

31C15NW0016 OP92-233 SHEFFIELD

010

**EXPLORATION FOR ZINC AND GOLD
IN SOUTH-EASTERN ONTARIO**

**SHEFFIELD AND HINCHINBROOKE TOWNSHIPS
ARDOCH AREA (CLARENDON TWP.)
KALADAR AREA (KALADAR TWP.)**

BY

DR. WINFRIED BRACK

OPAP 92 -233

JANUARY 1993

SUMMARY

Three different sub-projects were investigated. The program was executed as it was proposed in the OPAP grant application, with the exception that the Demars project (Marmora twp.) was replaced by the Ardoch project (Clarendon twp.). Both projects are comparable concerning the objective to find gold and zinc mineralization, however the Ardoch project ranks higher in its prospectivity. The incentive office was informed of this change by facsimile.

The first sub-project targeted zinc (sphalerite) mineralization within marble units in Sheffield and Hinchinbrooke townships. The objective was to cover large areas in order to define possible target areas for a later detailed follow up. The emphasis was to prospect for zinc mineralization. Some areas were transected with geochemical soil profiles to detect anomalous areas. The most promising area appears to be lot 8, concession 12 in Hinchinbrooke township, where a previously unmapped marble unit revealed a marble sphalerite boulder assaying 7% zinc.

The Ardoch project (Clarendon twp.) replaced the Demars project (Marmora twp.) as stated above. The project area 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. The project is a joint effort between W. Brack OPAP 92-233 (covering the northern portion of the property and W. Holmstead OPAP 92-83 (covering the southern portion of the property). A detailed geochemical soil sampling survey was completed as well as detailed lithological mapping. The geochemistry is somehow ambiguous. A cluster of overlapping anomalous element concentrations within the north-western portion of the survey area is also marked by high concentrations of manganese. The ability of manganese to accumulate (scavenge) other metals is well documented in literature. Therefore subsequent work on this anomaly has to be considered with care.

The Kaladar project was a follow up of the program in 1991 (OPAP 91-782 and OPAP 91-245). Several trenches and blast holes were completed across a quartz-sulphide vein. Although the vein shows impressive alterations, analysis of grab- and channel samples did not reveal any significant values of gold. However the trace and indicator element association in blast hole IX and X indicates hydrothermal activity. Further detailed follow-up surveys are recommended.



31C15NW0016 OP92-233 SHEFFIELD

010C

TABLE OF CONTI

SUMMARY i

TABLE OF CONTENTS..... ii

1. INTRODUCTION 1

2. PROJECT A: RECONNAISSANCE WORK IN SHEFFIELD AND HINCHINBROOKE TWPS..... 4

 2.1 Sheffield township 4

 2.1.1 Norway Lake (south)..... 4

 2.1.2 Norway Lake (north)..... 7

 2.1.3 Cranberry Lake 9

 2.2 Hinchinbrooke township..... 12

 2.2.1 Fifth Depot Lake 12

 2.2.3 Chippego Lake..... 15

 2.3 Geochemical soil sampling survey (Norway Lake) 17

 2.4 Air photo lineaments (Norway Lake)..... 19

3. PROJECT B: ARDOCH PROPERTY (CLARENDON TWP.)...

 3.1 Description, location and access 22

 3.2 Geology 22

 3.3 History of the property 24

 3.4 Exploration activities..... 26

 3.4.1 grid line survey..... 26

 3.4.2 geochemical soil sampling..... 26

 3.4.3 geological survey and prospecting 29

 3.4.4 air photo lineaments 30

4. PROJECT C: KALADAR (KALADAR TWP.)..... 32

 4.1 Description, location and access 32

 4.2 Geology 32

 4.3 Previous exploration activity..... 32

 4.4 Trenching..... 34

5. CONCLUSION AND RECOMMENDATION 39

REFERENCES 40

CERTIFICATE

TABLE OF CONTENTS (CONT'D)

PAGE

LIST OF FIGURES

Figure	1	General location map	
		Project areas	2
		* * *	
	2	General location map	
		Sheffield and Hinchinbrooke twps.....	3
	3	Traverse map: Norway Lake (south).....	5
	4	Traverse map: Wheeler Lake.....	6
	5	Traverse map: Norway Lake (north).....	8
	6	Traverse map: Cranberry Lake.....	10
	7	Pit and sample location scetch	
		Cranberry Lake.....	11
	8	Traverse map: Fifth Depot Lake.....	14
	9	Traverse map: Chippego Lake.....	16
		* * *	
	10	General location map	
		Ardoch project (Clarendon twp.).....	21
	11	Regional geology and claim location	
		Ardoch Project.....	23
		* * *	
	12	General location map	
		Kaladar project (Kaladar Twp.).....	31
	13	Kaladar project	
		Trench locations and geology.....	33
	14	Kaladar project: Trench 1.....	35
	15	Kaladar project: Trench 2.....	36

PHOTOGRAPHS

Picture	1	Quarzt-vein in trench 1	38
Picture	2	Quartz-vein hand specimens with various alterations	38

APPENDICES

Appendix	1	Analytical results (geochemistry)	
	2	Sample description (soil samples)	
	3	Sample description (rock samples)	

MAPS
(IN FOLDERS)

Map	1	Norway Lake area (Sheffield twp.) Air photo lineamentsfolder 1
		Geochemical contour maps for the Norway Lake area (Sheffield twp.) folder 2
	2.1	Soil sample location map
	2.2	Contour map for zinc
	2.3	Contour map for copper
	2.4	Contour map for lead
	2.5	Contour map for manganese
	2.6	Contour map for calcium
	3	Ardoch project (Clarendon twp.) Air photo lineaments folder 3
	4	Ardoch project (Clarendon twp.) Geology and rock sample locations..... folder 4
		Geochemical contour maps for the Ardoch project (Clarendon twp.) folder 5
	5.1	Soil sample location map
	5.2	Contour map for zinc
	5.3	Contour map for copper
	5.4	Contour map for lead
	5.5	Contour map for gold
	5.6	Contour map for arsenic
	5.7	Contour map for mercury
	5.8	Contour map for manganese
	5.9	Contour map for calcium
	5.10	Contour map for magnesium
	5.11	Contour map for barium

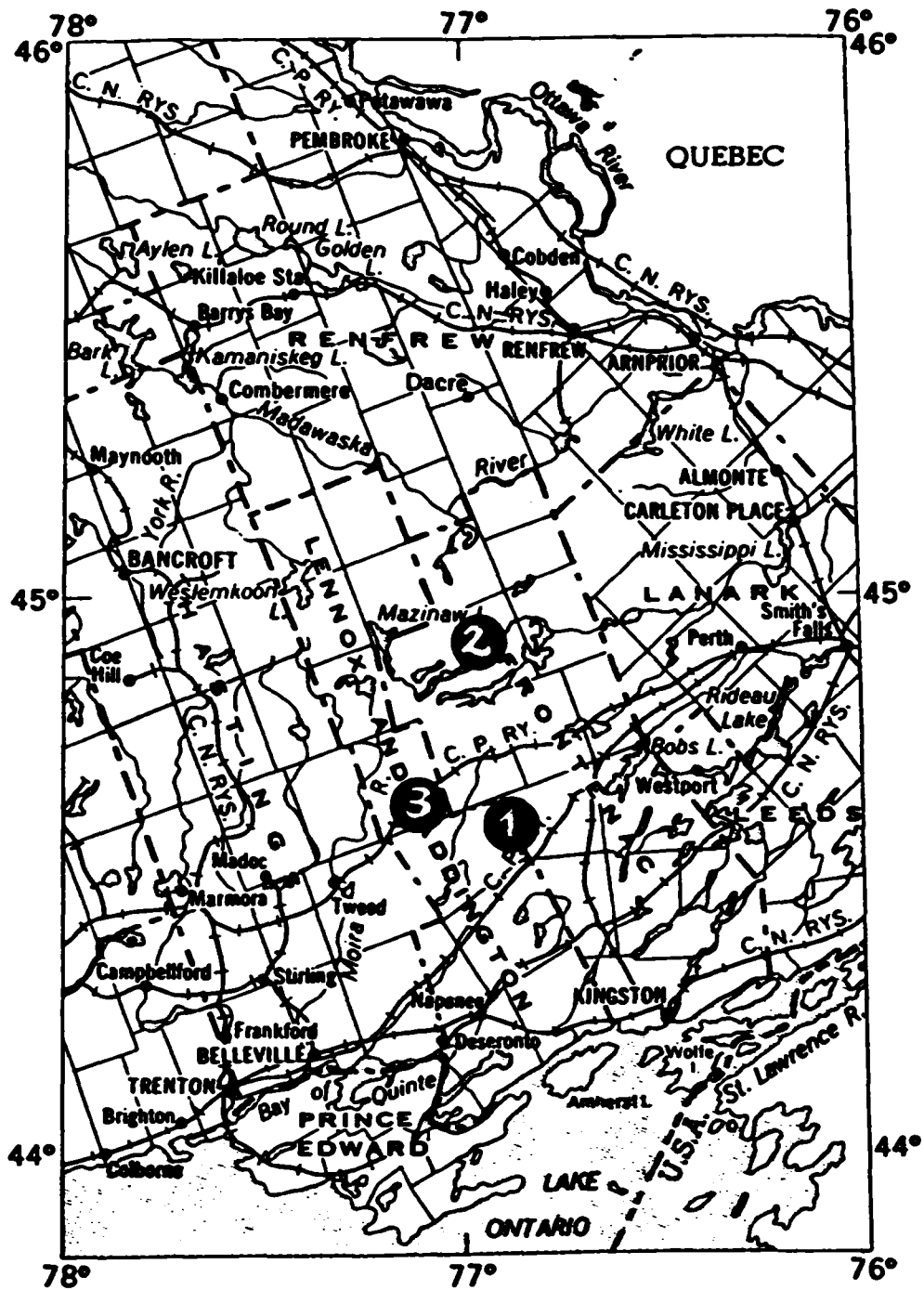
1. INTRODUCTION

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 92-233.

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.

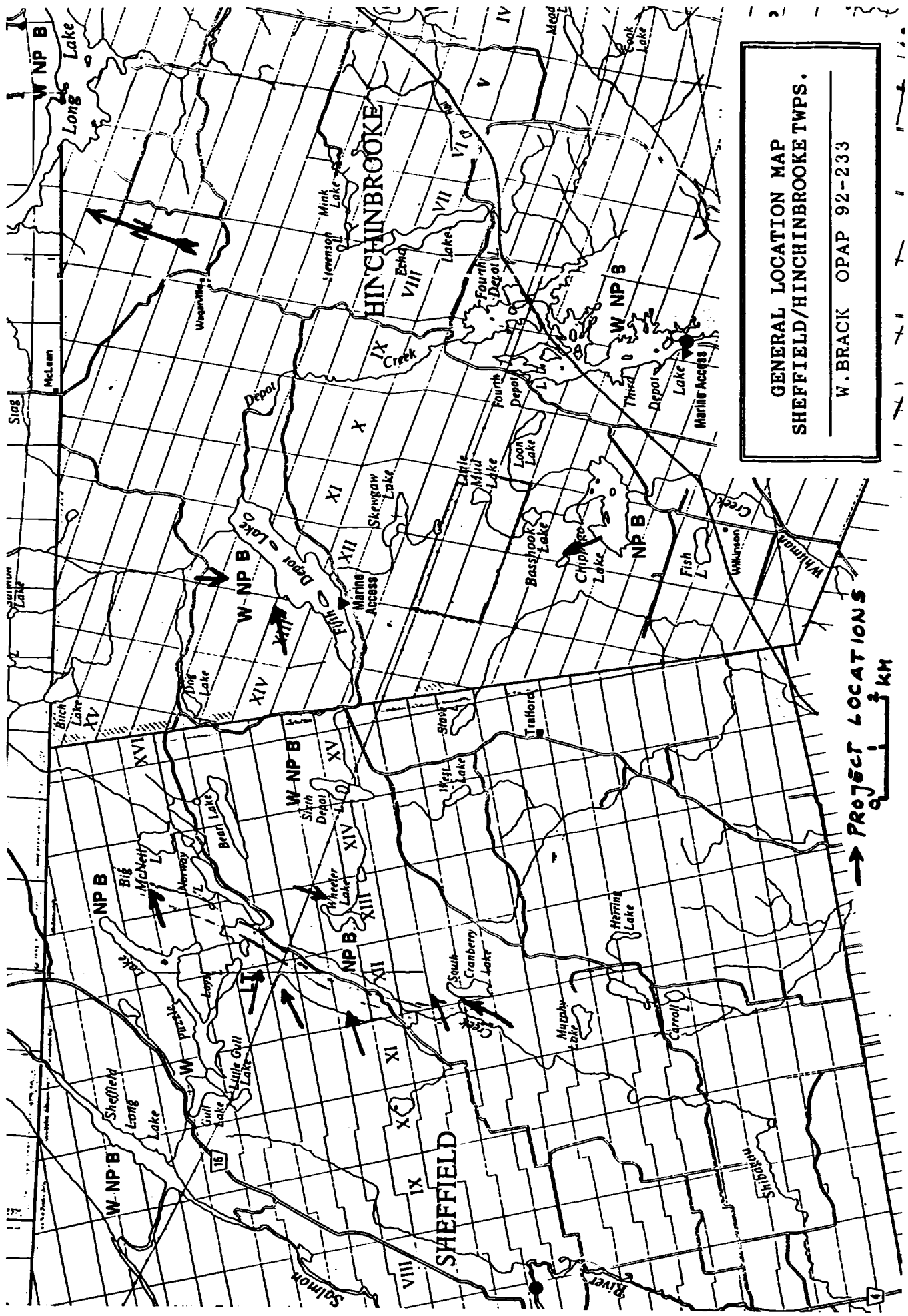
The completed exploration work differs from the original program proposal (see application OPAP 92-233). The Donahu project (Marmora twp.) was replaced by the Ardoch project (Clarendon twp.). The objectives in both projects are gold and zinc mineralization, however the Ardoch project has a significant higher prospectivity. A portion of the funds allocated for the Kaladar project was used for the Ardoch project. Concerning the change of program the Incentive Office was informed by facsimile on October 5, 1992.

The Ardoch project is a joint project with W. Holmstead (OPAP 92-83). His exploration efforts were mainly directed towards the gold occurrences within the southern portion of the claim group, whereas my concerns were focused mainly on the sphalerite occurrence within the northern portion of the claim group.



**GENERAL LOCATION MAP
PROJECT AREAS**

- 1) SHEFFIELD/HINCHINBROOKE TWPS.
- 2) ARDOCH PROPERTY
- 3) KALADAR PROJECT



**GENERAL LOCATION MAP
SHEFFIELD/HINCHINBROOKE TOWNSHIPS.**

W. BRACK OPAP 92-233

→ PROJECT LOCATIONS

0 1 2 km

2. Project A: RECONNAISSANCE WORK IN SHEFFIELD AND HINCHINBROOKE TOWNSHIPS

2.1 Sheffield Township

2.1.1 Norway Lake (south)

Location and access:

The Norway Lake south area is located approximately 12 km north-northeast of the village of Tamworth, near Napanee in southeastern Ontario, Sheffield twp. (UTM 4940000N, 345000E). The area is accessible by an asphalt road which leads from Tamworth to Parham. Approximately 3 km east of Tamworth a well maintained gravel road leads north which turns into a dead end dirt road beyond the last farm house. This stretch (approximately 4 km) requires a four-wheel drive pick-up truck. The road ends at Norway Lake.

Geology:

The Norway Lake property is situated in the Central Metasedimentary Belt of the Grenville geological province. The rocks present in the investigation area include biotite-quartz paragneiss, quartz-feldspar gneiss, para- and ortho-amphibolite, calcitic marble and quartz-monzonite intrusive rocks. These units trend \pm north south and dip shallow to the east.

Work done (summary):

Orientation survey for access: (16.9.92)

Prospecting: 3 traverses

Line preparation: 5415 metres (flagged lines)

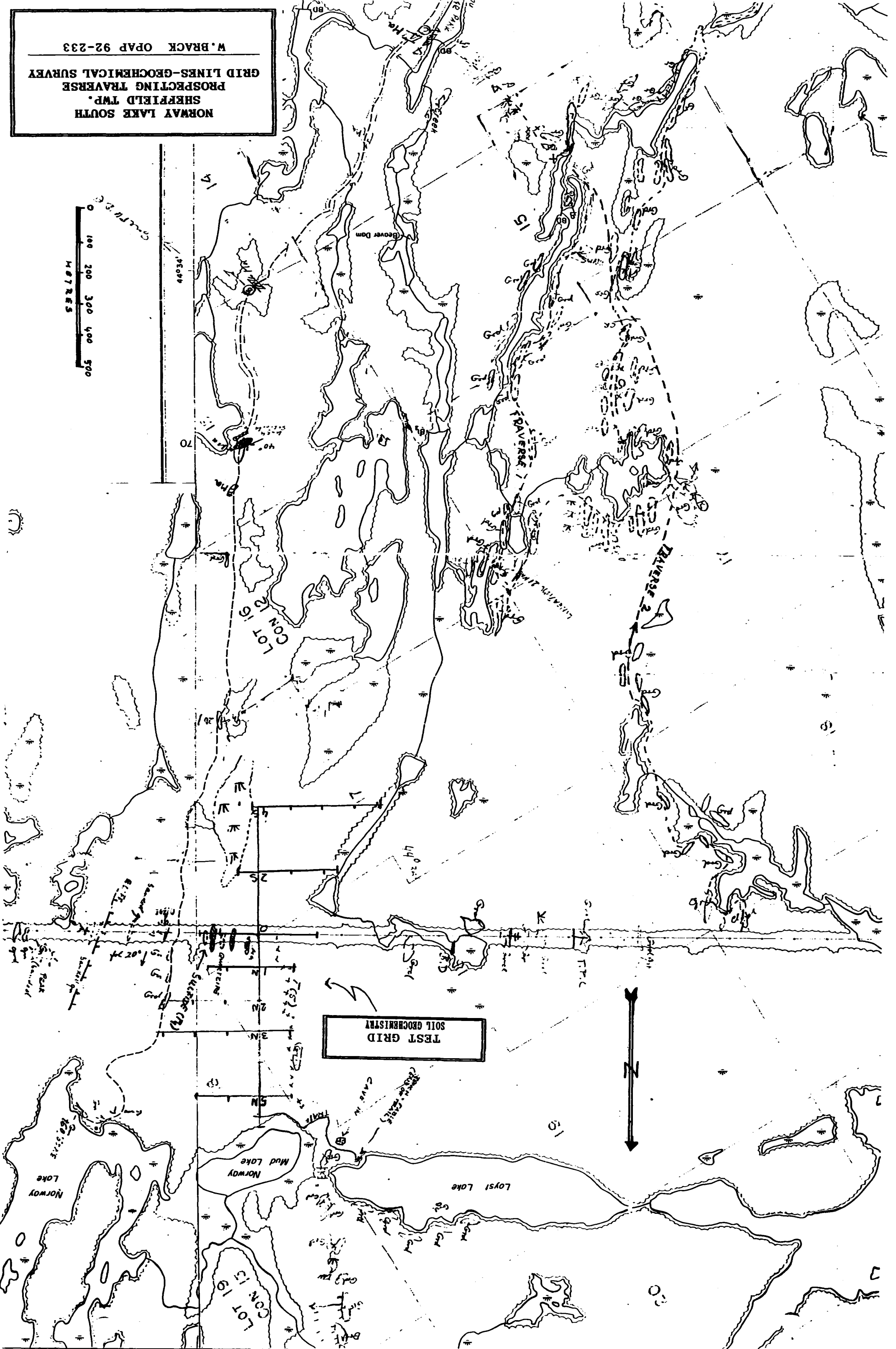
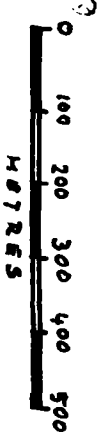
Geochemical soil sampling: 47 samples (for description see 2.3 page 17)

Orientation survey (16.9.92): An orientation survey was necessary to verify the best access to the Norway Lake area. It was discovered that in contrast to some of the existing maps, the access road to the Norway Lake does not continue. For the first ten nights a campsite was selected about 3.5 km south of Norway Lake, since the vehicle was not suitable for the rest of the trail.

Traverse 1 (17.9.92): The traverse started from the access road to Norway Lake approximately 3 km south of Norway Lake. The traverse lead to the west, southwest and northwest from the starting point (see fig. 3)

The lithologies encountered were marble (east of the beaver dam), biotite gneiss (west of the beaver dam) and monzonitic granite (for the remaining traverse). No mineralization was discovered and reference rock samples were discarded.

NORWAY LAKE SOUTH
SHEFFIELD TWP.
PROSPECTING TRAVERSE
GRID LINES-GEOCHEMICAL SURVEY
W. BRACK OPAP 92-233



Traverse 2 (18.9.92): The traverse started at the intersection of the power line with access road to Norway Lake. The traverse lead to the west, approx. 1 km along the power line and then to the southeast were the traverse connected with traverse 1 see (fig.3).

The lithologies encountered were quartz-gneiss, a 200 metre wide marble unit and monzonitic granite. Sulphide mineralization was observed within the marble unit. One rock sample was preserved for analysis.

Traverse 3 (19.9.92): The traverse started at the intersection of the power line with the access road to Norway Lake. This time the traverse was directed towards the east along the power line and then to the southwest towards Wheeler Lake and from there towards the southeast. The traverse was then reversed to Wheeler Lake and was consequently directed to the west up to the intersection with the access road.

The lithologies encountered were gneiss of various compositions and monzonite granites. A dominant fault structure was crossed (Norway Lake fault). Marble occurrences were located only within the vicinity of the access road. No samples were taken.

2.1.2 Norway Lake (north)

Location and access:

Location and access are the same as described in 2.1.1 The northern portion of Norway Lake is best reached by boat. However extensive swamps mainly to the west make access to the area difficult. Alternatively, a small trail could be taken to Loyst Lake and from there the bush can be walked in a northerly direction. Again swamps make the area difficult to access.

Geology: The geological framework is the same as in the Norway Lake south area (see 2.1.1)

Work done (summary):

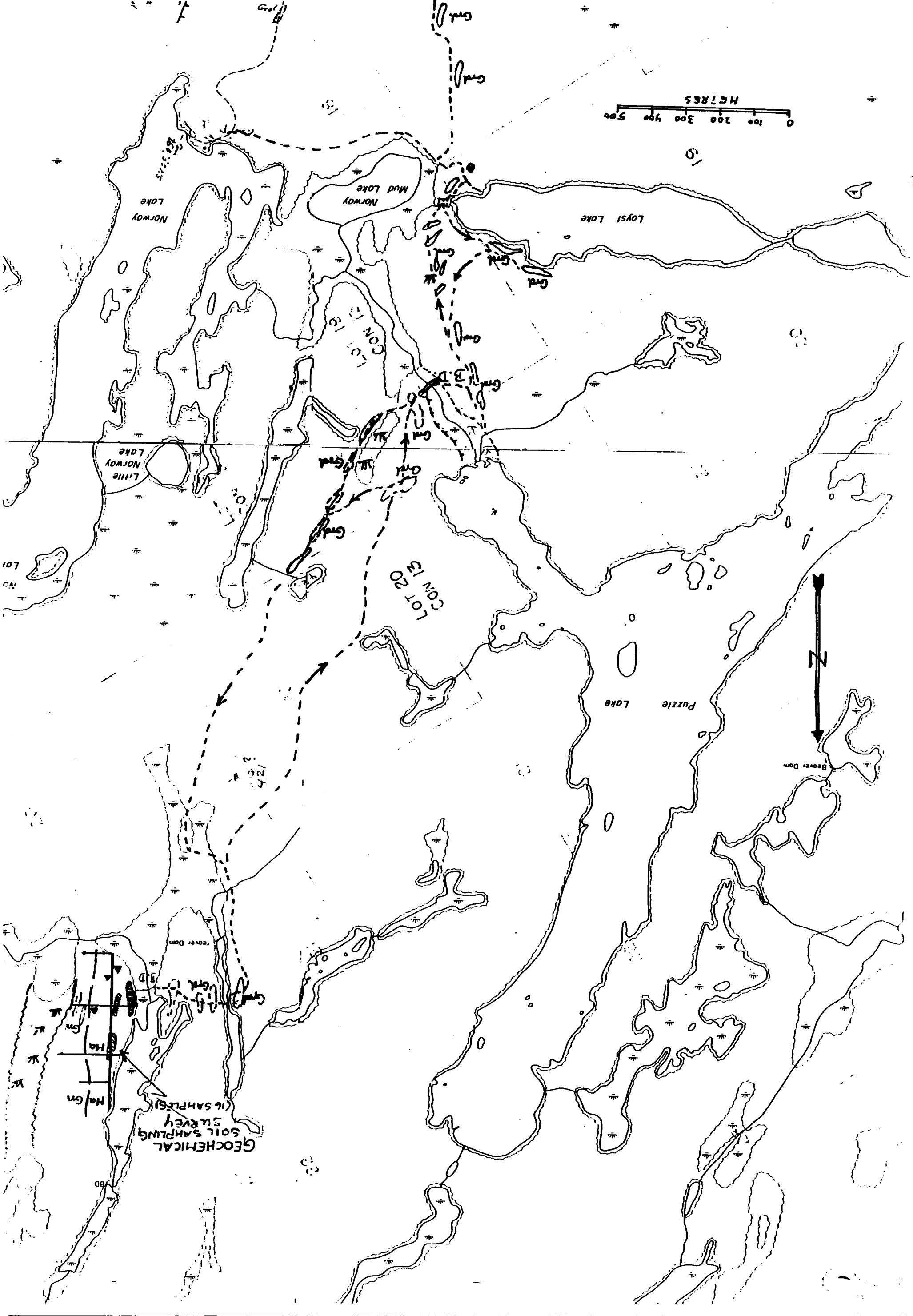
Prospecting: 1 traverse

Line establishment: 925 metres (flagged lines)

Geochemical survey: 16 samples

Traverse 4 (20.9.92): The traverse started again at the intersection of the power line with the access road. It followed the power line to the west and then was directed to the north. Close to Norway Mud Lake the traverse crossed a small trail which was followed towards Loyst Lake where the trail ends. The traverse was continued in a north-north westerly direction to Puzzle Lake. There it was partially reversed to the point of a beaver dam. The traverse was recommenced approximately 2 km in a northerly direction. Due to numerous swamps which had to be crossed at specific points

NORWAY LAKE
SHEFFIELD TWP.
PROSPECTING TRAVERSE
GRID LINES-GEOCHEMICAL SURVEY
K. BRACK GPAP 92-233



the traverse was reversed with only minor deviations.

The lithologies encountered were mostly of igneous composition predominantly monzonitic-granite. However at the northern end of the traverse a narrow marble unit was located, in contact with gneissic rocks. The unit is surrounded by swamps.

Geochemical soil sampling survey (Norway Lake - north):

A small grid was established over a marble occurrence northwest of Norway Lake. A total of 16 soil samples were collected. A separate statistical treatment of these samples would not be meaningful. Therefore the threshold values from the Norway Lake south-grid are applied.

There is no anomalous value for zinc. Sample NP4 is anomalous in copper (67ppm) and sample NP11 is anomalous in lead (48 ppm). Sample NP11 and sample NP16 have anomalous values in calcium (3.47% and 2.71%). At this point the anomalies do not indicate a major source of mineralization.

2.1.3 Cranberry Lake

Location and access: Location and access are the same as described in 2.1.1 Norway Lake. The Norway Lake access road is the starting point for the traverses.

Geology: The geological units are the south extension of the Norway Lake Fault, granite). Norway Lake lithologies (see 2.1.1)

Work done:

Prospecting: Two traverses

Rock sampling: 7 rock samples

Geochemistry: 6 soil samples

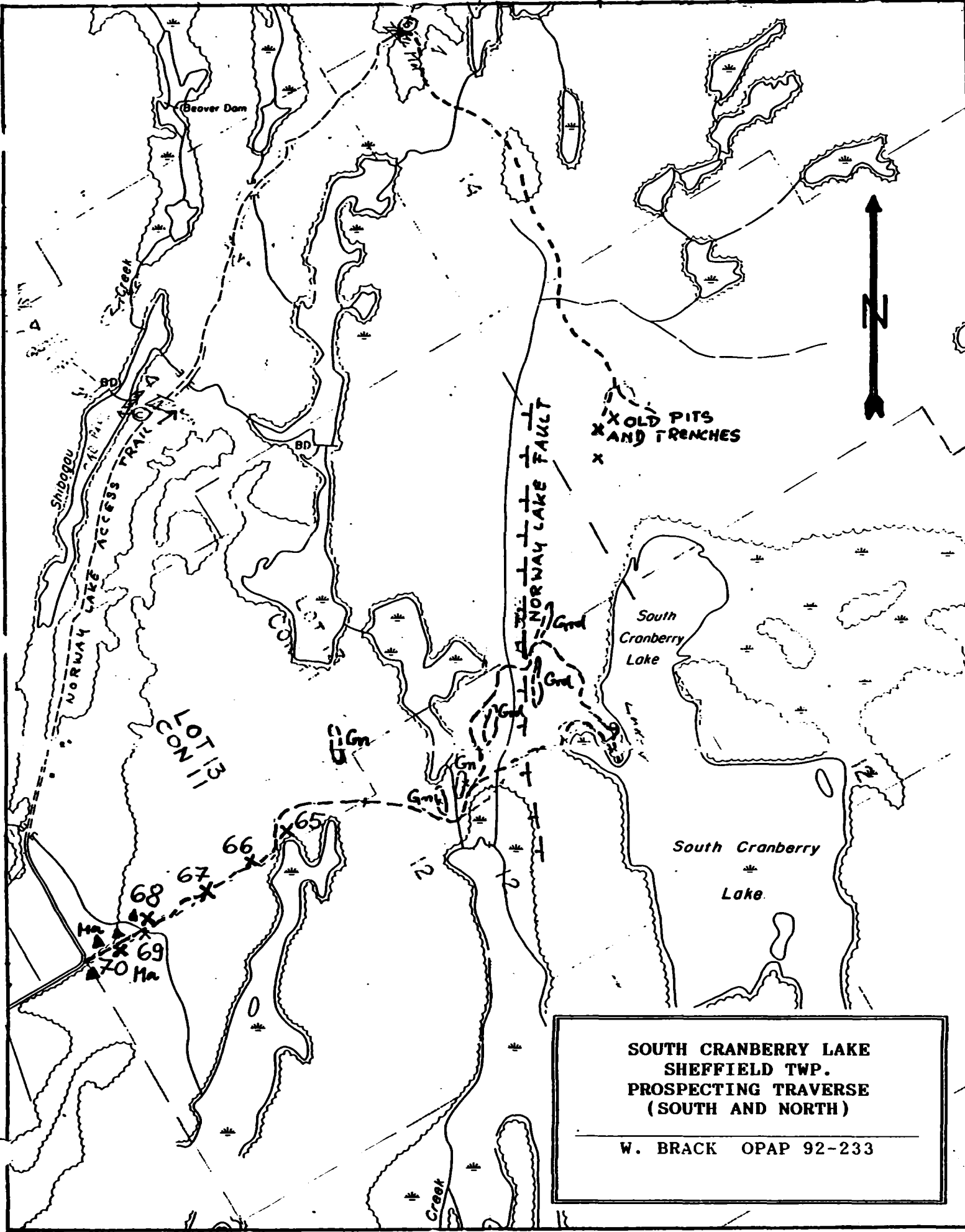
Traverse (north)(28.9.92): A Trail deviating from the Norway Lake access road to the east was followed. The trail leads towards the southeast and is directed towards Cranberry Lake. After approximately 1.2 km the trail splits in several sub-trails. Here old and unrecorded workings were discovered, They follow the granite gneiss contact and are related to the major north to south striking Norway Lake fault. Within the main pit large specs of molybdenum and disseminated sulphide mineralization were encountered. A plan of the trenches and pits was completed and six rock samples taken for analysis (sample 6729 - 6734)

Results: Significant molybdenum concentration were analyzed from the pit samples:

sample 6729 Mo (ppm) = 2664

sample 6732 Mo (ppm) = 672

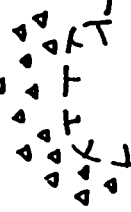
sample 6734 Mo (ppm) =>10000



**SOUTH CRANBERRY LAKE
SHEFFIELD TWP.
PROSPECTING TRAVERSE
(SOUTH AND NORTH)**

W. BRACK OPAP 92-233

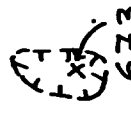
TAILING DEBRIS



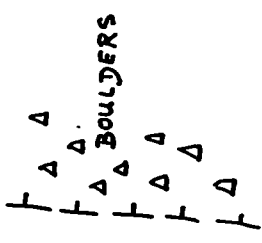
6729
6730



6731



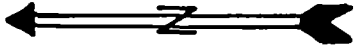
6732



BOULDERS

6733

6734



TRAIL

CRANBERRY LAKE
OLD PITS

W. BRACK OPAP 92-233

All other metals have very low concentrations (see appendix 1) These molybdenum mineralization along the contact of the granitic intrusive rocks and the meta-sedimentary units are not uncommon in this area. They present usually local features of sub-economic interest at best.

Traverse (south)(5.10.92): A second traverse towards Cranberry Lake covered lot 12 concession 11. The northern fence line was followed for approx. 400 metres. Several swamps had to be crossed before the Norway Lake fault was reached. The traverse was continued to Cranberry Lake and then reversed.

One rock sample (6763) and a profile of 6 geochemical soil samples were taken (sample 65 -70) across a marble unit. Sample 66 has an anomalous value in lead (154 ppm). Sample 68 has an anomalous chromium value (217 ppm), sample 69 has an anomalous copper value (220 ppm) and sample 70 is high in manganese (1473 ppm). The anomalies are rather inconclusive and seem to be isolated values unrelated to other elements within the same sample. The erratic behaviour of the element distribution in the area may be explained by the sample medium which was very high in organic and clay components. However a larger soil sampling survey may define areas of potential mineralization (base-metals). Therefore this area may be considered a medium priority target area for further reconnaissance work.

2.2 Hinchinbrooke Township

2.2.1 Fifth Depot Lake

Location and access:

The Fifth Depot Lake is located in the north-western part of Hinchinbrooke township in the South Western Mining Division of Ontario. The NTS is 31C/10SW. The prospect may be reached from Kingston going north on highway 38 to Parham. From there a secondary, paved country road leads to the west to Tamworth. The road straddles Fifth Depot Lake about half-way between the two country towns.

Geology:

As described in the above sub-projects the geology is marked by intrusive rocks in contact with meta-sedimentary units. In the case of the Fifth Depot Lake area a marble unit approaches the Fifth Depot Lake from the west and reaches the shore line about in the middle section of the western shore line. This unit bends towards the north-east and north before it turns to the west. The unit is approximately 800 metres wide. The unit has the character of a large fold. Large sections of the marble unit is covered by swamp.

Work done (summary):

Prospecting: 2 traverses

Geochemistry: two profiles with a total of 25 soil samples

The first (west) traverse (6.10.92) started at the south-west end of the Fifth Depot Lake and followed the shore line in close approximation. About 2 km to the north-east (lot 16 concession 13) a marble unit intercepts the shore line. From here a traverse was paced 270 degree west. The entire width of the marble unit was crossed (approximately 800 metres). The traverse was continued and completed to the south-west). Geochemical soil samples were taken (sample 71 - 81). The preferred location were depressions or edges of slopes. A total of 11 soil samples were collected. Lithologies encountered were granite, marble and gneiss. No mineralization of importance was encountered.

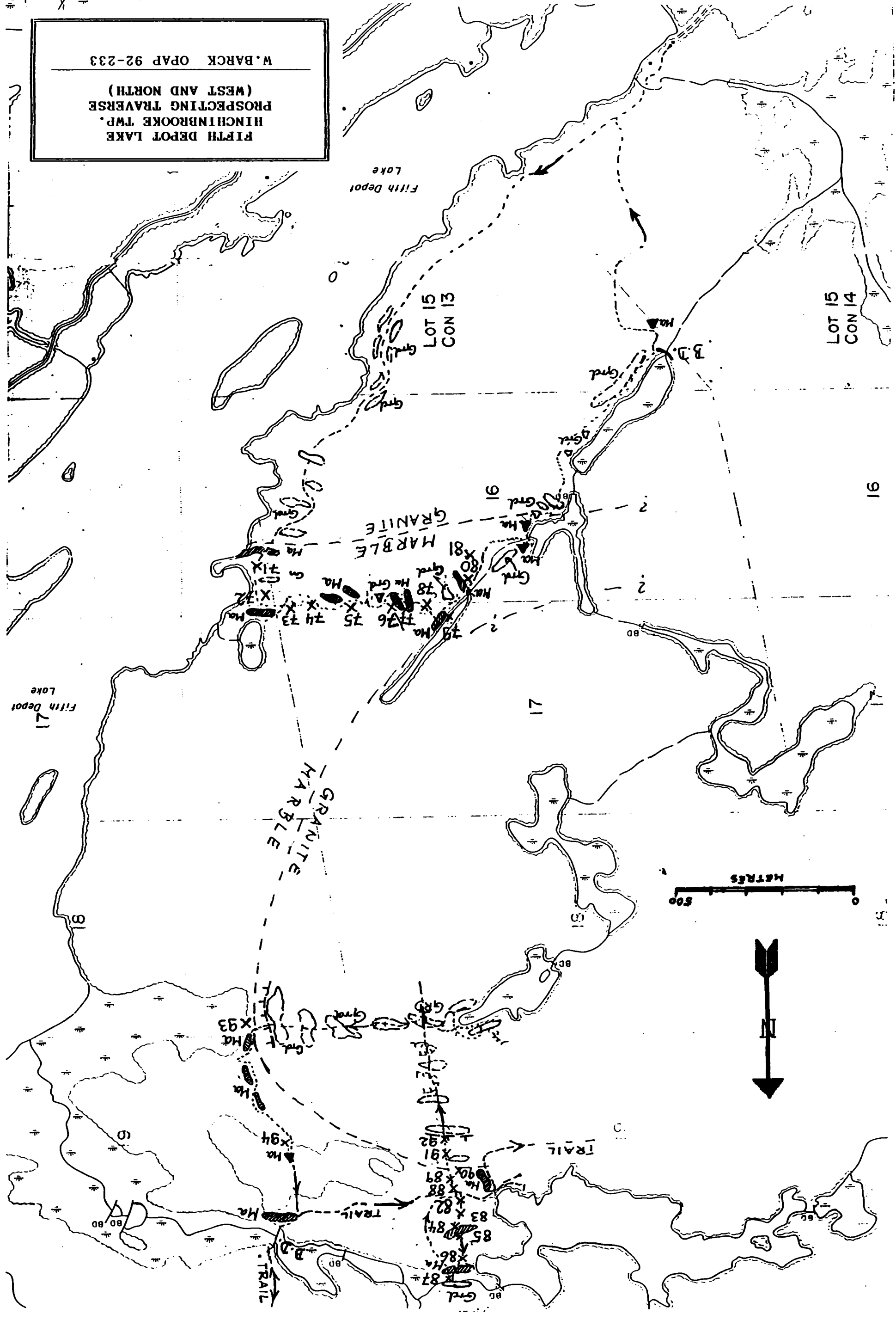
The analytical results of the geochemical soil sampling survey indicate two anomalous samples:

sample	ppm Zn	ppm Mn
71	1186	3265
72	2314	2347

The limited number of samples within this area (25 samples) is not suitable for a detailed statistical evaluation. However, the two above mentioned zinc values are certainly anomalous. The scavenging ability of manganese-oxides is well documented in the geochemical literature. Therefore the zinc anomalies have to be considered cautiously because they may not necessarily reflect zinc mineralization within the vicinity of the sample locations. A detailed follow-up is recommended.

For the second (north) traverse (13.10.92) access was gained via a small country road from the north of Fifth Depot Lake, which deteriorates into a bush trail past the last farm. The traverse followed the trail, first to the south and after passing a beaver dam the trail continues to the west and south-west. A north-south profile across a marble unit was executed (250 metres to the north of the trail and 600 metres to the south of the trail). The traverse was continued to the east, to a low and swampy area which connects with the Fifth Depot Lake. The traverse was then completed to the north. Geochemical soil samples were taken (sample 82 - 94 samples). The lithologies encountered were mainly marble and granite and to a lesser extent metasediments. No significant mineralization was encountered. The geochemical results revealed only background values.

FIFTH DEPOT LAKE
HINCHINBROOKE TWP.
PROSPECTING TRAVERSE
(WEST AND NORTH)
W. BARCK OPAP 92-233



2.2.2 Chippego Lake

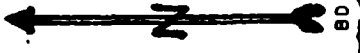
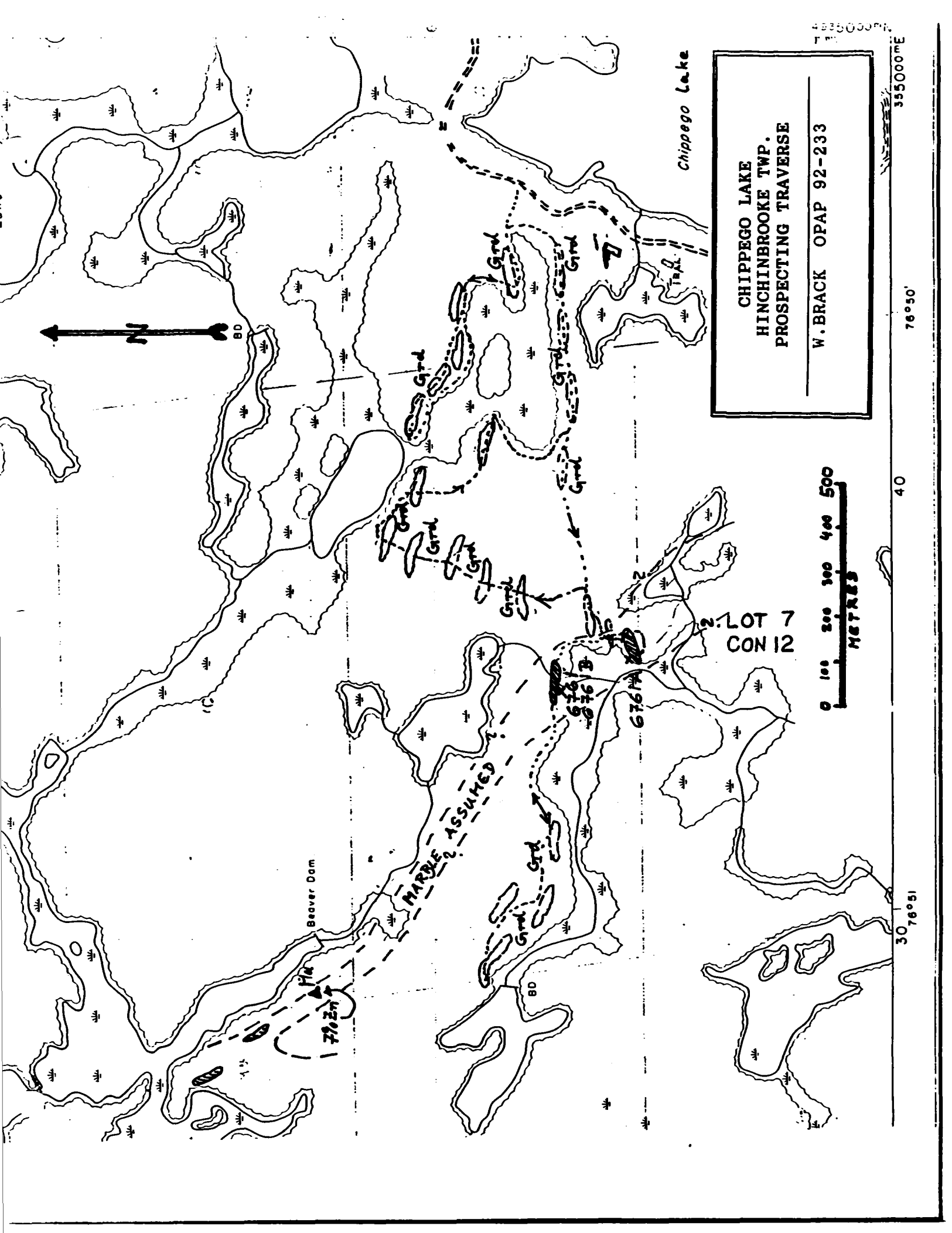
Location and access: Chippego Lake is located about 5 km to the south-east from the Fifth Depot Lake. The access is via the country road from Parham which is followed to the west were 0.5 km after Wagarville the road turns further to the south. Shortly before Wilkinson a trail leads towards Chippego Lake. The geographical coordinates are shown on map fig. 9.

Geology: The geology is dominated by granitic intrusive rocks. From a previous survey (Slave Lake OPAP 90-435) there was evidence that an unrecorded marble unit might connect towards Chippego Lake.

Work done (summary):

Prospecting: one traverse, 3 rock samples

The traverse (14.10.92) started from the access road at the north-west end of Chippego Lake. First it followed a swampy area to the north-west. The outlet of a lake did not allow for a westerly passage. Therefore the traverse was returned to the starting point and from there continued first to the west and then in a north-westerly direction. The traverse then was returned in approximation of the described path. The lithologies encountered were granite and a marble unit. The marble unit, which to my knowledge was not mapped previously connects to the north north-west into the Slave Lake area (OPAP 90-435). At the south-east extremity of the Slave Lake property (presently held by Willow Resources LTD., Vancouver) a sphalerite mineralized marble boulder was discovered in 1991 and analyzed to contain 7% Zn. Three marble samples were collected and one of them was analyzed (sample 6761). The analytical results were negative. The traverse map shows the assumed boundaries of the marble unit. Since sphalerite mineralization is indicated at the northern portion of the marble band a more detailed investigation of this area is recommended. The southern extension of the marble unit is presently unknown.



CHIPPEGO LAKE
 HINCHINBROOKE TWP.
 PROSPECTING TRAVERSE
 W. BRACK OPAP 92-233



355000mE

76°50'

40

30 76°51'

Beaver Dam

Chippego Lake

MARBLE ASSUMED

LOT 7
 CON 12

BD

676
 676

676

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

Gnd

2.3 Geochemical soil sampling survey (Norway lake)

The objective of the geochemical soil sampling survey was to discover hidden zinc mineralization within metasedimentary marble intercalations. The second objective was to cover partly an area of a previous geochemical soil sampling survey by St. Joe Canada Inc. (1985) in order to test the precision of the applied method.

Method: The selection of the sample medium is of importance for a meaningful geochemical survey. An orientation study over a known mineralization may determine the sampling technique to be applied. Preferred sample locations were depressions or at the base of slopes. The upper "B" horizon within the soil profile is considered the proper sample medium.

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. Locations with water saturated thick organic layers were in contrast to previous surveys not disregarded for sampling.

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 they 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 28 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 table* (by Bondar-Clegg 1991). The elements marked with an asterisk may be incomplete in their analysis for certain mineral forms.

* SEE APPENDIX 1

Statistical data:	Zn	Cu	Pb	Mn	Ca
Maximum value	1887	63	94	5449	1.32
Minimum value	37	2	4	71	0.08
Mean (arithmetic):	242(259)	17	14	622	0.39
Standard deviation:	370(321)	14	14	959	0.29
Threshold (2xSTD+MEAN):	981(901)	45	41	2539	0.97

(in brackets values from the St. Joe Canada Inc. survey (1985), covering the same survey area.)

A comparison with the St. Joe Canada Inc. survey reveals an astonishing precision in the two surveys. The sample density (115 versus 47 samples, covering an equal area) was much higher with the St. Joe survey and therefore their element concentration contours are more defined. The principle difference in the surveys is the sample site selection. Whereas St. Joe Canada Inc. worked on a systematic grid, the present survey emphasised "ideal sample locations" such as the edges of slopes or small depressions. Latter method is more cost effective since less samples have to be collected and analyzed.

Results: For the interpretation of the analytical results of the geochemical soil sampling survey in the Norway Lake area 5 elements were selected: Zinc, lead, copper, manganese and calcium. Regarding the contour maps for the individual elements it is evident that the various element anomalies (mean value + 2 x standard deviation) are point-anomalies, with the exception of manganese on line -200 (south). The overlap of the individual element anomalies is generally poor.

As for zinc there are two anomalies:

sample 33 Line +500 position + 180 Zn(ppm)= 1174

sample 46 Line +200 position + 130 Zn(ppm)= 1887

Both samples had clayish soil with an organic component.

For copper there are two anomalies:

sample 8 Line 00 position - 175 Cu(ppm)= 60

sample 33 Line +500 position + 180 Cu(ppm)= 63

Sample 8 was derived from the edge of a swamp and under the power line. A possible explanation for the anomaly could be reducing (Eh) conditions causing precipitation of Cu at the swamp location and / or contamination by the power line. The Cu anomaly in sample 33 overlaps with the Zn anomaly within the same sample (see above).

For lead there is one anomaly:

sample 24 Line -200 position - 75 Pb(ppm)= 94

The sample is rich in organic matter and it is doubtful if a proper B-horizon was developed in the soil profile at this location.

For manganese there are only two samples statistically anomalous. However several other have values close to the threshold value of 2539 ppm manganese. The two anomalous samples are:

sample 33 Line +420 position + 000 Mn(ppm)= 5449

sample 22 Line -200 position + 25 Mn(ppm)= 3801

Sample 22 as well as sample 33 is composed of clay and an organic component. No overlap with other anomalous elements occurs at these sample sites.

For calcium there are 4 anomalous values (the values are in %, however on the map they are shown as Ca(%)x100):

sample 33 Line +500 position + 180 Ca(%)= 1.04

sample 43 Line +250 position + 5 Ca(%)= 1.32

sample 44 Line +225 position + 30 Ca(%)= 8.60

sample 8 Line 0 position - 175 Ca(%)= 1.02

Sample 33 and sample 8 have overlapping anomalous values with other elements such as Cu and Zn. Sample 43 and 44 are isolated Ca-anomalies corresponding to underlying marble.

2.4 Air photo lineaments (Norway Lake)

The basis for this study are air photos at a scale of 1:10,000. The air photos used were numbered:

78-4443 187-256 to 262

78-4443 162- 4 to 6

78-4442 142-121 to 126

78-4441 141-109 to 114

78-4440 191-142 to 147

A TOPCON table stereoscope was used for the stereoscopic viewing of the air photos. All recognized lineaments were plotted on transparent paper with the exception of areas where the density of lineaments with the same directional pattern would have distorted the importance of such lineaments. Streams and lakes were plotted for reference. In order to correct some of the distortions the reference features were matched with the same features on the Ontario Base Maps in the Scale 1:10000 and the map was then redrawn.

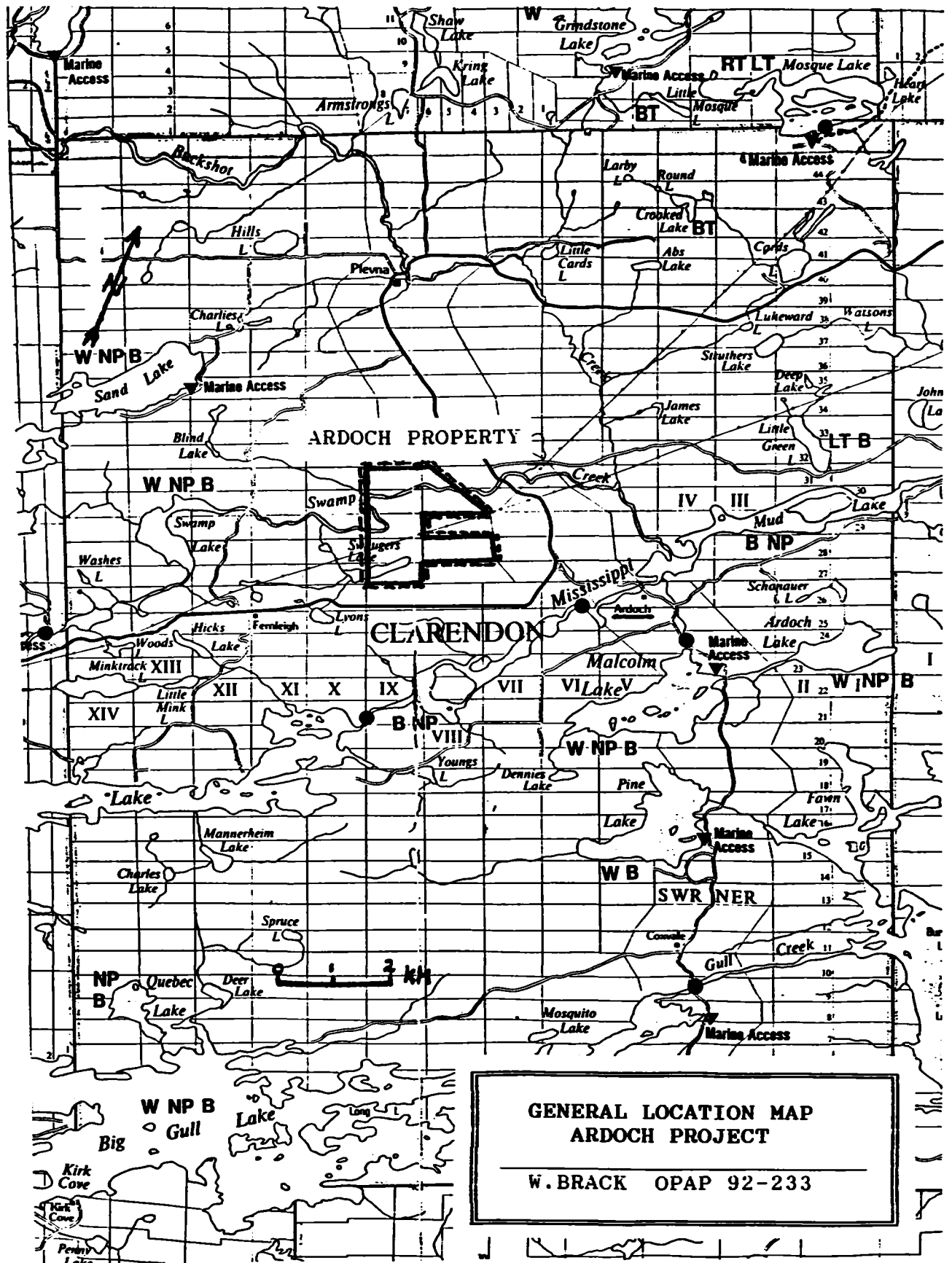
The above described method for the extraction of the air photo lineaments has to be considered as a quantitative approach, since distortions are unavoidable. However, the accuracy should be sufficient for a lineament interpretation and the selection of potential prospective target areas.

In principle, an air photo lineament is a line which may or may not have any geological significance. The geological importance of such lineaments increases with the recognizable regional directional pattern or the length of such lineaments, especially in cases where such lineaments have significant morphological or topographical expressions.

Results: The southern portion of the observation area (south of Norway Lake shows a relative regular lineament cross pattern, with short lines. These cross patterns are typical on a regional scale for the underlying granites. However, the pattern is interrupted in the south-centre portion, with lines directed \pm north-south and a significant decrease in the lineament density. This portion is underlain by marble. The Norway Lake fault forms the eastern boundary of this metasedimentary unit. The Norway Lake fault is a landmark and forms a steep cliff, which is easily recognizable in the field as well as on air photos. Another trend in the lineaments is directed 70 to 80 degree (ENE to WSW). In the area of Wheeler Lake this trend seems to curve more to the north. Almost perpendicular to it, at 290 degree (WNW to ESE), occurs another trend, directed towards the south tip of Puzzle Lake. In the lower southwest corner of the map appears a feature consisting of a pronounced north-south line which is intersected by a east-west line (the latter being an uncommon direction in this area). The intersection is marked by a small lake which stretches in all directions of the given pattern. Just to the northeast of this feature an s-shaped lineament occurs which could reflect a fold.

The centre of the map is marked by the west-east stretching of Puzzle Lake, Loyst Lake and Norway Lake. A fault structure was described in the previous literature. Although a strong 70 degree (ENE to WSW) trend is recognized, the air photo did not reveal any single structure which would confirm the Loyst Lake fault.

North of the map centre line (Loyst Lake) the directional pattern of the air photo lineaments is changing. There is a pronounced 45 degree trend (NE to SW) and a 320 degree trend (NW to SE). Within the north central portion of the observation area strong NS directed lineaments are present. This area is underlain by marble and presents the extension of the above described metasedimentary zone in the south.



GENERAL LOCATION MAP
ARDOCH PROJECT

 W. BRACK OPAP 92-233

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 seven 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.

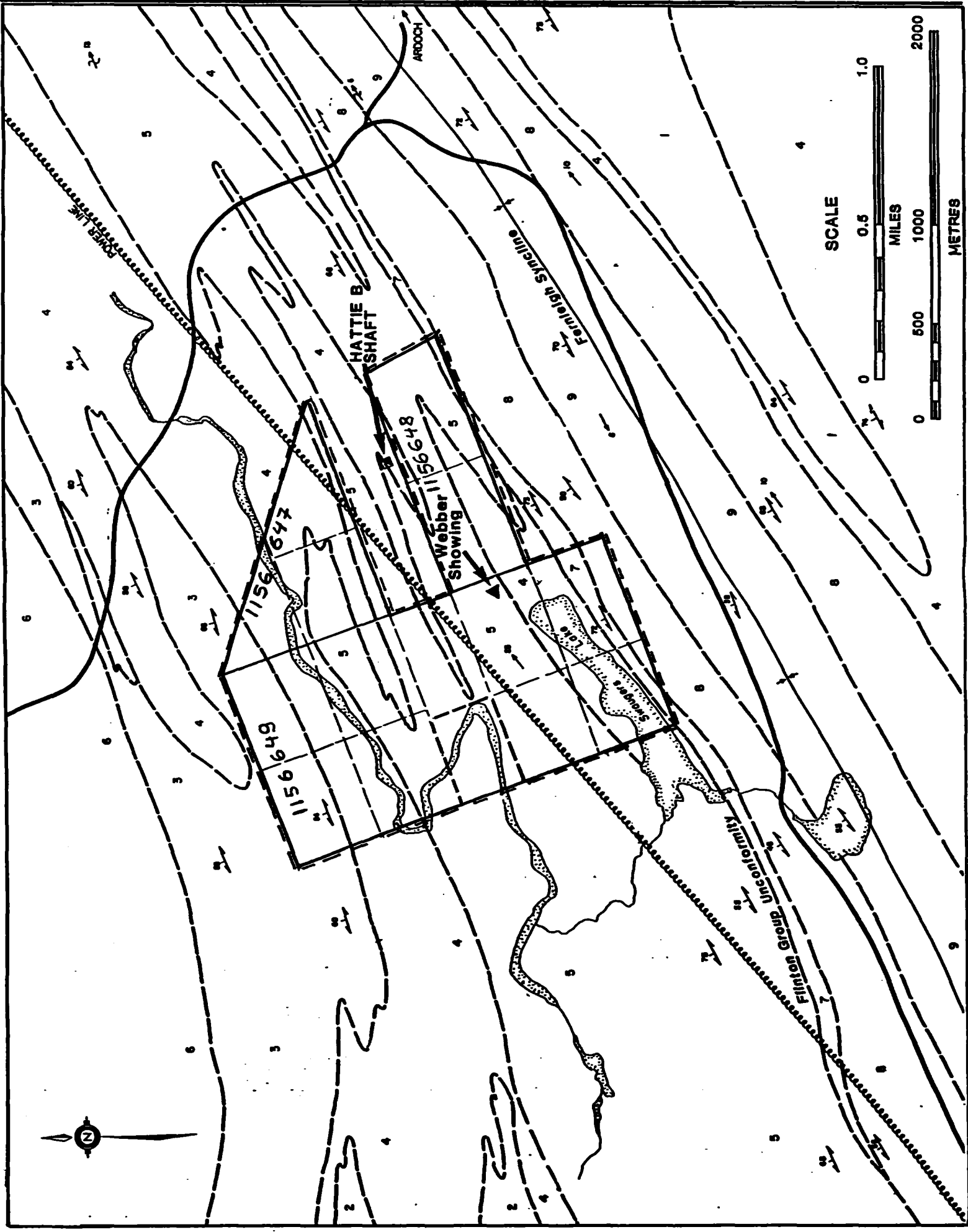
The southern portion of the property consists mainly of open and mature hardwood stands with intermittent grassland, whereas the northern portion is densely wooded such as in the low lying areas around Swamp River where cedar stands are difficult to penetrate.

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).



LEGEND

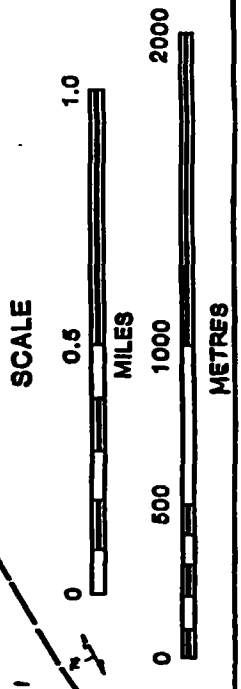
- PRECAMBRIAN**
 Grenville Supergroup - Flinton Group -
 Farnleigh Formation : Biotite-carbonate schist
 Myer Cave Formation : Graphite & pyrite schist; marble & dolomites; metaconglomerate; pelitic schist & pyrite & graphite
 Bishop Corners Formation : Undivided pelitic schists & muscovite & quartz & biotite & plagioclase & garnet & staurolite & kyanite & sillimanite; calcareous quartzite, calcite marble; conglomerate; hornblende biotite plagioclase & carbonate schist
 -Unconformity-
- Metamorphosed Mafic Intrusive Rocks**
 Gabbro, diorite; biotite-bearing
 -Intrusive Contact -
- Metasediments**
 Clastic Metasediments : calcareous sandstone; lithic sandstone; siliceous sandstone; undivided & muscovite & biotite
 Carbonate Metasediments : undivided marble and dolomitic marble; quartzite & hornblend-biotite-plagioclase - carbonate gneiss & metaconglomerate
- Felsic to Mafic Gneisses of Mixed Volcanic & Sedimentary Origin**
 Interlayered Felsic and Intermediate Gneisses
 Mafic Gneisses
Metavolcanics
 Mafic tuffs interlayered with carbonate metasediments and limy mudstones

SYMBOLS

- Foliation
- Lamination with plunge
- Geologic contact
- Axial Plane of syncline

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

A R D O C H P R O P E R T Y
 CLARENDON TWP.
 REGIONAL GEOLOGY
 AND CLAIM BOUNDARIES
 W. BRACK OPAP 92-233



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 centred in the middle part of the property with a minor Z-shape drag fold on the lower limb of a large Z-fold. An overturned anticline, the Boerth Anticline to the north part of the Z-fold and an overturned synform, the Swaugers Syncline, to the south, are 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 to the south of the property which transects the local Z-shape marble fold at an angle of 30 to 40 degree.

3) The gradational zone between the Mayo Group to 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 the lack of outcrops. At the regional scale, it 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 Minière 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

Originally it was planned to cut a new grid on the property. Due to an extreme heavy cedar growth, especially within the northern portion of the property line cutting would have been extremely time consuming. After establishing of a view reference lines, the old grid cuttings then were followed and the previous grid by Aurochs Société d'Exploration Minière Inc. was reestablished. In this way the utilisation of previous results was assured.

To revitalize the old grid, the pickets had to be located, marked, erected or replaced. A total of 3.6 km of reference lines and approximately 6 km of grid reestablishment was completed 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.

Method: The sampling technique and the analytical method was the same as previously described in paragraph 2.3 page 17.

Within the northern section of the property a total of 120 soil samples were collected. Originally a total of 99 samples were analyzed. The remaining samples were collected and analyzed later as a follow-up. The sample locations and main anomalies are presented in the compilation map. The following table gives the mean and standard deviation values for all elements of interest. The sample descriptions are provided in appendix 2 and the analytical results are given in appendix 1.

Statistical data:

	Zn	Cu	Pb	Au	As	Hg
Maximum value:	1411	95	126	759	276	2799
Minimum value:	21	3	2	3	5	10
Mean (arithmetic):	216	19	21	16	47	110
Standard deviation:	197	17	17	75	45	266
Threshold(2xSTD+MEAN):	610	52	54	165	137	643

	Mn	Ca x100	Mg x100	Ba
Maximum value:	6192	1000	855	394
Minimum value:	14	18	7	20
Mean (arithmetic):	1077	106	99	107
Standard deviation:	1208	166	110	67
Threshold(2xSTD+MEAN):	3493	437	319	242

Results:

The statistical approach for the interpretation of the analytical values for this soil survey is at this point not satisfying as it can be demonstrated for zinc. In order to resolve the situation a meaningful test to determine the sample populations is necessary. If possible the sample populations would then be recalculated for their individual means and standard deviations. Due to the lack of sophisticated statistical software such a procedure is postponed. In the meantime the geochemical data will be interpreted based on previous results in comparable environments.

Zinc: The zinc showing is not reflected as an anomaly. Three samples were taken from the same location just a few metres below the sphalerite occurrence. The A-horizon gave a value of 326 ppm Zn, the B-horizon a value of 410 ppm Zn and the C-horizon a value of 280 ppm Zn. The B-horizon is indeed the best selection. The values obtained directly below the sphalerite occurrence as well as the surrounding values are surprisingly low. One explanation might be that Zn within a carbonatic environment is largely immobile. However this does not reflect experiences within comparable environments. On the other hand the strongest anomaly (1411 ppm Zn - sample 36) is derived from an entirely organic and wet swamp locations. Zinc does precipitate in a reducing environment. The most interesting area appears to be the southern border of the north-west portion of the grid (north of Swamp river) where consistent high zinc values were obtained:

sample:	ppm Zn	sample:	ppm Zn
82	460	83	500
67	757	90	334
93	355	64	1184

Sample 94 with 634 ppm Zn is not directly in line with the above mentioned samples, it should however be considered in a possible follow up. A second grouping of high zinc values occurs in the very south-eastern corner, however the sample locations are at the foot of a hill and at the edge of a swamp.

Copper: Based on statistical considerations a total of 7 samples are considered anomalous in their copper content. They do not form any particular cluster:

sample 53	Line	00	position - 175	Cu(ppm)=	59
sample 36	Line	+500	position + 180	Cu(ppm)=	95
sample 61	Line	00	position - 175	Cu(ppm)=	79
sample 64	Line	+500	position + 180	Cu(ppm)=	47
sample 92	Line	00	position - 175	Cu(ppm)=	80
sample 90	Line	+500	position + 180	Cu(ppm)=	47
sample 75	Line	00	position - 175	Cu(ppm)=	50

The highest value (95 ppm) was obtained from a sample rich in organic material at the wet edge of a swamp. The absolute values of the anomalous samples may be considered relatively low and most likely do not relate to any major copper mineralization. In conjunction with other elements these copper values may be helpful as tracers.

lead: a cluster of anomalous Pb values occurs in the north-western portion of the survey area.

sample 81 (61 ppm Pb)	sample 82 (65 ppm Pb)
sample 93 (58 ppm Pb)	sample 64 (126 ppm Pb)

Although the absolute numbers are not very high the lead concentrations correlate with high zinc, copper, and manganese values.

arsenic: arsenic values are rather flat over the entire survey area, with the exception of sample 64 (876 ppm As). This sample carries anomalous values for Zn, Cu

gold: as with mercury the obvious anomaly is in the very south-east corner of the map (sample 1 / 220 ppb Au and sample / 759 ppb Au). The anomaly is caused by tailings from the former Hattie B-shaft operation. The more promising anomaly is sample 90 with 246 ppb Au (see Cu and Zn-values). Although two check-up analyses failed to indicate any gold values of interest, it is evident that soil samples size of 150 to 250 grams might not be sufficient to compensate for the erratic behaviour of gold (nugget effect). Therefore sample 90 should be considered for a follow-up program. Sample 23 (47 ppb Au) may also be considered anomalous.

mercury: the obvious anomaly is in the very south-east corner of the map (sample 1 / 333 ppm Hg and sample 2 with 2799 ppm Hg). This anomaly is caused by pollution through tailings originating from the Hattie B-shaft operation. Further to the west there is a high value 828 ppm Hg (sample 14) which may be related to the above described anomaly (dispersion). However this is not necessarily conclusive since mercury accumulation is common under bog conditions.

barium: the barium values are rather inconclusive and homogenous. Values which are statistically anomalous are erratic and do not relate to other anomalous elements with the exception of sample 81 (283 ppm Ba) and sample 82 (394 ppm Ba).

manganese: the highest concentration of anomalous manganese values are found in the north-western corner of the survey area (sample 81, 82, 69, 93, 64, 95 with values ranging from 3496 ppm Mn to 6192 ppm Mn). Unfortunately manganese has the ability to scavenge other metals and may produce false anomalies. Sample 24 with 4249 ppm Mn is surrounded by several high manganese concentrations just below the threshold value.

calcium and magnesium form an overlapping anomaly within the north-western survey area but slightly north of the anomalous metal concentrations. The calcium and magnesium anomalies may indicate the occurrence of dolomitic marble in this area.

The geochemical survey indicates a cluster of element concentrations within the north-western survey area (Zn, Cu, Pb, Au, As, Ba and Mn). The scavenging ability of manganese diminishes the quality of this anomaly, nevertheless a careful consideration should be given to this particular area.

3.4.3 Geological survey and prospecting

The geological map by Aurochs Société d'Exploration Minière Inc. is difficult to improve within the southern portion of the property where relative good outcrop exposure allows continuous geological observations. Within the northern portion of the property improvement could be achieved by detailed observations, which however did not change the general geological picture of the property. The geological observations are presented in the compilation map (folder 4).

Traditional prospecting was carried out mainly to cover ground between the survey lines in areas of particular interest, such as:

- between line 9 and 10E (prospecting and some stripping)
- between line 4, 5 and 6E (rusty quartz boulders)
- between line 3, 4 and 5W (rusty quartz)

The area surrounding the sphalerite showing as well as the

Webber gold showing (southern portion of the claims) were prospected. At the Webber gold showing attempts have been made to clean out portions of the trench bottom. Since no mineralization was visible in the uncovered section, further cleaning of the trench was abandoned

3.4.4 Air photo lineaments

The basis for this study are air photos at a scale of 1:10,000. The air photos used were numbered:

78-4463 78- 47 to 51,

78-4464 160-193 to 198

78-4465 80- 46 to 50

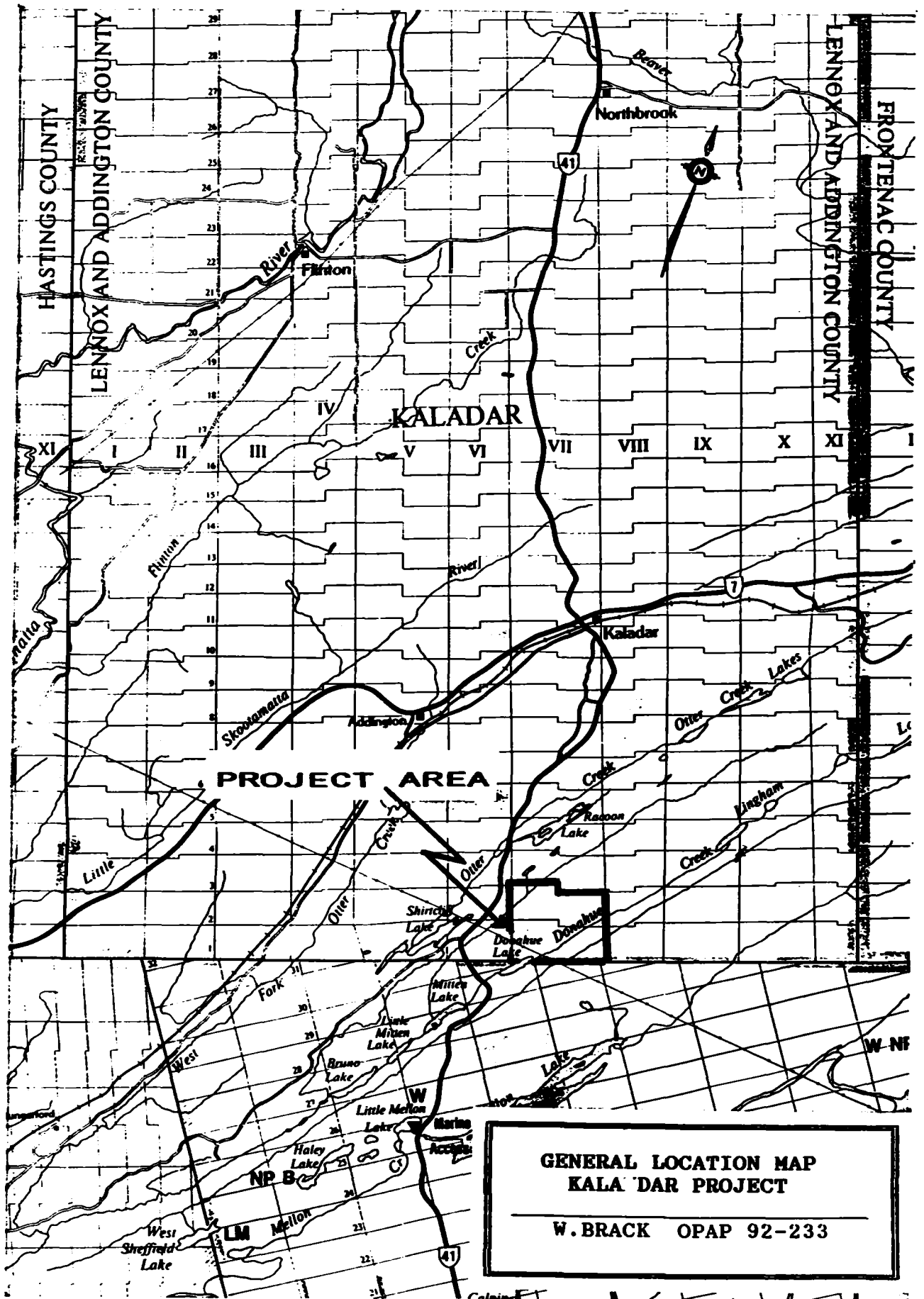
A TOPCON table stereoscope was used for the stereoscopic viewing of the air photos. The method of evaluation is explained in paragraph 2.5

Results: The most prominent structural feature on this map is a synform within the north-west corner of the map. The apex of the synform is marked by two narrow and strongly curved lakes. In the literature this synform is described as the Plevna syncline. A second strongly curved feature appears in the south-west corner of the map. Since it does not form a complete synform (the northern flank is missing) it represents most likely a distant expression of the above described Plevna syncline.

The most frequent lineament strikes ± 60 to 75 degree and relates to the regional shearing pattern. Other frequent lineament directions are ± 35 degree (mainly in the northern half of the observation area) and 340 degree. The lineaments with 340 degree tend to be quite long, however they are widely spaced.

One lineament relates to the Webber gold showing (285 degree). At least two additional lineaments are comparable with the Webber structure, one to the north-east and one to the south-west. Both of them as well as the Webber structure have to be considered as highly prospective. The Webber structure relates faintly to the Z-shape bending of the Swamp River. A possible fold structure in the area is not supported by the air photo lineaments.

Two other prominent features described in the literature, namely the Fernleigh Syncline and the Flinton Group Unconformity were not identified with the air photo lineaments.



4.0 PROJECT C: KALADAR (KALADAR TWP.)

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 (see map xx).

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 where 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.

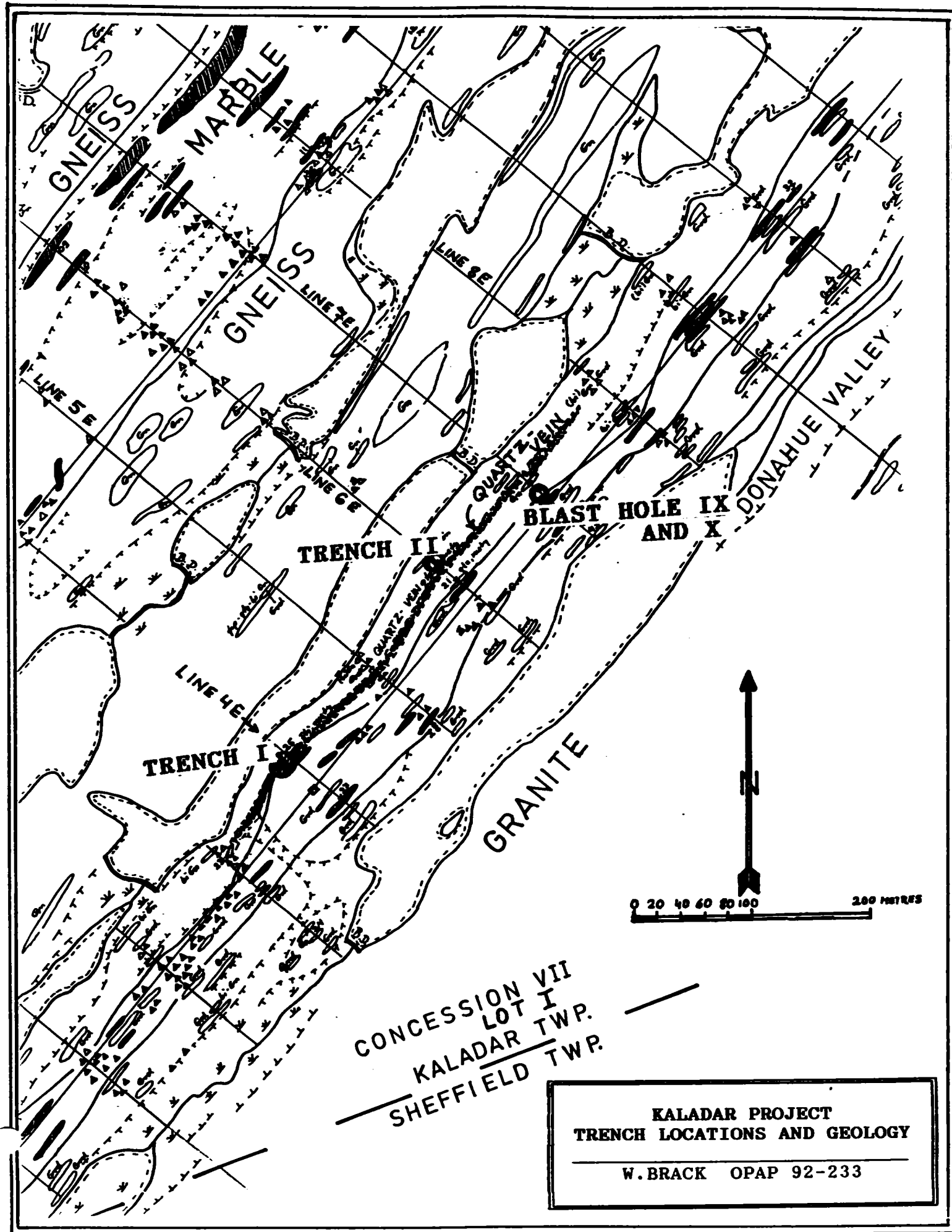
The area is marked by elongated ridges of minor elevations intersected by narrow, shallow lakes and swamps. Most of the lakes are created by the activity of beavers. The vegetation is dominated by hard-wood such as oak, beech, maple and birch with minor stands of spruce and pine. Patches of sumach bushes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



**KALADAR PROJECT
TRENCH LOCATIONS AND GEOLOGY**

W. BRACK OPAP 92-233

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.

4.4 Trenching

Two main trenches and several small test trenches as well as stripping of rock faces were completed across a newly discovered major quartz vein. An additional 10 blast holes were executed to extend the above mentioned trenches where heavy overburden was encountered.

4.4.1 Trench 1

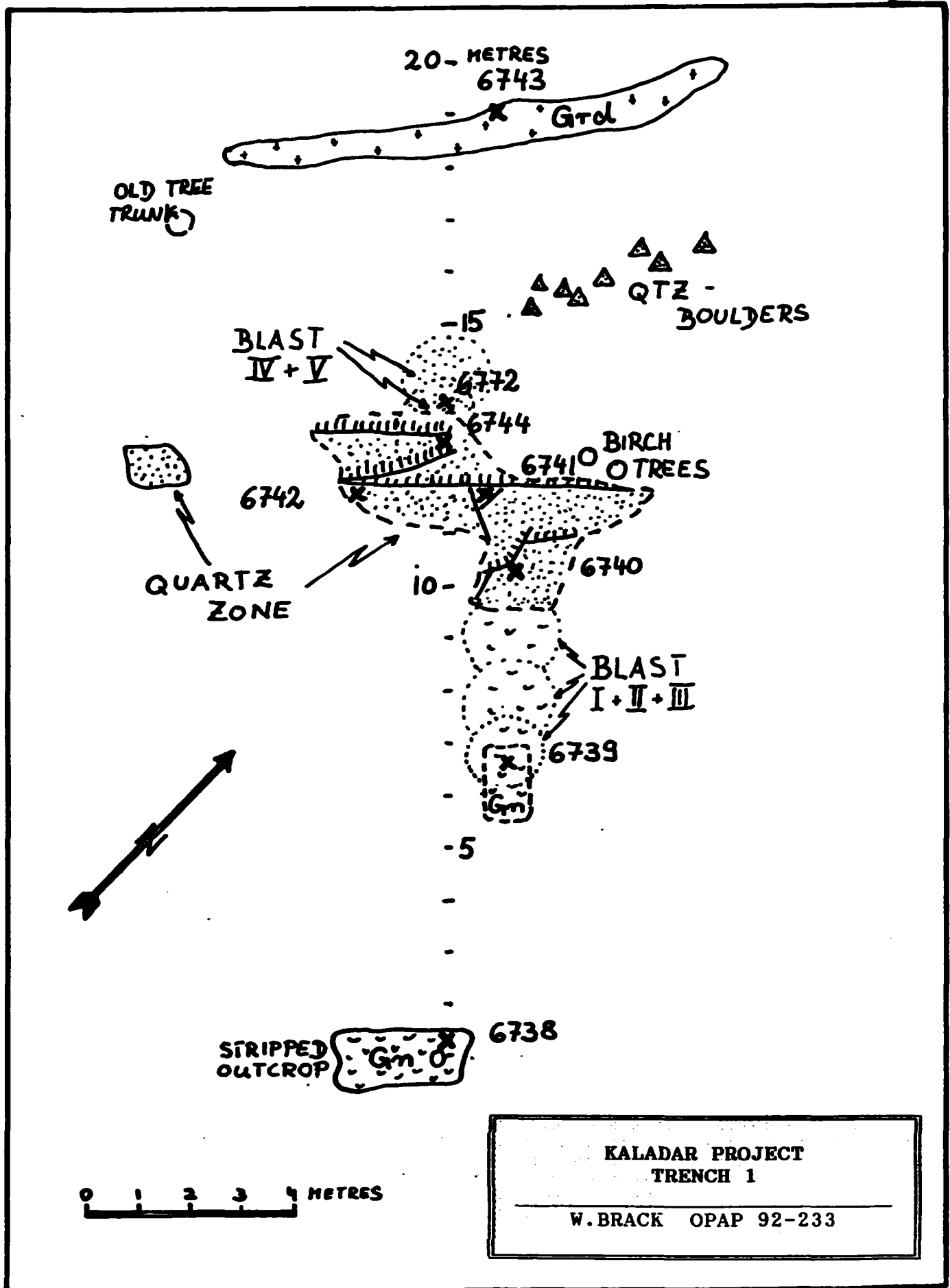
Trench 1 is stationed at 3+80 east, position 3+00 south. The trench is approximately 9 metres long and in the average 1 m wide. The trench is located on the north shoulder of a 100 metres wide and approximately 25 metres high ridge. The quartz vein is partially exposed as a small cliff. A total of 5 blast holes were executed after the first manual trenching in order to penetrate deep overburden cover and to obtain fresh rock samples.

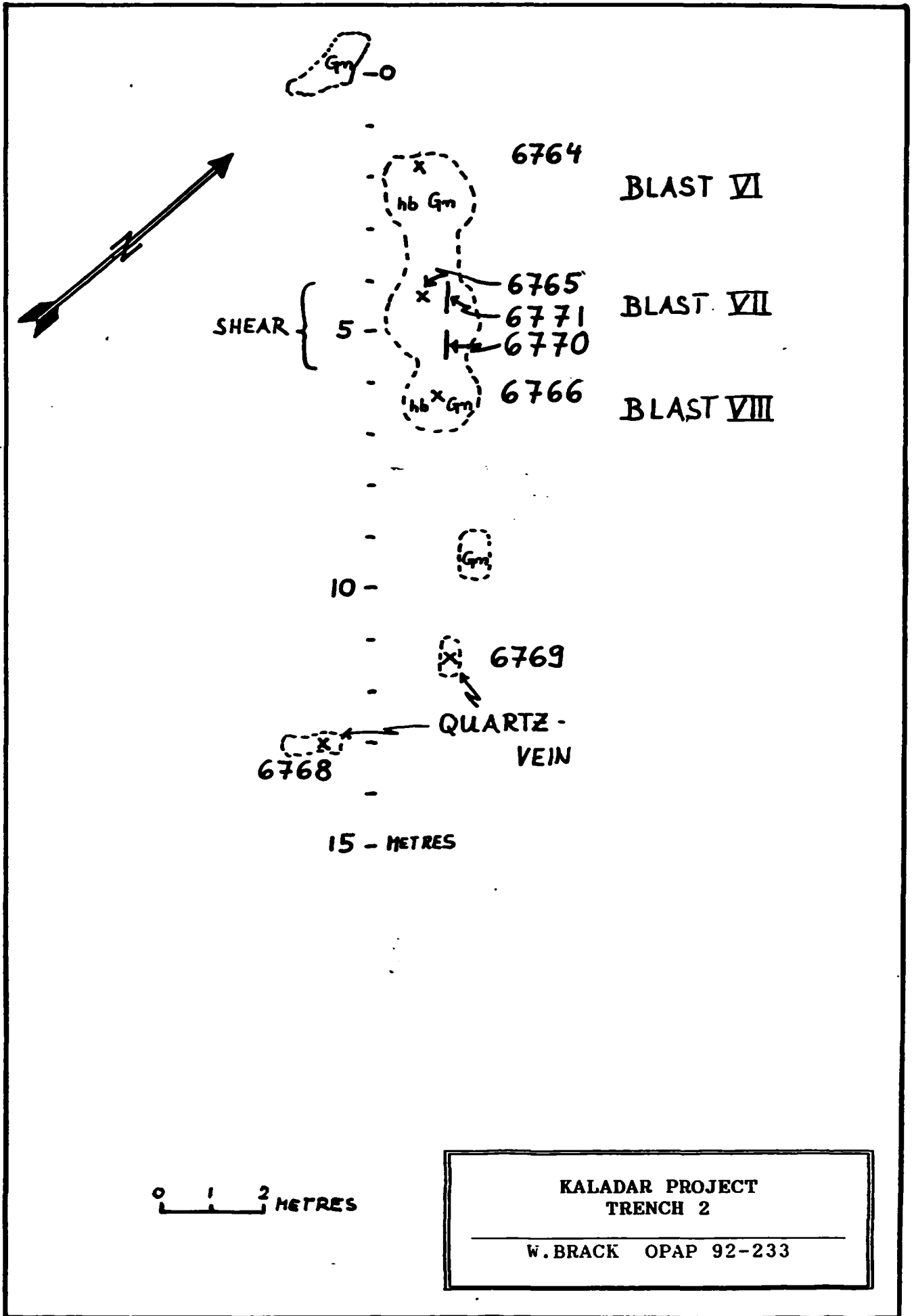
As described in a previous report OPAP 91-782, the ridge consists of a sequence of several narrow bands of granitoid rocks and metasedimentary marble. The trench revealed some additional lithologies, such as grey, fine grained biotite feldspar gneiss, amphibole gneiss with narrow bands of fine grained pyrite mineralization, a several metres wide quartz zone (vein ?) which is generally vuggy (leached calcite cavities or impurities) with considerable amount of rusty red hematite and some impregnations of pyrite. The quartz vein is bordered by a massive band of granite which is then in contact with quartzitic biotite gneiss.

4.4.2 Trench 2

Trench 2 is situated at line 6+00 east, position 3+00 south. The main trench is 5.50 metres long and 1,00 to 1,50 metres wide. Its location is in a flat lying densely wooded area with mature pine trees. The initial trenching was restricted to several hand dug test holes. Three blast holes north of the exposed quartz vein were executed in order to evaluate a geochemical soil anomaly (34 ppb Au), [see OPAP 91-245].

The lithologies exposed in trench II are comparable with the rock suites in trench I with the exception of a 2.5 metres wide shear zone composed of sandy material rich in iron oxide.





BLAST VI

BLAST VII

BLAST VIII

10 -

15 - METRES

0 1 2 METRES

KALADAR PROJECT
TRENCH 2

W. BRACK OPAP 92-233

4.4.3 Blast hole IX and X

Blast hole IX and X are situated at line 7+00 east 3+25 south. Both blasts were executed at the same spot in order to penetrate the deep overburden and to explain a geochemical anomaly (21 ppb Au), [see OPAP 91-245].

The lithology encountered was a deeply weathered meta-sedimentary marble with rust spots.

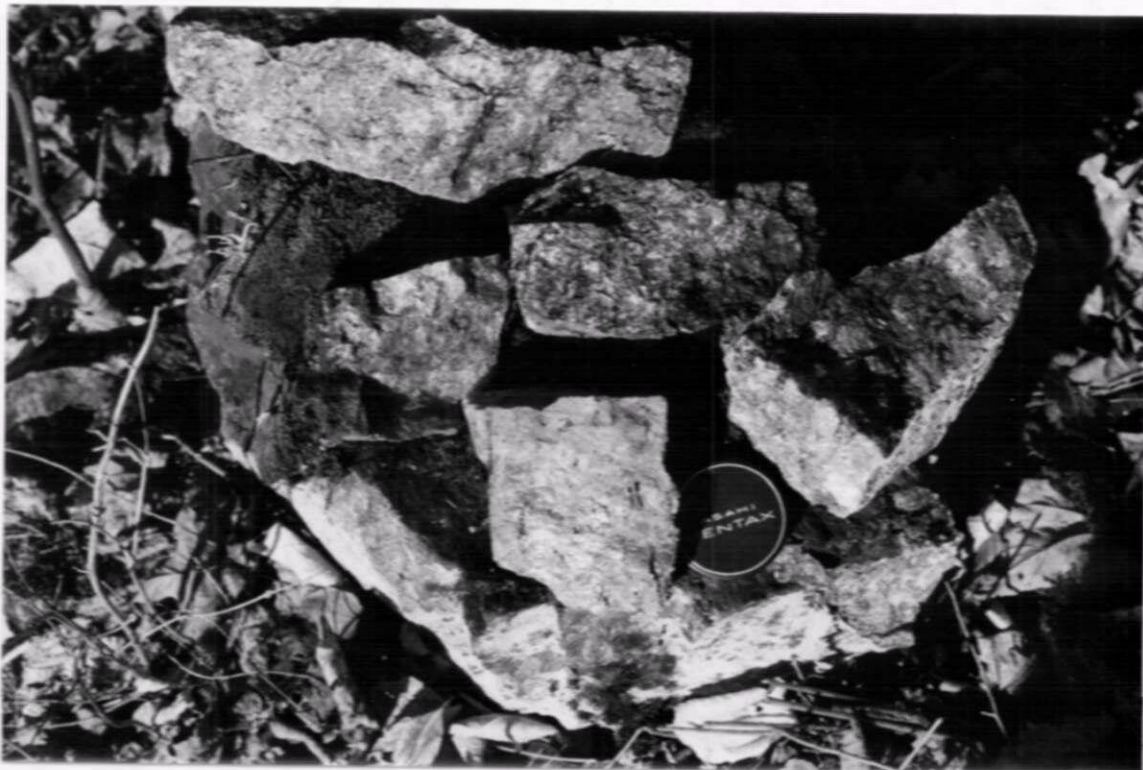
Sampling and analytical results:

A total of 16 rock samples have been collected and 14 of them have been geochemically analyzed (see appendix 3). Thin-section were completed from 3 rock samples. The samples taken were mainly grab samples (1 to 2 kg) with the exception of two channel samples across a shear zone in trench II.

The geochemical analysis confirmed previous results (OPAP 91-782) of elevated gold values within the quartz-vein. The best value obtained was 37 ppb Au (sample 6740), which can be considered marginally anomalous. Unfortunately these gold values are not supported by other trace or indicator elements. The exception is 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). Other samples with above background values are sample 6769 (trench I) with Mo (1273 ppm), Pb (130 ppm) and Cu (74 ppm), sample 6764 with Cu (153 ppm) and sample 6771 with Zn (270 ppm) and Pb (124 ppm).



Picture 1: Quartz-vein in trench 1



Picture 2: Quartz-vein hand specimens with various alterations

5. Conclusions and Recommendations:

Within the Norway Lake area (Sheffield twp.) the results are not encouraging. An attempt could be made to further investigate the marble unit in detail. Since large portions of the unit are covered by swamp such an endeavour should take place in winter (deep overburden drilling). The geochemical anomaly at Fifth Depot Lake (Hinchinbrooke twp.) should be verified. The most promising area for the potential discovery of sphalerite mineralization appears to be the previously unrecorded marble unit at Chippego Lake (Hinchinbrooke twp.). A magnetic survey would be helpful to outline the boundaries of this meta-sedimentary intercalation. This could be followed by detailed prospecting, geochemical soil sampling, deep overburden drilling and trenching.

The Ardoch project (Clarendon twp.) requires the evaluation of several geochemical anomalies. Within the northern portion of the property the geochemical soil survey should be extended. A detailed study should answer the question which role (if any) manganese plays in accumulating other metals within this particular area.

Although the quartz vein within the Kaladar project (Kaladar twp.) did not reveal any analytical results of economic interest, it nevertheless remains an interesting exploration target. This is supported by the presence of shear zones, the impressive size of the quartz vein, the widespread but marginal elevated Au values within the quartz vein, but foremost by the anomalous element association in blast hole IX and X. Hydrothermal activity possibly related to the quartz-vein injection is indicated. There is a reasonable possibility that the quartz-vein fills "the main structure" and mineralization is situated in subsidiary structures or within the perimeter of the main structure. Stockwork or ore shoot mineralization may be expected.

It is recommended to extend the trenching, especially around blast hole IX and X. A very detailed mapping (eventually 1:1000) with the emphasis on structural mapping may help to identify patterns which are potentially suited for mineralization. A detailed biogeochemical survey may pinpoint additional and covered mineralized areas.

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.
- 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.\
- Jowett, R.
1987 Report on a Soil Geochemical Survey, Puzzle Lake Property, Sheffield Township, St. Joe Canada Inc., Assessment report
- Uglow, W. L.
1916 Lead and Zinc Deposits in Ontario and Eastern Canada, OBM Annual Report Volume 25 Pt. 2.

CERTIFICATE OF QUALIFICATION

I, Winfried Brack do hereby certify:

1. that I am a geologist and reside at 34 Birch Hill Rd.,
Baie d'Urfe, Quebec, H9X 3H8,
2. that I graduated from the University in Munich
Germany) in 1972 with a degree of "Diplom Geologe" in geology
(approx. equivalent to a Master of Science) and from the
University of Munich (Germany) in 1977 with a degree of
"Doctor rerum naturalium" in mineralogy (equivalent Ph.D.),
3. that I have practiced my profession continuously since
1978 and executed exploration work in Canada since 1980,
4. that I visited the recorded investigation areas and my report
is based upon my personal observations, or otherwise listed in
the references.
5. that I have a personal floating interest in the described
property in Clarendon township.



Winfried Brack, Dr.
Dipl.-Geologe

January 26, 1993

APPENDIX 1

**ANALYTICAL RESULTS
GEOCHEMICAL LAB REPORTS
BY
BONDAR & CLEGG COMPANY LTD.**

REPORT: 092-42715.0 (COMPLETE)

REFERENCE:

CLIENT: GEOBRACK INC.
PROJECT: NONE

SUBMITTED BY: W. BRACK
DATE PRINTED: 28-OCT-92

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au Gold	3	5 PPB	FIRE ASSAY	FIRE ASSAY @ 10 G
2	Ti Titanium	3	0.01 PCT	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
3	Al Aluminum	3	0.01 PCT	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
4	Fe Tot Total Iron	3	0.01 PCT	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
5	Mn Manganese	3	50 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
6	Mg Magnesium	3	0.01 PCT	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
7	Ca Calcium	3	0.01 PCT	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
8	Na Sodium	3	0.01 PCT	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
9	K Potassium	3	0.01 PCT	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
10	Li Lithium	3	2 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
11	Sc Scandium	3	1 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
12	V Vanadium	3	2 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
13	Cr Chrome	3	2 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
14	Co Cobalt	3	1 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
15	Ni Nickel	3	1 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
16	Cu Copper	3	1 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
17	Zn Zinc	3	1 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
18	Ga Gallium	3	10 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
19	Sr Strontium	3	1 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
20	Y Yttrium	3	5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
21	Zr Zirconium	3	1 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
22	Nb Niobium	3	5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
23	Mo Molybdenum	3	1 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
24	Ag Silver	3	0.2 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
25	Cd Cadmium	3	0.5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
26	Sn Tin	3	20 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
27	Sb Antimony	3	5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
28	Te Tellerium	3	25 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
29	Ba Barium	3	5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
30	La Lanthanum	3	5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
31	Ta Tantalum	3	5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
32	W Tungsten	3	20 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
33	Pb Lead	3	2 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
34	Bi Bismuth	3	5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
35	As Arsenic	3	5 PPM	HF-HNO3-HClO4-HCL	INDUC. COUP. PLASMA
36	Hg Mercury	3	5 PPB	HNO3-HCL-SNCL2	COLD VAPOR AA

Geochemical Lab Report

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM
NW1			3.40	6.18	1230	2.40	0.51	0.05	0.05	<5	88	24
NW2			1.67	2.82	291	0.34	0.13	0.05	0.03	<5	46	19
NW3			1.30	4.54	558	0.21	0.08	0.05	0.03	<5	49	20
NW4			0.99	1.45	634	0.29	0.27	0.06	0.06	<5	26	19
NW5			1.29	2.01	525	0.30	0.13	0.05	0.04	<5	30	18
NW6			0.78	1.42	391	0.26	0.33	0.06	0.05	<5	22	14
NW7			0.85	1.21	458	0.19	0.17	0.06	0.06	<5	20	12
NW8			1.97	3.08	319	1.19	1.02	0.08	0.04	6	79	37
NW9			1.07	2.50	827	0.17	0.21	0.06	0.03	<5	34	15
NW10			0.53	1.03	122	0.09	0.12	0.05	0.03	<5	21	7
NW11			0.82	1.26	78	0.21	0.23	0.05	0.03	<5	22	13
NW12			1.06	2.38	251	0.17	0.16	0.05	0.03	<5	36	17
NW13			1.33	2.08	127	0.24	0.54	0.06	0.04	<5	27	19
NW14			1.77	2.57	333	0.57	0.23	0.05	0.04	<5	35	21
NW15			0.51	1.27	122	0.17	0.17	0.06	0.03	<5	21	10
NW16			1.31	3.44	213	0.53	0.74	0.07	0.13	<5	49	27
NW17			1.34	2.67	744	0.52	0.20	0.06	0.04	<5	37	19
NW18			1.27	1.72	227	0.50	0.65	0.07	0.15	<5	29	21
NW19			0.95	1.07	82	0.24	0.19	0.06	0.06	<5	22	13
NW20			1.78	1.82	193	0.64	0.35	0.05	0.04	<5	53	20
NW21			1.65	3.91	424	0.90	0.83	0.05	0.02	<5	43	32
NW22			1.92	3.52	3801	0.39	0.71	0.06	0.07	5	38	28
NW23			1.30	1.92	686	0.46	0.34	0.06	0.04	<5	27	18
NW24			1.02	2.39	370	0.25	0.11	0.06	0.07	<5	29	12
NW25			1.22	2.15	385	0.30	0.16	0.07	0.05	<5	33	19
NW26			1.56	2.31	2263	0.47	0.48	0.07	0.08	<5	33	24
NW27			1.81	2.53	266	0.42	0.26	0.06	0.05	<5	40	23
NW28			1.38	2.26	276	0.49	0.28	0.07	0.06	<5	35	21
NW29			1.31	2.30	149	0.41	0.66	0.07	0.05	<5	47	16
NW30			0.93	1.33	203	0.23	0.16	0.05	0.03	<5	22	13
NW31			1.21	1.46	340	0.25	0.12	0.05	0.04	<5	22	14
NW32			1.57	2.31	226	0.94	0.74	0.06	0.03	<5	39	25
NW33			1.92	2.86	1174	1.36	1.04	0.06	0.04	<5	42	24
NW34			0.54	1.17	98	0.12	0.15	0.05	0.03	<5	22	9
NW35			2.17	3.26	1214	0.85	0.32	0.06	0.05	<5	41	25
NW36			2.07	4.00	5449	0.64	0.55	0.06	0.04	<5	36	25
NW37			0.81	1.50	150	0.21	0.56	0.05	0.02	<5	23	16
NW38			1.60	2.79	639	0.33	0.21	0.04	0.05	<5	41	25
NW39			1.69	3.51	868	0.31	0.17	0.05	0.04	<5	41	21
NW40			1.54	2.75	695	0.55	0.18	0.05	0.04	<5	34	15

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM
NW1		29	34	17	298	24	10	14	<1	0.3	0.2	<20
NW2		15	16	18	92	6	4	10	2	0.4	<0.2	<20
NW3		11	19	13	224	7	4	3	4	0.4	1.2	<20
NW4		6	13	8	71	<5	8	7	2	0.2	0.6	<20
NW5		9	13	6	88	<5	5	3	<1	0.2	<0.2	<20
NW6		7	10	10	56	<5	8	5	<1	<0.2	0.7	<20
NW7		6	9	4	51	<5	6	3	1	<0.2	0.4	<20
NW8		12	33	60	61	<5	26	16	2	0.3	0.7	<20
NW9		9	13	12	81	<5	7	7	2	0.3	<0.2	<20
NW10		3	6	4	60	<5	4	5	<1	0.3	0.3	<20
NW11		7	22	12	70	<5	6	10	4	<0.2	0.3	<20
NW12		7	10	6	62	<5	7	5	<1	0.3	0.4	<20
NW13		7	15	14	61	<5	10	25	2	0.3	<0.2	<20
NW14		9	18	14	118	<5	6	7	<1	0.3	0.6	<20
NW15		4	6	6	38	<5	5	5	<1	<0.2	<0.2	<20
NW16		10	21	34	135	<5	15	19	3	0.3	1.1	<20
NW17		11	12	10	135	<5	5	4	<1	0.2	0.8	<20
NW18		6	14	12	78	<5	13	8	<1	0.3	<0.2	<20
NW19		6	19	17	135	<5	7	8	2	0.3	<0.2	<20
NW20		12	29	39	579	<5	21	7	1	0.4	<0.2	<20
NW21		21	50	20	105	5	18	24	6	0.3	0.8	<20
NW22		28	45	31	474	5	13	24	9	0.2	2.0	<20
NW23		8	15	11	136	<5	6	7	<1	0.4	0.4	<20
NW24		7	16	41	184	18	9	5	9	0.4	2.2	<20
NW25		8	14	6	79	<5	6	4	2	<0.2	<0.2	<20
NW26		12	15	11	105	<5	12	9	2	<0.2	1.0	<20
NW27		9	14	5	123	6	8	5	1	0.3	0.5	<20
NW28		11	16	15	364	<5	9	6	<1	0.3	0.5	<20
NW29		11	19	24	474	<5	21	8	3	0.5	1.6	<20
NW30		6	9	4	109	<5	5	7	<1	<0.2	<0.2	<20
NW31		7	11	13	88	6	5	5	<1	0.4	<0.2	<20
NW32		10	22	41	662	<5	13	30	3	0.4	1.3	<20
NW33		15	24	63	1742	5	11	30	<1	0.4	1.7	<20
NW34		3	5	2	163	<5	6	4	<1	0.3	0.4	<20
NW35		13	18	11	591	<5	8	6	2	0.2	0.3	<20
NW36		10	15	18	383	6	7	6	2	<0.2	1.5	<20
NW37		5	7	5	66	<5	11	7	1	0.3	0.8	<20
NW38		16	18	6	178	13	6	4	1	0.3	0.5	<20
NW39		15	23	15	214	8	6	5	3	0.4	0.4	<20
NW40		9	15	10	154	<5	6	4	1	<0.2	1.1	<20

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Sb PPM	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM	Hg PPB
NW1		<5	<10	87	17	<20	11	<5	
NW2		<5	<10	38	14	<20	8	<5	
NW3		<5	<10	58	7	<20	17	<5	
NW4		<5	<10	64	9	<20	6	<5	
NW5		<5	<10	55	5	<20	9	<5	
NW6		<5	<10	47	6	<20	8	<5	
NW7		<5	<10	48	5	<20	6	<5	
NW8		6	<10	146	17	<20	7	<5	
NW9		<5	<10	43	9	<20	11	<5	
NW10		<5	<10	38	5	<20	9	<5	
NW11		<5	<10	39	13	<20	6	<5	
NW12		<5	<10	50	6	<20	9	<5	
NW13		<5	<10	85	43	<20	9	<5	
NW14		<5	<10	48	10	<20	9	<5	
NW15		<5	<10	23	4	<20	4	<5	
NW16		<5	<10	134	23	<20	7	<5	
NW17		<5	<10	91	7	<20	7	<5	
NW18		6	<10	157	11	<20	14	<5	
NW19		<5	<10	90	11	<20	10	<5	
NW20		<5	<10	358	7	<20	26	<5	
NW21		<5	<10	76	26	<20	13	<5	
NW22		<5	<10	141	24	<20	8	<5	
NW23		<5	<10	64	9	<20	15	<5	
NW24		<5	<10	67	10	<20	94	<5	
NW25		<5	<10	92	6	<20	8	<5	
NW26		<5	<10	122	12	<20	13	<5	
NW27		6	<10	76	7	<20	6	<5	
NW28		<5	<10	82	8	<20	12	<5	
NW29		5	<10	143	10	<20	8	<5	
NW30		<5	<10	50	8	<20	5	<5	
NW31		<5	<10	56	7	<20	6	<5	
NW32		5	<10	111	28	<20	21	<5	
NW33		6	<10	122	25	<20	30	<5	
NW34		<5	<10	43	5	<20	10	<5	
NW35		5	<10	99	9	<20	20	<5	
NW36		6	<10	209	12	<20	22	<5	
NW37		<5	<10	45	7	<20	7	<5	
NW38		<5	<10	60	7	<20	13	<5	
NW39		<5	<10	59	10	<20	18	<5	
NW40		<5	<10	57	7	<20	13	<5	

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 2A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM
NW41			1.79	3.45	304	0.90	0.32	0.05	0.05	<5	55	22
NW42			1.44	2.39	420	0.78	0.40	0.06	0.05	<5	39	20
NW43			1.75	1.62	78	0.35	1.32	0.06	0.03	<5	18	15
NW44			1.17	2.28	145	0.43	0.86	0.07	0.05	<5	28	21
NW45			2.07	2.69	256	0.60	0.27	0.06	0.04	<5	44	22
NW46			1.73	3.63	445	0.54	0.30	0.05	0.04	<5	42	26
NW47			0.80	1.26	71	0.19	0.18	0.05	0.02	<5	22	15
NP1			2.20	3.61	1689	1.62	0.29	0.05	0.04	<5	47	26
NP2			1.01	1.53	808	0.26	0.21	0.05	0.03	<5	26	15
NP3			0.74	2.52	159	0.11	0.18	0.05	0.03	<5	54	12
NP4			1.77	4.09	425	0.73	0.86	0.06	0.06	<5	54	24
NP5			1.08	2.08	201	0.38	0.19	0.06	0.04	<5	34	18
NP6			1.85	3.11	1433	0.56	0.47	0.06	0.06	<5	46	25
NP7			1.24	2.69	1307	0.48	0.30	0.06	0.05	<5	41	21
NP8			2.03	1.80	125	0.40	0.14	0.05	0.04	<5	31	21
NP9			1.42	2.25	590	0.44	0.25	0.05	0.04	<5	33	16
NP10			1.34	2.45	510	0.95	0.40	0.05	0.03	<5	35	16
NP11			0.64	1.23	282	1.00	3.47	0.05	0.02	<5	31	8
NP12			0.95	1.93	194	0.43	0.31	0.06	0.05	<5	32	16
NP13			0.64	1.05	375	0.17	0.15	0.05	0.03	<5	20	8
NP14			1.00	1.53	389	0.28	0.22	0.06	0.05	<5	26	15
NP15			0.79	1.09	1143	0.21	0.18	0.06	0.04	<5	19	12
NP16			0.50	0.86	355	0.32	2.71	0.06	0.02	<5	25	6
A1		220	0.59	1.15	72	0.45	0.18	0.07	0.36	<5	12	10
A2		759	0.91	1.68	383	1.08	5.95	0.06	0.54	<5	27	13
A3		12	0.63	1.36	133	0.36	0.46	0.05	0.04	<5	28	17
A4		9	2.03	3.29	997	0.75	0.58	0.06	0.10	<5	52	26
A5		10	1.92	3.15	1256	1.04	0.99	0.06	0.14	<5	52	29
A6		8	2.22	5.26	1365	1.06	0.91	0.07	0.28	8	94	27
A7		5	1.79	3.12	713	0.48	0.35	0.05	0.07	<5	44	24
A8		6	1.23	1.90	223	0.47	0.61	0.07	0.06	<5	32	19
A9		13	0.19	0.56	14	0.27	5.96	0.05	<0.01	<5	3	3
A10		6	0.60	1.44	86	0.19	0.18	0.04	0.03	<5	35	10
A11		21	1.21	1.95	502	0.79	0.53	0.06	0.06	<5	37	17
A12		9	1.38	2.38	360	0.81	0.65	0.06	0.05	<5	45	40
A13		10	1.04	2.01	173	0.75	1.74	0.05	0.04	<5	34	18
A14		13	1.03	2.23	186	0.46	1.69	0.06	0.05	<5	42	25
A15		11	0.19	0.50	270	0.65	5.97	0.06	0.01	<5	3	3
A16		8	2.02	2.69	680	0.90	0.53	0.09	0.11	<5	45	31
A17		7	1.25	1.95	149	0.52	0.46	0.07	0.05	<5	33	19

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 2B

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM
MM41		12	18	6	151	<5	7	5	1	0.3	0.4	<20
MM42		12	15	20	98	6	10	14	1	0.4	0.4	<20
MM43		7	20	19	47	<5	23	25	1	0.4	0.4	<20
MM44		8	17	19	100	<5	13	25	1	0.3	0.9	<20
MM45		13	22	16	186	<5	8	8	2	0.2	0.4	<20
MM46		27	224	38	1887	<5	7	15	2	0.4	0.8	<20
MM47		4	11	4	37	<5	5	9	<1	0.3	0.5	<20
NP1		15	19	16	195	12	7	5	<1	0.3	0.3	<20
NP2		5	9	5	69	<5	6	3	<1	0.4	0.6	<20
NP3		3	5	5	44	<5	9	3	<1	0.3	0.5	<20
NP4		28	24	67	121	<5	12	29	1	<0.2	0.3	<20
NP5		6	10	6	86	5	5	4	<1	0.3	<0.2	<20
NP6		10	15	9	171	9	12	4	<1	0.3	<0.2	<20
NP7		15	16	9	161	9	8	3	1	<0.2	0.9	<20
NP8		8	17	23	51	5	5	6	1	<0.2	<0.2	<20
NP9		8	11	6	123	7	8	3	1	<0.2	0.6	<20
NP10		12	11	13	103	8	7	4	2	0.3	0.9	<20
NP11		9	9	42	104	8	33	20	<1	<0.2	1.2	<20
NP12		8	10	4	44	<5	8	5	<1	0.2	<0.2	<20
NP13		4	4	2	61	5	5	3	1	<0.2	<0.2	<20
NP14		6	7	4	48	8	7	5	1	<0.2	<0.2	<20
NP15		5	6	4	54	6	6	5	<1	<0.2	0.6	<20
NP16		4	8	33	134	8	98	15	3	0.2	1.8	<20
A1		3	7	27	21	83	3	4	<1	<0.2	0.2	<20
A2		6	11	39	92	142	64	5	<1	0.7	0.3	<20
A3		6	7	4	77	9	6	3	<1	0.3	<0.2	<20
A4		14	20	23	326	23	12	7	2	0.7	1.3	<20
A5		14	21	28	410	21	19	11	<1	0.8	0.6	<20
A6		23	22	28	280	18	13	15	2	0.8	0.7	<20
A7		11	14	7	222	17	9	4	<1	0.3	0.6	<20
A8		8	13	13	47	14	10	10	<1	0.3	0.4	<20
A9		<1	5	10	48	10	76	3	1	<0.2	0.5	<20
A10		3	5	3	38	<5	5	2	1	0.2	<0.2	<20
A11		10	12	6	112	9	9	6	<1	0.2	<0.2	<20
A12		13	22	16	57	24	8	6	<1	0.5	<0.2	<20
A13		8	10	9	76	17	18	5	1	0.3	<0.2	<20
A14		12	15	14	749	39	32	5	<1	0.5	1.5	<20
A15		<1	4	13	43	<5	208	2	2	<0.2	1.3	<20
A16		11	20	8	111	<5	15	8	<1	0.3	0.7	<20
A17		10	13	3	52	15	9	8	1	<0.2	<0.2	<20

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 2C

SAMPLE NUMBER	ELEMENT UNITS	Sb PPM	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM	Hg PPB
MU41		<5	<10	56	8	<20	17	<5	
MU42		6	<10	73	13	<20	19	<5	
MU43		<5	<10	103	40	<20	28	<5	
MU44		<5	<10	46	29	<20	13	<5	
MU45		6	<10	49	12	<20	28	<5	
MU46		<5	<10	62	16	<20	16	<5	
MU47		<5	<10	36	11	<20	9	<5	
NP1		6	<10	83	8	<20	7	<5	
NP2		<5	<10	56	5	<20	5	<5	
NP3		<5	<10	53	6	<20	8	<5	
NP4		<5	<10	204	31	<20	11	<5	
NP5		<5	<10	40	6	<20	5	<5	
NP6		5	<10	95	7	<20	12	<5	
NP7		<5	<10	96	6	<20	13	<5	
NP8		<5	<10	47	10	<20	7	<5	
NP9		5	<10	72	5	<20	8	<5	
NP10		5	<10	53	6	<20	32	<5	
NP11		6	<10	82	16	<20	48	<5	
NP12		<5	<10	26	6	<20	5	<5	
NP13		<5	<10	28	5	<20	11	<5	
NP14		<5	<10	38	8	<20	7	<5	
NP15		<5	<10	44	6	<20	6	<5	
NP16		<5	<10	115	12	<20	66	<5	
A1		<5	<10	20	6	<20	2	<5	333
A2		23	<10	74	7	<20	47	<5	2799
A3		<5	<10	56	4	<20	11	<5	53
A4		8	<10	216	9	<20	20	<5	53
A5		7	<10	227	14	<20	43	<5	82
A6		10	<10	220	15	<20	14	<5	80
A7		<5	<10	181	8	<20	11	<5	29
A8		<5	<10	91	13	<20	9	<5	35
A9		<5	<10	157	2	<20	2	<5	133
A10		<5	<10	24	4	<20	5	<5	11
A11		<5	<10	132	8	<20	14	<5	57
A12		5	<10	78	7	<20	12	<5	93
A13		5	<10	178	6	<20	10	<5	113
A14		<5	<10	48	7	<20	45	<5	828
A15		<5	<10	353	1	<20	7	<5	185
A16		<5	<10	121	11	<20	4	<5	35
A17		<5	<10	79	11	<20	15	<5	40

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 3A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM
A18		7	0.61	1.91	196	0.16	0.40	0.06	0.03	<5	33	10
A19		9	0.59	1.09	77	0.16	1.01	0.05	0.02	<5	29	8
A20		8	1.88	3.00	330	0.38	0.27	0.05	0.07	<5	75	25
A21		9	2.03	4.68	1528	0.26	0.61	0.05	0.07	<5	65	24
A22		8	2.46	3.97	923	0.90	0.60	0.07	0.15	6	81	34
A23		42	2.22	4.17	2198	0.52	0.31	0.05	0.11	<5	71	30
A24		6	1.74	4.12	4249	0.63	1.07	0.07	0.23	6	74	27
A25		6	1.91	3.03	731	0.66	0.49	0.07	0.11	<5	57	32
A26		<5	2.61	5.09	767	0.75	0.41	0.06	0.11	5	92	32
A27		6	1.81	4.35	486	0.34	0.41	0.05	0.06	<5	68	27
A28		7	1.79	2.73	336	0.52	0.29	0.05	0.06	<5	61	26
A29		9	2.46	4.75	188	0.96	1.21	0.07	0.03	9	105	44
A30		6	2.52	4.96	333	0.56	0.57	0.06	0.05	7	89	36
A31		6	2.23	4.26	673	0.62	0.28	0.05	0.08	5	84	28
A32		8	1.59	2.80	934	0.39	0.40	0.05	0.08	<5	48	23
A33		5	2.17	3.96	390	0.67	0.33	0.06	0.07	<5	78	34
A34		7	1.61	4.14	2497	0.55	0.34	0.05	0.08	<5	68	30
A35		<5	1.93	3.25	1678	1.50	1.07	0.07	0.12	<5	57	27
A36		9	0.22	0.47	85	0.12	5.45	0.06	0.02	<5	12	4
A37		7	1.54	2.25	735	0.42	0.61	0.05	0.07	<5	40	20
A38		7	2.45	3.03	506	0.99	0.92	0.07	0.25	6	49	36
A39		7	2.45	3.62	637	0.79	0.66	0.06	0.16	7	60	45
A40		6	1.73	3.29	599	0.62	0.26	0.05	0.08	<5	65	28
A41		6	1.75	2.73	923	0.46	0.21	0.05	0.06	<5	43	27
A42		11	1.98	3.75	402	0.61	0.39	0.06	0.09	<5	70	27
A43		7	2.18	4.76	285	1.17	0.73	0.05	0.09	11	115	43
A44		8	1.55	2.18	106	0.52	0.39	0.05	0.03	<5	39	36
A45		9	1.56	2.59	558	0.59	0.44	0.06	0.06	<5	42	30
A46		21	1.75	3.41	1189	0.55	0.71	0.06	0.09	<5	57	27
A47		6	1.88	3.32	468	0.86	0.82	0.06	0.11	5	44	27
A48		7	1.78	4.10	951	0.92	0.58	0.04	0.04	<5	149	26
A49		8	1.10	2.70	184	0.27	0.20	0.05	0.07	<5	52	19
A50		8	2.13	3.49	488	1.00	0.53	0.07	0.10	<5	54	32
A51		8	2.03	3.16	379	0.71	0.47	0.06	0.10	<5	49	32
A52		10	2.31	4.74	977	1.39	0.39	0.05	0.08	<5	59	34
A53		8	2.40	3.52	532	0.80	0.45	0.06	0.09	<5	58	33
A54		11	2.42	3.09	254	1.21	0.30	0.05	0.11	<5	57	77

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 38

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM
A18		4	6	5	45	12	8	3	<1	0.3	<0.2	<20
A19		4	5	6	77	12	18	3	<1	0.8	<0.2	<20
A20		12	23	7	182	72	14	3	3	0.3	0.4	<20
A21		11	19	9	440	51	17	7	4	0.6	0.5	<20
A22		18	26	27	151	34	17	12	2	0.5	1.0	<20
A23		18	21	11	185	44	13	8	<1	0.4	0.7	<20
A24		21	23	31	174	79	19	25	3	0.6	1.3	<20
A25		16	23	20	169	28	11	6	<1	0.3	0.9	<20
A26		20	23	15	213	87	12	8	<1	0.5	0.8	<20
A27		17	21	11	114	114	14	4	2	0.4	1.1	<20
A28		13	16	7	124	22	9	3	1	0.3	<0.2	<20
A29		25	28	18	104	38	29	18	2	0.6	<0.2	<20
A30		28	26	16	83	88	13	15	2	0.9	0.5	<20
A31		17	21	11	186	186	8	6	1	0.6	0.5	<20
A32		10	16	7	126	31	12	4	1	0.3	<0.2	<20
A33		13	18	13	132	25	9	5	2	0.3	<0.2	<20
A34		21	17	10	218	59	14	3	<1	0.6	0.4	<20
A35		11	20	18	215	51	18	18	2	0.5	0.8	<20
A36		2	17	95	1411	10	80	3	2	0.8	6.8	<20
A37		9	14	14	290	28	13	6	<1	0.5	0.5	<20
A38		11	22	22	121	17	19	17	<1	0.2	0.8	<20
A39		15	38	37	139	111	15	22	2	0.4	0.8	<20
A40		14	18	17	134	36	8	4	<1	0.3	0.4	<20
A41		10	21	7	162	26	8	4	<1	0.2	<0.2	<20
A42		16	21	21	160	65	10	5	2	0.6	0.3	<20
A43		24	27	18	81	46	11	16	1	0.7	0.3	<20
A44		13	74	10	106	25	9	9	2	0.5	0.4	<20
A45		11	19	9	101	40	10	10	1	0.4	0.4	<20
A46		13	19	29	130	72	13	16	<1	0.8	0.9	<20
A47		11	20	18	203	40	15	12	1	0.4	<0.2	<20
A48		11	18	8	243	55	9	3	3	0.4	0.6	<20
A49		6	11	5	81	10	9	3	<1	0.3	<0.2	<20
A50		15	23	18	104	28	14	11	<1	0.4	0.2	<20
A51		12	23	14	203	29	36	5	<1	0.5	0.5	<20
A52		22	31	59	272	40	11	6	2	1.0	0.3	<20
A53		15	21	11	171	17	14	8	<1	0.4	0.2	<20
A54		13	24	6	148	8	9	4	<1	0.7	<0.2	<20

REPORT: 092-42633.0 (COMPLETE)

DATE PRINTED: 22-OCT-92

PROJECT: NONE

PAGE 3C

SAMPLE NUMBER	ELEMENT UNITS	Sb PPM	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM	Hg PPB
A18		<5	<10	27	5	<20	10	<5	40
A19		<5	<10	48	4	<20	8	<5	97
A20		6	<10	99	6	<20	17	<5	36
A21		<5	<10	84	9	<20	29	<5	69
A22		6	<10	118	14	<20	14	<5	84
A23		<5	<10	87	10	<20	16	<5	90
A24		6	<10	106	24	<20	18	<5	371
A25		<5	<10	71	7	<20	11	<5	40
A26		7	<10	70	8	<20	19	<5	44
A27		5	<10	69	5	<20	27	<5	51
A28		5	<10	57	5	<20	11	<5	24
A29		7	<10	123	17	<20	9	<5	146
A30		5	<10	63	17	<20	23	<5	130
A31		5	<10	64	8	<20	14	<5	49
A32		<5	<10	75	6	<20	9	<5	42
A33		<5	<10	59	6	<20	8	<5	36
A34		<5	<10	130	6	<20	36	<5	47
A35		7	<10	133	23	<20	14	<5	164
A36		5	<10	152	2	<20	9	<5	325
A37		<5	<10	104	7	<20	7	<5	64
A38		5	<10	154	24	<20	4	<5	53
A39		5	<10	102	27	<20	8	<5	183
A40		<5	<10	71	7	<20	10	<5	32
A41		<5	<10	59	7	<20	7	<5	38
A42		5	<10	69	6	<20	22	<5	134
A43		6	<10	81	15	<20	12	<5	163
A44		<5	<10	56	13	<20	10	<5	159
A45		<5	<10	80	14	<20	6	<5	72
A46		<5	<10	77	17	<20	8	<5	223
A47		6	<10	98	14	<20	15	<5	85
A48		8	<10	86	6	<20	50	<5	53
A49		<5	<10	47	6	<20	5	<5	28
A50		5	<10	109	15	<20	10	<5	55
A51		<5	<10	127	8	<20	11	<5	26
A52		8	<10	193	9	<20	13	<5	36
A53		5	<10	149	11	<20	8	<5	36
A54		<5	<10	80	6	<20	9	<5	28

REPORT: 092-42716.0 (COMPLETE)

DATE PRINTED: 17-NOV-92

PROJECT: NONE

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	AuRew1 PPB	AuRew2 PPB	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM
65		<5			1.65	1.58	261	0.53	0.44	0.05	0.05	<5
66		<5			4.44	3.26	137	0.80	0.90	0.06	0.13	14
67		<5			3.81	3.25	199	1.06	1.22	0.07	0.21	9
68		<5			4.05	5.19	242	1.84	1.25	0.07	0.25	12
69		<5			3.09	3.70	178	1.17	1.32	0.08	0.22	10
70		<5			1.51	2.50	1473	0.66	0.65	0.07	0.07	<5
71		<5			3.32	4.21	3265	1.29	0.83	0.06	0.10	<5
72		<5			2.31	2.72	2347	1.30	1.19	0.08	0.14	<5
73		<5			0.93	1.57	120	0.16	0.18	0.07	0.03	<5
74		<5			1.55	2.47	263	0.56	0.90	0.09	0.08	<5
75		<5			2.54	2.78	283	0.70	0.25	0.06	0.06	<5
76		<5			2.20	2.31	392	0.76	0.45	0.06	0.13	<5
77		<5			1.62	2.41	1095	0.44	0.28	0.06	0.06	<5
78		<5			1.62	2.24	340	0.59	0.33	0.06	0.05	<5
79		<5			1.51	3.64	321	0.97	1.41	0.10	0.31	<5
80		<5			1.14	2.33	209	0.43	0.45	0.08	0.05	<5
81		<5			1.72	2.52	166	0.62	0.62	0.08	0.10	<5
82		<5			1.40	2.60	393	0.52	0.43	0.08	0.11	<5
83		<5			1.28	2.66	385	0.30	0.19	0.07	0.05	<5
84		<5			1.53	2.88	338	0.35	0.26	0.06	0.04	<5
85		<5			2.65	3.79	544	0.83	0.29	0.06	0.07	<5
86		<5			1.49	2.98	247	0.30	0.19	0.06	0.06	<5
87		<5			1.41	2.88	593	0.35	0.17	0.06	0.05	<5
88		<5			2.34	3.23	1979	1.74	0.54	0.06	0.16	<5
89		<5			0.99	1.44	458	0.31	0.38	0.07	0.04	<5
90		<5			2.24	3.53	563	0.82	0.64	0.08	0.07	<5
91		<5			0.65	0.46	80	0.13	0.11	0.06	0.03	<5
92		<5			2.34	2.38	200	0.29	0.15	0.06	0.05	<5
93		<5			2.35	2.52	434	1.17	0.80	0.07	0.08	6
94		<5			1.70	2.25	278	0.55	1.39	0.08	0.09	<5
A55		<5			1.08	1.85	247	0.35	0.24	0.06	0.04	<5
A56		<5			0.98	1.94	311	0.30	0.25	0.05	0.06	<5
A57		<5			1.99	3.53	1755	0.80	1.17	0.06	0.10	<5
A58		<5			1.41	2.86	326	0.38	0.56	0.06	0.05	<5
A59		<5			1.82	3.12	759	1.52	1.35	0.07	0.10	6
A60		<5			1.18	2.06	477	0.30	0.23	0.05	0.05	<5
A61		13			2.21	3.58	215	1.33	2.30	0.07	0.07	8
A62		<5			1.57	2.56	110	0.56	0.22	0.06	0.03	<5
A63		<5			2.73	5.98	1114	1.14	0.31	0.05	0.10	6
A64		10			2.42	>10.00	4695	1.02	0.90	0.06	0.04	7

Bondar-Clegg & Company Ltd.

5420 Canotek Road, Ottawa, Ontario, K1J 9G2, Canada

Tel: (613) 749-2220. Fax: (613) 749-7170

REPORT: 092-42716.0 (COMPLETE)

DATE PRINTED: 17-NOV-92

PROJECT: NONE

PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	V PPM	Cr PPM	Co PPM	Ni PPM	Cu PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM
65		32	30	17	16	13	<5	32	19	1	0.5	7.7
66		67	54	14	48	88	<5	32	79	3	0.7	2.1
67		71	54	14	36	68	<5	35	30	3	0.6	0.9
68		84	217	24	83	39	14	36	23	4	0.6	1.3
69		86	45	27	35	220	53	33	18	2	0.2	2.0
70		42	30	12	18	13	16	16	9	<1	<0.2	0.8
71		41	31	18	20	12	41	20	9	2	<0.2	2.6
72		31	24	15	28	35	15	22	34	2	<0.2	3.4
73		32	14	4	6	3	<5	7	4	<1	<0.2	0.5
74		42	26	10	18	15	10	20	14	2	<0.2	0.6
75		44	29	11	23	8	8	13	5	<1	<0.2	0.4
76		39	32	14	23	16	<5	15	7	<1	<0.2	0.6
77		37	23	11	12	10	18	10	5	<1	<0.2	0.6
78		40	21	10	14	5	25	10	5	1	<0.2	0.9
79		47	10	9	8	14	6	16	27	<1	<0.2	0.7
80		36	19	10	16	15	12	10	8	2	<0.2	0.2
81		39	28	10	19	15	<5	19	20	1	<0.2	0.7
82		46	28	13	17	11	22	14	8	<1	<0.2	<0.2
83		41	22	7	12	3	19	7	5	1	<0.2	<0.2
84		44	35	11	22	12	23	7	4	2	<0.2	0.7
85		54	45	18	47	18	18	10	7	1	<0.2	0.7
86		47	25	10	16	7	7	7	5	<1	<0.2	0.5
87		47	30	11	16	6	<5	5	4	1	<0.2	1.1
88		50	67	23	48	18	7	17	11	2	<0.2	1.8
89		27	19	8	22	17	<5	15	66	2	<0.2	1.0
90		52	39	22	33	25	29	12	15	<1	<0.2	0.5
91		14	10	1	4	3	<5	5	10	2	<0.2	<0.2
92		40	25	9	17	6	28	6	11	2	<0.2	0.4
93		39	34	11	24	11	9	17	45	2	<0.2	0.6
94		32	75	16	37	47	30	25	34	1	<0.2	0.5
A55		48	18	8	10	5	14	8	4	<1	<0.2	0.8
A56		45	17	7	8	4	13	8	3	1	<0.2	0.4
A57		50	31	16	26	32	61	22	18	2	<0.2	1.2
A58		53	21	8	12	8	43	9	5	2	<0.2	1.0
A59		65	26	15	25	59	92	17	25	1	0.2	1.4
A60		37	18	8	11	5	9	9	3	<1	<0.2	0.7
A61		118	64	18	27	79	5	32	19	<1	0.2	1.1
A62		63	25	11	13	5	79	6	2	1	<0.2	0.6
A63		122	32	24	21	37	78	8	4	3	0.4	0.5
A64		104	35	35	34	47	276	10	21	6	1.0	4.4

REPORT: 092-42716.0 (COMPLETE)

DATE PRINTED: 17-NOV-92

PROJECT: NONE

PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Sn PPM	Sb PPM	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM	Zn PPM	Hg PPB
65		<20	<5	<10	83	13	<20	18	<5	49	36
66		<20	9	<10	359	58	<20	154	<5	92	57
67		<20	7	<10	450	33	<20	61	<5	111	32
68		<20	8	<10	488	23	<20	18	<5	91	44
69		<20	6	<10	452	17	<20	15	<5	153	27
70		<20	<5	<10	142	9	<20	14	<5	101	42
71		<20	8	<10	232	10	<20	69	<5	1186	61
72		<20	7	<10	96	24	<20	83	<5	2314	69
73		<20	<5	<10	27	4	<20	7	<5	61	19
74		<20	<5	<10	72	11	<20	21	<5	233	38
75		<20	5	<10	102	6	<20	9	<5	137	29
76		<20	<5	<10	125	9	<20	10	<5	240	13
77		<20	<5	<10	141	7	<20	20	<5	325	42
78		<20	<5	<10	104	6	<20	9	<5	202	25
79		<20	<5	<10	84	20	<20	11	<5	341	21
80		<20	<5	<10	32	6	<20	6	<5	51	15
81		<20	<5	<10	77	18	<20	7	<5	81	19
82		<20	<5	<10	78	9	<20	7	<5	67	15
83		<20	<5	<10	47	5	<20	10	<5	132	30
84		<20	<5	<10	54	5	<20	11	<5	149	36
85		<20	6	<10	125	8	<20	11	<5	289	40
86		<20	<5	<10	62	5	<20	8	<5	172	19
87		<20	<5	<10	47	5	<20	9	<5	144	23
88		<20	5	<10	157	12	<20	22	<5	243	52
89		<20	<5	<10	113	26	<20	10	<5	347	29
90		<20	5	<10	77	14	<20	13	<5	179	50
91		<20	<5	<10	29	15	<20	6	<5	36	11
92		<20	<5	<10	47	11	<20	10	<5	103	63
93		20	<5	<10	139	35	<20	9	<5	61	78
94		<20	<5	<10	117	33	<20	10	<5	95	103
A55		<20	<5	<10	34	4	<20	12	<5	154	21
A56		<20	<5	<10	50	4	<20	9	<5	84	19
A57		<20	6	<10	106	14	<20	30	<5	184	126
A58		<20	<5	<10	38	6	<20	10	<5	92	38
A59		<20	7	<10	67	20	<20	27	<5	162	271
A60		<20	<5	<10	62	4	<20	11	<5	105	32
A61		<20	8	<10	85	13	<20	9	<5	116	306
A62		<20	6	<10	28	4	<20	17	<5	106	21
A63		<20	11	<10	76	6	<20	30	<5	256	40
A64		<20	14	<10	140	17	<20	126	<5	1184	182

REPORT: 092-42716.0 (COMPLETE)

DATE PRINTED: 17-NOV-92

PROJECT: NONE

PAGE 2A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	AuRew1 PPB	AuRew2 PPB	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM
A65		<5			0.77	2.58	1789	8.55	>10.00	0.06	0.02	<5
A66		<5			2.27	4.08	265	1.24	0.54	0.05	0.07	5
A67		<5			3.25	6.49	1914	1.46	0.57	0.06	0.20	8
A68		<5			3.34	4.80	657	1.00	0.51	0.07	0.09	<5
A69		<5			3.02	>10.00	6192	2.23	2.88	0.07	0.03	8
A70		<5			2.41	4.83	3190	1.26	1.05	0.07	0.07	<5
A71		<5			1.61	3.13	534	0.65	0.22	0.06	0.06	<5
A72		<5			2.93	5.80	3343	2.56	0.62	0.06	0.03	6
A73		<5			1.76	5.22	400	0.72	0.24	0.06	0.10	<5
A74		<5			1.14	2.98	1276	0.36	0.62	0.06	0.10	<5
A75		<5			1.72	4.14	254	1.39	0.69	0.06	0.08	8
A76		<5			0.72	2.40	90	0.27	0.33	0.06	0.04	<5
A77		<5			1.19	2.75	197	0.61	0.22	0.06	0.05	<5
A78		<5			1.90	3.38	351	0.72	0.49	0.07	0.15	<5
A79		<5			1.11	2.82	458	0.57	0.33	0.06	0.13	<5
A80		<5			0.25	1.31	87	0.07	0.19	0.05	0.03	<5
A81		<5			1.54	4.51	3744	2.09	3.39	0.08	0.16	<5
A82		<5			1.50	4.47	5041	1.65	3.18	0.07	0.18	<5
A83		<5			1.41	3.11	596	0.56	0.40	0.06	0.14	<5
A84		<5			2.68	3.75	1911	1.18	0.43	0.06	0.09	<5
A85		<5			2.55	3.22	624	1.19	0.51	0.07	0.07	<5
A86		<5			1.61	3.29	641	0.72	0.42	0.07	0.07	<5
A87		<5			1.37	3.82	2273	8.13	>10.00	0.07	0.02	<5
A88		<5			3.67	4.63	296	2.02	1.25	0.08	0.09	7
A89		<5			2.36	4.70	1050	1.06	0.45	0.06	0.06	5
A90		246	<5	6	4.58	6.12	1503	2.56	0.82	0.07	0.06	20
A91		<5			2.36	4.51	546	0.88	1.18	0.06	0.07	<5
A92		<5			3.29	4.91	241	1.65	1.54	0.06	0.05	13
A93		<5			2.24	4.96	3496	0.81	1.06	0.06	0.06	<5
A94		<5			1.97	5.39	1876	2.13	1.18	0.07	0.07	6
A95		<5			3.19	>10.00	5675	2.04	0.36	0.06	0.06	7
A96		<5			1.84	3.54	316	0.61	0.36	0.06	0.06	<5
A97		<5			3.14	4.99	3048	1.17	0.88	0.08	0.30	9
A98		<5			2.74	4.05	1365	1.61	0.30	0.06	0.08	<5
A99		<5			3.50	3.77	1982	2.40	0.58	0.06	0.07	6
A100		<5			0.87	2.15	1009	0.53	1.01	0.06	0.05	<5
A101		<5			1.53	2.71	521	0.69	0.46	0.08	0.14	<5
A102		<5			2.17	3.01	1719	0.94	0.84	0.07	0.09	<5
A103		<5			2.55	6.29	1196	1.86	0.80	0.08	0.41	8
A104		<5			1.67	3.11	1296	0.69	0.52	0.07	0.08	<5

REPORT: 092-42716.0 (COMPLETE)

DATE PRINTED: 17-NOV-92

PROJECT: NONE

PAGE 28

SAMPLE NUMBER	ELEMENT UNITS	V PPM	Cr PPM	Co PPM	Ni PPM	Cu PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM
A65		34	19	10	11	9	15	19	5	<1	<0.2	1.4
A66		120	25	14	14	13	26	9	5	1	<0.2	0.3
A67		121	35	25	30	32	42	11	12	3	0.3	0.9
A68		76	49	20	33	10	40	10	5	1	<0.2	<0.2
A69		62	50	50	65	37	131	17	28	4	0.7	4.4
A70		53	31	17	21	31	59	10	18	<1	<0.2	2.5
A71		45	24	10	14	6	29	5	4	<1	<0.2	0.7
A72		107	23	23	26	26	94	9	7	3	<0.2	1.5
A73		129	15	17	10	10	29	5	4	1	<0.2	1.5
A74		52	20	9	11	8	7	13	3	<1	0.3	0.7
A75		118	73	21	34	50	15	13	27	2	<0.2	0.8
A76		84	11	6	4	6	<5	7	3	1	<0.2	0.8
A77		53	18	8	10	7	15	6	3	<1	<0.2	<0.2
A78		70	31	12	14	8	<5	11	5	<1	0.2	1.5
A79		40	22	13	19	22	11	9	10	7	<0.2	1.5
A80		27	10	2	6	3	<5	5	2	3	<0.2	<0.2
A81		59	34	16	27	38	118	30	15	4	0.2	2.1
A82		58	36	18	33	41	121	33	17	2	<0.2	3.3
A83		70	25	14	13	11	20	12	3	2	<0.2	1.0
A84		67	35	15	21	9	23	11	6	<1	<0.2	0.8
A85		39	30	12	21	6	30	14	5	<1	<0.2	0.3
A86		70	29	11	14	8	<5	10	5	<1	<0.2	0.4
A87		44	24	13	16	10	23	21	16	<1	<0.2	2.8
A88		67	44	16	34	31	53	16	18	<1	0.2	1.3
A89		98	80	18	26	16	55	8	4	2	<0.2	1.6
A90		252	110	44	44	47	138	14	8	4	0.4	1.9
A91		66	32	24	25	20	109	20	7	2	0.6	1.0
A92		106	56	28	39	80	137	21	26	1	0.7	1.4
A93		48	27	21	24	17	116	13	18	2	0.3	1.6
A94		59	25	16	22	21	58	9	20	<1	<0.2	1.0
A95		174	43	38	36	8	145	8	6	3	0.9	6.0
A96		55	26	10	23	12	29	8	5	<1	<0.2	1.0
A97		92	49	24	41	48	43	18	27	2	0.4	1.3
A98		59	30	14	18	8	28	7	4	1	<0.2	0.5
A99		61	25	15	29	8	42	10	10	2	<0.2	1.9
A100		46	25	8	13	11	<5	16	3	1	0.2	1.0
A101		52	29	9	15	11	<5	13	7	<1	0.3	<0.2
A102		43	29	11	18	12	11	17	8	1	0.4	1.1
A103		158	92	36	42	43	28	17	8	1	0.5	1.0
A104		50	29	12	14	7	14	14	4	2	0.4	1.0

REPORT: 092-42716.0 (COMPLETE)

DATE PRINTED: 17-NOV-92

PROJECT: NONE

PAGE 2C

SAMPLE NUMBER	ELEMENT UNITS	Sn PPM	Sb PPM	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM	Zn PPM	Hg PPB
A65		24	<5	<10	103	5	<20	27	<5	174	59
A66		<20	9	<10	59	4	<20	16	<5	111	17
A67		<20	15	<10	118	12	<20	35	<5	757	103
A68		<20	10	<10	92	8	<20	18	<5	210	30
A69		23	9	<10	127	27	<20	36	<5	309	86
A70		<20	9	<10	95	19	<20	17	<5	254	195
A71		<20	7	<10	47	5	<20	13	<5	104	27
A72		<20	11	<10	159	9	<20	33	<5	315	44
A73		<20	8	<10	114	5	<20	10	<5	150	29
A74		<20	<5	<10	196	5	<20	16	<5	94	63
A75		<20	8	<10	78	34	<20	7	<5	73	19
A76		<20	<5	<10	50	4	<20	5	<5	39	10
A77		<20	<5	<10	51	4	<20	13	<5	104	23
A78		<20	6	<10	129	6	<20	11	<5	142	30
A79		35	<5	<10	55	10	<20	11	<5	52	17
A80		<20	<5	<10	21	3	<20	4	<5	23	11
A81		<20	11	<10	283	13	<20	61	<5	375	128
A82		<20	10	<10	394	14	<20	65	<5	460	117
A83		<20	<5	<10	82	5	<20	13	<5	500	30
A84		<20	9	<10	140	7	<20	15	<5	279	40
A85		<20	7	<10	69	7	<20	17	<5	183	30
A86		<20	6	<10	97	6	<20	11	<5	132	28
A87		<20	<5	<10	134	21	<20	16	<5	94	85
A88		<20	9	<10	114	17	<20	20	<5	146	75
A89		<20	10	<10	81	6	<20	29	<5	247	38
A90		<20	13	<10	100	6	<20	34	<5	334	28
A91		<20	9	<10	76	8	<20	34	<5	116	102
A92		<20	14	<10	95	17	<20	24	<5	133	130
A93		<20	11	<10	93	14	<20	58	<5	355	141
A94		<20	10	<10	60	13	<20	20	<5	154	168
A95		<20	11	<10	113	11	<20	37	<5	634	90
A96		<20	5	<10	76	6	<20	10	<5	221	34
A97		31	7	<10	379	25	<20	10	<5	361	126
A98		<20	8	<10	102	6	<20	46	<5	252	45
A99		<20	8	<10	123	12	<20	23	<5	153	51
A100		<20	<5	<10	180	4	<20	18	<5	170	45
A101		<20	<5	<10	180	7	<20	10	<5	226	32
A102		<20	7	<10	205	10	<20	24	<5	276	81
A103		<20	7	<10	243	7	<20	18	<5	197	41
A104		<20	5	<10	186	6	<20	14	<5	282	24

REPORT: 092-42716.0 (COMPLETE)

DATE PRINTED: 17-NOV-92

PROJECT: NONE

PAGE 38

SAMPLE NUMBER	ELEMENT UNITS	V PPM	Cr PPM	Co PPM	Ni PPM	Cu PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM
A105		72	36	12	24	14	46	16	18	3	<0.2	1.0

REPORT: 092-42716.0 (COMPLETE)

DATE PRINTED: 17-NOV-92

PROJECT: NONE

PAGE 3C

SAMPLE NUMBER	ELEMENT UNITS	Sn PPM	Sb PPM	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM	Zn PPM	Hg PPB
A105		<20	6	<10	237	15	<20	14	<5	110	60

REPORT: 092-42901.0 (COMPLETE)

DATE PRINTED: 4-DEC-92

PROJECT: NONE

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM
AR106		7	1.85	4.16	957	0.70	0.89	0.06	0.10	5	59	34
AR107		9	1.30	2.41	217	0.43	0.43	0.06	0.07	<5	42	22
AR108		<5	1.53	2.96	266	0.61	0.57	0.06	0.08	<5	43	28
AR109		<5	1.04	2.30	1540	0.50	0.46	0.06	0.10	<5	39	19
AR110		6	1.31	3.05	554	0.77	0.58	0.07	0.12	5	56	25
AR111		<5	1.59	3.14	223	0.70	0.31	0.07	0.08	<5	59	28
AR112		<5	1.65	3.23	2068	1.18	0.70	0.07	0.09	<5	55	23
AR113		<5	1.44	2.29	380	0.64	0.22	0.06	0.05	<5	52	21
AR114		<5	1.30	2.50	179	0.30	0.43	0.07	0.06	<5	42	22
AR115		<5	0.95	2.07	206	0.50	0.30	0.07	0.06	<5	43	17
AR116		<5	2.45	4.23	3053	0.76	0.95	0.06	0.24	6	95	28
AR117		<5	2.69	4.44	1637	0.83	0.68	0.07	0.14	9	80	43
AR118		10	1.61	2.80	2010	0.64	1.72	0.07	0.12	<5	59	28
AR119		7	1.77	7.19	3542	0.24	0.81	0.05	0.08	<5	86	26
AR120		<5	2.55	4.53	1228	1.11	0.53	0.07	0.39	7	134	28

REPORT: 092-42901.0 (COMPLETE)

DATE PRINTED: 4-DEC-92

PROJECT: NONE

PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	Ni PPM	Cu PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
AR106		19	23	32	78	15	11	1	0.5	0.4	<20	14
AR107		10	14	8	27	10	5	1	0.4	<0.2	<20	13
AR108		13	21	18	62	15	8	<1	0.7	<0.2	<20	15
AR109		10	11	8	29	8	4	<1	0.7	0.6	<20	12
AR110		14	15	28	27	13	14	<1	0.3	<0.2	<20	15
AR111		14	20	19	89	9	6	3	0.6	<0.2	<20	15
AR112		11	16	12	59	15	7	<1	0.5	1.9	<20	14
AR113		11	13	6	39	7	4	<1	0.4	<0.2	<20	13
AR114		9	12	6	27	10	5	<1	0.4	<0.2	<20	12
AR115		9	10	6	13	9	5	<1	0.4	<0.2	<20	9
AR116		21	24	20	47	17	14	<1	0.5	0.4	<20	20
AR117		23	28	38	156	17	18	1	0.7	0.4	<20	23
AR118		12	21	29	41	24	11	2	0.6	1.4	<20	15
AR119		14	17	12	133	19	12	4	0.6	0.2	<20	12
AR120		24	23	15	43	12	12	<1	0.7	<0.2	<20	18

REPORT: 092-42901.0 (COMPLETE)

DATE PRINTED: 4-DEC-92

PROJECT: NONE

PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM	Zn PPM	Hg PPB
AR106		<10	108	11	<20	39	<5	235	91
AR107		<10	50	5	<20	36	<5	177	52
AR108		<10	55	8	<20	59	<5	565	74
AR109		<10	64	5	<20	32	<5	197	90
AR110		<10	62	12	<20	23	<5	123	79
AR111		<10	54	6	<20	35	<5	417	16
AR112		<10	107	7	<20	24	<5	411	52
AR113		<10	58	4	<20	24	<5	326	23
AR114		<10	35	5	<20	20	<5	148	43
AR115		<10	39	5	<20	23	<5	158	14
AR116		<10	149	11	<20	31	<5	269	108
AR117		<10	117	17	<20	46	<5	424	249
AR118		<10	97	9	<20	40	<5	158	151
AR119		<10	87	11	<20	44	<5	363	154
AR120		<10	135	10	<20	29	<5	225	77

REPORT: 092-42715.0 (COMPLETE)

DATE PRINTED: 28-OCT-92

PROJECT: NONE

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ti PCT	Al PCT	Fe Tot PCT	Mn PPM	Mg PCT	Cs PCT	Na PCT	K PCT	Li PPM	Sc PPM	V PPM
6735		<5	0.02	0.32	0.51	<50	0.09	0.05	<0.01	0.16	3	<1	17
6736		<5	<0.01	0.16	0.78	58	0.03	0.02	<0.01	0.04	<2	<1	7
6737		<5	0.05	4.08	1.17	135	0.12	0.19	0.76	0.78	5	2	13

REPORT: 092-42715.0 (COMPLETE)

DATE PRINTED: 28-OCT-92

PROJECT: NONE

PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Cr PPM	Co PPM	Ni PPM	Cu PPM	Zn PPM	Ga PPM	Sr PPM	Y PPM	Zr PPM	Nb PPM	Mo PPM	Ag PPM
6735		320	3	10	20	7	<10	2	<5	5	<5	3	<0.2
6736		527	3	8	17	6	<10	4	<5	2	<5	3	<0.2
6737		130	8	10	19	7	<10	56	<5	63	<5	1	1.0

REPORT: 092-42715.0 (COMPLETE) DATE PRINTED: 28-OCT-92 PAGE 1C
 PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Cd PPM	Sn PPM	Sb PPM	Te PPM	Ba PPM	La PPM	Ta PPM	W PPM	Pb PPM	Bi PPM	As PPM	Hg PPM
6735		0.6	<20	<5	<25	30	<5	<5	<20	5	<5	<5	8
6736		0.9	<20	<5	<25	12	<5	<5	<20	3	<5	<5	10
6737		<0.5	<20	<5	<25	293	10	<5	<20	13	<5	22	10

REPORT: 092-42900.0 (COMPLETE)

DATE PRINTED: 27-NOV-92

PROJECT: NONE

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM
6726		15	0.41	2.39	30	0.08	0.12	0.23	0.10	<5	16	99
6729		9	6.49	7.80	481	3.48	5.49	0.25	0.26	5	54	65
6730		8	7.10	3.33	480	3.76	5.85	0.50	0.27	<5	37	46
6731		<5	6.49	4.72	416	3.08	6.45	0.07	0.13	6	75	50
6732		27	7.79	6.56	674	3.64	6.26	0.57	0.16	8	92	54
6733		<5	0.31	3.58	128	0.34	0.39	0.06	0.02	<5	9	194
6734		25	2.23	6.32	324	2.42	1.29	0.07	0.25	<5	<1	110
6735		<5	1.33	2.13	114	0.87	0.72	0.07	0.45	<5	11	161
6739		7	1.84	6.28	149	1.50	0.14	0.14	0.47	8	86	120
6740		37	0.13	1.36	92	0.05	0.21	0.06	0.02	<5	21	184
6741		6	0.03	2.07	67	0.02	0.09	0.04	0.02	<5	7	240
6742		19	0.03	1.79	82	0.02	0.09	0.05	0.02	<5	4	207
6744		<5	0.02	1.74	64	0.01	0.04	0.05	0.01	<5	4	262
6747		82	0.03	0.58	52	0.02	0.01	0.05	0.02	<5	3	341
6748		<5	0.36	0.48	469	7.01	>10.00	0.07	0.36	<5	16	44

REPORT: 092-42900.0 (COMPLETE)

DATE PRINTED: 27-NOV-92

PROJECT: NONE

PAGE 18

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	Ni PPM	Cu PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
6726		6	29	34	<5	12	7	10	0.5	<0.2	<20	<5
6729		28	88	74	37	76	19	2664	1.1	0.5	<20	30
6730		17	44	23	26	42	14	36	<0.2	<0.2	<20	33
6731		21	51	29	41	43	20	28	0.3	<0.2	<20	35
6732		30	69	28	46	39	24	672	0.4	<0.2	<20	39
6733		11	54	87	<5	3	1	101	0.5	<0.2	<20	5
6734		42	49	38	11	16	7	>10000	2.6	2.0	<20	33
6735		8	20	38	11	28	9	140	0.3	<0.2	<20	12
6739		21	63	74	20	7	3	1273	1.3	<0.2	<20	13
6740		5	9	12	6	2	2	31	0.6	<0.2	<20	<5
6741		4	8	8	<5	1	<1	10	0.4	<0.2	<20	<5
6742		4	7	9	192	1	<1	6	1.0	<0.2	<20	<5
6744		4	9	6	<5	1	<1	5	0.5	<0.2	<20	<5
6747		4	11	19	<5	<1	<1	3	0.3	<0.2	<20	<5
6748		7	4	6	32	215	2	4	<0.2	0.9	<20	<5

REPORT: 092-42900.0 (COMPLETE)

DATE PRINTED: 27-NOV-92

PROJECT: NONE

PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM	Zn PPM	Hg PPB
6726		<10	28	4	<20	17	<5	6	<5
6729		<10	26	15	<20	40	<5	77	5
6730		<10	14	8	<20	21	<5	41	<5
6731		<10	6	11	<20	23	<5	64	<5
6732		<10	16	16	<20	23	<5	88	<5
6733		<10	3	2	<20	19	<5	21	<5
6734		31	40	2	<20	50	10	57	7
6735		<10	77	6	<20	19	5	18	<5
6739		<10	61	6	<20	130	<5	77	7
6740		<10	7	1	<20	17	<5	25	9
6741		<10	5	<1	<20	13	<5	28	5
6742		<10	10	<1	<20	25	<5	108	7
6744		<10	8	<1	<20	9	<5	10	9
6747		<10	3	<1	<20	6	<5	6	25
6748		<10	39	1	<20	60	<5	347	265

REPORT: 092-42997.0 (COMPLETE)

DATE PRINTED: 17-DEC-92

PROJECT: NONE

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM
6764		11	0.35	5.47	89	0.16	0.07	0.04	0.02	<5	18	220
6765		8	3.05	7.72	217	1.68	0.10	0.09	0.81	5	120	350
6766		9	2.80	3.70	579	0.46	3.51	0.26	0.53	<5	24	70
6767		32	0.05	0.27	428	>10.00	>10.00	0.05	<0.01	<5	4	14
6768		10	0.05	2.11	47	0.03	0.05	0.04	<0.01	<5	15	348
6769		13	0.05	1.90	165	0.05	0.52	0.04	0.01	<5	4	216
6770		8	0.05	2.05	45	0.03	0.05	0.04	0.01	<5	15	357
6771		10	2.98	9.25	210	2.05	0.16	0.10	0.67	9	287	241
6772		23	0.07	1.73	165	0.02	0.10	0.04	<0.01	<5	11	308
6773		27	0.66	1.49	297	0.29	>10.00	0.08	0.29	<5	7	60

REPORT: 092-42997.0 (COMPLETE)

DATE PRINTED: 17-DEC-92

PROJECT: NONE

PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	Ni PPM	Cu PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
6764		7	23	153	11	2	<1	2	0.3	0.7	<20	<5
6765		4	16	67	42	11	7	16	<0.2	<0.2	<20	<5
6766		22	25	68	38	72	10	2	<0.2	1.5	<20	<5
6767		4	2	9	<5	98	3	<1	4.2	33.9	<20	70
6768		<1	8	15	12	2	<1	2	<0.2	0.5	<20	9
6769		<1	7	23	<5	5	<1	2	<0.2	0.9	<20	<5
6770		<1	8	13	6	2	<1	2	0.3	<0.2	<20	11
6771		6	26	78	51	12	10	20	<0.2	0.4	<20	<5
6772		6	12	16	13	1	1	2	0.2	0.6	<20	7
6773		12	19	184	91	96	4	26	41.8	208.2	<20	96

REPORT: 092-42997.0 (COMPLETE)

DATE PRINTED: 17-DEC-92

PROJECT: NONE

PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	V PPM	Pb PPM	Bi PPM	Zn PPM	Hg PPB
6764		<10	11	3	<20	50	<5	23	17
6765		<10	321	11	<20	59	<5	191	18
6766		<10	73	9	<20	41	<5	105	<5
6767		59	5	<1	<20	203	28	2039	1164
6768		17	3	<1	<20	48	<5	6	5
6769		<10	20	<1	<20	31	<5	25	7
6770		21	3	<1	<20	53	<5	5	12
6771		<10	300	14	<20	124	<5	270	20
6772		12	9	1	<20	46	<5	35	20
6773		<10	144	2	<20	>10000	<5	>20000	>50000

APPENDIX 2

SAMPLE DESCRIPTION

(SOIL SAMPLES)

DESCRIPTION OF GEOCHEMICAL SOIL SAMPLES
 NORWAY LAKE (SOUTH) / SHEFFIELD TOWNSHIP

W. BRACK OPAP 92-233

SPL	STATION	POSITION	DEPTH	COLOUR	COMP1	COMP2	HUM	
1	1+00	N	0+00		30 MED. BRW	CLAY	SANDY	M
2	1+00	N	0+50	E	25 MED. BRW	SANDY	CLAY	M
3	1+00	N	1+00	E	25 MED. BRW	SANDY	CLAY	D
4	1+00	N	1+50	E	30 DK. BRW	CLAY	SANDY	M
5	1+00	N	0+50	W	30 MED. BRW	SANDY	CLAY	D
6	0+00		0+50	W	30 DK. BRW	CLAY	SANDY	M
7	0+00		0+85	W	30 MED. BRW	CLAY	ORG.	M
8	0+00		1+75	W	25 BLK	ORG.	SANDY	W
9	0+00		0+50	E	30 BRW	SANDY	ORG	M
10	0+00		0+75	E	30 GRY	SANDY		D
11	0+00		1+15	E	30 GRY	CLAY	ORG	W
12	0+00		1+50	E	30 BRW	SANDY		D
13	4+00	S	0+10	E	35 DK. GRY	CLAY	ORG	W
14	4+00	S	0+50	W	30 MED. BRW	CLAY	SAND	M
15	4+00	S	1+25	W	30 LGT. BRW	SAND	CLAY	D
16	4+25	S	1+75	W	40 BRW	CLAY	ORG	M
17	4+00	S	2+25	W	25 BRW	CLAY	ORG	M
18	4+00	S	2+75	W	40 GRY/BLK	CLAY	ORG	M
19	4+00	S	3+50	W	15 GRY	CLAY	ORG	M
20	4+00	S	4+25	W	20 BLK	CLAY	ORG	M
21	2+00	S	0+60	E	30 BRW	CLAY		M
22	2+00	S	0+25	E	40 BRW	CLAY	ORG	M
23	2+00	S	0+25	W	30 BRW	CLAY	ORG	M
24	2+00	S	0+75	W	25 BLK	ORG		M
25	2+00	S	1+25	W	25 BRW	SAND		D
26	2+00	S	1+50	W	35 BRW	CLAY	ORG	M
27	2+20	S	2+00	W	35 BRW	SAND		D
28	2+00	S	2+55	W	35 LGT. BRW	CLAY	ORG	M
29	2+00	S	3+10	W	30 BRW	CLAY	ORG	W
30	5+10	N	0+25	W	30 LGT. BRW	CLAY	SAND	D
31	5+10	N	0+90	W	20 BRW	CLAY	SAND	D
32	5+00	N	2+00	E	35 GRY	CLAY	ORG	W

VALLEY

VALLEY

E.H.

E.S

E.S

E.H. + E.S.

E.S.

E.H.

VALLEY

DEP.

DEP.

E.S.

E.S.

DEP.

DEP.

DEP.

DEP.

E.H.

E.S.

VALLEY

VALLEY

VALLEY

33	5+00	N	1+80	E	35	BRW	CLAY	ORG	M	E.V.
34	5+05	N	0+75	E	25	BRW	SAND	ORG	D	DEP.
35	5+00	N	0+35	E	30	BRW	SAND	CLAY	D	CONTACT
36	4+20	N	0+00		50	BRW	ORG	CLAY	M	DEP.
37	3+05	N	2+00	E	35	DRK.GRY	CLAY	ORG	W	VALLEY
38	3+00	N	2+80	E	30	MED.BRW	SAND		D	
39	3+00	N	1+45	E	30	BRW	SAND		D	
40	3+00	N	1+00	E	25	BRW	CLAY	SAND	M	DEP.
41	2+90	N	0+10	E	25	BRW	CLAY	ORG	M	CONTACT
42	3+00	N	1+10	W	35	DRK.BRW	CLAY	ORG	W	E.H.+ E.S.
43	2+50	N	0+05	W	30	BLK	ORG		W	E.S.
44	2+25	N	0+30	W	30	GRY	CLAY		W	E.S.
45	1+75	N	0+75	E	30	BRW	ORG	CLAY	M	DEP.
46	2+00	N	1+30	E	30	BRW	CLAY	ORG	M	DEP.
47	2+00	N	1+90	E	30	GRY	CLAY		W	VALLEY

CRANBERRY LAKE

SPL	STATION	POSITION	DEPTH	COLOUR1	COMP1	COMP2	HUM	
65			35	GRY	CLAY	ORG	W	VALLEY
66			20	BLK/GRY	CLAY	ORG	M	FLAT
67			30	BLK/GRY	CLAY	ORG	M	FLAT
68			30	BLK	CLAY		W	VALLEY
69			25	GRY	CLAY	ORG	W	VALLEY
70			30	BRW	SILT	CLAY	D	FLAT

FIFTH DEPOT LAKE (WEST) PROFILE

SPL	STATION	POSITION	DEPTH	COLOUR1	COMP1	COMP2	HUM	
71	0+00		0+00	25	BRW	ORG	CLAY	M
72	0+25	N	0+00	25	BRW	ORG	CLAY	M DEP
73	0+25	N	0+42 W	30	BRW	SILT	ORG	D DEP
74	0+25	N	1+00 W	35	GRY/BLK	CLAY	ORG	W E. SWAMP
75	0+25	N	2+00 W	25	BRW	SILT	CLAY	D DEP
76	0+25	N	3+00 W	30	GRY	CLAY		D DEP
77	0+25	N	3+95 W	30	BRW	SILT	CLAY	D DEP
78	0+25	N	4+20 W	30	BRW	SILT	CLAY	D DEP
79	0+25	N	4+90 W	30	BRW	SILT		W L.S.
80	0+50	S	4+60 W	30	BRW	SILT	CLAY	D E.H.
81	0+75	S	4+60 W	30	GRY	CLAY		W CREEK

FIFTH DEPOT LAKE (NORD) PROFILE

SPL	STATION	POSITION	DEPTH	COLOUR1	COMP1	COMP2	HUM	
82	5+00	W	0+20 N	30	LGT. BRW	CLAY	SILT	M LOW GROUND
83	5+00	W	0+50 N	30	BRW	SILT		D SLOPE
84	5+00	W	1+00 N	30	BRW	SILT		D FLAT
85	5+00	W	1+25 N	30	BRW	SILT	CLAY	D DEP
86	5+00	W	2+00 N	30	BRW	SILT		D SLOPE
87	5+00	W	2+30 N	35	GRY	CLAY	SILT	M E.H.+E.S.
88	5+00	W	0+00 S	40	BRW	SILT	CLAY	D E.H.
89	5+00	W	0+35 S	30	BRW	SILT	CLAY	D SLOPE
90	5+00	W	0+90 S	40	BRW	SILT		D FLAT
91	5+00	W	1+25 S	35	GRY	CLAY		W DEP
92	5+00	W	1+50 S	35	BRW	SILT	CLAY	M E.H.
93	0+90	E	4+75 S	35	GRY	SILT		W E.H.+E.S.

DESCRIPTION OF GEOCHEMICAL SOIL SAMPLES
ARDOCH PROJECT (CLARENDON TOWNSHIP)

W. BRACK

OPAP 92-233

SPL	STATION		POSITION	DEPTH	COLOUR1	COMP1	COMP2	HUM	
1	13+75	E	6+75 N	25	GREY	SILT		M	E.S.
2	13+25	E	6+75 N	30	GREY	SILT		M	E.S.
3	13+00	E	7+50 N	35	BRW	SILT	CLAY	W	E.H.+E.S.
4	13+00	E	8+00 N	20	MED.BRW	CLAY	SILT	D	DEP
5	13+00	E	8+00 N	30	DK.BRW	ORG	SILT	D	DEP
6	13+00	E	8+00 N	45	MED.BRW	SILT	CLAY	D	DEP
7	12+75	E	8+75 N	30	MED.BRW	SILT		D	HILL
8	12+75	E	9+75 N	30	LGT.GRY	CLAY		M	E.H.
9	12+00	E	10+00 N	30	BLK	ORG		W	E.RIVER
10	12+00	E	9+25 N	25	LGT.GRY	SILT		D	E.H.
11	12+00	E	8+00 N	30	GRY/BLK	CLAY	ORG	M	E.H.+E.S.
12	12+00	E	6+80 N	30	GRY	CLAY		W	E.H.+E.S.
13	11+00	E	7+00 N	60	BLK	ORG		W	E.H.+E.S.
14	9+50	E	7+00 N	30	BLK/GRY	ORG	CLAY	W	E.H.+E.S.
15	9+50	E	8+30 N	40	BLK	ORG		W	E.H.+E.S.
16	9+50	E	8+75 N	30	BRW	CLAY		M	FLAT
17	9+50	E	10+15 N	30	GRY	CLAY		M	DEP
18	5+10	E	6+50 N	30	MED.BRW	SILT	CLAY	M	E.H.+E.S.
19	5+00	E	7+75 N	35	BLK/GRY	ORG	CLAY	W	E.H.+E.S.
20	5+00	E	8+05 N	25	BRW	SILT		D	HILL
21	5+00	E	8+50 N	30	BRW	SILT		D	DEP
22	5+00	E	8+75 N	30	LGT.BRW	CLAY	SILT	M	HILL
23	5+00	E	9+15 N	35	BRW	SILT	CLAY	M	DEP
24	5+00	E	9+50 N	30	MED.BRW	SILT		D	SLOPE
25	5+00	E	9+75 N	30	MED.BRW	SILT	CLAY	D	DEP
26	5+00	E	10+00 N	30	BRW	SILT		D	HILL
27	5+00	E	10+25 N	30	BRW	SILT		D	HILL
28	5+00	E	10+60 N	30	BRW	SILT		D	HILL
29	5+00	E	10+90 N	40	GRY	CLAY	ORG	W	E.H.+E.R.
30	6+00	E	10+75 N	25	BRW	CLAY	SILT	M	E.H.+E.R.
31	6+00	E	10+25 N	25	MED.BRW	SILT	CLAY	D	SLOPE
32	6+00	E	10+00 N	20	BRW	SILT	CLAY	D	FLAT RIDGE

33	6+00	E	9+30	N	20	BRW	SILT	CLAY	D	E.H.
34	6+00	E	9+00	N	30	BRW	SILT	CLAY	D	RIDGE
35	6+00	E	8+25	N	35	BRW	CLAY	SILT	M	VALLEY
36	6+00	E	7+65	N	80	BLK	ORG		W	E.H.+E.S.
37	7+00	E	8+50	N	40	LGT.BRW	CLAY	SILT	M	E.H.
38	7+00	E	8+80	N	30	LGT.GRY	CLAY		M	VALLEY
39	7+00	E	9+00	N	35	MED.BRW	CLAY		M	E.H.
40	7+00	E	9+55	N	30	MED.BRW	SILT		D	E.H.
41	7+00	E	9+80	N	30	MED.BRW	SILT		D	FLAT
42	7+00	E	10+25	N	25	MED.BRW	SILT		D	SLOPE
43	7+00	E	10+55	N	40	LGT.GRY	CLAY		M	E.H.
44	8+00	E	10+50	N	40	GRY	CLAY		M	E.S.
45	8+00	E	10+25	N	35	MED.BRW	CLAY	SILT	M	FLAT
46	8+00	E	10+00	N	40	MED.BRW	CLAY	SILT	D	DEP
47	8+00	E	9+50	N	40	LGT.GRY	CLAY		M	E.H.
48	8+00	E	9+25	N	30	BRW	SILT		D	FLAT
49	8+00	E	8+75	N	30	BRW	SILT	CLAY	D	FLAT
50	8+00	E	8+15	N	30	BRW	CLAY		M	SLOPE
51	13+00	E	8+25	N	25	BRW	CLAY	SILT	D	SLOPE
52	13+00	E	8+50	N	25	BRW	SILT		D	
53	13+00	E	9+00	N	25	BRW	CLAY	SILT	D	RIDGE
54	13+00	E	7+75	N	25	BRW	CLAY	SILT	M	FLAT
55	4+00	E	8+00	N	40	LGT.BRW	SILT	CLAY	D	E.H.+E.S.
56	4+00	E	8+75	N	30	LGT.BRW	SILT		D	SLOPE
57	4+00	E	9+10	N	30	BRW	CLAY	ORG	M	LOW GR
58	4+00	E	9+25	N	35	MED.BRW	CLAY	SILT	D	E.H.
59	4+00	E	9+50	N	30	DK.BRW	ORG	CLAY	M	LOW GR
60	4+00	E	9+90	N	30	MED.BRW	SILT		D	SLOPE
61	4+00	E	10+25	N	50	BLK/GRY	ORG	CLAY	W	E.H.+E.S.
62	2+00	W	11+70	N	30	LGT.BRW	SILT	CLAY	M	E.H.
63	2+00	W	12+05	N	30	MED.BRW	SILT		D	SLOPE
64	2+00	W	12+25	N	30	MED.BRW	SILT		D	VALLEY
65	2+00	W	12+50	N	40	LGT.BRW	SILT		D	SLOPE
66	5+00	W	11+25	N	30	MED.BRW	SILT		D	E.H.
67	5+00	W	11+50	N	30	MED.BRW	SILT	CLAY	D	VALLEY
68	5+00	W	12+00	N	25	MED.BRW	SILT		D	SLOPE
69	5+00	W	12+25	N	25	MED.BRW	SILT		D	SLOPE
70	5+00	W	12+65	N	30	BRW	SILT	CLAY	M	DEP

71	5+00	W	13+10 N	30	MED. BRW	SILT		D	SLOPE
72	5+00	W	13+50 N	25	BRW	SILT		D	FLAT RG.
73	5+00	W	13+75 N	25	BRW	SILT		D	FLAT RG
74	5+00	W	14+00 N	25	DK. BRW	SILT	CLAY	M	FLAT RG.
75	5+00	W	14+30 N	50	LGT. GRY	CLAY	SILT	W	DEP
76	6+00	W	14+25 N	30	BRW/GRY	SILT	CLAY	D	RIDGE
77	6+00	W	14+05 N	30	BRW	SILT		D	DEP
78	6+00	W	13+70 N	30	BRW	SILT		D	RIDGE
79	6+00	W	13+25 N	30	LGT. BRW	SILT		D	E.H.
80	6+00	W	13+00 N	30	BRW	SILT		D	E.H.
81	6+00	W	12+65 N	30	DK. BRW	SILT	ORG	M	SLOPE
82	6+00	W	12+25 N	50	DK. BRW	SILT	CLAY	M	DEP
83	6+00	W	11+65 N	40	BRW	SILT	CLAY	M	DEP
84	4+00	W	13+50 N	30	BRW	CLAY	SILT	D	FLAT RG.
85	4+00	W	13+25 N	30	BRW	SILT		D	E.H.
86	4+00	W	13+00 N	20	BRW	SILT	CLAY	D	FLAT RG.
87	4+00	W	12+75 N	35	BLK	ORG	CLAY	M	DEP
88	4+00	W	12+50 N	40	BLK/GRY	ORG	CLAY	M	FLAT RG.
89	4+00	W	12+00 N	20	BRW	ORG	SILT	D	SLOPE
90	4+00	W	11+75 N	30	BRW	SILT		D	SLOPE
91	4+00	W	11+25 N	35	BRW	CLAY	SAND	M	E.H.+E.S.
92	3+00	W	11+45 N	40	GRY	CLAY	ORG	W	E.H.+E.S.
93	3+00	W	11+95 N	25	BRW	CLAY	SILT	M	
94	3+00	W	12+75 N	35	LGT. BRW	CLAY	SILT	M	DEP
95	3+00	W	13+00 N	25	BRW	SILT	ORG	D	FLAT
96	3+00	W	13+40 N	30	BRW	SILT		D	SLOPE
97	3+00	W	13+60 N	30	BRW	SILT		M	DEP/VALLEY
98	3+00	W	14+00 N	30	BRW	SILT		D	E.H.
99	3+00	W	14+25 N	30	BRW	SILT	ORG	D	RIDGE
100	13+50	E	7+75 N	40	BLK/GRY	ORG	CLAY	W	E.H.+E.S.
101	13+50	E	7+95 N	35	LGT. GRY	CLAY		M	SINK HOLE
102	13+50	E	8+20 N	30	BRW	CLAY		M	TRAIL
103	13+50	E	8+40 N	30	BRW	SILT	CLAY	D	DEP
104	13+50	E	8+60 N	25	BRW	SILT		D	SLOPE
105	13+50	E	9+05 N	30	LGT. BRW	CLAY		M	FLAT
106	10+00	E	6+80 N	30	BRW	ORG	CLAY	D	SLOPE
107	10+25	E	7+00 N	30	MED. BRW	CLAY		D	E.H.+E.S.
108	9+90	E	7+00 N	30	LGT. BRW	CLAY	ORG	M	E.H.+E.S.
109	10+25	E	6+50 S	30	LGT. BRW	CLAY	ORG	M	SLOPE
110	8+50	E	6+25 S	30	LGT. BRW	CLAY	SILT	M	E.H.+E.S.
111	6+00	E	7+65 N	30	LGT. BRW	CLAY		W	E.H.+E.S.
112	6+00	E	7+90 N	30	BRW	SILT	CLAY	M	DEP
113	5+50	E	7+80 N	25	MED. BRW	SILT	CLAY	D	RIDGE
114	5+50	E	8+25 N	25	MED. BRW	SILT	CLAY	D	E.H.
115	5+50	E	7+60 N	30	LGT. BRW	SILT		D	E.H.+E.S.
116	5+25	E	9+15 N	30	MED. BRW	CLAY	SILT	D	DEP
117	4+50	E	9+00 N	35	MED. BRW	CLAY		M	DEP
118	5+00	E	8+80 N	30	BLK	ORG	CLAY	M	DEP
119	5+25	E	8+50 N	40	BRW	CLAY	SILT	M	DEP
120	4+70	E	8+30 N	35	BRW	CLAY	SILT	M	DEP

APPENDIX 3

SAMPLE DESCRIPTION

(ROCK SAMPLES)

ROCK SAMPLE DESCRIPTION

W. BRACK OPAP 92-233

SAMPLE NUMBER	PROJECT PURPOSE	LOCATION	DESCRIPTION
6726	SHF A / R	NORWAY L./POWERL.50M WEST	QUARZITIC GNEISS WITH SULPHIDS
6729	SHF A / S	CRANBERRY L./OLD WORKINGS	RUSTY, TECTONIZED GNEISS
6730	SHF A / R	CRANBERRY L./OLD WORKINGS	RUSTY, SULPHIDE IMPREGN. BRECCIA
6731	SHF A	CRANBERRY L./OLD WORKINGS	RUSTY SULPHIDE IMPREGN. BRECCIA
6732	SHF A / S	CRANBERRY L./OLD WORKINGS	RUSTY SULPHIDE IMPREGN. BRECCIA
6733	SHF A	CRANBERRY L./OLD WORKINGS	RUSTY, MILKY QUARTZ, SULPHIDES
6734	SHF A / S	CRANBERRY L./OLD WORKINGS	GNEISS-QUARTZ BRECCIA, SULPHIDES,
6735	SHF A / R	NORWAY L./POWERL.300M EAST	APLITIC GRANITE, SULPHIDE SPECS
6763	SHF S	CRANBERRY LAKE	ALTERED GNEISS
6761	HIN A / R	CHIPPEGO LAKE	DIRTY MARBLE

SHF = SHEFFIELD TOWNSHIP
HIN = HINCHINBROOKE TOWNSHIP
A = ANALYSIS
R = REFERENCE SAMPLE
S = THIN SECTION

ROCK SAMPLE DESCRIPTION: ARDOCH PROJECT (CLARENDON TWP.)

W. BRACK OPAP 92-233

SAMPLE NUMBER	PROJECT	PURPOSE	LOCATION	DESCRIPTION
6745	ARD	R	WEBBER SHOWING 100W 125S	QUARTZ BOULDER
6746	ARD	R	WEBBER SHOWING 100W 125S	BANDED FLSP-BI GNEISS
6747	ARD	A / R	500E/8+25N	QUARTZ BOULDER, MILKY, HEMATITE
6748	ARD	A / R	600E/8+00N	SILICIFIED MARBLE, RUSTY SPECS
6749	ARD	S	800E/9+60n	MARBLE, SUGGARY TEXTURE
6750	ARD	S	500E/9+00N	HB-GNEISS
6751	ARD	R	PIT	LAMINATED QUARTZITE
6752	ARD	R	PIT	GRANITE WITH MALACHITE
6756	ARD	S	500W/12+00N	GABBRO
6757	ARD	R	425W/4+00S	APLITIC ROCK
6758	ARD	A	025W/3+50N	DIRTY RUSTY MARBLE
6759	ARD	R	400W/12+50N	RUSTY QUARTZ BOULDER
6760	ARD	R	400W/12+50N	BANDED GREY MARBLY, RUSTY SPECS
6762	ARD	S	SPHALERITE TRENCH	MARBLE WITH SPHALERITE
6773	ARD	A / R	SPHALERITE TRENCH	MARBLE WITH SPHALERITE

ARD = ARDOCH PROJECT
A = ANALYSIS
R = REFERENCE SAMPLE
S = THIN SECTION

ROCK SAMPLE DESCRIPTION: KALADAR PROJECT (KALADAR TWP.)

W. BRACK OPAP 92-233

SAMPLE NUMBER	PROJECT	PURPOSE	LOCATION	DESCRIPTION
6738	KAL	S	TRENCH I / 400E-300S	HORNLENDE GNEISS
6739	KAL	A	TRENCH I / 400E-300S	SILICIOUS GNEISS WITH PYRITE
6740	KAL	A	TRENCH I / 400E-300S	RUSTY QUARTZ VEIN
6741	KAL	A / R	TRENCH I / 400E-300S	RUSTY QUARTZ VEIN
6742	KAL	A	TRENCH I / 400E-300S	RUSTY QUARTZ VEIN
6743	KAL	S	TRENCH I / 400E-300S	SYENITIC GRANITE
6744	KAL	A / S	TRENCH I / 400E-300S	RUSTY QUARTZ VEIN
6764	KAL	A	600E/3+00S TRENCH II	SHEAR/RUSTY SILICIOUS GRUS
6765	KAL	A	600E/3+00S TRENCH II	SHEAR/RUSTY GRUS
6766	KAL	A	600E/3+00S TRENCH II	HB./FLSP.-GNEISS
6767	KAL	A	700E/3+25S TRENCH III	RUST DOTTED MARBLE
6768	KAL	A	600E/3+00S TRENCH II	RUSTY QUARTZ VEIN
6769	KAL	A	600E/3+00S TRENCH II	RUSTY QUARTZ VEIN
6770	KAL	A	600E/3+00S TRENCH II	SHEAR/RUSTY GRUS
6771	KAL	A	600E/3+00S TRENCH II	SHEAR/RUSTY GRUS
6772	KAL	A / R	400E/3+00S TRENCH I	QUARTZ-VEIN, COMPOSITE SAMPLE

KAL = KALADAR PROJECT
 A = ANALYSIS
 R = REFERENCE SAMPLE
 S = THIN SECTION

44° 37'



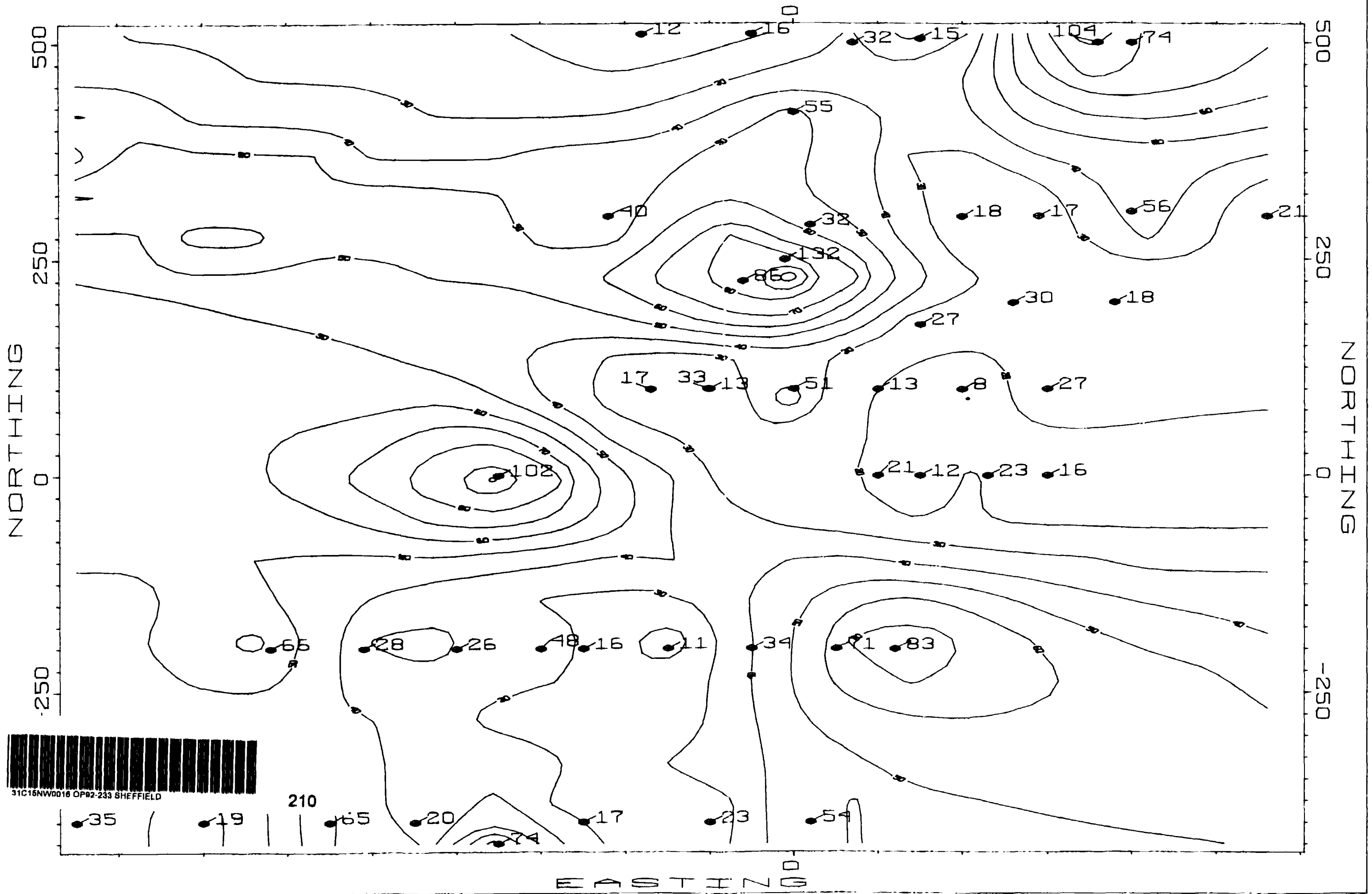
0 500 M 1 KM 2 KM

NORWAY LAKE AREA
SHEFFIELD TWP.
AIR PHOTO LINEAMENT MAP

W BRACK OPAP 92-233



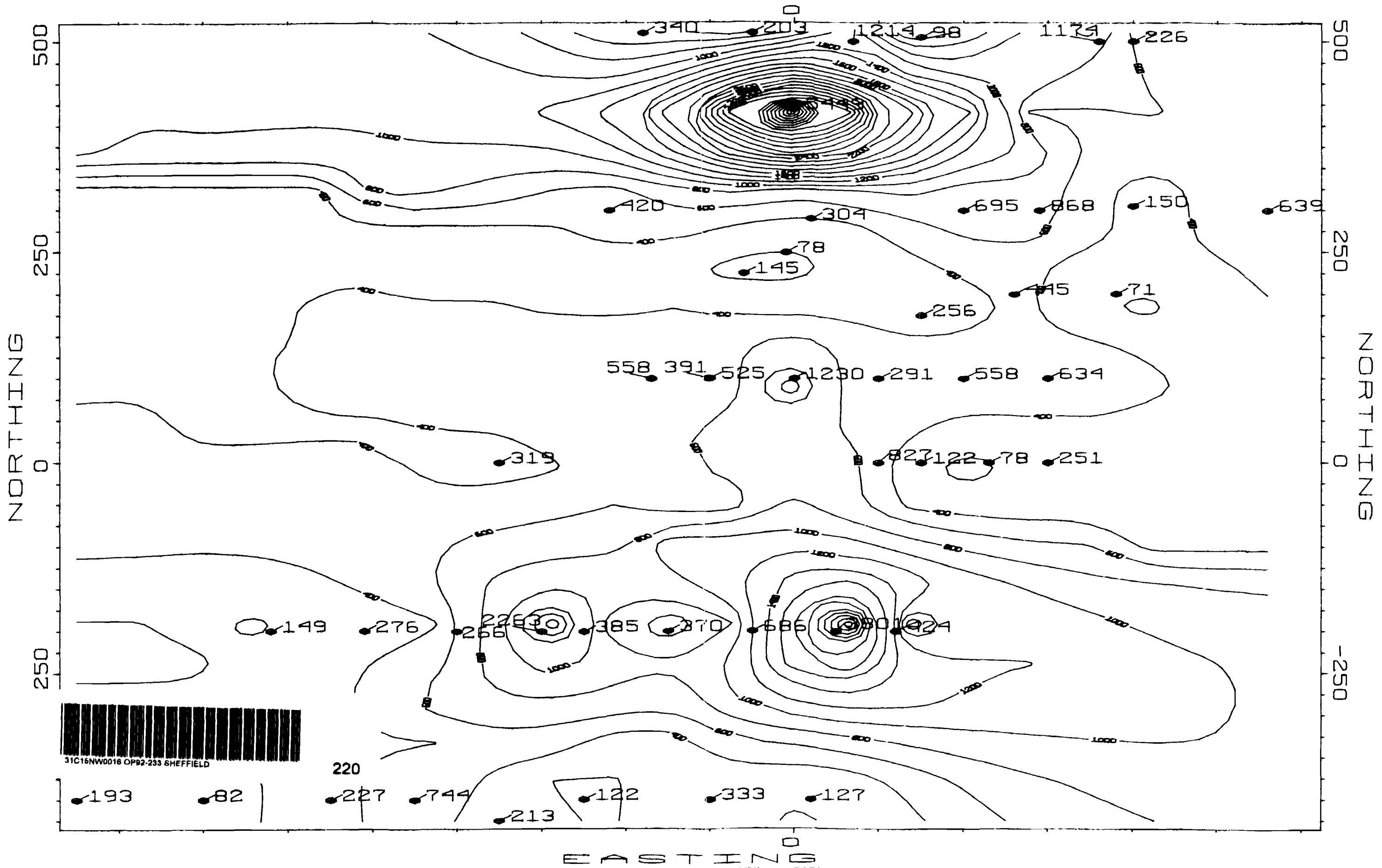
NORWAY LAKE
SOIL GEOCHEMISTRY - CALCIUM (PPM * 100)



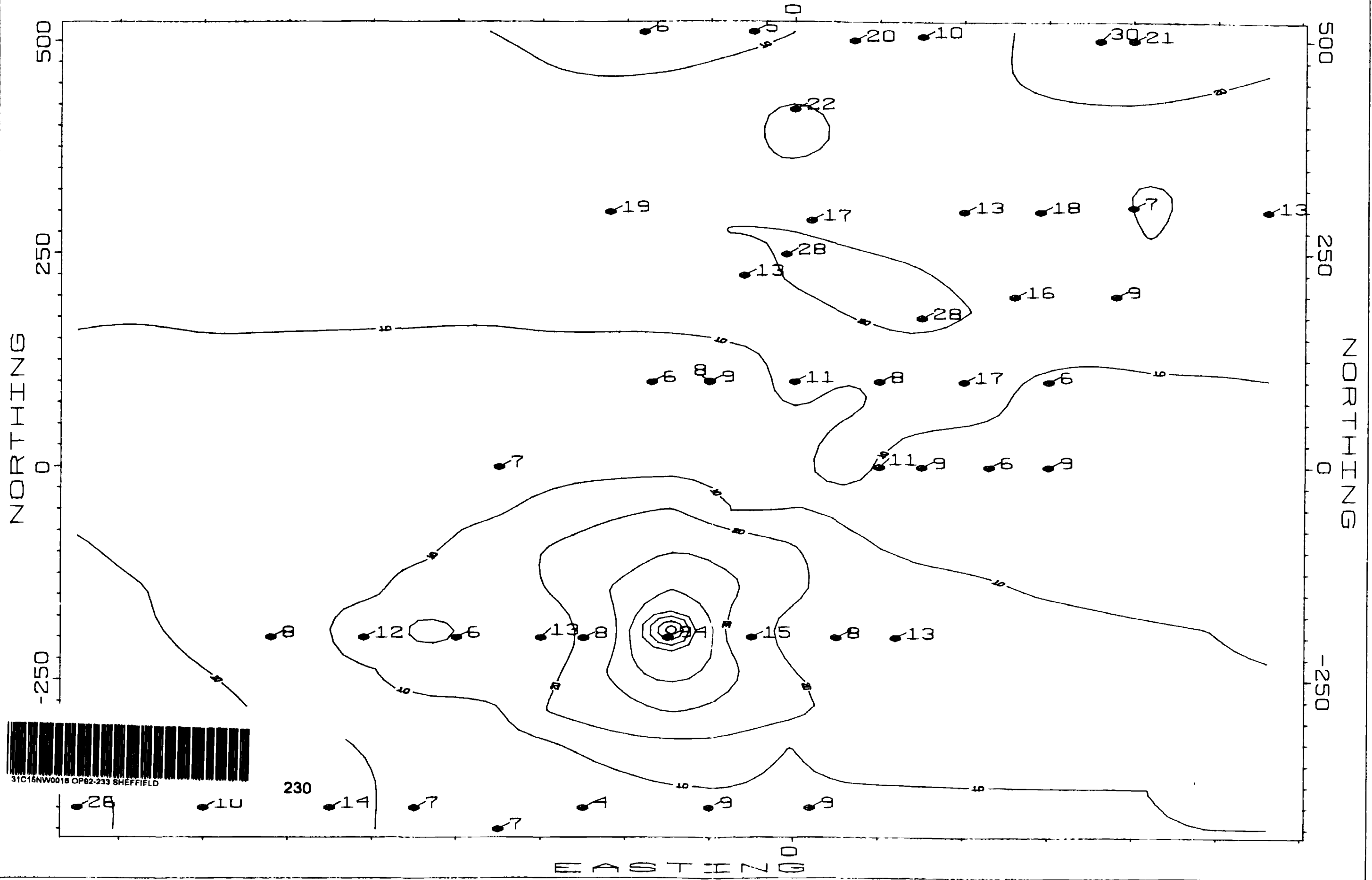
EASTING



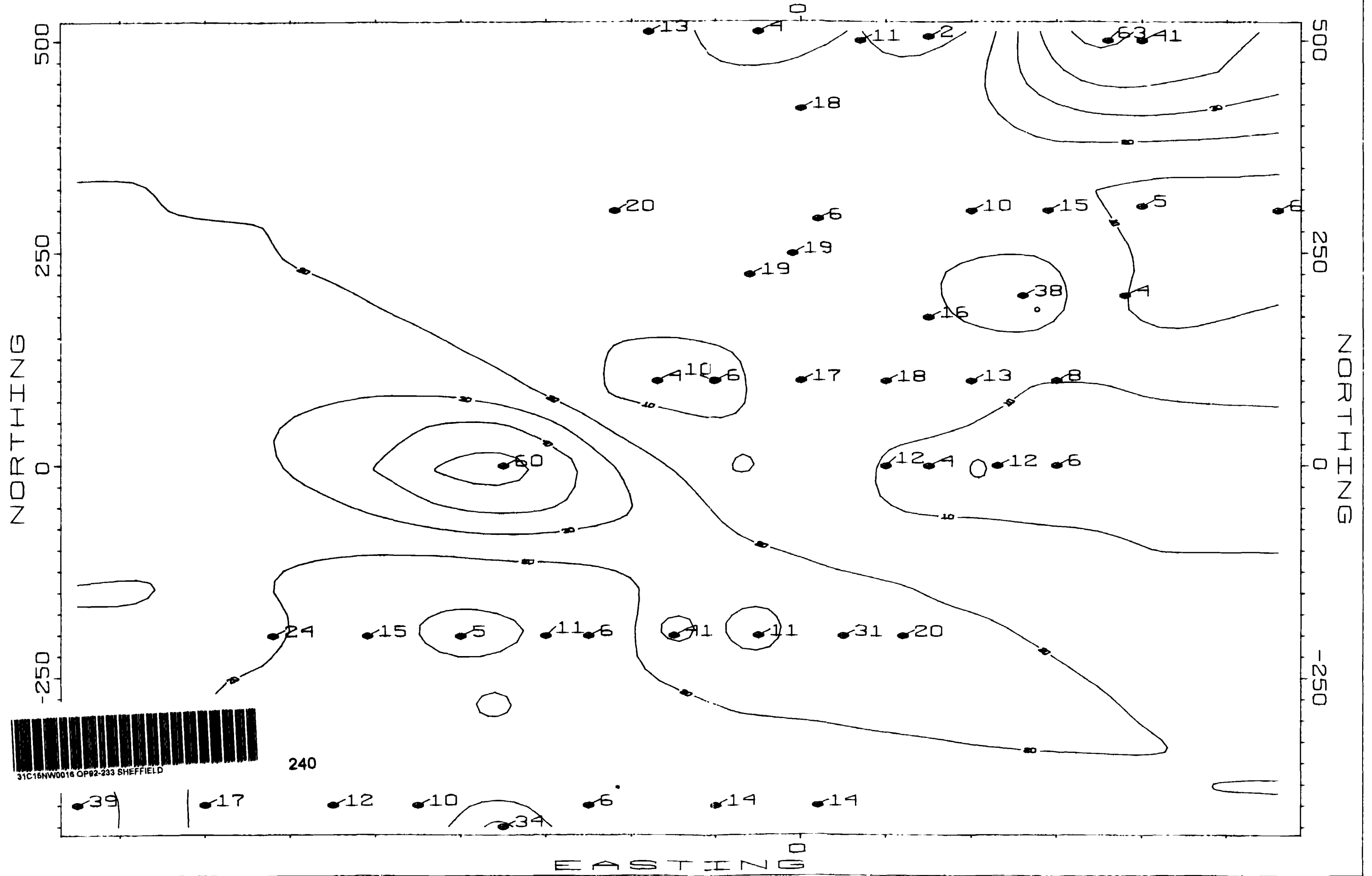
NORWAY LAKE
SOIL GEOCHEMISTRY - MANGANESE (PPM)



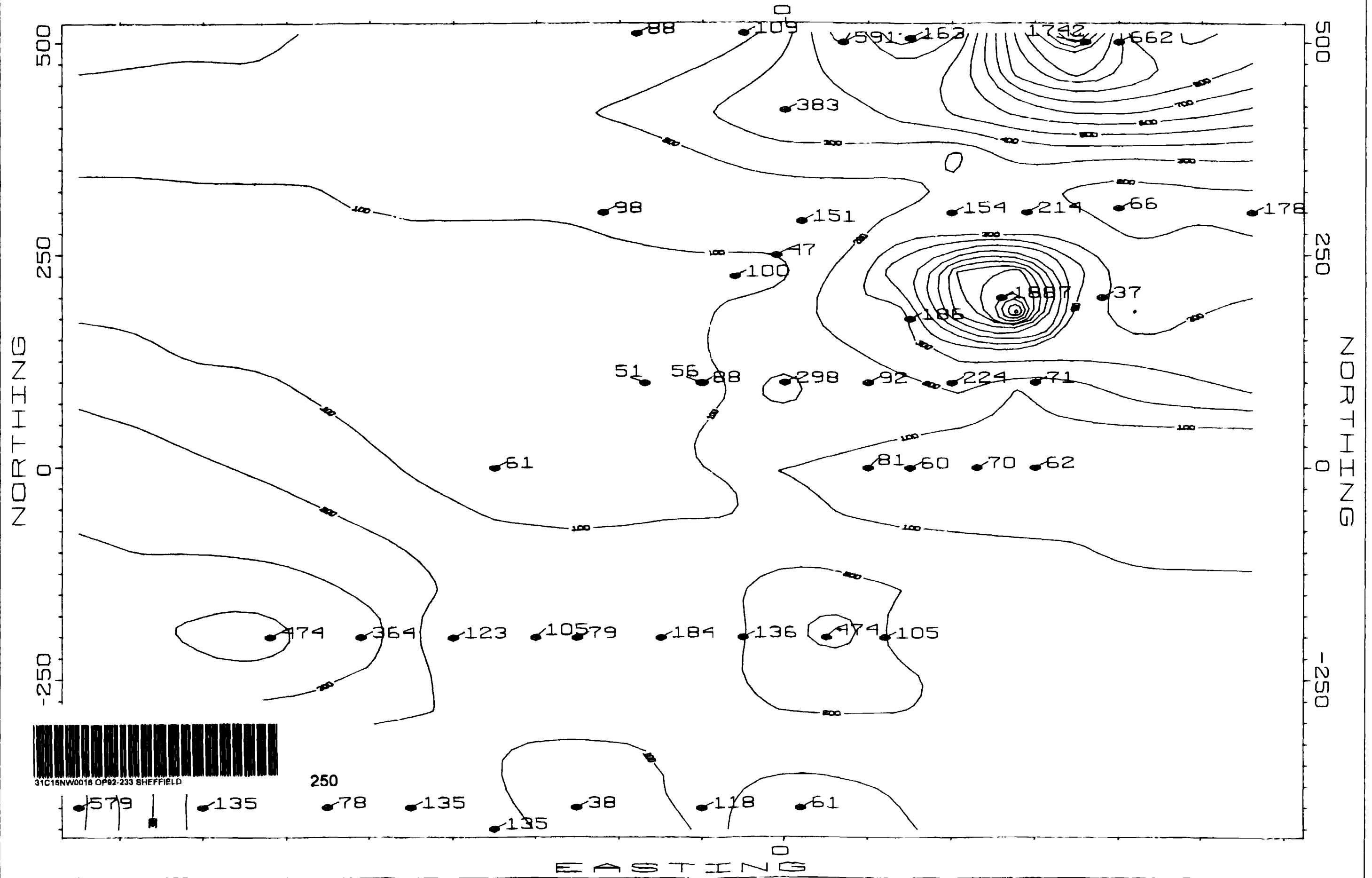
NORTHWEST LAKE SOIL GEOCHEMISTRY - LEAD (PPM)



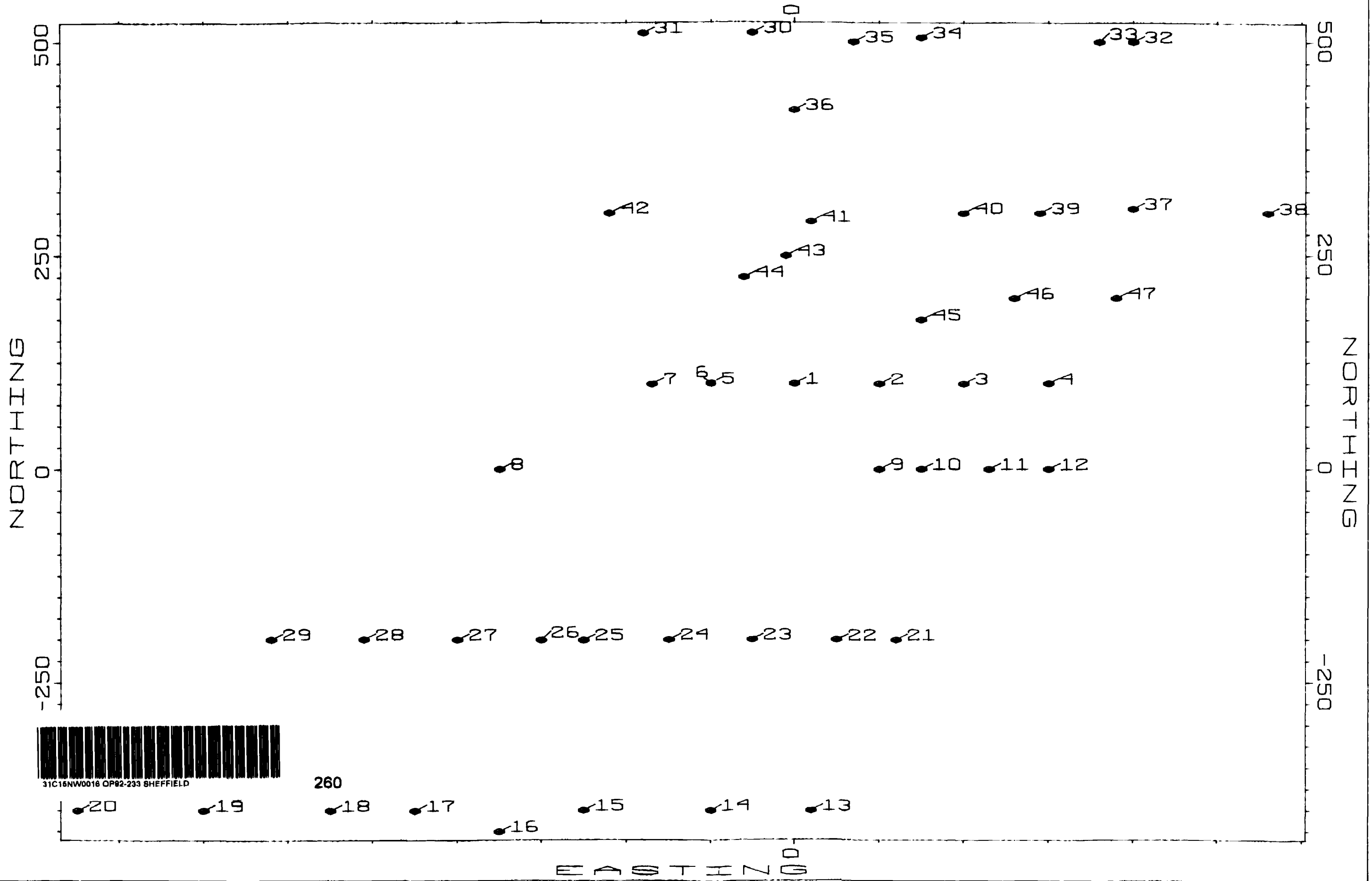
NORWAY LAKE SOIL GEOCHEMISTRY - COPPER (PPM)



NORWAY LAKE
SOIL GEOCHEMISTRY - ZINC (PPM)



NORWAY LAKE SOIL GEOCHEMISTRY - SAMPLES





270

31C11001018 OP92-233 SHEETFIELD

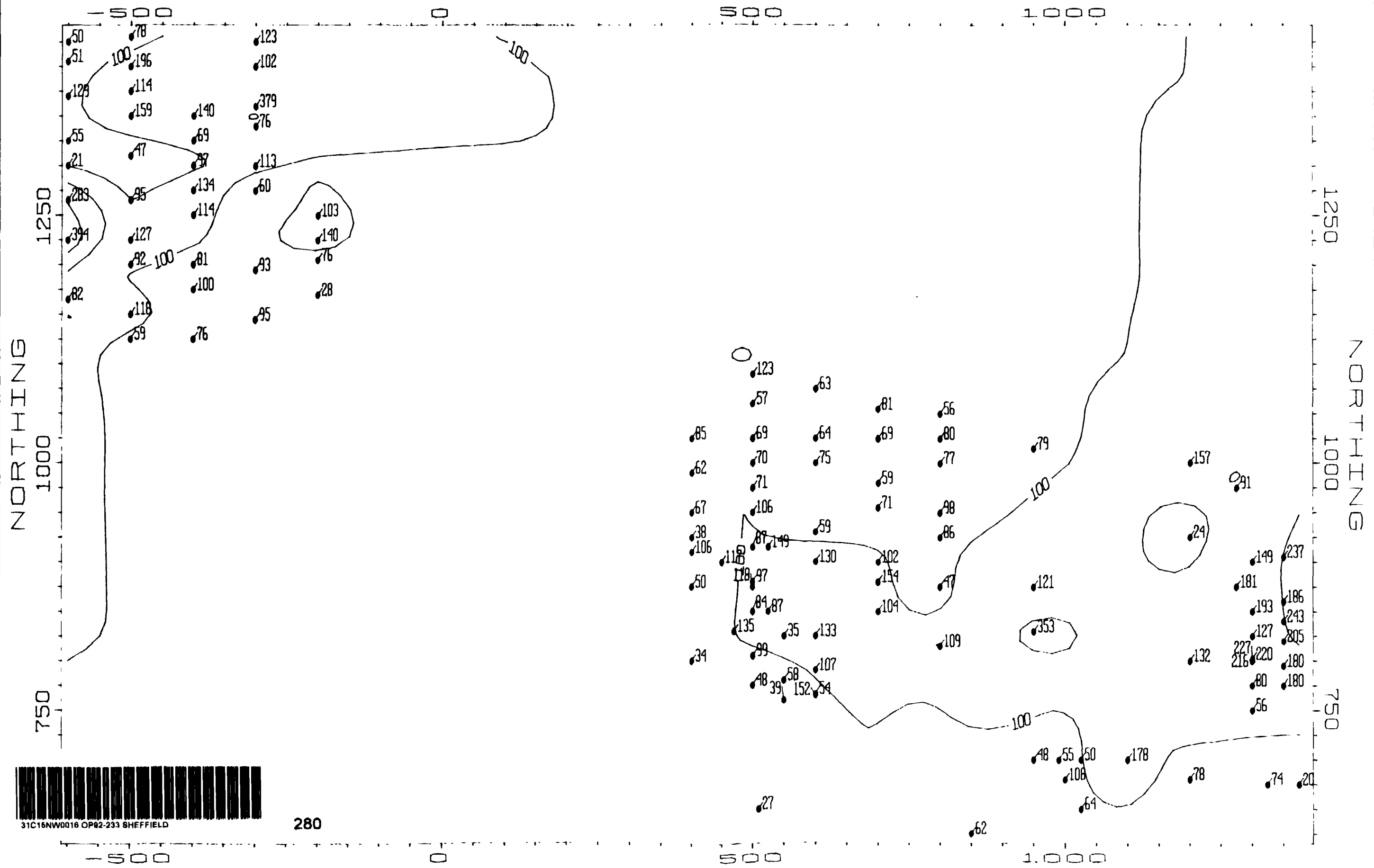
0 500 M 1 KM 2 KM

ARDOCH PROJECT
 CLARENDON TWP.
 AIR PHOTO LINEAMENT MAP

W. BRACK OPAP 92-233

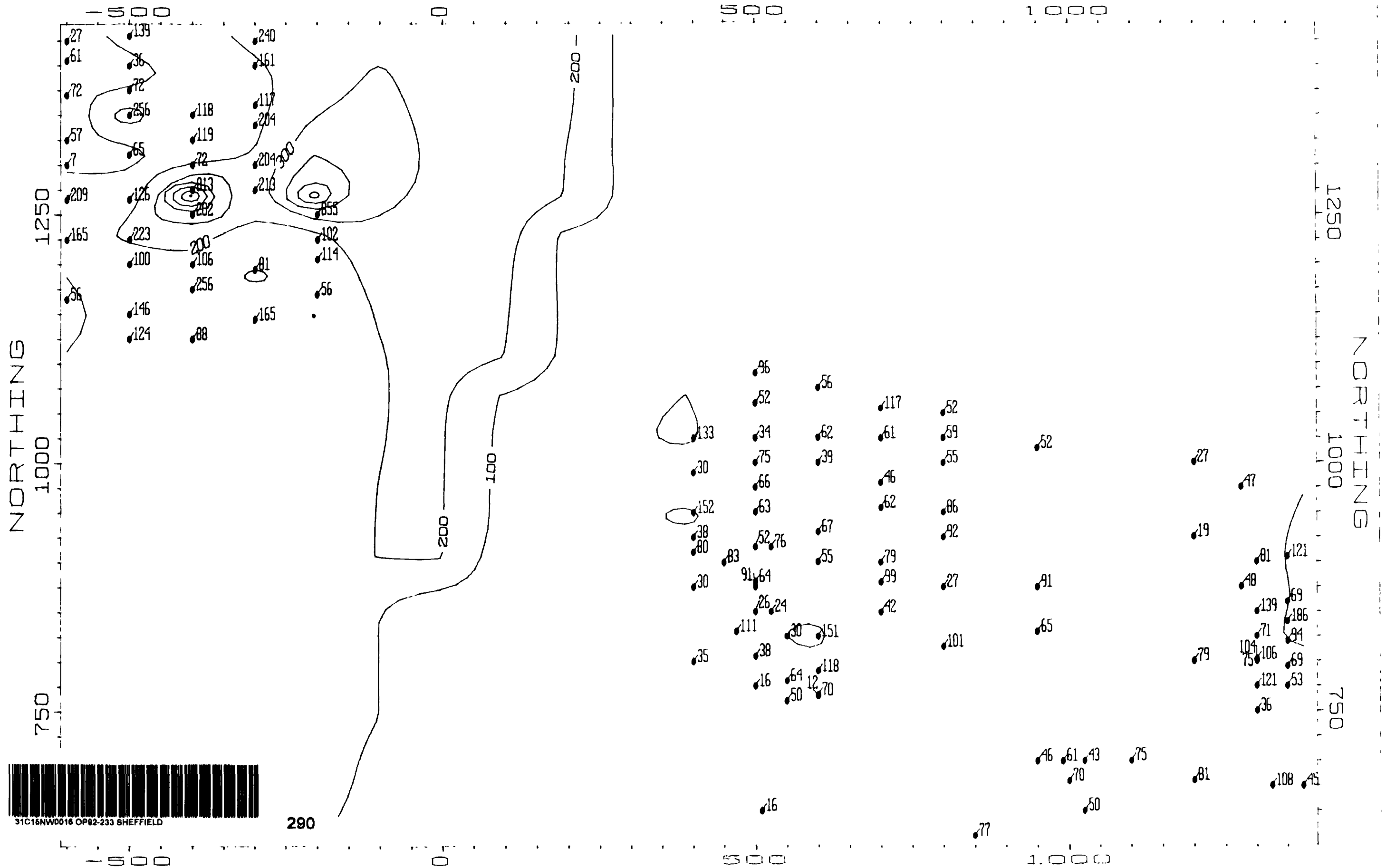
44° 55'
76° 56'

CLARENDON TOWNSHIP SOIL GEOCHEMISTRY - BARIUM (PPM)



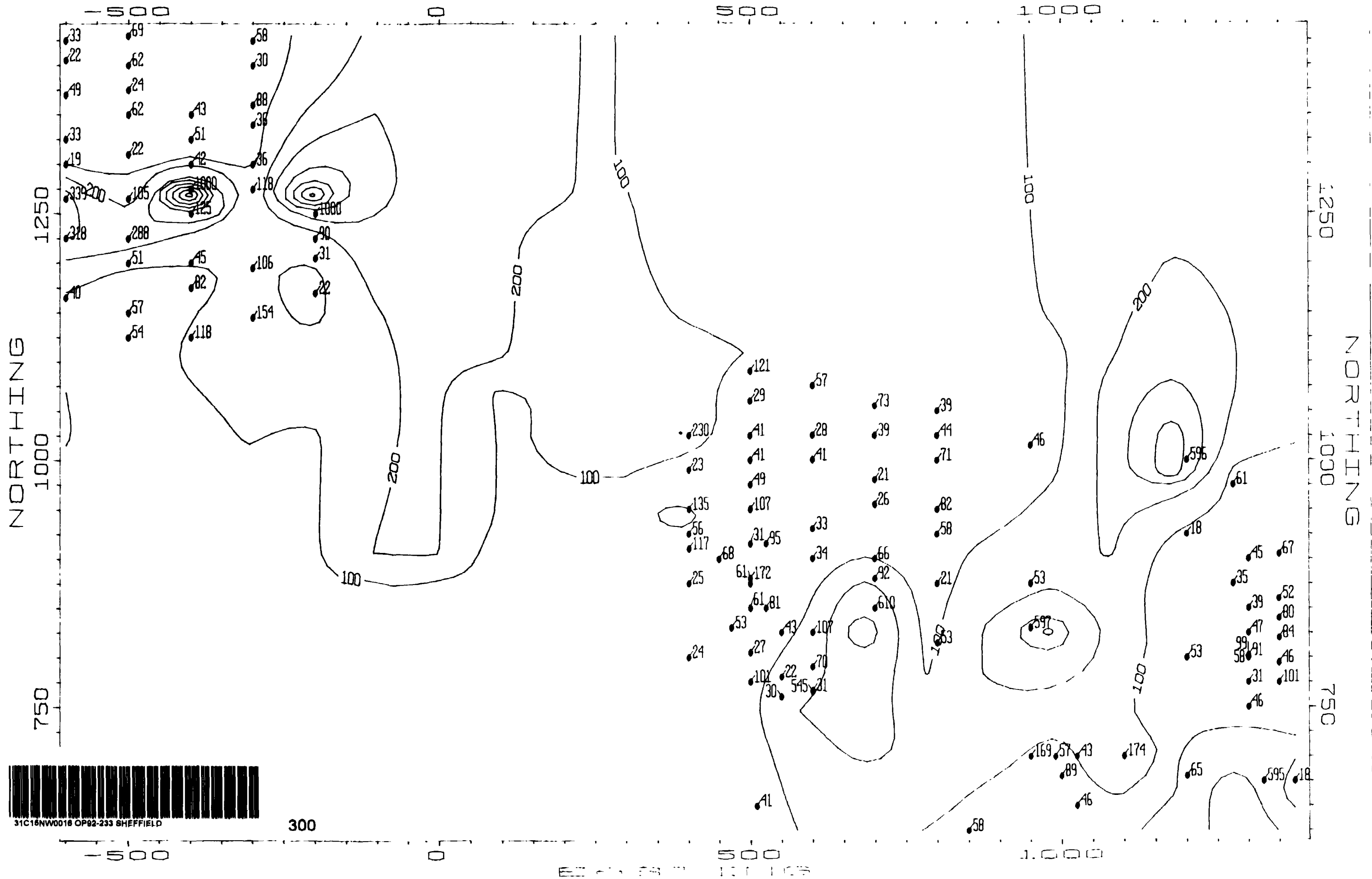
280

CLARENDON TOWNSHIP
 SOIL GEOCHEMISTRY -- MAGNESIUM (% * 100)

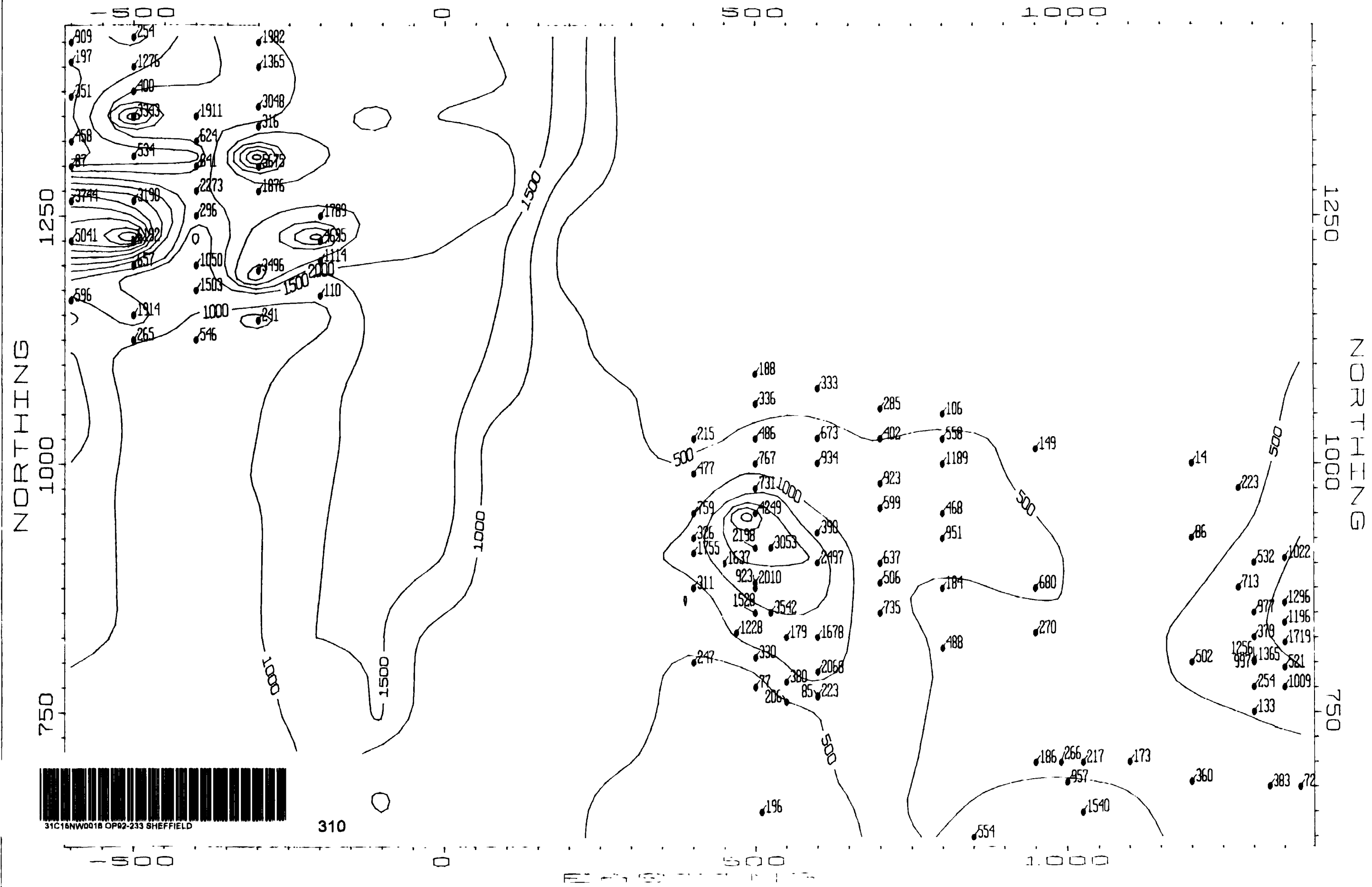


290

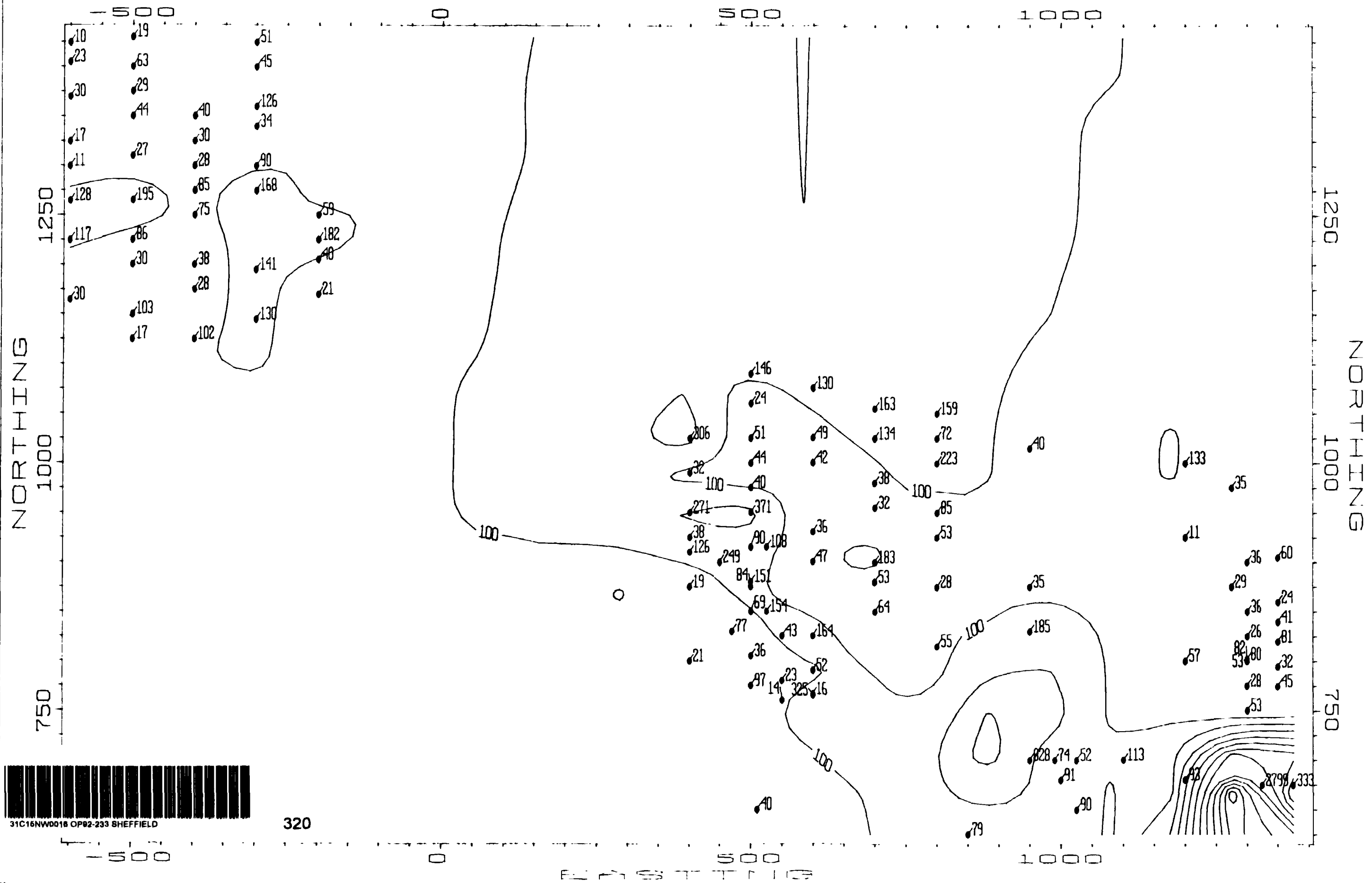
CLARENDON TOWNSHIP
 SOIL GEOCHEMISTRY - CALCIUM (% * 100)



CLARENDON TOWNSHIP SOIL GEOCHEMISTRY - MANGANESE (PPM)



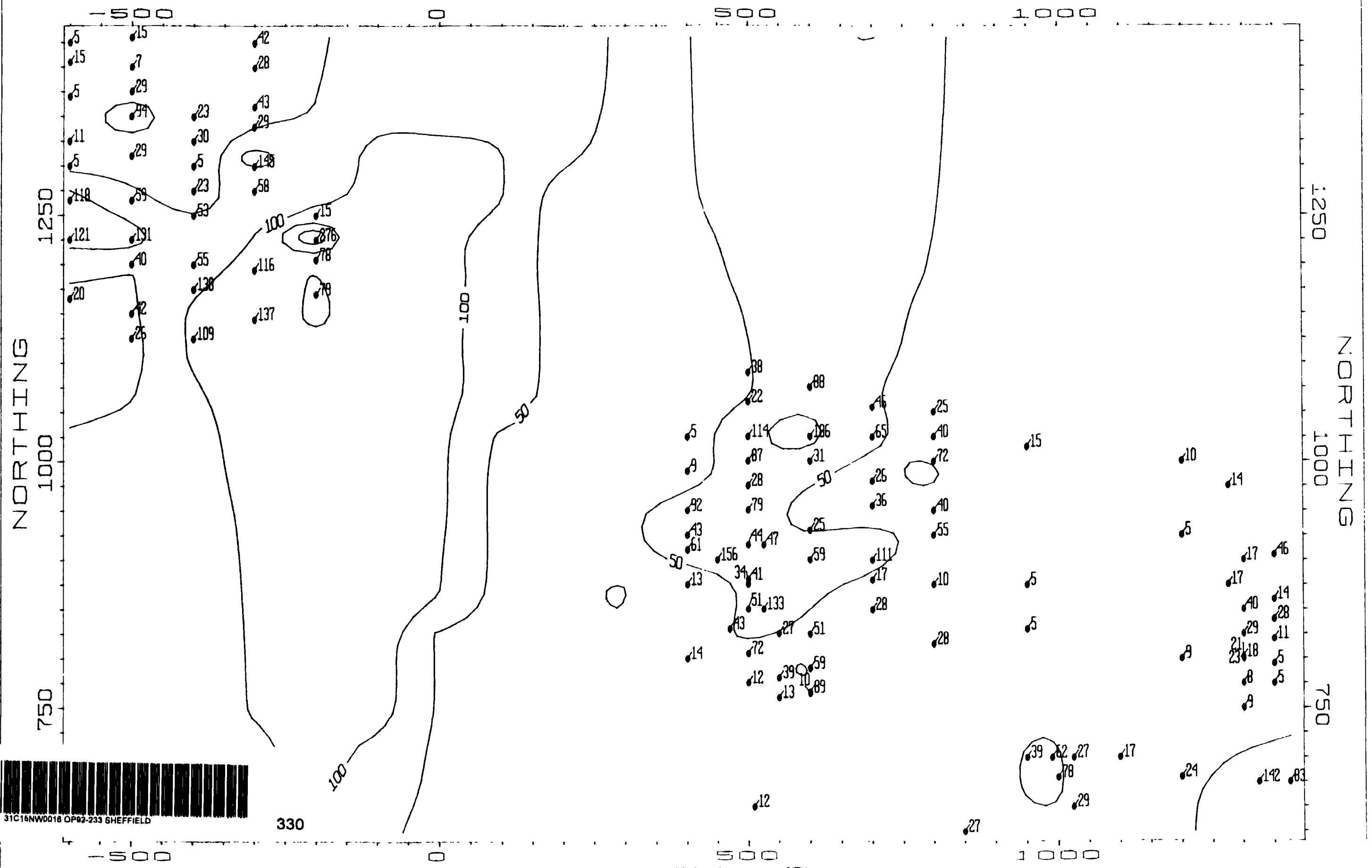
CLARENDON TOWNSHIP SOIL GEOCHEMISTRY - MERCURY (PPB)



320

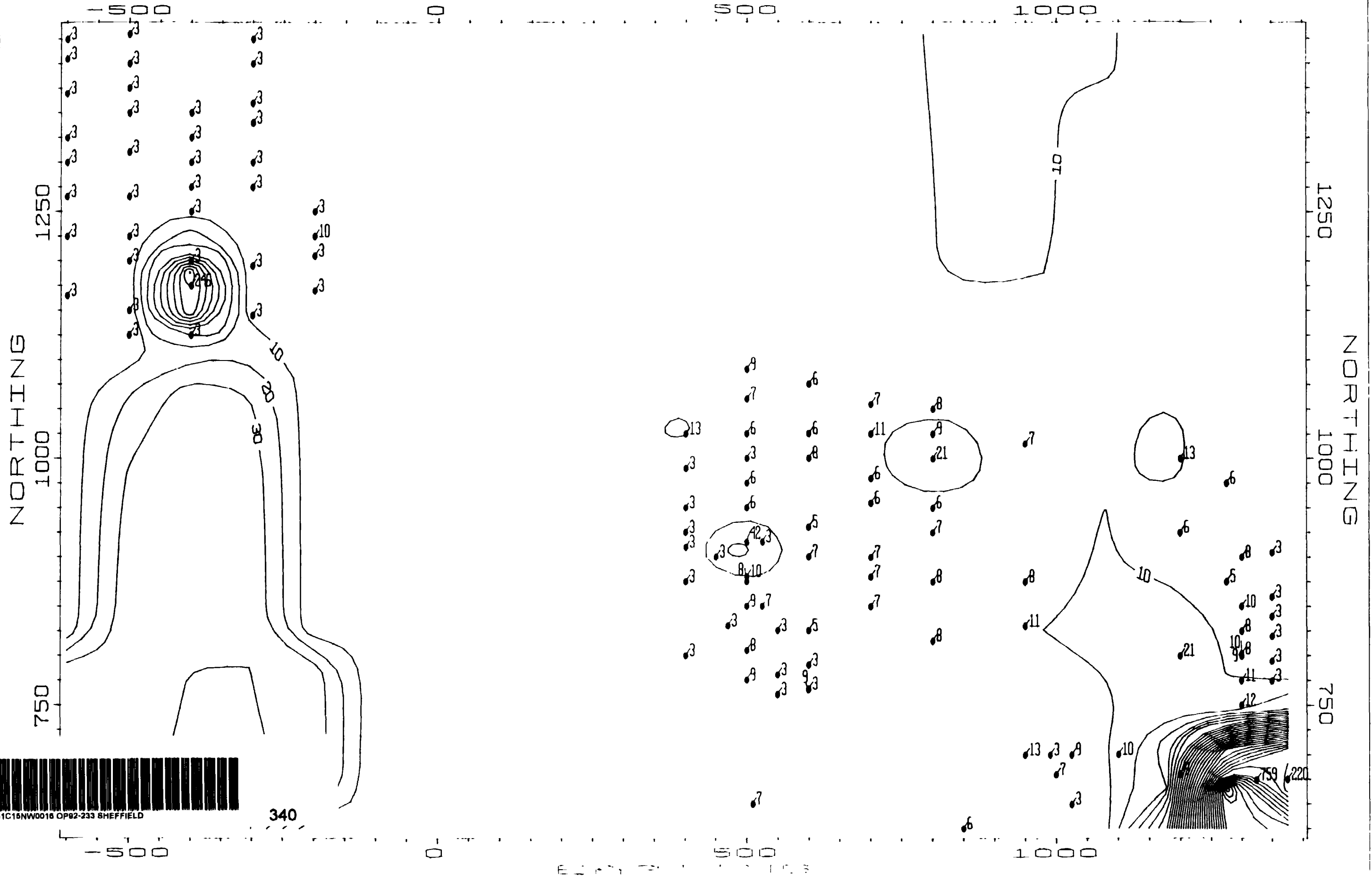
EASTING

CLARENDON TOWNSHIP SOIL GEOCHEMISTRY - ARSENIC (PPM)



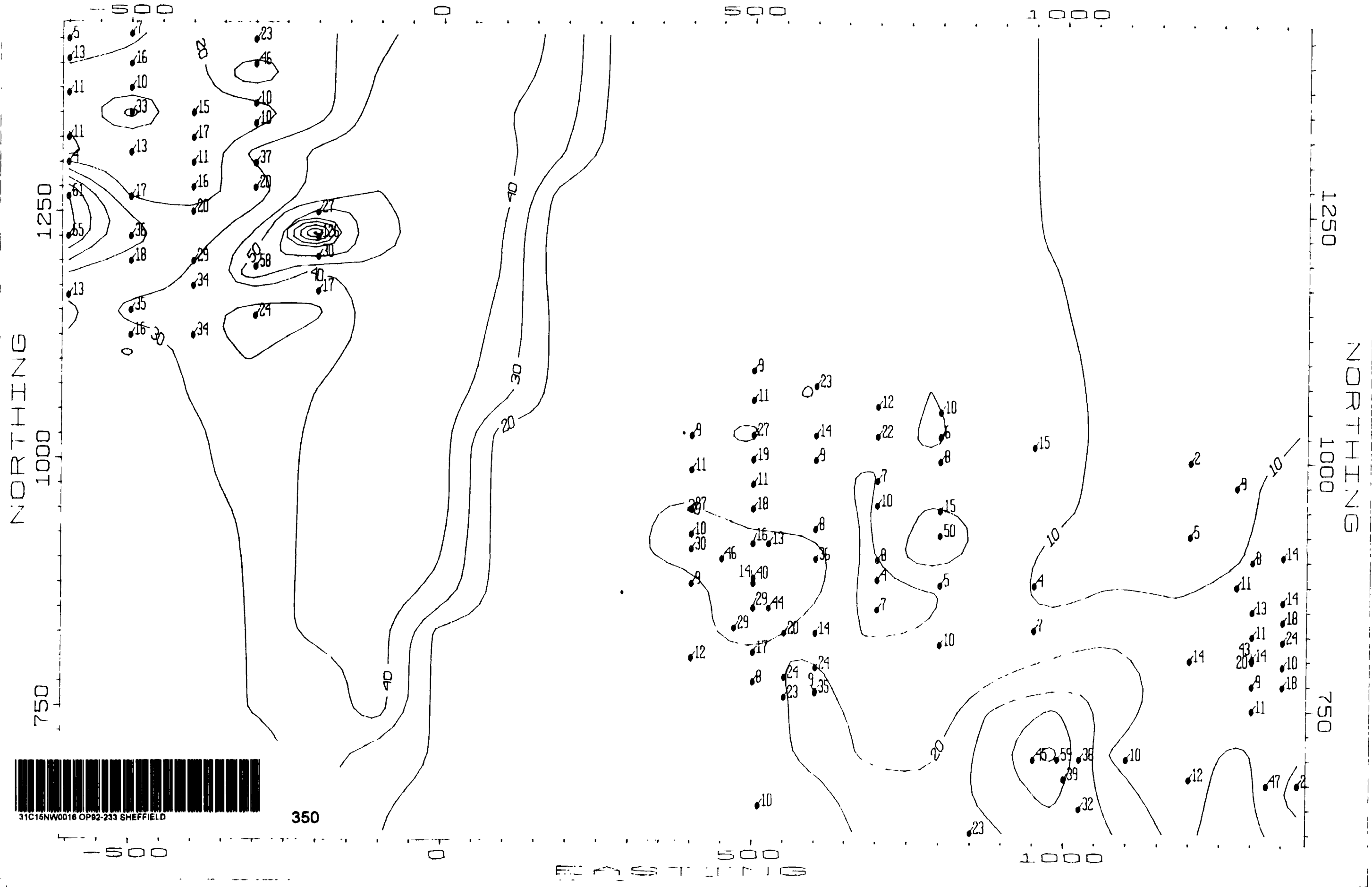
330

CLARENDON TOWNSHIP SOIL GEOCHEMISTRY - GOLD (PPB)

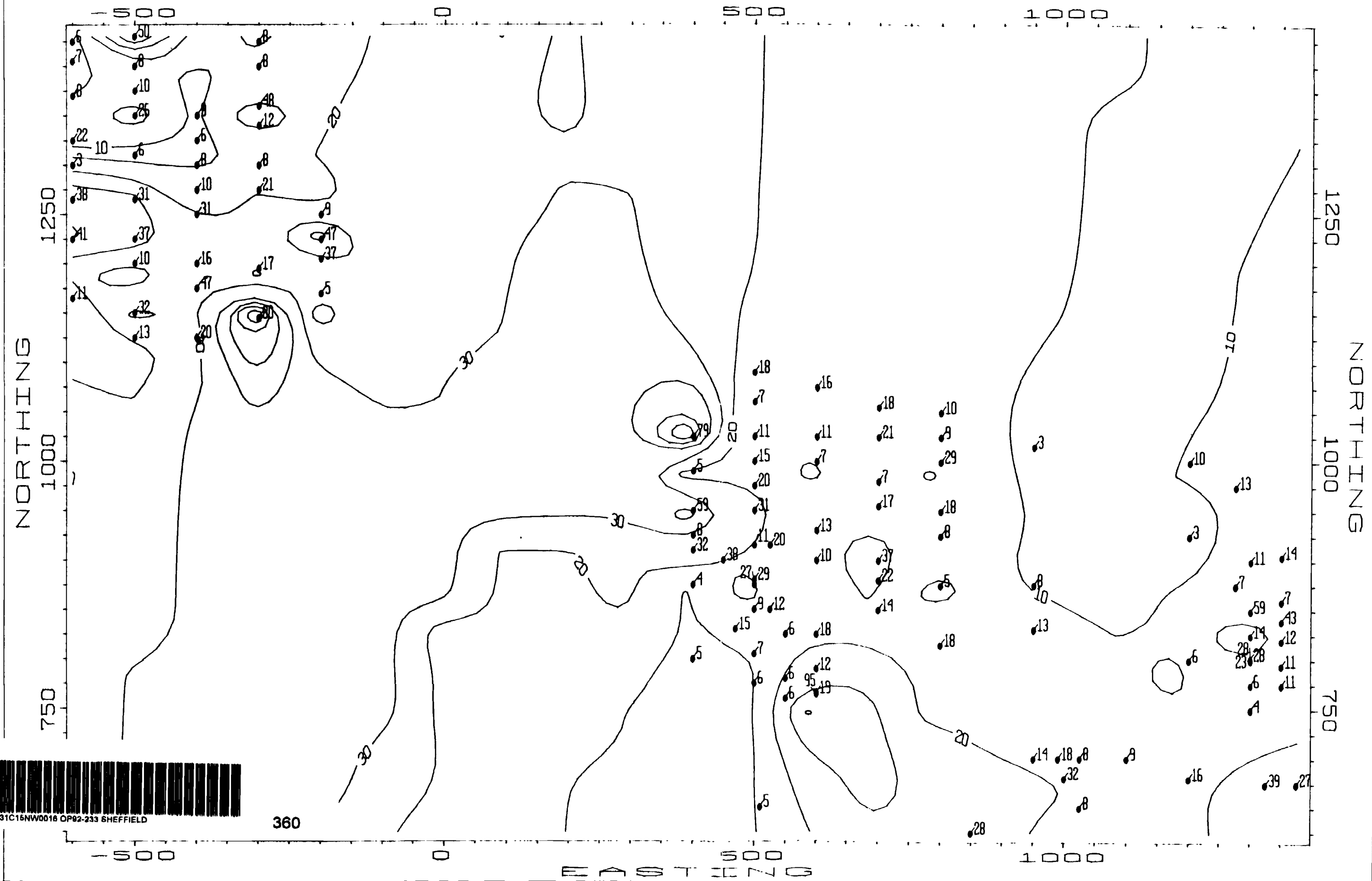


340

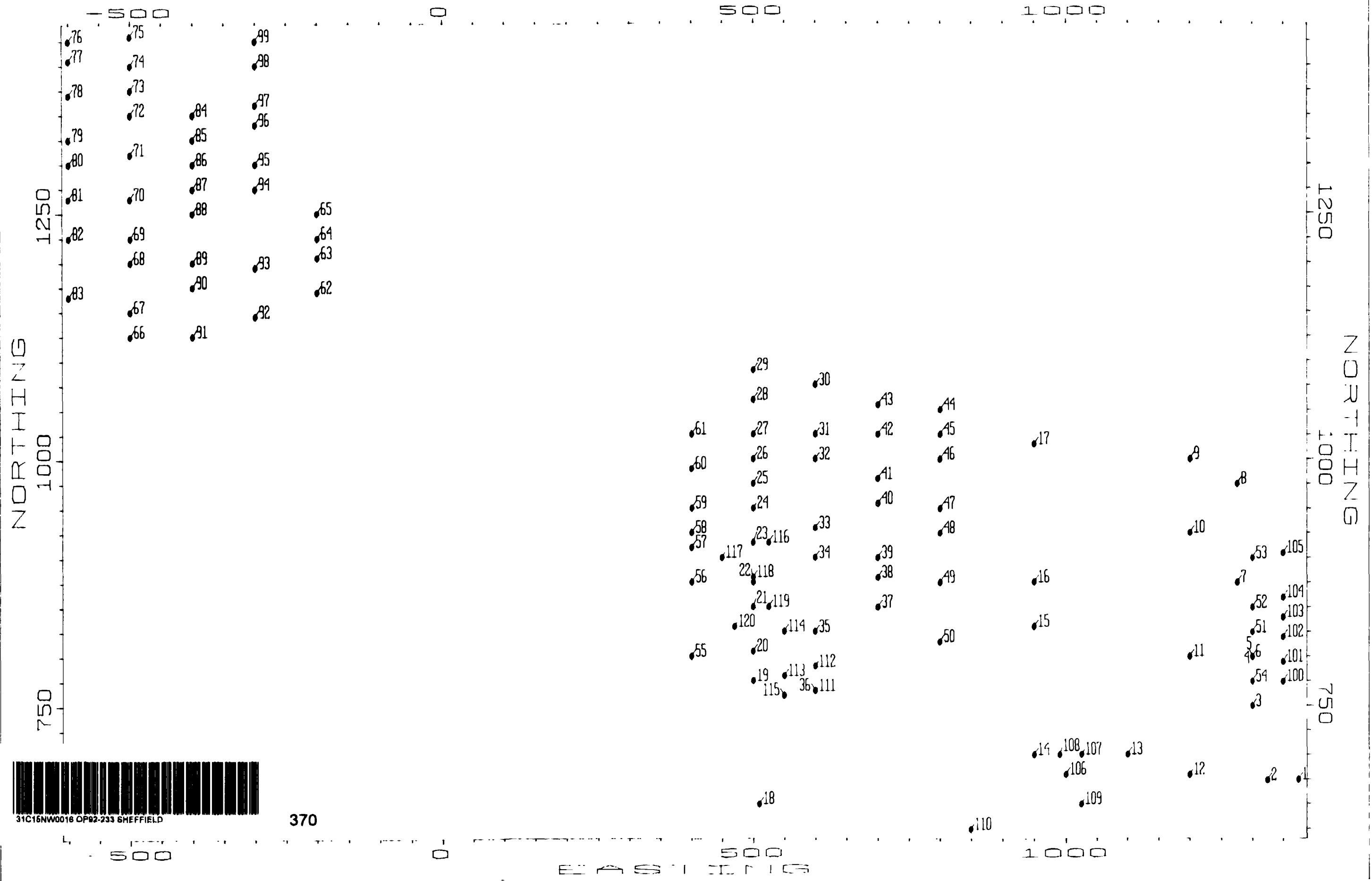
SOIL GEOCHEMISTRY - LAND CRAP



CLARENDON TOWNSHIP
SOIL GEOCHEMISTRY COPPER (PPM)

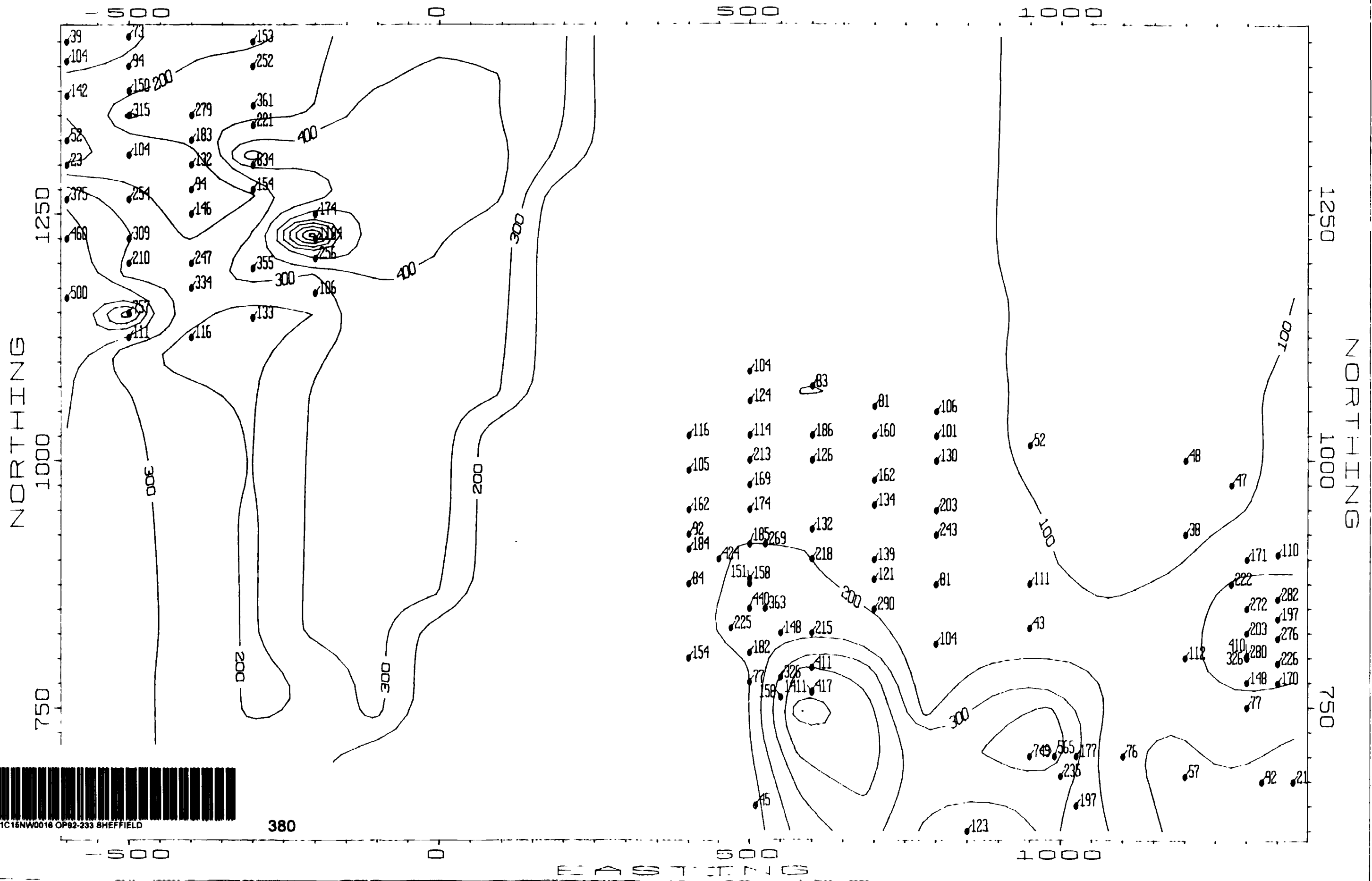


SOIL GEOCHEMISTRY SAMPLE LOCATIONS



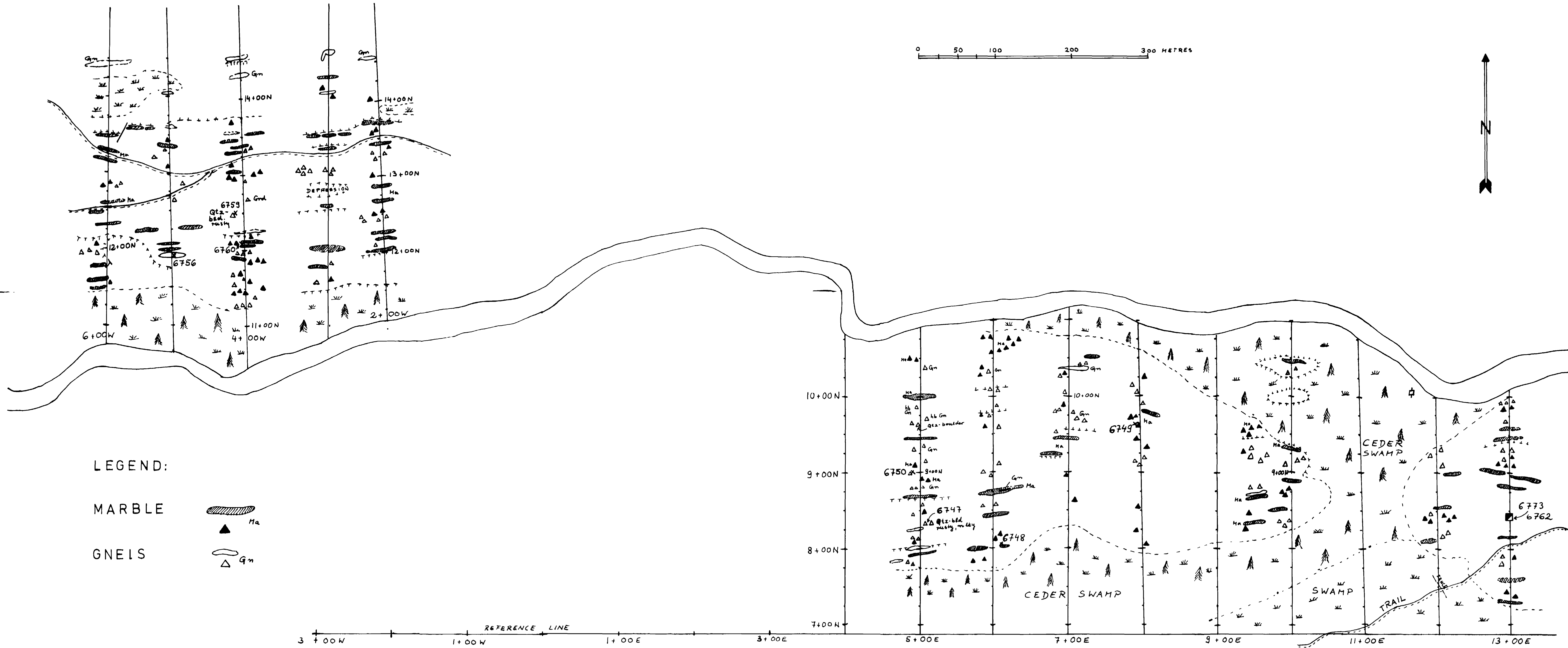
370

CLARENDON COUNTY SOUTH CAROLINA
 SOIL GEOCHEMISTRY - ZINC (PPM)



31C15NW0018 OP82-233 BHEFFIELD

380



LEGEND:

MARBLE



Ma

GNEISS



Gn

ARDOCH PROJECT
 CLARENDON TWP.
 GEOLOGY AND ROCK SAMPLE
 LOCATIONS

W. BRACK OPAP 92-233

