EXPLORATION FOR GOLD AND ZINC IN SOUTH-EASTERN ONTARIO

GRIMSTHORPE TOWNSHIP
ARDOCH AREA (CLARENDON TWP.)
KALADAR AREA (KALADAR TWP.)

BY

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OPAP 93 - 446

DECEMBER 1993

SUMMARY

Three different sub-projects were investigated, not including a one day follow-up investigation in Hinchinbrooke Township. The program was executed as it was proposed in the OPAP grant application with some minor adjustments such as several days of prospecting with the "Goldspear" which measures tiny conductive particles in overburden. The method will be described in this report.

The first sub-project targeted gold mineralization in Grimsthorpe Township. The main target of the project is gold associated with quartz veining in the peri-intrusive and roof-pendant environment of the Lingham Lake Diorite-Gabbro Complex. Within the contact zone of the intrusive rocks and the older but overlying volcanogenic rocks, late stage hydrothermal activity may have remobilized gold and concentrated in quartz-veins. The objective was to cover large areas in order to define possible target areas for a detailed follow-up at a later date. Work completed in Grimsthorpe Township consisted of prospecting and a geochemical soil survey. No significant gold occurrence has been found with the exception of one anomalous soil sample.

The Ardoch property (Clarendon twp.) contains well documented gold showings. In the immediate vicinity a small gold production was operating early this century. A sphalerite showing is located outside but close to the property line. Geochemical soil anomalies in the northern portion of the property were followed up by additional geochemical soil sampling, which did not reveal any promising results. A detailed geochemical soil sampling survey was completed at the south-western margin of the property (south of Swaugert Lake) which was not investigated previously. The results are encouraging since two gold anomalies have been reproduced in a follow-up sampling (383 ppb Au). At the southern claim boundary zinc anomalies do occur which may be related to a lithological unit of the Flinton formational unit."Goldspear" prospecting was carried out in selected areas of the property.

The Kaladar project was a follow-up of the program in 1991 (OPAP 91-782 and OPAP 91-245) and 1992 (OPAP 92-233). Several trenches and blast holes were completed in the area of the former blast holes IX and X. No significant result has been obtained from outcrop rock analyses. A small detailed geochemical survey was completed. Two anomalous zinc values have been obtained, however they relate to extremely high manganese values. The anomalous rock sample described in the OPAP 92-233 report proved to be a large boulder. Its source has been not found to date.

In the Chippego Lake area (Hinchinbrooke twp.) a previously unmapped marble unit was confirmed. So far there has been no indication that shalerite mineralization extends into this area. However, the extension of this marble unit to the south has not been investigated.

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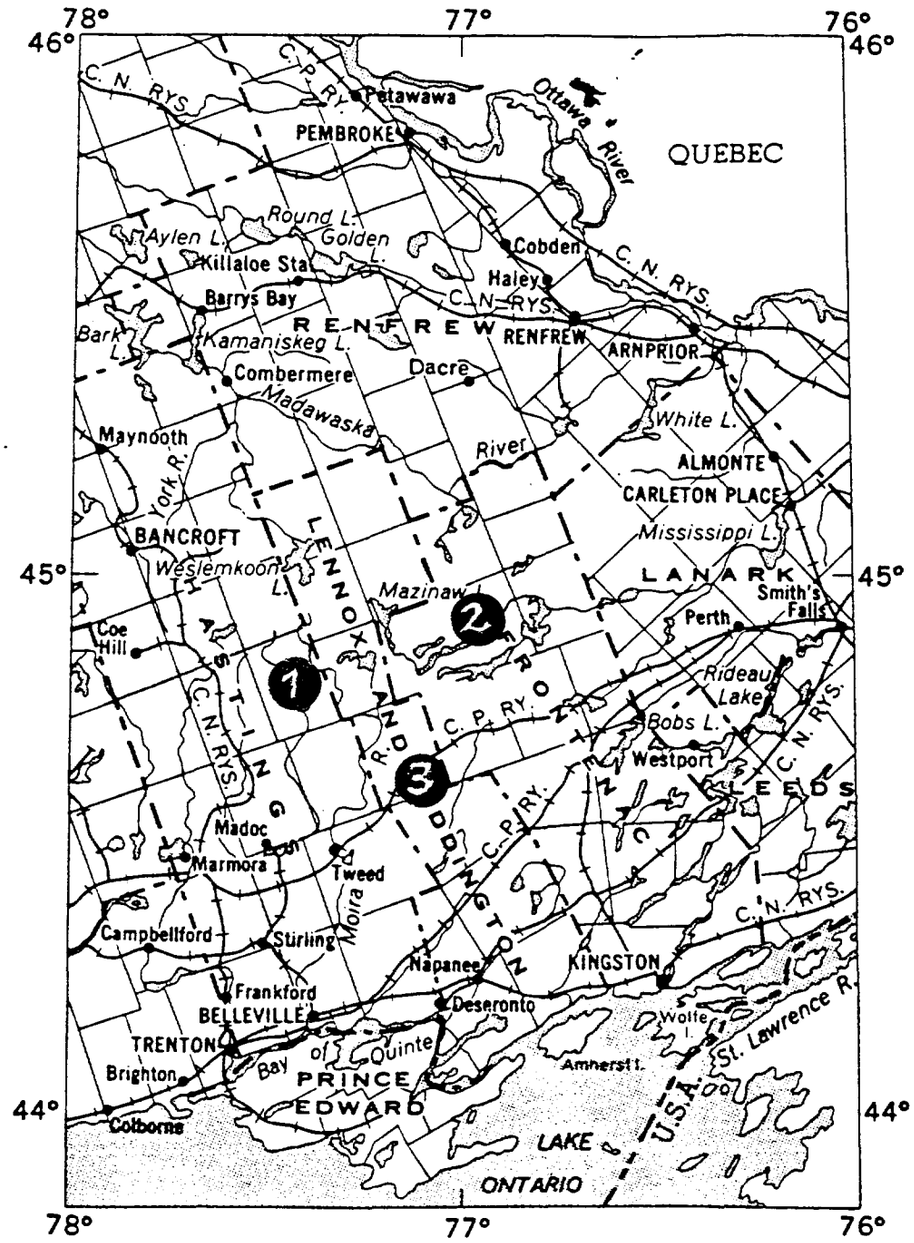
1. INTRODUCTION

This report summarizes the results of the exploration efforts completed by Dr. Winfried Brack in south-eastern Ontario. These activities were supported by the Ontario Prospectors Assistance Program (OPAP) and registered under the file number: OPAP 93-446.

The objectives of the exploration activities were to locate zinc-sphalerite mineralization of economic interest hosted by marble occurrences within the Grenville rock suites of south-eastern Ontario and to locate gold mineralization associated with quartz-veining along shears or other tectonical features within meta-sedimentary units or along the contacts with intrusive rocks.

The completed exploration work differs only marginally from the original program proposal (see application OPAP 93-446). Minor adjustments in the executed exploration occurred within the three sub-projects. More geochemical soil samples were analyzed than planned and several days less were spent in the field. A one day follow-up was added to the program in the Chippego Lake Area (Hinchinbrooke Twp.). There the objective was to confirm and prospect a newly discovered marble unit for sphalerite mineralization (see OPAP 92-233).



GENERAL LOCATION MAP
PROJECT AREAS

1) GRIMSTHORPE PROJECT
2) ARDOCH PROPERTY
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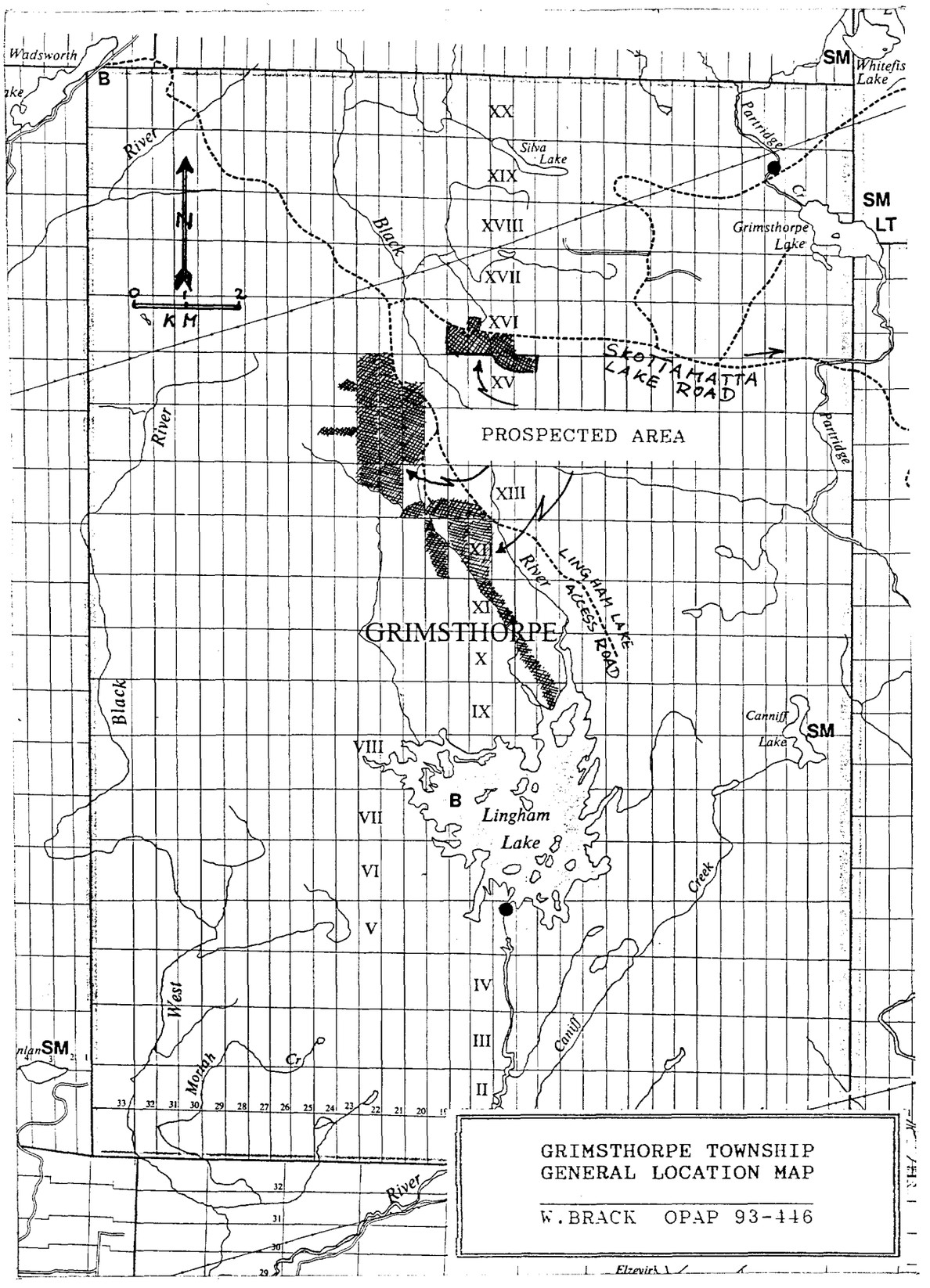

GRIMSTHORPE TOWNSHIP
GENERAL LOCATION MAP

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2. PROJECT A: GRIMSTHORPE TOWNSHIP

2.1 Location, access and claims

The Grimsthorpe project is located in Grimsthorpe Township in SE-Ontario, Southern Ontario Mining Division (NTS 31C/13 31C/14 31C/11). The approximate geographic centre is 44 46' latitude and 76 25' longitude.

Access to the investigation area is possible from highway 62, and Highway 41 along Skottamatta Road, which transect the northern portion of Grimsthorpe Township. Additional access is provided by numerous logging roads, cottage roads and trails. Claims: presently none.

2.2 Geology

According to R.M. Easton and F.Ford (1990) the Grimsthorpe area is underlain by Precambrian rocks of Middle to Late Proterozoic age which form part of the Central Metasedimentary Belt of the Grenville Structural Province. The rock suites encountered within the investigated area belong to the western block of the north-northeast-striking Partridge Creek shear zone. This block is characterized by a package of mafic volcanoclastic rocks, minor mafic flow rocks, and minor silicious clastic meta-sediments and pyritiferous meta-sediments. These rocks have been intruded by gabbros, mafic to intermediate dykes, as well as gabbroic and dioritic rocks of the Lingham Lake Suite.

2.3 Exploration History

Very limited exploration has been executed in this area due to difficult access in the past. The main activity was concentrated at the north-west corner of the township covering an area around the former producing Gilmour Gold Mine (1902-1939). Homestake Mineral Development Company covered this area with detailed exploration work, but due to the lack of funds froze any further activity (1990-1991). Recently, some exploration activity has been noted in this township by individual prospectors which are holding a claim block along Black River. Gold-arsenopyrite-quartz mineralization does occur on their property.

2.4 Exploration Activities

2.4.1 Orientation survey (27.07.93): An orientation survey was necessary to verify the best access to the Lingham Lake area. The forestry access road from highway 41 (Skottamatta Lake road) was used to reach Grimthorpe Township which connects with highway 62 to the west.It was discovered that the access road to Lingham Lake was only partly suited for my vehicle (up to the bridge crossing Black River). For the first ten nights a campsite was selected in the approximate area of the above mentioned bridge. Numerous unmapped trails allow for convenient access to the exploration area. However major portions of the bush are extremely difficult to access due to various damages caused by lumber activities, bush fires and windbreak. This is especially true along valleys whereas ridges tend to be more open.

2.4.2 Prospecting

The objective of the prospecting was to locate gold mineralization associated with quartz veining within the peri-intrusive and roof-pendant environment of the Lingham Lake Diorite-Gabbro Complex. Within the contact zone of the intrusive rocks and the older but overlying volcanogenic rocks, late stage hydrothermal activity may have remobilized gold and concentrated in quartz-veins.

Results: The prospecting did not result in a significant discovery of gold mineralization. Several outcropping sulphide bearing horizons and boulders were encountered which were mostly associated with black shales. The gold values with these black shales are slightly elevated, however this is considered to be the norm. Silicification and quartz veining are relatively rare. The analyzed specimens did not reveal any interesting gold values. The majority of rocks encountered were massive piles of green and homogeneous hornblende gneiss which represent metamorphic volcanogenic rocks.

Description of individual traverses:

1. Date: 28.07.93
   trail (I) to the south-west (towards the Lingham intrusive)
   (approximate length: 4.3 km)
   Lithologies: predominantly meta-volcanic rocks, numerous outcrops along trail, significant till overburden
   Samples: 54453, (rusty metasediments), boulders
   (for details see appendix 5).

2. Date: 29.07.93 (traverse 2)
from trail (I) compass traverse towards the east to creek (A), along creek (A), compass traverse towards the west to trail (I)
(approximate length: 2.9 km)
Lithologies: mainly metavolcanic rocks, biotite gneiss boulders, some minor quartz-veining
Samples: quartz veinlet within meta-volcanic, not analyzed.
(for sample description and analytical results see appendix 5).

3. Date: 30.07.93 (traverse 3)
from Lingham Lake road (Black River crossing) to the west and south south-west on trail III to Lingham Lake and rotor
(approximate length: 6.8 km)
Lithologies: almost consistently rather with various degrees of sulphide impregnation (max. 1%), locally rusty. Short intersections of crosscutting quartz veins. Towards Lingham Lake (distance 1.5 km, alluvial (lacustrin) sedimentary cover on flat ground
Samples: 53455, 53456, 53457, 53458
(for sample description and analysis see appendix 5).

4. Date: 18.08.93 (traverse 4)
Trail (II) towards west and south and connection with trail (III)
(approximate length: 3.0 km)
Lithologies: few outcrops of rather significant till overburden
Samples: none

5. Date: 19.08.93 (traverse 5)
Trail (II) towards the west and southeast along creek (B) as well as towards the northwest along creek (B)
(approximate length: 5.4 km
Lithologies: mainly meta-volcanic rocks, however a metasedimentary unit occurs close to creek (A). It consists mainly of meta black shales which are silicious in places, rusty and sulphide mineralized. This unit was observed in outcrop and as boulders along creek (A).
Samples: 53459, 53460
(for sample description and analysis see appendix 5).

6. Date: 20.08.93 (travers 6)
Trail (I) towards southwest, Trail (IV) towards the southeast up to cabin at beaver dam trail (III) and rotor
(approximate length: 9.2 km)
Lithologies: mainly rather with several metasedimentary (black shale) intercalations. This black shales are gossanous and are sulphide impregnated.
Samples: 53461, 53462
(for sample description and analysis see appendix 5).

7. Date: 21.08.93
Trail II towards the west: outcrop stripping.
Lithology: medium to dark grey and black, siliceous metasediment, rusty and locally gossanous appearance, rich in sulphide, mainly pyrite.
Samples: 53466, 53467, 53468

8. Date: 22.09.93 (traverse 7)
Trail (I) towards southwest, at creek (B) towards northwest along the creek, at beaver dam 350 metres to the west, return to beaver dam, along concession line to creek (A), crossing at beaver dam and traversing towards the Lingham Lake access road
(approximate length: 5.1 km)
Lithologies: all the outcrops are metavolcanic rocks with the exception of a black shale sequence close to the Lingham Lake access road.
Sample: 53463
for sample description and analysis see appendix 5).

9. Date: 23.09.93 (traverse 8)
Cris-crossing stream bed (creek A) from trail (I) toward east southeast and crossing to Lingham Lake access road. Trail (V) to the east for 600 metres and return, claim verification and prospecting along claim line north of trail (I).
(approximate length: 4.2 km)
Lithologies: few outcrops in valley of creek A, mainly metavolcanic rocks, with minor (<1%) sulphide impregnation. Occasional brown rusty surface coating of the volcanic rocks. Along trail (V) gossanous outcrop, as well as along the Lingham Lake access road
Samples: 53464,53565
(for sample description and analysis see appendix 5).

10. Date: 24.09.93 (traverse 9)
Trail I towards creek "C", following creek towards NW, crossing beaver dam and from there compass traverse towards west.
(approximate length: 5.2 km)
Lithologies: with the exception of several granitic

boulders (glacial drift), all outcrops encountered are meta-volcanic rocks.
Samples: none

2.4.3 Line Cutting

A line grid was completed south of the Skottamatta forest access road and est of the Lingham Lake access road. The grid was paced and flagged and corresponds to the grid north of the Scottamatta forest access road established by W. Holmstead (OPAP-project). A total of 1700 metres of lines has been prepared. Three lines were directed north to south and two lines east to west.

2.4.4 Geochemical Soil Survey

The purpose of the geochemical survey was to test the contact between the Lingham Lake volcanic to its eastern margin with its igneous rock suits for its prospectivity for gold and base-metals. This survey corresponds to the geochemical soil survey executed by W. Holmstead north of the Scottamatta road.

Method: The selection of the sample medium is of importance for a meaningful geochemical survey. The upper "B" horizon within the soil profile is considered the proper sample medium. The samples were taken at a regular grid pattern with minor adjustments to the sample locations. Deviations from the gird point generally do not exceed more then 5 metres.

During the geochemical soil sample survey great attention was given to the consistency and uniformity of the sample medium. In order to control the sampling a short protocol was noted for each sample.

The sample extraction was done with a narrow bladed garden spade. First the top layer (grass, mulch etc.) was turned over and then a soil profile was extracted. After determining the upper "B"-horizon approximately 150 to 200 grammes of soil was filled in a pre-labelled geochemical soil sample paper-bag. A short description of the sample was given (location, depth of sample, colour, composition, humidity and significant topographic features). Before shipping the samples for analysis were dried for several days.

Analysis: The geochemical soil samples were analyzed by BONDAR-CLEGG & COMPANY LTD. in 5420 Canotek Road, Ottawa, Ontario K1J 9G2. The most cost effective analytical method, the gold + 29 element IPC-atomic emission spectroscopy, was chosen. The analytical extraction method is based on the Aqua Regia Digestion. The analyzed elements and their detection limits are shown in appendix 1 (Bondar-Clegg 1993). The

elements marked with an asterisk may be incomplete in their analysis for certain mineral forms.

Results: A total of 66 soil samples has been collected and 65 have been analyzed (one sample {13} has been lost). The sample description, grid plan and the analysis is given in the appendix.
One significant high gold value was discovered (sample 58). For the graphic plot an approximate average value of three analyses of the same sample was used. However the original value of 495 ppb gold was not repeated in the check-up analysis with only 8 and 16 ppb gold respectively. This is indicative for an erratic high gold value possibly from a single gold flake. However, within the immediate surrounding gold is slightly elevated and an anomalous arsenic value was obtained from sample 57 (83ppm). Therefore this anomaly should be resampled and reevaluated. Other element correlations are weak. Sample 42 shows a high value for copper (131 ppm) and arsenic (94 ppm). Six contour plans have been computer drafted, for sample location, gold, arsenic, mercury, copper and zinc. The directional pattern of the contour lines, may not be significant since the grid is relatively small and the grid pattern runs in two directions.

2.4.5 Goldspear Prospecting

The Goldspear was developed in Finland and refined in England. It is now available in the U.S.A and Canada. The Goldspear is a highly sensitive detection device to measure the conductivity of individual metal grains down to the size of 50 microns. It allows to differentiate four different conductivity ranges, which gives an approximate idea of the nature of the detected particles. The highest range indicates gold or silver.

The Goldspear consists of a steel bar with a sensor tip and a console with a handle. The console contains the electronic hardware, a control bottom and indicator lamps for 4 different detection ranges. A connector for a headphone allows to differentiate the detection ranges acoustically.

The Goldspear initially was designed especially for placer gold deposits to delineate pockets or horizons of gold in alluvial sediments. When tested, the instrument reacted very positively with material collected from a gold mill (the sensor was pressed into a bucket filled with grinded mill debris). Some of the very fine gold particles floating on water were then splashed onto a lawn. The instrument was able to delineate the area of the splash. The surrounding was completely barren and no conductivity was registered.

The goldspear was then applied within the various sub-projects

of this OPAP 93-446 program. It was noticed that areas of known mineralization clearly had a significant higher number of conductivity responses than areas known to be barren. A semi-quantitative approach was chosen. In a range of 1 square meter 10 piercings of the steal bar were conducted. If the response rate was >30% the area was considered to be prospective. If the response rate was >50% the area was considered very prospective. Also the quality of the conductivity had to be considered. Responses from the medium to the high conductivity are more valuable since they correspond to metals like Cu, Ag, Au etc.

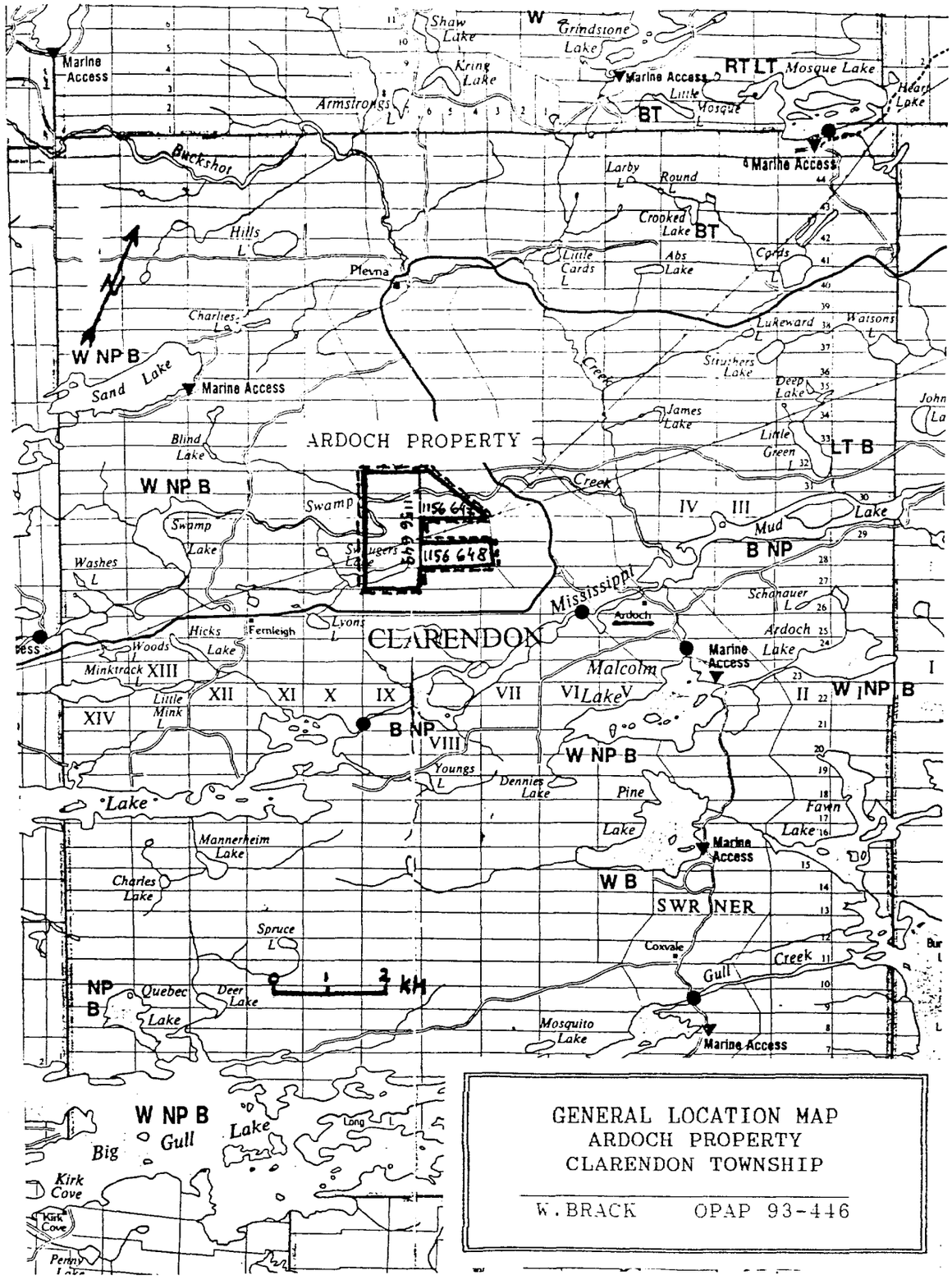
The advantage of the Goldspear prospecting (disregarding its merits for placer prospecting) is to receive instant results which may delineate areas of high prospectivity, or to narrow down target zones such as geochemical anomalies. Limitations are difficulties to detect coarse material, to penetrate rocky and bolderly ground and problems to duplicate anomalies. Once the particles are detected their natural environment of occurrence is disturbed and they are either removed or undetectable.
The results of the Goldspear prospecting are described for the individual sub-projects within the respective paragraphs.

Goldspear prospecting in the Grimsthorpe area:
Within the Grimsthorpe area Goldspear prospecting was applied for one day (18.11.93) along the geochemical grid lines. The results were negative, since the responses were sporadic and generally in the low range of conductivity.

2.4.6 Beep Mat Prospecting

Beep mat prospecting is well established in Ontario. The instrument can be obtain from the Department of Natural Resources on a rental basis. The instrument is in principle a miniature horizontal loop instrument, measuring the conductivity in the overburden. The instrument is suited to detect sub-outcropping sulphide mineralization (mainly when pyrrhotite, chalcopyrite and graphite is present) and boulders of this type. The depth penetration is approximately three feet but deeper penetration successes have been reported.

A one day (18.11.93) Beep mat prospecting was completed at the north-eastern margin of the property. At the contact to the intrusive rocks outcrops of sulphide mineralised meta-volcanic do occur. The contact zone was intensely investigated. The Beep mat did not respond to the outcrop mineralization (pyrite). Several times metallic debris was located, especially along trails.



GENERAL LOCATION MAP
ARDOCH PROPERTY
CLARENDON TOWNSHIP

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3.0 PROJECT B: ARDOCH PROPERTY (CLARENDON TWP.)

3.1 Description, location, access and claims

The property consists of 3 contiguous mining claims in the central parts of Clarendon Township, Frontenac County, Eastern Ontario Mining Division in NTS 13C/14, 15. The approximate geographic centre is 44 55'30" latitude and 76 58'00" longitude. The property is located approximately 2 km WNW of the village of Ardoch, which in turn is approximately 200 km north of Kingston, Ontario.

The property is easily accessible by road. From Kingston highway 38 leads to Shabot Lake. There at the intersection with highway 7 after 1 km to the west, road 509 leads to the north. After 10 km road 506 leads to the northwest to Ardoch. Road 506 straddles the northwestern and southeastern portion of the property. Several small bush roads and a power line access road penetrate the property. An important power line corridor bisects the central part of the property.

The southern portion of the property consists mainly of open and mature hardwood stands with intermittent grassland, whereas the northern portion is densely wooded such as in the low lying areas around Swamp River where cedar stands are difficult to penetrate.

Three claims have been staked in Clarendon township and are held jointly by Wayne Holmstead (Kingston, Ont.), Gregg Waag (Ottawa, Ont.) and Winfried Brack (Montreal, Que.). The geographical distribution of the claims are as follows:

Claim number:	Units:	Lot:	Concession:
1156 649	3	30,31	VIII
1156 648	2	28	VIII
1156 649	10	27,28, 29,30,31	IX

3.2 Geology

Clarendon Township lies within the Central Metasedimentary Belt and is dominated by Grenville Supergroup rocks of late Precambrian (Helikien) age and by stratified rock assemblages postdating the Grenville Supergroup (Moore and Thompson, 1980).
The regional map originates from a report by Bowen, R.P.P.Ing. A detailed description of the property geology was given by Bowen, R.P. P.Ing. (1988), Allard, P. (1988) and Delisle,J.C. (1989). Delisle,J.C. divides the property into three structural and lithological domains:

1) The local (property-scale) Z-shaped marble fold is centred in the middle part of the property with a minor Z-shape drag fold on the lower limb of the Z-fold. An overturned anticline, the Boerth Anticline to the north is part of the Z-fold and may be an overturned synform. The Swaugers Syncline to the south is stressed with D2 folding. This Z-shaped marble fold is located within the Mayo Group. The folds plunge 10 degree to the NNE and locally to the SSW.

2) The Flinton Group unconformity is locted to the south of the property which transects the local Z-shape marble fold at an angle of 30 to 40 degree.

3) There is a gradational zone between the Mayo Group and the Hermon Group in the north part of the property. The structural pattern is different from the south portion of the property but is still undefined on the property scale because of lack of outcrops. At the regional scale, the property is localized on the southern limb of the Plevna Z-shape fold.

3.3 History of the property

The property history was described in detail by Bowen, R.P. (1988) The following paragraph is a copy of his compilation:

The documented history of the Boerth-Hill property dates back to a 1900 reference in the Report of the Bureau of Mine which reports that two shallow shafts (Hattie B and Uncle Sam) were sunk and a 10 stamp mill erected at the Boerth Mine. The Hattie B shaft was inclined at 65° and sunk to a depth of about 37m with 16m of drifting carried out on the 23m level. The Uncle Sam shaft, located approximately 49m to the south was sunk to about 11m depth. Total production in 1900 was reported as 13 ounces gold. Work was halted in 1901 due to lack of financing.

In addition to the above, the following activities must have been carried out subsequent to the 1900 report by the Bureau of Mines:

- **i) development of a 30m long adit located approximately 550m east of the Hattie B shaft area;**
- **ii) sinking of two shafts (approximately 12 and 7.6m deep respectively) collared between the Hattie B shaft area and the adit;**
- **iii) numerous trenches and open cuts in the Hattie B shaft area.**

In 1950, Bruce Robson acquired the Boerth property by staking and drilled three holes totalling 167m in 1952. All three holes were drilled on the Boerth patented claim. Values up to 18.8g/t across 0.61m are reported from pyrite-tourmaline bearing quartz veins.

The Ontario Department of Mines mapped Clarendon Township and reported preliminary results in publication P.R. 1951-3.

Stratmat Limited drilled three drill holes totalling 166.2m east of Swaugers Lake in 1952. Assay results from the drilling are not included with the drill logs.

The Ontario Department of Mines published a one inch to one mile regional geologic map of the area, including Clarendon Township in 1956. The map forms a compilation of field work by B.L. Smith and P.A. Peach. The map shows the location of both the Boerth and Webber showings.

The 1963-64 Ganda Silver Mines Ltd. optioned the Boerth property and acquired by staking the adjoining ground. The company carried out a 47 hole, 2,150m diamond drill program in addition to surface prospecting, stripping and trenching. A.C.A. Howe in a summary report dated May 25, 1964 concluded that "numerous high grade, narrow quartz veins have been found on the property spread over a belt 2,000ft. (600m) long and about 300ft. (90m) wide." Howe recommends a program of shaft rehabilitation, drifting and cross-cutting, underground diamond drilling and bulk sampling of the Hattie B shaft. An examination of drill sections of the Ganda Silver drilling indicates that in most cases only quartz vein material was split and sampled. The gold tenor of hanging and footwall material is not known.

The regional geology of the area was compiled by B.V. Sanford and A.J. Baer at a scale of 1:1,000,000 and published as Map 1335A in 1971. The map suggests that the Clarendon area may form part of a northeast trending trough occupied by Helikian clastic and chemical sediments associated with an Helikian volcanic pile that has intruded an Aphebian or early Helikian felsic batholith.

L. Pauk and G. Mannard mapped the Ardoch area in 1980 at a scale of 1:15,840. Their findings are presented in O.G.S. Open File Report 5381.

Kenting Earth Sciences Limited carried out an airborne total field and gradient magnetic survey in the general area in 1984. The airborne data is presented as a series of 1:20,000 scale maps and confirm the northeast trending linear grain indicated by Government regional mapping.

P.S. Barron of the Ontario Geological Survey carried out a compilation of selected gold occurrences in southeastern Ontario including the Boerth and Webber showings in 1985. He concludes that "the majority of mineralized veins occur within carbonate and clastic metasediments overlying volcanic sequences and along the Flinton unconformity." A grab sample collected from the Hattie B dump returned 4.11 g/t gold with trace values in copper, silver and zinc. A

grab sample from the Webber dump assayed 14.74 g/t gold and greater than 1.0 g/t arsenic.

The Ardoch Syndicate carried out a program of ground magnetic VLF-electromagnetic and I.P. surveys over the southern and central portions of the property in 1986-87.

Aurochs Société d'Exploration Miniere Inc., worked the property from 1987 to 1989. Geological mapping, I.P.-survey, VLF and Magnetic survey and limited geochemical soil sampling across I.P. anomalies were completed.

3.4 Exploration activity

3.4.1 Grid line survey

In the northern portion of the property the grid was extended by two lines, whereas in the southern portion of the property, the area south of Swaugert Lake all the lines had to be reestablished.

To revitalize the old grid, the pickets had to be located, marked, erected or replaced by flagging tape. A total of 2.3 km of grid lines were reestablished on the property.

3.4.2 Geochemical soil survey

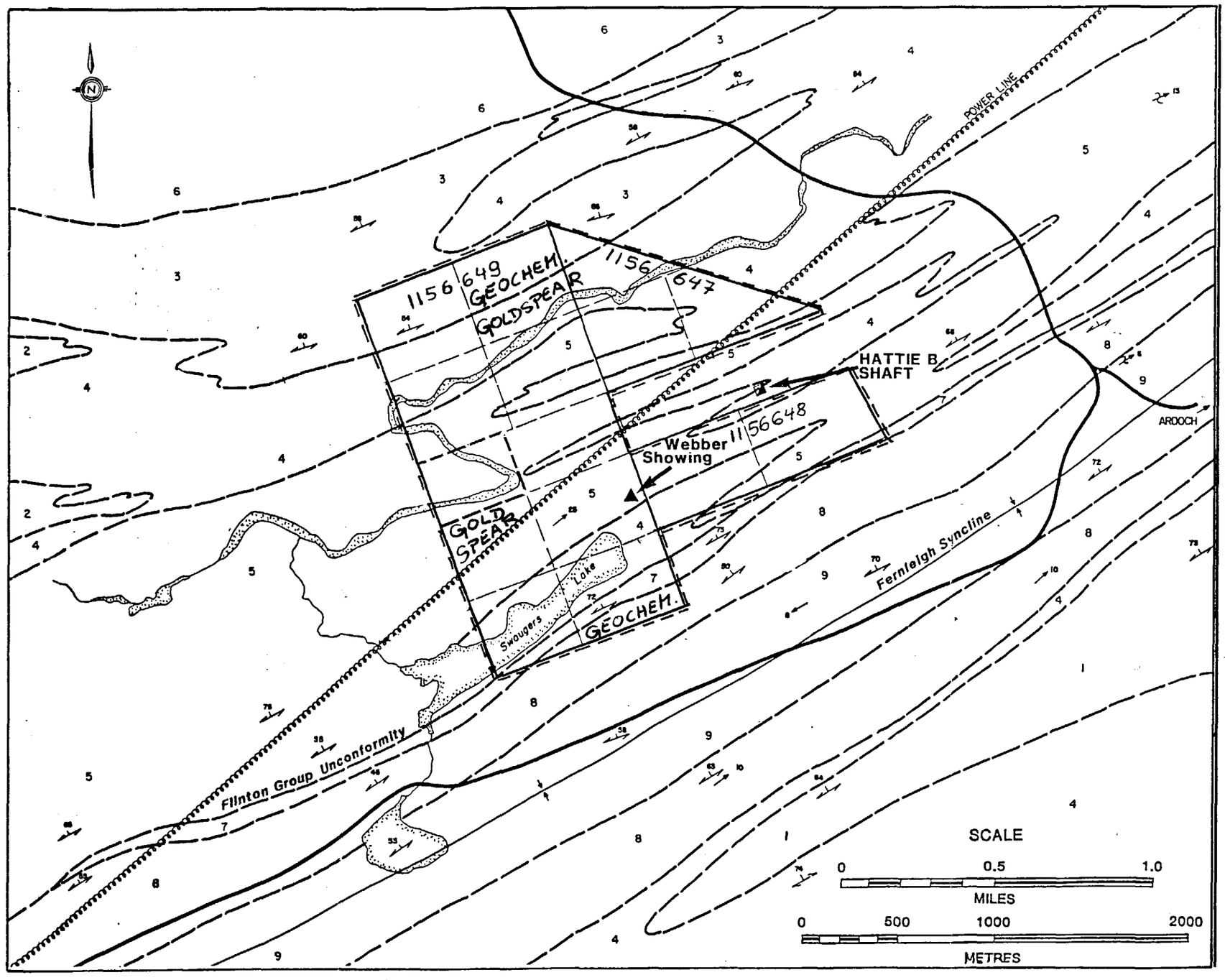
Objective: The objective of the geochemical soil sampling survey was to detect sphalerite (zinc) mineralization within visible or hidden marble lenses as well as other potential precious metals and/or base metal mineralization. Heavy overburden and dense vegetation result in limited geological information. Therefore a detailed geochemical soil sampling survey was warranted.

North of Swamp River the survey aimed at resampling areas of high gold values and associated elements (As, Hg, Sb) and at extending the geochemical sampling in order to define trends or anomalous patterns.

The area south of Swaugert Lake was previously not sampled. Within this area the contact to the Flinton Group promised to be prospective for gold and base metals.

Method: The sampling technique and the analytical method was the same as previously described in paragraph 2.4.4.

In the northern section of the property (north of Swamp River) a total of 23 soil samples were collected (AR-121 to Ar-143).
The geochemical survey south of Swaugert Lake originally consisted of a total of 90 samples. The remaining samples were collected and analyzed later as a follow-up. The sample locations and main anomalies are presented in the computer drafted maps in the appendix.



LEGEND

PRECAMBRIAN

Grenville Supergroup

–Flinton Group–

9 Fernleigh Formation : Biotite-carbonate schist

8 Myer Cave Formation : Graphite ± pyrite schist; marble ± dolomite; metaconglomerate; pelitic schist ± pyrite ± graphite

7 Bishop Corners Formation : Undivided pelitic schists ± muscovite ± quartz ± biotite ± plagioclase ± garnet ± staurolite ± kyanite ± sillimanite ; calcareous quartzite, calcite marble ; conglomerate ; hornblende biotite plagioclase ± carbonate schist

–Unconformity–

Metamorphosed Mafic Intrusive Rocks

6 Gabbro, diorite ; biotite-bearing

–Intrusive Contact–

Metasediments

5 Clastic Metasediments ; calcareous sandstone ; lithic sandstone ; siliceous sandstone ; undivided ± muscovite ± biotite

4 Carbonate Metasediments ; undivided marble and dolomitic marble ± quartzite ± hornblend-biotite -plagioclase - carbonate gneiss ± metaconglomerate

Felsic to Mafic Gneisses of Mixed Volcanic & Sedimentary Origin

3 Interlayered Felsic and Intermediate Gneisses

2 *Mafic Gneisses*

Metavolcanics

1 Mafic tuffs interlayered with carbonate metasediments and limy mudstones

SYMBOLS

Foliation

Lineation with plunge

Geologic contact

Axial Plane of syncline

Notes : Geology after L. Pauk, and G. Hannard, 1980; Ontario Geological Survey Map P. 2407

ARDOCH PROPERTY
CLARENDON TOWNSHIP
REGIONAL GEOLOGY AND CLAIMS AREAS OF ACTIVITIES

W.BRACK OPAP 93-446

Results of the geochemical soil survey:
(Area north of Swamp River)
The area north of Swamp River contain some erratic concentrations of gold which may relate to till deposition. They most likely do not relate to any mineralization in the immediate surrounding. Several samples around the former geochemical gold anomaly did not recreate this anomaly. Other erratic element concentrations relate to the occurrence of manganese in the soil which acts as a metal scavenger. No further follow-up is planned for this portion of the property. Five computer drafted plans are presented: a sample location plan for gold, zinc, copper and lead. The presentation plans include the data from the 1992 survey (OPAP 92-233).

(Area south of Swaugers Lake)
Two significant results were obtained as a result of this survey.
First, there is a distinct gold anomaly at the northeast corner of the grid, (sample Ar 233 = 131, 67, 220 ppb Au and sample Ar 174 = 75, 4, 75 ppb Au) A follow-up sampling of these two location resulted in the duplication of these anomalies (Ar 233-1 = 256 and 383 ppb Au and Ar 174-1 = 29, 22 ppb Au, Ar 174-2 = 43, 42 ppb Au) A further and more detailed study of the area is highly recommended.
Second, at the southern margin several significantly high zinc values were obtained such as sample Ar 147 with 5299 ppm Zn
Ar 165 with 1179 ppm Zn
Ar 167 with 1187 ppm Zn
Ar 183 with 1637 ppm Zn

The anomalous values were confirmed by follow-up samples Ar 147-1 (4569 ppm zinc), sample 165-1 (814 ppm zinc) and sample Ar 167-2 (896 ppm zinc).
Three plans have been computer drafted for sample locations, gold and zinc.

3.4.3 Prospecting

Prospecting was executed with the "Goldspear". As described in paragraph 2.4.5, the instrument measures the conductivity of individual soil particles and is able to distinguish between low, medium and high conductive material. Three areas were tested:

1. The area north of Swamp River Line 5+00W to Line 0+00
Very few responses were obtained. Compared with other areas the response frequency indicates low prospectivity. The highest response was a single medium conductive response on line 4+00 W station 12+25 N.

2. Area of Line 5+00 W 3+50 N.
In this area several geochemical gold and arsenic anomalies

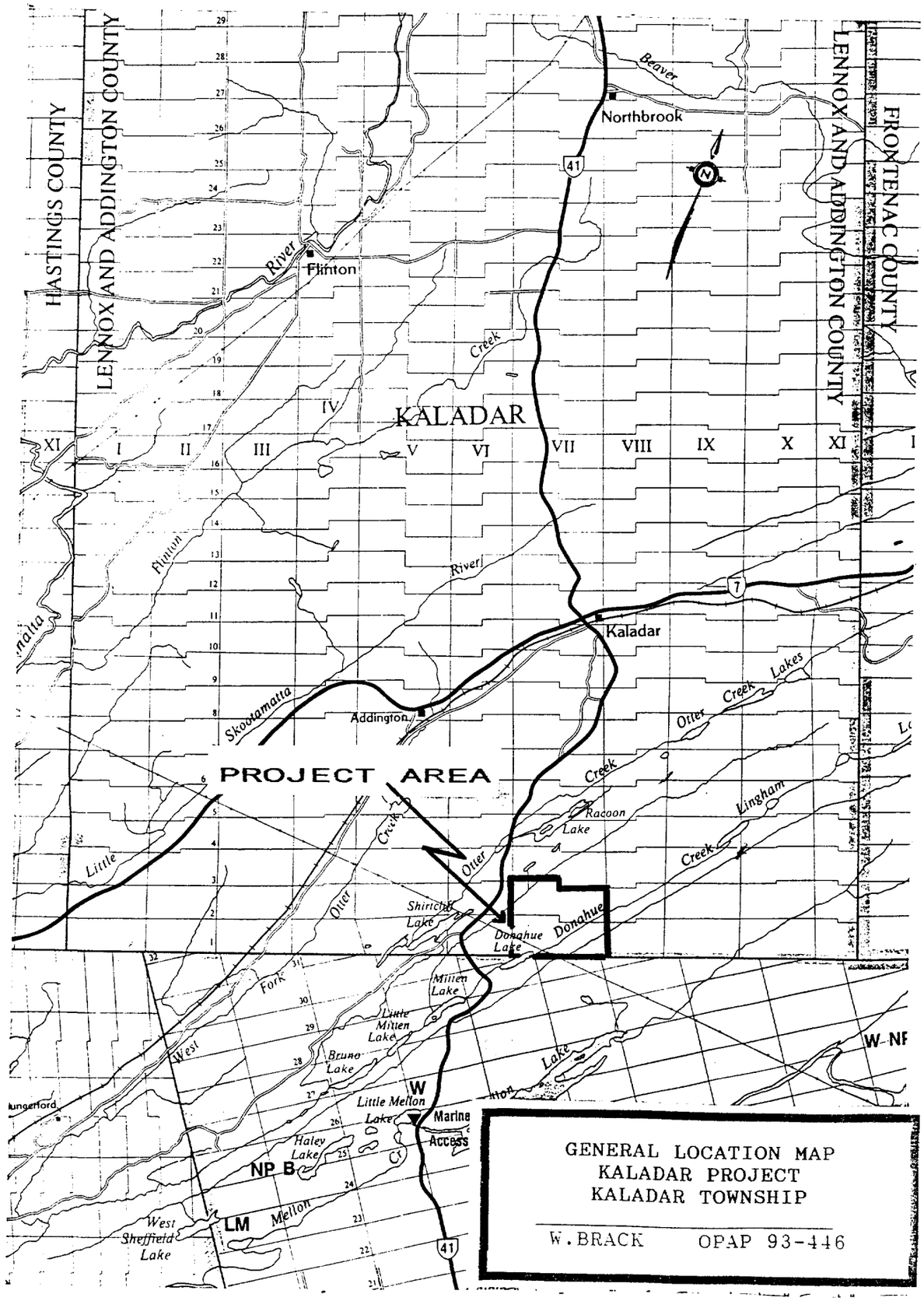
have been discovered in 1992. The response of the gold spear survey was negative. Even low range responses are rare. Again the prospectivity of this area is considered low.

3. Area of line 5+00 E 2+00 N
Numerous low and medium conductive and several high conductive responses were obtained in this area. Several rusty quartz boulders were recovered in the overburden. The responses were obtained in several patches in an area of 100 X 30 Metres (edge of the swamp). The area is considered to be highly prospective.

Several rock samples were collected, however no significant result was obtained.

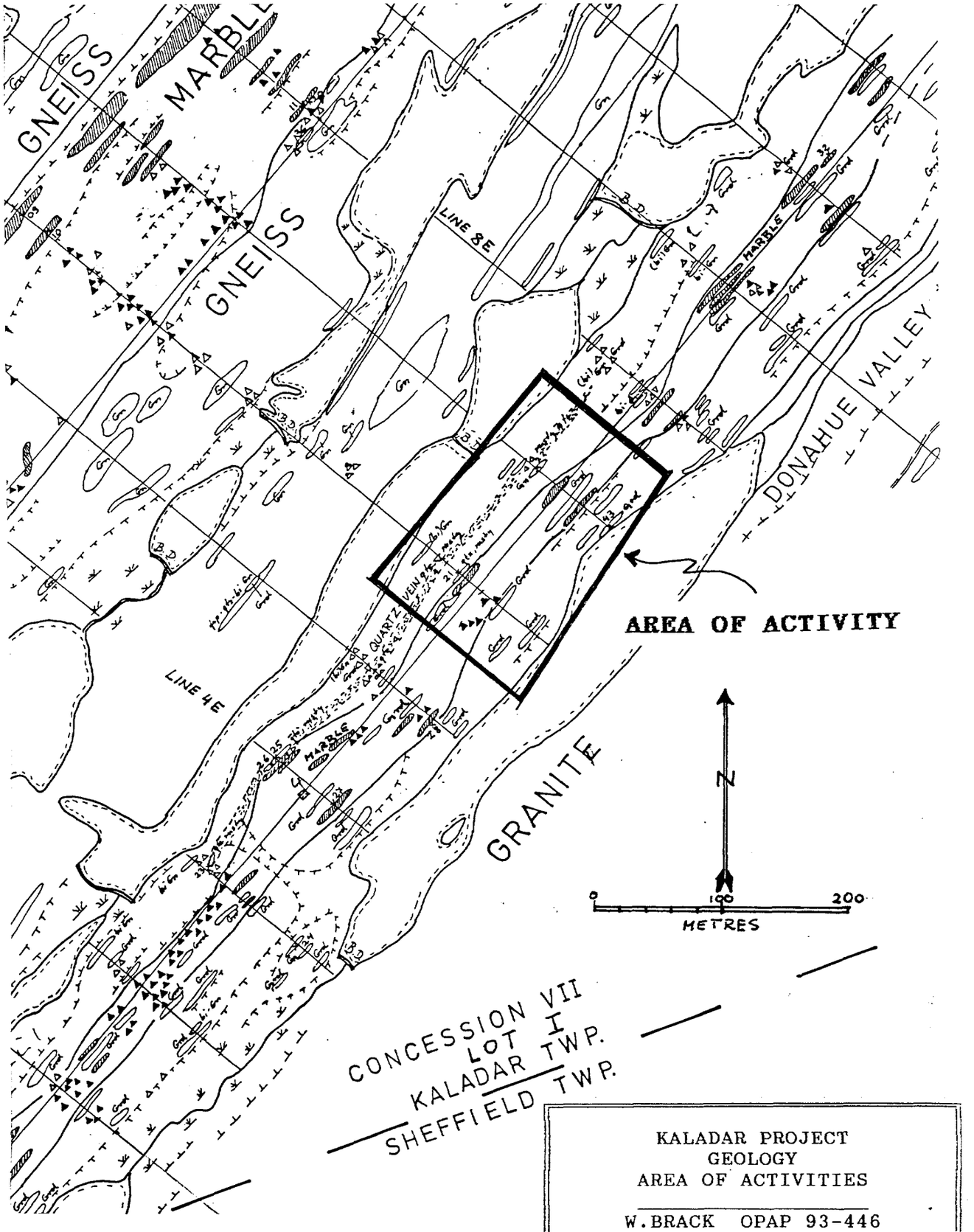
4. Area of line 11+00 E and 12+00 E from 0+25N to 2+00 N
The response frequency was good in the low range conductivity. Occasional medium conductive responses were obtained. The area is considered to be prospective. Several rusty (sulphide impregnated) and silicious samples of gneiss have been analyzed. No anomalous gold values were detected.

5. Area Of line 13+00E 6+75 N
This area is known to contain tailing material from the old gold mill dating back to the beginning of this century. The area was selected to verify the ability of the Goldspear to respond to minor gold mineralization. The responses were numerous and almost certain for each probe. They were mainly within the medium conductive field but several high conductive responses were obtained as well. It was observed that the responses indicate a layered deposition of conductive material within the tailings. A probe of the tailing material resulted in highly anomalous gold and mercury values (for details see report by W.Holmstead OPAP 1993).



GENERAL LOCATION MAP
KALADAR PROJECT
KALADAR TOWNSHIP

W.BRACK OPAP 93-446



KALADAR PROJECT
GEOLOGY
AREA OF ACTIVITIES

W.BRACK OPAP 93-446

4.0 PROJECT C: KALADAR (KALADAR TOWNSHIP)

4.1 Description, location and access

The Kaladar project is located in the most south-central portion of Kaladar Twp. within the Southeastern Mining Division of Ontario. The project covers concession VII, lot 1 and lot 2.
The accessibility of the investigation area is excellent. Coming from Kaladar where highway 7 is intersected by highway 41 and following highway 41 approximately 7 kilometres to the south, the property can be reached from the intersection with the Racoon Lake road or approximately 700 metres further to the south were two private trails reach the investigation area. One trail leads to the northeast and north of Donahue Lake to the central portion of the investigation area, whereas the second trail is to the south of Donahue Lake and intersects the southern portion of the investigation area.

The area is marked by elongated ridges of minor elevations intersected by narrow, shallow lakes and swamps. Most of the lakes are created by the activity of beavers. The vegetation is dominated by hard-wood such as oak, beech, maple and birch with minor stands of spruce and pine. Patches of sumach bushes and alders are common. A hydro power line intercepts the south-west corner of concession XII lot 1 of the investigation area. The investigated lot is Crown land.

4.2 Geology

The investigation area is part of the Central Metasedimentary Belt, Hasting Basin as defined by Wayne-Edwards(1972), and is composed of Late Precambrian meta-volcanic and meta-sedimentary rocks of the Grenville Supergroup, and Late Precambrian granitic intrusive. Late tectonic pegmatite sheets and dikes cut the supracrustal rocks locally (J.M.Wolff,1982).

4.3 Previous exploration activity

Very limited records do exist of previous exploration activities in the area and particularly on the target area. However, a report by J.D.McCannell for Glenshire Mines Limited (1975) describes a trench within the northwest corner of concession VII, lot 2: "Heavy sphalerite is exposed in an old trench in crystalline limestone in the northwest corner of lot 2 concession VII. A large sample of well mineralized rock from this trench returned an assay of 29.29% zinc, 0.007% lead and 0.04 ounces of silver. The sphalerite was difficult to identify as such with the result that better mineralized pieces were selected to establish the presence of zinc mineralization rather than to determine the grade of the material."

In 1991 W. Brack (OPAP 91-784) and Wayne Holmstead (OPAP 91-245) investigated the area and could not confirm the above described zinc mineralization. However they discovered an extended quartz dyke with some low grade gold values associated with geochemical soil anomalies.

In 1992 W. Brack (OPAP 92-233) and Wayne Holmstead (OPAP 1992) blasted and trenched the above described quartz dyke and discovered a multi-element anomaly in blast hole IX and X. Sample 6767 (blast hole IX and X): the rust doted marble is elevated in Au (32 ppb), Sb (70 ppm), Te (59 ppm), Bi (28 ppm), Hg (1164 ppm), Zn (2039 ppm), and Pb (203 ppm).

4.4 Exploration Activity

4.4.1 Trenching

Trenching and stripping by hand has been carried out in the area of blast hole IX and X. First the former blast holes have been completely dug out to reach the outcropping bedrock. As a surprising result the bedrock is not marble as previously thought but a silicious biotite gneiss. The previously analyzed marble material was derived from a large overlying boulder. In order to locate the source of the anomalous material several sub-outcropping rock faces were stripped and small pits have been dug. As a result the marble units are in place as previously mapped.

4.4.2 Line preparation

For a detailed follow-up in the area of the former blast holes IX and X grid lines were flagged between line 7+00 N and 6+00 N as well as a baseline at 3+25 S (former tie line). A total of 450 metres of lines were established.

4.4.3 Geochemical soil survey

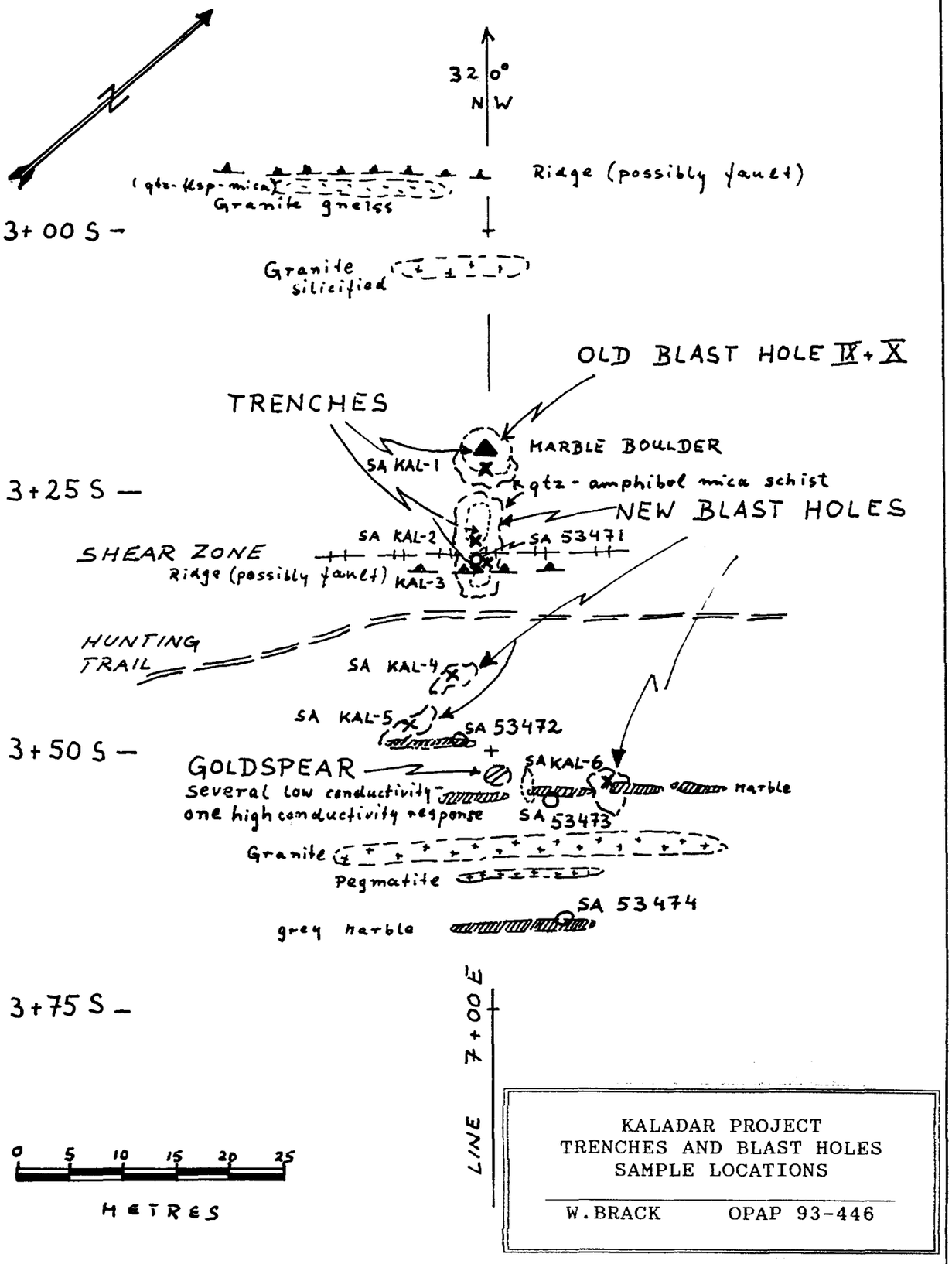
A detailed geochemical survey was completed in the area of the former blast hole IX and X. A total of 37 samples were collected along 3 profile lines and 1 cross line. The sampling technique and the analytical method was the same as previously described in paragraph 2.4.4. Compared with previous data from this area the zinc values appear to be elevated, with 3 samples having zinc values >1000 ppm.

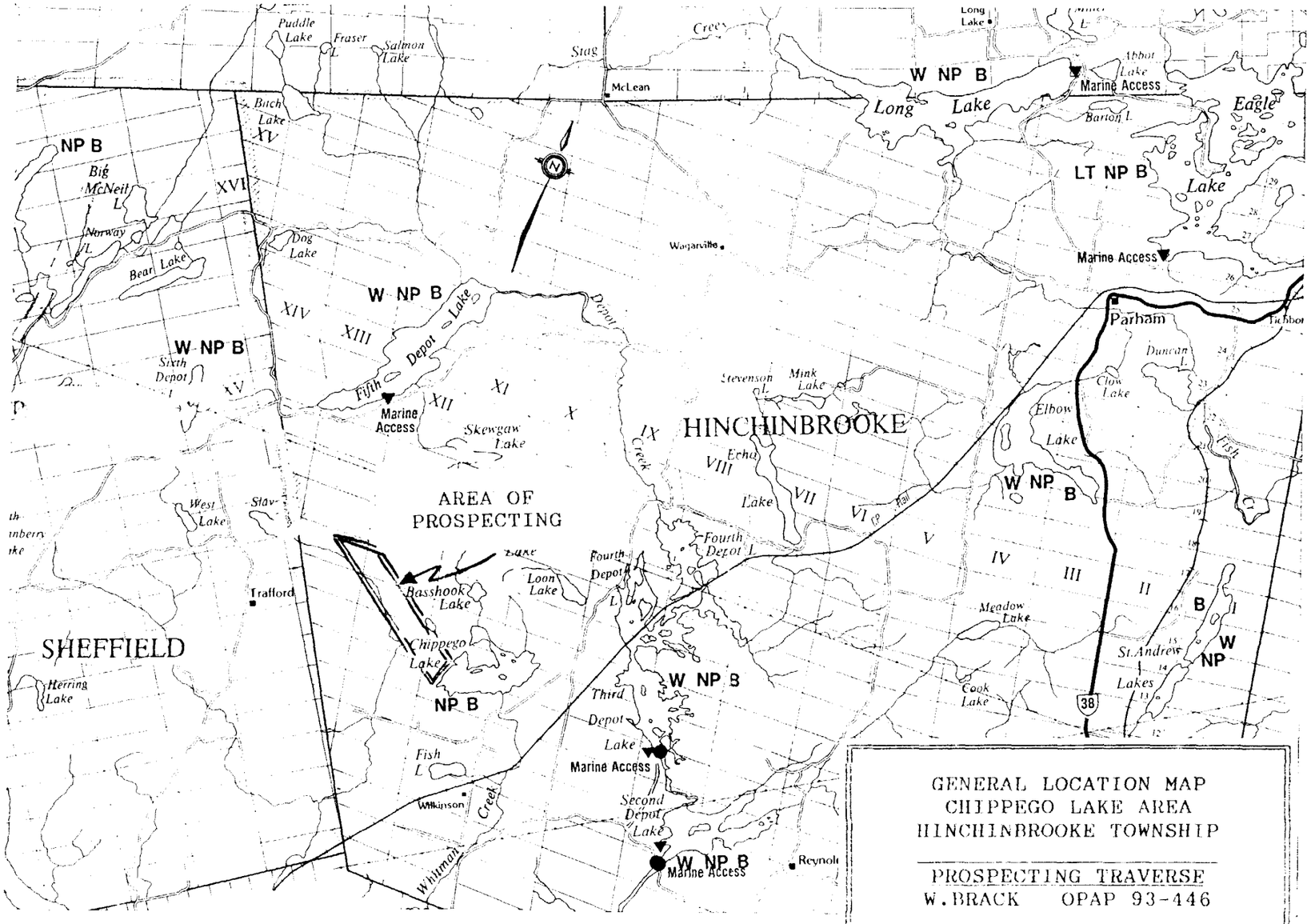
4.4.4. Goldspear prospecting

The method of Goldspear prospecting was explained in paragraph 2.4.5. Compared with other areas where Goldspear prospecting had been applied the response in the Kaladar area was very strong, especially within the area of detailed prospecting around the former blast holes. A distinct increase of medium conductive readings was noticed along the shear and quartz zone. Above the blast hole IX and X at the contact between the marbles and granitic material one of the rare high conductivity responses was encountered. On cross-cutting lines towards the base-line and along the base-line the frequency of conductive responses was significantly lower.

4.4.5 Blasting

The purpose of 9 blast holes was to open the area around the former blast holes IX and X in order to fill gaps in the outcrop exposer. As a result a rusty and bleached shear zone was discovered as well as silicified gneiss. Several rock samples were collected and analyzed. No significant anomalous values were discovered. For more analytical details please refer to OPAP report of 1993 by Wayne Holmstead.

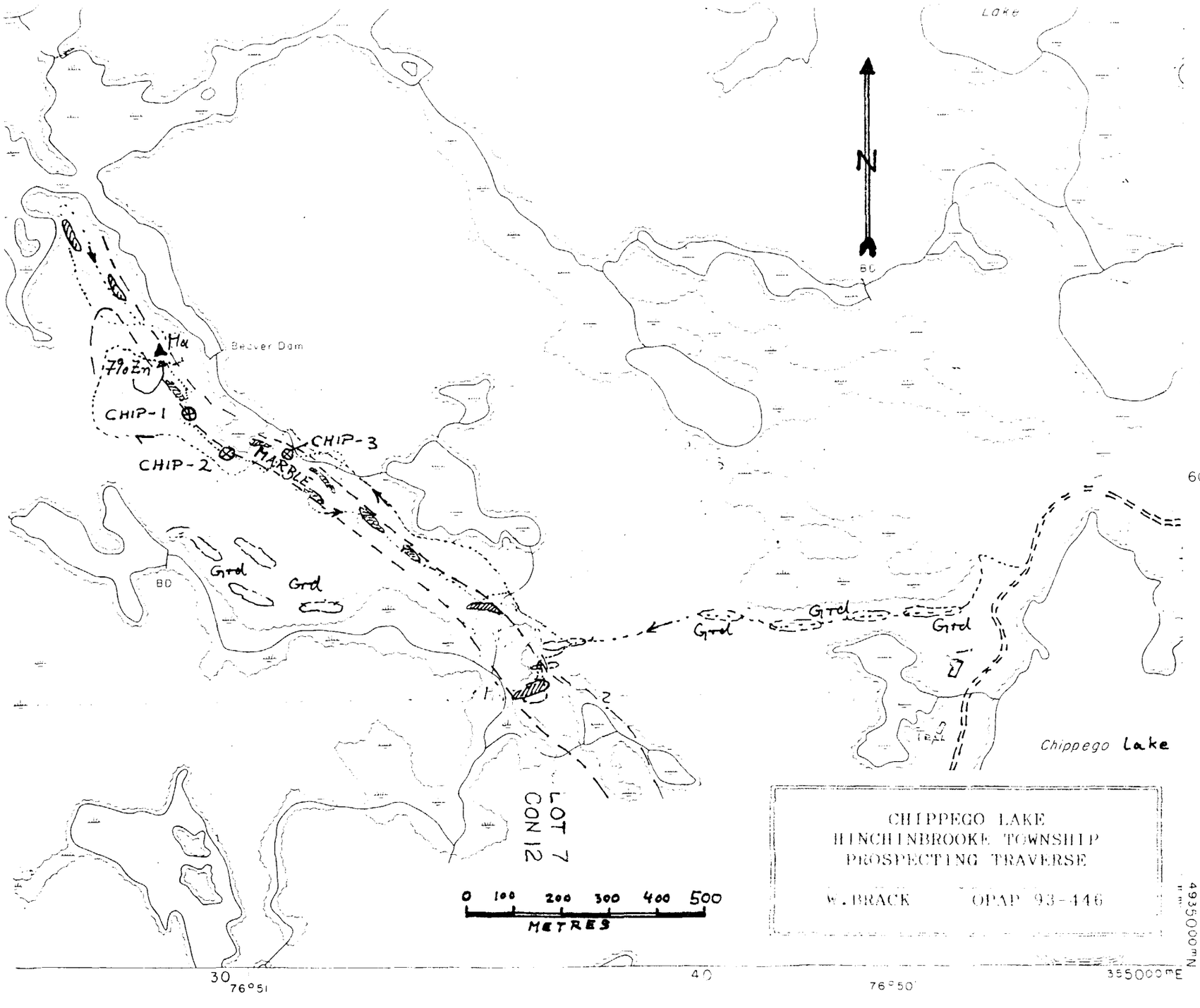

320°
NW
Ridge (possibly fault)
(qtz-fksp-mica)
Granite gneiss
3+00 S
Granite
silicified
OLD BLAST HOLE IX + X
TRENCHES
MARBLE BOULDER
SA KAL-1
qtz - amphibol mica schist
3+25 S
NEW BLAST HOLES
SA KAL-2
SA 53471
SHEAR ZONE
Ridge (possibly fault)
KAL-3
HUNTING
TRAIL
SA KAL-4
SA KAL-5
SA 53472
3+50 S
GOLDSPEAR
several low conductivity
one high conductivity response
SA KAL-6
Marble
SA 53473
Granite
Pegmatite
SA 53474
grey marble
3+75 S
7+00 E
LINE
0 5 10 15 20 25
METRES
KALADAR PROJECT
TRENCHES AND BLAST HOLES
SAMPLE LOCATIONS
W.BRACK OPAP 93-446


AREA OF PROSPECTING
HINCHINBROOKE
SHEFFIELD
Puddle Lake
Fraser L.
Salmon Lake
Stag
McLean
Long Lake
Marine Access
Eagle Lake
Barton L.
Abbot Lake
Long Lake
Butch Lake
XV
XVI
Big McNeil L.
Norway L.
Bear Lake
Dog Lake
Wagarville
XIV
XIII
Depot Lake
Fifth Depot Lake
Sixth Depot
XII
XI
X
IX
VIII
VII
VI
V
IV
III
II
I
Skewgaw Lake
Stevenson L.
Mink Lake
Echo Lake
Creek
Parham
Duncan L.
Clow Lake
Elbow Lake
Fish
Meadow Lake
St. Andrews Lakes
Cook Lake
38
West Lake
Trafford
Basshook Lake
Loon Lake
Chippego Lake
Herring Lake
Fourth Depot L.
Fourth Depot Lake
Third Depot Lake
Second Depot Lake
Fish L.
Wilkinson Creek
Whitman
Reynolds
W NP B
NP B
LT NP B
Marine Access
GENERAL LOCATION MAP
CHIPPEGO LAKE AREA
HINCHINBROOKE TOWNSHIP
PROSPECTING TRAVERSE
W. BRACK OPAP 93-446

5.0 PROSPECTING AT CHIPPEGO LAKE (HINCHINBROOKE TOWNSHIP)

In 1992 (OPAP 92-233) a narrow marble unit was discovered to connect the Slave Lake area with the Chippego Lake area. This marble band was previously not mapped. The prospectivity of this unit was demonstrated by a sphalerite discovery (7% zinc) at the south-east margin of the former Slave Lake claim group (OPAP 91-784) which has been optioned to Willow Resources. The objective of this prospecting traverse was to confirm the continuity of this marble unit and to probe it for zinc mineralization.

Results: The traverse was started from Chippego Lake towards the south-east corner of the former claim group. It was noted that the reference portion of the former sphalerite mineralized marble boulder had been removed. Traces of sphalerite was observed in underlying outcrop. Three samples were taken along the margin of the described marble unit. No significant zinc values were obtained. The marble unit does occur continuously and is approximately 50 to 75 metres wide. No further exploration work is required for this area.


LOKE
N
BC
Beaver Dam
Hu
790 Zn
CHIP-1
CHIP-2
CHIP-3
MARBLE
BD
Grd
Grd
Grd
Grd
Grd
TRAIL
Chippego Lake
LOT 7
CON 12
0 100 200 300 400 500
METRES
CHIPPEGO LAKE
HINCHINBROOKE TOWNSHIP
PROSPECTING TRAVERSE
W. BRACK
OPAP 93-446
30
40
76°51
76°50'
355000mE
4935000mN
44°34'
60

6. Conclusions and Recommendations:

Gold mineralization in the Grimsthorpe - Lingham Lake area appears to be confined to a structure along the Black River, which is staked at the present time. No comparable mineralization could be located within the investigated area. The geochemical soil anomaly south of the Skottamatta road should be re-sampled for a follow-up analysis.

The Ardoch property remains a highly prospective area. The occurrence of gold mineralization in the southern portion of the property is possible. A geochemical soil anomaly Ar-233 (max.220 ppb Au) was re-sampled and confirmed the anomaly (sample Ar-233-1, max. 383 ppb Au). A detailed follow-up program is recommended (trenching, blasting).

The Kaladar project remains a prospective target, since the source of a marble occurrence, which is highly anomalous in zinc and other metals, has not been located. The intense tectonization and alteration of the rock assemblage in this area is very appealing. More detailed prospecting to the east of the occurrence of the marble boulder may result in a successful discovery.

In the Chippego Lake area a previously unmapped marble unit was confirmed. So far there has been no indication that shalerite mineralization extends into this area. However, the extension of this marble unit to the south has not been investigated.

References:

Allard, P. 1988 — Rapport Geologique Preliminaire de la Propriete Boerth-Hill, Canton Clarendon, Ontario. Assessment Report 2.12051 Mining Land Section, Tweed

Bowen, R.P. 1988 — Report on the Boerth-Hill Property, Clarendon Township, Ontario, for Aurochs Société d'Exploration Miniere Inc., internal paper.

Brack, W. — Exploration for Zinc in South-Eastern Ontario, Slave Lake Area, Little Mud Lake Area, Kaladar Area. OPAP 91-782 report and OPAP 92-233 report.

Delisle, P.C. 1989 — Progress Report on the Boerth-Hill Property, Clarendon Township, S.E. Ontario. Internal report for Aurochs Société d'Exploration Miniere Inc.

Easton, R.M. and Ford, F. 1990 — 15.Project Unit 90-19. Geology of the Grimsthorpe Area. Summary of Field Work and Other Activities 1990, Ontario Geological Survey, Miscellaneous Paper 151

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APPENDIX -1-

GRIMSTHORPE TOWNSSHIP

GEOCHEMICAL RECORDS

- Sample description
- Analytical results (geochemistry)
- Contour maps (for selected elements)

OPAP 93-446
W.BRACK
GEOCHEMICAL SAMPLE DESCRIPTION
GRIMSTHORPE TOWNSHIP

SA	LINE	N/S	LOC.	E/W	DEPTH	COLOUR	COMPOSITION	HUM	REMARK
1	20+00	S	0+25	E	20	BRW	SAND	D	SLOPE
2	20+00	S	0+50	E	25	BRW	SAND	D	SLOPE
3	20+00	S	0+75	E	25	BRW	SAND	D	SLOPE
4	20+00	S	1+00	E	35	BRW	SAND	D	SLOPE
5	20+00	S	1+25	E	30	GRY	CLAY/SAND	W	DEPRESSION
6	20+00	S	1+50	E	30	BRW/GRY	SAND/CLAY	M	SLOPE
7	20+00	S	1+75	E	30	GRY	SAND	D	SLOPE
8	20+00	S	2+00	E	30	BRW/GRY	SAND	M	DEPRESSION
9	20+00	S	2+25	E	35	BLK	ORG	W	DEPRESSION
10	20+00	S	2+50	E	30	BRW	ORG	M	TOP OF HILL
11	20+00	S	2+75	E	30	BRW	SAND	D	SLOPE
12	20+00	S	3+00	E	30	BRW	SAND	D	SLOPE
13	20+00	S	3+25	E	30	BRW	SAND	D	SLOPE
14	20+00	S	3+50	E	30	BRW	CLAY	W	DEPRESSION
15	19+00	S	3+75	E	30	BRW	SAND	M	SLOPE
16	19+00	S	4+00	E	30	BRW	SAND	D	FLAT
17	19+00	S	3+50	E	25	BRW	SAND	D	FLAT
18	19+00	S	3+25	E	25	BRW	SAND	D	STEP SLOPE
19	19+00	S	2+95	E	25	BRW	SAND	D	FLAT
20	19+00	S	2+75	E	30	BRW	SAND	M	FLAT
21	19+00	S	2+50	E	25	BRW	SAND	D	SLOPE
22	19+00	S	2+25	E	15	RED BRW	SAND	D	RIDGE
23	19+00	S	2+00	E	20	BRW	CLAY	M	SLOPE
24	19+00	S	1+75	E	15	BRW	CLAY	D	SLOPE
25	19+00	S	1+50	E	25	BRW	SAND	D	DEPRESSION
26	19+00	S	1+25	E	25	GRY/BRW	SAND	M	SLOPE
27	19+00	S	1+00	E	25	BRW	SAND	D	SLOPE
28	19+00	S	0+75	E	30	BRW	SAND	M	SLOPE
29	19+00	S	0+50	E	20	BRW			
30	19+00	S	0+25	E	30	BRW			
31	22+00	S	0+50	E	30	BLK/BRW	ORG	M	SLOPE
32	22+00	S	0+75	E	25	BRW	SAND	D	SLOPE
33	22+00	S	1+00	E	25	BRW	SAND	D	SLOPE
34	22+00	S	1+25	E	25	BRW	SAND	M	SLOPE
35	22+00	S	1+50	E	25	BRW	SAND	D	SLOPE
36	22+00	S	1+75	E	25	BLK/BRW	ORG	M	SLOPE
37	22+00	S	2+00	E	25	DK.BRW	ORG	D	DEPR. ON SLOPE
38	22+00	S	2+25	E	25	BLK/GRY	ORG	M	FLAT RIDGE
39	22+00	S	2+50	E	30	BLK	ORG	M	STEEP SLOPE
40	22+00	S	2+75	E	30	DK.BRW	SAND	M	VALLEY
41	22+00	S	3+00	E	30	DK.BRW	CLAY/SAND	M	VALLEY
42	22+00	S	3+25	E	25	MED.BRW	CLAY/SAND	D	SLOPE
43	22+00	S	3+50	E	30	MED.BRW	CLAY	W	DEPRESSION
44	23+00	S	3+00	E	20	BRW	CLAY/ORG	M	EDGE OF LAKE
45	22+75	S	3+00	E	25	BRW	CLAY/SAND	M	FLAT
46	22+50	S	3+00	E	35	BLK/GRY	CLAY	W	VALLEY

47	22+25	S	3+00	E	30	BRW	SAND	D	VALLEY
48	20+25	S	3+00	E	30	BRW	CLAY/SAND	M	DEPRESSION
49	20+50	S	3+00	E	25	BRW	CLAY/SAND	D	SLOPE
50	20+75	S	3+00	E	30	BRW	CLAY/SAND	M	EDGE OF SLOPE
51	21+00	S	3+00	E	20	BRW	CLAY	D	RIDGE
52	21+25	S	3+00	E	40	BEIGE	CLAY/SAND	W	DEPRESSION
53	21+50	S	3+00	E	30	LGT.BRW	SAND	D	EDGE OF SLOPE
54	21+75	S	3+00	E	30	DK.BRW	ORG/SAND	D	EDGE OF SLOPE
55	23+20	S	2+00	E	25	BLK	ORG	M	EDGE OF SWAMP
56	23+00	S	2+00	E	20	BRW	SAND	D	EDGE OF SLOPE
57	22+75	S	2+00	E	30	BRW	SAND	D	EDGE OF SLOPE
58	22+50	S	2+00	E	25	BRW	SAND	M	SLOPE
59	22+25	S	2+00	E	25	BRW	SAND	D	
60	20+25	S	2+00	E	20	BRW	SAND	D	RIDGE
61	20+50	S	2+00	E	30	BRW	SAND	D	FLAT
62	20+75	S	2+00	E	25	BRW	SAND	D	SLOPE
63	21+00	S	2+00	E	20	BLK/GRY	ORG/CLAY	D	SLOPE
64	21+25	S	2+00	E	35	BRW	ORG/CLAY	W	DEPRESSION
65	21+50	S	2+00	E	30	BRW	SAND/CLAY	D	SLOPE
66	21+75	S	2+00	E	30	BRW	SAND/CLAY	M	SLOPE

BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

REPORT: 093-42557.0 (COMPLETE)

REFERENCE:

CLIENT: GEOBRACK INC.

SUBMITTED BY: W. BRACK

PROJECT: NONE

DATE PRINTED: 16-NOV-93

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	107	5 PPB	FIRE ASSAY	FIRE ASSAY @ 10 G
2	AuRew1	Gold Reweighs	2	1 PPB	FIRE ASSAY	
3	AuRew2	Gold Reweighs	2	1 PPB	FIRE ASSAY	
4	Ag	Silver	107	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
5	Pb	Lead	107	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
6	Zn	Zinc	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
7	Fe	Iron	107	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
8	Ba	Barium	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
9	Sn	Tin	107	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
10	Al	Aluminum	107	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
11	Na	Sodium	107	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
12	Mn	Manganese	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
13	Mg	Magnesium	107	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
14	K	Potassium	107	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
15	Sc	Scandium	107	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
16	V	Vanadium	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
17	Cr	Chromium	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
18	Ni	Nickel	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
19	Mo	Molybdenum	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
20	Cd	Cadmium	107	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
21	Sb	Antimony	107	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
22	W	Tungsten	107	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
23	Ca	Calcium	107	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
24	Cu	Copper	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
25	Co	Cobalt	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
26	As	Arsenic	107	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
27	Bi	Bismuth	107	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
28	Te	Tellurium	107	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
29	La	Lanthanum	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
30	Sr	Strontium	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
31	Y	Yttrium	107	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
32	Hg	Mercury	107	5 PPB	HNO3-HCL-SNCL2	COLD VAPOR AA

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	AuRew1 PPB	AuRew2 PPB	Ag PPM	Pb PPM	Zn PPM	Fe PCT	Ba PPM	Sn PPM	Al PCT	Na PCT
GR-1		<5			0.6	14	103	3.17	56	<20	1.49	0.03
GR-2		<5			0.5	14	102	2.84	46	<20	1.32	0.03
GR-3		<5			0.8	14	100	3.71	60	<20	1.18	0.03
GR-4		<5			0.5	26	141	2.67	81	<20	0.87	0.03
GR-5		<5			1.3	23	89	3.36	100	<20	2.30	0.03
GR-6		<5			0.6	12	75	2.93	31	<20	1.06	0.02
GR-7		<5			0.6	17	57	2.41	26	<20	0.65	0.02
GR-8		<5			0.6	16	46	2.46	19	<20	0.72	0.02
GR-9		<5			1.1	34	132	1.45	62	<20	2.49	0.04
GR-10		<5			0.3	14	145	3.22	88	<20	0.84	0.03
GR-11		<5			1.6	10	54	2.21	22	<20	0.64	0.02
GR-12		<5			1.7	15	243	3.04	72	<20	1.15	0.02
GR-14		<5			0.8	19	117	3.85	165	<20	2.63	0.03
GR-15		5			0.5	54	78	3.00	45	<20	2.21	0.03
GR-16		5			0.5	22	134	3.05	58	<20	1.69	0.03
GR-17		7			1.0	38	97	3.21	48	<20	2.40	0.03
GR-18		6			0.4	14	89	2.68	25	<20	1.62	0.04
GR-19		9			0.5	16	94	2.06	41	<20	1.03	0.02
GR-20		6			1.3	17	76	1.94	37	<20	0.92	0.02
GR-21		<5			0.8	12	97	2.63	34	<20	1.72	0.02
GR-22		<5			1.2	23	207	7.26	102	<20	2.88	0.03
GR-23		<5			0.5	11	59	2.40	37	<20	0.73	0.03
GR-24		<5			1.9	42	73	2.12	44	<20	0.57	0.02
GR-25		7			0.6	16	165	3.07	90	<20	2.26	0.03
GR-26		10			1.0	10	26	0.99	12	<20	0.27	0.03
GR-27		5			0.5	15	102	3.01	27	<20	1.99	0.03
GR-28		11			0.4	14	147	3.39	60	<20	1.52	0.03
GR-29		16			1.0	32	147	>10.00	104	<20	1.15	<0.01
GR-30		8			1.1	36	161	6.50	332	<20	3.00	0.03
GR-31		12			0.7	54	255	3.20	293	<20	1.29	0.04
GR-32		13			1.0	21	107	5.39	62	<20	1.50	0.01
GR-33		15			0.7	22	180	4.25	60	<20	1.48	0.03
GR-34		6			0.8	16	117	3.23	32	<20	1.10	0.03
GR-35		<5			0.4	16	100	2.83	44	<20	0.95	0.02
GR-36		<5			0.4	14	80	3.27	90	<20	0.78	0.03
GR-37		5			0.8	38	381	4.44	318	<20	2.68	0.03
GR-38		<5			0.3	11	57	1.06	38	<20	0.53	0.03
GR-39		<5			<0.2	17	219	2.54	349	<20	1.39	0.04
GR-40		<5			1.1	58	188	2.96	166	<20	2.30	0.03
GR-41		<5			0.7	25	78	3.24	89	<20	1.92	0.02

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SAMPLE NUMBER	ELEMENT UNITS	Mn PPM	Mg PCT	K PCT	Sc PPM	V PPM	Cr PPM	Ni PPM	Mo PPM	Cd PPM	Sb PPM	W PPM
GR-1		305	0.48	0.09	<5	54	34	26	1	<0.2	<5	<20
GR-2		187	0.26	0.05	<5	48	23	19	1	<0.2	<5	<20
GR-3		251	0.15	0.04	<5	68	25	14	<1	1.1	<5	<20
GR-4		1496	0.19	0.05	<5	56	19	11	<1	1.0	<5	<20
GR-5		251	0.53	0.05	<5	53	45	64	2	<0.2	<5	<20
GR-6		132	0.22	0.03	<5	64	30	15	<1	<0.2	<5	<20
GR-7		84	0.09	0.03	<5	88	19	9	<1	0.3	<5	<20
GR-8		89	0.13	0.03	<5	67	20	10	1	<0.2	<5	<20
GR-9		1827	0.10	0.06	<5	22	22	20	3	0.9	6	<20
GR-10		2606	0.20	0.05	<5	67	30	12	<1	0.5	<5	<20
GR-11		138	0.15	0.03	<5	60	16	8	<1	<0.2	<5	<20
GR-12		2619	0.24	0.04	<5	83	46	34	1	<0.2	<5	<20
GR-14		5297	0.50	0.05	12	75	61	70	2	<0.2	8	<20
GR-15		243	0.52	0.04	<5	55	42	33	<1	<0.2	5	<20
GR-16		365	0.35	0.05	<5	53	30	26	<1	<0.2	5	<20
GR-17		219	0.50	0.05	<5	58	39	30	<1	<0.2	5	<20
GR-18		157	0.30	0.03	<5	53	31	20	<1	<0.2	<5	<20
GR-19		361	0.18	0.04	<5	36	18	13	<1	<0.2	<5	<20
GR-20		301	0.12	0.03	<5	41	17	10	<1	<0.2	<5	<20
GR-21		260	0.34	0.04	<5	46	36	24	<1	<0.2	<5	<20
GR-22		548	1.03	0.07	9	182	63	54	<1	<0.2	7	<20
GR-23		460	0.10	0.04	<5	70	14	8	<1	<0.2	<5	<20
GR-24		154	0.08	0.03	<5	75	15	14	<1	0.3	<5	<20
GR-25		760	0.73	0.07	<5	45	25	36	1	<0.2	7	<20
GR-26		57	0.07	0.01	<5	52	9	2	<1	<0.2	<5	<20
GR-27		225	0.54	0.04	<5	53	40	30	<1	1.0	6	<20
GR-28		208	0.26	0.04	<5	65	25	18	1	<0.2	<5	<20
GR-29		1193	0.17	0.03	<5	103	44	56	5	0.9	<5	<20
GR-30		923	2.65	0.25	23	189	126	50	2	<0.2	10	<20
GR-31		1916	0.62	0.08	<5	80	36	22	2	<0.2	6	<20
GR-32		136	0.20	0.05	<5	120	39	18	1	<0.2	6	<20
GR-33		210	0.54	0.06	<5	79	41	42	1	1.5	5	<20
GR-34		147	0.43	0.05	<5	73	41	22	1	<0.2	6	<20
GR-35		111	0.21	0.04	<5	57	22	12	<1	0.7	<5	<20
GR-36		211	0.20	0.05	<5	75	26	15	<1	<0.2	<5	<20
GR-37		6203	0.80	0.09	12	107	68	49	1	1.1	9	<20
GR-38		98	0.26	0.03	<5	21	18	14	<1	<0.2	<5	<20
GR-39		9586	0.26	0.05	<5	44	43	54	<1	1.0	7	<20
GR-40		3323	0.37	0.10	<5	52	33	56	1	0.4	7	<20
GR-41		854	0.10	0.04	<5	56	29	11	1	<0.2	<5	<20

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GR-1		0.28	31	18	26	<5	<10	6	7	6	36
GR-2		0.27	21	10	20	<5	<10	5	7	4	44
GR-3		0.30	15	8	21	<5	<10	4	10	3	66
GR-4		0.32	19	13	18	<5	<10	4	10	3	60
GR-5		0.36	71	32	29	<5	<10	18	9	15	110
GR-6		0.19	12	9	21	<5	<10	4	5	3	33
GR-7		0.17	12	5	29	<5	<10	4	7	3	47
GR-8		0.11	8	5	43	<5	<10	4	5	2	22
GR-9		0.62	82	148	23	<5	<10	10	21	17	209
GR-10		0.43	14	14	11	<5	<10	4	8	4	41
GR-11		0.25	5	5	6	<5	<10	4	5	4	8
GR-12		0.18	31	20	16	<5	<10	5	5	3	38
GR-14		0.47	98	63	32	<5	<10	20	14	45	126
GR-15		0.22	65	15	50	<5	<10	6	5	6	85
GR-16		0.28	43	16	14	<5	<10	8	8	9	27
GR-17		0.21	56	16	32	<5	<10	7	5	7	44
GR-18		0.22	21	8	25	<5	<10	5	5	3	38
GR-19		0.19	9	9	21	<5	<10	5	6	3	30
GR-20		0.12	6	5	18	<5	<10	4	5	3	25
GR-21		0.15	35	14	31	<5	<10	5	5	5	30
GR-22		0.27	93	55	24	<5	<10	5	9	7	41
GR-23		0.28	18	9	9	<5	<10	4	6	3	33
GR-24		0.42	21	9	9	<5	<10	3	9	5	66
GR-25		0.60	32	22	40	<5	<10	15	14	17	55
GR-26		0.12	5	<1	5	<5	<10	2	3	1	16
GR-27		0.20	42	15	25	<5	<10	6	5	4	33
GR-28		0.17	14	13	26	<5	<10	5	5	4	16
GR-29		0.54	66	58	14	<5	<10	5	7	9	41
GR-30		0.68	50	38	32	<5	10	7	16	13	34
GR-31		0.94	51	20	19	<5	<10	5	23	4	120
GR-32		0.20	11	7	22	<5	<10	6	8	3	59
GR-33		0.28	37	19	25	<5	<10	4	8	3	36
GR-34		0.27	22	14	26	<5	<10	4	6	3	45
GR-35		0.19	10	6	37	<5	<10	4	5	3	36
GR-36		0.41	24	9	33	<5	<10	4	11	3	42
GR-37		1.36	60	35	37	<5	<10	24	29	55	129
GR-38		0.27	9	6	<5	<5	<10	3	9	2	36
GR-39		1.44	144	53	17	<5	<10	6	32	14	162
GR-40		0.51	37	25	31	<5	<10	15	14	20	90
GR-41		0.44	19	30	32	<5	<10	10	15	12	103

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GR-42		<5			0.9	27	232	5.62	65	<20	2.33	0.02
GR-43		<5			0.8	18	151	3.35	94	<20	1.76	0.03
GR-44		<5			0.7	15	66	2.55	60	<20	0.47	0.03
GR-45		<5			0.7	16	76	2.57	51	<20	1.02	0.02
GR-46		<5			1.2	29	170	4.06	189	<20	3.35	0.04
GR-47		<5			0.4	17	121	3.23	83	<20	1.90	0.03
GR-48		<5			0.7	30	223	4.02	133	<20	2.98	0.03
GR-49		<5			0.5	19	86	2.13	31	<20	0.76	0.03
GR-50		<5			0.8	12	162	4.78	65	<20	2.06	0.02
GR-51		<5			0.6	14	102	3.55	71	<20	0.98	0.03
GR-52		<5			0.8	12	29	1.60	78	<20	1.12	0.02
GR-53		<5			0.6	19	111	3.89	61	<20	2.19	0.02
GR-54		<5			0.5	24	176	4.30	67	<20	1.70	0.03
GR-55		6			0.4	18	29	0.60	24	<20	0.35	0.03
GR-56		<5			0.5	22	176	2.66	84	<20	1.58	0.03
GR-57		<5			1.2	17	234	7.13	97	<20	3.32	0.03
GR-58		495	8	16	0.6	33	137	4.04	59	<20	1.37	0.03
GR-59		16			0.8	27	175	5.59	61	<20	2.35	0.03
GR-60		9			0.5	18	116	2.91	49	<20	1.12	0.03
GR-61		<5			0.4	26	102	2.84	38	<20	1.54	0.03
GR-62		<5			0.5	19	81	4.08	36	<20	1.02	0.02
GR-63		<5			0.6	11	92	1.52	66	<20	0.56	0.04
GR-64		<5			0.5	14	52	1.24	190	<20	1.69	0.03
GR-65		28			0.6	19	65	3.32	48	<20	1.09	0.02
GR-66		<5			1.0	22	236	6.62	130	<20	2.53	0.02

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GR-42		300	1.18	0.03	5	193	100	98	1	<0.2	7	<20
GR-43		322	0.62	0.05	<5	54	45	28	1	<0.2	6	<20
GR-44		146	0.13	0.03	<5	76	18	17	2	<0.2	<5	<20
GR-45		95	0.17	0.05	<5	60	19	15	<1	<0.2	<5	<20
GR-46		4154	0.42	0.05	8	71	70	51	2	0.5	6	<20
GR-47		231	0.60	0.10	<5	48	37	23	1	0.4	5	<20
GR-48		6990	0.90	0.16	12	63	58	54	2	0.7	9	<20
GR-49		221	0.15	0.03	<5	51	24	11	<1	<0.2	<5	<20
GR-50		355	0.77	0.05	<5	102	55	38	<1	<0.2	8	<20
GR-51		856	0.12	0.05	<5	86	23	19	<1	1.0	<5	<20
GR-52		318	0.10	0.04	<5	36	19	21	<1	<0.2	<5	<20
GR-53		146	0.26	0.05	<5	65	31	20	<1	<0.2	6	<20
GR-54		266	0.52	0.05	<5	122	68	45	<1	<0.2	7	<20
GR-55		46	0.14	0.02	<5	19	10	6	<1	<0.2	<5	<20
GR-56		287	0.69	0.08	<5	49	43	30	9	<0.2	7	<20
GR-57		321	1.89	0.09	6	162	93	38	2	<0.2	10	<20
GR-58		640	0.55	0.07	<5	89	44	28	1	<0.2	5	<20
GR-59		422	1.38	0.05	7	201	96	62	<1	<0.2	8	<20
GR-60		277	0.24	0.04	<5	50	25	14	<1	<0.2	<5	<20
GR-61		253	0.30	0.04	<5	46	30	19	<1	<0.2	5	<20
GR-62		126	0.12	0.04	<5	73	25	9	<1	0.6	<5	<20
GR-63		474	0.24	0.06	<5	34	18	13	<1	0.6	<5	<20
GR-64		89	0.30	0.07	8	29	23	33	1	0.2	<5	<20
GR-65		119	0.16	0.04	<5	65	23	10	1	<0.2	<5	<20
GR-66		564	1.67	0.11	9	230	134	48	<1	<0.2	10	<20

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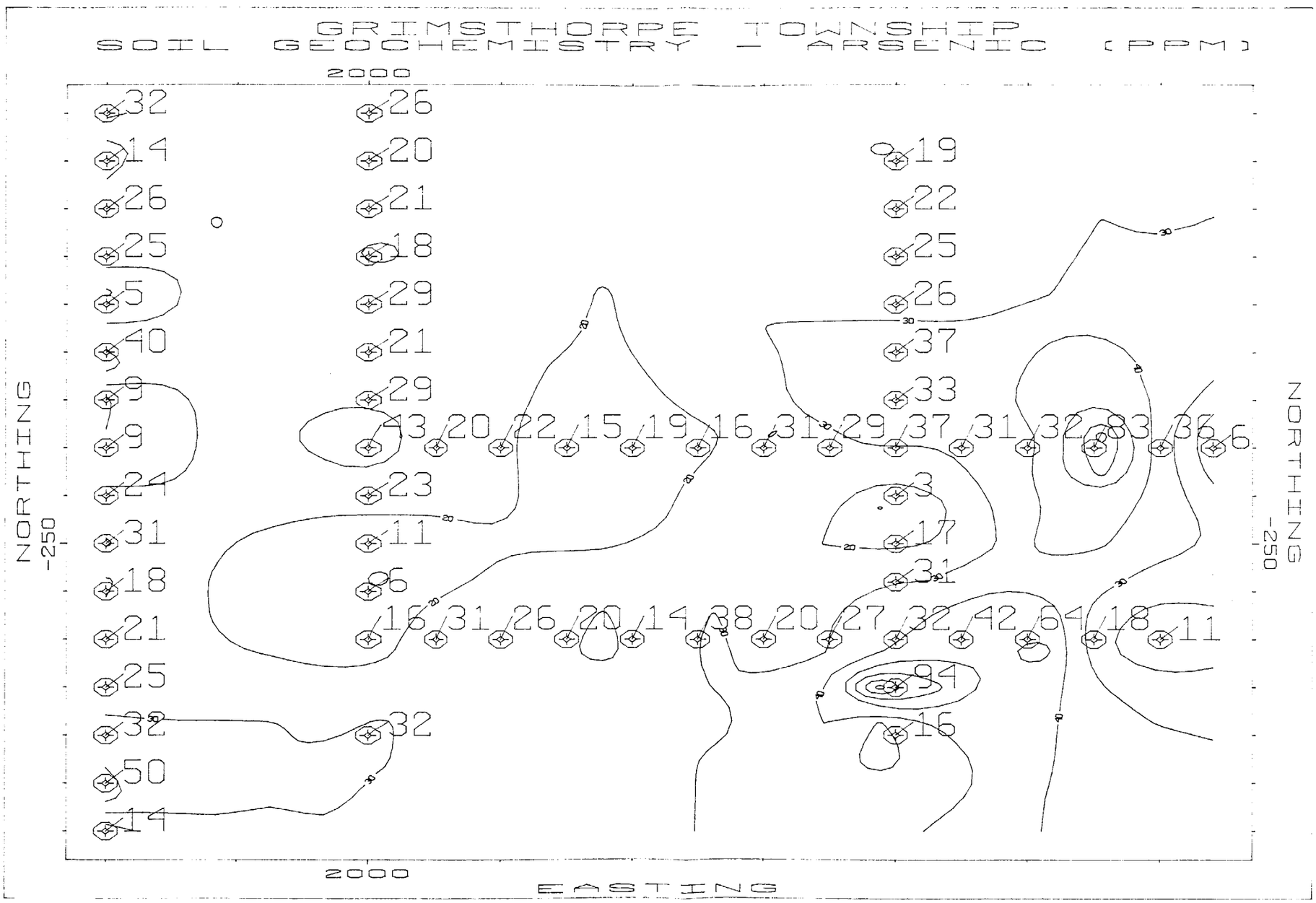
GR-42		0.36	131	77	94	<5	<10	3	7	5	36
GR-43		0.28	18	21	16	<5	<10	7	11	6	31
GR-44		0.35	27	7	11	<5	<10	3	10	2	42
GR-45		0.20	13	5	18	<5	<10	5	6	3	25
GR-46		1.01	84	30	64	<5	<10	33	27	64	134
GR-47		0.45	22	11	42	<5	<10	8	14	6	48
GR-48		0.53	114	49	31	<5	<10	34	16	46	95
GR-49		0.19	11	7	26	<5	<10	4	5	3	36
GR-50		0.24	41	30	20	<5	<10	4	6	2	28
GR-51		0.38	37	20	14	<5	<10	4	8	5	50
GR-52		0.27	12	6	38	<5	<10	11	8	18	50
GR-53		0.15	12	12	20	<5	<10	5	7	5	45
GR-54		0.28	63	37	27	<5	<10	4	8	5	48
GR-55		0.13	3	3	6	<5	<10	3	5	2	41
GR-56		0.28	23	15	36	<5	<10	4	8	3	43
GR-57		0.32	62	23	83	<5	11	5	7	4	35
GR-58		0.20	28	20	32	<5	<10	4	5	3	30
GR-59		0.36	62	39	31	<5	<10	6	9	7	49
GR-60		0.20	15	9	20	<5	<10	5	7	3	57
GR-61		0.20	18	11	22	<5	<10	5	6	3	54
GR-62		0.20	12	5	15	<5	<10	5	6	4	73
GR-63		0.57	10	8	19	<5	<10	3	12	3	52
GR-64		0.54	95	6	16	<5	<10	96	15	106	154
GR-65		0.39	7	5	31	<5	<10	4	11	3	32
GR-66		0.49	46	34	29	<5	<10	5	12	8	46

GRIMSTHORPE TOWNSHIP

SOIL GEOCHEMISTRY - SAMPLE LOCATION

GRIMSTHORPE TOWNSHIP
SOIL GEOCHEMISTRY - GOLD (PPB)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SOIL GEOCHEMISTRY — ARSENIC (PPM)
2000
NORTHING
-250
EASTING
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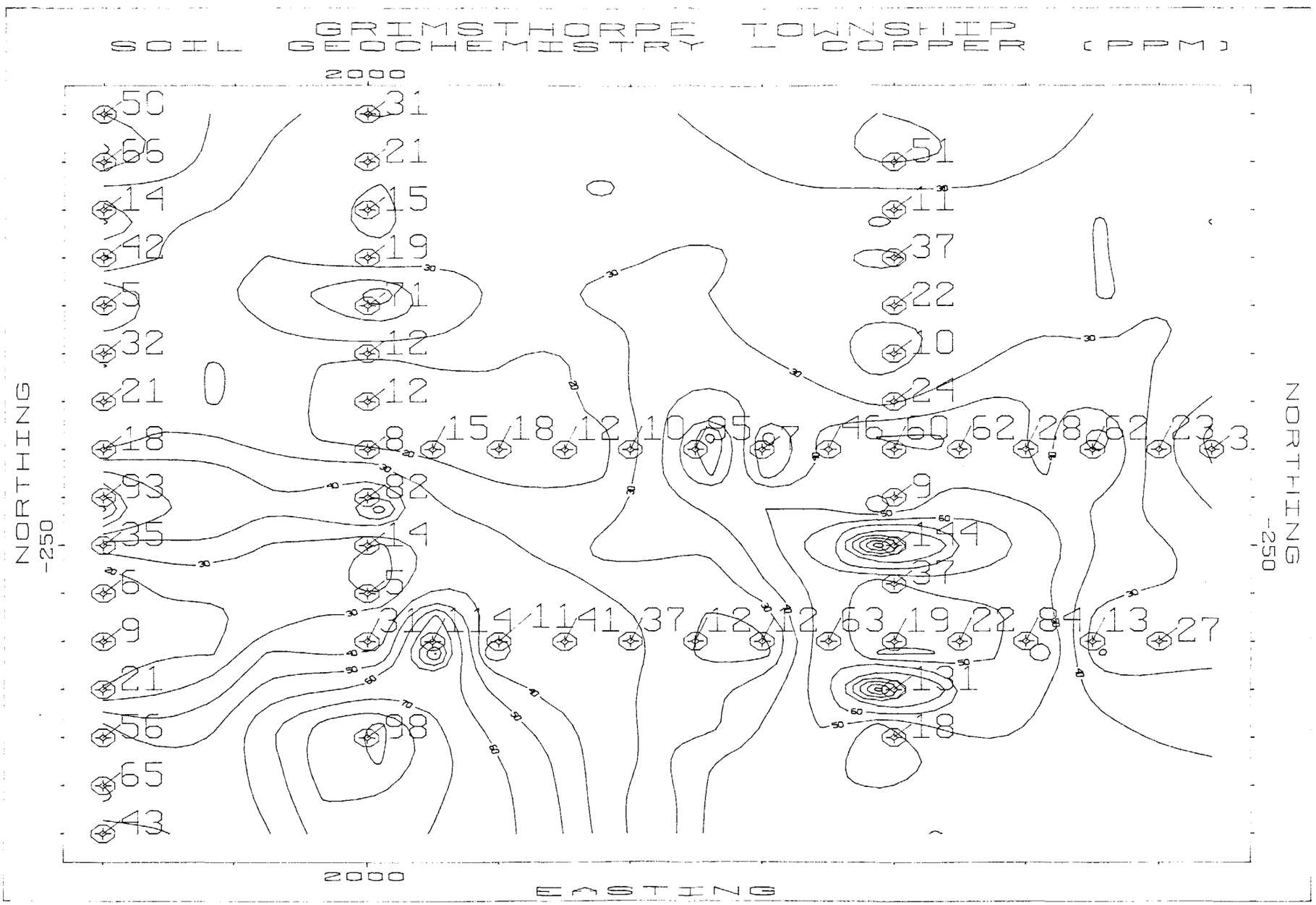
26 20 21 18 29 21 29 43 20 22 15 19 16 31 29 37 31 32 23 11 6 16 31 26 20 14 38 20 27 32 42 64 18 11 32
19 22 25 26 37 33 3 17 31 94 16
30
20
10
40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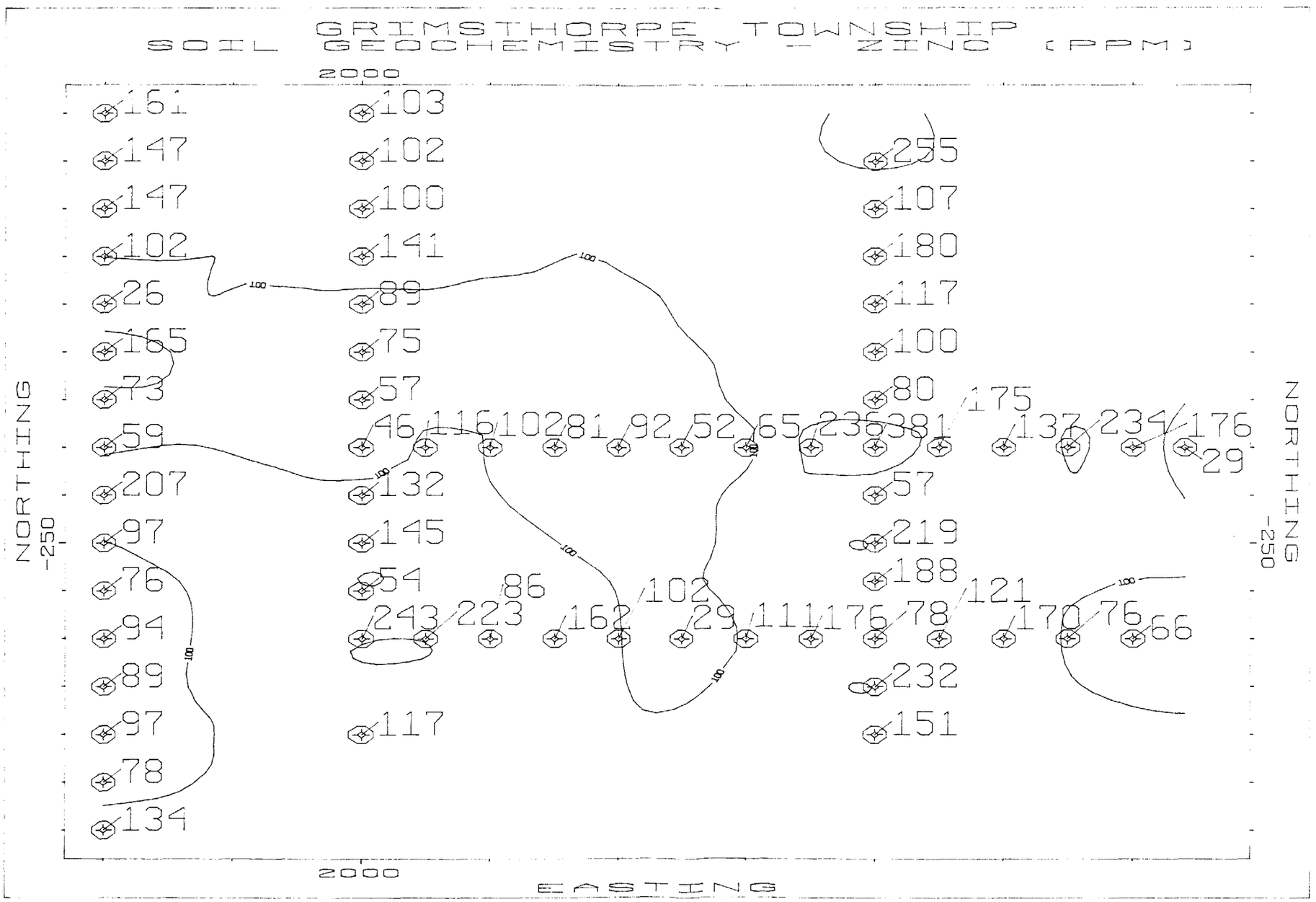
SOIL GEOCHEMISTRY - COPPER (PPM)
2000
NORTHING
-250
EASTING
2000
NORTHING
-250


GRIMSTHORPE TOWNSHIP
SOIL GEOCHEMISTRY - ZINC (PPM)
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147
147
102
26
165
73
59
207
97
76
94
89
97
78
134
103
102
100
141
89
75
57
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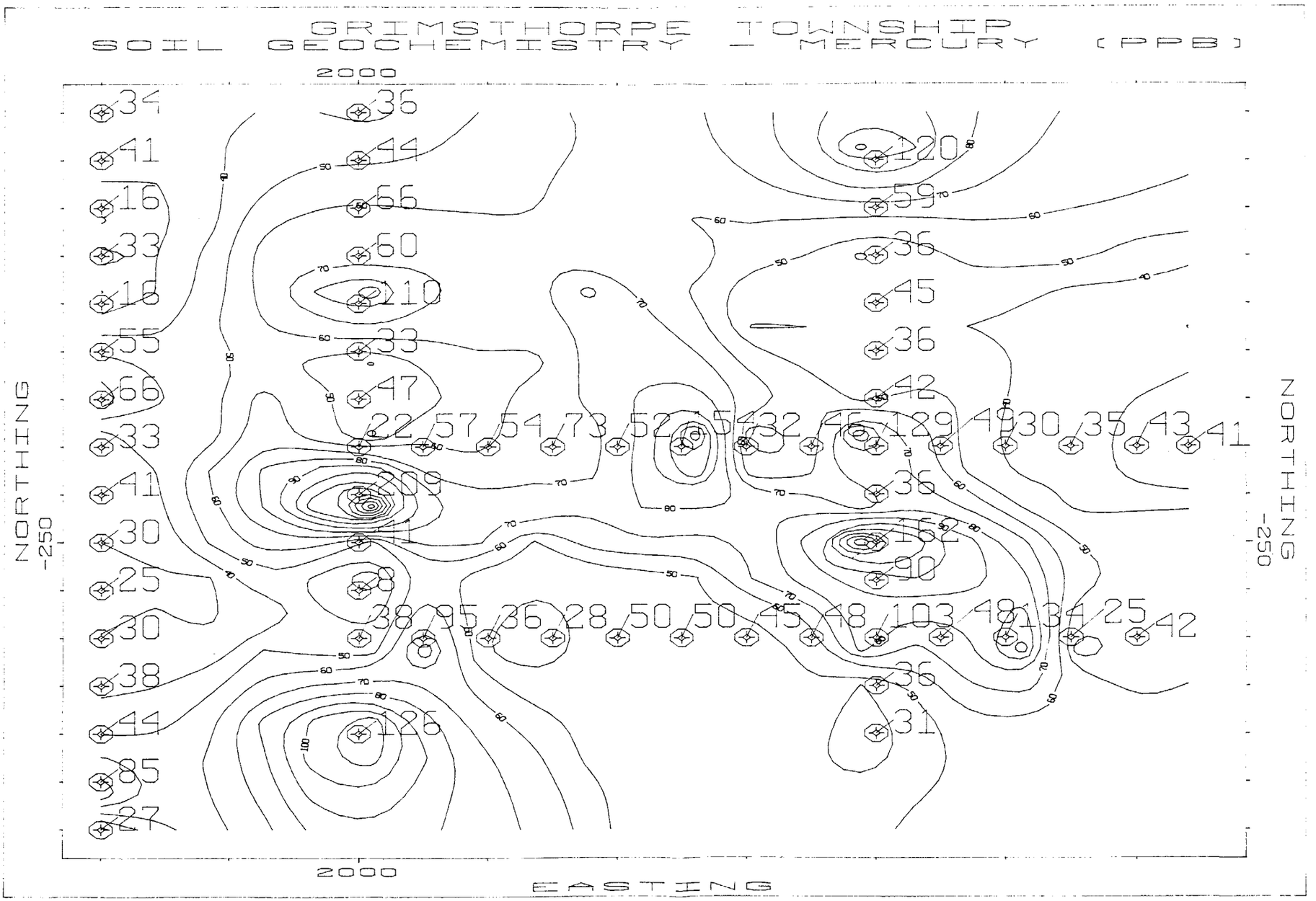
116
102
81
92
52
65
235
381
175
137
234
176
29
132
145
54
86
102
243
223
162
29
111
176
78
121
170
76
66
117
255
107
180
117
100
80
57
219
188
232
151
100
NORTHING
-250
NORTHING
-250
2000
EASTING


GRIMSTHORPE TOWNSHIP
SOIL GEOCHEMISTRY - MERCURY (PPB)
2000
NORTHING
-250
EASTING
34
41
16
33
10
55
66
33
41
30
25
30
38
44
85
27
36
44
66
60
210
33
47
22 57 54 73 52 55 32 46 129 49 30 35 43 41
209
11
8
38 95 86 28 50 50 45 48 103 48 134 25 42
126
120
59
36
45
36
42
36
162
90
36
31

APPENDIX -2-

ARDOCH PROPERTY (NORTHERN CLAIMS)

GEOCHEMICAL RECORDS

- Sample description
- Analytical results (geochemistry)
- Contour maps (for selected elements)

OPAP 93-446
WINFRIED BRACK
GEOCHEMICAL SAMPLE DESCRIPTION
ARDOCH PROPERTY - NORD (CLARENDON TWP.)

SAMPLINE	N/S	LOC	E/W	DEPTH	COLOUR	COMPOSITION	HUM	REMARK
121	4+00 W	11+80	N	20	MED.BRW	SAND/CLAY	D	FORMER LOC.
122	4+00 W	11+79	N	30	MED.BRW	SAND/CLAY	D	1M S OF FORMER
123	4+00 W	11+78	N	30	MED.BRW	SAND/CLAY	D	5M/W FORMER LOC
124	4+00 W	11+75	N	30	MED.BRW	SAND/CLAY	M	
125	4+00 W	11+50	N	30	MED.BRW	CLAY/SAND	M	
126	3+50 W	11+70	N	30	MED.BRW	SAND/CLAY	D	DEPR.
127	2+50 W	12+00	N	30	MED.BRW	SAND/CLAY	D	DEPR.
128	2+00 W	12+30	N	30	MED.BRW	SAND/CLAY	M	RIDGE
129	2+00 W	13+00	N	30	MED.BRW	SAND/CLAY	D	E.RIDGE
130	2+00 W	13+25	N	25	DRK.BRW	SAND/CLAY	D	DEPR.
131	2+00 W	13+70	N	35	DRK.BRW	ORG/CLAY	W	E.DEPR.
132	2+00 W	13+95	N	30	BRW	SAND/CLAY	M	FLAT
133	2+00 W	14+30	N	30	DRK.BRW	ORG/SAND	D	DEPR.
134	1+50 W	12+30	N	30	LGT.BRW	SAND/CLAY	D	E.C.SWAMP
135	0+95 W	12+50	N	20	LGT.BRW	CLAY/SAND	M	TRAIL
136	1+00 W	13+15	N	20	BRW	SAND	D	DEPR.
137	1+00 W	13+35	N	25	BRW	SAND/CLAY	M	DEPR.
138	1+00 W	13+50	N	20	BRW	CLAY/SAND	M	SLOPE
139	0+00	12+50	N	30	RED BRW	SAND/CLAY	D	SLOPE
140	0+00	12+75	N	20	BRW	SAND	D	RIDGE
141	0+00	13+00	N	20	BRW	SAND	D	DEPR.
142	0+00	13+20	N	30	RED BRW	CLAY/SAND	M	E.DEPR.
143	0+25 E	14+00	N	30	BEIGE	CLAY/SAND	M	

BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

DATE PRINTED: 29-OCT-93

REPORT: 093-42485.1 (COMPLETE) PROJECT: OPAP-93 PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	Pb PPM	Zn PPM	Fe PCT	Ba PPM	Sn PPM	Al PCT	Na PCT	Mn PPM	Mg PCT
AR-121		21	1.0	31	300	6.90	100	<20	5.26	0.07	1117	2.84
AR-122		7	0.9	26	340	6.79	145	<20	5.31	0.06	1194	2.69
AR-123		7	0.6	51	486	4.80	71	<20	1.91	0.05	1539	0.40
AR-124		<5	1.0	29	246	7.70	83	<20	4.62	0.06	1027	2.47
AR-125		<5	0.9	32	303	4.84	78	<20	3.82	0.05	735	3.18
AR-126		6	0.9	31	201	6.85	92	<20	3.48	0.05	746	1.94
AR-127		6	0.6	13	216	3.63	54	<20	1.99	0.06	557	0.59
AR-128		15	1.3	80	970	9.64	113	<20	2.66	0.06	4443	0.56
AR-129		<5	0.6	13	327	5.87	106	<20	2.80	0.05	660	1.34
AR-130		<5	0.4	28	209	3.80	40	<20	2.05	0.05	372	1.83
AR-131		6	0.6	8	84	2.54	191	<20	1.78	0.08	456	0.61
AR-132		<5	0.8	8	102	5.86	164	<20	1.92	0.05	274	1.21
AR-133		10	0.7	9	263	4.54	338	<20	3.06	0.06	5417	0.78
AR-134		9	1.1	16	131	8.78	109	34	3.46	0.05	463	1.68
AR-135		<5	0.7	23	194	6.05	40	27	2.43	0.06	402	1.16
AR-136		<5	0.8	14	236	9.51	179	40	2.30	0.06	4351	1.81
AR-137		14	0.8	17	443	7.69	171	<20	2.48	0.07	2588	2.10
AR-138		6	0.4	31	370	8.53	530	25	2.42	0.06	13225	0.94
AR-139		6	1.1	54	822	>10.00	93	<20	3.26	0.06	2425	2.17
AR-140		7	0.8	13	176	6.63	93	<20	0.67	0.07	3818	3.90
AR-141		<5	<0.2	5	96	3.55	66	<20	0.41	0.06	1760	5.50
AR-142		6	1.2	18	279	8.56	107	<20	2.42	0.07	3249	1.72
AR-143		<5	0.3	10	57	2.63	104	<20	1.53	0.06	133	0.99

Bondar-Clegg & Company Ltd.
5420 Canotek Road, Ottawa, Ontario, K1J 9G2, Canada
Tel: (613) 749-2220, Fax: (613) 749-7170

DATE PRINTED: 29-OCT-93

REPORT: 093-42485.1 (COMPLETE) PROJECT: OPAP-93 PAGE 18

SAMPLE NUMBER	ELEMENT UNITS	K PCT	Sc PPM	V PPM	Cr PPM	Ni PPM	Mo PPM	Cd PPM	Sb PPM	W PPM	Ca PCT	Cu PPM
AR-121		0.07	24	303	136	50	2	<0.2	19	<20	0.69	56
AR-122		0.18	23	265	150	47	<1	0.9	16	<20	0.61	42
AR-123		0.04	<5	62	30	19	2	<0.2	13	<20	0.63	8
AR-124		0.09	18	250	98	40	4	<0.2	17	<20	0.52	51
AR-125		0.14	6	112	49	28	4	0.9	18	<20	0.48	25
AR-126		0.19	11	163	58	31	1	0.9	16	<20	0.45	48
AR-127		0.06	<5	57	34	23	<1	0.9	10	<20	0.29	19
AR-128		0.03	6	95	37	26	3	1.8	13	<20	0.45	21
AR-129		0.07	5	101	37	25	<1	0.7	10	<20	0.25	10
AR-130		0.03	<5	35	22	21	<1	<0.2	11	<20	0.59	10
AR-131		0.25	<5	38	29	19	1	0.8	6	<20	1.78	35
AR-132		0.71	<5	157	20	15	<1	<0.2	10	<20	0.30	45
AR-133		0.11	9	80	65	30	<1	0.5	14	<20	2.04	53
AR-134		0.15	24	260	113	40	<1	<0.2	14	<20	0.66	33
AR-135		0.04	9	133	85	40	1	<0.2	9	<20	0.30	27
AR-136		0.05	8	100	31	23	<1	1.3	11	<20	1.59	9
AR-137		0.15	10	112	33	45	<1	0.3	12	<20	1.15	62
AR-138		0.06	10	90	37	34	<1	2.7	11	<20	0.98	25
AR-139		0.04	13	149	46	32	<1	0.7	13	<20	0.34	20
AR-140		<0.01	<5	46	14	19	<1	<0.2	8	<20	6.57	15
AR-141		<0.01	<5	18	9	9	<1	<0.2	6	<20	9.36	3
AR-142		0.06	12	111	32	33	<1	1.2	22	<20	0.76	40
AR-143		0.03	<5	45	20	15	1	<0.2	9	<20	1.02	7

Bondar-Clegg & Company Ltd.
5420 Canotek Road, Ottawa, Ontario, K1J 9G2, Canada
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BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

DATE PRINTED: 29-OCT-93

REPORT: 093-42485.1 (COMPLETE) PROJECT: OPAP-93 PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	As PPM	Bi PPM	Te PPM	La PPM	Sr PPM	Y PPM	Hg PPB
AR-121		46	117	<5	16	7	12	9	106
AR-122		42	71	<5	<10	7	12	8	35
AR-123		15	95	<5	<10	7	8	6	87
AR-124		41	107	<5	13	8	9	8	32
AR-125		27	79	<5	11	5	8	3	32
AR-126		28	339	<5	11	7	9	6	55
AR-127		13	48	<5	<10	7	6	6	29
AR-128		24	121	<5	10	15	7	26	161
AR-129		19	18	<5	12	8	5	6	26
AR-130		14	148	<5	<10	5	7	2	26
AR-131		9	13	<5	<10	22	23	26	119
AR-132		23	42	<5	<10	5	6	5	16
AR-133		15	17	<5	<10	59	36	111	110
AR-134		34	29	<5	<10	12	8	18	45
AR-135		29	113	<5	<10	7	5	7	39
AR-136		20	30	<5	15	19	11	26	68
AR-137		37	37	<5	<10	24	13	25	84
AR-138		51	59	<5	<10	43	12	52	258
AR-139		27	142	<5	12	14	7	12	122
AR-140		15	22	<5	14	8	13	11	119
AR-141		8	98	<5	<10	6	11	10	55
AR-142		32	60	<5	<10	19	8	20	135
AR-143		9	37	<5	<10	5	17	5	39

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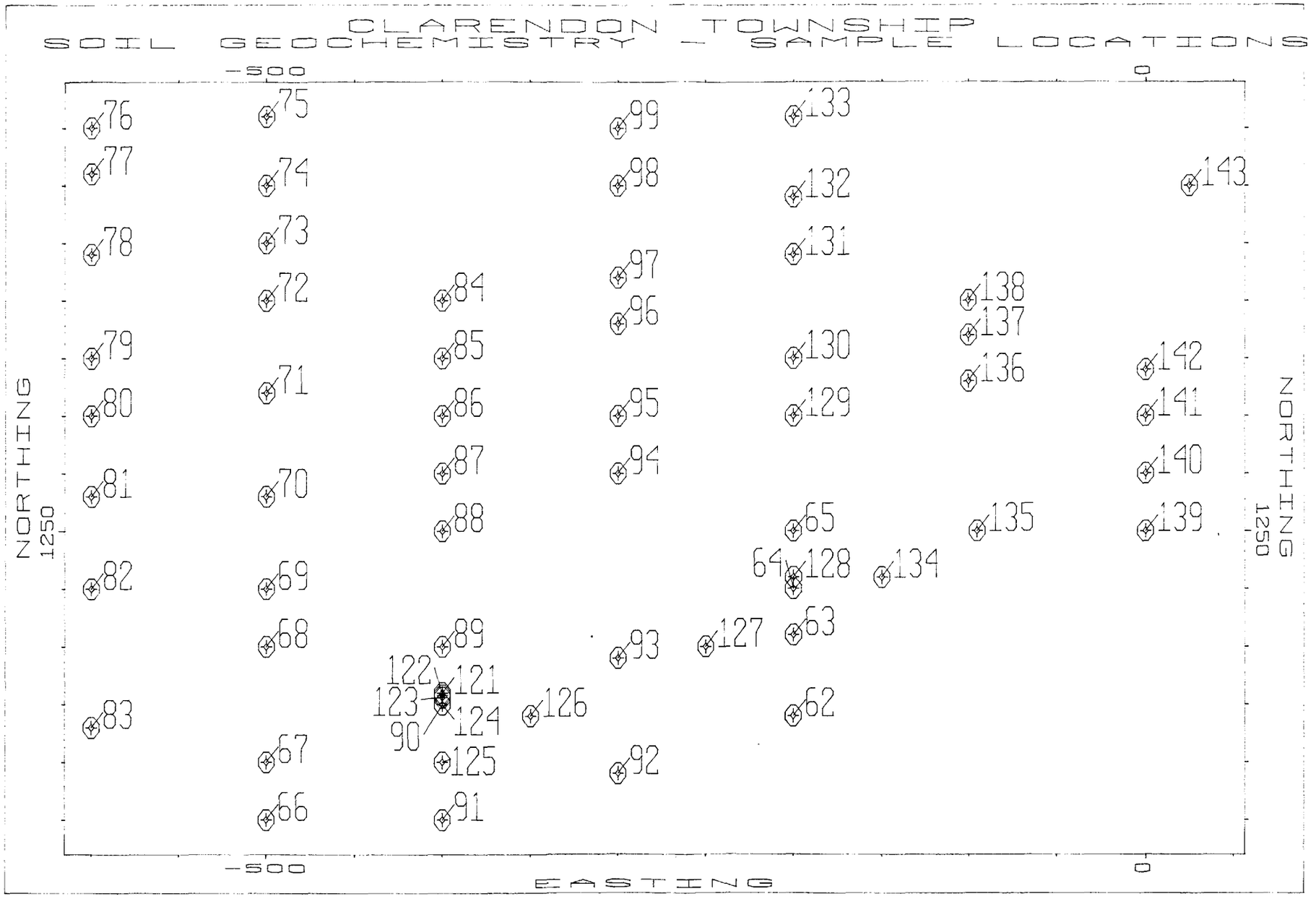
CLARENDON TOWNSHIP
SOIL GEOCHEMISTRY - SAMPLE LOCATIONS
-500
0
NORTHING
1250
EASTING
76
75
99
133
77
74
98
132
143
78
73
131
72
84
97
138
96
137
79
85
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127
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121
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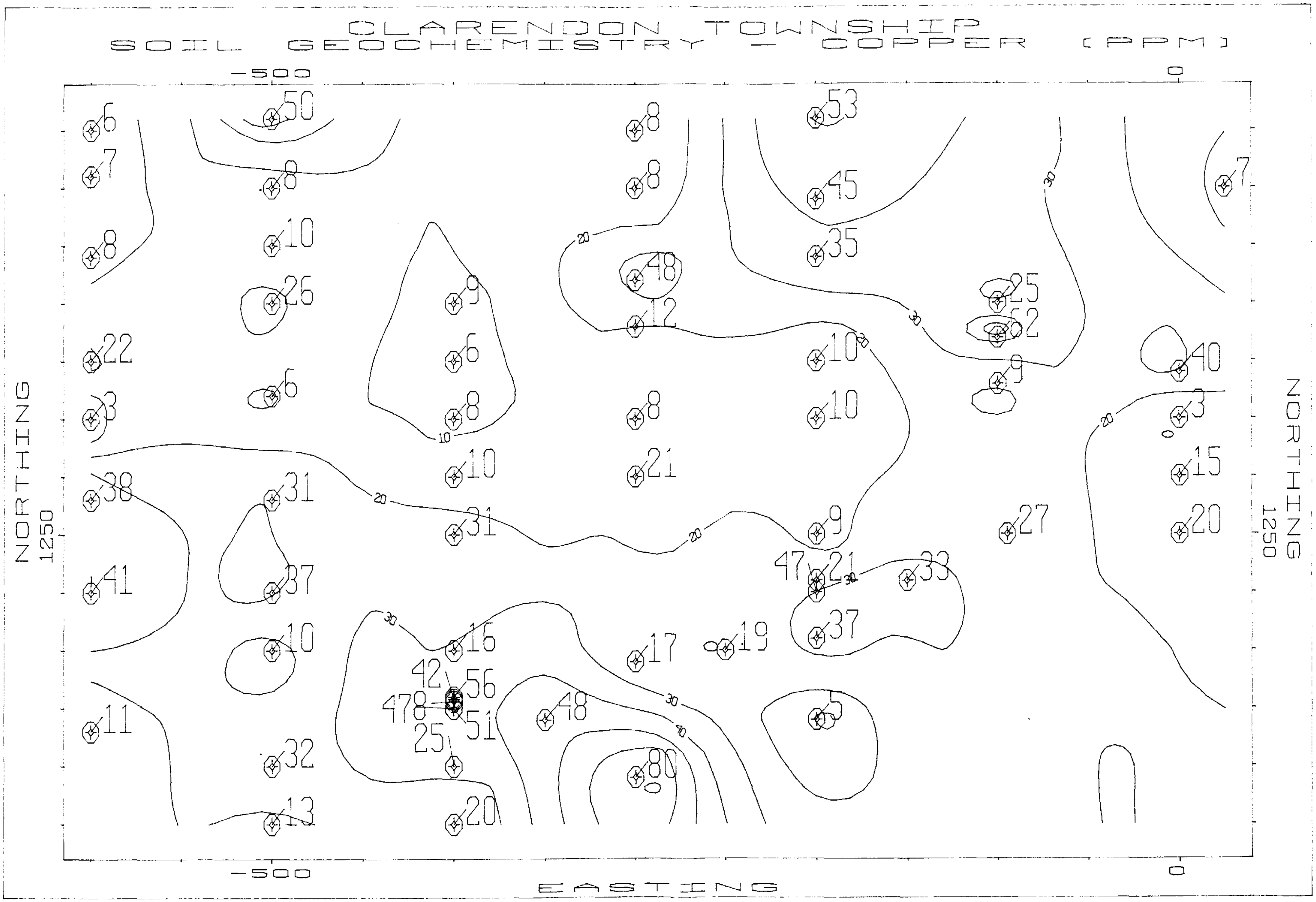
91

CLARENDON TOWNSHIP
SOIL GEOCHEMISTRY — GOLD (PPB)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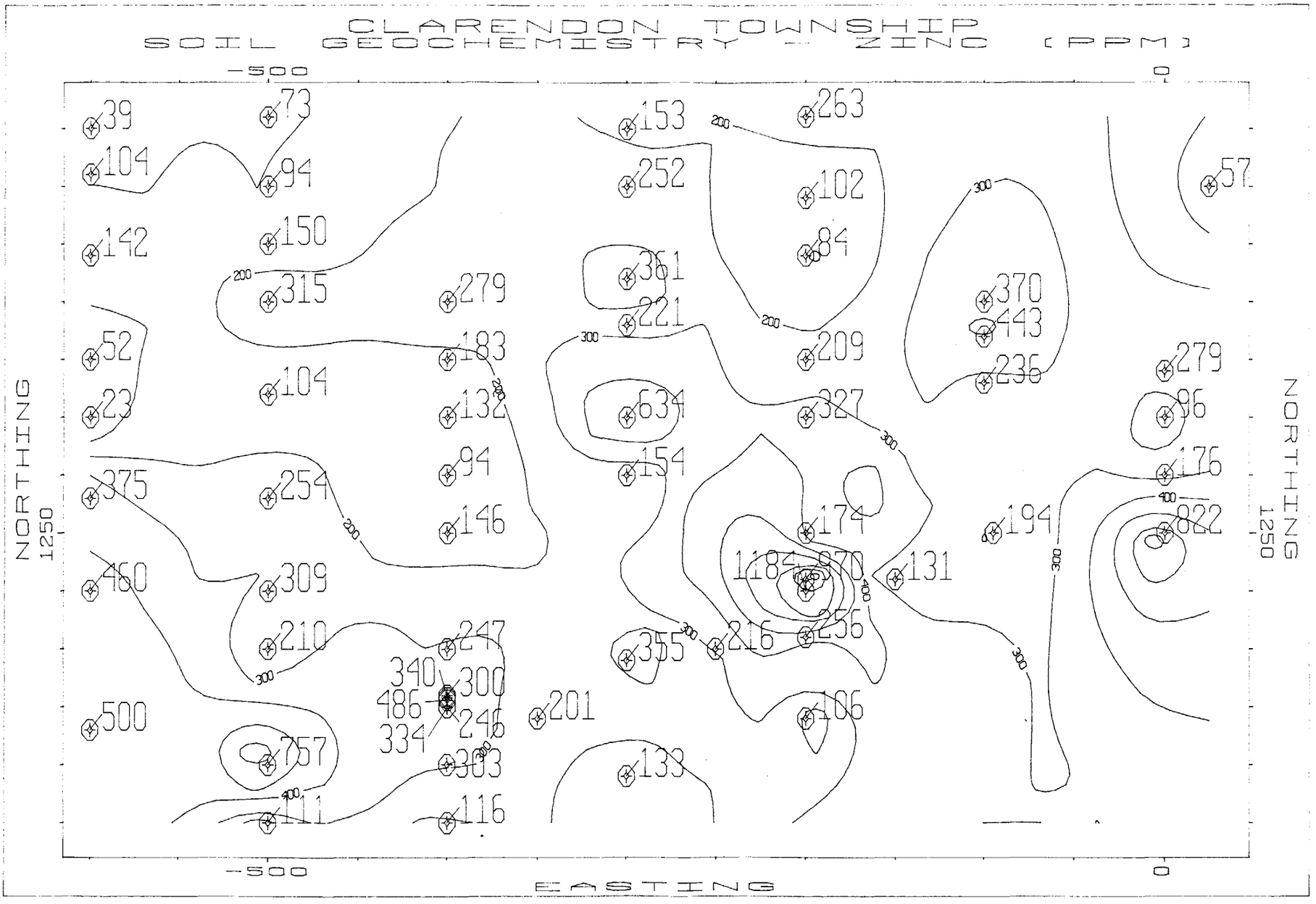
SOIL GEOCHEMISTRY - COPPER (PPM)
-500
0
NORTHING
1250
EASTING


CLARENDON TOWNSHIP
SOIL GEOCHEMISTRY - ZINC (PPM)
-500
0
NORTHING
1250
EASTING
39
104
142
52
23
375
460
500
73
94
150
315
104
254
309
210
757
111
279
183
132
94
146
247
340
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300
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201
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102
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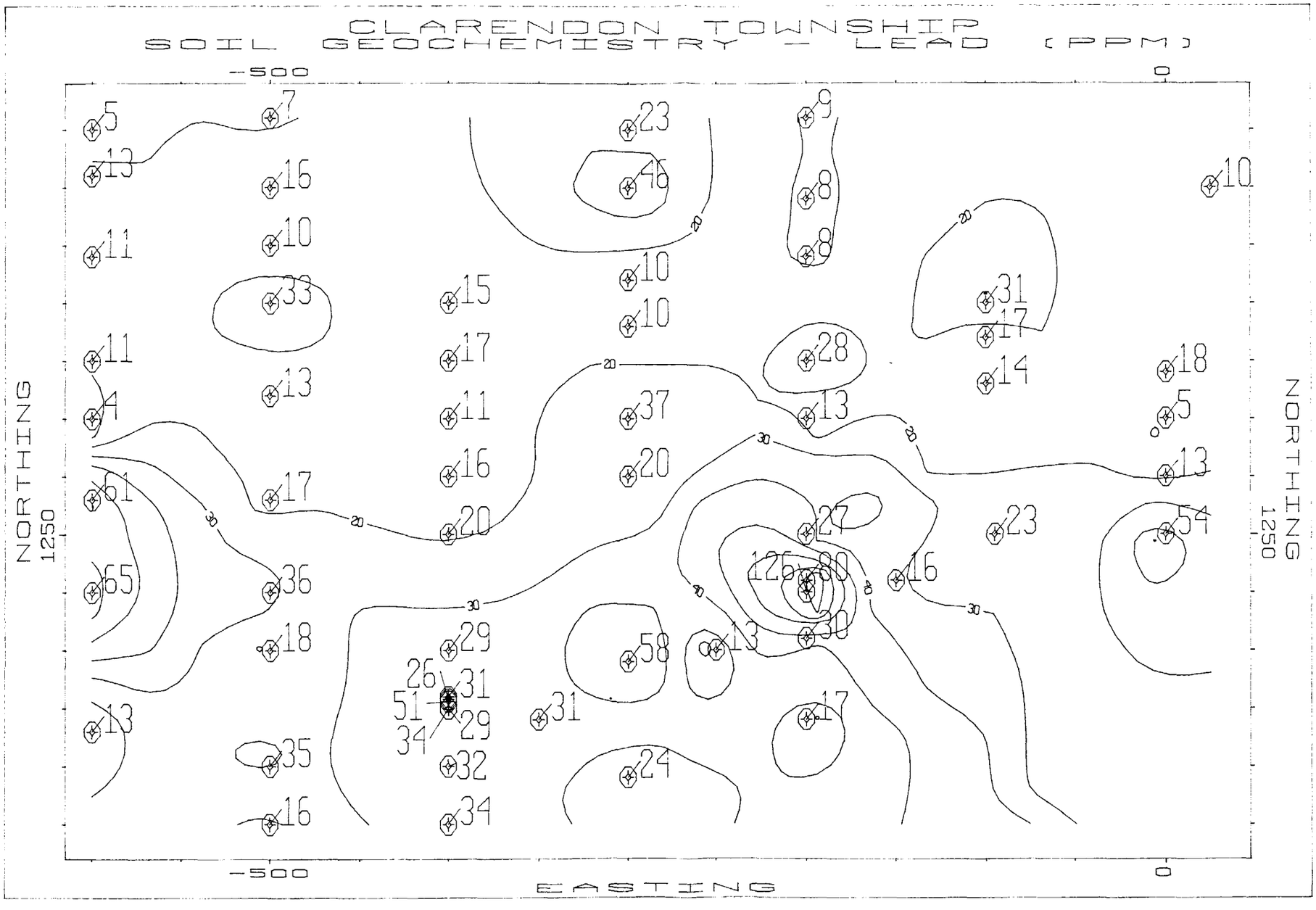
CLARENDON TOWNSHIP
SOIL GEOCHEMISTRY - LEAD (PPM)
-500
0
NORTHING
1250
EASTING

APPENDIX -3-

ARDOCH PROPERTY (SOUTHERN CLAIMS)

GEOCHEMICAL RECORDS

- Sample description
- Analytical results (geochemistry)
- Contour maps (for selected elements)

OPAP 93-446
W.BRACK
GEOCHEMICAL SAMPLE DESCRIPTION
GRIMSTHORPE TOWNSHIP

SA	LINE	E/W	LOC.	N/S	DEPTH	COLOUR	COMPOSITION	HUM	REMARK
144	9+00	W	4+25	S	20	GRY	SAND	D	
145	9+00	W	4+50	S	25	LGT.BRW	SAND	D	
146	9+00	W	4+70	S	30	BLK	ORG/SAND	W	EDGE OF SLOPE
147	9+00	W	5+40	S	35	GRY	CLAY/SAND	M	E.S.
148	8+68	W	5+25	S	30	GRY	CLAY/SAND	W	E.S.
149	8+00	W	4+30	S	15	GRY	CLAY/SAND	M	E.S.
150	8+00	W	4+50	S	20	GRY	SAND	D	SLOPE
151	8+00	W	4+50	S	30	BRW	SAND	D	SLOPE
152	8+00	W	4+75	S	30	LGT.BRW	SAND	D	FLAT
153	8+00	W	4+90	S	30	LGT.BRW	SAND	D	RIDGE
154	8+00	W	5+15	S	20	RED BRW	ORG/SAND	D	FLAT
155	8+00	W	5+15	S	35	GRY	CLAY/SAND	D	FLAT
156	7+50	W	5+25	S	30	BRW	SAND/CLAY	W	SLOPE
157	7+00	W	5+00	S	30	BRW	SAND	D	FLAT
158	7+00	W	4+75	S	30	BRW	CLAY/SAND	M	FLAT
159	7+00	W	4+50	S	35	LGT.BRW	CLAY/ORG	M	FLAT
160	7+00	W	4+25	S	35	BRW	SAND	D	EDGE OF LAKE
161	7+00	W	5+25	S	30	BRW	SAND/ORG	M	FLAT
162	6+50	W	5+25	S	30	BEIGE	CLAY/SAND	M	FLAT
163	6+00	W	5+25	S	30	BRW	SAND	D	DEPR
164	6+00	W	5+00	S	20	GRY	CLAY/SAND	M	RIDGE
165	6+00	W	4+75	S	35	BRW	CLAY/SAND	M	ROAD
166	6+00	W	4+50	S	30	BRW	CLAY/SAND	M	E.S.
167	6+00	W	5+45	S	30	BRW	CLAY/SAND	D	DEPR
168	5+50	W	5+25	S	30	BRW	SAND	D	DEPR
169	5+00	W	5+25	S	30	BRW	SAND	D	RIDGE
170	5+00	W	5+00	S	30	BRW	SAND	D	FLAT
171	5+00	W	4+75	S	30	BRW	SAND	D	TRAIL
172	5+00	W	4+50	S	30	BRW	CLAY/ORG	W	FLAT
173	5+00	W	4+25	S	30	BRW	SAND	D	SLOPE
174	1+00	E	2+25	S	30	BRW	CLAY/SAND	D	E.SWAMP
175	1+00	E	2+50	S	25	BRW	SAND	D	SLOPE
176	1+00	E	2+75	S	30	BRW	SAND	D	SLOPE
177	1+00	E	3+00	S	25	GRY	CLAY	M	RIDGE
178	1+00	E	3+25	S	30	BRW	SAND/CLAY	M	FLAT
179	1+00	E	3+50	S	25	BLK	ORG/CLAY	M	SLOPE
180	1+00	E	3+75	S	25	BRW	SAND	D	FLAT
181	1+00	E	4+00	S	25	BRW	SAND/ORG	M	RIDGE
182	1+00	E	4+25	S	25	BRW	SAND/CLAY	M	E.SWAMP
183	1+00	E	4+50	S	20	BRW	ORG	M	FLAT
184	1+00	E	4+75	S	25	BRW	CLAY/ORG	M	FLAT
185	1+00	E	1+75	S	25	BRW	SAND/ORG	M	E.SWAMP
186	1+50	W	3+50	S	30	BRW	CLAY/SAND	M	FLAT
187	1+50	W	3+80	S	30	BRW	CLAY/ORG	M	SLOPE
188	1+50	W	3+25	S	35	LGT.BRW	SAND/CLAY	M	FLAT
189	1+50	W	3+00	S	30	BRW	CLAY	M	SLOPE

190	1+50	W	2+75	S	25	BRW	SAND	D	SLOPE
191	1+50	W	2+50	S	30	BRW	SAND	D	SLOPE
192	1+50	W	2+25	S	25	GRY	SAND	M	LAKE SHORE
193	2+50	W	2+75	S	30	BLK	ORG/CLAY	W	LAKE SHORE
194	2+50	W	3+00	S	30	MED.BRW	CLAY/SAND	M	E.S.
195	2+50	W	3+25	S	30	MED.BRW	CLAY/SAND	D	FLAT
196	2+50	W	3+50	S	30	BRW	CLAY/SAND	D	FLAT
197	2+50	W	3+75	S	30	MED.BRW	SAND/CLAY	D	E.S.
198	2+50	W	4+00	S	25	BLK	ORG	W	RIDGE
199	2+50	W	4+30	S	25	BRW	CLAY/SAND	D	E.S.
200	2+50	W	4+50	S	25	BLK	ORG	W	DEPR
201	2+50	W	4+75	S	30	BRW	CLAY	M	RIDGE
202	2+50	W	5+00	S	30	BRW	CLAY/SAND	M	FLAT
203	2+50	W	5+25	S	25	BRW	SAND	D	ROAD
204	2+00	W	4+00	S	30	BLK	ORG	W	E.SWAMP
205	2+00	W	4+75	S	30	BLK	CLAY	W	E.SWAMP
206	2+00	W	5+00	S	30	BRW	CLAY/SAND	M	RIDGE
207	3+00	W	3+25	S	30	BRW	SAND	D	E.LAKE
208	3+00	W	3+50	S	25	BRW	SAND	D	SLOPE
209	3+00	W	3+75	S	30	BRW	SAND	D	SLOPE
210	3+00	W	4+00	S	30	BRW	SAND	M	SLOPE
211	3+00	W	4+25	S	30	BRW	SAND	M	RIDGE
212	3+00	W	4+50	S	30	BRW	SAND/CLAY	D	RIDGE
213	3+00	W	4+75	S	25	BRW	SAND/CLAY	D	DEPR
214	3+00	W	5+00	S	35	MED.BRW	SAND	D	FLAT
215	3+00	W	5+25	S	30	BRW	SAND	D	DEPR
216	4+00	W	5+25	S	30	BRW	ORG/SAND	M	E.SWAMP
217	4+00	W	3+00	S	30	MED.BRW	SAND	D	SLOPE
218	4+00	W	3+25	S	30	BRW	SAND	D	SLOPE
219	4+00	W	3+50	S	30	BRW	SAND	D	SLOPE
220	4+00	W	3+75	S	35	BRW	SAND	D	FLAT
221	1+00	W	4+75	S	25	BRW	SAND/CLAY	M	RIDGE
222	1+00	W	4+50	S	30	MED.BRW	SAND	D	RIDGE
223	1+00	W	4+25	S	30	BEIGE	CLAY/ORG	W	SWAMP
224	1+00	W	4+00	S	30	BLK	ORG/CLAY	M	HOUSE
225	1+00	W	5+00	S	30	RED BRW	SAND	D	FLAT
226	1+00	W	5+25	S	30	RED BRW	SAND	D	FLAT
227	0+00		5+25	S	30	BRW	SAND	D	
228	0+00		5+00	S	25	RED BRW	SAND	D	FLAT
229	0+00		4+75	S	30	LGT.BRW	SAND	D	DEPR
230	0+00		4+50	S	25	BRW	SAND/GRAVEL	D	FLAT
231	0+00		4+25	S	30	BRW	SAND	D	E.OF RIDGE
232	0+00		3+90	S	30	BRW	SAND	D	RIDGE
233	0+00		3+55	S	30	BLK/GRY	SAND/CLAY	W	E.S.

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Geochemical Lab Report

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REPORT: 093-42557.0 (COMPLETE) PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	AuRew1 PPB	AuRew2 PPB	Ag PPM	Pb PPM	Zn PPM	Fe PCT	Ba PPM	Sn PPM	Al PCT	Na PCT
AR144		<5			<0.2	11	34	0.84	16	<20	0.37	0.05
AR145		<5			0.3	13	127	2.96	73	<20	1.32	0.06
AR146		<5			0.8	23	440	1.67	188	<20	1.43	0.07
AR147		<5			0.6	54	5299	3.81	370	<20	2.65	0.06
AR148		<5			0.5	14	687	4.30	348	<20	3.32	0.06
AR149		<5			<0.2	3	51	1.16	40	<20	0.58	0.09
AR150		<5			<0.2	5	17	0.71	13	<20	0.29	0.06
AR151		<5			0.3	13	70	2.90	57	<20	1.96	0.07
AR152		<5			<0.2	5	54	1.50	21	<20	0.61	0.06
AR153		8			<0.2	11	106	2.33	67	<20	1.35	0.07
AR154		<5			<0.2	15	94	0.18	28	<20	0.11	0.06
AR155		<5			0.3	36	322	3.93	136	<20	2.25	0.06
AR156		<5			0.5	20	223	4.77	875	<20	3.77	0.07
AR157		<5			0.3	9	143	2.56	79	<20	0.78	0.06
AR158		8			0.5	18	163	3.03	186	<20	2.45	0.09
AR159		<5			<0.2	5	158	1.91	144	<20	0.91	0.08
AR160		<5			0.3	8	45	2.71	38	<20	0.99	0.07
AR161		<5			0.4	27	272	3.17	158	<20	2.17	0.07
AR162		<5			0.6	11	160	2.45	154	<20	1.75	0.09
AR163		<5			<0.2	11	263	2.73	408	<20	1.85	0.06
AR164		<5			0.3	16	220	4.35	579	<20	1.66	0.06
AR165		<5			<0.2	42	1179	2.71	93	<20	2.43	0.06
AR166		<5			0.4	39	270	4.50	160	<20	3.04	0.06
AR167		<5			0.2	17	1187	3.53	174	<20	2.04	0.07
AR168		<5			<0.2	9	155	1.77	128	<20	1.30	0.07
AR169		<5			<0.2	9	86	2.69	113	<20	1.41	0.06
AR170		<5			0.3	14	148	2.95	80	<20	1.90	0.08
AR171		<5			<0.2	25	317	3.39	215	<20	2.22	0.07
AR172		<5			<0.2	20	139	2.81	167	<20	1.07	0.06
AR173		<5			<0.2	7	40	2.06	34	<20	0.54	0.06
AR174		75	4	52	<0.2	12	58	3.47	48	<20	1.62	0.06
AR175		14			0.3	14	81	3.19	56	<20	1.24	0.06
AR176		7			<0.2	14	77	3.13	64	<20	1.06	0.06
AR177		8			<0.2	4	35	1.75	64	<20	0.19	0.06
AR178		<5			<0.2	14	103	3.06	53	<20	3.02	0.06
AR179		9			<0.2	48	100	2.26	109	<20	0.73	0.06
AR180		<5			<0.2	20	113	2.32	59	<20	1.33	0.05
AR181		<5			<0.2	20	162	3.58	114	<20	1.92	0.04
AR182		<5			<0.2	17	149	3.64	176	<20	2.37	0.05
AR183		<5			0.5	307	1637	4.42	283	<20	1.75	0.05

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Geochemical Lab Report

Inchcape Testing Services

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SAMPLE NUMBER	ELEMENT UNITS	Mn PPM	Mg PCT	K PCT	Sc PPM	V PPM	Cr PPM	Ni PPM	Mo PPM	Cd PPM	Sb PPM	W PPM
AR144		69	0.09	0.03	<5	22	7	4	10	<0.2	<5	<20
AR145		222	0.46	0.05	<5	51	22	16	2	0.8	7	<20
AR146		1223	0.74	0.08	<5	32	21	17	4	1.9	7	<20
AR147		853	2.14	0.74	6	91	45	60	2	2.2	6	<20
AR148		852	2.11	0.45	8	100	48	57	3	1.1	6	<20
AR149		221	1.22	0.07	<5	23	13	9	<1	<0.2	5	<20
AR150		58	0.06	0.03	<5	26	7	3	<1	0.2	<5	<20
AR151		153	0.55	0.05	<5	46	26	16	<1	<0.2	<5	<20
AR152		206	0.11	0.03	<5	29	10	5	<1	0.7	<5	<20
AR153		247	0.46	0.07	<5	42	20	13	1	0.7	<5	<20
AR154		40	0.06	0.03	<5	4	3	4	<1	<0.2	<5	<20
AR155		972	1.44	0.12	<5	82	42	38	5	0.3	6	<20
AR156		837	2.66	1.28	8	118	53	56	2	<0.2	7	<20
AR157		169	0.21	0.06	<5	53	17	7	1	0.8	<5	<20
AR158		3538	1.70	0.12	<5	50	35	26	10	2.0	10	<20
AR159		2005	0.33	0.07	<5	33	24	16	5	2.1	<5	<20
AR160		120	0.16	0.04	<5	53	18	8	2	<0.2	<5	<20
AR161		2123	1.26	0.06	<5	58	34	24	5	1.0	8	<20
AR162		713	0.69	0.12	<5	46	33	32	2	0.8	7	<20
AR163		8744	0.47	0.08	<5	47	36	31	14	0.9	8	<20
AR164		4884	1.09	0.37	<5	79	42	25	5	0.7	6	<20
AR165		512	2.07	0.05	<5	188	40	32	5	0.5	7	<20
AR166		6861	2.45	0.07	<5	48	35	25	3	<0.2	11	<20
AR167		1426	0.84	0.07	<5	62	30	37	1	0.9	<5	<20
AR168		836	0.28	0.05	<5	33	33	17	<1	0.5	<5	<20
AR169		799	0.66	0.10	<5	54	26	29	<1	0.7	<5	<20
AR170		530	0.57	0.09	<5	55	23	21	2	0.5	6	<20
AR171		6350	0.88	0.08	<5	216	30	40	11	1.1	9	<20
AR172		3460	0.17	0.08	<5	43	20	12	2	1.2	<5	<20
AR173		125	0.09	0.04	<5	36	15	5	<1	0.3	<5	<20
AR174		129	0.38	0.04	<5	59	23	13	1	<0.2	6	<20
AR175		339	0.39	0.05	<5	66	19	10	<1	0.9	<5	<20
AR176		398	0.24	0.05	<5	63	19	11	<1	1.0	<5	<20
AR177		100	0.02	0.03	<5	25	15	6	<1	0.7	<5	<20
AR178		357	1.12	0.04	<5	41	23	23	1	0.7	8	<20
AR179		2615	0.12	0.07	<5	38	14	8	2	1.0	<5	<20
AR180		747	0.43	0.04	<5	40	18	13	1	<0.2	<5	<20
AR181		1328	2.19	0.23	6	173	33	40	18	0.8	10	<20
AR182		761	1.33	0.10	<5	85	39	34	2	0.9	8	<20
AR183		1889	0.84	0.10	<5	71	32	41	2	2.2	7	<20

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SAMPLE NUMBER	ELEMENT UNITS	Ca PCT	Cu PPM	Co PPM	As PPM	Bi PPM	Te PPM	La PPM	Sr PPM	Y PPM	Hg PPB
AR144		0.09	1	2	<5	<5	<10	6	4	3	15
AR145		0.29	9	8	37	<5	<10	10	9	5	36
AR146		1.41	12	9	25	<5	<10	12	67	8	132
AR147		0.50	14	28	16	<5	<10	19	21	9	44
AR148		1.01	21	30	17	<5	<10	31	92	14	85
AR149		2.37	9	6	8	<5	<10	16	28	11	31
AR150		0.10	1	1	9	<5	<10	6	4	2	15
AR151		0.23	13	9	52	<5	<10	10	8	5	58
AR152		0.11	2	3	<5	<5	<10	6	4	3	21
AR153		0.29	6	8	<5	<5	<10	10	8	7	59
AR154		0.71	5	<1	<5	<5	<10	<1	17	<1	75
AR155		0.72	16	42	20	<5	<10	21	16	4	75
AR156		0.35	43	29	21	<5	<10	21	16	7	31
AR157		0.29	3	5	9	<5	<10	9	8	4	18
AR158		1.76	28	13	46	<5	<10	60	37	34	255
AR159		0.85	95	7	33	<5	<10	30	16	23	147
AR160		0.20	3	4	9	<5	<10	7	6	3	18
AR161		1.09	11	29	97	<5	<10	23	19	11	142
AR162		0.72	20	10	12	<5	<10	51	18	27	82
AR163		0.49	10	13	23	<5	<10	16	16	10	116
AR164		0.37	16	16	13	<5	<10	29	23	4	54
AR165		0.33	9	12	6	<5	<10	14	9	6	26
AR166		0.34	29	31	88	<5	<10	14	8	6	80
AR167		0.29	12	16	25	<5	<10	12	16	6	39
AR168		0.30	7	6	<5	<5	<10	15	10	11	54
AR169		0.27	12	18	17	<5	<10	16	10	7	26
AR170		0.33	9	11	23	<5	<10	15	12	10	44
AR171		0.38	17	14	24	<5	<10	19	16	15	95
AR172		0.16	8	9	14	<5	<10	15	7	4	88
AR173		0.21	3	3	<5	<5	<10	7	7	4	26
AR174		0.23	9	9	27	<5	<10	9	8	5	40
AR175		0.25	11	10	49	<5	<10	9	9	5	34
AR176		0.12	8	6	35	<5	<10	8	6	3	42
AR177		0.05	10	3	<5	<5	<10	25	4	2	40
AR178		0.34	54	10	114	<5	<10	12	13	4	74
AR179		0.44	16	21	20	<5	<10	14	12	3	101
AR180		0.25	9	7	19	<5	<10	11	7	7	48
AR181		0.36	46	20	12	<5	<10	29	9	27	50
AR182		0.15	19	23	14	<5	<10	17	8	5	37
AR183		0.79	18	17	16	<5	<10	16	61	11	85

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	AuRew1 PPB	AuRew2 PPB	Ag PPM	Pb PPM	Zn PPM	Fe PCT	Ba PPM	Sn PPM	Al PCT	Na PCT
AR184		<5			0.3	45	896	3.67	245	<20	1.90	0.06
AR185		<5			<0.2	11	48	2.67	31	<20	1.09	0.05
AR186		<5			<0.2	10	108	2.99	49	<20	1.28	0.05
AR187		<5			<0.2	21	118	2.77	77	<20	1.42	0.05
AR188		<5			<0.2	6	64	1.98	26	<20	0.74	0.05
AR189		<5			0.3	12	124	3.05	75	<20	1.77	0.05
AR190		6			<0.2	13	84	2.93	75	<20	1.29	0.06
AR191		<5			<0.2	7	38	2.27	38	<20	0.72	0.05
AR192		<5			<0.2	<2	33	0.48	38	<20	0.29	0.06
AR193		<5			<0.2	21	279	2.28	212	<20	1.52	0.07
AR194		<5			<0.2	8	57	2.26	79	<20	1.30	0.07
AR195		<5			0.2	9	60	2.94	56	<20	1.13	0.06
AR196		<5			<0.2	9	69	2.04	64	<20	1.08	0.06
AR197		<5			<0.2	9	89	1.89	36	<20	0.97	0.06
AR198		<5			0.2	9	84	2.21	59	<20	1.26	0.06
AR199		<5			0.2	9	42	1.60	49	<20	0.25	0.05
AR200		7			2.0	37	254	3.04	160	<20	2.70	0.06
AR201		<5			0.2	18	152	2.70	46	<20	2.06	0.06
AR202		<5			<0.2	8	860	2.89	97	<20	1.50	0.06
AR203		<5			0.3	40	530	4.27	159	<20	2.43	0.05
AR204		<5			<0.2	22	121	2.97	485	<20	1.76	0.06
AR205		<5			0.3	10	64	2.67	128	<20	1.55	0.07
AR206		<5			<0.2	12	182	4.37	1034	26	3.10	0.05
AR207		<5			0.2	9	39	2.37	119	<20	1.54	0.07
AR208		<5			<0.2	10	52	1.89	41	<20	0.83	0.05
AR209		<5			<0.2	10	99	2.28	70	<20	1.25	0.06
AR210		<5			<0.2	7	86	2.01	74	<20	1.07	0.05
AR211		<5			<0.2	7	61	1.76	38	<20	0.84	0.06
AR212		<5			<0.2	8	85	2.44	30	<20	1.09	0.06
AR213		6			0.3	14	194	4.50	72	<20	2.27	0.06
AR214		<5			0.3	12	135	2.51	70	<20	1.24	0.06
AR215		<5			0.4	20	347	2.90	179	<20	1.73	0.06
AR216		<5			0.6	26	151	2.22	80	<20	1.73	0.06
AR217		<5			0.4	11	49	2.18	60	<20	1.30	0.08
AR218		<5			0.3	13	78	2.22	54	<20	1.18	0.07
AR219		<5			0.2	11	72	1.70	31	<20	1.05	0.07
AR220		8			0.4	12	51	2.04	33	<20	1.11	0.06
AR221		<5			0.6	20	245	3.88	196	<20	2.73	0.07
AR222		<5			0.5	23	188	3.91	81	<20	2.49	0.07
AR223		<5			0.6	16	124	2.75	84	<20	1.61	0.09

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AR184		1197	0.53	0.06	<5	63	36	23	<1	2.4	5	<20
AR185		103	0.23	0.02	<5	45	16	11	1	<0.2	5	<20
AR186		193	0.25	0.04	<5	43	19	11	2	<0.2	<5	<20
AR187		716	0.44	0.07	<5	48	23	17	2	<0.2	<5	<20
AR188		112	0.17	0.04	<5	31	13	6	1	0.2	<5	<20
AR189		1084	0.65	0.07	<5	47	25	17	2	1.0	6	<20
AR190		338	0.30	0.06	<5	49	24	13	<1	1.1	5	<20
AR191		153	0.15	0.04	<5	42	16	7	<1	<0.2	<5	<20
AR192		64	0.11	0.02	<5	13	6	2	<1	<0.2	<5	<20
AR193		2726	0.56	0.10	<5	35	26	19	6	2.1	5	<20
AR194		171	0.34	0.04	<5	35	20	11	2	0.9	<5	<20
AR195		138	0.26	0.05	<5	45	21	12	1	<0.2	<5	<20
AR196		268	0.30	0.05	<5	35	17	10	<1	0.4	5	<20
AR197		420	0.22	0.05	<5	30	16	8	<1	<0.2	<5	<20
AR198		265	0.30	0.04	<5	41	19	14	1	0.8	<5	<20
AR199		163	0.03	0.03	<5	24	13	8	<1	1.0	<5	<20
AR200		2550	0.79	0.05	<5	47	40	26	4	1.2	8	<20
AR201		429	1.49	0.04	<5	162	34	27	10	0.3	7	<20
AR202		722	0.73	0.04	<5	70	27	18	4	1.1	5	<20
AR203		1652	1.61	0.08	<5	85	46	41	2	<0.2	6	<20
AR204		5512	0.50	0.06	<5	47	37	24	13	0.5	6	<20
AR205		227	0.50	0.08	<5	53	32	16	2	<0.2	5	<20
AR206		2523	2.17	0.94	6	106	51	53	1	1.1	8	<20
AR207		231	0.31	0.07	<5	36	23	14	1	<0.2	<5	<20
AR208		278	0.16	0.04	<5	34	15	8	<1	<0.2	<5	<20
AR209		512	0.31	0.06	<5	36	19	11	1	1.1	<5	<20
AR210		1456	0.41	0.06	<5	33	18	12	<1	<0.2	<5	<20
AR211		310	0.18	0.03	<5	31	14	8	<1	0.7	<5	<20
AR212		209	0.27	0.04	<5	41	18	13	<1	<0.2	<5	<20
AR213		776	0.65	0.07	<5	53	33	24	5	0.4	6	<20
AR214		479	0.44	0.07	<5	56	18	14	3	0.3	6	<20
AR215		976	0.69	0.08	<5	62	30	25	2	0.7	<5	<20
AR216		724	0.57	0.03	<5	140	24	20	10	0.5	<5	<20
AR217		188	0.36	0.07	<5	38	21	12	<1	0.7	<5	<20
AR218		531	0.34	0.06	<5	38	20	10	<1	0.7	<5	<20
AR219		235	0.21	0.05	<5	29	15	9	<1	0.3	<5	<20
AR220		174	0.16	0.03	<5	39	16	8	<1	0.5	<5	<20
AR221		1351	2.09	0.13	<5	59	47	41	1	0.7	<5	<20
AR222		289	2.24	0.10	<5	84	38	51	4	1.0	<5	<20
AR223		942	1.28	0.08	<5	165	35	18	7	1.6	<5	<20

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Geochemical Lab Report

Inchcape Testing Services

DATE PRINTED: 16-NOV-93

REPORT: 093-42557.0 (COMPLETE) PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ca PCT	Cu PPM	Co PPM	As PPM	Bi PPM	Te PPM	La PPM	Sr PPM	Y PPM	Hg PPB
AR184		0.65	12	15	22	<5	<10	14	55	10	53
AR185		0.27	5	6	49	<5	<10	8	11	4	37
AR186		0.27	5	7	19	<5	<10	9	9	5	34
AR187		0.22	16	12	32	<5	<10	15	7	7	50
AR188		0.21	4	4	<5	<5	<10	7	7	4	21
AR189		0.33	11	13	29	<5	<10	11	11	6	45
AR190		0.24	6	7	17	<5	<10	12	8	6	32
AR191		0.18	3	5	<5	<5	<10	7	6	3	21
AR192		0.58	2	1	<5	<5	<10	16	12	10	32
AR193		1.65	25	11	18	<5	<10	34	30	27	133
AR194		0.63	7	8	15	<5	<10	15	15	11	37
AR195		0.45	7	7	12	<5	<10	10	11	7	29
AR196		0.37	7	7	8	<5	<10	11	11	7	24
AR197		0.25	5	6	<5	<5	<10	9	6	6	26
AR198		0.27	17	9	13	<5	<10	16	8	10	45
AR199		0.10	24	3	<5	<5	<10	21	5	3	48
AR200		1.04	47	14	43	<5	<10	54	20	49	239
AR201		0.22	21	12	13	<5	<10	12	7	8	45
AR202		0.48	3	13	8	<5	<10	10	11	7	42
AR203		0.15	25	35	42	<5	<10	21	8	5	34
AR204		0.89	26	23	22	<5	<10	34	20	23	109
AR205		0.82	6	8	20	<5	<10	42	19	24	85
AR206		0.34	30	34	36	<5	<10	13	19	3	26
AR207		0.61	10	8	21	<5	<10	17	14	12	45
AR208		0.21	5	5	12	<5	<10	8	6	4	29
AR209		0.19	7	7	6	<5	<10	12	7	6	26
AR210		0.29	5	8	14	<5	<10	12	9	8	24
AR211		0.14	5	5	<5	<5	<10	9	5	4	24
AR212		0.14	13	9	45	<5	<10	10	4	5	24
AR213		0.55	23	12	50	<5	<10	12	21	6	66
AR214		0.22	8	6	12	<5	<10	9	8	5	24
AR215		0.23	9	11	15	<5	<10	10	10	6	33
AR216		0.69	10	9	14	<5	<10	10	13	6	68
AR217		0.30	6	8	9	<5	<10	9	11	7	25
AR218		0.23	6	8	14	<5	<10	11	7	7	25
AR219		0.19	4	6	8	<5	<10	6	8	5	25
AR220		0.18	4	5	12	<5	<10	7	7	4	30
AR221		0.34	24	15	14	<5	<10	19	14	7	36
AR222		0.28	33	18	18	<5	<10	11	9	5	19
AR223		1.05	15	13	31	<5	<10	20	22	18	79

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	AuRew1 PPB	AuRew2 PPB	Ag PPM	Pb PPM	Zn PPM	Fe PCT	Ba PPM	Sn PPM	Al PCT	Na PCT
AR224		7			<0.2	53	327	4.62	663	<20	2.61	0.06
AR225		6			0.6	20	264	3.91	243	<20	2.48	0.06
AR226		<5			0.5	34	299	4.61	170	<20	2.01	0.06
AR227		<5			0.4	22	241	2.89	109	<20	1.67	0.07
AR228		<5			0.3	20	230	3.70	138	<20	2.90	0.08
AR229		9			0.7	13	114	2.64	174	<20	1.83	0.08
AR230		9			0.7	102	680	4.79	108	<20	2.42	0.07
AR231		9			0.5	25	205	3.35	107	<20	1.86	0.07
AR232		<5			0.6	20	118	3.43	49	<20	1.75	0.07
AR233		131	67	220	0.5	9	27	1.33	38	<20	0.47	0.05

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SAMPLE NUMBER	ELEMENT UNITS	Mn PPM	Mg PCT	K PCT	Sc PPM	V PPM	Cr PPM	Ni PPM	Mo PPM	Cd PPM	Sb PPM	W PPM
AR224		>20000	2.58	0.08	<5	34	36	35	3	2.5	10	<20
AR225		1002	0.93	0.12	<5	76	36	31	<1	0.9	<5	<20
AR226		1471	0.64	0.06	<5	60	31	50	<1	1.7	<5	<20
AR227		889	0.50	0.06	<5	51	24	16	<1	0.9	<5	<20
AR228		568	1.03	0.13	<5	100	30	26	<1	0.4	<5	<20
AR229		676	0.54	0.07	<5	48	27	20	1	0.4	<5	<20
AR230		827	3.11	0.25	6	161	41	68	29	1.5	<5	<20
AR231		2160	0.64	0.07	<5	61	27	20	2	1.3	<5	<20
AR232		713	0.47	0.06	<5	55	24	15	1	0.3	<5	<20
AR233		149	0.05	0.06	<5	22	13	4	<1	0.7	<5	<20

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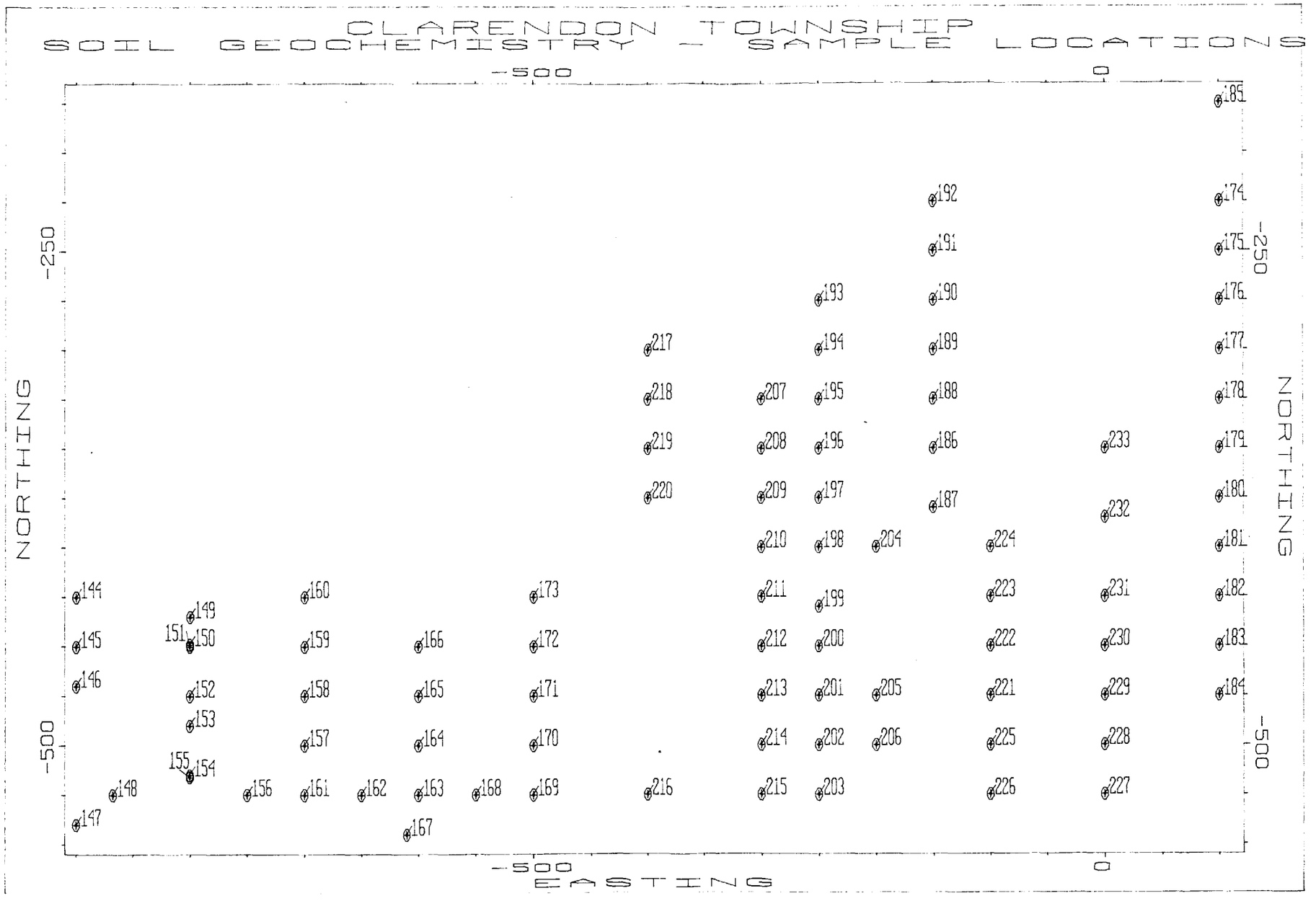
SAMPLE NUMBER	ELEMENT UNITS	Ca PCT	Cu PPM	Co PPM	As PPM	Bi PPM	Te PPM	La PPM	Sr PPM	Y PPM	Hg PPB
AR224		1.59	26	28	25	<5	<10	25	27	23	140
AR225		0.32	10	19	21	<5	<10	13	17	5	49
AR226		0.60	14	21	18	<5	<10	24	50	22	63
AR227		0.40	9	10	18	<5	<10	11	23	7	41
AR228		0.33	17	19	207	<5	<10	15	15	9	52
AR229		0.57	9	11	18	<5	<10	21	18	14	77
AR230		0.44	56	21	12	<5	<10	67	10	33	52
AR231		0.44	14	13	27	<5	<10	12	14	8	46
AR232		0.18	13	10	37	<5	<10	8	6	4	55
AR233		0.13	12	5	8	<5	<10	16	6	2	22

GEOCHEMICAL SOIL SURVEY
SELECTED FOLLOW-UP SURVEY
ARDOCH SOUTH (SWAUGERT LAKE SOUTH)

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	AuRew1 PPB	Ag PPM	Pb PPM	Zn PPM	Fe PCT	Ba PPM	Sn PPM	Al PCT	Na PCT	Mn PPM	Mg PCT
AR147-1		<5		0.5	54	4569	4.05	309	<20	2.75	0.02	894	2.07
AR147-2		<5		0.4	25	300	4.06	606	<20	3.38	0.02	607	2.22
AR147-3		<5		0.3	25	284	4.17	414	<20	2.72	0.02	634	1.91
AR165-1		<5		0.4	135	814	4.84	216	<20	2.50	0.02	1812	2.53
AR165-2		<5		0.3	43	427	7.12	555	<20	2.14	0.02	9468	2.23
AR1671		<5		<0.2	29	487	3.32	145	<20	1.74	0.02	925	0.72
AR1672		<5		<0.2	11	896	2.64	153	<20	1.38	0.02	438	0.48
AR174-1		29	22	0.2	29	79	2.49	74	<20	2.65	0.03	303	1.25
AR174-2		43	42	0.3	29	50	3.99	54	<20	3.18	0.05	348	1.34
AR233-1		256	383	0.4	32	99	2.11	104	<20	0.91	0.02	2766	0.37
AR233-2		20	23	0.3	25	67	2.21	79	<20	0.74	0.02	2440	0.12
AR233-3		<5		<0.2	34	95	2.57	44	<20	1.32	0.02	693	0.81

SAMPLE NUMBER	ELEMENT UNITS	K PCT	Sc PPM	V PPM	Cr PPM	Ni PPM	Mo PPM	Cd PPM	Sb PPM	W PPM	Ca PCT	Cu PPM	Co PPM
AR147-1		0.58	7	95	58	66	6	2.7	<5	<20	0.53	16	29
AR147-2		0.80	7	102	59	54	5	<0.2	<5	<20	0.23	21	25
AR147-3		0.51	5	95	54	45	5	0.4	<5	<20	0.30	22	20
AR165-1		0.14	<5	80	56	28	8	0.3	<5	<20	0.27	16	11
AR165-2		0.05	<5	36	46	29	7	1.1	<5	<20	0.82	13	11
AR1671		0.09	<5	55	35	31	4	0.3	<5	<20	0.42	18	14
AR1672		0.06	<5	43	30	31	2	0.9	<5	<20	0.26	8	10
AR174-1		0.04	<5	27	17	15	5	<0.2	<5	<20	0.72	31	9
AR174-2		0.03	<5	47	29	21	7	0.6	<5	<20	0.71	81	17
AR233-1		0.07	<5	30	23	12	3	1.2	<5	<20	0.20	6	26
AR233-2		0.06	<5	32	17	8	3	0.5	<5	<20	0.24	13	52
AR233-3		0.05	<5	33	26	28	3	0.5	<5	<20	0.28	12	25

SAMPLE NUMBER	ELEMENT UNITS	As PPM	Bi PPM	Te PPM	La PPM	Sr PPM	Y PPM	Hg PPB
AR147-1		<5	<5	<10	23	25	9	56
AR147-2		9	<5	<10	12	13	3	41
AR147-3		<5	<5	11	9	17	3	26
AR165-1		8	<5	11	15	11	5	43
AR165-2		17	<5	<10	49	16	35	94
AR1671		12	<5	<10	10	21	5	38
AR1672		9	<5	<10	9	13	5	20
AR174-1		20	<5	<10	10	17	4	84
AR174-2		29	<5	10	20	17	12	112
AR233-1		<5	<5	<10	15	7	3	84
AR233-2		<5	<5	<10	11	9	2	64
AR233-3		<5	<5	<10	13	9	5	72


CLARENDON TOWNSHIP
SOIL GEOCHEMISTRY - SAMPLE LOCATIONS
-500
0
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-500
NORTHING
EASTING
144
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146
147
148
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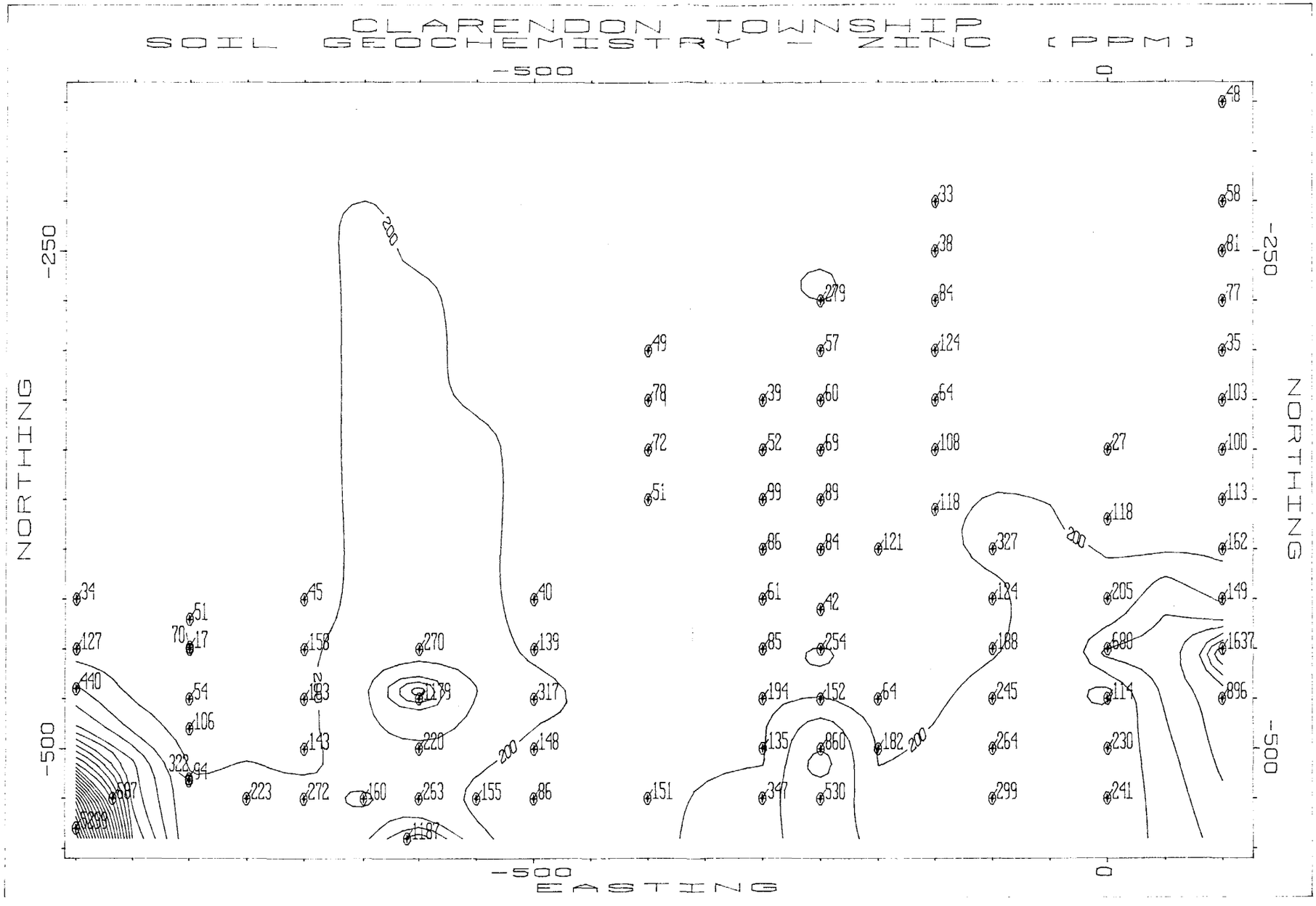
CLARENDON TOWNSHIP
SOIL GEOCHEMISTRY - ZINC (PPM)
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0
-250
NORTHING
EASTING
200
48
58
81
77
35
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100
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896
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270
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127
440
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179
317
106
143
220
148
322
94
223
272
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263
155
86
687
1187

CLARENDON TOWNSHIP
SOIL GEOCHEMISTRY - GOLD (PPB)

APPENDIX -4-

KALADAR PROJECT

GEOCHEMICAL RECORDS

- Sample description
- Analytical results (geochemistry)
- Contour maps (for selected elements)

OPAP 93-446
W.BRACK
GEOCHEMICAL SAMPLE DESCRIPTION
KALADAR PROJECT

SA	LINE	E/W	LOC.	N/S	DEPTH	COLOUR	COMPOSITION	HUM	REMARK
9301	7+00	E	3+00	S	10	BRW	SAND/ORG	D	SLOPE
9302	7+00	E	3+12	S	10	BRW	SAND/ORG	D	SLOPE
9303	7+00	E	3+25	S	10	BRW/BLK	ORG/SAND	D	EDGE OF SLOPE
9304	7+00	E	3+37	S	10	BRW/BLK	ORG/CLAY	M	FLAT
9305	7+00	E	3+50	S	10	BRW/BLK	ORG	D	SLOPE
9306	7+00	E	3+62	S	5	BLK	ORG	D	FLAT
9307	7+00	E	3+75	S	7	BLK	ORG	D	RIDGE
9308	7+00	E	3+87	S	10	BLK	ORG	D	STEEP SLOPE
9309	7+00	E	4+00	S	15	BLK	ORG	D	EDGE OF SLOPE
9310	6+87	E	3+25	S	10	BLK	ORG/SAND	D	SLOPE
9311	6+75	E	3+25	S	10	RED BRW	ORG/SAND	D	FLAT
9312	6+62	E	3+25	S	10	RED BRW	SAND	D	SLOPE
9313	6+50	E	3+25	S	10	RED BRW	ORG/SAND	M	FLAT
9314	6+37	E	3+25	S	10	BRW	SAND/ORG	D	FLAT
9315	6+25	E	3+25	S	10	BLK	ORG/SAND	M	FLAT
9316	6+12	E	3+25	S	10	BLK	ORG/SAND	M	FLAT
9317	6+00	E	3+25	S	5	BRW	ORG/SAND	D	FLAT
9318	6+50	E	3+12	S	10	RED BRW	ORG/SAND	D	FLAT
9319	6+50	E	3+00	S	10	BRW	ORG	D	FLAT
9320	6+50	E	2+87	S	10	BRW	ORG/SAND	D	SLOPE
9321	6+50	E	2+75	S	10	BRW	ORG	D	EDGE OF SLOPE
9322	6+50	E	3+37	S	10	RED BRW	ORG	D	EDGE OF SLOPE
9323	6+50	E	3+50	S	10	BRW	ORG/SAND	D	EDGE OF SLOPE
9324	6+50	E	3+62	S	10	BRW	ORG/SAND	D	SLOPE
9325	6+50	E	3+75	S	10	BRW	ORG/SAND	D	FLAT
9326	6+50	E	3+87	S	15	BRW	ORG/SAND	D	SLOPE
9327	6+00	E	4+00	S	10	BRW	ORG/SAND	D	SLOPE
9328	6+00	E	3+12	S	10	BRW	ORG	D	FLAT
9329	6+00	E	3+00	S	20	BRW	ORG	D	FLAT
9330	6+00	E	2+87	S	15	BRW	ORG	D	SLOPE
9331	6+00	E	2+75	S	15	BRW	ORG	D	EDGE OF SWAMP
9332	6+00	E	3+37	S	10	BRW	ORG/SAND	D	RIDGE
9333	6+00	E	3+50	S	15	BRW	ORG/SAND	D	FLAT
9334	6+00	E	3+62	S	15	BLK/BRW	ORG/SAND	D	FLAT
9335	6+00	E	3+75	S	25	BRW	ORG/SAND	D	FLAT
9336	6+00	E	3+87	S	25	BRW	ORG/SAND	D	SLOPE
9337	6+00	E	4+00	S	15	BRW	ORG/SAND	D	SLOPE

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	AuRew1 PPB	AuRew2 PPB	Ag PPM	Pb PPM	Zn PPM	Fe PCT	Ba PPM	Sn PPM	Al PCT	Na PCT
9301		15			0.4	50	397	3.76	105	<20	2.10	0.06
9302		7			0.4	44	130	1.66	76	<20	0.66	0.06
9303		<5			0.5	62	407	3.12	123	<20	1.56	0.07
9304		19			0.4	34	393	3.38	225	<20	1.31	0.09
9305		<5			0.2	64	1453	5.09	1142	23	2.61	0.07
9306		6			<0.2	50	1442	4.40	1127	23	2.29	0.07
9307		7			0.5	79	696	3.12	397	<20	2.34	0.07
9308		<5			0.4	44	519	4.27	263	<20	2.40	0.08
9309		17			0.4	43	467	2.37	247	<20	1.78	0.08
9310		10			0.6	46	476	3.19	199	<20	1.54	0.05
9311		7			0.6	58	307	2.61	120	<20	0.92	0.06
9312		<5			0.8	122	505	6.70	164	<20	2.77	0.06
9313		8			1.0	148	228	7.14	128	<20	1.14	0.06
9314		7			0.5	33	295	3.14	78	<20	1.53	0.06
9315		<5			0.5	35	138	2.00	66	<20	0.68	0.06
9316		<5			0.3	29	210	2.83	85	<20	1.27	0.07
9317		7			0.5	20	311	3.08	99	<20	1.50	0.05
9318		12			1.4	94	308	6.26	105	<20	1.00	0.02
9319		<5			0.7	166	620	4.44	192	<20	2.45	0.02
9320		8			0.9	52	263	4.03	78	<20	1.74	0.02
9321		6			0.4	82	112	1.16	154	<20	0.41	0.04
9322		5			0.3	61	406	2.84	230	<20	1.42	0.03
9323		9			2.8	102	733	4.74	396	<20	1.89	0.04
9324		<5			<0.2	26	323	3.11	204	<20	1.56	0.03
9325		<5			0.4	21	218	2.91	102	<20	1.36	0.03
9326		<5			0.3	30	336	4.47	224	<20	2.06	0.03
9327		<5			0.6	25	133	3.36	122	<20	0.81	0.03
9328		<5			1.0	74	145	1.96	180	<20	0.42	0.03
9329		<5			0.6	111	475	2.30	260	<20	1.20	0.04
9330		<5			0.8	55	232	3.60	85	<20	1.25	0.03
9331		<5			0.3	69	131	0.88	156	<20	0.62	0.03
9332		8			0.2	23	229	2.38	78	<20	1.30	0.03
9333		9			<0.2	22	226	2.70	116	<20	1.35	0.03
9334		6			0.2	28	218	2.75	147	<20	1.41	0.03
9335		<5			<0.2	78	1021	5.31	649	<20	2.95	0.03
9336		<5			0.5	28	215	3.73	128	<20	1.79	0.03
9337		<5			0.4	26	219	3.51	184	<20	1.68	0.03

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Geochemical Lab Report

Inchcape Testing Services

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DATE PRINTED: 3-DEC-93

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Mn PPM	Mg PCT	K PCT	Sc PPM	V PPM	Cr PPM	Ni PPM	Mo PPM	Cd PPM	Sb PPM	W PPM
9301		173	0.98	0.11	<5	60	37	25	<1	1.0	<5	<20
9302		433	0.19	0.06	<5	30	13	8	<1	1.2	<5	<20
9303		2096	0.61	0.08	<5	56	26	22	<1	1.8	<5	<20
9304		4072	0.16	0.06	<5	32	19	42	2	2.5	<5	<20
9305		>20000	2.52	0.22	<5	44	34	53	<1	12.9	7	<20
9306		>20000	2.97	0.20	<5	31	29	35	<1	6.7	7	<20
9307		5772	2.46	0.10	<5	31	23	20	<1	4.1	<5	<20
9308		5607	2.11	0.20	<5	45	28	22	<1	3.0	<5	<20
9309		925	2.35	0.09	<5	29	14	12	<1	3.7	5	<20
9310		3268	0.53	0.09	<5	60	34	18	<1	3.4	<5	<20
9311		743	0.34	0.07	<5	44	15	11	1	1.2	<5	<20
9312		1250	1.46	0.11	10	162	50	16	8	1.6	<5	<20
9313		592	0.41	0.11	<5	111	26	11	5	1.9	<5	<20
9314		1018	0.51	0.07	<5	42	19	14	1	<0.2	<5	<20
9315		283	0.14	0.05	<5	33	10	7	1	1.7	<5	<20
9316		654	0.39	0.06	<5	37	16	10	<1	1.0	<5	<20
9317		1286	0.46	0.07	<5	39	19	15	<1	1.1	<5	<20
9318		759	0.18	0.05	<5	74	23	13	5	1.8	<5	<20
9319		1281	1.25	0.09	5	93	47	20	3	2.1	10	<20
9320		244	0.64	0.08	<5	41	17	10	4	0.7	7	<20
9321		197	0.14	0.04	<5	16	8	8	2	1.8	<5	<20
9322		4902	0.46	0.05	<5	35	22	15	1	1.9	7	<20
9323		11889	2.98	0.16	<5	35	30	33	1	6.6	13	<20
9324		2748	0.64	0.05	<5	37	22	14	<1	0.3	7	<20
9325		995	0.47	0.05	<5	38	20	12	<1	<0.2	6	<20
9326		4338	0.96	0.07	<5	43	28	17	2	0.5	9	<20
9327		1312	0.15	0.07	<5	52	15	9	<1	0.7	<5	<20
9328		169	0.10	0.05	<5	29	8	7	2	1.1	<5	<20
9329		1912	0.39	0.08	<5	49	40	23	2	4.0	<5	<20
9330		926	0.32	0.09	<5	40	17	10	2	0.7	<5	<20
9331		96	0.31	0.05	<5	9	9	7	2	1.6	6	<20
9332		457	0.61	0.04	<5	34	24	11	3	<0.2	<5	<20
9333		917	0.46	0.04	<5	34	19	12	<1	<0.2	5	<20
9334		1459	0.44	0.05	<5	34	20	11	2	0.2	5	<20
9335		17136	1.34	0.07	<5	49	37	22	<1	5.9	13	<20
9336		1125	0.63	0.06	<5	48	26	16	1	0.3	7	<20
9337		2426	0.62	0.07	<5	43	25	14	<1	0.2	7	<20

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Geochemical Lab Report

Inchcape Testing Services

REPORT: 093-42623.0 (PARTIAL)

DATE PRINTED: 3-DEC-93

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ca PCT	Cu PPM	Co PPM	As PPM	Bi PPM	Te PPM	La PPM	Sr PPM	Y PPM	Hg PPM
9301		0.38	28	18	19	<5	<10	6	11	3	44
9302		0.16	7	6	15	<5	<10	6	7	2	38
9303		0.18	19	18	16	<5	<10	9	7	4	38
9304		0.43	44	38	7	<5	<10	5	12	2	52
9305		4.04	448	47	29	<5	<10	66	33	67	118
9306		4.91	35	22	17	<5	<10	43	36	53	216
9307		1.51	18	17	17	<5	<10	18	16	16	104
9308		2.20	27	19	14	<5	<10	35	18	38	123
9309		2.78	23	8	10	<5	<10	8	22	7	99
9310		0.33	19	19	14	<5	<10	7	10	3	66
9311		0.33	8	9	8	<5	<10	5	10	2	46
9312		0.19	25	7	15	<5	<10	9	17	2	60
9313		0.15	21	9	18	<5	<10	7	9	3	52
9314		0.20	11	12	11	<5	<10	6	7	3	36
9315		0.15	10	5	7	<5	<10	5	5	2	49
9316		0.24	10	10	10	<5	<10	5	7	3	38
9317		0.19	16	13	14	<5	<10	7	7	4	36
9318		0.28	68	5	25	<5	<10	6	10	2	87
9319		0.31	21	13	168	<5	<10	6	16	5	65
9320		0.14	39	6	20	<5	<10	6	6	3	65
9321		1.35	14	2	6	<5	<10	3	102	5	152
9322		0.62	11	14	16	<5	<10	7	12	7	84
9323		6.63	38	22	29	<5	<10	25	46	61	344
9324		0.40	11	13	16	<5	<10	6	8	6	46
9325		0.26	11	11	9	<5	<10	6	5	6	32
9326		0.41	17	16	22	<5	<10	9	9	11	54
9327		0.28	12	11	9	<5	<10	5	8	4	60
9328		0.61	13	3	14	<5	<10	4	23	2	168
9329		0.75	31	13	139	<5	<10	4	24	3	117
9330		0.28	21	6	20	<5	<10	5	13	3	79
9331		1.93	10	<1	8	<5	<10	3	140	3	130
9332		0.39	6	9	17	<5	<10	5	7	5	31
9333		0.28	7	9	14	<5	<10	5	6	5	
9334		0.35	10	11	19	<5	<10	6	7	5	
9335		0.72	34	20	25	<5	<10	18	14	29	
9336		0.33	14	14	25	<5	<10	7	9	6	
9337		0.28	12	14	18	<5	<10	7	9	6	

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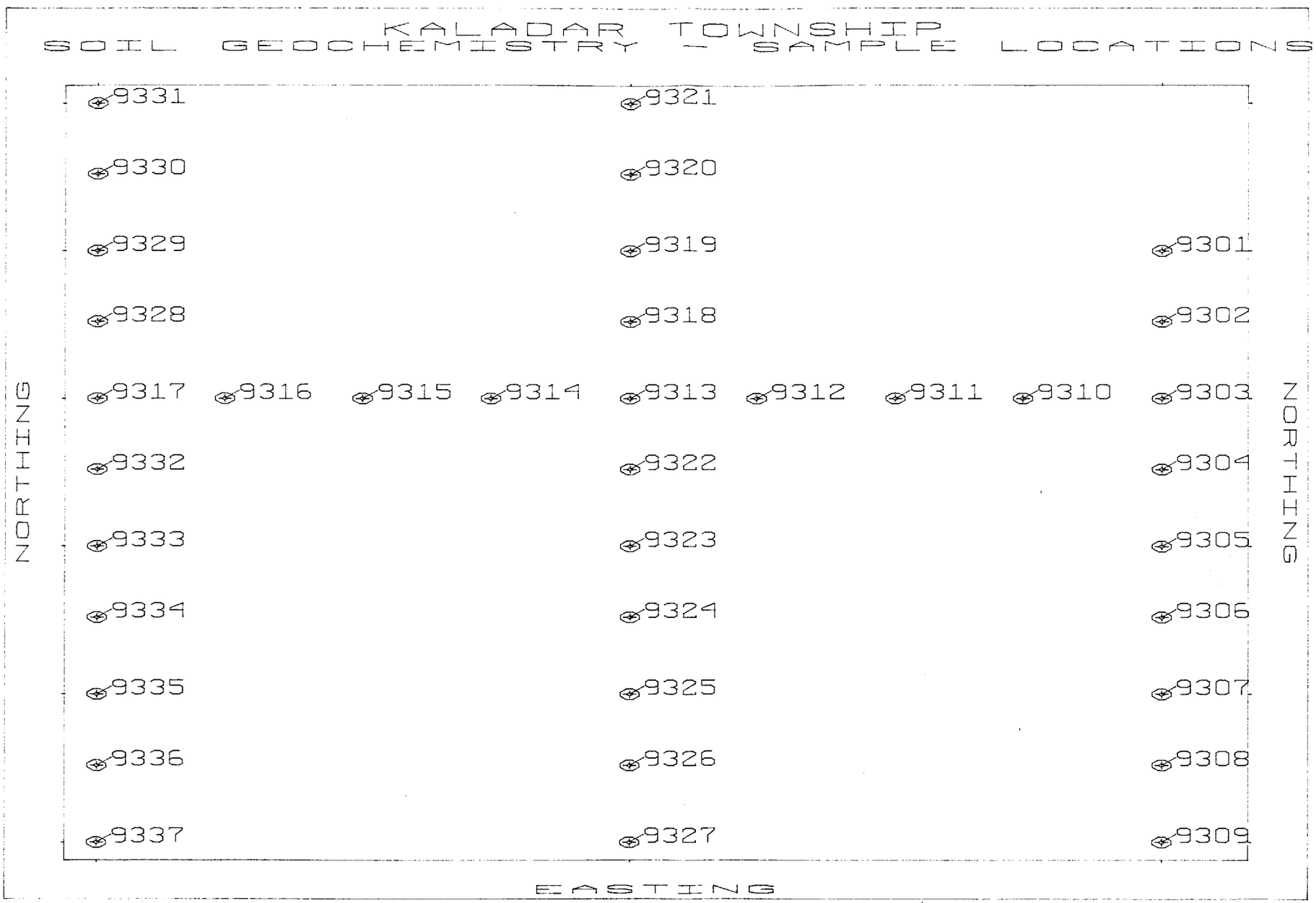
KALADAR TOWNSHIP
SOIL GEOCHEMISTRY - SAMPLE LOCATIONS
9331
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9301
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9302
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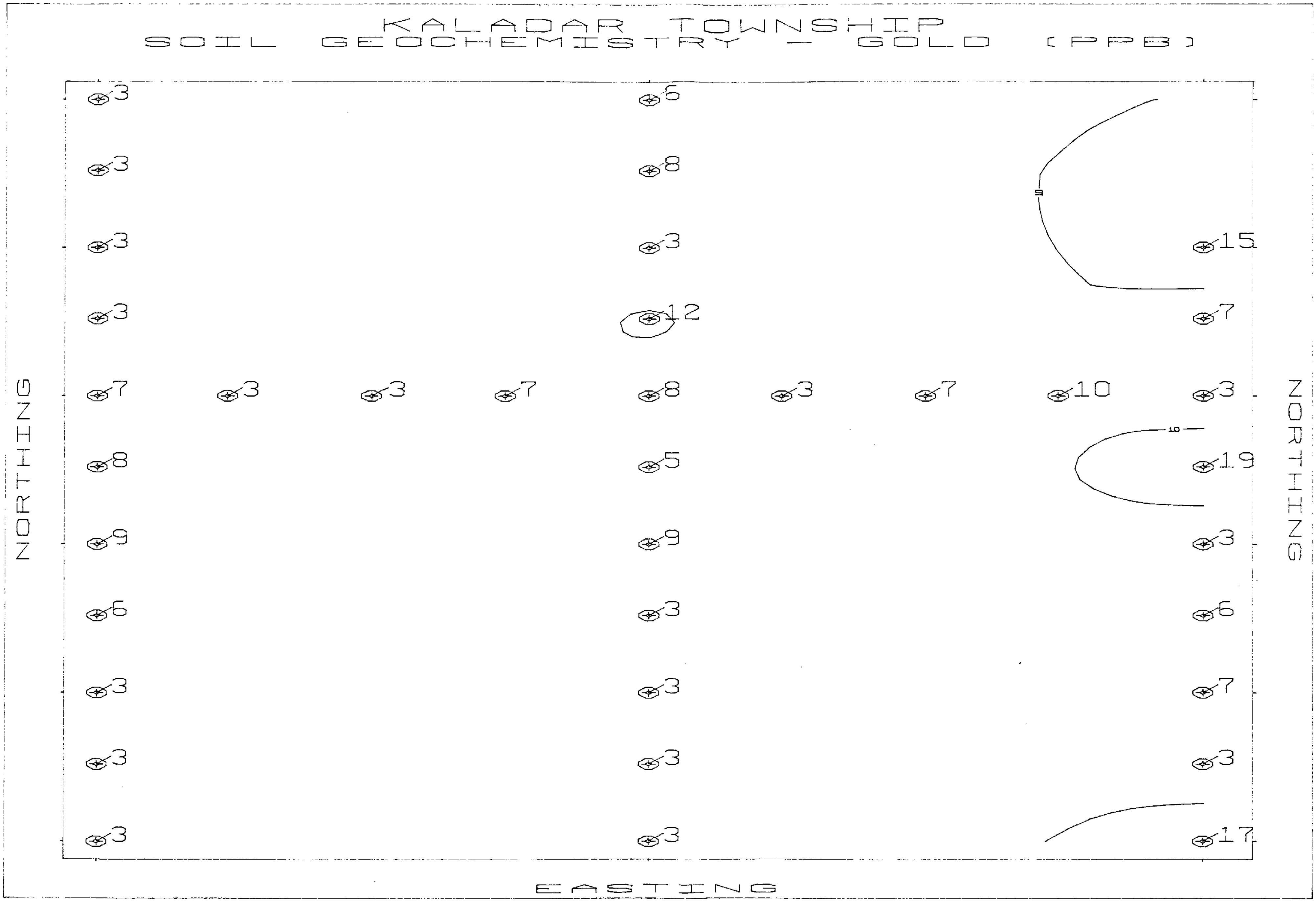
NORTHING
NORTHING
EASTING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SOIL GEOCHEMISTRY - GOLD (PPB)
NORTHING
EASTING
NORTHING
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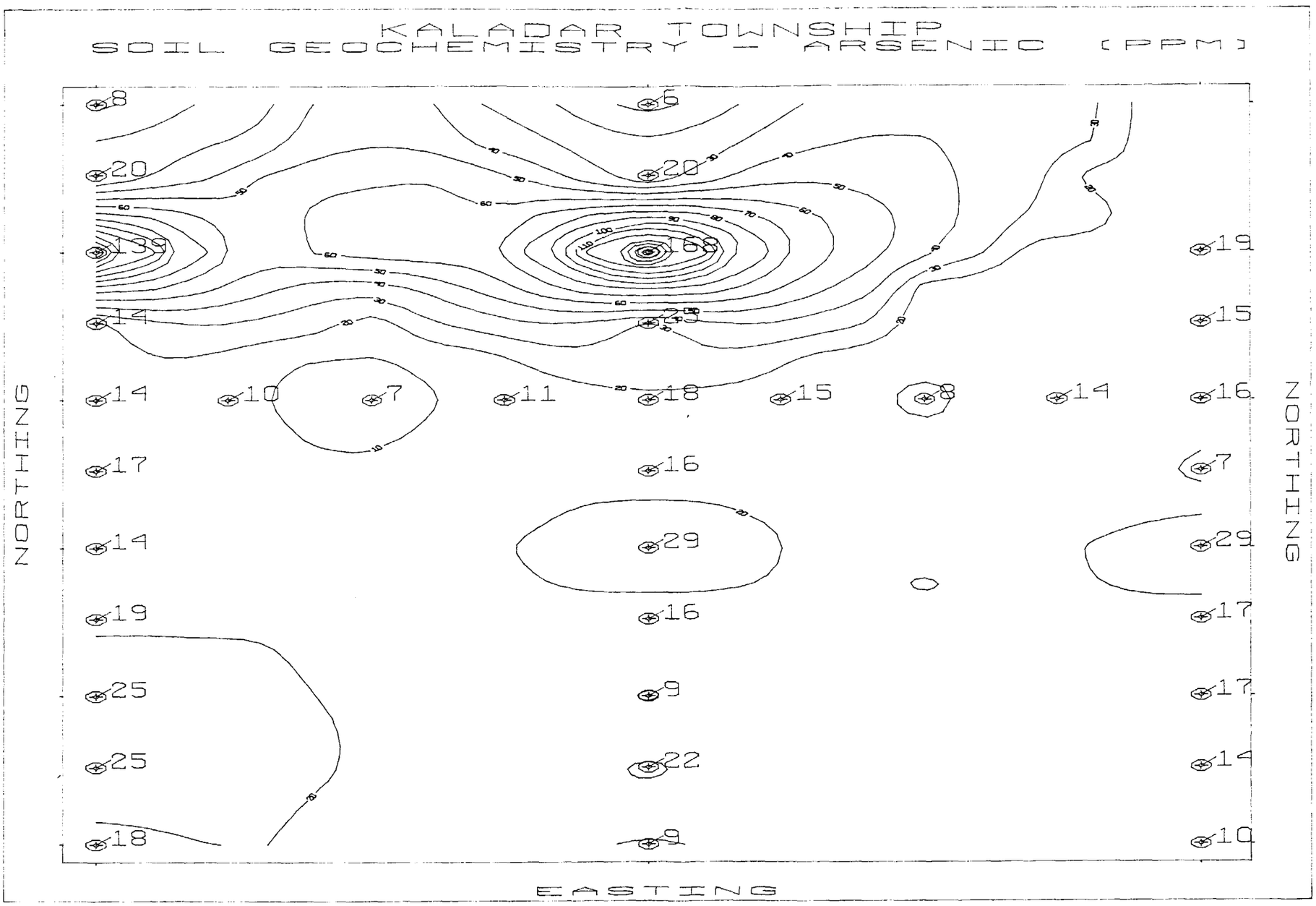
KALADAR TOWNSHIP
SOIL GEOCHEMISTRY — ARSENIC (PPM)
NORTHING
NORTHING
EASTING
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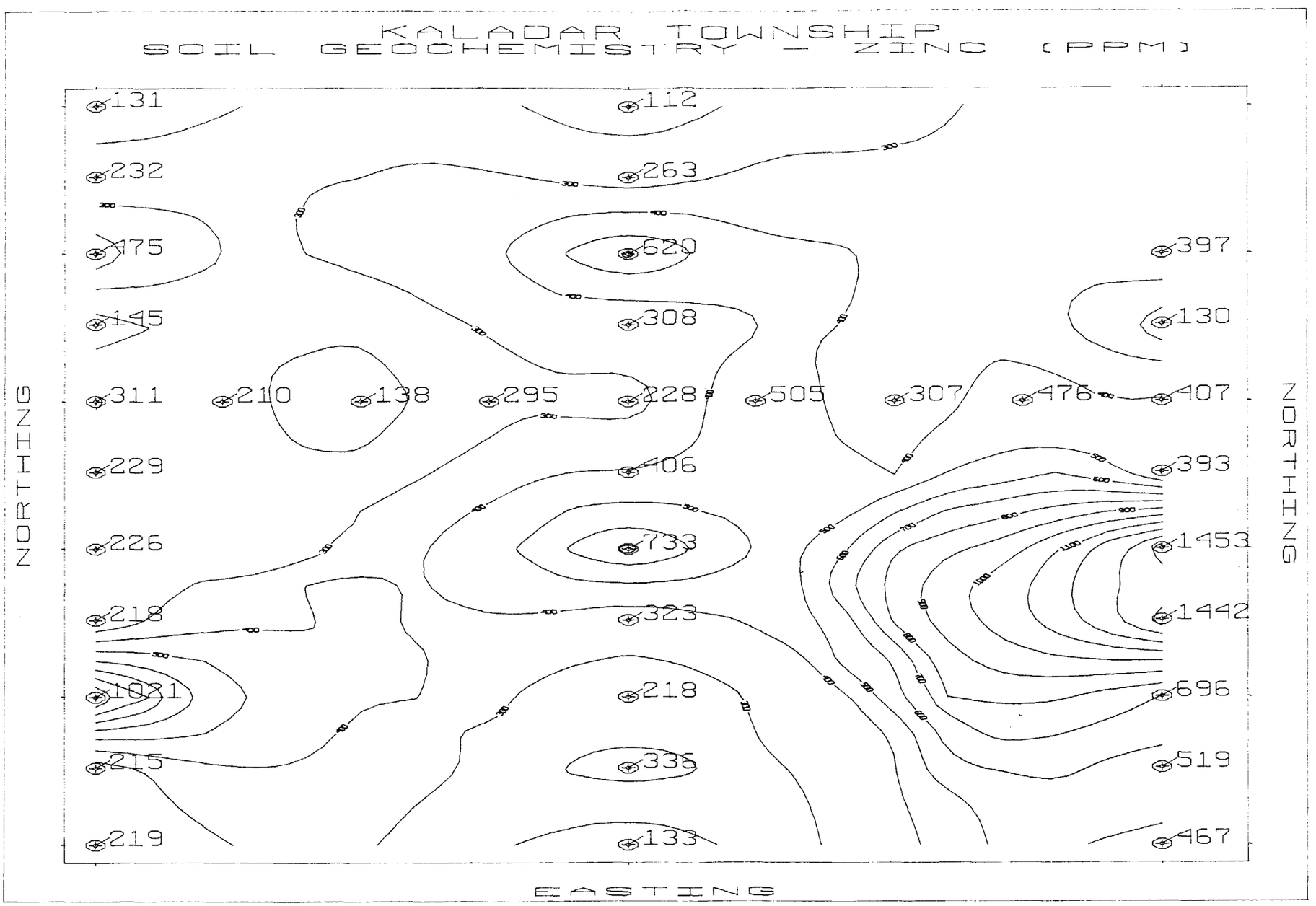
KALADAR TOWNSHIP
SOIL GEOCHEMISTRY - ZINC (PPM)



APPENDIX -5-

ROCK SAMPLES
(FOR ALL SUB-PROJECTS)

GEOCHEMICAL RECORDS

- Sample description
- Analytical results (geochemistry)

OPAP 93-446
W.BRACK

SAMPLE DESCRIPTION

SAMPLE	TWP	LOCATION		DESCRIPTION
53451	GRT	4964000mN	306450mE	RUSTY SLATE,TR.OF SULPHIDE MIN.
53452	GRT	4965110mN	304300mE	QUARTZITE, TR. OF SULPHIDE MIN.
53453	GRT	4964240mN	304005mE	TWO RUSTY BOULDERS
53454	GRT	4967050mN	304000mE	SHEARED QUARTZITIC SHALE, SULPHID
53455	GRT	4962190mN	308120mE	RUSTY FELSIC VOLC., SULPHIDE IMPR
53456	GRT	4962470mN	307740mE	QTZ. VEINLET WITHIN VOLC.FLOW
53457	GRT	4962470mN	307740mE	RUSTY VOLC. FLOW
53458	GRT	4963130mN	306850mE	QTZ. FLOAT (ACROSS ROAD)
53459	GRT	4964000mN	305480mE	RUSTY META-SEDIMENT, SULPHIDE MIN
53460	GRT	4964300mN	305490mE	RUSTY GOSSAN ZONE, SULPHIDE MIN.
53461	GRT	4964370mN	304490mE	RUSTY BOULDERS, COMPOSITE SAMPLE
53462	GRT	4963290mN	306400mE	RUSTY SHALE, BOULDERS, COMPOSITE
53463	GRT	4966200mN	304002mE	RUSTY META-SEDIMENT, SULPHIDE MIN
53464	GRT	4966400mN	304000mE	RUSTY VOLC.(?), TR. OF SULPHIDE M
53465	GRT	4965900mN	304400mE	RUSTY META-VOLCANIC ROCK
53466	GRT	4964150mN	305460mE	META-SEDIMENT, SULPHIDE IMPREG.,G
53467	GRT	4964150mN	305460mE	META-SEDIMENT, SULPHIDE IMPREG.,G
53468	GRT	4964150mN	305460mE	META-SEDIMENT, SULPHIDE IMPREG.,G
53469	KAL	7+00N	3+25E	ALTERED MICA-SCHIST
53470	KAL	7+00N	3+25E	QUARTZ-MICA SCHIST
53471	ARD	11+45E	0+90N	GNEISS,RUSTY, SULPHIDE
53472	ARD	11+40E	1+00N	GNEISS, SILICIOUS, RUSTY
53473	ARD	11+65E	1+25N	QUARTZ BOULDER, RUSTY
53474	ARD	11+45E	0+90N	QUARTZ BOULDER, RUSTY
53475	ARD	11+90E	1+75N	GNEISS, SEMI-MASSIVE SULPHIDE MIN
53476	ARD	12+00E	1+75N	CALC-SILICATE ROCK, TR.OF SULPHID
53477	ARD	0+50E	5+25S	GNEISS, SULPHIDE IMPREGNATION
53478	ARD	0+00E	1+00W	GNEISS, SULPHIDE IMPREGNATION
53479	KAL	7+00E	3+30S	CALC-SILICATE ROCK, RUSTY
53480	KAL	7+00E	3+55S	MARBLE
53481	KAL	7+00E	3+75S	MARBLE
53482	KAL	7+00E	3+85S	MARBLE
53483	KAL-1	7+00E	3+23S	QUARTZ-HORNBLENDE-MICA GNEISS
53484	KAL-2	7+00E	3+30S	RUSTY SHEAR ZONE MATERIAL
53485	KAL-3	7+00E	3+32S	SULPHIDE MINERALIZED HORNBLENDE G
53486	KAL-4	6+96E	3+42S	SULPHIDE MINERALIZED HORNBLENDE G
53487	KAL-5	6+92E	3+47S	LEAN IRONFORMATION
53488	KAL-6	7+10E	3+53S	MARBLE
53489	CHP-1	SEE MAP IN REPORT		MARBLE, DIRTY WITH MICA, EV. SOME
53490	CHP-2	SEE MAP IN REPORT		MARBLE, DIRTY WITH MICA, EV. SOME
53491	CHP-3	SEE MAP IN REPORT		MARBLE, DIRTY WITH MICA, EV. SOME

GRT = GRIMSTHORPE TWP. \ ARD = ARDOCH PROPERTY
KAL = KALADAR PROJECT \ CHP = CHIPPEGO LAKE

BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

REPORT: 093-42485.0 (COMPLETE)

DATE PRINTED:

PROJECT: OPAP-93

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	Pb PPM	Zn PPM	Fe PCT	Ba PPM	Sn PPM	Al PCT	Na PCT	Mn PPM	Mg PCT
53451		<5	0.7	6	66	4.83	144	<20	1.95	0.21	450	1.29
53452		29	0.5	3	65	3.25	151	<20	2.38	0.19	303	0.75
53453		104	0.9	15	85	6.12	241	23	2.65	0.10	290	1.72
53454		12	0.7	5	79	4.83	104	<20	2.42	0.13	287	1.45
53455		<5	1.1	22	222	8.00	129	<20	2.75	0.08	328	2.02
53456		<5	<0.2	3	25	0.72	5	<20	0.22	0.06	33	0.10
53457		6	1.1	14	138	6.34	155	30	4.97	0.39	119	2.34
53458		<5	<0.2	2	19	0.59	4	<20	0.21	0.06	166	0.17
53459		11	1.3	31	143	7.23	182	22	2.69	0.14	130	1.80
53460		11	1.3	4	84	8.52	285	<20	3.04	0.09	329	2.29
53461		21	1.2	7	108	7.18	185	<20	2.38	0.09	364	1.49
53462		<5	0.5	3	48	4.58	124	30	1.53	0.07	133	0.88
53463		11	1.1	3	81	5.61	177	<20	3.07	0.23	344	2.01
53464		6	0.8	4	94	5.28	241	<20	2.23	0.13	370	1.73
53465		<5	0.6	4	66	4.36	112	<20	1.90	0.16	449	1.51
53466		11	1.2	27	84	6.30	91	32	1.37	0.08	157	0.82
53467		26	1.2	30	49	6.26	80	24	1.48	0.07	180	0.90
53468		18	1.4	2	124	8.53	326	30	3.28	0.10	540	2.74
53469		<5	0.4	3	107	5.57	190	<20	1.77	0.16	684	1.04
53470		<5	1.8	29	189	3.99	28	<20	1.63	0.11	287	2.38
53471		32	0.6	15	46	4.13	32	<20	1.57	0.14	167	0.79
53472		25	0.4	13	32	2.21	32	<20	1.33	0.12	194	0.81
53473		10	<0.2	6	5	0.76	4	<20	0.10	0.06	26	0.03
53474		<5	0.2	5	17	0.70	7	<20	0.12	0.05	35	0.04
53475		15	1.0	25	27	5.44	368	<20	2.73	0.13	131	1.89
53476		<5	<0.2	<2	39	2.32	8	<20	0.14	0.06	820	7.95
53477		<5	0.5	22	114	3.09	164	<20	2.14	0.23	91	1.86
53478		<5	0.5	22	131	3.57	302	<20	2.42	0.34	58	1.02
53479		<5	0.5	29	1050	3.43	41	<20	0.78	0.11	96	0.69
53480		<5	<0.2	30	11	0.50	90	<20	0.14	0.29	1199	>10.00
53481		<5	<0.2	5	14	0.34	104	<20	0.12	0.31	678	>10.00
53482		7	<0.2	<2	11	0.35	105	<20	0.15	0.29	775	>10.00
KAL-1	10		0.4	39	212	4.94	121	<20	2.41	0.02	512	1.41
KAL-2	<5		0.6	158	940	5.47	196	<20	2.88	0.03	359	1.88
KAL-3	<5		0.8	218	431	5.79	211	<20	2.83	0.03	428	1.68
KAL-4	13		<0.2	19	122	3.29	107	<20	1.88	0.03	446	0.92
KAL-5	<5		0.4	23	294	3.86	316	<20	2.17	0.02	1121	1.09
KAL-6	<5		0.5	24	284	1.61	255	<20	0.71	0.03	8367	6.87
CHIP-1		<5	<0.2	29	46	0.06	23	<20	0.03	0.04	264	1.32
CHIP-2		<5	<0.2	6	86	0.08	3	<20	0.04	0.04	519	5.24
CHIP-3		<5	<0.2	4	208	0.30	9	<20	0.05	0.22	469	11.59

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Geochemical Lab Report

Inchcape Testing Services

REPORT: 093-42485.0 (COMPLETE) DATE PRINTED: PROJECT: OPAP-93 PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	K PCT	Sc PPM	V PPM	Cr PPM	Ni PPM	Mo PPM	Cd PPM	Sb PPM	W PPM	Ca PCT	Cu PPM
53451		0.67	10	140	73	17	<1	<0.2	8	<20	1.05	148
53452		1.07	5	40	75	25	<1	<0.2	10	<20	0.82	33
53453		1.59	10	114	127	44	<1	<0.2	11	<20	0.17	132
53454		1.33	5	76	97	55	2	<0.2	9	<20	0.35	65
53455		0.62	9	116	98	33	4	<0.2	10	<20	0.22	78
53456		0.05	<5	12	198	10	<1	<0.2	<5	<20	0.06	25
53457		1.78	19	261	216	62	<1	<0.2	14	<20	1.68	152
53458		0.01	<5	12	166	8	<1	<0.2	<5	<20	0.03	12
53459		1.38	11	253	236	168	5	0.3	11	<20	0.58	205
53460		1.58	13	260	149	79	<1	0.9	11	<20	0.40	131
53461		1.25	10	117	112	64	<1	<0.2	10	<20	0.23	124
53462		0.87	<5	36	56	39	<1	<0.2	6	<20	0.22	70
53463		1.78	9	125	113	60	5	0.6	12	<20	0.54	81
53464		1.30	<5	90	90	37	<1	<0.2	8	<20	0.66	97
53465		0.79	<5	58	170	256	<1	<0.2	8	<20	1.02	124
53466		0.58	<5	147	123	153	8	0.4	6	<20	0.46	200
53467		0.58	<5	146	123	148	8	0.4	9	<20	0.37	197
53468		2.24	16	292	167	99	5	0.4	10	<20	0.65	141
53469		0.59	8	27	83	9	<1	<0.2	7	<20	1.04	14
53470		0.03	19	137	82	26	<1	<0.2	10	<20	1.83	46
53471		0.72	<5	22	56	36	2	<0.2	11	<20	0.42	17
53472		0.72	<5	12	81	12	<1	1.0	8	<20	0.29	14
53473		0.03	<5	1	153	5	<1	0.4	<5	<20	0.02	12
53474		0.05	<5	2	192	6	1	<0.2	<5	<20	0.02	6
53475		1.12	13	125	65	34	1	0.3	12	<20	1.89	69
53476		0.02	<5	5	27	6	<1	0.4	<5	<20	>10.00	8
53477		1.07	5	64	96	37	4	<0.2	11	<20	2.20	48
53478		0.59	<5	45	52	39	6	0.5	9	<20	2.22	45
53479		0.47	6	57	87	17	9	5.8	7	<20	0.07	41
53480		0.04	<5	3	14	2	5	<0.2	9	<20	>10.00	1
53481		0.06	<5	2	15	<1	9	<0.2	9	<20	>10.00	10
53482		0.09	<5	2	14	1	10	<0.2	<5	<20	>10.00	6
KAL-1		0.40	8	67	46	33	6	0.9	<5	<20	0.33	78
KAL-2		0.60	13	111	71	40	7	1.2	<5	<20	0.16	65
KAL-3		0.84	13	127	78	19	8	0.3	<5	<20	0.20	52
KAL-4		0.14	5	39	30	37	4	<0.2	<5	<20	0.43	57
KAL-5		0.24	<5	33	24	18	4	<0.2	<5	<20	0.33	30
KAL-6		0.06	<5	15	26	22	3	3.3	<5	<20	>10.00	221
	CHIP-1	0.04	<5	1	22	<1	<1	0.5	<5	<20	>10.00	4
	CHIP-2	0.01	<5	1	26	3	<1	0.5	<5	<20	>10.00	9
	CHIP-3	0.09	<5	2	17	17	17	9.8	63	29	>10.00	3

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BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

REPORT: 093-42485.0 (COMPLETE) DATE PRINTED:
PROJECT: OPAP-93 PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	As PPM	Bi PPM	Te PPM	La PPM	Sr PPM	Y PPM	Hg PPB
53451		24	<5	<5	<10	3	8	6	6
53452		15	8	<5	<10	15	34	16	<5
53453		30	12	<5	<10	9	12	8	<5
53454		17	21	<5	<10	7	13	9	<5
53455		14	19	<5	<10	11	6	7	<5
53456		2	<5	<5	<10	<1	3	1	<5
53457		25	17	<5	<10	11	97	11	10
53458		4	<5	<5	<10	<1	2	<1	<5
53459		37	9	<5	11	18	12	23	<5
53460		35	20	<5	<10	12	7	13	<5
53461		29	46	<5	<10	18	8	16	<5
53462		26	13	<5	<10	9	3	9	<5
53463		28	23	<5	<10	11	25	10	<5
53464		31	20	<5	<10	9	8	12	<5
53465		30	7	<5	<10	9	8	6	<5
53466		40	11	<5	<10	17	8	16	<5
53467		44	8	<5	<10	17	7	15	<5
53468		36	22	<5	<10	12	11	15	<5
53469		14	21	<5	10	11	9	28	<5
53470		40	10	<5	<10	6	16	19	39
53471		20	50	<5	<10	11	26	3	14
53472		6	26	<5	<10	10	18	2	28
53473		<1	8	<5	<10	<1	2	<1	<5
53474		2	11	<5	<10	<1	3	<1	<5
53475		34	50	<5	<10	29	51	8	28
53476		4	<5	<5	<10	4	101	4	11
53477		10	116	<5	<10	14	278	15	<5
53478		11	23	<5	<10	12	743	9	<5
53479		5	7	<5	<10	8	11	2	65
53480		3	20	8	17	<1	113	8	<5
53481		6	30	11	<10	<1	109	3	<5
53482		3	35	<5	14	<1	70	7	<5
	KAL-1	20	8	<5	<10	32	12	18	28
	KAL-2	18	<5	<5	10	15	13	6	36
	KAL-3	13	<5	<5	<10	10	19	5	46
	KAL-4	17	<5	<5	11	16	7	10	36
	KAL-5	13	8	<5	<10	18	7	13	48
	KAL-6	18	9	<5	<10	25	55	30	146
	CHIP-1	5	<5	<5	<10	2	218	2	<5
	CHIP-2	6	<5	<5	<10	1	73	3	<5
	CHIP-3	<1	<5	24	75	<1	126	1	<5

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APPENDIX -6-

GRIMSTHORPE TOWNSHIP

COMPILATION MAP

PROSPECTING TRAVERSES

GEOCHEMICAL GRID

SAMPLE LOCATIONS

GRIMSTHORPE PROJECT

PROSPECTING TRAVERSES AND GEOCHEMICAL GRID

W. BRACK OPAP 93-446

SCOTTAMATTA LAKE FOREST ACCESS ROAD

LINGHAM LAKE ACCESS ROAD

STAKED

VOLCANOGENIC IGNEOUS ROCK SUITE COMPLEX

IGNEOUS VOLCANOGENIC ROCK SUITE COMPLEX

BLACK RIVER BRIDGE

LINGHAM LAKE

LOT 17 CON 17

LOT 18 CON 16

LOT 19 CON 15

LOT 20 CON 14

LOT 21 CON 13

LOT 23 CON 14

LOT 19 CON 13

LOT 23 CON 11

12 CON

BASE LINE 19E 20E 22E

1+00S 2+00S 3+00S

TRAVERSE I TRAIL IV

TRAVERSE A TRAVERSE B TRAVERSE C TRAVERSE D TRAVERSE E TRAVERSE F TRAVERSE G TRAVERSE H TRAVERSE J TRAVERSE K

TRAIL I TRAIL II

CREEK A CREEK B CREEK C

CAMP CABIN STRIPPING

53451 53453 53454 53455 53456 53457 53458 53459 53460 53461 53462 53463 53464 53465 53466 53467 53468

0 100 200 300 400 500 1000

METRES

N

200