NTS: 42A/6

# REPORT ON

# A GEOLOGICAL SURVEY

# IN

# FALLON AND LANGMUIR TOWNSHIPS

# PORCUPINE MINING DIVISION

# TIMMINS AREA, ONTARIO



FOR

MERCIER EXPLORATIONS LTD.

February 3rd, 1984
Toronto, Ontario

J. A. McCance, P.Eng.

Qual. 2.1765

# MERCIER EXPLORATIONS LTD. - GEOLOGICAL REPORT

## FALLON AND LANGMUIR TOWNSHIPS

## TIMMINS AREA, ONTARIO

## NTS 42A/6

## TABLE OF CONTENTS

## LIST OF FIGURES AND TABLES



## APPENDICES

# MERCIER EXPLORATIONS LTD. - GEOLOGICAL REPORT
# FALLON AND LANGMUIR TOWNSHIPS
# TIMMINS AREA, ONTARIO
# NTS 42A/6

## INTRODUCTION

This report outlines the results of both geological mapping and prospecting activities undertaken on a property which straddles the common boundary between Fallon and Langmuir Townships, Porcupine Mining Division, Ontario. Completed on behalf of Mercier Explorations Ltd., the property owner, all field traverses were located relative to a pre-existing grid of north-south picket lines on which both magnetic and electromagnetic surveys had been carried out during February 1983.

All field mapping was completed between October 11th and October 29th, 1983. Upon completion, all field notes were forwarded to Toronto for final map and report preparation.

The purpose of these activities was to provide a more precise data base which would permit re-evaluation of the exploration significance of the known galena occurrence and several electromagnetic and magnetic anomalies located on the property.

## PROPERTY, LOCATION AND ACCESS

The property consists of 8 contiguous mining claims (320 acres), in the Porcupine Mining Division, numbered P652642 to P652649 inclusive. They are shown on claim maps M-292 Langmuir Township and claim map M-278 Fallon Township.

The approximate center of the property is located about 20 miles southeast of South Porcupine near the 2 mile post on the common boundary between Fallon and Langmuir Townships (Figure 1). Co-ordinates of this centerpoint are 81°01'24"W longitude and 48°16'36"N latitude as indicated on the Canada 1:50,000 series topographic map 42A/6 "TIMMINS".

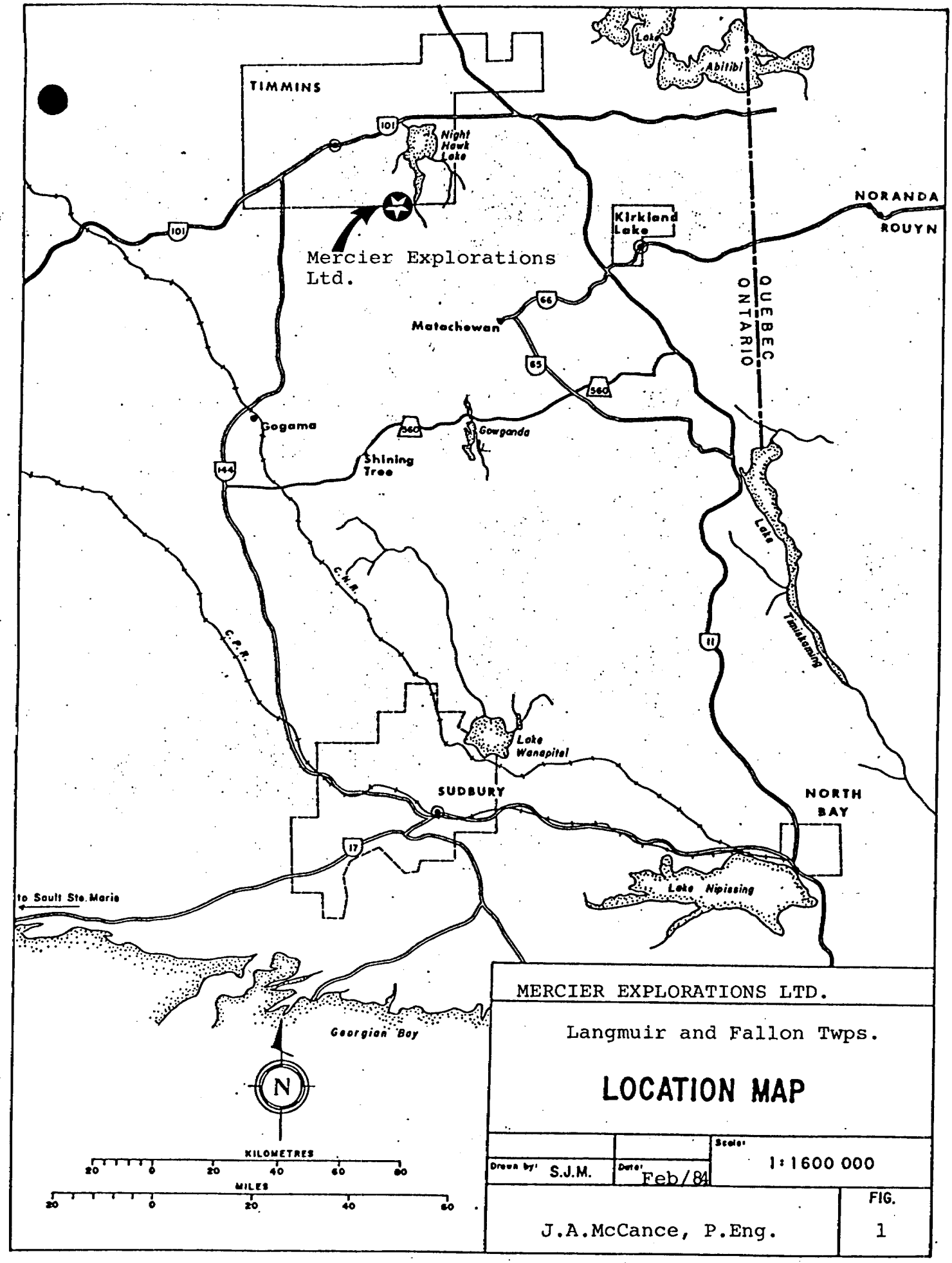
Access to the property is from South Porcupine southward along an all-weather road for a distance of 9 miles from the railroad crossing at Connaught Hill. At this point the Nighthawk Timber Company Ltd. private access road continues southward through Shaw and Eldorado Townships a distance of 10.5 miles to the west corner of Langmuir and Fallon Townships. Walking eastward along a swamp buggy/winter road for a distance of 1 1/4 miles will access the west boundary of the claims.

On the property, access to water for drilling purposes is generally available within a distance of 800 metres. Transportation access is facilitated by the north-south picket lines, the east-west township-baseline, a north-south tributary of the Nighthawk River and a natural helicopter landing site near the western boundary.

## VEGETATION AND TOPOGRAPHY

Elevation everywhere on this property ranges between 950' and 1000' as indicated on the 1:50,000 topographic map 42A/6 "TIMMINS". Numerous topographic ridges were encountered but nowhere did outcrops rise more than 10 metres above the generally flat terrain.

Pleistocene and recent deposits cover 70 percent of the property. The material, predominantly clay and silt, form part of an extensive glaciolacustrine plain which extends throughout the southwest part of Langmuir Township and southwards along the western boundary of Fallon Township (O.G.S. Map 5029; 1979 NOEGTS Data Base Map TIMMINS, scale 1:100,000). This terrain changes in the extreme northeastern part of




MERCIER EXPLORATIONS LTD.

Langmuir and Fallon Twps.

# LOCATION MAP

| Drawn by: S.J.M. | Date: Feb/84 | Scale: 1:1600 000 |
|---|---|---|
| J.A.McCance, P.Eng. | | FIG. 1 |

the property where morainal sand and gravel was observed. Throughout much of the central part of the property a swampy organic terrain exists.

Vegetation throughout the property is varied with open poplar bush present in the extreme northwest, northeast and southeast while black spruce occupies the southwest and south central parts of this property. In parts of these areas tree height exceeds 50 feet for poplar and 30 feet for spruce. Throughout all other wooded parts of the property a highly varied mix of poplar, black spruce, white birch and occasional balsam fir is present.

The western quarter and most of the northern half of the property is covered by open alder and spruce swamp, with a singluar section of cedar, alder and tamarack swamp located along the baseline between lines 1E and 2E.

To provide mapping control for the major woodland-swamp boundaries indicated on the accompanying map and in the designation of tall timber occurrences, stereoscopic airphoto coverage at a scale of 1 inch = 1/4 mile was used.

## PREVIOUS WORK

Although Langmuir Township was the locale of extensive exploration during the 1960's; Fallon Township remained essentially unmapped until 1968. D.R. Pyke (1970, ODM Geological Report 86) in reporting on his 1967 mapping of Langmuir Township published a comprehensive summary of exploration work covering the period 1951-1967. A similar summation of the much more limited activity in Fallon Township to 1968 was also published by D.R. Pyke in 1973 (ODM Geological Report 104). These publications also identify prior mapping of the area back to 1896.

Aeromagnetic coverage of the area surrounding the property was published in a revised format by the Geological Survey of Canada in 1970. Three maps at a scale of 1 inch = 1 mile (291G - Peterlong Lake; 293G - Timmins; 294G - Watabeag River) clearly indicate the dimensions and the prominently magnetic contact zone associated with the monzonitic intrusive in Fallon Township and the locale of ultramafic intrusive (?) rocks immediately north of the property.

A comprehensive compilation of existing ground vertical field magnetic data, overburden data and analyses of the magnetic susceptibilities of typical rocks in Langmuir Township was published by W. Moon in 1976 (ODM Geoscience Report 137, scale 1" = 1/2 mile). Unfortunately, the geological interpretation provides only vague information on the geology of this property.

More detailed magnetic information was made available for the northwestern part of this property as part of a combined electromagnetic and magnetic survey submitted for assessment credit by Maybrun Mines Ltd. in 1965 (AFRO File No. 63-1484). Drilling on a combined electromagnetic and magnetic target intersected regionally altered basic lavas, minor iron formation and a 50 foot wide fault zone (AFRO File No. Langmuir DDH 35).

Most recently Harper Consulting Services Inc. has submitted the results of additional magnetic and electromagnetic surveys completed on this grid which confirm the presence of the various magnetic zones identified from the 1" = 1 mile aeromagnetic coverage of the property.

Numerous small pits were encountered within small feldspar porphyry dikes and quartz-carbonate veins near the south boundary of the property but no record of such previous work is known. Pyrite in small quantities was the only visible sulphide in these pits most of which are now filled with water or overgrown.

## GENERAL GEOLOGY

Regional compilation mapping for the Langmuir and Fallon Townships area was published in 1967 at a scale of 1 inch = 4 miles, as the Ontario Division of Mines Geological Compilation Series Map 2205, Timmins-Kirkland Lake. More recently, a synoptic series map of the Precambrian geology of the area was published by the Ontario Geological Survey at a scale of 1:50,000 (1982; OGS Map 2455). Both the compilation maps provide an excellent overview.

The property is situated within an Early Precambrian mafic metavolcanic terrane, which has been identified from a recent and tentative distribution of the volcanic stratigraphic units in the Timmins area to be a tholeiitic cycle, which youngs southward (1982, D.R. Pyke, Ontario Geological Survey Report 219). These volcanics have been most recently intruded by a monzonite stock situated to the southeast and have either been intruded by a serpentinized ultramafic sill or overlie an older komatiitic metavolcanic unit located in Langmuir Township. This latter lithologic relationship remains poorly defined. Evidence from the current mapping does not provide any additional information on which to resolve either the age relationships of these ultramafic masses or the regional volcanic stratigraphy. It has however, allowed an improved estimate to be made for the location of the outer margin of a contact metamorphic aureole associated with the Fallon monzonite stock.

All traverses were controlled by a pre-existing grid (100 metre line separation and 20 metre station interval) with considerable effort made to locate all possible outcrops between grid lines and along claim lines to provide greater detail. In total, approximately 25 kilometres of prospecting and mapping were completed over this property.

As mapped, the outcrop distribution has been estimated at 30 per cent in areal extent with the various lithologies encountered being identified and listed in Table 1, attached. The most extensive

TABLE 1

Table of Lithologic Units

Cenozoic

Recent - swamp, stream deposits

Pleistocene - clay, sand, gravel

UNCONFORMITY

Early Precambrian (Archean)

Mafic Intrusive Rocks

4-porphyritic diabase

INTRUSIVE CONTACT

Felsic Intrusive Rocks

3a-monzonite, porphyritic monzonite, quartz-monzonite dikes

3b-contaminated border zone (amphibolitic rocks)

INTRUSIVE CONTACT

Mafic to Ultramafic Intrusive Rocks ?

2a-gabbro, diorite

2b-serpentinized ultramafic rocks

?INTRUSIVE CONTACT?

Mafic Metavolcanics

1a-flow, massive to foliated

1b-flow, pillowed to amygdaloidal

1c-breccia to agglomerate fragmentals (dikes?)

1d-amphibolite, amphibolitic schist, banded amphibolite (epidote-layered?)

areas of outcrop occur in the southwest and southeast parts of the property, an area underlain by amphibolites, amphibolitic schist and banded amphibolites. These rocks represent metamorphosed mafic flows and probable pyroclastic units which have undergone contact metamorphism. Within these amphibolitized volcanics, zones of medium to coarse-grained amphibolite, with a gabbro-like texture occur and are interpreted to be apophyses from the Fallon stock.

Outcrops in the northwest and central parts of the property seem typical of regionally metamorphosed mafic volcanics elsewhere in the Timmins area. These rocks are fine grained, occasionally chloritized and weakly schistose with both fresh and weathered surfaces having a dull dark to medium green-grey colouration. Pillowed metavolcanics and volcanic fragmentals (breccia, agglomerate) occur within these mafic rocks. The most prominent exposures being located grid south of the old beaver pond on Line 00, where pillow tops are to the southwest and as exposed on Line 5E immediately north of the baseline. The apparent volcanic fragmental at this latter outcrop may reflect the presence of a felsic dike given the limited exposure of this feature. Similar pseudo-tuffaceous and agglomeratic zones occur within the contact metamorphosed rocks to the south.

Along the northern boundary two outcrops of serpentinized peridotite are located. These rocks have a very dark bluish, black colouration indicative of serpentinization according to Pyke (ODM Geological Report 86). They are also noticeably magnetic, unlike all other rocks observed on the property. Whether these ultramafics occur as sills or extrusive flows was not readily apparent, however volcanic units proximal to these rocks show no contact metamorphic effects or alteration patterns which could be ascribed to intrusion. A strong magnetic anomaly south of these outcrops is believed to be associated with a thin ultramafic body which does not outcrop.

Prominent alteration effects, primarily of structural significance, have been identified based upon contrasting lithological characteristics and relative magnetic signatures. As mapped, they include the approximate location of an outer margin for the contact

metamorphic aureole and interpreted limits to apophyses from the Fallon stock and its contaminated border zone.

The boundary interpreted to represent the outer limit of the Fallon stock separates amphibolitic schists and locally gneissic mafic volcanics from massive medium to coarse-grained amphibolites. These massive amphibolites (possibly mafic gabbros) are also located within the adjacent metavolcanics and have been interpreted as apophyses from the stock based on relative magnetic characteristics. The apophyses coincide with a zone of relative magnetic depression, whereas the periphery of the monzonite intrusion coincides with a band of magnetic anomalies which extends from the southern extremity of Line 7E to the vicinity of Line 15E and the baseline. Beyond Line 10E, this geologic boundary is projected entirely upon this magnetic characteristic, which regionally defines the limits of the Fallon stock (1970, GSC aeromagnetic maps 291G, 293G, 294G ).

The location of an outer margin for the contact metamorphic aureole is considered a gradational boundary between weakly schistose, chloritic metavolcanics; some containing original volcanic structure; and fine to medium-grained, moderate to highly-foliated amphibolites. These latter amphibolites typically contain lenticular pods, patches, vein networks, dikes and interlayers rich in epidote, feldspar, quartz and hornblende. Zoned lenses and veins are also common with several combinations of epidote+feldspar+quartz observed in differing percentages. Occasionally epidote-rich patches were also observed to contain porphyroblasts of hornblende.

The varying degree to which the contact metamorphic effects are observed throughout these amphibolitized metavolcanics was used in some measure to determine spatial relationships, particularly proximity to the hybrid rocks of the contaminated border zone unit. Another spatial indicator observed closest to apophyses of the stock or to the border zone rocks was the presence of flow folding wherein lenticular features became highly contorted. Some measure of increased pyrite content was also noticed near these apophyses, but this relationship is not well understood.

Collectively, the above lithologic characteristics of these contact aureole rocks appear to have altered the background magnetic character associated with the regionally altered mafic metavolcanics. The presence of this weak magnetic low has been used with these lithologic indicators to establish the locale for the outer margin of the contact metamorphic aureole. In fact the location of this boundary was projected northeastwards from Line 7E based solely on the presence of a definable magnetic depression within the amphibolitized volcanics, which generally paralleled the known schistosities.

The structural geology of the property, apart from the prominent alteration effects displayed as a result of contact metamorphism, is poorly understood. A 15 m wide fault zone and several sheared sections within volcanic rocks were encountered in a foreign borehole, re-located on Line 4E. These intersections coincide with a linear magnetic low which trends northwest from Line 8E to Line 2E. But faulting, previously inferred to extend from Line 13E, 500S to Line 7E, 425N from an apparent offset in an electromagnetic conductor could not be observed in outcrop.

## MINERALIZATION

The current economic interest in this property centres on a galena occurrence located near Line 6E, at the baseline. During traversing, several other historic pits were located, which probably reflect gold prospecting activities dating to the early 1900's. The grid coordinates of these early activity centres are 2+40E along the south property boundary; Line 1E near 1+00S; 0+50E, 4+00S; and 1+40W, 4+70S. In total, nine prospect pits were located with one small copper occurrence identified. All such pits appear to have been placed to explore small feldspar porphyry dikes and quartz or quartz-carbonate veins within amphibolitized metavolcanics.

The galena mineralization occurs in a 5m x 2m trench at grid coordinates 0+10S, 6+10E and again in a 3m x 3m pit at 0+20N, 5+80E. The trench has been blasted into a 1m wide quartz-carbonate vein hosted by mafic metavolcanics. Observed sulphide mineralization consists of about 2-5 per cent pyrite and less than one per cent galena, concentrated along narrow seams within the quartz-carbonate

vein. Along the west side of this trench, a gossanous and micaceous gouge zone hosts a small pegmatitic quartz-feldspar vein. The pit at 0+20N, 5+80E is located within a zone of highly pyritic metavolcanics which host thin discontinuous quartz-feldspar veins. Here, sulphide mineralization exceeds 30 per cent pyrite with less than one per cent galena present within vein material. Between these galena-rich zones a monzonite dike was located at 0+00, 6+00E. The area of the dike shows evidence of prior chip sampling over a distance of 2m approximately. Six grab samples were assayed from this galena occurrence, with the highest grade sample returning assay grades of 0.006 oz./T. Au, 2.90 oz./T. Ag, and 0.65% Pb. All other assay results are attached as Appendix A.

The copper occurrence situated at 2+40E on the southern property boundary, is hosted by a 6cm x 1m section of a discontinuous quartz vein within amphibolitized and pyritic metavolcanics. Sulphide content within the volcanics ranges from two per cent to five per cent, with malachite stain and minor chalcopyrite observed within the quartz vein. Four prospect pits were located in this area, bearing 262° Azimuth. A second quartz-carbonate vein, 30cm wide was located 26m southwest of this line of pits but only minor pyrite was noted. One sample taken from this copper showing returned disappointing assay results. A second sample taken from a narrow quartz-feldspar porphyry monzonite dike (0+50E,4+00S) trending 324° Azimuth for a distance of 40m,returned equally disappointing results.

No other mineralization of economic significance was observed during these traverses but a substantial, quartz-rich zone was located near the south boundary between Lines 1W and 2W. Other quartz-carbonate, quartz and quartz+epidote occurrences were recorded but nowhere was a significant variation in pyrite concentrations observed to be associated with these zones.

A drill hole on Line 4E was apparently drilled to test an electromagnetic anomaly associated with ultramafics. No mineralization was encountered with the anomaly apparently caused by a fault and secondary shear zones within metavolcanics. A minor iron formation unit was identified but ultramafic rocks were absent.

## CONCLUSIONS AND RECOMMENDATIONS

As a result of the current mapping it is concluded that:

* The known chalcopyrite and galena mineralized occurrences appear to hold no on-going exploration potential as direct targets for gold.

* Although pyrite occurrences on the property situated either within or near the contact metamorphic aureole may prove favourable locales for hydrothermal mineralization related to the known felsic intrusions; all past prospecting associated with quartz veins, quartz-carbonate veins and/or shear zones within these metavolcanics has been abandoned without success. Future exploration here would require additional prospecting, intensive geochemical sampling activities and both whole rock sampling and thin section studies.

* Any southwest extension to the barite occurrence hosted by a zone of epidote layered amphibolite to the east of the property either has no surface expression or occurs south of the current property boundary.

* The combined magnetic and electromagnetic anomaly located between Line 00 and Line 8E represents a targetable zone in any ongoing search for either nickel or gold-bearing sulphide concentrations (eg. Langmuir nickel occurrence).

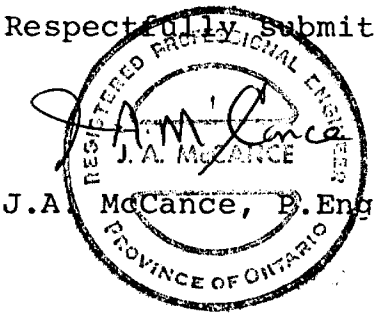
It is recommended that:

* All exploration data be re-evaluated as an initial step in preparing any on-going exploration program to define sulphide concentrations associated with the buried ultramafic unit on this property.

* Any further exploration involve either soil geochemical sampling or soil and rock geochemistry, possibly involving the use of overburden drilling tactics.

* A limited program of horizontal loop electromagnetics be conducted prior to any program involving exploration drilling of the known conductors.

Respectfully Submitted,




J.A. McCance, P.Eng

# APPENDIX A

## SAMPLE RECORD AND ASSAY CERTIFICATES

# SAMPLE RECORD

| Sample # | Location | Rock unit | Purpose | Type of sample | Lithology |
|---|---|---|---|---|---|
| 600-020-001 | 6E,0+20N pit | 1a,c | check mineralization (vis. galena) | rock, grab | pyritic, mafic metavolcanics |
| 600-020-002 | 6E,0+20N pit | 1a,c | check min'zn. (vis. galena) | rock, grab | pyritic, mafic metavol. |
| 600-000-003 | 6E,BL trench | 1a | check min'zn. (vis. galena) | rock, grab | qtz.-carb. vein |
| 600-000-004 | 6E,BL trench | 1a | check for min'zn. | rock, grab | pyr & micac. shear, peg. qtz-fsp vein |
| 600-000-005 | 6E,BL | 1a | check for min'zn. | rock, grab | monz. dike area of prev. channel samp. |
| 600-000-006 | 6E,BL | 1a | check for min'zn. | rock, grab split of 005 | misc. monz. dike + pyr. mafic metavol. |
| 114B | 2+40E, south boundary | 1d | check min'zn. (vis. malachite, cpy) | rock, grab | quartz vein |
| 116 | 0+50E, 4+00S | 3a,4? | check for min'zn. | rock, grab | pyr+qtz+fsp in porph. monz. dike |

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755 TELEX 06-986947

# CERTIFICATE OF ANALYSIS

TO: MERCIER EXPLORATIONS LIMITED
ATTN: H.G. HARPER
88 UNIVERSITY AVENUE, SUITE 806
TORONTO, ONTARIO
M5J 1T6

CUSTOMER NO. 467

DATE SUBMITTED
25-OCT-83

REPORT 19522

REF. FILE 15281-A2

6 ROCKS

WERE ANALYSED AS FOLLOWS:

| | METHOD | DETECTION LIMIT |
|---|---|---|
| AU OZ/TON | FA | 0.001 |
| AG OZ/TON | FA | 0.100 |
| PB % | XRF | 0.010 |

X-RAY ASSAY LABORATORIES LIMITED

DATE 07-NOV-83

CERTIFIED BY .....

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS 180 DAYS ***
AND REJECTS 90 DAYS FROM DATE OF THIS REPORT

| SAMPLE | AU OZ/TON | AG OZ/TON | PB % |
|---|---|---|---|
| 600-000-003 | 0.004 | 1.46 | 0.28 |
| 600-000-004 | NIL | NIL | TRACE |
| 600-000-005 | 0.002 | 0.26 | 0.06 |
| 600-000-006 | TRACE | NIL | 0.01 |
| 600-020-001 | 0.001 | 0.19 | 0.09 |
| 600-020-002 | 0.006 | 2.90 | 0.65 |

# APPENDIX B

## LIST OF CLAIMS, CLAIM MAPS (2),

## TECHNICAL DATA STATEMENT

# LIST OF CLAIMS

| CLAIM NUMBER | EXPIRY DATE |
|---|---|
| P. 652642 | |
| P. 652643 | |
| P. 652644 | |
| P. 652645 | |
| P. 652646 | |
| P. 652647 | |
| P. 652648 | |
| P. 652649 | |

# APPENDIX C

## STATEMENT OF QUALIFICATIONS

J. A. McCance, P.Eng.

## STATEMENT OF QUALIFICATIONS

I, JOHN A. McCANCE of the City of North York, Metropolitan Toronto, Province of Ontario do hereby certify:

1. That I am an exploration geologist/geophysicist and reside at 113 Hendon Avenue, Willowdale, Ontario.

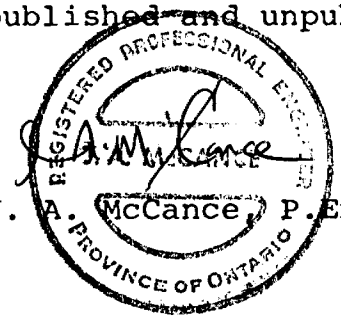
2. That I graduated from Queen's University at Kingston in 1970 with a Bachelor of Science degree, Faculty of Applied Science and have completed post-graduate training at the University of Western Ontario, London.

3. That I am a member of the Association of Professional Engineers of the Province of Ontario (Mining Branch) and the Canadian Exploration Geophysical Society (KEGS).

4. That I have been practising my profession for a period of eleven years.

5. That I am self-employed and personally carried out all geological mapping and prospecting activities herein reported.

6. That the information, opinions and recommendations expressed in the attached report are based on personal familiarity with the property and a study of published and unpublished reports and maps.




February 3rd, 1984

J. A. McCance, P.Eng.

Assessment Copy



020

**Mercier Explorations Limited**

**Radiometric Survey**

Fallon and Langmuir Townships

Ontario



February 6, 1984.
Diskname:Offset
Disk No.:0102
Filename: Fallrad.tit

H. Grant Harper, P.Eng.,
Economic Geologist.

Mercier Explorations Inc.
Radiometric Survey
Fallon & Langmuir Twps.
Ontario

## Introduction

This report covers a radiometric survey on a group of claims located in Fallon and Langmuir Townships Porcupine Mining Division, Ontario, which are owned by Mercier Explorations Inc. The survey work was done in February of 1983.

A base line was established along the township line and north-south picket lines were cut every 100 metres. The line cutting was done by Claude Castonguay and Leon Gagnon of Kirkland Lake and Swastika. The survey work was done by E.M. Hall of Toronto. H.Grant Harper of Toronto did the interpretation, map preparation and report.

## Property and Location

The property consists of 8 contiguous mining claims numbered as follows P652642 to P652649 inclusive.

The property straddles the boundary between Fallon and Langmuir Townships near the 2 mile post. It is located in the Porcupine Mining Division approximately 15 miles southeast of Timmins.

## Access and Facilities

Access to the property is from South Porcupine southward through Shaw and Eldorado Townships to the west corner of Langmuir nad Fallon Townships. Thence by walking eastward 3/4 mile to the west boundary of the claims.

The only facility of note on the property is a grid system of north-south picket lines.

## Radiometric Survey

The radiometric survey was carried out using a McPhar TC33A total field scintillometer having a sensitivity of 0.1 mev and higher. Readings were recorded in counts per second and were recorded at hip level. The instrument was left running at all times and any between station anomaly would have been detected by the audio response and thus recorded.

No anomlous readings were recorded during the survey. Reading differentials were too low to aid in locating contacts through overburden. An outcrop map of the area surveyed was submitted under a separate report covering the mapping of the property.

## Conclusions and Recommendations

1.-The radiometric survey has not contributed to the exploration of the property except in the negative sense.

This report is respectfully submitted.

HARPER CONSULTING SERVICES INC.

H.G. Harper, P.Eng.
President.

Willowdale, Ontario,
February 6, 1984.

This document available on disk:IBMPC;DOS2.0;WORDSTAR
Modem transmission: 416 225 7414;PCTALKIII;300/1200.
Disk NO:0102
Diskname:Offset
Filename:Fallnrad

Ministry of Natural Resources
Ontario

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

#5

W8406-53 The Min

42A07SW0056 2.6376 LANGMUIR

900

| | |
|---|---|
| Type of Survey(s): Radiometric | Township or Area: Fallon & Langmuir |
| Claim Holder(s): Mercier Explorations Limited | Prospector's Licence No.: T 897 |
| Address: 806 - 88 University Ave, Toronto | 2.6376 |
| Survey Company: Harper Consulting Services Inc. | Date of Survey (from & to): Day 6, Mo. 12, Yr. 83 — Day 6, Mo. Feb, Yr. 84 |
| Total Miles of line Cut: N/A | |
| Name and Address of Author (of Geo-Technical report): H.G. Harper, 314 Hendon Ave, Willowdale | |

## 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 | 20 |
| | - Other | |
| | Geological | |
| | 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. |
|---|---|---|
| P | 652642 | |
| | 652643 | |
| | 652644 | |
| | 652645 | |
| | 652646 | |
| | 652647 | |
| | 652648 | |
| | 652649 | |

| Mining Claim Prefix | Mining Claim Number | Expend. Days Cr. |
|---|---|---|
| | | |

MAR 15 1984

RECORDED
FEB 16 1984
Receipt No. 04

Total number of mining claims covered by this report of work: 8

## Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

FEB 16 1984 p.m.

Calculation of Expenditure Days Credits

Total Expenditures $ [illegible] ÷ 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 |
|---|---|---|
| 160 | Feb 16/84 | |
| | Date Approved as Recorded: 84.6.6 | Branch Director of Mining Recorder |

| Date | Recorded Holder or Agent (Signature) |
|---|---|
| 6 Feb 84 | per H.G. Harper, Pres. |

## 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.
314 Hendon Ave, Willowdale

Date Certified: 6 Feb 84

Certified by (Signature): H.G. Harper.

Ministry of Natural Resources
Ontario

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

#52/84

The Mining Act 26376

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 Mapping | Township or Area: Fallon & Longmuir Twps. |
| Claim Holder(s): Mercia Explorations Limited | Prospector's Licence No.: T897 |
| Address: 806 - 88 University Ave, Toronto | |
| Survey Company: J. McCance P. Eng. | Date of Survey (from & to): 10 Oct 83 / 5 Feb 84 (Day / Mo. / Yr.) |
| Name and Address of Author (of Geo-Technical report): as abm. 113 Hendon Ave, Willowdale | Total Miles of line Cut: N/A. |

## 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 | 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. |
|---|---|---|---|---|---|
| P | 652642 | | | | |
| | 652643 | | | | |
| | 652644 | | | | |
| | 652645 | | | | |
| | 652646 | | | | |
| | 652647 | | | | |
| | 652648 | | | | |
| | 652649 | | | | |

MAR 15 1984

RECORDED
FEB 16 1984
Receipt No. C

## Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

FEB 16 1984 P.M.

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.

Total number of mining claims covered by this report of work: 8

Date: 6 Feb 84

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

### For Office Use Only

| Total Days Cr. Recorded | Date Recorded | Mining Recorder |
|---|---|---|
| 160 | Feb 16/84 | |
| | Date Approved as Recorded: 84.6.6 | 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.
314 Hendon Ave, Willowdale

Date Certified: 6 Feb 84

Certified by (Signature): H. G. Harper.

Ministry of Natural Resources
Ontario

# Geotechnical Report Approval

File 2.6376

Mining Lands Comments

- geology map not coloured
- radiometric maps not contoured & profiled

☑ To: Geophysics R. Barlow

Comments

☑ Approved ☐ Wish to see again with corrections | Date Apr 14/84 | Signature RBL

☑ To: Geology - Expenditures C. Kustra

Comments

☑ Approved ☐ Wish to see again with corrections | Date April 24/84 | Signature C Kustra

☐ To: Geochemistry

Comments

LD

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

Our File: 2.6376

1984 02 23

Mr. Bruce Hanley
Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geophysical (Radiometric) and Geological survey submitted under Special Provisions (credit for Performance and Coverage) on mining claims P 652642 to 49 incl., in the Townships of Fallon and Langmuir.

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 very truly,

J.R. Morton
Acting Director
Land Management Branch

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

A. Barr:dg

cc: Mercier Explorations Ltd.
Ste. 806
88 University Avenue
Toronto, Ontario
M5J 1T6

cc: J.A. McCance
113 Henden Avenue
Willowdale, Ontario
M2M 1A6

# HARPER Consulting Services Inc.

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

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

February 6, 1984.

Mining Recorder,
60 Wilson Ave.,
Timmins, Ontario.
P4N 2S7.

Dear Sir,

Enclosed please find Report of Work forms covering 20 days of radiometric surveying and 20 days of geological mapping on each of 8 claims numbered P652642 to P652649 inclusive. The claims are owned by Mercier Explorations Limited. The required maps and reports have been submitted in duplicate to Mr. Matthews office in Toronto.

Should you note any errors or omissions in this submission will you please advise this office. Thank you.

Yours truly,

H. G. Harper

Ontario

Ministry of Natural Resources

File _____

# GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

**TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT**
**FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT**
**TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.**

Type of Survey(s) GEOLOGICAL MAPPING

Township or Area LANGMUIR and FALLON TWPS.

Claim Holder(s) MERCIER EXPLORATIONS LTD.
STE. 806, 88 UNIVERSITY AVE.

Survey Company SELF-EMPLOYED PROFESSIONAL

Author of Report J.A. McCANCE

Address of Author 113 HENDON AVE., WILLOWDALE

Covering Dates of Survey OCT. 10, 1983-FEB. 5,1984
(linecutting to office)

Total Miles of Line Cut N/A

**SPECIAL PROVISIONS CREDITS REQUESTED**

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

| | DAYS per claim |
|---|---|
| Geophysical | |
| –Electromagnetic | |
| –Magnetometer | |
| –Radiometric | |
| –Other | |
| Geological | 20 |
| Geochemical | |

**AIRBORNE CREDITS** (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: February 3, 1984 SIGNATURE: J.A. McCance P.Eng.
Author of Report or Agent

Res. Geol. _____ Qualifications 2.1965

Previous Surveys

| File No. | Type | Date | Claim Holder |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**MINING CLAIMS TRAVERSED**
**List numerically**

| (prefix) | (number) |
|---|---|
| P. | 652642 |
| P. | 652643 |
| P. | 652644 |
| P. | 652645 |
| P. | 652646 |
| P. | 652647 |
| P. | 652648 |
| P. | 652649 |

If space insufficient, attach list

TOTAL CLAIMS _____

OFFICE USE ONLY

837 (5/79)

Ontario Resources

# (Geophysical, Geological, Geochemical and Expenditures)

**The 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 Mapping

Township or Area: Fallon & Langmuir Twp.

Claim Holder(s): Mercia Explorations Limited

Prospector's Licence No.: T897

Address: 806 - 88 University Ave, Toronto

Survey Company: J. McConce P. Eng.

Date of Survey (from & to): 10 Day | Oct Mo. | 83 Yr. | 5 Day | Feb Mo. | 84 Yr.

Total Miles of line Cut: N/A.

Name and Address of Author (of Geo-Technical report): as above. 113 Hendon Ave, Willowdale

## 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 |
| | Geochemical | |
| **Man Days** Complete reverse side and enter total(s) here | Geophysical | |
| | - Electromagnetic | |
| | - Magnetometer | |
| | - Radiometric | |
| | - Other | |
| | Geological | |
| | Geochemical | |
| **Airborne Credits** 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. |
|---|---|---|
| P | 652642 | |
| | 652643 | |
| | 652644 | |
| | 652645 | |
| | 652646 | |
| | 652647 | |
| | 652648 | |
| | 652649 | |

| Mining Claim Prefix | Mining Claim Number | Expend. Days Cr. |
|---|---|---|
| | | |

Total number of mining claims covered by this report of work: 8

## 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: 6 Feb 84

Recorded Holder or Agent (Signature): Mercia Explns Ltd per H. G. Harper President

## 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.

Date Certified | Certified by (Signature)

Ontario

Ministry of Natural Resources

File _____

# GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Radiometric

Township or Area Fallon & Longmuir Twps.

Claim Holder(s) Mercier Explorations Limited
Suite 806 - 88 University Ave Toronto

Survey Company Harper Consulting Services Inc.

Author of Report H. G. Harper. P. Eng.

Address of Author 314 Hendon Ave, Welland

Covering Dates of Survey Feb 83 to Feb 84
(linecutting to office)

Total Miles of Line Cut N/A

## SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

DAYS per claim

Geophysical
--Electromagnetic _____
--Magnetometer _____
--Radiometric 20
--Other _____
Geological _____
Geochemical _____

## AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Feb 6 / 84 SIGNATURE: H. G. Harper.
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

| File No. | Type | Date | Claim Holder |
|---|---|---|---|
| | | | |
| | | | |
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| | | | |

OFFICE USE ONLY

## MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

P 652642
P 652643
P 652644
P 652645
P 652646
P 652647
P 652648
P 652649

TOTAL CLAIMS 8

If space insufficient, attach list

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument McPhar TV33A Scintillometer

Values measured gamma radiation in counts per second

Energy windows (levels) 0.1 mev & higher

Height of instrument high level Background Count 400 cps.

Size of detector 1.5" diam x 1.5" high 2.63 cu in.

Overburden Variable 0 - several feet sand, gravel, peat

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

Ontario Resources

# (Geophysical, Geological, Geochemical and Expenditures)

## The Mining Act

Note: – If number of mining claims traversed exceeds space on this form, attach a list.
– 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): Radiometric

Township or Area: Fallon & Langmuir

Claim Holder(s): Mercian Explorations Limited

Prospector's Licence No.: T 897

Address: 806 - 88 University Ave, Toronto

Survey Company: Harper Consulting Service Inc.

Date of Survey (from & to): 6 Feb 84 – 6 Feb 84 (Day / Mo. / Yr.)

Total Miles of line Cut: N/A

Name and Address of Author (of Geo-Technical report): W. G. Harper, 314 Hendon Ave, Willowdale

### 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 | 20 |
| | - Other | |
| | Geological | |
| | 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. |
|---|---|---|
| P | 652642 | |
| | 652643 | |
| | 652644 | |
| | 652645 | |
| | 652646 | |
| | 652647 | |
| | 652648 | |
| | 652649 | |

| Mining Claim Prefix | Mining Claim Number | Expend. Days Cr. |
|---|---|---|
| | | |

Total number of mining claims covered by this report of work.: 8

### 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: 6 Feb 84

Recorded Holder or Agent (Signature): per W. G. Harper, Pres.

### 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: W. G. Harper.

| | R. | GL. | | | | 2·6376 |
|---|---|---|---|---|---|---|
| ~~5~~ 2642 | ✓ | ✓ | | | | |
| 43 | ✓ | ✓ | | | | |
| 44 | ✓ | ✓ | | | | |
| 45 | ✓ | ✓ | | | | |
| 46 | ✓ | ✓ | | | | |
| 47 | ✓ | ✓ | | | | |
| 48 | ✓ | ✓ | | | | |
| 49 | ✓ | ✓ | | | | |
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400' surface rights reservation along the shores of all lakes and rivers

Flooding rights on Nighthawk Lake to the contour elevation 903.5' reserved to H.E.P.C.

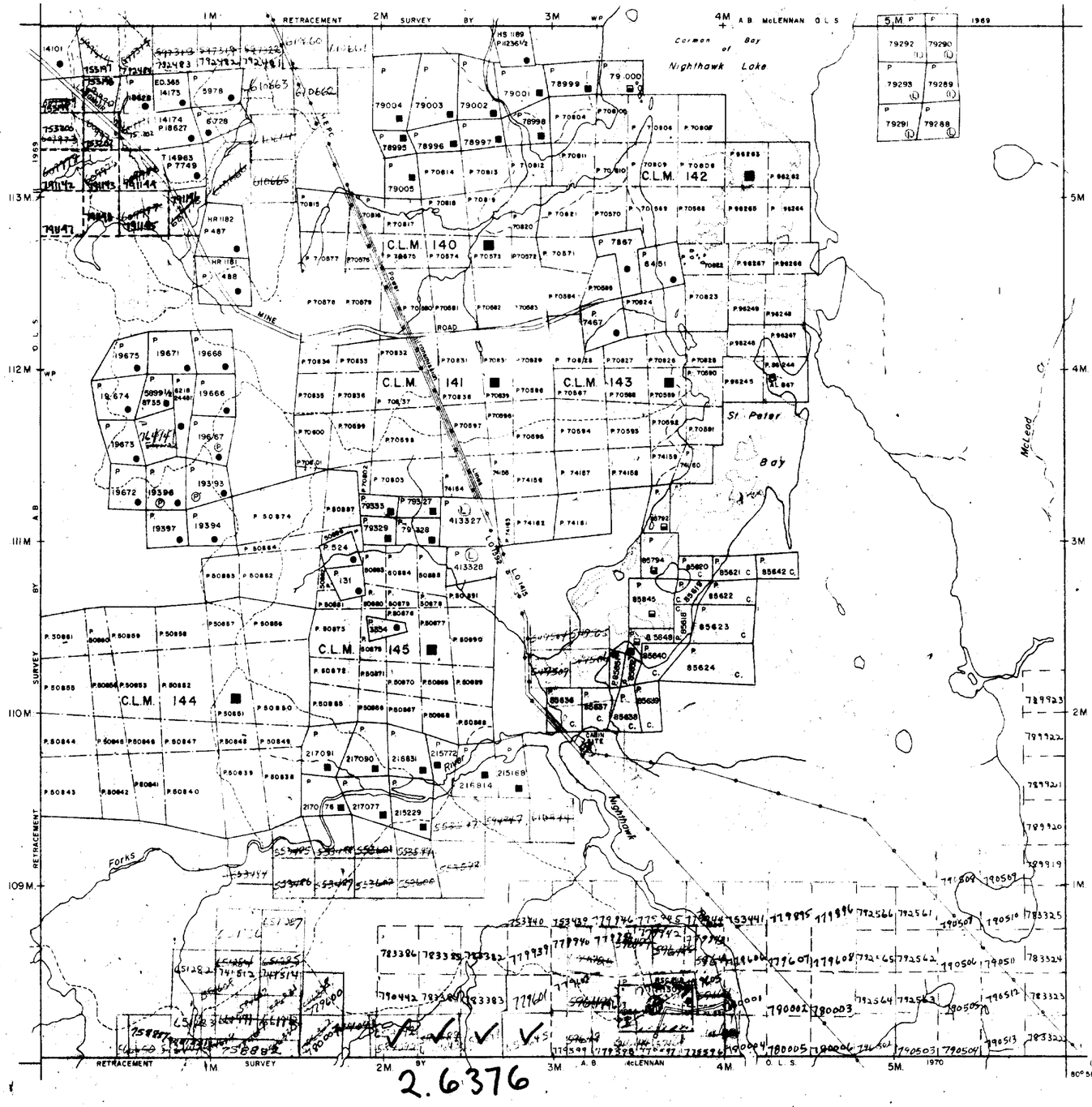
SAND and GRAVEL

[illegible] 2/5/81

MR+SR Withdrawn from staking NRW 37/83

This township lies within the Municipality of CITY of TIMMINS.

# CARMAN TP. M.266




ELDORADO TP. M.276

BLACKSTOCK TP. M.263

2.6376

FALLON TP. M.278

## LEGEND

- HIGHWAY AND ROUTE No
- OTHER ROADS
- TRAILS
- SURVEYED LINES
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

## DISPOSITION OF CROWN LANDS

| TYPE OF DOCUMENT | SYMBOL |
|---|---|
| PATENT, SURFACE & MINING RIGHTS | |
| SURFACE RIGHTS ONLY | |
| MINING RIGHTS ONLY | |
| LEASE, SURFACE & MINING RIGHTS | |
| SURFACE RIGHTS ONLY | |
| MINING RIGHTS ONLY | |
| LICENCE OF OCCUPATION | |
| CROWN LAND SALE | C.S. |
| ORDER-IN-COUNCIL | OC |
| RESERVATION | R |
| CANCELLED | C |
| SAND & GRAVEL | S |

RECEIVED
APR 25 1984
MINING LANDS SECTION
A.M. P.M.

SCALE : 1 INCH 40 CHAINS

FEET 0 500 1000 2000 4000 6000 8000
METRES 0 200 400 600 800 1KM 2KM

| ACRES | HECTARES |
|---|---|
| 40 | 16 |

TOWNSHIP

# LANGMUIR

DISTRICT

COCHRANE

MINING DIVISION

PORCUPINE

Rec. Oct 4/84

ISSUE
JUN 4 1984
Ministry of Natural Resources

Ministry of Natural Resources

Ontario Surveys and Mapping Branch

Date SEPT. 1973

Whitney Block
Queen's Park, Toronto

Plan No. M.292

ATV

## NOTES

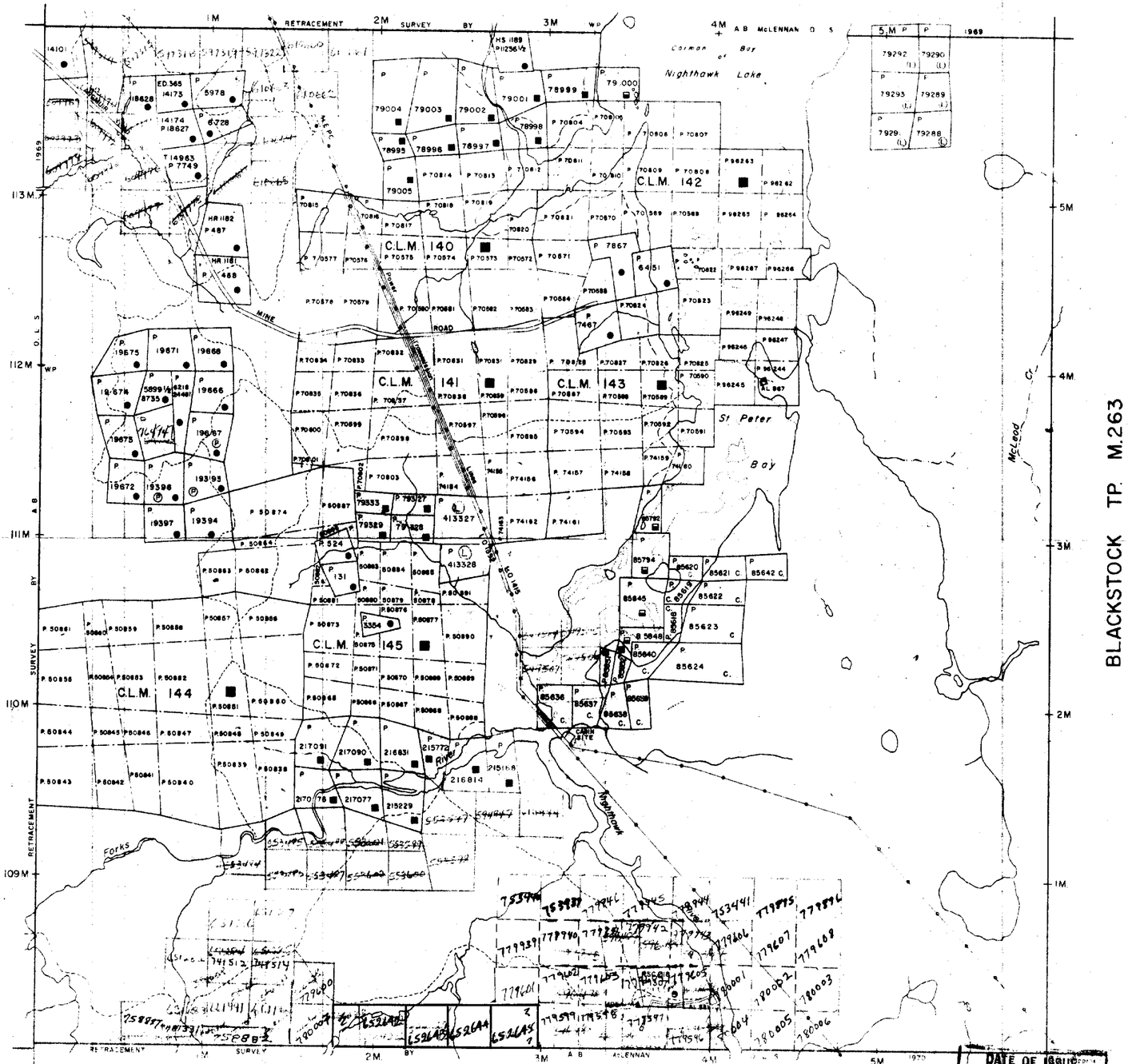
400 surface rights reservation along the shores of all lakes and rivers.

Flooding rights on Nighthawk Lake to the contour elevation 903.5' reserved to H.E.P.C.

SAND and GRAVEL

This township lies within the Municipality of CITY of TIMMINS.

# CARMAN TP. M.266




TP. M.276 ELDORADO

TP. M.263 BLACKSTOCK

FALLON TP. M.278

## LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS, ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

## DISPOSITION OF CROWN LANDS

| TYPE OF DOCUMENT | SYMBOL |
|---|---|
| PATENT, SURFACE & MINING RIGHTS | ● |
| SURFACE RIGHTS ONLY | ◐ |
| MINING RIGHTS ONLY | ◑ |
| LEASE, SURFACE & MINING RIGHTS | ■ |
| SURFACE RIGHTS ONLY | ◧ |
| MINING RIGHTS ONLY | ◨ |
| LICENCE OF OCCUPATION | ◀ |
| CROWN LAND SALE | C.S. |
| ORDER-IN-COUNCIL | OC |
| RESERVATION | (R) |
| CANCELLED | (X) |
| SAND & GRAVEL | (P) |

SCALE : 1 INCH = 40 CHAINS

FEET 0 500 1000 2000 3000 4000 5000 6000 7000 8000

METRES 0 200 400 600 800 1 KM 2 KM

| ACRES | HECTARES |
|---|---|
| 40 | 16 |

TOWNSHIP

# LANGMUIR

DISTRICT

COCHRANE

MINING DIVISION

PORCUPINE

Ministry of Natural Resources

Ontario

M.292







26,326

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

March 11/84

M.278

ONTARIO
MINISTRY OF NAT RESOURCES
SURVEYS AND

# FALLON

## PORCUPINE MINING DIVISION
## DISTRICT OF TIMISKAMING

Scale: - 40 Chains - 1 Inch

North Ast.

LANGMUIR

DOUGLAS

FASKEN

CLEAVER

2.6376

1M. 2M. 3M. 4M. 5M.

108. 107. 106. 105. 104. 103. 102.

5M. 4M. 3M. 2M. 1M.

Transmission Line

Hawk Lake

Dam

Quarry Permit

400' Surface rights reservation around all lakes & rivers.

## LEGEND

| | |
|---|---|
| CANCELLED | C |
| PATENTED LAND | (P) |
| CROWN LAND SALE | C.S. |
| LEASES | (L) |
| LOCATED LAND | LOC |
| LICENSE OF OCCUPATION | L.O. |
| MINING RIGHTS ONLY | MRO. |
| SURFACE RIGHTS ONLY | SRO |

DATE OF ISSUE
JUN 4 1984
Ministry of Natural Resources
TORONTO

42A07SW0056 2.6376 LANGMUIR

M.278

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

# FALLON

## PORCUPINE MINING DIVISION
## DISTRICT OF TIMISKAMING

Scale - 40 Chains - 1 Inch

LANGMUIR 26376

DOUGLAS

FASKEN

HEWITT RIVER

CLEAVER

LEGEND

| | |
|---|---|
| CANCELLED | C |
| PATENTED LAND | (P) |
| CROWN LAND SALE | C.S |
| LEASES | (L) |
| LOCATED LAND | LOC |
| LICENSE OF OCCUPATION | L.O |
| MINING RIGHTS ONLY | MRO |
| SURFACE RIGHTS ONLY | SRO |

400' Surface rights reservation around all lakes & rivers

January 20, 1984

DATE OF ISSUE
FEB 3 1984
Ministry of Natural Resources
TORONTO

42A07SW0056 2.6376 LANGMUIR

L3W L2W L1W L00 L1E L2E L3E L4E L5E L6E L7E L8E L9E L10E L11E L12E L13E L14E L15E

N

Timmins and Matheson

old road

Maybourn Mines Ltd. 1965

P652642 P652643 P652644 P652645 P652646 P652647 P652648 P652649

helicopter landing site

old campsite

2W Post

Langmuir
Fallon

BASELINE

Area Surveyed

LOCATION MAP
1" = ¼ mile

## KEY SYMBOLS

- float occurrence ? small bedrock outcrop ?
- area of bedrock outcrop
- schistosity (inclined, vertical, unknown)
- lava flow : top in direction of arrow
- strike & dip of prominent joint sets
- geological boundary, position interpreted
- outer margin of contact metamorphic aureole
- glacial landform, morraine ridge ?esker ?
- vegetation boundary, position interpreted
- trench
- drill hole, inclined
- sample site
- winter road
- trail ; portage
- claim boundary ; post & lines located
- Langmuir / Fallon — 2M Post — TIMMINS : southern limit of city (township boundary)
- 6m — sharp relief ; height in metres
- swamp or muskeg
- old pit

qv quartz vein (blue; grey; glassy)
qcv quartz carbonate vein
eqv epidote quartz vein
py pyrite
cpy chalcopyrite
gn galena
Ag silver
Au gold

## LEGEND

**CENOZOIC**

**RECENT**

swamp, stream deposits

**PLEISTOCENE**

clay, sand, gravel

UNCONFORMITY

**EARLY PRECAMBRIAN (ARCHEAN)**

**Mafic Intrusive Rocks**

4 porphyritic diabase

INTRUSIVE CONTACT

**Felsic Intrusive Rocks**

3a monzonite, porphyritic monzonite, quartz-monzonite dikes

3b contaminated border zone (amphibolitic rocks)

INTRUSIVE CONTACT

**Mafic to Ultramafic Intrusive Rocks**

2a gabbro, diorite

2b serpentinized ultramafic rocks

INTRUSIVE CONTACT

**Mafic Metavolcanics**

1a flow, massive to foliated

1b flow, pillowed to amygdaloidal

1c breccia to agglomerate fragmentals (dikes?)

1d amphibolite, amphibolitic schist, banded amphibolite (epidote-layered?)

2.6376

# MERCIER EXPLORATIONS LTD

LANGMUIR - FALLON TWPS.

1 : 2000

0 20 40 60 80 100 metres 200

REGISTERED PROFESSIONAL ENGINEER

Province of Ontario

240

L3W L2W L1W L00 L1E L2E L3E L4E L5E L6E L7E L8E L9E L10E L11E L12E L13E L14E L15E

N

Timmer and Sr. McGuiggan

old road

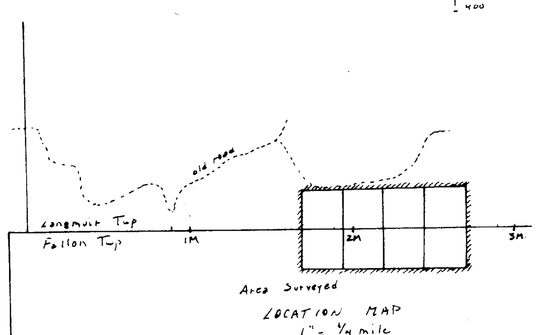
P852642 P852643 P852644 P852645

P852649 P852648 P852647 P852646

Langmuir
Fallon

2M Post

BASELINE




Area Surveyed
LOCATION MAP
1" = ½ mile

ANOMALY

McPhar TC33A Scintillometer

SENSITIVITY: 0.1 mev plus

readings in counts per second at hip level

# MERCIER EXPLORATIONS LTD

LANGMUIR – FALLON TWPS.

1:2000

## Radiometric Survey

MAR 3 1989

H. C. HARTER

250