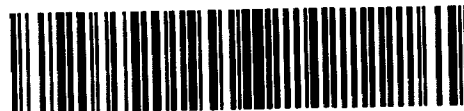


OPAD # 90-48Z

63.5992

FREDERICK ROSS  
958 PARK AVE  
TIMMINS, ONTARIO  
P4N 7K6



428095W0019 63.5992 NOVA

010

SWANZE AREA

PROSPECTED IN THE SWANZE GREEN  
STONE AREA DURING MATCH - NOV. 1990.

TWP'S - HELLIER, RANEN AND CROCKETT

ACCESS - IS BY SECONDARY LOBBING  
ROAD SOUTH OF HWY 101 APPROX.  
27 MILES WEST OF THE TOWN OF  
FOLEYET, ONTARIO

GEOLOGY - METAVOLCANICS, ANORTHOSSITE  
AND METAMORPHIC

CONCLUSION - WIDE RANGE PROSPECTIVE  
FOR BASE METALS AND GOLD.  
ONLY ONE SIGNIFICANT AREA  
THAT IS IN HELLIER TWP.  
ANORTHOSSITE GABBRO  
CARBONATED WITH SOME  
COPPER VALUES  
THIS IS WITHIN A GRANITE  
FORMATION

RECOMMENDATIONS

MORE PROSPECTIVE ALONG  
WITH MECHANICAL STRIPPING,  
TRENCHING AND BLASTING  
COULD PROVE POSITIVE WITHIN  
THIS ZONE

SWANIZE AREA

PROSPECTED FROM MARCH - NOV. 1990

TWP'S - EARNET AND KEITH

ACCESS - EARNET AND KEITH TOWNSHIPS  
ACCESS IS BY SECONDARY  
ROADS FROM SOUTH OF HWY 101  
5 MILES EAST OF TOLLETT  
DISTANCE FROM HWY 101  
KEITH TWP APPROX 10 MILES  
EARNET APPROX 40 MILES

GEOLOGY - KEITH TWP - METAVOLCANICS  
AND MAFIC TO INTERMEDIATE  
METAVOLCANICS

CONCLUSION - WIDE RANGE PROSPECTIVE  
RELEASED AIRBORNE FOR  
KEITH TWP STAKED IN FOR  
CLAIMS ON CONDUCTORS  
SAMPLED LARGE SULFATED ZONE  
NO VALUES DETECTED

EARNET TWP  
UNCOVERED LARGE CARBONATED  
QUARTZ VEIN IN SW CORNER  
OF TWP SAMPLED CROSS SECTION  
NO VALUES DETECTED

RECOMMENDATIONS - MORE PROSPECTIVE  
IS RECOMMENDED AFTER  
LOGGING COMPANY ERBERRY  
HAS REQUESTED THE TWP  
THIS WILL EXPOSE  
MORE OUTCROPS IN EARNET  
TWP.

FOLLOW UP ON CONDUCTORS  
IN KEITH TWP PROSPECTIVE,  
SAMPLING AND BLASTING  
ALONG CONDUCTIVE ZONE.  
MAJOR COMPANIES ARE  
IN THE PROCESS OF DRILLING  
ADJACENT TO OUR 33 CLAIMS

# SUMMIT AREA

PROSPECTED FROM MARCH - NOV. 1990

TRIP'S - PENHORWOOD, KENOBANINE  
AND HORWOOD

ACCESS - IS BY SECONDARY LOBBIE  
SOUTH OF HIGHWAY 101 40 MILES  
WEST OF TIMMINS CUT.  
PENHORWOOD AND KENOBANINE  
APPROX 6 MILES S. OF HWY 101  
HORWOOD APPROX 25 MILES S  
OF HWY 101

GEOLOGY - PENHORWOOD AND KENOBANINE  
TRIP'S ARE ROCK TIPS OF  
METASEDIMENTS, METAVOLCANICS  
AND MAFIC TO INTERMEDIATE  
METAVOLCANICS  
HORWOOD TRIP IS MOSTLY MAFIC  
TO INTERMEDIATE METAVOLCANICS

CONCLUSION - ~~PENHORWOOD TRIP WEST OF~~  
~~NAT RIVER~~  
SAMPLES TAKEN IN QUARTZ  
CARBONATE VEIN 16" WIDE  
NO VALUES  
STEEL TAILC HAS ADJACENT  
PROPERTIES GOLD VALUES UP  
TO 20 TON WERE OBTAINED  
IN BCAB SAMPLES

RECOMMENDATIONS - MORE TRENCHING AND  
SAMPLING IS REQUIRED  
WALKS THE ONLY ACCESS  
TO THIS AREA

CONCLUSION - ~~PENHORWOOD TALC ZONE~~  
ASSEMBLY FOR GOLD, NO VALUES IN  
SMALL CARBONATE QUARTZ  
VEINS

RECOMMENDATIONS - MECHANICAL STRIPPING  
DRILLING, BLASTING AND  
SAMPLING OF THIS TALC  
ZONE  
NO VALUES AVAILABLE AT  
PRESENT TIME

DEERWOOD - ZINC  
AND GOLD SHOWINGS

● CONCLUSION - MORE STAPPING, BLASTING  
TRENCHING AND SANDLING  
WERE DONE OUT THESE SHOWINGS  
BUT NO SIGNIFICANT RESULTS  
WERE OBTAINED

RECOMMENDATIONS - NO MORE MONEY OR TIME  
TO BE SPENT PROSPECTING  
ON THESE SHOWINGS  
OPTION TO COMPANY MAY BE  
POSSIBLE

CONCLUSION  
KENOSAMINE - NICKEL SHOWINGS IN  
KENOSAMINE THIS HAS  
BEEN OPTIONED TO TRIMBLE  
NICKEL JULY 31 90  
EXPLORATION EXPENDITURES  
AT LEAST \$50,000.00 FIRST YR  
\$150,000.00 SECOND YR AND  
\$250,000.00 THE THIRD YEAR  
WORK HAS COMMENCED ON  
THIS PROPERTY NOV 90  
DRILLING IN SPRING OF 1991

CONCLUSION - HORNWOOD - HARDMAN  
ZINC AND COPPER  
SHOWINGS - 33 CLAIMS  
PROPERTY OPTIONED TO  
ASARCO EXPLORATION OCT. 190  
NO WORK COMMITMENT  
DEC 190 DRILLING STARTED  
ON ZINC SHOWINGS TO TEST  
CONDUCTORS

# MOUTCAIN AREA

PROSPECTING IN THE MOUTCAIN AREA  
DURING MARCH - SEPT. 1990

NOVA TWP.

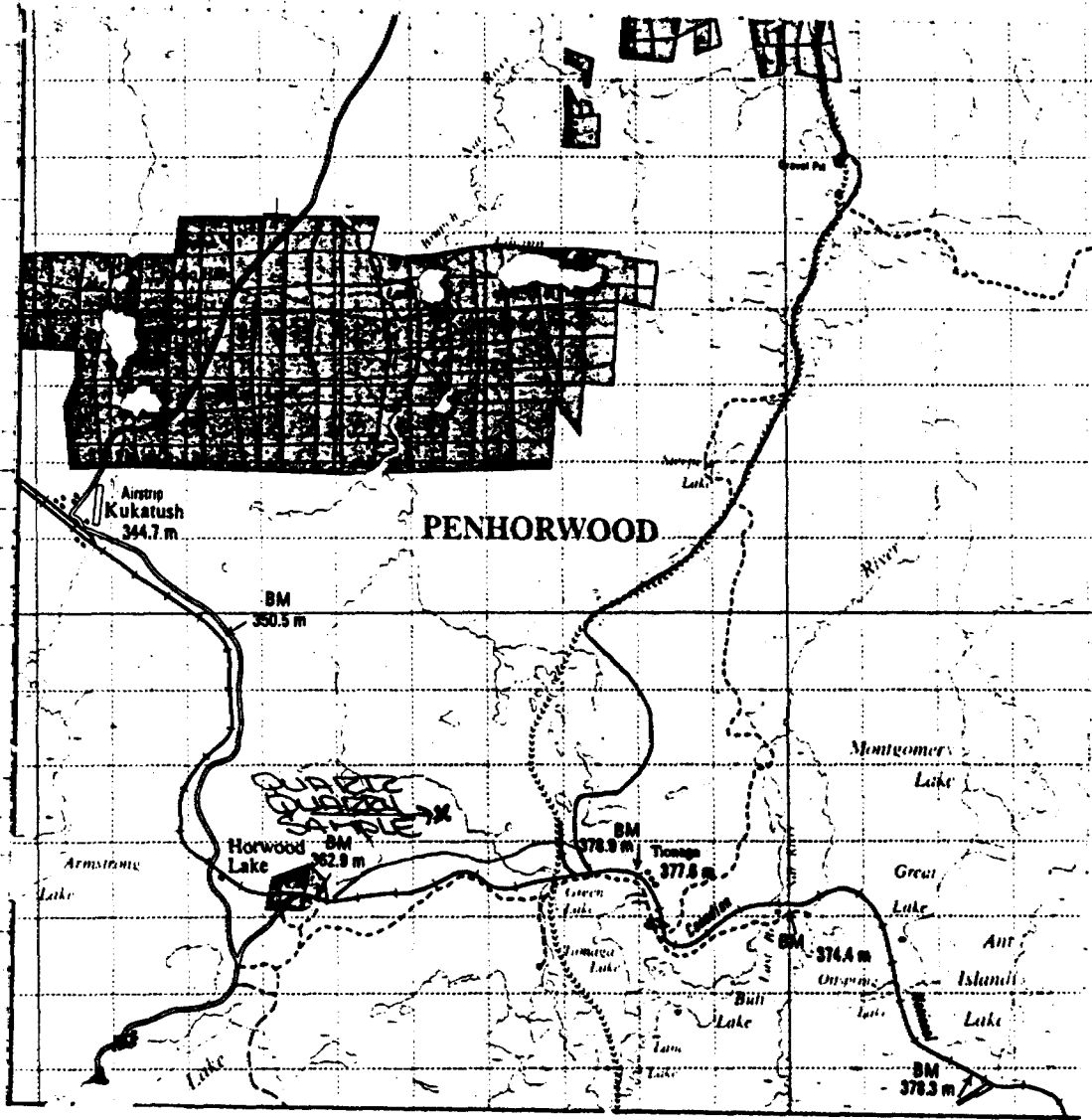
ACCESS - IS BY LOGGING ROAD NORTH  
OF HWY 101 AND THE JUNCTION  
BIB APPROX 12 MILES EAST OF  
FOLEYET  
MAIN LOGGING RAILS 40-50  
MILES NORTH INTO NOVA TWP.

GEOLOGY VISIBLE OUT CROPS ALONG  
ROAD SIDE AND CUT OVER AREAS  
ARE MAINLY OF METAVOLCANICS  
AND FELIC TO INTERMEDIATE

CONCLUSION WIDE RANGE PROSPECTIVE  
IN NOVA TWP FOR BASE METALS  
AND GOLD.  
SEVERAL OUT CROPS SAMPLED  
WITH VERY LITTLE MINERALIZATION  
A COUPLE CARBONATED QUARTZ  
VEINS WERE SAMPLED BUT NO  
VALUES WERE PRESENT

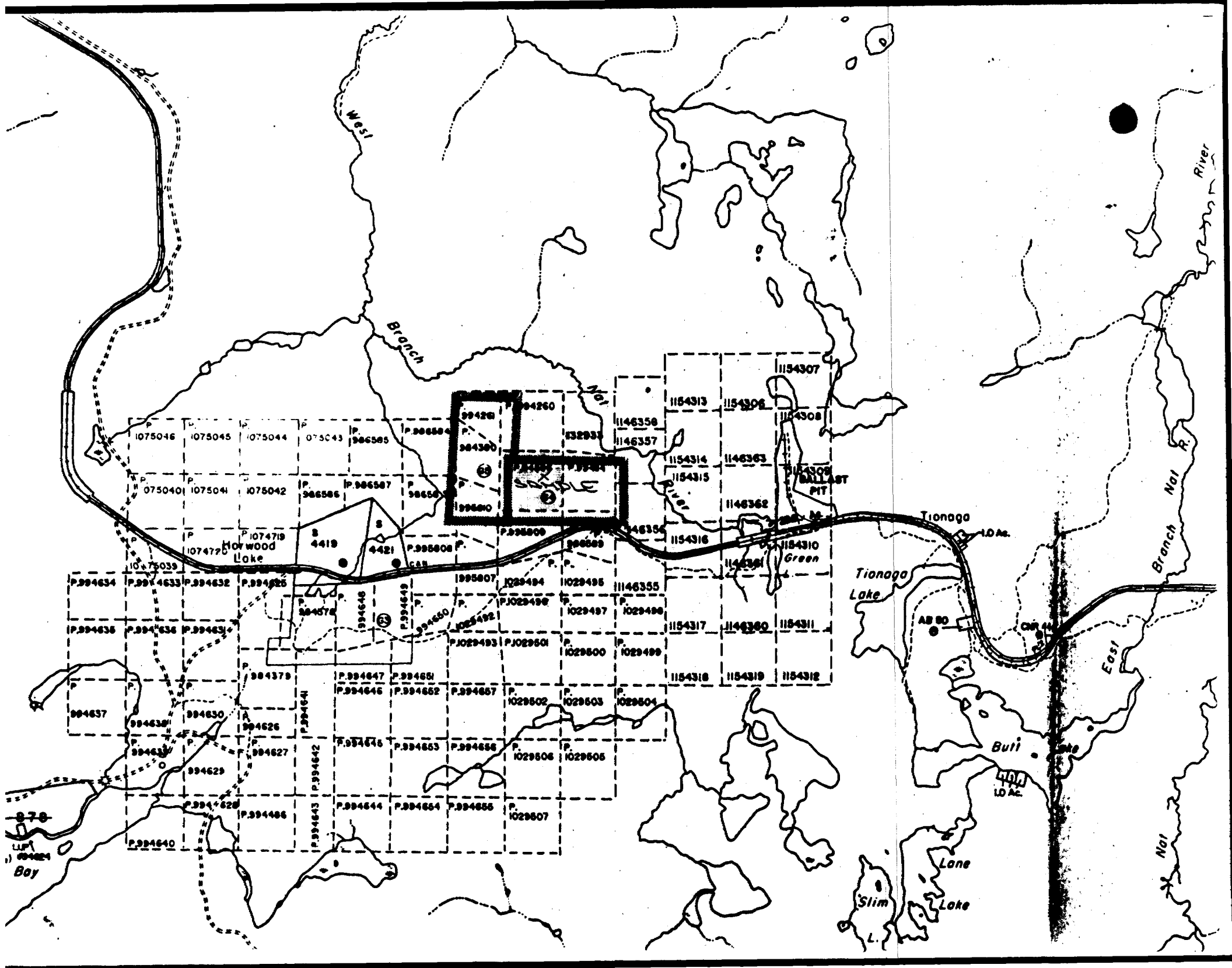
RECOMMENDATIONS - MORE PROSPECTING IN  
THE SW CORNER OF TWP  
IS WARRANTED AS LOGGING  
IS PRESENT AT THIS TIME  
IN TWP. THERE WILL BE  
MORE OUTCROPS VISIBLE AS  
OPERATIONAL PROGRESS AND  
MORE ROAD ACCESS TO BE  
NOTE AREAS

SCALE - 1:100,000 N.T.S. 42B/SE



APRIL 29/90  
PROSPECTED HIGHLIGHTED AREA IN  
PENHORWOOD TWP CLAIM NO 986588

PROSPECTED CLAIM NO 986588  
SAMPLED WALL ROCK ON N-SIDE OF  
QUARTZ QUARRY  
SAMPLE CONTAINED MASSIVE PYRITE  
SEE ATTACHED ASSEY SHEET  
TYPE OF ROCK EXPOSED - HUGE QUARTZ  
STRUCTURE WITH PORPHYRITIC FLOWS



90 LNL 006 SW

Au, Ag

Fred Ross - Penhorwood Twp.  
- from wall of No. 3 quarry  
pit. Rosal Silica  
- pyritic, sheared, carbonatized  
(sericitic?), fuchsite altered  
ultramafic flow - possible  
chalcopyrite (carnished pyrite).



Laboratory Report

Requested To: J.C. Ireland, Staff Geologist, Mines & Minerals Div. (NE), MNDM, 60 Wilson Ave., Timmins, Ont. P4N 2S7

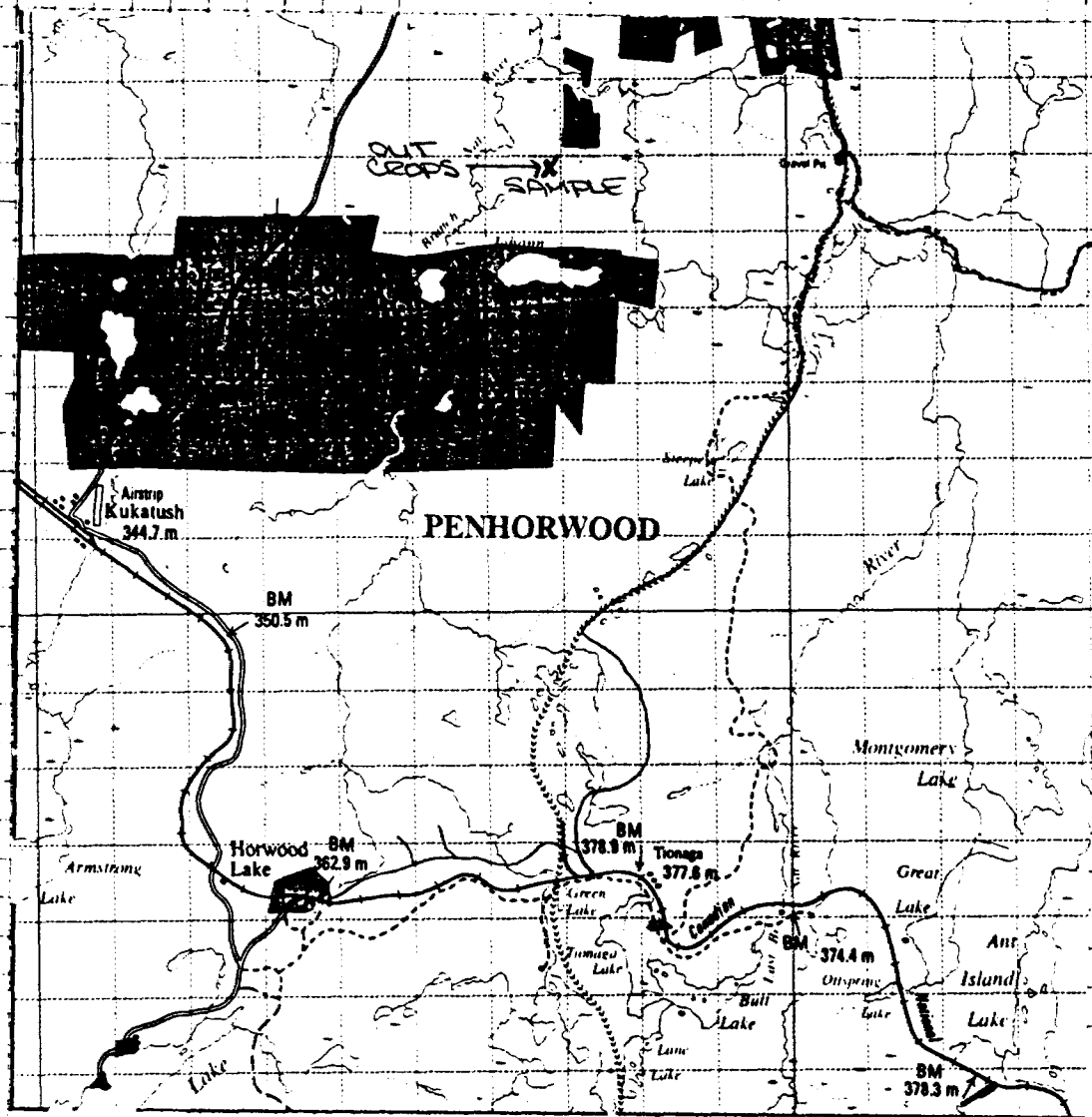
Sample Number	Gold Oz. Per Ton	Silver Oz. Per Ton	Cu%	Pb%	Zn%
90 LNL 004 SW	[REDACTED]	[REDACTED]			
90 LNL 005 SW	[REDACTED]	[REDACTED]			
90 LNL 006 SW	0.002	Nil			
90 LNL 007 SW	[REDACTED]	[REDACTED]	[REDACTED]		

Received Ministry

*L. Owsicki* for L. Owsicki  
Manager (Acting)

Except by special permission, reproduction of these results must include any qualifying remarks made by this ministry with reference to any sample.

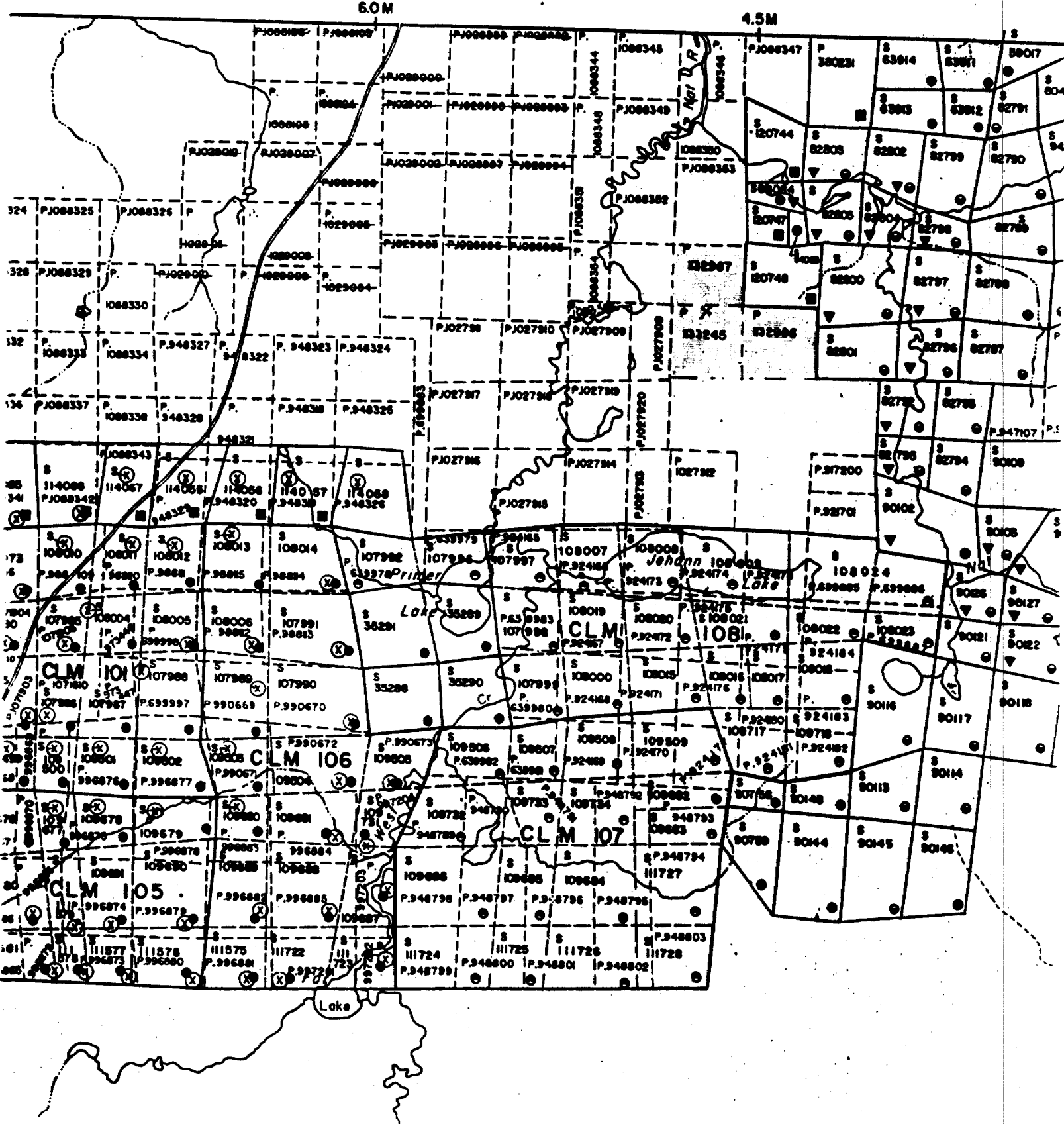
SCALE - 1:100,000 N.T.S. 42B/SE



MAY 5, AND 6 1960  
PROSPECTED HIGHLIGHTED AREA IN  
PENHORWOOD TWP

WALKED CLAIM LINES ON CLAIMS P1132986,  
P1132987 AND 1133245  
FOUND SEVERAL OLD TRENCHES FROM THE  
1940's  
SAMPLED NEAR 1 PIT ON CLAIM P1133245  
ON NORTH BOUNDARY 396 CHALCOPIRITE IN  
SAMPLE  
SEE ASSEY SHEET ATTACHED  
MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS

# REEVES TWP.



90 LNL 009 SW

Au, Ag, Cu,  
Zn

F. Ross, Penhorwood Twp.  
-from old pit near north  
boundary of cl. P.1133245  
Possible chert breccia or  
felsic fragmental with minor  
pyrite and chalcopyrite (to  
3 %).

Laboratory Report

Date May 25, 1990

Issued To: J.C. Ireland, Staff Geologist, Mines & Minerals Div., MNDM, 60 Wilson Ave., Timmins, Ont.  
P4N2s7

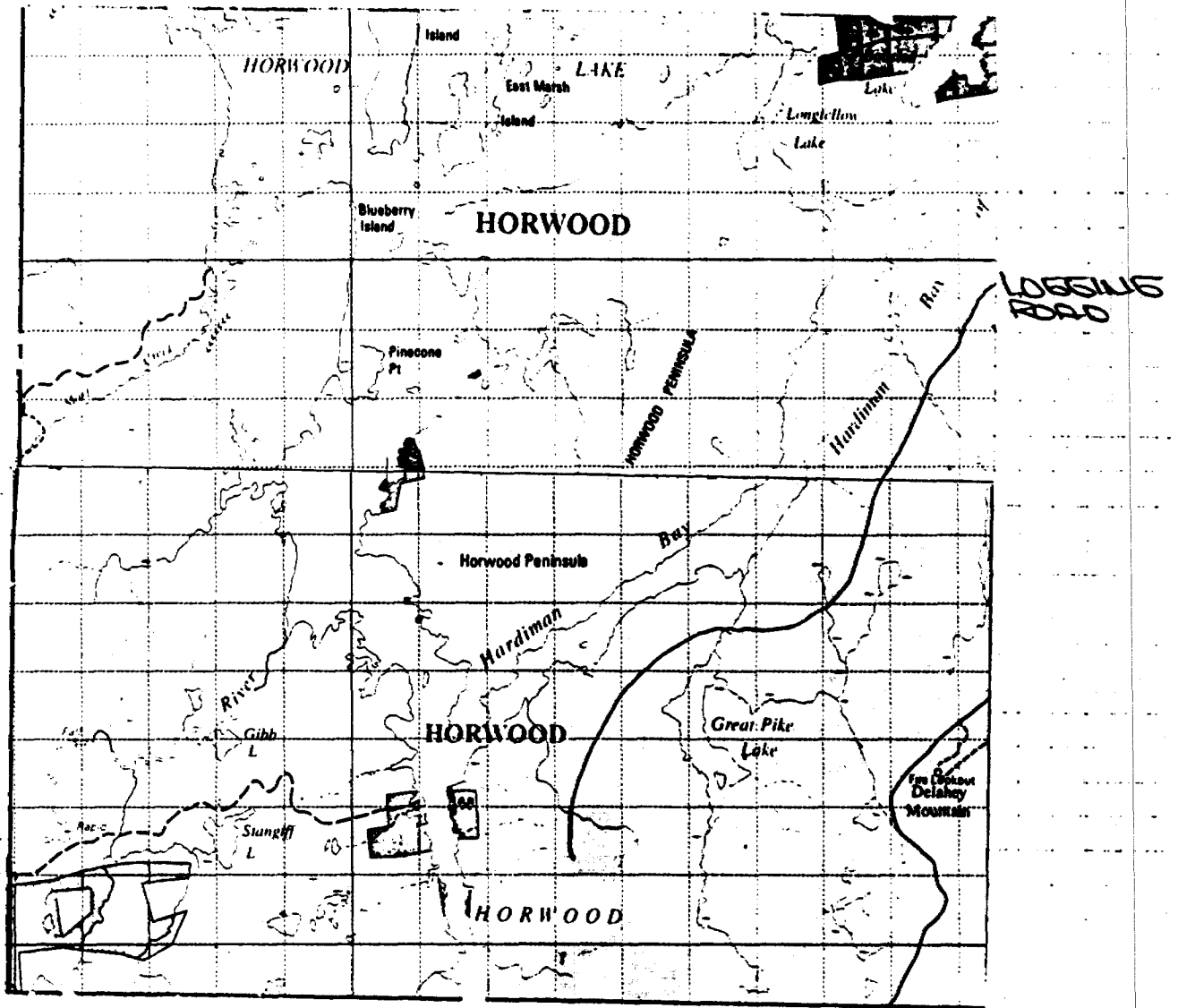
Sample Number	Gold Oz. Per Ton	Silver Oz. Per Ton	Cu%	Zn%
90 LNL -009 SW	0.006	Nil	0.110	0.044

es Received Ministry

*L. Owsicki*  
L. Owsicki  
Manager (Acting)

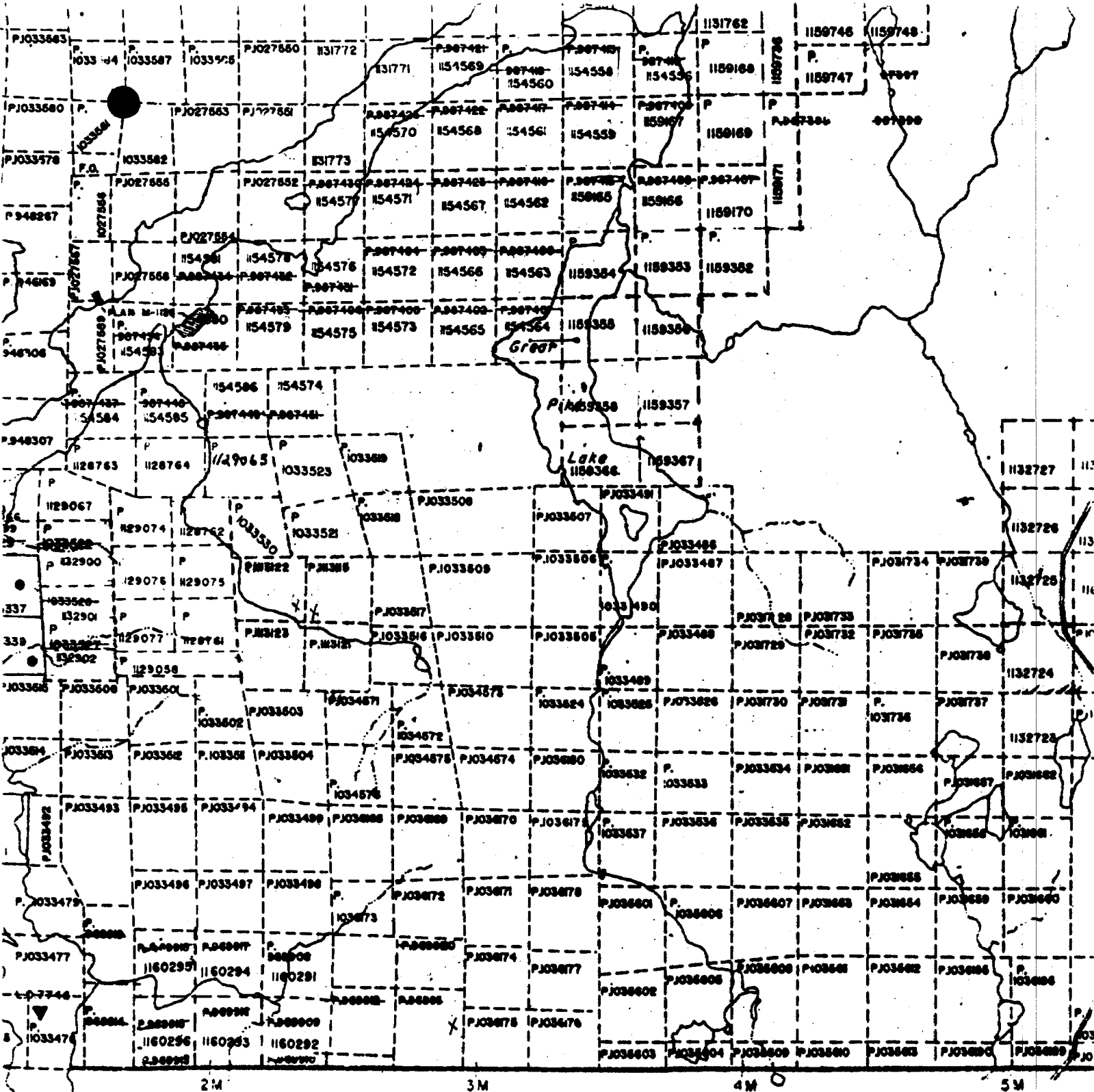
Except by special permission, reproduction of these results must include any  
qualifying remarks made by this ministry with reference to any sample.

SCALE 1:100,000  
N.T.S. 4101NE - N.T.S. 42B/SE



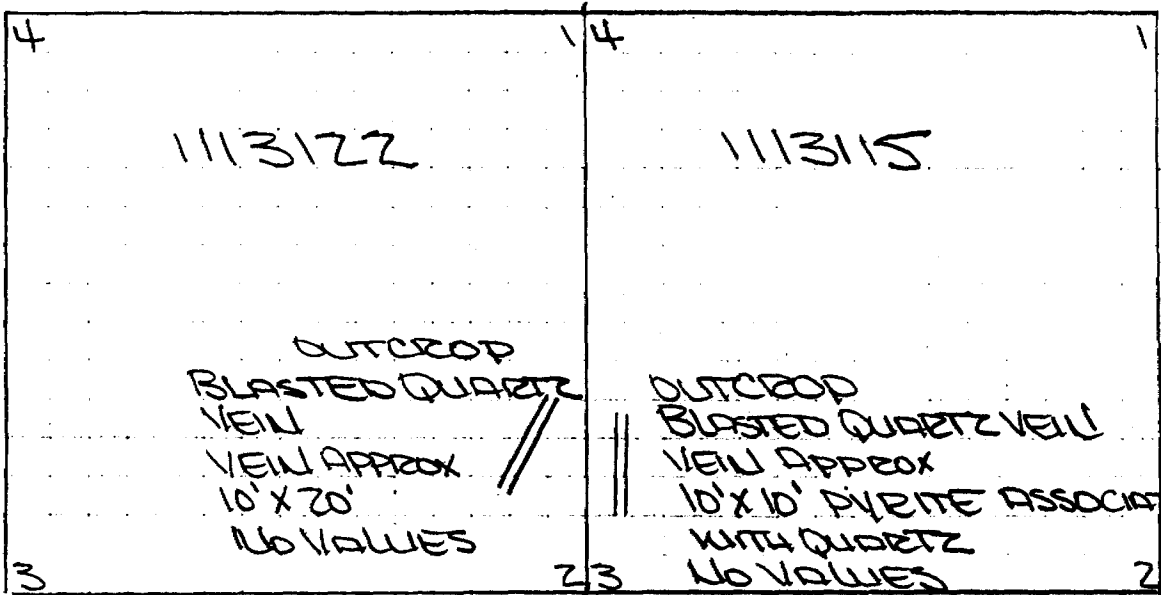
MAY 10 190 AND MAY 11 190  
PROSPECTED HIGHBATED AREAS  
IN HORWOOD TWP

SEE ATTACHED SHEETS

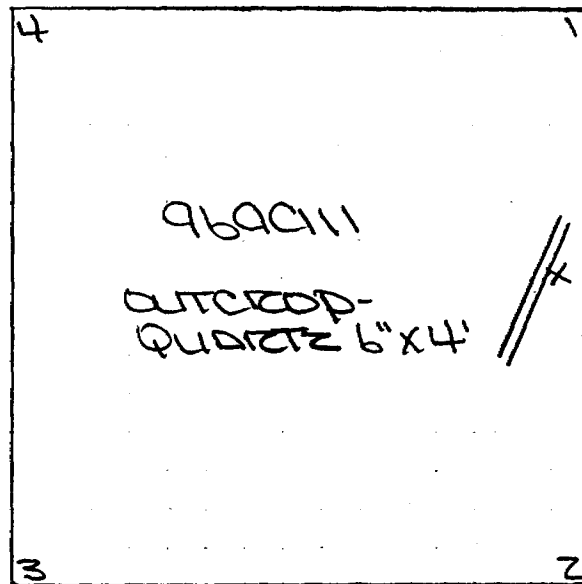


DALE TWP

HORWOOD TWP.  
SCALE 3" = 1320'



ROCK TYPE ON CLAIM 1113122 AND 1113115  
MAFIC TO INTERMEDIATE METAVOLCANICS  
MAFIC PYROCLASTIC ROCK  
SAMPLED TO QUARTZ VEINS  
VEINS CONTAINED 1-3% PYRITE  
NO VALUES ENCOUNTERED



ROCK TYPE ON CLAIM 969911  
BASALT TO ANDESITE FLOWS  
HIGHLY CONTAMINATED QUARTZ VEIN  
ASSAY RESULTS OF NO VALUE  
SEE ATTACHED ASSAY SHEET  
LET THIS CLAIM LAPS







# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Geochemical Analysis Certificate

0T-0255-RG1

Company: Fred Ross  
Project:  
Attn:

Date: MAY-16-90

We hereby certify the following Geochemical Analysis of 1 rock samples submitted MAY-16-90 by .

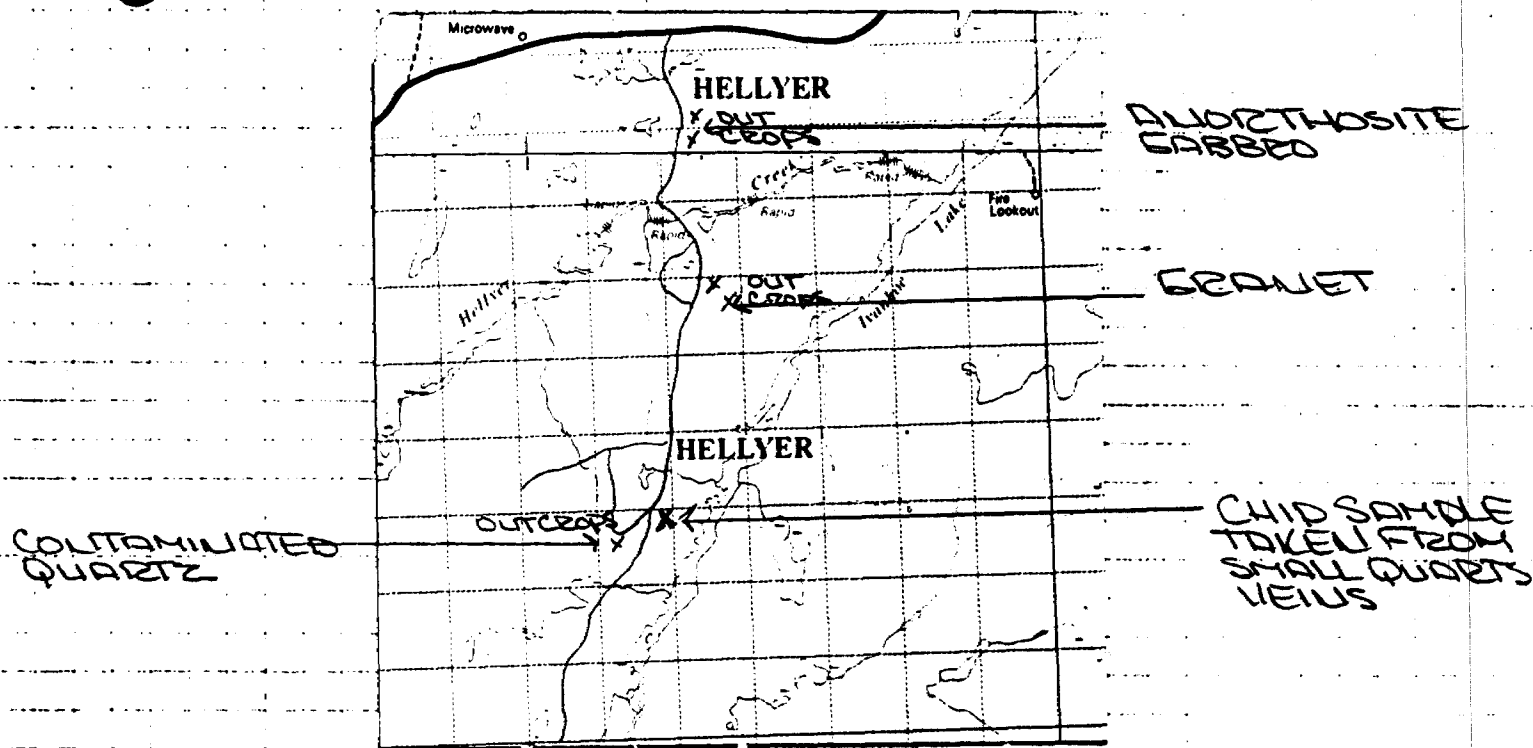
Sample Number	Au ppb	Au check ppb
#1-11	72	69

Certified by

G. Lebel / Manager

0T-0255-RG1

SCALE - 1:100,000  
PROVINCIAL SERIES - NITS 42B/SE  
410/NE



MAY 12 AND 13/90

PROSPECTED HIGHLIGHTED AREAS IN  
HELLYER, RANEY AND CROCKETT TWPS.

HELLYER TWP SEVERAL OUTCROPS  
ROCKTYPE ANORTHOSITE AND FELSIC

SAMPLE TAKEN FROM OUTCROP IN SW CORNER  
OF HELLYER TWP. SEE ATTACHED SHEET  
FOR ASSEY RESULTS

MORE WORK TO BE DONE ON THIS OUTCROP  
AT A LATER DATE

90LNLO18SW Au,Ag,  
TSPA F. Ross, Central Hellyer Twp., west  
side of road. Unidentified rock rich  
in Fe-carbonate (siderite?)  
mineralized with dissem. chalcopyrite  
tetras to 5mm. Less than 1% total  
sulphide; crudely banded.  
Non-magnetic.

90LNLO19SW Au,Ag,Cu F. Ross, McArthur Twp. 500m north of  
Mountjoy River bridge at south  
boundary of township. Massive pyrite  
and vein quartz.

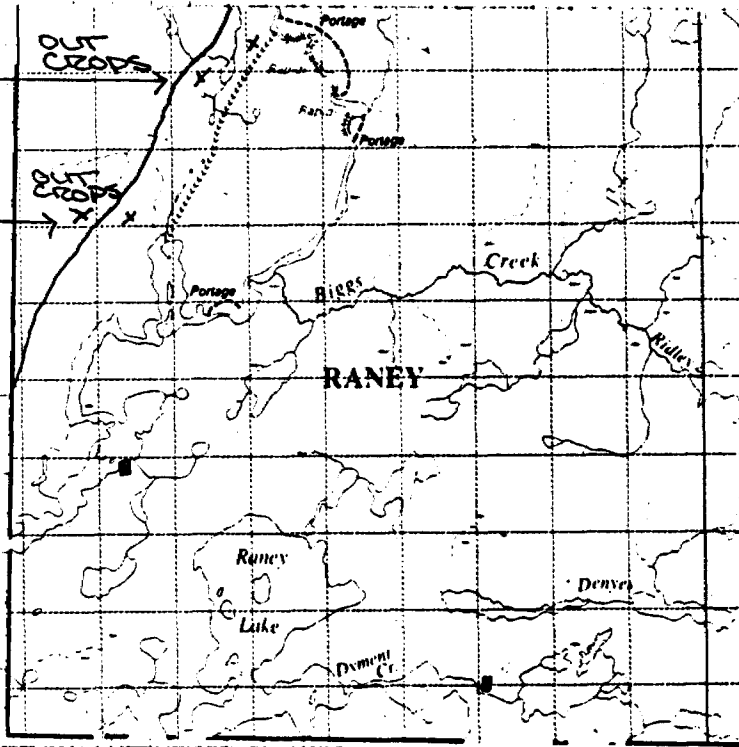
qualifying remarks made by this ministry with reference to any sample.



SCALE - 1:100,000  
PROVINCIAL SERIES - N.T.S. 410/NE

QUARTZ  
VEIN IN GRANITE

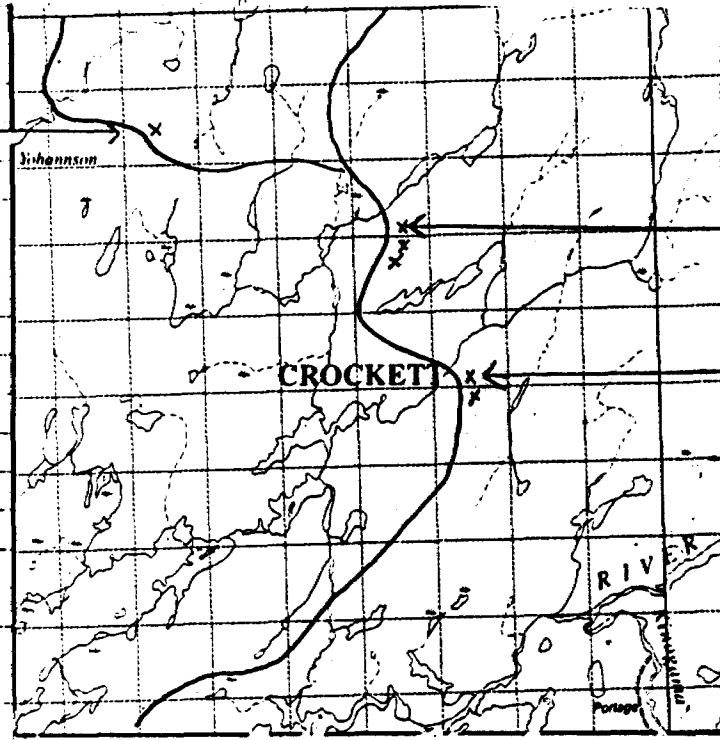
QUARTZ  
VEIN IN GRANITE



PROSPECTED OUTCROPS ALONG  
HOBBING ROADS IN RANEY TWP.  
NW SIDE OF TWP ROCK TYPE ANOETHOSITE  
TO BARBROIC ANOETHOSITE  
BUT QUARTZ NO MINERALIZATION  
DID NOT WARRANT ASSESSING

SCALE = 1:100,000  
PROVINCIAL SERIES - N.T.S. 410/NE

OUTCROP  
GARNET

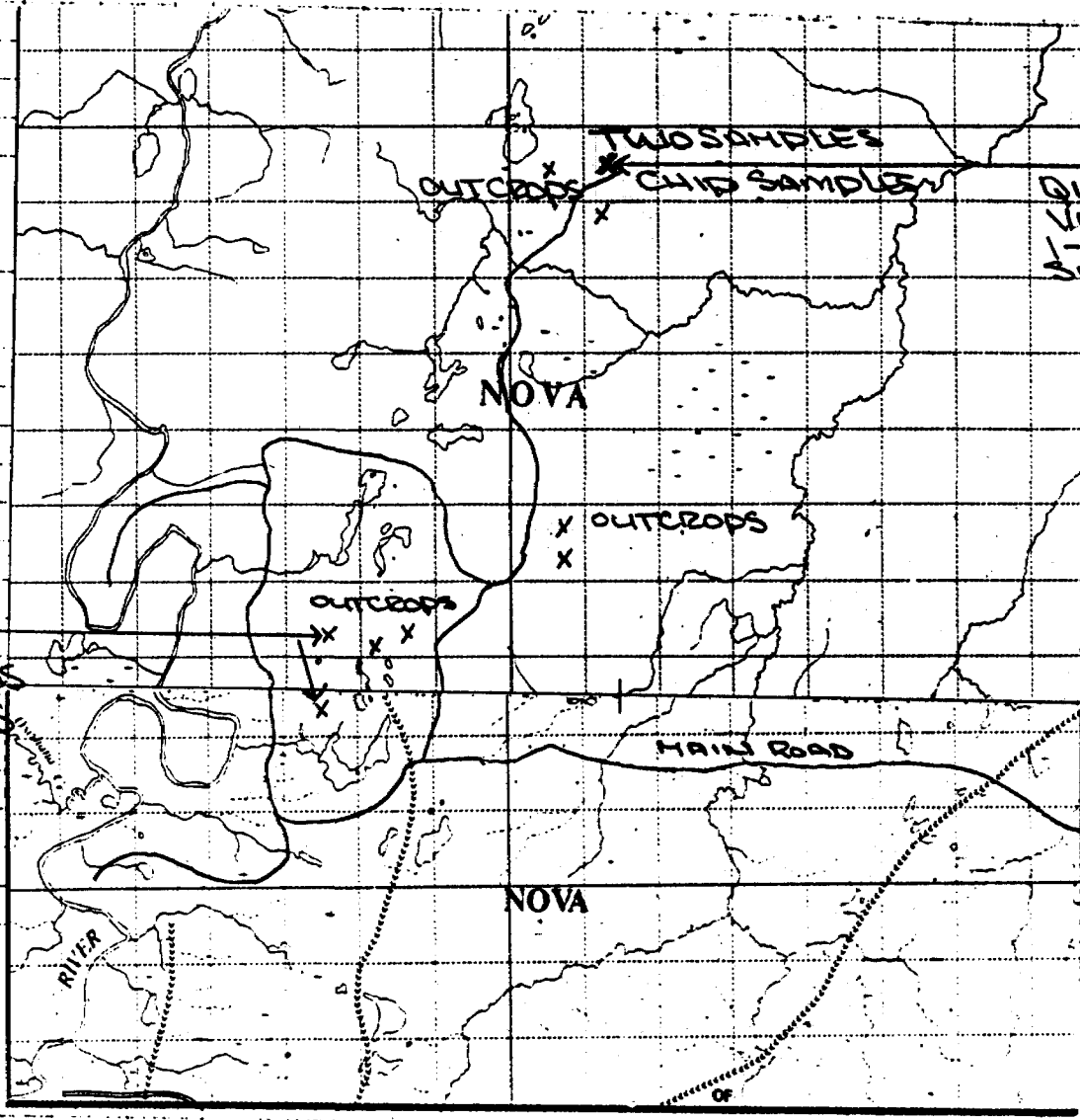


OUTCROPS  
GARNET

OUTCROPS  
GARNET

PROSPECTED OUTCROPS ALONG LOGGING  
ROADS IN CROCKETT TWP  
VERY FEW OUTCROPS EXPOSED  
ROCK TYPE PYROXENE-GARNET-QUARTZ-FELDSPAR  
GARNULITE  
NOTHING WORTH ASSESSING

SCALE - 1:100,000  
PROVINCIAL SERIES N.T.S. 42 B/SE  
N.T.S. 42 B/NE



MAY 19, 20, 21 AND 27/90  
PROSPECTED HIGHLIGHTED AREAS IN NOVA  
TWP  
VERY FEW EXPOSED OUTCROPS IN NOVA TWP  
HEAVY OVERBURDEN AND COARSE GRAVEL  
TYPE OF ROCK IN NORTH AND CENTRE OF  
TWP - BASALT TO ANDESITE FLOWS  
WEST SIDE - PORPHYRITIC FLOWS, QUARTZ  
FELDSPAR PORPHYRY.  
TWO SAMPLES TAKEN FOR ASSEY FROM  
N-END OF TWP.  
SEE ATTACHED SHEET



SAMPLE LIST

JUNE 13, 1990

90LNLO20SW Au,Ag F. Ross, Nova Twp. Sample of highly carbonatized, silicified, pyritic (2-5 %), sheared metasediment? local green carbonate alteration. The other half of this sample was sent to Swastika Labs for comparison.

90LNLO21SW Au,Ag F. Ross, Nova Twp. Sample from same location as above. Same rock type.

Laboratory Report

Date June 27/90

Requested To: J.C. Ireland, Staff Geologist, Mines & Minerals Div.(NE), MNDM, 60 Wilson Ave., Timmins, Ont.

P4N 2S7

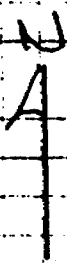
Sample Number	Gold % REACTANT	Silver % REACTANT
	Ppb	Ppm
90 LNL 020 SW	18	< 3
90 LNL 021 SW	22	< 3

Received Ministry

*L. Owsicki* for L. Owsicki  
Manager (Acting)

Except by special permission, reproduction of these results must include any  
qualifying remarks made by this ministry with reference to any sample.

SCALE - 1:100,000  
 N.T.S. 47AISK

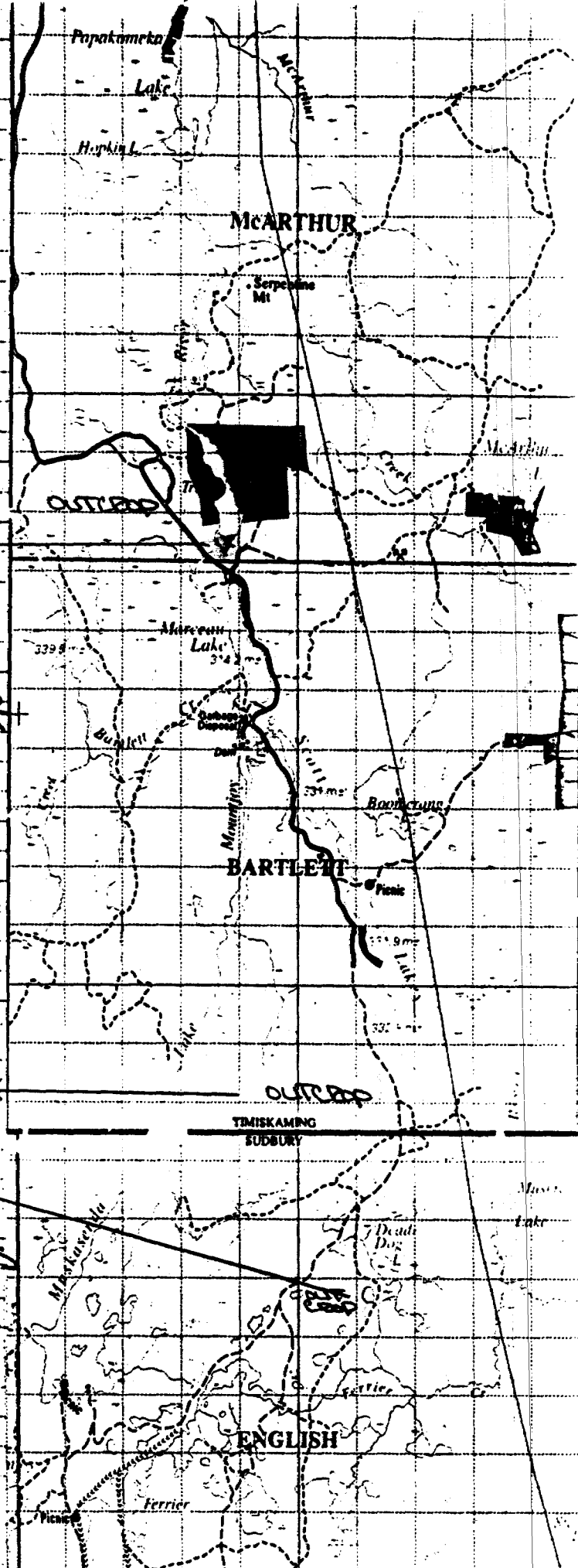
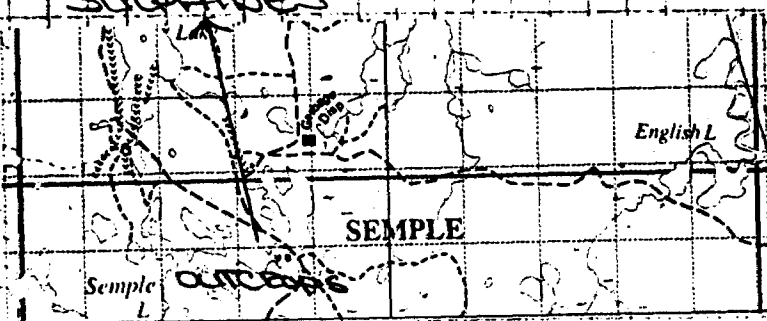


MAY 29 1990  
 PROSPECTED HIGHLIGHTED  
 AREAS IN MCARTHUR,  
 BARTLETT ENGLISH,  
 AND SEMPLE TOWNS

ROCK TYPE  
 FELSIC METAVOLCANICS  
 SAMPLED OUTCROP  
 ALONG LOCAL FORMATION  
 SAMPLE WAS QUARTZ  
 WITH MASSIVE SULPHIDES  
 SEE ATTACHED ASSESS SHEET  
 MORE PROSPECTING IN  
 THIS AREA IN LATE FALL  
 WHEN LEAVES HAVE  
 FALLEN

ROCK TYPE  
 FELSIC METAVOLCANICS  
 IN OUTCROPS SAMPLED  
 IN BARTLETT AND  
 ENGLISH TWP  
 NO MINERALIZATION

SAMPLED QUARTZ STRINGERS  
 IN OUTCROP NO VISIBLE  
 SULPHIDES



90LNLO18SW Au,Ag,  
TSPA

F. Ross, Central Hellyer Twp., west side of road. Unidentified rock rich in Fe-carbonate (siderite?) mineralized with dissem. chalcopyrite tetras to 5mm. Less than 1% total sulphide; crudely banded. Non-magnetic.

90LNLO19SW Au,Ag,Cu

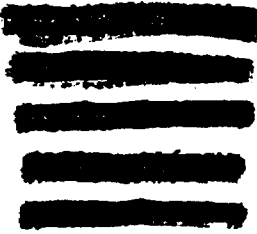


F. Ross, McArthur Twp. 500m north of Mountjoy River bridge at south boundary of township. Massive pyrite and vein quartz.

qualifying remarks made by this ministry with reference to any sample.

Laboratory Report

Date June 8, 1990

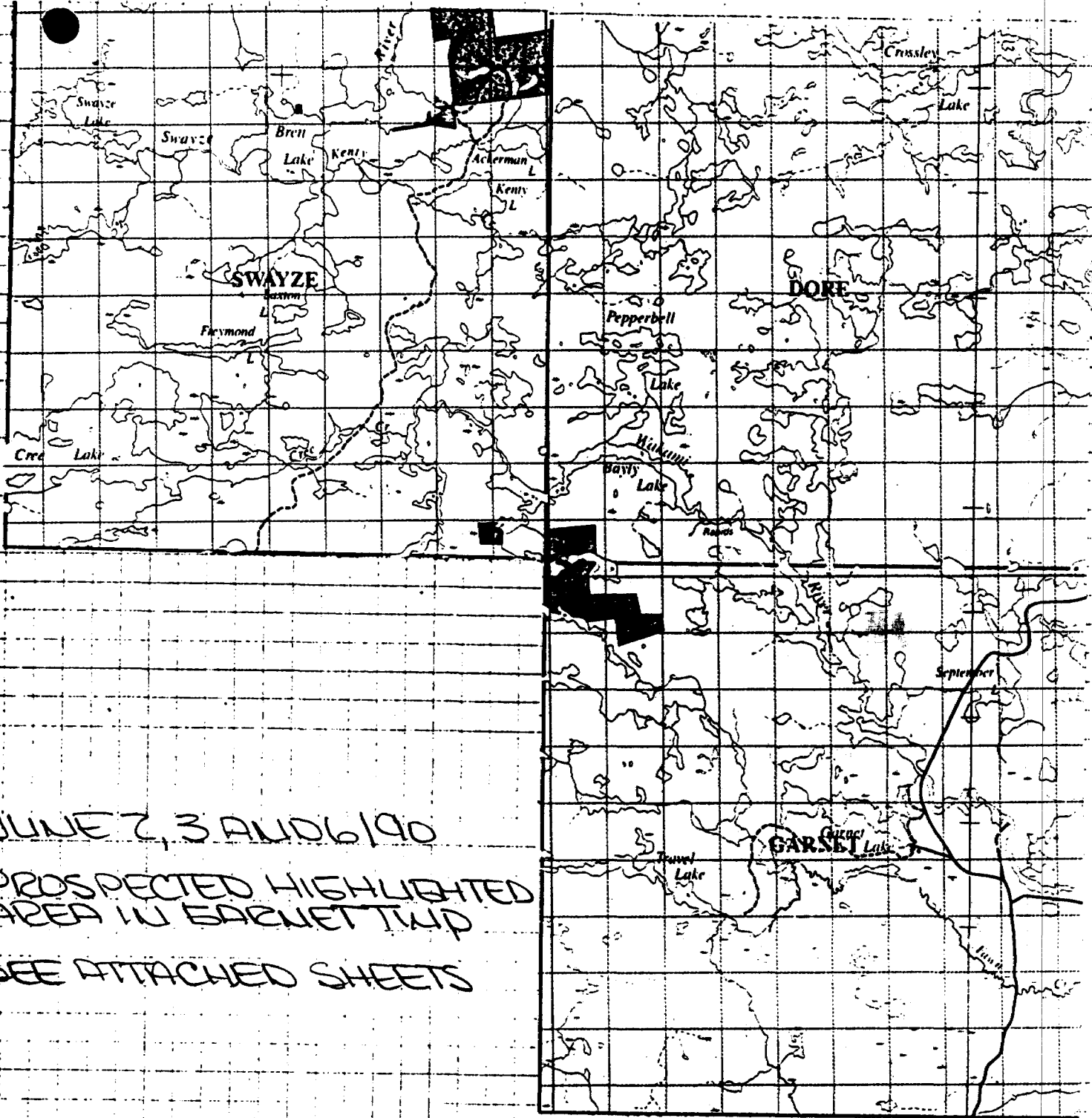
Addressed To: J.C. Ireland, Staff Geologist, MNDM, Mines & Minerals Div.(NE), 60 Wilson Ave.,  
Timmins, Ont. P4N 2S7

Sample Number	Gold Gz. Ppb x100000x	Silver Gz. Ppm x100000x	Cu Ppm
 90 LNL 019 SW	 <10	 <3	1136

Received Ministry

  
L. Owsicki  
Manager (Acting)

SCALE - 1:100,000 N.T.S. 410/NE

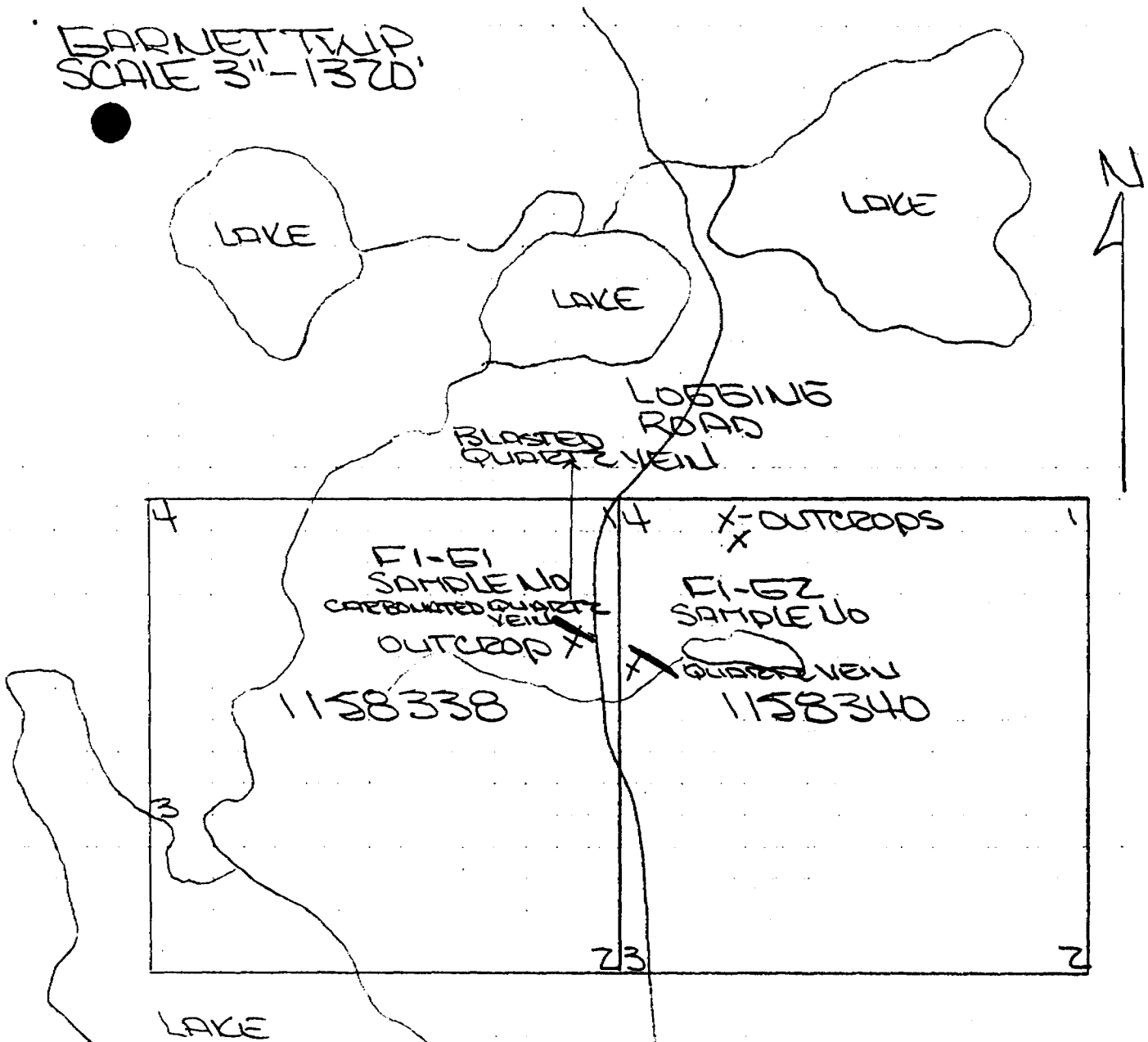


JUNE 2, 3 AND 6/90

PROSPECTED HIGHLIGHTED  
AREA IN GARSET TWP

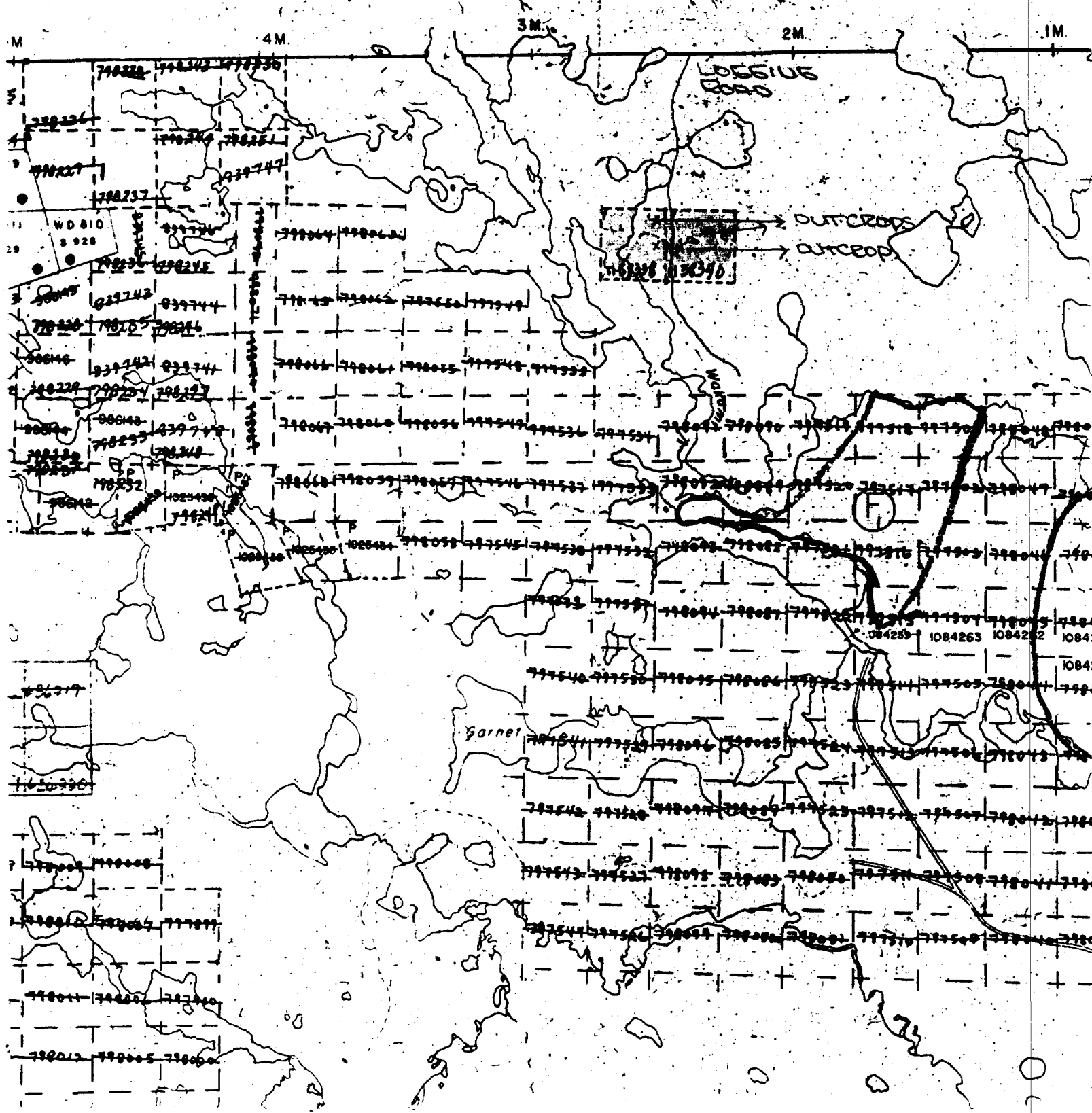
SEE ATTACHED SHEETS

EARNETT TWP  
SCALE 3" = 1320'



JUNE 2, 3 AND 6 1900  
METAVOLCANICS  
TROC TYPE - BASALT TO ANDESITE FLOWS  
PROSPECTED CLAIM NO 1158338 AND 1158340  
SAMPLED TWO CARBONATED QUARTZ VEINS  
AS INDICATED ON SKETCH ABOVE  
SEE ATTACHED ASSEY SHEETS  
SAMPLES WHERE QUARTZ WITH MASSIVE  
SULPHIDES

# DORE TP. M. 763







Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Assay Certificate

OT-0321-RA1

Company: **FRED ROSS**

Date: **JUN-21-90**

Project:

Copy 1. **FRED ROSS, 958 PARK AVE. TIMMINS ONT.**

Attn:

We hereby certify the following Assay of 1 ROCK samples submitted JUN-18-90 by .

Sample	Assay g/tonne	Assay oz/ton
F-1-51	0.01	.001

~~sample contains or represents~~

Certified by

G. Lebel / Manager

OT-0321-RA1





# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

## Geochemical Analysis Certificate

OT-0301-RG1

Company: **FRED ROSS**  
Project:  
Attn: **FRED ROSS**

Date: JUN-13-90  
Copy 1. FAX TO SWASTIKA LABS TIMMINS

We hereby certify the following Geochemical Analysis of 1 ROCK samples submitted JUN-11-90 by .

Sample Number	Au ppb
F-1-52	Nil

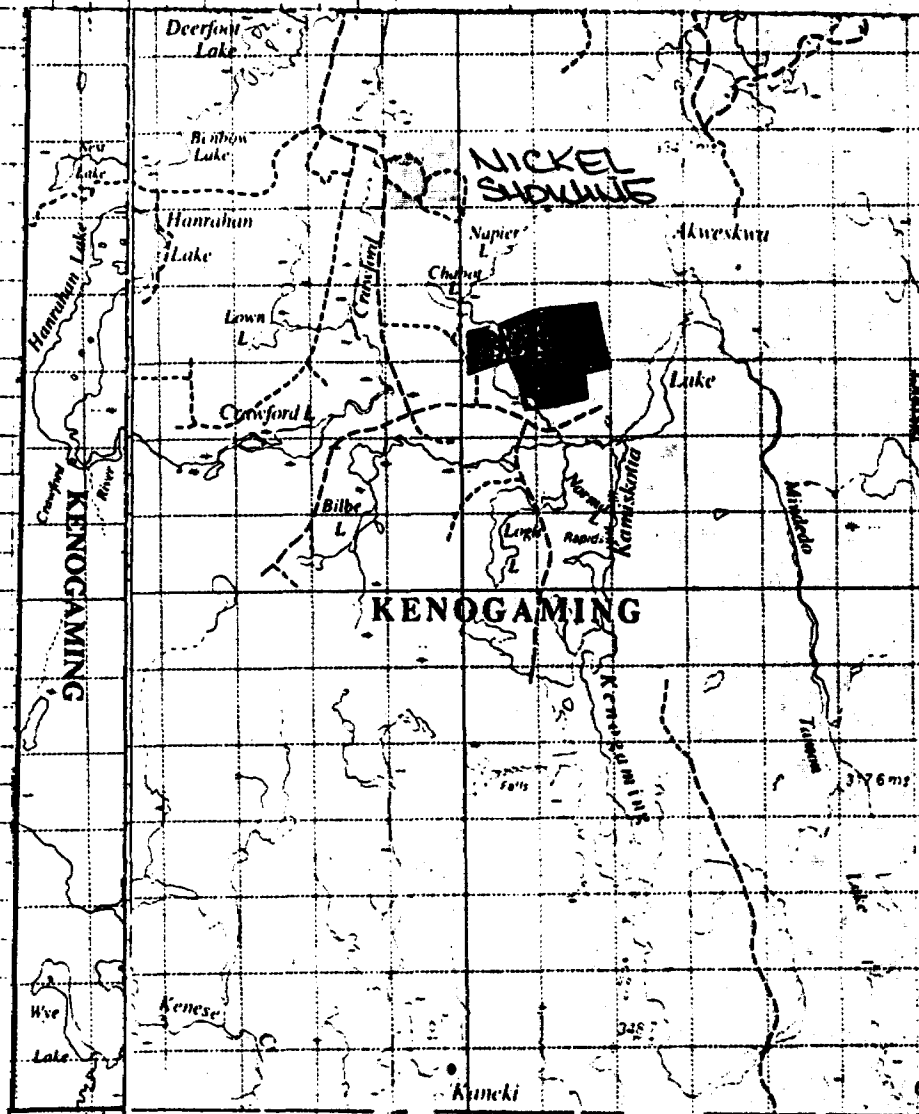
Certified by 

G. Lebel / Manager

OT-0301-RG1

22472

SCALE - 1:100,000  
N.T.S 42A1SW - N.T.S 42B1SE



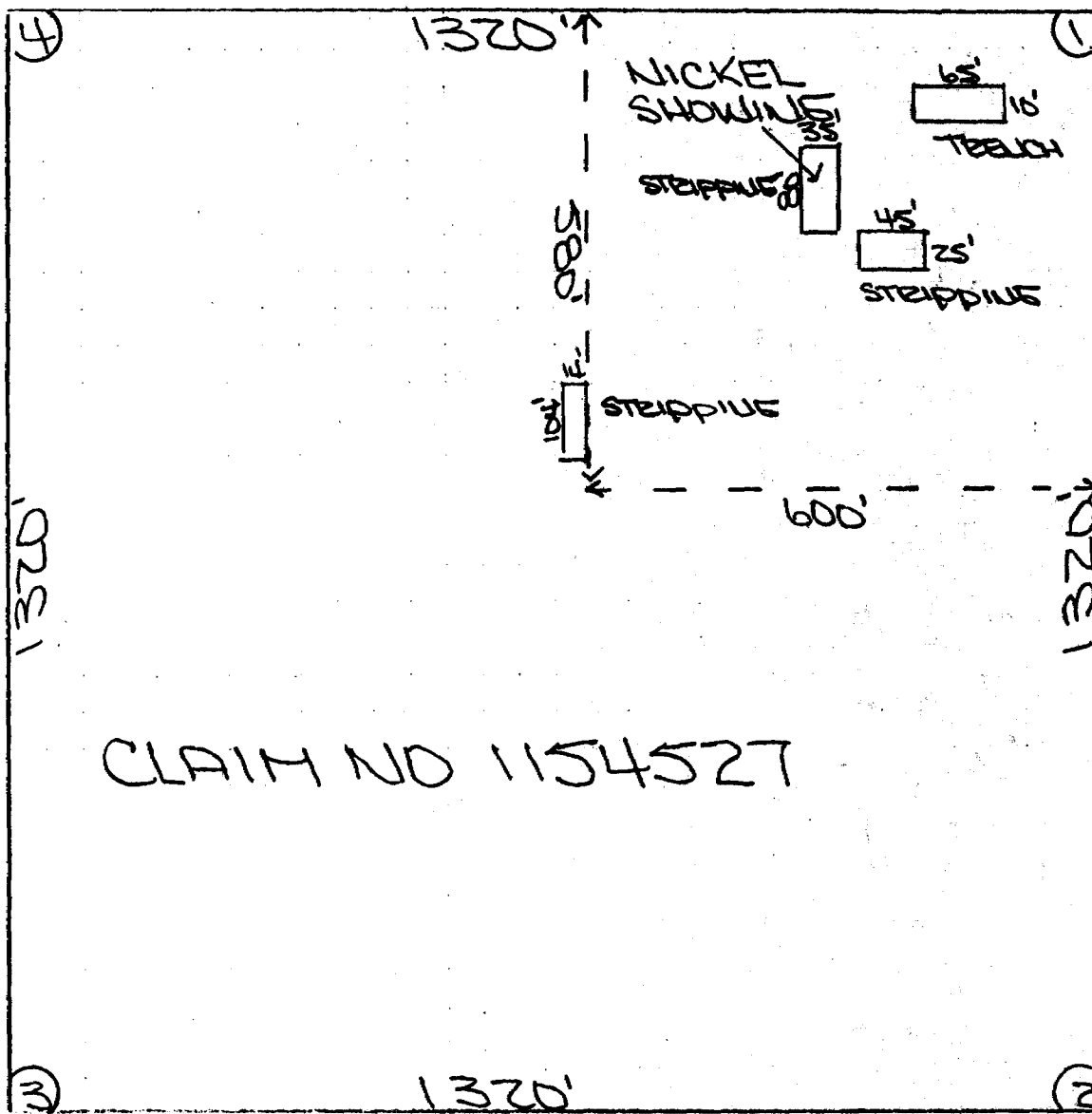
NICKEL SHOWINGS  
KENOGAMING TWP.

PROSPECTED HIGHLIGHTED  
AREA KENOGAMING TWP ON  
JUNE 29 AND 30/90  
JULY 1, 6, 7, 8, 13 AND 14/90

SEE ATTACHED CLAIM MAP  
AND WORK REPORT FOR  
NICKEL SHOWINGS IN KENOGAMING  
TWP



KENOSHA TWP  
SCALE 1" = 200'

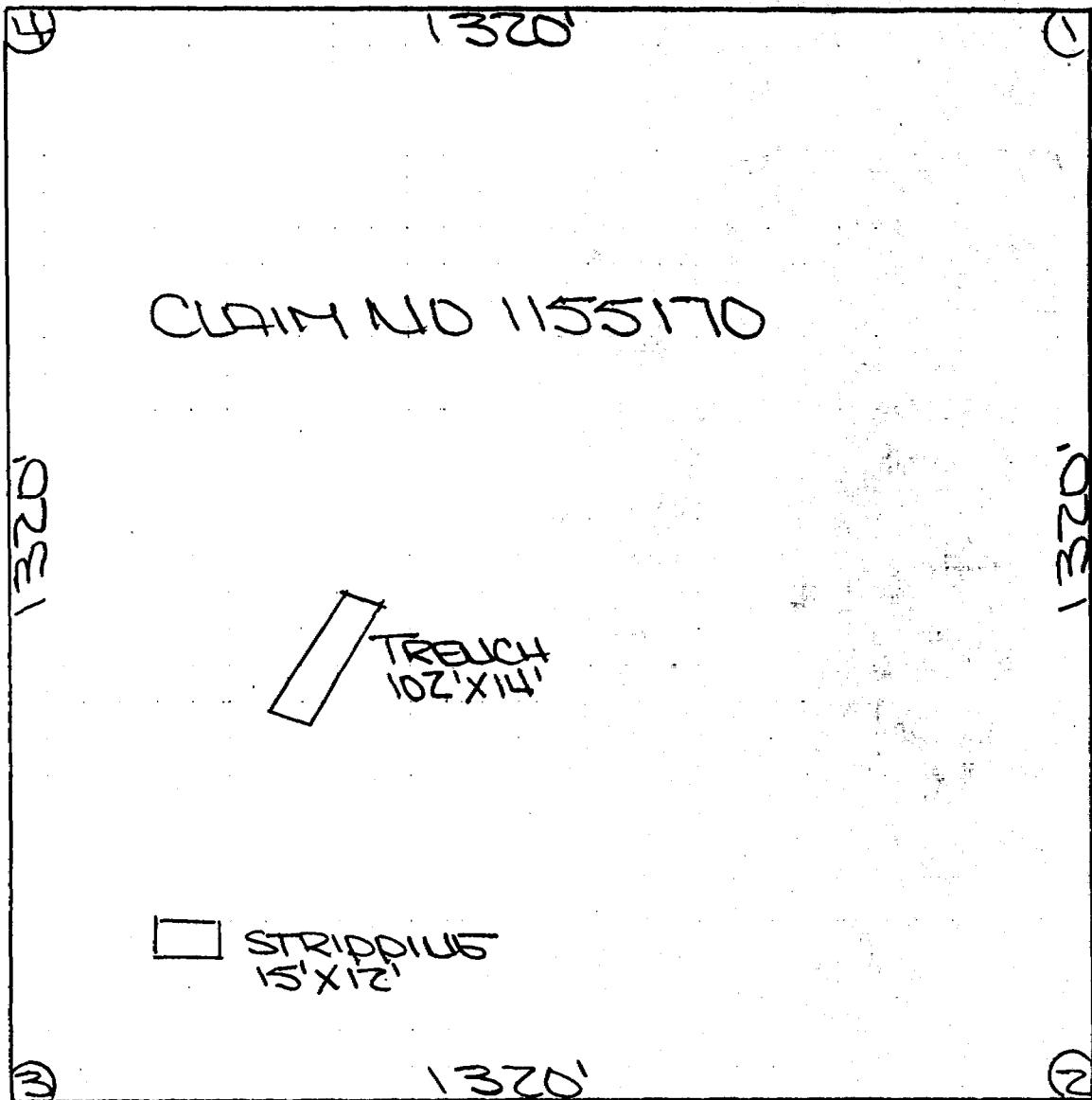
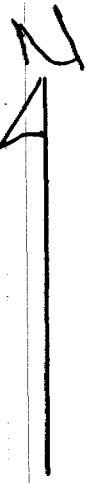


CLAIM NO 1154527

JULY 17 AND 18/90 STRIPPING AND TRENCHING  
ON N.E. CORNER OF CLAIM # 1154527  
WITH CAT. 225 BACKHOE

ASSEMBLY SHEET ATTACHED

KENOGAMING TWP  
SCALE 1" = 220'



JULY 19/90 STRIPPING AND TRENCHING  
ON S.W. CORNER OF CLAIM # 1155170  
WITH CAT. 225 BACKHOE

2

# SANFORD EXPLORATIONS

P.O. Box 211,  
FOLEYET, ONTARIO P0M 1T0

M Denis Morin & <sup>FRED</sup> George Ross

Foleyet, Ontario

July 19th, 1990

TRENCHING & STRIPPING KENOGAMI ROAD			
July 17, 1990	Backhoe 225		
	8 hrs @	85.00	680.00
July 18, 1990	Backhoe 225		
	8 hrs @	85.00	680.00
July 19	Backhoe 225		
	7 hrs @	85.00	595.00
July 17&19	Rental Wajax Pump&hose		
	3 days @	50.00	150.00
July 17&19	Rental Gas Plugger & Steel		
	2 days @	65.00	<u>130.00</u>
	Contract Total		<u>2,235.00</u>

*Paid 50% of Invoice  
by D Morin  
50% by Ross*



EXPENCES WHILE PROSPECTING ON CLAIMS IN KEUOSAMINUS TRIP ON JUNE 29 & 30/90 - JULY 1, 6, 7, 8, 13, 14, 17, 18 & 19/90

DISTANCE FROM TIMMINS TO PROSPECTIVE AREA APPROX 130 KILOMETERS/TRIP

11-TRIPS - 130 KM/TRIP X .30/KM = 429.00  
1430 KM X .30/KM =

\$100.00/MAN DAY X 11 DAYS = 1,100.00

FOOD SUPPLIES FOR 11 DAYS 200.00

RECEIPT FOR STEPPING AND TRENCHING 1/2 OF \$2,275.00 = 1,117.50

TOTAL EXPENCES FOR THIS PROJECT WAS \$2,846.50

THIS PROPERTY HAS NOW BEING OPITION TO TIMMINS NICKEL

*J. Ross*

NOTE THAT D. MORIN, AND E. ROSS ALSO HAVE EXPENCES TOWARDS THIS PROPERTY



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019424

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019424

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O. #:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 7-AUG-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	4	Sample split from other certif
200	4	Whole rock fusion

\* NOTE 1:

Code 1000 is used for repeat gold analyses  
It shows typical sample variability due to  
coarse gold effects. Each value is  
correct for its particular subsample.

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	4	Al2O3 %: Whole rock	ICP-AES	0.01	99.00
542	4	BaO %: Whole rock	ICP-AES	0.01	99.00
588	4	CaO %: Whole rock	ICP-AES	0.01	99.00
586	4	Fe2O3(total) %: Whole rock	ICP-AES	0.01	99.00
821	4	K2O %: Whole rock	ICP-AES	0.01	99.0
593	4	MgO %: Whole rock	ICP-AES	0.01	99.00
596	4	MnO %: Whole rock	ICP-AES	0.01	99.00
599	4	Na2O %: Whole rock	ICP-AES	0.01	99.00
597	4	P2O5 %: Whole rock	ICP-AES	0.01	99.00
592	4	SiO2 %: Whole rock	ICP-AES	0.01	99.00
595	4	TiO2 %: Whole rock	ICP-AES	0.01	99.00
475	4	L.O.I. %: Loss on ignition	FURNACE	0.01	99.00
540	4	Total %	CALCULATION	0.01	N/A

*Ross Properties*

*Kenogaming - Penhorwood  
Types*





# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019421

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019421

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O. #:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 28-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	2	Geochem ring to approx 150 mesh
294	2	Crush and split (0-10 pounds)

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	2	Au ppb: Base 10 g sample	FA-AAS	5	10000

*Loss Property  
Kenogaming Twp.*





# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd. E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019423

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019423

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O. #:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 28-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	4	Geochem ring to approx 150 mesh
294	4	Crush and split (0-10 pounds)
238	4	NITRIC-AQUA REGIA DIGESTION

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
13	4	As ppm: HNO <sub>3</sub> -aqua regia digest	AAS-HYDRIDE/EDL	1	10000
1005	4	Ag ppm: 9 element, soil and rock	ICP-AES	0.5	200
1929	4	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	4	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	4	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	4	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	4	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	4	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	4	Pb ppm: 9 element, soil and rock	ICP-AES	5	10000
1950	4	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Ross Properties



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To: RIO ALGOM EXPLORATION INC.

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Page Number : 1  
Total Pages : 1  
Invoice Date : 28-JUL-90  
Invoice No. : I-9019423  
P.O. Number :

Project : 9002  
Comments : ATTN: R. ARCHER

## CERTIFICATE OF ANALYSIS A9019423

SAMPLE DESCRIPTION	PREP CODE	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
298459 N. side	205 294	1	< 0.5	16	23	3.14	950	< 1	41	24	140
298460 S. side	205 294	1	< 0.5	16	43	2.97	1310	< 1	35	10	112
298461 felsic dyke	205 294	1	< 0.5	12	16	1.87	430	< 1	81	20	84
298462 UM	205 294	< 1	< 0.5	54	47	7.02	715	< 1	1120	< 2	32

459-461 - Zn showing  
462 - Ni showing

CERTIFICATION:

*B. Coughlin*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019420

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019420

RIO ALGOM EXPLORATION INC.

Project: 9002

P.O. #:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 31-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	6	Geochem ring to approx 150 mesh
294	6	Crush and split (0-10 pounds)
238	5	NITRIC-AQUA REGIA DIGESTION

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	2	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
2	1	Cu ppm: HNO3-aqua regia digest	AAS	1	10000
5	1	Zn ppm: HNO3-aqua regia digest	AAS	1	10000
8	4	Ni ppm: HNO3-aqua regia digest	AAS-BKGD CORR	1	10000





# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

Project: 9002  
Comments: ATTN: R. ARCHER

Page Number: 1  
Total Pages: 1  
Invoice Date: 31-JUL-90  
Invoice No.: I-9019420  
P.O. Number:

## CERTIFICATE OF ANALYSIS

A9019420

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Cu ppm	Zn ppm	Ni ppm						
298068	205 294	< 5	-----	-----	-----	} sk'd fels in pyroclastics - Au showing Min'd Qv. - Zn showing uM - Ni showing					
298069	205 294	60	1300	>10000	-----						
298070	205 294	-----	-----	-----	3700						
298071	205 294	-----	-----	-----	8000						
298072	205 294	-----	-----	-----	5700						
298073	205 294	-----	-----	-----	6500						

CERTIFICATION:

*Janet Beckler*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019422

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019422

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O. #:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 16-AUG-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	2	Sample split from other certif
200	2	Whole rock fusion

\* NOTE 1:

Code 1000 is used for repeat gold analyses  
It shows typical sample variability due to  
coarse gold effects. Each value is  
correct for its particular subsample.

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	2	Al2O3 %: Whole rock	ICP-AES	0.01	99.00
542	2	BaO %: Whole rock	ICP-AES	0.01	99.00
588	2	CaO %: Whole rock	ICP-AES	0.01	99.00
586	2	Fe2O3 (total) %: Whole rock	ICP-AES	0.01	99.00
821	2	K2O %: Whole rock	ICP-AES	0.01	99.0
593	2	MgO %: Whole rock	ICP-AES	0.01	99.00
596	2	MnO %: Whole rock	ICP-AES	0.01	99.00
599	2	Na2O %: Whole rock	ICP-AES	0.01	99.00
597	2	P2O5 %: Whole rock	ICP-AES	0.01	99.00
592	2	S102 %: Whole rock	ICP-AES	0.01	99.00
595	2	T102 %: Whole rock	ICP-AES	0.01	99.00
475	2	L.O.I. %: Loss on ignition	FURNACE	0.01	99.00
540	2	Total %	CALCULATION	0.01	N/A

*Ross Au showing  
Pemberton Type.*



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Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

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P4N 7E3

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P.O. Number

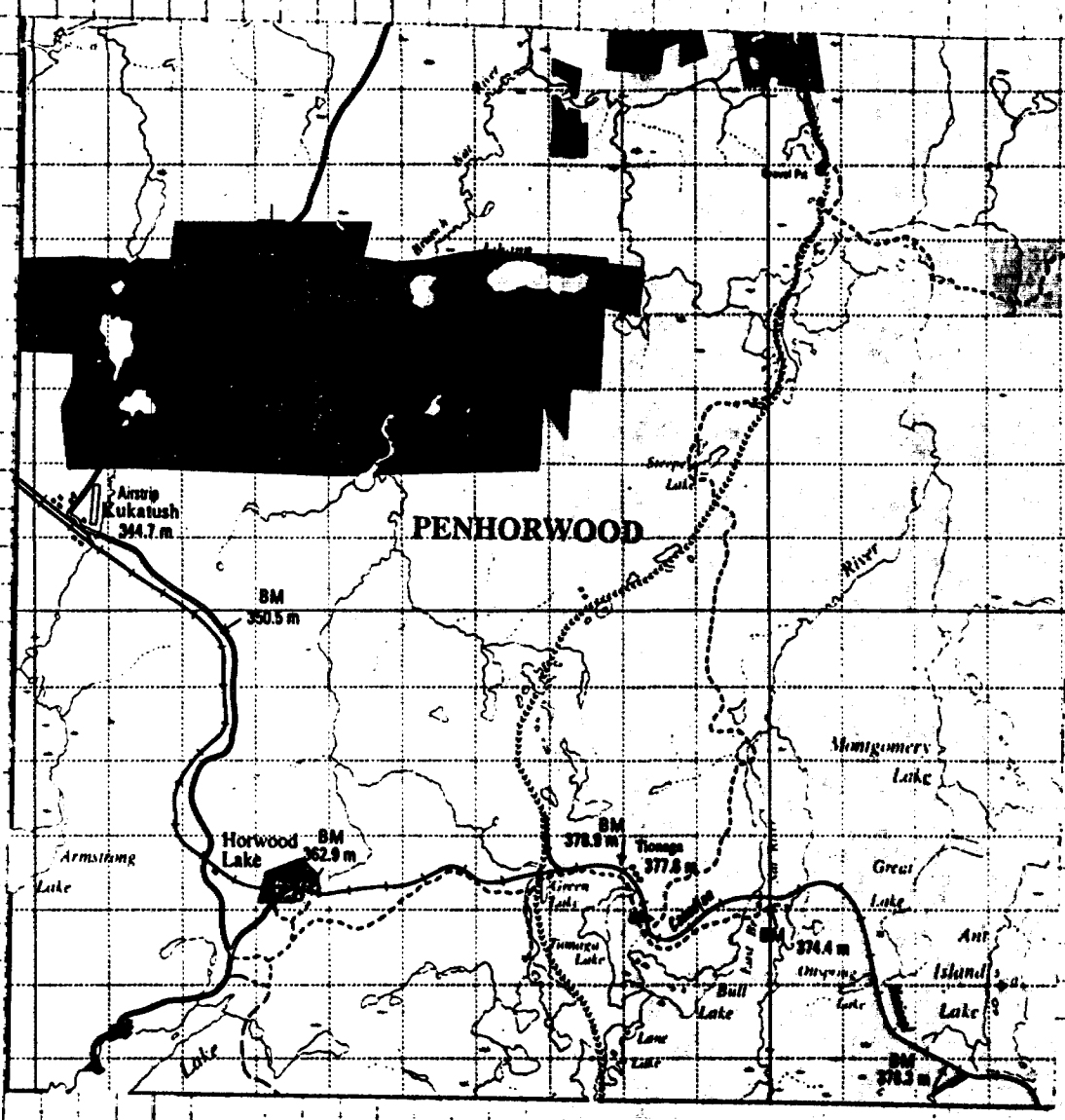
Project : 9002  
Comments : ATTN: R. ARCHER

## CERTIFICATE OF ANALYSIS A9019422

SAMPLE DESCRIPTION	PREP CODE	Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
298457	299 200	15.46	0.08	1.56	1.75	1.09	0.78	0.01	4.97	0.06	69.65	0.27	1.88	97.57
298458	299 200	14.81	0.02	8.95	6.59	0.64	2.49	0.09	1.09	0.38	58.67	0.78	3.09	97.58
<p>298457 = Porphyry Dyke 298458 = "Pyroclastic"</p> <p>Ross Au showing Penhorwood Twp.</p>														

CERTIFICATION:

*B. Coughlin*



ZINC SHOWING

PENHORWOOD

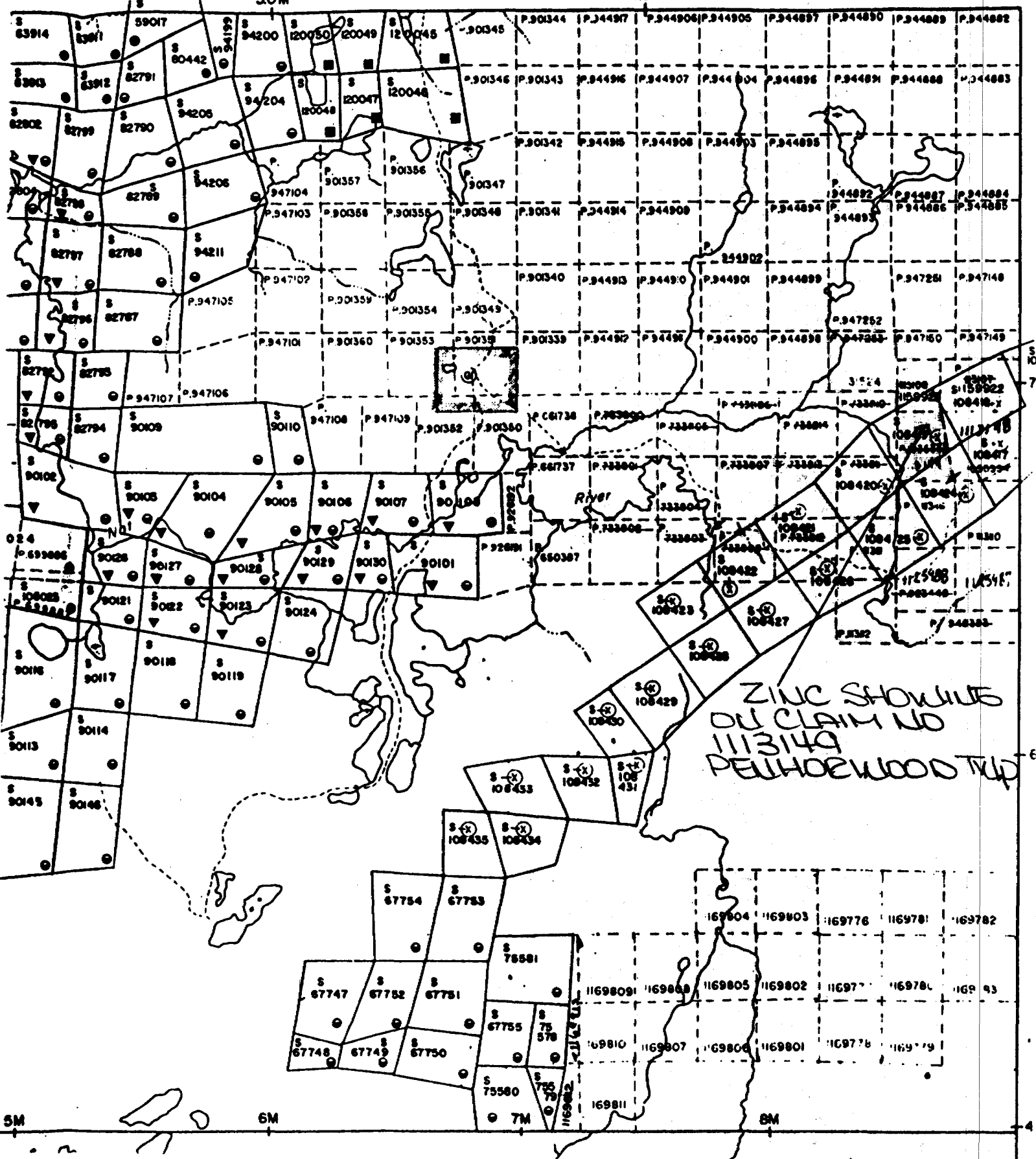
ZINC SHOWING  
PENHORWOOD TWP

PROSPECTED AND WORKED  
HIGHLIGHTED AREA ON JULY 21  
AND 24, 90, PENHORWOOD TWP  
SEE ATTACHED WORK REPORT

TWP.

30M

1.5M

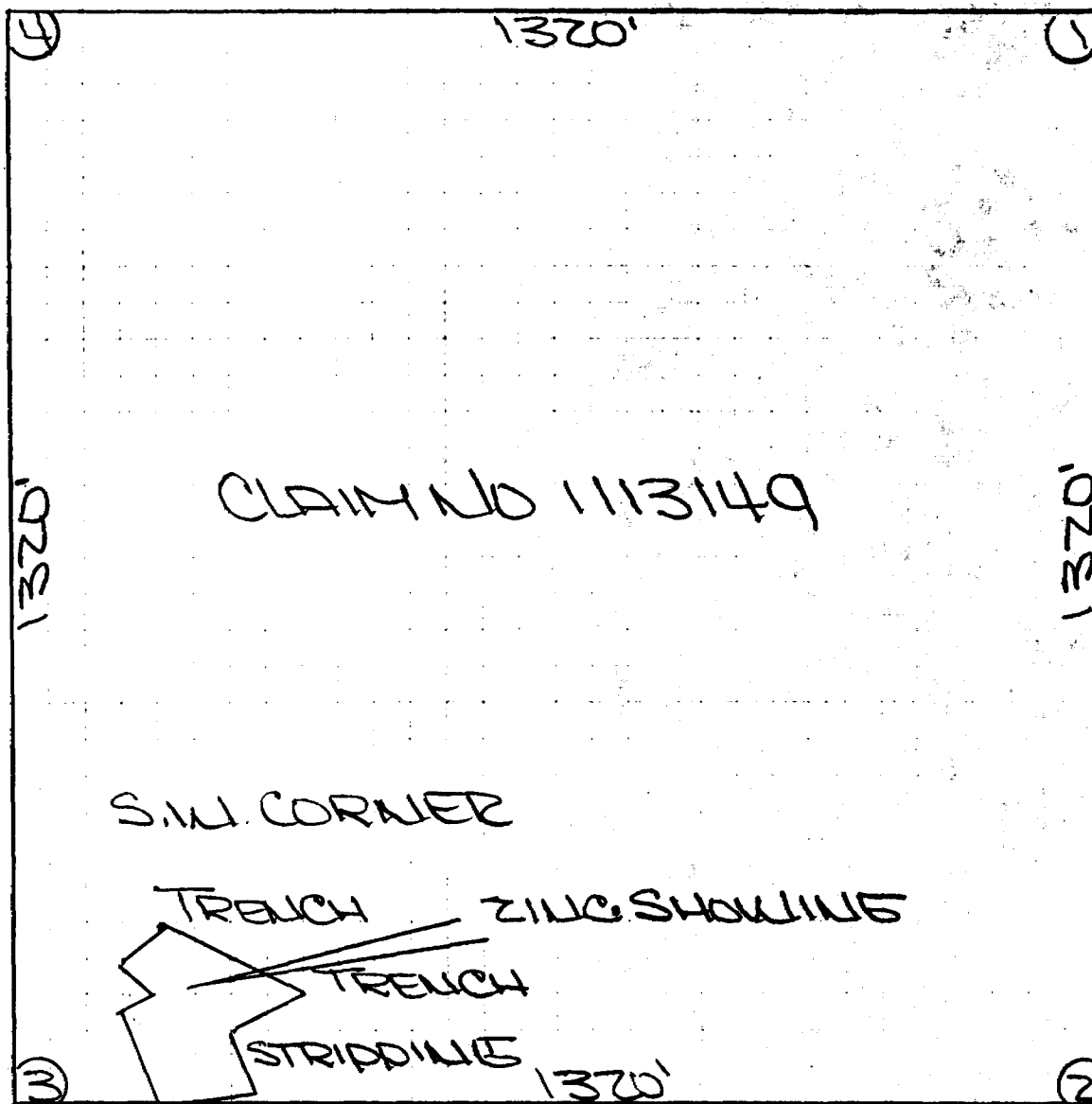


ZINC SHOWING  
ON CLAIM NO  
113149  
PELHOEWOOD TWP

5M 6M 7M 8M 4 5 6 7 8

PENHORWOOD TWP.  
SCALE 1" = 200'

N  
A



PARTNERS - D. MORIN, E. ROSS  
AND R. DENOMMEY  
SOME STRIPPING, BLASTING AND  
TRENCHING WAS DONE ON THIS  
SHOWING LAST YEAR.  
ADDITIONAL WORK DONE JULY 190  
JULY 21/90 STRIPPING AND TRENCHING  
BY CAT 225 BACKHOE  
JULY 22/90 PROSPECTED STRIPPED AREA  
ASSEY SHEET ATTACHED

# SANFORD EXPLORATIONS

P.O. Box 211,  
FOLEYET, ONTARIO POM 1T0

M DENIS MORIN + FRED ROSS  
FOLEYET, ONT.  
POM 1T0

July 21	} CAT 225 BACKHOE WORK ON AND STRIPPING ON CLAIMS IN PENHORWOOD TOWNSHIP.	2,275.00	÷ 2 = 1,137.50
July 22			
July 23			
WORK PERFORMED BY GERRY SANFORD.			
Paid by Fred.			

# 568.75  
PAID BY F. ROSS  
DUPLICATE  
SHOWING AND  
# 568.75 ON  
OLD SHOWING

Paid 50% of Invoice  
by D Morin  
50% by Ross

● EXPENCES WHILE WORKING AND PROSPECTING ZINC SHOWINGS ON CLAIM NO 1113149 IN PELWORTHWOOD TWP. JULY 21 AND 22/90

DISTANCE FROM HOME - TIMMINIS TO WORK AREA APPROX 130 KILOMETERS RETURN

2 - TRIPS - 130 KM / TRIP X .30 / KM	78.00
260 KM X .30 / KM =	
\$100.00 / MAN DAY X 2 DAYS	200.00
RECEIPTS FOR STRIPPING AND TRENCHING	568.75
FOOD FOR 2 DAYS	50.00
TOTAL EXPENCES	\$896.75

THIS IS JUST MY EXPENCES PARTNERS WILL CLAIM THEIR OWN

*Row*





# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019424

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019424

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O.#:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 7-AUG-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	4	Sample split from other certif
200	4	Whole rock fusion

NOTE 1:

Code 1000 is used for repeat gold analyses  
It shows typical sample variability due to  
coarse gold effects. Each value is  
correct for its particular subsample.

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	4	Al2O3 %: Whole rock	ICP-AES	0.01	99.00
542	4	BaO %: Whole rock	ICP-AES	0.01	99.00
588	4	CaO %: Whole rock	ICP-AES	0.01	99.00
586	4	Fe2O3(total) %: Whole rock	ICP-AES	0.01	99.00
821	4	K2O %: Whole rock	ICP-AES	0.01	99.0
593	4	MgO %: Whole rock	ICP-AES	0.01	99.00
596	4	MnO %: Whole rock	ICP-AES	0.01	99.00
599	4	Na2O %: Whole rock	ICP-AES	0.01	99.00
597	4	P2O5 %: Whole rock	ICP-AES	0.01	99.00
592	4	SiO2 %: Whole rock	ICP-AES	0.01	99.00
595	4	TiO2 %: Whole rock	ICP-AES	0.01	99.00
475	4	L.O.I. %: Loss on ignition	FURNACE	0.01	99.00
540	4	Total %	CALCULATION	0.01	N/A

*Loss Properties  
Kenogaming - Penthorwood  
Types*



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 450 Matheson Blvd. E., Unit 54, Mississauga,  
 Ontario, Canada L4Z 1R5  
 PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
 TIMMINS, ON  
 P4N 7E5

Page Number: 1  
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 Invoice Date: 7-AUG-90  
 Invoice No.: I-9019424  
 P.O. Number:

Project: 9002  
 Comments: ATTN: R. ARCHER

## CERTIFICATE OF ANALYSIS A9019424

SAMPLE DESCRIPTION	PREP CODE	Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
298459	299 200	15.16	0.04	6.50	6.17	1.17	2.00	0.21	1.31	0.20	61.97	0.76	2.26	97.74
298460	299 200	15.21	0.03	6.24	5.80	1.71	1.49	0.28	1.91	0.14	61.58	0.76	2.87	98.02
298461	299 200	14.25	0.02	5.12	4.58	0.24	4.30	0.10	5.33	0.18	61.12	0.63	2.17	98.25
298462	299 200	3.33	< 0.01	2.33	11.89	0.03	31.86	0.15	0.02	< 0.01	37.67	0.17	10.12	97.59
298459 - N. Side of shear														
460 - S. Side of shear														
461 - False dyke in shear														
298462 - Ultramafic - Ni showing Kenogaming Twp.														

Zn showing - Parkwood Twp.  
 Ross Property

CERTIFICATION: B. Conklin



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019421

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019421

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O. #:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 28-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	2	Geochem ring to approx 150 mesh Crush and split (0-10 pounds)
294	2	

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	2	Au ppb: Base 10 g sample	FA-AAS	5	10000

*Loss Property  
Kerogaming Twp.*



# Chemex Labs Ltd.

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TIMMINS, ON  
P4N 7E3

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Invoice No.: I-9019421  
P.O. Number:

## CERTIFICATE OF ANALYSIS

A9019421

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA											
298457 Pyrite duff 298458 Calc. pyrocl.	205 294 205 294	< 5 < 5											
<i>Au showing</i>													

CERTIFICATION:

*Therese Vank*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019423

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019423

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O.#:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 28-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	4	Geochem ring to approx 150 mesh
294	4	Crush and split (0-10 pounds)
238	4	NITRIC-AQUA REGIA DIGESTION

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
13	4	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
1005	4	Ag ppm: 9 element, soil and rock	ICP-AES	0.5	200
1929	4	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	4	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	4	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	4	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	4	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	4	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	4	Pb ppm: 9 element, soil and rock	ICP-AES	5	10000
1950	4	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Ross Properties



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Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

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Invoice No.: I-9019423  
P.O. Number:

## CERTIFICATE OF ANALYSIS

A9019423

SAMPLE DESCRIPTION	PREP CODE	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
298459 N. side	205 294	1	< 0.5	16	23	3.14	950	< 1	41	24	140
298460 S. side	205 294	1	< 0.5	16	43	2.97	1310	< 1	35	10	112
298461 felsic dyke	205 294	1	< 0.5	12	16	1.87	430	< 1	81	20	84
298462 VM	205 294	< 1	< 0.5	54	47	7.02	715	< 1	1120	< 2	32

459-461 - Zn Slowing  
462 - Ni Slowing

CERTIFICATION:

*B. Coughlin*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019420

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019420

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O.#:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 31-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	6	Geochem ring to approx 150 mesh
294	6	Crush and split (0-10 pounds)
238	5	NITRIC-AQUA REGIA DIGESTION

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	2	Zn ppb: Fuse 10 g sample	FA-AAS	5	10000
2	1	Cu ppm: HNO3-aqua regia digest	AAS	1	10000
5	1	Zn ppm: HNO3-aqua regia digest	AAS	1	10000
8	4	Ni ppm: HNO3-aqua regia digest	AAS-BKGD CORR	1	10000



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

Project: 9002  
Comments: ATTN: R. ARCHER

Page Number: 1  
Total Pages: 1  
Invoice Date: 31-JUL-90  
Invoice No.: I-9019420  
P.O. Number:

## CERTIFICATE OF ANALYSIS

A9019420

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Cu ppm	Zn ppm	Ni ppm						
298068	205 294	< 5	-----	-----	-----	} shld fals in pyroclastic - Au showing min'd qu. - Au showing um - Ni showing					
298069	205 294	60	1300	>10000	-----						
298070	205 294	-----	-----	-----	3700						
298071	205 294	-----	-----	-----	8000						
298072	205 294	-----	-----	-----	5700						
298073	205 294	-----	-----	-----	6500						

CERTIFICATION: Hart Zickler





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450 Matheson Blvd. E., Unit 54, Mississauga,  
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PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E5

A9019422

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019422

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O. #:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 16-AUG-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	2	Sample split from other certif
200	2	Whole rock fusion

\* NOTE 1:

Code 1000 is used for repeat gold analyses  
It shows typical sample variability due to  
coarse gold effects. Each value is  
correct for its particular subsample.

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	2	Al <sub>2</sub> O <sub>3</sub> %: Whole rock	ICP-AES	0.01	99.00
542	2	BaO %: Whole rock	ICP-AES	0.01	99.00
588	2	CaO %: Whole rock	ICP-AES	0.01	99.00
586	2	Fe <sub>2</sub> O <sub>3</sub> (total) %: Whole rock	ICP-AES	0.01	99.00
821	2	K <sub>2</sub> O %: Whole rock	ICP-AES	0.01	99.00
593	2	MgO %: Whole rock	ICP-AES	0.01	99.00
596	2	MnO %: Whole rock	ICP-AES	0.01	99.00
599	2	Na <sub>2</sub> O %: Whole rock	ICP-AES	0.01	99.00
597	2	P <sub>2</sub> O <sub>5</sub> %: Whole rock	ICP-AES	0.01	99.00
592	2	SiO <sub>2</sub> %: Whole rock	ICP-AES	0.01	99.00
595	2	TiO <sub>2</sub> %: Whole rock	ICP-AES	0.01	99.00
475	2	L.O.I. %: Loss on ignition	FURNACE	0.01	99.00
540	2	Total %	CALCULATION	0.01	N/A

Ross Au showing  
Pemberton Twp.



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To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

Project: 9002  
Comments: ATTN: R. ARCHER

Page Number: 1  
Total Pages: 1  
Invoice Date: 07-AUG-90  
Invoice No.: I-9019422  
P.O. Number:

## CERTIFICATE OF ANALYSIS A9019422

SAMPLE DESCRIPTION	PREP CODE	Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
298457	299 200	15.46	0.08	1.56	1.75	1.09	0.78	0.01	4.97	0.06	69.65	0.27	1.88	97.57
298458	299 200	14.81	0.02	8.95	6.59	0.64	2.49	0.09	1.09	0.38	58.67	0.78	3.09	97.58
298457 = Porphyry Dyke														
298458 = "Pyroclastic"														
<i>Ross Au showing Penhorwood Twp.</i>														



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGON EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 1Y8

Project: 8002  
Contract: ATTN: R. ARCHER

Page Number: 1  
Total Pages: 1  
Invoice Date: 07-AUG-80  
Invoice No.: I-9019422  
P.O. Number:

## CERTIFICATE OF ANALYSIS

A9019422

SAMPLE DESCRIPTION	PREP CODE	Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
298457	299 200	15.46	0.08	1.56	1.75	1.08	0.78	0.01	4.97	0.06	69.65	0.27	1.88	97.57
298458	299 200	14.81	0.02	8.95	8.59	0.84	2.69	0.09	17.09	0.38	58.67	0.78	3.09	97.58
298457 = Porphyry Dyke														
298458 = "Pyroclastic"														

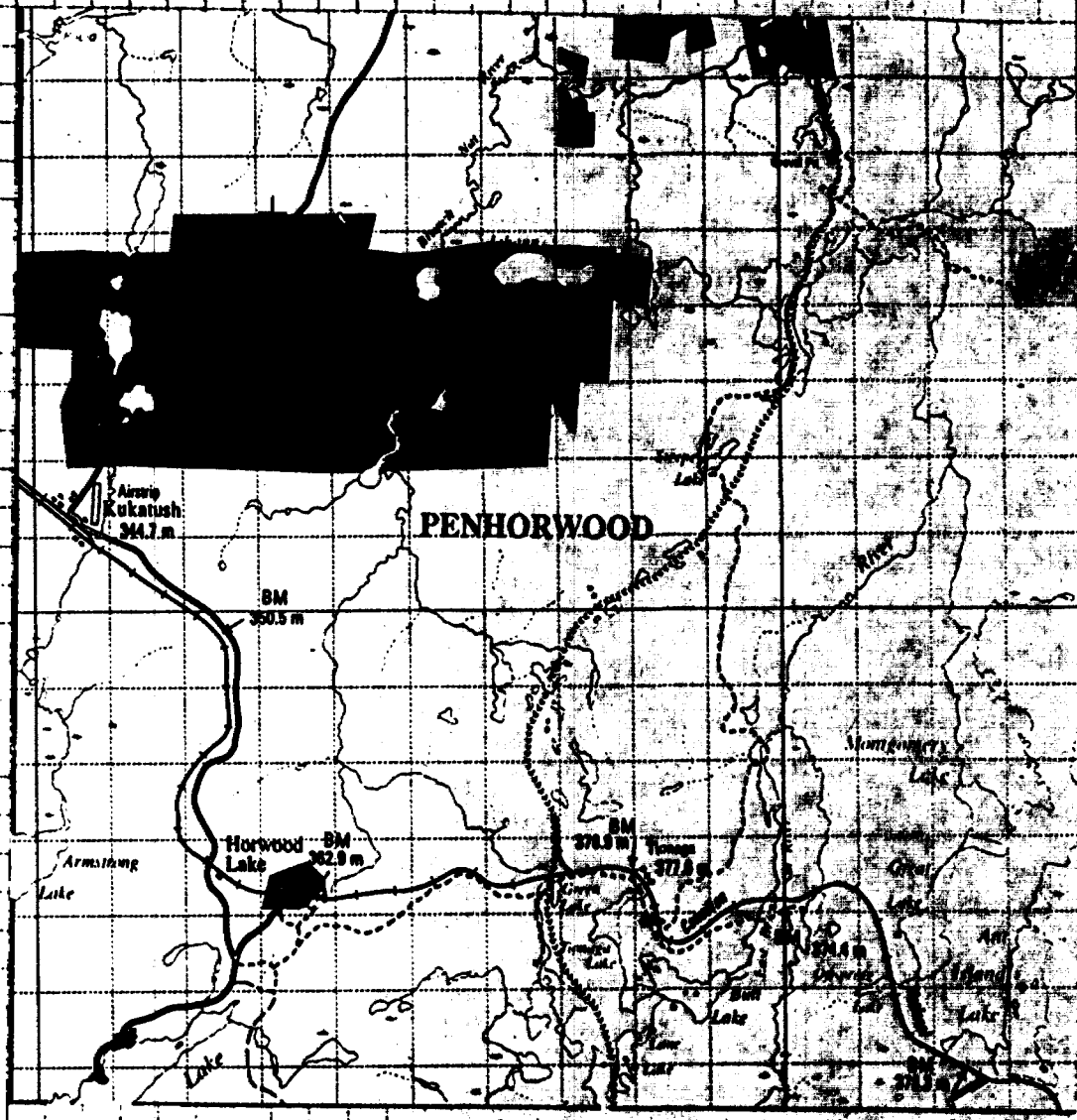
*Ross Au showing  
Penhorwood Turp.*

CERTIFICATION:

*B. Coughlin*

SCALE - 1:100,000

N.T.S. 42 BISE



OLD  
SHOWING  
AREA

OLD SHOWING  
PENHORWOOD TWP

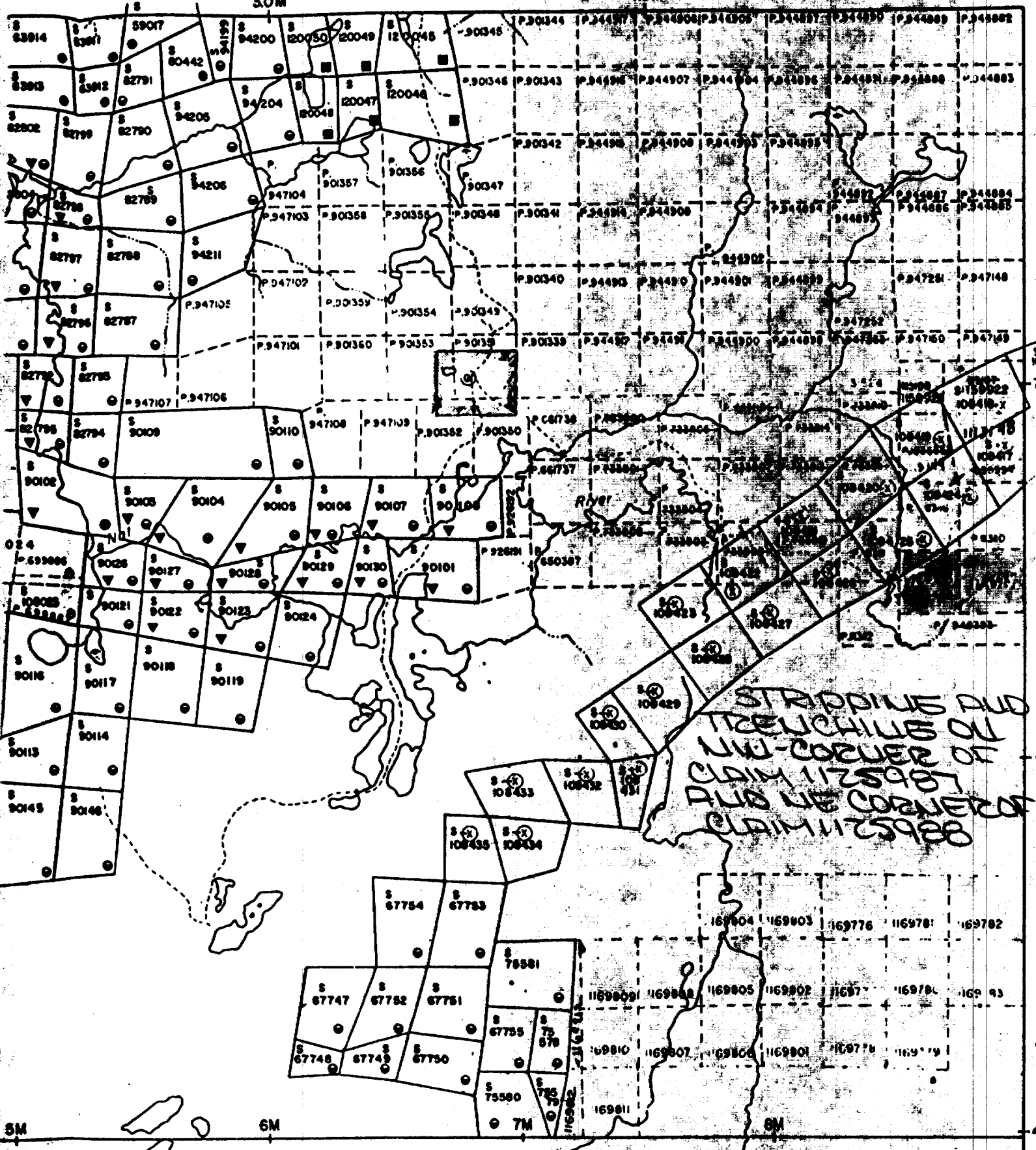
PROSPECTED AND WORKED  
HIGHLIGHTED AREA ON  
JULY 22, 23, AND 24/90

SEE ATTACHED WORK REPORT

TWP.

30M

15M



STRIPPING AND  
TRENCHING ON  
NW-CORNER OF  
CLAIM 1125987  
AND NE-CORNER OF  
CLAIM 1125988

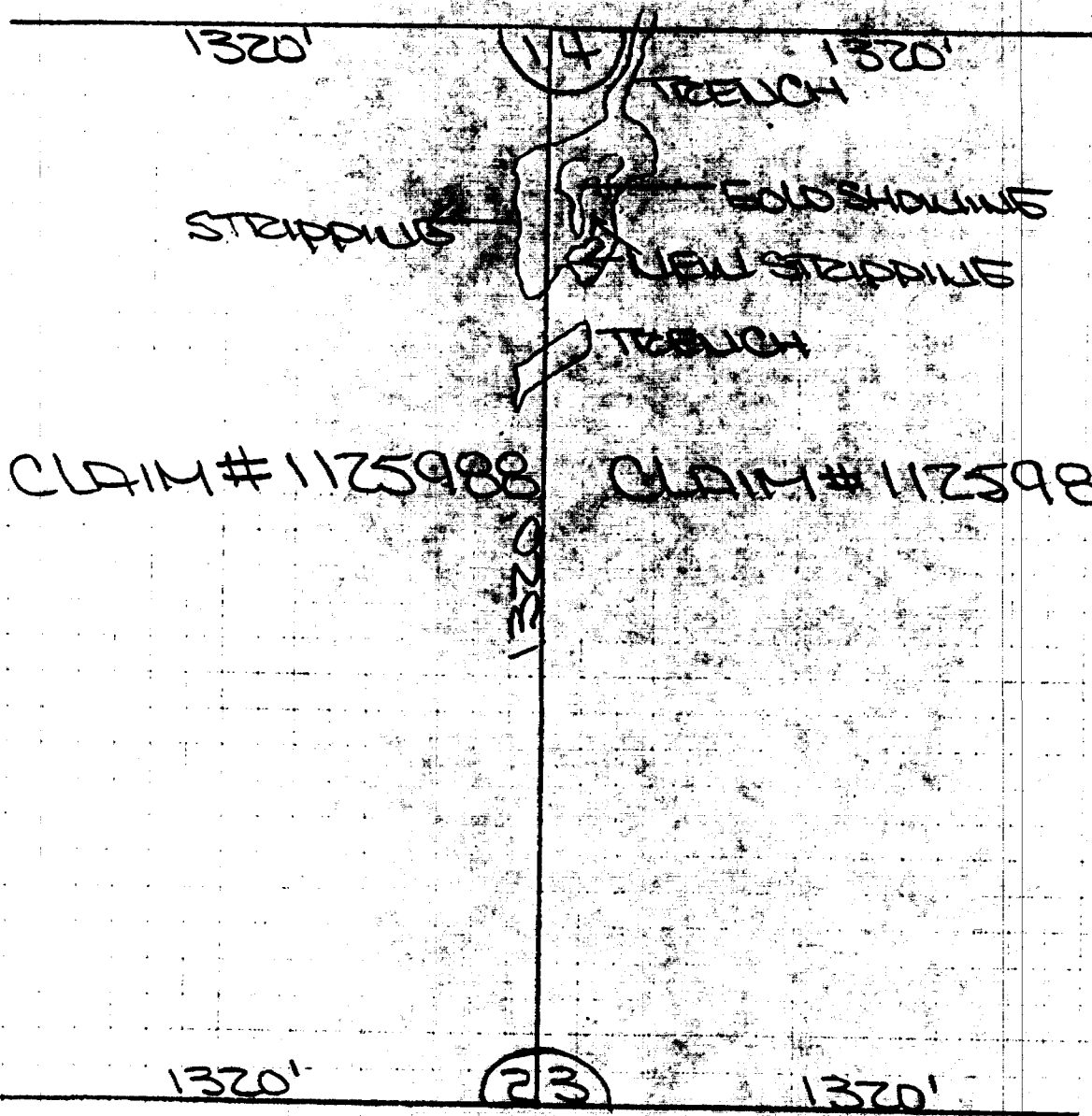
5M

6M

6M

4

PENHORNWOOD TWP  
SCALE 1" = 200'



PROSPECTORS - D. MORIN, E. ROSS AND R. DELORMEE  
SOME WORK WAS DONE ON THESE CLAIMS LAST YEAR - 89  
JULY 22, 23/90 STRIPPING AND TRENCHING WITH CATS BACKHOE  
PROSPECTED AREA JULY 24/90



EXPENCES WHILE WORKING ON  
CLAIM NO 1125987 AND 1125988  
DEN HORTWOOD GOLD SHOWING  
JULY 22, 23 AND 24/90

TRAVELLING DISTANCE TO WORK  
AREA 130 KILOMETERS RETURN

2 TRIPS - 130 KM / TRIP  
260 KM X .30 / KM =

78.00

\$100.00 / MAN DAY X 2 DAYS

200.00

RECEIPTS FOR STRAPPING

568.75

FOOD FOR 2 DAYS

50.00

TOTAL EXPENCES

\$ 896.75

PARTNERS WILL CLAIM THEIR  
EXPENCES

*Joss*





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Analytical Chemists \* Geochemists \* Registered Assayers  
450 Matheson Blvd. E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019424

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019424

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O.#:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 7-AUG-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	4	Sample split from other certif
200	4	Whole rock fusion

\* NOTE 1:  
Code 1000 is used for repeat gold analyses  
It shows typical sample variability due to  
coarse gold effects. Each value is  
correct for its particular subsample.

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	4	Al2O3 %: Whole rock	ICP-AES	0.01	99.00
542	4	BaO %: Whole rock	ICP-AES	0.01	99.00
588	4	CaO %: Whole rock	ICP-AES	0.01	99.00
586	4	Fe2O3(total) %: Whole rock	ICP-AES	0.01	99.00
821	4	K2O %: Whole rock	ICP-AES	0.01	99.0
593	4	MgO %: Whole rock	ICP-AES	0.01	99.00
596	4	MnO %: Whole rock	ICP-AES	0.01	99.00
599	4	Na2O %: Whole rock	ICP-AES	0.01	99.00
597	4	P2O5 %: Whole rock	ICP-AES	0.01	99.00
592	4	SiO2 %: Whole rock	ICP-AES	0.01	99.00
595	4	TiO2 %: Whole rock	ICP-AES	0.01	99.00
475	4	L.O.I. %: Loss on ignition	FURNACE	0.01	99.00
540	4	Total %	CALCULATION	0.01	N/A

*Ross Properties*

*Kenogaming - Penthorwood  
Twp*



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 450 Matheson Blvd. E., Unit 54, Mississauga,  
 Ontario, Canada L4Z 1R5  
 PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
 TIMMINS, ON  
 P4N 7E3

Project: 9002  
 Comments: ATTN: R. ARCHER

Page Number: 1  
 Total Pages: 1  
 Invoice Date: 7-AUG-90  
 Invoice No.: I-9019424  
 P.O. Number:

## CERTIFICATE OF ANALYSIS A9019424

SAMPLE DESCRIPTION	PREP CODE	Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
298459	299 200	15.16	0.04	6.50	6.17	1.17	2.00	0.21	1.31	0.20	61.97	0.76	2.26	97.74
298460	299 200	15.21	0.03	6.24	5.80	1.71	1.49	0.28	1.91	0.14	61.58	0.76	2.87	98.02
298461	299 200	14.25	0.02	5.12	4.58	0.24	4.50	0.10	5.33	0.18	61.12	0.63	2.17	98.25
298462	299 200	3.33	< 0.01	2.33	11.89	0.03	31.86	0.15	0.02	< 0.01	37.67	0.17	10.12	97.59
298459 - N. Side of shear														
460 - S. Side of shear														
461 - Felsic dyke in shear														
298462 - Ultramafic - Ni showing Kenogaming Twp.														

} Zn showing - Parkwood Twp.  
 Ross Property

CERTIFICATION: B. Conklin



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Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019421

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019421

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O.#:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 28-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205 294	2 2	Geochem ring to approx 150 mesh Crush and split (0-10 pounds)

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	2	As ppb: Base 10 g sample	FA-AAS	5	10000

*Loss Property  
Kerogening Test.*



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450 Matheson Blvd., E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

Project: 9002  
Comments: ATTN: R. ARCHER

Page Number: 1  
Total Pages: 1  
Invoice Date: 28-JUL-90  
Invoice No.: I-9019421  
P.O. Number:

## CERTIFICATE OF ANALYSIS

A9019421

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA											
298457 Porph. dyke 298458 Fels. gneiss.	205 294 205 294	< 5 < 5											
			<i>Au showing</i>										

CERTIFICATION:

*Therese Vank*



# Chemex Labs Ltd.

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450 Matheson Blvd. E., Unit 54, Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019423

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019423

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O. #:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 28-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	4	Geochem ring to approx 150 mesh
294	4	Crush and split (0-10 pounds)
238	4	NITRIC-AQUA REGIA DIGESTION

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
13	4	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
1005	4	Ag ppm: 9 element, soil and rock	ICP-AES	0.5	200
1929	4	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	4	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	4	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	4	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	4	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	4	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	4	Pb ppm: 9 element, soil and rock	ICP-AES	5	10000
1950	4	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Ross Properties



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Invoice No.: I-9019423  
P.O. Number:

## CERTIFICATE OF ANALYSIS

A9019423

SAMPLE DESCRIPTION	PREP CODE	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
298459 N. Side	205 294	1	^^^ 0.5	16	23	3.14	950	< 1	41	24	140
298460 S. Side	205 294	1	^^^ 0.5	16	43	2.97	1310	< 1	35	10	112
298461 False dyke	205 294	1	^^^ 0.5	12	16	1.87	430	< 1	81	20	84
298462 UM	205 294	< 1	^^^ 0.5	54	47	7.02	715	< 1	1120	< 2	32

459-461 - Z - Slowing  
462 - Ni - Slowing

CERTIFICATION:



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PHONE: 416-890-0310

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

A9019420

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019420

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O.#:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 31-JUL-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	6	Geochem ring to approx 150 mesh
294	6	Crush and split (0-10 pounds)
238	5	NITRIC-AQUA REGIA DIGESTION

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	2	As ppb: Fuse 10 g sample	FA-AAS	5	10000
2	1	Cu ppm: HNO3-aqua regia digest	AAS	1	10000
5	1	En ppm: HNO3-aqua regia digest	AAS	1	10000
8	4	Ni ppm: HNO3-aqua regia digest	AAS-RECD CORR	1	10000



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Ontario, Canada L4Z 1R5  
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To: RIO ALGOM EXPLORATION INC.

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Project: 9002  
Comments: ATTN: R. ARCHER

## CERTIFICATE OF ANALYSIS

A9019420

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Cu ppm	Zn ppm	Ni ppm						
298068	205 294	< 5	-----	-----	-----	sh'd fall in pyroclastic - Au showing min'd Qv. - Zn showing } uM - Ni showing					
298069	205 294	60	1300	>10000	-----						
298070	205 294	-----	-----	-----	3700						
298071	205 294	-----	-----	-----	8000						
298072	205 294	-----	-----	-----	5700						
298073	205 294	-----	-----	-----	6500						

CERTIFICATION: Hart Buchler





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To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E5

A9019422

Comments: ATTN: R. ARCHER

CERTIFICATE

A9019422

RIO ALGOM EXPLORATION INC.

Project: 9002  
P.O.#:

Samples submitted to our lab in Mississauga, ON.  
This report was printed on 16-AUG-90.

## SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	2	Sample split from other certif
200	2	Whole rock fusion

\* NOTE 1:  
Code 1000 is used for repeat gold analyses  
It shows typical sample variability due to  
coarse gold effects. Each value is  
correct for its particular subsample.

## ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	2	Al2O3 %: Whole rock	ICP-AES	0.01	99.00
542	2	BaO %: Whole rock	ICP-AES	0.01	99.00
588	2	CaO %: Whole rock	ICP-AES	0.01	99.00
586	2	Fe2O3(total) %: Whole rock	ICP-AES	0.01	99.00
821	2	K2O %: Whole rock	ICP-AES	0.01	99.0
593	2	MgO %: Whole rock	ICP-AES	0.01	99.00
596	2	MnO %: Whole rock	ICP-AES	0.01	99.00
599	2	Na2O %: Whole rock	ICP-AES	0.01	99.00
597	2	P2O5 %: Whole rock	ICP-AES	0.01	99.00
592	2	SiO2 %: Whole rock	ICP-AES	0.01	99.00
595	2	TiO2 %: Whole rock	ICP-AES	0.01	99.00
475	2	L.O.I. %: Loss on ignition	FURNACE	0.01	99.00
540	2	Total %	CALCULATION	0.01	%/A

*Ross Au showing  
Peachwood Twp.*



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To: RIO ALGOM EXPLORATION INC.

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P4N 7E3

Project: 9002  
Comments: ATTN: R. ARCHER

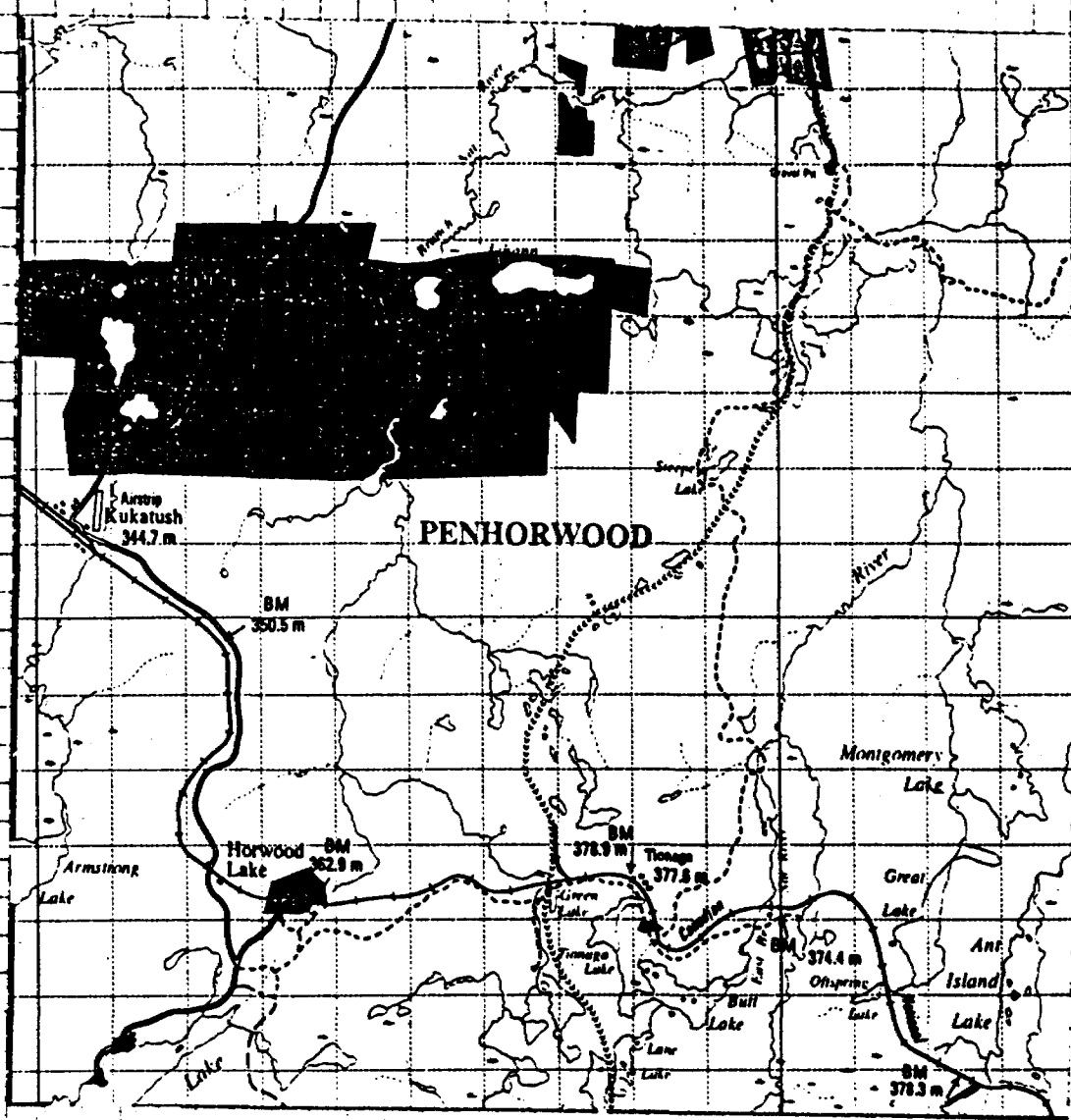
Page Number: 1  
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P.O. Number:

## CERTIFICATE OF ANALYSIS

A9019422

SAMPLE DESCRIPTION	FREP CODE	Al2O3 ‡	BaO ‡	CaO ‡	Fe2O3 ‡	K2O ‡	MgO ‡	MnO ‡	Na2O ‡	P2O5 ‡	SiO2 ‡	TiO2 ‡	LOI ‡	TOTAL ‡
298457	299 200	15.46	0.08	1.56	1.75	1.09	0.78	0.01	4.97	0.06	69.65	0.27	1.88	97.57
298458	299 200	14.81	0.02	8.95	6.59	0.64	2.49	0.09	1.09	0.38	58.67	0.78	3.09	97.58
298457 = Porphyry Dyke														
298458 = "Pyroclastic"														
Ross Au showing Penhorwood Twp.														

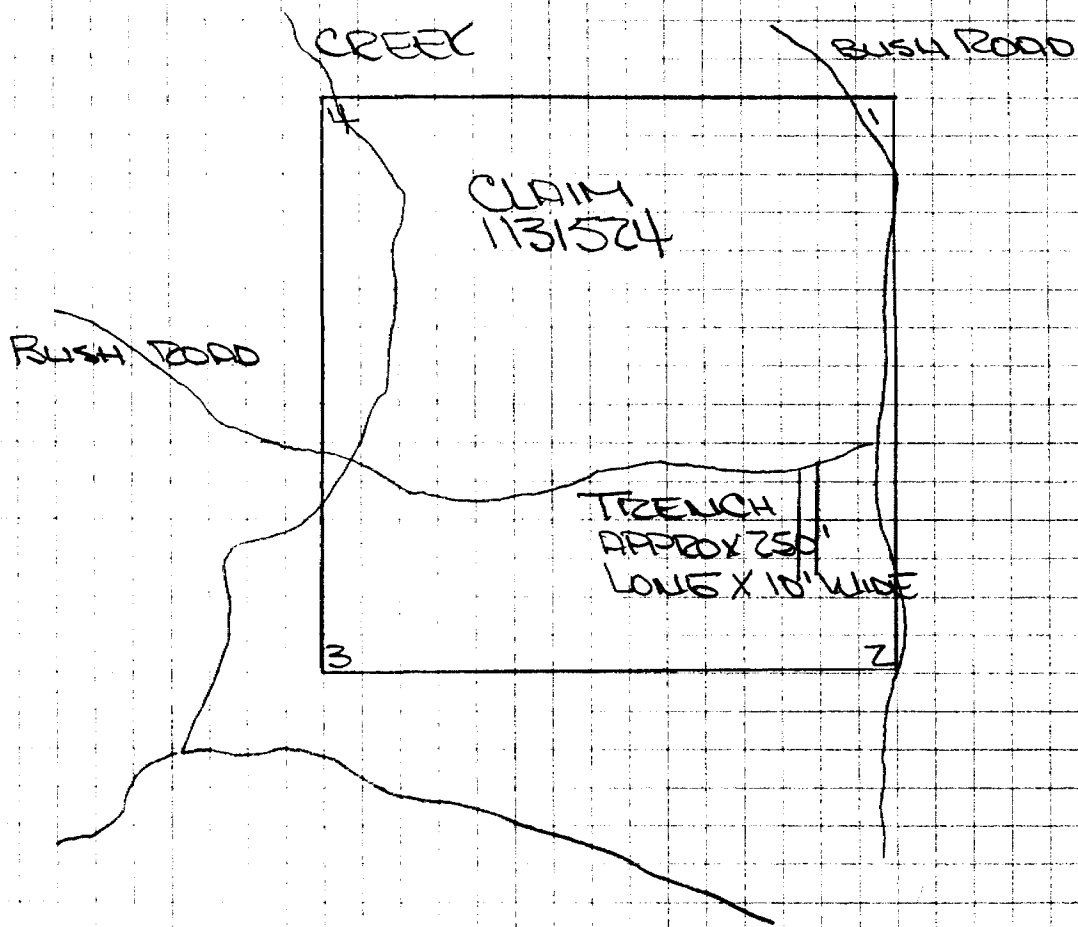
CERTIFICATION: B. Coughlin



Aug 18, 19, 25, and 26/90  
PROSPECTED HIGHLIGHTED  
AREA IN PENHORWOOD TRIP  
SEE ATTACHED SHEETS



SCALE - 3" = 1320'  
PENHOBWOOD TWP



TRENCH SAMPLE  
S 5 4 3 2 1 N

SAMPLED 50' INTERVALS FROM  
N TO S  
TAKEN 5 SAMPLES FROM TRENCH  
SAMPLES CONTAINED QUARTZ  
WITH 1% SULPHIDES  
SEE ATTACHED ASSAY SHEET

ROCK TYPE  
MIGMATIZED MAFIC METAVOLCANICS  
THIS IS BORDERED BY A 10M  
FORMATION RUNNING EAST TO WEST  
HIGH GRADES OF TALC ARE EXPOSED  
IN THIS TRENCH  
A COUPLE OF COMPANIES THAT  
DEAL IN INDUSTRIAL MINERALS  
HAVE INDICATED INTEREST IN  
THESE CLAIMS  
MORE FOLLOWUP WORK TO BE  
DONE LATER - STRIPPING, BLASTING  
AND SAMPLING

22979

**SWASTIKA LABORATORIES**  
(A DIVISION OF ASSAYERS CORPORATION LIMITED)

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0  
TELEPHONE: (705) 642-3244 FAX (705) 642-3300

Mr. F. Ross  
958 Park Ave  
Timmins, Ontario  
P4N 7K6

**1.5% LATE CHARGE OVER 30  
DAYS (ANNUAL RATE 18%)**

		NOTRE NO DE COMMANDE	NOTRE NO DE COMMANDE	CONDITIONS	REP. DES VENTES
		OUR ORDER NO.	OUR ORDER NO.	NET 30 DAYS	SALES REP.
				TERMS	MONTANT
				UNIT PRICE	AMOUNT
		DESCRIPTION			
5			Au assays	\$ 8.75	\$ 43.75
5			Sample Handling	3.00	15.00
			Cert.#OT-0478-RA1 Aug.28, 1990		
				SWASTIKA LABORATORIES	
				AUG 28 1990	
				<i>D. Gardner</i>	
				TOTAL....	\$ 58.75

FACTURE/INVOICE ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS  
ESTABLISHED 1928



OT-0478-RA1

22979

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation



Established 1928

## Assay Certificate

OT-0478-RA1

Company: **FRED ROSS**

Date: **AUG-28-90**


Project:

Copy 1. 958 Park Ave., Timmins, Ont P4N 7K6

Attn:

We hereby certify the following Assay of 5 ROCK samples submitted AUG-27-90 by FRED ROSS.

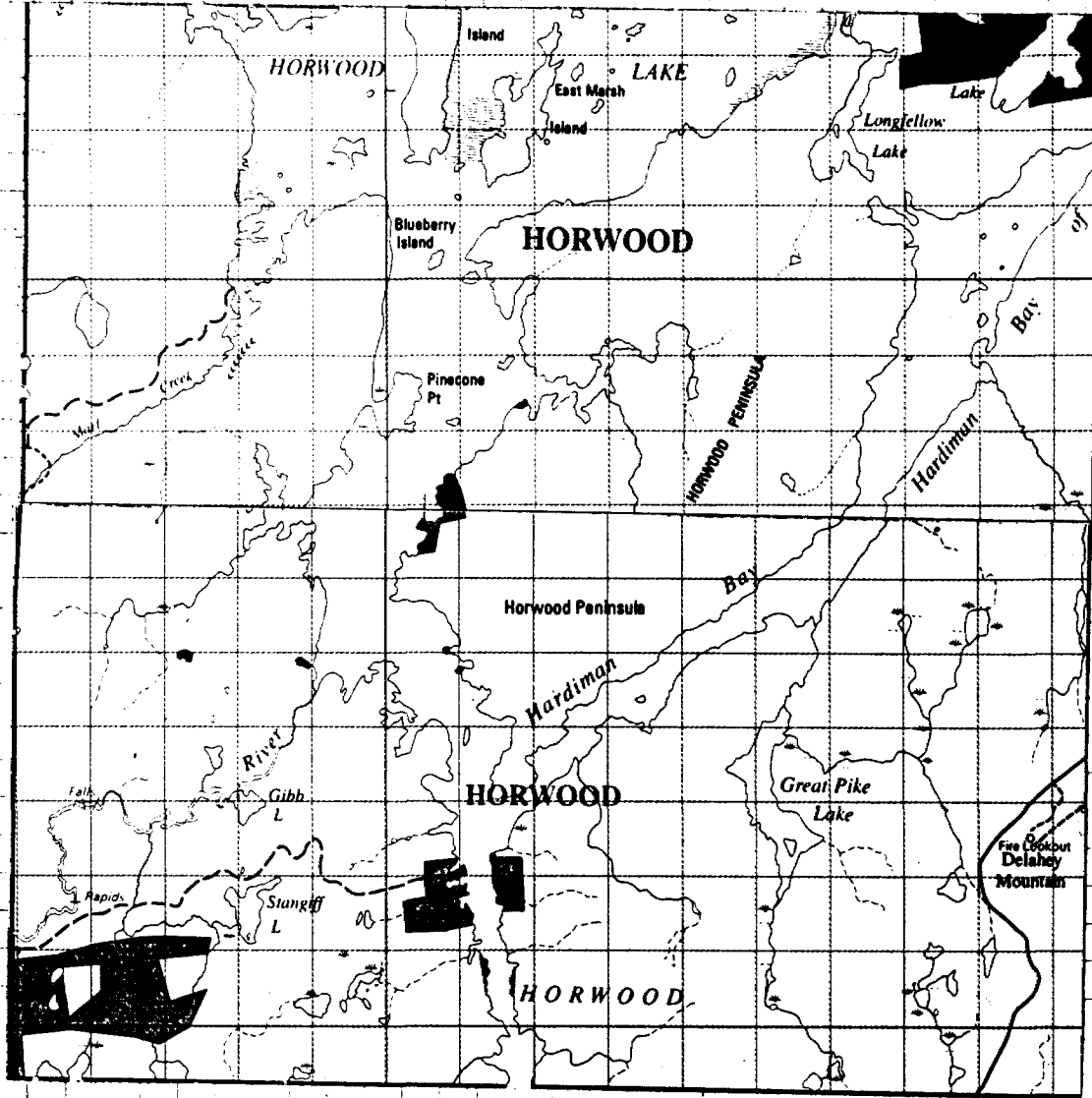
Sample Number	Au ppb
P-1	Nil
P-2	Nil
P-3	Nil
P-4	Nil
P-5	Nil

Certified by   
 G. Lebel / Manager

OT-0478-RA1

22979

SCALE 1:100,000  
N.T.S. 4101NE - N.T.S. 42B1SE



SECT 1, 2, 3, 8, 9, 15, 16, 19D  
PROSPECTED HIGHLIGHTED AREAS  
IN HORWOOD TWP



FG. PLAN  
M-1118

Longfellow  
Lake

7 1/2 M

RUSH  
LOGGING  
ROAD

ZINC  
COPPER  
SILVER  
SHOWING

HARDIMAN TWP

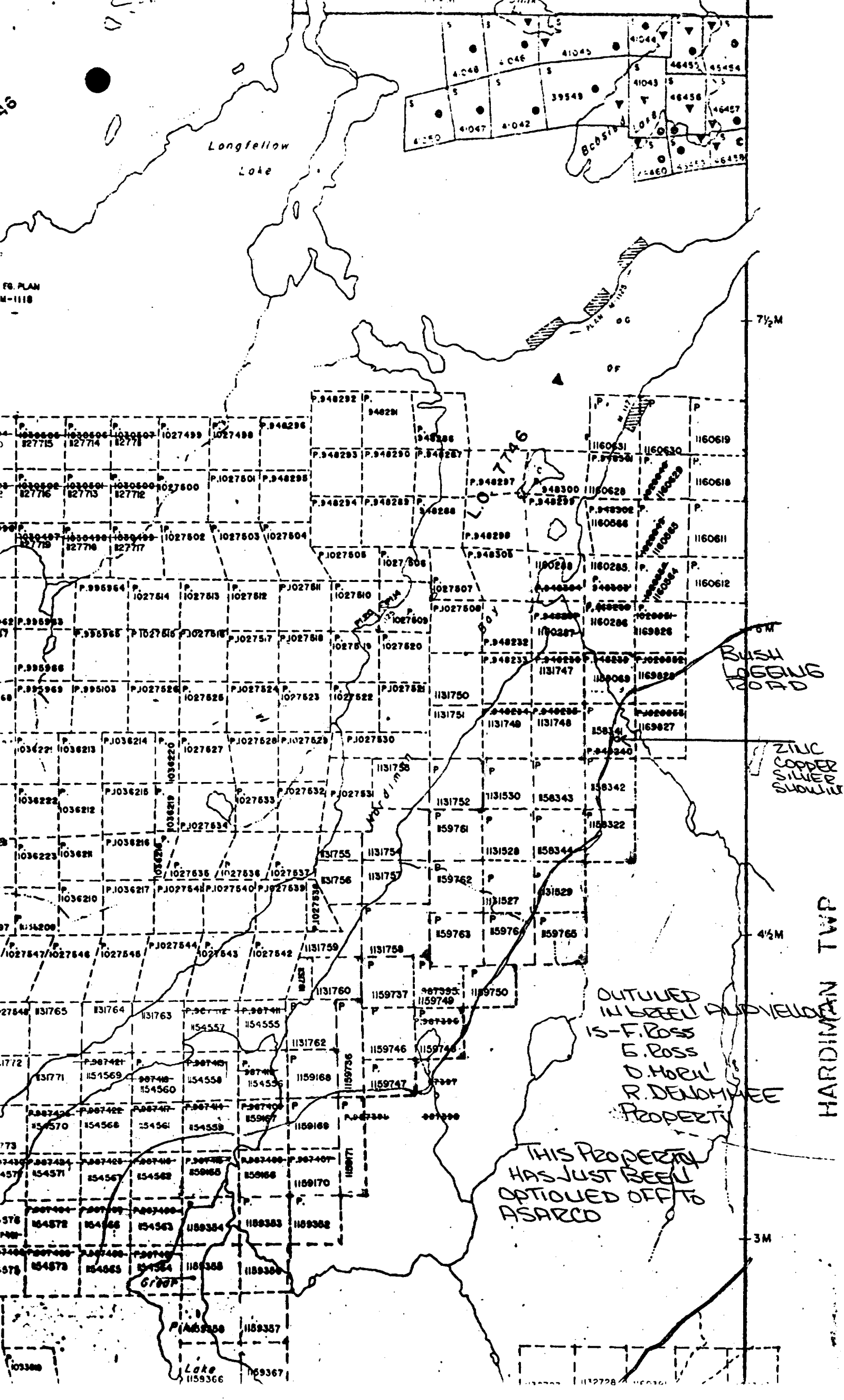
4 1/2 M

OPTIONED  
IN BEECH AND YELLOW  
IS - F. ROSS  
E. ROSS  
D. HORN  
R. DENOMYER  
PROPERTY

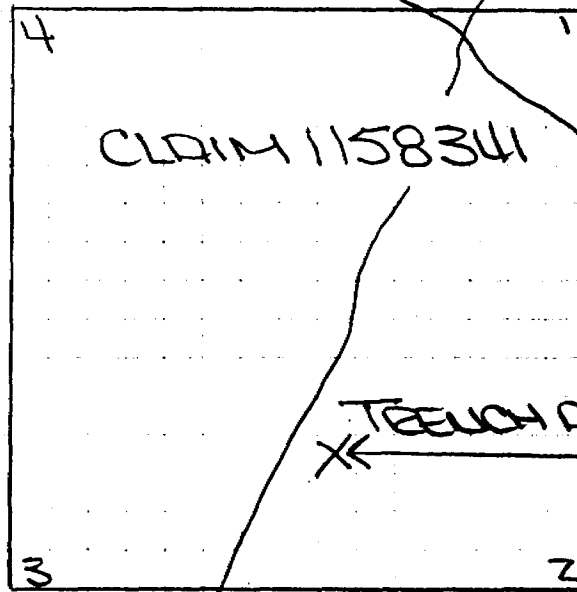
THIS PROPERTY  
HAS JUST BEEN  
OPTIONED OFF TO  
ASARCO

3 M

Lake  
1159366



HORWOOD TWP  
SCALE 3" = 1370"



ROCK TYPE UNSUBDIVIDED  
ASSAY RESULTS ATTACHED

PLEASE NOTE THAT PARTNERS  
GEORGE ROSS AND ROGER DENOMINEE  
SPENT THE LARGER SUM OF  
MONEY ON BLASTING, DRILLING AND  
MAG. WORK ON THIS AREA.  
THEIR DESCRIPTION OF THIS WILL  
BE SUBMITTED IN THEIR OP AD REPORT

ROSS PROPERTY - HORWOOD TWP.

<u>Sample No.</u>	<u>Location</u>	<u>Description</u>
298463	#1 showing	sulphide breccia - <sup>graphitic</sup> <del>siliceous</del> clasts in 30% po, sph, cpy
298464	#1 "	sulphide breccia - siliceous clasts in 30% po, sph, cpy
298465	"	quartz vein with 5% py, stalerite - adjacent to felsic dyke cutting sf bx
298466	N of #1 showing	quartz vein with 5% py cutting hanging wall mafic volcanic
298467	(30m) just S of #1 showing	banded magnetite / chert
298468	#2 showing	banded chert - po - cpy (trace) - sph (?)
298469	#1 showing	fso porphyry dyke cutting sf breccia
298470	50m S of #1 showing	trondjemite - footwall to sf. zone
298471	75m S of #1 showing	trondjemite footwall.
298472	#2 showing - hanging wall	mafic tuff or chloritic sed. - finely laminated
298473	"	Trondjemitic sill
298474	"	Mafic volcanic - thin flow?
298475	"	Mafic Tuff similar to 298472
298476	"	Trondjemitic sill w/ gneissic (?) banding
298477	N of #1 showing - hanging wall to sf. zone	Amphibolite - mafic volcanic.

R.H. Sahn - Red Algon. Expt.



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
5175 Timberlea Blvd., Mississauga,  
Ontario, Canada L4Z 1R5  
PHONE: 416-824-2806

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

Page Number : 1  
Total Pages : 1  
Invoice Date : 25-SEP-90  
Invoice No. : I-9023211  
P.O. Number :

Project : 9002  
Comments : ATTN: R. ARCHER

## CERTIFICATE OF ANALYSIS

### A9023211

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Zn ppm	As ppm						
298463	205 294	30	3.2	1600	>10000	132						
298464	205 294	5	2.4	1240	5400	6						
298465	205 294	10	0.4	520	1400	4						
298466	205 294	5	4.6	600	640	24						
298467	205 294	< 5	0.8	400	800	2						
298468	205 294	< 5	1.6	1040	158	6						
298478	205 294	< 5	-----	-----	-----	1						
298479	205 294	< 5	-----	-----	-----	1						
298480	205 294	< 5	-----	-----	-----	1						
298481	205 294	< 5	-----	-----	-----	1						

CERTIFICATION:

*Hart Bickler*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
5175 Timberlea Blvd., Mississauga,  
Ontario, Canada L4W 2S3  
PHONE: 416-624-2806

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

Page Number : 1  
Total Pages : 1  
Invoice Date : 4-OCT-90  
Invoice No. : I-9023643  
P.O. Number :

Project : 9002  
Comments: ATTN: B. ARCHER

## CERTIFICATE OF ANALYSIS

A9023643

SAMPLE DESCRIPTION	PREP CODE	Zn %											
298463	214 --	1.28											

CERTIFICATION:

*W. Stan Amis*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
5175 Timberlea Blvd., Mississauga,  
Ontario, Canada L4W 2S3  
PHONE: 416-624-2806

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

Page Number : 1  
Total Pages : 1  
Invoice Date : 2-OCT-90  
Invoice No. : I-9023210  
P.O. Number :

Project :  
Comments: ATTN: R. ARCHER

## CERTIFICATE OF ANALYSIS A9023210

SAMPLE DESCRIPTION	PREP CODE	Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
298469	299 200	15.28	0.19	1.95	3.37	1.79	0.66	0.04	3.77	0.09	70.78	0.17	1.11	99.19
298470	299 200	15.97	0.06	1.42	2.65	2.05	0.66	0.03	5.31	0.07	69.59	0.26	0.94	99.01
298471	299 200	15.98	0.06	2.61	2.66	1.40	0.69	0.02	5.09	0.07	69.82	0.29	0.66	99.34
298472	299 200	16.44	0.03	7.03	10.40	1.91	7.25	0.10	2.44	0.06	48.19	0.77	3.03	97.66
298473	299 200	15.92	0.05	2.45	1.98	1.69	0.67	0.02	5.36	0.06	69.88	0.27	0.59	98.94
298474	299 200	14.61	< 0.01	8.48	11.15	0.24	10.37	0.17	2.32	0.04	47.80	0.68	1.72	97.59
298475	299 200	14.61	< 0.01	12.83	11.02	0.36	7.63	0.20	1.57	0.06	47.56	0.68	1.10	97.61
298476	299 200	14.13	0.04	2.52	1.92	1.37	0.50	0.03	4.13	0.02	74.75	0.15	0.54	100.10
298477	299 200	14.56	0.02	9.48	12.61	1.05	7.43	0.19	2.42	0.08	47.76	0.94	1.17	97.70

CERTIFICATION:

*B. Coughlin*



# Laboratoires Chemex Ltee.

Essayeurs \* Geochimistes \* Chimistes Analytique  
175 Boul. Industriel C.P. 284, Rouyn,  
Quebec, Canada J9X 5C3  
PHONE: 819-797-1922

To: RIO ALGOM EXPLORATION INC.

P.O. BOX 470  
TIMMINS, ON  
P4N 7E3

Project : 9002  
Comments: ATTN: R. ARCHER

Page Number : 1  
Total Pages : 1  
Invoice Date : 25-SEP-90  
Invoice No. : I-9023209  
P.O. Number :

## CERTIFICATE OF ANALYSIS

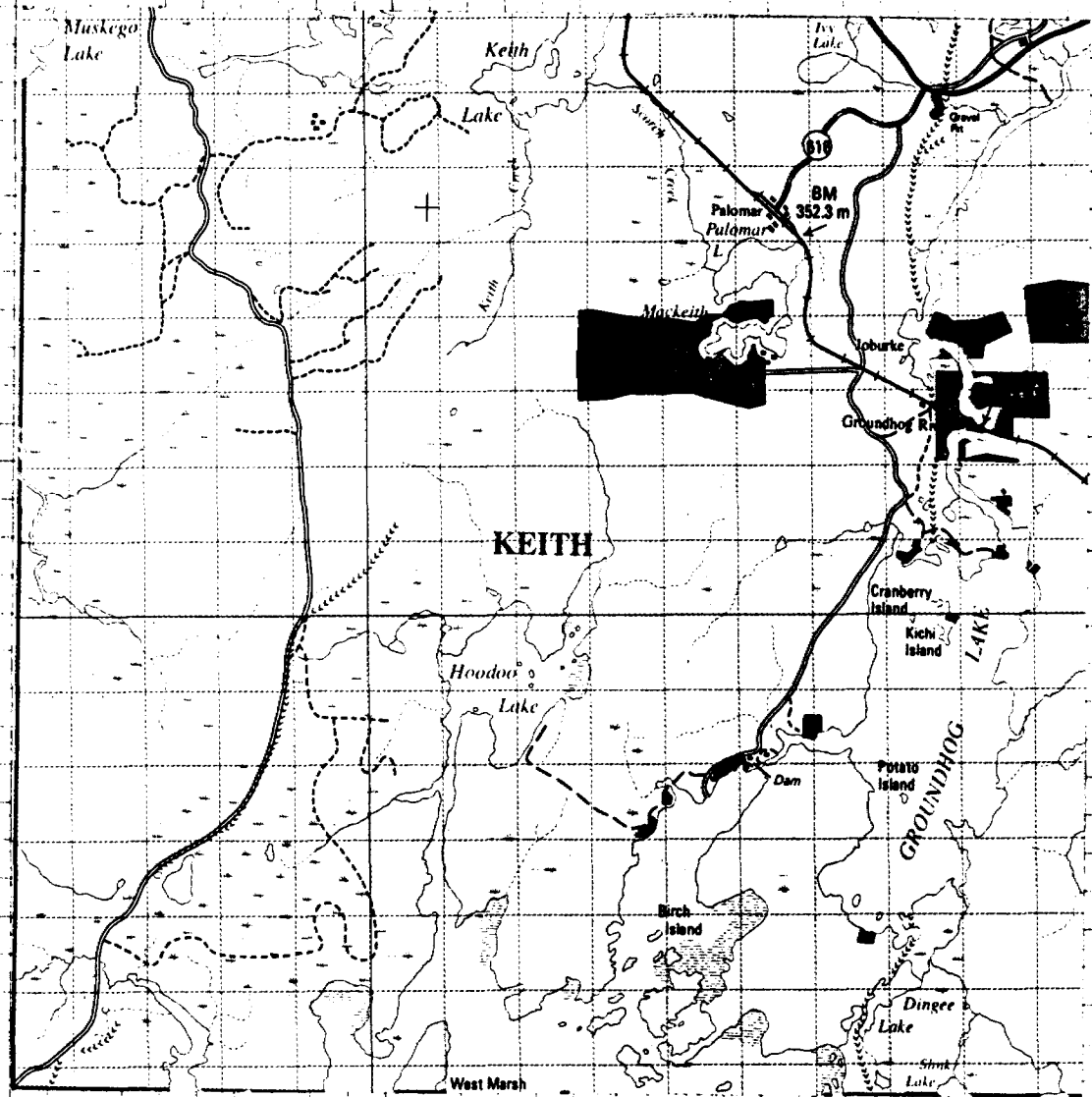
### A9023209

SAMPLE DESCRIPTION	PREP CODE	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
298469	205 294	< 1	< 0.5	4	60	2.11	175	2	6	38	108
298470	205 294	2	< 0.5	2	3	1.64	205	2	5	58	392
298471	205 294	2	< 0.5	2	< 1	1.69	135	1	4	10	72
298472	205 294	< 1	< 0.5	33	204	4.42	145	< 1	105	14	74
298473	205 294	< 1	< 0.5	2	4	1.24	145	1	5	4	58
298474	205 294	< 1	< 0.5	10	37	1.80	190	< 1	47	2	22
298475	205 294	1	< 0.5	5	42	0.88	180	3	31	2	36
298476	205 294	< 1	< 0.5	1	2	1.10	215	1	4	4	50
298477	205 294	< 1	< 0.5	11	21	2.63	370	< 1	34	< 2	46

CERTIFICATION:

*B. Coughlin*

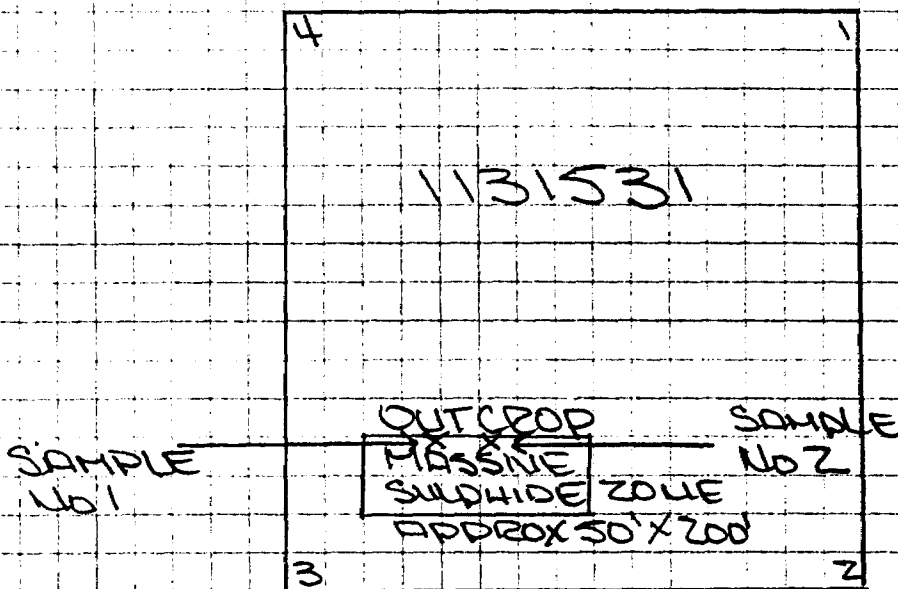
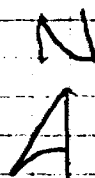
SCALE - 1:100,000  
N.T.S. 42B/SE



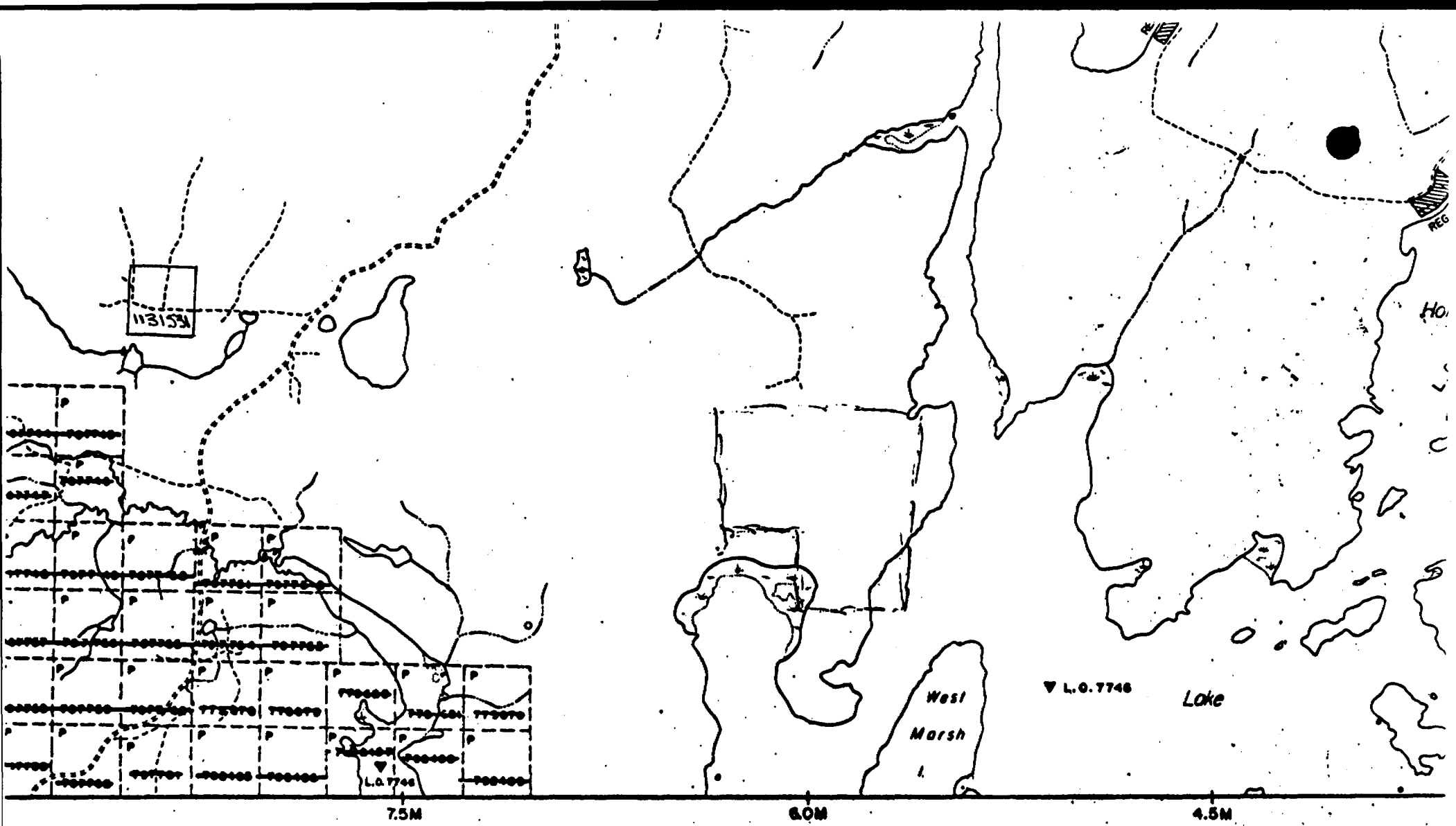
OCT 6 AND 7/90  
PROSPECTED HIGHLIGHTED  
AREA IN KEITH TRIP



KEITH TWP  
SCALE 3" = 1320'



ROCK TYPE ON CLAIM 1131531  
MAFIC TO INTERMEDIATE METAVOLCANICS  
BASALT  
SAMPLED TO AREAS ON SULPHIDE  
ZONE NEAR CONTACT  
SAMPLES CONTAINED APPROX 15-25%  
SULPHIDES  
SEE ATTACHED ASSAY SHEET



HORWOOD TWP.



# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Geochemical Analysis Certificate

0T-0640-RG1

Company: **FRED ROSS**

Date: **OCT-11-90**

Project:

Copy 1. COPY SWASTIKA LAB, TIMMINS

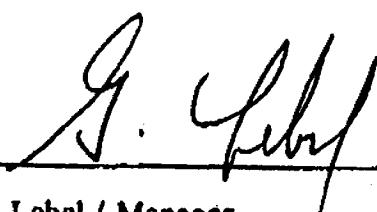
Ann:

2. 958 PARK AVE, TIMMINS

We hereby certify the following Geochemical Analysis of 2 ROCK samples submitted OCT-09-90 by FRED ROSS.

Sample Number	Au ppb
K-1	Nil
K-2	Nil

Certified by

  
G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244, FAX (705) 642-3300

