

63.5024



41P14NE0008 63.5024 MIDLOTHIAN

010

REPORT ON MAGNETOMETER
AND RESISTIVITY SURVEYS,
STAIRS PROPERTY OF GOLDTECK MINES LIMITED
PORCUPINE AND LARDER LAKE MINING DIVISIONS

BY

GREATER TEMAGAMI MINES LTD.

S.A. Scott

July, 1987

OM86-6-P-258

SUMMARY

A preliminary program of line cutting, geophysical reconnaissance and test surveying was carried out during February, 1987 on the Stairs Property of Goldteck Mines Limited in Halliday and Midlothian Townships. The purpose of the work was to establish a base for the evaluation of previous work on the property, and to delineate major magnetic and electrically conductive zones that may be associated with gold-bearing zones.

Linecutting work totalled 76.7 kilometres, all of which was surveyed magnetically at 20 metre stations with a line spacing of 40 or 80 metres. A test AC resistivity survey was completed over 27.5 kilometres in the western portion of the grid.

The contact zone between Timiskaming conglomeratic sediments to the north and Archean felsic volcanics to the south is reported to contain graphite and marcasite. This zone is interpreted as the source of a strong resistivity low that crosses the southern portion of the property trending 065° to 080° , and which is offset at least twice by northeast-trending faults. Several northwest and east-west-trending resistivity low zones in the northern and eastern parts of Campbell Lake are thought to be the expression of conductive shear zones that, along with the contact zone, should be further investigated by geological mapping and prospecting. Several conductive zones also lie at the edge of the resistivity survey area, and cannot be fully evaluated at this time.

Several highly resistive areas at the southern boundary of the survey and near Slipper Lake are interpreted as the expression of highly siliceous igneous rocks, or of silicified zones within the clastic sediments.

Magnetic relief in the area is generally very low (approximately 300 gammas). Locally higher relief was encountered 1) around Slipper Lake, 2) along the Mitt Lake fault and 3) in the Stairs Mine area. The first two may represent local mafic intrusive plugs, while the third may be partly cultural in origin. These should be investigated by detailed magnetic surveys, geological mapping and diamond drilling.

Throughout the area, the predominant magnetic trend is northeasterly. Slight magnetic highs east of Campbell Lake may be marginal effects produced by siliceous porphyry bodies. The Slipper Lake area shows a strong disturbance in the regional trend, and should be detailed. The Wood Lake Zone, investigated by diamond drilling in the past, appears to be marked by moderate, northeast-trending magnetic highs and lows within a low background area. This area warrants further detailed surveys, mapping and prospecting to delineate drill targets.



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1.0 - INTRODUCTION

Reconnaissance magnetometer and test resistivity surveys were performed in February, 1987 on the Stairs property of Goldteck Mines Limited in Halliday and Midlothian Townships, Porcupine and Larder Lake Mining Divisions respectively. The surveys were intended to locate conductors and other geological and structural features that may be associated with potential gold-bearing zones. The grid will allow geological and engineering data from previous work to be tied in to the present work.

The surveys were managed by Greater Temagami Mines Ltd. on behalf of Goldteck Mines Limited. The contractor was Teck Explorations Limited.

2.0 - PROPERTY LOCATION AND ACCESS

The property is located approximately 32 kilometres west of Matachewan and 64 kilometres south of Timmins, Ontario (Figure 1). Access is by all weather gravel road from Matachewan to the adjacent United Asbestos property, then northwesterly 6 kilometres by bush road to the original mine shaft site.

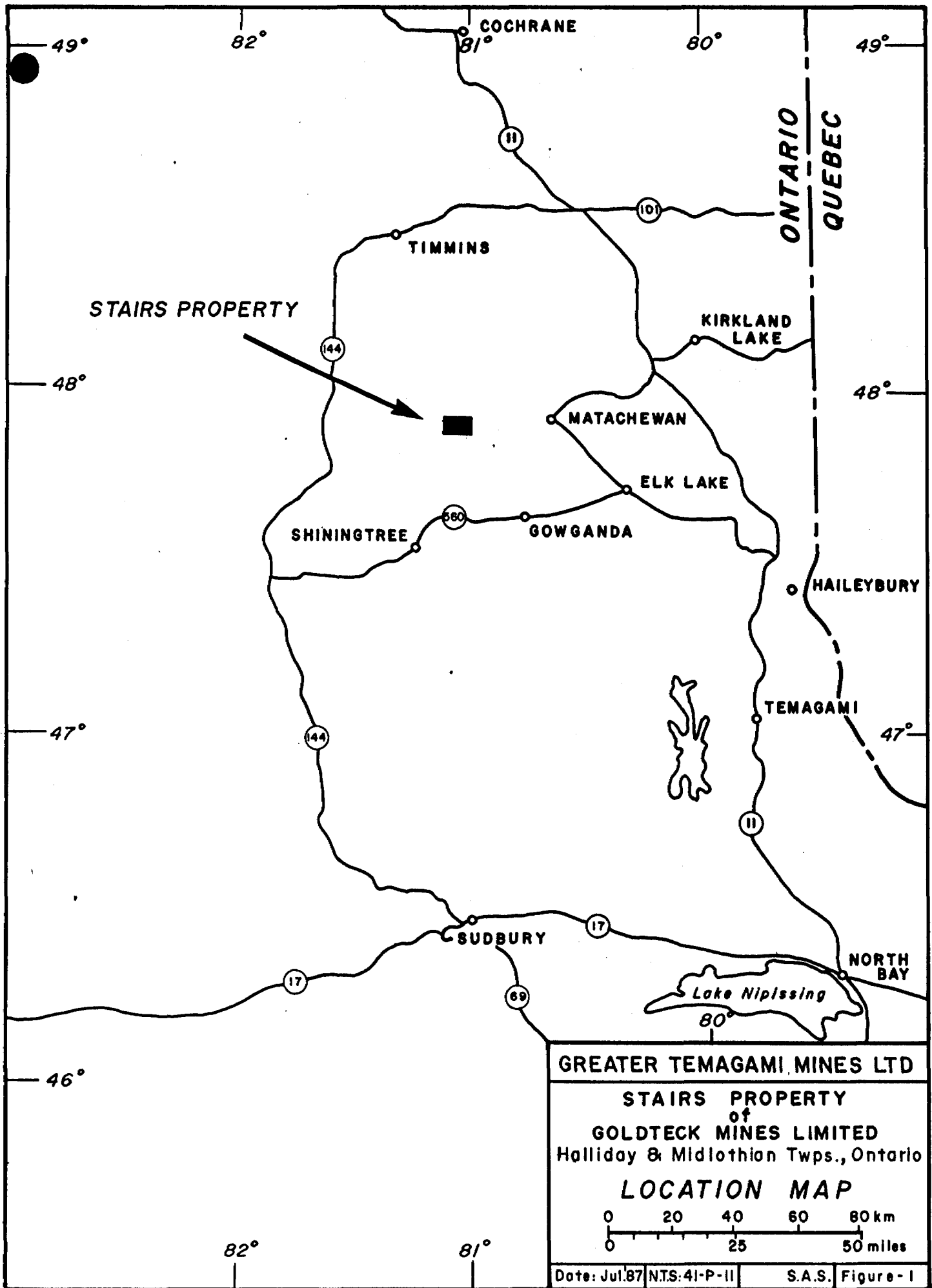
The Stairs Mine property consists of 124 claims located in the northwestern portion of Midlothian Township and the northeastern portion of Halliday Township, Ontario. Eighteen of the claims are leased and 106 are unpatented (Figure 2). A list of claim numbers is included with this report as Appendix C.

3.0 - GENERAL PROPERTY GEOLOGY

A broad band of Temiskaming sediments consisting of conglomerates with minor arkose and greywacke crosses the central portion of the property from east to west. This band, interpreted by Bright (1970) to be the south limb of a syncline, is cut by the northwesterly-trending Mitt Lake fault. Sediments on the east side of the fault have been displaced approximately 1 kilometre to the north.

To the south the sediments overlie Archean felsic metavolcanics consisting of rhyolite-dacite flows and breccias which are locally altered to sericite schists. To the north, the sediments are possibly overlain by alternating sequences of felsic, intermediate and mafic metavolcanics.

The south contact of the sediments with the felsic metavolcanics has been interpreted to dip steeply northward, and locally has been carbonatized with associated marcasite and graphite. Several northeasterly-trending shear zones cross this contact and are accompanied by extensive quartz veining and alteration. The Stairs Mine occupies one of these zones at its intersection with the sediment/volcanic contact.

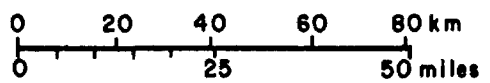


STAIRS PROPERTY

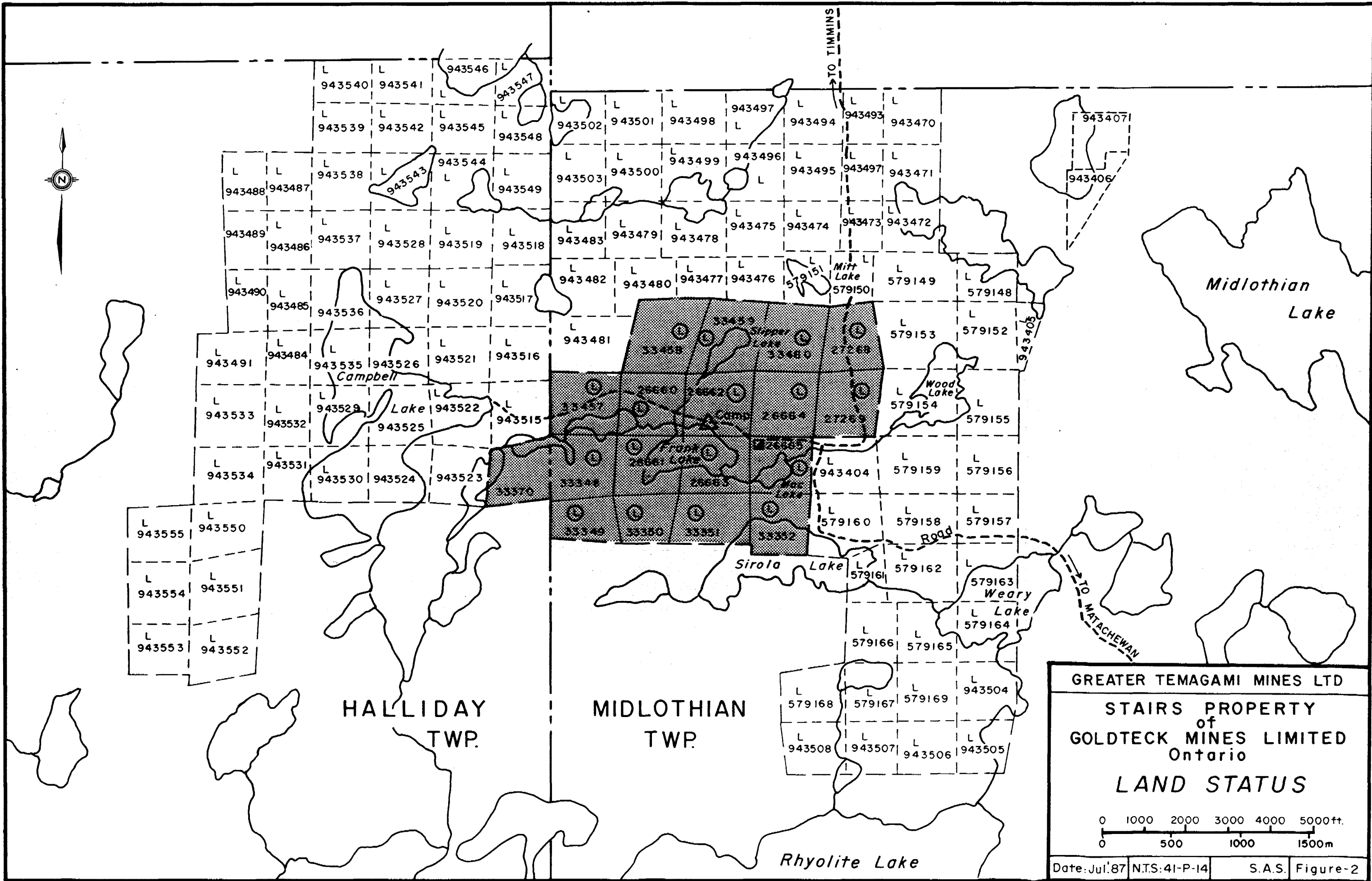
GREATER TEMAGAMI MINES LTD

STAIRS PROPERTY
of
GOLDTECK MINES LIMITED
Halliday & Midlothian Twp., Ontario

LOCATION MAP



Date: Jul.87 | NTS: 41-P-11 | S.A.S. Figure - I



GREATER TEMAGAMI MINES LTD

STAIRS PROPERTY
of
GOLDTECK MINES LIMITED
Ontario

LAND STATUS

0 1000 2000 3000 4000 5000ft.
0 500 1000 1500m

Date: Jul '87 N.T.S.: 41-P-14 S.A.S. Figure-2

4.0 SURVEY PROCEDURES

Line cutting and magnetometer surveying were carried out by the same contractor. Details of the survey are given in Table 1. Grid lines are spaced 40 metres apart in the vicinity of the Stairs Mine, and 80 metres apart elsewhere, with pickets at 20 metre intervals throughout.

Magnetometer readings were taken at 20-metre stations on all lines.

Plotting and drafting of the magnetometer survey data were done by Teck Explorations Limited. The data were contoured by the author, using a 20 gamma contour interval.

Resistivity surveying was done between February 4 and 28, 1987; details of the survey are presented in Table 1. A current electrode wire was laid out on Line 16+40E; a generator for 60 Hz AC was located at 50+00N. The data were plotted and contoured by the contractor.

Less than half of the grid was covered by the resistivity survey. This will be completed during the summer of 1987.

Instrument specifications are included as Appendix A.

5.0 DISCUSSION

5.1 Resistivity survey results

The results of the resistivity survey were originally plotted at a scale of 1:1000, but were reduced to 1:2000 for presentation as Figure 3.

Zone A is a strong linear resistivity low that crosses the entire southern portion of the survey area trending 065 to 080 degrees. This is the strongest and most continuous feature encountered in the survey. It has an apparent width of 200 to 250 metres, being stronger along the south side and weakening somewhat toward the north side of the zone, possibly implying a northerly dip. It is suggested that this zone is an expression of the sedimentary/volcanic contact which contains sulphides and graphite.

On the west side of Campbell Lake, Zone A appears to be offset, and to have a more northerly trend than the portion farther east. A strong 045°-trending photo-lineament, interpreted by Bright (1970), is shown on Figure 2 as the fault that produces the apparent discontinuity.

Area B to the south of Zone A in Corkscrew Lake is an area of very high resistivity and probably represents the felsic metavolcanics that have been mapped in this area. The common 070° trend is observed in this area.

In the northeast corner of Campbell Lake a moderate northwesterly trending resistivity low, Zone C, parallels the shore line within a bay. This zone lies almost entirely within the lake and therefore may represent

TABLE 1
SURVEY STATISTICS

	METRAGE (km)	CONTRACTOR	SURVEY DATES	INSTRUMENT	OPERATOR
Line Cutting	Transit Base & Tie Lines 6.3 Cross Lines 70.4	Fred Blake (Temagami)	Feb 4-28, 1987	N/A	N/A
Magnetometer Survey	76.7	Fred Blake (Temagami)	Feb 4-28, 1987	EDA Omni IV Tie Line Magnetometer Serial #255134	A.J. MacDonnell
Resistivity Survey	27.5	Teck Explorations Limited (North Bay)	Feb 4-28, 1987	Fluke 8060 A True RMS Multimeter Serial #3453743	W.R. Marion

conductive lake bottom sediments. However, it more likely represents a shear zone that continues to the east as Zone F. A second 045° fault has been interpreted here, displacing the two segments; resistivity contours to the southwest also support such a discontinuity.

Zone E is a long, discontinuous zone of moderate to low resistivity that extends from the central portion of Campbell Lake with 080° trend. It may represent a shear or fault zone and should be investigated on the northeast side of Campbell Lake where it is stronger. At its western end, it swings to become coincident with the interpreted fault.

Zones D, E and F continue through the boundary of this portion of the survey; their full extent will be seen when the survey is completed.

In the Slipper Lake-Frank Lake area which is the easternmost end of the survey area, the resistivity patterns apparently reflect very different geology and/or structure from those at Campbell Lake. Continuation of the survey to the east and north will aid in clarifying these trends.

Zone A continuing eastward from Campbell Lake appears to be terminated or faulted off just north of Frank Lake. A highly resistive zone of faulting and/or alteration trending northeasterly has been interpreted here (Zone G).

Resistivity data values in general appear to be rising in this easterly portion of the survey area, possibly as distance from the electrode line increases.

Area H to the north between Frank Lake and the southern end of Slipper Lake is a very highly resistive zone possibly representing Temiskaming conglomerates or highly silicified or carbonated rocks. It displays the common 070 to 090 trend, and is the approximate location of the "Slipper Lake Zone" which was trenched and drilled by Stairs geologists.

A zone of low resistivity lies within Frank Lake (Zone I), and appears to continue to the east beyond the present survey. It may be a faulted off segment of Zone A, especially if Zone A represents the conglomerate/volcanic contact as previously stated.

The Stairs mine shaft is located 200 metres east of the eastern limit of the present survey. The farther eastward extension of resistivity surveying will hopefully reveal electrical characteristics of the mineralized zone at the Stairs mine.

The nature of the Slipper Lake Zone is still largely unknown. Relative resistivity lows lie within Slipper Lake, to either side of the south end of the lake and on strike to the south of the lake itself. These zones appear to be trending in an 045° direction (structural) rather than the prevailing 070 to 080 direction (geological). Bright (1970) has interpreted a broad northeast-trending shear zone in this vicinity, but further geological investigation is necessary to confirm this trend.

5.2 Magnetometer Survey Results

Magnetic data contoured with a 20 gamma interval are presented as Figure 4 at a scale of 1:1000.

Generally the magnetic relief within the survey area is low, approximately 300 gammas. Locally much higher relief is found 1) around Slipper Lake, 2) in the Stairs mine area, and 3) associated with the Mitt Lake fault.

A magnetic low with a maximum relief of 100 gammas trends northeasterly along the peninsula that extends into Campbell Lake from the west side. This feature does not continue on the east side of Campbell Lake.

Another magnetic low trends northerly up the peninsula that extends from the south end of Campbell Lake. Contours in the central part of Campbell Lake trend strongly north-south, a feature not seen in the resistivity data. These areas of low magnetic response may represent highly siliceous porphyry bodies, or very clean, quartz-rich conglomerates.

A moderate magnetic high with a relief of 100 gammas trends northeasterly on the east shore of Campbell Lake at approximately 21 + 20E, 52 + 00 N. The northeast trend of this feature is parallel to the Campbell Zone, although displaced from it, and is also parallel to an ODM-interpreted lineament. However the trend is not continuous to the northeast.

Northeast of Campbell Lake the predominating northeasterly trend becomes evident in the magnetic contours although the relief generally is low. Slight magnetic highs in this area may be marginal effects of siliceous porphyry bodies.

Trends in the Mule Lake-Bowl Lake area are east-west to slightly north of east and relief is low. This situation extends as far east as Slipper Lake.

At Slipper Lake, the magnetic picture becomes more confused and broken up. Immediately east, west and south of the lake are very strong abrupt magnetic highs with maximum relief on the east side of 600 gammas. There appears to be a strong dipole effect in this vicinity, since Slipper Lake is underlain by magnetic lows.

The Stairs Mine area is underlain locally by strong high and low magnetic features that trend northeasterly to 200 meters west and 400 meters east of the mine; however the regional trend is quite definitely north-south and disturbed. From the Stairs Mine as far east as the Mitt Lake fault at line 50+00E, magnetic relief is low and the general trend continues to be east-west.

The Mitt Lake fault is evident as a series of strong, elongated 150° trending magnetic highs. These probably represent bodies of gabbroic material intruded into the fault zone at intervals.

East of the Mitt Lake fault a predominating northeasterly trend is again evident in the magnetics. East of line 50 + 00 E and extending to the easterly edge of the grid, there appears to be a regional magnetic gradient in which the background drops approximately 100 gammas.

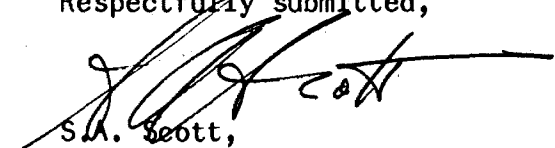
Immediately north of Wood Lake a discontinuous series of moderate highs and lows trends northeasterly. These may be the expression of the Wood Lake Zone investigated in the past by diamond drilling. In an area of generally low magnetic expression, this zone stands out.

6.0 CONCLUSIONS AND RECOMMENDATIONS

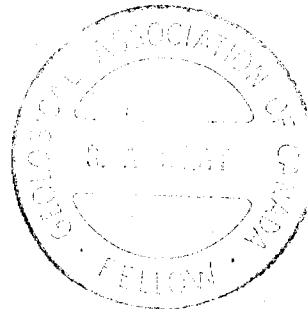
1. The highest magnetic relief in the survey area is produced by gabbroic intrusive bodies in the Mitt Lake fault zone. It is suspected that this may be the case around Slipper Lake as well. This possibility should be investigated by detailed geological mapping.
2. The mine shaft area is characterized by a high magnetic anomaly of limited extent. The strongest shaft anomaly extends approximately 60 metres to the west and 80 metres to the east and is emphasized by a strong negative anomaly to the north and south. While these may be partly cultural effects, they also represent the contact effect between clastic sediments to the north and silicious rhyolite and/or porphyry to the south. This relationship should be clarified by underground investigations and by detailed mapping and diamond drilling.
3. Sixty metres north of the shaft, a magnetic high with relief of 100 gammas extends approximately 40 metres either side of line 40+00E, and could be the expression of the mineralized zone (Pope-Marcasite-Chromic Veins). This suggests that any magnetic expression of gold mineralization is very subtle. The magnetic and electrical responses of the known mineralized zone at the Stairs Mine should be investigated in detail.
4. Magnetic and electrical effects suggest that the clastic sedimentary/felsic igneous contact passes through Corkscrew Lake, well south of the originally interpreted contact (Bright 1970). The suggested contact area should be mapped and prospected in detail along its entire length.
5. The area indicated as the Wood Lake Zone should be prospected and mapped in detail.

6. Resistivity surveying should be completed over the existing grid.
7. The following blocks of ground should be gridded and surveyed with both techniques to extend and complete zones and areas of interest:
 - a) between L30 E and L42 E from 50N to 56N.
 - b) between L28+40 E and L36+40 E from 43+20N to 47+00N
8. The zones discussed in section 5.1 should be mapped and prospected to define their geology and economic potential for the purpose of establishing diamond drill targets.

Respectfully submitted,



S.A. Scott,
M.Sc., FGAC, P. Geol. (Alberta)



7.0

REFERENCES

Bright, E.G., 1970: Geology of Halliday and Midlothian Townships; Ontario Department of Mines Geological Report 79, 30 p; Map 2187, Scale 1:31,680.

Roach, R.J. and Hope, K.G., 1964: Report on the Geology of the Stairs Exploration and Mining Company Ltd., 10 p; Ontario Department of Mines Assessment Files.

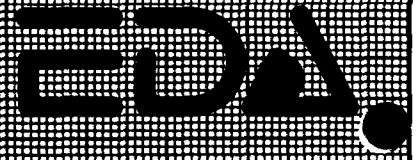
APPENDIX A

OMNI PLUS VLF/Magnetometer System



Major Benefits of the OMNI PLUS

- Combined VLF/Magnetometer/Gradiometer System
- No Orientation Required
- Three VLF Magnetic Parameters Recorded
- Automatic Calculation of Fraser Filter
- Calculation of Ellipticity
- Automatic Correction of Primary Field Variations
- Measurement of VLF Electric Field



Specifications*

Frequency Tuning Range	15 to 30 kHz, with bandwidth of 150 Hz; tuning range accommodates new Puerto Rico station at 28.5 kHz
Transmitting Stations Measured	Up to 3 stations can be automatically measured at any given grid location within frequency tuning range
Recorded VLF Magnetic Parameters	Total field strength, total dip, vertical quadrature (or alternately, horizontal amplitude)
Standard Memory Capacity	800 combined VLF magnetic and VLF electric measurements as well as gradiometer and magnetometer readings
Display	Custom designed, ruggedized liquid crystal display with built-in heater and an operating temperature range from -40°C to $+55^{\circ}\text{C}$. The display contains six numeric digits, decimal point, battery status monitor, signal strength status monitor and function descriptors.
RS232C Serial I/O Interface	2400 baud rate, 8 data bits, 2 stop bits, no parity
Test Mode	A. Diagnostic Testing (data and programmable memory) B. Self Test (hardware)
Sensor Head	Contains 3 orthogonally mounted coils with automatic tilt compensation
Operating Environmental Range	-40°C to $+55^{\circ}\text{C}$; 0 - 100% relative humidity; Weatherproof
Power Supply	Non-magnetic rechargeable sealed lead-acid 18V DC battery cartridge or belt; 18V DC disposable battery belt; 12V DC external power source for base station operation only.
Weights and Dimensions	
Instrument Console	2.8 kg, 128 x 150 x 250 mm
Sensor Head	2.1 kg, 130 dia. x 130 mm
VLF Electronics Module	1.1 kg, 40 x 150 x 250 mm
Lead Acid Battery Cartridge	1.8 kg, 235 x 105 x 90 mm
Lead Acid Battery Belt	1.8 kg, 540 x 100 x 40 mm
Disposable Battery Belt	1.2 kg, 540 x 100 x 40 mm

*Preliminary

EDA Instruments Inc.,
4 Thorncliffe Park Drive,
Toronto, Ontario
Canada M4H 1H1
Telex: 06 23222 EDA TOR,
Cables: Instruments Toronto
(416) 425-7800

In USA,
EDA Instruments Inc.,
5151 Ward Road,
Wheat Ridge, Colorado
U.S.A. 80033
(303) 422-9112

Printed in Canada

RESISTIVITY SURVEY INSTRUMENT SPECIFICATIONS

Instrument: Fluke 8060A True RMS Multimeter,
Serial #3453743

Sensitivity: 0.1 millivolt on 0 - 3 mv range

Current Electrode Spacing: 2200 metres

Potential Electrode Separation: 20 metres

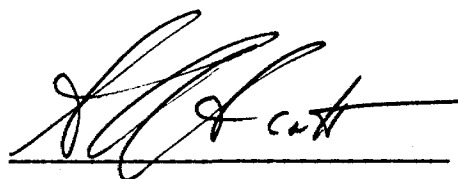
Array: Gradient array

APPENDIX B

CERTIFICATE OF QUALIFICATIONS

I, Susan Anne Scott of the City of Calgary, Province of Alberta, do hereby certify

- 1) That I am a consultant geologist and reside at 1950-13th Street SW, Calgary, Alberta, T2T 3P6.
- 2) That I graduated from the University of Toronto in 1965 with the degree of Bachelor of Science in Geology, and from McGill University in 1969 with the degree of Master of Science in Geology (Geochemistry).
- 3) That I am a Fellow of the Geological Association of Canada, and a Professional Geologist in the Province of Alberta.
- 4) That I have been practising my profession for a period of 15 years.
- 5) That I have no direct or indirect interest nor do I expect to receive any interest in the property or securities of Greater Temagami Mines Ltd. or of Goldteck Mines Limited.
- 6) That this report is based on observation and interpretation of the geophysical data, and on knowledge of the property gained through the references and through visits to the property.



Susan A. Scott, M.Sc., FGAC,
P.Geol.(Alberta)



July, 1987

APPENDIX C

STAIRS PROPERTY CLAIMS LIST

LEASED CLAIMS

Midlothian Township, Larder Lake Mining Division

MR 26660 to 26665 inclusive	(6)
MR 27268 to 27269 inclusive	(2)
MR 33348 to 33352 inclusive	(5)
MR 33457 to 33460 inclusive	(4)

Halliday Township, Porcupine Mining Division

MR 33370	(1)
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Total 18

STAKED CLAIMS

Midlothian Township

L579148 to 579169 inclusive	(22)
L943404 to 943407 inclusive	(4)
L943470 to 943483 inclusive	(14)
L943492 to 943508 inclusive	(17)

Halliday Township

L943484 to 943491 inclusive	(8)
L943515 to 943555 inclusive	(41)

Total 106



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REPORT ON DIAMOND DRILLING
FEBRUARY, 1987
STAIRS PROPERTY OF GOLDTECK MINES LIMITED
MIDLOTHIAN TOWNSHIP
LARDER LAKE MINING DIVISION
BY GREATER TEMAGAMI MINES LTD.

S.A. Scott
August 1987

SUMMARY

Six diamond drill holes were completed during February, 1987 on the Stairs Property of Goldteck Mines Limited, in Midlothian Township, Larder Lake Mining Division. Total length drilled was 963 metres. The holes were logged in the field by J.R. Goodwin. Before the core could be sampled for assay, the core boxes were stolen, and all the core was dumped together beside the rack. Goodwin has subsequently attempted to re-place the core from the six holes in new boxes, but because of the resulting uncertainty as to the true position of any section, sampling has not been carried out, and is not advised.

Polymict conglomerate forms approximately 80 per cent of the lithologies encountered, with greywacke and arkose (?) making up the remainder. The rock types and alteration features are similar in all three areas drilled -- the Wood Lake Zone, Stairs Mine area and Slipper Lake Zone.

Spectacular beds up to 20 centimetres thick of marcasite nodules or replaced clasts occur within conglomerate and greywacke; marcasite also occurs as scattered nodules or clasts within a sequence. Sericite alteration was encountered in all three areas; at its most intense, this alteration results in a "pea soup" colour pervading clasts and matrix. Bright green fuchsite alteration is found replacing or surrounding clasts, or as blebs or stringers.

The Wood Lake Zone is thought to have been intersected by DDH S-1 and S-2, but overdrilled by DDH S-3. Shear zones with quartz veining and carbonate and fuchsite alteration occur near the top of DDH S-1 and S-2. The intersections suggest a possible strike of 060° for the zone. Four Winkie drill holes at 20 metre spacing, 60 metres each hole, are recommended for preliminary drill followup on this zone.

Of two holes, DDH S-4 and S-5 in the Stairs Mine area, S-5 is thought to have intersected the Pope Zone near the bottom of the hole: massive quartz veining over one metre, accompanied by shearing, fuchsite and sericite alteration. DDH S-4, investigating the footwall area is a long hole in conglomerate, ending in an intermediate intrusive rock. The overburden-covered contact between conglomerates and felsic volcanics (mapped to the south) is farther south than expected.

Surface drilling should be used to investigate beyond both ends of the mine workings, and below them, to extend reported mineralization. Some drilling should be possible also within the mine area where open workings are not developed. Surface exposures of the vein system should be mapped and sampled in detail.

One hole (DDH S-6) in the Slipper Lake Zone encountered sericite/fuchsite/carbonate altered zones with quartz veining up to 24 centimetres in width. The Slipper Lake Zone is still very much unknown; it should be mapped and prospected on surface, and investigated with preliminary shallow drilling.



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- B. Certificate of Qualifications
- C. Stairs Property Claims List

1.0 INTRODUCTION

A preliminary diamond drill programme was carried out during February, 1987 on the Stairs Property of Goldteck Mines Limited in Midlothian Township, Larder Lake Mining Division.

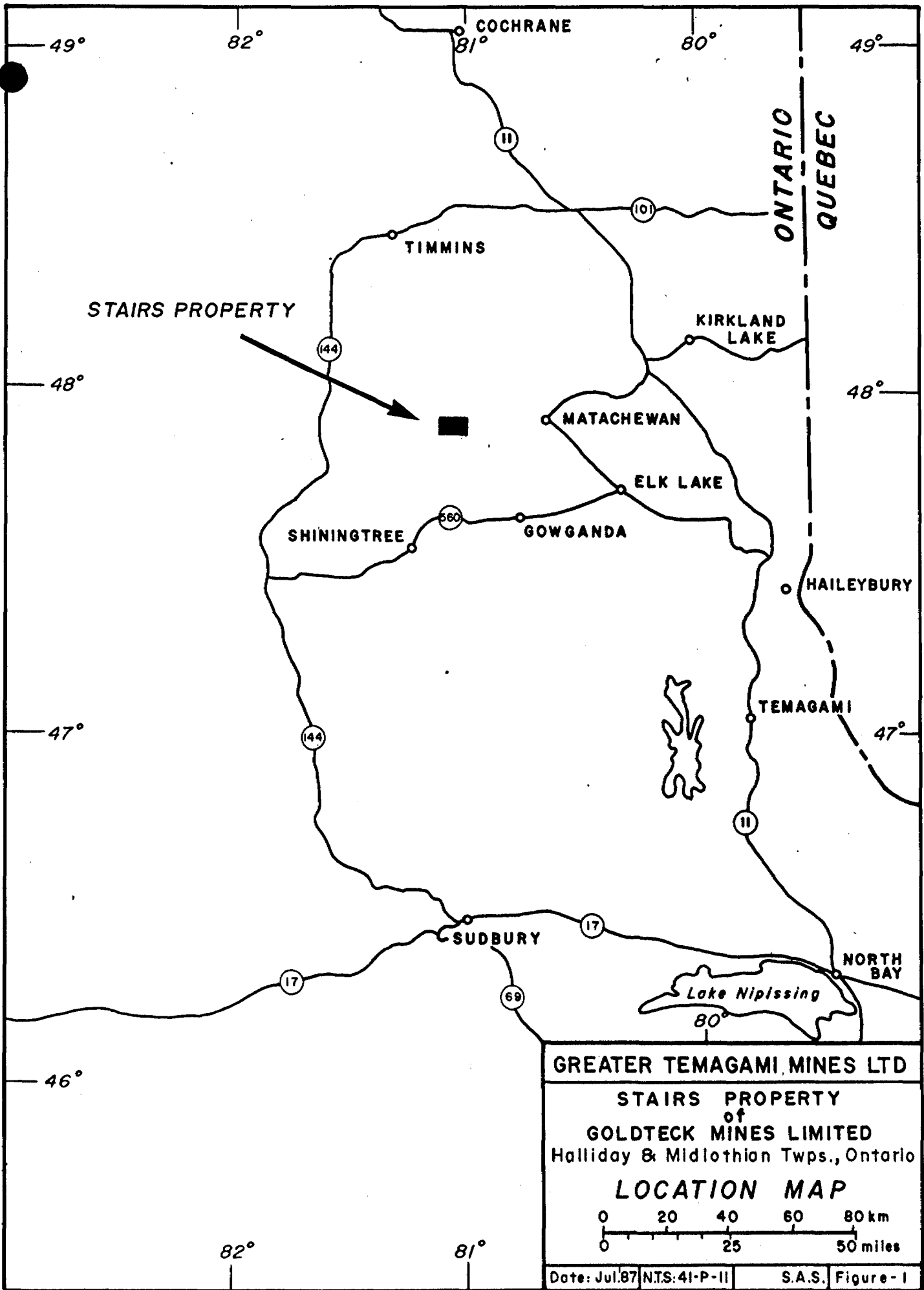
The purpose of the programme was to verify the existence and approximate position of gold mineralization described in outdated reports and drill plans, for which supporting data in the form of core, detailed logs, assays and sections have been lost.

The programme was managed by Greater Temagami Mines Ltd. on behalf of Goldteck Mines Limited. The drilling contractor was Kit Enterprises; core was logged in the field by J.R. Goodwin. Six holes were drilled, totalling 963 metres.

2.0 PROPERTY LOCATION AND ACCESS

The property is located approximately 32 kilometres west of Matachewan and 64 kilometres south of Timmins, Ontario (Figure 1). Access is by all weather gravel road from Matachewan to the adjacent United Asbestos property, then northwesterly 6 kilometres by bush road to the original mine shaft site.

The Stairs Mine property consists of 124 claims located in the northwestern portion of Midlothian Township and the northeastern portion of Halliday Township, Ontario. Eighteen of the claims are leased and 106 are



49°

82°

COCHRANE

81°

80°

49°

ONTARIO
QUEBEC

TIMMINS

STAIRS PROPERTY

KIRKLAND
LAKE

48°

48°

MATACHEWAN

ELK LAKE

SHININGTREE

GOWGANDA

HAILEYBURY

47°

47°

TEMAGAMI

SUDBURY

NORTH
BAY

Lake Nipissing

80°

46°

82°

81°

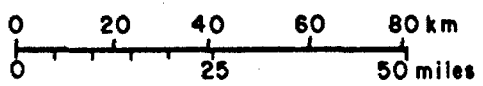
GREATER TEMAGAMI MINES LTD

STAIRS PROPERTY

of
GOLDTECK MINES LIMITED

Halliday & Midlothian Twps., Ontario

LOCATION MAP



Date: Jul.87 | NTS:41-P-11 | S.A.S. | Figure-1

unpatented (Figure 2). A list of claim numbers is included with this report as Appendix C.

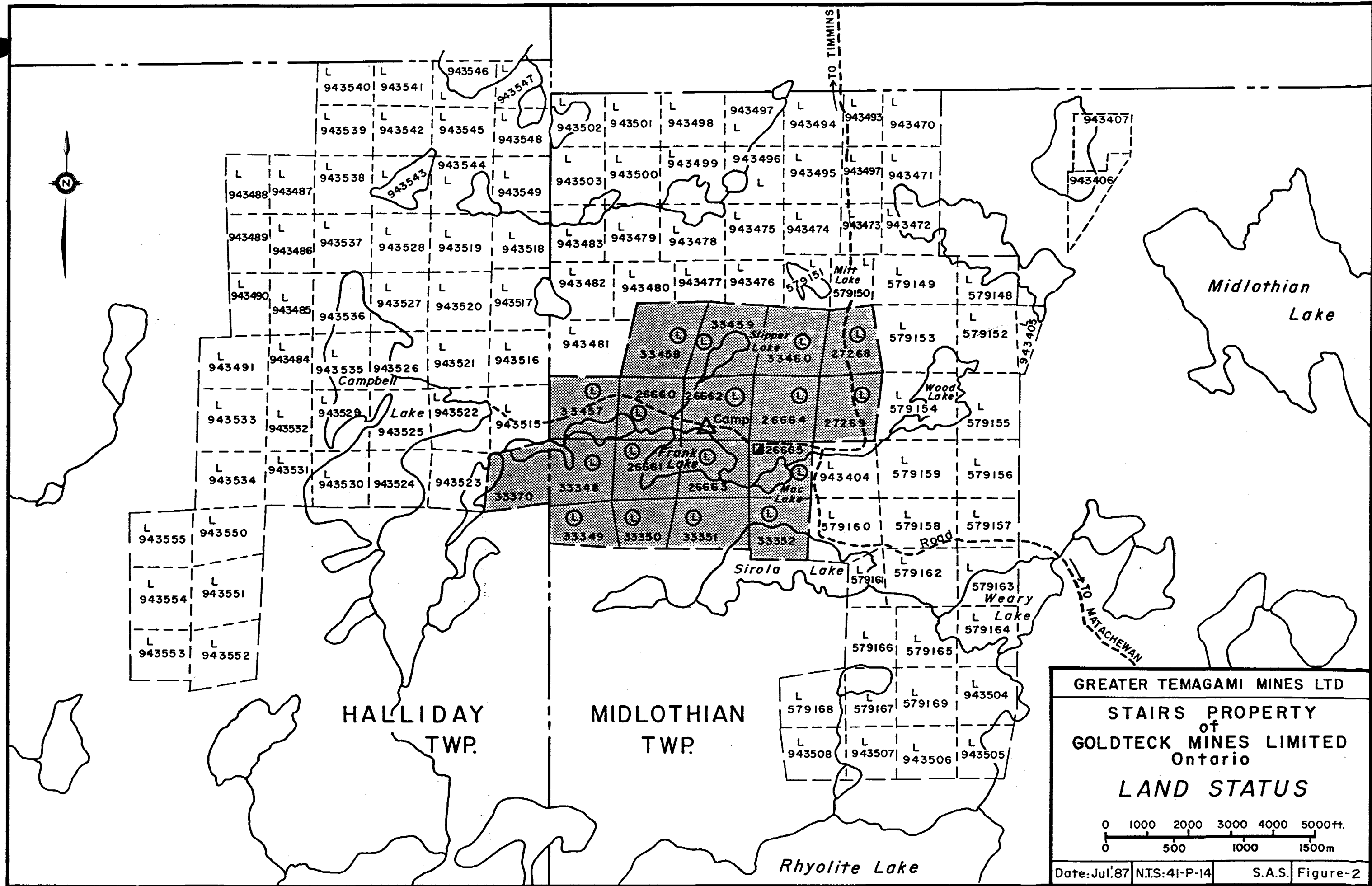
All six drill holes are located in the Midlothian Township portion of the property.

3.0 GENERAL PROPERTY GEOLOGY

A broad band of Temiskaming sediments consisting of conglomerates with minor arkose and greywacke crosses the central portion of the property from east to west. This band, interpreted by Bright (1970) to be the south limb of a syncline, is cut by the northwesterly-trending Mitt Lake fault. Sediments on the east side of the fault have been displaced approximately 1 kilometre to the north.

To the south the sediments overlie Archean felsic metavolcanics consisting of rhyolite-dacite flows and breccias which are locally altered to sericite schists. To the north, the sediments are possibly overlain by alternating sequences of felsic, intermediate and mafic metavolcanics.

The south contact of the sediments with the felsic metavolcanics has been interpreted to dip steeply northward, and locally has been carbonatized with associated marcasite and graphite. Several



GREATER TEMAGAMI MINES LTD
 STAIRS PROPERTY
 of
 GOLDTECK MINES LIMITED
 Ontario
LAND STATUS

0 1000 2000 3000 4000 5000ft.
 0 500 1000 1500m

Date: Jul '87 N.T.S.: 41-P-14 S.A.S. Figure-2

northeasterly-trending shear zones cross this contact and are accompanied by extensive quartz veining and alteration. The Stairs Mine occupies one of these zones at its intersection with the sediment/volcanic contact.

3.1 Slipper Lake Zone

West of the Stairs Mine, a strong northeasterly-trending shear zone reported as the Slipper Lake Zone lies south of Slipper Lake. This zone has not been extensively drilled in the past, and no detailed description has been found.

3.2 Wood Lake Zone

North and west of Wood Lake, in the far eastern portion of the property is an area which was explored at different times in the past for base as well as precious metals by Rio Tinto and the Stairs group. Incomplete reports from The Northern Miner, 1962 and Riocanex, 1963 describe drill intersections of 0.53 oz/t over 8 ft. and 0.73 oz/t over 5 ft. respectively.

The zone is seen on surface as rusty, carbonatized, sheared rock, with strong disseminated pyrite locally evident.

4.0 DIAMOND DRILL PROGRAMME

Six holes of BQ wireline drilling were completed, for a total of 963.1 metres. The programme was carried out between February 10th and 28th, 1987. Drilling statistics are included as Table 1. A map showing

general geology and drill hole locations is included as Figure 3 (scale 1:10,000).

Diamond drill sections at a scale of 1:500 have been constructed, and form Figures 4 (a) to 4(f). Drill logs by J.R. Goodwin are included as Appendix A. A detailed plan of the Wood Lake Zone (DDH S-1, S-2, S-3) is presented as Figure 5.

TABLE 1
DIAMOND DRILLING STATISTICS

DDH#	TOTAL DEPTH (M)	BRG	DIP (COLLAR)	GRID LOCATION
S-1	130.0	132°	-50°	59 + 55E/56 + 00N
S-2	130.0	132°	-50°	59 + 62E/56 + 22N
S-3	47.0	132°	-50°	59 + 54E/55 + 73N
S-4	270.6	180°	-50°	44 + 50E/48 + 00N
S-5	211.5	150°	-50°	43 + 28E/48 + 88N
S-6	174.0	135°	-50°	40 + 22E/49 + 80N

4.1 Sampling Problem

Prior to being sampled, split and assayed, the core was stored in a rack on the Stairs Mine site. Subsequently the core boxes and protecting lumber and tarpaulin were stolen, and the core from all six holes was dumped together beside the rack.

J.R. Goodwin, who logged the core originally, replaced the core in new boxes using the logs as a guide. However, this procedure is at best an approximation of the original arrangement, and there is no guarantee as to the exact location of any assays that might result.

At the present time, no sampling of the core has been carried out.

5.0 RESULTS

Lithologies and alteration features in holes drilled at the Wood Lake (S-1, S-2, S-3) and Slipper Lake Zones (S-6) appear identical to those seen in the Stairs Mine holes. This is especially significant and encouraging when it is considered that the Wood Lake Zone is 2 kilometres to the northeast, across a major fault with apparent displacement of one kilometre.

Generally the sequence consists of conglomerate and greywacke, with minor argillite and arkose. In the bottom of DDH S-4, an intermediate intrusive rock was encountered. Beds up to 12 cm thick of marcasite (pyrite?) nodules or replaced clasts occur in both conglomerate and greywacke and are conformable with foliation. Quartz veins up to 1 metre in width have been noted.

A brief description of the main lithological and alteration features follows.

5.1 Rock Units

The conglomerates on the Stairs property are polymict and generally matrix-supported, with clast size up to 10 centimetres observed. Clasts are mainly rounded to sub-rounded. The composition of clasts includes mafic to felsic volcanics, conglomerate and greywacke, quartz, dark chert and argillite. The matrix appears to contain all sizes of material. Conglomerate forms 80 per cent of material encountered in all holes.

Greywacke, the next most abundant unit, is light to medium grey in colour, with particles generally ranging up to 3 millimetres in diameter. Thin conglomerate beds or pebble layers commonly occur within the greywacke units; the reverse is not as common. In some cases angular black argillite fragments are the largest clasts seen.

Arkose was described as being present in three of the six holes. The author examined the core only after it had weathered for several months; at that stage there was no apparent colour difference between arkose and greywacke, but the arkose appeared to be coarser-grained. In the drill logs arkose is described as being more feldspathic than greywacke.

Argillite is a distinctive but minor unit in the core. It is black, very fine-grained, thin-bedded, and occasionally forms a separate unit within greywacke sequences. It is more often seen as angular to sub-angular clasts in conglomerate.

The bottom of drillhole S-4 encountered a medium to light grey, medium-grained intrusive rock that appears to be granodioritic in composition.

Quartz veins are commonly a few centimetres in thickness, occasionally up to a few decimetres, and occur in both conglomerate and greywacke sequences. The larger veins are often accompanied by shearing and/or brecciation. Disseminated pyrite, and occasionally chalcopyrite were observed in and at the margins of veins and irregular quartz blebs.

5.2 Structure

Shearing and/or brecciation with carbonatization is common with quartz veining. Moderate to strong foliation was observed with most units. Pebbles and clasts are often elongated in the plane of foliation. An alteration/shear zone with quartz was encountered in holes S-1 and S-2, and may represent the Wood Lake Zone. Massive quartz veining in altered conglomerate in DDH S-5 may represent the Pope Vein in the Stairs Mine.

5.3 Alteration

The most spectacular alteration type observed in core is the replacement of clasts by marcasite (pyrite?). Locally, marcasite replaces all of the clasts in beds up to 20 centimetres thick. The matrix in this case appears to be mainly quartz-carbonate. In other cases, the marcasite clasts or nodules are scattered over several decimetres of core length.

Occasionally the form of the marcasite fragments is angular, as if brecciated, either before or after replacement.

Sericite alteration is massive in some parts of the sequence, as in DDH S-5. Conglomerate changes from grey to buff in colour, then to a "pea soup" colour as sericitization increases in intensity. When it is strongest, the clasts and matrix are uniform in colour, and are difficult to distinguish. This alteration is important in Stairs Mine geological descriptions (Roach and Hope, 1964).

Bright green fuchsite alteration is widespread, in the form of blebs, commonly appearing to replace shards in the conglomerate, or within the greywacke fabric.

Occasionally a halo of fuchsite will surround small clasts. Thin stringers of the green mica have also been observed. Fuchsite was described in Stairs Mine reports, and the "Chromic Vein" is assumed to be accompanied by especially strong fuchsite alteration.

6.0 DRILLHOLE SUMMARIES

DDH S-1 (130.0 m)

This hole encountered conglomerates for almost its entire length of 130 metres, with greywacke units from 51 to 84 metres and 107 to 112 metres. The initial 50 metres of conglomerate is buff in colour with an

altered, carbonatized shear zone from 9.5 to 12 metres, accompanied by sericite, fuchsite and quartz veining. A weak alteration/shear zone also occurs from 84 to 89 metres. A one metre white quartz vein was encountered at 109 metres.

DDH S-2 (130.0 m)

Conglomerate forms the predominant unit in this hole. Greywacke units occur from 53 to 57 and from 101 to 121 metres, with arkose following from 121 to 127 metres. The hole ends in conglomerate at 130 metres. From 27 to 39 metres frequent marcasite beds occur. A strong fracture zone from 38 to 39 metres contains remnants of fractured quartz. Alteration in this zone was not detailed. A narrow zone of carbonate-sericite alteration was noted in greywacke between 103 and 105 metres.

DDH S-3 (47.0 m)

This hole intersected alternating sequences of greywacke and conglomerate. The upper unit of conglomerate, from 8 to 23 metres is described as "dirty buff" in colour, with sericite alteration. The lower conglomerate unit, from 39 to 47 metres is buff in colour, with zones of fuchsite/sericite alteration.

DDH S-4 (270.6 m)

This hole is largely conglomerate, some intensely altered, with

two arkose sections from 32 to 51 and 74 to 109 metres. Conglomerate from 16 to 32 metres is buff in colour, with fuchsite/sericite alteration. Quartz veining occurs in dark grey conglomerate between 51 and 65 metres. Conglomerate from 193 to 252 metres is "pea soup" coloured, with one minor quartz vein at 228 metres. An intermediate intrusive rock was encountered from 260 to 263 and from 265 to 270.6 metres.

DDH S-5 (211.5 m)

Conglomerate in this hole is interrupted by greywacke from 95 to 105 metres, and by arkose from 187 metres to end of hole. The uppermost 50 metres of conglomerate is strongly fractured with several quartz veins up to 24 centimetres from 31 to 49 metres. Conglomerate from 76 to 95 metres becomes progressively more altered with depth to "pea soup" creamy colour. Again from 105 to 187 metres conglomerate is highly altered, with sericite; massive quartz veining occurs from 173 to 174 metres, possibly the Pope Vein. This is followed by arkose to end of hole.

DDH S-6 (174.0 m)

This hole is mainly conglomerate, with minor greywacke from 11 to 15 metres, and argillite from 158 to 160 metres. Zones of moderate foliation are accompanied by weak to moderate sericite/fuchsite alteration from 25 to 31, 65 to 70, 77 to 93, 105 to 117 and 150 to 158 metres. A 24-centimetre quartz vein occurs at 65 metres.

DDH S-6 on the largely unknown Slipper Lake Zone intersected several altered zones which are encouraging. Sampling and assaying of the re-placed core are not advised, however, because of the uncertainty of position. Results could be misleading, and could lead to further investigations in the wrong area.

It is strongly recommended that the Wood Lake Zone be re-drilled with holes stepped out to reflect the local strike of the zone that is suggested by the present intersections. Hole azimuths should be 150° , with a dip of -50° and length of 60 metres. A light drill could be used for shallow intersections, with collars as follows:

S-7:	59 + 90E/56 + 30N
S-8:	59 + 72.5E/56 + 20N
S-9:	59 + 55E/56 + 10N
S-10:	59 + 37.5E/56 + 00N

In the mine area the favourable horizon (Pope-Marcasite-Chromic Veins) should be investigated from surface by drilling beyond and below the mine workings. Surface exposures of the vein systems should also be mapped in detail.

The Slipper Lake Zone should be explored in detail on surface where possible, and a light drill could be used to investigate shallow targets.

Respectfully submitted,



S.A. Scott
M.Sc. FGAC, P.Geol.(Alberta)

ss-3/eh



8.0 REFERENCES

Bright, E.G., 1970: Geology of Halliday and Midlothian Townships; Ontario Department of Mines Geological Report 79, 30 p; Map 2187, Scale 1:31,680.

Cheriton, C.G., 1965: Report on the Midlothian Gold Property of Stairs Exploration & Mining Company Limited; Unpub. company report, January, 1965.

Lehto, John, 1963: Report on the Geology of the Stairs Option; Riocanex Internal Report.

Roach, R.J. and Hope, K.G. 1964: Report on the Geology of the Stairs Exploration and Mining Company Ltd., 10 p; Ontario Department of Mines Assessment Files.

The Northern Miner, 1962: Report on drill results, Wood Lake Zone of Stairs Exploration & Mining, November, 1962.

APPENDIX A

FIELD LOG

Fill in on
every pageHole No.
S-4Page No.
1

Footage		Rock Type	Description Colour, grain size, texture, minerals, alteration, etc.	Planar Feature Angle *	Core Specimen Footage †	Your Sample No	Sample Footage		Sample Length	Assays †	
From	To						From	To			
0.0	2.7		Overburden								
2.7	7.3	Conglomerate	Grey c.g. scattered fuchsite altered vol frags								
7.3	10.3	Conglomerate	light grey, finegrained, scattered marc/py nod. to 2cm to 2%								
10.3	16.35	Greywacke	Grey, f.g. scattered thin black cherty frags to 0.5 cm								
16.35	32.5	Conglomerate	Buff. c.g. close packed, fuchsite altn. 25.5-32.5 - grey, close packed sericite altn, marc/py to 10%								
32.5	51.5	Arkose	Light grey, scattered frags to 1cm								
51.5	74.0	Conglomerate	Coarse grained, dark grey 51.5-52.0- qtz vein, broken 57.0-74.0- frags become light grey 59.2- 6cm qtz vein 64.8- 4cm qtz vein 65.2- 4cm qtz vein								
74.0	109.0	Arkose	Grey, black slate shards								
109.0	260.2	Conglomerate	109.0-173.0- dark grey, c.g., angular frags to 4cm 173.0-185.5- grey, f.g. hard, close packed frags to 1cm. 185.5-193.2- m.g. mixed zone, black frags to 2cm, few argillite beds to 2cm. 193.2-252.0- pea-soup coloured frags, few thin argillite beds to 2cm, 1% py. 228.0- 4cm q.v. 252.0-260.2- c. g. grey.								
260.2	262.8	Interm. Intrus	ve Dark grey, m.g. uniform texture, non-mag.								
262.8	270.6	Conglomerate	c.g. grey, close packed, scattered marc/py 265.0-270.6- intermed. intrusive, -similar to 260.2-262.8								
270.6			END OF HOLE								
			Bearing of hole								
			100m-175								
			204m-174								
			268m-177								

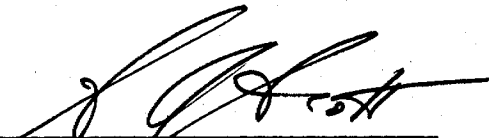
Drilling Company KIT ENTERPRISES		Collar Elevation	Bearing of hole from true North. 180	Total Footage 270.6 m.	Dip of Hole at collar 50	Location of hole in relation to a fixed point on the claim. L 44+50E 48+00N	Map Reference No.	Claim No.
Date Hole Started Feb. 16/87	Date Completed Feb. 21/87	Date Logged Feb. 21/87	Logged by J. R. Goodwin	100m Ft. 50	204m Ft. 49		Location Midlothian Twp.	
Exploration Co., Owner or Optionee GREATER TEMAGAMI MINES LTD.		Date Submitted	Submitted by (Signature)	268m Ft. 46		Property name Stairs Mine Area		

APPENDIX B

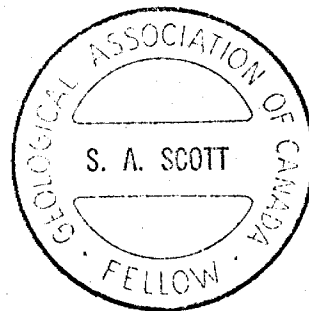
CERTIFICATE OF QUALIFICATIONS

I, Susan Anne Scott of the City of Calgary, Province of Alberta, do hereby certify

- 1) That I am a consultant geologist and reside at 1950-13th Street SW, Calgary, Alberta, T2T 3P6.
- 2) That I graduated from the University of Toronto in 1965 with the degree of Bachelor of Science in Geology, and from McGill University in 1969 with the degree of Master of Science in Geology (Geochemistry).
- 3) That I am a Fellow of the Geological Association of Canada, and a Professional Geologist in the Province of Alberta.
- 4) That I have been practising my profession for a period of 15 years.
- 5) That I I have no direct or indirect interest, nor do I expect to receive any interest in the property or securities of Greater Temagami Mines Ltd. or of Goldteck Mines Limited.
- 6) That this report is based on examination of the drill core and logs and on knowledge of the property gained through the references and through visits to the property.


Susan A. Scott, M.Sc., FGAC,
P.Geol.(Alberta)

August, 1987



APPENDIX C

STAIRS PROPERTY CLAIMS LIST

LEASED CLAIMS

Midlothian Township, Larder Lake Mining Division

MR 26660 to 26665 inclusive	(6)
MR 27268 to 27269 inclusive	(2)
MR 33348 to 33352 inclusive	(5)
MR 33457 to 33460 inclusive	(4)

Halliday Township, Porcupine Mining Division

MR 33370	(1)
----------	-----

Total 18

STAKED CLAIMS

Midlothian Township

L579148 to 579169 inclusive	(22)
L943404 to 943407 inclusive	(4)
L943470 to 943483 inclusive	(14)
L943492 to 943508 inclusive	(17)

Halliday Township

L943484 to 943491 inclusive	(8)
L943515 to 943555 inclusive	(41)

Total 106



41P14NE0008 63.5024 MIDLOTHIAN

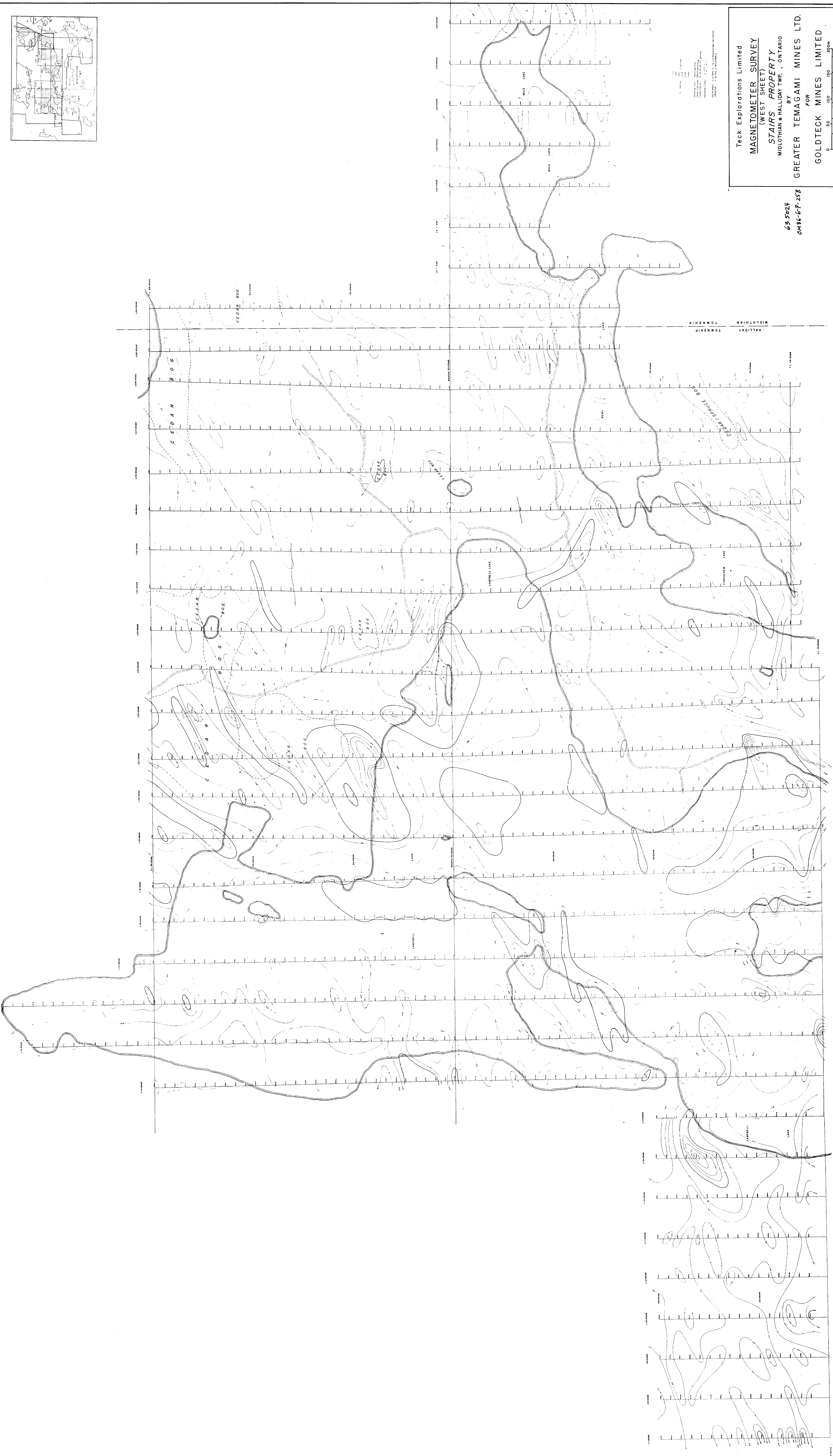
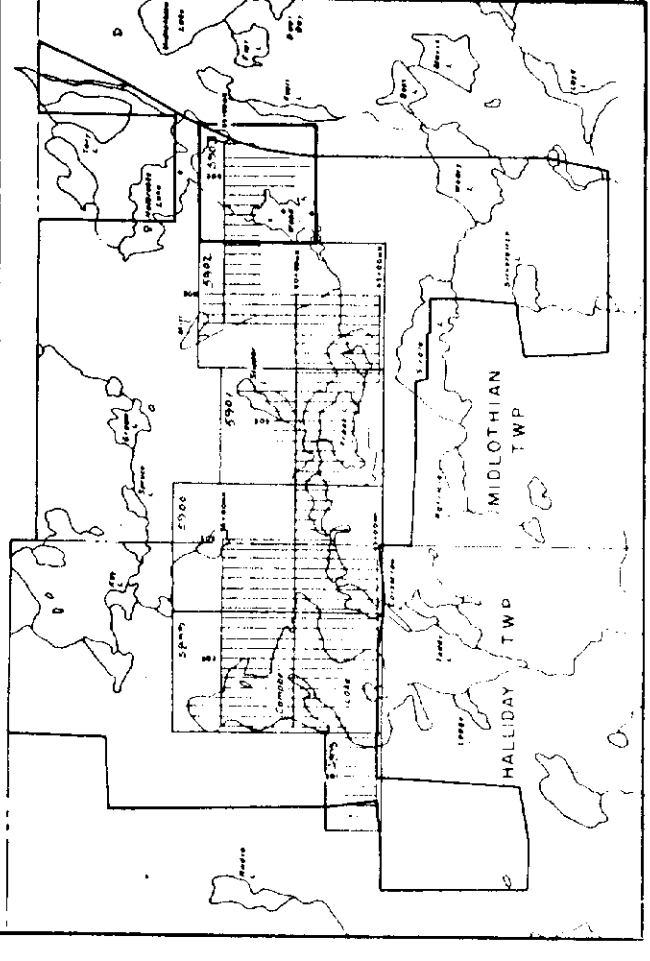
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#63.5024

OM 86-6-P-258

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DDH no. S-1	—————>	see Toronto file
to S-3, incl. on		Midlothian TWP DDR 32
Stairs Property, Goldtech		R.O.W #404 for 1987
Mines. Ltd., J.R.		
Goodwin, 1987		

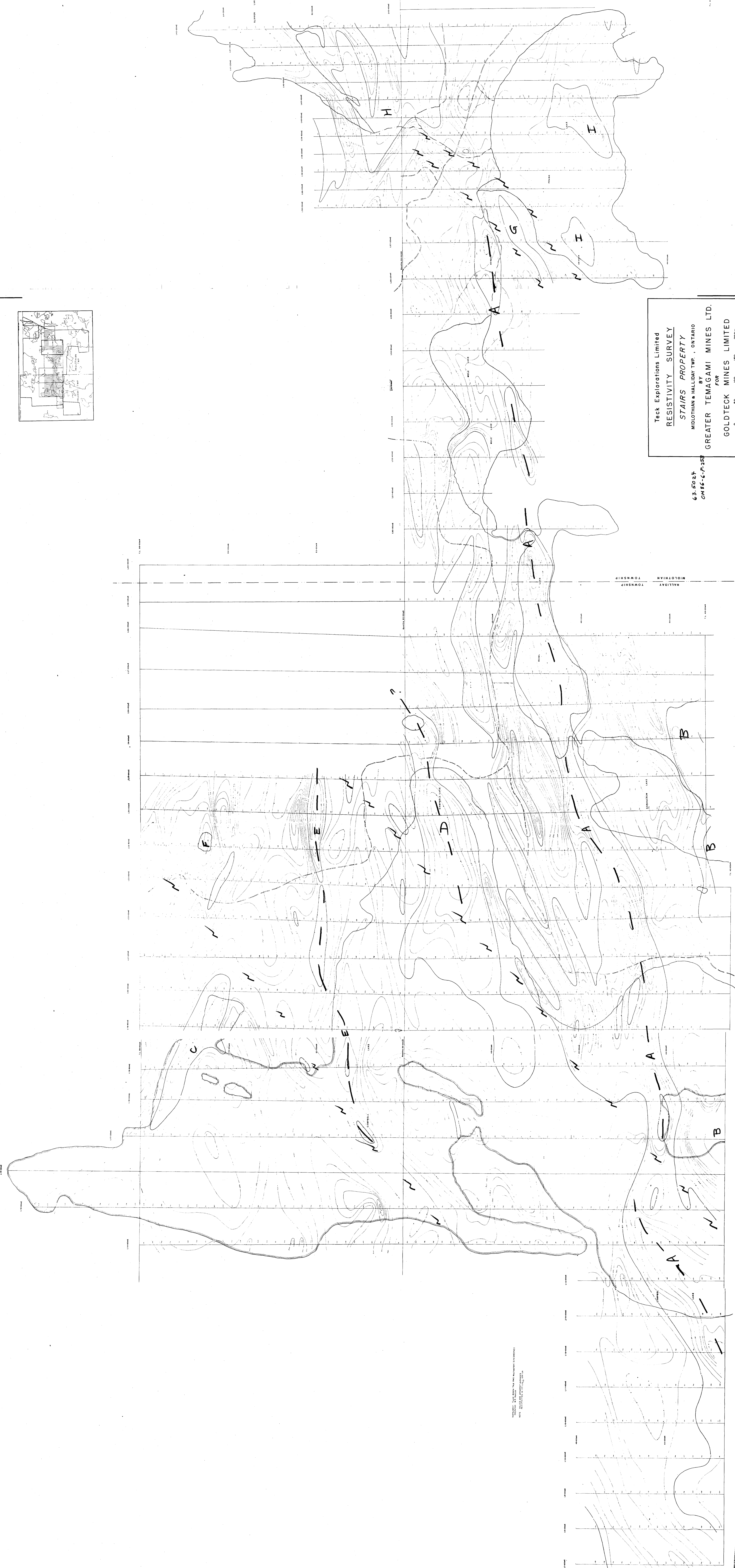
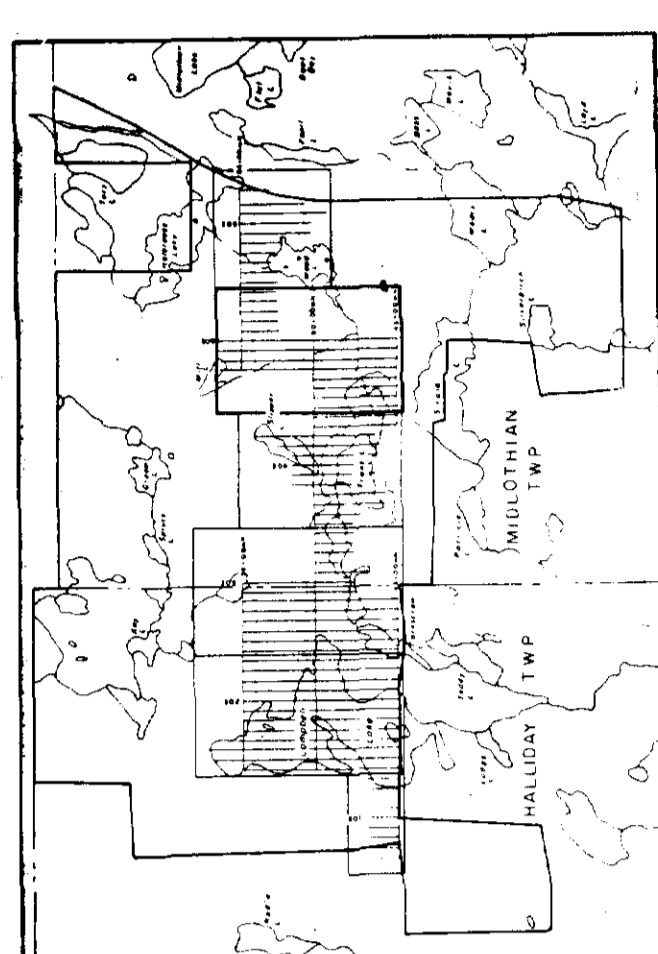


Teck Explorations Limited
MAGNETOMETER SURVEY
 (WEST SHEET)
STAIRS PROPERTY
 MIDLOTHIAN & HALLIDAY TWP., ONTARIO
 BY
GREATER TEMAGAMI MINES LTD.
 FOR
GOLDTECK MINES LIMITED

635924
 0486-67-258

Date: Mar. '87 NTS. 41-P-14 Scale: 1:2000 Job No. 14822 Dets. 8863g
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 Figure 4



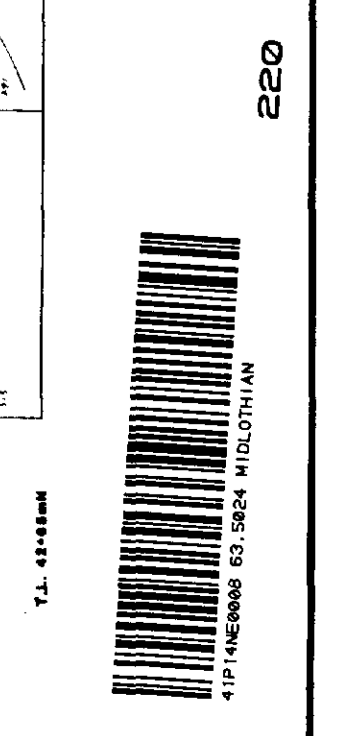


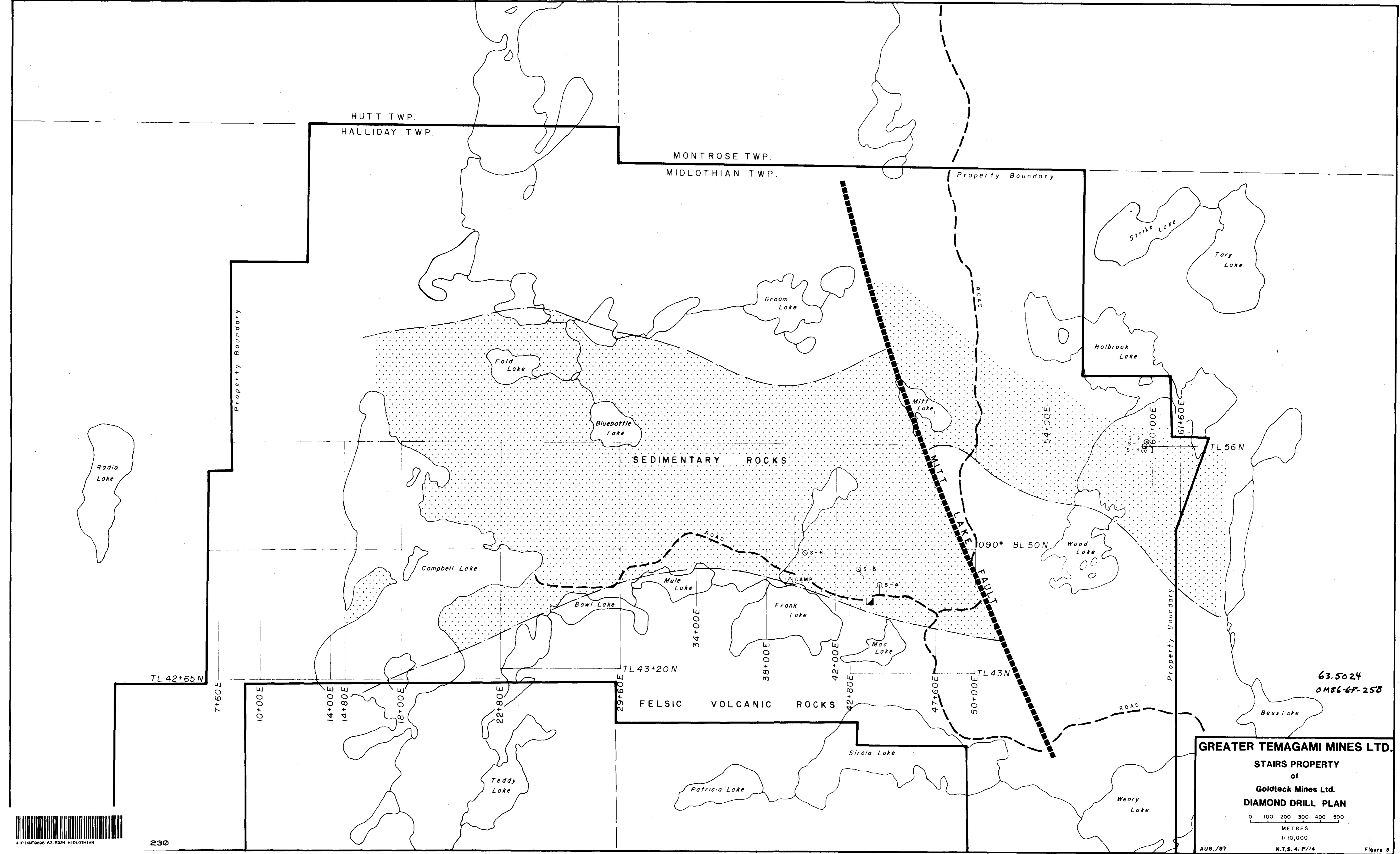
Teck Explorations Limited
RESISTIVITY SURVEY
STAIRS PROPERTY
BY MIDLOTHIAN & HALLIDAY TWP., ONTARIO
FOR GREATER TEMAGAMI MINES LTD.
GOLDTECK MINES LIMITED

63-5024
OM 56-C-P-352

Scale 1:2000
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Figure 3
Data Jan. 57 NTS. 41-P-14 Series 12000 Jobs 14822 Dots 25313





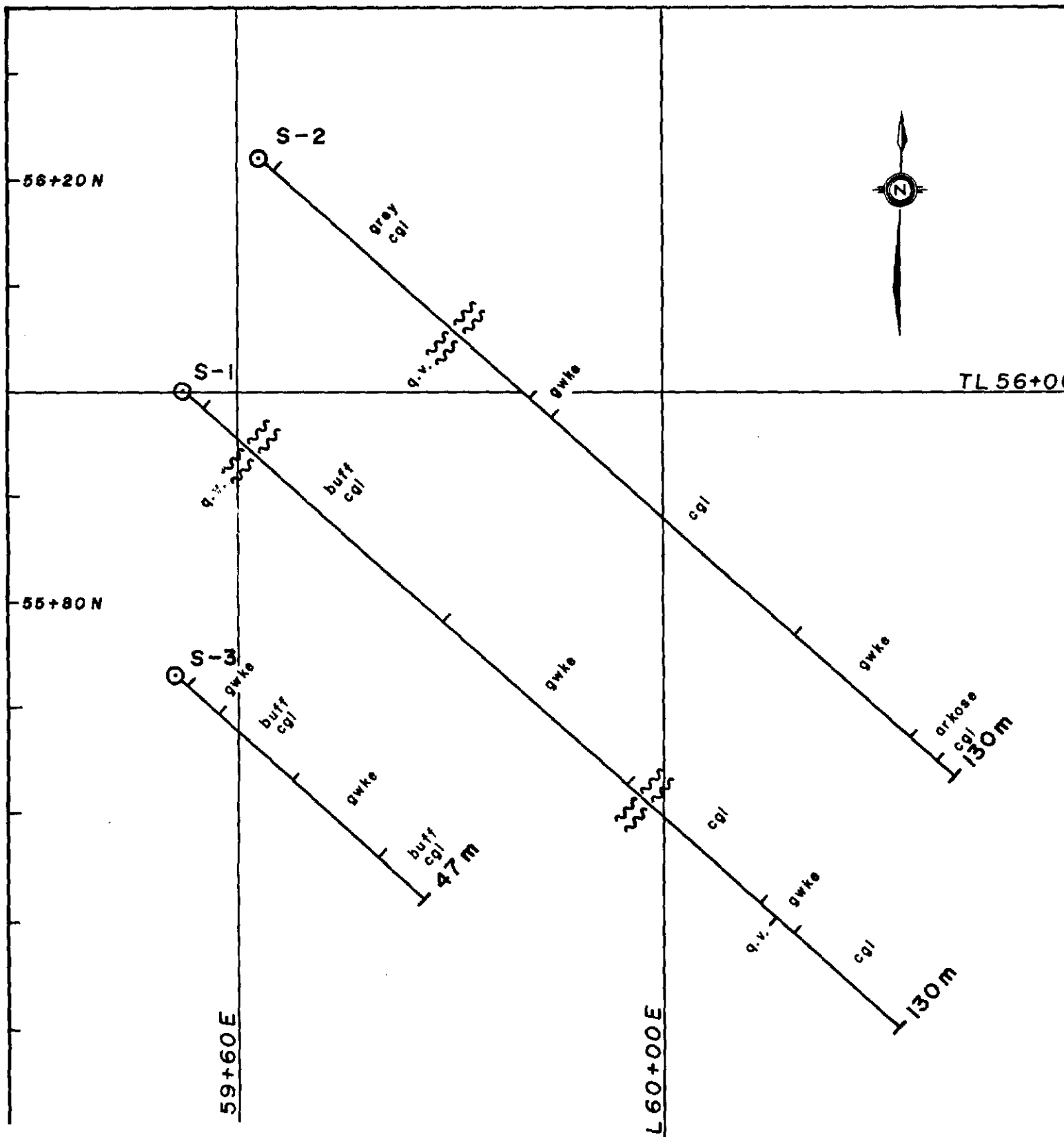
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GREATER TEMAGAMI MINES LTD.
STAIRS PROPERTY
 of
Goldteck Mines Ltd.
DIAMOND DRILL PLAN

0 100 200 300 400 500
 METRES
 1" = 10,000'

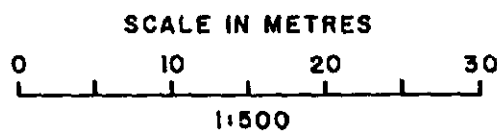
AUG./87 N.T.S. 41P/14 Figure 3





41P14NE0008 63.5024 MIDLOTHIAN

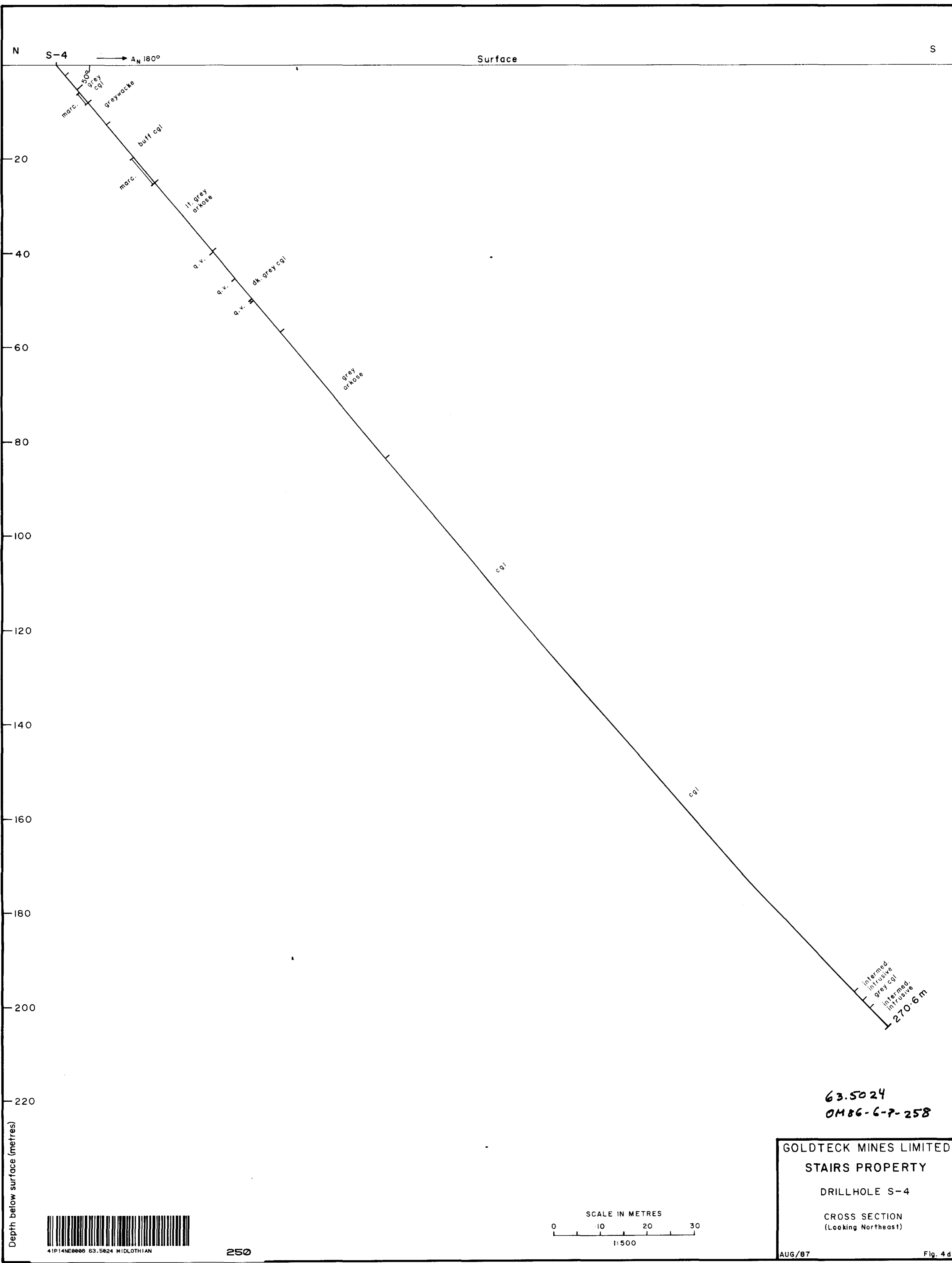
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GOLDTECK MINES LIMITED
STAIRS PROPERTY
WOOD LAKE ZONE
DIAMOND DRILL PLAN

AUG/87

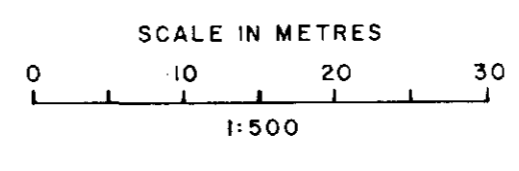
Fig.



Depth below surface (metres)



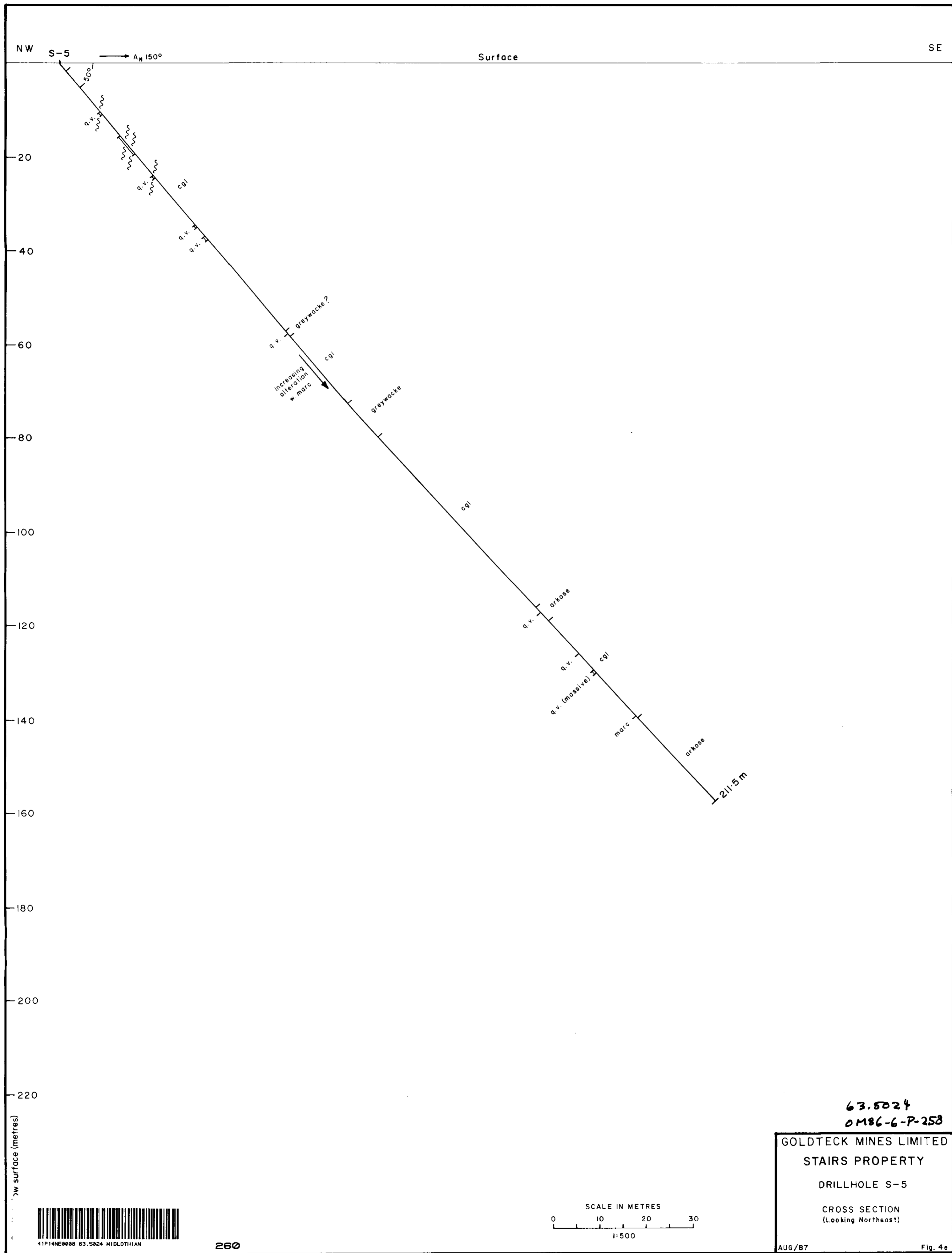
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63.5024
OM86-6-7-258

GOLDTECK MINES LIMITED
STAIRS PROPERTY
DRILLHOLE S-4
CROSS SECTION
(Looking Northeast)
AUG/87

Fig. 4d



NW

SE

S-6

A_N 135°

Surface

20

40

60

80

100

120

140

160

180

200

220

Depth below surface (metres)

50°
grey
cgl
greywacke
marc.
marc.
altered
cgl

g.v.
altered

altered

altered

argillite

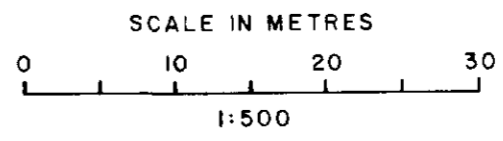
cgl

174.0 m



41P14NE0008 63.5024 MIDLOTHIAN

270



GOLDTECK MINES LIMITED
STAIRS PROPERTY
DRILLHOLE S-6
CROSS SECTION
(Looking Northeast)

AUG/87

Fig. 4f

63.5024
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