+00 E 2+50 N	499

		1558

No further work is recommended for this property.

3. COST INCURRED

A total of \$25,409 was expended on the Sawdo Property during the period January 1 - December 31, 1988. A breakdown of the apportioned cost accompanies the application for the Ontario Mineral Exploration Programme Grant.

H.A. Pearson
H.A. Pearson, P. Eng.




BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0580

DATE: March 9, 1988

SAMPLE(S) OF: Core (61)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

Sands Group S-88-1

Sample No.	Cu %	Ni %	Sample No.	Cu %	Ni %
S#10020 11.5-20'	0.002	0.064	290 -300' S#10300	0.011	0.058
30 -30'	0.002	0.070	-310'	10	0.003
40 -40'	0.002	0.078	-320'	20	0.003
50 -50'	0.002	0.072	-330'	30	0.004
60 -60'	0.002	0.070	-340'	40	0.004
70 -70'	0.002	0.090	-350'	50	0.002
80 -80'	0.002	0.076	-360'	60	0.001
90 -90'	0.002	0.092	-370'	70	0.002
S#10100 -100'	0.002	0.088	-380'	80	0.004
10 -110'	0.002	0.088	-390'	90	0.028
20 -120'	0.002	0.090	-400'	S#10400	0.001
30 -130'	0.002	0.104	-410'	10	0.001
40 -140'	ND	0.084	-420'	20	0.004
50 -150'	0.002	0.080	-428.5	28.5	0.006
S#10154.5 -154.50'	0.002	0.070	-432	32	0.006
55.5 -155.5	0.004	0.086	-438.5	38.5	0.002
60 -160'	0.004	0.074	-443	43	0.004
70 -170'	0.002	0.080	-450'	50	0.001
80 -180'	0.002	0.068	-460'	60	0.004
90 -190'	0.002	0.084	-470'	70	0.006
S#10200 -200'	0.004	0.092	-480'	80	0.010
10 -210'	0.004	0.092	-489	89	0.017
20 -220'	0.004	0.078	-499	99	0.072
30 -230'	0.032	0.090	-508.5	S#10508.5	0.022
40 -240'	0.026	0.102	-520	20	0.006
50 -250'	0.001	0.084	-530	30	0.009
60 -260'	0.001	0.080	-540	40	0.016
70 -270'	0.003	0.090	-550	50	0.002
80 -280'	0.003	0.110	-560	60	0.005
90 280-290'	0.003	0.098	-570	70	0.017
			-580	80	0.018

NOTE: ND denotes not detected.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THIS SHEET HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FINE ASSAY PROCESS.



BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0548

DATE: February 29, 1988

SAMPLE(S) OF: Core (61)

RECEIVED: February 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

Sawdo Group S-88-1

Sample No.	Au oz.	Pt oz.	Pd oz.	Sample No.	Au oz.	Pt oz.	Pd oz.
S810020-11.5-20	Trace	Trace	Trace	300-310 S810310	Trace	Trace	Trace
30 20-30	Trace	Trace	Trace	-320	20	Trace	Trace
40 -40	Trace	Trace	Trace	-330	30	Trace	Trace
50 -50	Trace	Trace	Trace	-340	40	Trace	Trace
60 -60	Trace	Trace	Trace	-350	50	Trace	Trace
70 -70	Trace	Trace	Trace	-360	60	Trace	Trace
80 -80	Trace	Trace	Trace	-370	70	Trace	Trace
90 -90	Trace	Trace	Trace	-380	80	Trace	Trace
S910100 -100	Trace	Trace	Trace	-390 S	90	Trace	Trace
10 -110	Trace	Trace	Trace	-400	S10400	Trace	Trace
20 -120	Trace	Trace	Trace	-410	10	Trace	Trace
30 -130	Trace	Trace	Trace	-420	20	Trace	Trace
40 -140	Trace	Trace	Trace	-420.5	28.5	Trace	Trace
50 -150	Trace	Trace	Trace	-432	32	Trace	Trace
54.5 -154.5	Trace	Trace	Trace	-438.5	38.5	Trace	Trace
58.5 -158.5	Trace	Trace	Trace	-443	43	Trace	Trace
60 -160	Trace	Trace	Trace	-450	50	Trace	Trace
70 -170	Trace	Trace	Trace	-460	60	Trace	Trace
80 -180	Trace	Trace	Trace	-470	70	Trace	Trace
90 -190	Trace	Trace	Trace	-480	80	Trace	Trace
S10200 -200	Trace	Trace	Trace	-489	89	Trace	Trace
10 -210	Trace	Trace	Trace	-499 S	99	Trace	Trace
20 -220	Trace	Trace	Trace	-508.5	S10508.5	Trace	Trace
30 -230	Trace	Trace	Trace	-520	20	Trace	Trace
40 -240	Trace	Trace	Trace	-530	30	Trace	Trace
50 -250	Trace	Trace	Trace	-540	40	Trace	Trace
60 -260	Trace	Trace	Trace	-550	50	Trace	Trace
70 -270	Trace	Trace	Trace	-560	60	Trace	Trace
80 -280	Trace	Trace	Trace	-570	70	Trace	Trace
90 -290	Trace	Trace	Trace	-580	80	Trace	Trace
S10300 290-300	Trace	Trace	Trace				

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM UNLESS IT IS SPECIFICALLY STATED GOLD, SILVER AND COPPER VALUES REPORTED ON THIS CERTIFICATE HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FINE ASSAY PROCEDURE.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0267

DATE: January 26, 1988

SAMPLE(S) OF: 22(core)

RECEIVED: January 1988

SAMPLE(S) FROM: Alic Pearson, Boston Bay Mines Ltd.

Sawdo Group S-88-2

Sample No.	Footage	Au ppb	Pt ppb	Pd ppb	Cu %	Ni %
2035	25-35'	Trace	Trace	Trace	0.011	0.022
60	50-60'	Trace	Trace	Trace	0.005	0.044
70	60-70	Trace	Trace	Trace	ND	0.108
80	70-80	Trace	Trace	Trace	0.006	0.096
90	80-90	Trace	Trace	Trace	ND	0.040
20100	90-100	Trace	Trace	Trace	ND	0.110
10	100-110	Trace	Trace	Trace	ND	0.078
20	110-120	Trace	Trace	Trace	ND	0.070
30	120-130	Trace	Trace	Trace	ND	0.084
40	130-140	Trace	Trace	Trace	ND	0.108
50	140-150	Trace	Trace	Trace	ND	0.106
60	150-160	Trace	Trace	Trace	ND	0.100
70	160-170	Trace	Trace	Trace	ND	0.076
80	170-180	Trace	Trace	Trace	ND	0.058
90	180-190	Trace	Trace	Trace	ND	0.038
20200	190-200	Trace	Trace	Trace	ND	0.100
10	200-210	Trace	Trace	Trace	ND	0.032
20	210-220	Trace	Trace	Trace	ND	0.082
30	220-230	Trace	Trace	Trace	ND	0.122
40	230-240	Trace	Trace	Trace	ND	0.110
50	240-250	Trace	Trace	Trace	ND	0.096
20257.5	250-257.5	Trace	Trace	Trace	ND	0.160

NOTE: ND denotes not detected.



BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0483

DATE: February 25, 1988

SAMPLE(S) OF: Core (25)

RECEIVED: February 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

SAWDO GROUP S-88-2

0-288.5 drilled by crew #1 (error made in footage)
260-479 " by " #2 (rods counted when drilling started)

Sample No.	Footage	Au oz.	Pt oz.	Pd oz.
Core #1 20267	257.5-267	Trace	Trace	0.002
#2 20270	260-270	Trace	Trace	0.002
#1 20274	267-274	Trace	Trace	0.002
#2 20280	270-280	Trace	Trace	0.002
#1 20280.5	274-280.5	0.002	Trace	0.002
#2 20290	280-290	Trace	Trace	0.002
20300	290-300	Trace	Trace	0.002
20310	300-310	Trace	Trace	Trace
20320	310-320	Trace	Trace	0.002
20330	320-330	Trace	Trace	0.002
20340	330-340	Trace	Trace	0.002
20350	340-350	Trace	Trace	0.002
20360	350-360	Trace	Trace	0.002
20370	360-370	Trace	Trace	0.002
20380	370-380	Trace	Trace	Trace
20390	380-390	Trace	Trace	0.004
20400	390-400	Trace	Trace	0.002
20410	400-410	Trace	Trace	0.002
20420	410-420	Trace	Trace	0.002
20430	420-430	Trace	Trace	Trace
20440	430-440	Trace	Trace	0.002
20450	440-450	Trace	Trace	Trace
20460	450-460	Trace	Trace	0.003
20470	460-470	Trace	Trace	0.003
20479	470-479	Trace	Trace	0.002

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

MAR 04 1988

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0513

DATE: February 29, 1988

SAMPLE(S) OF: Core (25)

RECEIVED: February 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

Sawdo Group

S-88-Z

	<u>Sample No.</u>	<u>Cu %</u>	<u>Ni %</u>
<i>Crew #1</i>	20267 <i>257.5-267</i>	0.001	0.106
<i>#2</i>	20270 <i>(260-270)</i>	0.001	0.120
<i>#1</i>	20274 <i>267-274</i>	0.012	0.118
<i>#2</i>	20280 <i>(270-280)</i>	0.004	0.078
<i>#1</i>	20280.5 <i>274-280.5</i>	0.001	0.114
<i>#2</i>	20290 <i>(280-290)</i>	0.011	0.088
	20300 <i>290-300</i>	0.001	0.110
	20310 <i>300-310</i>	0.001	0.106
	20320 <i>310-320</i>	0.001	0.102
	20330 <i>320-330</i>	ND	0.100
	20340 <i>330-340</i>	ND	0.094
	20350 <i>340-350</i>	0.001	0.064
	20360 <i>350-360</i>	0.001	0.056
	20370 <i>360-370</i>	0.001	0.058
	20380 <i>370-380</i>	0.001	0.054
	20390 <i>380-390</i>	0.003	0.082
	20400 <i>390-400</i>	0.002	0.062
	20410 <i>400-410</i>	0.001	0.068
	20420 <i>410-420</i>	0.002	0.062
	20430 <i>420-430</i>	0.001	0.056
	20440 <i>430-440</i>	0.005	0.052
	20450 <i>440-450</i>	0.004	0.048
	20460 <i>450-460</i>	0.002	0.080
	20470 <i>460-470</i>	0.002	0.122
	20479 <i>470-479</i>	0.002	0.064

NOTE: ND denotes not detected

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

[Signature]
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Certificate of Analysis

NO. 0611

DATE: March 14, 1988

SAMPLE(S) OF: core (49)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

Sawdo Group S-88-3

Sample No.	Au oz.	Pt oz.	Pd oz.
S#30020 15-20	Trace	Trace	Trace
30 -30	0.038	Trace	Trace
40 -40	Trace	Trace	Trace
50 -50	Trace	Trace	Trace
60 -60	Trace	Trace	Trace
70 -70	Trace	Trace	Trace
80 -80	Trace	Trace	Trace
90 -90	Trace	Trace	Trace
S#30100 -100	Trace	Trace	Trace
10 -110	Trace	Trace	Trace
20 -120	Trace	Trace	Trace
30 -130	Trace	Trace	Trace
40 -140	Trace	Trace	Trace
50 -150	Trace	Trace	Trace
60 -160	Trace	Trace	Trace
70 -170	Trace	Trace	Trace
80 -180	Trace	Trace	Trace
90 -190	Trace	Trace	Trace
S#30200 -200	Trace	Trace	Trace
10 -210	Trace	Trace	Trace
20 -220	Trace	Trace	Trace
30 -230	Trace	Trace	Trace
40 -240	Trace	Trace	Trace
50 -250	Trace	Trace	Trace

Sample No.	Au oz.	Pt oz.	Pd oz.
S#30260 ²⁵⁰⁻ 260	Trace	Trace	Trace
70 -270	Trace	Trace	Trace
80 -280	Trace	Trace	Trace
90 -290	Trace	Trace	Trace
S#30300 -300	Trace	Trace	Trace
10 -310	Trace	Trace	Trace
20 -320	Trace	Trace	Trace
30 -330	Trace	Trace	Trace
40 -340	Trace	Trace	Trace
50 -350	Trace	Trace	Trace
60 -360	Trace	Trace	Trace
70 -370	Trace	Trace	Trace
80 -380	Trace	Trace	Trace
90 -390	Trace	Trace	Trace
S#30400 -400	Trace	Trace	Trace
10 -410	Trace	Trace	Trace
20 -420	Trace	Trace	Trace
30 -430	Trace	Trace	Trace
40 -440	Trace	Trace	Trace
50 -450	Trace	Trace	Trace
60 -460	Trace	Trace	Trace
70 -470	Trace	Trace	Trace
80 -480	Trace	Trace	Trace
90 -490	Trace	Trace	Trace
S#30499 -499	Trace	Trace	Trace

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.



BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0267

DATE: January 26, 1988

SAMPLE(S) OF: 22(core)

RECEIVED: January 1988

SAMPLE(S) FROM: Alic Pearson, Boston Bay Mines Ltd.

SANDO GROUP 588-2

<u>Sample No.</u>	<u>Au ppb</u>	<u>Pt ppb</u>	<u>Pd ppb</u>	<u>Cu %</u>	<u>Ni %</u>
2035	Trace	Trace	Trace	0.011	0.022
60	Trace	Trace	Trace	0.005	0.044
70	Trace	Trace	Trace	ND	0.108
80	Trace	Trace	Trace	0.006	0.096
90	Trace	Trace	Trace	ND	0.040
20100	Trace	Trace	Trace	ND	0.110
10	Trace	Trace	Trace	ND	0.078
20	Trace	Trace	Trace	ND	0.070
30	Trace	Trace	Trace	ND	0.084
40	Trace	Trace	Trace	ND	0.108
50	Trace	Trace	Trace	ND	0.106
60	Trace	Trace	Trace	ND	0.100
70	Trace	Trace	Trace	ND	0.076
80	Trace	Trace	Trace	ND	0.058
90	Trace	Trace	Trace	ND	0.038
20200	Trace	Trace	Trace	ND	0.100
10	Trace	Trace	Trace	ND	0.032
20	Trace	Trace	Trace	ND	0.082
30	Trace	Trace	Trace	ND	0.122
40	Trace	Trace	Trace	ND	0.110
50	Trace	Trace	Trace	ND	0.096
20257.5	Trace	Trace	Trace	ND	0.160

NOTE: ND denotes not detected.

IN ACCORDANCE WITH LONG ESTABLISHED NORTH AMERICAN CUSTOM UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0483

DATE: February 25, 1988

SAMPLE(S) OF: Core (25)

RECEIVED: February 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

AG

S-83-2

<u>Sample No.</u>	<u>Au oz.</u>	<u>Pt oz.</u>	<u>Pd oz.</u>
20267 <i>2515-267</i>	Trace	Trace	0.002
20270 <i>(260-270)</i>	Trace	Trace	0.002
20274 <i>267-274</i>	Trace	Trace	0.002
20280 <i>(270-280)</i>	Trace	Trace	0.002
20280 <i>5 274-280.5</i>	0.002	Trace	0.002
20290 <i>(280-290)</i>	Trace	Trace	0.002
20300	Trace	Trace	0.002
20310	Trace	Trace	Trace
20320	Trace	Trace	0.002
20330	Trace	Trace	0.002
20340	Trace	Trace	0.002
20350	Trace	Trace	0.002
20360	Trace	Trace	0.002
20370	Trace	Trace	0.002
20380	Trace	Trace	Trace
20390	Trace	Trace	0.004
20400	Trace	Trace	0.002
20410	Trace	Trace	0.002
20420	Trace	Trace	0.002
20430	Trace	Trace	Trace
20440	Trace	Trace	0.002
20450	Trace	Trace	Trace
20460	Trace	Trace	0.003
20470	Trace	Trace	0.003
20479 <i>470-479</i>	Trace	Trace	0.002

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0513

DATE: February 29, 1988

SAMPLE(S) OF: Core (25)

RECEIVED: February 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

<u>Sample No.</u>	<u>Cu %</u>	<u>Ni %</u>
20267 2575-267	0.001	0.106
20270 (260-270)	0.001	0.120
20274 267-274	0.012	0.118
20280 (270-280)	0.004	0.078
20280.5 274-280.5	0.001	0.114
20290 (280-290)	0.011	0.088
20300	0.001	0.110
20310	0.001	0.106
20320	0.001	0.102
20330	ND	0.100
20340	ND	0.094
20350	0.001	0.064
20360	0.001	0.056
20370	0.001	0.058
20380	0.001	0.054
20390	0.003	0.082
20400	0.002	0.062
20410	0.001	0.068
20420	0.002	0.062
20430	0.001	0.056
20440	0.005	0.052
20450	0.004	0.048
20460	0.002	0.080
20470	0.002	0.122
20479	0.002	0.064

NOTE: ND denotes not detected

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE, GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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II

TIB LAKE PROPERTY

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Electromagnetic Conductor Check (in pocket)
Logs & Assays in pocket

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II

TIB LAKE PROPERTY

Schoor, Ranta, Kuehner, Bumbu Claim Groups

Tib Lake - Armistice Lakes Area
Thunder Bay Mining Division
Ontario

OMEPA PROGRAMME

January 1 - December 31, 1988

1. SUMMARY

A. The Property and its History

The property is comprised of four contiguous groups of optioned claims. Altogether there are 190 unpatented mining claims as follows:

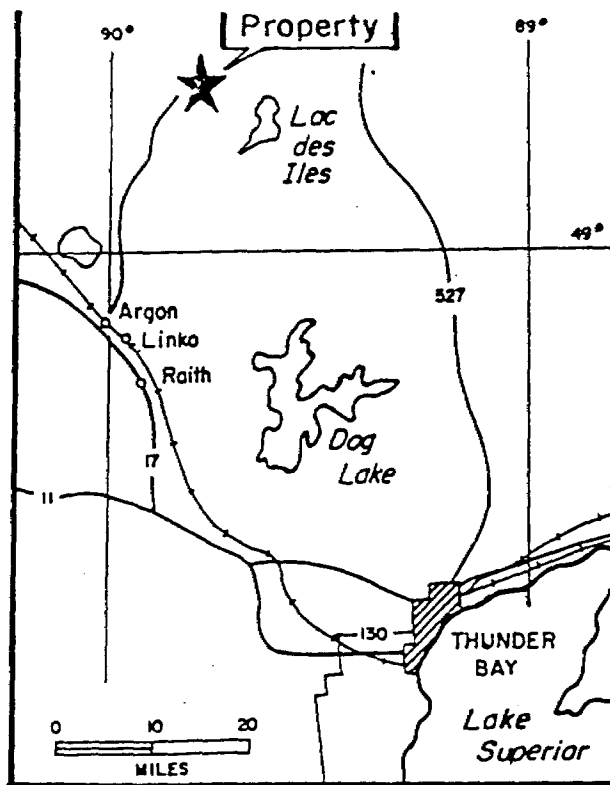
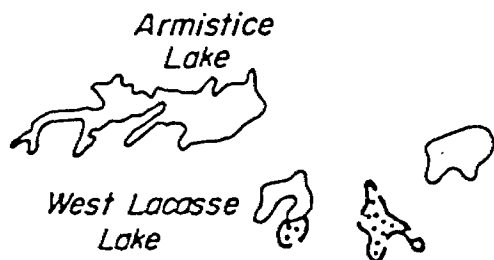
Tib/Armistice/Manfred Schoor Claim numbers 908542 to 908553 (inclusive), 908555 to 908561 (inclusive), 909497 to 909519 (inclusive), 909521 to 909535 (inclusive), 909554, 926816 to 926821 (inclusive), 926831 to 926839 (inclusive), 961366 to 961370 (inclusive), 962987 to 962988 (inclusive), 962999, 963000, 986822 to 986824 (inclusive).

Ranta Claim numbers 464199, 730823, 730824, 746272 to 746276 (inclusive), 746583, 746586, 746588 to 746589 (inclusive), 746592 to 746595 (inclusive), 759925 to 759928 (inclusive), 759931 to 759934 (inclusive).

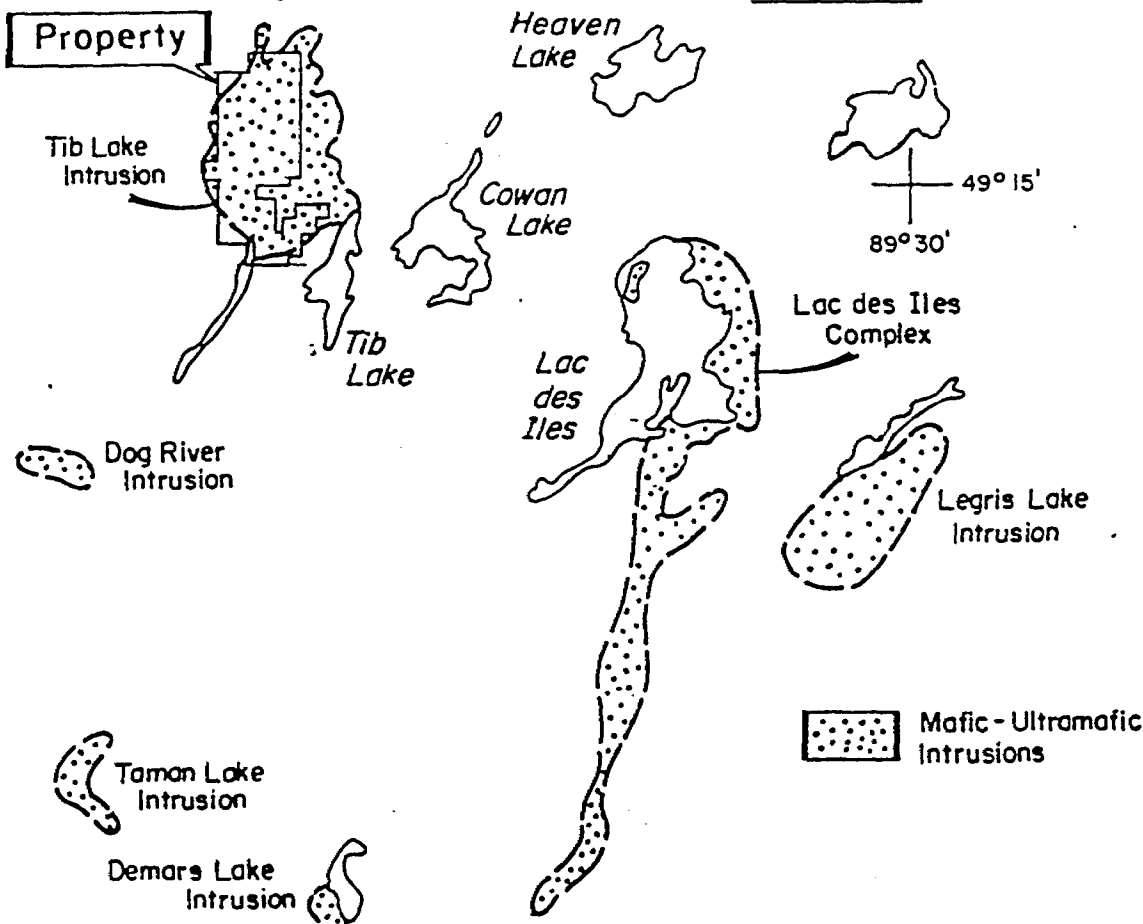
Kuehner Claim numbers 645906 to 645915 (inclusive), 845583.

Bumbu Claim numbers 888148 to 888166 (inclusive), 908752 to 908791 (inclusive), 909201 to 909211 (inclusive).

The Tib Lake Property is located approximately 65 miles northwest of Thunder Bay, Ontario in the Tib Lake - Armistice Lake Area of the Thunder Bay Mining Division. It is



KEY MAP



MADELEINE MINES LTD.
 Location Maps - Tib Lake Property
 Thunder Bay Mining Division - Ontario

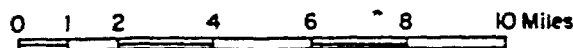


Fig. 1

approximately 10 miles northwest of Madeleine Mines Lac des Iles Property. (See Figure 1, Appendix B).

It is also 20 miles due west of Mile 60 on Highway 527; and can be reached by the 12 mile access road to Madeleine Mines Lac des Iles Property and thence by a series of logging roads.

It may also be reached by float or ski equipped aircraft from Thunder Bay.

The claim-group overlies the major portion of a gabbro intrusive which is one of several forming a roughly circular structure approximately 30 km in diameter which includes the Lac des Iles gabbro complex. Important deposits of platinum-palladium mineralization associated with copper-nickel sulphides have been outlined within the Lac des Iles complex, so that the similarities to the possible association with the Tib Lake intrusive have attracted past exploration activities to the area.

Initial exploration activities of the area were directed to copper-nickel sulphide showings which is evidenced in old trenches in claims T.B. 845583 and T.B. 730824 within 250 metres of the east shore of Laurion Lake.

In 1972, therefore, Tex-Sol Explorations carried out magnetic and electromagnetic surveys in the western section of the South Group of claims, exploring for massive sulphide Cu-Ni deposits. In 1975, Leeward Mines Limited re-sampled the old showings of Laurion Lake, the results of which returned several anomalously high PGM values. Steppingstone Explorations conducted a magnetometer and electromagnetic (VLF) survey which would have covered the most southwesterly five claims of the North Group of claims. This company subsequently drilled four holes totaling 350 metres in 1976, with no sampling of the core reported.

In 1978, K. Kuhnner diamond drilled one hole to a depth of 150 metres directed to intersect the mineralization occurring within the old trenches located approximately 250 metres east of

the east shore of Lake Laurion, with no significant values encountered. Westmin Resources followed with work over a 10-claim group to the east and north of the Kuhner claim in an attempt to trace any extensions of the mineralization.

The exploration and prospecting activities carried out on the various sections indicate that sulphide mineralization in the form of pyrite, pyrrhotite and chalcopyrite is quite widespread, although a greater concentration would appear to be in the southern section of the property associated with coarse or pegmatitic gabbro. The best PGM mineralization encountered has been located within or in the vicinity of the old trenches of the eastern side of Laurion Lake where selected character samples have indicated PGM values as high as 0.16 oz/ton.

B. Geology and Mineralogy

The claim group covers the major portion of the Tib Lake intrusive which is a predominantly mafic intrusive roughly 7 km by 5 km in dimensions, with its long axis north-south. The geological work to date has indicated the mafic rock to vary from norites to pyroxene-hornblende gabbro, locally displaying layering which trends east-west and dips 40 to 80 degrees north. The gabbros in the northern section of the property tend to be fine to medium-grained, whereas the gabbros to the south display medium to coarse textures with pods of pegmatitic gabbro, indicating probable differentiation.

Sulphide mineralization in the form of pyrite, pyrrhotite and chalcopyrite occurs within sections of the gabbro, predominantly associated with the medium-to-coarse phase of the gabbro. Two sulphide showings containing PGM occur on claims T.B. 845583 and 730824, approximately 240 metres east of the shore of Lake Laurion, which have been sampled several times with the best selected character sample grading 0.16 oz/ton PGM.

2. THE EXPLORATION PROGRAMME

A. The Diamond Drilling Programme

In 1987, a grid was cut over the Tib Lake claim group, with grid lines established at 300 foot intervals, stations at 100 foot spacing, with 50 foot stations in anomalous areas.

The Group was covered by a magnetic survey; and by an electromagnetic survey employing the Max-Min instrument in a horizontal-coil configuration.

The electromagnetic survey located several good conductors on claims 908763, 908764 and 908778. Figure 3, Appendix B.

During February and March 1988, four diamond drill holes, T88-1, 2, 3 and 4, were bored to investigate the above conductors. In the 4 holes, a total of 2,061 feet were diamond drilled.

The drill holes intersected gabbro, quartz-gabbro, mafic metavolcanics and a few felsic (granitic) dikes. Figures 2 and logs - Appendix B.

Locations and lengths of the drill holes are as follows:

<u>Hole No.</u>	<u>Location</u>	<u>Length (feet)</u>
T88-1	L93E 152+50N	587
T88-2	L90E 148+60N	467
T88-3	L84E 144+90N	550
T88-4	L78E 151+90N	457

		2,061

This drilling was conducted by Oakley Drilling, #602-4676 Yew Street, Vancouver, B.C. V6L 2J6 under the supervision of H.A. Pearson, P.Eng. and W.B. Murphy.

The conductivity was provided by sulphides principally pyrite and pyrrhotite - but with minor amounts of chalcopyrite.

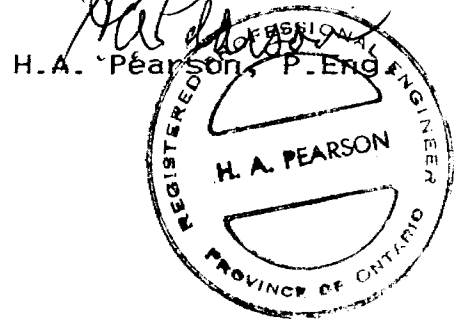
A total of 213 samples were taken; and these were assayed for gold, platinum, palladium, copper and nickel.

Only traces of gold, platinum, palladium were detected; and negligible amounts of copper and nickel.

No further work is recommended for the Tib Lake Property.

3. COST INCURRED

A total of \$74,812 was expended on the Tib Lake group properties during the period January 1 - December 31, 1988. A breakdown of the apportioned cost accompanies the application for the Ontario Mineral Exploration Programme Grant.





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Page 1 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

TIB LK. PROPERTY

D.D.H. T-88-1

Sample No.	Footage	Au Oz.	Pt. Oz.	Pd. Oz.	Cu %	Ni %
T10017	10'-17'	Trace	Trace	Trace	0.008	0.003
27	17-27	Trace	Trace	Trace	0.003	0.002
37	27-37	Trace	Trace	Trace	0.003	0.002
47	37-47	Trace	Trace	Trace	0.004	0.003
56	47-56	Trace	Trace	Trace	0.003	0.002
66	56-66	Trace	Trace	Trace	0.002	0.001
76	66-76	Trace	Trace	Trace	0.002	0.002
86	76-86	Trace	Trace	Trace	0.002	0.001
96	86-96	Trace	Trace	Trace	0.002	0.001
T10106	96-106	Trace	Trace	Trace	0.002	0.001
16	106-116	Trace	Trace	Trace	0.002	0.001
26	116-126	Trace	Trace	Trace	0.001	0.001
36	126-136	Trace	Trace	Trace	0.003	0.002
46	136-146	Trace	Trace	Trace	0.004	0.002
51	146-151	Trace	Trace	Trace	0.005	0.004
57	151-157	Trace	Trace	Trace	0.019	0.005
62.8	157-162.8	Trace	Trace	Trace	0.011	0.004
69	162.8-169	Trace	Trace	Trace	0.004	0.003
76	169-176	Trace	Trace	Trace	0.010	0.006
86	176-186	Trace	Trace	Trace	0.010	0.005
97	186-197	Trace	Trace	Trace	0.013	0.004
T10207	197-207	Trace	Trace	Trace	0.009	0.004
17	207-217	Trace	Trace	Trace	0.007	0.003
27	217-227	Trace	Trace	Trace	0.018	0.004
37	227-237	Trace	Trace	Trace	0.009	0.003
47	237-247	Trace	Trace	Trace	0.016	0.005
57	247-257	Trace	Trace	Trace	0.002	0.002

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Page 2 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

TIB LK. PROPERTY

T 88-1

Sample No.	Footage	Au Oz.	Pt. Oz.	Pd. Oz.	Cu %	Ni %
T10267	257'-267'	Trace	Trace	Trace	0.002	0.002
77	267-277	Trace	Trace	Trace	0.002	0.002
87	277-287	Trace	Trace	Trace	0.002	0.002
97	287-297	Trace	Trace	Trace	0.002	0.001
T10307	297-307	Trace	Trace	Trace	0.002	0.002
17	307-317	Trace	Trace	Trace	0.004	0.003
27	317-327	Trace	Trace	Trace	0.005	0.004
37	327-337	Trace	Trace	Trace	0.004	0.003
47	337-347	Trace	Trace	Trace	0.003	0.004
57	347-357	Trace	Trace	Trace	0.002	0.002
67	357-367	Trace	Trace	Trace	0.003	0.001
77	367-377	Trace	Trace	Trace	0.001	0.002
87	377-387	Trace	Trace	Trace	0.002	0.001
97	387-397	Trace	Trace	Trace	0.002	0.001
T10407	397-407	Trace	Trace	Trace	0.002	0.003
17	407-417	Trace	Trace	Trace	0.002	0.002
27	417-427	Trace	Trace	Trace	0.002	0.001
37	427-437	Trace	Trace	Trace	0.002	0.001
47	437-447	Trace	Trace	Trace	0.002	0.001
57	447-457	Trace	Trace	Trace	0.002	0.001
67	457-467	Trace	Trace	Trace	0.003	0.003
77	467-477	Trace	Trace	Trace	0.007	0.005
87	477-487	Trace	Trace	Trace	0.011	0.008
97	487-497	Trace	Trace	Trace	0.017	0.006
T10507	497-507	Trace	Trace	Trace	0.016	0.006
17	507-517	Trace	Trace	Trace	0.014	0.010
27	517-527	Trace	Trace	Trace	0.007	0.004

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Page 3 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

TIB LAKE PROPERTY

T88-1

T88-2

Sample No.	Footage	Au Oz.	Pt. Oz.	Pd. Oz.	Cu %	Ni %
T10537	<i>521-537</i>	Trace	Trace	Trace	0.009	0.004
47	<i>537-547</i>	Trace	Trace	Trace	0.008	0.004
57	<i>547-557</i>	Trace	Trace	Trace	0.009	0.004
67	<i>557-567</i>	Trace	Trace	Trace	0.012	0.005
77	<i>567-577</i>	Trace	Trace	Trace	0.013	0.005
87	<i>577-587</i>	Trace	Trace	Trace	0.013	0.006
T20017	<i>9.5-17'</i>	Trace	Trace	Trace	0.007	0.003
27	<i>17-27</i>	Trace	Trace	Trace	0.005	0.002
37	<i>27-37</i>	Trace	Trace	Trace	0.004	0.002
47	<i>37-47</i>	Trace	Trace	Trace	0.003	0.002
57	<i>47-57</i>	Trace	Trace	Trace	0.002	0.001
67	<i>57-67</i>	Trace	Trace	Trace	0.002	0.001
77	<i>67-77</i>	Trace	Trace	Trace	0.003	0.006
87	<i>77-87</i>	Trace	Trace	Trace	0.004	0.013
97.5	<i>87-97.5</i>	Trace	Trace	Trace	0.003	0.002
T20102.5	<i>97.5-102.5</i>	Trace	Trace	Trace	0.014	0.003
T20111	<i>102.5-111</i>	Trace	Trace	Trace	0.016	0.008
19	<i>111-119</i>	Trace	Trace	Trace	0.017	0.008
T20127.5	<i>119-127.5</i>	Trace	Trace	Trace	0.018	0.008
T20130.5	<i>127.5-130.5</i>	Trace	Trace	Trace	0.156	0.008
37	<i>130.5-137</i>	Trace	Trace	Trace	0.011	0.005
47	<i>137-147</i>	Trace	Trace	Trace	0.008	0.003
57	<i>147-157</i>	Trace	Trace	Trace	0.005	0.002
68	<i>157-168</i>	Trace	Trace	Trace	0.009	0.002
79	<i>168-179</i>	Trace	Trace	Trace	0.007	0.004
88	<i>179-188</i>	Trace	Trace	Trace	0.001	0.001
96	<i>188-196</i>	Trace	Trace	Trace	0.001	0.001

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Page 4 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

TIB LAKE PROPERTY

T88-2

<u>Sample No.</u>	<u>Footage</u>	<u>Au Oz.</u>	<u>Pt. Oz.</u>	<u>Pd. Oz.</u>	<u>Cu %</u>	<u>Ni %</u>
T20207	196-207	Trace	Trace	Trace	0.004	0.004
17	207-217	Trace	Trace	Trace	0.010	0.006
27	217-227	Trace	Trace	Trace	0.011	0.005
37	227-237	Trace	Trace	Trace	0.009	0.005
47	237-247	Trace	Trace	Trace	0.005	0.002
57	247-257	Trace	Trace	Trace	0.004	0.002
67	257-267	Trace	Trace	Trace	0.003	0.002
77	267-277	Trace	Trace	Trace	0.003	0.002
87	277-287	Trace	Trace	Trace	0.004	0.002
97	287-297	Trace	Trace	Trace	0.004	0.003
T20307	297-307	Trace	Trace	Trace	0.003	0.001
17	307-317	Trace	Trace	Trace	0.001	0.001
27	317-327	Trace	Trace	Trace	0.002	0.001
37	327-337	Trace	Trace	Trace	0.002	0.001
47	337-347	Trace	Trace	Trace	0.002	0.001
57	347-357	Trace	Trace	Trace	0.006	0.003
67	357-367	Trace	Trace	Trace	0.012	0.005
77	367-377	Trace	Trace	Trace	0.015	0.006
87	377-387	Trace	Trace	Trace	0.004	0.002
97	387-397	Trace	Trace	Trace	0.002	0.001
T20407	397-407	Trace	Trace	Trace	0.004	0.002
17	407-417	Trace	Trace	Trace	0.003	0.001
27	417-427	Trace	Trace	Trace	0.003	0.001
37	427-437	Trace	Trace	Trace	0.008	0.003
47	437-447	Trace	Trace	Trace	0.008	0.004
56	447-456	Trace	Trace	Trace	0.008	0.004
67	456-467	Trace	Trace	Trace	0.001	0.002

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Page 1 of 3

NO. 0682

DATE: March 24, 1988

SAMPLE(S) OF: Core (80)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

TIB LAKE PROPERTY

T88-3

Sample No.	Footage	Au oz.	Pt oz.	Pd oz.	Cu %	Ni %
T30020	9'-20'	Trace	Trace	Trace	0.003	0.001
T30026	20-26.8	Trace	Trace	Trace	0.002	0.001
T30028	26.8-28	Trace	Trace	Trace	0.220	0.001
T30035	28-35'	Trace	Trace	Trace	0.002	0.001
T30045	35'-45'	Trace	Trace	Trace	0.004	0.002
T30055	45-55	Trace	Trace	Trace	0.005	0.003
T30065	55-65	Trace	Trace	Trace	0.004	0.002
T30075	65-75	Trace	Trace	Trace	0.010	0.004
T30085	75-85	Trace	Trace	Trace	0.013	0.004
T30095	85-95	Trace	Trace	Trace	0.013	0.004
T30105	95-105	Trace	Trace	Trace	0.014	0.005
T30115	105-115	Trace	Trace	Trace	0.012	0.004
T30125	115-125	Trace	Trace	Trace	0.012	0.003
T30135	125-135	Trace	Trace	Trace	0.017	0.005
T30145	135-145	Trace	Trace	Trace	0.015	0.004
T30155	145-155	Trace	Trace	Trace	0.012	0.002
T30165	155-165	Trace	Trace	Trace	0.007	0.005
T30175	165-175	Trace	Trace	Trace	0.004	0.005
T30185	175-185	Trace	Trace	Trace	0.011	0.003
T30195	185-195	Trace	Trace	Trace	0.011	0.004
T30205	195-205	Trace	Trace	Trace	0.013	0.003
T30215	205-215	Trace	Trace	Trace	0.018	0.003
T30225	215-225	Trace	Trace	Trace	0.011	0.006
T30235	225-235	Trace	Trace	Trace	0.006	0.003
T30245	235-245	Trace	Trace	Trace	0.019	0.003
T30255	245-255	Trace	Trace	Trace	0.011	0.003
T30265	255-265	Trace	Trace	Trace	0.007	0.005

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Page 2 of 3

NO. 0682

DATE: March 25, 1988

SAMPLE(S) OF: Core (80)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

TIB LAKE PROPERTY

T88-3

Sample No.	Footage	Au oz.	Pt oz.	Pd oz.	Cu %	Ni %
T30275	265-275	Trace	Trace	Trace	0.003	0.004
T30285	275-285	Trace	Trace	Trace	0.007	0.004
T30295	285-295	Trace	Trace	Trace	0.005	0.005
T30305	295-305	Trace	Trace	Trace	0.005	0.002
T30315	305-315	Trace	Trace	Trace	0.004	0.001
T30327	315-327	Trace	Trace	Trace	0.005	0.002
T30337	327-337	Trace	Trace	Trace	0.006	0.002
T30347	337-347	Trace	Trace	Trace	0.005	0.002
T30357	347-357	Trace	Trace	Trace	0.004	0.002
T30367	357-367	Trace	Trace	Trace	0.002	0.001
T30377	367-377	Trace	Trace	Trace	0.002	0.001
T30387	377-387	Trace	Trace	Trace	0.003	0.001
T30397	387-397	Trace	Trace	Trace	0.004	0.001
T30407	397-407	Trace	Trace	Trace	0.003	0.001
T30417	407-417	Trace	Trace	Trace	0.003	0.001
T30427	417-427	Trace	Trace	Trace	0.004	0.001
T30437	427-437	Trace	Trace	Trace	0.004	0.002
T30447	437-447	Trace	Trace	Trace	0.004	0.001
T30457	447-457	Trace	Trace	Trace	0.004	0.001
T30467	457-467	Trace	Trace	Trace	0.008	0.004
T30477	467-477	Trace	Trace	Trace	0.017	0.005
T30487	477-487	Trace	Trace	Trace	0.003	0.001
T30494	487-494	Trace	Trace	Trace	0.003	0.002
T30504	494-504	Trace	Trace	Trace	0.003	0.002
T30514	504-514	Trace	Trace	Trace	0.007	0.003
T30524	514-524	Trace	Trace	Trace	0.003	0.001
T30534	524-534	Trace	Trace	Trace	0.003	0.001

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Page 3 of 3

NO. 0682

DATE: March 25, 1988

SAMPLE(S) OF: Core (80)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

TIB LAKE PROPERTY

T88-3

T88-4

Sample No.	<i>Footage</i>	Au oz.	Pt oz.	Pd oz.	Cu %	Ni %
T30542	<i>534-542</i>	Trace	Trace	Trace	0.002	0.001
T30550	<i>542-550</i>	Trace	<i>T88-3</i> Trace	Trace	0.002	0.001
T40245	<i>235-245</i>	Trace	Trace	Trace	0.005	0.002
T40255	<i>245-255</i>	Trace	<i>T88-4</i> Trace	Trace	0.005	0.004
T40265	<i>255-265</i>	0.002	Trace	Trace	0.004	0.002
T40268.5	<i>265-268.5</i>	Trace	Trace	Trace	0.003	0.001
T40271.5	<i>268.5-271.5</i>	Trace	Trace	Trace	0.002	0.001
T40280	<i>271.5-280</i>	Trace	Trace	Trace	0.003	0.001
T40290	<i>280-290</i>	Trace	Trace	Trace	0.003	0.001
T40300	<i>290-300</i>	Trace	Trace	Trace	0.003	0.002
T\$0310	<i>300-310</i>	Trace	Trace	Trace	0.003	0.002
T40320	<i>310-320</i>	0.008	Trace	Trace	0.003	0.001
T40330	<i>320-330</i>	Trace	Trace	Trace	0.005	0.001
T40340	<i>330-340</i>	Trace	Trace	Trace	0.003	0.001
T40350	<i>340-350</i>	Trace	Trace	Trace	0.005	0.002
T40356.5	<i>350-356.5</i>	Trace	Trace	Trace	0.005	0.002
T40367.5	<i>356.5-367.5</i>	Trace	Trace	Trace	0.004	0.001
T40378.5	<i>367.5-378.5</i>	Trace	Trace	Trace	0.004	0.001
T40387	<i>378.5-387</i>	Trace	Trace	Trace	0.006	0.001
T40397	<i>387-397</i>	Trace	Trace	Trace	0.005	0.001
T40407	<i>397-407</i>	Trace	Trace	Trace	0.006	0.001
T40417	<i>407-417</i>	Trace	Trace	Trace	0.007	0.001
T40427	<i>417-427</i>	Trace	Trace	Trace	0.008	0.001
T40437	<i>427-437</i>	Trace	Trace	Trace	0.008	0.001
T40447	<i>437-447</i>	Trace	Trace	Trace	0.009	0.001
T40457	<i>447-457</i>	Trace	Trace	Trace	0.008	0.001

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0657

DATE: March 21, 1988

SAMPLE(S) OF: Core (25)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

TIB LAKE PROPERTY

T88-4

Sample No.	Footage	Au oz.	Pt oz.	Pd oz.	Cu %	Ni %
T40020	9'-20'	Trace	Trace	Trace	0.009	0.004
T40030	20-30	Trace	Trace	Trace	0.006	0.004
T40040	30-40	Trace	Trace	Trace	0.002	0.002
T40050	40-50	Trace	Trace	Trace	0.003	0.002
T40060	50-60	Trace	Trace	Trace	0.004	0.002
T40070	60-70	Trace	Trace	Trace	0.003	0.003
T40076	70-76	Trace	Trace	Trace	0.004	0.002
T40082	76-82	Trace	Trace	Trace	0.003	0.003
T40085	82-85.5	Trace	Trace	Trace	0.016	0.003
T40095	85.5-95	Trace	Trace	Trace	0.002	0.002
T40105	95-105	Trace	Trace	Trace	0.004	0.002
T40115	105-115	Trace	Trace	Trace	0.004	0.001
T40125	115-125	Trace	Trace	Trace	0.003	0.001
T40135	125-135	Trace	Trace	Trace	0.003	0.001
T40145	135-145	Trace	Trace	Trace	0.002	0.001
T40155	145-155	Trace	Trace	Trace	0.002	0.001
T40165	155-165	Trace	Trace	Trace	0.003	0.003
T40175	165-175	Trace	Trace	Trace	0.003	0.001
T40180.5	175-180.5	Trace	Trace	Trace	0.002	0.001
T40186	180.5-186	Trace	Trace	Trace	0.003	0.002
T40195	186-195	Trace	Trace	Trace	0.002	0.001
T40205	195-205	Trace	Trace	Trace	0.003	0.001
T40215	205-215	Trace	Trace	Trace	0.002	0.001
T40225	215-225	Trace	Trace	Trace	0.003	0.001
T40235	225-235	Trace	Trace	Trace	0.003	0.001

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

Page 1 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T-88-1

<u>Sample No.</u>	<u>Au Oz.</u>	<u>Pt. Oz.</u>	<u>Pd. Oz.</u>	<u>Cu %</u>	<u>Ni %</u>
T10017 <i>10'-17'</i>	Trace	Trace	Trace	0.008	0.003
27	Trace	Trace	Trace	0.003	0.002
37	Trace	Trace	Trace	0.003	0.002
47	Trace	Trace	Trace	0.004	0.003
56	Trace	Trace	Trace	0.003	0.002
66	Trace	Trace	Trace	0.002	0.001
76	Trace	Trace	Trace	0.002	0.002
86	Trace	Trace	Trace	0.002	0.001
96	Trace	Trace	Trace	0.002	0.001
T10106	Trace	Trace	Trace	0.002	0.001
16	Trace	Trace	Trace	0.002	0.001
26	Trace	Trace	Trace	0.001	0.001
36	Trace	Trace	Trace	0.003	0.002
46	Trace	Trace	Trace	0.004	0.002
51	Trace	Trace	Trace	0.005	0.004
57	Trace	Trace	Trace	0.019	0.005
62.8	Trace	Trace	Trace	0.011	0.004
69	Trace	Trace	Trace	0.004	0.003
76	Trace	Trace	Trace	0.010	0.006
86	Trace	Trace	Trace	0.010	0.005
97	Trace	Trace	Trace	0.013	0.004
T10207	Trace	Trace	Trace	0.009	0.004
17	Trace	Trace	Trace	0.007	0.003
27	Trace	Trace	Trace	0.018	0.004
37	Trace	Trace	Trace	0.009	0.003
47	Trace	Trace	Trace	0.016	0.005
57 <i>247'-257'</i>	Trace	Trace	Trace	0.002	0.002

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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[Signature]
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P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

Page 2 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T-88-1

<u>Sample No.</u>	<u>Au Oz.</u>	<u>Pt. Oz.</u>	<u>Pd. Oz.</u>	<u>Cu %</u>	<u>Ni %</u>
T10267 <i>257-267'</i>	Trace	Trace	Trace	0.002	0.002
77	Trace	Trace	Trace	0.002	0.002
87	Trace	Trace	Trace	0.002	0.002
97	Trace	Trace	Trace	0.002	0.001
T10307	Trace	Trace	Trace	0.002	0.002
17	Trace	Trace	Trace	0.004	0.003
27	Trace	Trace	Trace	0.005	0.004
37	Trace	Trace	Trace	0.004	0.003
47	Trace	Trace	Trace	0.003	0.004
57	Trace	Trace	Trace	0.002	0.002
67	Trace	Trace	Trace	0.003	0.001
77	Trace	Trace	Trace	0.001	0.002
87	Trace	Trace	Trace	0.002	0.001
97	Trace	Trace	Trace	0.002	0.001
T10407	Trace	Trace	Trace	0.002	0.003
17	Trace	Trace	Trace	0.002	0.002
27	Trace	Trace	Trace	0.002	0.001
37	Trace	Trace	Trace	0.002	0.001
47	Trace	Trace	Trace	0.002	0.001
57	Trace	Trace	Trace	0.002	0.001
67	Trace	Trace	Trace	0.003	0.003
77	Trace	Trace	Trace	0.007	0.005
87	Trace	Trace	Trace	0.011	0.008
97	Trace	Trace	Trace	0.017	0.006
T10507	Trace	Trace	Trace	0.016	0.006
17	Trace	Trace	Trace	0.014	0.010
<i>27 517-527'</i>	Trace	Trace	Trace	0.007	0.004

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BELL-WHITE ANALYTICAL LABORATORIES LTD.

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P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

Page 3 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T-88-1

T-88-2

Sample No.	Au Oz.	Pt. Oz.	Pd. Oz.	Cu %	Ni %
T10537 <u>517-537'</u>	Trace	Trace	Trace	0.009	0.004
47	Trace	Trace	Trace	0.008	0.004
57	Trace	Trace	Trace	0.009	0.004
67	Trace	Trace	Trace	0.012	0.005
77	Trace	Trace	Trace	0.013	0.005
87 <u>517-587'</u>	Trace	Trace	Trace	0.013	0.006
T20017 <u>9.5'-17'</u>	Trace	Trace	Trace	0.007	0.003
27	Trace	Trace	Trace	0.005	0.002
37	Trace	Trace	Trace	0.004	0.002
47	Trace	Trace	Trace	0.003	0.002
57	Trace	Trace	Trace	0.002	0.001
67	Trace	Trace	Trace	0.002	0.001
77	Trace	Trace	Trace	0.003	0.006
87	Trace	Trace	Trace	0.004	0.013
97.5	Trace	Trace	Trace	0.003	0.002
T20102.5	Trace	Trace	Trace	0.014	0.003
T20111	Trace	Trace	Trace	0.016	0.008
19	Trace	Trace	Trace	0.017	0.008
T20127.5	Trace	Trace	Trace	0.018	0.008
T20130.5	Trace	Trace	Trace	0.156	0.008
37	Trace	Trace	Trace	0.011	0.005
47	Trace	Trace	Trace	0.008	0.003
57	Trace	Trace	Trace	0.005	0.002
68	Trace	Trace	Trace	0.009	0.002
79	Trace	Trace	Trace	0.007	0.004
88	Trace	Trace	Trace	0.001	0.001
96 <u>188'-196'</u>	Trace	Trace	Trace	0.001	0.001

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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Certificate of Analysis

Page 4 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T-88-2

Sample No.	Au Oz.	Pt. Oz.	Pd. Oz.	Cu %	Ni %
T20207 196-207	Trace	Trace	Trace	0.004	0.004
17	Trace	Trace	Trace	0.010	0.006
27	Trace	Trace	Trace	0.011	0.005
37	Trace	Trace	Trace	0.009	0.005
47	Trace	Trace	Trace	0.005	0.002
57	Trace	Trace	Trace	0.004	0.002
67	Trace	Trace	Trace	0.003	0.002
77	Trace	Trace	Trace	0.003	0.002
87	Trace	Trace	Trace	0.004	0.002
97	Trace	Trace	Trace	0.004	0.003
T20307	Trace	Trace	Trace	0.003	0.001
17	Trace	Trace	Trace	0.001	0.001
27	Trace	Trace	Trace	0.002	0.001
37	Trace	Trace	Trace	0.002	0.001
47	Trace	Trace	Trace	0.002	0.001
57	Trace	Trace	Trace	0.002	0.001
67	Trace	Trace	Trace	0.006	0.003
77	Trace	Trace	Trace	0.012	0.005
87	Trace	Trace	Trace	0.015	0.006
97	Trace	Trace	Trace	0.004	0.002
T20407	Trace	Trace	Trace	0.002	0.001
17	Trace	Trace	Trace	0.004	0.002
27	Trace	Trace	Trace	0.003	0.001
37	Trace	Trace	Trace	0.003	0.001
47	Trace	Trace	Trace	0.003	0.001
57	Trace	Trace	Trace	0.003	0.001

56

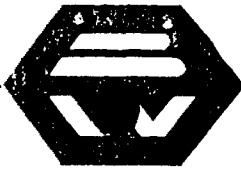
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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

Page 4 of 4

NO. 0716

DATE: April 6, 1988

SAMPLE(S) OF: Core (108)

RECEIVED: April 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T-88-2

<u>Sample No.</u>	<u>Au Oz.</u>	<u>Pt. Oz.</u>	<u>Pd. Oz.</u>	<u>Cu %</u>	<u>Ni %</u>
T20207 <i>196-207</i>	Trace	Trace	Trace	0.004	0.004
17	Trace	Trace	Trace	0.010	0.006
27	Trace	Trace	Trace	0.011	0.005
37	Trace	Trace	Trace	0.009	0.005
47	Trace	Trace	Trace	0.005	0.002
57	Trace	Trace	Trace	0.004	0.002
67	Trace	Trace	Trace	0.003	0.002
77	Trace	Trace	Trace	0.003	0.002
87	Trace	Trace	Trace	0.004	0.002
97	Trace	Trace	Trace	0.004	0.003
T20307	Trace	Trace	Trace	0.003	0.001
17	Trace	Trace	Trace	0.001	0.001
27	Trace	Trace	Trace	0.002	0.001
37	Trace	Trace	Trace	0.002	0.001
47	Trace	Trace	Trace	0.002	0.001
57	Trace	Trace	Trace	0.006	0.003
67	Trace	Trace	Trace	0.012	0.005
77	Trace	Trace	Trace	0.015	0.006
87	Trace	Trace	Trace	0.004	0.002
97	Trace	Trace	Trace	0.002	0.001
T20407	Trace	Trace	Trace	0.004	0.002
17	Trace	Trace	Trace	0.003	0.001
27	Trace	Trace	Trace	0.003	0.001
37	Trace	Trace	Trace	0.008	0.003
47	Trace	Trace	Trace	0.008	0.004
56	Trace	Trace	Trace	0.008	0.004
67 <i>456-467</i>	Trace	Trace	Trace	0.001	0.002

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

Page 1 of 3

NO. 0682

DATE: March 24, 1988

SAMPLE(S) OF: Core (80)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T88-3

<u>Sample No.</u>	<u>Au oz.</u>	<u>Pt oz.</u>	<u>Pd oz.</u>	<u>Cu %</u>	<u>Ni %</u>
T30020 <i>9'-20'</i>	Trace	Trace	Trace	0.003	0.001
T30026.8	Trace	Trace	Trace	0.002	0.001
T30028	Trace	Trace	Trace	0.220	0.001
T30035	Trace	Trace	Trace	0.002	0.001
T30045	Trace	Trace	Trace	0.004	0.002
T30055	Trace	Trace	Trace	0.005	0.003
T30065	Trace	Trace	Trace	0.004	0.002
T30075	Trace	Trace	Trace	0.010	0.004
T30085	Trace	Trace	Trace	0.013	0.004
T30095	Trace	Trace	Trace	0.013	0.004
T30105	Trace	Trace	Trace	0.014	0.005
T30115	Trace	Trace	Trace	0.012	0.004
T30125	Trace	Trace	Trace	0.012	0.003
T30135	Trace	Trace	Trace	0.017	0.005
T30145	Trace	Trace	Trace	0.015	0.004
T30155	Trace	Trace	Trace	0.012	0.002
T30165	Trace	Trace	Trace	0.007	0.005
T30175	Trace	Trace	Trace	0.004	0.005
T30185	Trace	Trace	Trace	0.011	0.003
T30195	Trace	Trace	Trace	0.011	0.004
T30205	Trace	Trace	Trace	0.013	0.003
T30215	Trace	Trace	Trace	0.018	0.003
T30225	Trace	Trace	Trace	0.011	0.006
T30235	Trace	Trace	Trace	0.006	0.003
T30245	Trace	Trace	Trace	0.019	0.003
T30255	Trace	Trace	Trace	0.011	0.003
T30265 <i>255-265</i>	Trace	Trace	Trace	0.007	0.005

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

Page 2 of 3

NO. 0682

DATE: March 25, 1988

SAMPLE(S) OF: Core (80)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T-88-3

Sample No.	Au oz.	Pt oz.	Pd oz.	Cu %	Ni %
T30275 <i>265-275</i>	Trace	Trace	Trace	0.003	0.004
T30285	Trace	Trace	Trace	0.007	0.004
T30295	Trace	Trace	Trace	0.005	0.005
T30305	Trace	Trace	Trace	0.005	0.002
T30315	Trace	Trace	Trace	0.004	0.001
T30327	Trace	Trace	Trace	0.005	0.002
T30337	Trace	Trace	Trace	0.006	0.002
T30347	Trace	Trace	Trace	0.005	0.002
T30357	Trace	Trace	Trace	0.004	0.002
T30367	Trace	Trace	Trace	0.002	0.001
T30377	Trace	Trace	Trace	0.002	0.001
T30387	Trace	Trace	Trace	0.003	0.001
T30397	Trace	Trace	Trace	0.004	0.001
T30407	Trace	Trace	Trace	0.003	0.001
T30417	Trace	Trace	Trace	0.003	0.001
T30427	Trace	Trace	Trace	0.004	0.001
T30437	Trace	Trace	Trace	0.004	0.002
T30447	Trace	Trace	Trace	0.004	0.001
T30457	Trace	Trace	Trace	0.004	0.001
T30467	Trace	Trace	Trace	0.008	0.004
T30477	Trace	Trace	Trace	0.017	0.005
T30487	Trace	Trace	Trace	0.003	0.001
T30494	Trace	Trace	Trace	0.003	0.002
T30504	Trace	Trace	Trace	0.003	0.002
T30514	Trace	Trace	Trace	0.007	0.003
T30524	Trace	Trace	Trace	0.003	0.001
T30534 <i>524-534</i>	Trace	Trace	Trace	0.003	0.001

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

Page 3 of 3

NO. 0682

DATE: March 25, 1988

SAMPLE(S) OF: Core (80)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T88-3

T88-4

Sample No.	Au oz.	Pt oz.	Pd oz.	Cu %	Ni %
T30542	Trace	Trace	Trace	0.002	0.001
T30550 <i>547-550</i>	Trace	Trace	Trace	0.002	0.001
T40245 <i>235-245</i>	Trace	Trace	Trace	0.005	0.002
T40255	Trace	Trace	Trace	0.005	0.004
T40265	0.002	Trace	Trace	0.004	0.002
T40268.5	Trace	Trace	Trace	0.003	0.001
T40271.5	Trace	Trace	Trace	0.002	0.001
T40280	Trace	Trace	Trace	0.003	0.001
T40290	Trace	Trace	Trace	0.003	0.001
T40300	Trace	Trace	Trace	0.003	0.002
T\$0310	Trace	Trace	Trace	0.003	0.002
T40320	0.008	Trace	Trace	0.003	0.001
T40330	Trace	Trace	Trace	0.005	0.001
T40340	Trace	Trace	Trace	0.003	0.001
T40350	Trace	Trace	Trace	0.005	0.002
T40356.5	Trace	Trace	Trace	0.005	0.002
T40367.5	Trace	Trace	Trace	0.004	0.001
T40378.5	Trace	Trace	Trace	0.004	0.001
T40387	Trace	Trace	Trace	0.006	0.001
T40397	Trace	Trace	Trace	0.005	0.001
T40407	Trace	Trace	Trace	0.006	0.001
T40417	Trace	Trace	Trace	0.007	0.001
T40427	Trace	Trace	Trace	0.008	0.001
T40437	Trace	Trace	Trace	0.008	0.001
T40447	Trace	Trace	Trace	0.009	0.001
T40457 <i>447-457</i>	Trace	Trace	Trace	0.008	0.001

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0657

DATE: March 21, 1988

SAMPLE(S) OF: Core (25)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

T-88-4

Sample No.	Au oz.	Pt oz.	Pd oz.	Cu %	Ni %
T40020 <i>9'-20'</i>	Trace	Trace	Trace	0.009	0.004
T40030	Trace	Trace	Trace	0.006	0.004
T40040	Trace	Trace	Trace	0.002	0.002
T40050	Trace	Trace	Trace	0.003	0.002
T40060	Trace	Trace	Trace	0.004	0.002
T40070	Trace	Trace	Trace	0.003	0.003
T40076	Trace	Trace	Trace	0.004	0.002
T40082	Trace	Trace	Trace	0.003	0.003
T40085.5	Trace	Trace	Trace	0.016	0.003
T40095	Trace	Trace	Trace	0.002	0.002
T40105	Trace	Trace	Trace	0.004	0.002
T40115	Trace	Trace	Trace	0.004	0.001
T40125	Trace	Trace	Trace	0.003	0.001
T40135	Trace	Trace	Trace	0.003	0.001
T40145	Trace	Trace	Trace	0.002	0.001
T40155	Trace	Trace	Trace	0.002	0.001
T40165	Trace	Trace	Trace	0.003	0.003
T40175	Trace	Trace	Trace	0.003	0.001
T40180.5	Trace	Trace	Trace	0.002	0.001
T40186	Trace	Trace	Trace	0.003	0.002
T40195	Trace	Trace	Trace	0.002	0.001
T40205	Trace	Trace	Trace	0.003	0.001
T40215	Trace	Trace	Trace	0.002	0.001
T40225	Trace	Trace	Trace	0.003	0.001
T40235 <i>225-235</i>	Trace	Trace	Trace	0.003	0.001

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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MADELEINE MINES LTD.

III

LAC DES ILES PROPERTY

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MADELEINE MINES LTD.

III

LAC DES ILES PROPERTY

Thunder Bay Mining Division
Ontario
OMEP Programme
January 1 - December 31, 1988

1. INTRODUCTION

The Madeleine Mines Ltd. property is located approximately 50 miles north of Thunder Bay, Ontario; and consists of 85 leased claims located at the south end of Lac des Iles.

The claims cover the basic and ultra basic rocks of the Lac des Iles complex. This complex and the surrounding granites and tonalities are of Archean Age.

In 1963, prospectors discovered copper-nickel sulphide mineralization south of Lac des Iles.

Gunnex Limited acquired a large block of claims in the area; and located eight sulphide zones some of which contained palladium and platinum. Anaconda Canada Exploration Ltd. optioned the claims from Gunnex in 1966; and conducted further diamond drilling.

When Anaconda dropped the properties in 1973, Boston Bay Mines Ltd., acquired the claims by option and staking.

Drilling by Boston Bay Mines encountered platinum group metals associated with minor copper-nickel concentrations. The location of a new zone, called the Roby Zone sparked renewed interest in the property.

Texasgulf optioned the property in the spring of 1975 and continued the diamond drilling programme.

This drilling proved up considerable reserves on two important zones, the Roby Zone and the C Zone.

The Texasgulf and Boston Bay drilling outlined approximately 6,490,000 tons available by open pit mining to 500 feet. The deepest drill hole indicates the platinum-palladium mineralization extending to a depth of 1,465 feet; and it is open at that depth.

The drilling of the C Zone has indicated 900,000 tons minable by open pit methods.

Texasgulf and Boston Bay drilling amounted to 64,356 feet in 117 holes.

In April of 1986, Madeleine entered into an agreement with The Platinum Group Mines Limited. Under the agreement, Madeleine Mines and The Platinum Group will work towards a final amalgamation which will see Madeleine acquire a 100% interest in the property.

Under the terms of the agreement with The Platinum Group, if a suitable amalgamation acceptable to all cannot be arranged, Madeleine will have the option to bring the property to production at 3,000 tons per day and earn a 50% interest in the property for so doing.

In early June, 1986, Madeleine Mines commenced an exploration programme on the Lac des Iles property. The programme consisted of diamond drilling, line-cutting (to establish grids), clearing timber and stripping overburden from the Roby Zone.

The purpose of the drilling programme was to detail the Roby Zone for open pit mining; explore the depth extensions of the Roby Zone; and investigate the extent of the lower grade halo to the west of the Roby Zone.

In 1986, a total of 36,777 feet were diamond drilled in 34 holes.

In 1987, Madeleine Mines continued the diamond drilling programme and a total of 11,319 feet was drilled in 16 holes.

In addition, 935,000 cubic yards of trenching were completed to assist in outlining the extent of the orebody for open pit production.

Further a 12 mile access road was completed from Mile 60 on Highway 527.

2. THE PROPERTY, LOCATION AND ACCESS

The property consists of 85 leased claims in the Thunder Bay Mining Division. It is located approximately 50 miles north of Thunder Bay, Ontario. The claim numbers are indicated in the accompanying Figure 2.

The claim numbers are as follows:

TB 352256-352264 inclusive	TB 384889-384909 inclusive
TB 352370-352379 inclusive	TB 404122-404135 inclusive
TB 384484-384492 inclusive	TB 405357-405378 inclusive

The property is located at the south end of Lac des Iles; and covers the basic and ultrabasic rocks of the Lac des Iles complex.

The property is approximately 12 miles due west of Mile 60 on Highway 527 (Figure 2). The access road covering the 12 miles has been completed.

The property may also be reached by float or ski-equipped aircraft from Thunder Bay.

3. HISTORY

A general chronology of the exploration of the property is covered in the Introduction to this report.

The Gunnex Limited exploration in 1963, 1964, included geological mapping, geochemistry, ground geophysical surveys and

diamond drilling. Eight sulphide zones (A, B, C, D, E, F, G, H), some bearing platinum-palladium mineralization, were located

During the summer seasons of 1964 and 1965, the Ontario Department of Mines conducted a geological survey of the area under the director of Dr. E.G. Pye.

Drs. MacDonald and Sutcliffe of the Ontario Geological Survey have carried out detailed mapping of the property and its environs during the summer of 1986.

The Boston Bay Mines exploration consisted of detailed geophysical surveys (magnetic and electromagnetic) and diamond drilling. The Texasgulf programme was essentially diamond drilling.

The complete drill holes were divided into 10 foot lengths for assay purposes. The core was split and one half was sent for assay; the remainder kept as a record.

Assaying was for platinum group metals using the fire assays method. Bell-White Laboratories, Haileybury, did this work. Later, Bell-White were requested to assay all samples for copper and nickel. In the current programme Bell-White is also assaying for gold.

Representatives of Rustenberg Mines of South Africa visited the property in 1975. They checked a number of the Bell White assays; and their results show good correlation with Bell-White (Figure 5).

The Rustenberg assays are slightly higher than Bell-White due to the fact that their results include gold values with the platinum group metals, while Bell-White assays only cover the platinum group metals.

They show roughly a palladium-platinum ratio of 8:1.

4. GEOLOGY AND MINERALOGY

The area around Lac des Iles is underlain by rocks of Precambrian Age. Basic and ultrabasic rocks of the Lac des Iles complex are completely surrounded by younger granite and tonalities.

There are erosional remnants of the Keweenawan diabase sills. There is a small remnant of a sill just south of the Roby Zone.

The Lac des Iles complex includes anorthosite, anorthositic gabbros, norite, pyroxenite, peridotite, serpentinite, quartz gabbro and their altered equivalents.

The southern section is divided into two mafic units. The Eastern Gabbro is a medium grained gabbro to norite; and is oxide-rich, sulphide poor. The Western Gabbro is coarsergrained and sometime pegmatitic consisting of gabbro (70%), norite (20%), clinopyroxenite, and minor anorthosite.

The latter are layered, steeply dipping and contain copper, nickel, iron sulphides and platinum group sulphides, arsenides, antimonides and tellurides.

The principal platinum group minerals are:

Vysotskite - (Pd,Ni) S
 Braggite - (Pt,Pd,Ni) S
 Kotulskite - Pd (Te,Bi)
 Isomertieite - Pd,Sb₂,As₂
 Merenskyite - Pd,Te₂
 Sperrylite - Pt,As₂
 Stibiopalladinite - Pd₅ (Sb,As,Te)₂
 Stillwaterite - Pd₈,As₃

5. ORE RESERVES AND METALLURGY

The palladium-platinum minerals have been found in a number of zones in the area of Lac des Iles. The most important zones found to date are the Roby Zones and the C Zone.

The Roby Zone has received the most investigation and is the zone of immediate economic importance.

The Roby Zone strikes approximately N20 degrees W, dips vertically to steeply east and extends for some 2,000 feet. It has a maximum width of 375 feet.

It is amenable to open pit mining. The pit area requires the clearing of 34 acres.

The deepest drill hole to date, Hole D1, shows the mineralization extending downwards to 1,465 feet; and open at depth. In this hole a section from 1,095 feet to 1,245 feet averaged 0.235 platinum group metals per ton; and from 1,245-1,465 feet, 0.0725 ounces PGM per ton.

The Roby mineralization appears to be syngenetic and a product of magmatic segregation and magma mixing.

An open pit on this zone would have a length of 1,700 feet and an average width of 83 feet.

Glenn R. Clark, P.Eng. estimates: an open pit reserve of the Roby Zone to 500 feet of 6,490,000 tons with an average grade of 0.18 ounces of platinum group metals per ton, 0.01 ounces gold per ton, 0.1% copper and 0.1% nickel. Subsequent assaying indicates an average grade of 0.02 ounces gold per ton. Clark's reserves were based on 52 drill holes totalling 32,000 feet of drilling.

For the C Zone, Clark estimates 900,000 tons with an average grade of 0.14 ounces of platinum group metals per ton. This is open pit material.

Total reserves to 1,500 feet are estimated at 20,400,000 tons with an average grade of 0.18 ounces of platinum group metals.

It will be noted that the Roby Zone, C Zone, H Zone and B Zone are closely related to the West Gabbro - East Gabbro contact.

The palladium-platinum mineralization does not appear to be directly related to the total sulphides present.

Heavier concentrations of platinum group metals occur in the clinopyroxenite in proximity to the West Gabbro - East Gabbro contact; and in the mineralized norites of the West Gabbro.

The platinum-palladium ores are amenable to concentration by flotation. The recovery circuit uses gravity ahead of flotation. Early indications show a high grade jig concentrate.

It is intended to treat the concentrates in the hydrometallurgical facility. The concentrates are pressure leached and produce a PGM rich residue which is sent to the refinery. A combined recovery of the significant metals of approximately 85% is expected from the combined gravity and flotation circuit.

Flotation tests have been conducted by four laboratories including Falconbridge, Placer and Noranda.

It is expected that minor but recoverable amounts of Rhodium, Ruthenium, Osmium and Iridium will be produced.

6. THE EXPLORATION PROGRAMME

The exploration programme consisted of:

- (a) stripping and trenching to expose the Central and West Zones for bulk sampling and metallurgical testing;
- (b) temporary construction - camp, access roads, infrastructure;
- (c) further metallurgical testing. Programmes (a) and (b) were conducted under the supervision of James Vernon P.Eng. Programme (c) was supervised by G.W. Reschke, metallurgist.

A. The Stripping and Trenching Programme

The 1988 programme extended the 1987 programme, which exposed the surface of the Roby Zone, 400 feet to the westward to

expose the Central and West Zones for bulk sampling and metallurgical testing.

The 1986 and 1987 diamond drilling programme had outlined the better grade mineralization of the Central Zone and the West Zone in the mineralized halo to the west of the Roby Zone.

A section drawn through the Roby, Central and West Zones indicates an average grade of 0.085 ozs. PGM per ton across a true width of 1,100 feet.

Between Sections 505 and 512 and to a depth of 700 feet, this would indicate 49,000,000 tons with an average grade of 0.085 ozs. PGM per ton. The northern extensions of the Central and West Zones remain to be drilled.

The westward extension of the stripped area over the Roby Zone exposed the Central and West Zones during the period January to August, 1988. This stripping and trenching exposed an area 2,700 feet by 400 feet. The average depth of the stripping is conservatively estimated to be 16 feet. Estimation of the average depth of the stripped areas is rendered difficult by the extreme irregularity of the surface of the deposit due to strong longitudinal and transverse faulting. In some areas the depth is as much as 30 - 35 feet.

On the basis of the 16 foot average depth and the area outlined in Figure 1, Appendix C, approximately 640,000 cubic yards of stripping and trenching were completed in 1988.

B. Temporary Construction - Camp, Access Roads, Infrastructures

During 1988 work continued on improvement of the 12 mile access road from Mile 60 on Highway 527 to the property. This included the elimination of several curves: and adding further gravel surfacing of the road. Figure 2 - Appendix C.

Within the Lac des Iles property, the infrastructure was upgraded by installing 4 septic tanks and temporary water lines.

In addition, the internal access roads were constructed. These included: (a) an access road to the pit area (stripped area); (b) the main haulage road from the pit to the mill; (c) the road from the mill via the stripped area to the powder house. Plan of the roads on the property to follow.

C. Metallurgical Tests

A 60-ton sample, taken from trenches 1A, 1B, 1C, 2A, 2B, 3A, 3B, 3C, was processed through the Thunder Bay pilot plant of Canadian Concentrators in a series of concentration tests under the supervision of Madeleine metallurgist G.W. Reschke. The tests were entirely for concentration purposes and not to establish grade. This work was conducted in November - December, 1987.

The Canadian Concentrators pilot plant, owned by R. Miron, is a simple flotation mill consisting of a small ball mill, 6 cells, a Denver jig, a thickener and filter. Figure 3-Appendix C.

The water was recirculated from the thickener to the ball mill. Figure 4 - Appendix C.

Metallurgical testing of the concentrates continued throughout 1988 under the supervision of Madeleine metallurgist G. Reschke; and resulted in establishing the accompanying Metallurgical Balance. Figure 5.

This demonstrates the importance of inserting jigs into the Madeleine mill circuit.

7. COST INCURRED

A total of \$4,026,370 was expended on the property during the period January 1 - December 31, 1988.

A breakdown of the apportioned cost accompanies the application for the Ontario Mineral Exploration Programme Grant.

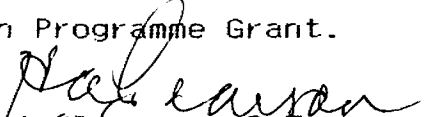
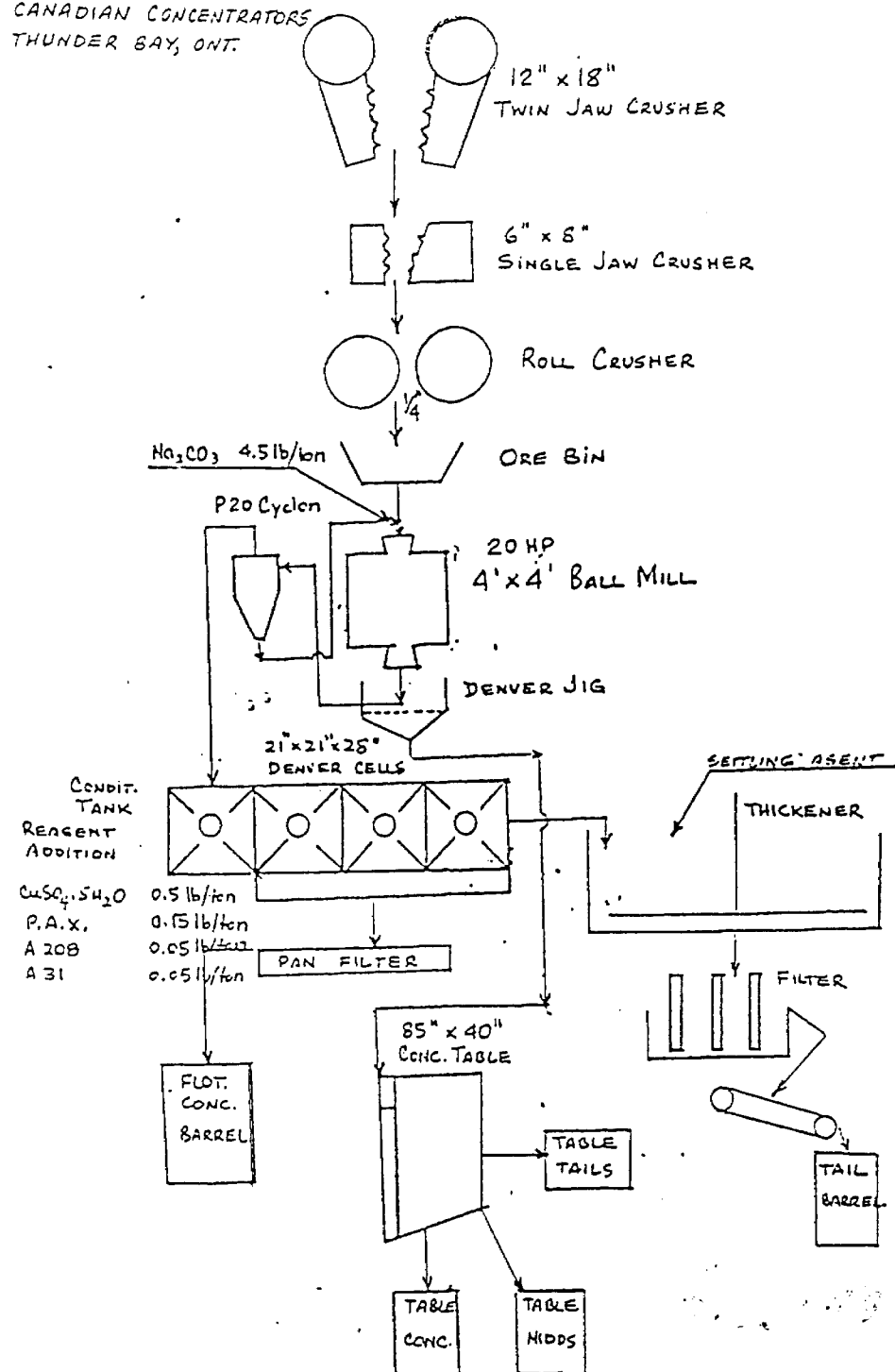

H.A. Pearson, P.Eng.

FIG. 3

MAR-24-59 FRI 10:59 DIEPDAUME MINES LTD. P. 02

LAC DES ILES PILOT PLANT FLOWSHEET

CANADIAN CONCENTRATORS
THUNDER BAY, ONT.



CANADIAN CONCENTRATORS
THUNDER BAY, ONT.

LAC DES ILES
PILOT PLANT
WATER CIRCUIT

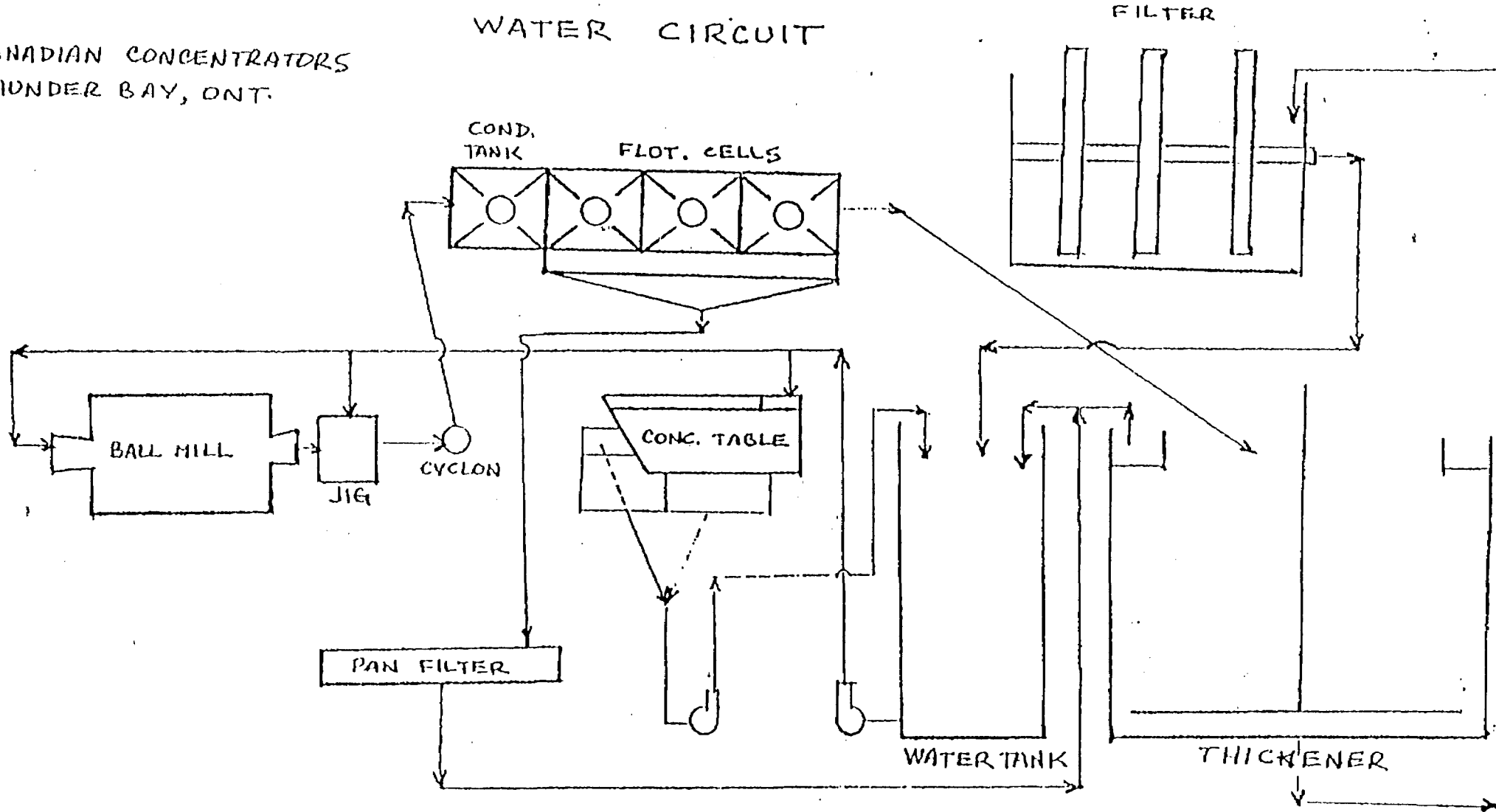


FIG. 4

LAC DES ILES
 PILOT PLANT
 METALLURGICAL BALANCE
 SUMMARY OF "ROBY ZONES" 8"C"

Product	Wt %	Au Oz/Ton	Pt Oz/Ton	Pd Oz/Ton	Cu %	Ni %	Au Dist %	Pt Dist %	Pd Dist %	Cu Dist %	Ni Dist %
Jig R. Conc	0.11	3.50	0.75	8.43	9.50	8.8	7.2	5.6	4.5	2.9	5.8
Jig S. Conc	0.29	0.50	0.15	2.93	0.90	2.1	2.7	2.9	4.2	0.7	3.6
Jig R & S Conc	0.40	1.357	0.321	4.50	3.36	4.0	9.9	8.5	8.7	3.6	9.4
Flot. Conc	8.10	0.333	0.112	1.86	3.20	1.32	50.9	60.8	65.8	71.5	63.7
Jig R & S Conc & Flot. Conc	8.50	0.384	0.122	1.791	3.20	1.32	60.8	69.3	74.5	75.1	73.1
Jig Flot Tails	1.5	0.026	0.007	0.05	0.04	0.09	0.7	0.7	0.4	0.1	0.8
Flot. Tails		0.023	0.005	0.057	0.10	0.06	38.5	30.0	25.1	24.8	26.1
Total Tails	90.4	0.023	0.005	0.057	0.10	0.06	39.2	30.7	25.5	24.9	26.9
Calc'd Head	100.0	0.054	0.015	0.204	0.36	0.17	100.0	100.0	100.0	100.0	100.0



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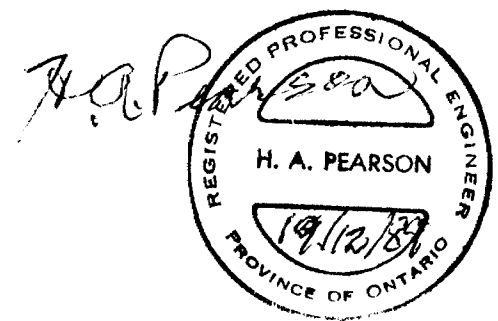
Certificate of Analysis

NO. 0493 DATE: February 26, 1988
 SAMPLE(S) OF: Pulps (4) RECEIVED: February 1988
 SAMPLE(S) FROM: Mr. George W. Reschke, Boston Bay Mines Ltd.

Lac des Iles Metallurgical Tests.

Samples: 147-160 incl. 164-183 incl.

These are concentration tests carried out on grab samples from the 60 - ton bulk sample; and form the basis of the Pilot Plant Metallurgical Balances Figure 5. ("Roby" and "C" Zones)



Sample No.	Au oz.	Pt oz.	Pd oz.	Cu %	Ni %
147	0.053**	0.014	0.075	0.110	0.064
8	4.390**	0.292**	1.700**	2.600	1.780
9	0.195**	0.051**	0.250**	0.300	0.300
150	0.020	0.008	0.031	0.044	0.036

** Checked

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[Signature]
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Certificate of Analysis

NO. 0644

DATE: March 18, 1988

SAMPLE(S) OF: Pulp (4)

RECEIVED: March 1988

SAMPLE(S) FROM: Mr. George Reschke, Boston Bay Mines Ltd.

Lac des Iles Metallurgical Tests

<u>Sample No.</u>	<u>Au oz.</u>	<u>Pt oz.</u>	<u>Pd oz.</u>	<u>Cu %</u>	<u>Ni %</u>
151	0.464**	0.020	0.219	0.840	0.780
2	0.030	0.009	0.038	0.148	0.124
3	0.644**	0.014	0.086	0.280	0.098
4	0.014	0.004	0.021	0.024	0.026

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Certificate of Analysis

NO. 0688

DATE: March 29, 1988

SAMPLE(S) OF: Pulp (6)

RECEIVED: March 1988

SAMPLE(S) FROM: Boston Bay Mines Ltd.

Lac de Iles Metallurgical Tests

<u>Sample No.</u>	<u>Au oz.</u>	<u>Pt oz.</u>	<u>Pd oz.</u>	<u>Cu %</u>	<u>Ni %</u>
155	0.514**	0.175**	2.530**	1.800	0.580
156	0.244**	0.122**	2.250**	0.640	0.840
157	0.008	0.004	0.057	0.046	0.024
158	0.040**	0.014	0.311**	0.240	0.106
159	0.642**	0.235**	3.700**	1.540	1.400
160	0.006	0.002	0.050	0.038	0.019

** Checked

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TEL: 672-3107

Certificate of Analysis

NO. 1354

DATE: August 8, 1988

SAMPLE(S) OF: Fines (3)

RECEIVED: August 1988

SAMPLE(S) FROM: Mr. George W. Reschke, Boston Bay Mines Ltd.

Lac des Iles Metallurgical Tests

<u>Sample No.</u>	<u>Oz. Gold</u>	<u>Oz. Pt</u>	<u>Cu %</u>	<u>Ni %</u>
164	1.31**	0.062	0.76	0.50
5	7.64**	0.032	0.26	0.46
6	0.018	0.006	0.04	0.04

**Checked

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Certificate of Analysis

NO. 1489

DATE: September 16, 1988

SAMPLE(S) OF: Pulp (3)

RECEIVED: September 1988

SAMPLE(S) FROM: Mr. George Reschke, Boston Bay Mines

Lac des Iles Metallurgical Tests

<u>Sample No.</u>	<u>Oz. Gold</u>	<u>Oz. Pt</u>	<u>Oz. Pd</u>	<u>Cu %</u>	<u>Ni %</u>
167	0.012	0.004	0.065	0.06	0.06
168	0.084**	0.028	0.634	0.46	0.38
169	1.860**	0.213	4.910	3.60	4.00

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TEL: 672-3107

Certificate of Analysis

NO. 1653

DATE: October 24, 1988

SAMPLE(S) OF: Fines (4)

RECEIVED: October 1988

SAMPLE(S) FROM: Mr. Pat Sheridan, Boston Bay Mines

Lac des Iles Metallurgical Tests

<u>Sample No.</u>	<u>Oz. Gold</u>	<u>Oz. Pt</u>	<u>Oz. Pd</u>	<u>Cu %</u>	<u>Ni %</u>
170	15.980**	1.640	17.070	22.0	0.92
171	0.615**	0.193	2.890	10.0	0.68
172	2.760**	0.587	6.720	19.6	0.96
173	0.311**	0.128	2.530	9.6	0.76

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P.O. BOX 187,
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HAILEYBURY, ONTARIO

TEL: 672-3107
FAX: (705) 672-5843

Certificate of Analysis

NO. 1870

DATE: December 15, 1988

SAMPLE(S) OF: Fines (10)

RECEIVED: December 1988

SAMPLE(S) FROM: Mr. G.W. Reschke, Boston Bay Mines

Lac des Iles Metallurgical Tests

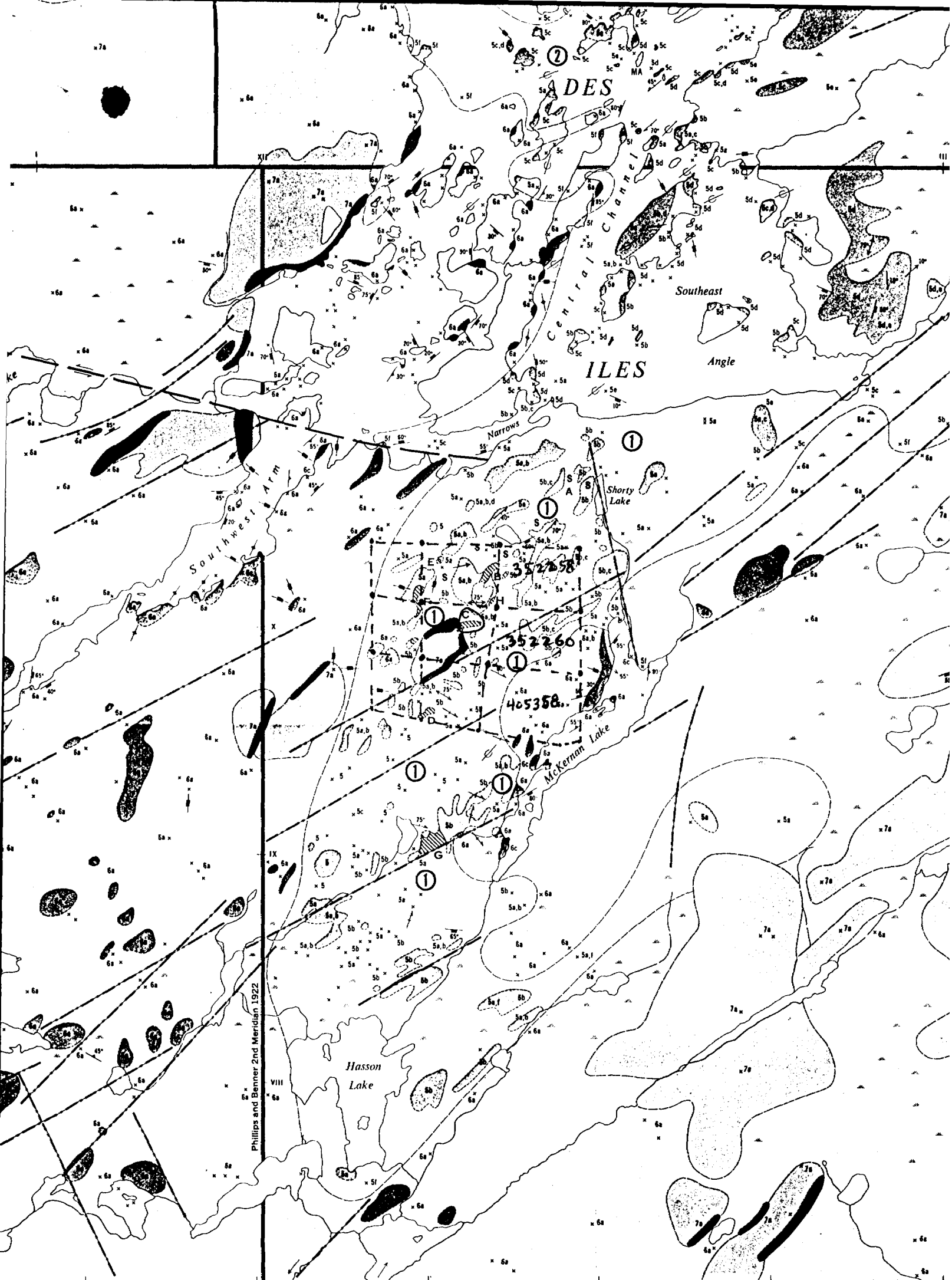
Sample No.	Oz. Au	Oz. Pt	Oz. Pd	% Cu	% Ni
174	0.006	Trace	0.065	0.06	0.06
175	0.005	Trace	0.071	0.04	0.04
176	1.43**	0.479**	7.87**	5.00	4.40
177	0.012	0.011	0.571	0.36	0.38
178	0.170**	0.114**	1.50**	1.30	0.60
179	0.208**	0.042**	0.940**	0.38	0.74
180	0.008	0.002	0.078	0.04	0.06
181	0.543**	0.314**	5.15**	2.60	2.60
182	0.028**	0.064**	1.23**	0.68	0.96
183	0.006	0.004	0.070	0.04	0.06

** Checked

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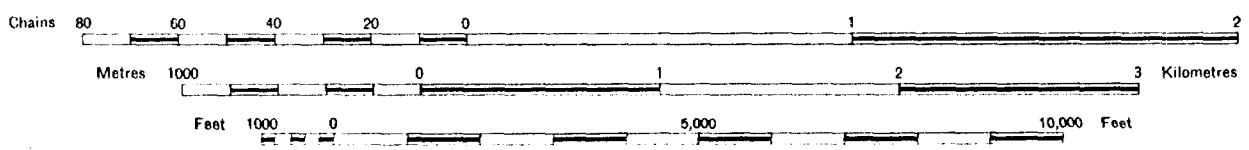
Map 2135

LAC DES ILES SHEET

THUNDER BAY DISTRICT

Scale 1:31,680 or 1 Inch to 1/2 Mile

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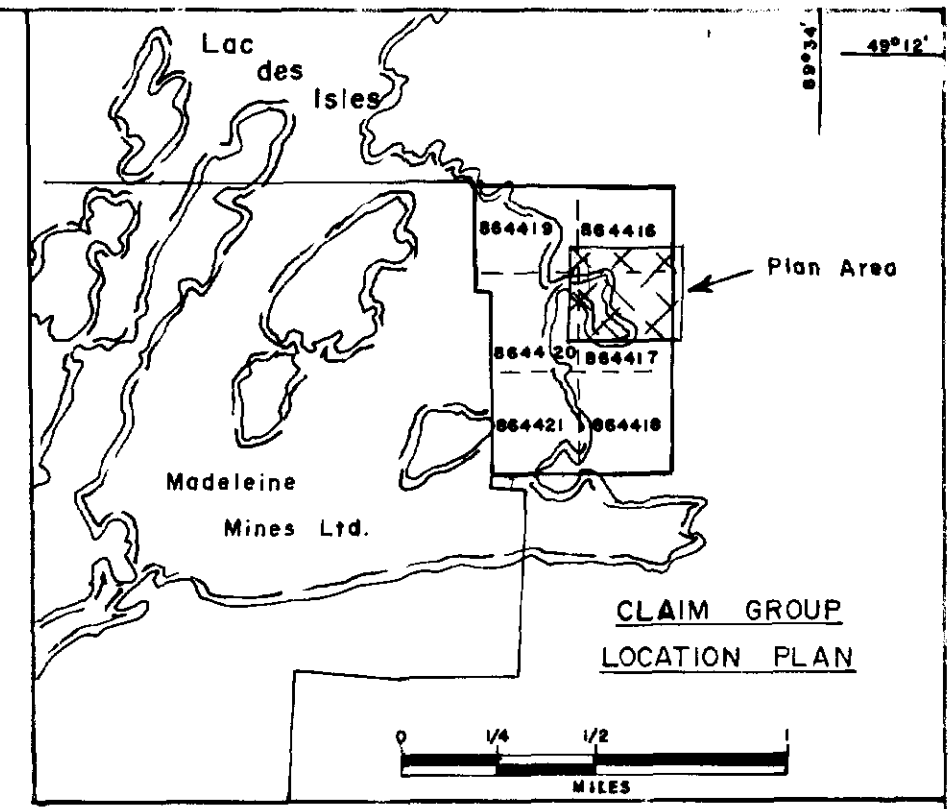
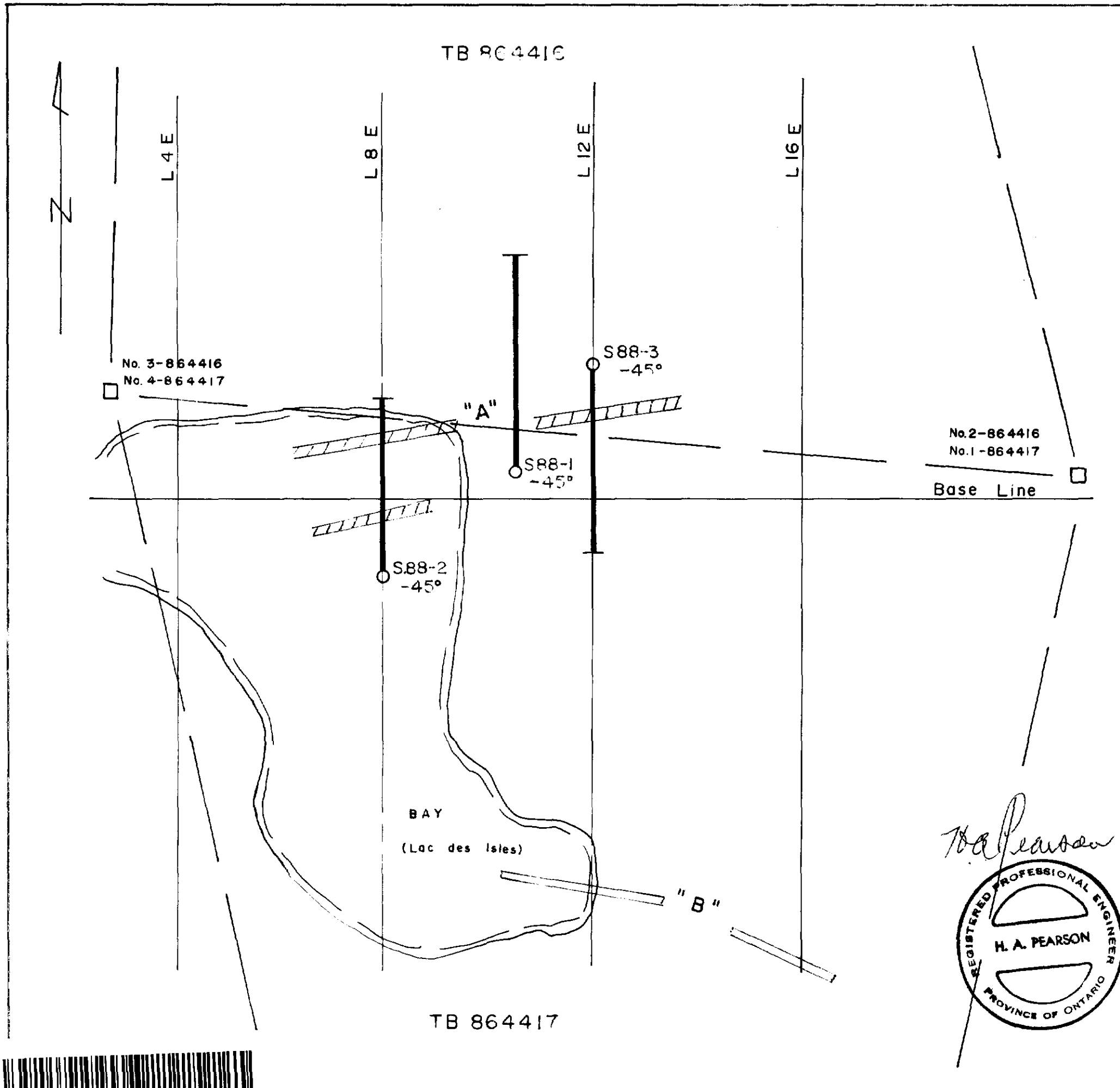
#63.5408

OM 87-4-C-311

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

① Drilling on the Sawdo Claim Group, => See File: LAC DES ILES DDR
Holes S88-1 to S88-3, Dec. /87 to #19, Report of Work # W8804-276
Feb. /88, R. Sawdo + Madeleine Mines
Ltd.

② Drilling on the Tib Lake Property, => See File: ARMISTICE LAKE DDR
Holes T88-1 to T88-4, Feb. to #19, Report of Work # W8804-636
March /88, J.P. Sheridan + Madeleine
Mines Ltd.



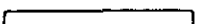
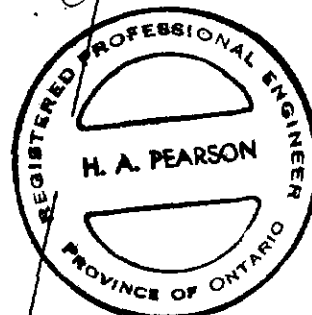
 Good E. M. Conductor
 Fair E. M. Conductor

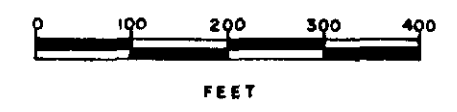
Fig. 1

MADELEINE MINES LTD.
 (R. Sawdo Option)
DRILL HOLE PLAN

Lac des Isles Area
 Thunder Bay, Ontario

June 1980

H. A. Pearson




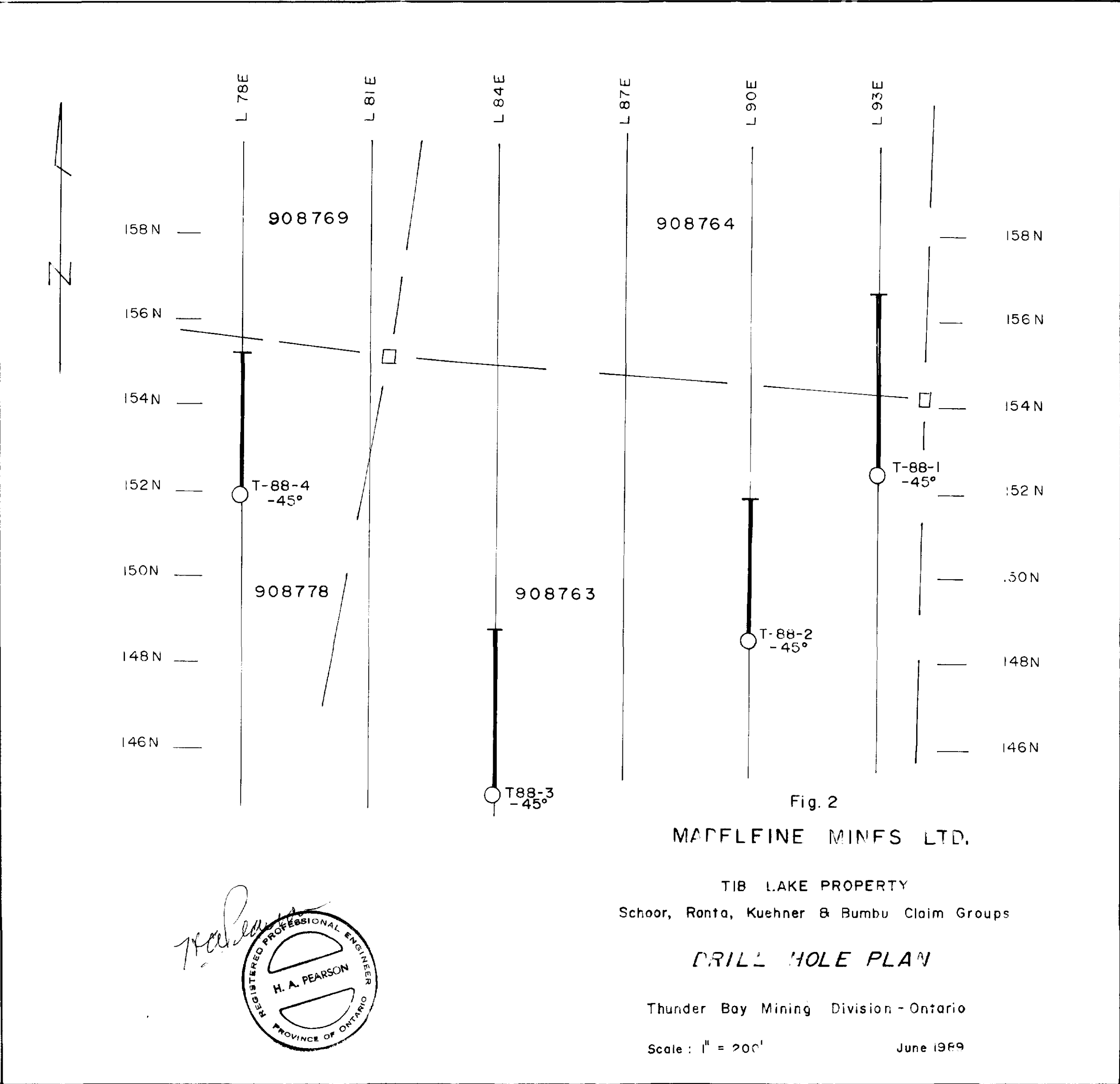
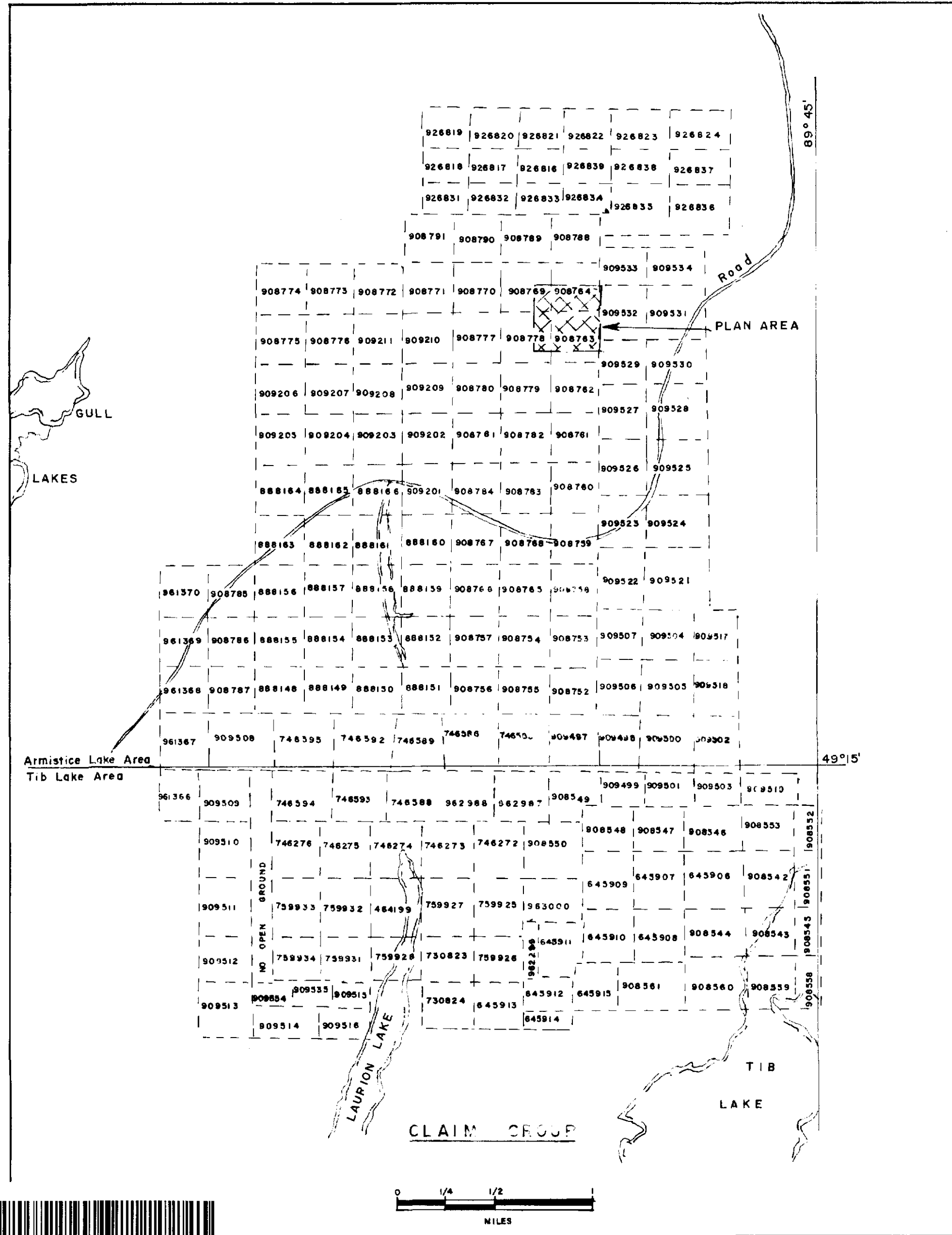


Fig. 2
MADDFINE MINES LTD.
 TIB LAKE PROPERTY
 Schoor, Ronta, Kuehner & Bumbu Claim Groups
DRILL HOLE PLAN
 Thunder Bay Mining Division - Ontario
 Scale: 1" = 200'
 June 1989



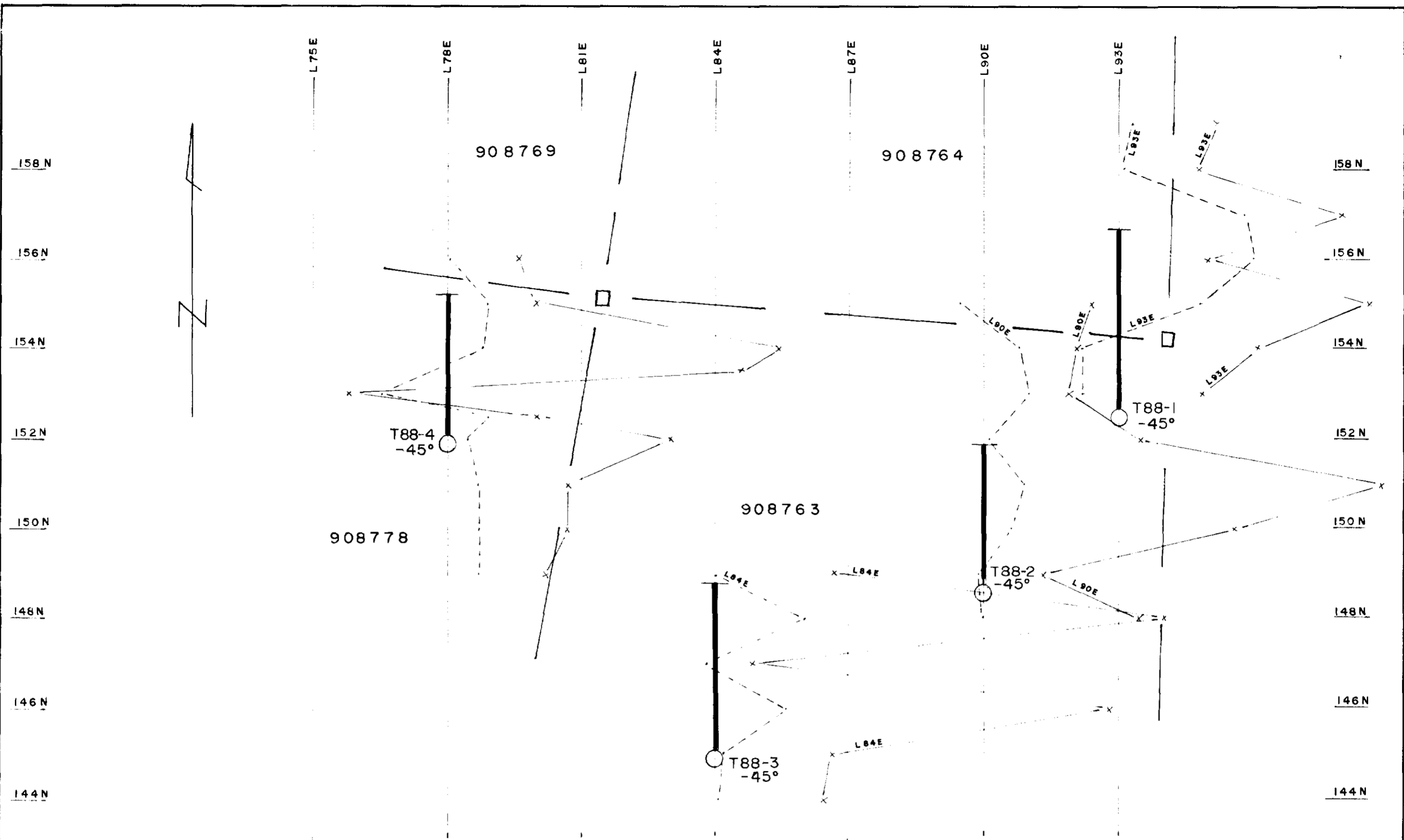


Fig. 3

MADELEINE MINES LTD.

TIB LAKE PROPERTY
 Schoor, Ranta, Kuehner & Bumbu Claim Groups

DRILL HOLE PLAN &
 MAX-MIN ELECTROMAGNETIC CONDUCTOR CHECK

Thunder Bay Mining Division - Ontario

Scale: 1" = 200'

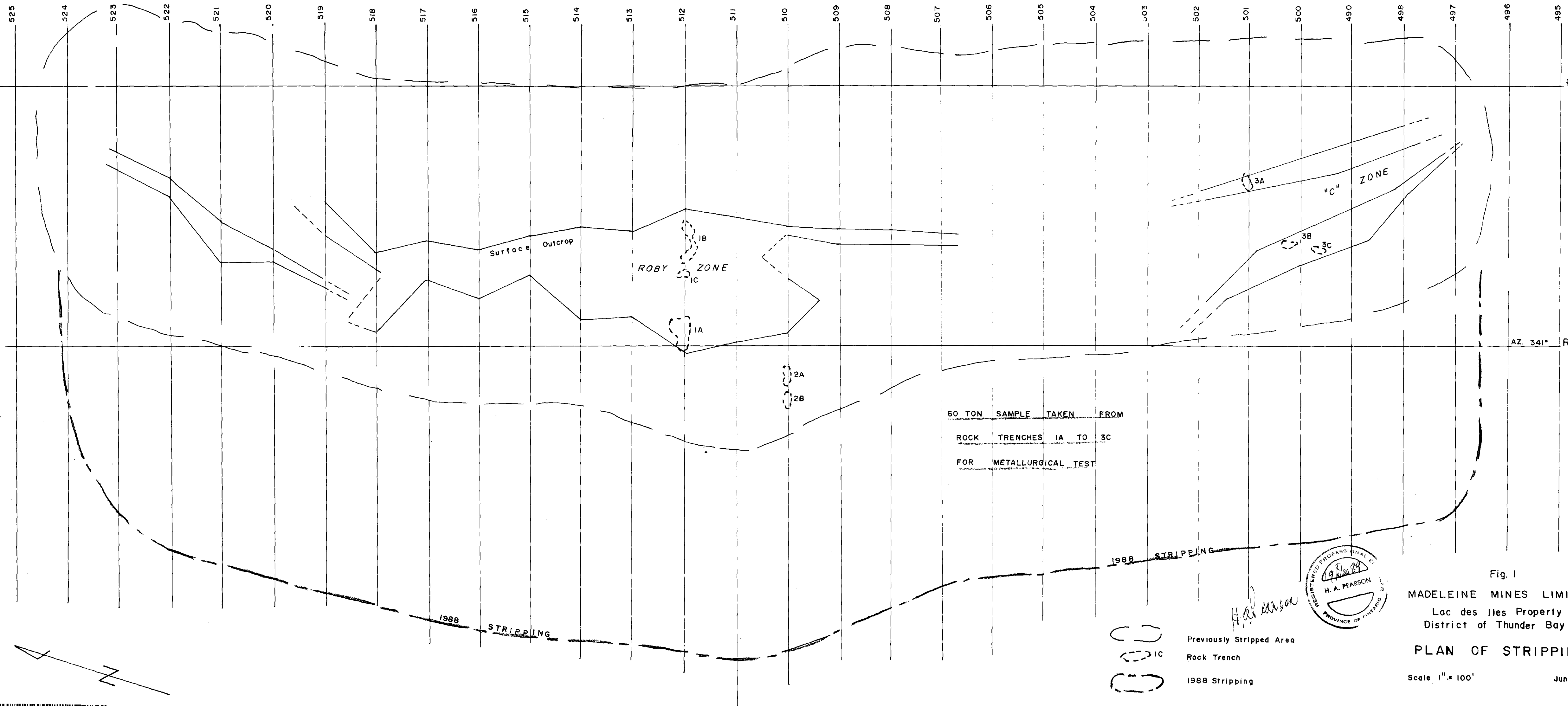
June 1989

LEGEND

- In phase response
- Out of phase response
- Drill Hole

H.A. Pearson
 E.M. Profile Scale: 1" = 10%





60 TON SAMPLE TAKEN FROM
 ROCK TRENCHES 1A TO 3C
 FOR METALLURGICAL TEST

1988 STRIPPING

Previously Stripped Area

Rock Trench

1988 Stripping

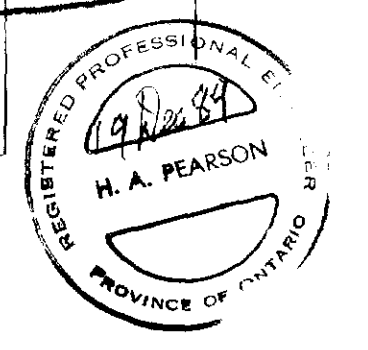


Fig. 1
 MADELEINE MINES LIMITED
 Lac des Iles Property
 District of Thunder Bay
 PLAN OF STRIPPING
 Scale 1" = 100'
 June 1989



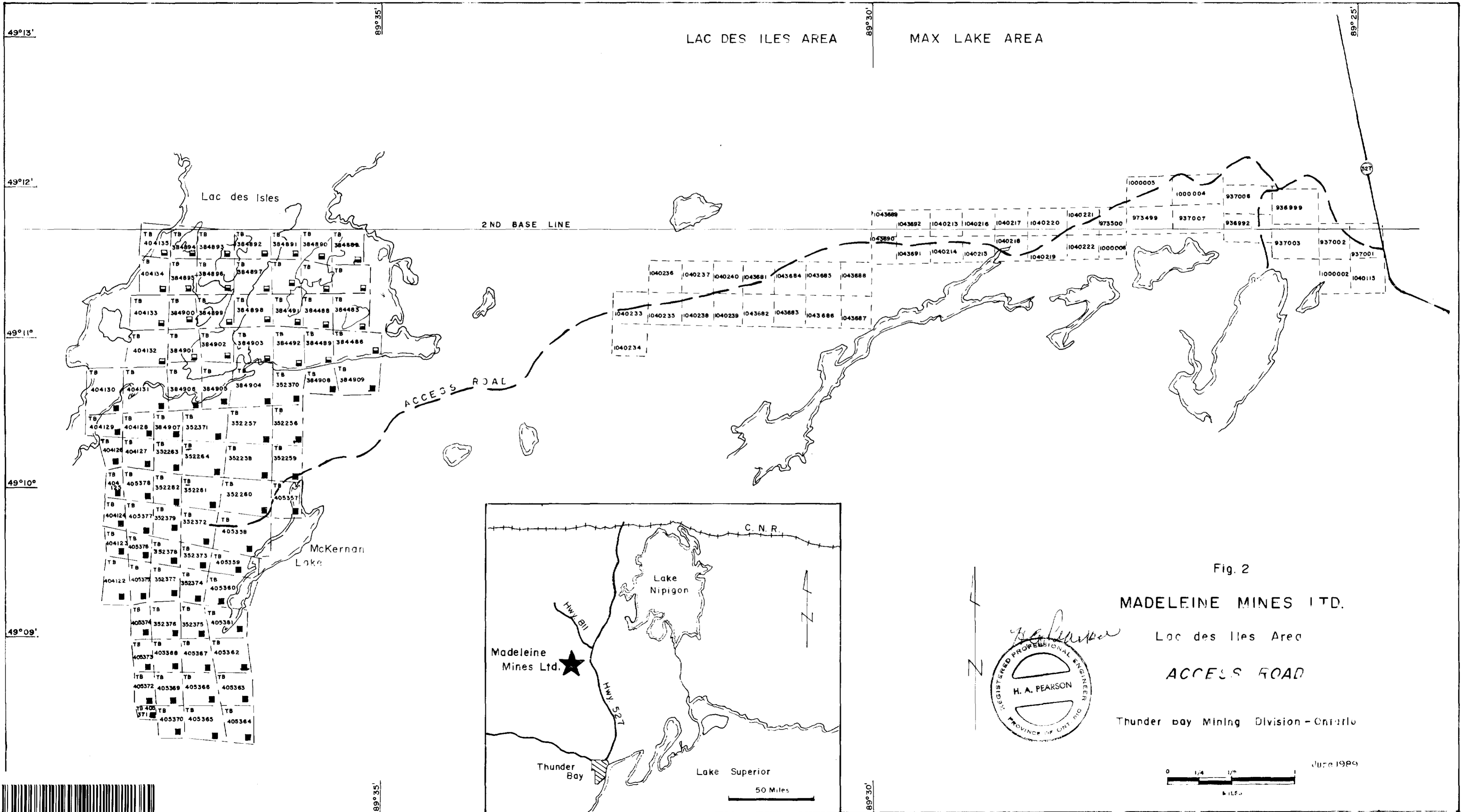
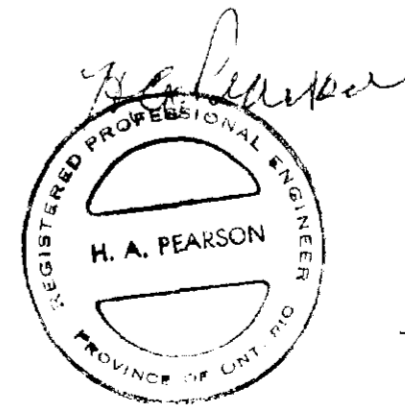
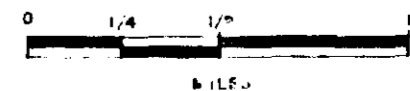


Fig. 2
MADELEINE MINES LTD.
 Lac des Iles Area
ACCESS ROAD
 Thunder Bay Mining Division - Ontario



June 1989



52H055W0002 63.5408 ARMISTICE LAKE