



THE LANGMUIR TOWNSHIP CLAIMS  
OF  
CON-SHAWKEY GOLD MINES LIMITED  
TIMMINS, ONTARIO

INTRODUCTION

During the period 20-30 June, 1969, the writer, accompanied by Robert Kasner, prospector, of 313 Troke St., Timmins, spent five days examining, mapping and sampling the claim group.

A grid system of lines at 200 foot intervals had been cut over the claim group in 1966 and were utilized for a magnetometer and EM survey - the writer utilized the existing system but spent considerable time locating the old lines and pickets.

Reference Map: O.D.M. Map P.444 - Langmuir Township

LOCATION & ACCESSIBILITY

The group consists of 8 contiguous unpatented mining claims numbered as follows:

P.84897-98-99  
85599  
83154  
82189  
64951  
64953

Located in the northwest corner of Langmuir Township, the claims lie 12 miles southeast of the Town of South Porcupine. Secondary gravel roads passable to all vehicles extend for 8 miles from South Porcupine to the Carshaw Porcupine Gold Mines in the southeast corner of Star Township. From this point logging roads passable only to tractor or swamp buggy extend to and across the property.

The area has been logged in recent years so that little or no marketable timber remains. The six westerly claims are flat, clay covered and crossed by several small streams. The low ground extends northerly through the centre of claim 64953. The east half of claim 64953 and claim 64951 contain much outcrop.

GENERAL GEOLOGY

From O.D.M. Map P.444

\*North of the Forks River andesitic to dacitic volcanics predominate. Included with these is a very fine-grained quartz porphyry (unit 2a), which at least in part is intrusive into the metavolcanics. The iron formation consists dominantly of chert and argillite locally containing bands rich in pyrite and

pyrrhotite and lesser amounts of magnetite and hematite.

Serpentinized ultramafic and mafic intrusive rocks form sill-like bodies within the volcanics in the northwest part of the area. More regionally these intrusions form the southeast end of an elliptical-shaped structure approximately 10 x 6 miles, as outlined by a magnetic high (Geological Survey of Canada, Aeromagnetic Series, Map 293G), and discontinuous outcroppings of serpentinite (Ontario Department of Mines Map 2046).

A stock of medium-grained, grey, biotite-hornblende granodiorite extends into the northwest corner of the township. The northern periphery of a small hornblende syenite body intrudes the mafic volcanic rocks along the southern boundary. Other granitic rocks in the area consist of minor dikes and sills.

Minor, flat-lying conglomerate, greywacke and argillite of the Cobalt Group outcrop in the southwest corner of the township.

Diabase dikes were observed to cut all the above rock types.

Major fault and shear zones appear to be generally in a north to NW direction. The Montreal River Fault (Ontario Department of Mines Map 2046) probably extends to at least a mile NW of the Forks River, as indicated by shearing in a few outcrops in that vicinity."

#### GEOLOGY OF THE PROPERTY

The six westerly claims of the group are covered with overburden consisting of an apparent thick mantle of clay with the exception of several large outcrops of granodiorite in the southwest corner. It is medium grained and grey in colour. No contacts were observed.

Near the east boundary of the westerly six claims, the ground rises onto a prominent ridge of ultramafic intrusive rocks which extend to the northeast across claim no. 64953. These rocks are massive, brown and deeply weathered, often with scaly fragments. They exhibit in places a peculiar columnar jointing which in weathering shows onion-like layering. In part they are well sheared producing a jagged coarse layered effect. They are soft and highly magnetic. According to O.D.M. Map P.444 these rocks form the southeasterly nose of a large elliptical basin-like structure and are sill-like intrusives, with northeasterly strike, which are tightly folded and overturned to the north.

The ultramafic rocks have intruded volcanic rocks which are found on the two most easterly claims. These rocks are fine grained, light coloured and massive. Locally they contain finely disseminated pyrite. In the south half of claim 64951 are fine grained quartz porphyries which are intimately intruded or interbedded with the felsic volcanics.

Interbedded within the felsic volcanic rocks are narrow, discontinuous bands of iron formation consisting of 1" - 6" bands of chert with similar layers of massive pyrite and pyrrhotite. A very minor amount of chalcopyrite was observed.

On the west boundary of claim 64951 shallow trenching has exposed 3 to 5 feet of banded chert and pyrite-pyrrhotite over a length of about 50 feet. The band dips easterly at about 60° and strikes 10° - 20° east of north. It apparently terminates abruptly to the north. The southerly extension is covered by overburden. One selected sample of the most heavily mineralized material ran as follows:

Ni	Nil
Cu	0.26%
Au	Nil
Ag	0.04 oz.

Approximately 400 feet to the northeast 4 shallow pits have exposed 2 bands of iron formation about 30 feet apart. The bands, 1' - 2' wide, strike slightly east of north and dip about 35° to the southeast.

The westerly band is about 20 feet long and apparently pinches out. One channel sample 18" long was cut across the zone. Results are as follows:

Ni	0.01%
Cu	0.07%
Au	Nil
Ag	0.03 oz.

The easterly band on which 3 pits are located is a minimum of 75 feet in length. Two channel samples 12" long were taken across the formation from the two most southerly pits with the following results:

Ni	0.03%	Tr
Cu	0.15%	0.04
Au	Nil	Nil
Ag	Tr	0.04 oz.

There is evidence of diamond drilling at this location but the collars were not located.

Three EM anomalies were located on claim 64951 - one of these coincides with the iron formation located on the west boundary of the property.

The second conductor lies about 200 feet south of and approximately parallel to the easterly iron formations. The conductor occurs in an overburden area and may represent another band of iron formation. The third conductor located on line 12S @ 15E coincides with an area of fine pyrite mineralization in the felsic volcanics. One grab sample of this mineralization assayed as follows:

Ni	Tr
Cu	0.03
Au	Nil
Ag	0.02

The geophysical report by McPhar, dated 14 September, 1966, in discussing the Em anomalies states "Zone A consists of a series of conductor axes located near 11E on Lines 2S to 10S that appear to represent a single throughgoing structure. It trends roughly N-S and is probably due to a relatively shallow source of good conductivity that dips steeply west."

In the writer's opinion neither the mineralization nor the anomalies on claim 64951 warrant further investigation.

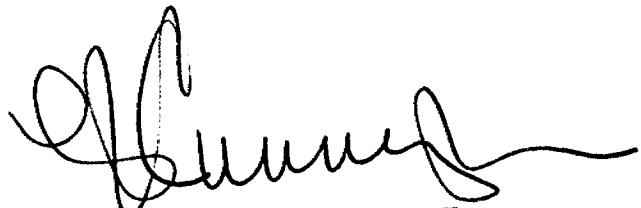
In discussing the magnetics the following was stated "The most prominent features on the magnetic map are the two E-W trending anomalies near 36S. These could be caused by an E-W basic dike" "However, there is no obvious correlation between the magnetics and the electromagnetic responses."

Considerable interest exists in the township with nickel-bearing sulphides, sparsely disseminated in some of the serpentized ultramafic rocks being the prime targets. International Nickel Co. has been active in the area for several years but the results of their work are unknown. McWatters Gold Mines have announced a relatively small tonnage of nickel-bearing sulphide. The possibilities therefore exist of finding an economic deposit of low grade disseminated nickel-ferrous sulphides within the serpentized peridotites. With this in mind, consideration should be given to an inducted polarization survey over all but claim 64951. This coincides with some of the recommendations as set forth in the geophysical report in discussing the 6 westerly claims.

"The remaining electromagnetic responses are typical of those obtained in areas of conductive overburden and may be caused by this material. However, they may also represent bedrock conductors that are masked and distorted by the conductive overburden. Induced Polarization surveying should be considered to determine whether there is any significant metallics on the main group of claims."

- McPhar report.

Signed,



L. J. Cunningham, B.Sc., P.Eng.,  
Mining Engineer

Dated at  
Kirkland Lake, Ontario  
22nd August, 1969



REPORT ON THE  
MAGNETIC AND ELECTROMAGNETIC SURVEY  
LANGMUIR TOWNSHIP, ONTARIO  
FOR  
CON-SHAWKEY GOLD MINES LIMITED

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1. INTRODUCTION

As authorized by Con-Shawkey Gold Mines Limited, magnetic and electromagnetic surveys have been carried out over a group of 8 contiguous claims. The claims are located in the northwest portion of Langmuir Township in the Porcupine Division of Ontario.

The work was carried out with a McPhar M500 magnetometer and a McPhar SS 15 vertical loop EM system operating at 1000 and 5000 cps. The grid consists of a series of E-W traverse lines spaced at intervals of 200 feet with stations every 100 feet. Field surveying was completed during April 1966.

2. PRESENTATION OF RESULTS

The magnetic data has been shown in numerical and contour form on the accompanying map at a scale of 1" = 200'. Profiles have been used to show the electromagnetic dip angles on a separate map that is also at a scale of 1" = 200'.

### 3. DISCUSSION OF RESULTS

#### Electromagnetics

##### Zone A

Zone A consists of a series of conductor axes located near 11E on Lines 2S to 10S that appear to represent a single throughgoing structure. It trends roughly N-S and is probably due to a relatively shallow source of good conductivity that dips steeply west. However, the above characteristics of the zone are not definite due to the existence of other conductors in the vicinity as well as the possibility of conductive overburden which may cause some distortion of the profile.

Gossan material containing some copper values is reported in old trenches on Lines 10S and 14S and Zone A is considered worthy of at least one test drill hole. D. D. H. #1 has been spotted at 10E on Line 8S to determine the cause of the anomaly.

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The isolated crossover near 15E on Line 12S is of interest and would warrant testing if the results of D. D. H. #1 are encouraging. However, it lies close to the claim boundary and consideration should be given to acquiring the adjacent ground before drilling is considered.

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A large number of conductor axes and possible conductor axes have been interpreted from the electromagnetic profiles on the main group of claims. Some of these may represent shear zones or

other poorly conductive bedrock structures. However, the overall character of the results suggests that the responses are either entirely due to conductive overburden or are somewhat masked and distorted by this surficial material. In our opinion, there is little to be gained by additional surveying with electromagnetic methods. A program of induced polarization surveying on 400 or 600 foot lines is suggested to establish whether any significant metallic material is associated with the poorly defined electromagnetic indications.

#### Magnetics

The most prominent features on the magnetic map are the two E-W trending anomalies near 36S. These could be caused by an E-W basic dike and if this is considered to be of importance, it should be outlined by a series of N-S traverses.

The magnetic contours on the east half of the main grid between 10S and 28S display a N-S trend and parallel both the stream and the trend of the electromagnetic indications. However, there is no obvious correlation between the magnetics and the electromagnetic responses.

#### 4. SUMMARY AND RECOMMENDATIONS

The electromagnetic results have outlined a N-S trending zone, Zone A, that lies on the most easterly claim of the group. It displays good conductivity and occurs in an area where copper

mineralization is reported in old trenches. D. D. H. #1 has been spotted to test this interesting anomaly.

The crossover near 15E on Line 12S is also of interest, but it occurs close to the claim boundary.

The remaining electromagnetic responses are typical of those obtained in areas of conductive overburden and may be caused by this material. However, they may also represent bedrock conductors that are masked and distorted by the conductive overburden. Induced Polarization surveying should be considered to determine whether there is any significant metallics on the main group of claims.

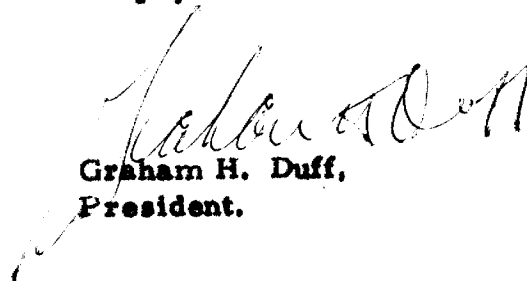
None of the magnetic features correlate with the electromagnetics but on the main grid the magnetic contours have a N-S trend that parallels the trend of the EM indications.

There are two E-W trending magnetic features near 36S. These may represent a basic dike and if this is thought to be of economic importance they should be detailed by a series of N-S traverses.

GHD CONSULTANTS LIMITED



D. B. Sutherland,  
Geophysical Consultant



Graham H. Duff,  
President.

Dated: September 14, 1966



# McPHAR GEOPHYSICS LIMITED

## GENERAL NOTES ON THE McPHAR ELECTROMAGNETIC METHOD

Electromagnetic measurements are made in terms of "dip angles" and are recorded in degrees. The dip angles measure the amount of distortion of the primary (applied) electromagnetic field caused by secondary fields associated with currents induced in sub-surface electrical conductors. These angles are plotted in degrees on the accompanying maps either beneath or to the right of the station from which each observation was taken. Where a minus sign precedes a number, the angle of dip is to the west or south; the absence of a sign preceding a number indicates an easterly or northerly dip angle.

Transmitting coil locations are termed "setups"; each one being marked on the maps with a triangle and bearing a code number. Several lines are traversed with the receiving coil when the transmitting coil is at any one location; the readings on these lines are related to the corresponding setup by the code at the end of each series of readings.

"Conductor-axes" are marked on the maps according to the legend. They are, in general, vertical projections to the surface of the upper extremities of electrically-conductive bodies.

Electromagnetic anomalies can result from sulphide mineralization, graphitic schists, carbonaceous sediments and, on occasion, fault zones. Apropos of this it is to be noted that disseminated sulphide mineralization consisting entirely of discrete particles is not a conductor at the normal frequencies used for practical geophysical exploration. Consequently, exploration of a property subsequent to an electromagnetic survey should be based not only on the indicated electromagnetic anomalies, but should take into account all the geologic and physiographic data that can be obtained.

Carman Twp. - M.266

THE TOWNSHIP  
OF  
**CLAIM MAP**  
**LANGMUIR**

DISTRICT OF  
TIMISKAMING

PORCUPINE  
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 — — — — —

NOTES

400' Surface Rights Reservation around all lakes and rivers.

Flooding rights on Nighthawk Lake to the contour elevation 903.5' reserved to M.E.R.C.

DATE OF ISSUE

NOV 3 1969

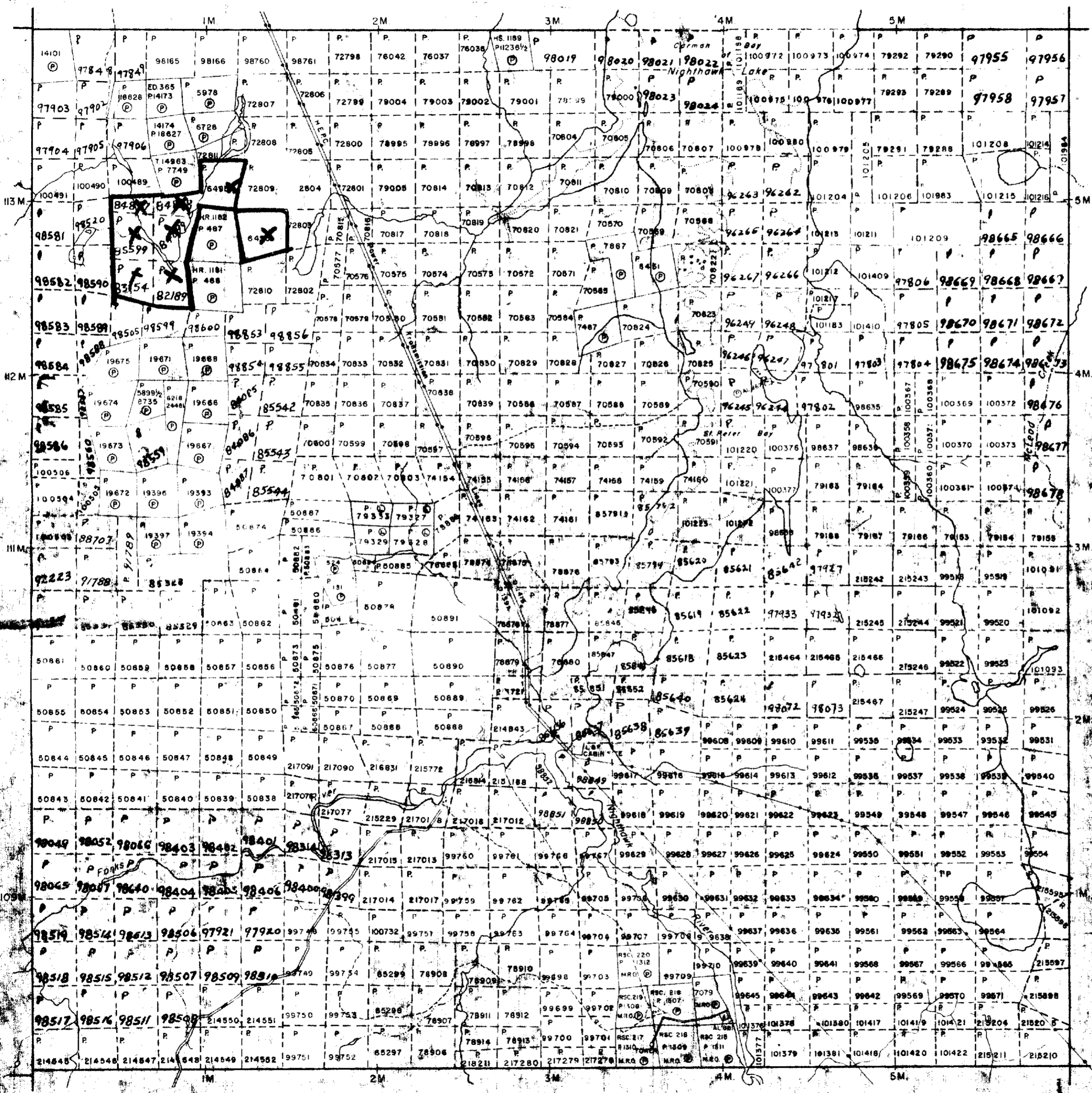
ONTARIO DEPT. OF MINES

NOV 3 1969

ONTARIO DEPT. OF MINES

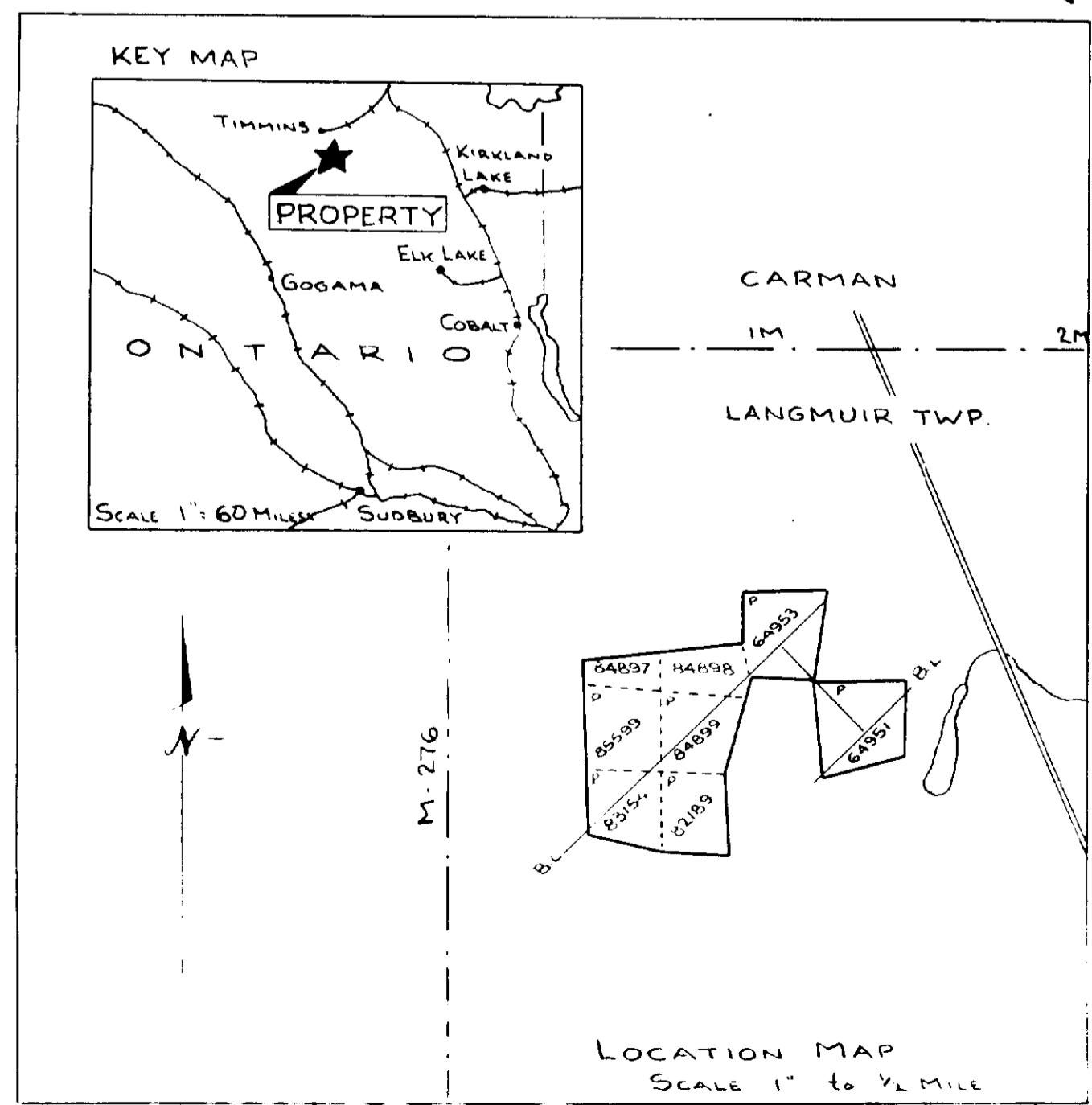
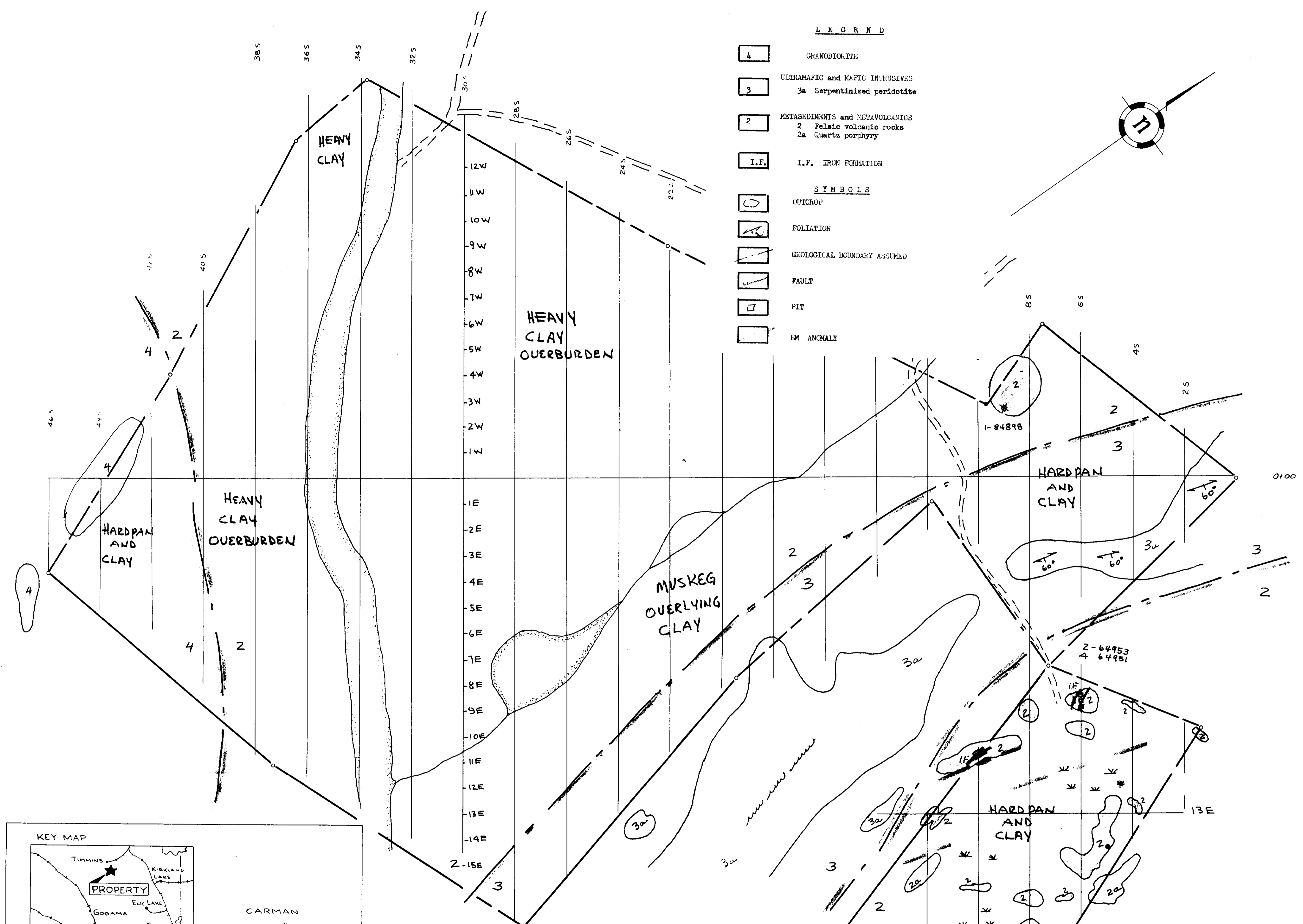
PLAN NO. **M.292**

DEPARTMENT OF MINES  
— ONTARIO —



Falcon Twp. - M.278





CON SHAWKEY GOLD MINES LTD.  
LANGMUIR TOWNSHIP, ONTARIO.

**GEOLOGICAL SURVEY**

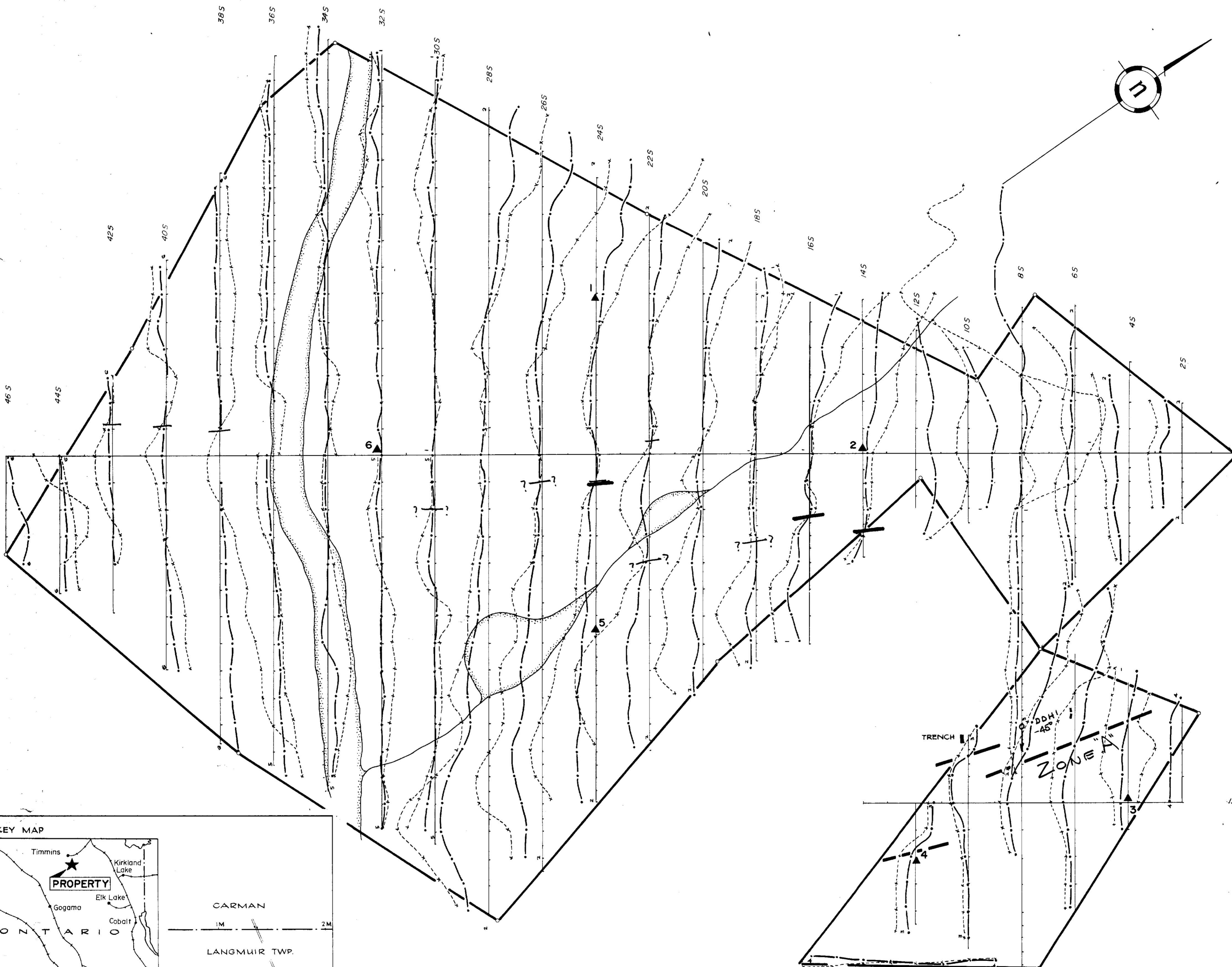
CLAIMS 84897-98-99, 85599, 83154, 82189, 64951, 64953

by  
L. J. CUNNINGHAM B.Sc., P. ENG



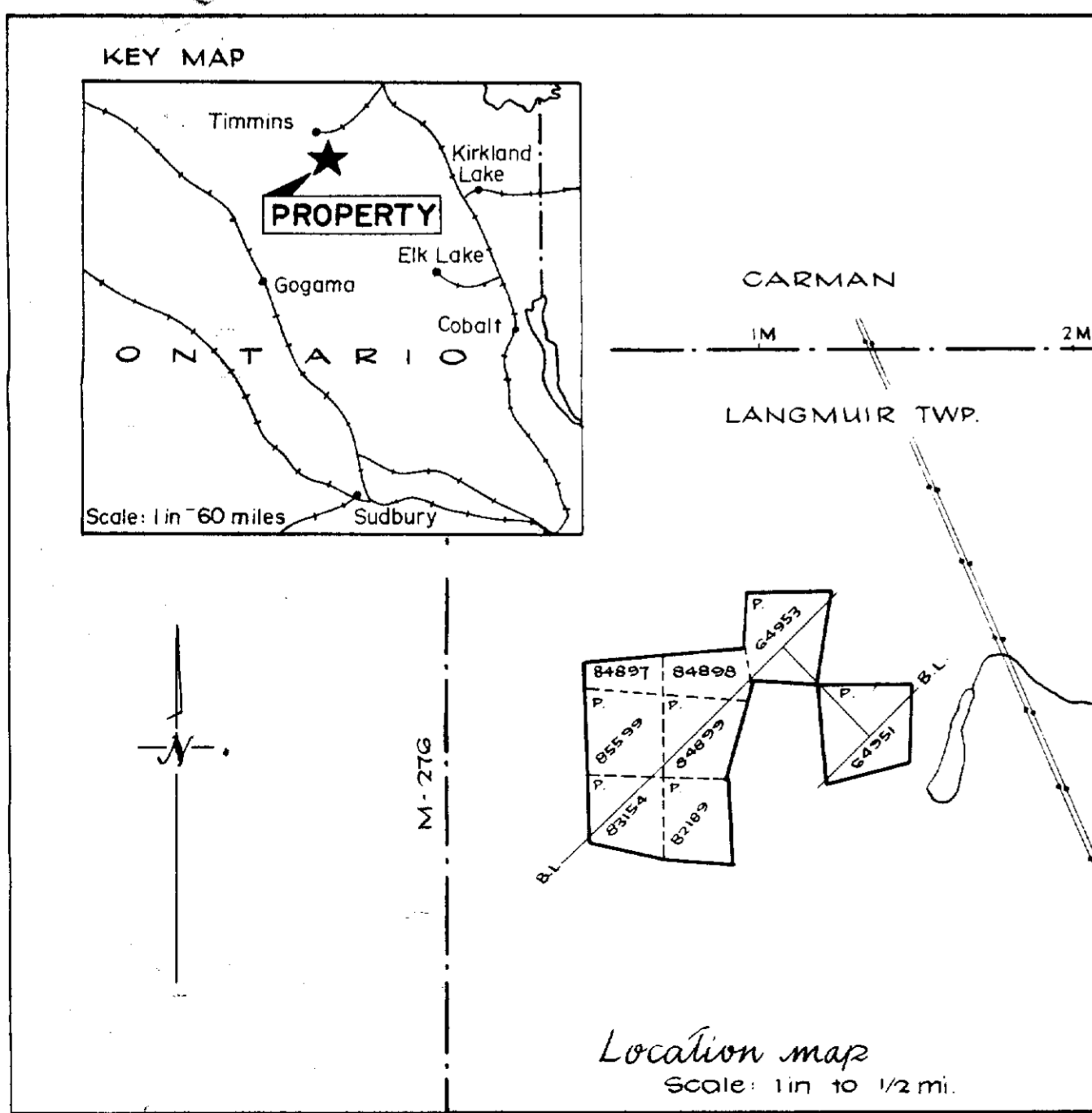
30th JUNE, 1969





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13+00 E



LEGEND

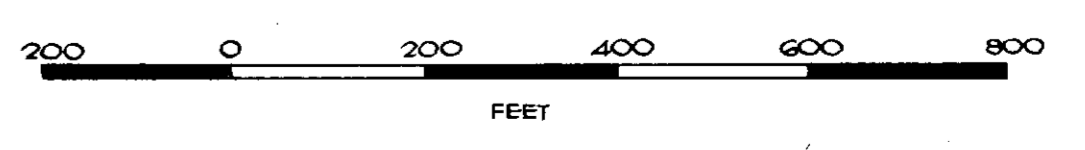
- E.M. SURVEY VERTICAL LOOP
- SCALE: 1" = 20'
- 1000 c.p.s. PROFILE
- 5000 " " "
- ▲ TRANSMITTER LOCATION

CON-SHAWKEY GOLD MINES LTD.  
LANGMUIR TOWNSHIP, ONTARIO.

ELECTROMAGNETIC SURVEY

CLAIMS 84897-98, 99, 85599, 83154, 82189, 64951, 64953.

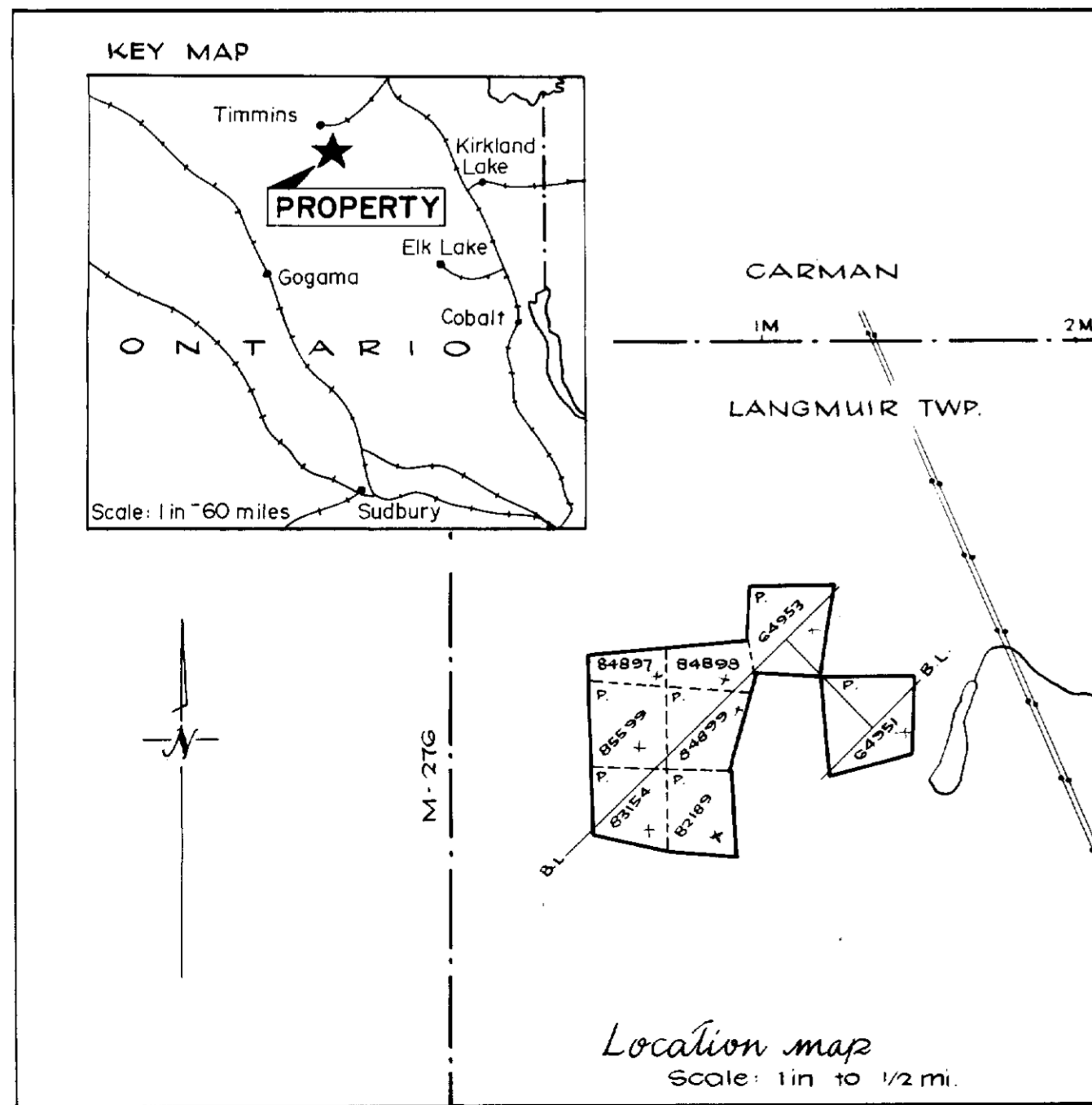
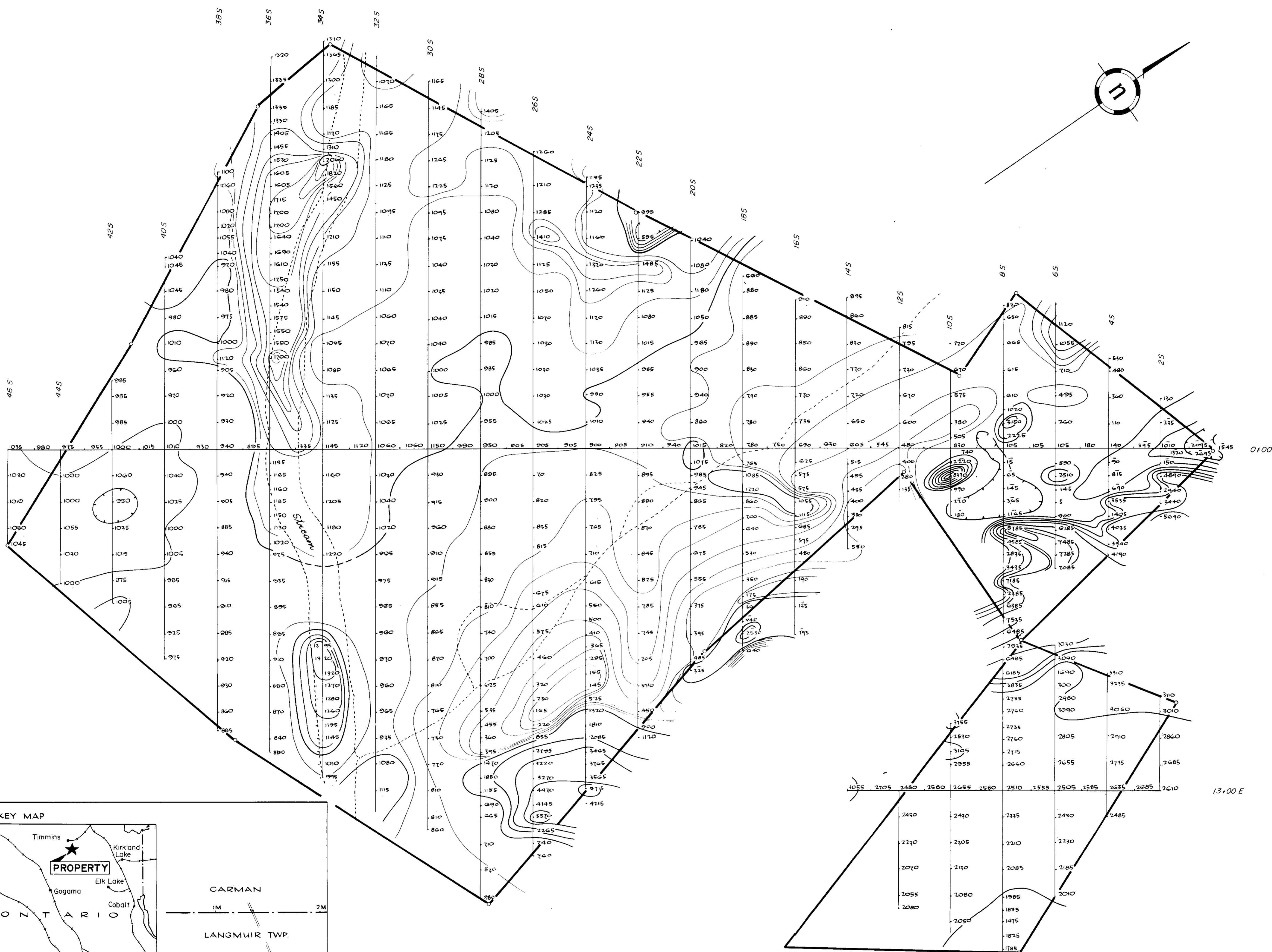
by  
GHD CONSULTANTS LIMITED



10000

April '64





**LEGEND**

1200 Relative value of magnetic field in gammas

Contour interval 1000 gammas

Contour interval 100 gammas shown only where space permits.

**CON-SHAWKEY GOLD MINES LTD.**  
LANGMUIR TOWNSHIP, ONTARIO.

**MAGNETOMETER SURVEY**

CLAIMS 84897-98,99,85599,83154,82189,64951,64953.

by  
GHD CONSULTANTS LIMITED



3-760  
April '66