010

GEOLOGICAL REPORT ON THE GOLDMAC SILVER PROPERTY NEAR LARDER LAKE, ONTARIO

(BEN NEVIS TOWNSHIP)

JUNE 26, 1984

PAUL A. STUDEMEISTER
CONSULTING GEOLOGIST, Ph.D.

CERTIFICATE

I, PAUL ALEXANDER STUDEMEISTER, certify as follows with respect to my report on the Goldmac property dated June 26, 1984:

1) I graduated from the University of California at Berkeley in 1977 with a B. A. degree in geology, and then from the University of Western Ontario in 1982 with a Ph.D. degree in geology.

2) I carried-out a geological survey of the Goldmac property and interpreted the data in my report during June 1984.

This report is respectfully submitted,

Paul Studemeister

June 26, 1984

Paul A. Studemeister
Consulting Geologist, Ph.D.
Suite 506
199 Bay Street
Toronto, Ontario, Canada M5J 1L5

INTRODUCTION

The Goldmac property of 16 claims is located 20 miles north of Larder Lake in Ben Nevis Township, District of Cochrane, Ontario. The claim numbers are: L575225 to L575231, L544466 to L544468, and L537914 to L537919. The claim group is reached by a gravel road that branches off Highway 66 northeast of Larder Lake. The Goldmac property includes the Roche (Harper) silver occurence and adjoins the Canagau Mines property.

This report discusses a geological survey made by the author in June 1984. The bedrock of the property was mapped over a grid system with picket lines spaced 400 feet apart. The area surrounding the Roche occurence was examined in greater detail. The purpose of the survey was to evaluate the distribution of the silver occurence relative to lithology and structure.

HISTORY

Mineral exploration around the Roche occurence began in the 1920's. In 1952 Sakinaw Lake Copper and Iron Mining Ltd. prepared a geological report on a 23-claim group adjoining the Canagau Mines property. In 1964 Dome Exploration (Canada) Ltd. and Frobex Ltd. drilled 6 holes totalling 1971 feet of core. Diamond-drill hole F64-1 intersected 30.4 feet (122.0'-152.4') with about 2.3 oz/ton Ag; F64-4 intersected 26.9 feet (126.1'-153.0') with 4.59 oz/ton Ag; and F64-6 intersected 11.0 feet (134.7'-145.7') with 1.31 oz/ton Ag. In 1965 Amex Exploration Inc. drilled 2 holes totalling 601 feet of core

.../2

to test an IP anomaly near the Roche occurence. Diamond-drill hole TX71-71 intersected 0.5 ft to 3.0 ft at shallow depth with 3.03 oz/ton Ag to 4.78 oz/ton Ag. Diamond-drill hole TX72-71 intersected 1.0 feet (202'-203') with 1.28 oz/ton Ag.

In 1980 Goldmac Explorations Inc. completed magnetic and VLF-electromagnetic surveys of claims L544466 to L544468 and L537914 to L537919, inclusive. In 1982 Goldmac Explorations Inc. conducted a surface sampling program, a radiometric survey, and drilled 5 holes totalling 1269 feet of core on the 16-claim group. Diamond-drill hole BN82-1 intersected 15.0 feet (147'-162') with 1.84 oz/ton Ag and 0.012 oz/ton Au; BN82-5 intersected 20.0 feet (275'-295') with 1.18 oz/ton Ag and 0.004 oz/ton Au. The geophysical surveys by Goldmac Explorations have not produced results that have significantly assisted in the exploration.

REGIONAL GEOLOGY

The Goldmac property is within the Abitibi greenstone belt, an Archean sequence of metavolcanic and metasedimentary rocks that covers parts of Ontario and Quebec. A number of geologists have recognized several felsic volcanic centres within the belt including a major one in the Noranda District of Quebec. These centres are characterized by thickening of the volcanic sequence, increased proportion of felsic and pyroclastic rocks, and clusters of Fe-Cu-Zn-Ag sulphide deposits. The metavolcanic rocks underlying the property are

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part of the Blake River Group, a metamorphosed assemblage of mafic to felsic volcanic cycles that hosts the massive base metal sulphide deposits of the Noranda District.

STRUCTURE

The metavolcanic sequence in and around the Goldmac property probably dips gently to the south. Personal discussions by the author with H. L. Lowell and E. C. Grunsky, geologists of the Ontario Geological Survey familiar with the geology of Ben Nevis Township, confirm the gentle dip of the Archean sequence. The pillowed meta-lavas in the east half of Ben Nevis Township are generally south facing and gently dipping. Primary sedimentary layers on the Goldmac property were not encountered by the author during the mapping survey. The metavolcanic rocks are in the subgreenschist facies of regional metamorphism. The common minerals are quartz, albite, white mica, epidote, chlorite, calcite, prehnite, pumpellyite, pyrite, and sphene. Original volcanic textures and structures are well preserved despite low-grade metamorphism.

The Archean rocks on the property are traversed by a schistosity that strikes northwest and dips 75° to 90°. The foliation is best developed in felsic rocks with abundant white mica, a reflection of relatively incompetent rocks. Rocks laden with platy minerals strained more readily than rocks laden with quartz + albite + epidote during regional deformation.

.../4

The axis of a wide anticline that plunges to the south crosses the Goldmac property according to Jensen, L. S. of the Ontario Geological Survey (Geoscience Report 132; 1975). The trace of the Murdoch Creek fault zone across the north part of the property is speculative and based on extrapolation. The north part of the property is mainly covered by marsh and spruce forest, and the fault zone is not exposed.

INTERMEDIATE METAVOLCANIC ROCKS

The intermediate metavolcanic rocks on the property are grey-green coloured, fine grained rocks derived from andesite. These rocks are exposed at the southwest corner, and in the hills at the northwest corner, of the property. The intermediate rocks were mapped in the field into four general types: massive flow or sill, amygdular flow, pillowed flow, and mafic breccia. The common minerals are albite, chlorite, calcite, epidote, quartz, prehnite, pumpellyite, sphene, and pyrite. The massive flow or sill (unit 1a) is a uniform-textured massive rock with relict phenocrysts now composed of albite and with only scattered amygdules. The matrix generally has fine green clots of ferromagnesium minerals, perhaps chlorite + epidote after pyroxene. The amygdular flow (unit 1b) is a massive textured rock with abundant vesicles, 1/16" to 6/16" wide, filled with quartz, calcite, and minor prehnite (?). The amygdules are oval, rounded, and stringer like in form, and many have a quartz core with a calcite-bearing rim. The pillowed flow (unit 1c) has volcanic

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pillows consisting of pale green coloured rims (epidote laden?), 1/2" to 2" wide, around grey-green coloured amygdular cores. Mafic breccia (unit 1d) consists of angular to rounded, amygdular to massive clasts set in a matrix that is generally amygdular and locally siliceous. The mafic breccia occurs as thin bands within lava successions and represents autobrecciated lava. Exposures of pillowed rock with minor mafic breccia occur alongside the gravel road near the southwest corner of the property. The widespread distribution of pillowed rocks in the Ben Nevis Township indicates subaqueous accumulation of andesite from numerous fissure vents.

FELSIC METAVOLCANIC ROCKS

The felsic metavolcanic rocks are grey coloured, fine grained rocks derived from rhyolite. These rocks have leucocratic assemblages of quartz, white mica, albite, calcite, epidote, chlorite, prehnite (?), pumpellyite (?), and pyrite. The felsic rocks were mapped in the field into four general types: rhyolite-flow breccia, tuff-breccia, lapilli tuff, and fine grained tuff. The rhyolite-flow breccia (unit 2a) is a massive to jointed rhyolite that is prevalent in the south part of the property. The rhyolite is traversed by joints with a polygonal pattern that strike northwest and dip steeply. The density of joints is not uniform and some rhyolite is relatively massive. Where the jointing is prevalent, the rhyolite has a breccia-like texture with white mica-laden fissile seams enveloping dense felsic fragments. The jointing pattern is attributed to autobrecciation

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of rhyolite-flow by steam explosions during subaqueous volcanism.

The rhyolite-flow breccia grades into pyroclastic deposits that outcrop as irregular-shaped domains in the central and north parts of the Goldmac property. The tuff-breccia (unit 2b) is a fragmental rhyolite with felsic clasts of lapilli and block size dispersed chaotically in a felsic, clastic matrix of similar composition. The clasts are subangular in outline, are unsorted, and consist mainly of massive rhyolite with occasional laminated rhyolite. The lapilli tuff (unit 2c) is similar to the tuff-breccia except that it is dominated by lapilli-sized clasts. A major difference between the rhyolite-flow breccia (unit 2a) and the tuff-breccia plus lapilli tuff (units 2b + 2c) is the development of a distinct matrix to the clasts in the later two units. The fine grained tuff (unit 2d) refers to a fine grained, grey to tan coloured, foliated rock with abundant white mica + carbonate. Sporadic concentrations of pyrite occur in joints with quartz in the rhyolite-flow breccia and also in the interstitial matrix of the tuff-breccia.

The tuff-breccia and lapilli tuff are intricately associated with massive to jointed rhyolite in a manner of endogenous dome-vent agglomerate relationships in which pyroclastic deposits are piled over and alongside intruding and potruding viscous rhyolite domes. The tuff-breccia and lapilli tuff appear to cover the flanks of an autobrecciated rhyolite dome, possibly centered near the south part of the Goldmac property. Felsic metavolcanic rocks within the Abitibi

.../7

greenstone belt have a clustered habit suggesting a number of central vents marking subsidence structures such as calderas.

SILVER OCCURENCE

The Roche occurence is a gossan-stained ledge of rock on claim L544467 that strikes northeast for about 50 feet. Grab samples taken from the ledge by Goldmac Explorations in 1982 assayed 0.85 oz/ton Ag to 16.6 oz/ton Ag, trace to 0.019 oz/ton Au, 0.01% to 1.27% Zn, and 0.03% to 2.04% Pb. The felsic rocks around the occurence assayed anomalous in silver content.

The diamond drilling done in 1964 by Dome Exploration (Canada) with Frobex Ltd. and in 1982 by Goldmac Explorations suggest that the silver tenor of the sulphide zone at depth is irregular with the better parts averaging 2 oz/ton Ag across 10 ft to 20 ft widths. The holes drilled immediately south of the Roche occurence intersected the sulphide zone at depths of 100 to 200 feet. Diamond-drill hole BN82-5 is an exception; it was drilled further south from the rest and perhaps intersected the downdip extent of the sulphide zone. The holes drilled north and northeast of the Roche occurence, including the Amex Exploration program in 1965, only intersected scattered narrow silver values. The results of the drilling program suggest that the sulphide zone is irregular in silver tenor and width, but appears to be gently dipping to the south.

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An examination of the Roche occurence elucidates the nature of the sulphide zone. The Roche occurence consists of felsic metavolcanic rocks with massive to disseminated pyrite plus minor sphalerite, galena, and trace chalcopyrite plus silver. The sulphide zone is traversed or bordered by a northeast striking diabase dike less than 50 feet wide. The common gangue minerals found with the sulphides are quartz with minor white mica and carbonate. The alteration of the felsic rocks around the sulphide zone is silicification and pyritization; e.g. the rhyolites are laden with quartz and have disseminated pyrite anomalous in silver content.

The sulphide minerals are concentrated in three associated forms. Pyrite occurs as interstitial matrix to rhyolitic and dark cherty clasts in tuff-breccia. This tuff-breccia at the Roche occurence has non-pyritic rhyolite clasts mixed with dark cherty clasts with 1% to 3% fine grained pyrite; the pyrite in the matrix is coarser grained and more concentrated. Pyrite also occurs with quartz in stringers and joints traversing siliceous rhyolite-flow breccia adjacent to the tuff-breccia. Finally, there is a dark cherty tuff, similar to the clasts in the tuff-breccia, locally exposed at the occurence that has accessory amounts of pyrite. Sphalerite, galena, and trace chalcopyrite are subordinate to the pyrite in all three forms of sulphide concentration. The coexistance of pyrite in clast and matrix within the tuff-breccia suggests that

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rhyolite fragmentation and sulphide concentration were more or less synchronous, and probably synvolcanic, processes. The argentiferous pyrite concentration appears to occur at the interface between silicified, jointed rhyolite-flow and tuff-breccia just below andesite flows of the intermediate series which have been removed over the Roche occurence by erosion.

COMPARISON

The Roche occurence has features in common with massive base metal sulphide deposits of the Noranda District. The sulphide zone occurs in jointed rhyolite-flow and pyroclastic rocks near the contact with andesite flows in the Blake River Group. The massive sulphide deposits of the Noranda District occur with felsic pyroclastic rocks on the flanks of rhyolite domes at or near the contact with andesite flows, also within the Blake River Group. The alteration phenomenon in the Roche occurence is silicification and pyritization, similar to the alteration associated with many massive sulphide deposits. The Roche occurence is characterized by concentrations of pyrite, sphalerite, galena, and silver; gold is not concentrated to the same extent. The massive sulphide deposits of the Noranda District are characterized by concentrations of pyrite, pyrrhotite, chalcopyrite, sphalerite, silver, $\pm$ galena with only minor gold; it is not unusual for massive sulphides to average 1 oz/ton Ag to 2 oz/ton Ag.

The massive sulphide deposits of the Noranda District consist of

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a massive lens of chalcopyrite with pyrrhotite, pyrite, ± magnetite, silver and an epigenetic stringer zone of chalcopyrite, pyrrhotite, pyrite below the lens. Passing stratrigraphically upwards and also laterally outwards is a massive to disseminated sulphide zone of pyrite, sphalerite, ± galena, silver. In individual orebodies such as the Corbet deposit, the transition from Cpy-Po-Py ore to Py-Sph±Gal ore occurs within 200 feet. A similar metal-mineral zonation occurs in camps consisting of several orebodies such as the Millenbach mine. Eighty percent of mineable Millenbach ore was deposited within a 900 feet diameter circle centred at a main hydrothermal vent. The ore at this main and at subsidiary hydrothermal vents is chalcopyrite and pyrrhotite rich; the Cpy-Po content decreases and the Py-Sph content increases away from the hydrothermal vents. Pyritic sulphide zones with low Cu/Zn ratios occur 2600 feet from the major vent at Millenbach. In view of this discussion, the sulphide zone at the Roche occurence is probably in a distal setting relative to its hydrothermal vent located at more or less the same stratigraphic position.

There is an important difference between the sulphide zone at the Roche and nearby occurences, and the sulphide deposits of the Noranda District. The metamorphic grade in the Ben Nevis area is lower than that of the Noranda area, and this may be due to lack of

removal of overlying rock by erosion. Thus, the Noranda area level of erosion may be in the Ben Nevis area 0.5 to 1.5 miles deep if regional metamorphism is a function of depth of burial.

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CONCLUSIONS

1. The argentiferous pyrite zone on the Goldmac property occurs in siliceous rock at the interface between rhyolite-flow and tuff-breccia near the contact with an andesite-flow series.
2. The sulphide zone is irregular in silver tenor, has minor sphalerite + galena, and appears to dip gently southwards more or less parallel to the attitude of the volcanic sequence.
3. In analogy with mine-scale zonation in the Noranda District, the hydrothermal vent corresponding to the Roche occurence may exist, perhaps within 3000 feet, laterally away from and/or paleo-topographically above the sulphide zone.
4. The postulated vent zone with massive chalcopyrite + pyrrhotite + pyrite sulphide may be detected by magnetic, gravity, or perhaps mercury anomalies from the surface.

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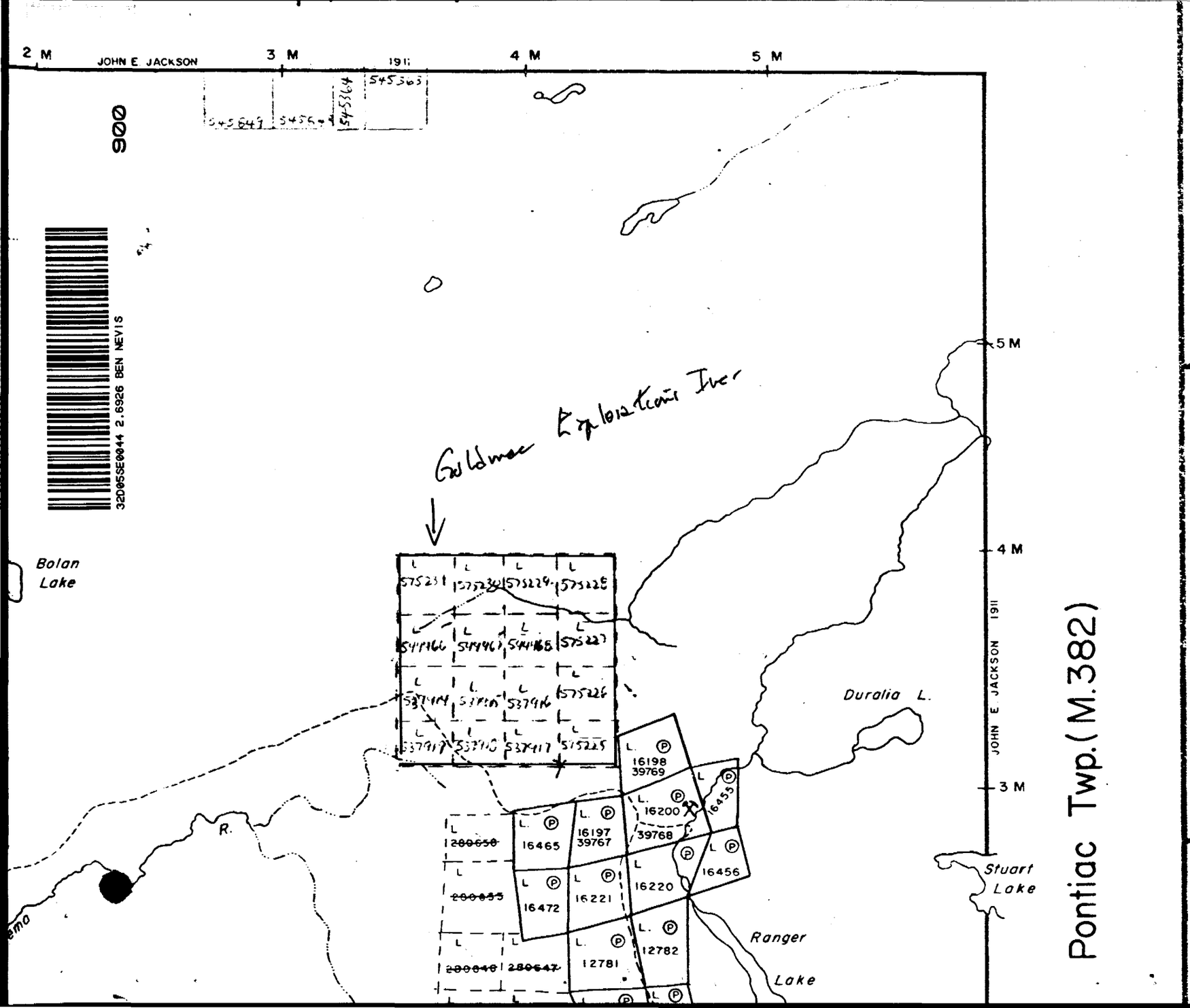


BEN NEVIS

May 17 81

DISTRICT OF
COCHRANE

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc
LICENSE OF OCCUPATION	L.O
MINING RIGHTS ONLY	M.R.O
SURFACE RIGHTS ONLY	S.R.O
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C
TRAILS	

NOTES

400' Surface rights reservation along the shores of all lakes and rivers

Mining Lands Section

File No 2.6926

Control Sheet

TYPE OF SURVEY

____ GEOPHYSICAL

__✓__ GEOLOGICAL

____ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

lgd. L.D.

D. Hurst

Signature of Assessor

Aug 1/84.

Date

#2S1

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

Ben Nevis Twp.
File L537914
Mining Act 2.6926

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): Geological
Township or Area: Ben Nevis
Claim Holder(s): Goldmac Explorations Inc.
Prospector's Licence No.: T930
Address: Suite 806 88 University Ave, Toronto M5M 1B6
Survey Company: Paul Studemeister
Date of Survey (from & to): 7 5 84 (Day Mo. Yr.) 26 6 84
Total Miles of line Cut: 11
Name and Address of Author (of Geo-Technical report): Apt D105 2140 Santa Cruz Ave, Menlo Park California 94025

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions: For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	20 ~~40~~
	Geochemical	
Man Days: Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits: Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	537914				
	537915				
	537916				
	537917				
	537918				
	537919				
L	575225				
	575226				
	575227				
	575228				
	575229				
	575230				
	575231				
L	544466				
	544467				
	544468				

LARDER LAKE MINING DIV.
RECEIVED
JUL 11 1984
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Total number of mining claims covered by this report of work: 16

Expenditures (excludes power stripping)

Type of Work Performed:
Performed on Claim(s):

Calculation of Expenditure Days Credits
Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date: July 5 1984
Recorded Holder, Agent (Signature): per: H. G. Harper

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
320	JUL 11 1984	
	Date Approved as Recorded: Aug 3/84	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: H. G. Harper P. Eng.
314 Hendon Ave, Willowdale
Date Certified: July 7 1984
Certified by (Signature): H. G. Harper

1362 (81/9)

1984 07 16

Your File:
Our File: 2.6926

Mr. George J. Koleszar
Mining Recorder
Ministry of Natural Resources
4 Government Road East
P.O. Box 984
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

We have received reports and maps for a Geological Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 537914 et al in the Township of Ben Nevis.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416) 965-1380

A. Barr:mc

cc: Goldmac Explorations Inc
Suite 806
88 University Avenue
Toronto, Ontario M2M 1B6

Hc:Grant Harper
314 Hendon Avenue
Willowdale, Ontario
M2M 1B2

HARPER Consulting Services Inc.

H. Grant Harper P. Eng., President
Consulting Engineer & Geologist

314 Hendon Avenue
Willowdale, Ontario M2M 1B2
(416) 225-7412

JUly 5, 1984.

Mr. G.J. Koleszar, Mining Recorder,
Box 984,
4 Government Rd., E.,
Kirkland Lake, Ontario.

Dear Mr. Kol[illegible]zar,

Enclosed please find a completed Report of Work form covering 40 days of assessment work for line cutting and geological mapping on each of 15 claims in Ben Nevis Township owned by Goldmac Explorations Ltd.

[redacted]

If there are any problems with this application will you please advise me.

Yours truly,

RECEIVED
JUL 9 1984
MINING LANDS SECTION

Volume Label: Goldmac
Disk No.: 0107
Filename: BNMinRec.84

Ontario

Geochemical and Expenditures

Mining Act

Note: Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns. Do not use shaded areas below.

Type of Survey(s): Geological

Township or Area: Ben Nevis

Claim Holder(s): Goldmec Exploration Inc.

Prospector's Licence No.: T930

Address: Suite 806 88 University Ave, Toronto M2M 1B6

Survey Company: Paul Studemeister

Date of Survey (from & to): 7 5 84 (Day Mo. Yr.) to 26 6 84 (Day Mo. Yr.)

Total Miles of line Cut: 11

Name and Address of Author (of Geo Technical report): Apt D105 2140 Santa Cruz Ave, Menlo Park California 94025

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	40
	Geochemical	
Man Days		**Days per Claim**
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits		**Days per Claim**
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
L	537 914	
	537 915	
	537 916	
	537 917	
	537 918	
	537 919	
L	575 225	
	575 226	
	575 227	
	575 228	
	575 229	
	575 230	
	575 231	
L	544 466	
	544 467	
	544 468	

Prefix	Mining Claim Number	Expend. Days Cr.

Total number of mining claims covered by this report of work: 16

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Date: July 5 1984

Recorded Holder or Agent (Signature): per. H. G. Harper

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: H. G. Harper P. Eng. 314 Herndon Ave, Willowdale

Date Certified: July 7/1984

Certified by (Signature): H. G. Harper

1362 (81/9)

								2.6926				
537914	✓			575226	✓							
15	✓			26	✓			544466	✓			
16	✓			27	✓			67	✓			
17	✓			28	✓			68	✓			
18	✓			29	✓							
19	✓			30	✓							
				31	✓							

L12W L8W L4W L00 L4E L8E L12E L16E L20E L24E L28E L32E

575231 575230 575229 575228

544467 544468 575227

544466 537916 GRAVEL ROAD 575226

537914 537915 537917 537918 537919 575225

BASELINE BASELINE

Ag

TABLE OF FORMATIONS

Late Precambrian

3 DIABASE

Early Precambrian (Archean)

FELSIC METAVOLCANIC ROCKS
- 2a RHYOLITE-FLOW BRECCIA
- 2b TUFF-BRECCIA
- 2c LAPILLI TUFF
- 2d FINE GRAINED TUFF
- 2e PYRITE-BEARING
- 2f SILICEOUS; SILICEOUS TUFF

INTERMEDIATE METAVOLCANIC ROCKS
- 1a MASSIVE FLOW OR SILL
- 1b AMYGDULAR FLOW
- 1c PILLOWED FLOW
- 1d MAFIC BRECCIA

SYMBOLS

- 80 Schistosity (inclined; vertical)
- Lithological contact
- 2a Outcrop
- Fault zone (inferred)
- ◆ Ag Silver occurence
- Trench

OUTCROP GEOLOGY MAP

SCALE

0 400 800 FEET

0 100 METERS

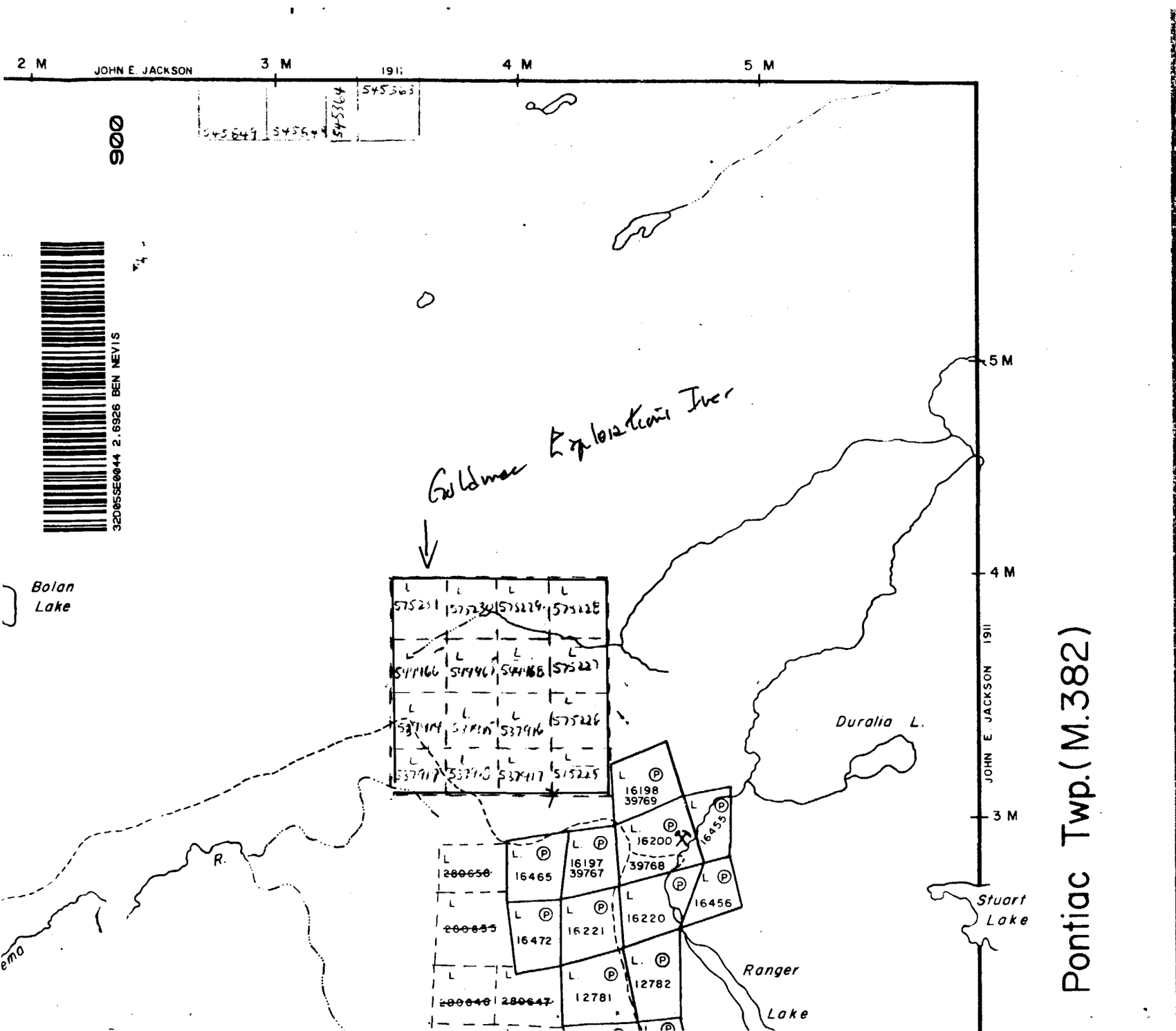
GOLDMAC PROPERTY

GEOLOGY BY P.A. STUDEMEISTER

JUNE 1984

26926

Paul Studemeister
JUNE 22, 1984



BEN NEVIS

DISTRICT OF
COCHRANE

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	Ⓟ
CROWN LAND SALE	C.S.
LEASES	Ⓛ
LOCATED LAND	Loc
LICENSE OF OCCUPATION	L O
MINING RIGHTS ONLY	M.R.O
SURFACE RIGHTS ONLY	S.R.O
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	
TRAILS	

NOTES

400' Surface rights reservation along the shores of all lakes and rivers

Mining Lands Section

File No 26926

Control Sheet

TYPE OF SURVEY

____ GEOPHYSICAL

__✓__ GEOLOGICAL

____ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

lgd. L.D.

V. Hurst

Signature of Assessor

Aug 1/84.

Date

#251

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

Ben Nevis Twp
File L537914
Mining Act 2.6926

Instructions: – Please type or print
– If number of mining claims traversed exceeds space on this form, attach a list
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s)	Township or Area
Geological	Ben Nevis

Claim Holder(s)	Prospector's Licence No.
Goldmec Explorations Inc.	T930

Address: Suite 806 88 University Ave, Toronto M5M 1B6

Survey Company	Date of Survey (from & to) Day / Mo. / Yr.	Total Miles of line Cut
Paul Stademeister	7 5 84 / 26 6 84	11

Name and Address of Author (of Geo-Technical report)
Apt D105 2140 Santa Cruz Ave, Menlo Park California 94025

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	~~40~~ 20
	Geochemical	
Man Days		**Days per Claim**
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits		**Days per Claim**
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	537914				
	537915				
	537916				
	537917				
	537918				
	537919				
L	575225				
	575226				
	575227				
	575228				
	575229				
	575230				
	575231				
L	544466				
	544467				
	544468				
	~~544469~~				

LARDER LAKE MINING DIV.
RECEIVED
JUL 11 1984
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Total number of mining claims covered by this report of work: 16

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures			=	Total Days Credits
$	÷	15	=	

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	JUL 11 1984	
	Date Approved as Recorded: Aug 3/84	Branch Director

Date	Recorded Holder, or Agent (Signature)
July 5 1984	per H.G. Harper

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
H. G. Harper P. Eng.
314 Hendon Ave, Willowdale

Date Certified	Certified by (Signature)
July 7 1984	H.G. Harper

1362 (81/9)

1984 07 16

Your File:
Our File: 2.6926

Mr. George J. Koleszar
Mining Recorder
Ministry of Natural Resources
4 Government Road East
P.O. Box 984
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

We have received reports and maps for a Geological Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 537914 et al in the Township of Ben Nevis.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416) 965-1380

A. Barr:mc

cc: Goldmac Explorations Inc
Suite 806
88 University Avenue
Toronto, Ontario M2M 1B6

Mc:GrantGrant Harper
314 Hendon Avenue
Willowdale, Ontario
M2M 1B2

HARPER Consulting Services Inc.

H. Grant Harper P. Eng., President
Consulting Engineer & Geologist

314 Hendon Avenue
Willowdale, Ontario M2M 1B2
(416) 225-7412

JUly 5, 1984.

Mr. G.J. Koleszar, Mining Recorder,
Box 984,
4 Government Rd., E.,
Kirkland Lake, Ontario.

Dear Mr. Koleszar,

Enclosed please find a completed Report of Work form covering 40 days of assessment work for line cutting and geological mapping on each of 15 claims in Ben Nevis Township owned by Goldmac Explorations Ltd.

[redacted]

If there are any problems with this application will you please advise me.

Yours truly,

RECEIVED
JUL 1984
MINING LANDS SECTION

Volume Label: Goldmac
Disk No.: 0107
Filename: BNMinRec.84

Geochemical and Expenditures

Note: ... credits calculated in "Expenditures" section may be entered in the "Expend. Days Cr." column. - Do not use shaded area below.

Mining Act

Type of Survey(s): Geological

Township or Area: Ben Nevis

Claim Holder(s): Goldmac Explorations Inc.

Prospector's Licence No.: T930

Address: Suite 806 88 University Ave, Toronto M2M 1B6

Survey Company: Paul Studemeister

Date of Survey (from & to): 7 5 84 (Day / Mo. / Yr.) 26 6 84 (Day / Mo. / Yr.)

Total Miles of line Cut: 11

Name and Address of Author (of Geo Technical report): Apt D105 2140 Santa Cruz Ave, Menlo Park California 94025

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	40
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
L	537 914	
	537 915	
	537 916	
	537 917	
	537 918	
	537 919	
L	575 225	
	575 226	
	575 227	
	575 228	
	575 229	
	575 230	
	575 231	
L	544 466	
	544 467	
	544 468	
	~~[illegible]~~	

Prefix	Mining Claim Number	Expend. Days Cr.

Total number of mining claims covered by this report of work: 16

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date: July 5 1984

Recorded Holder or Agent (Signature): per. H. G. Harper

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: H. G. Harper P. Eng. 314 Hendon Ave, Willowdale

Date Certified: July 7 1984

Certified by (Signature): H. G. Harper

1362 (81/9)