

63.4751



42D14NE0006 63.4751 LOWER AGUASABON LAKE

010

REPORT ON THE PROPERTY OF  
BEL AIR RESOURCES LTD.  
LOWER AGUASABON, SYDNE and  
STREY TOWNSHIPS  
DISTRICT OF THUNDER BAY  
ONTARIO

OM84-317

George Cavey  
Brett Barnes  
January 8, 1985

OREQUEST



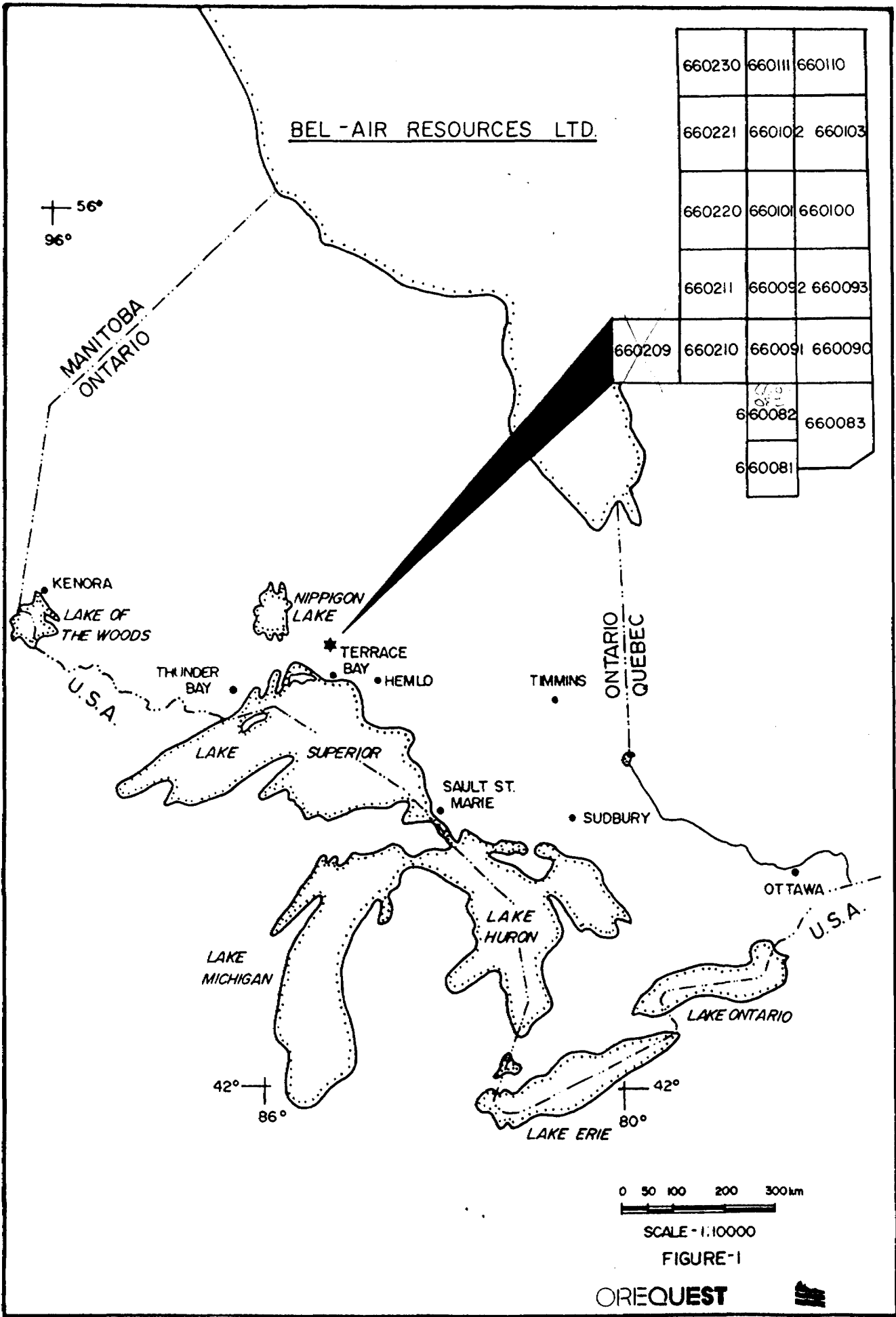
## SUMMARY

In November, 1984 a trenching and sampling program was completed on the Bel-Air Resources Ltd. property located near Terrace Bay, Ontario. Two areas coincident and proximal to repeated rock and soil gold geochemical anomalies were tested. The target areas, separated by 300-400 metres, appear to be along strike of each other. No anomalous geochemical data occurs between the two areas.

Low grade gold mineralization encountered during the program was found over very narrow cross-strike widths. A close association existed in the veins between anomalous gold values and sulphide mineralization. Anomalous mineralization was almost exclusively restricted to quartz carbonate veining. Rock mineralogy appears to be similar in both areas of interest.

BEL-AIR RESOURCES LTD.

|        |        |        |        |
|--------|--------|--------|--------|
| 660230 | 660111 | 660110 |        |
| 660221 | 660102 | 660103 |        |
| 660220 | 660101 | 660100 |        |
| 660211 | 660092 | 660093 |        |
| 660209 | 660210 | 660091 | 660090 |
|        | 660082 | 660083 |        |
|        | 660081 |        |        |



SCALE - 1:10000

FIGURE-1

**OREQUEST**





42D14NE0006 63.4751 LOWER AGUASABON LAKE

010C

TABLE of CONTENTS

Summary

Table of Contents

|                                       |   |
|---------------------------------------|---|
| 1.0 Introduction                      | 1 |
| 2.0 Previous Work Summary             | 2 |
| 3.0 Exploration Model                 | 2 |
| 4.0 Target Geology                    | 3 |
| 5.0 Exploration Results               | 3 |
| 5.1a Detailed Trench Geology - Area A | 3 |
| 5.1b Detailed Trench Geology - Area B | 4 |
| 5.2 Geophysics                        | 5 |
| 6.0 Conclusions and Recommendations   | 5 |

Statement of Qualifications

    George Cavey, Consulting Geologist

    Brett Barnes, Geologist

Cost Estimates

LIST of FIGURES

|           |  |                   |
|-----------|--|-------------------|
| Figure 1  | Property Location  | Following Summary |
| Figure 2  | Regional Geology   | Following Page 4  |
| Figure 3  | <sup>Detail</sup><br><del>Trench and Rock Sample Locations</del><br>( <del>Trench Detail</del> ) | In Pocket         |
| FIGURE 4. | SAMPLING EX TANK   | In Pocket         |

## 1.0 INTRODUCTION

The following report deals with the work done to date on the Bel-Air Resources Ltd. property in Terrace Bay, Ontario; specifically on the recently completed Phase II trenching and geophysical program.

Phase I consisted of a geological, geochemical and geophysical exploration program which was completed in September of 1983. Based on favorable geochemical results indicating anomalous gold in the soil and subsequent re-sampling of anomalies, Phase II of the exploration program was initiated. The Phase II program involved up-grading four lines of the Phase I grid system to permit a geophysical survey (I.P.) to be performed on the ground. Approximately 2.7 kilometers of an Induced Polarization survey was completed by Phoenix Geophysics Ltd.

Trenching of the geochemical gold targets began in late October 1984 and terminated in mid-November 1984. The target areas are located approximately 300 metres apart and only the specific anomalous regions were examined.

A 22.9 metre trench was established on Line 11+00E at 7+50N over a coincident geochemical soil and rock gold anomaly. The second target area on Line 7+00E, lying between stations 7+50N to 8+00N occurred on a talus slope. Detailed chip sampling of the up-slope cliff face was conducted over a cross strike width of 24 metres.

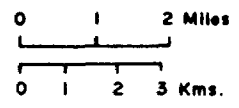
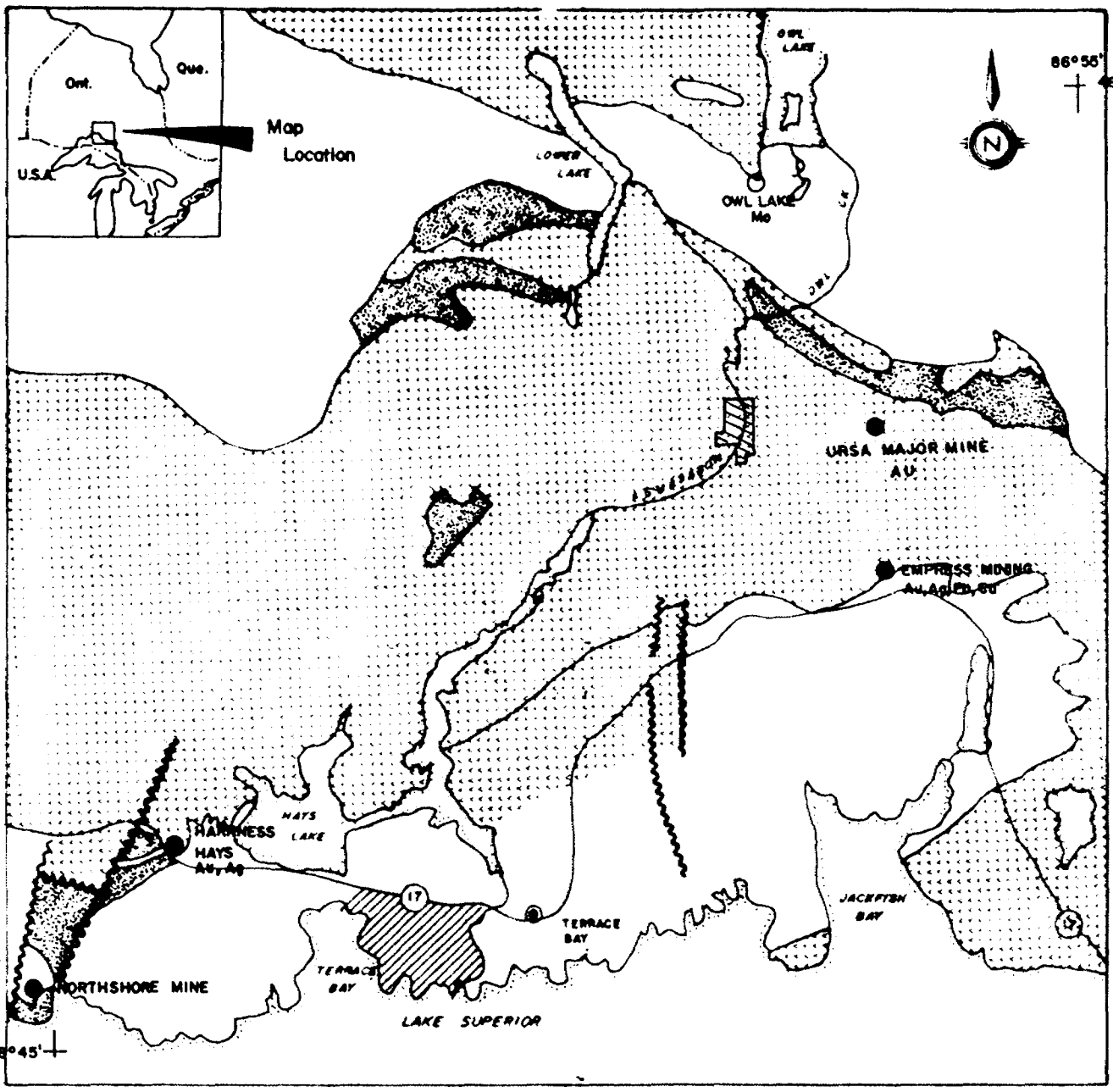
## 2.0 PREVIOUS WORK SUMMARY







Phase I consisted of a geological, geochemical and geophysical exploration program which was completed in September of 1983 by OreQuest Consultants Ltd. Phase I involved establishing a cut and flag line grid which was used in the geological and geochemical surveys as a means of control. Soil sampling was done at 50 metre intervals on north-south grid lines, spaced 100 metres apart, over the entire property. Rock sampling was selective in areas of geological interest.

In November of 1983 and in July of 1984 all soil and rock geochemical gold anomalies were resampled. On Line 11+00E near station 7+50N; coincident geochemical soil values returned gold values of 140 ppb and 250 ppb. On Line 7+00E, a talus rock sample hosting a quartz-carbonate vein with pyrite mineralization returned a value of 2075 ppb or 0.06 oz/ton gold. The reported geochemical anomalies were targeted for detailed sampling and a geophysical survey.

## 3.0 EXPLORATION MODEL

Terrace Bay type gold deposits are vein type occurrences contained within metavolcanic sequences and are usually associated with large felsic intrusives (i.e. Terrace Bay Batholith). The gold is generally associated with quartz-carbonate alteration and/or some type of intrusive dike or sill emplacement. Veins of quartz-carbonate, zones associated with pervasive alteration and hybassal intrusives in general, all respond with low resistivity signatures in areas of mafic metavolcanics. Subsequently, an I.P. survey (resistivity) was chosen as a means to outline areas of possible alteration within the volcanics surrounding a surface soil or rock geochemical anomaly.



-  Granitic Rock
-  Porphyritic
-  Felsic-intermediate volcanic, sediments
-  Mafic volcanics (± Mafic intrusives)
-  Mineral occurrence
-  Past producing mine

TERRACE BAY  
GENERAL GEOLOGY

FIGURE 2



#### 4.0 TARGET GEOLOGY

As determined by the Phase I program, the target areas lie within a thick intermediate to mafic metavolcanic unit that extends across the northern half of the claim group. Detailed petrographic sections of five rocks selected from within this unit, confirmed the Phase I field analysis of the specific rock types encountered. Harris Exploration Services (Appendix II) identified the five rocks as "closely related, being fine-grained, undeformed, weakly metamorphosed and recrystallized ash tuffs, probably of intermediate composition".

#### 5.0 EXPLORATION RESULTS

##### 5.1 DETAILED TRENCH GEOLOGY

Area A - Line 11+00E; 7+50N (8+00N on New Grid)

The trench lies entirely within a mafic/intermediate metavolcanic sequence that appears to have undergone quartz-carbonate alteration. The rocks generally have a tabular fabric, but become very schistose in certain sections usually associated with quartz veining. The sequence in the trench appears to become more silicious to the south; the schistosity is very poorly developed in the silicified sections. Vesicular and/or amygdaloidal calcite-filled flow textures were noted in all sections of the trench.

Stratigraphic strike did not appear to vary more than 10°, usually averaging 075°. Dips were steep (70°) to vertical. The only exception was found between 5.0 to 6.0 metres in the trench, where a minor z-fold hinge was measured and recorded.

Anomalous gold values occur between 4.0 to 6.0 metres. The area was mapped as a discrete unit, although somewhat longer (i.e.) 4.0 to 7.0 metres. The reason for the

anomaly within the unit is not immediately apparent. There appears to be an association with increased silica content in the stratigraphy and the gold may be related to the micro-quartz veining. A minor fold crest was observed between 5.0 to 6.0 metres. Structural traps often play a large part in concentrating mineralized fluids migrating through the rock. Since the interval 5.0-6.0 has the highest gold anomaly in the host rock of the trench; the minor fold and gold mineralization are thought to be related.

Quartz veining is found as two distinct types. The first type occurs as boudined, sub-parallel to parallel quartz-carbonate veins, 15-25 cm wide which dip vertically and carry 1%-3% euhedral pyrite. The second type is found as discrete quartz veins sub-horizontal 1 cm to 10 cm wide, quartz rich, carbonate poor that cross cut stratigraphy. The second group sometimes is indicated by rust staining, but appears to be barren of gold. Gold mineralization in the trench is found associated with the first group of quartz veins, the carbonate rich variety and also appears to be associated with folding structural traps and micro veining.

Area B - Line 7+00E; 7+25N

The cliff face above the talus slope appears to be entirely composed of mafic to intermediate metavolcanics. The fabric of the rock is tabular to blocky, except near boudined quartz-veins, where it becomes more schistose and structurally unstable. The silica content again appears to increase to the south, an observation that is born out by the I.P. geophysical survey. Amygdules of calcite were observed along the length of the cliff face sampled. The stratigraphy generally strikes 075° with steep to vertical dips.

Quartz veins sampled along the cliff face were noted to be identical to those found in Area A. The difference in Area B is that the low angle, quartz rich veins occasionally carry anomalous gold. The reason for this is not clear, but may be related to increase sulphide content.

## 5.2 GEOPHYSICS

Phoenix Geophysics Ltd., sub-contracted by OreQuest Consultants Ltd., conducted four lines of an I.P. survey concentrating in the areas outlined by previous soil and rock sampling anomalies. The I.P. survey successfully outlined areas of alteration closely associated with the anomalies.

On Line 11+00E between stations 10+00W and 13+00N, a high resistivity appears to be associated with pervasive alteration associated with quartz veining. This anomaly requires further evaluation, more I.P. work to enhance and to understand the source.

The second anomaly on Line 4+00E between stations 8+25W and 9+50N also appears to be closely associated to quartz veining and carbonate alteration. This area has not yet been adequately tested. Further I.P. to the west of the property border is recommended on this anomaly.

## 6.0 CONCLUSIONS and RECOMMENDATIONS

Results of the detail sampling and trenching program on the Bel-Air ground are not extremely encouraging, however, based on all results to date and general geological setting, further trenching is recommended on the I.P. anomaly outlined on Line 4+00E (completion of Phase II).

Work done to date indicates the general area is favourable to gold mineralization, but due to the low grades and spotty nature of the gold values continuation to Phase III as originally proposed in the property report is not recommended at this time. A lesser program consisting of I.P. and further sampling is warranted.

A complete review of all assessment data from adjoining properties including all geochemical and geophysical results will also be required before any diamond drilling is recommended.

COST ESTIMATES

PHASE III

|  |                  |
|--|------------------|
| Geological Mapping                       | \$ 5,000         |
| Regional I.P. Survey - 3 km @ \$1,000/km | 3,000            |
| Detailed I.P. - 2 km @ \$2,000/km        | 4,000            |
| Trenching                                | 5,000            |
| Analysis                                 | 4,500            |
| Camp Costs                               | 3,500            |
| Supervision and Report                   | 5,000            |
| Contingencies                            | <u>4,500</u>     |
| TOTAL OF PHASE III                       | <u>\$ 34,500</u> |

PHASE IV

|                                    |                  |
|------------------------------------|------------------|
| Mobilization and Demobilization    | \$ 10,000        |
| Diamond Drilling -                 |                  |
| 1,000 metres @ \$80/metre          | 80,000           |
| Assays - 500 samples @ \$20/sample | 10,000           |
| Supervision - 30 days @ \$400/day  | 12,000           |
| Camp Costs                         | 10,000           |
| Contingencies @ 20%                | <u>24,400</u>    |
| TOTAL OF PHASE IV                  | <u>\$146,400</u> |

TOTAL COST OF PHASE III and PHASE IV \$180,900

## QUALIFICATIONS

I, George Cavey, of 6891 Wiltshire Street, Vancouver, British Columbia hereby certify:

1. I am a graduate of the University of British Columbia (1976) and hold a BSc. degree in geology.
2. I am presently employed as a consulting geologist with OreQuest Consultants Ltd. of 404-595 Howe Street, Vancouver, British Columbia.
3. I have been employed in my profession by various mining companies for the past nine years.
4. I am a Fellow of the Geological Association of Canada.
5. I am a member of the Canadian Institute of Mining and Metallurgy.
6. The information contained in this report was obtained from an onsite property examination and supervision of the field work program conducted by OreQuest Consultants Ltd. in 1984.
7. Neither OreQuest Consultants Ltd. nor myself have direct or indirect interest in the property nor in the securities of Bel Air Resources Ltd..
8. This report may be used by Bel Air Resources Ltd. for all corporate purposes and including any public financing.

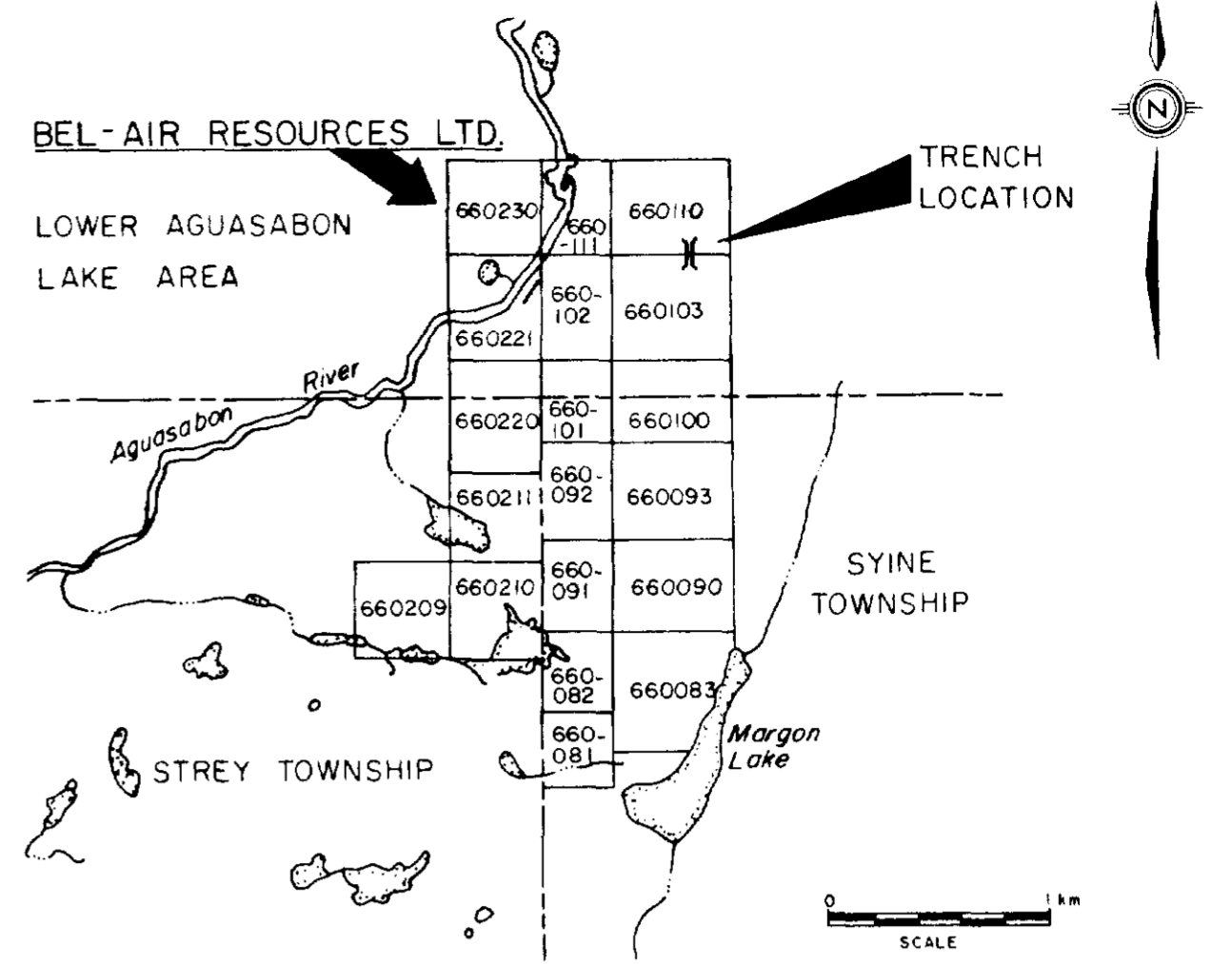
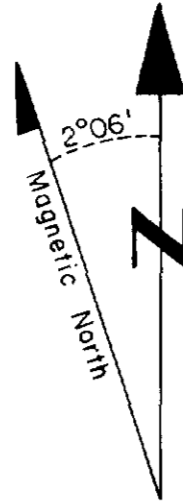
George Cavey  
Consulting Geologist

DATED at Vancouver, British Columbia, this 8th day of January, 1985

## ROCK GEOCHEMISTRY

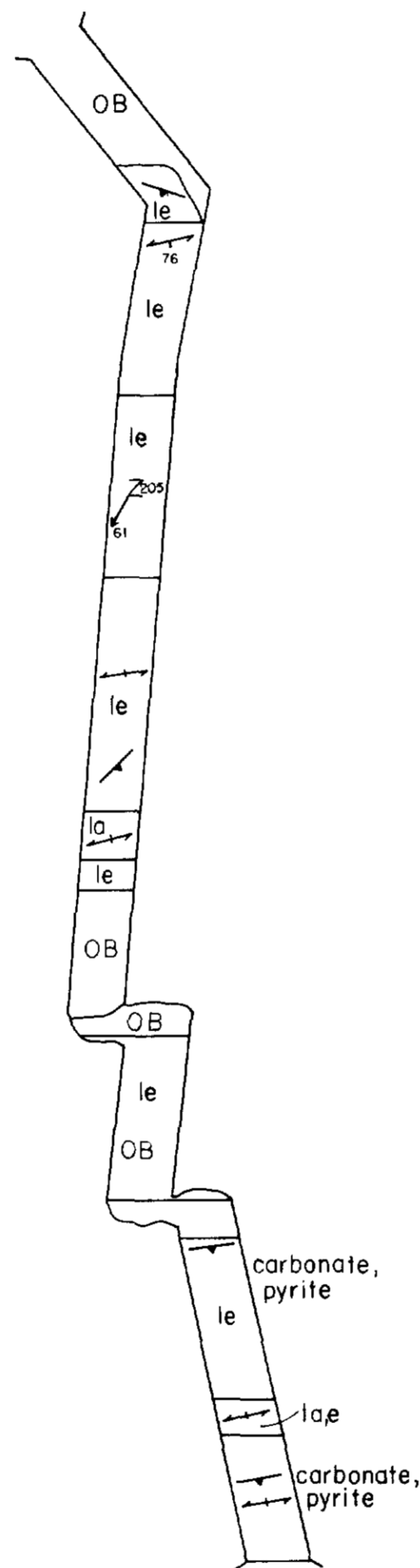
BELHIK 84

| SAMPLE NO. | Au<br>(ppb) | Ag<br>(ppm) | As<br>(ppm) | SAMPLE NO. | Au<br>(ppb) | Ag<br>(ppm) | As<br>(ppm) |
|------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|
| 06676      | 5           | 0.1         | 10          | 06726      | 5           | 0.1         | 2           |
| 06677      | 10          | 0.1         | 2           | 06727      | 30          | 0.1         | 4           |
| 06678      | 10          | 0.1         | 4           | 06728      | 5           | 0.1         | 2           |
| 06679      | 10          | 0.1         | 2           | 06729      | 5           | 0.1         | 2           |
| 06680      | 10          | 0.1         | 4           | 06730      | 110         | 0.2         | 2           |
| 06681      | --          | 0.2         | 4           | 06731      | 160         | 0.2         | 2           |
| 06682      | 5           | 0.2         | 2           | 06732      | 10          | 0.1         | 2           |
| 06683      | 20          | 0.1         | 2           | 06733      | --          | 0.1         | 2           |
| 06684      | 5           | 0.1         | 4           | 06734      | 10          | 0.1         | 2           |
| 06685      | 5           | 0.4         | 4           | 06735      | 25          | 0.1         | 2           |
| 06686      | --          | 0.1         | 2           | 06736      | 30          | 0.2         | 2           |
| 06687      | 65          | 0.2         | 2           | 06737      | 5           | 0.1         | 4           |
| 06688      | --          | 0.1         | 2           | 06738      | 5           | 0.1         | 2           |
| 06689      | 35          | 0.2         | 4           | 06739      | --          | 0.1         | 2           |
| 06690      | 5           | 0.1         | 2           | 06740      | --          | 0.1         | 4           |
| 06691      | 50          | 0.2         | 4           | 06741      | 10          | 0.1         | 4           |
| 06692      | 5           | 0.1         | 2           | 06742      | 10          | 0.1         | 4           |
| 06693      | 30          | 0.1         | 2           | 06743      | --          | 0.1         | 2           |
| 06694      | --          | 0.1         | 4           | 06744      | 5           | 0.1         | 2           |
| 06695      | --          | 0.1         | 2           | 06745      | --          | 0.1         | 4           |
| 06696      | --          | 0.1         | 2           | 06749      | 140         | 0.2         | 4           |
| 06697      | 25          | 0.2         | 2           |            |             |             |             |
| 06698      | 5           | 0.1         | 2           |            |             |             |             |
| 06699      | 10          | 0.1         | 4           |            |             |             |             |
| 06700      | 15          | 0.1         | 2           |            |             |             |             |
| 06701      | --          | 0.1         | 2           |            |             |             |             |
| 06702      | 100         | 0.3         | 2           |            |             |             |             |
| 06703      | 340         | 0.5         | 2           |            |             |             |             |
| 06704      | 340         | 0.2         | 4           |            |             |             |             |
| 06705      | 10          | 0.6         | 4           |            |             |             |             |
| 06706      | 140         | 0.4         | 2           |            |             |             |             |
| 06707      | 320         | 0.3         | 4           |            |             |             |             |
| 06708      | 5           | 0.1         | 4           |            |             |             |             |



11+00E

- overburden
- le - altered amygdaloidal
  - yellow-rusty brown weather
  - massive to polar foliation
- le - more siliceous amygdaloidal, quartz - veins and amygdules of calcite
  - rusty gossan on fractures
  - interbedded siliceous and chlorite units
  - good foliation
- le - siliceous, massive amygdaloidal and amygdules of calcite
  - interbedded siliceous and chlorite rich units massive and foliated, respectively
  - increased siliceous unit content
  - fold crest visible axis
- le - siliceous, massive amygdaloidal
  - reddish weather on fracture faces
  - poor - moderate foliation definition (78 - 90)
  - amygdules
- la - chlorite rich fine grained amphibolite flow
  - good foliation / shear
- le - siliceous, massive amygdaloidal
- overburden
- le - poorly foliated, amygdaloidal siliceous
  - overburden (possible bedrock) plus talus
  - overburden
- le - massive, poorly foliated, amygdaloidal siliceous
  - progressively more siliceous to the south
  - reddish gossan on fracture faces
  - amygdules of calcite
- la,e - well foliated, amygdaloidal, fine grained amphibolite flow
- weather surface



- 06726
- 06727
- 06728
- 06729
- 06730
- 06731
- 06732
- 06733
- 06734
- 06735
- 06736
- 06737
- 06738
- 06739
- 06740
- 06741
- 06742
- 06743
- 06744
- 06745
- 06749

- 8+00N

### LEGEND ROCK GEOCHEMISTRY

| SAMPLE NO. | Au (ppb) | Ag (ppm) | As (ppm) |
|------------|----------|----------|----------|
| 06726      | 5        | 0.1      | 2        |
| 06727      | 30       | 0.1      | 4        |
| 06728      | 5        | 0.1      | 2        |
| 06729      | 5        | 0.1      | 2        |
| 06730      | 110      | 0.2      | 2        |
| 06731      | 160      | 0.2      | 2        |
| 06732      | 10       | 0.1      | 2        |
| 06733      | —        | 0.1      | 2        |
| 06734      | 10       | 0.1      | 2        |
| 06735      | 25       | 0.1      | 2        |
| 06736      | 30       | 0.2      | 2        |
| 06737      | 5        | 0.1      | 4        |
| 06738      | 5        | 0.1      | 2        |
| 06739      | —        | 0.1      | 2        |
| 06740      | —        | 0.1      | 4        |
| 06741      | 10       | 0.1      | 4        |
| 06742      | 10       | 0.1      | 4        |
| 06743      | —        | 0.1      | 2        |
| 06744      | 5        | 0.1      | 2        |
| 06745      | —        | 0.1      | 4        |
| 06749      | 140      | 0.2      | 4        |

### SYMBOLS

- quartz vein
- 76° / foliation (vertical, inclined)
- 205° / Z-fold
- 61° / trench
- outcrop
- OB overburden

0 5 metres  
Scale - 1:100

63.4751

FIGURE 3

OM84-317

## TRENCH DETAIL

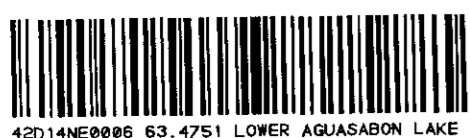
BEL-AIR RESOURCES LTD.

LOWER AGUASABON LAKE AREA, SYINE AND STREY TOWNSHIPS  
THUNDER BAY MINING DIVISION ONTARIO

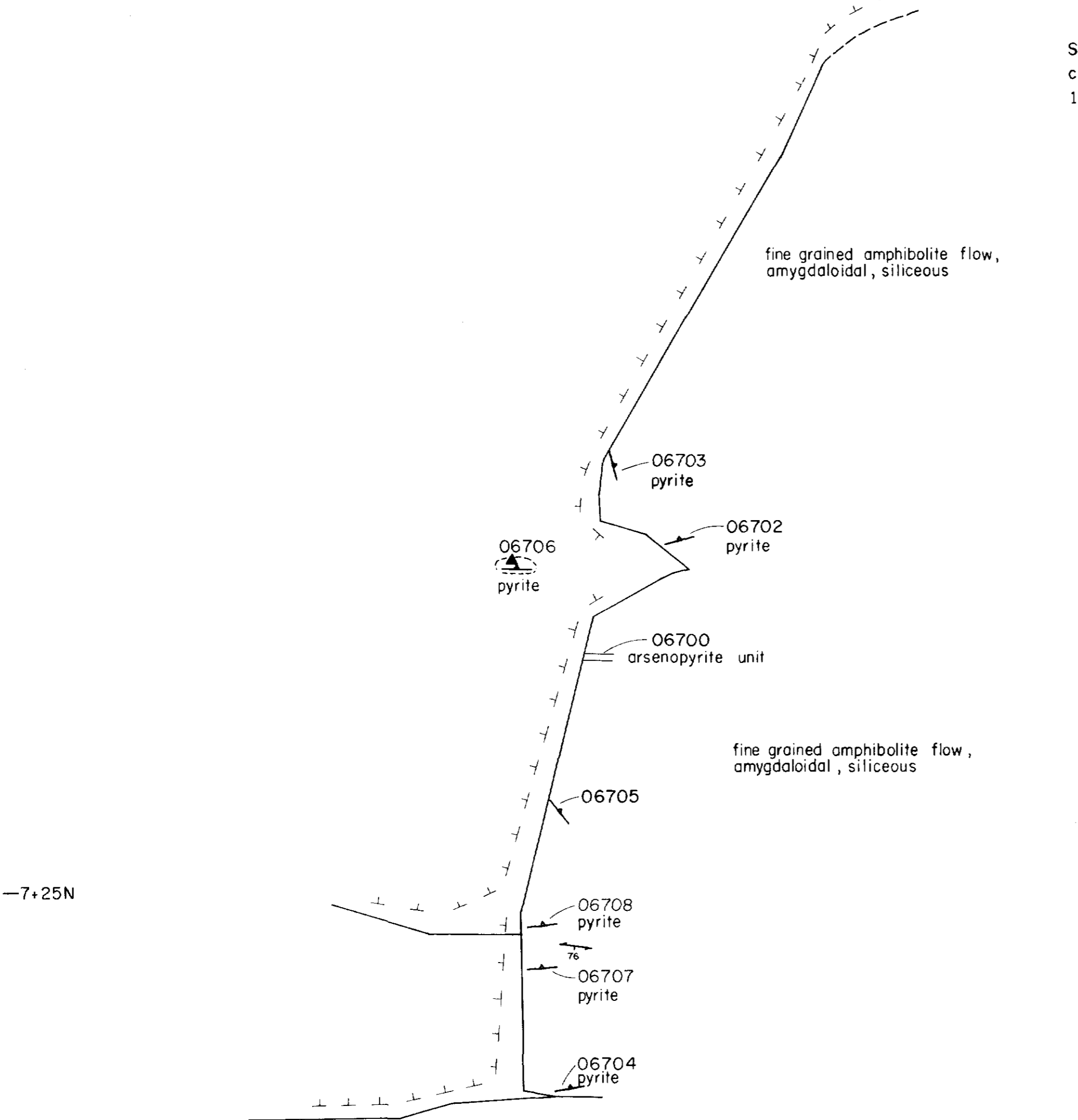
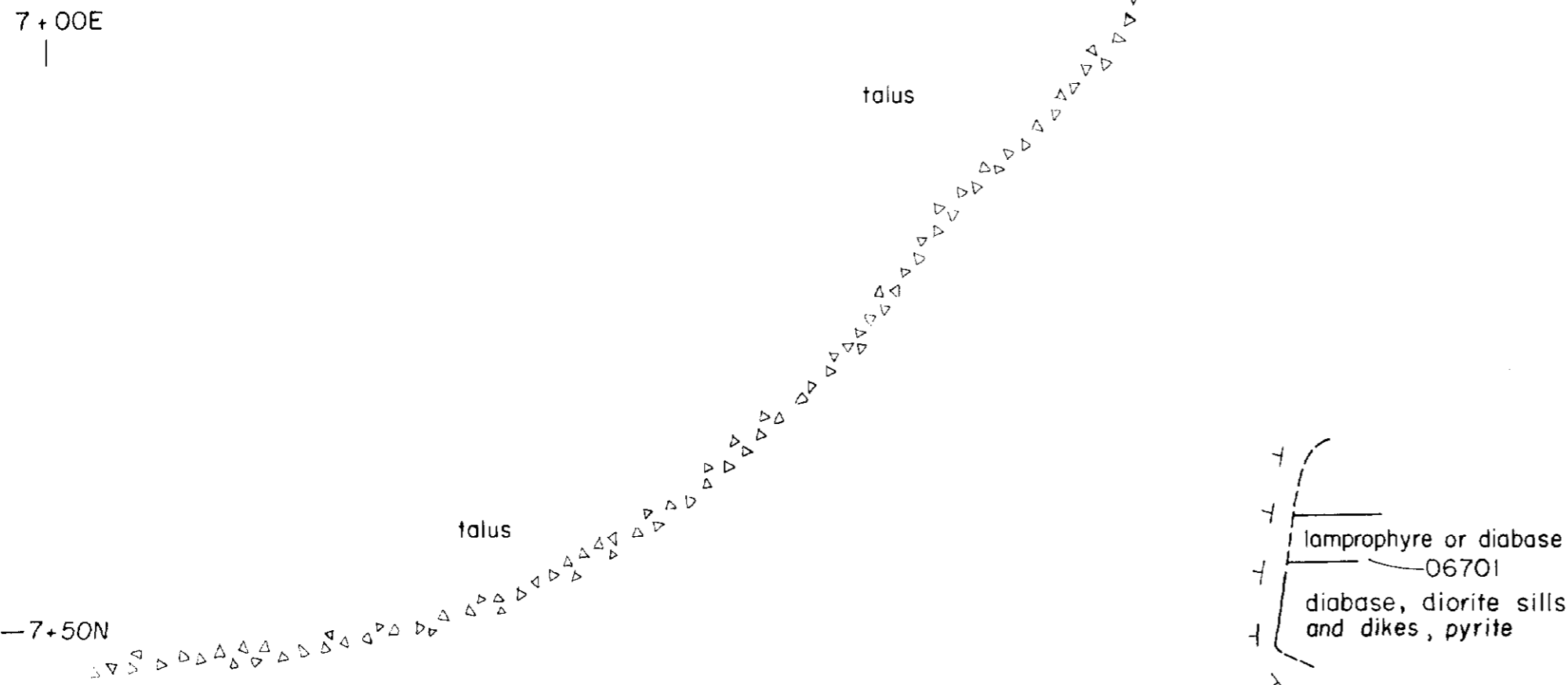
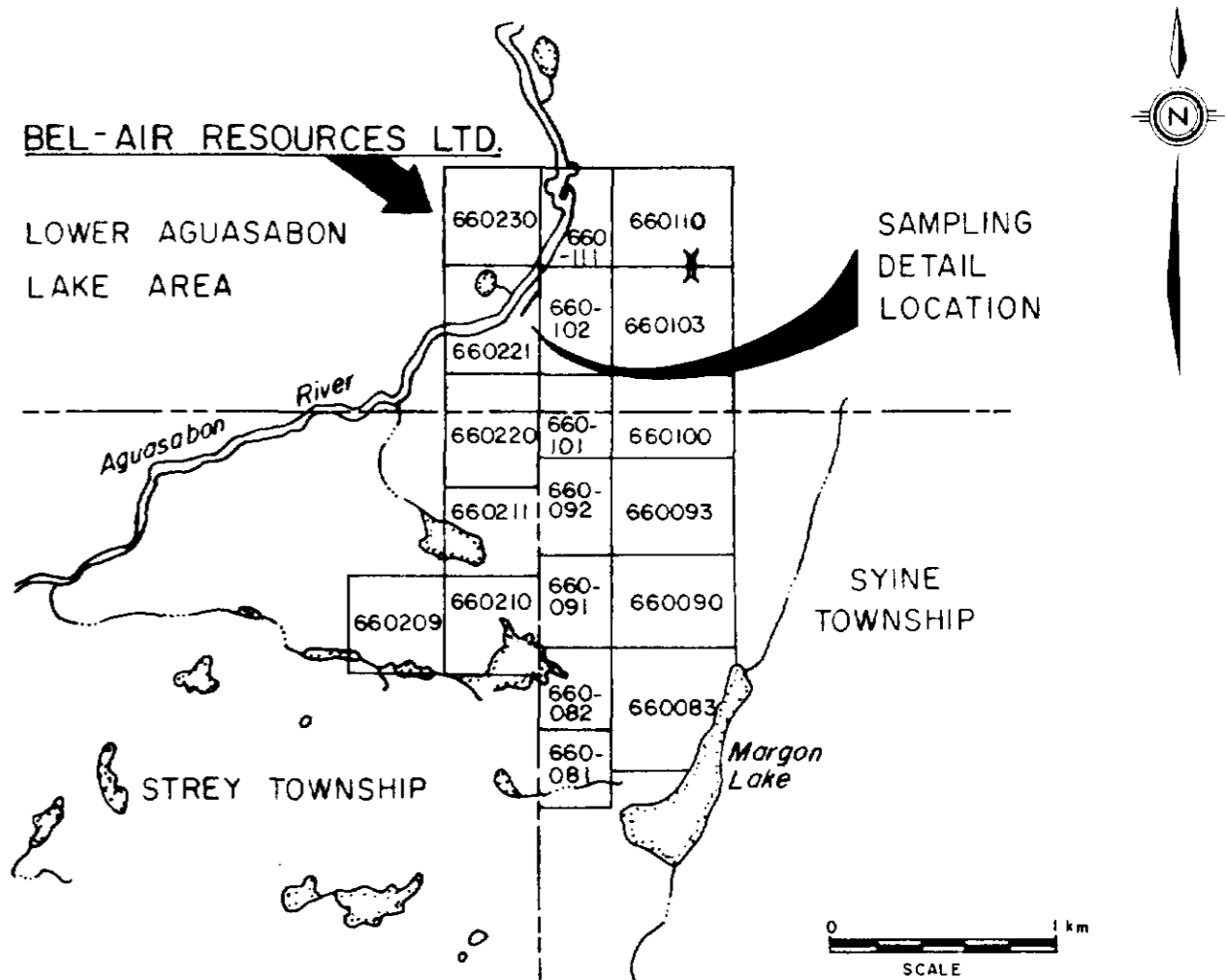
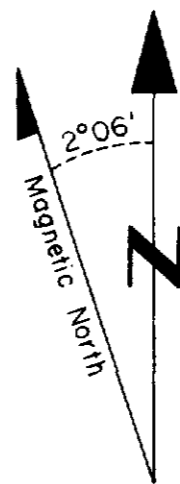
OREQUEST



PY MAR, 85







Sampling along cliff face at 1 metre intervals

06699  
06698  
06697  
06696  
06695  
06694  
06693  
06692  
06691  
06690  
06689  
06688  
06687  
06686  
06685  
06684  
06683  
06682  
06681  
06680  
06679  
06678  
06677  
06676

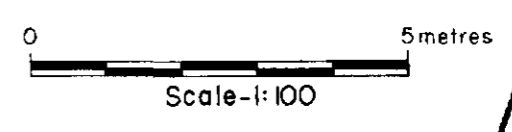
LEGEND

ROCK GEOCHEMISTRY

| SAMPLE NO. | Au (ppb) | Ag (ppm) | As (ppm) |
|------------|----------|----------|----------|
| 06676      | 5        | 0.1      | 10       |
| 06677      | 10       | 0.1      | 2        |
| 06678      | 10       | 0.1      | 4        |
| 06679      | 10       | 0.1      | 2        |
| 06680      | 10       | 0.1      | 4        |
| 06681      | —        | 0.2      | 4        |
| 06682      | 5        | 0.2      | 2        |
| 06683      | 20       | 0.1      | 2        |
| 06684      | 5        | 0.1      | 4        |
| 06685      | 5        | 0.4      | 4        |
| 06686      | —        | 0.1      | 2        |
| 06687      | 65       | 0.2      | 2        |
| 06688      | —        | 0.1      | 2        |
| 06689      | 35       | 0.2      | 4        |
| 06690      | 5        | 0.1      | 2        |
| 06691      | 50       | 0.2      | 4        |
| 06692      | 5        | 0.1      | 2        |
| 06693      | 30       | 0.1      | 2        |
| 06694      | —        | 0.1      | 4        |
| 06695      | —        | 0.1      | 2        |
| 06696      | —        | 0.1      | 2        |
| 06697      | 25       | 0.2      | 2        |
| 06698      | 5        | 0.1      | 2        |
| 06699      | 10       | 0.1      | 4        |
| 06700      | 15       | 0.1      | 2        |
| 06701      | —        | 0.1      | 2        |
| 06702      | 100      | 0.3      | 2        |
| 06703      | 340      | 0.5      | 2        |
| 06704      | 340      | 0.2      | 4        |
| 06705      | 10       | 0.6      | 4        |
| 06706      | 140      | 0.4      | 2        |
| 06707      | 320      | 0.3      | 4        |
| 06708      | 5        | 0.1      | 4        |

SYMBOLS

- talus
- cliff
- quartz vein
- foliation (inclined)
- rock sample
- outcrop (observed, assumed)



63.4751  
OM84-317

FIGURE 4

SAMPLING DETAIL  
BEL-AIR RESOURCES LTD.

LOWER AGUASABON LAKE AREA, SYINE AND STREY TOWNSHIPS  
THUNDER BAY MINING DIVISION ONTARIO

