

**GEOCHEMICAL ORIENTATION SURVEYS
AND REGOLITH GEOLOGY IN THE S.W.
ARUNTA PROVINCE, NORTHERN TERRITORY
(ARGOS PROJECT)**

Volume 2 - Appendices 1-4

M.S. Skwarnecki, Li Shu, S.J. Fraser and I.D.M. Robertson

CRC LEME OPEN FILE REPORT 82

January 2002

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(CSIRO Exploration and Mining Report 677R/CRC LEME Report 129R, 2000.
Second impression 2002)

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GEOCHEMICAL ORIENTATION SURVEYS AND REGOLITH GEOLOGY IN THE S.W. ARUNTA PROVINCE, NORTHERN TERRITORY (ARGOS PROJECT)

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Before commencing a geochemical survey over a large area of the SW Aruntas, The Northern Territory Geological Survey contracted CRC LEME to establish optimum procedures for this survey. This report presents the outcomes of this Project, which commenced in September 1999, was completed in February 2000 and was led by Dr I.D.M. Robertson.

The agreement between the parties allowed public release of these reports when the Northern Territory Geological Survey released the regional survey data. This was accomplished in October 2001 with release of Dunster J.N. and Mügge, A.E. Stream sediment survey of Western MacDonnell Ranges – statistical and GIS-based interpretation. Northern Territory Geological Survey, Digital Information on CD Package DIP 2001-002. It is intended that publication of the report will be an additional factor in transferring technology to aid the Australian mineral industry.

This report (CRC LEME Open File Report 82) is a second impression (second printing) of CSIRO Exploration and Mining Restricted Report 129R, first issued in 2000, which formed the output of the ARGOS Project.

Copies of this publication can be obtained from:

The Publication Officer, c/- CRC LEME, CSIRO Exploration and Mining, P.O. Box 1130, Bentley, WA 6102, Australia. Information on other publications in this series may be obtained from the above or from

<http://leme.anu.edu.au/>

Cataloguing-in-Publication:

Geochemical orientation surveys and regolith geology in the S.W. Arunta Province, Northern Territory (Argos Project)

ISBN v1: 0 643 06773 6 v2: 0 643 06777 9 v3: 0 643 06778 7 set: 0 643 06779 5

1. Regolith - Northern Territory 2. Geochemistry 3. Landforms - Northern Territory

I. Skwarnecki, M.S. II. Title

CRC LEME Open File Report 82.

ISSN 1329-4768

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APPENDIX I

TABULATED GEOCHEMISTRY

This data supplied elsewhere in digital format

FieldNo Sample numbers of field stations - see Appendix 3

LabSeqNo Sequence used for analysis, randomised against others

LibNo Unique CSIRO Exploration and Mining sample storage number

Relative Coordinates were digitised from an uncontrolled map

AMG coordinates approximate (± 100 m) - ordinary GPS

Fractions: -

Bulk whole sample

6_2 6-2 mm

2_.5 2-0.5 mm

180_75 180-75 μm

<75 <75 μm

N.B. Determinations less than detection (<dl) have been allocated values of 0.5 of detection for plotting and statistical purposes.

APPENDIX 2

STANDARDS

Sni - Sn by ICP/MS

Snx - Sn by XRF

Mean - Arithmetic mean of standard determinations

AccVal - Accepted value determined historically by XRF and INAA

CoeffVar - Coefficient of Variation = $100 \times \text{Standard Deviation}/\text{Mean}$ as a measure of precision. N.B. Compare the precision to the detection limit.

APPENDIX 3

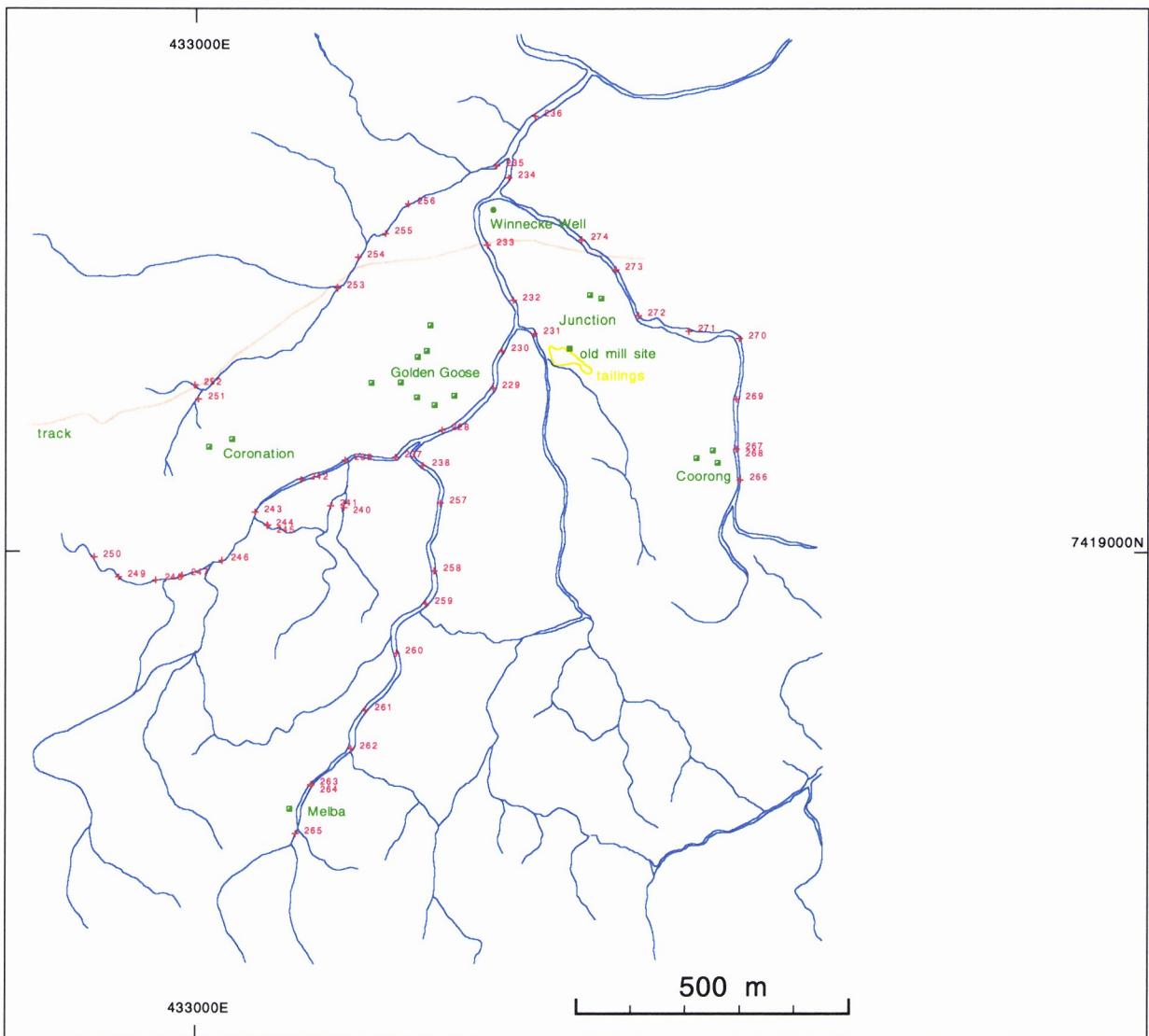
DOT MAPS

APPENDIX 3.A Winnecke Orientation Survey - map of sample locations

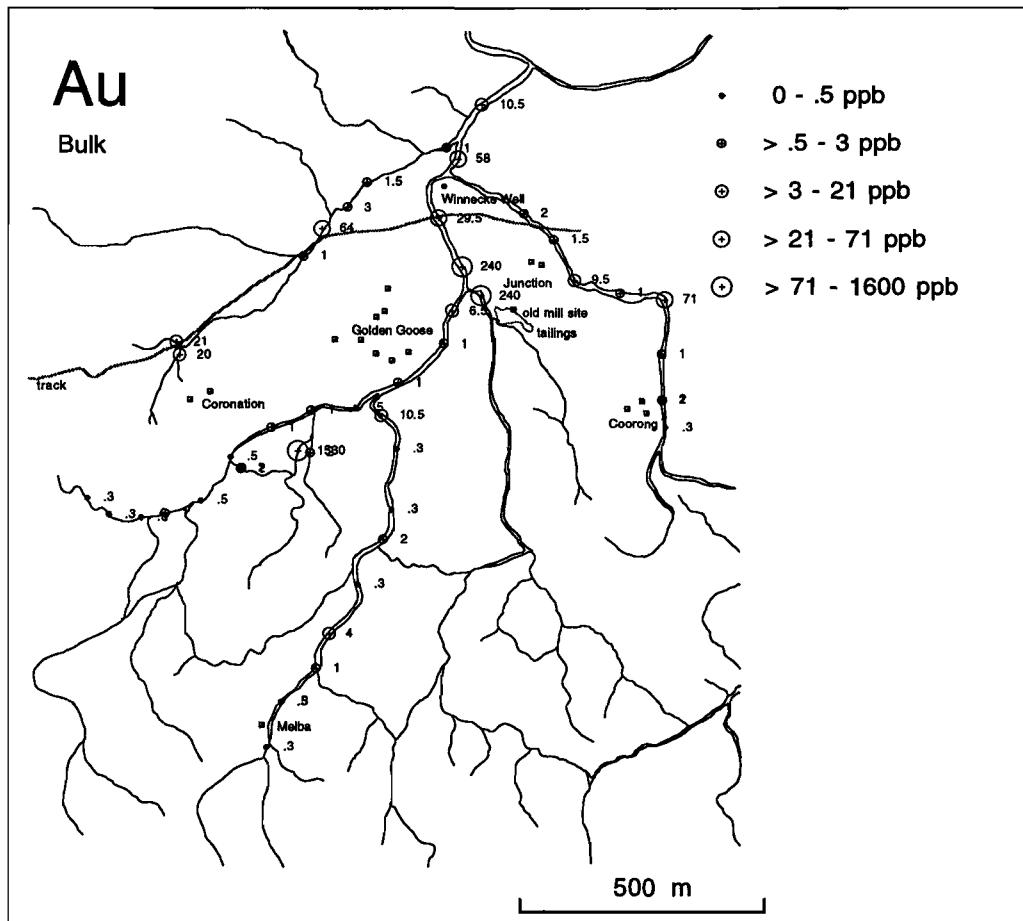
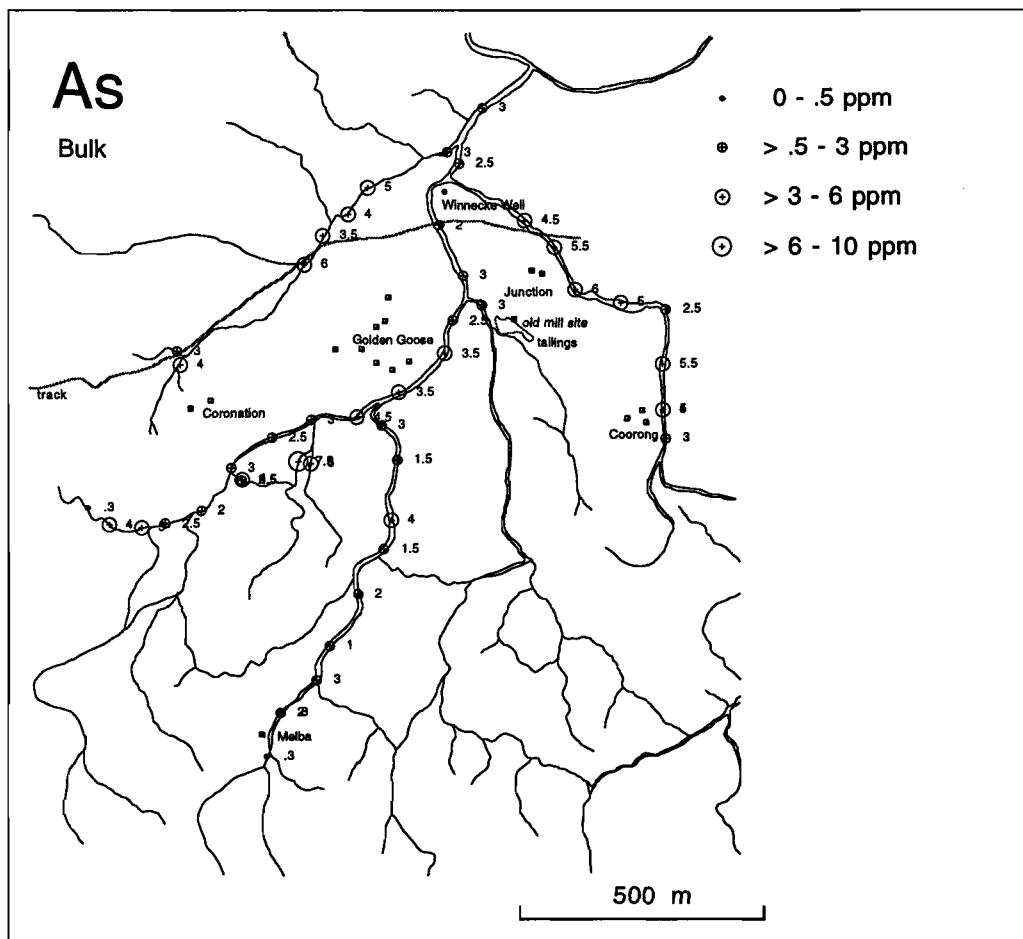
Appendix 3.A.1	Bulk
Appendix 3.A.2	6-2 mm
Appendix 3.A.3	2-0.5 mm
Appendix 3.A.4	180-75 μm
Appendix 3.A.5	<75 μm

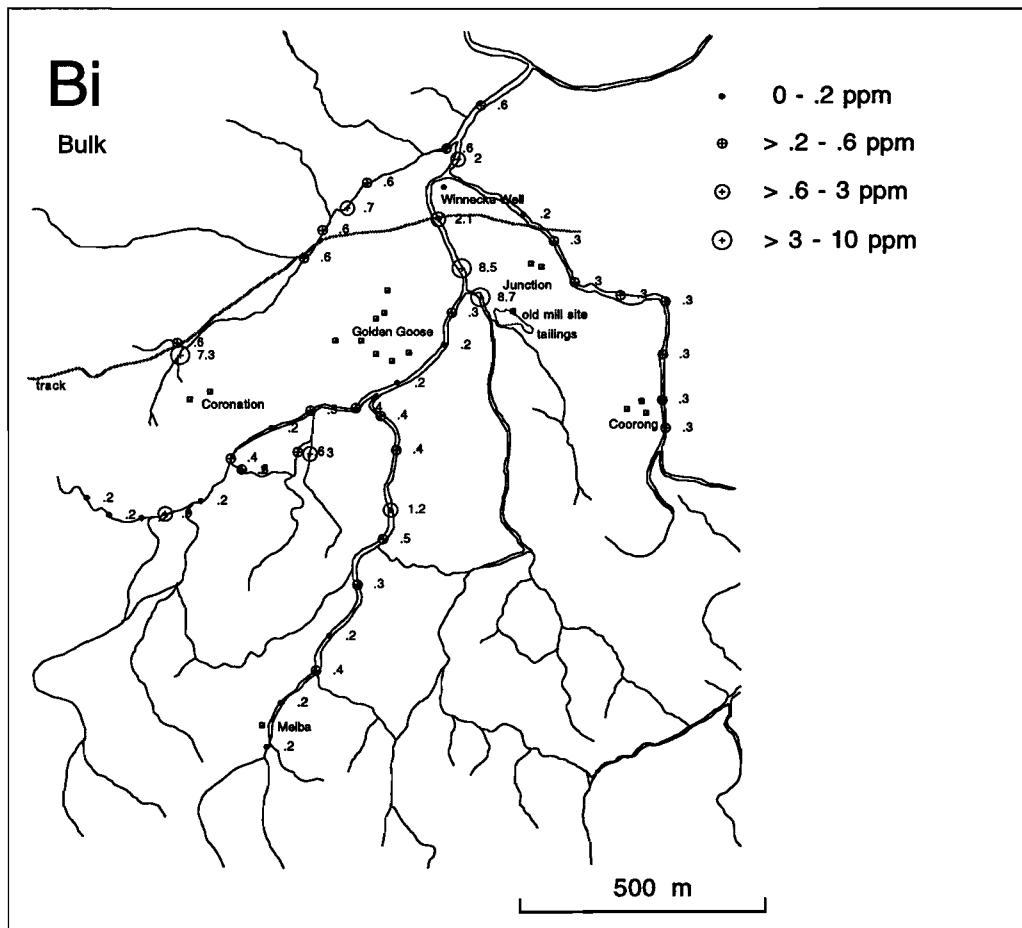
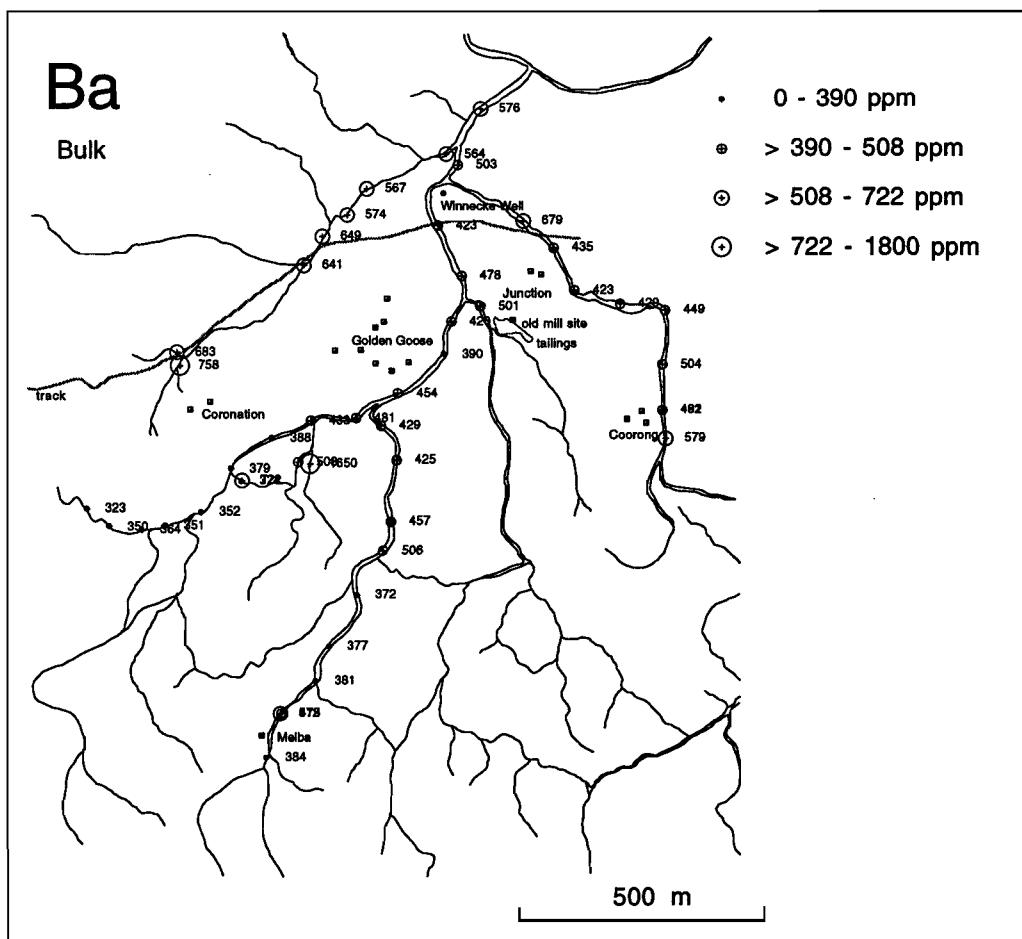
APPENDIX 3.B Oonagalabi Orientation Survey - map of sample locations

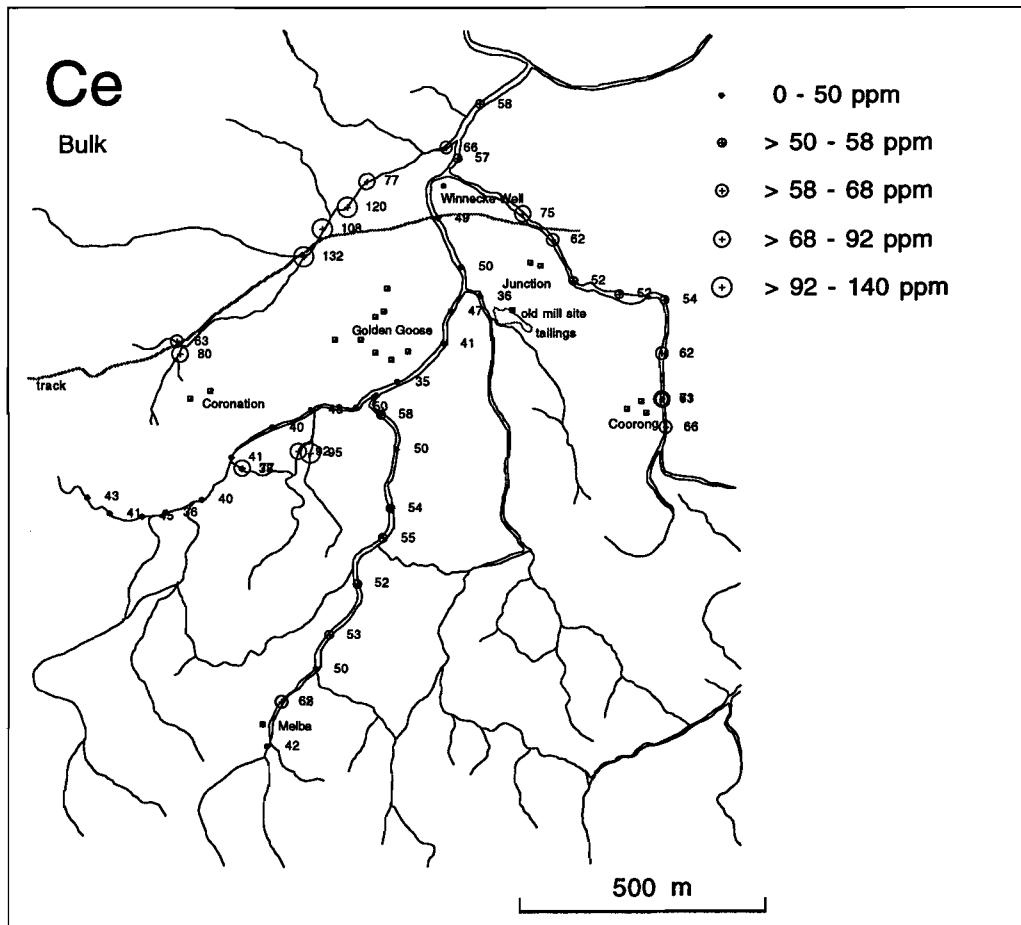
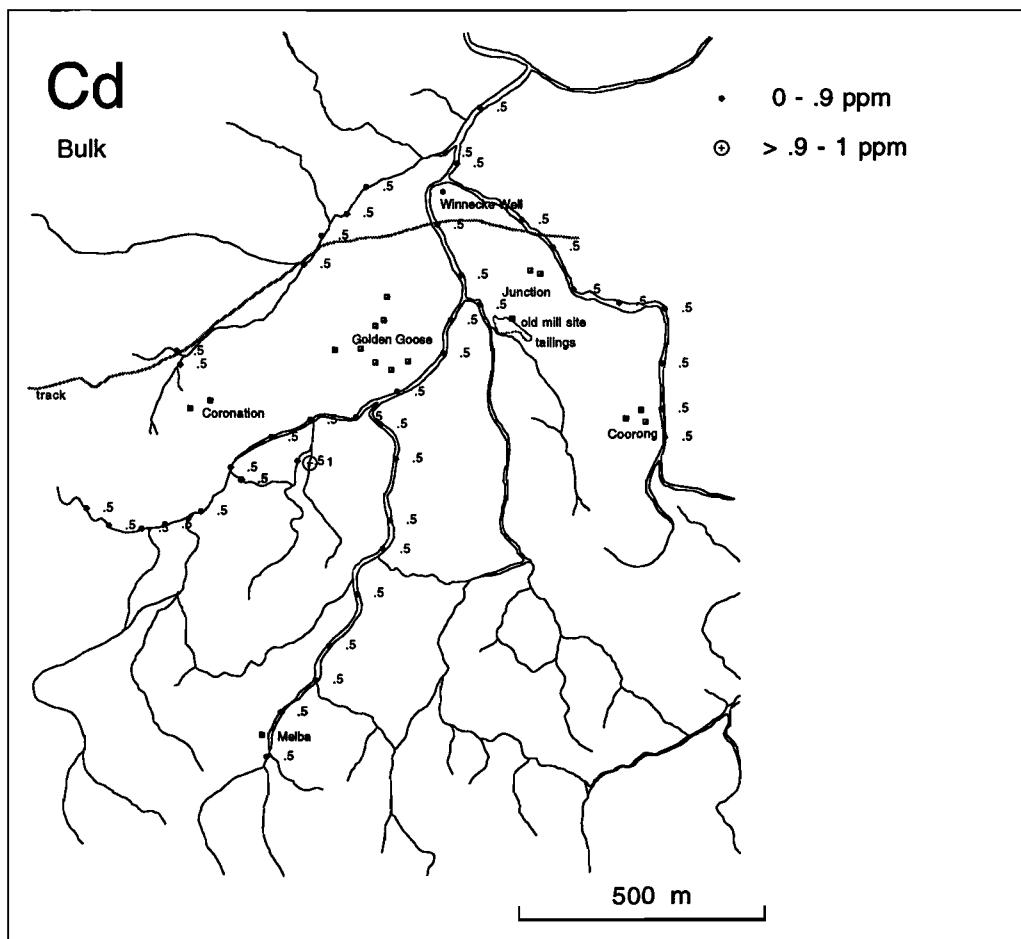
Appendix 3.B.1	Bulk
Appendix 3.B.2	6-2 mm
Appendix 3.B.3	2-0.5 mm
Appendix 3.B.4	180-75 μm
Appendix 3.B.5	<75 μm

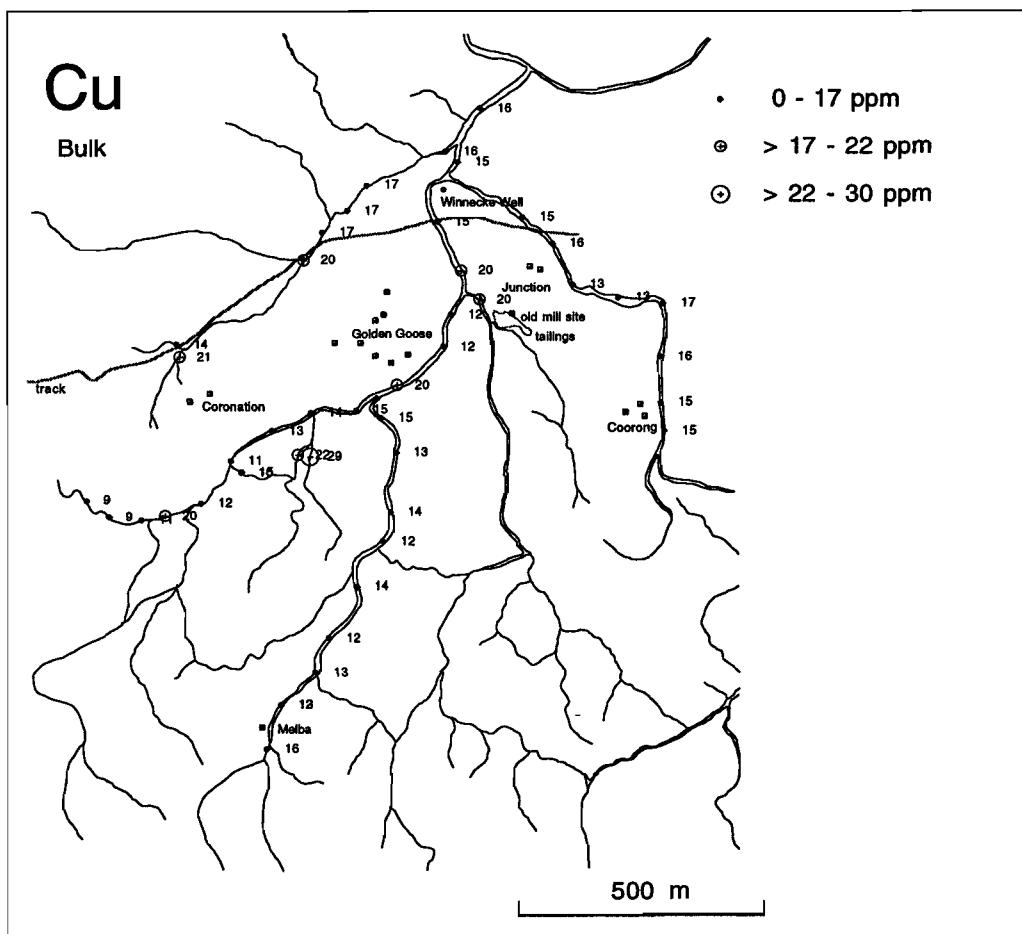
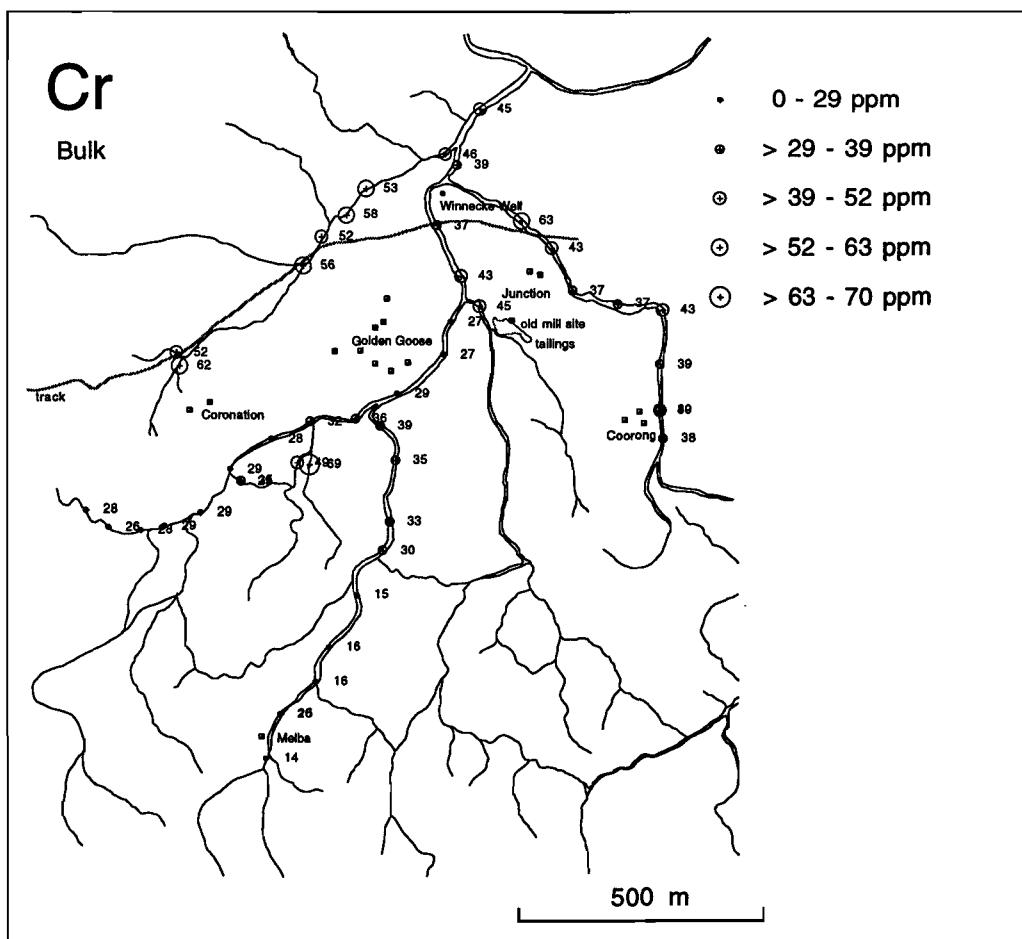


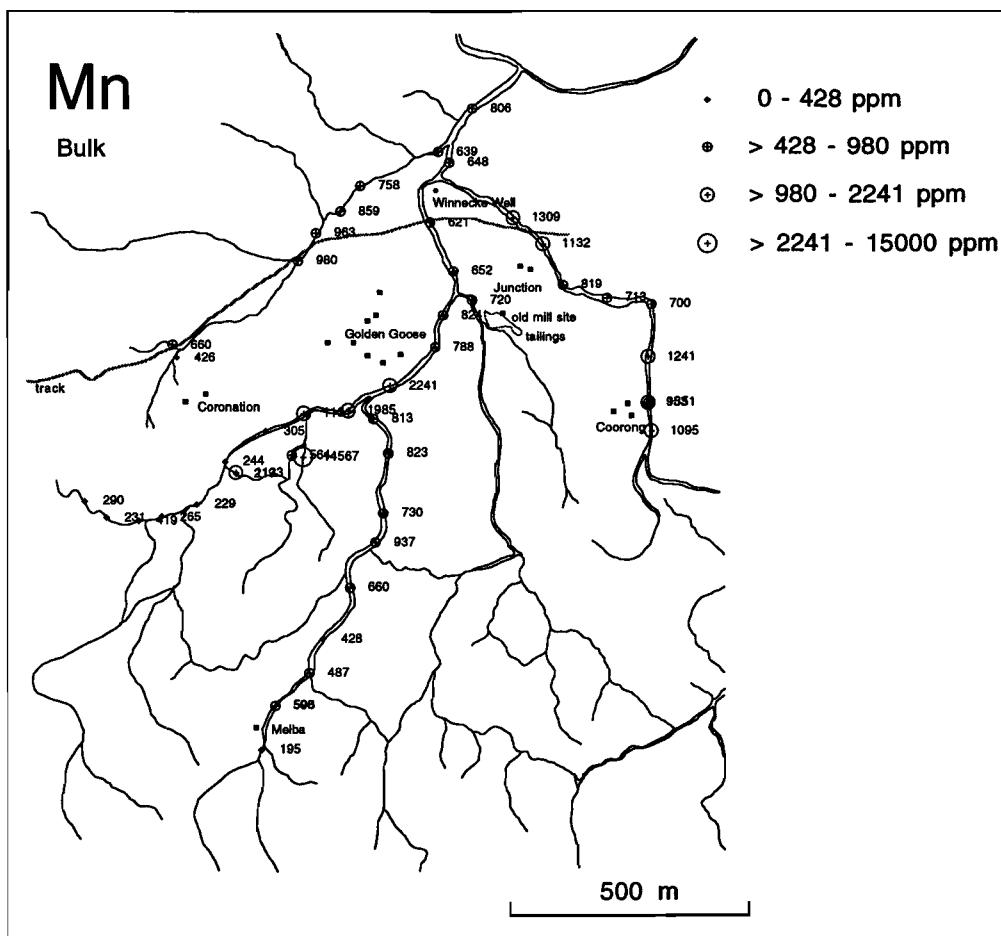
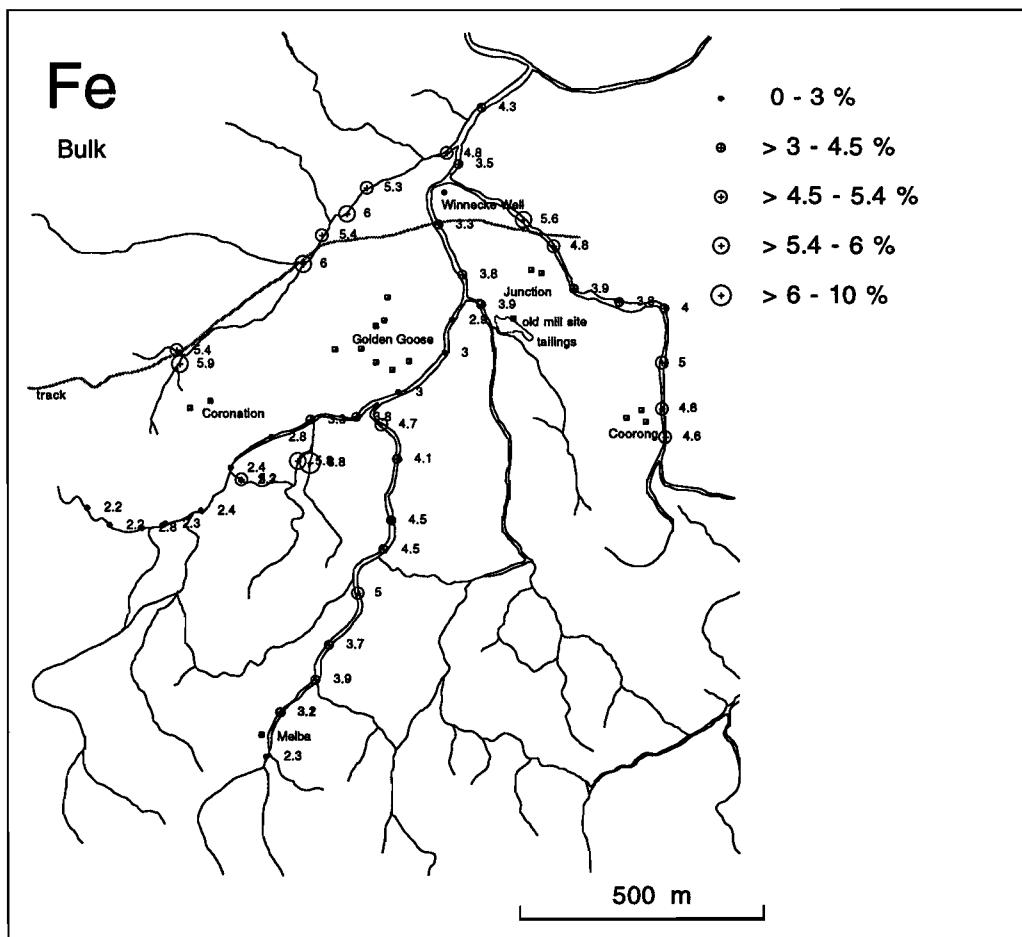
Map of the Winnecke orientation survey area. The drainage is shown in blue, old mine workings in green and mill tailings in yellow. Drainage sample locations and field numbers are in red. The map was produced from uncontrolled air photographs; the digitiser coordinates used to produce it are relative coordinates. An estimate of the location a major AMG coordinate intersection has been made (± 100 m). North is at the top of the map but the orientation is not precise ($\pm 5^\circ$). This map is used as an underlay for the dot maps that follow.

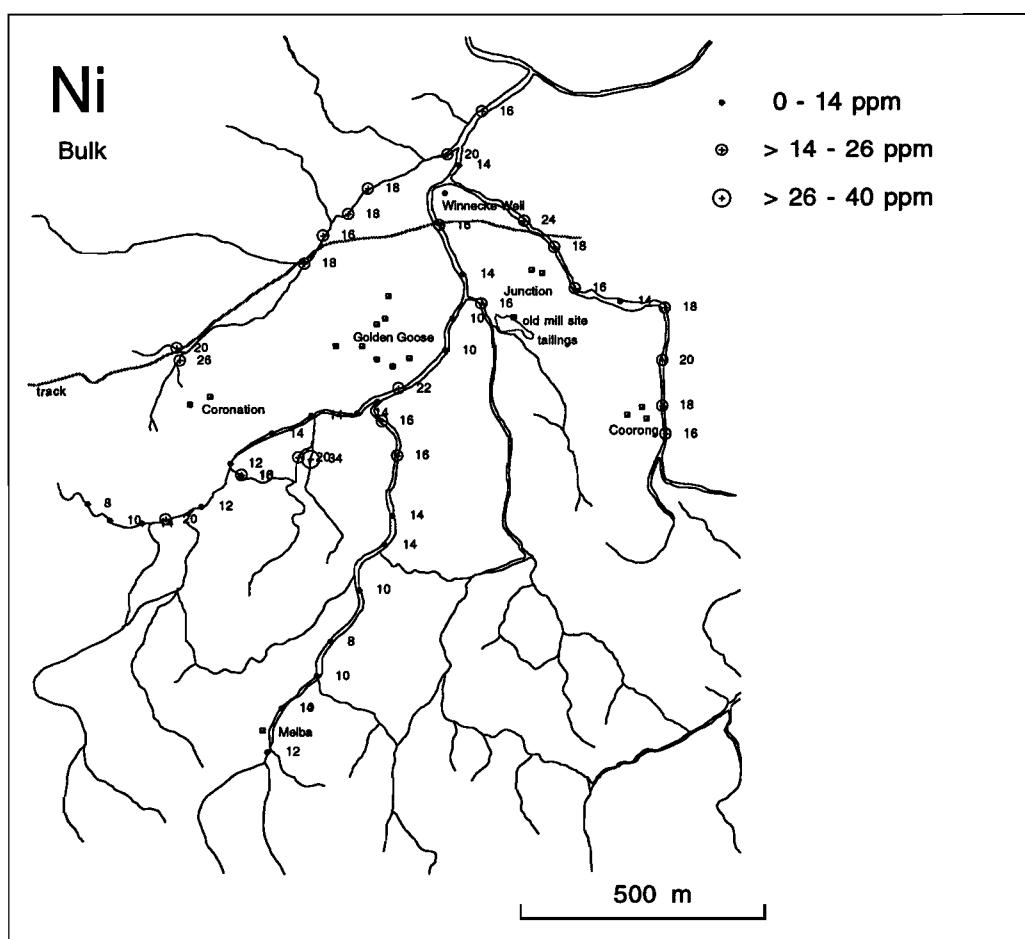
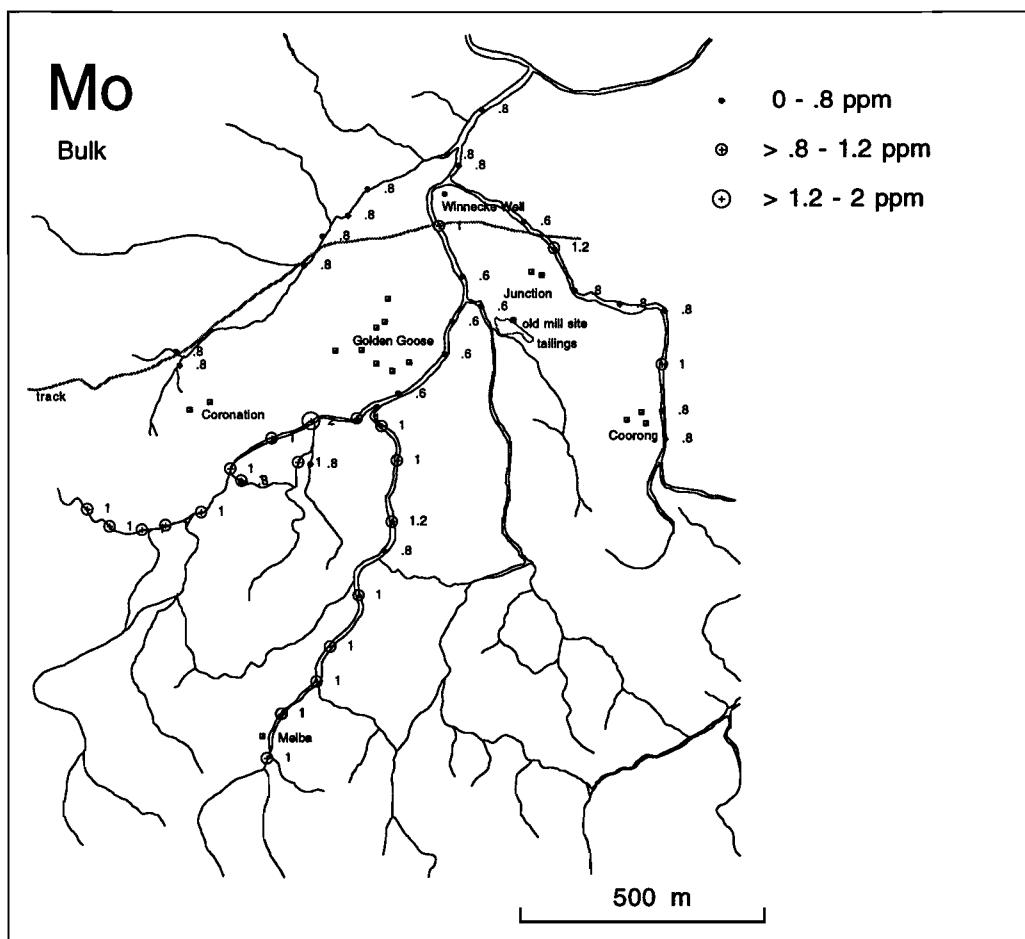


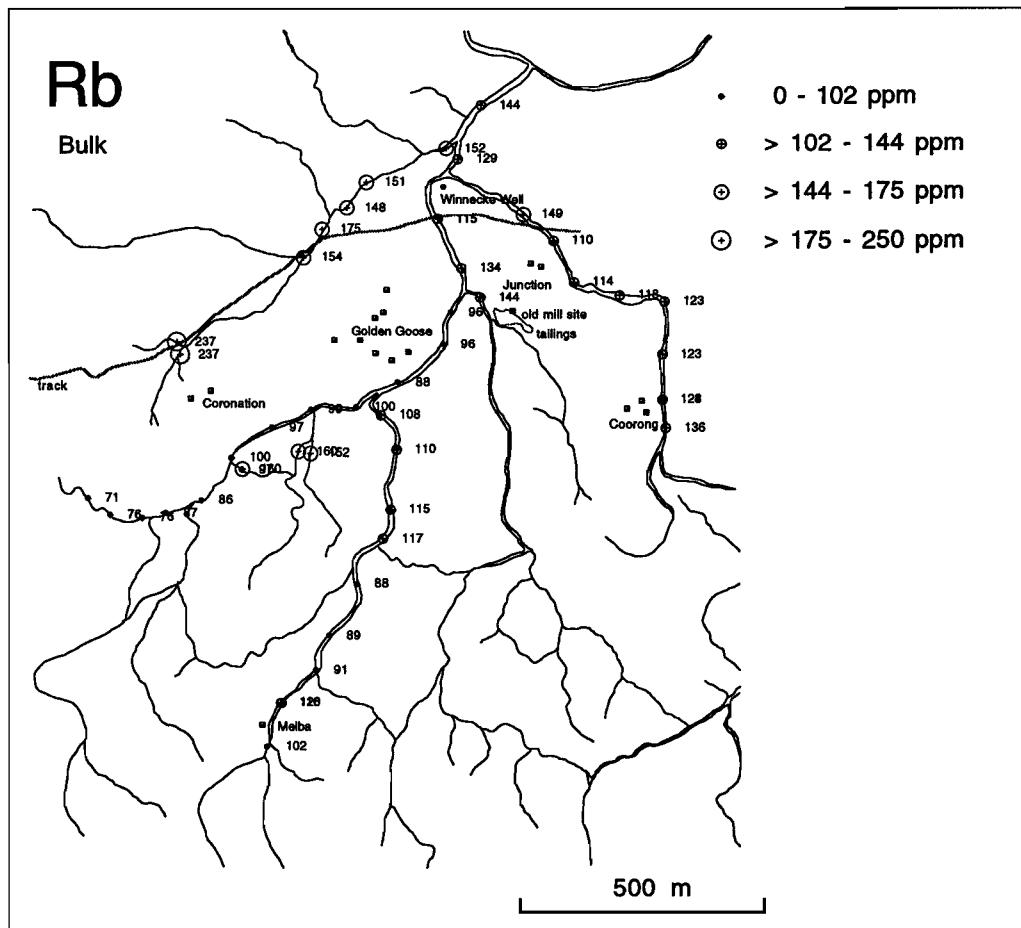
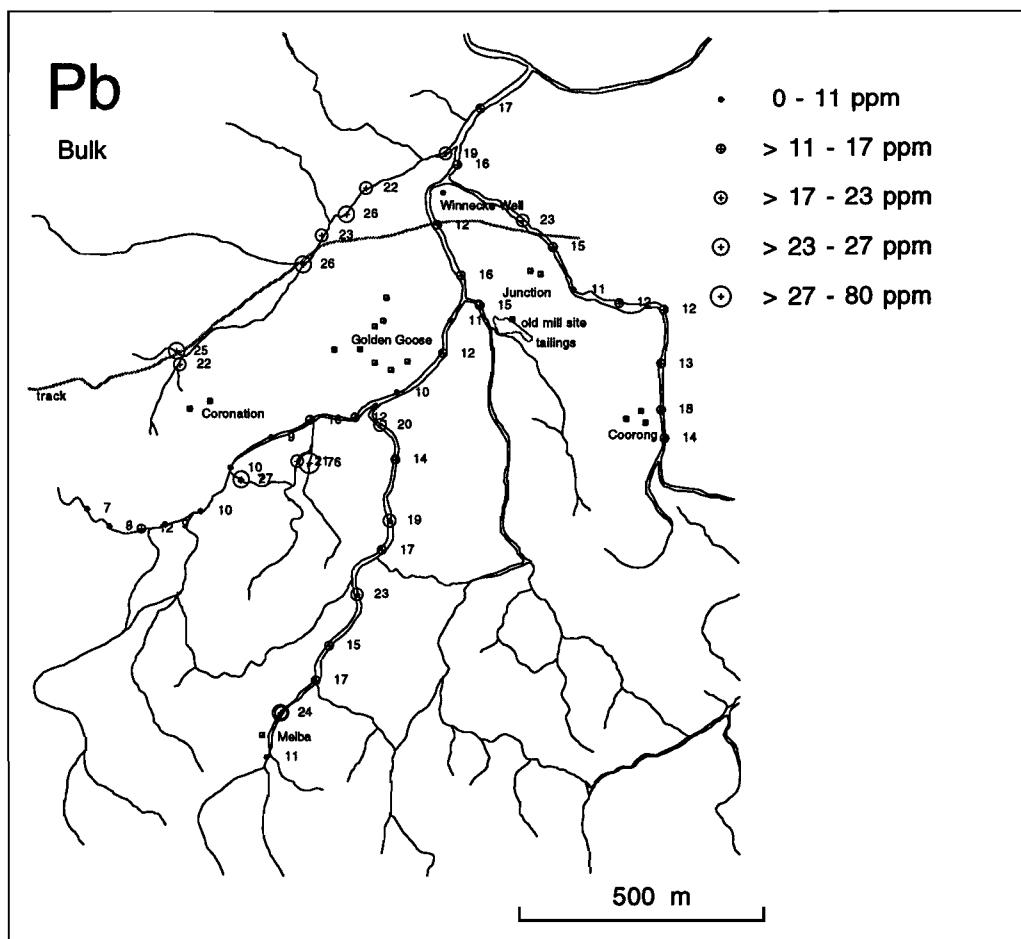


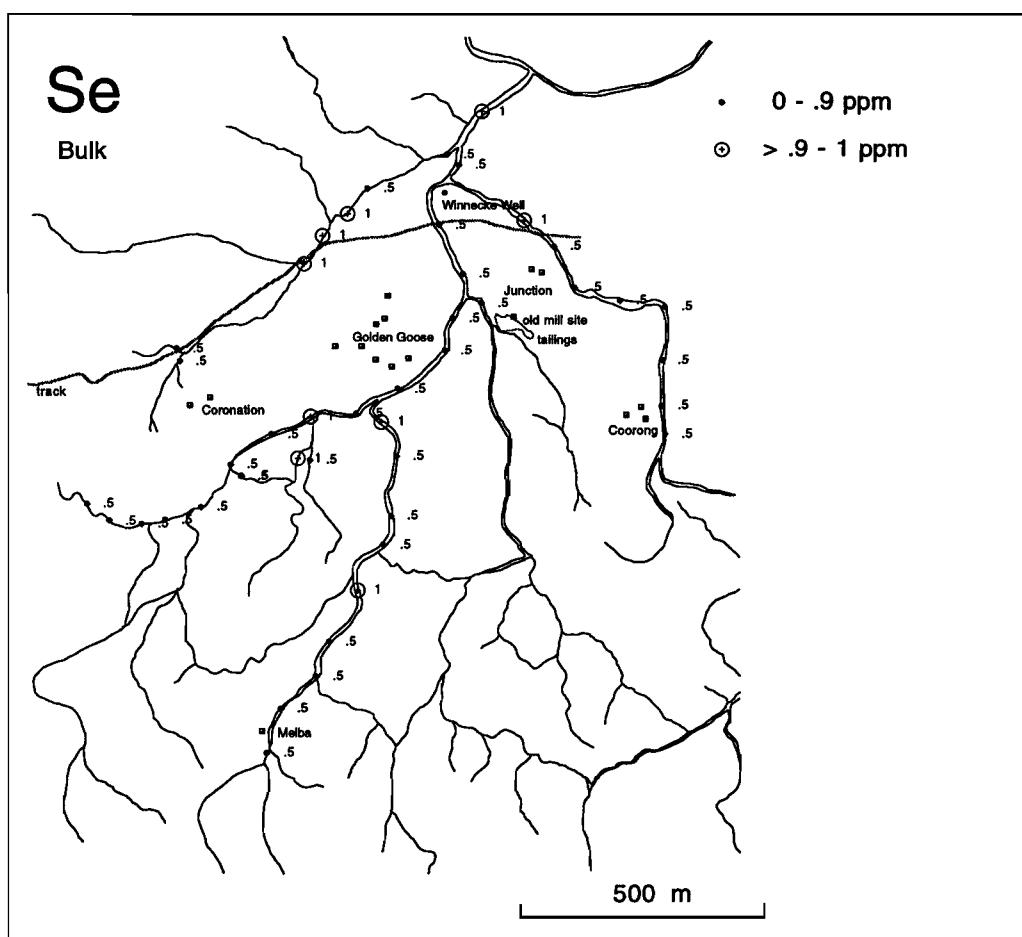
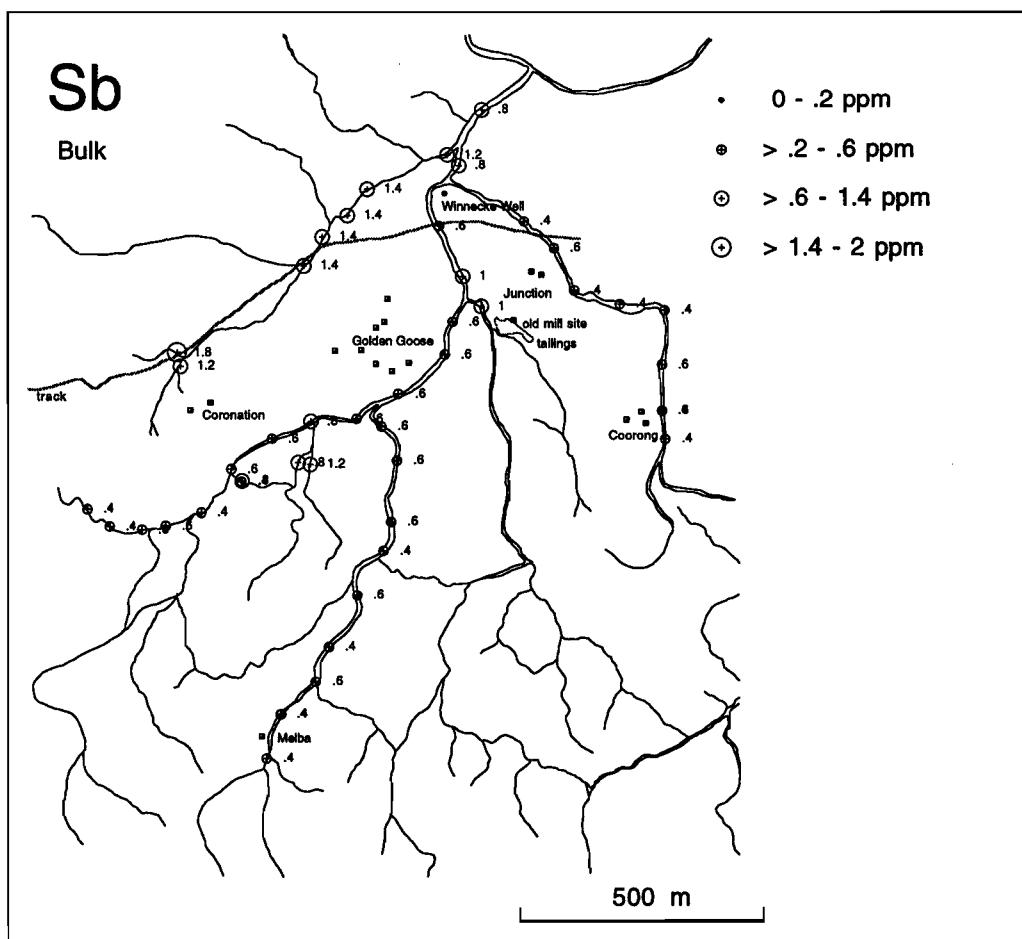


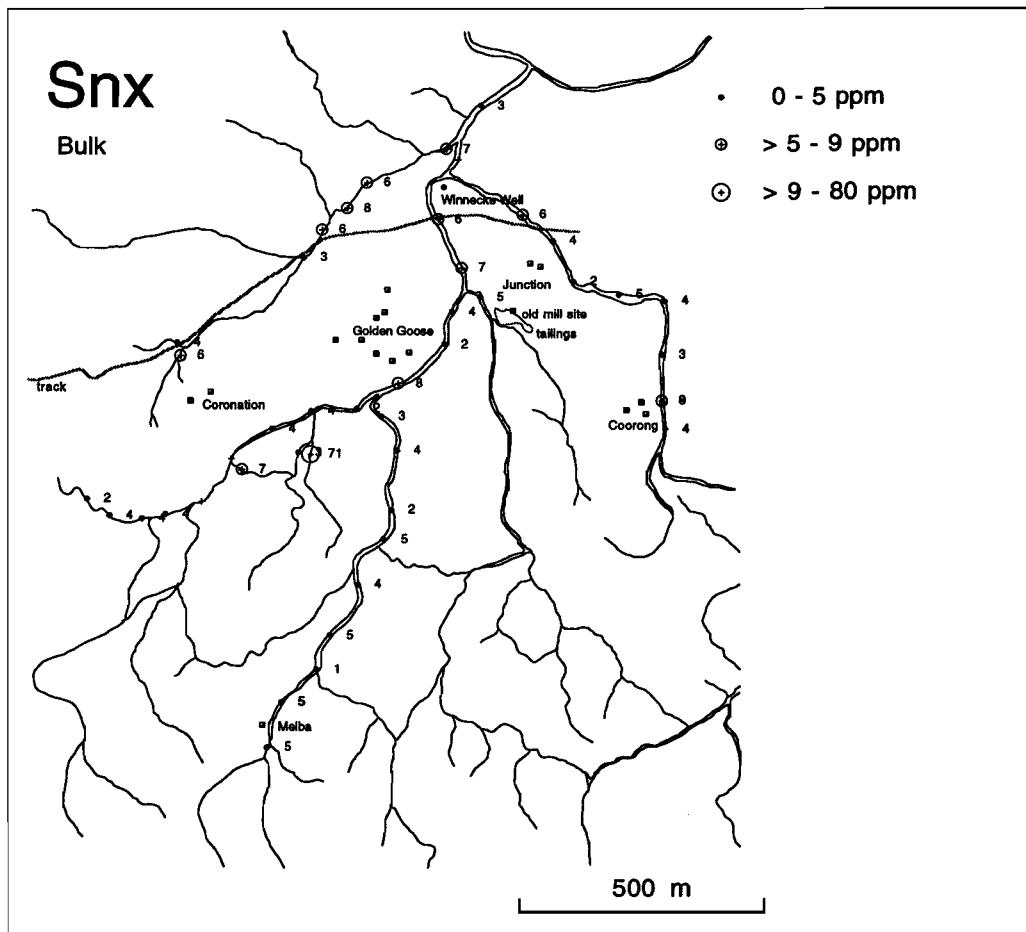
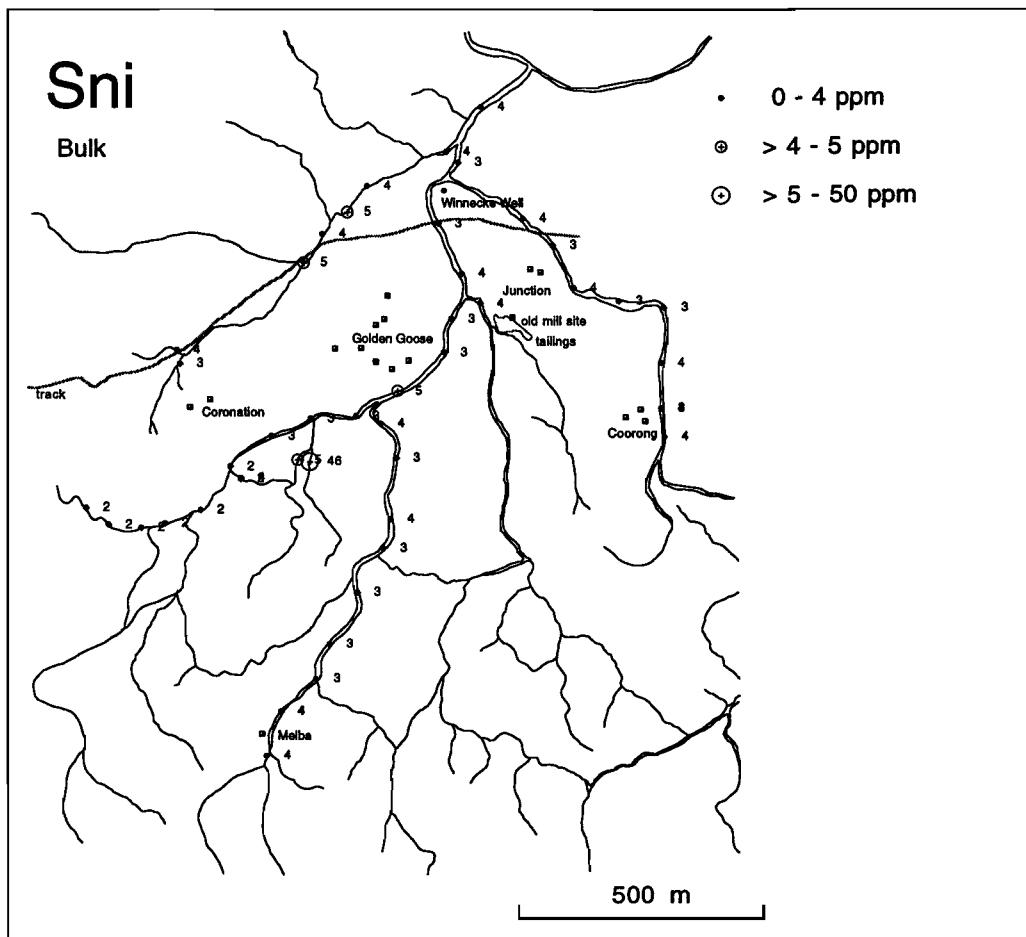


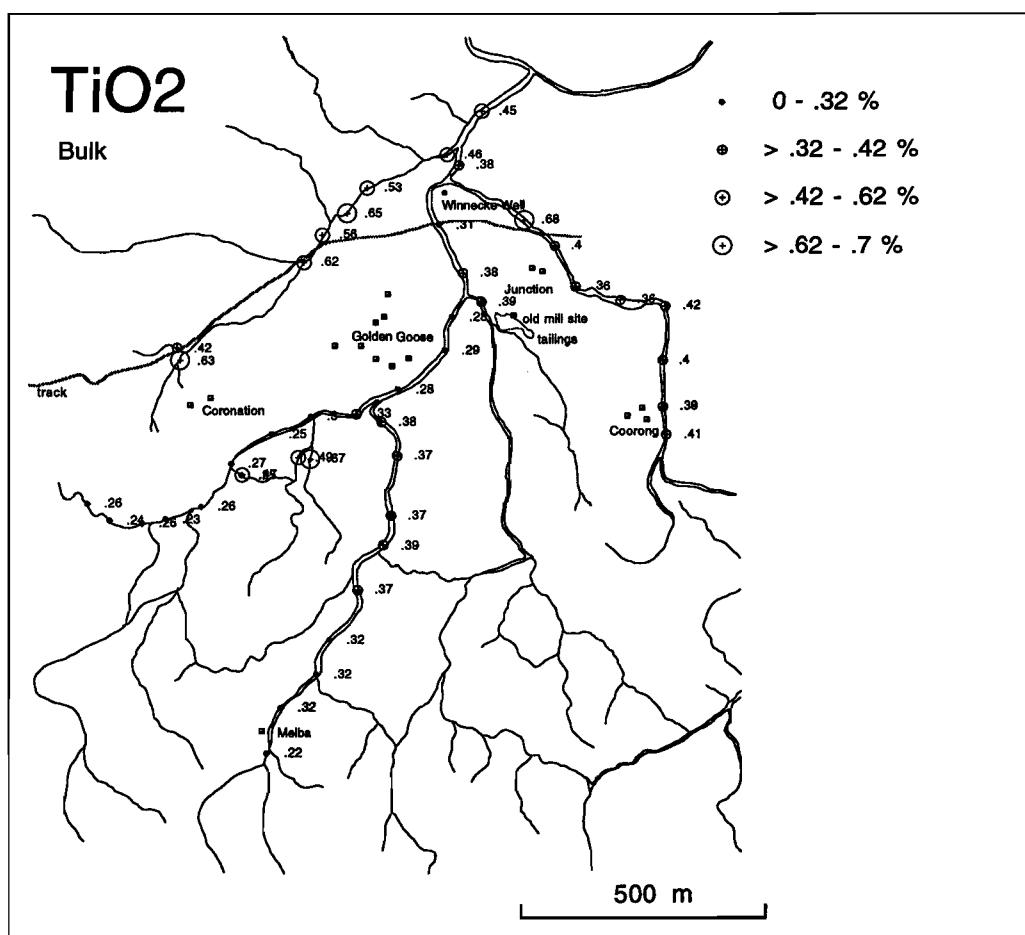
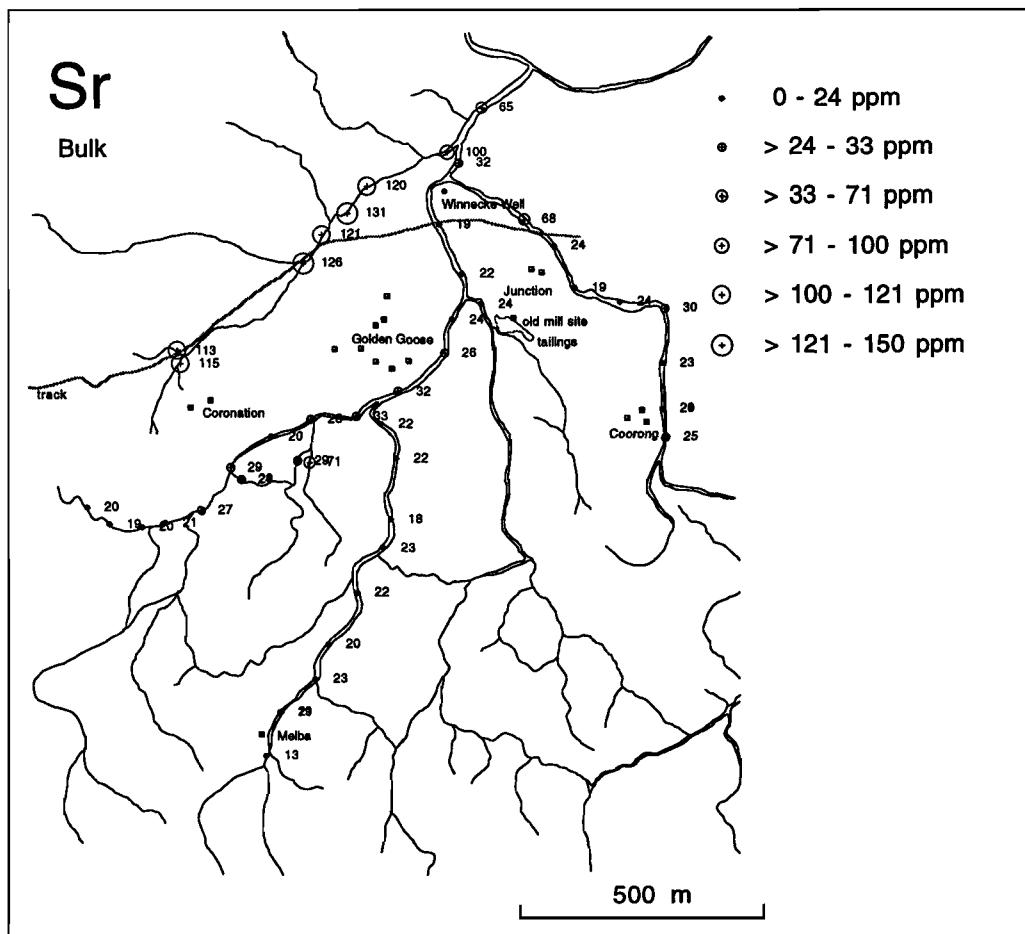


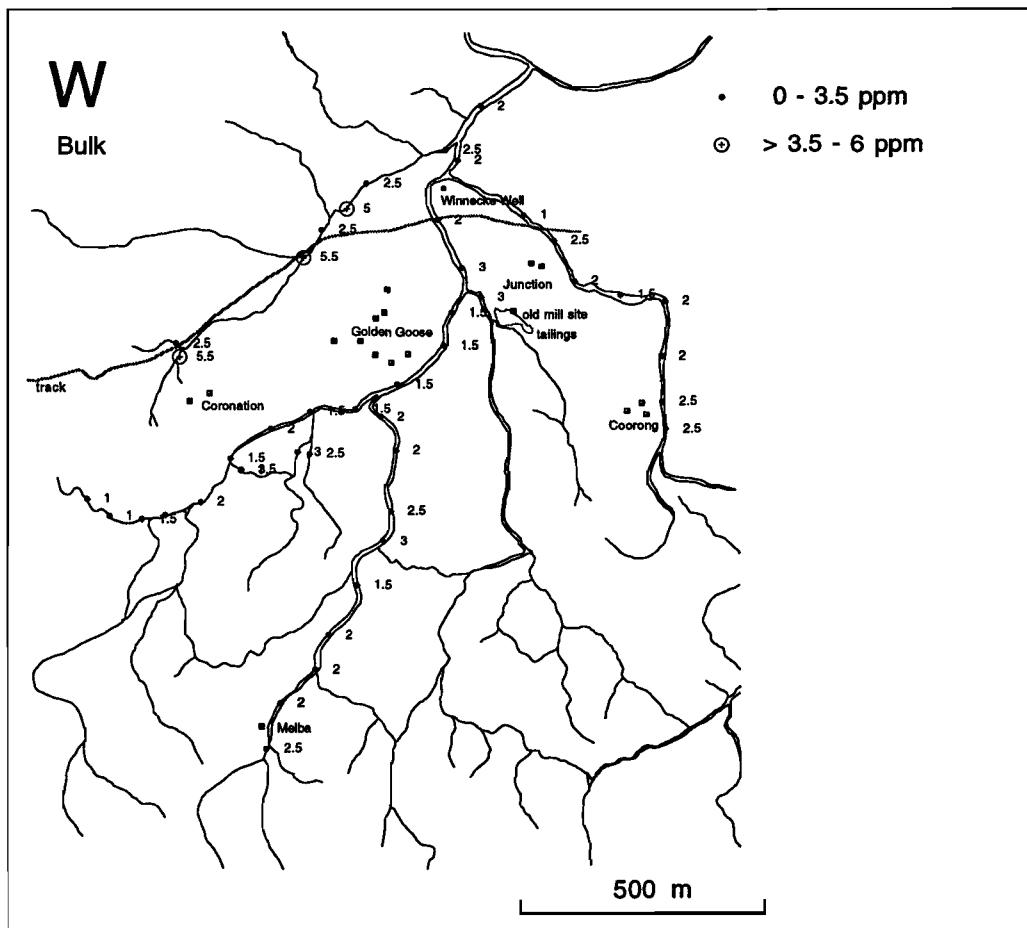
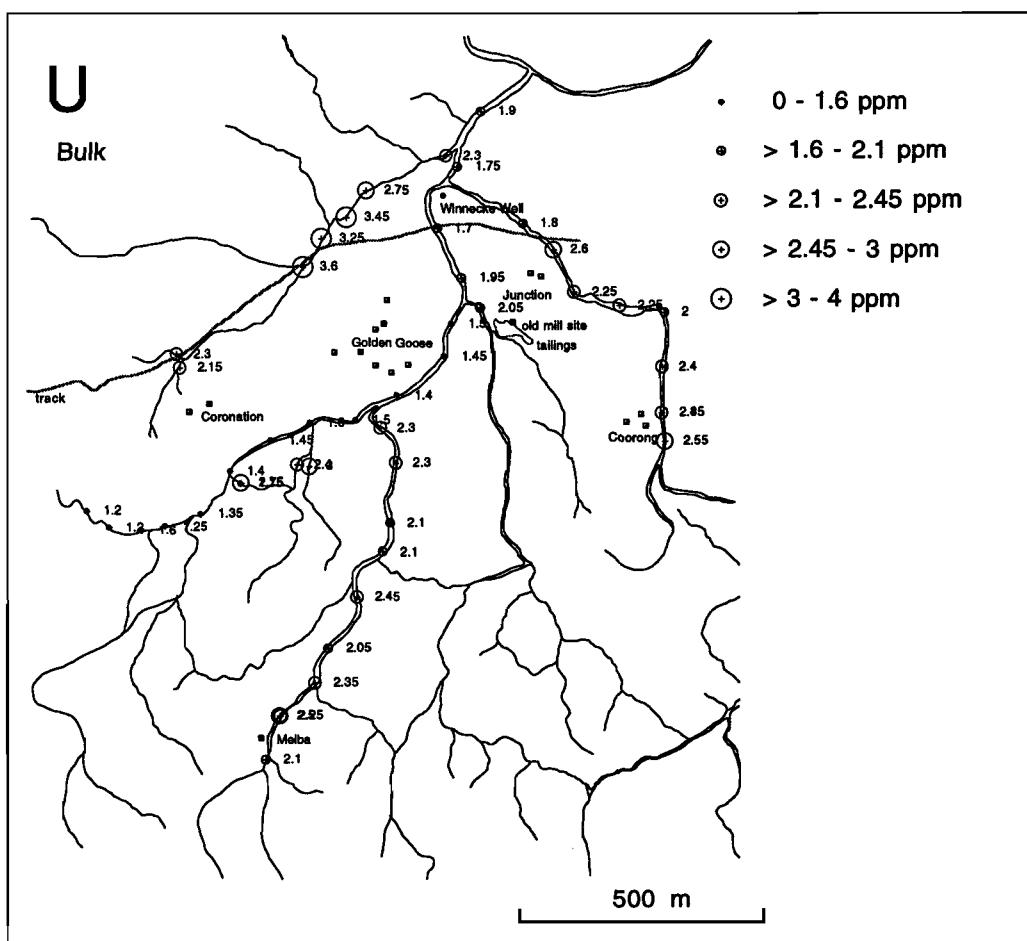


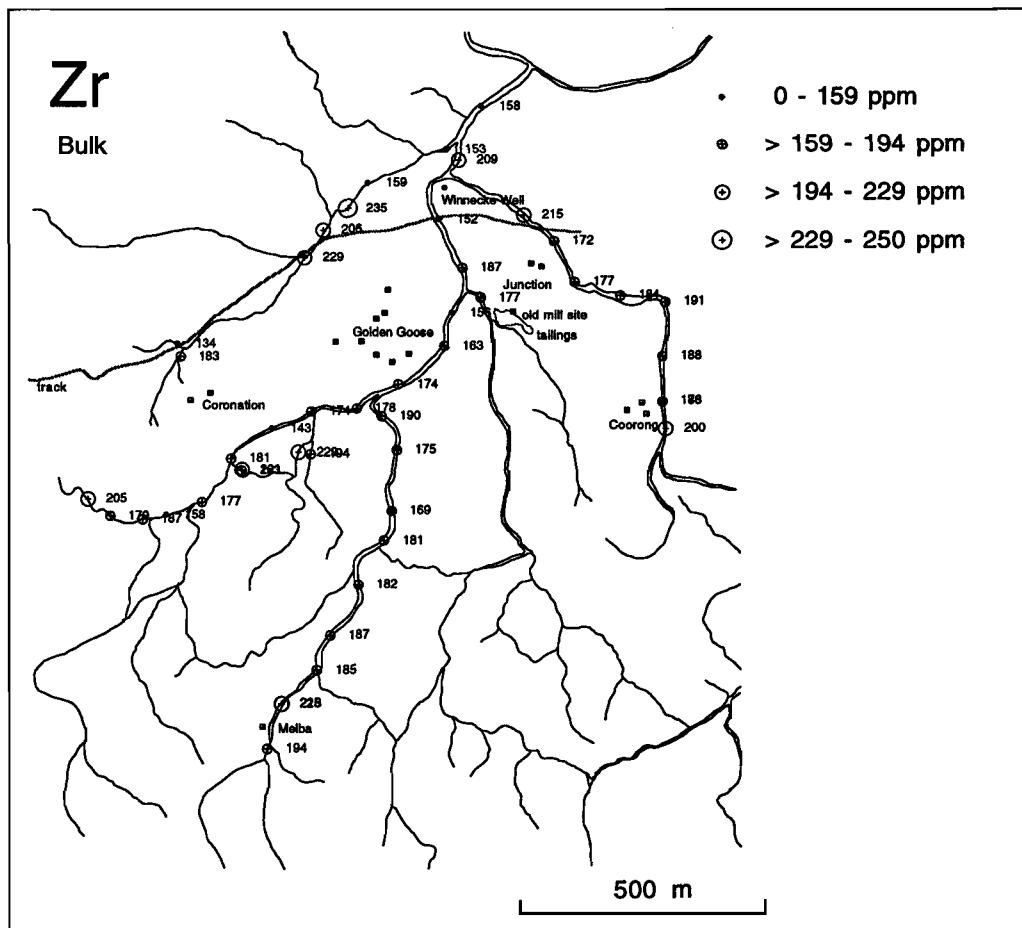
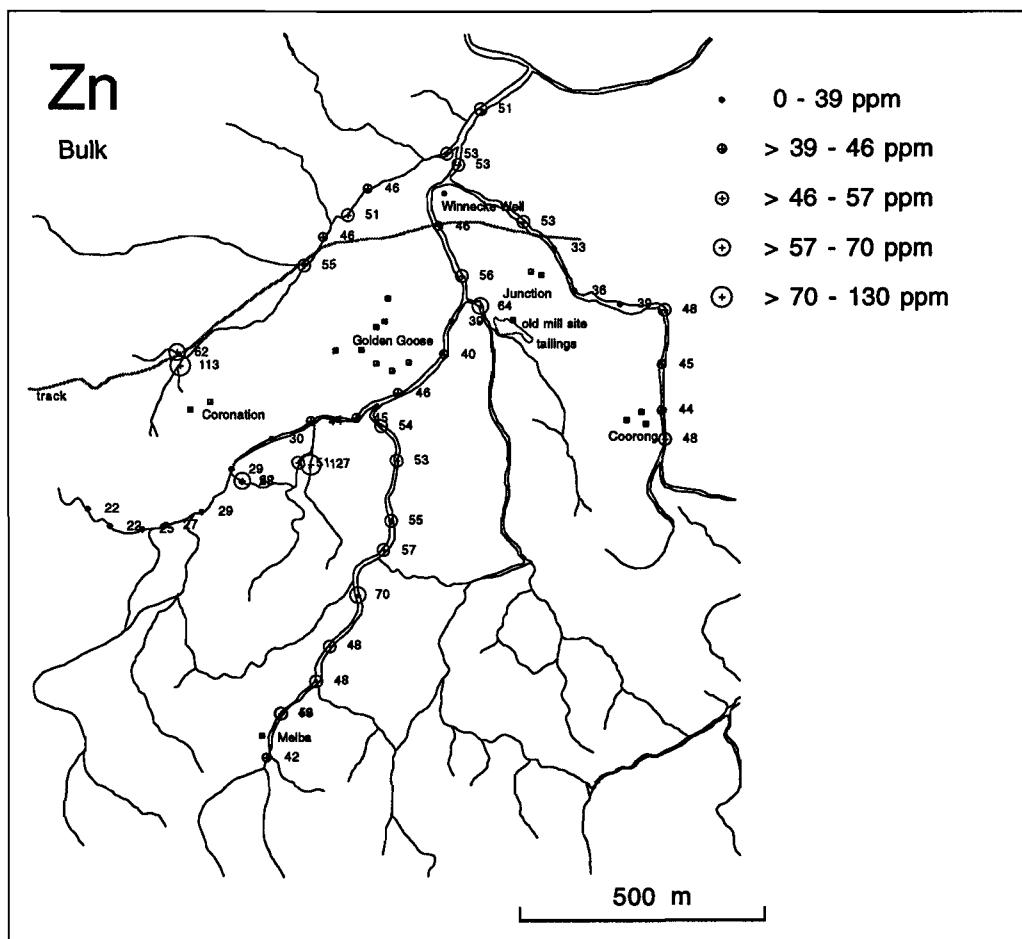


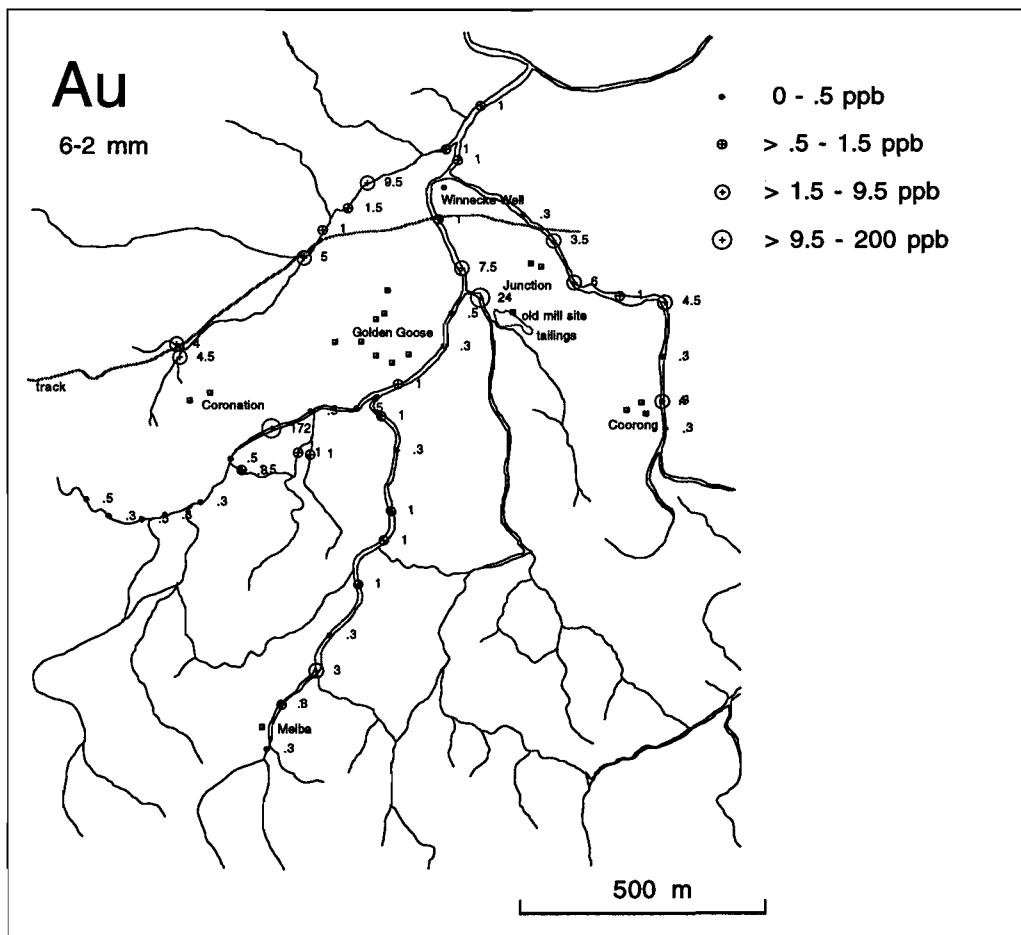
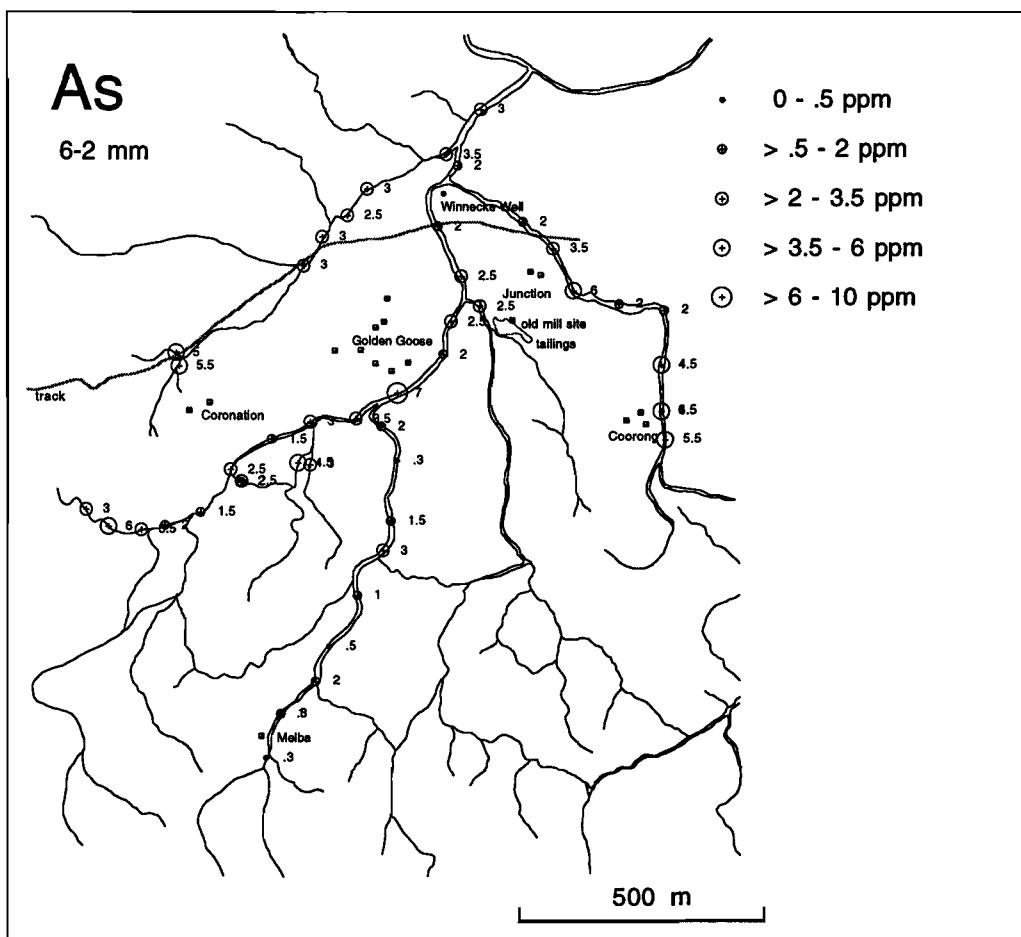


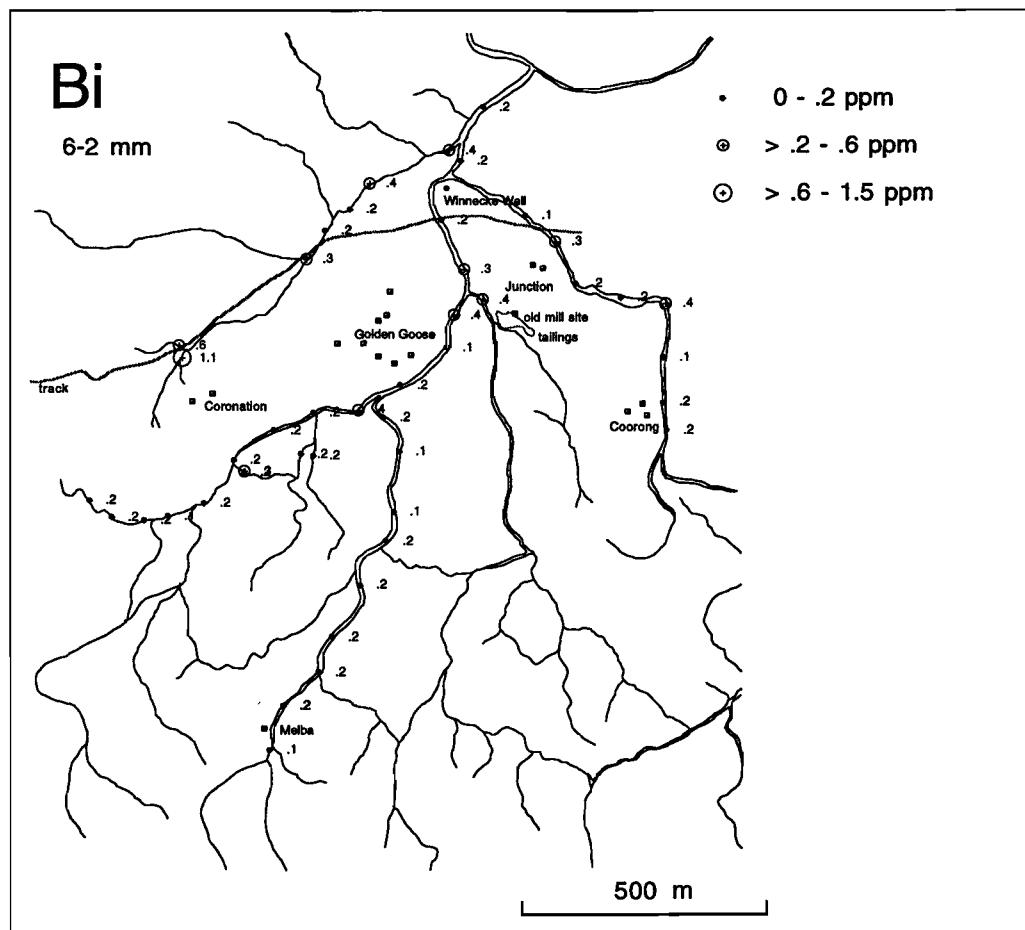
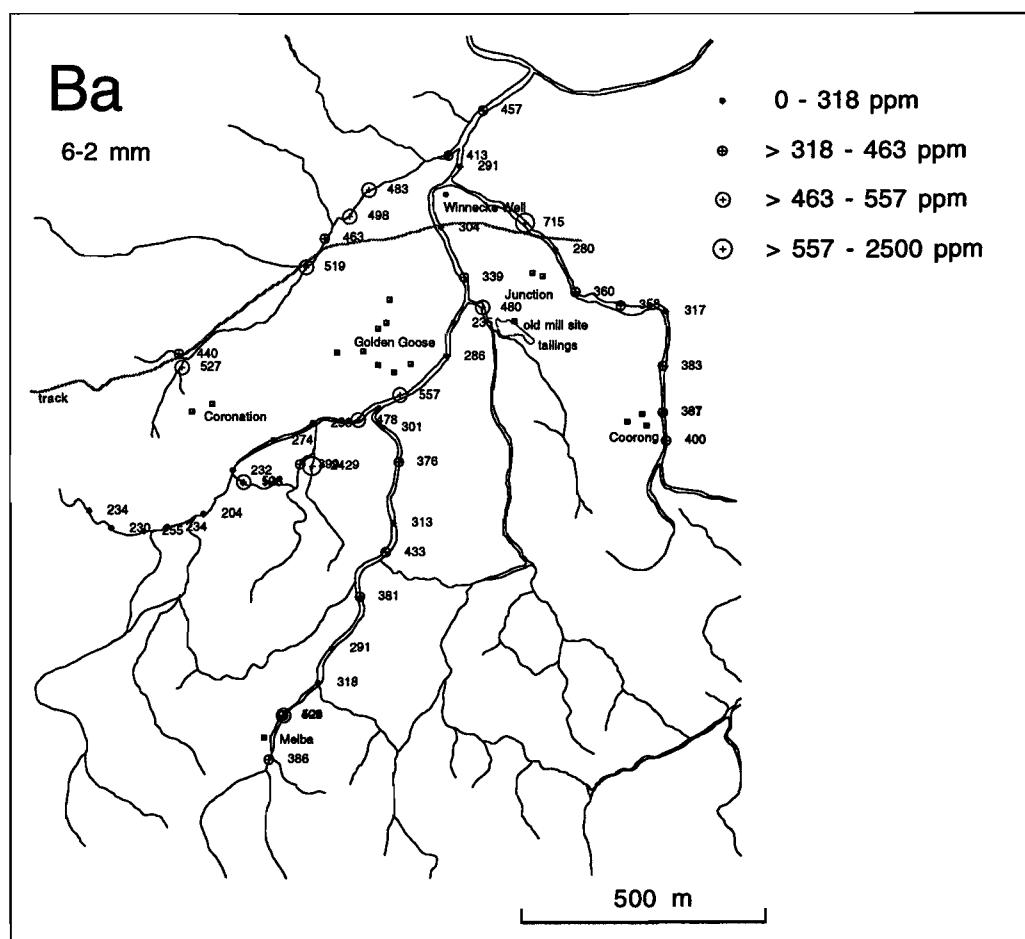


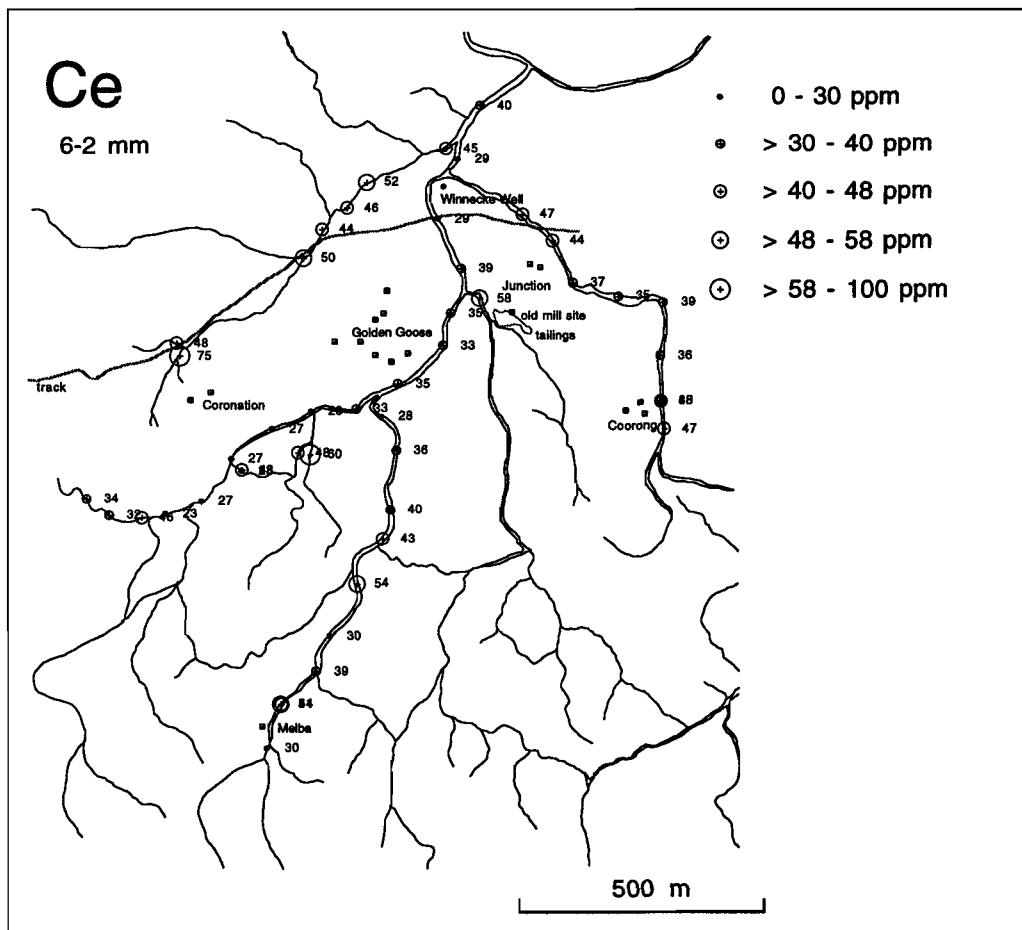
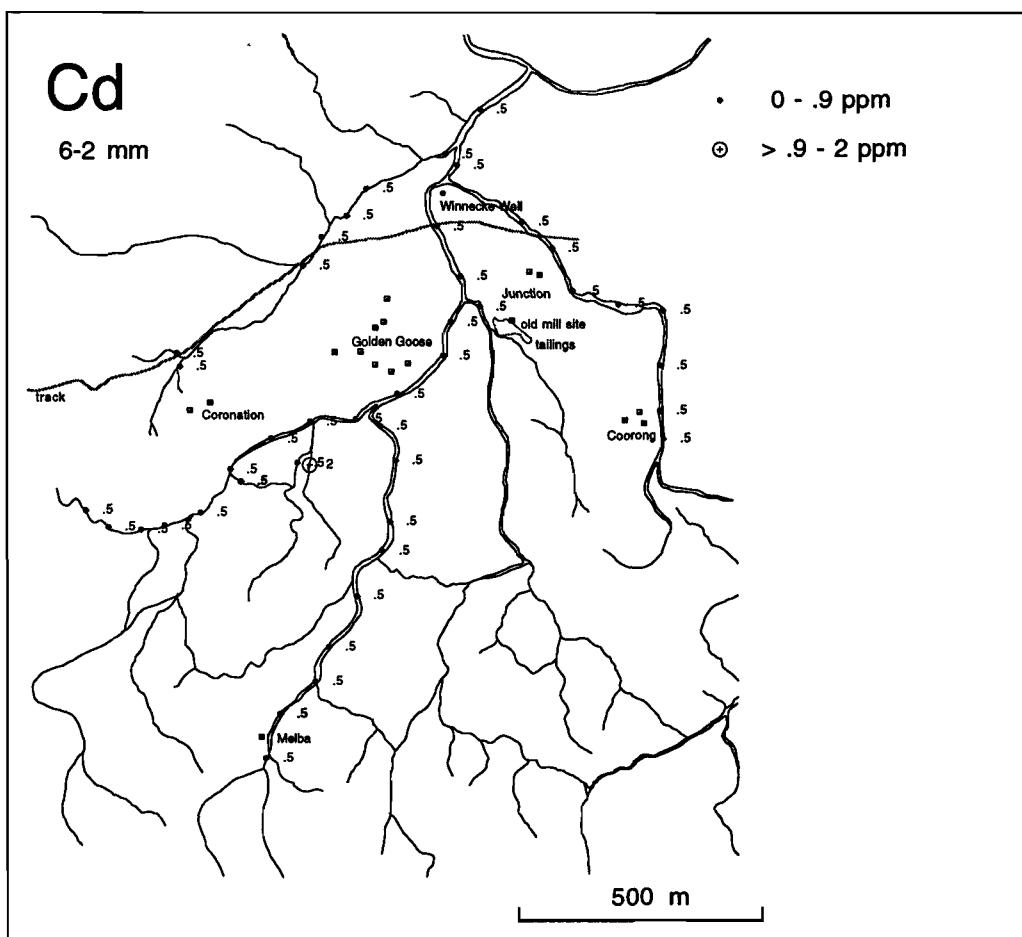


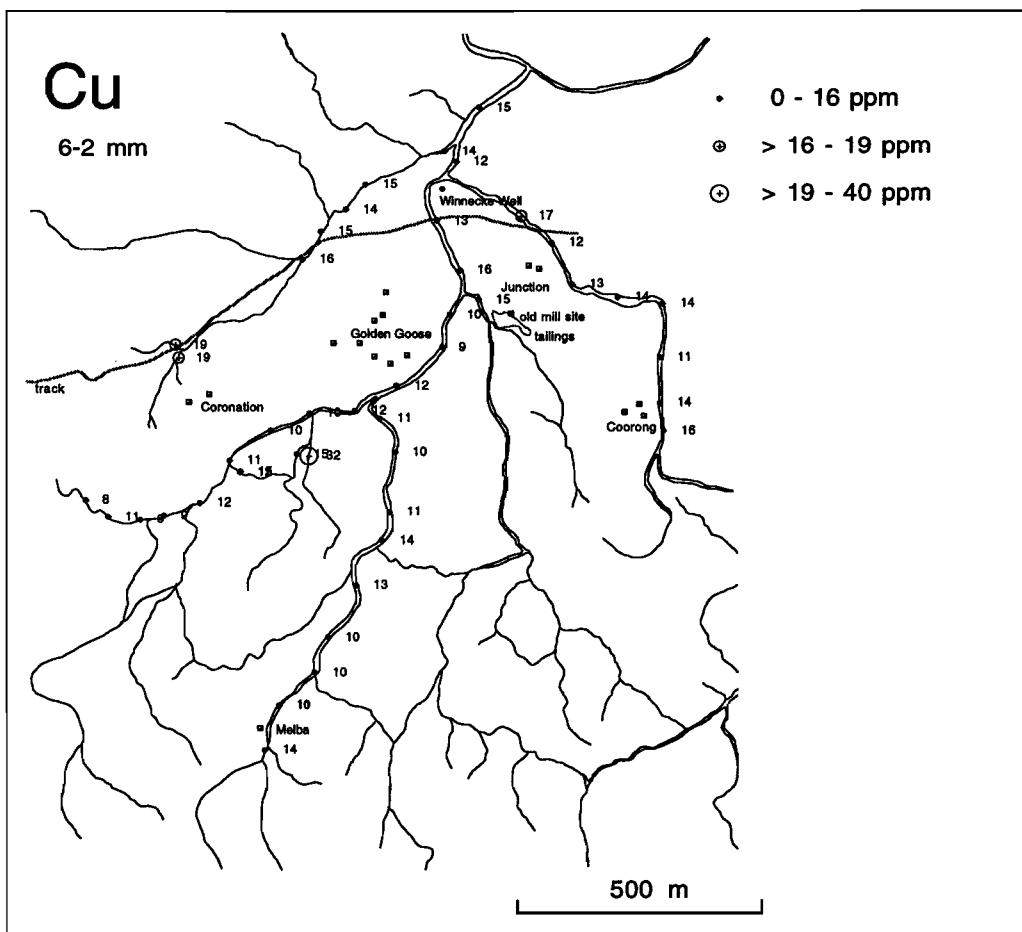
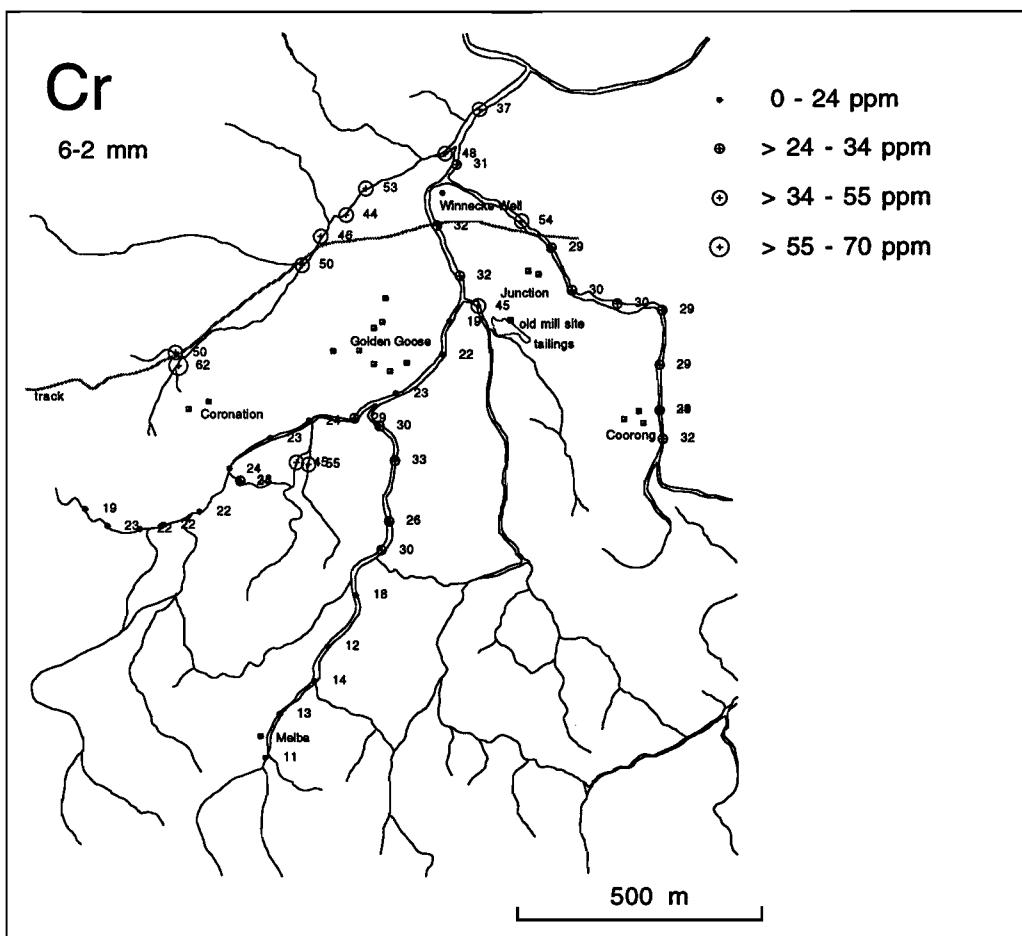


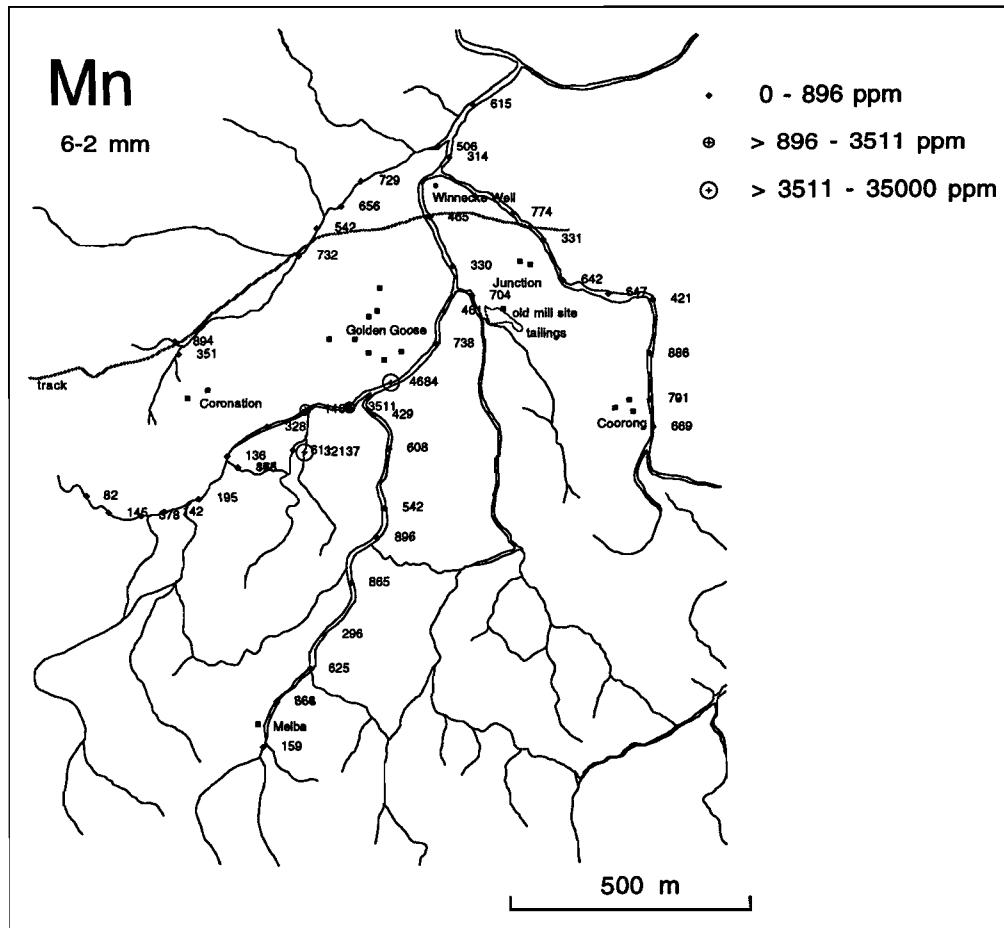
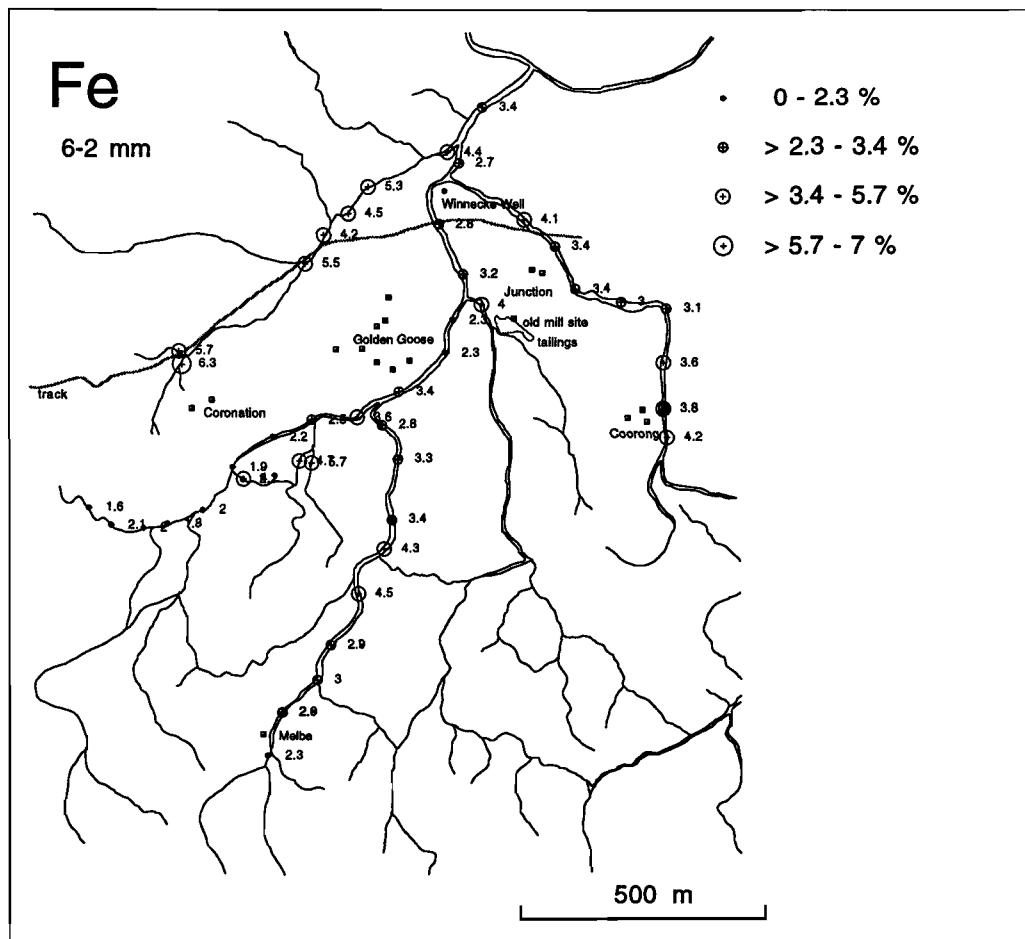


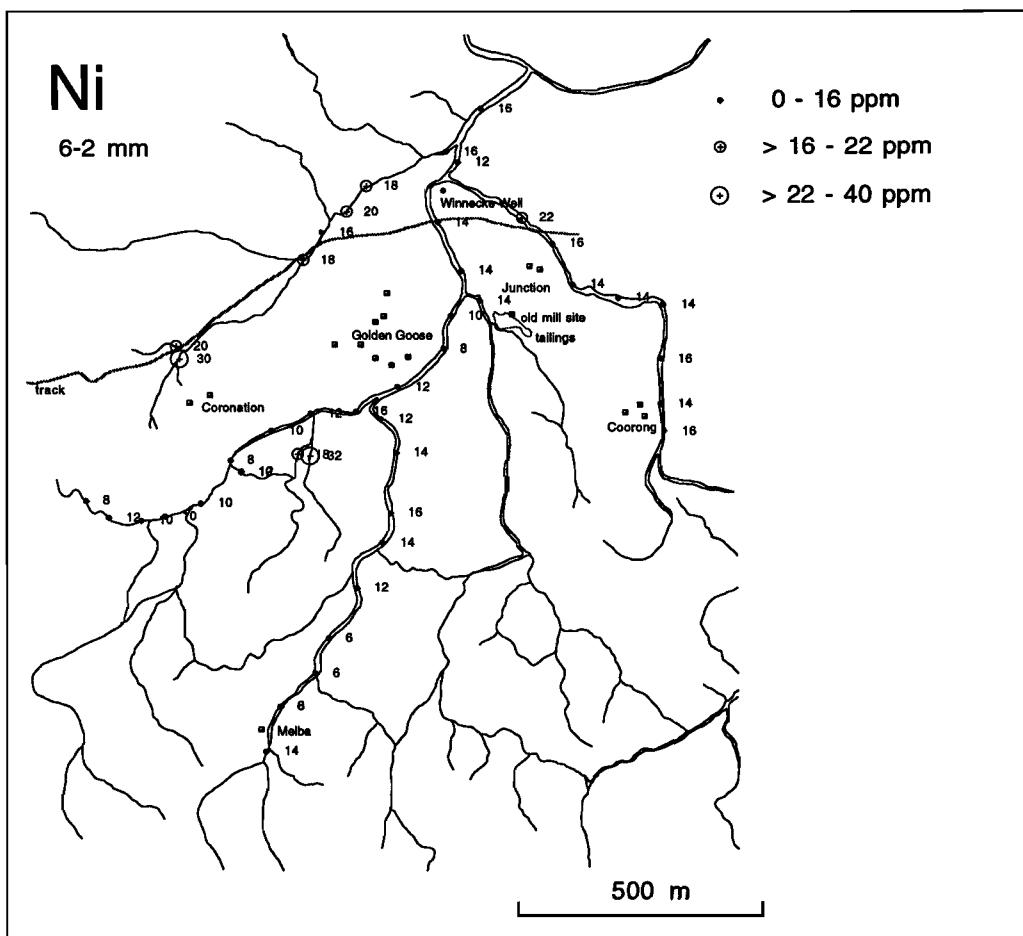
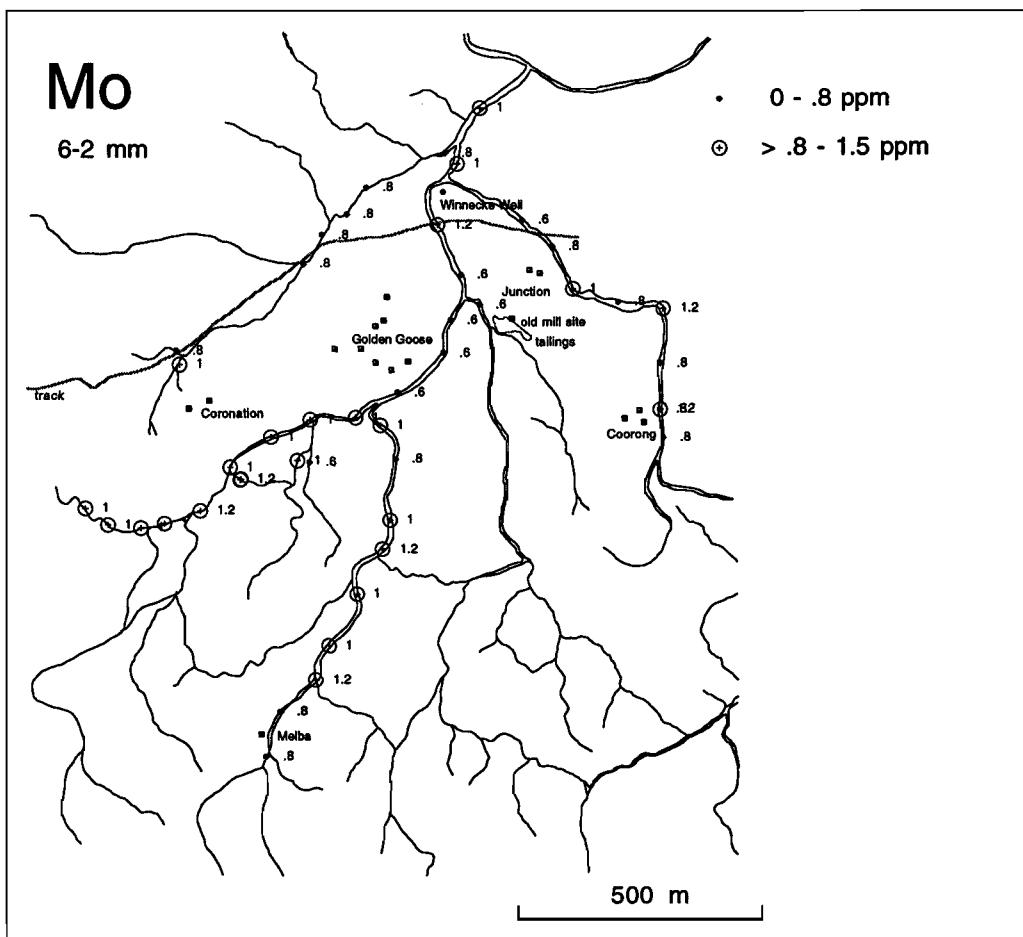


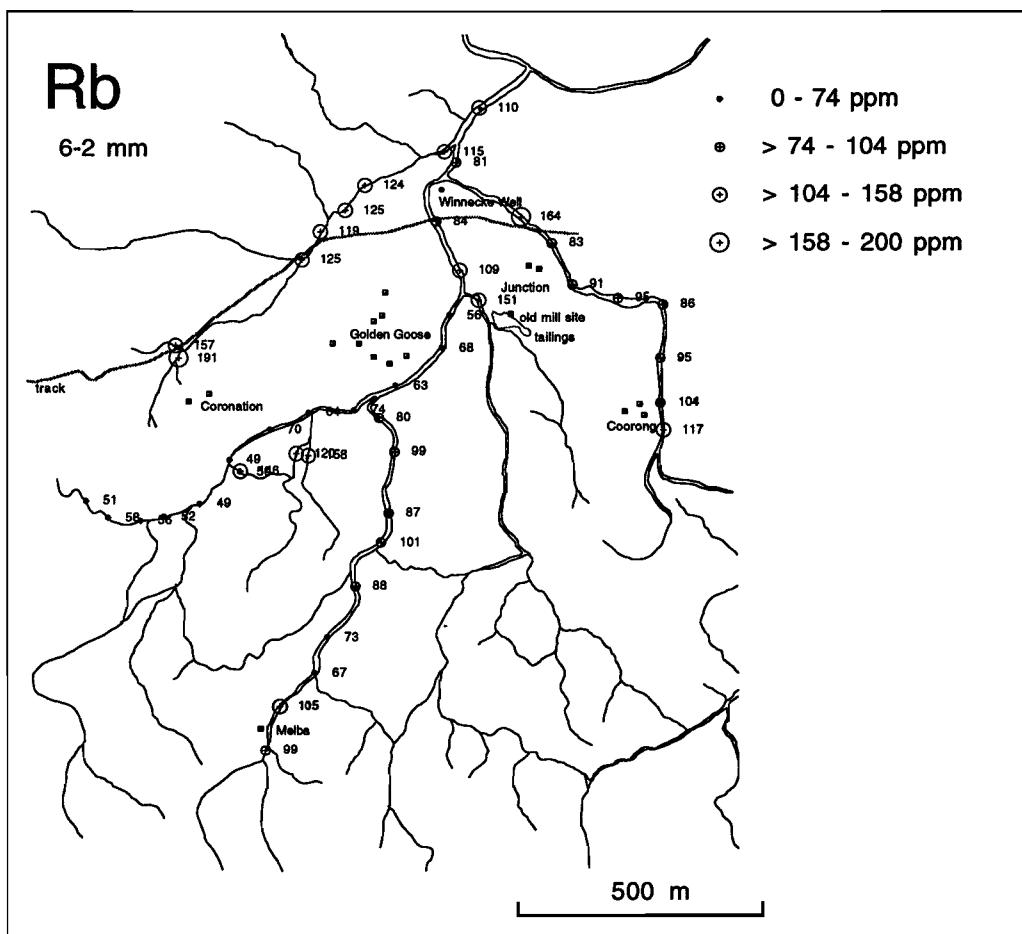
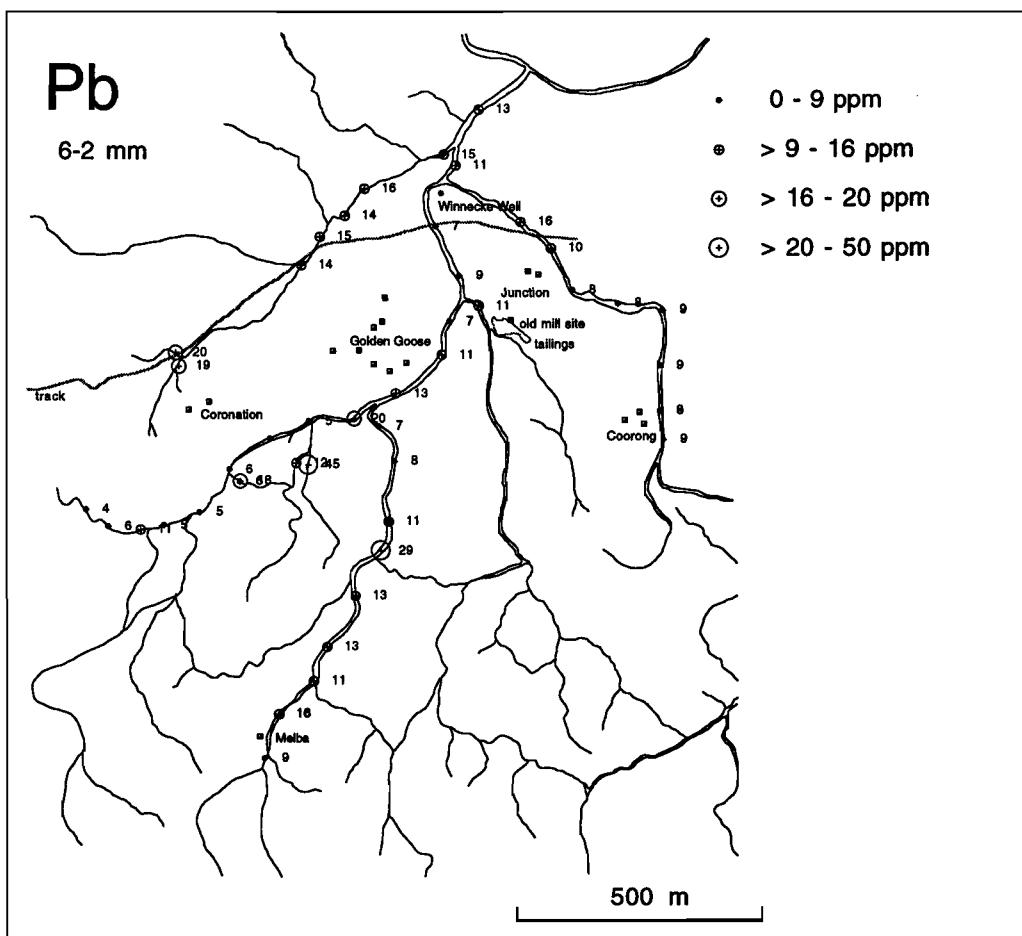


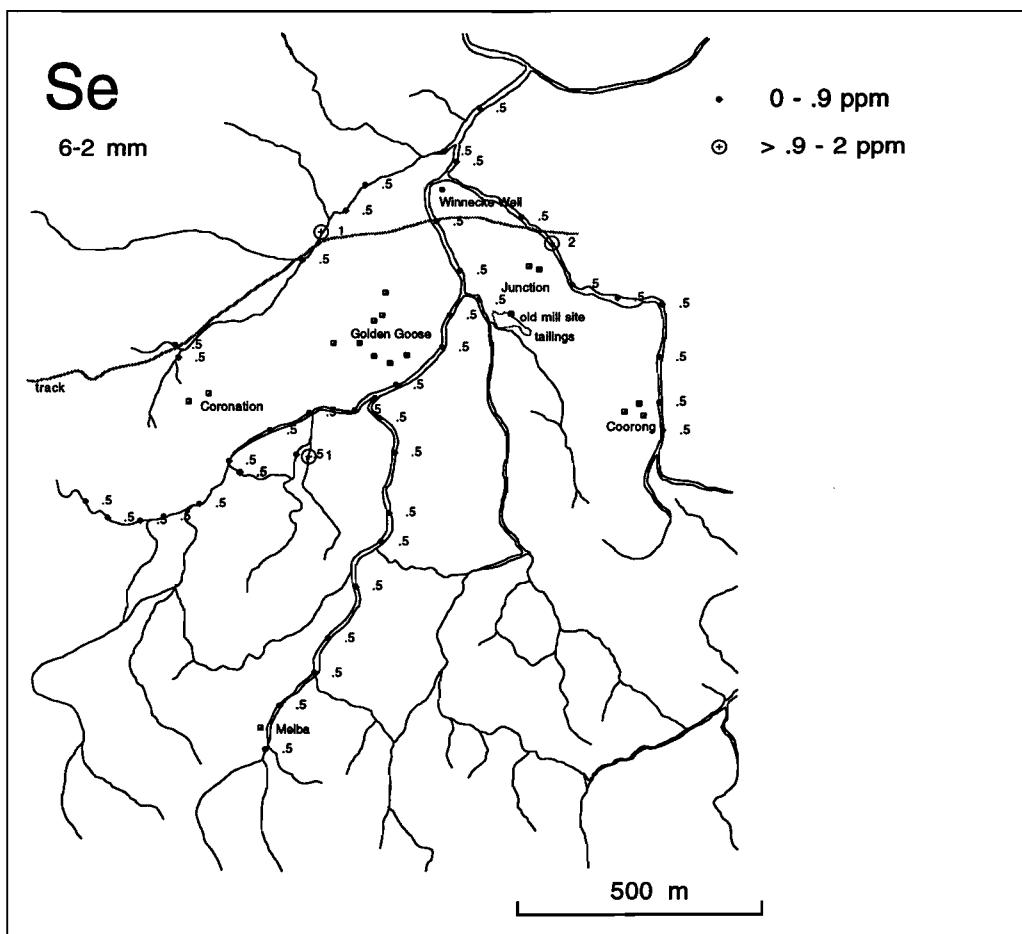
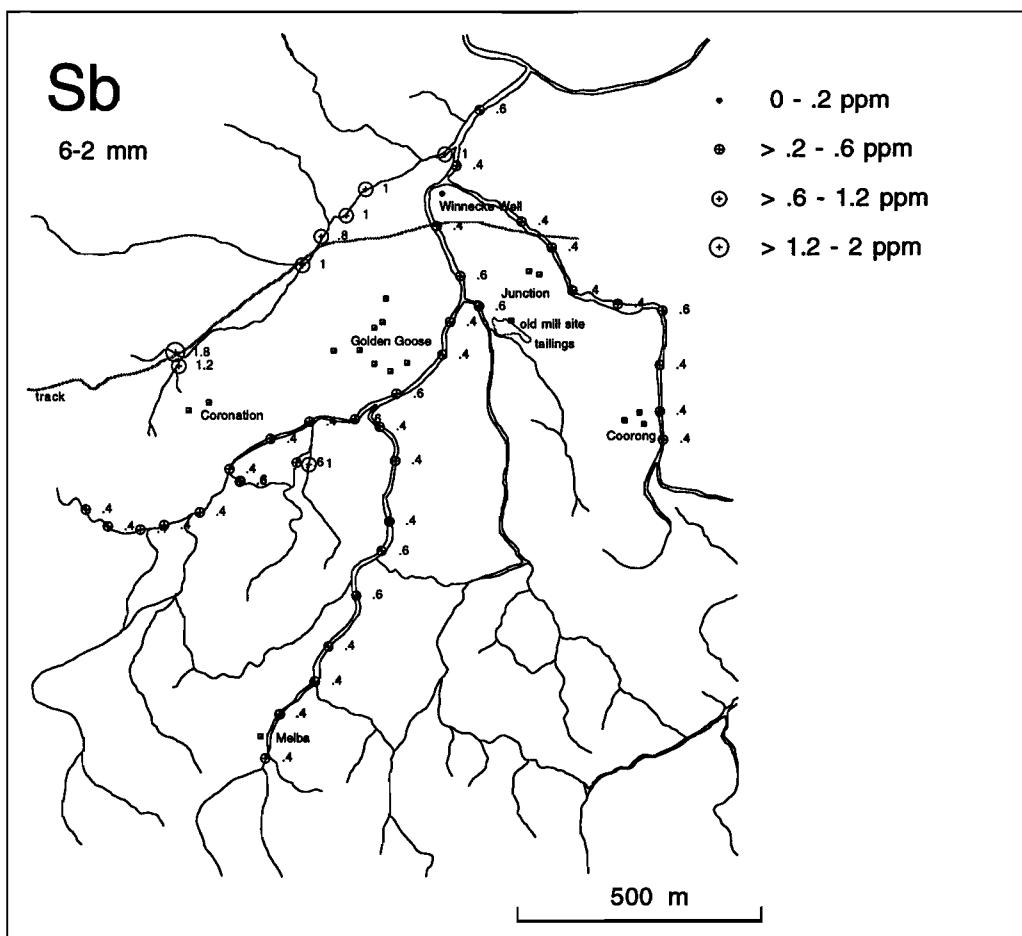


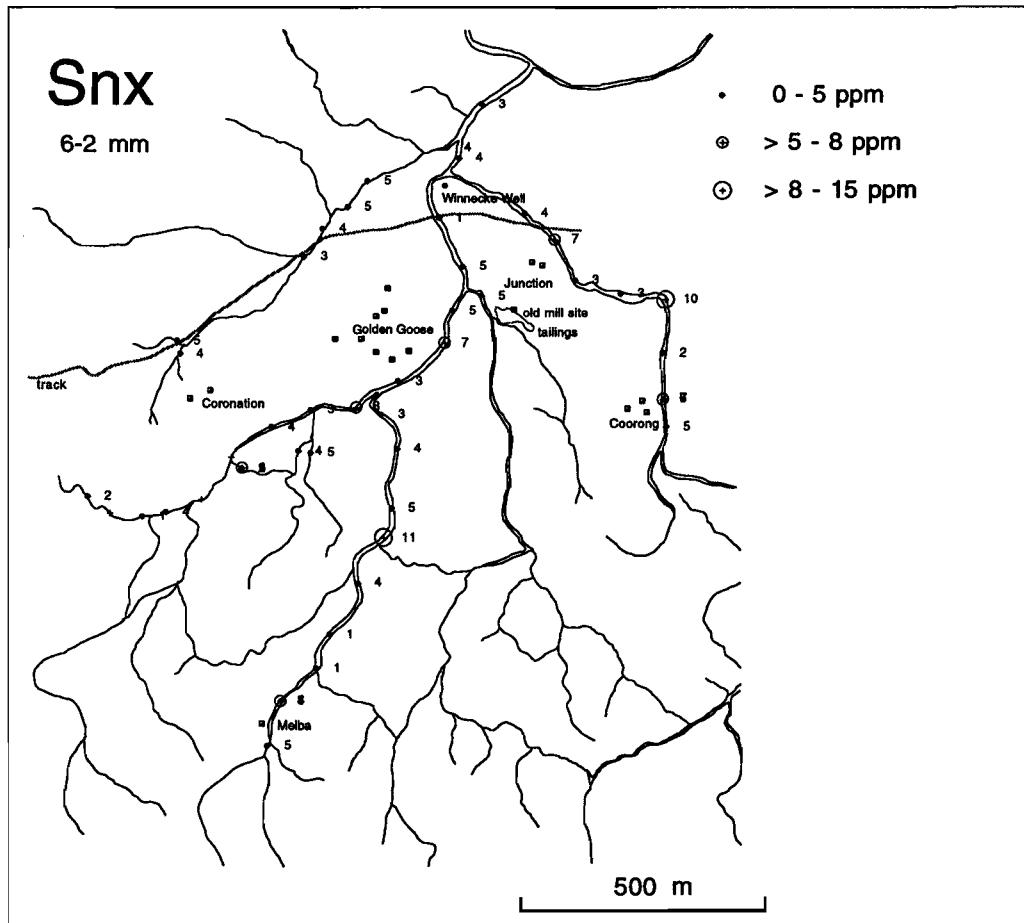
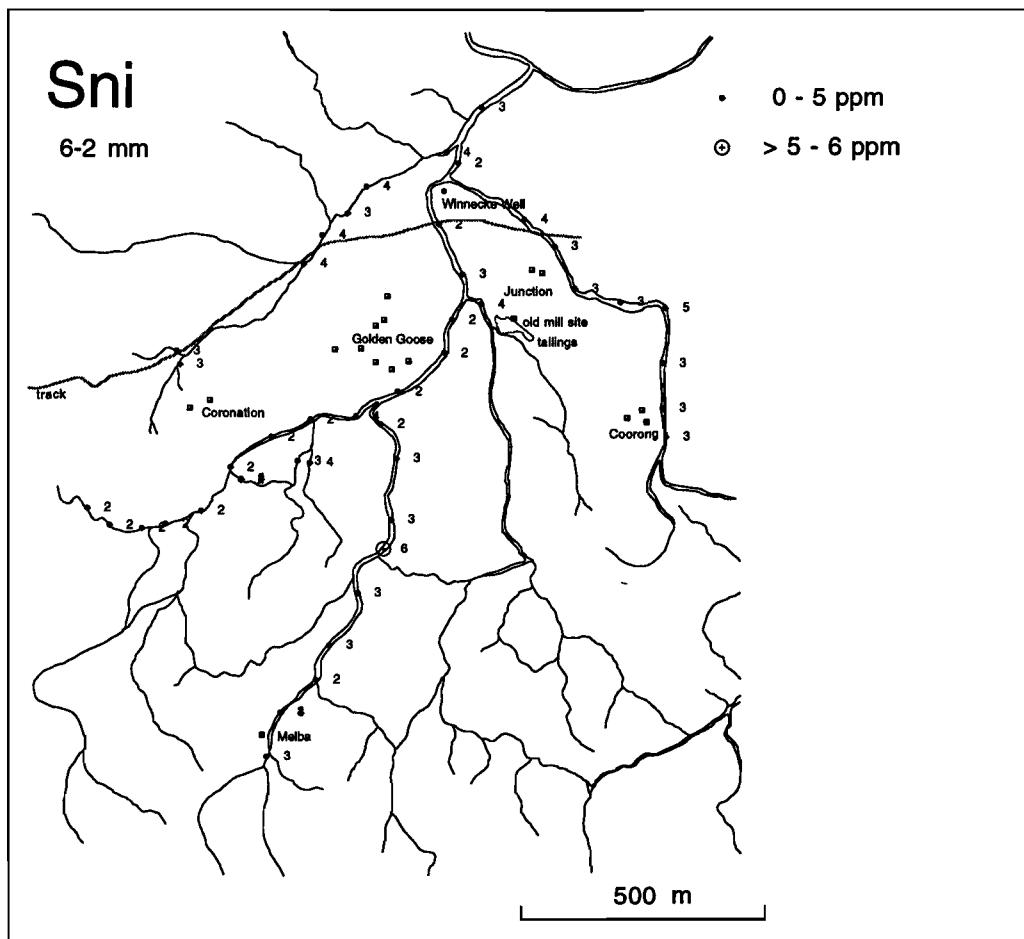


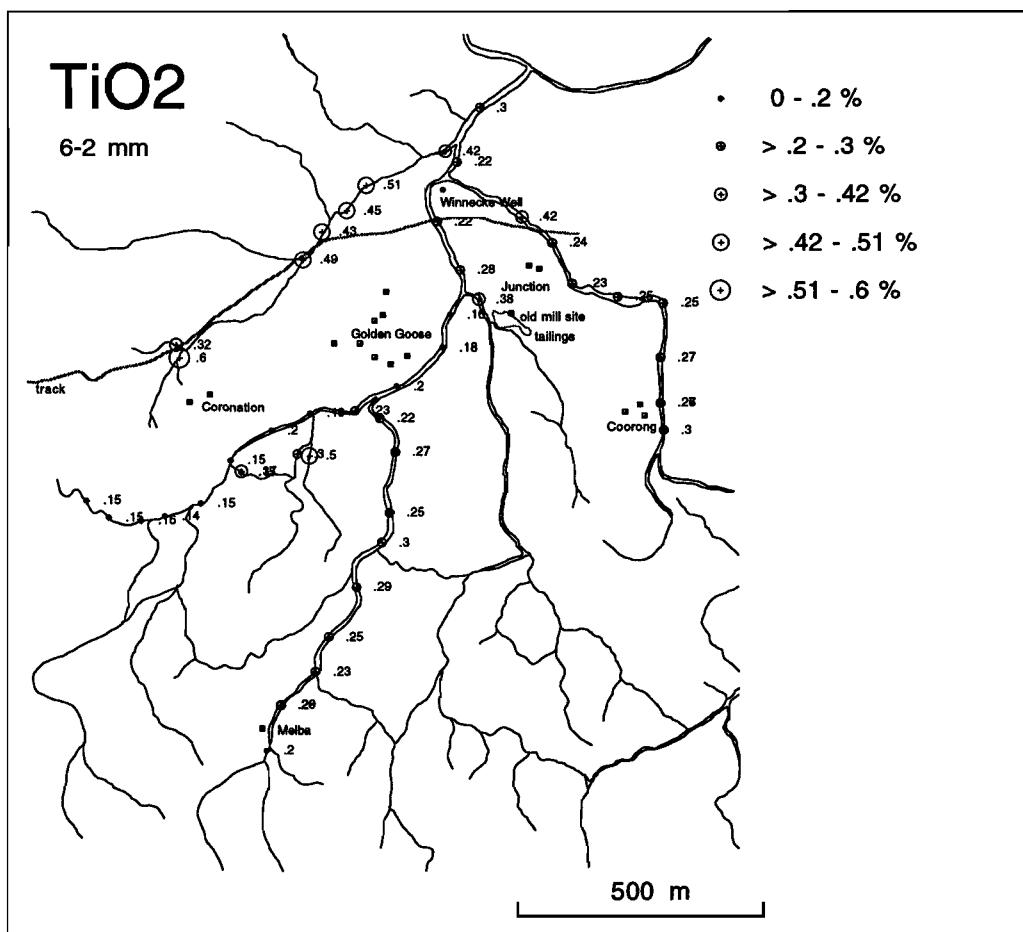
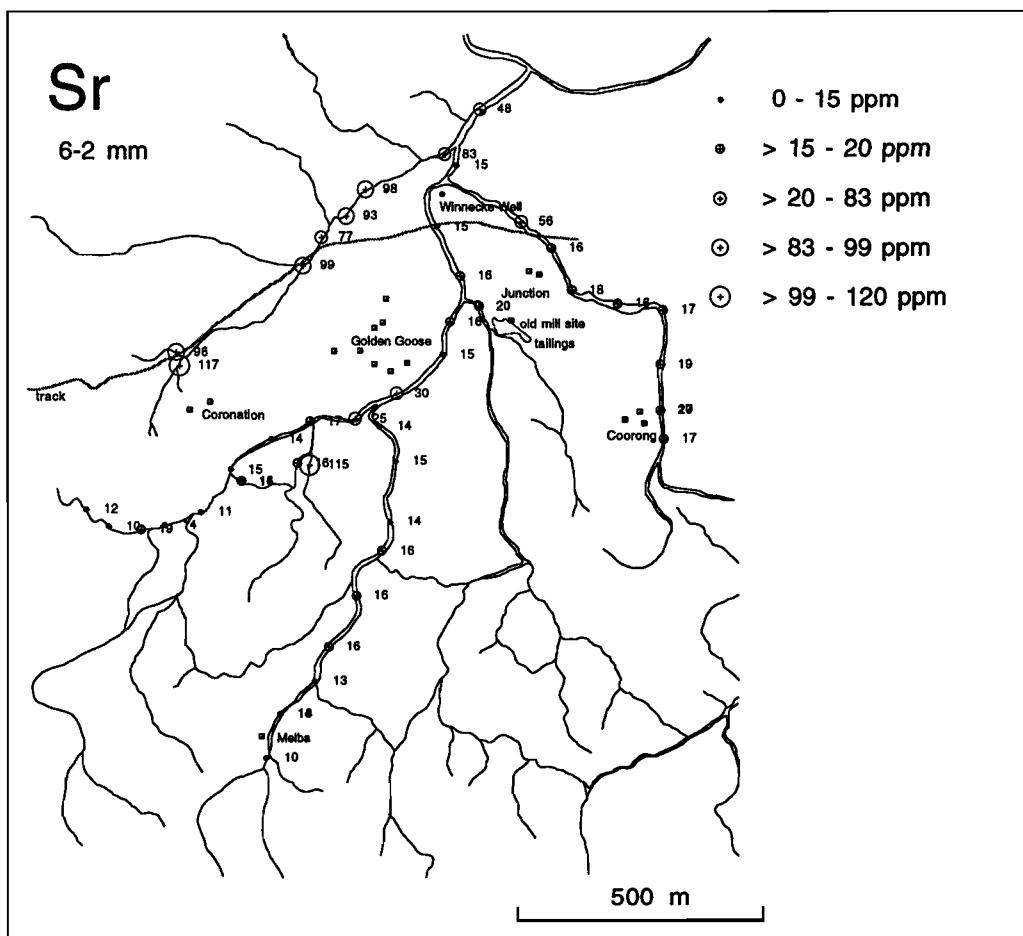


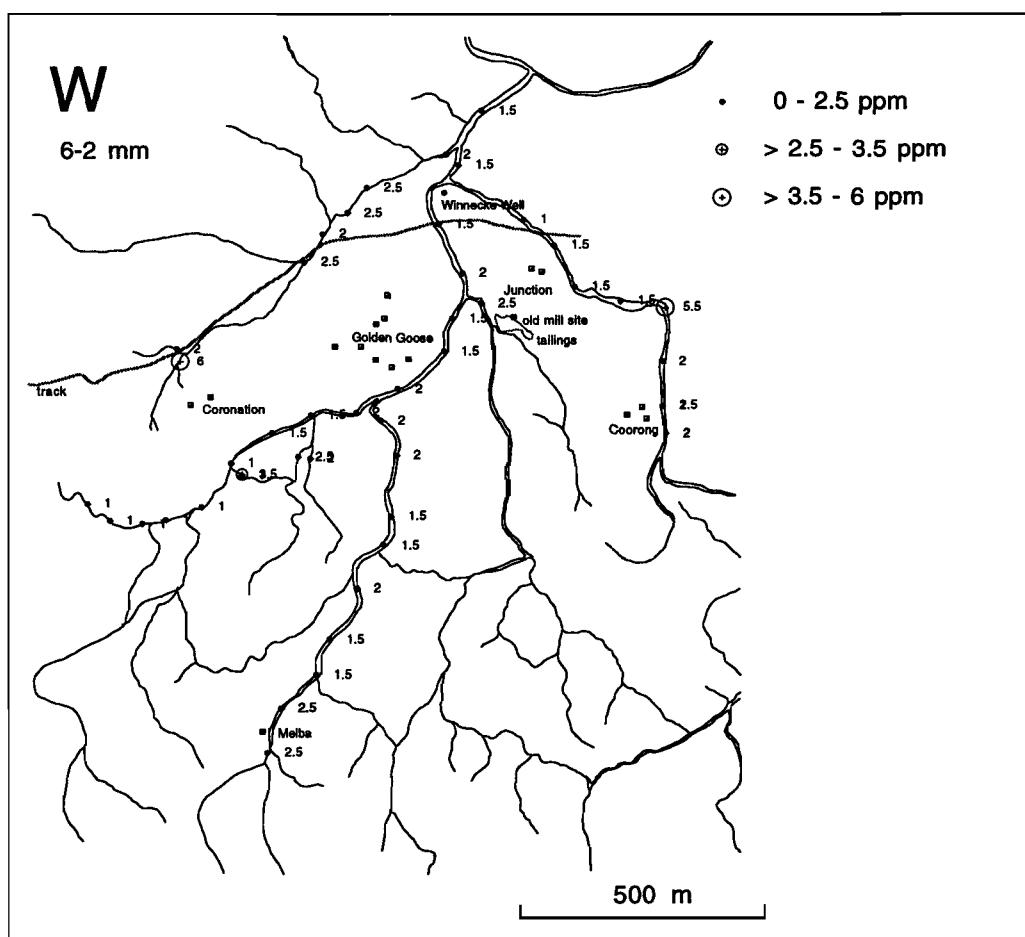
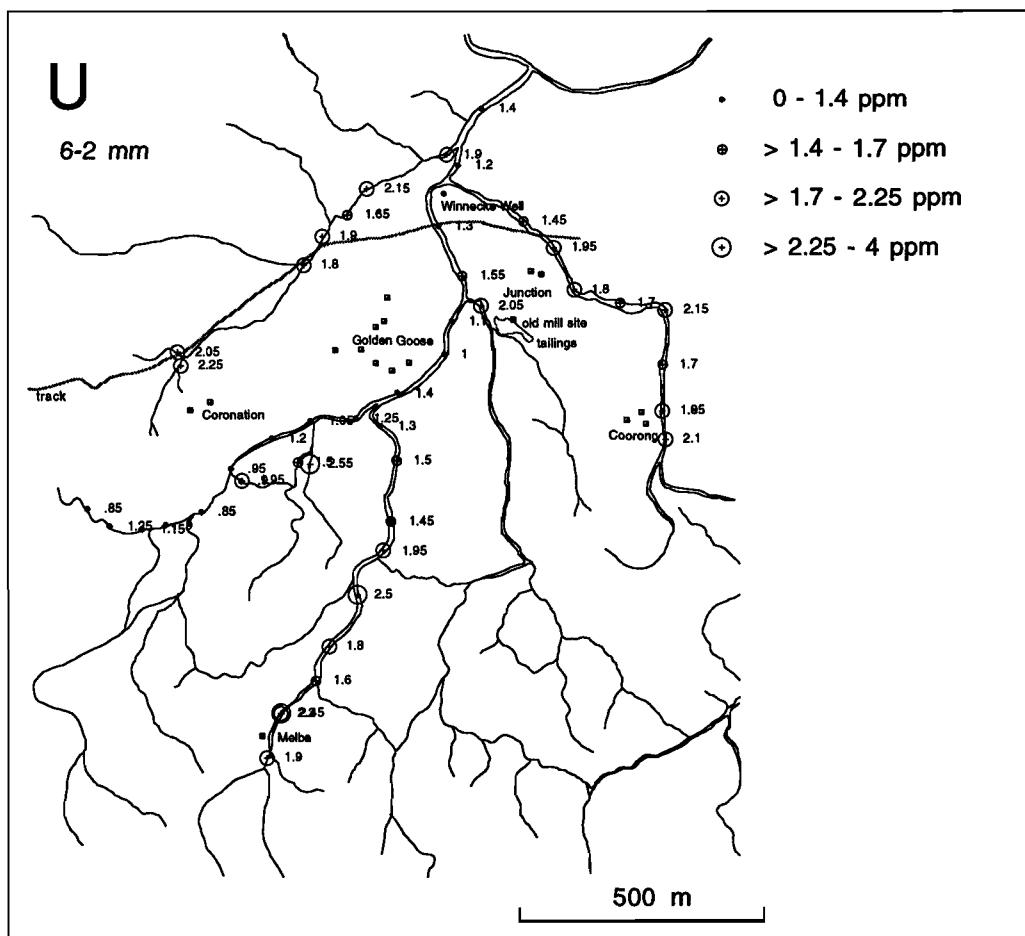


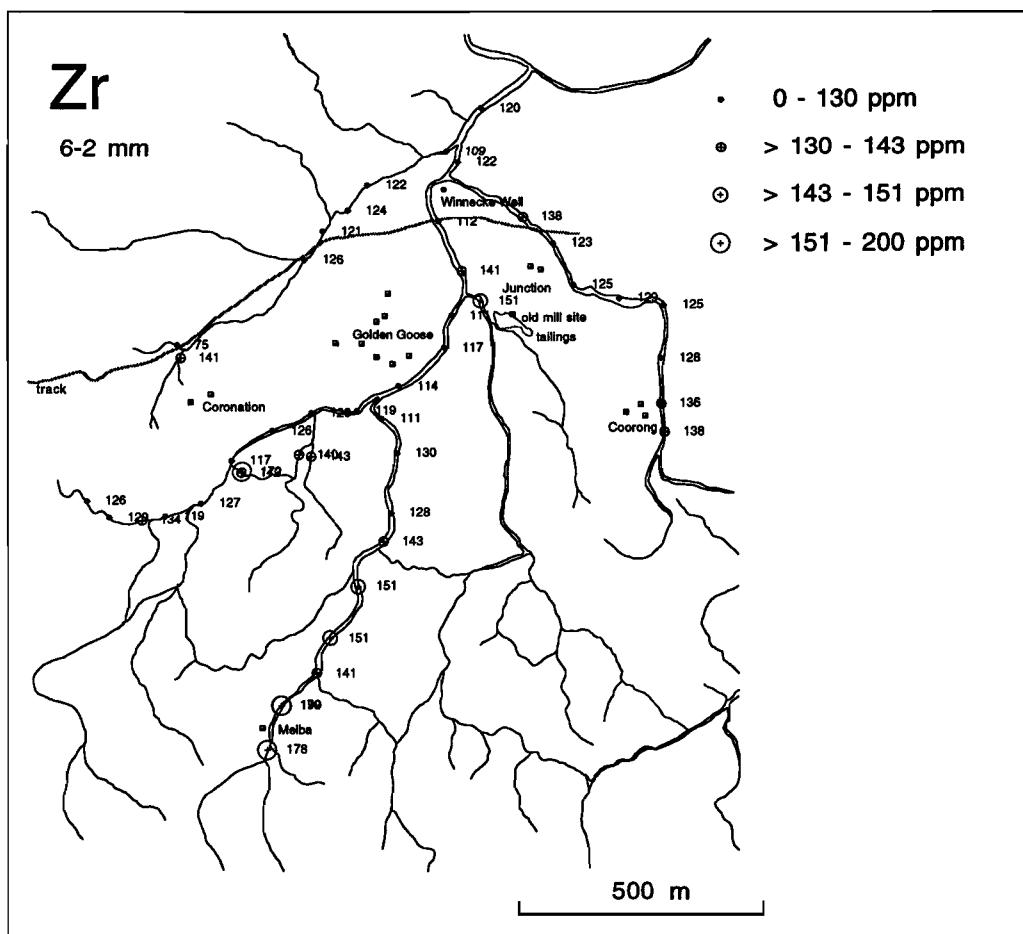
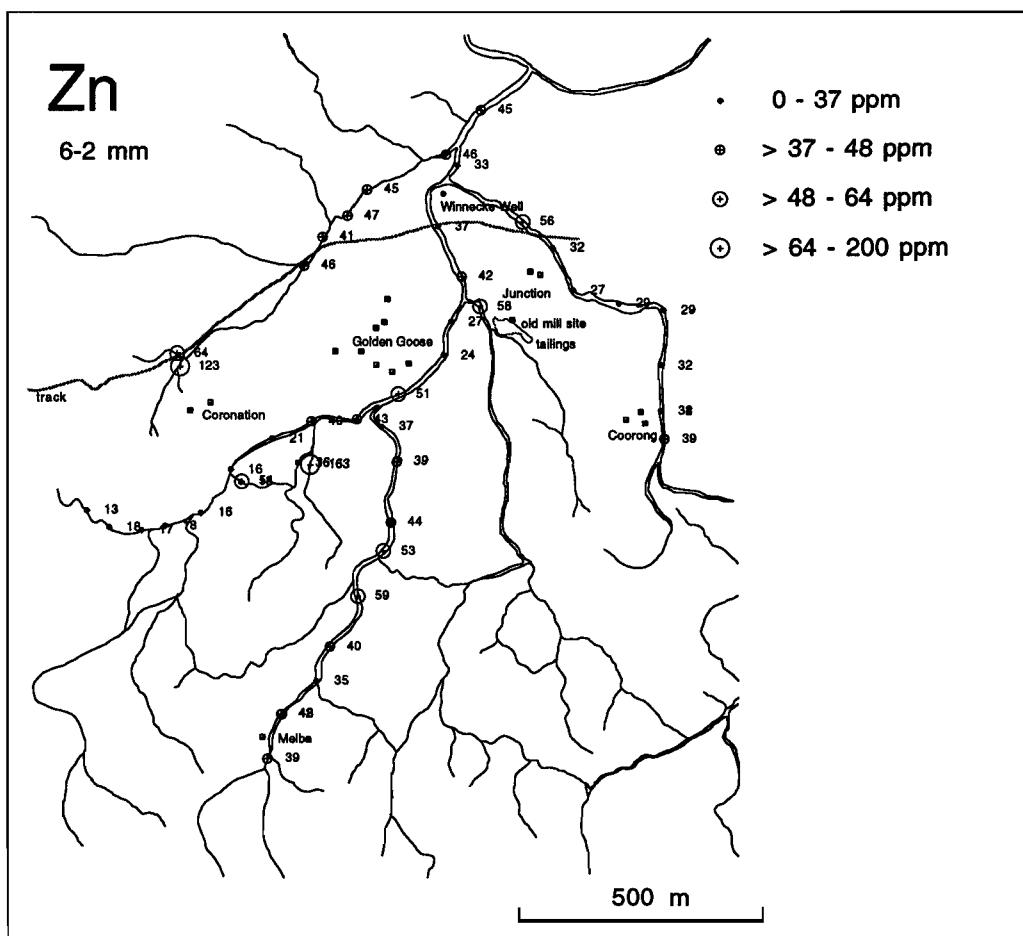


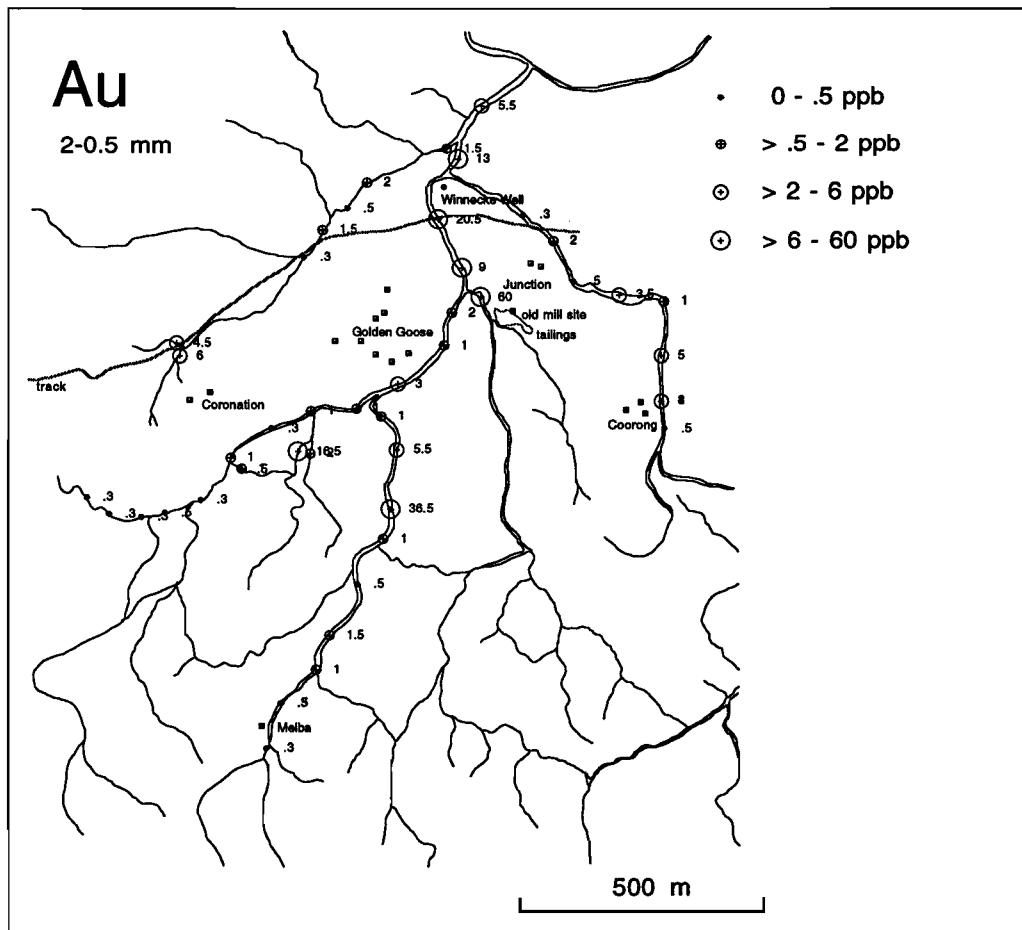
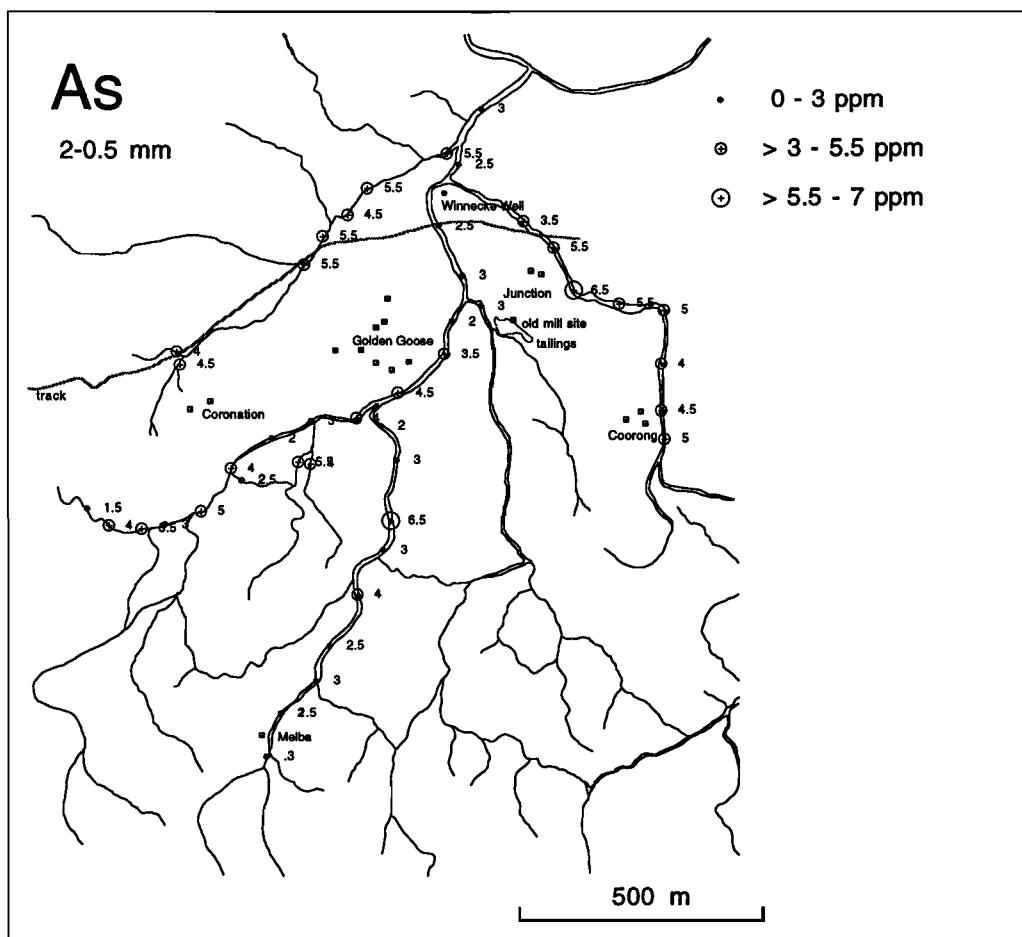


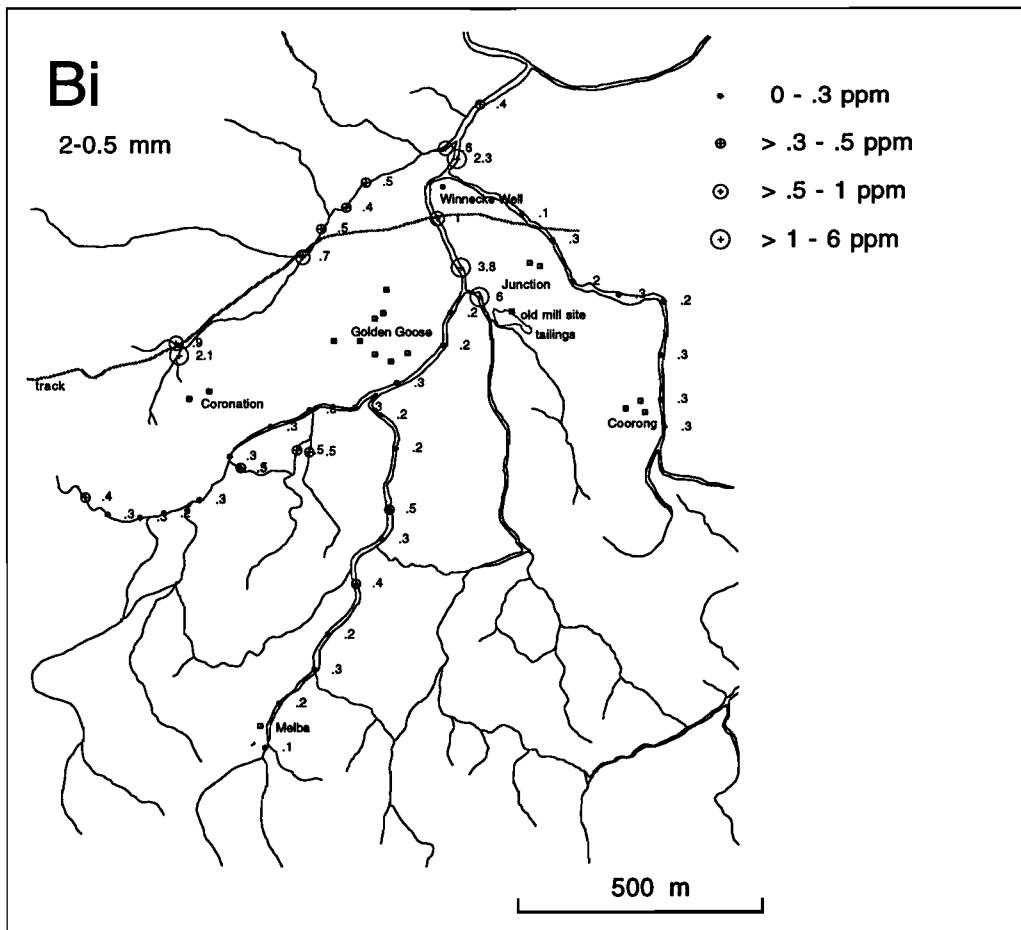
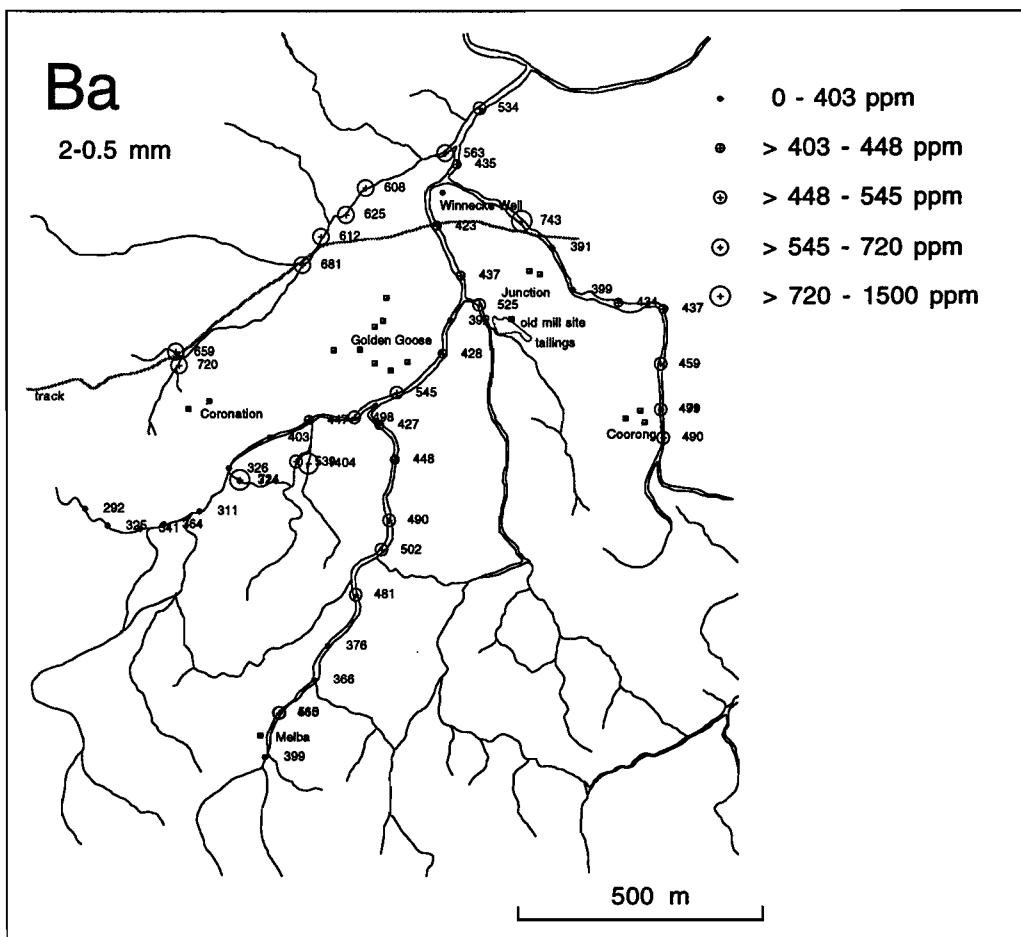


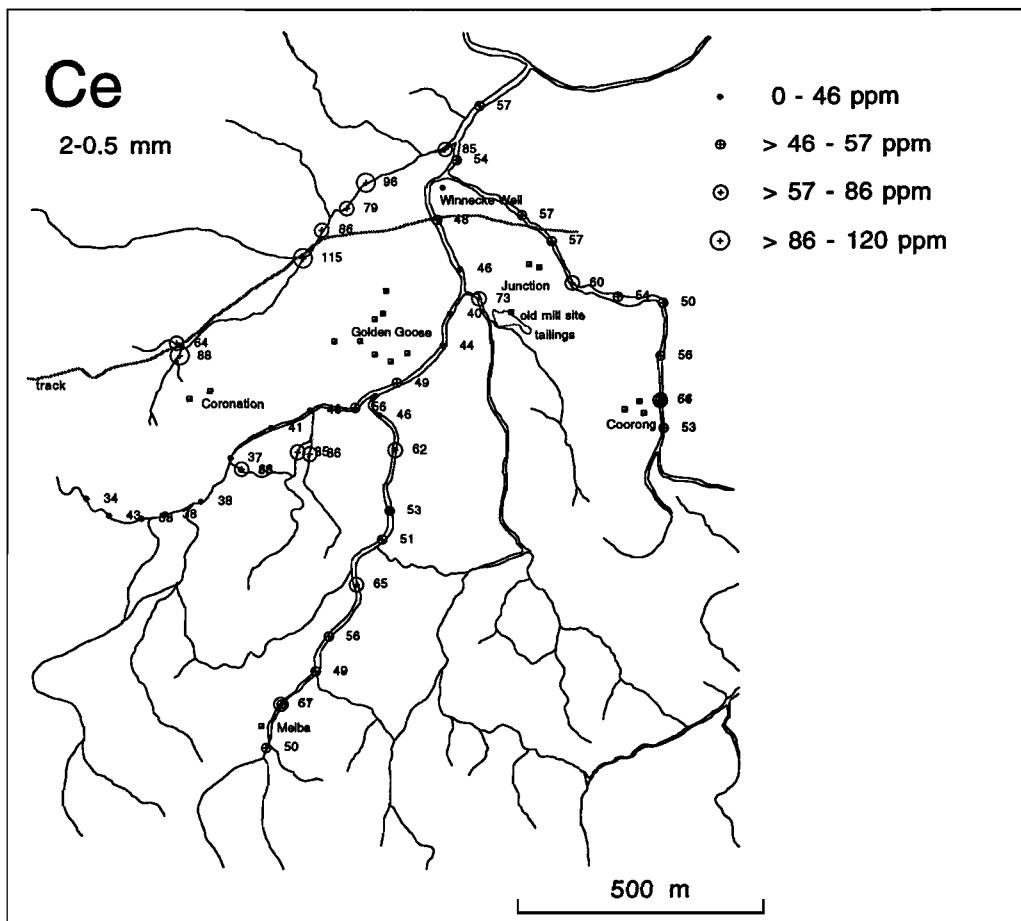
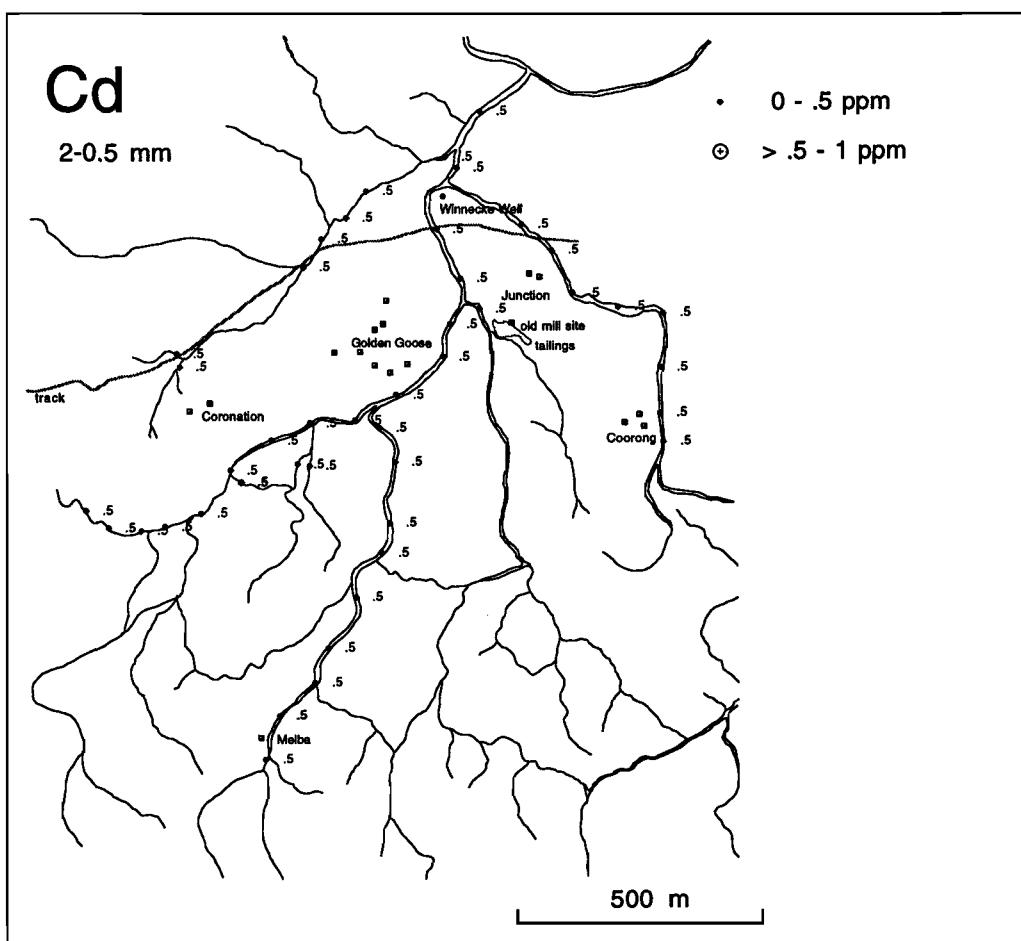


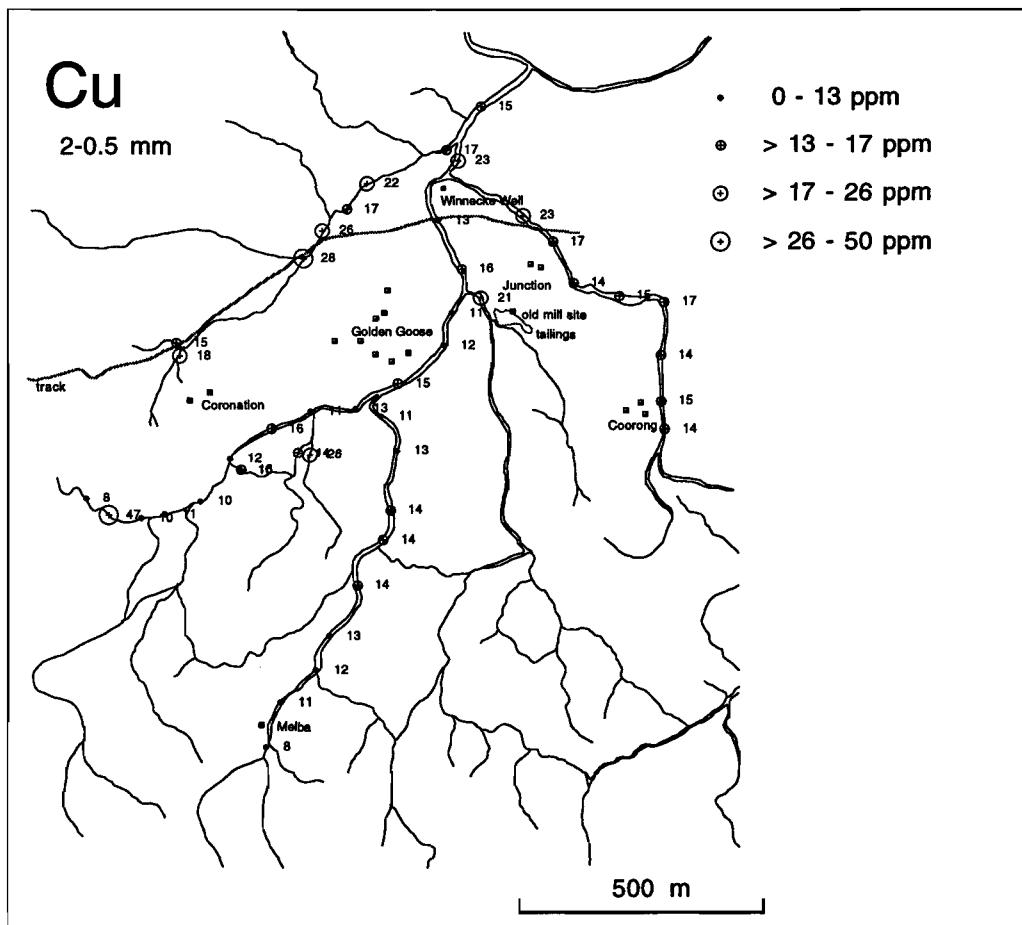
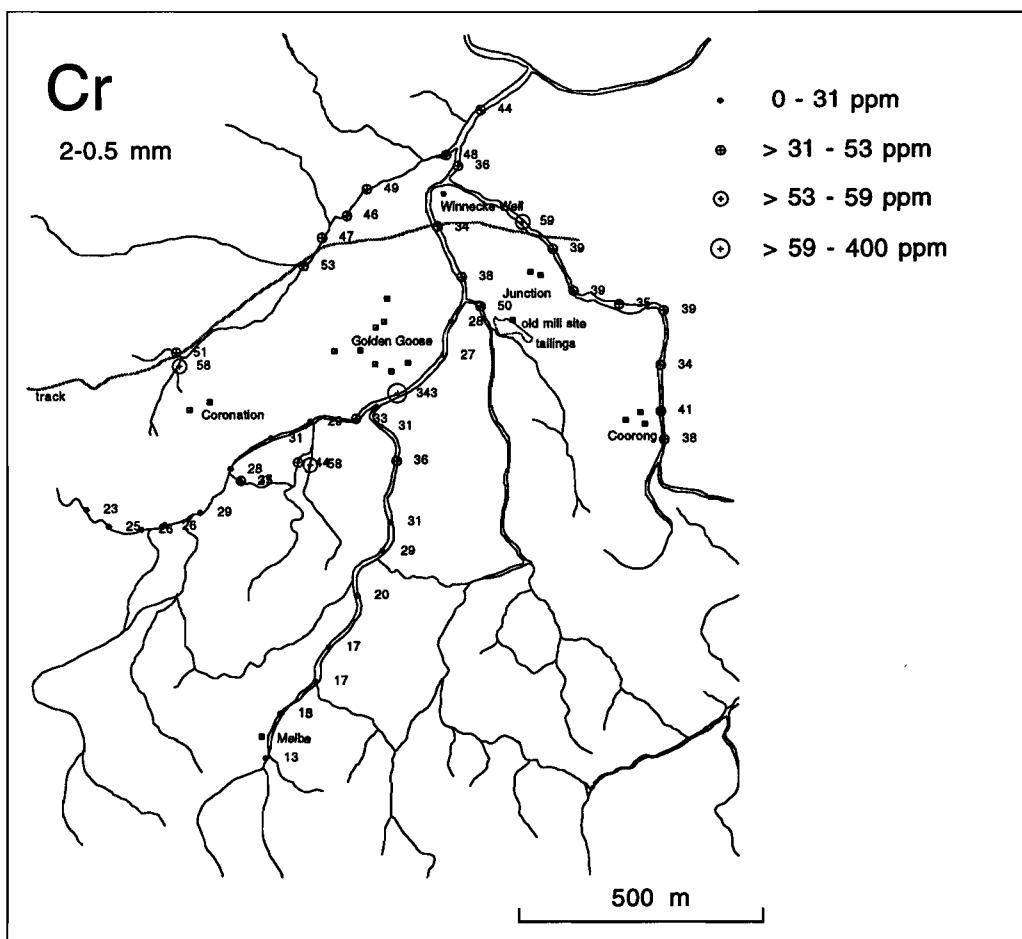


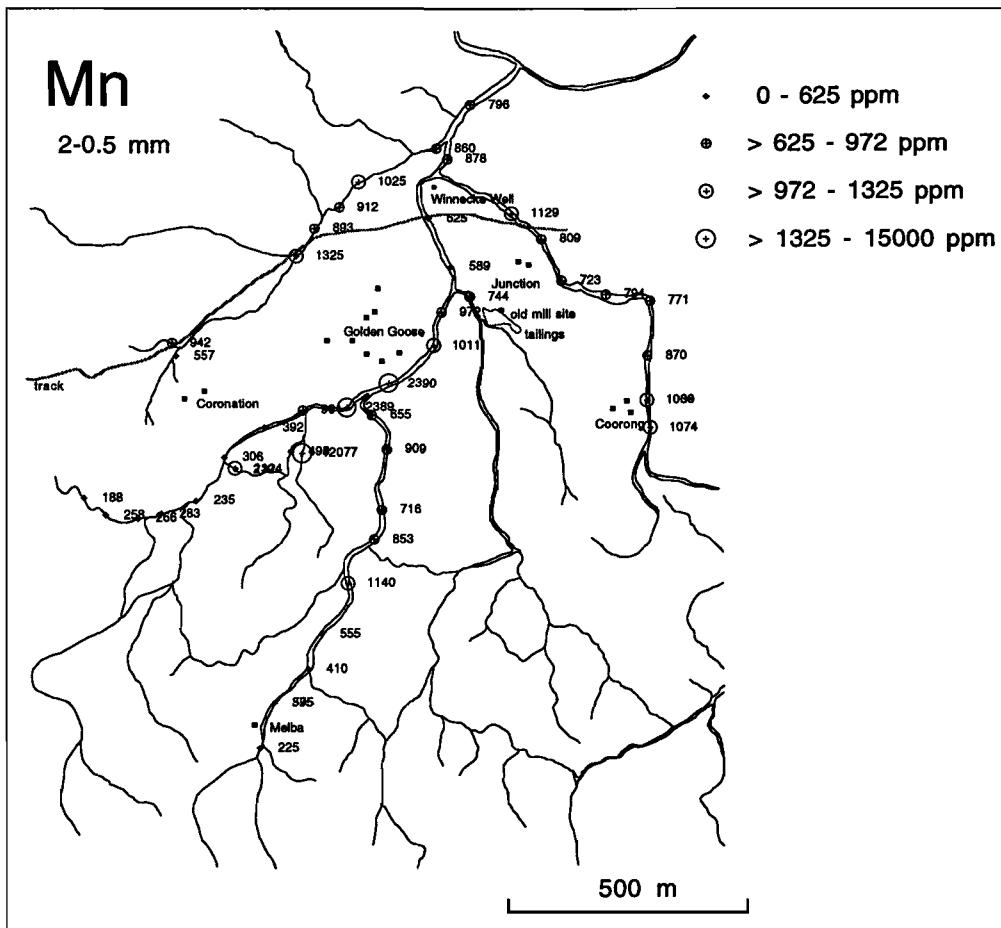
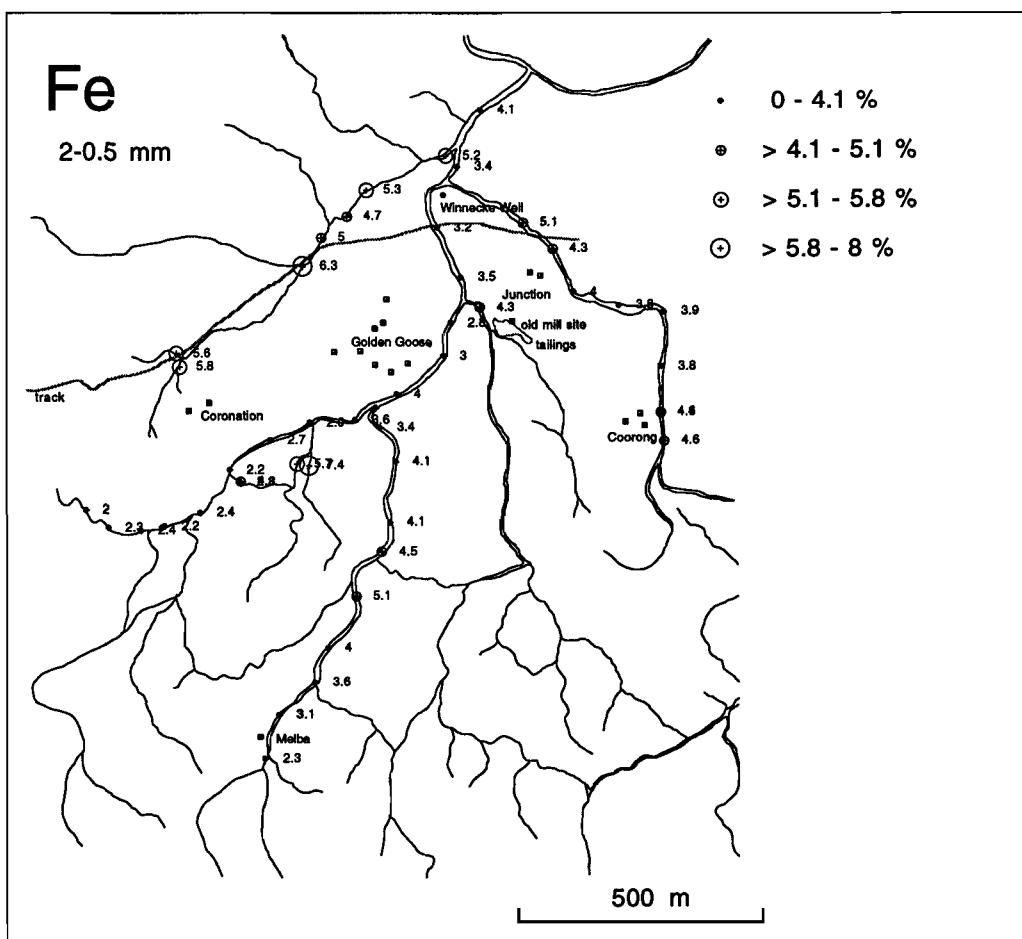


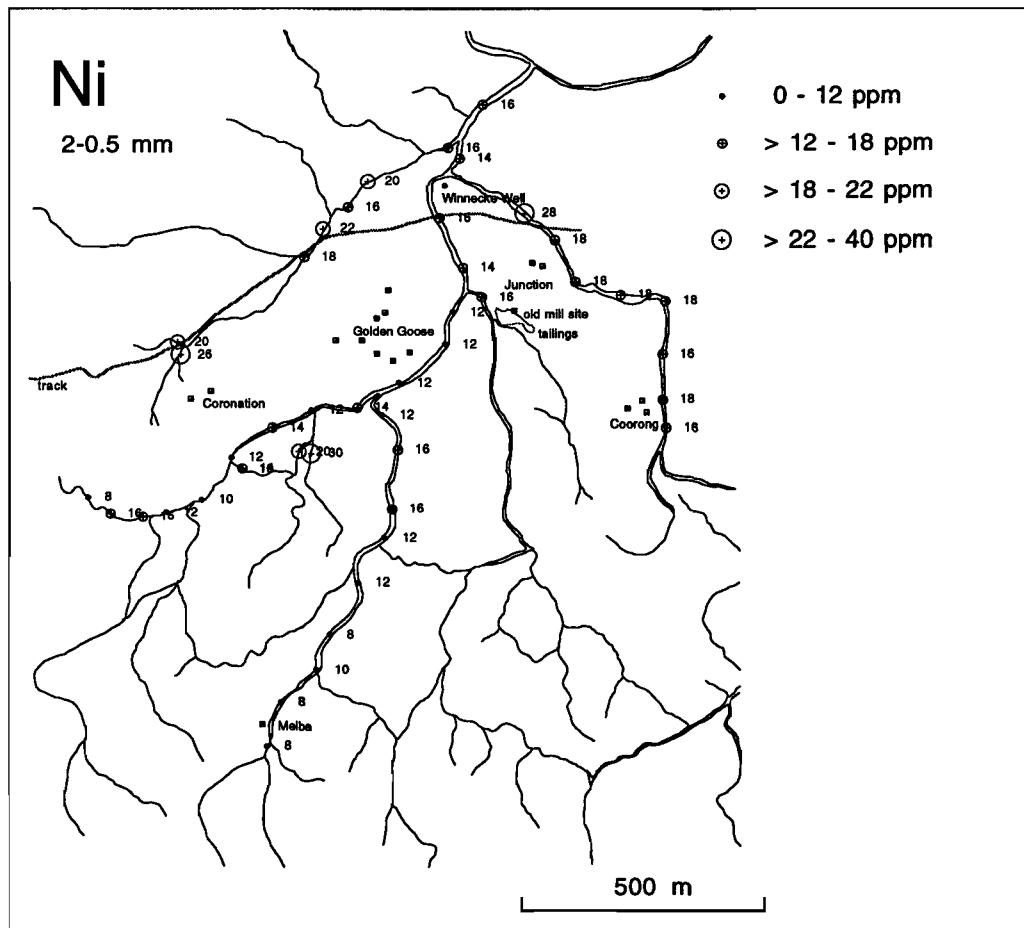
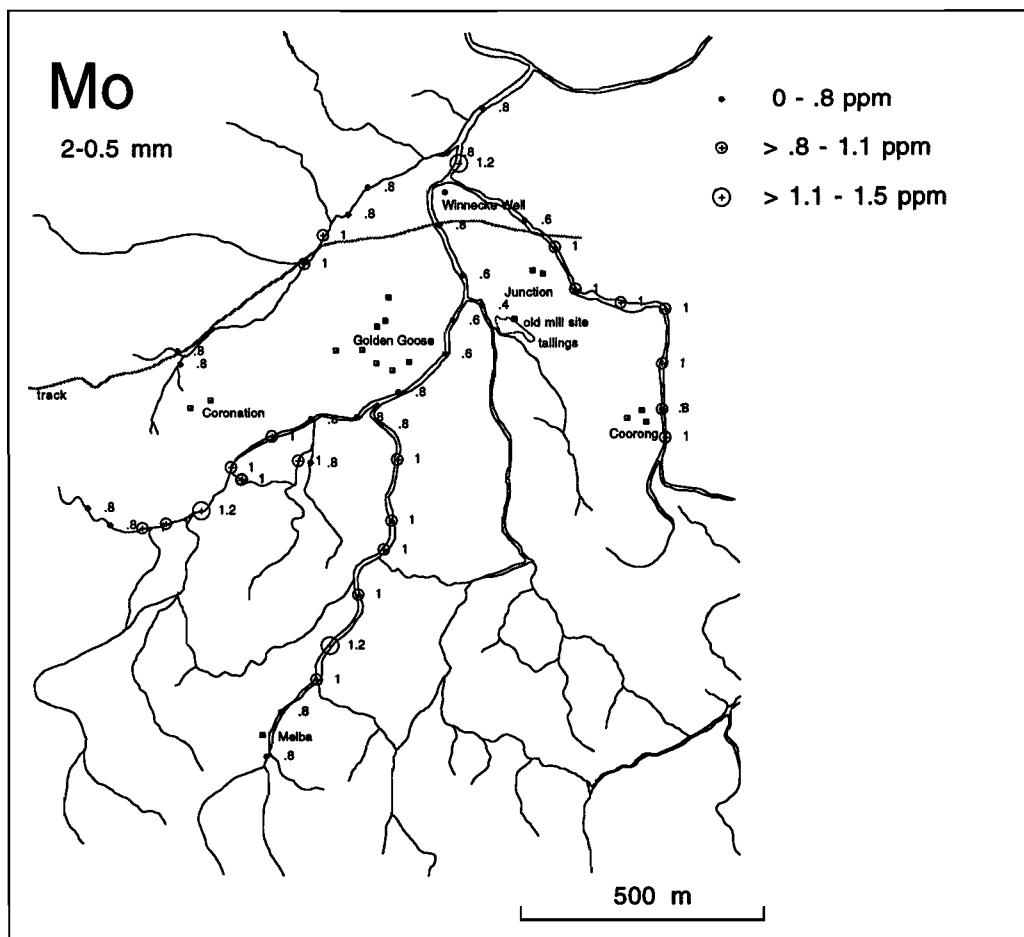


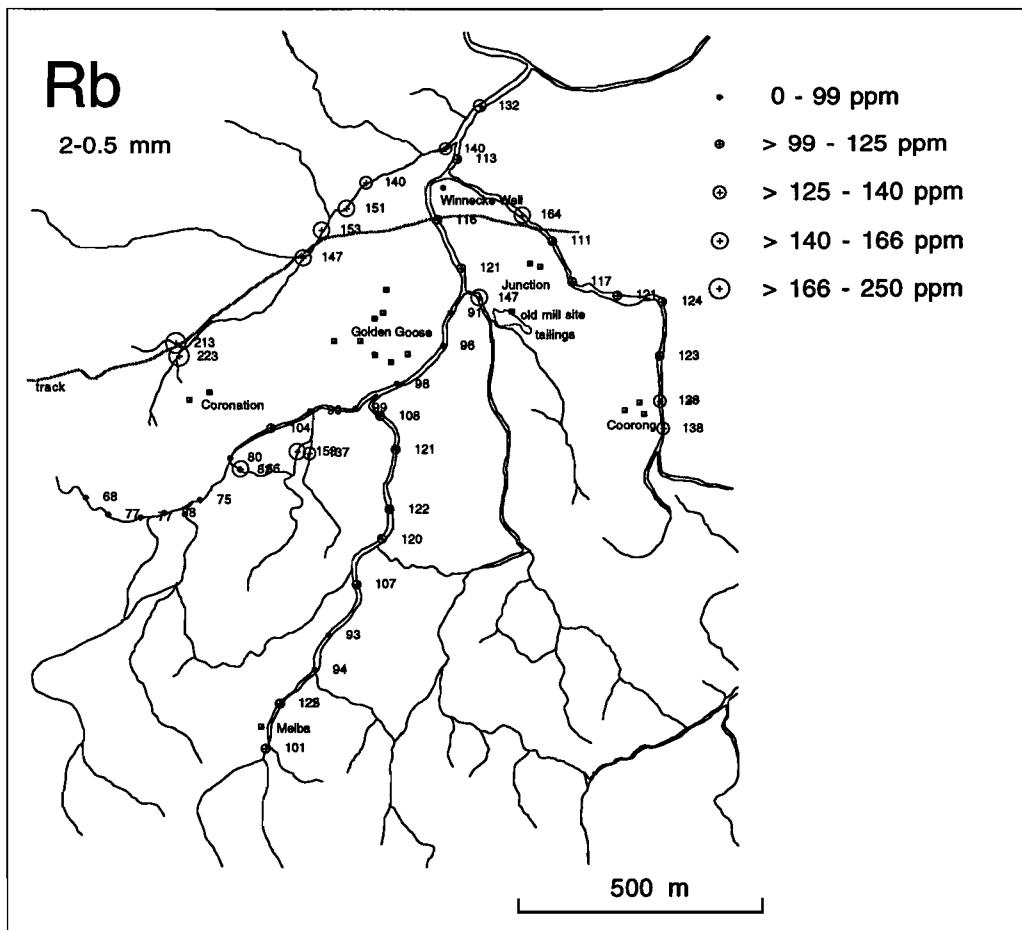
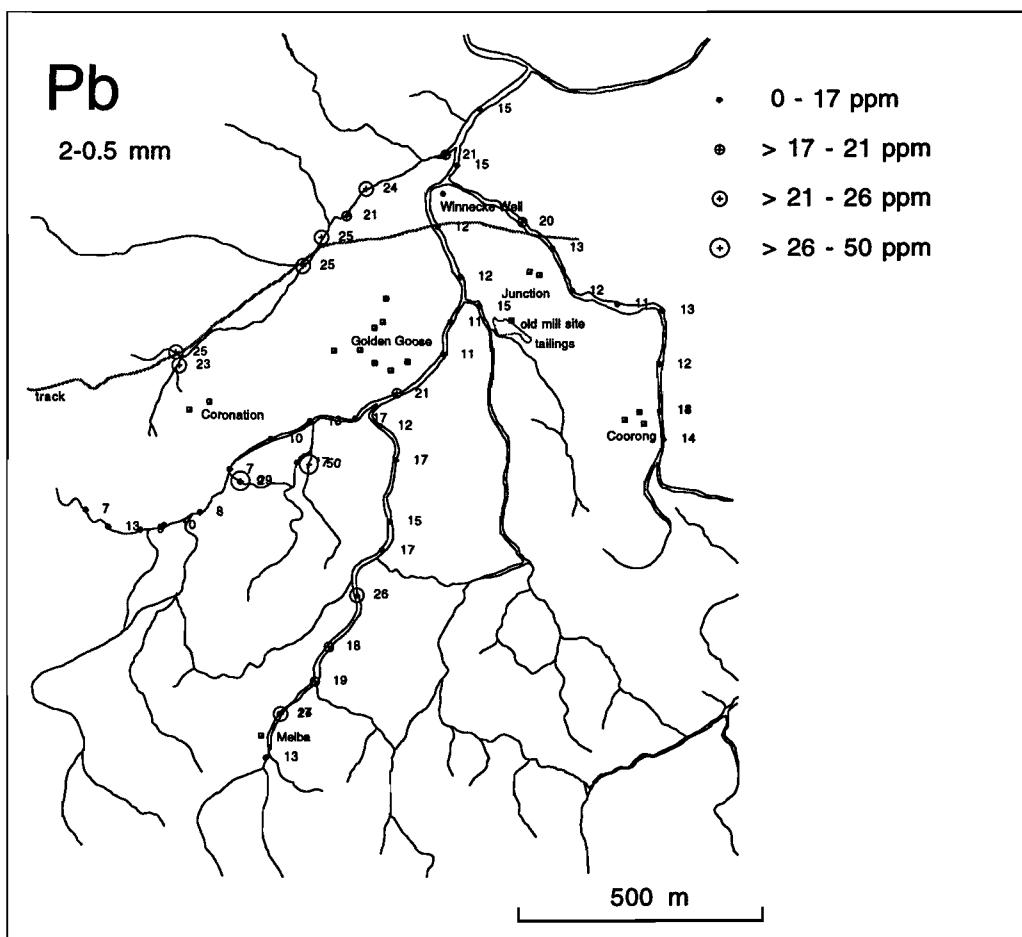


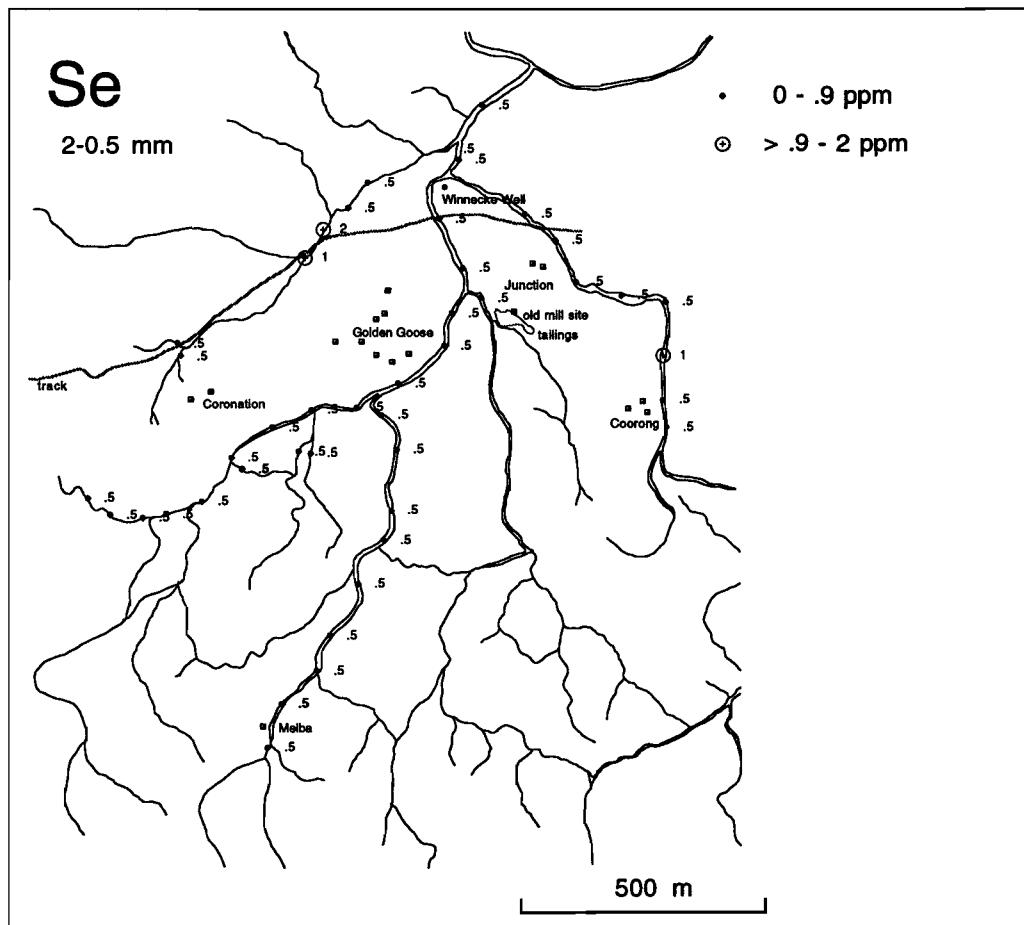
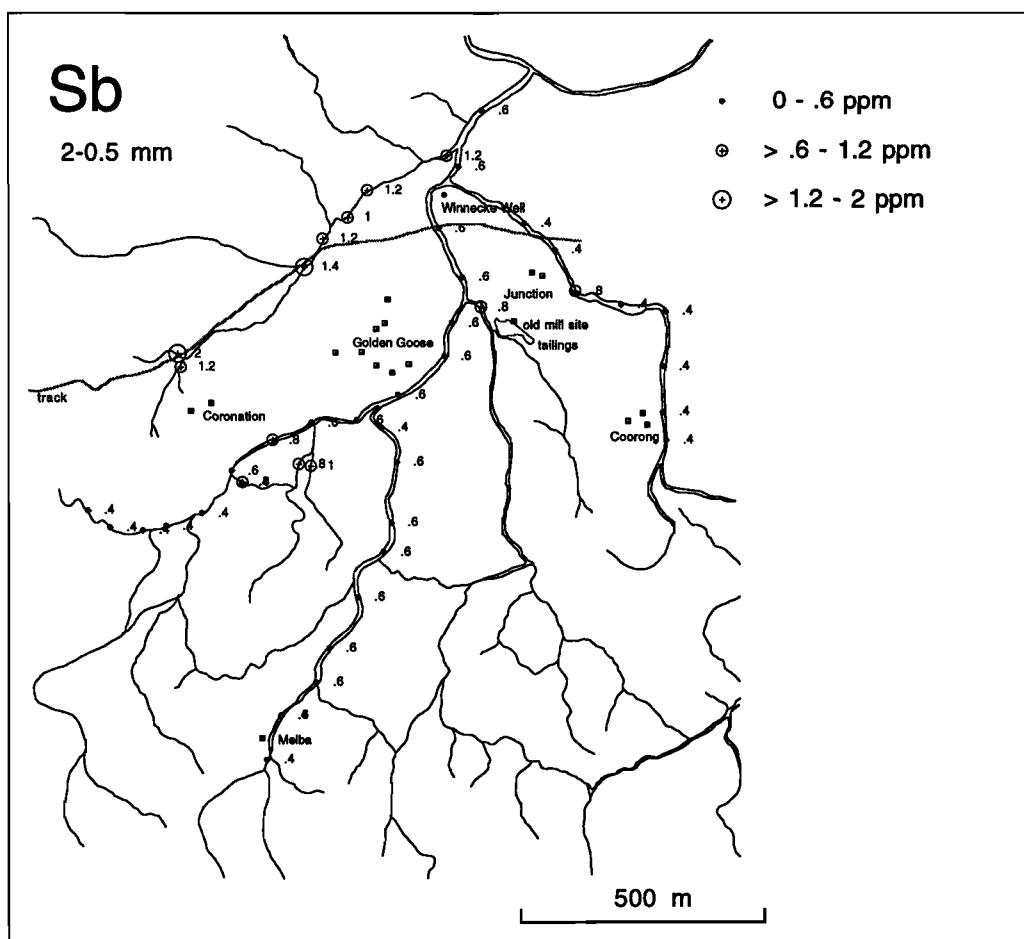


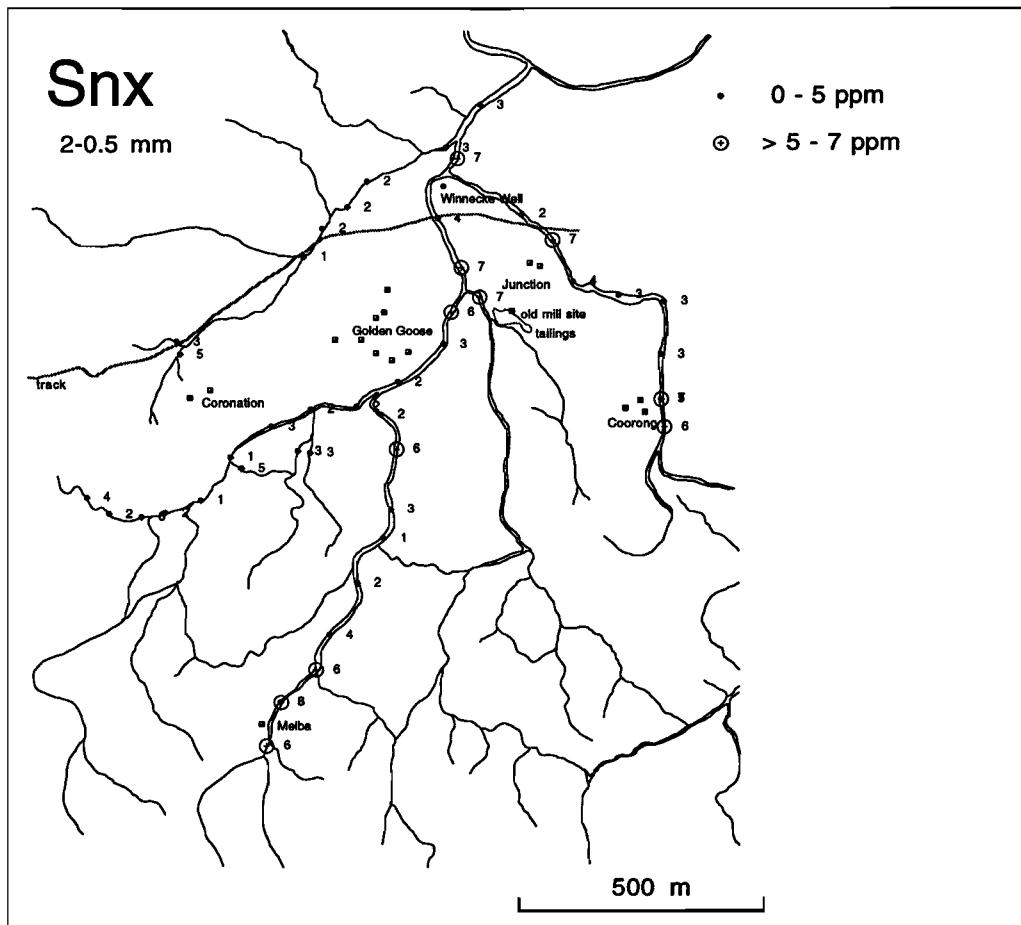
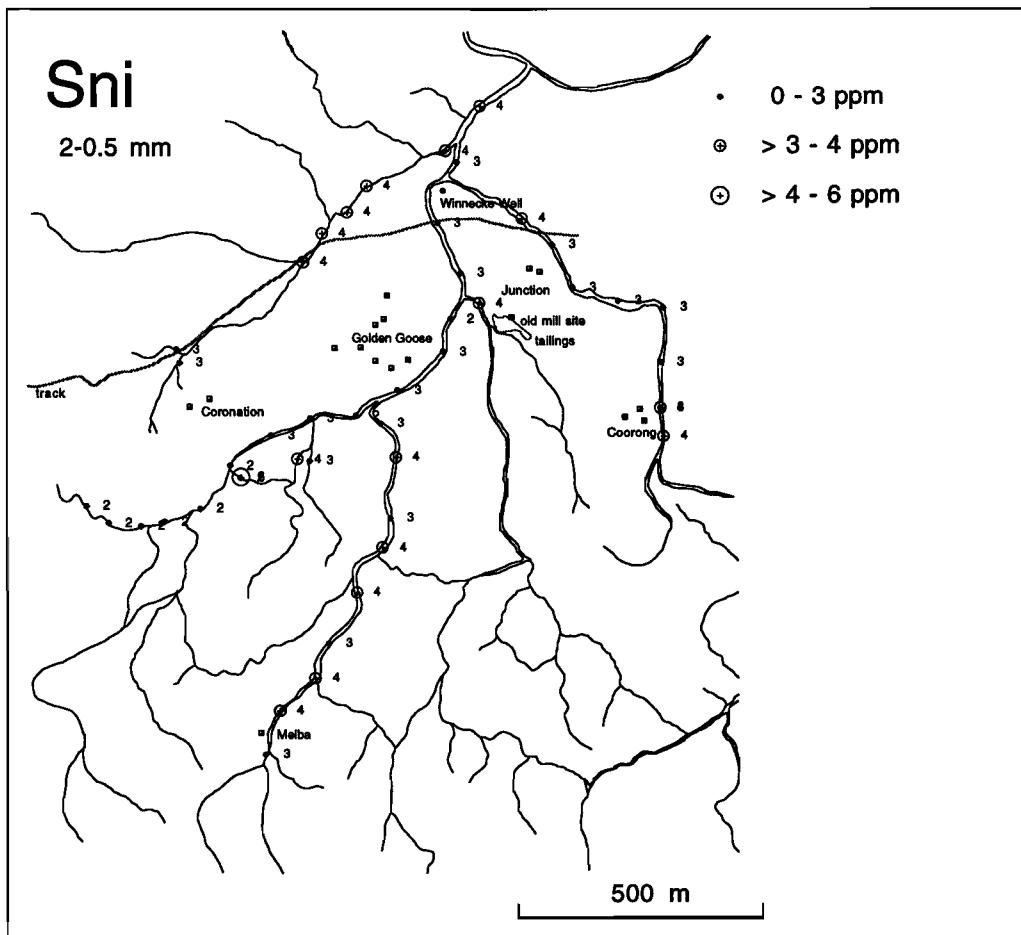


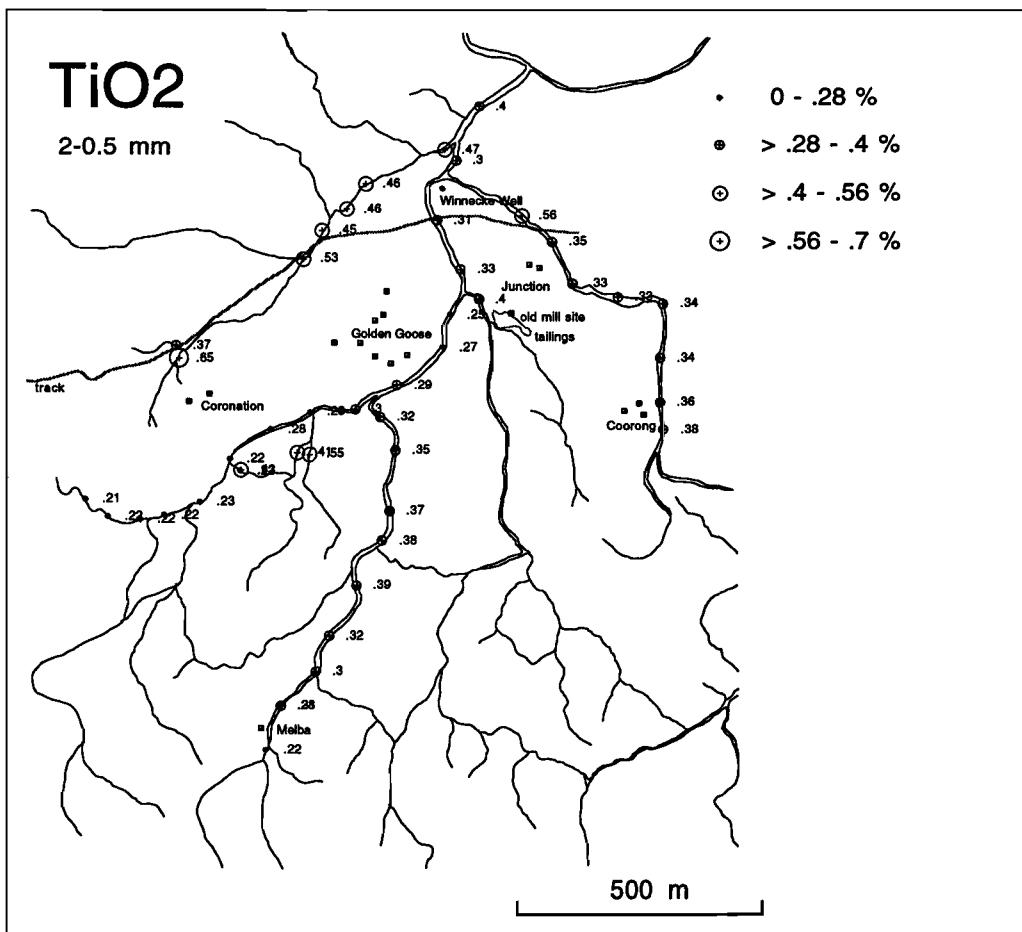
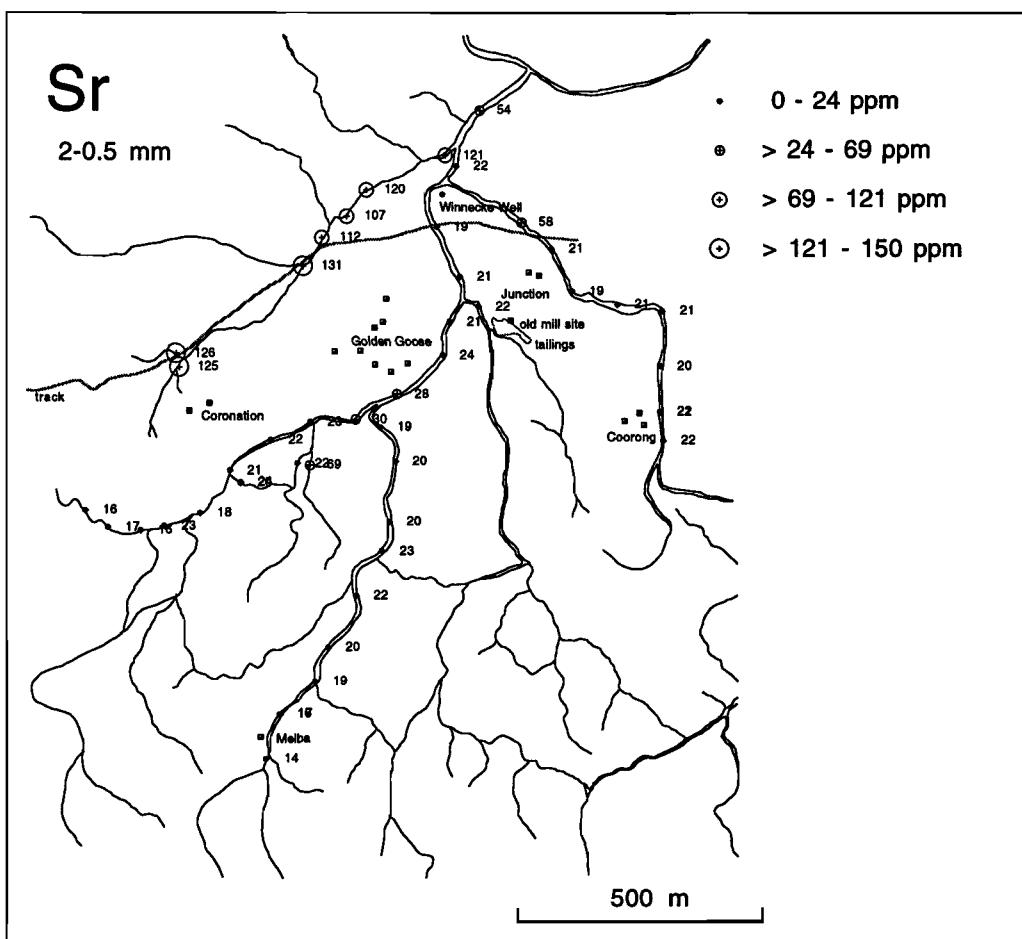


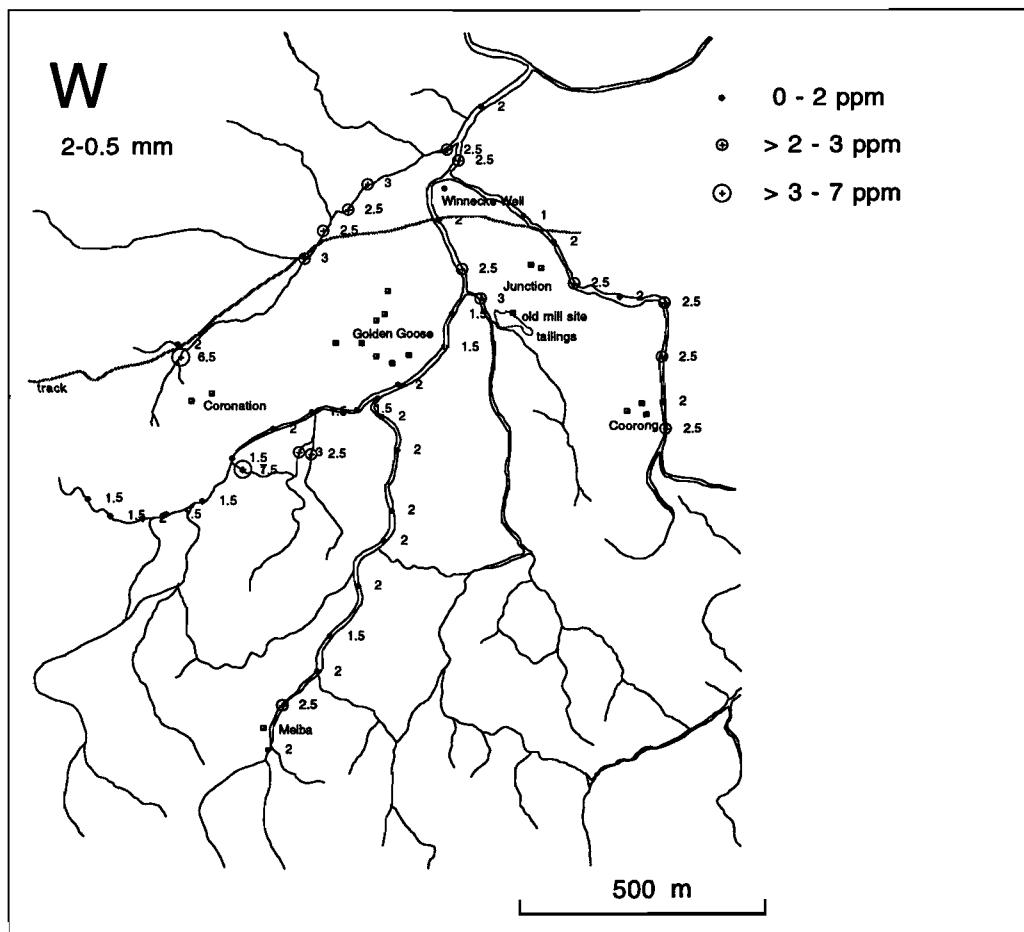
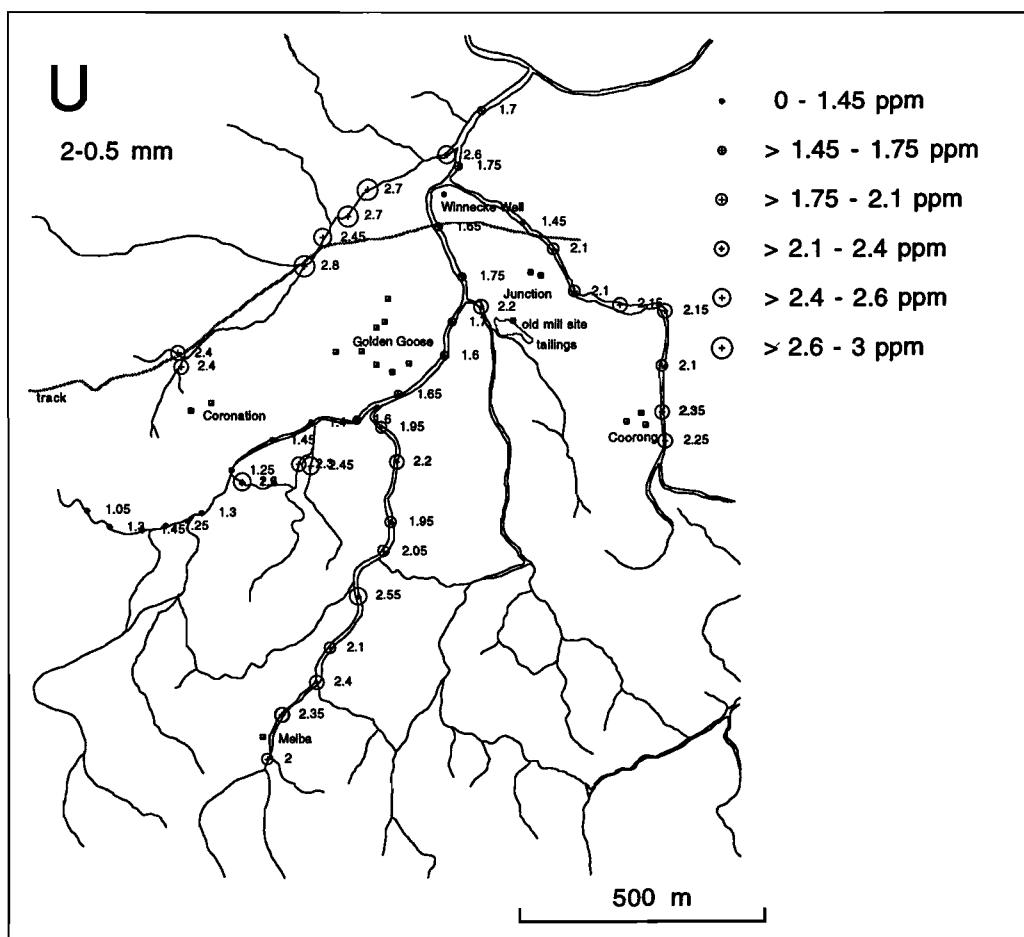


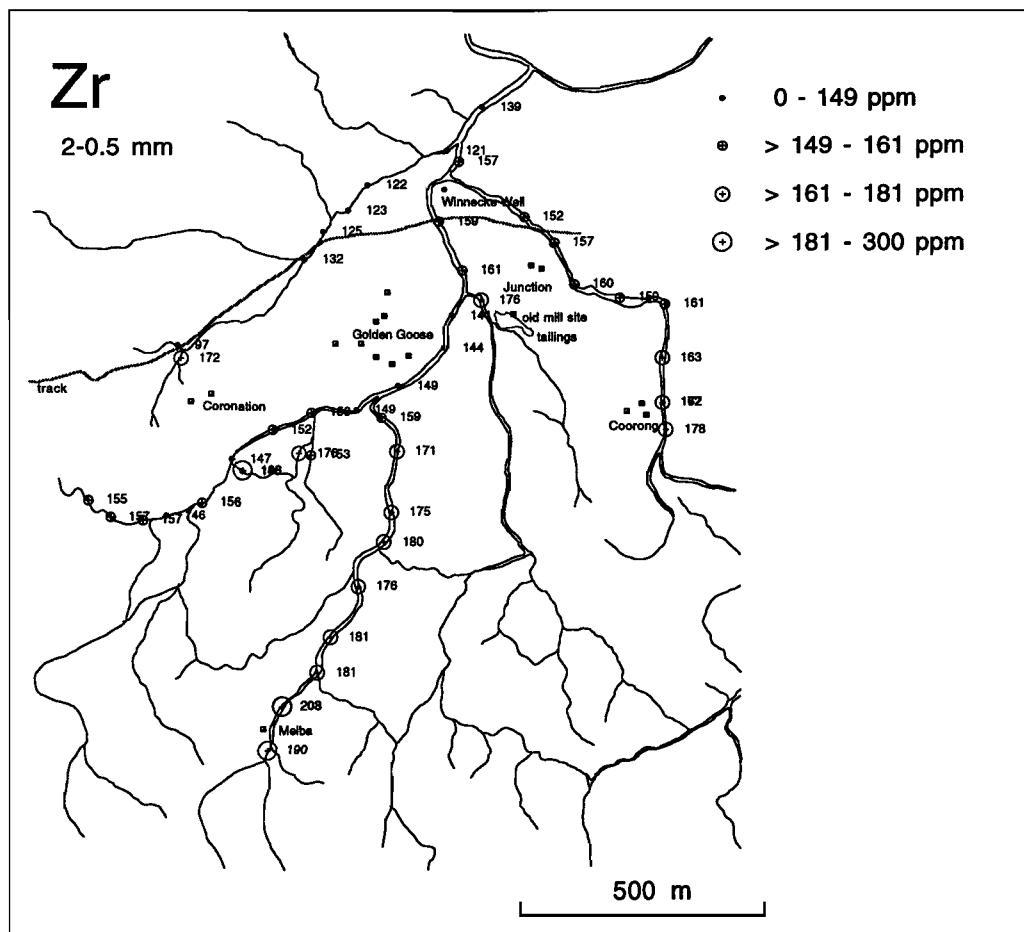
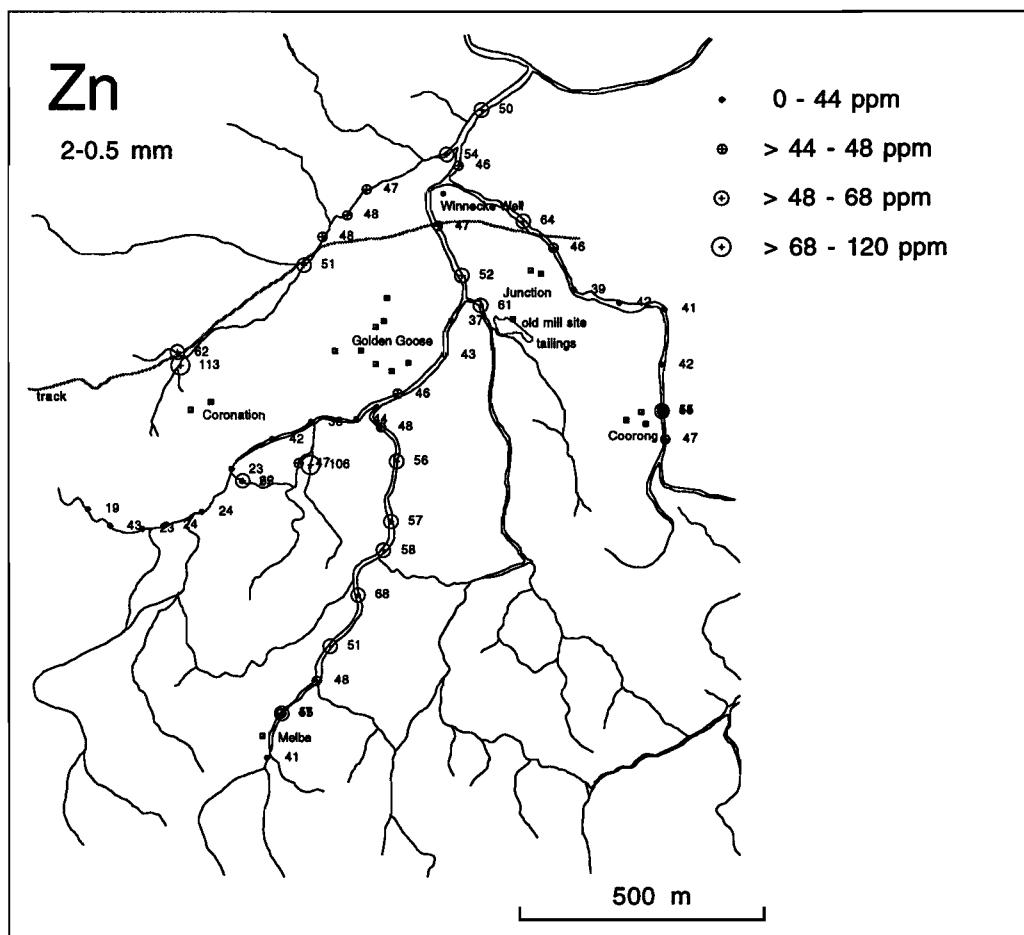


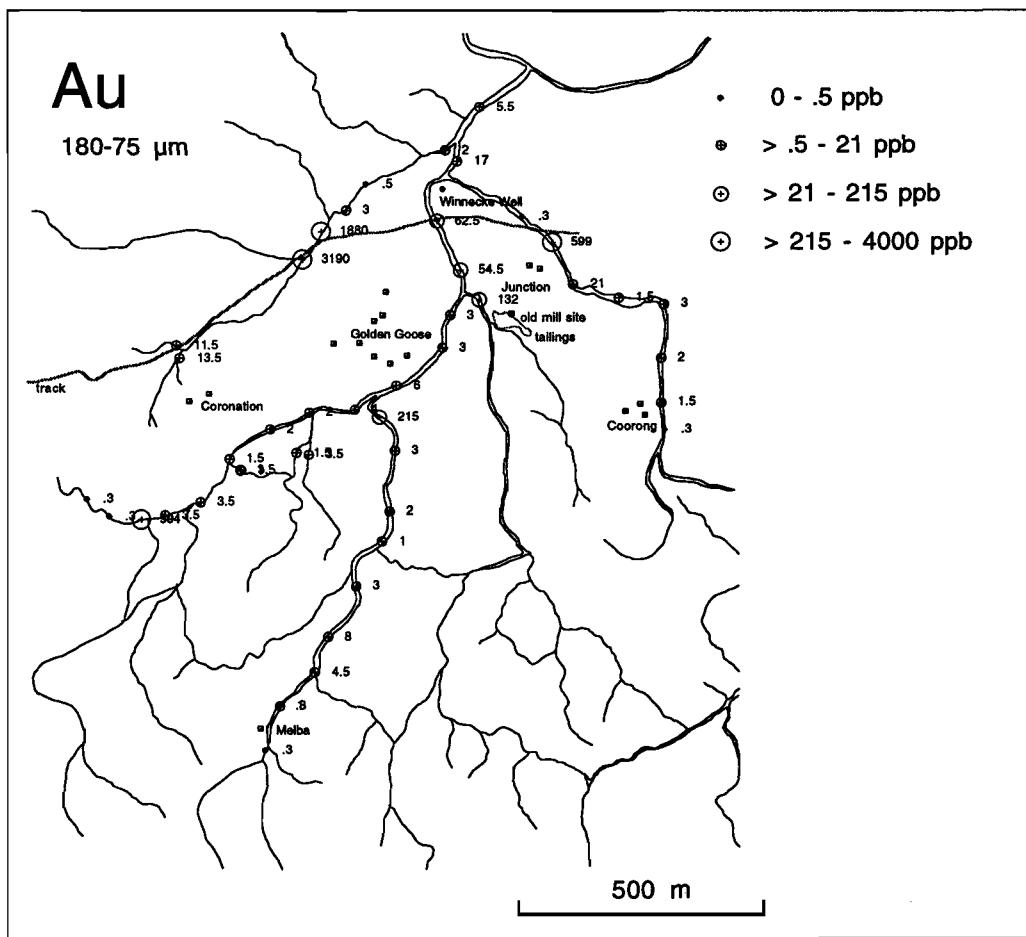
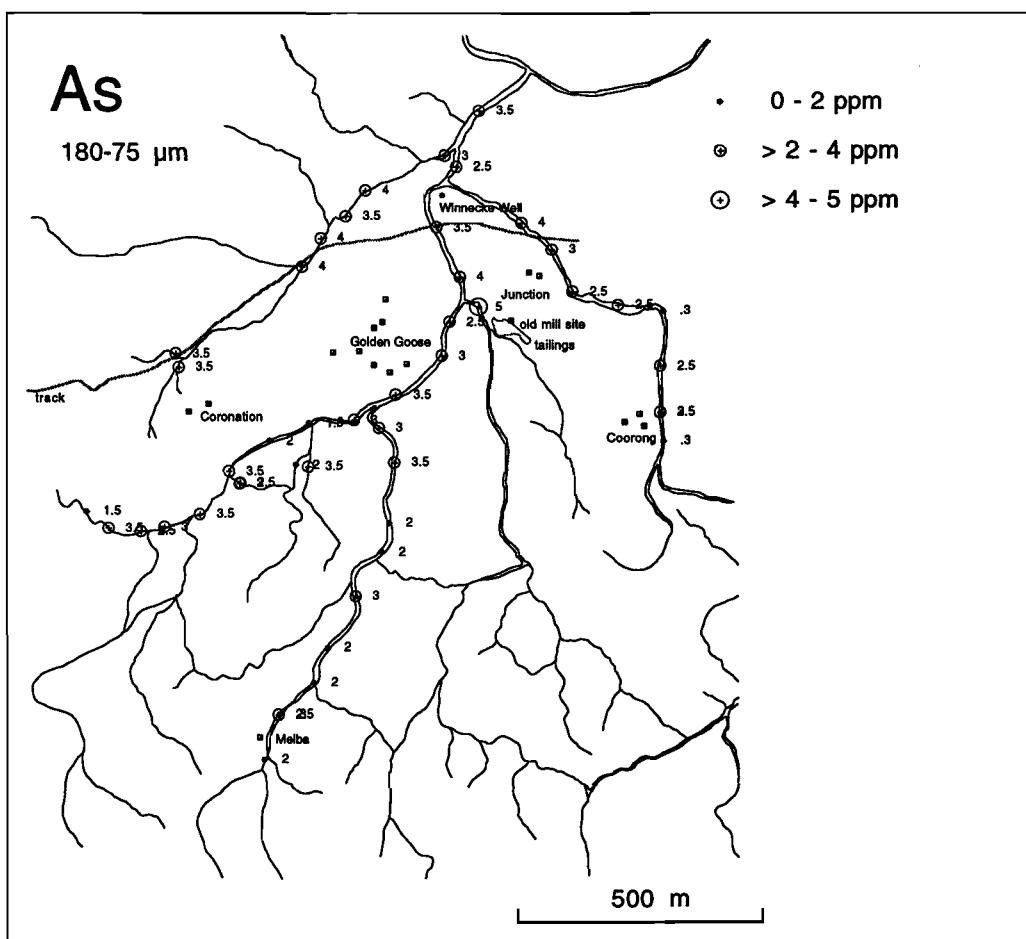


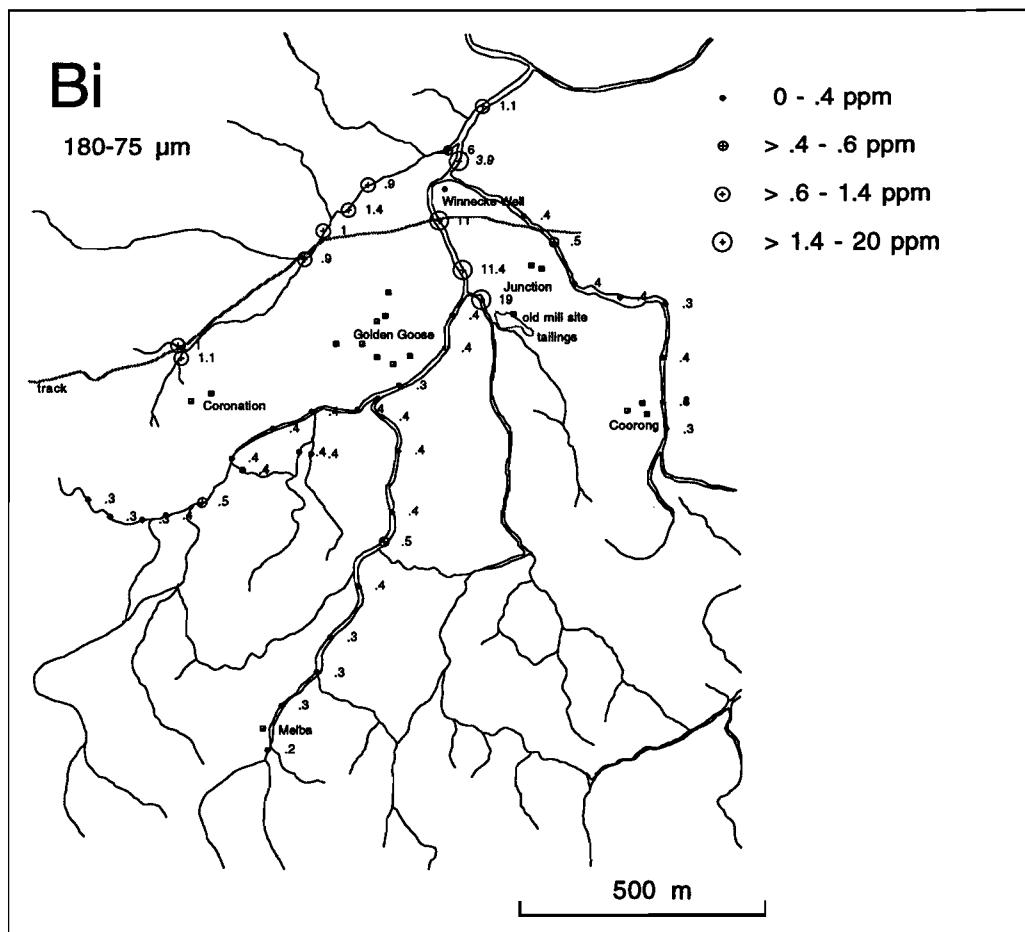
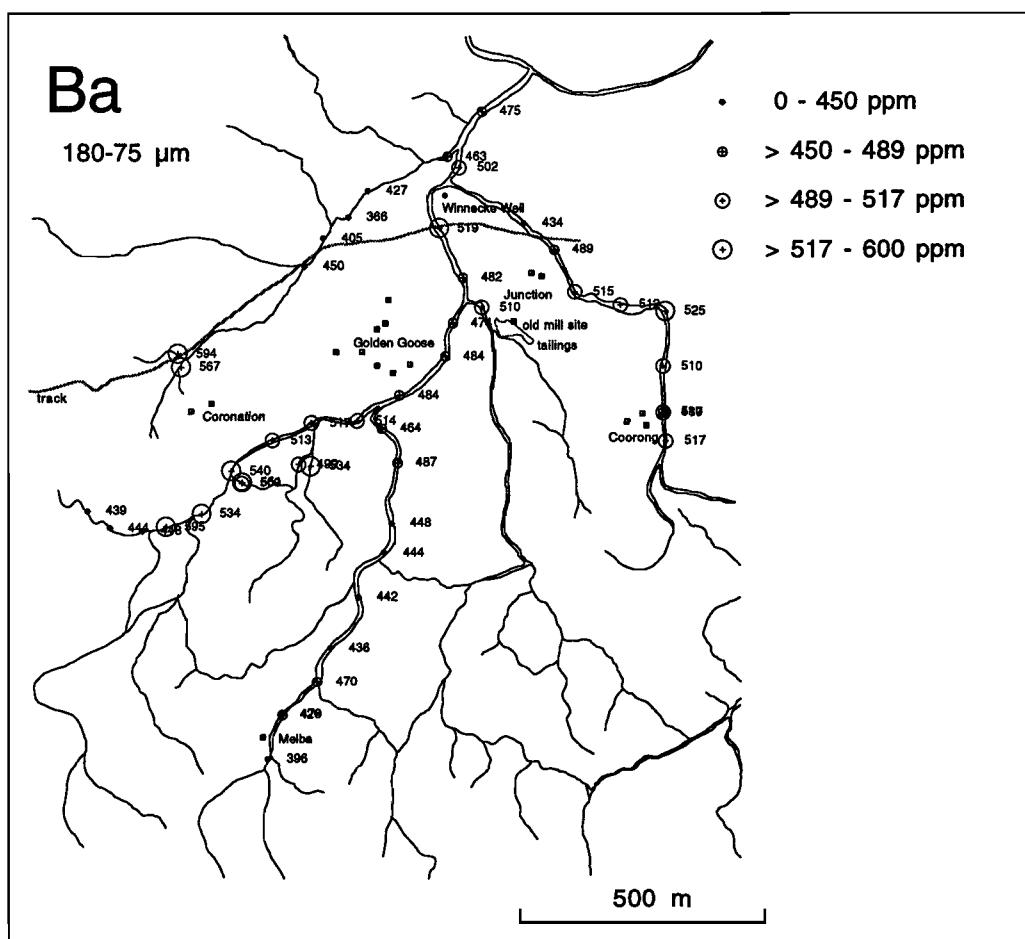


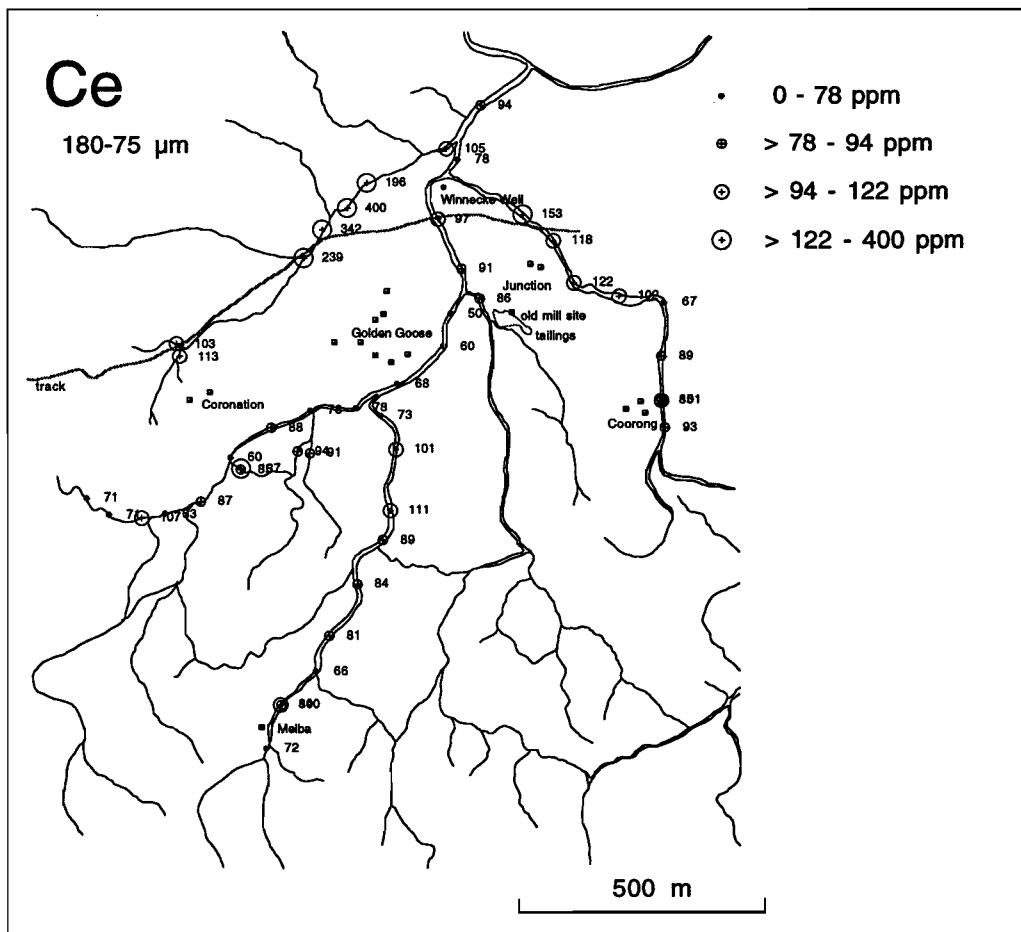
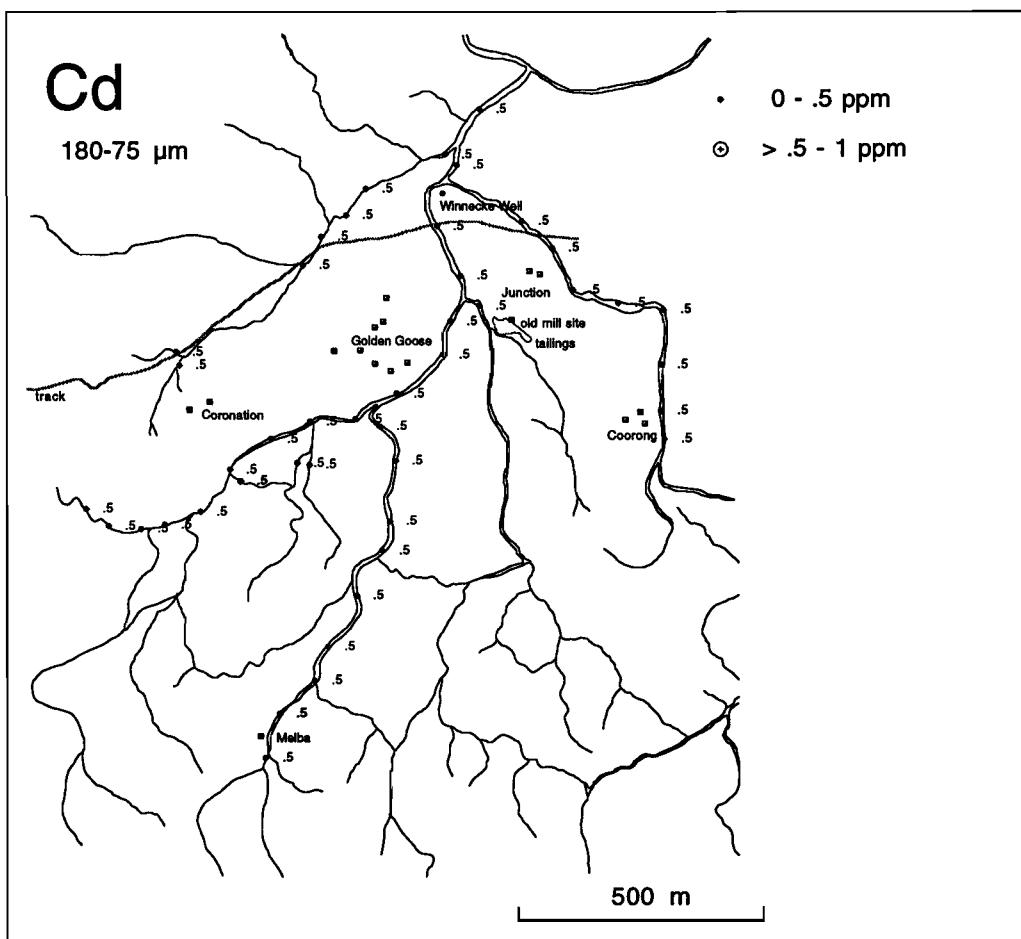


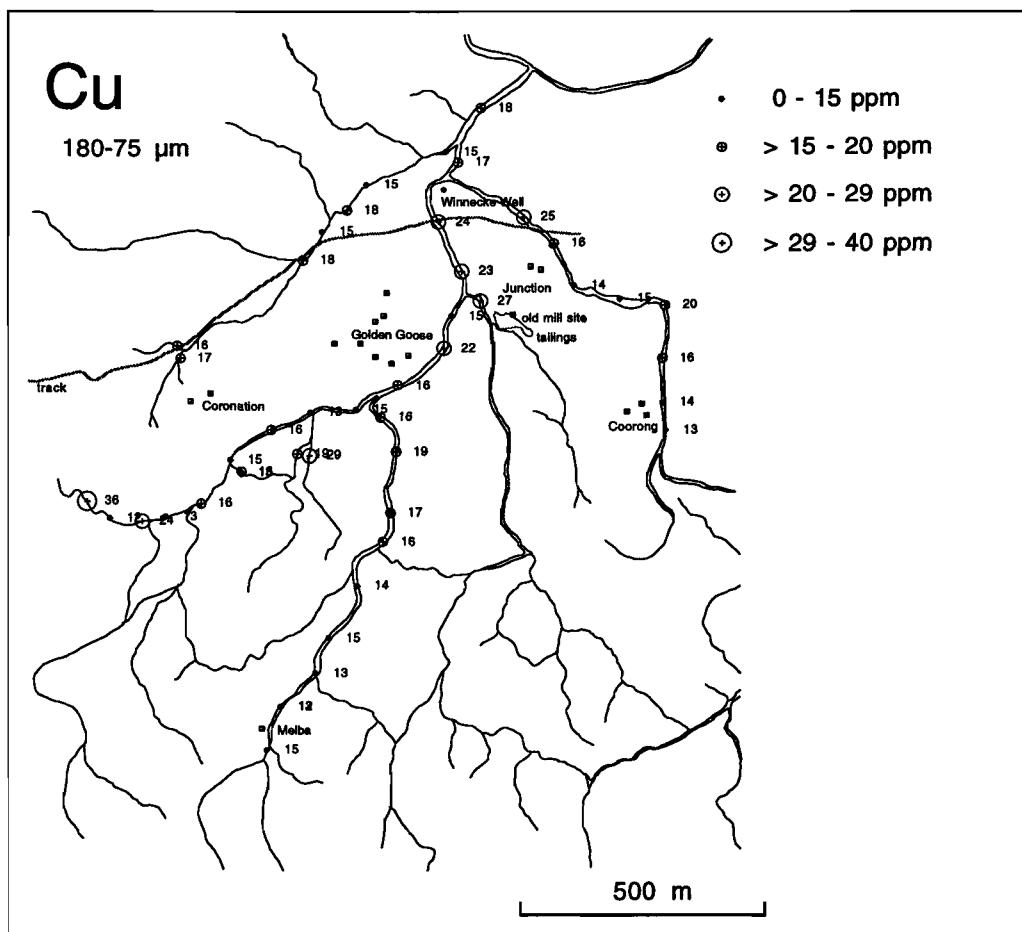
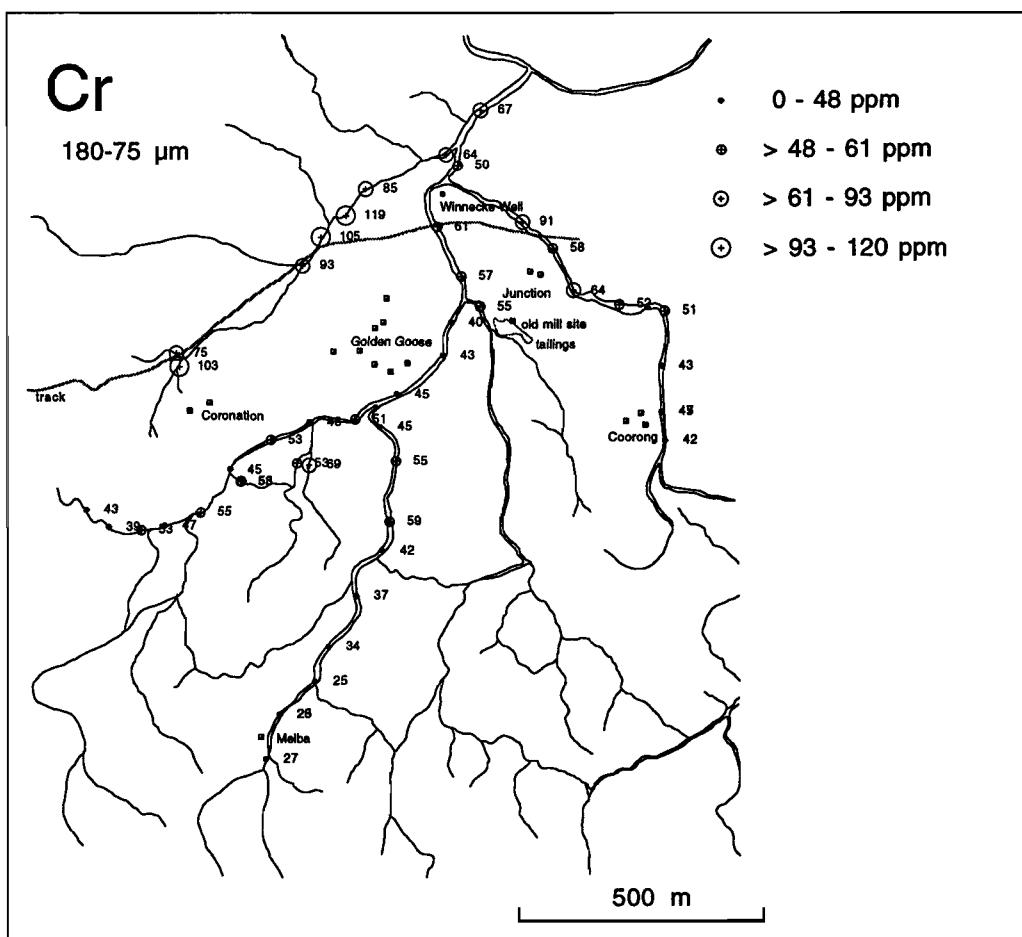


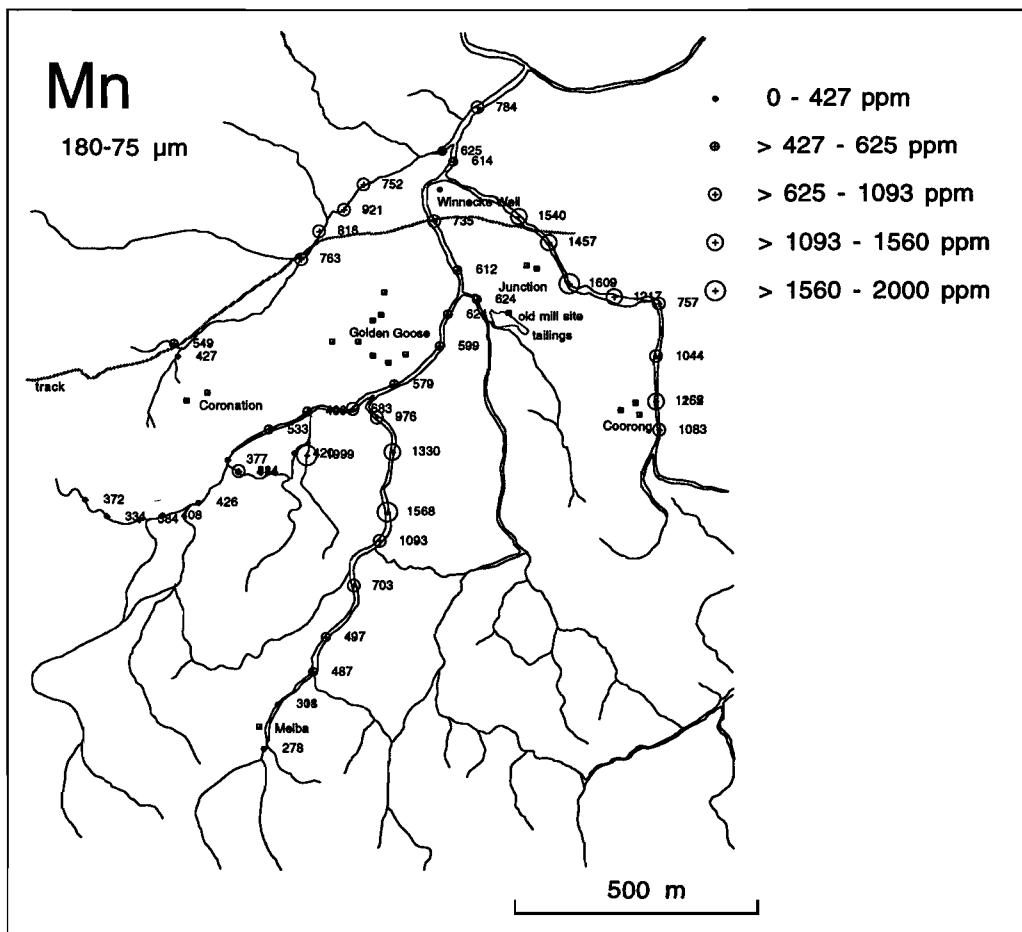
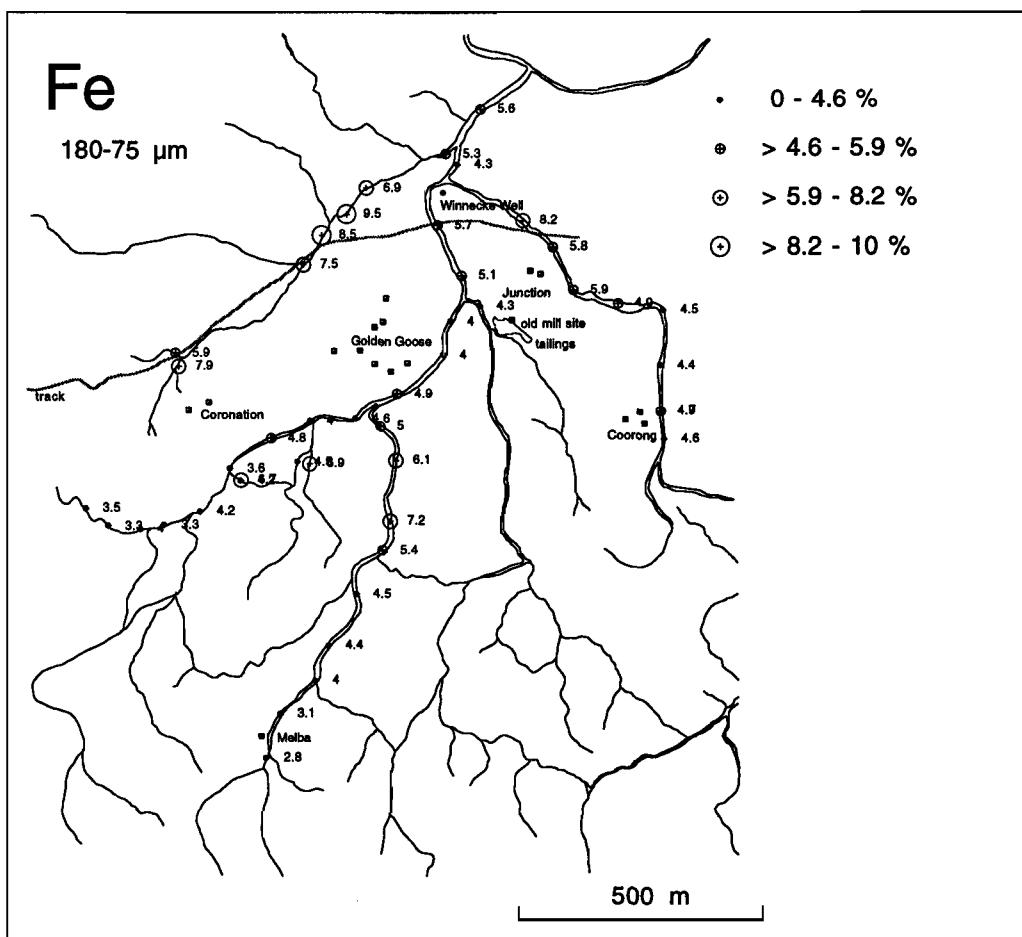


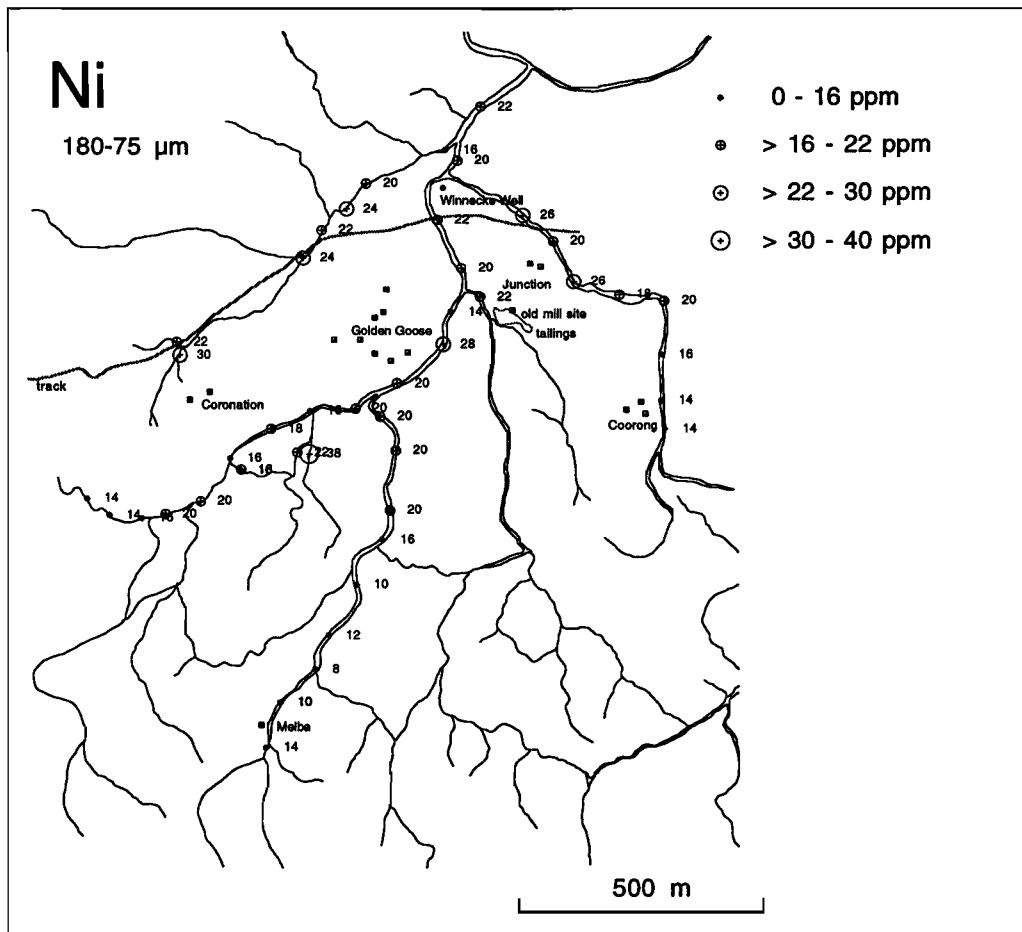
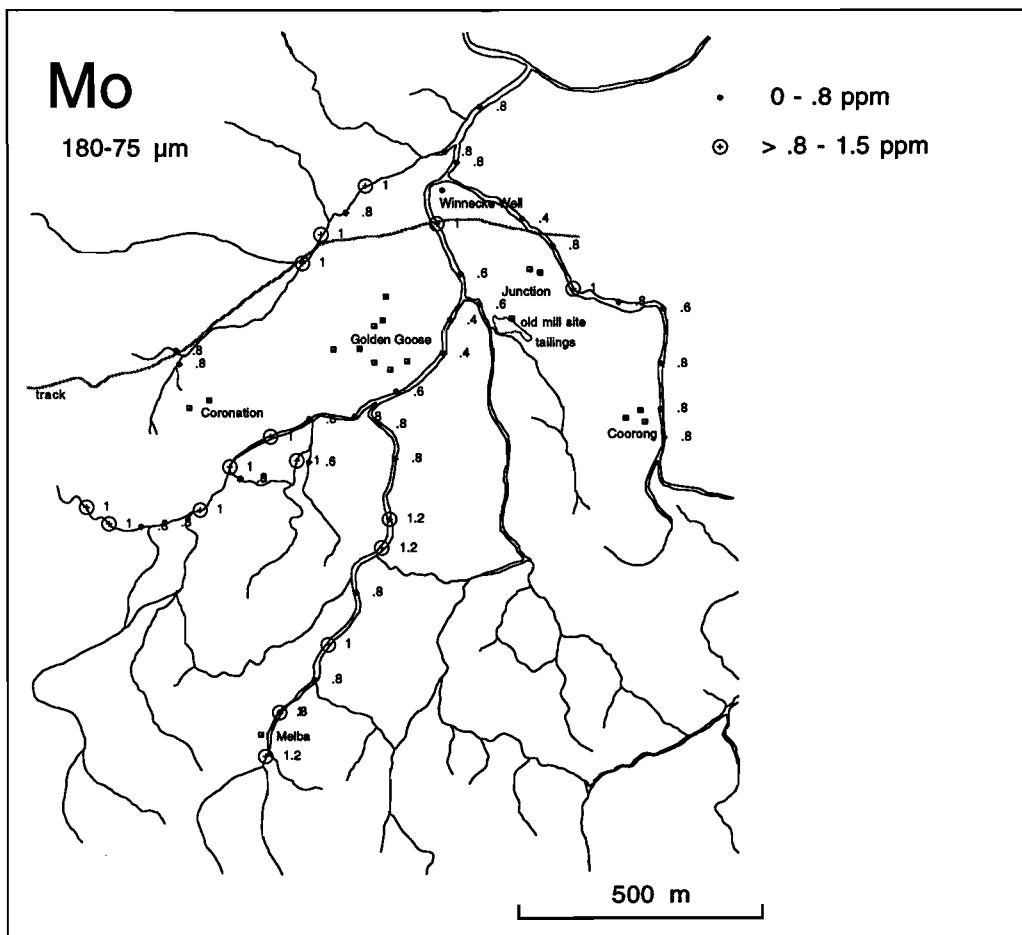


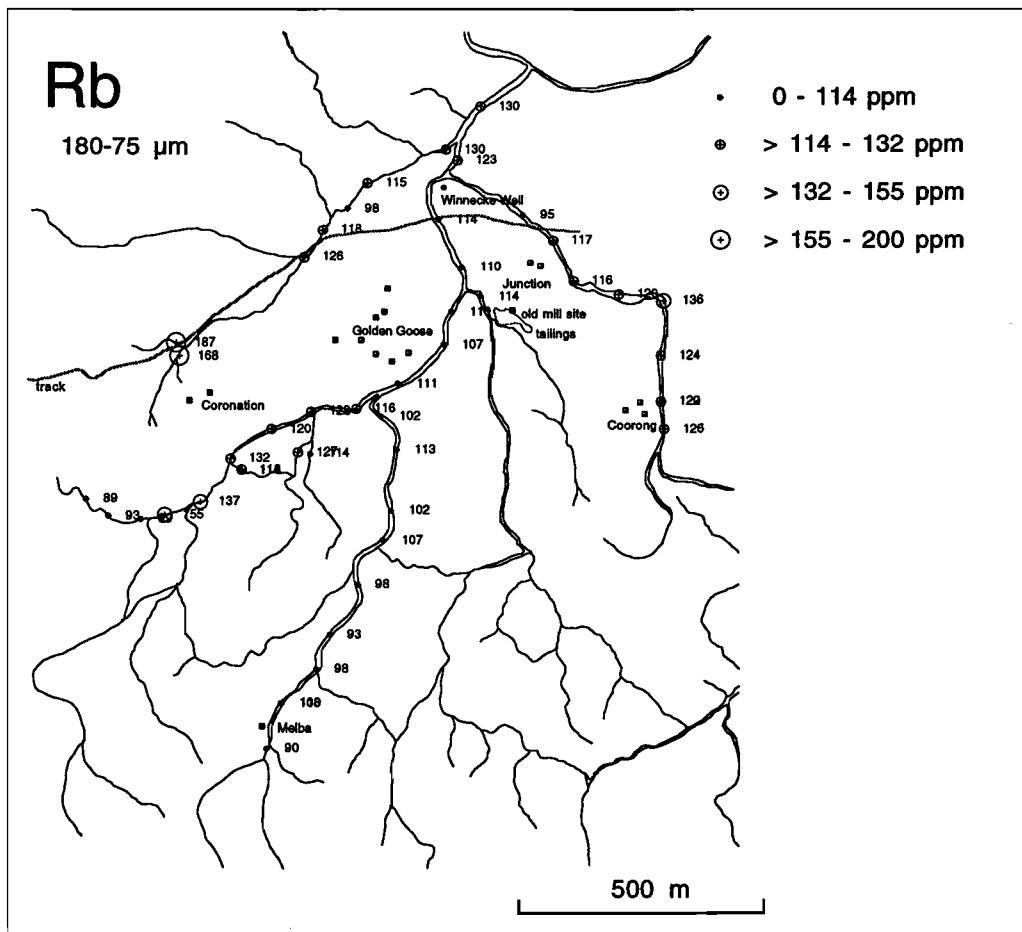
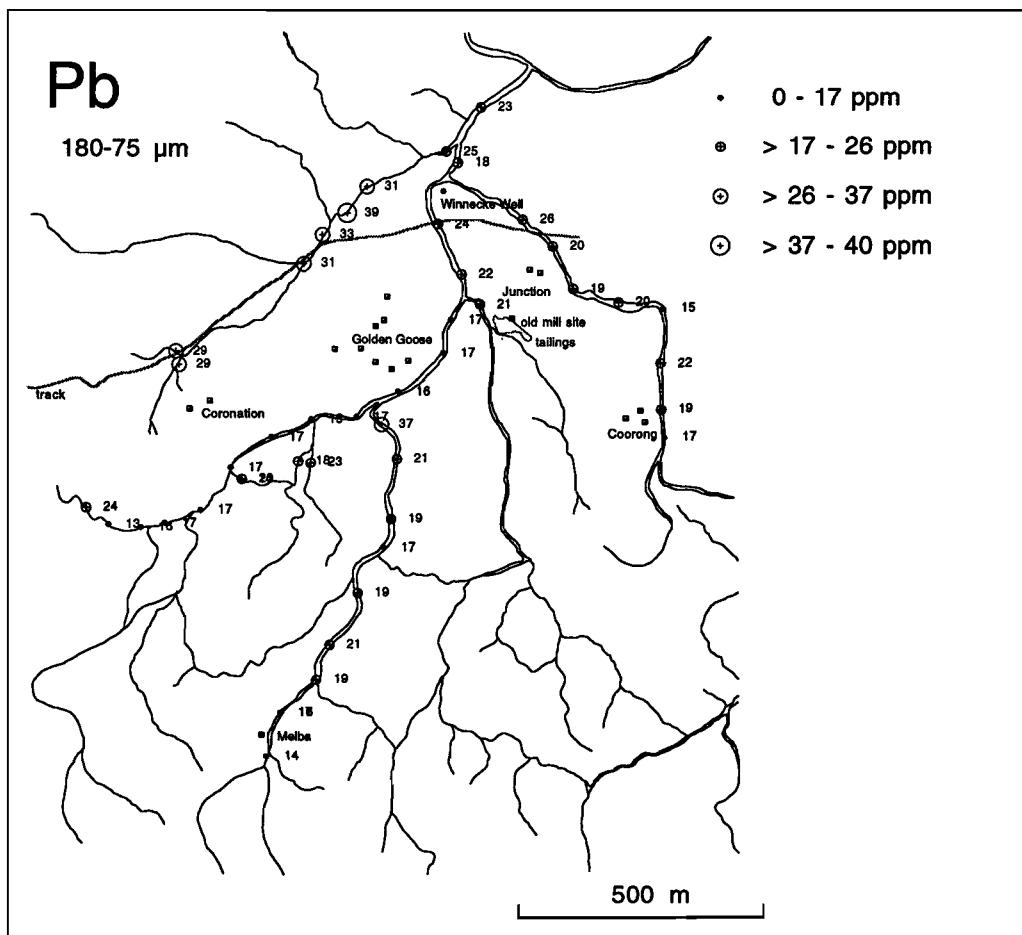


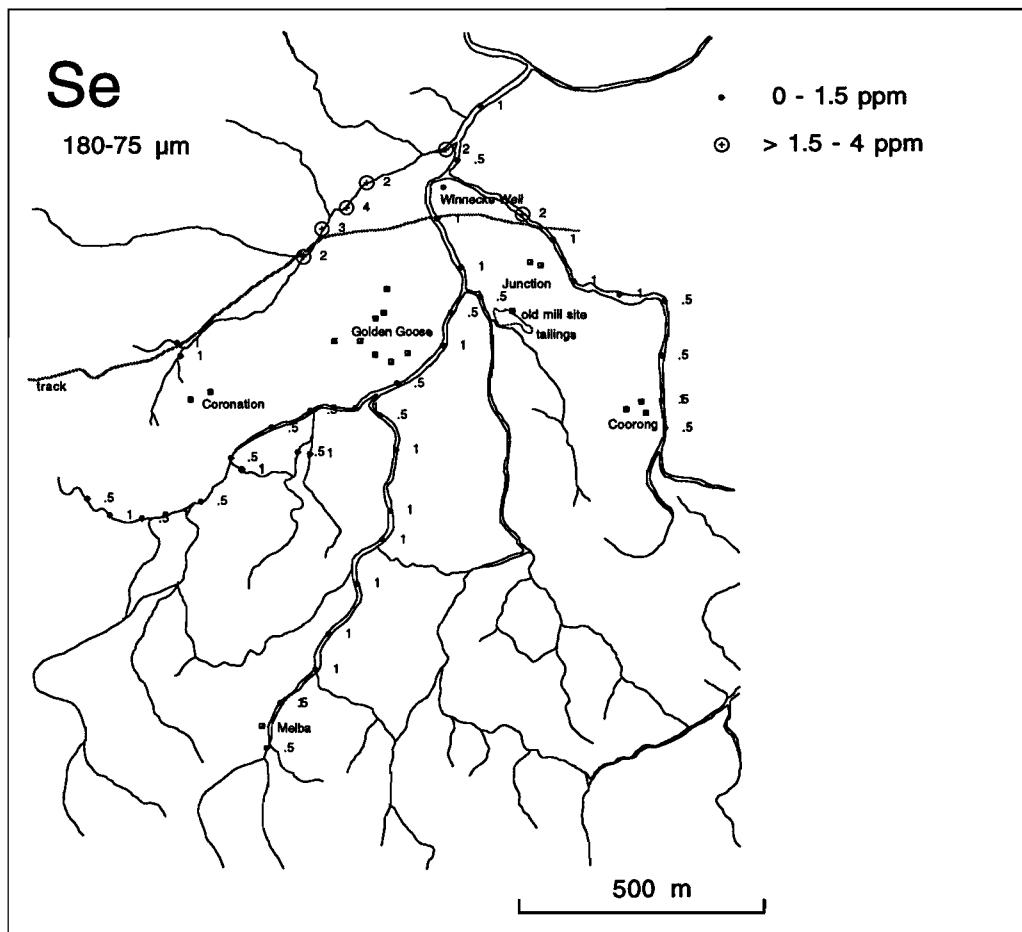
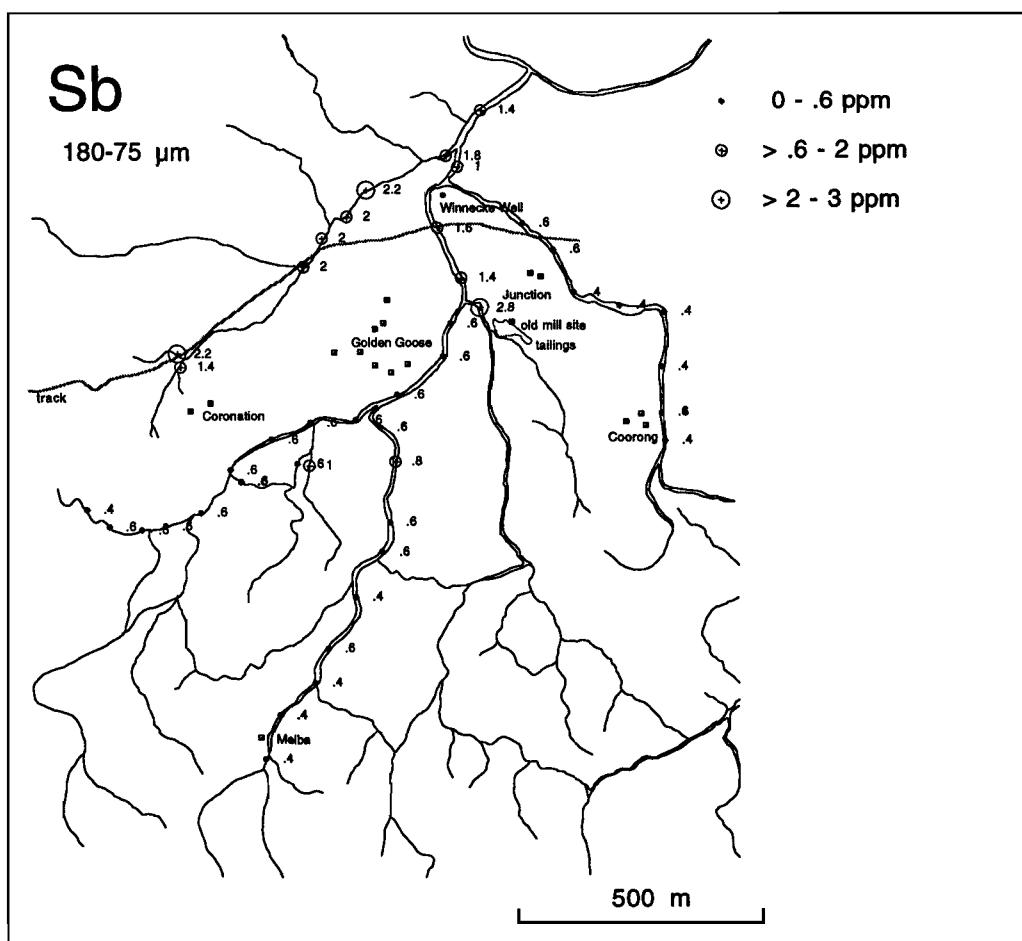


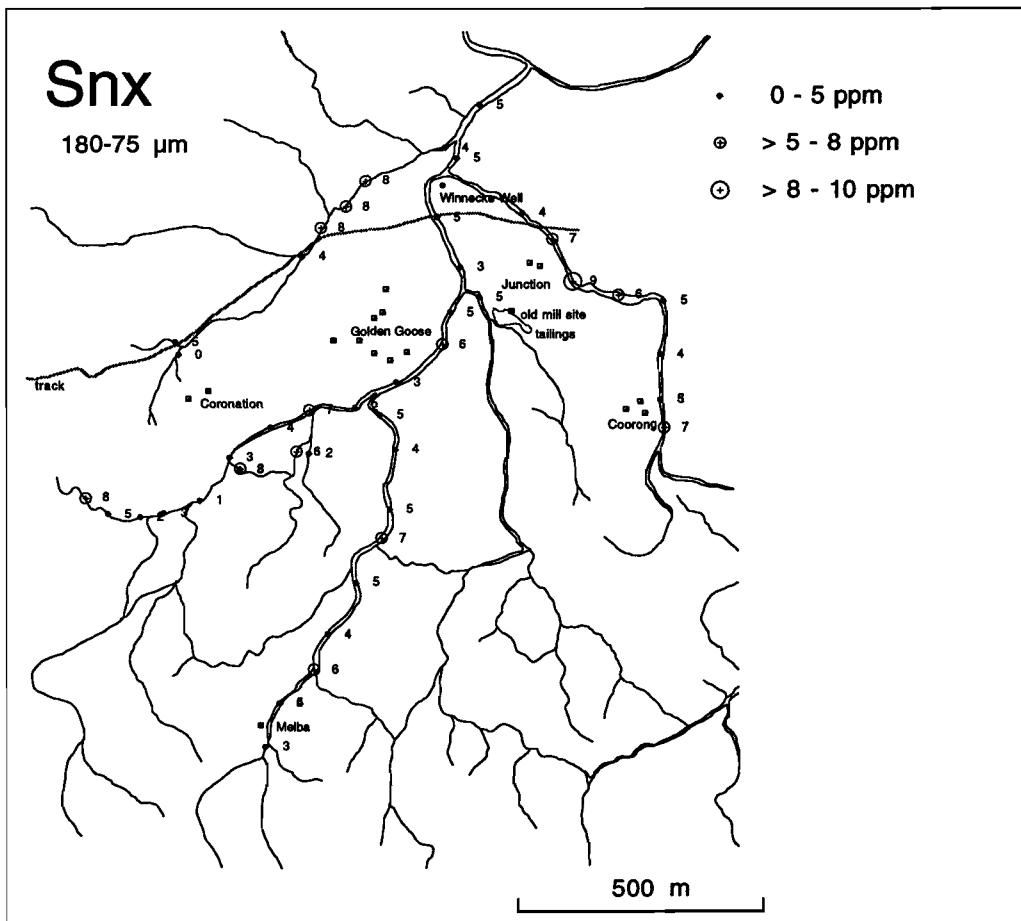
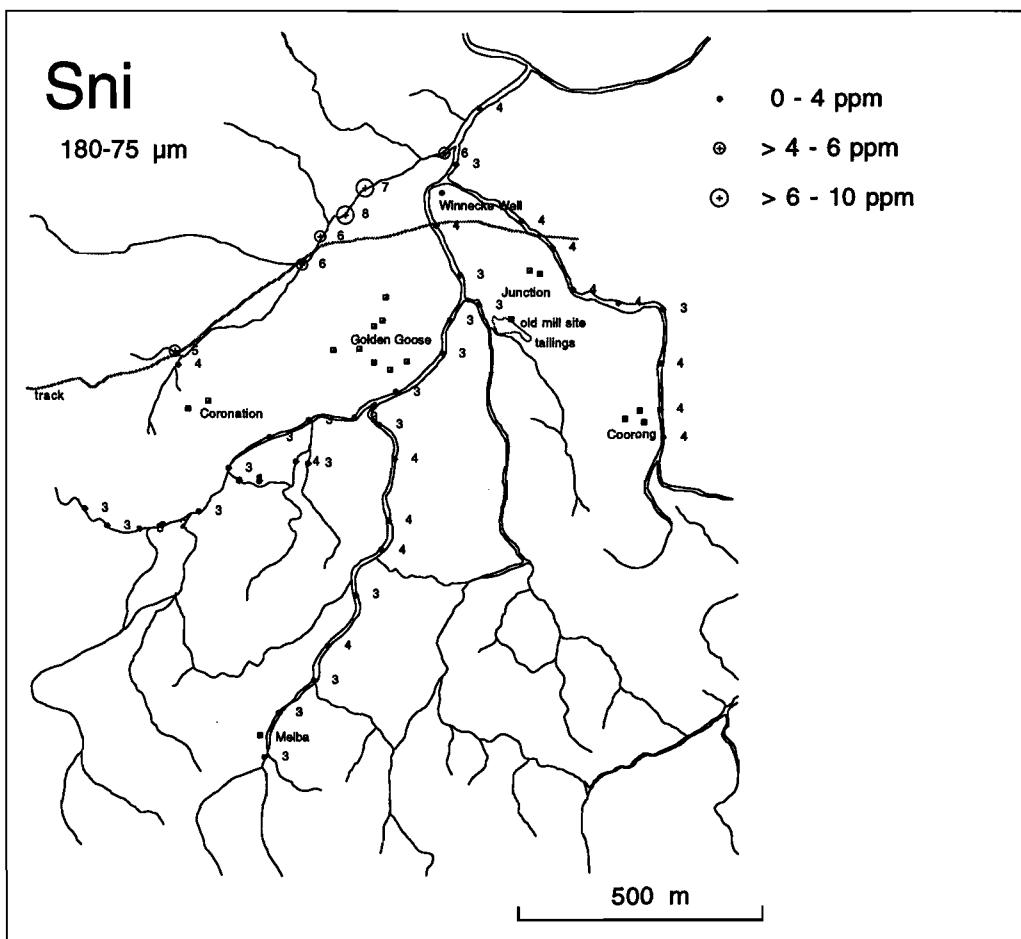


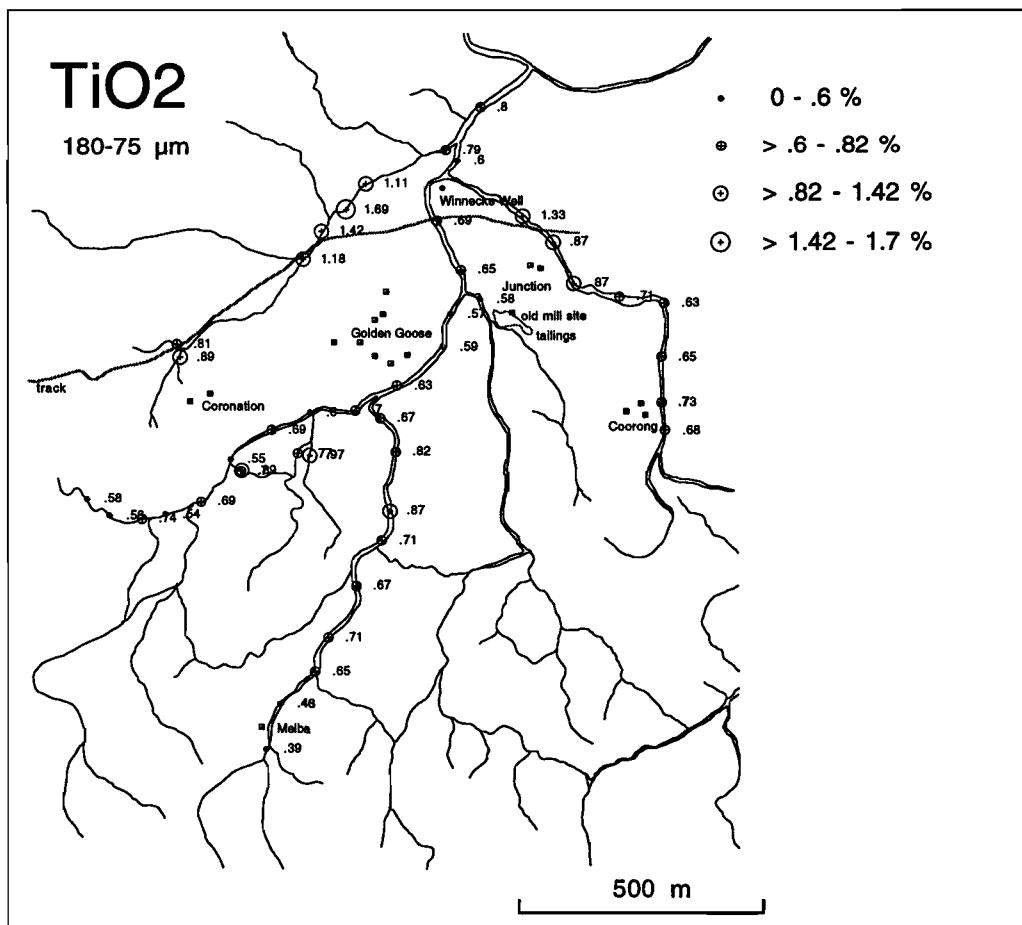
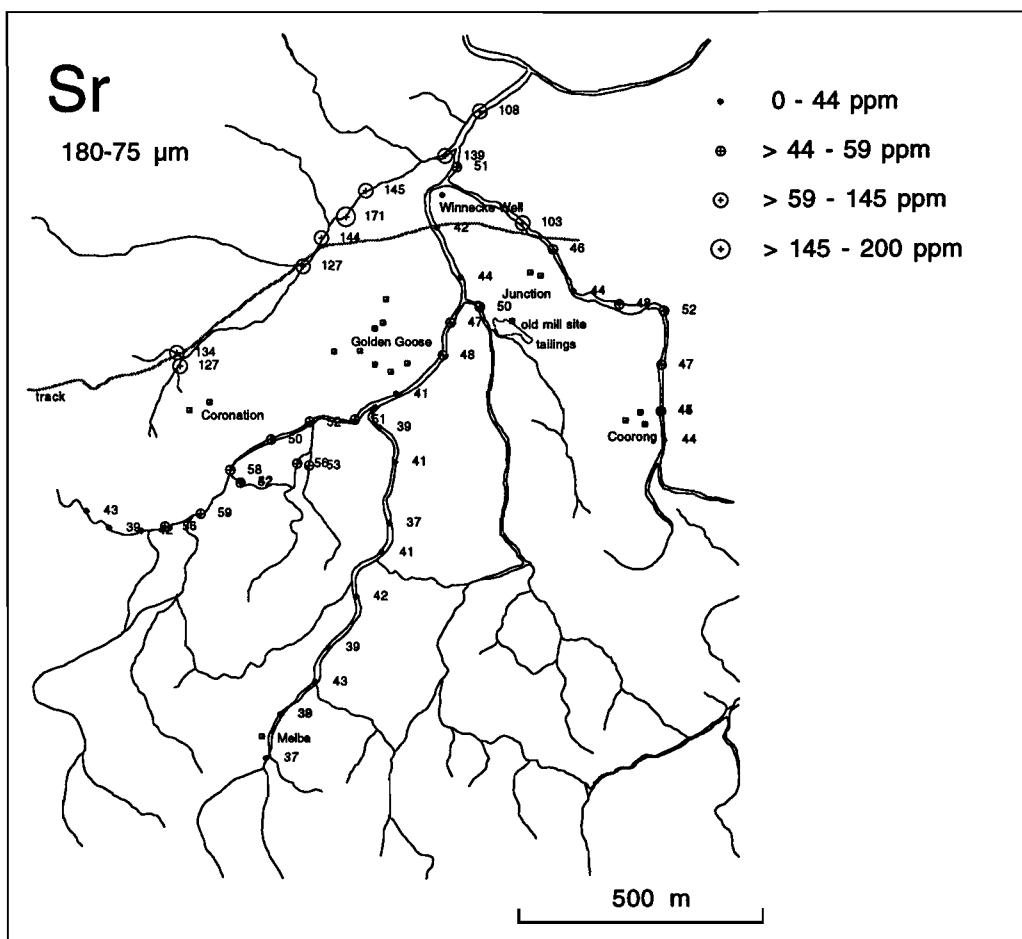


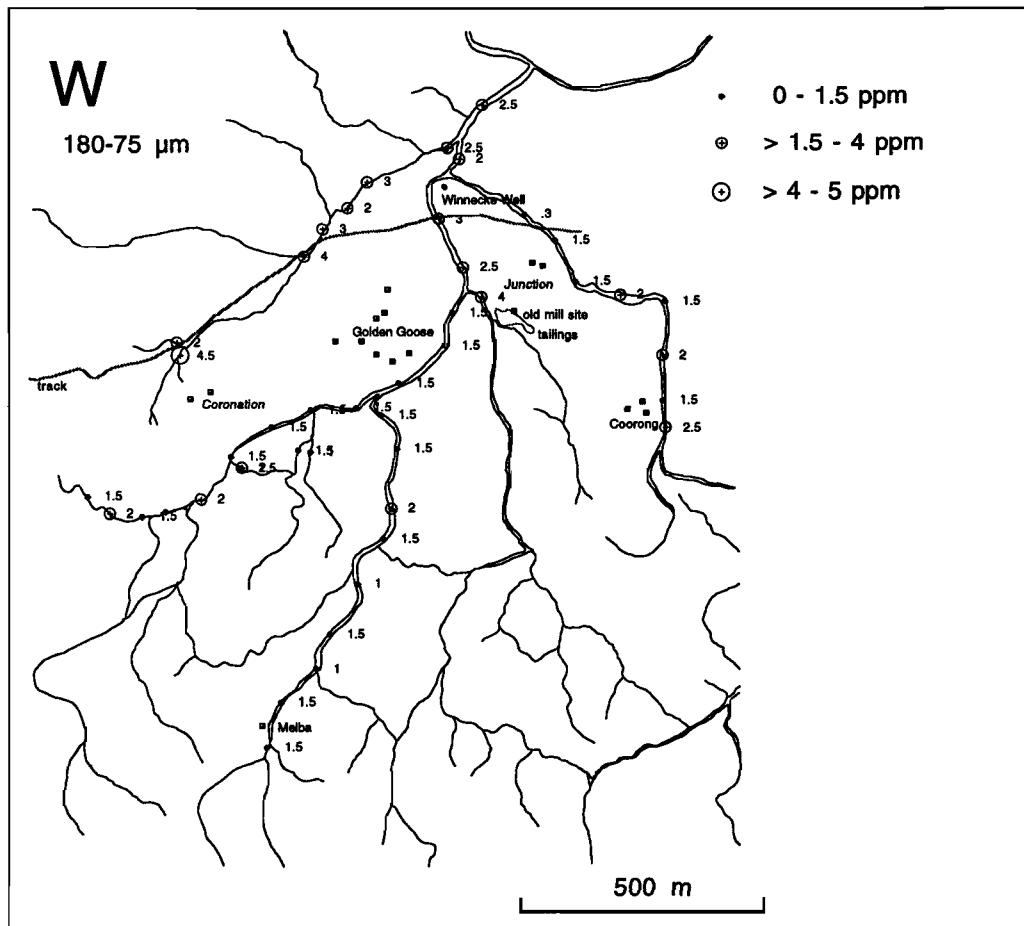
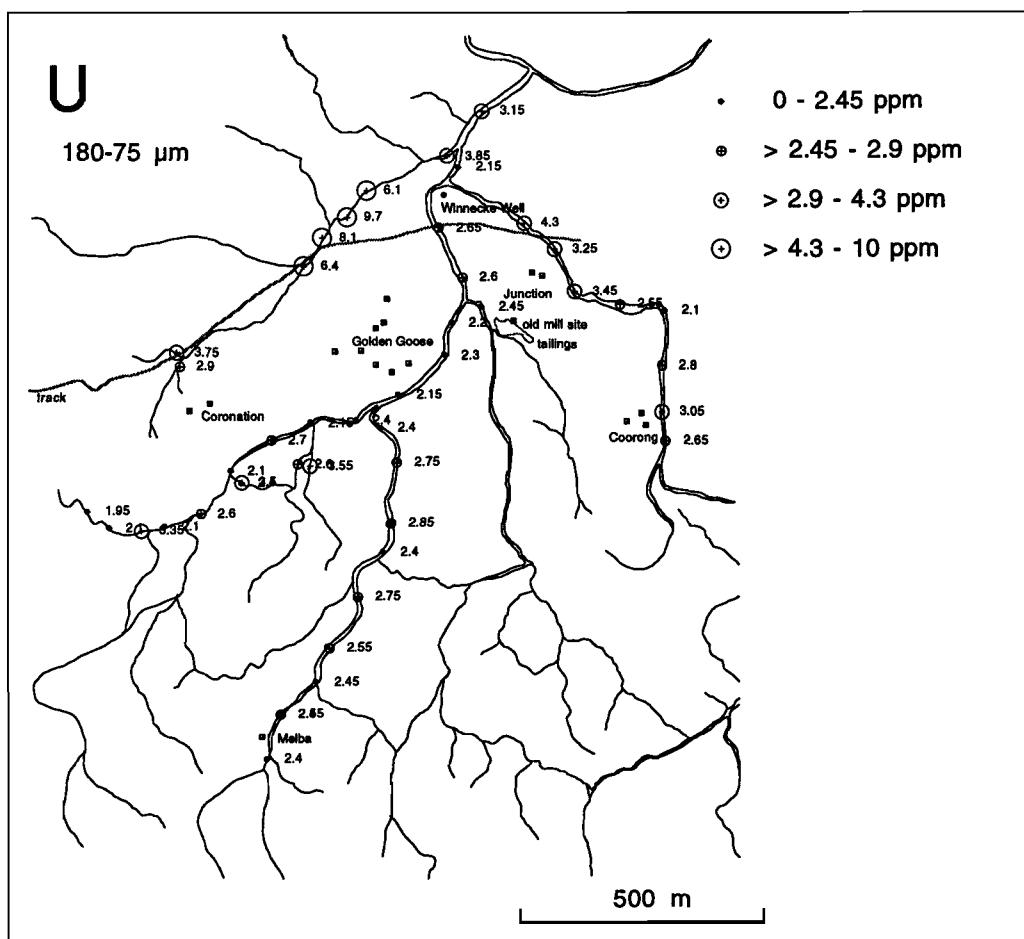


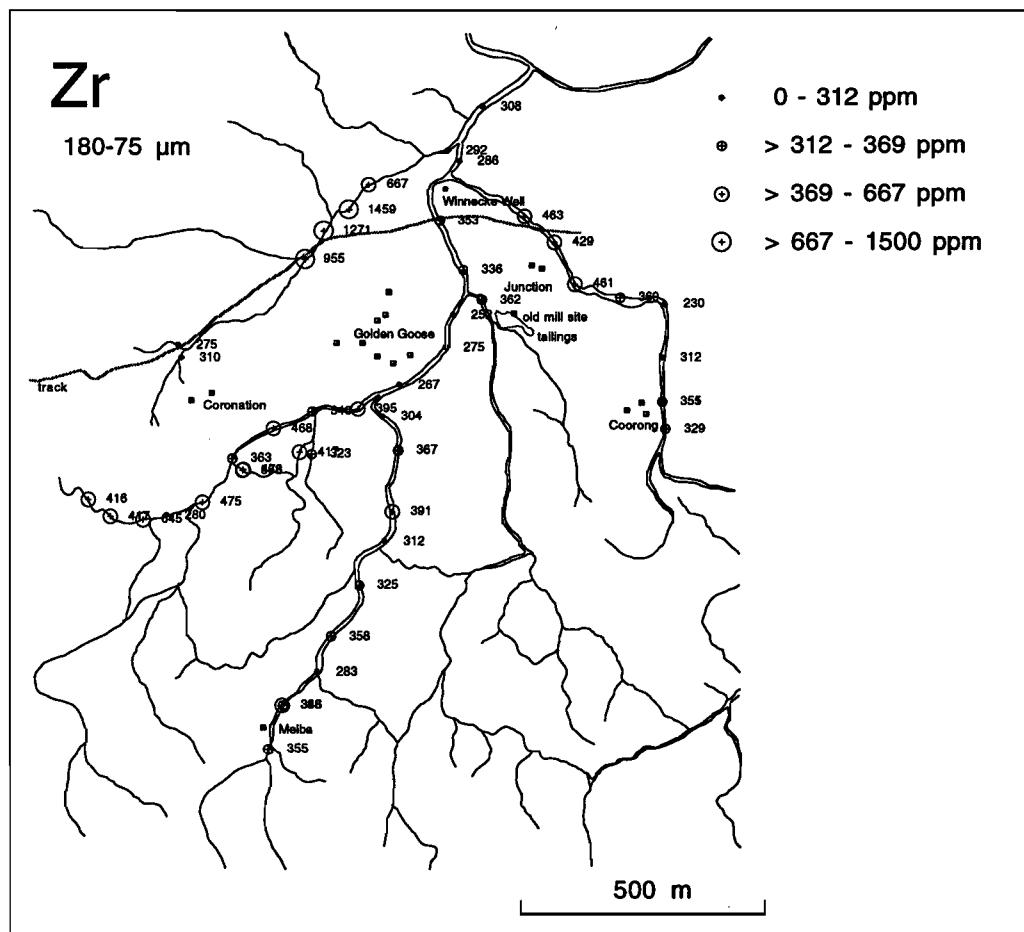
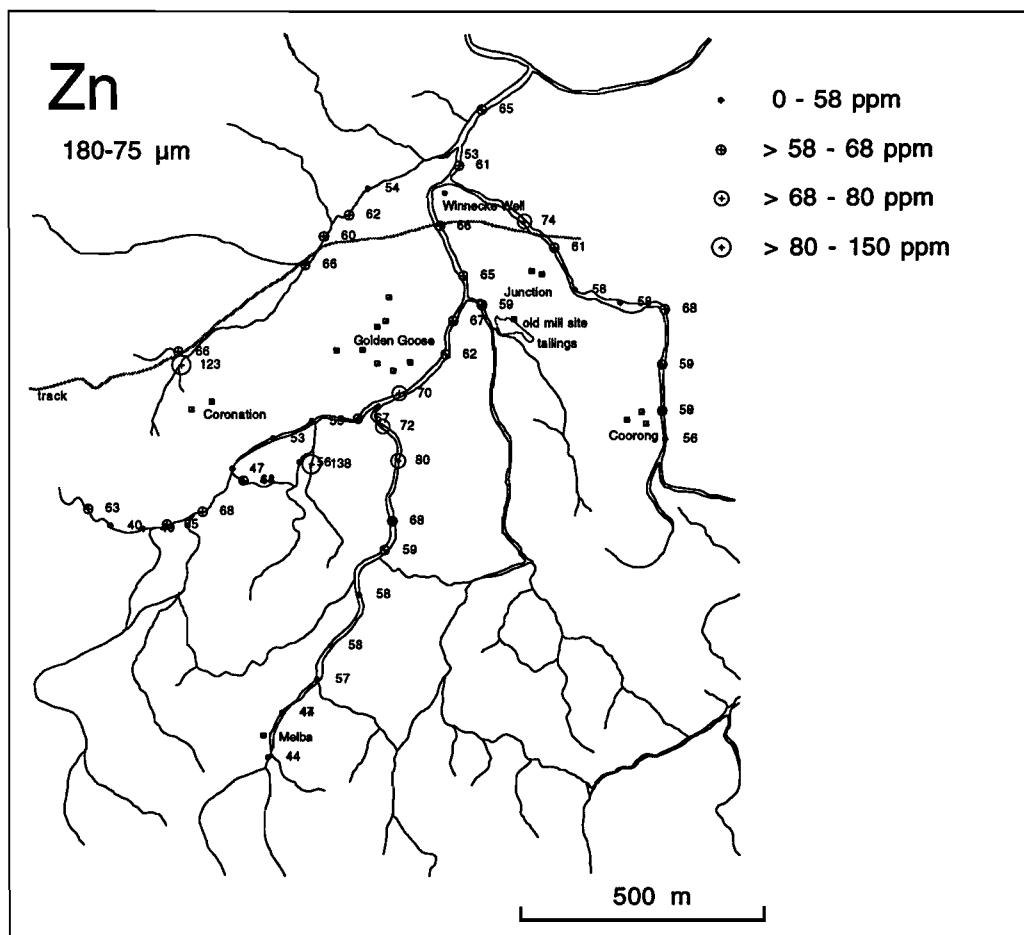


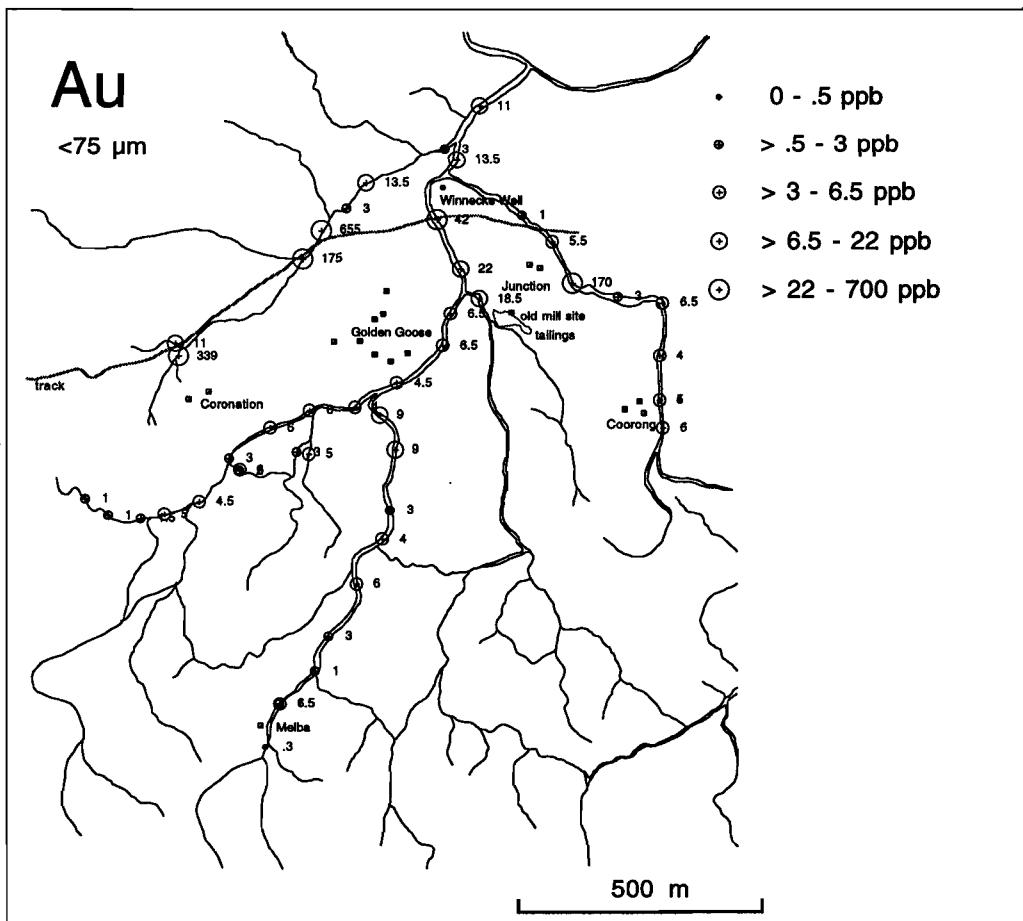
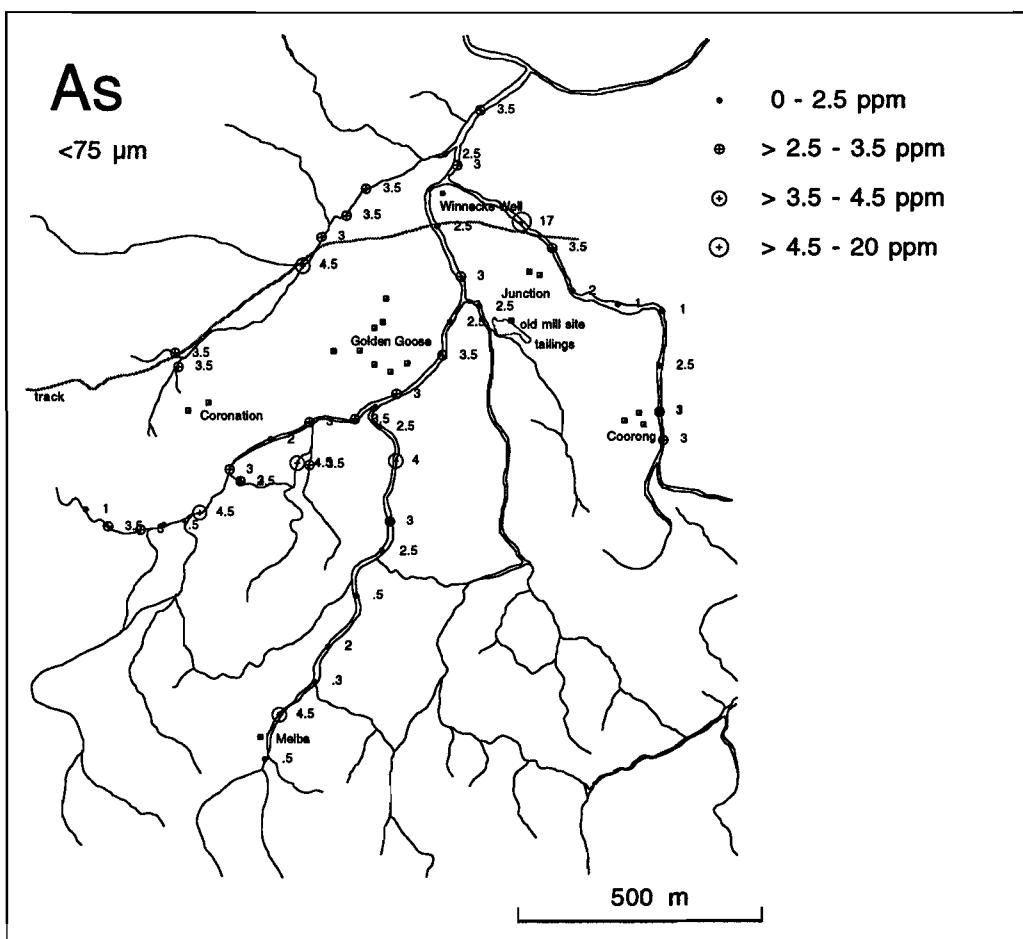


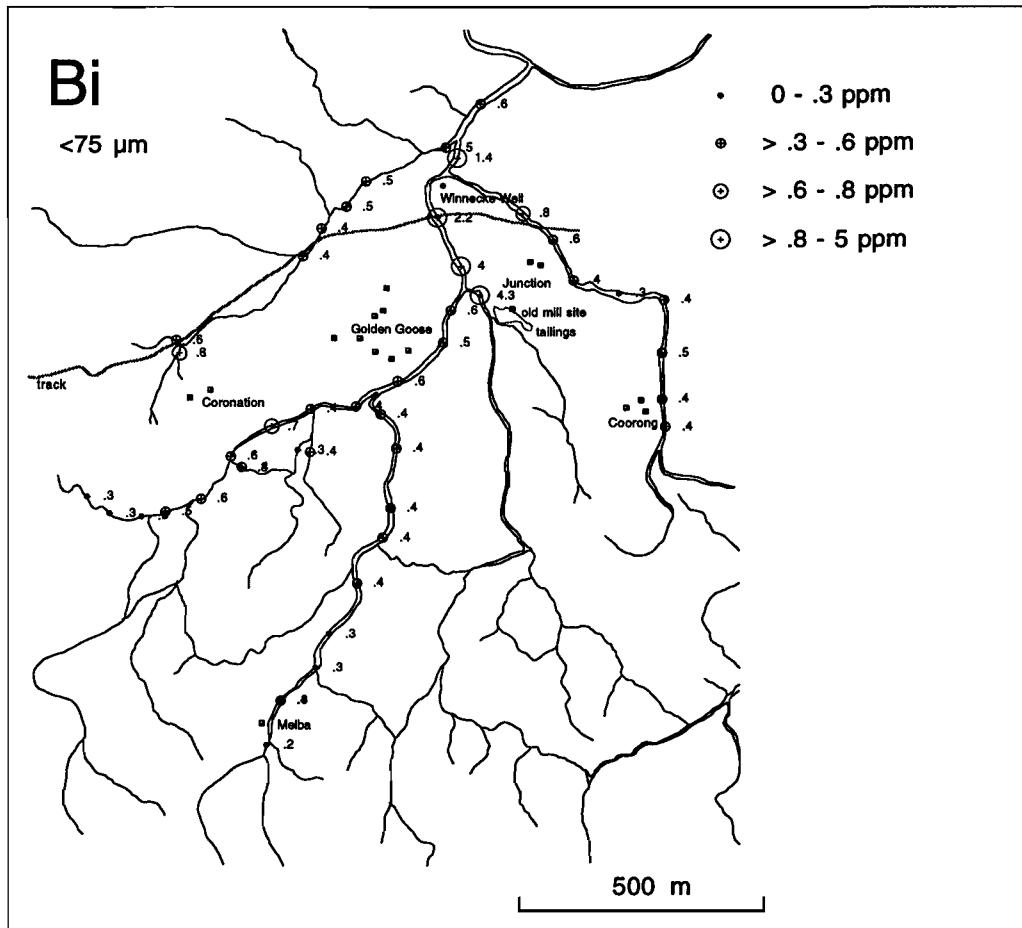
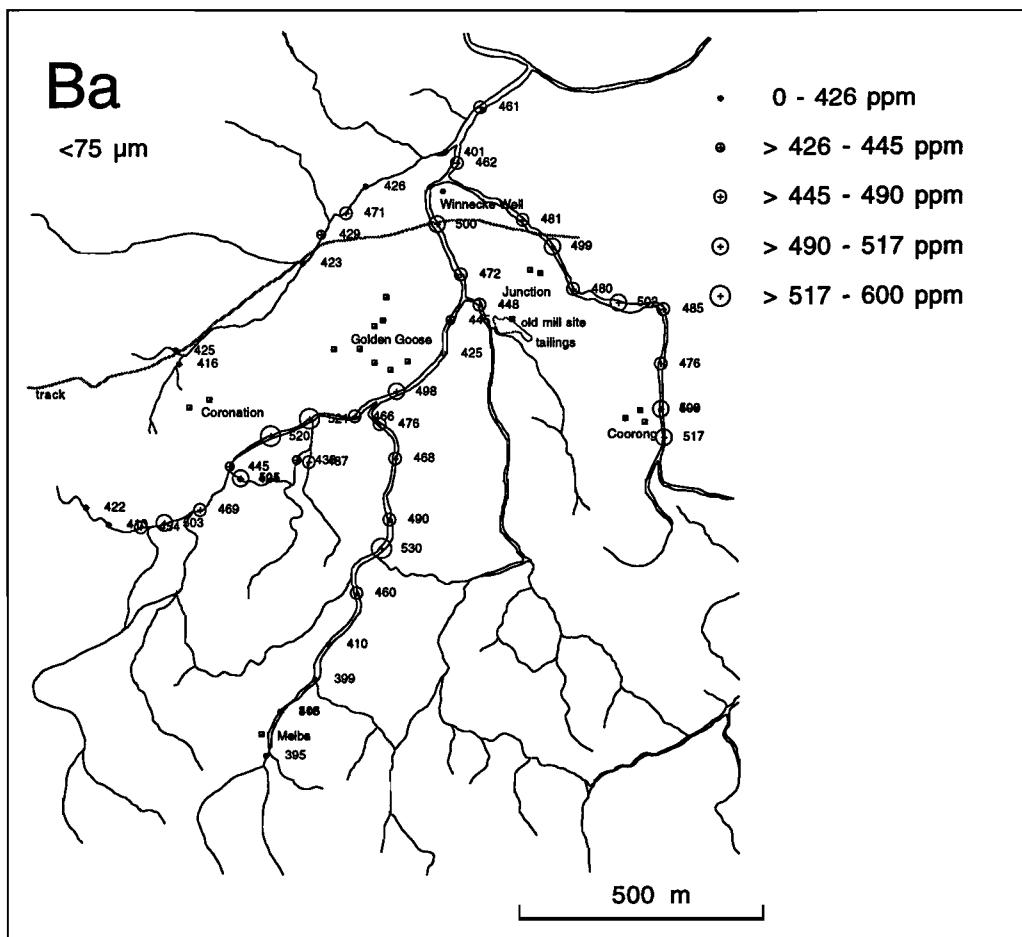


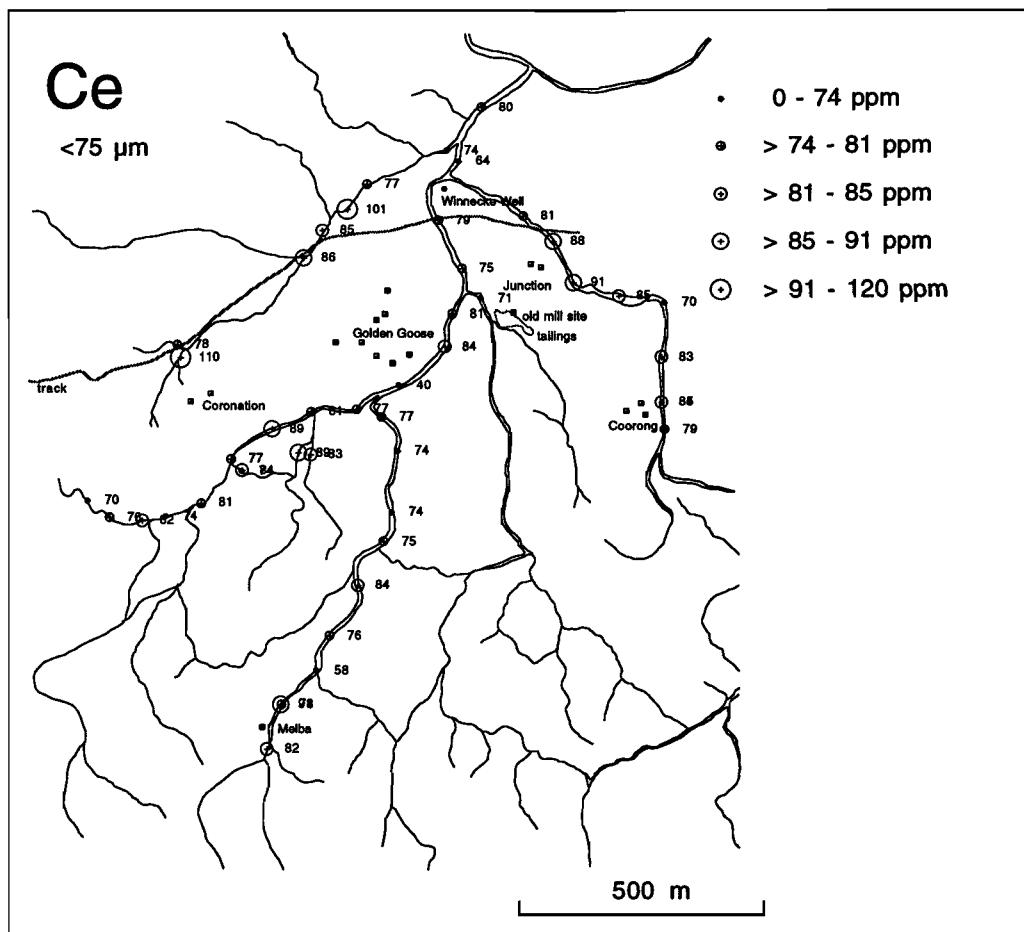
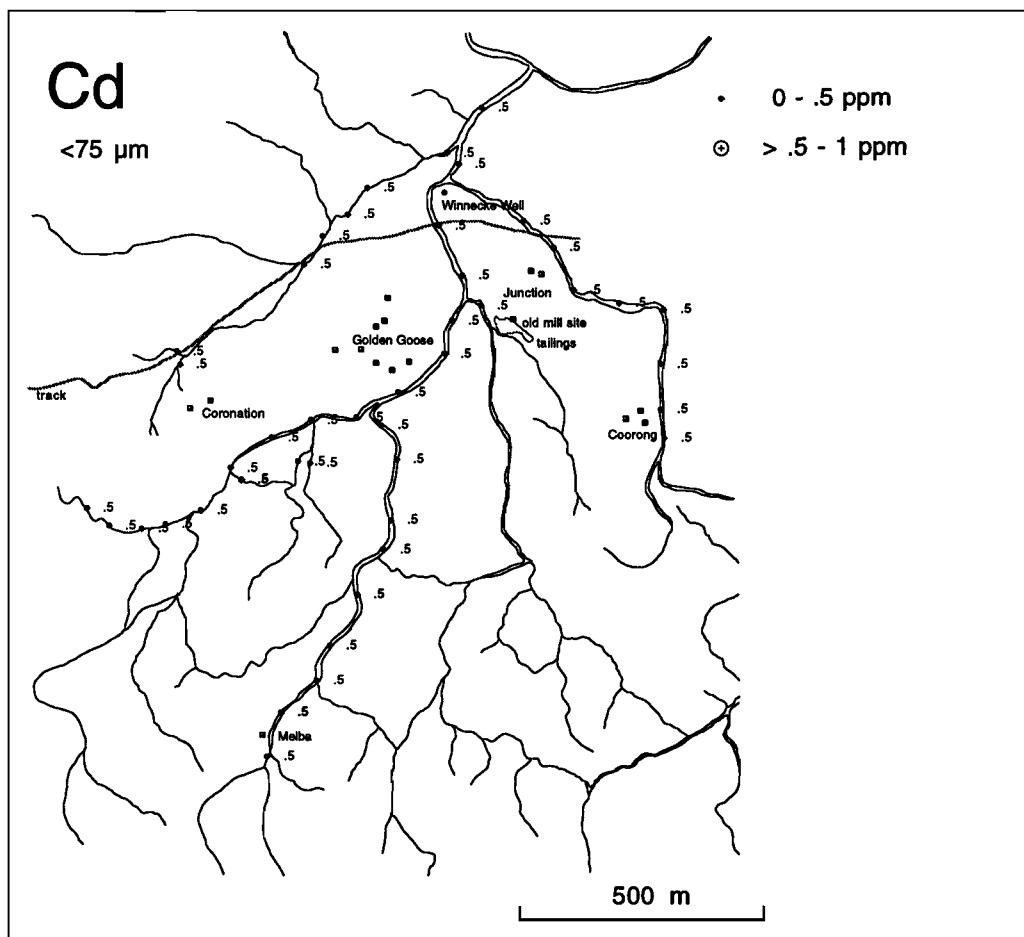


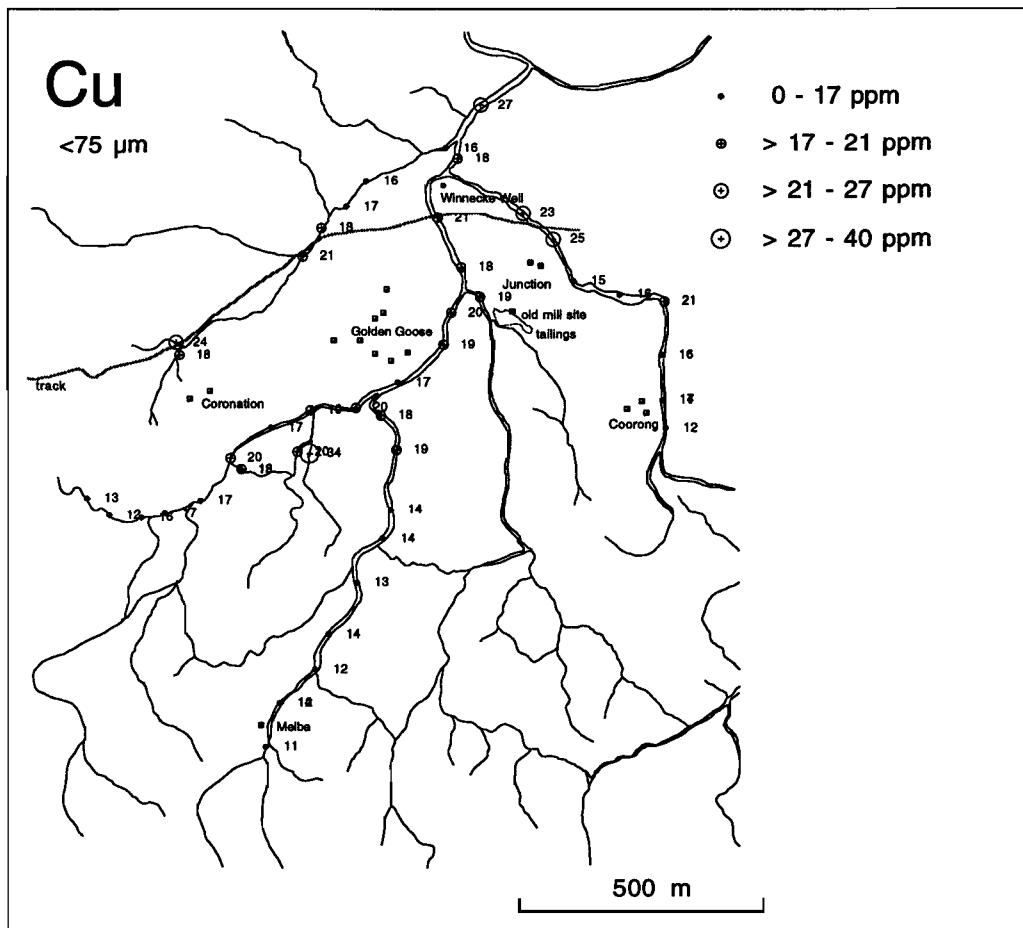
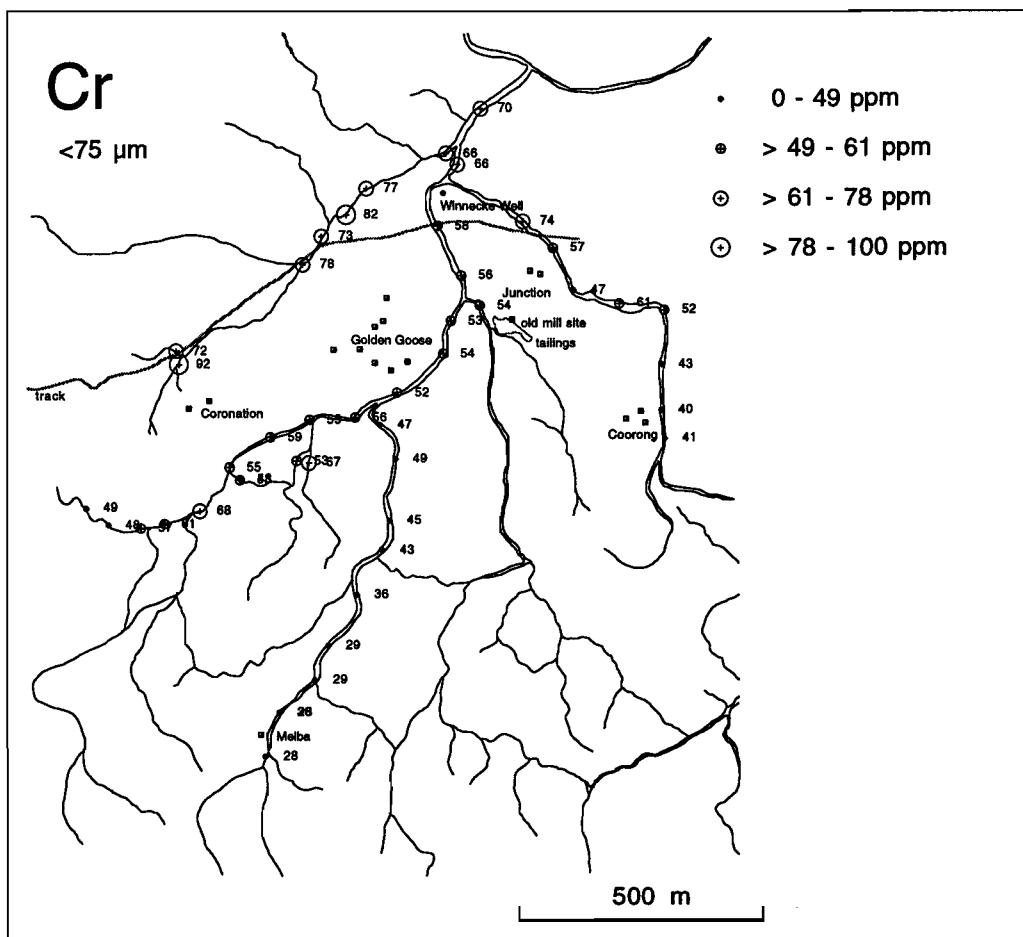


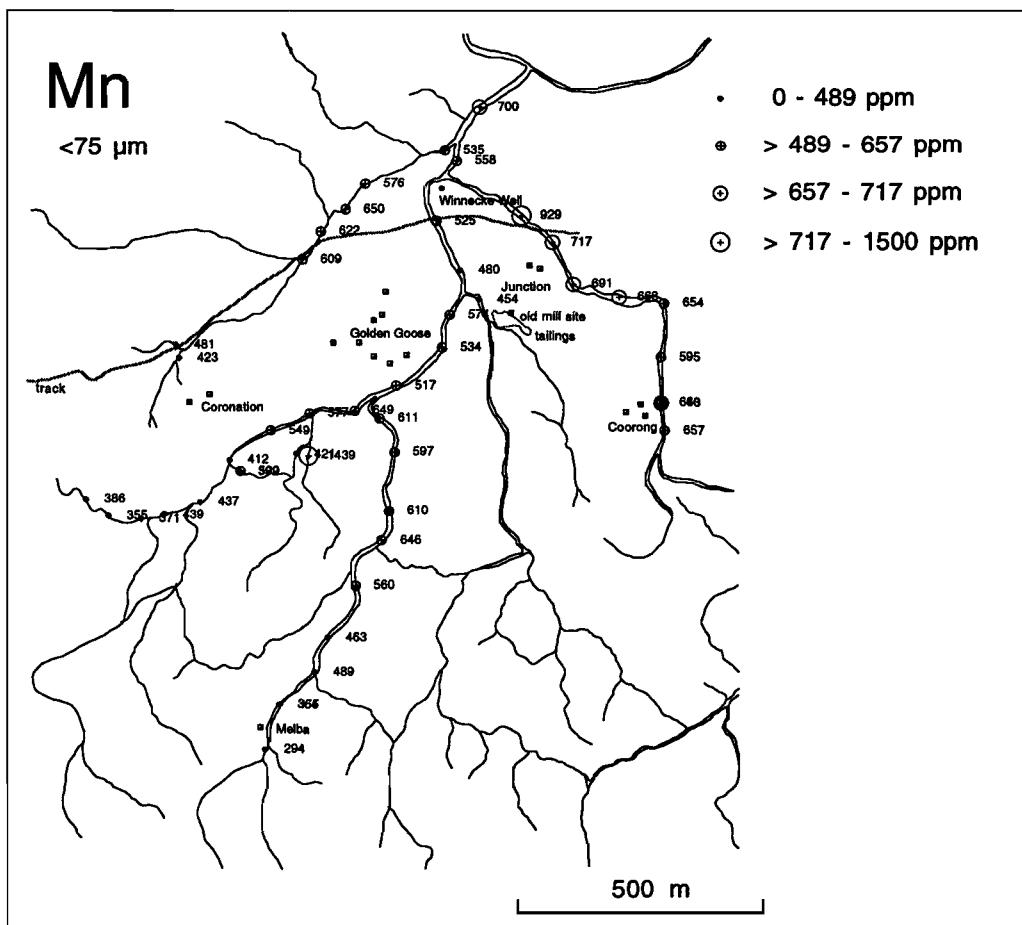
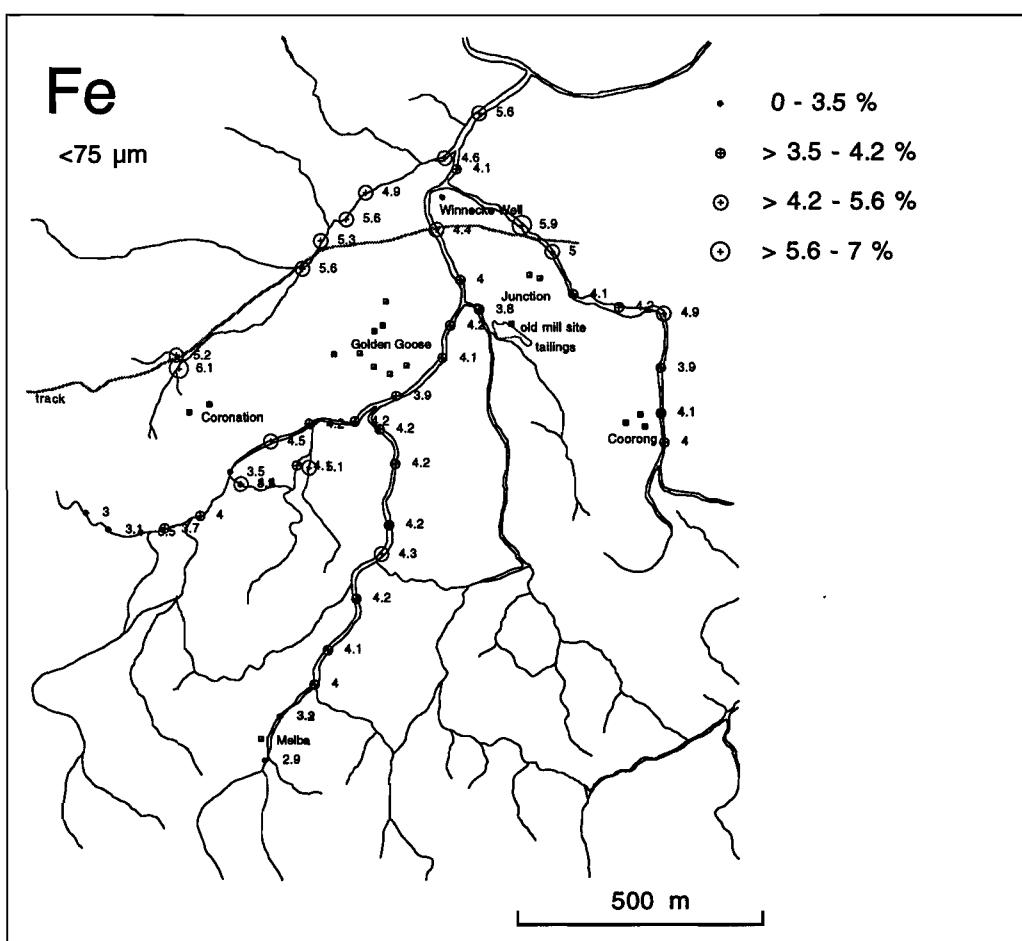


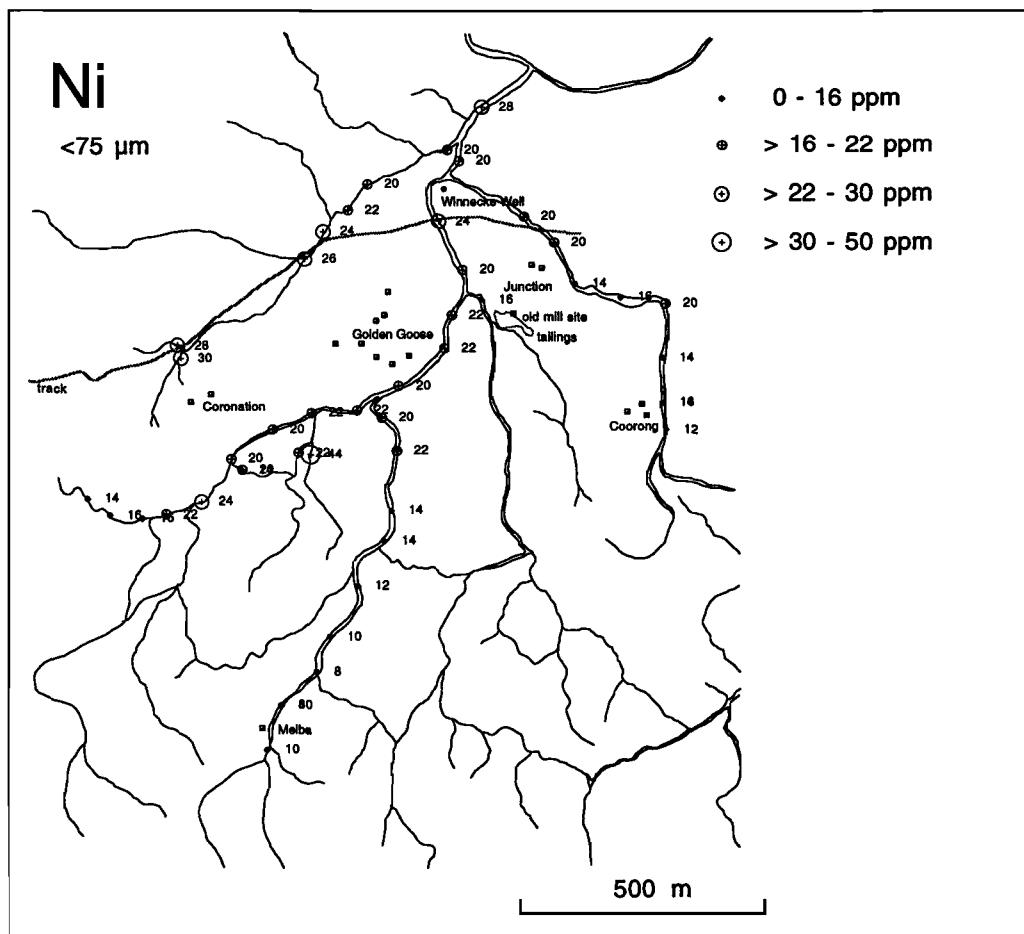
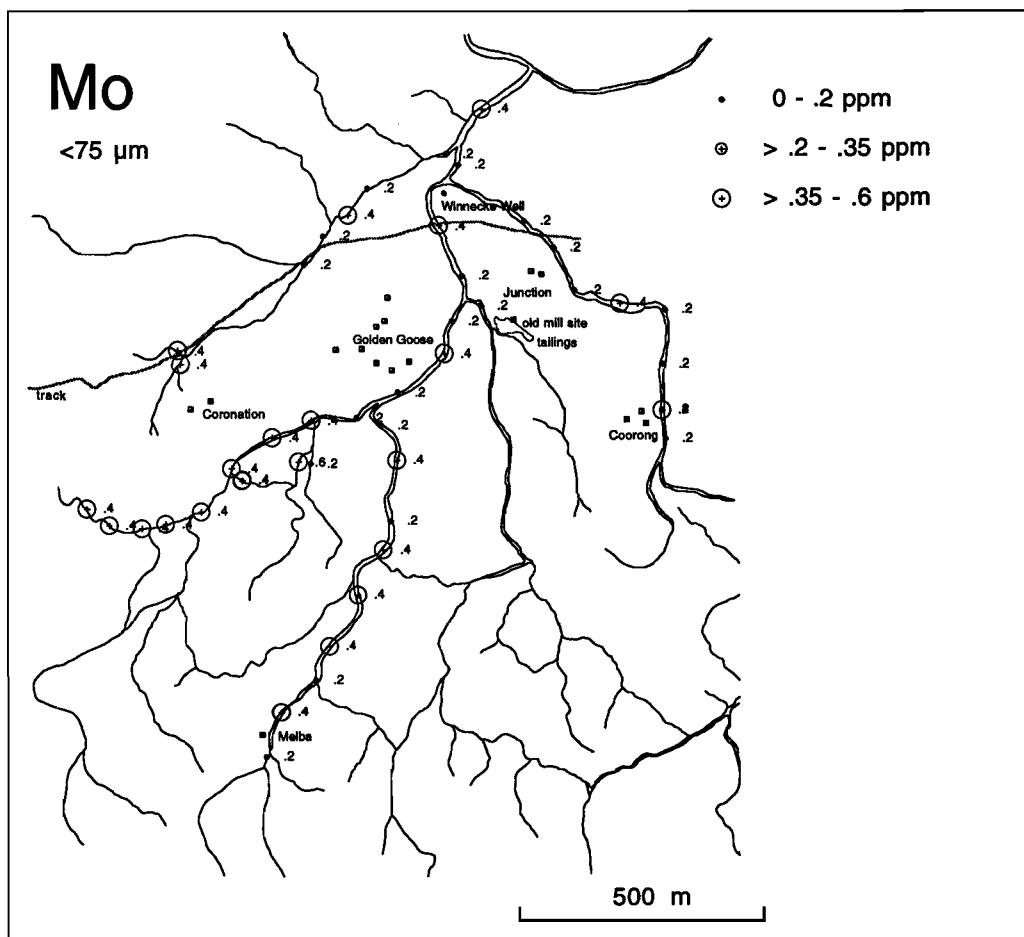


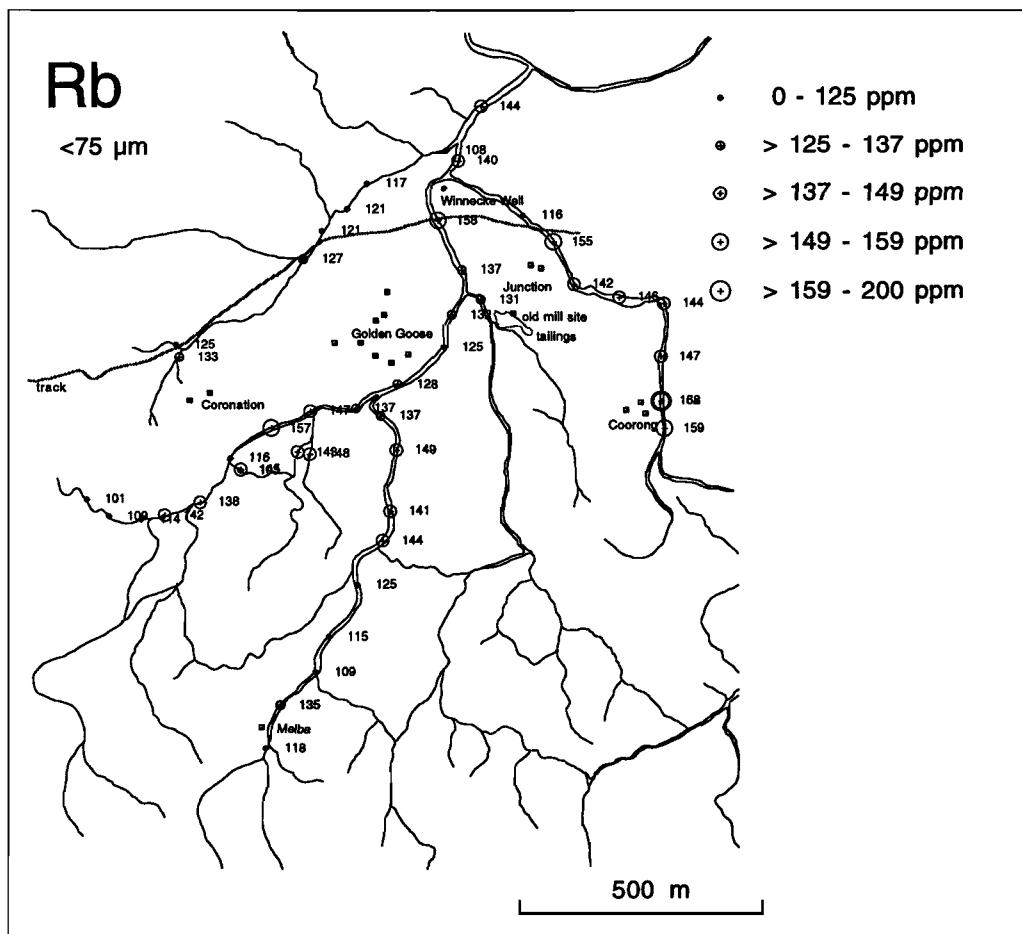
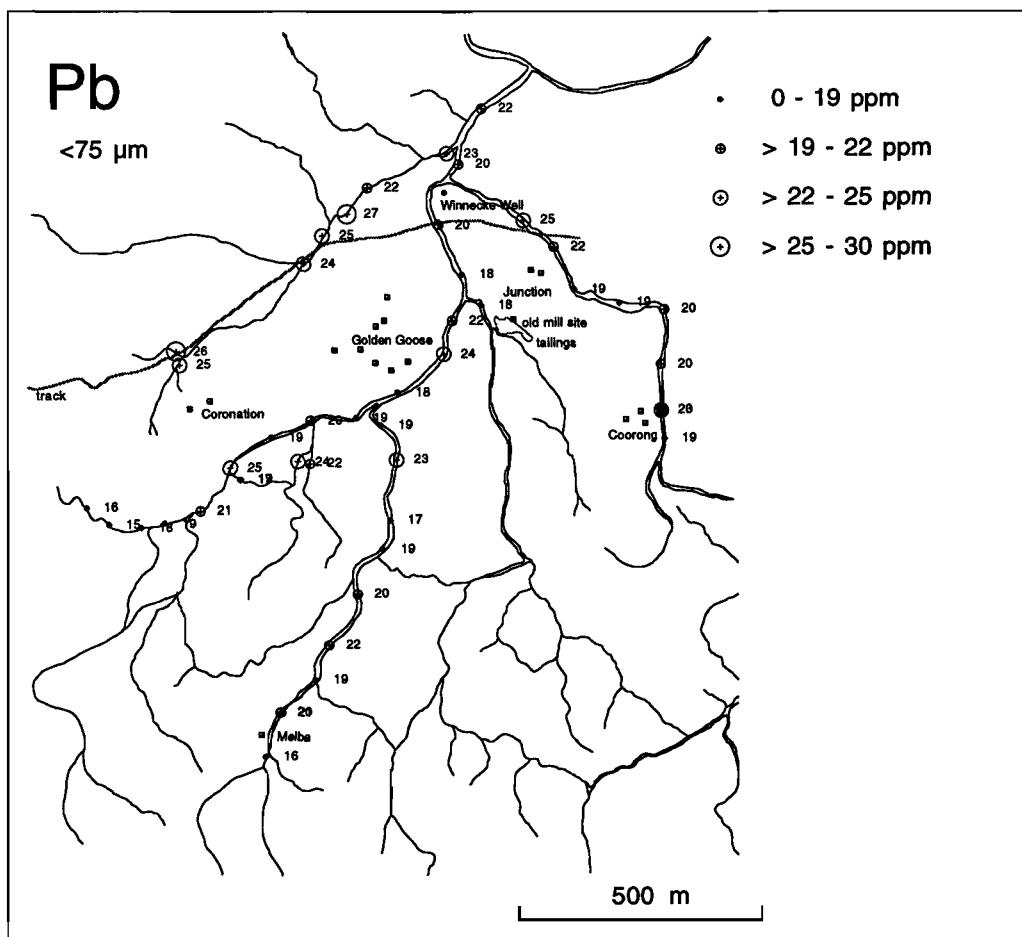


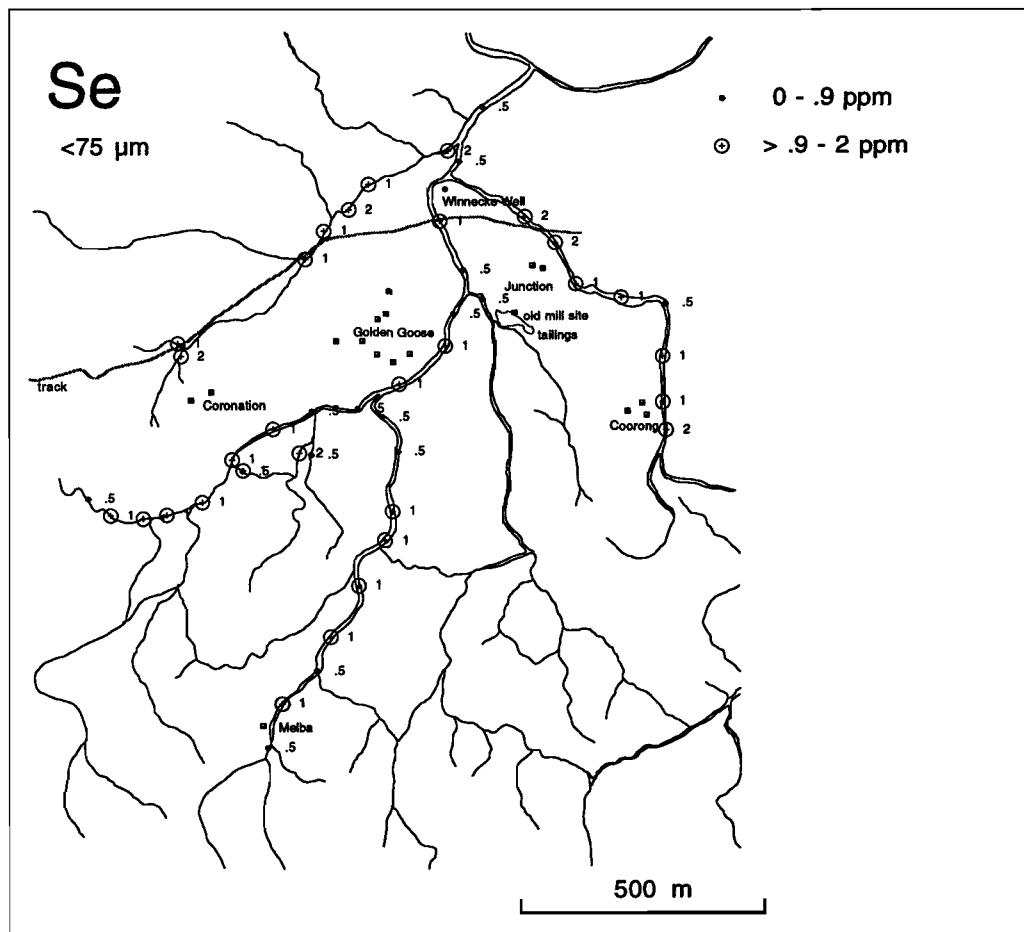
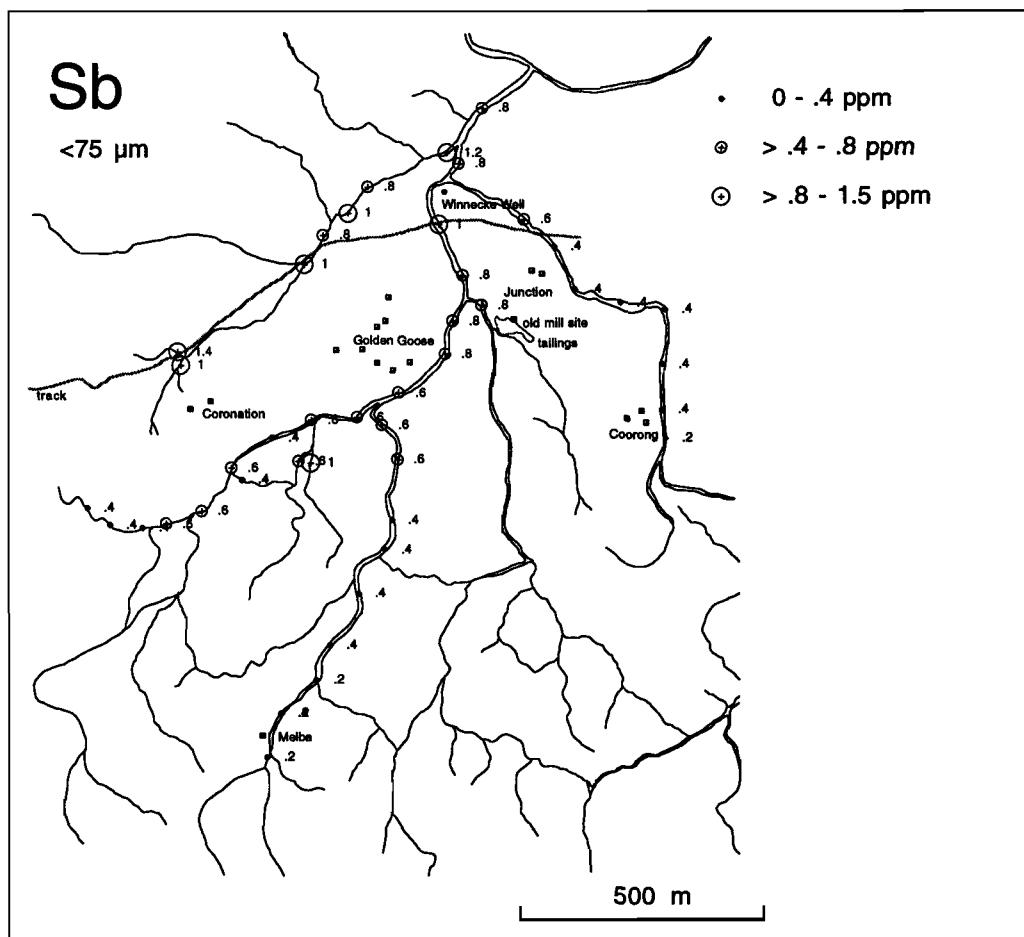


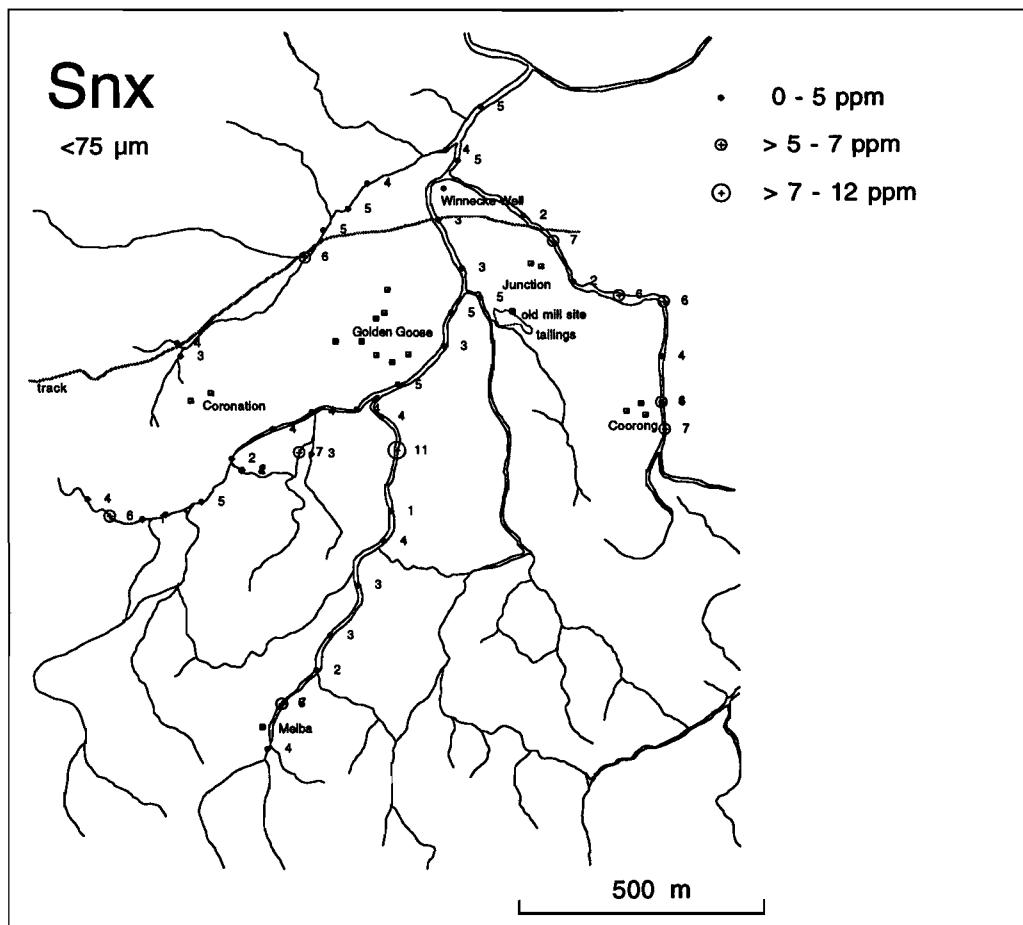
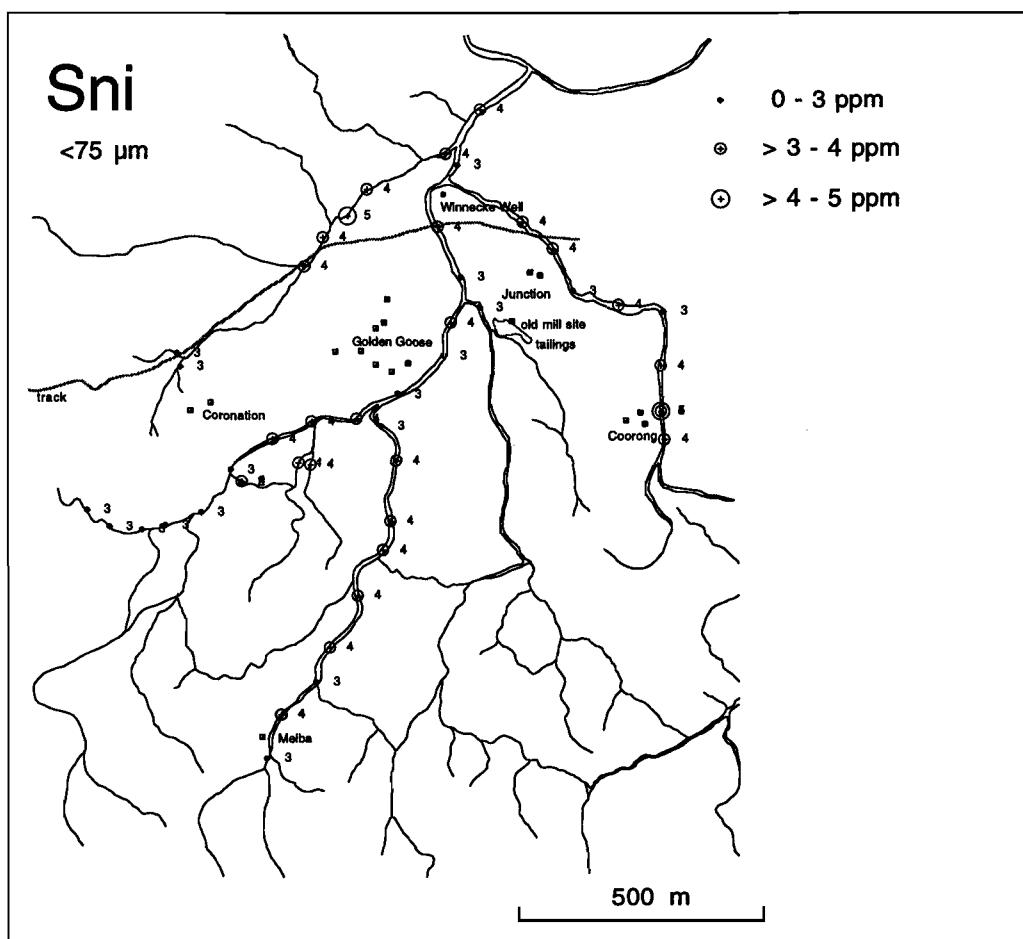


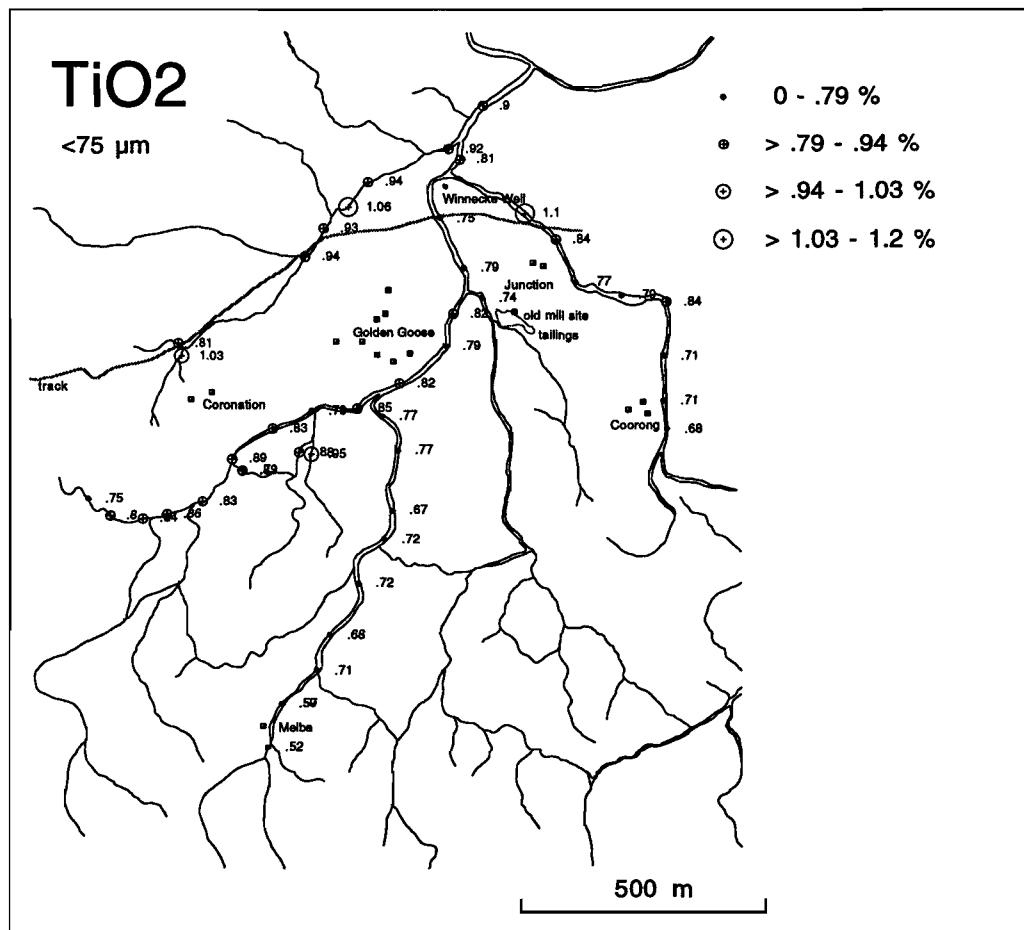
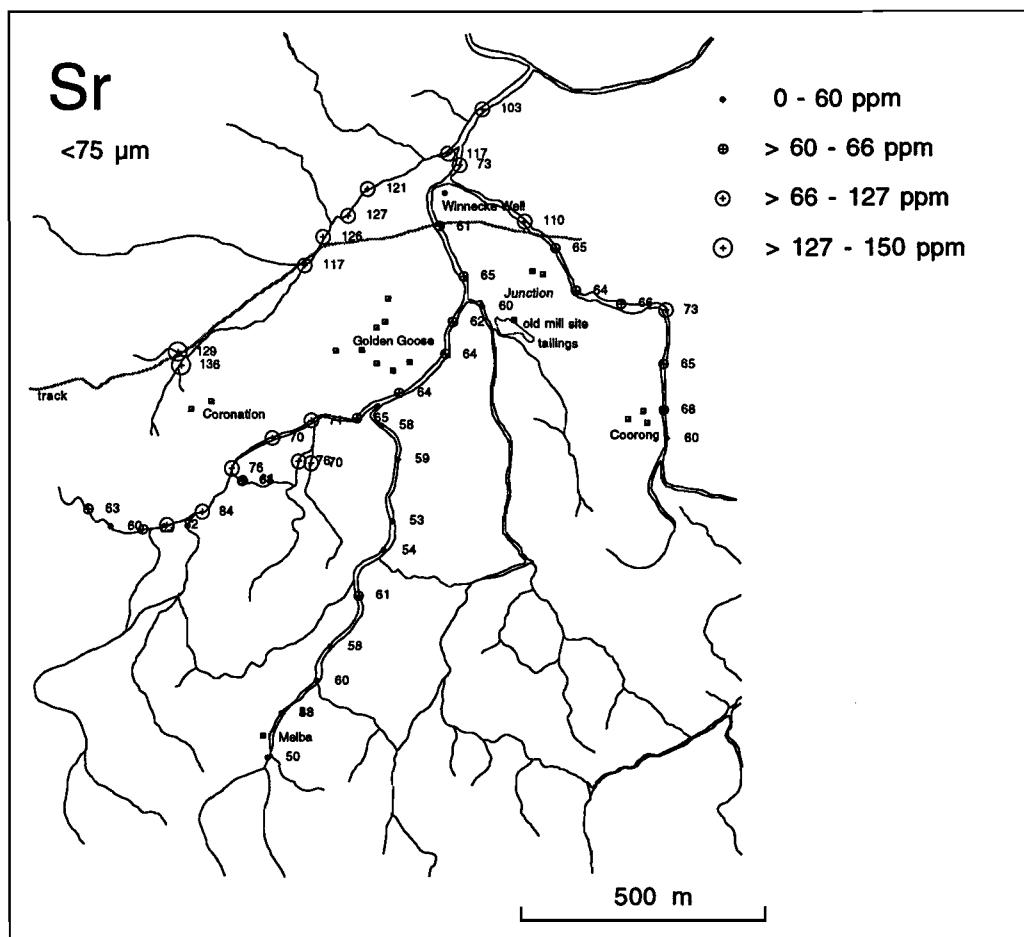


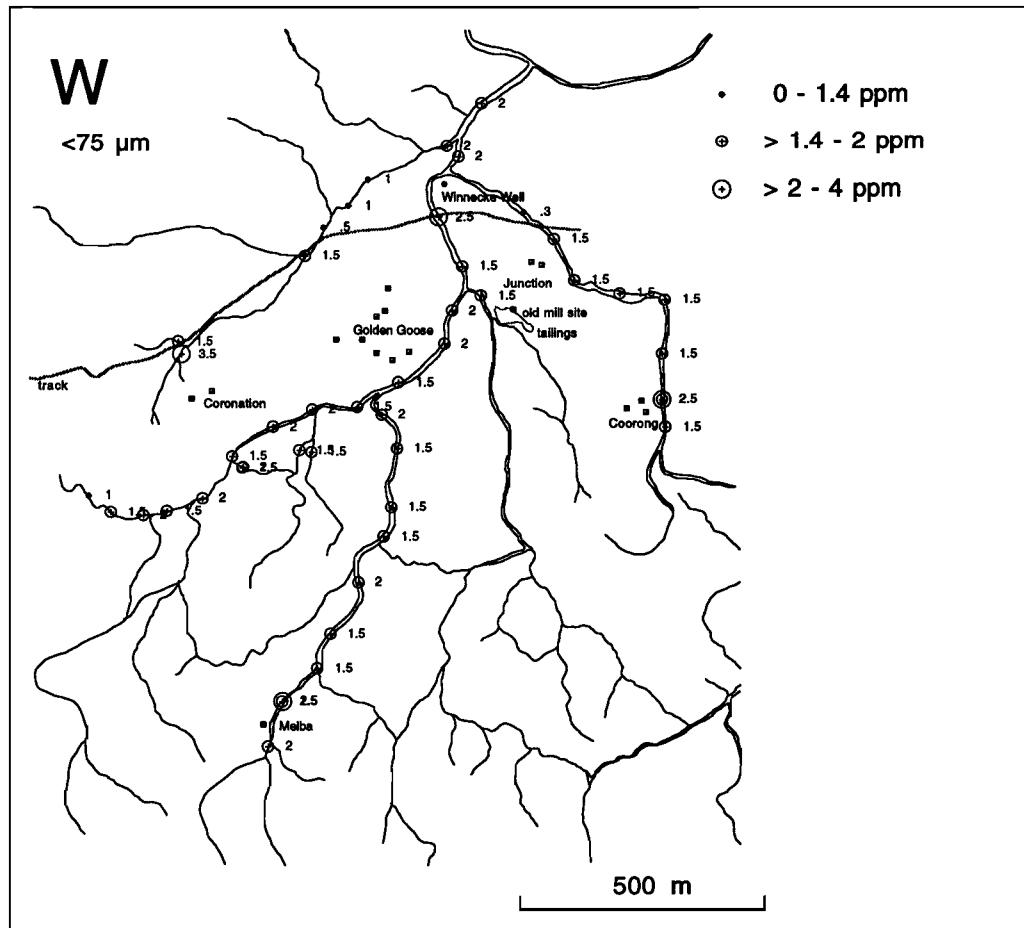
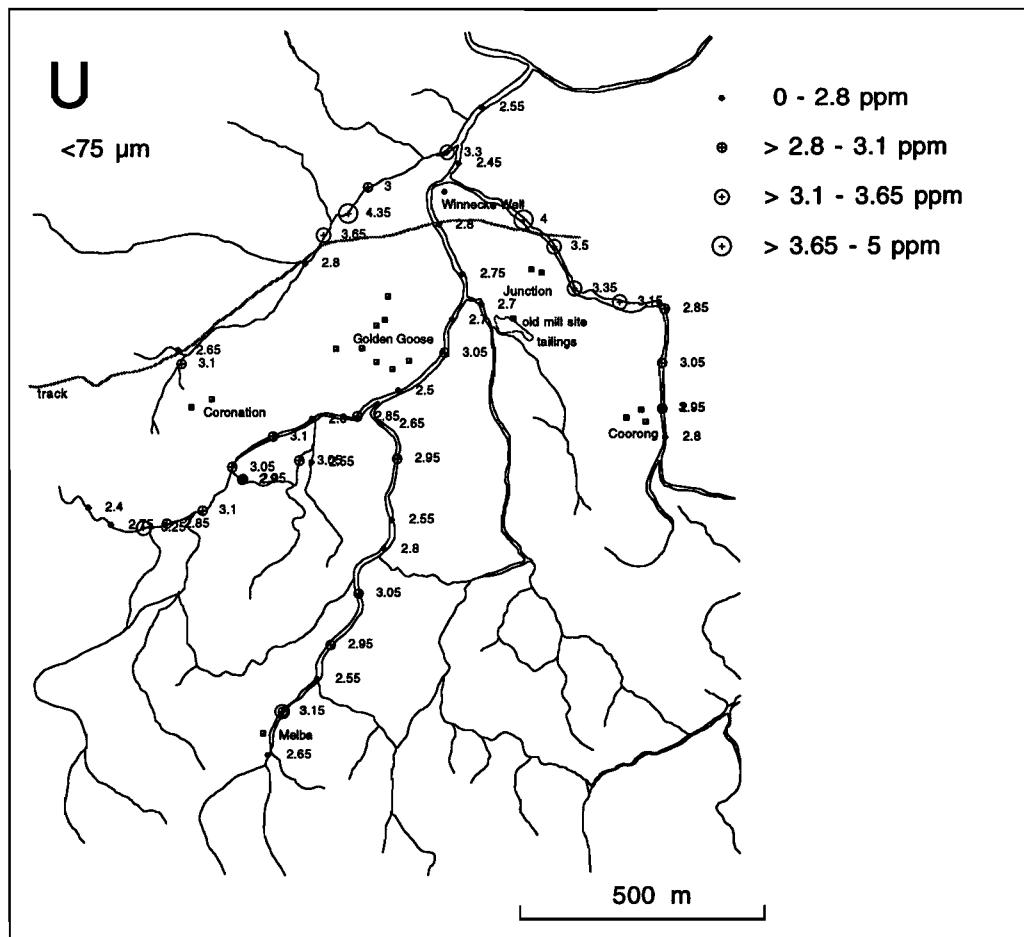


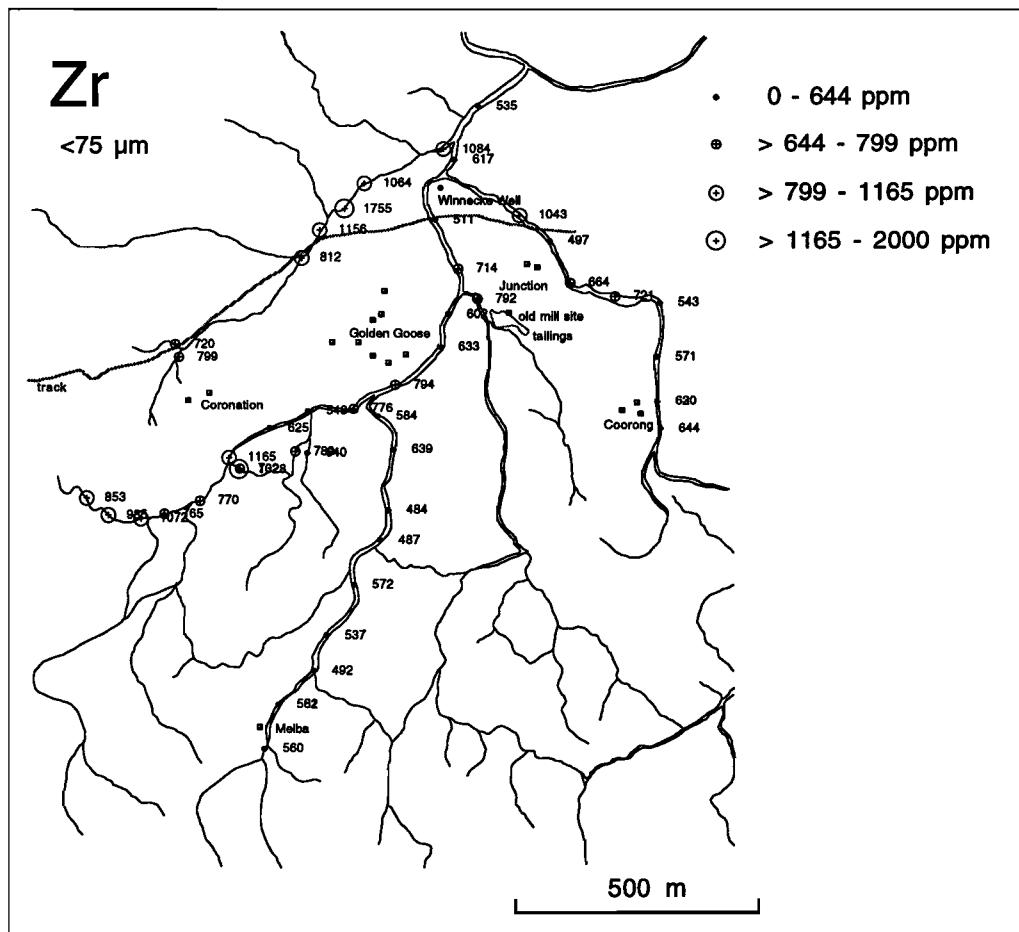
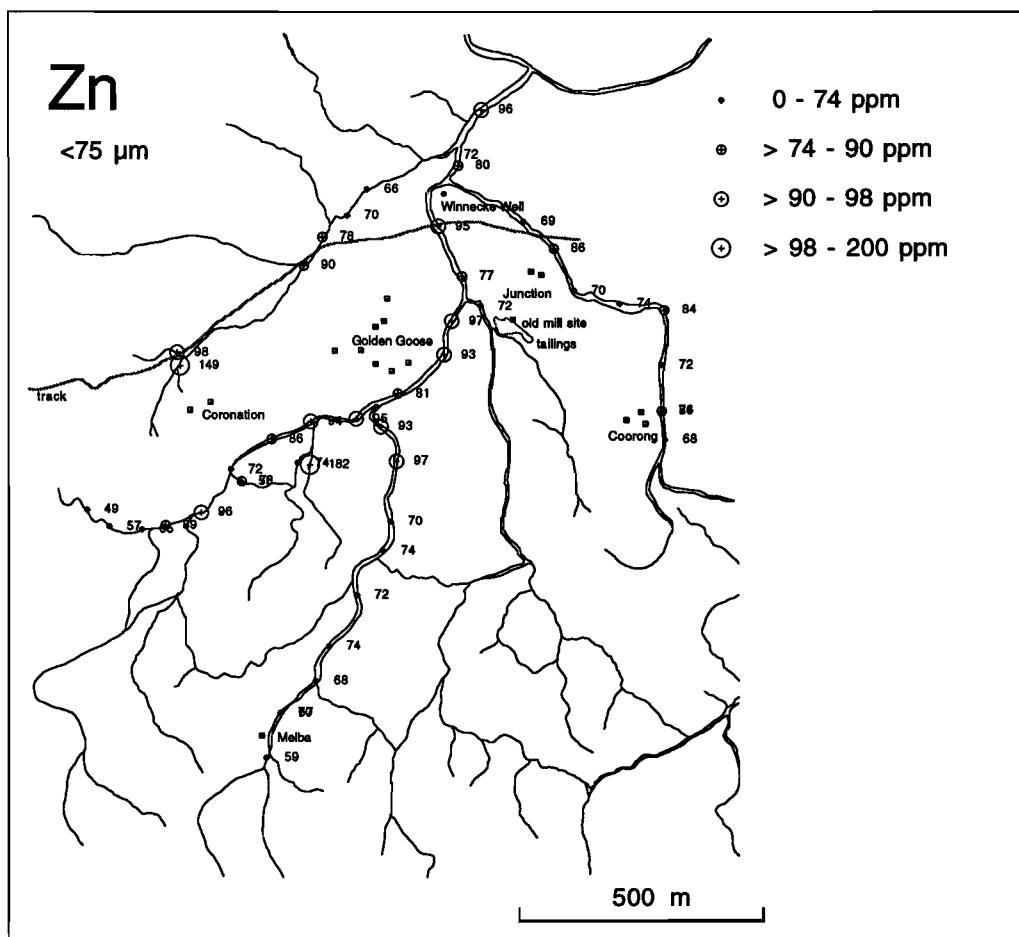


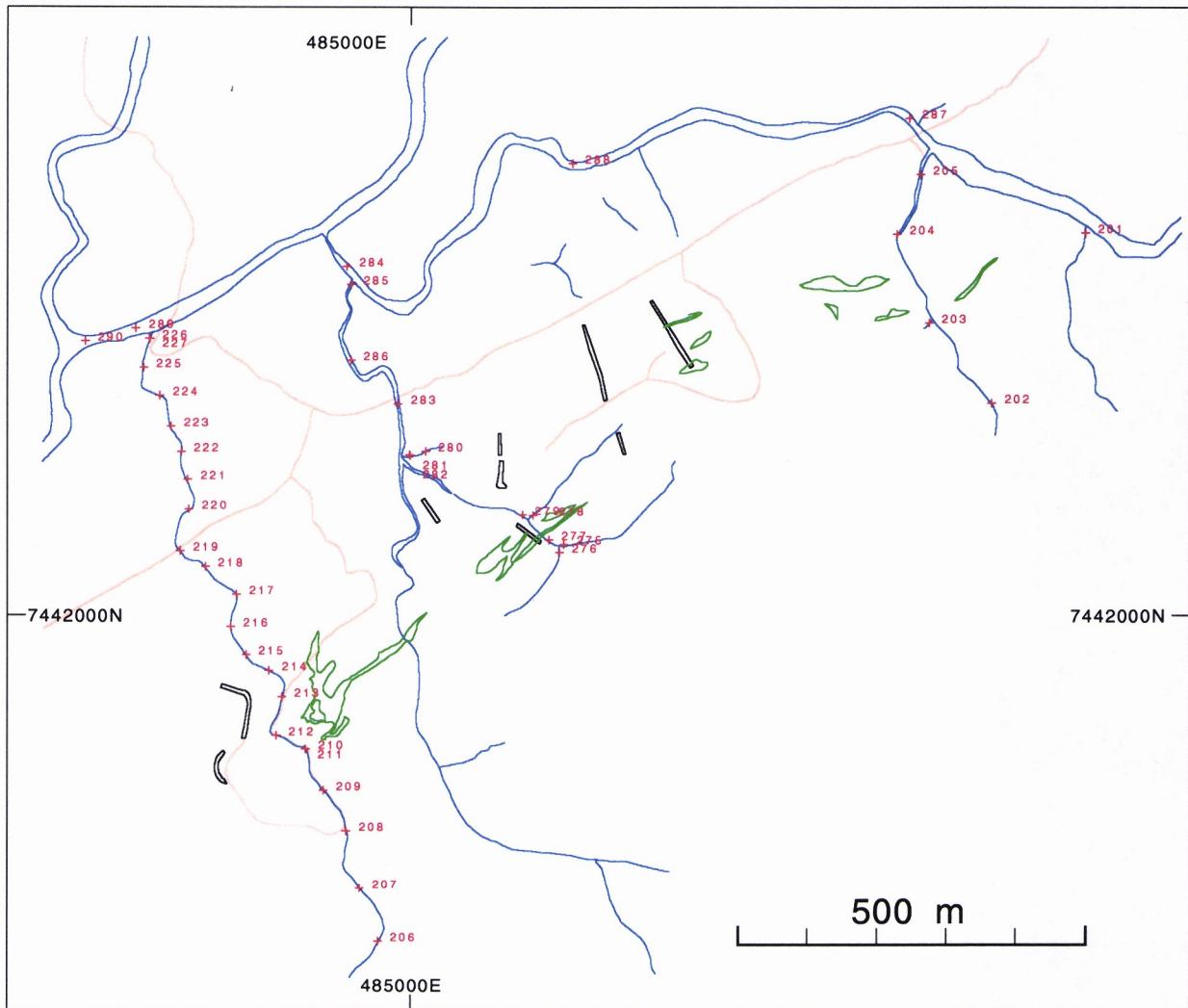




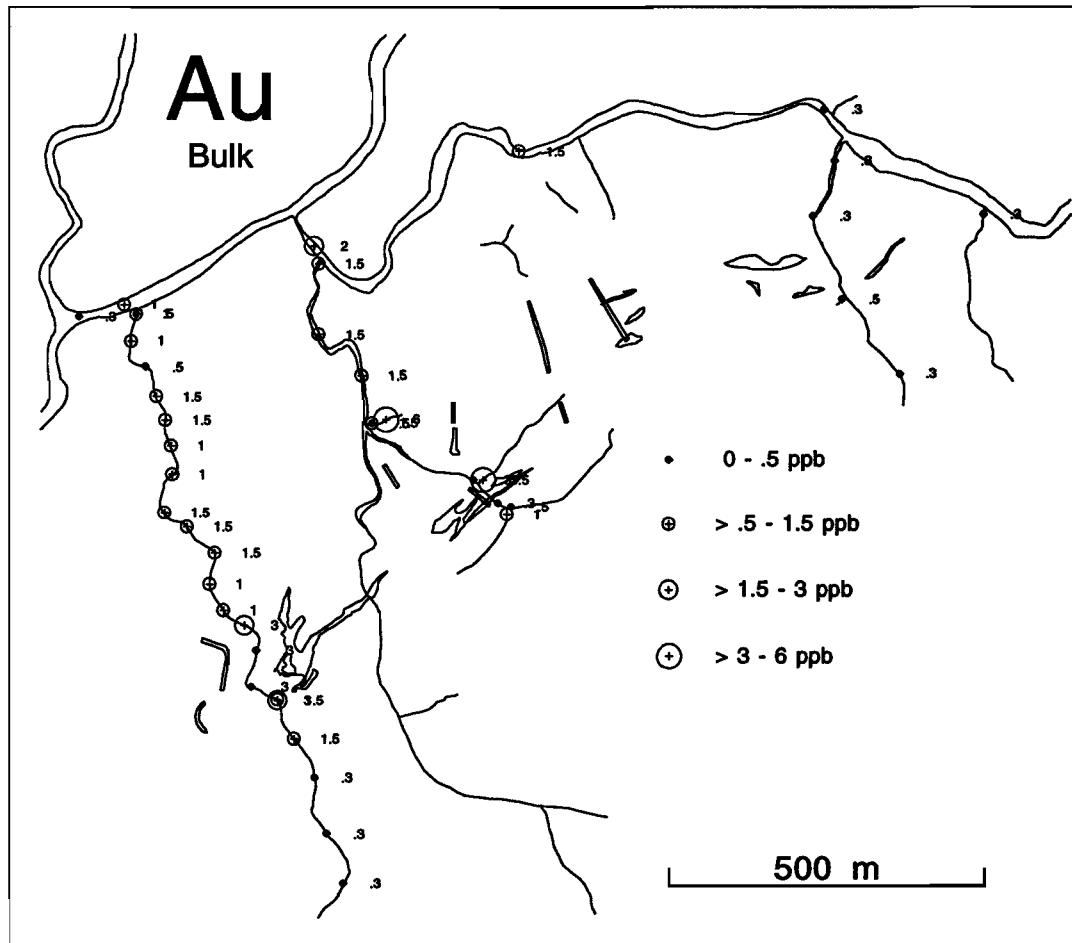
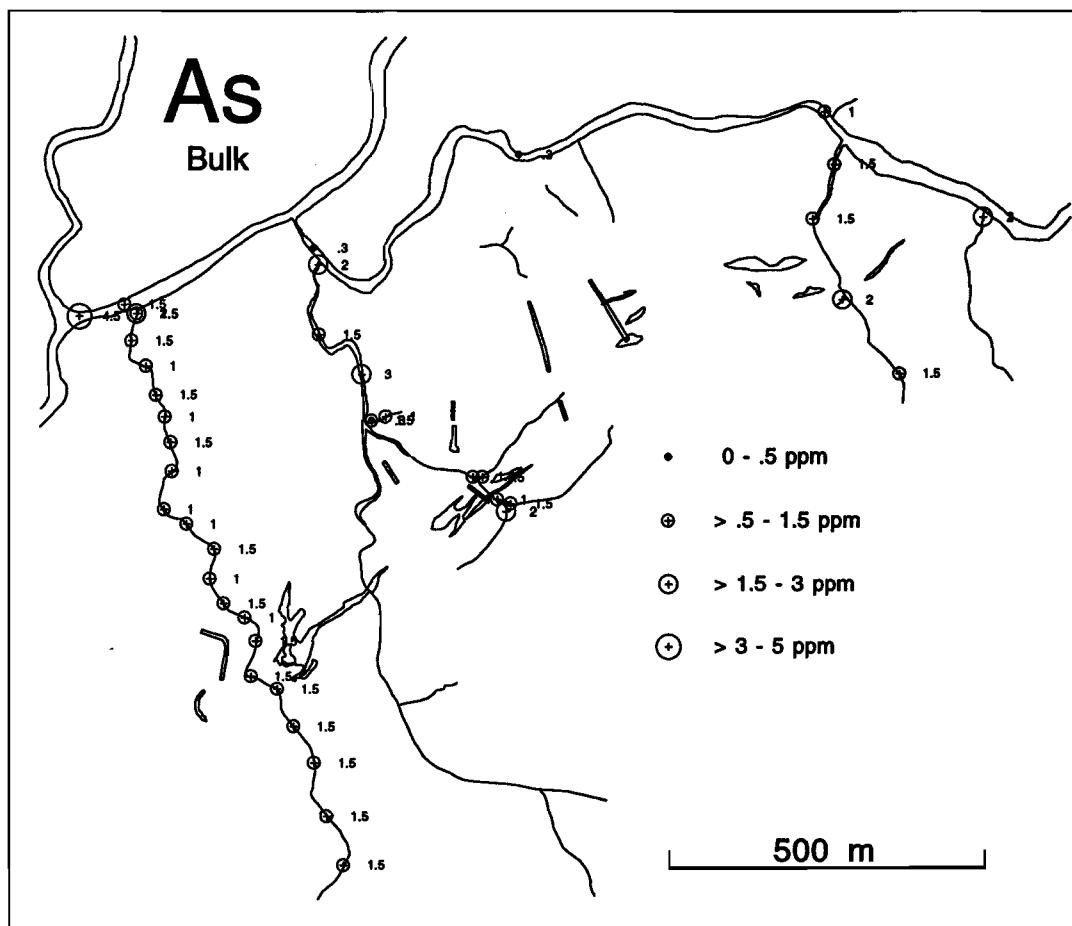


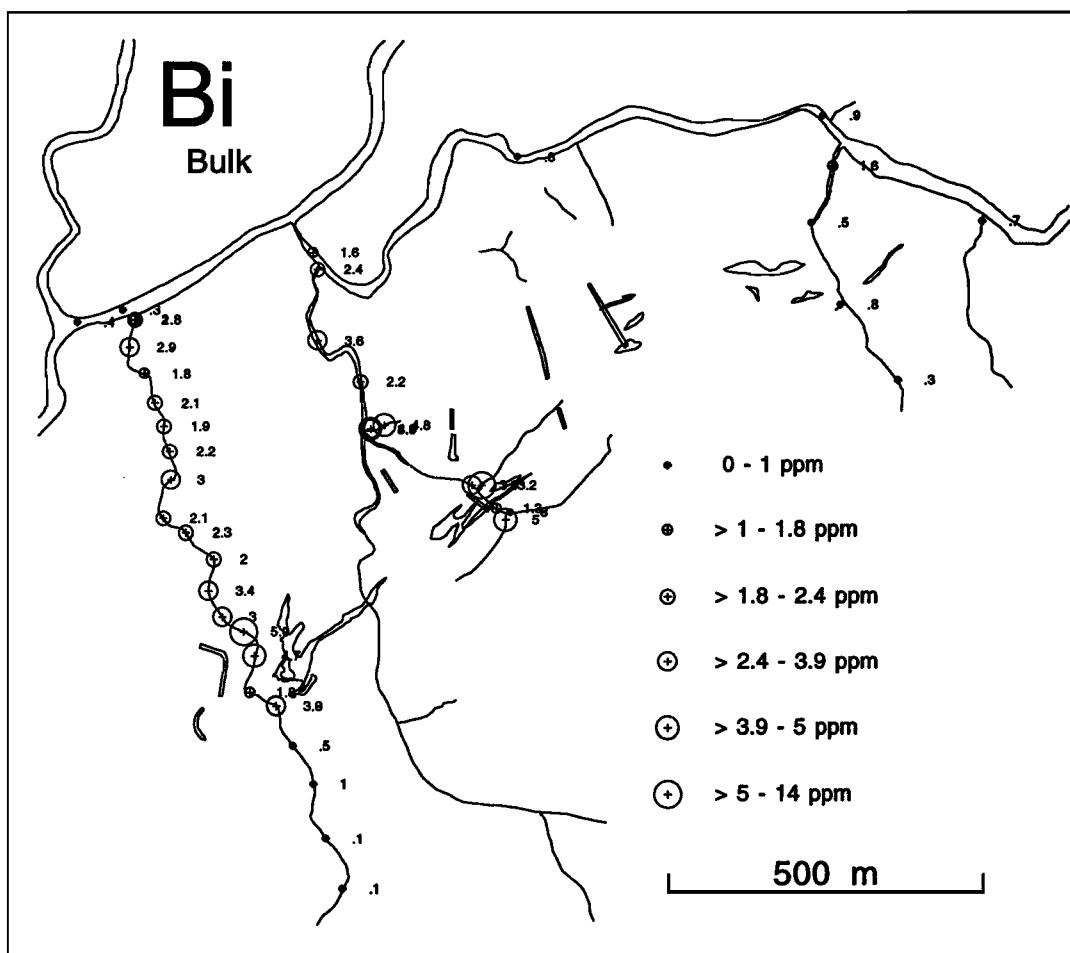
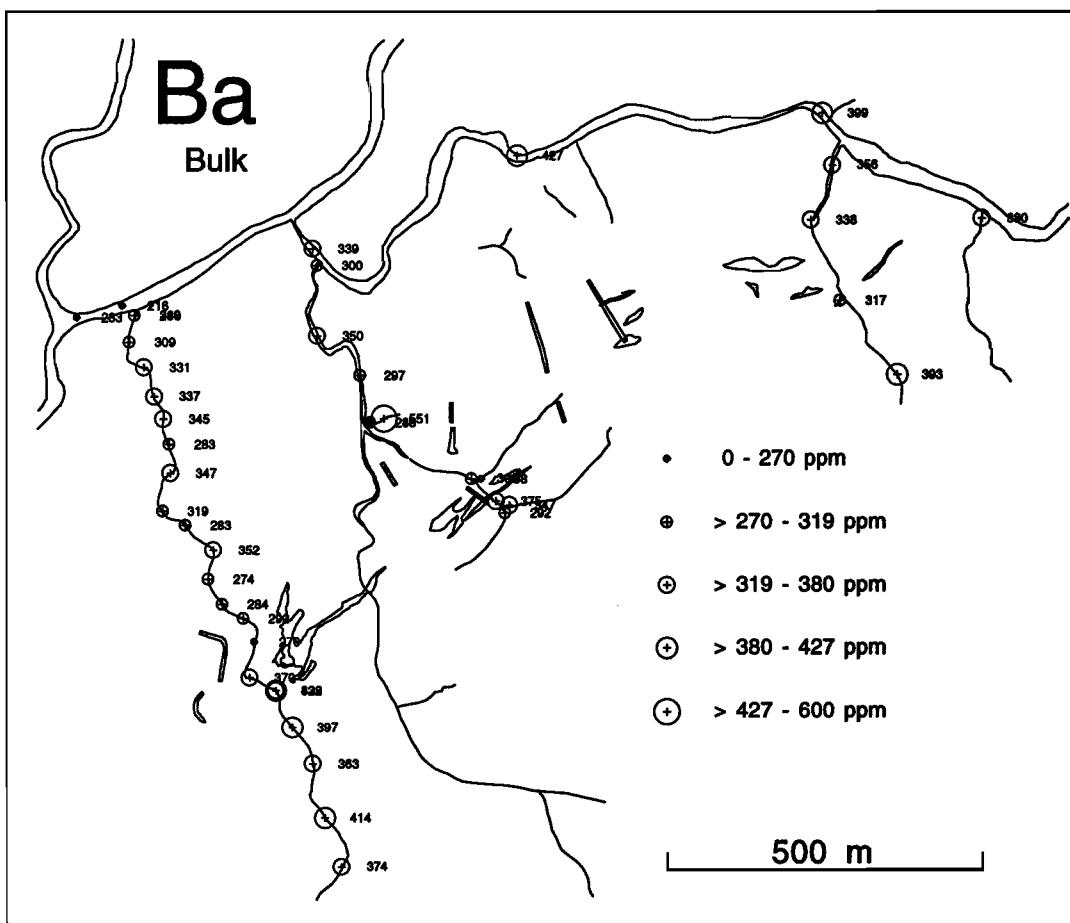


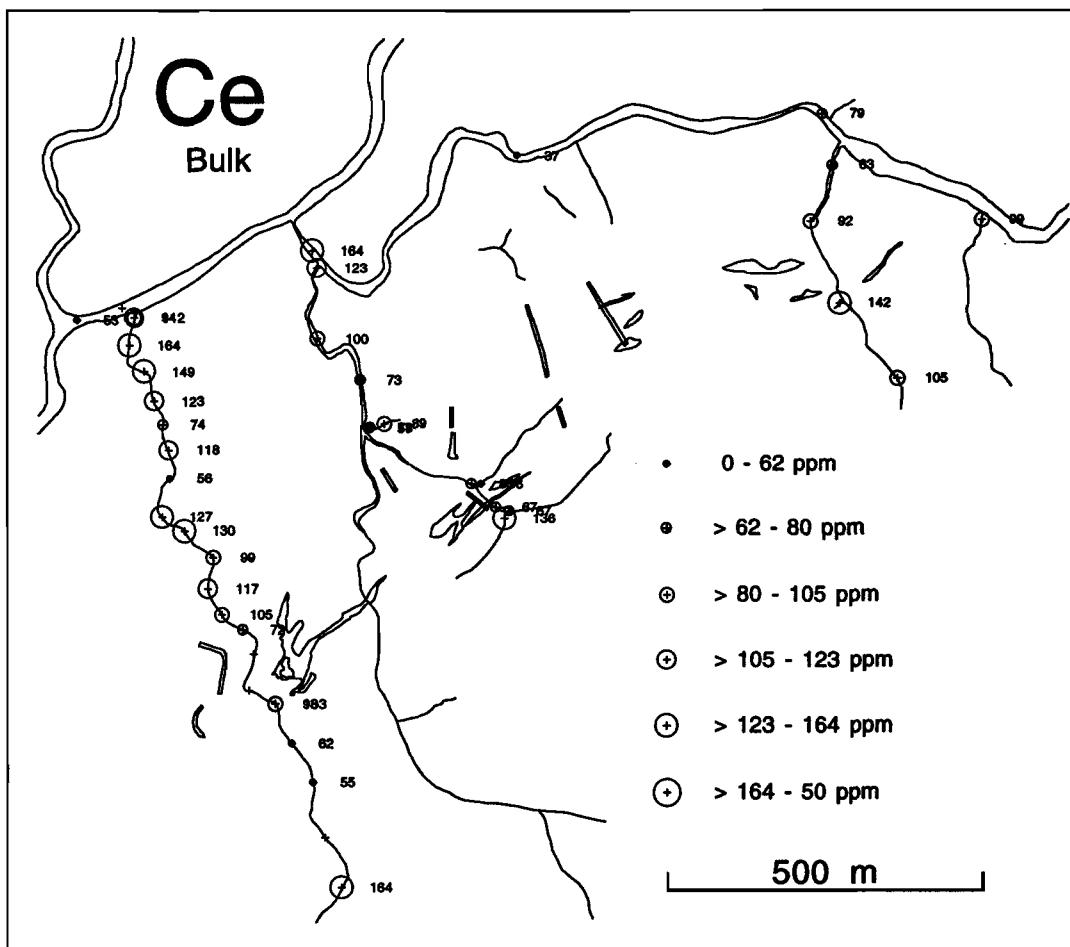
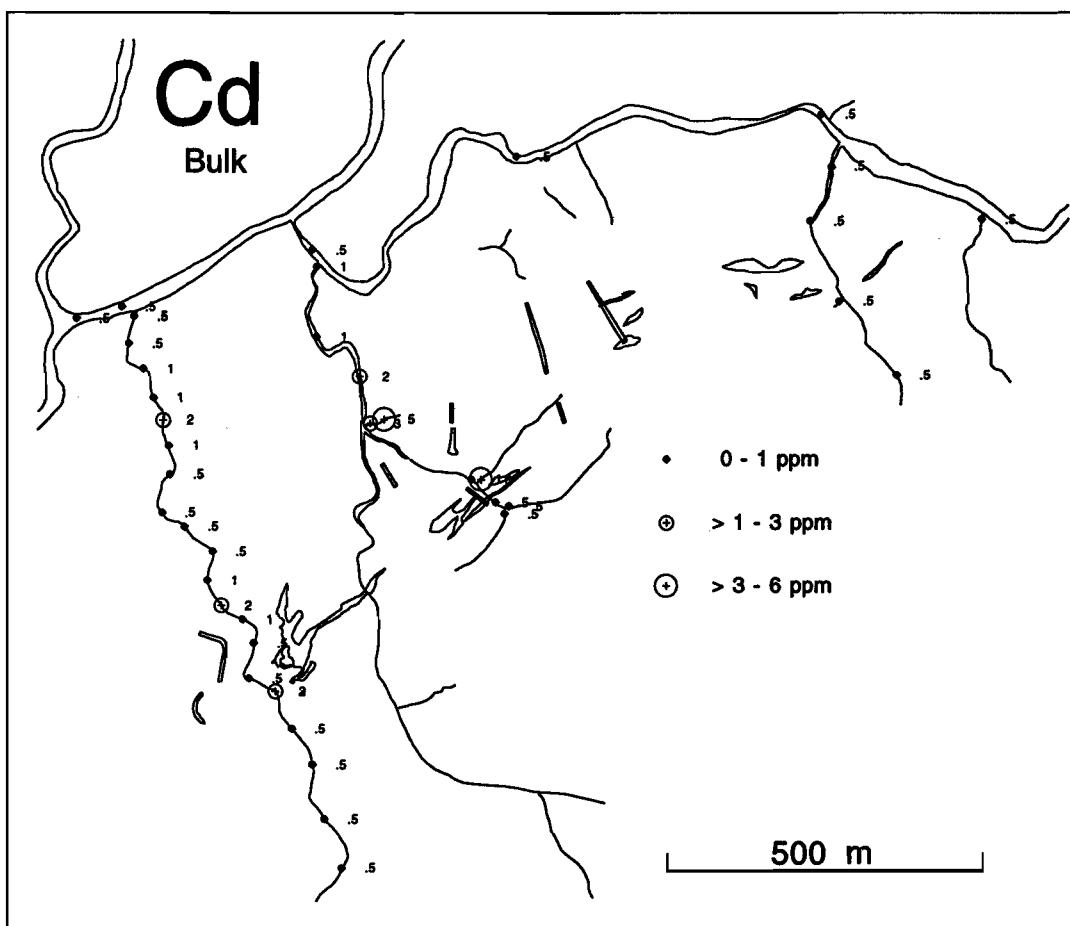


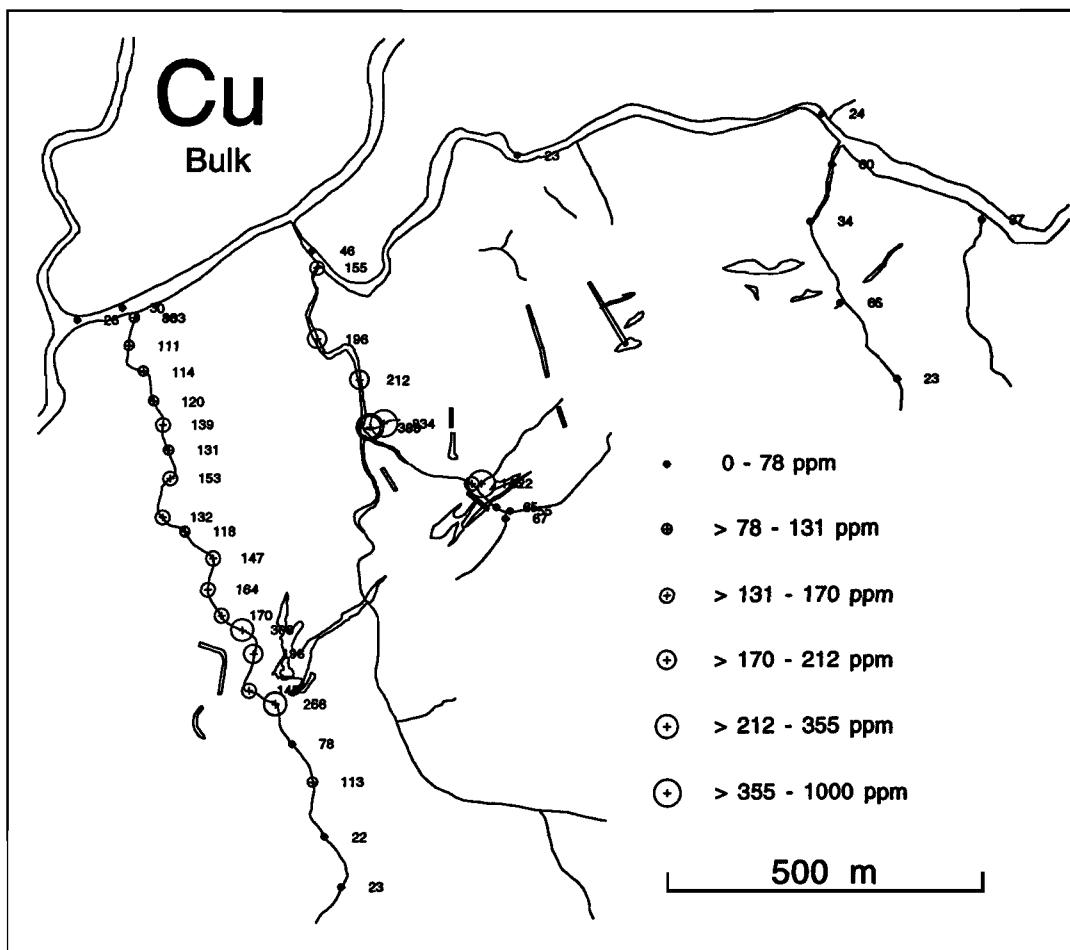
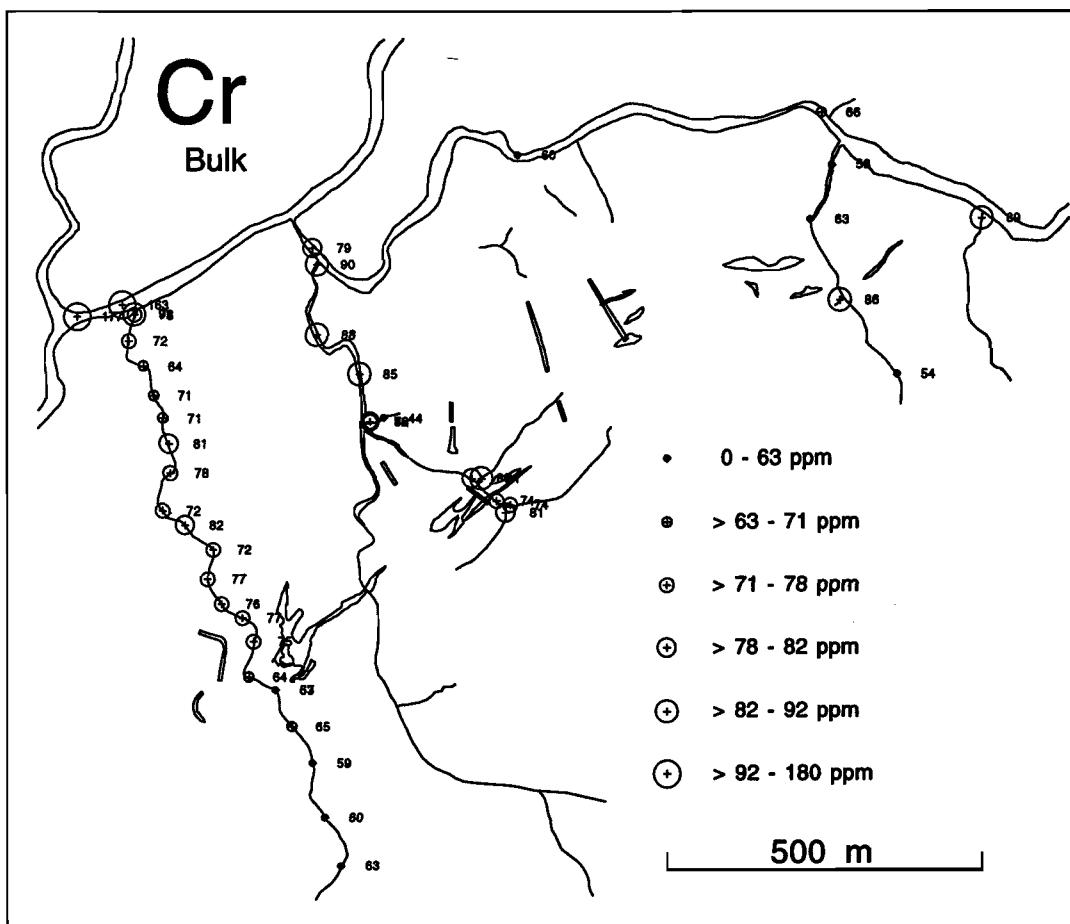


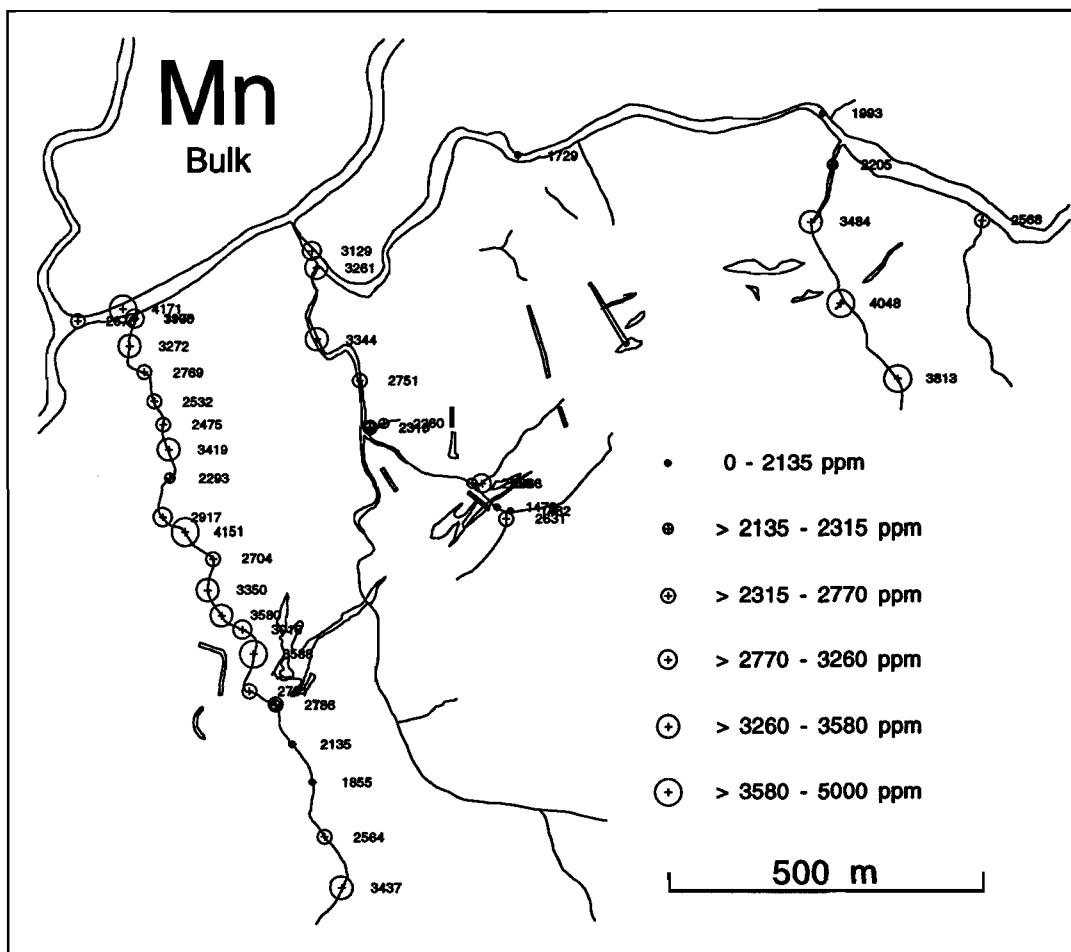
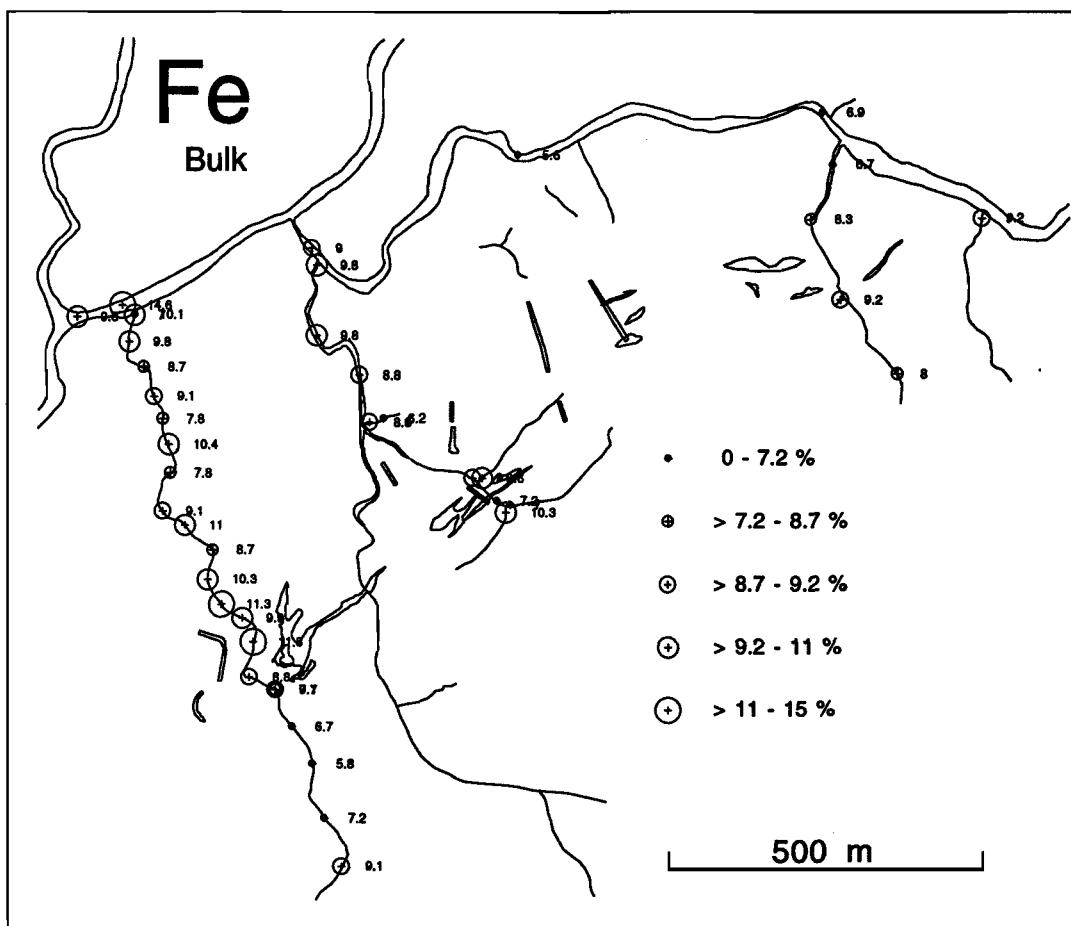
Map of the Oonagalabi orientation survey area. The drainage is shown in blue, coastlines in black and potentially mineralised skarns in green. Drainage sample locations and field numbers are in red. The map was produced from uncontrolled air photographs; the digitiser coordinates used to produce it are relative coordinates. An estimate of the location of a major AMG coordinate intersection has been made (± 100 m). North is at the top of the map but the orientation is not precise ($\pm 5^\circ$). This map is used as an underlay for the dot maps that follow.

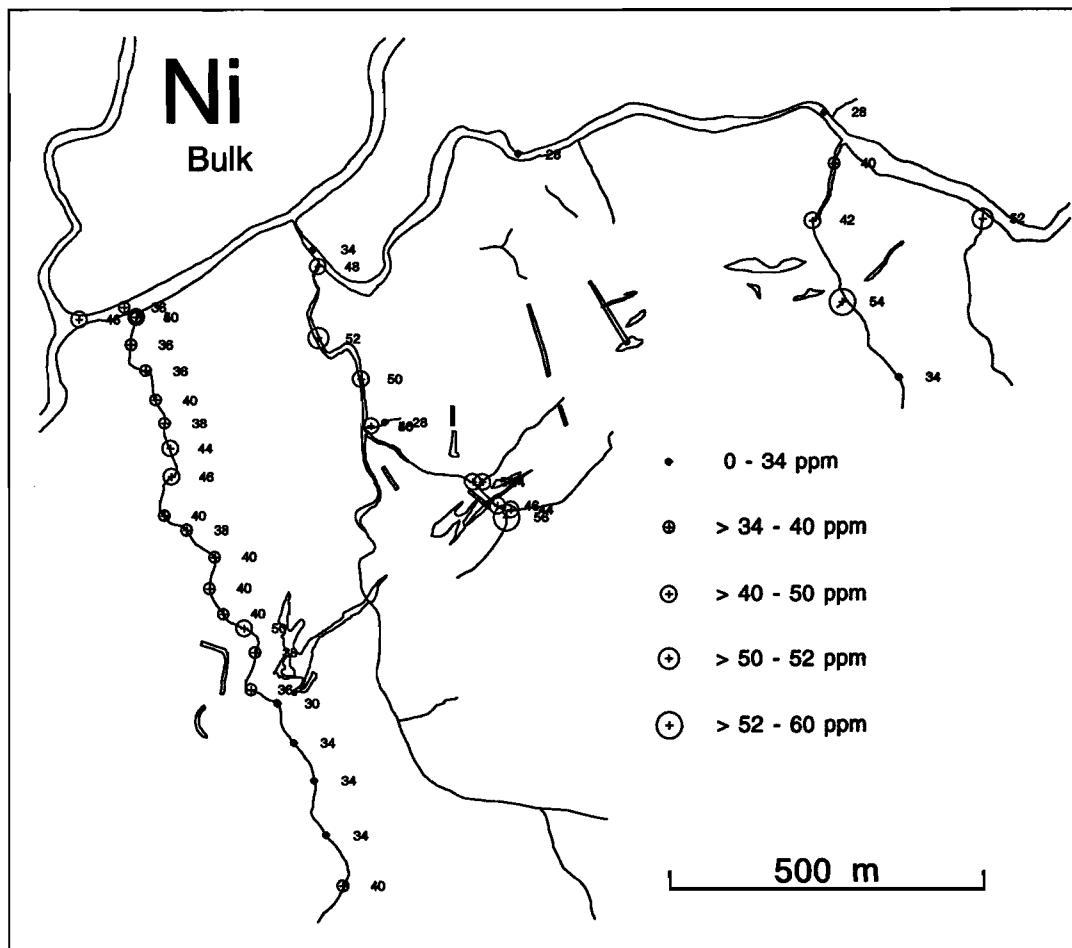
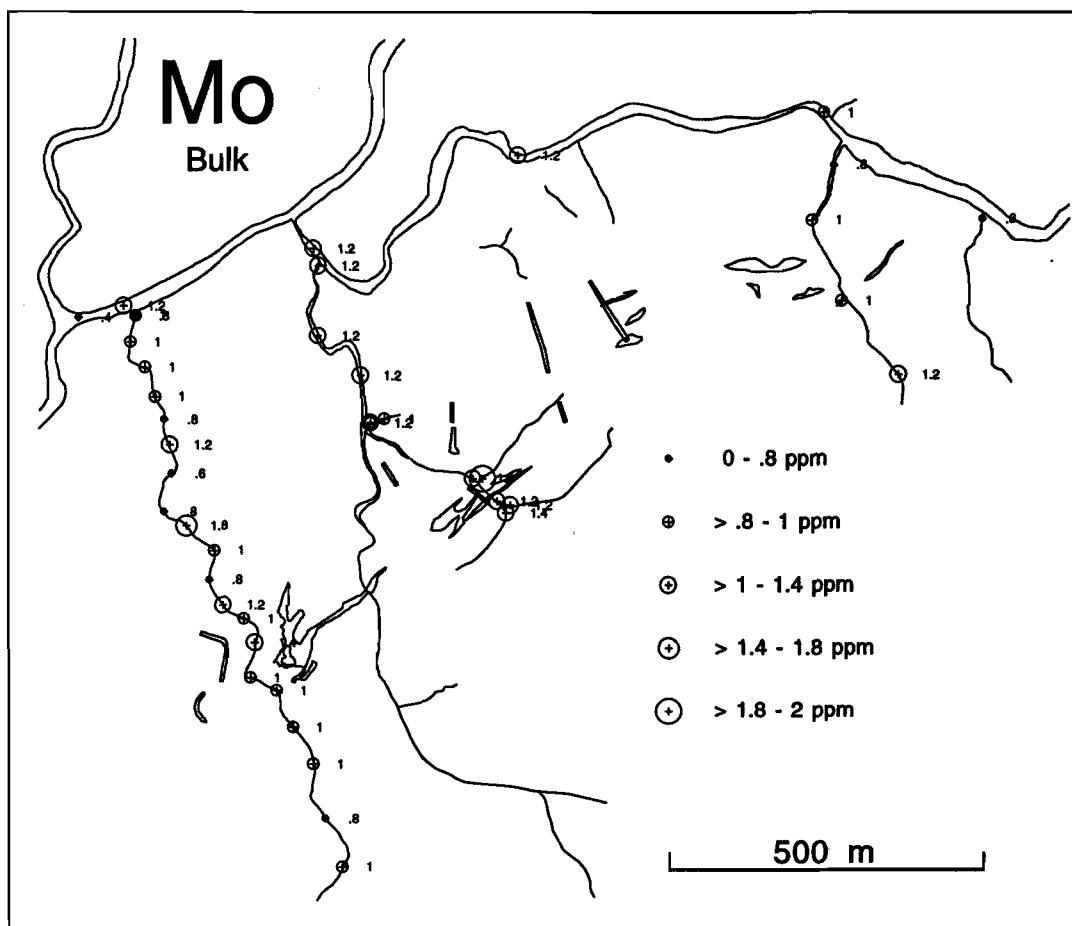


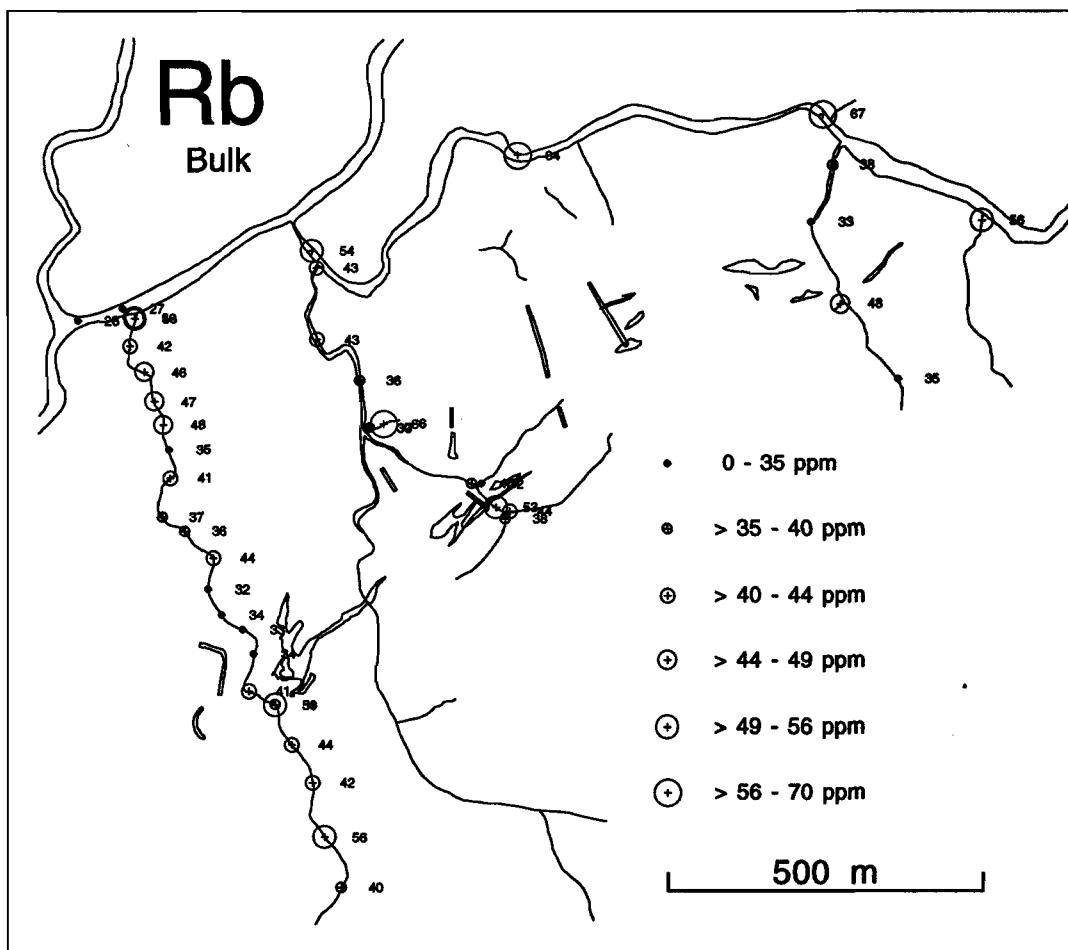
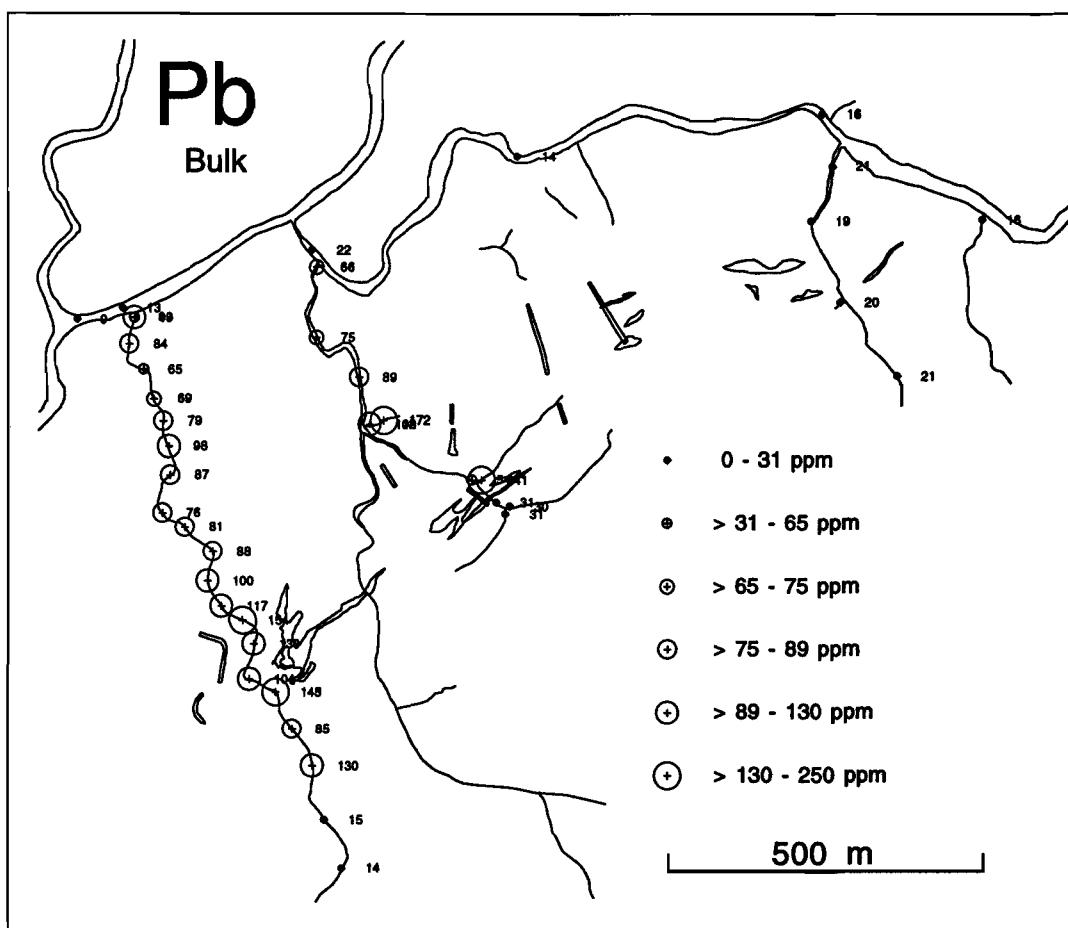


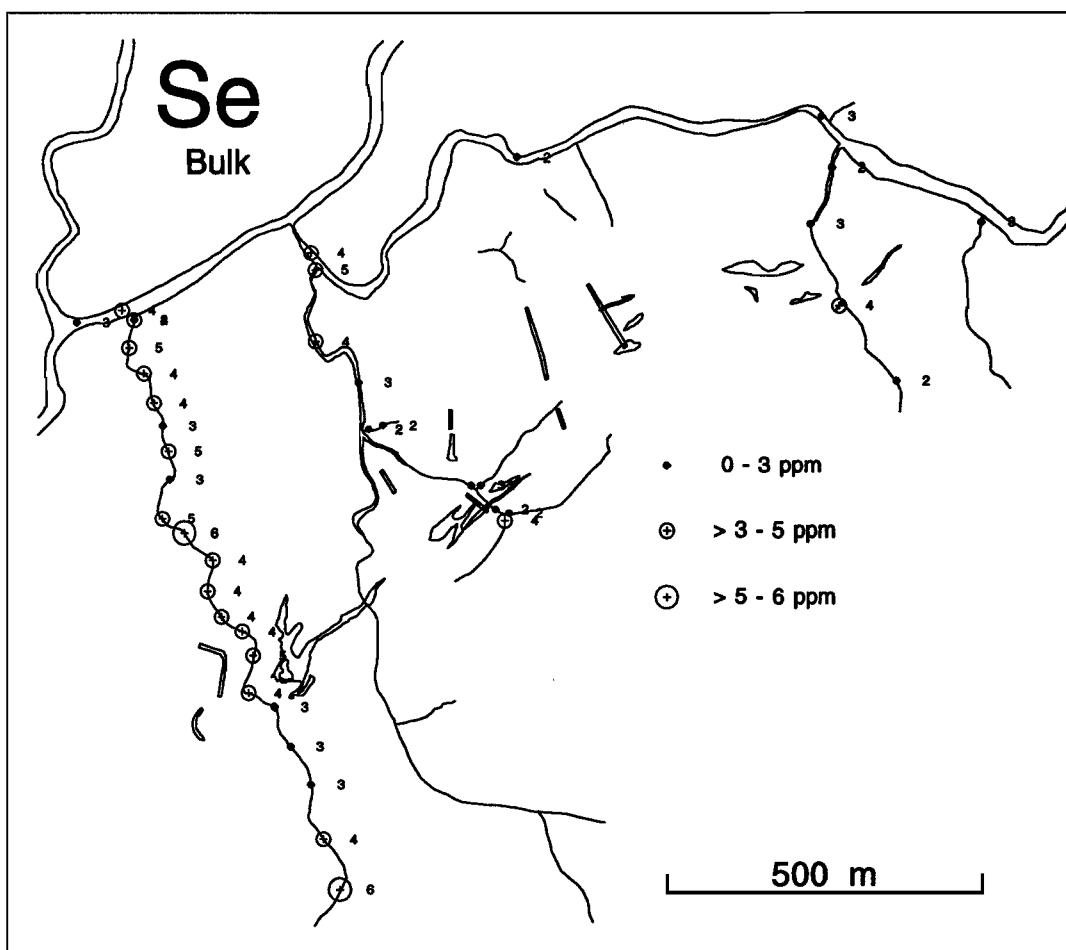
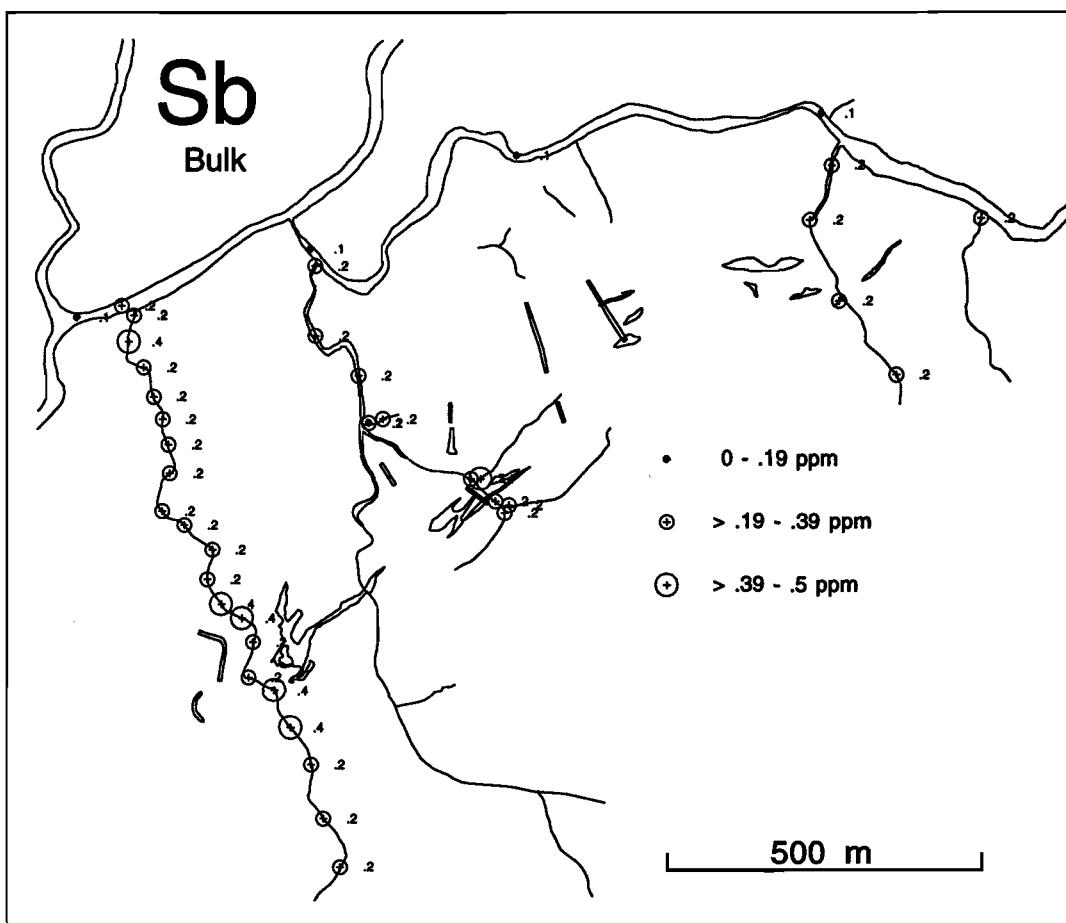


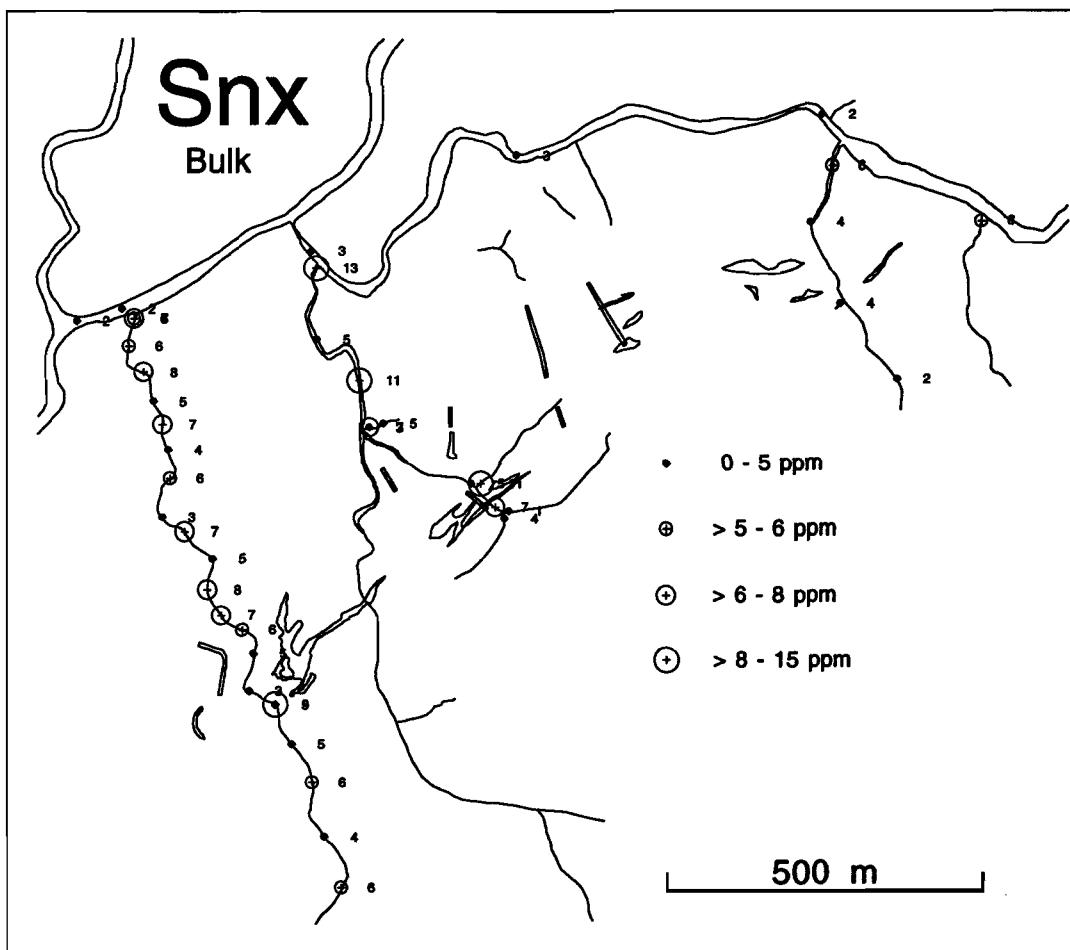
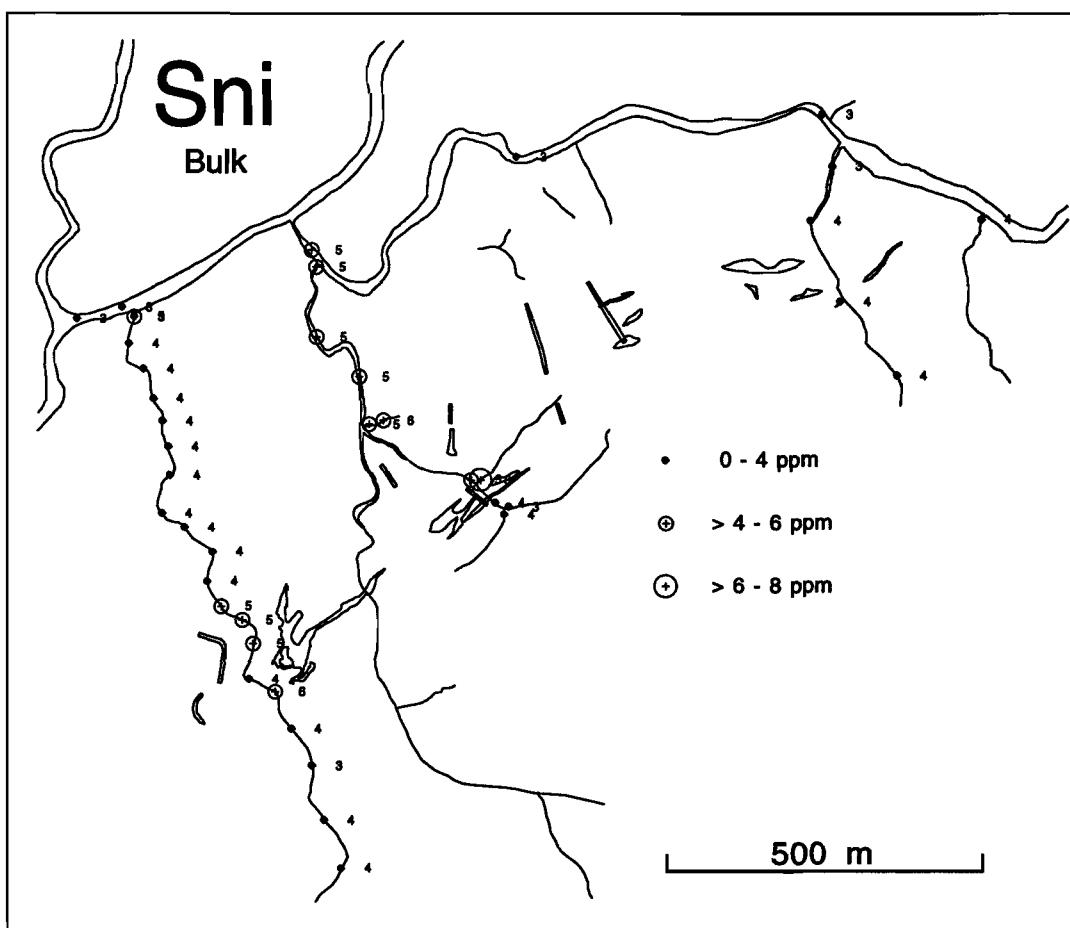


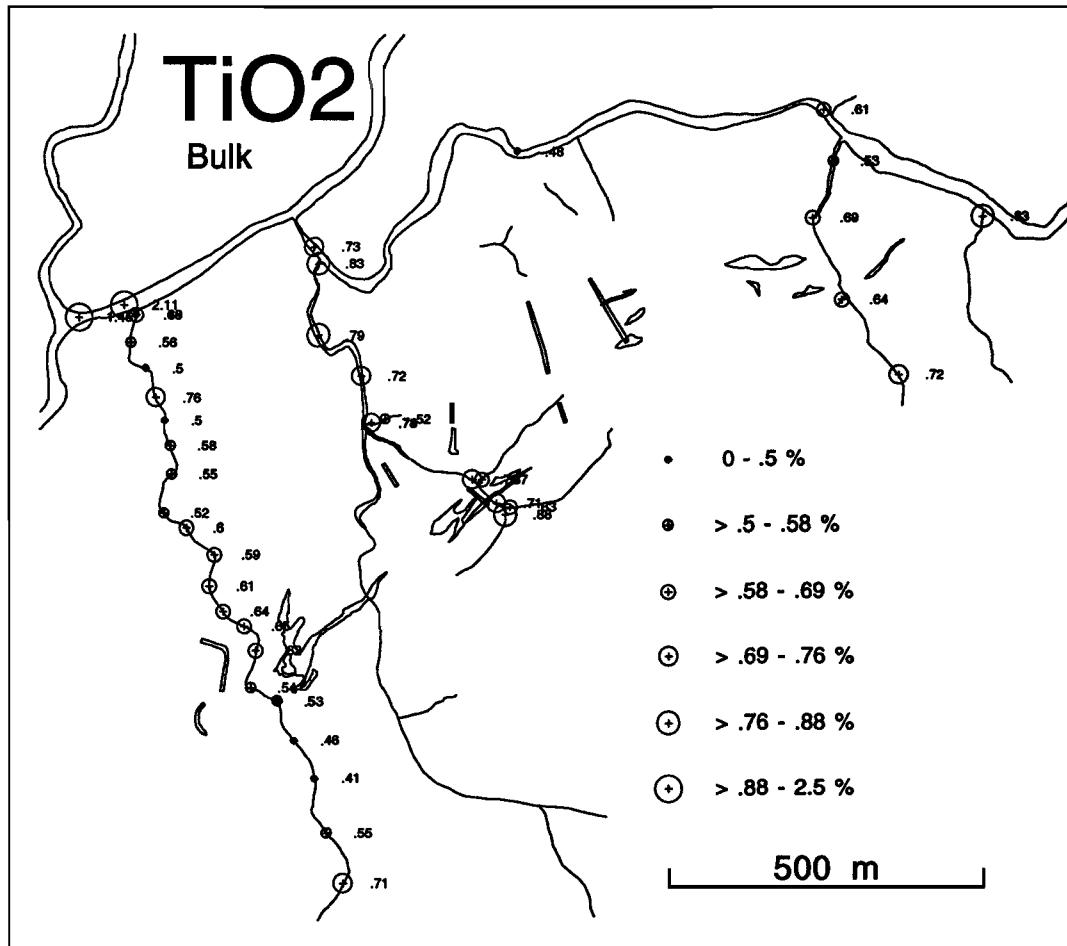
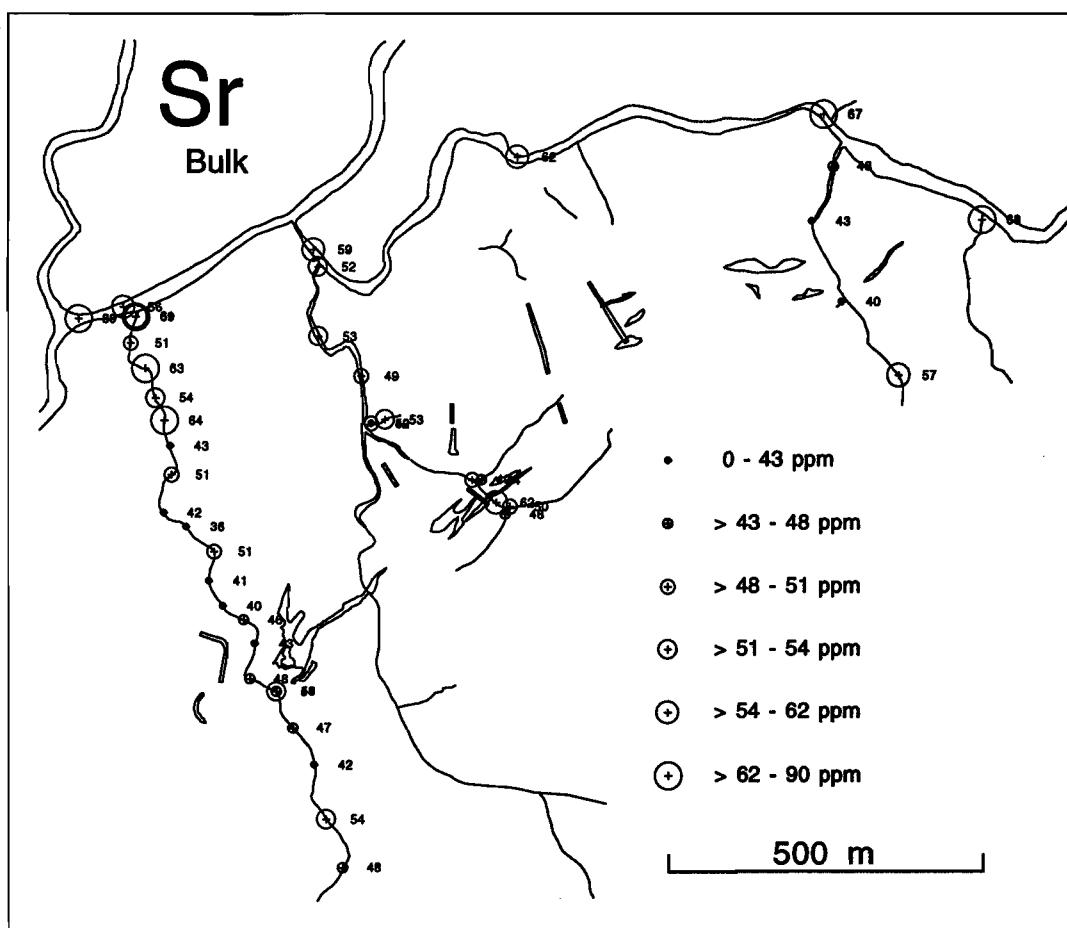


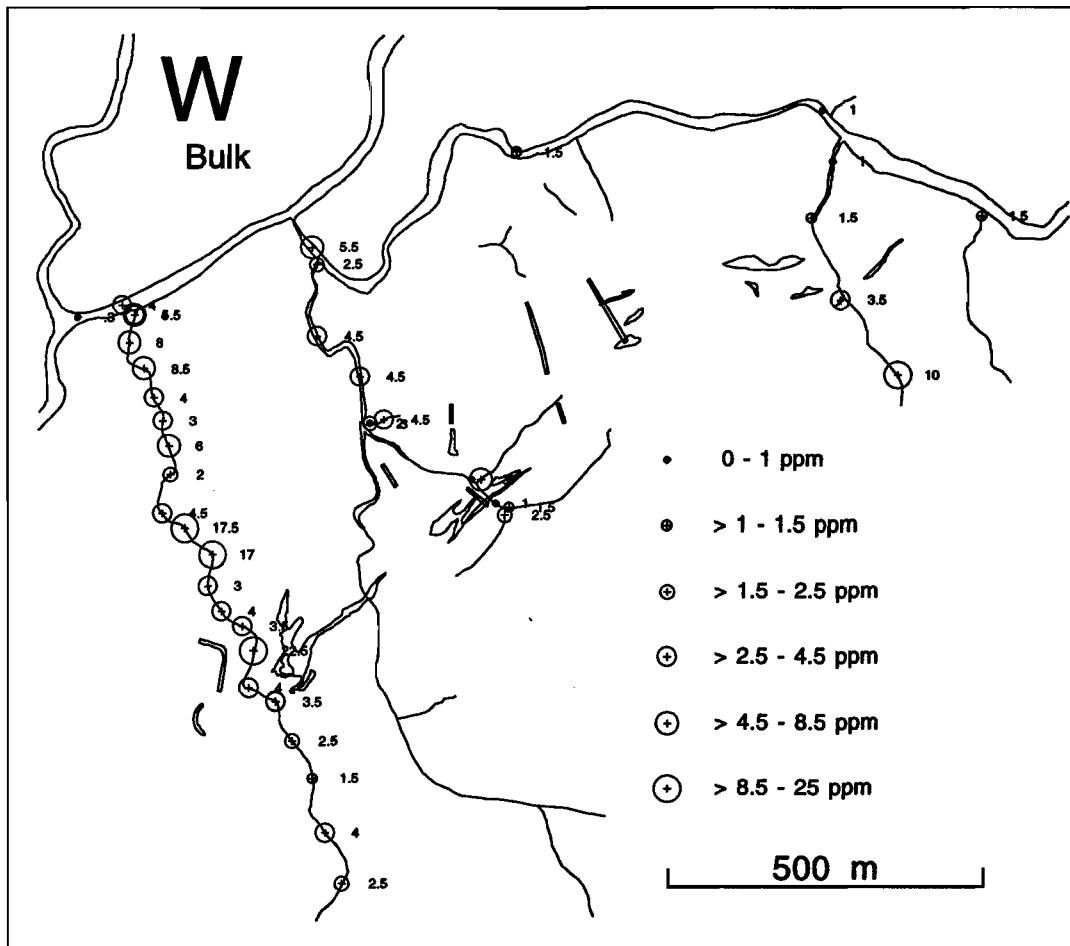
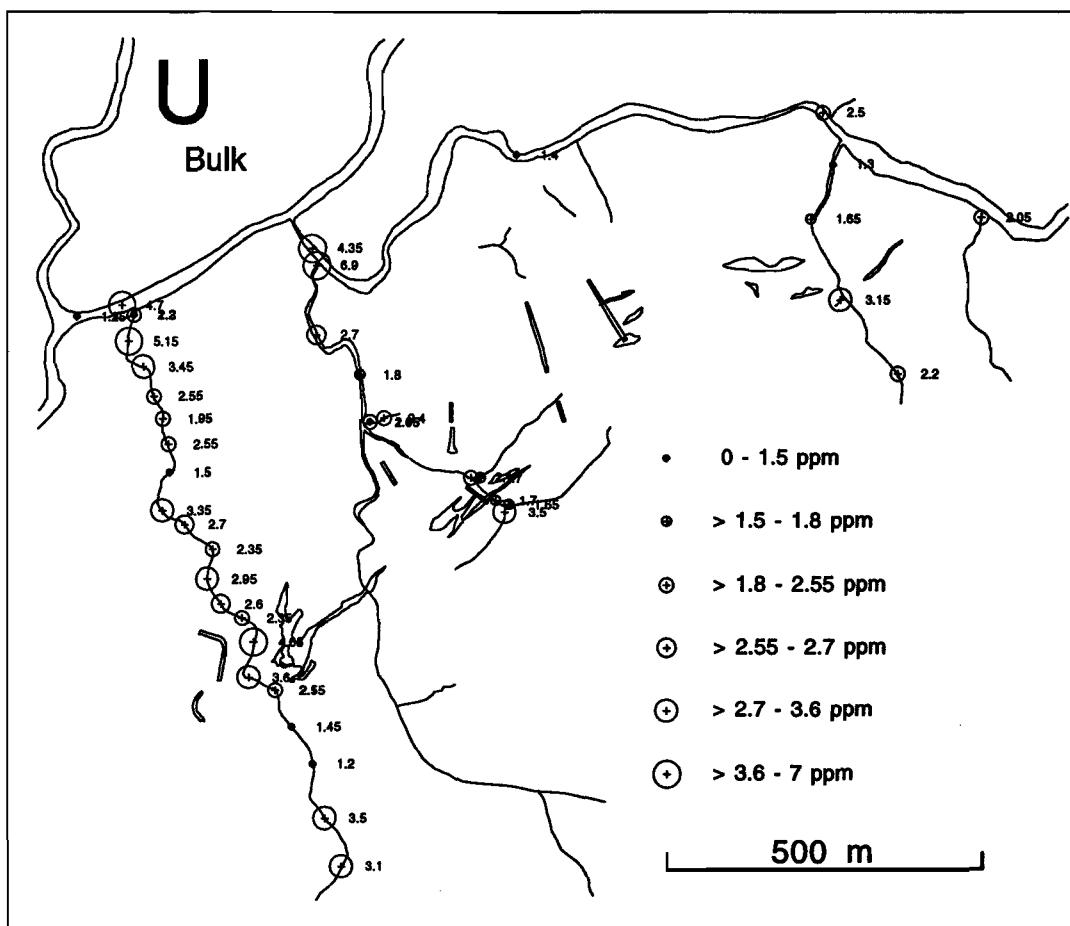


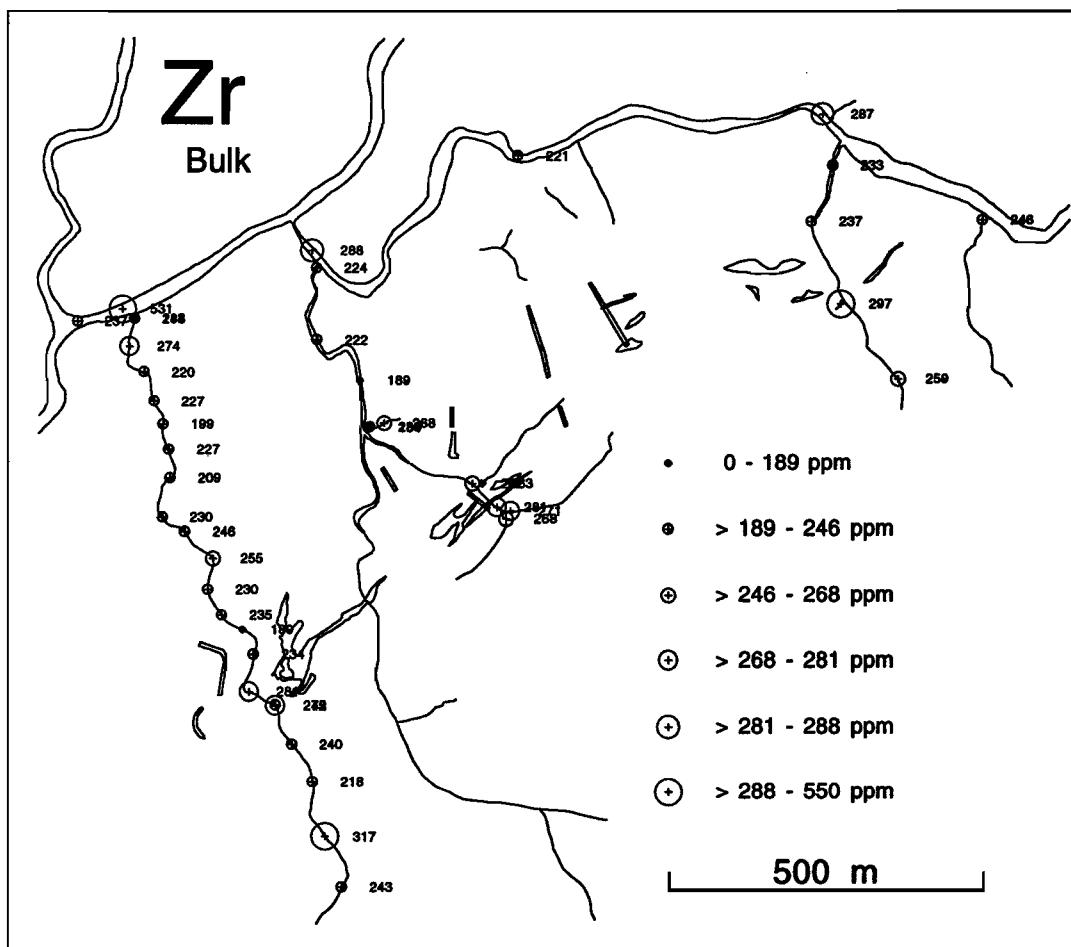
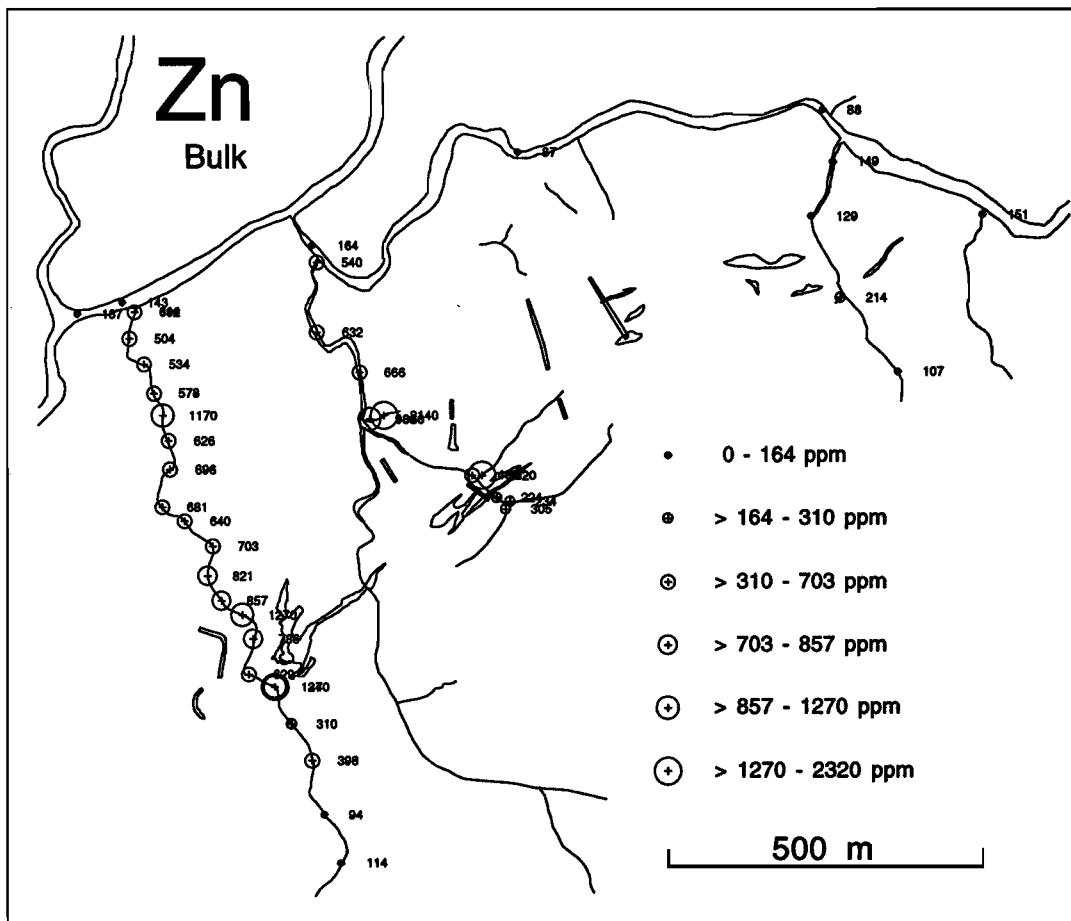


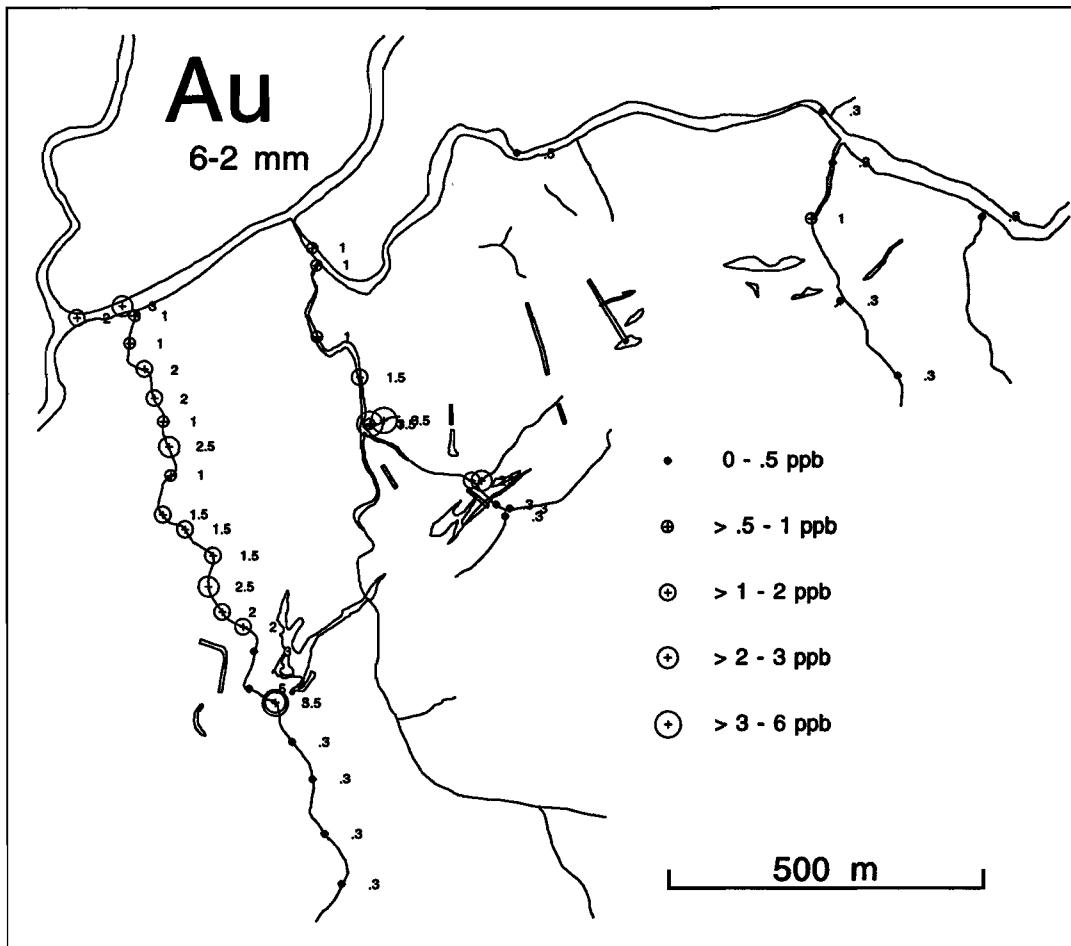
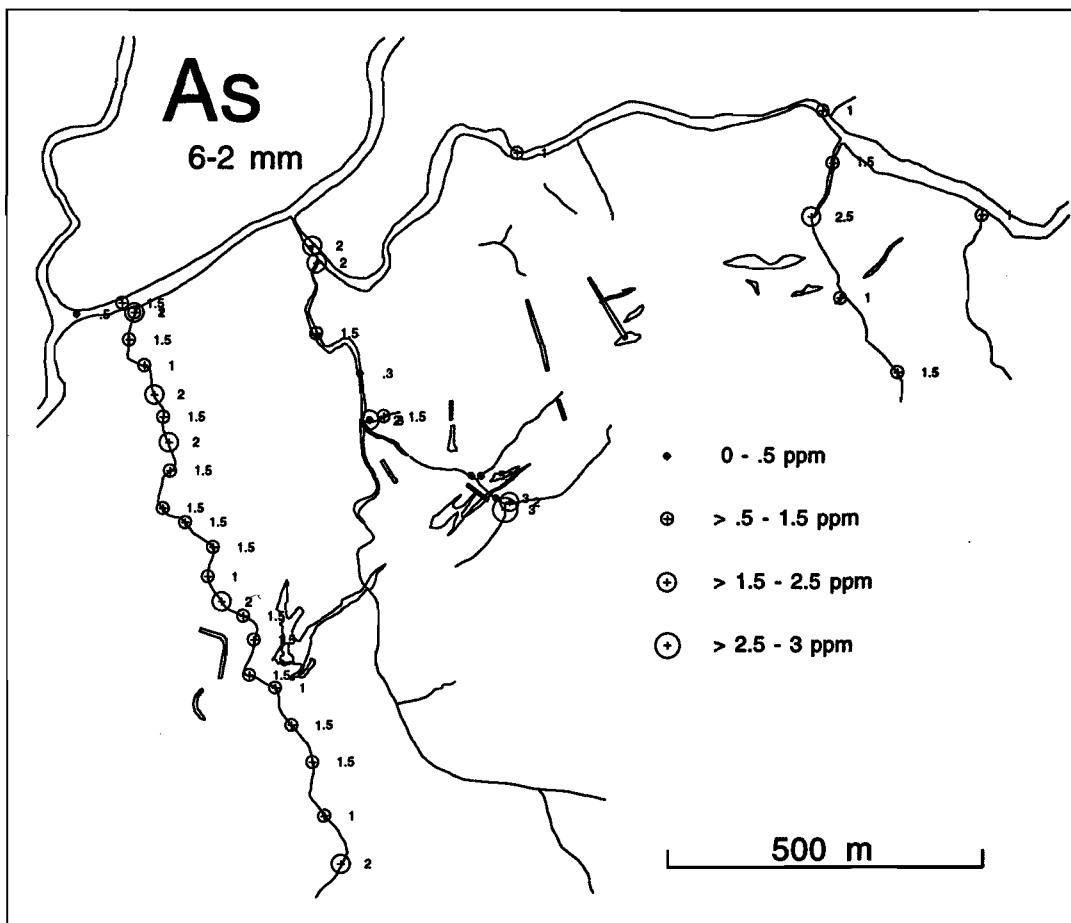


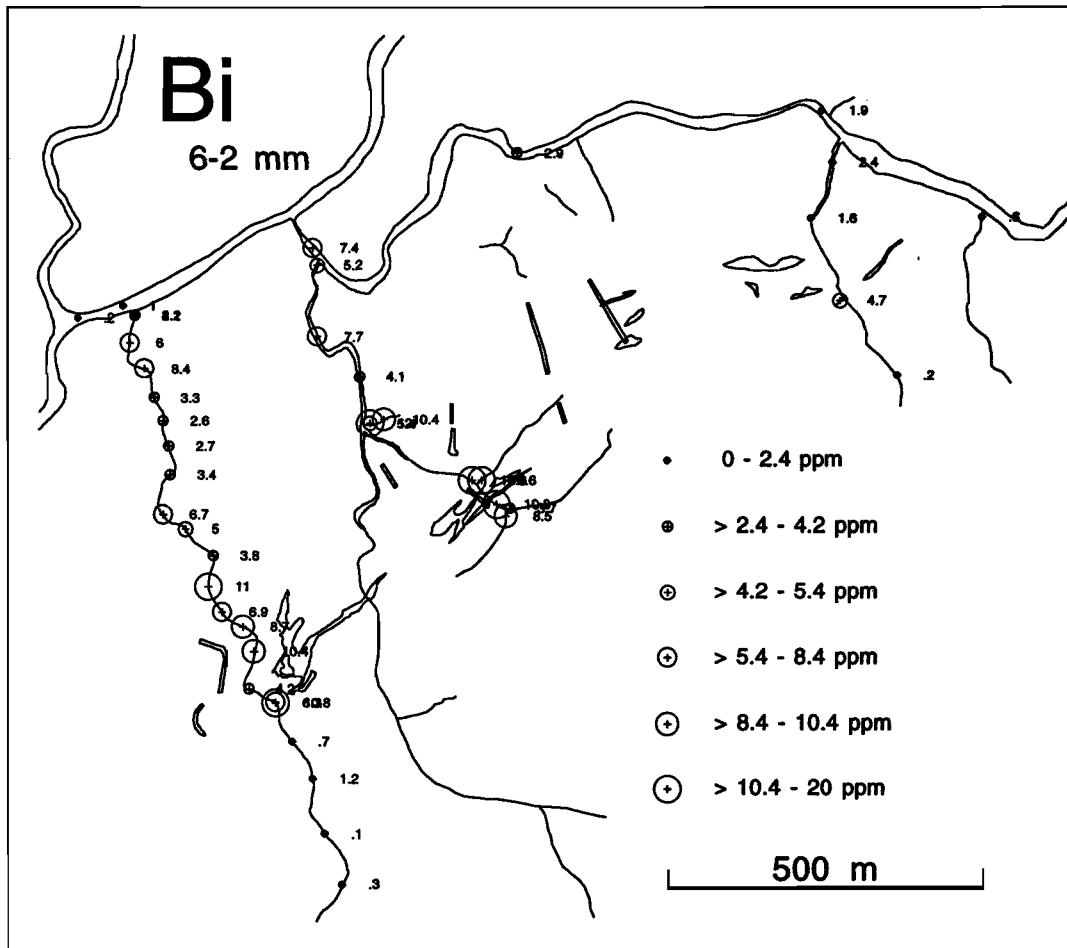
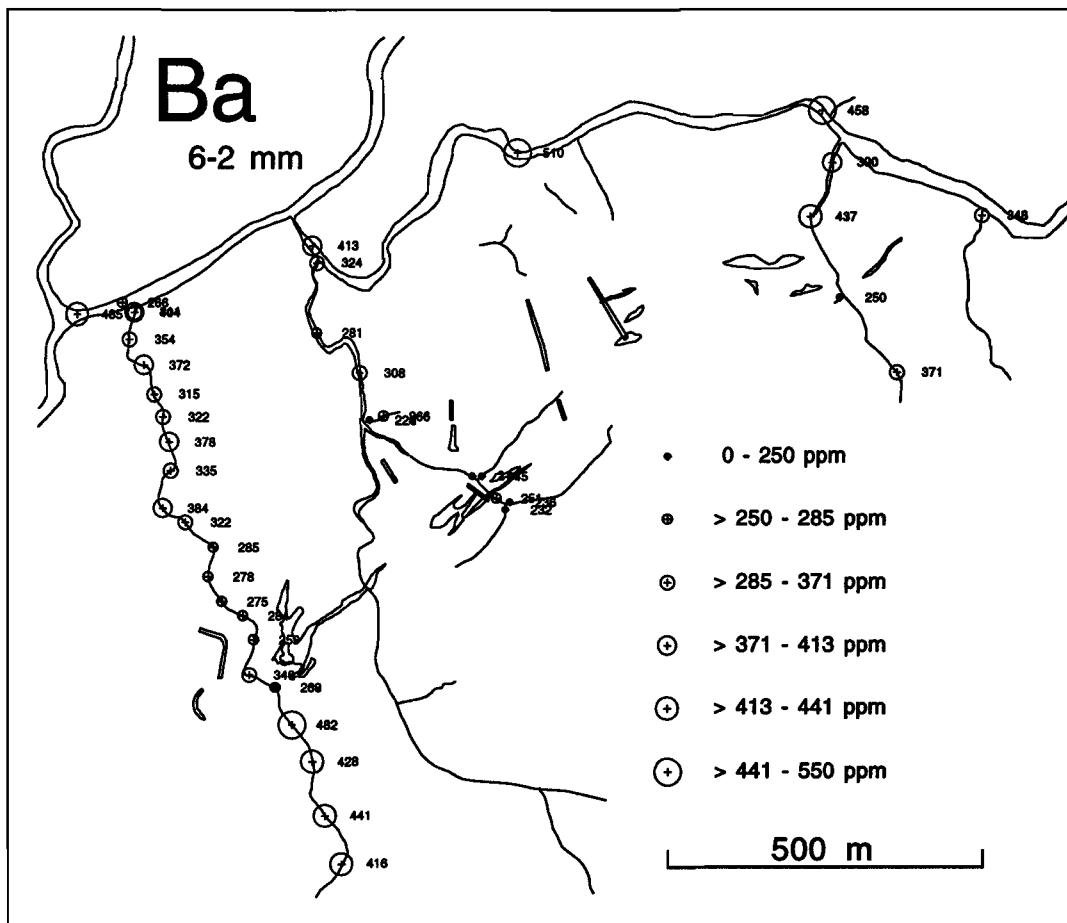


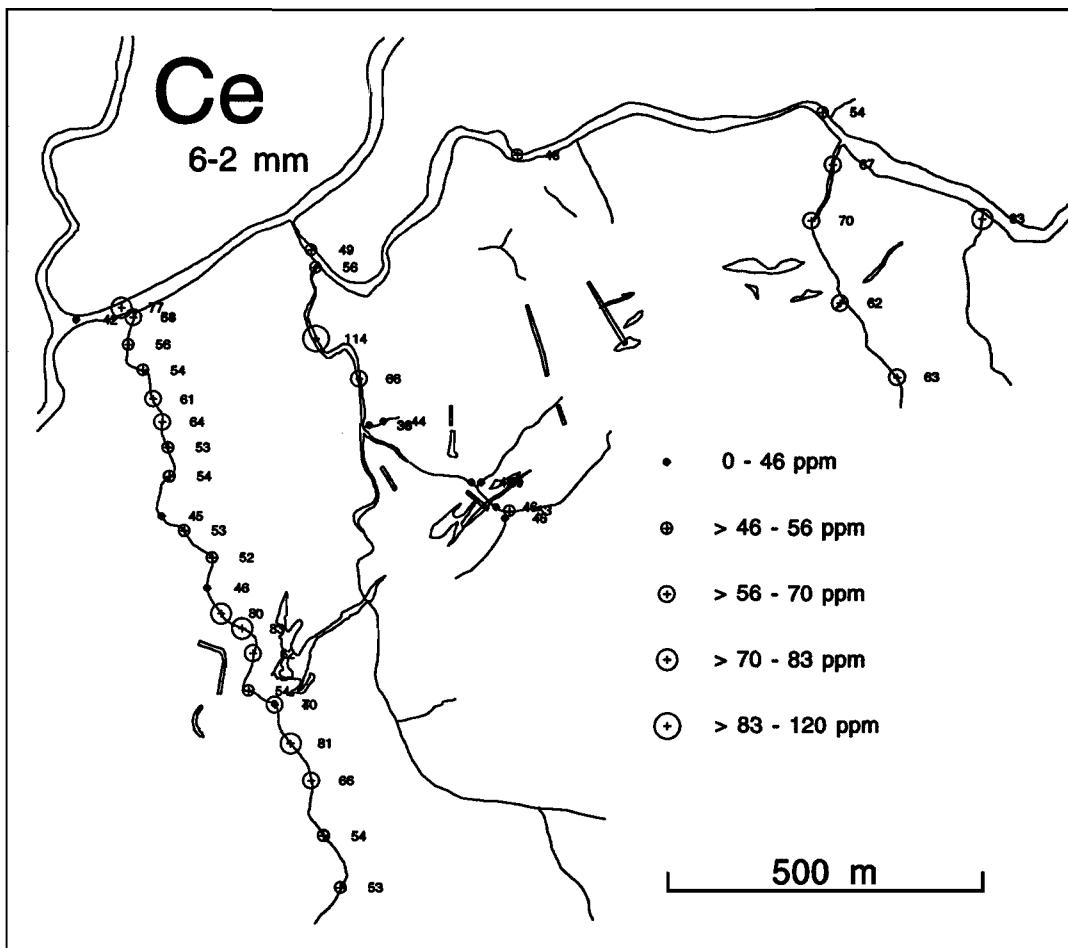
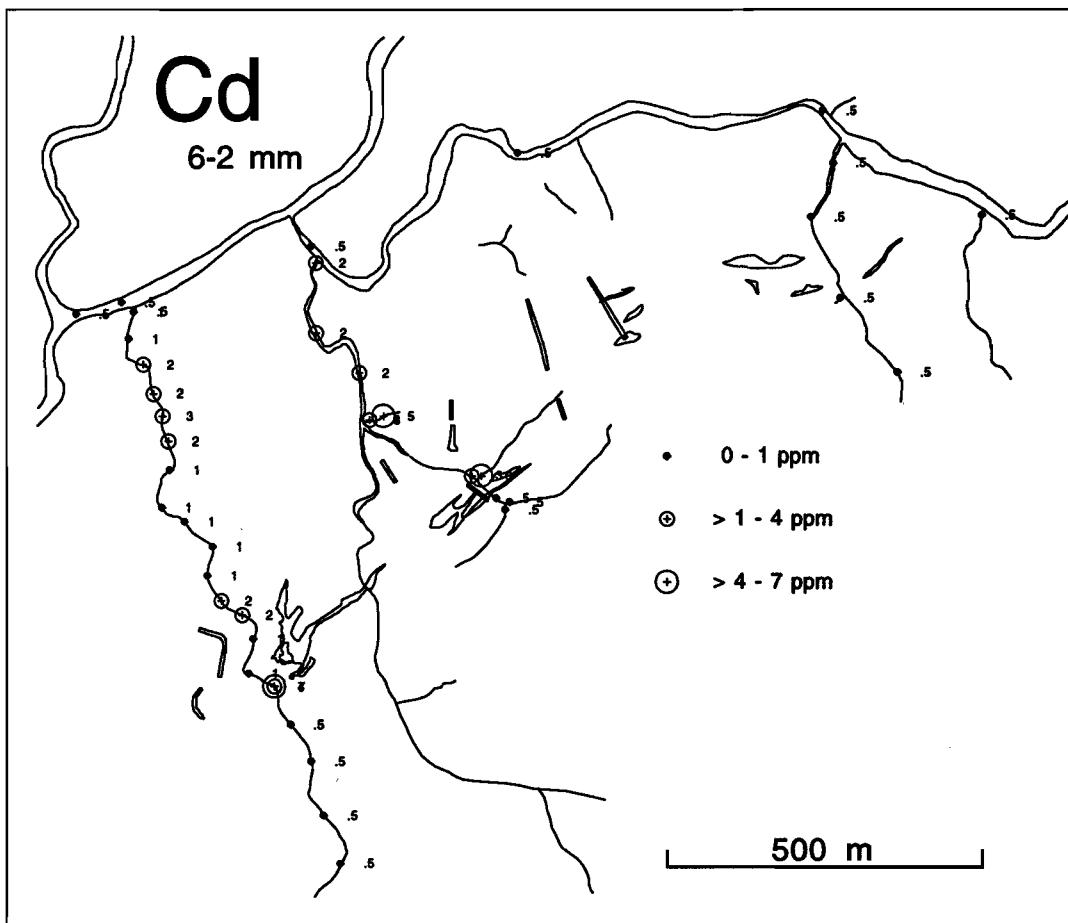


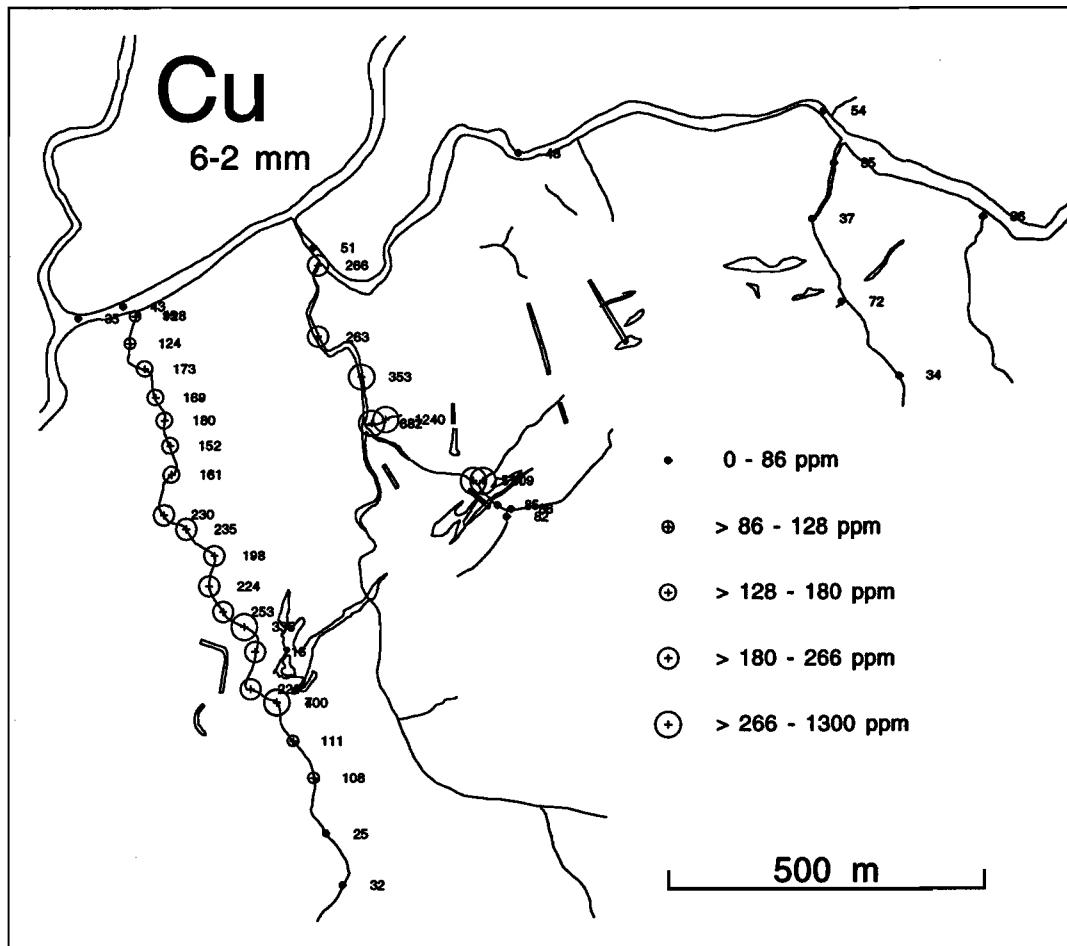
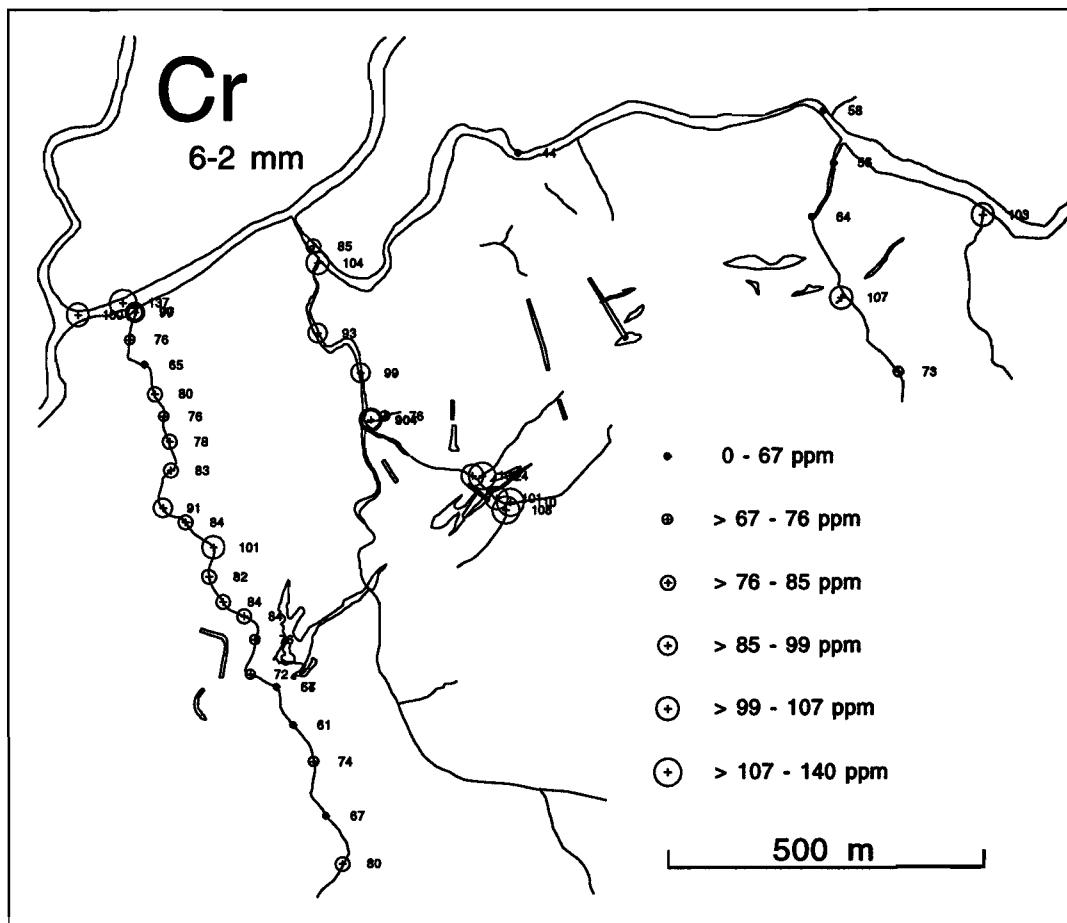


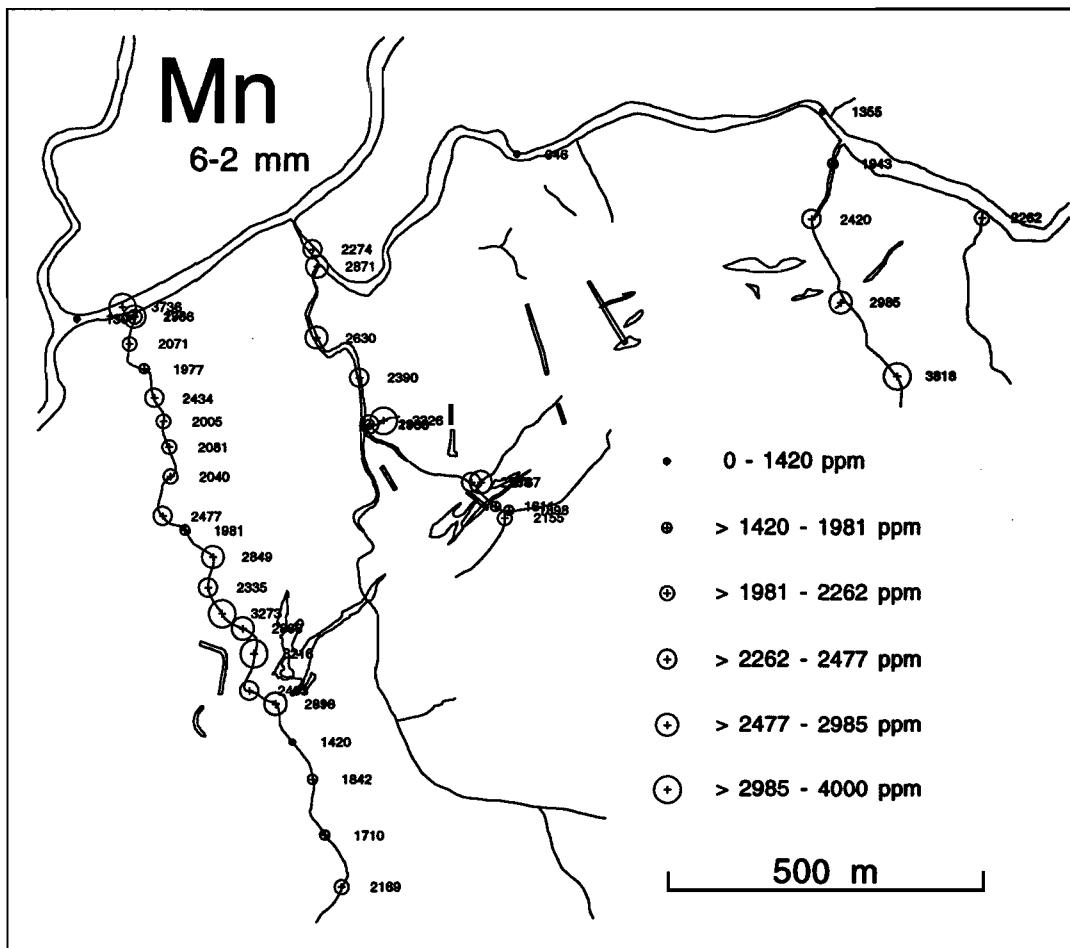
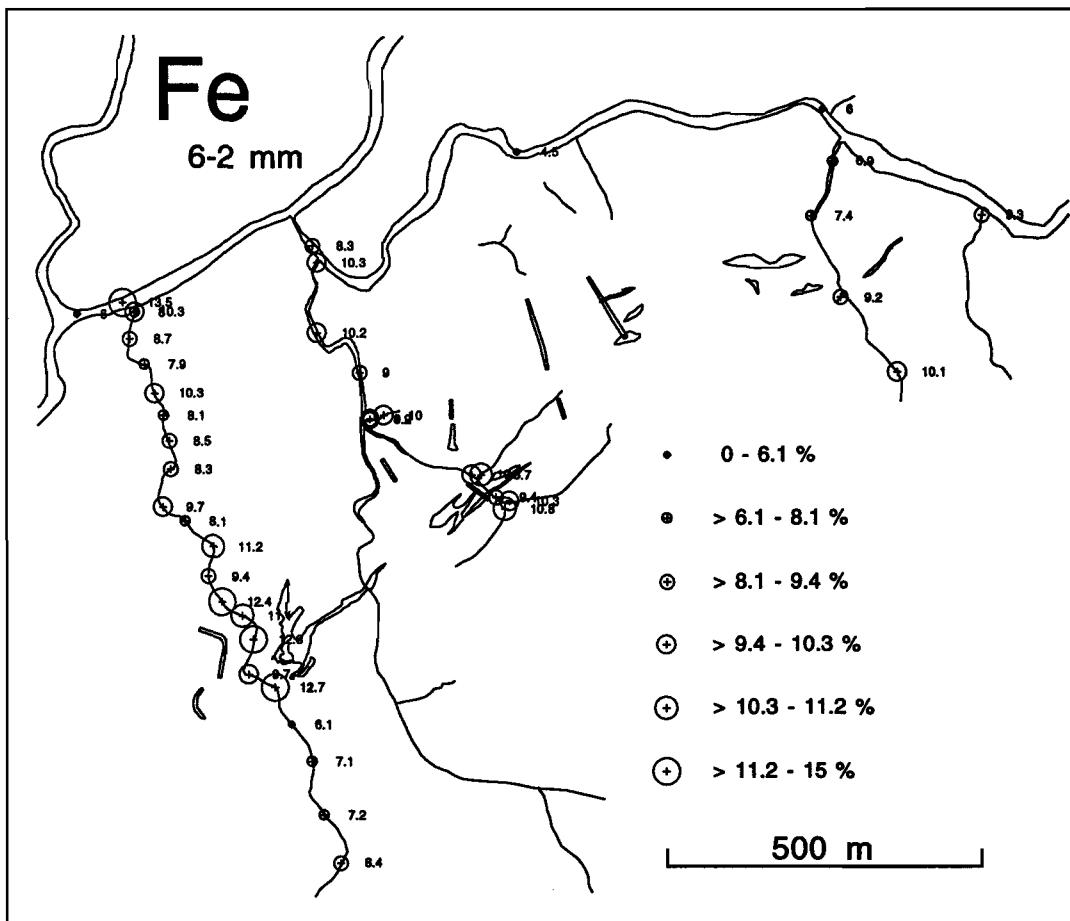


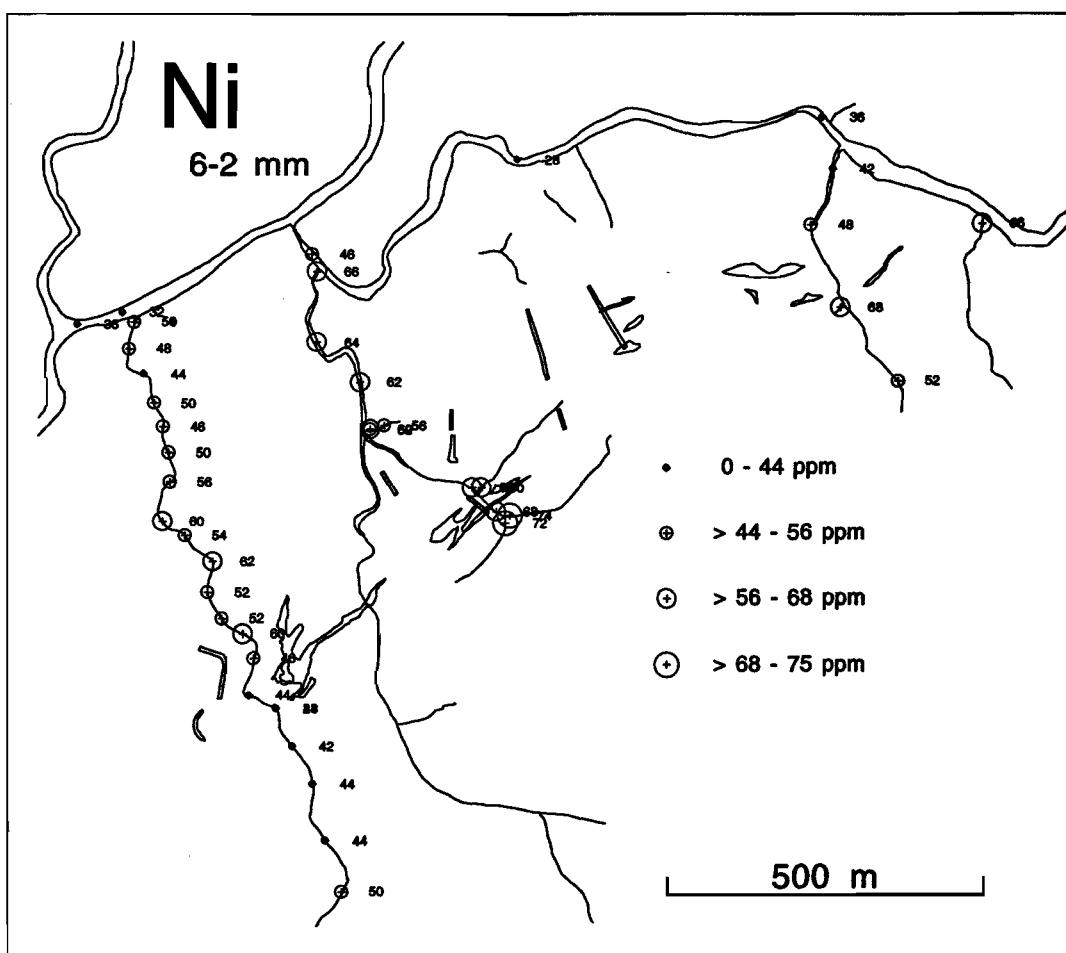
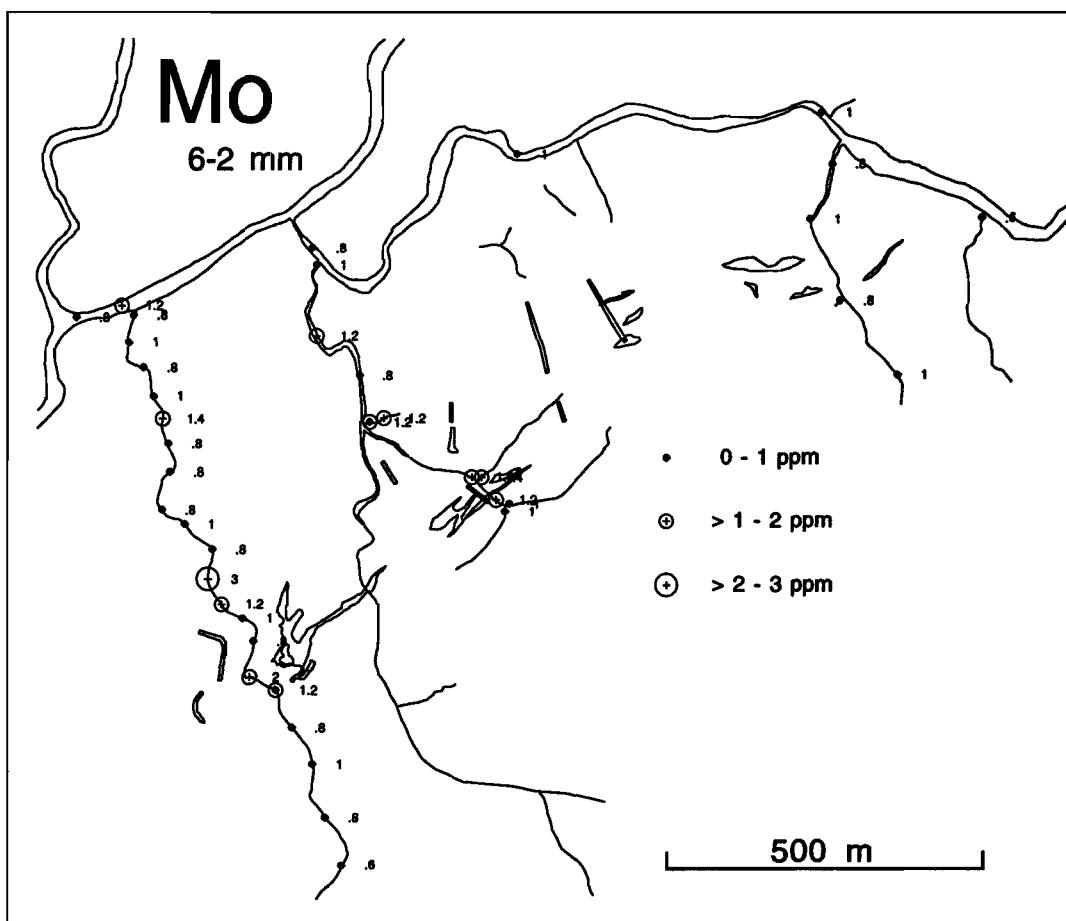


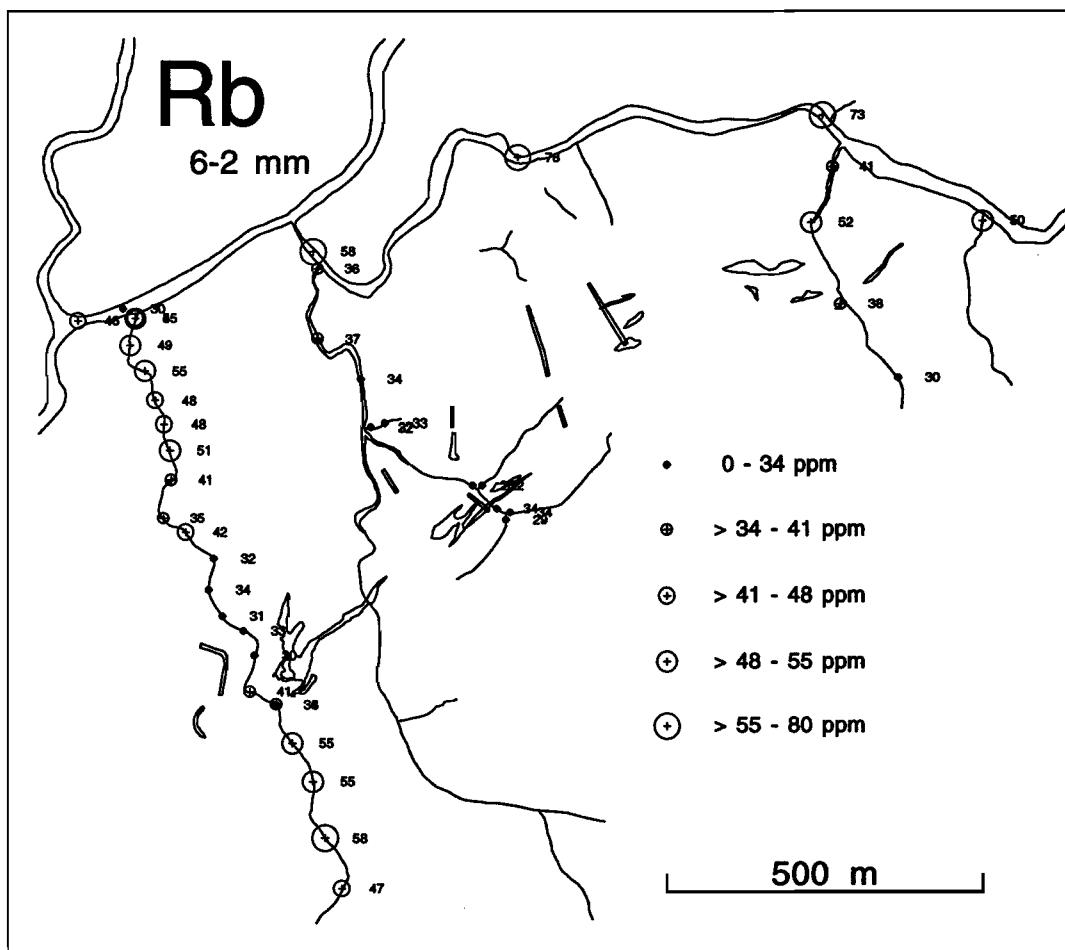
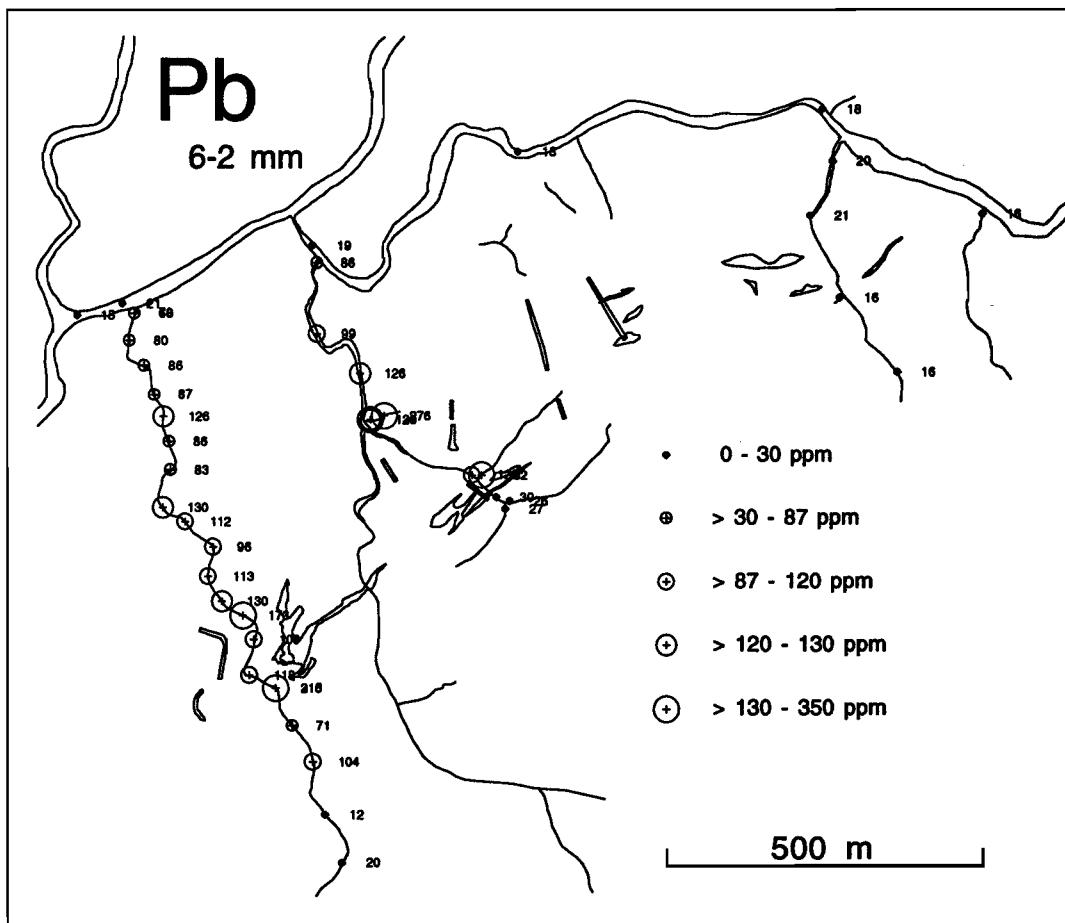


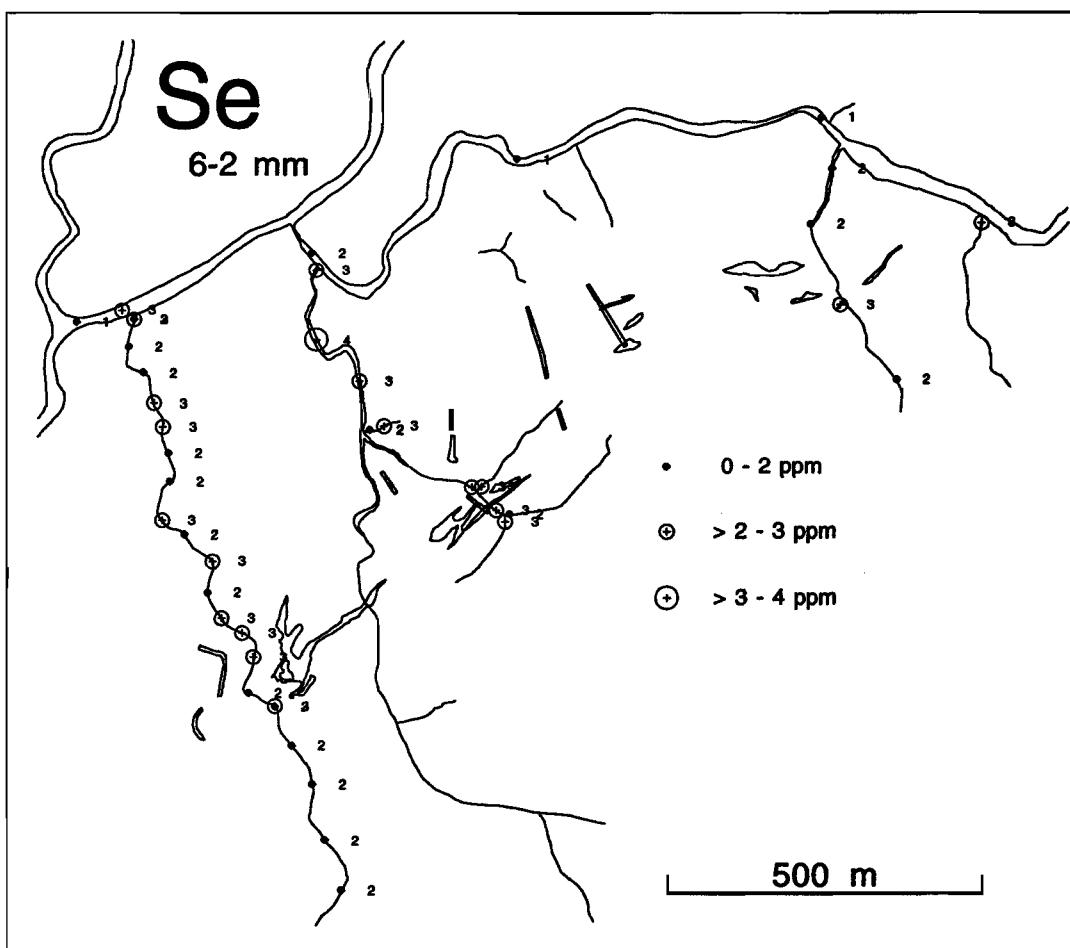
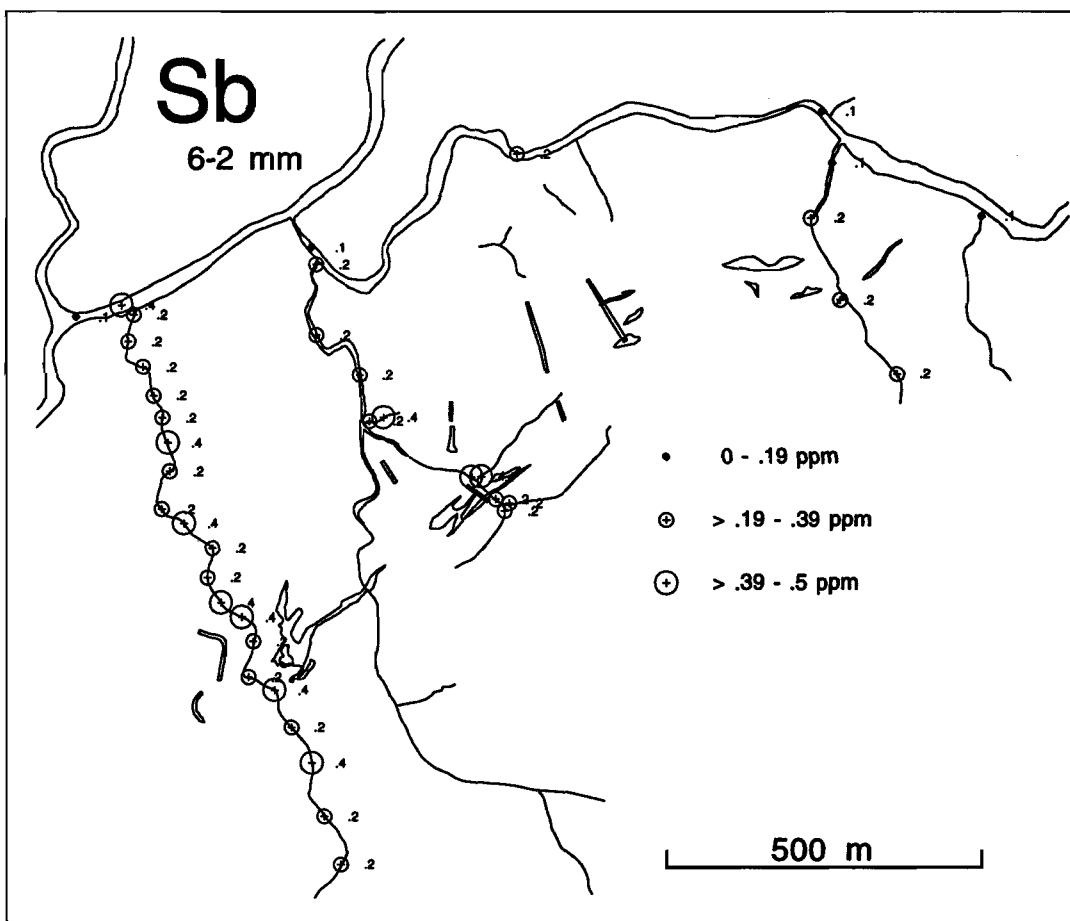


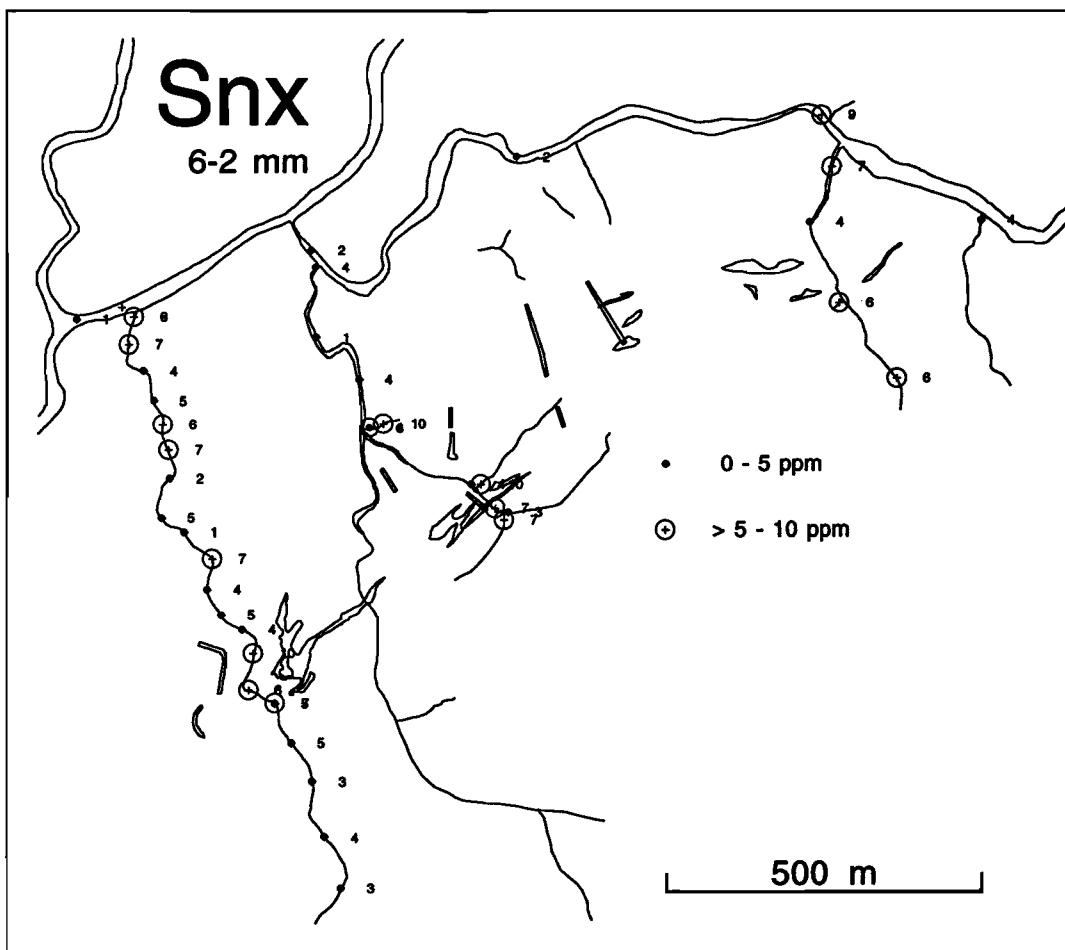
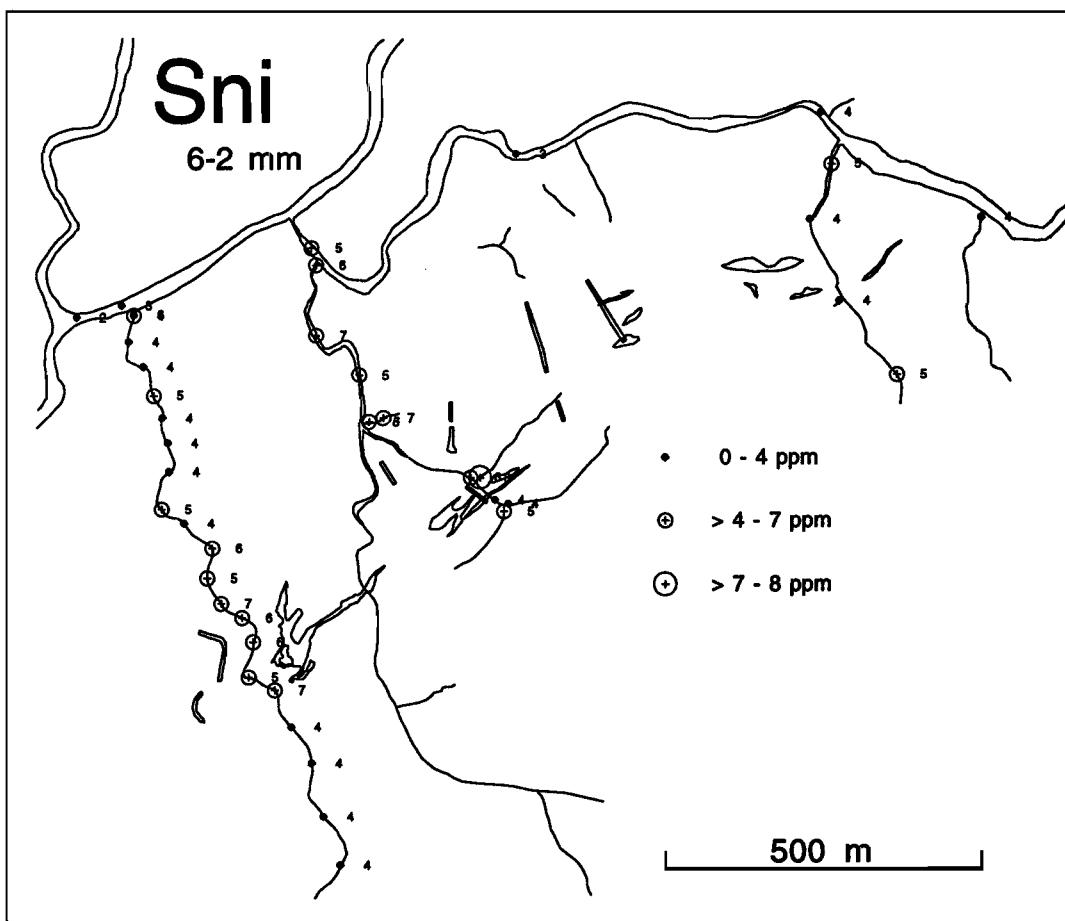


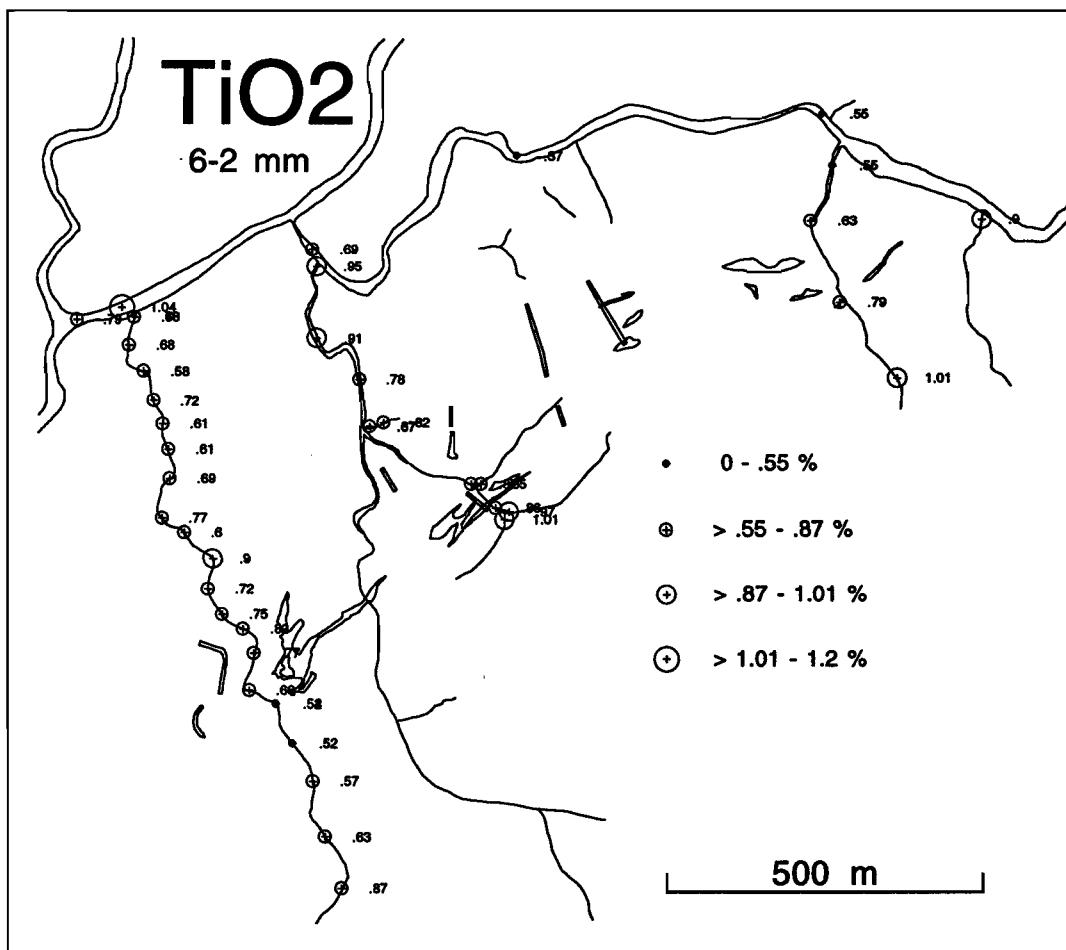
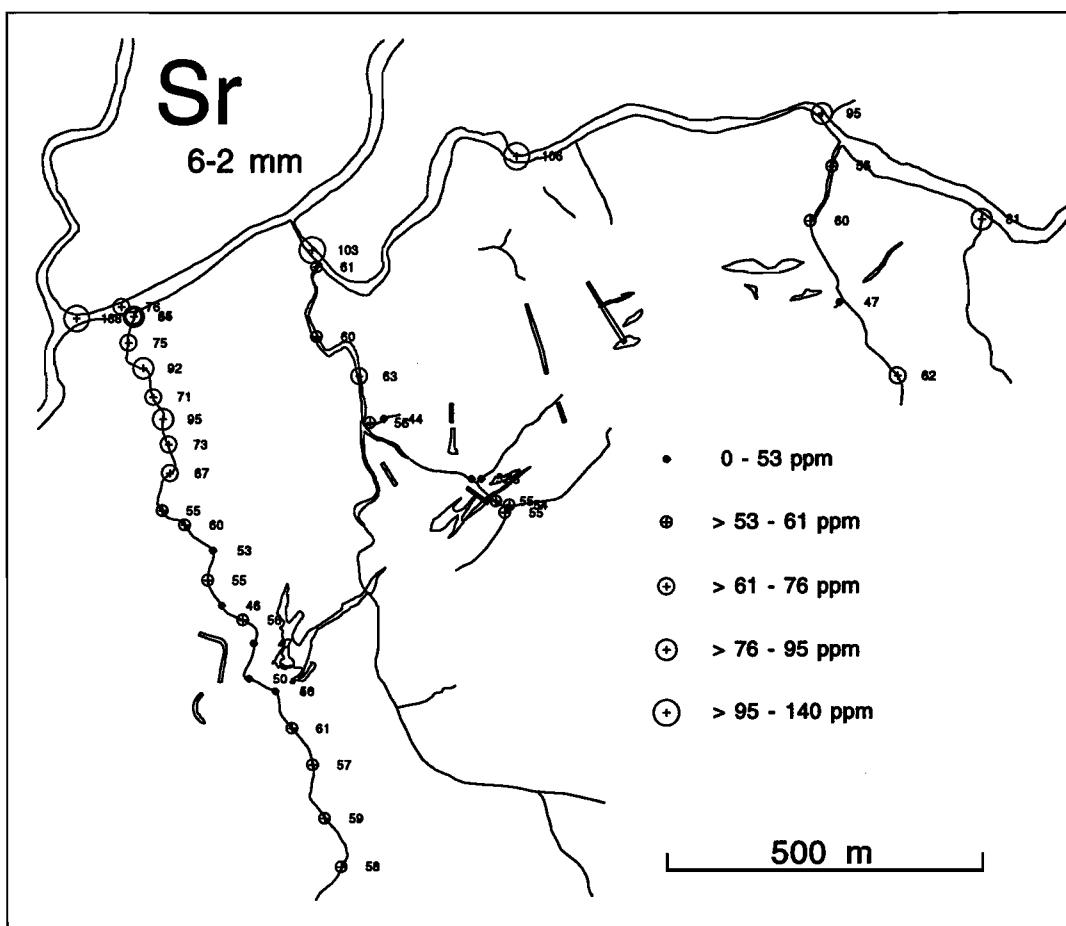


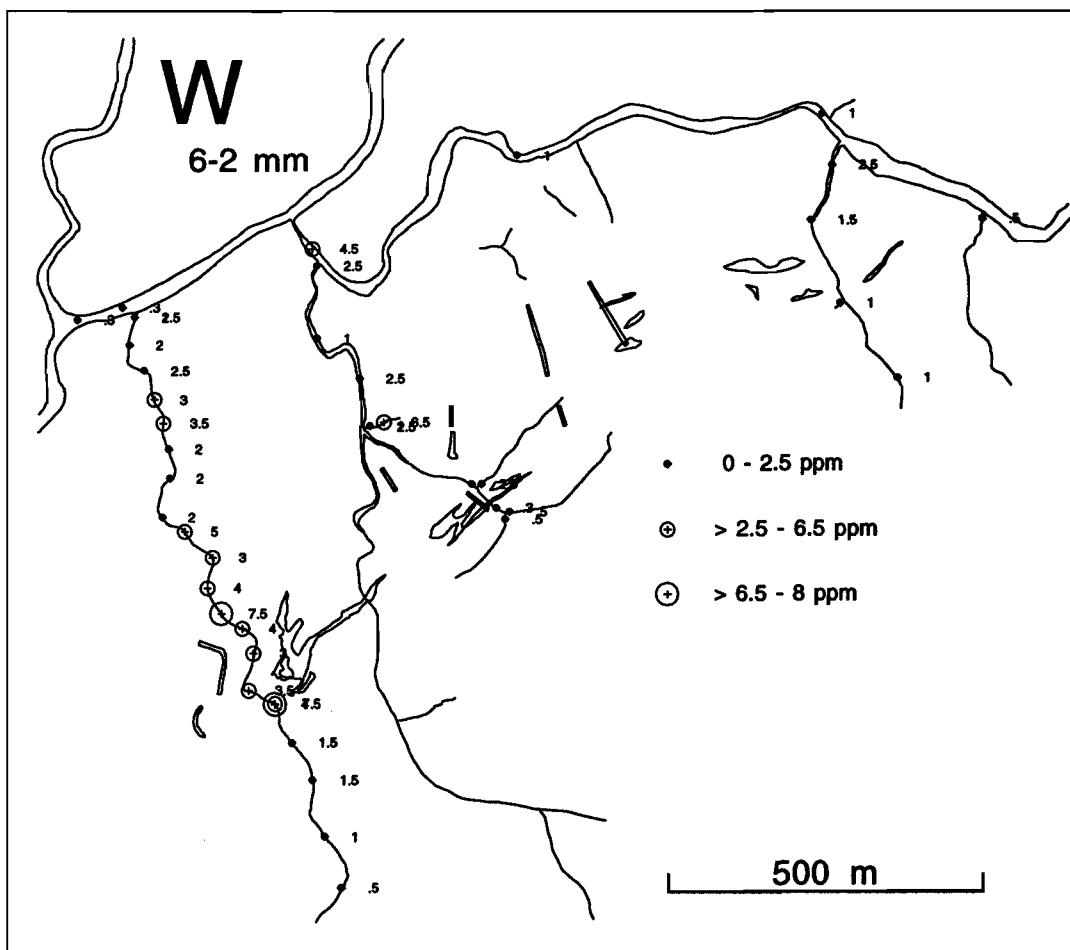
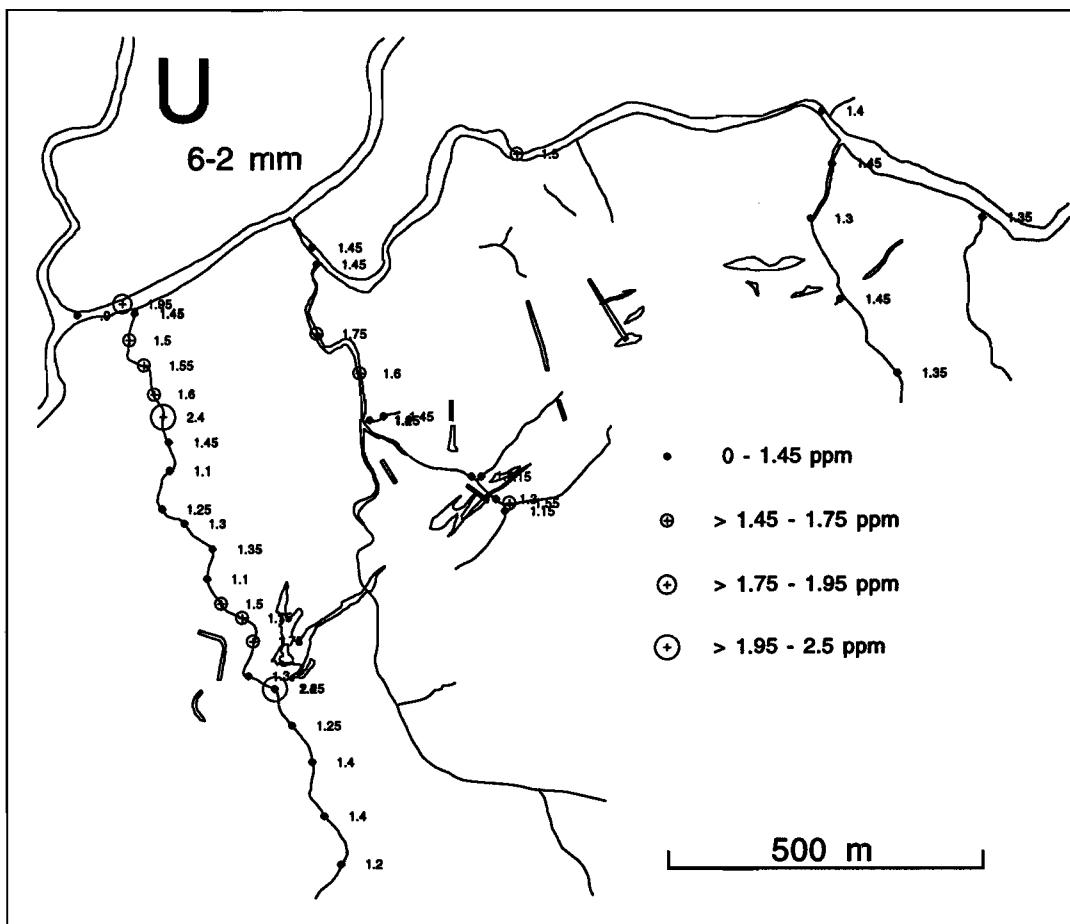


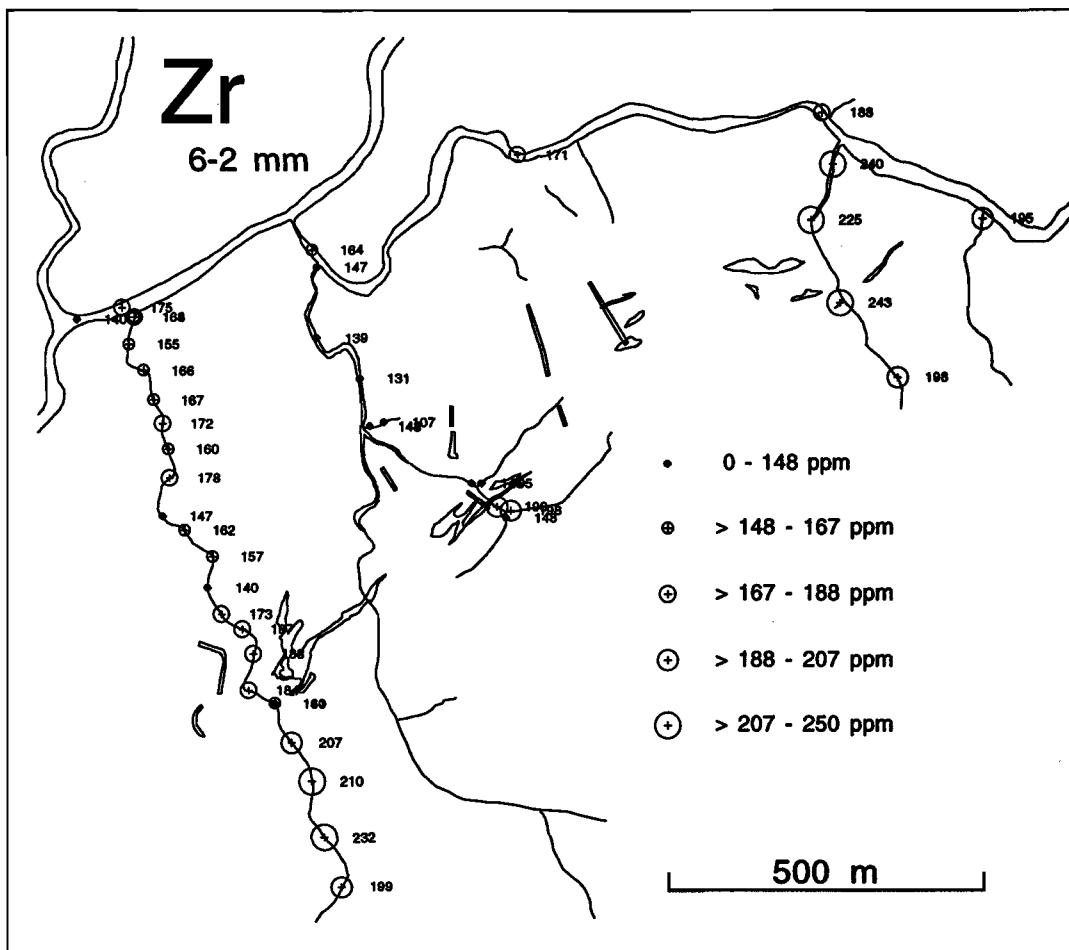
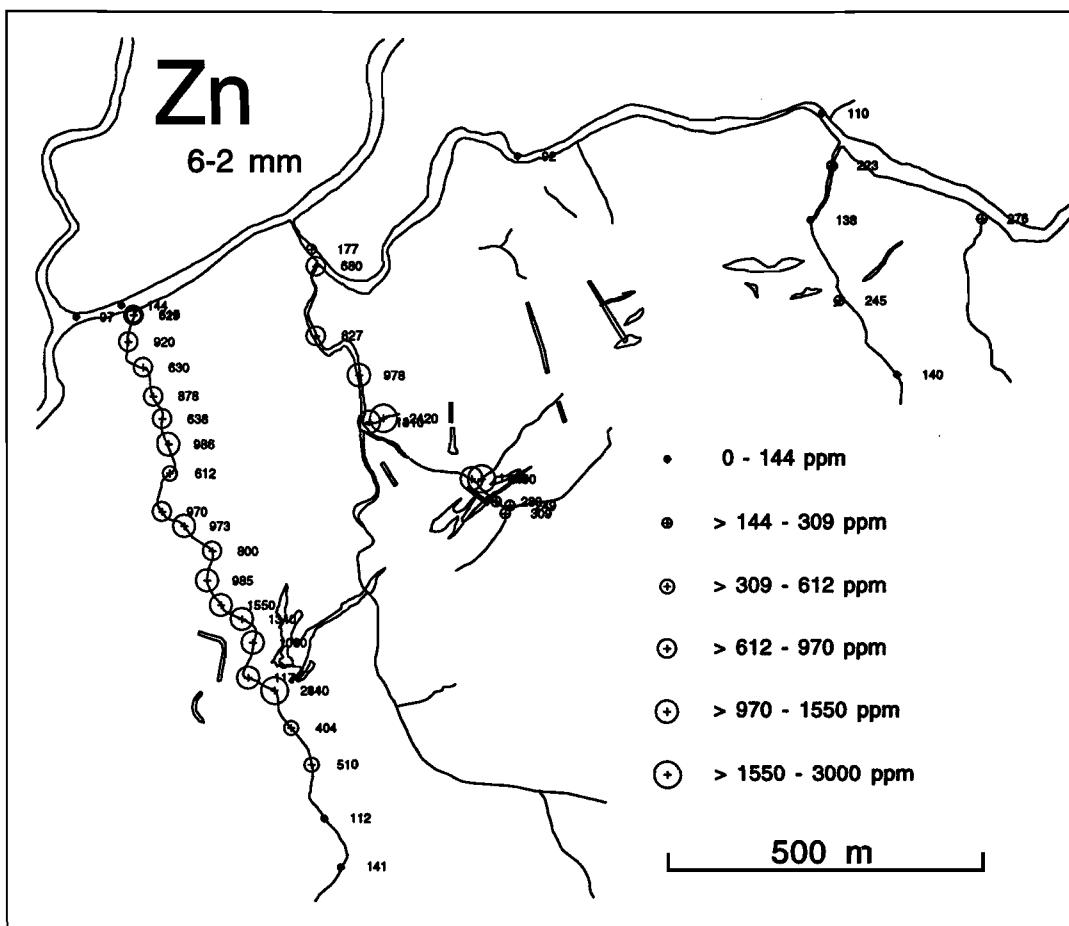


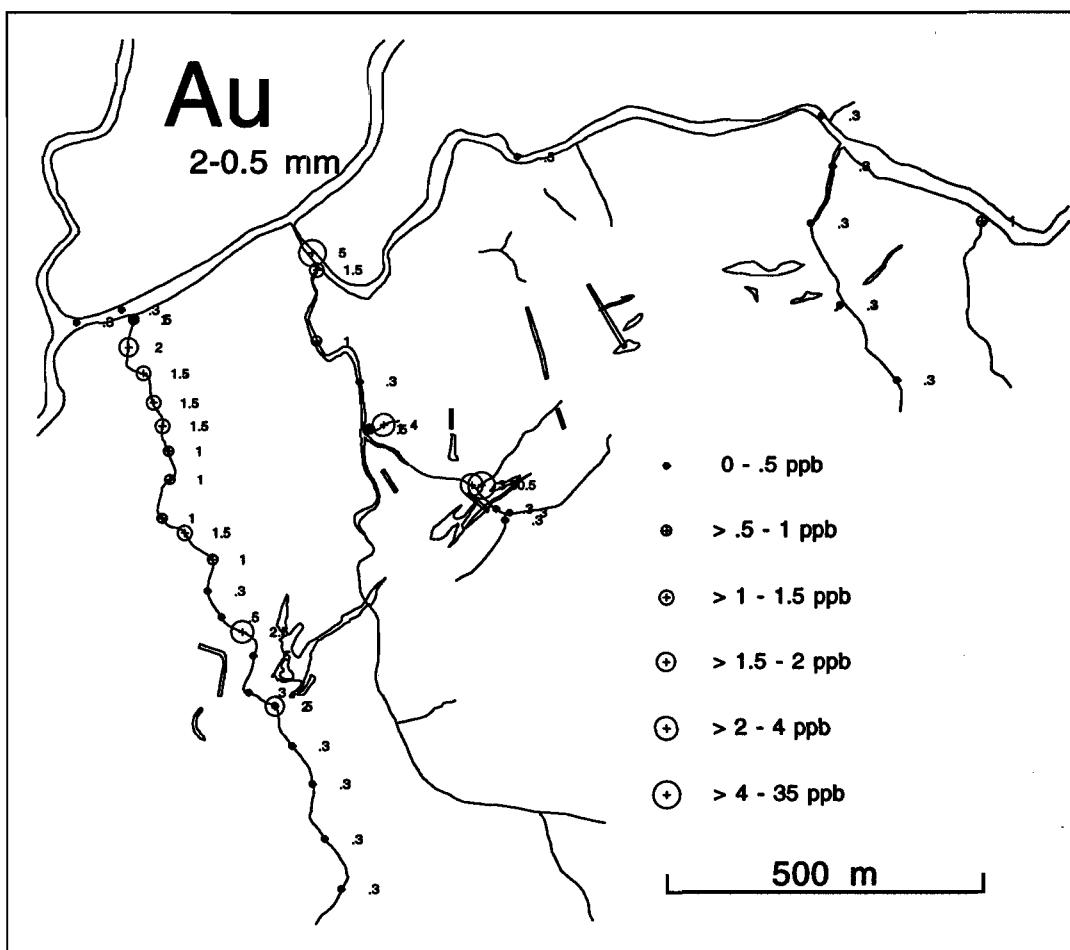
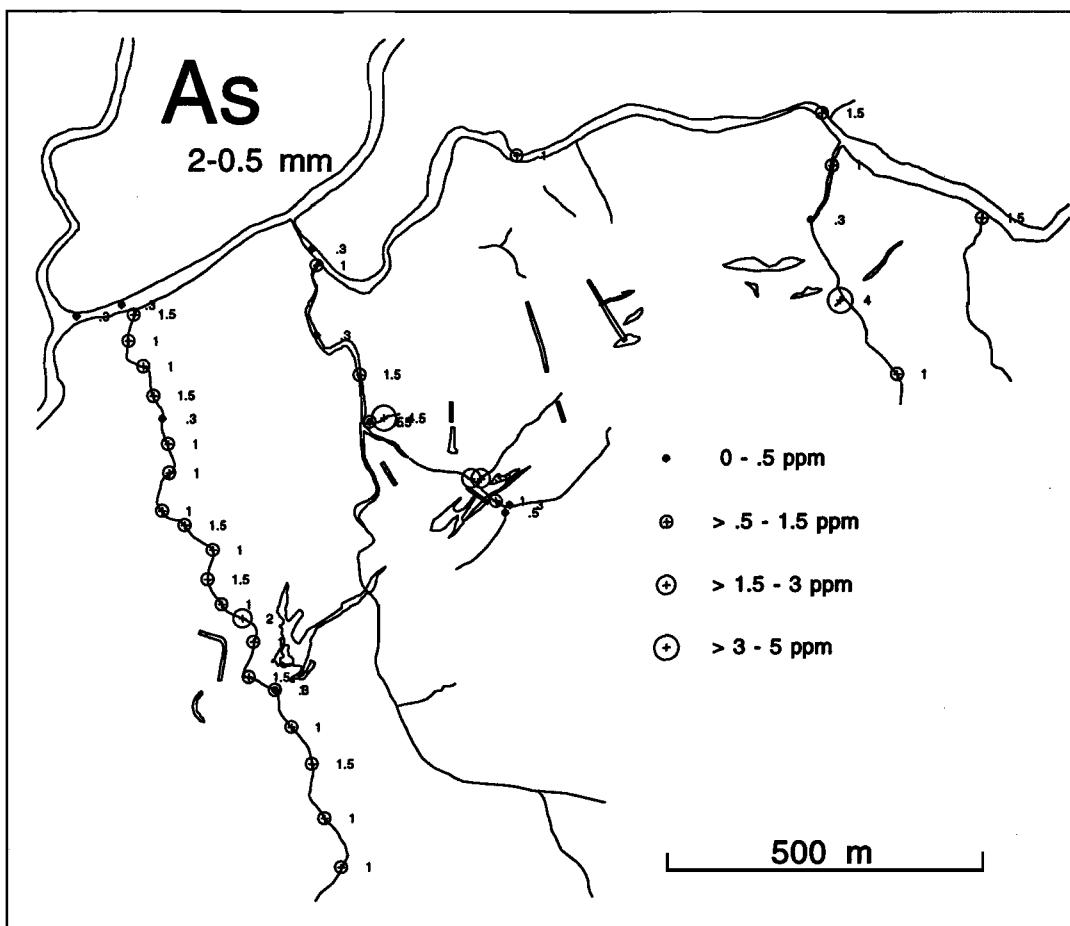


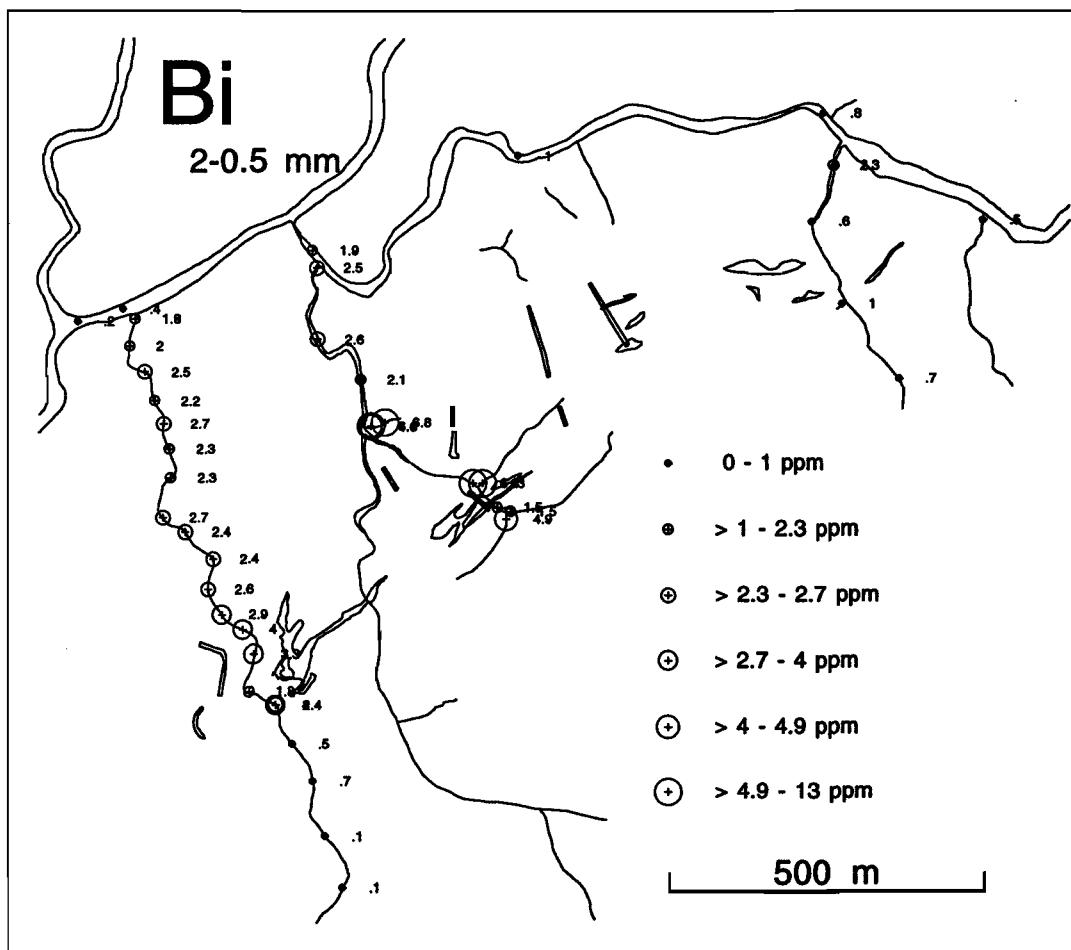
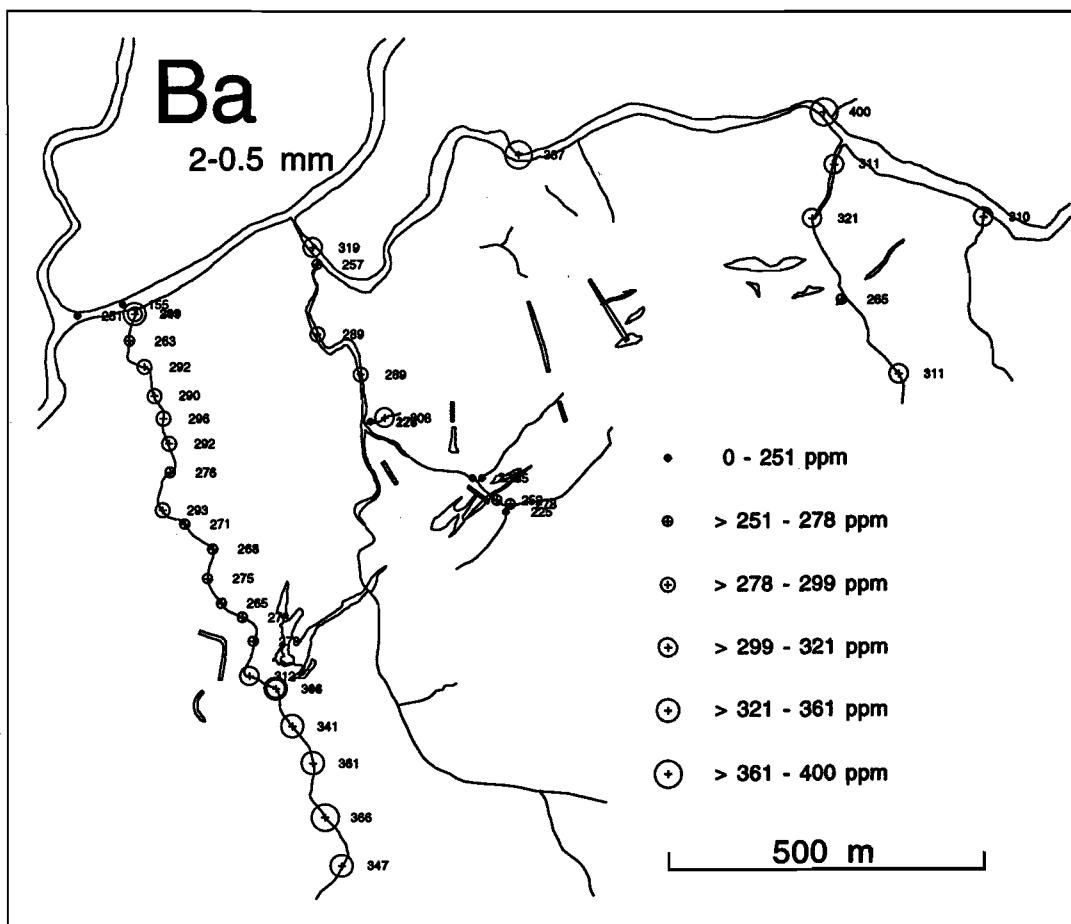


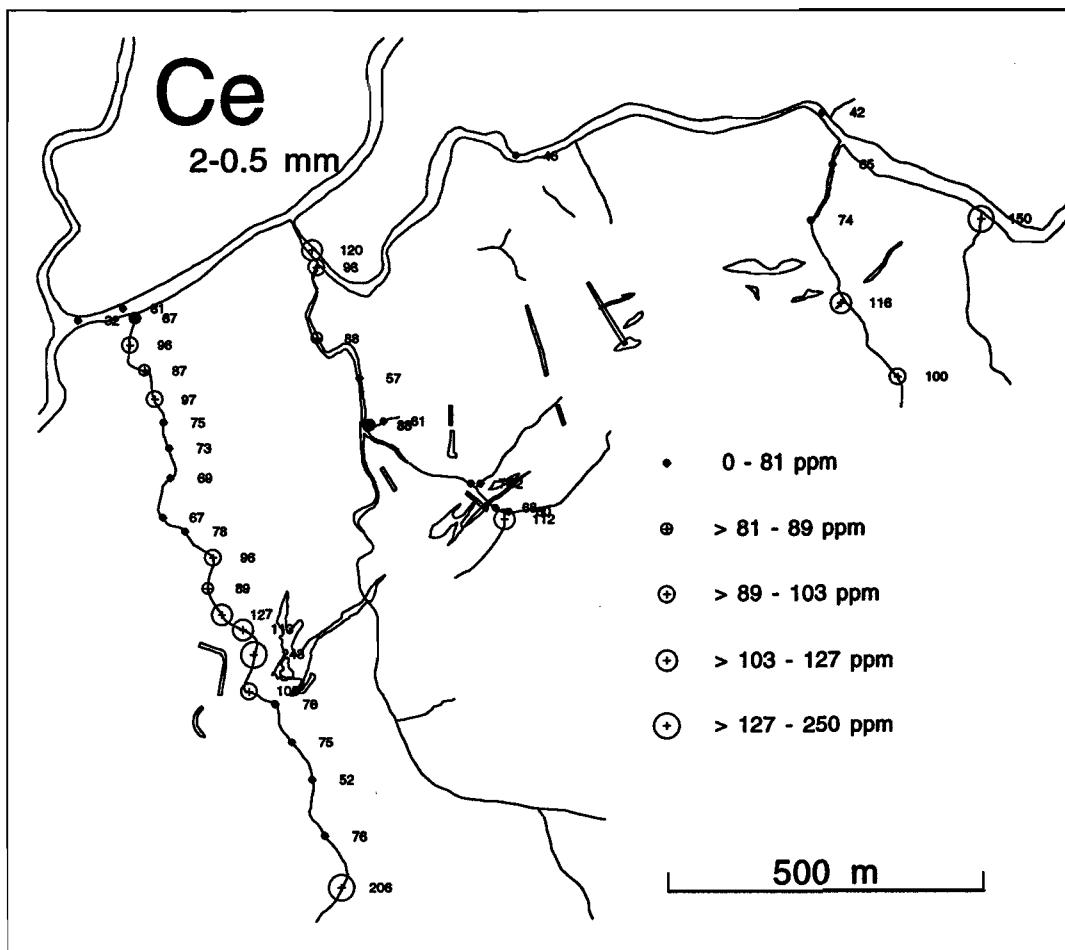
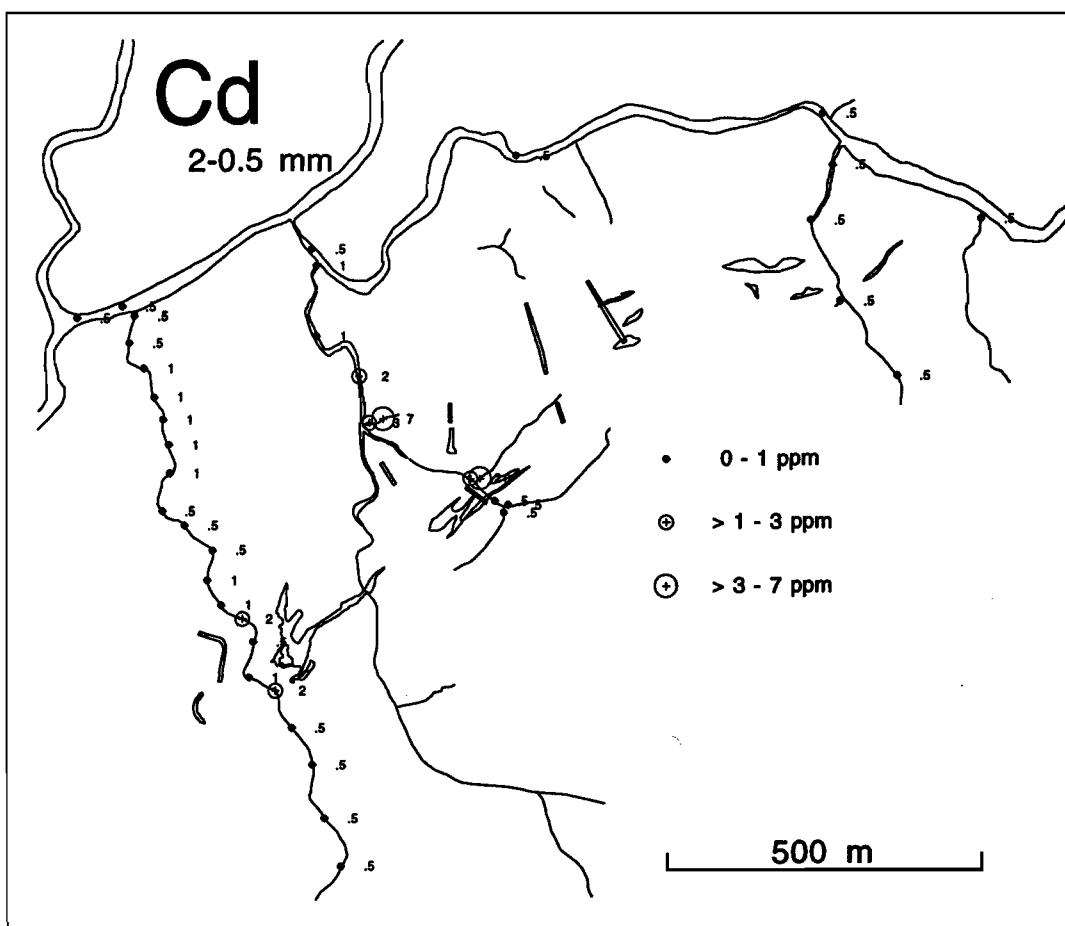


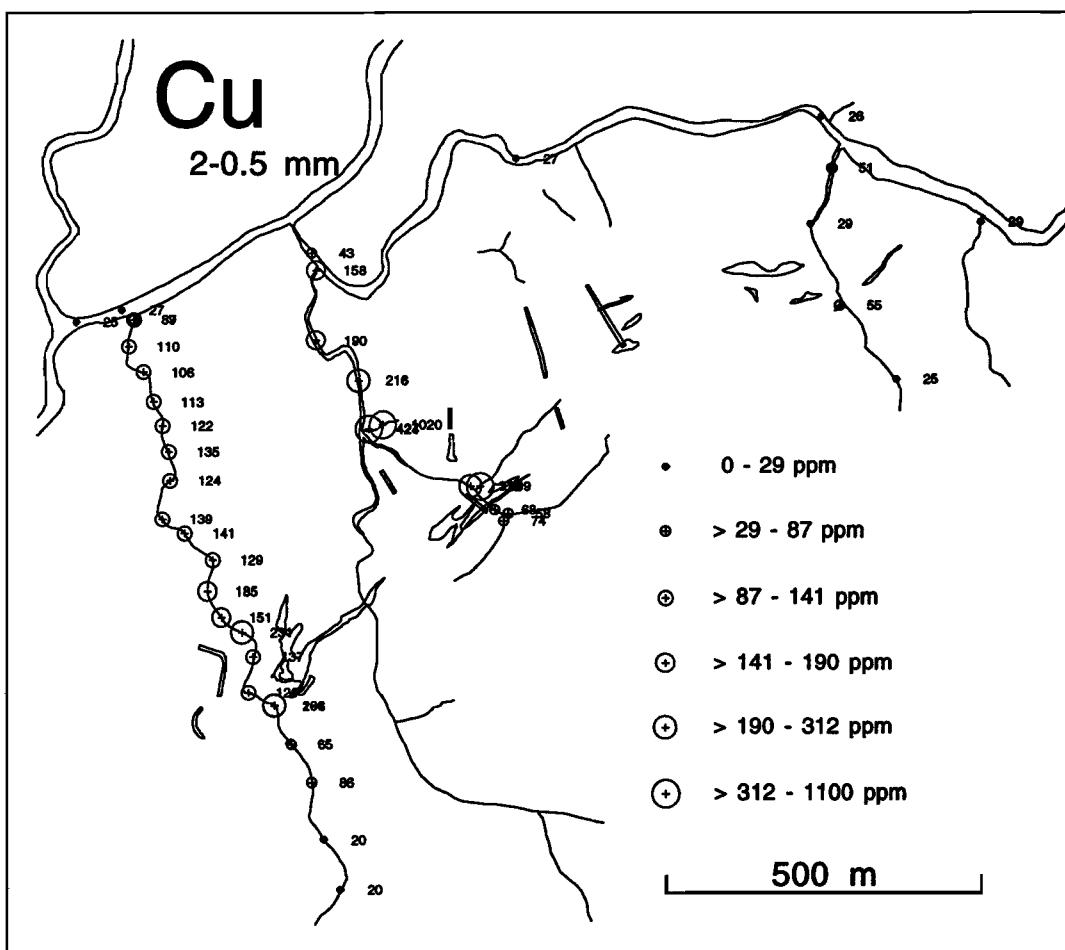
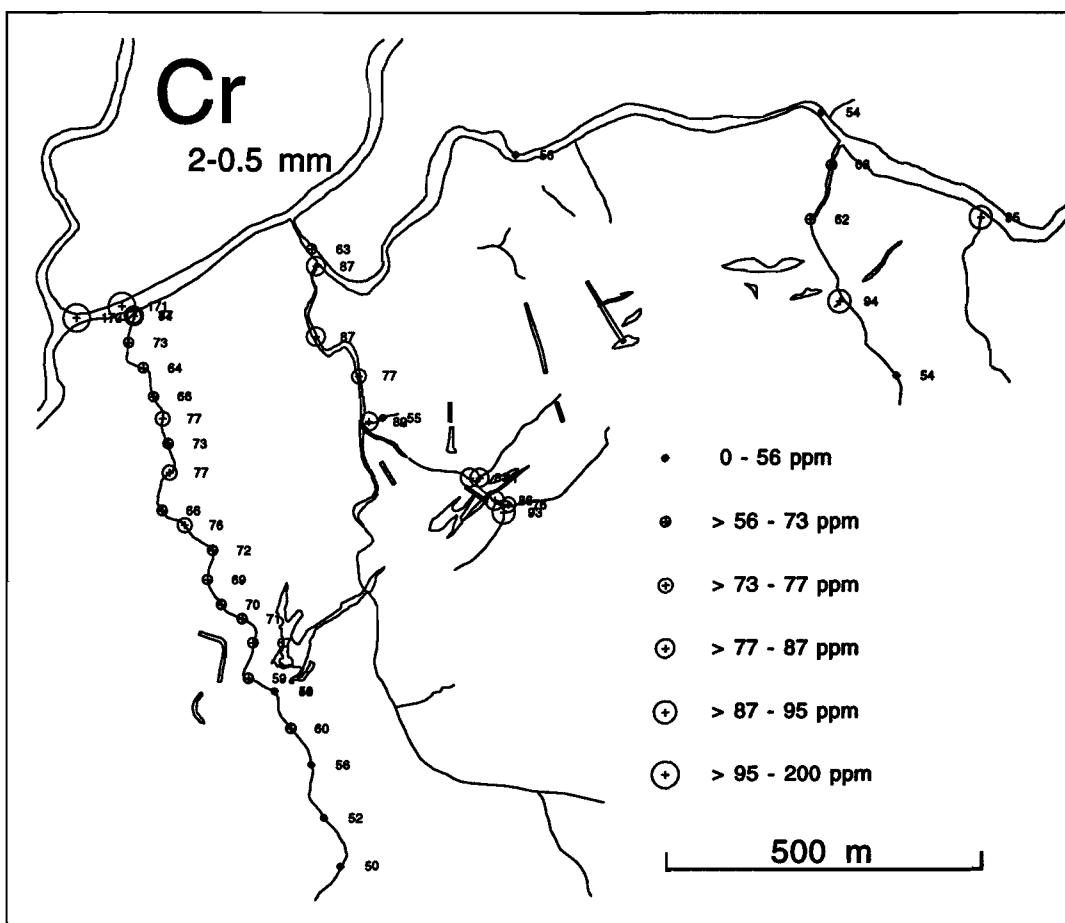


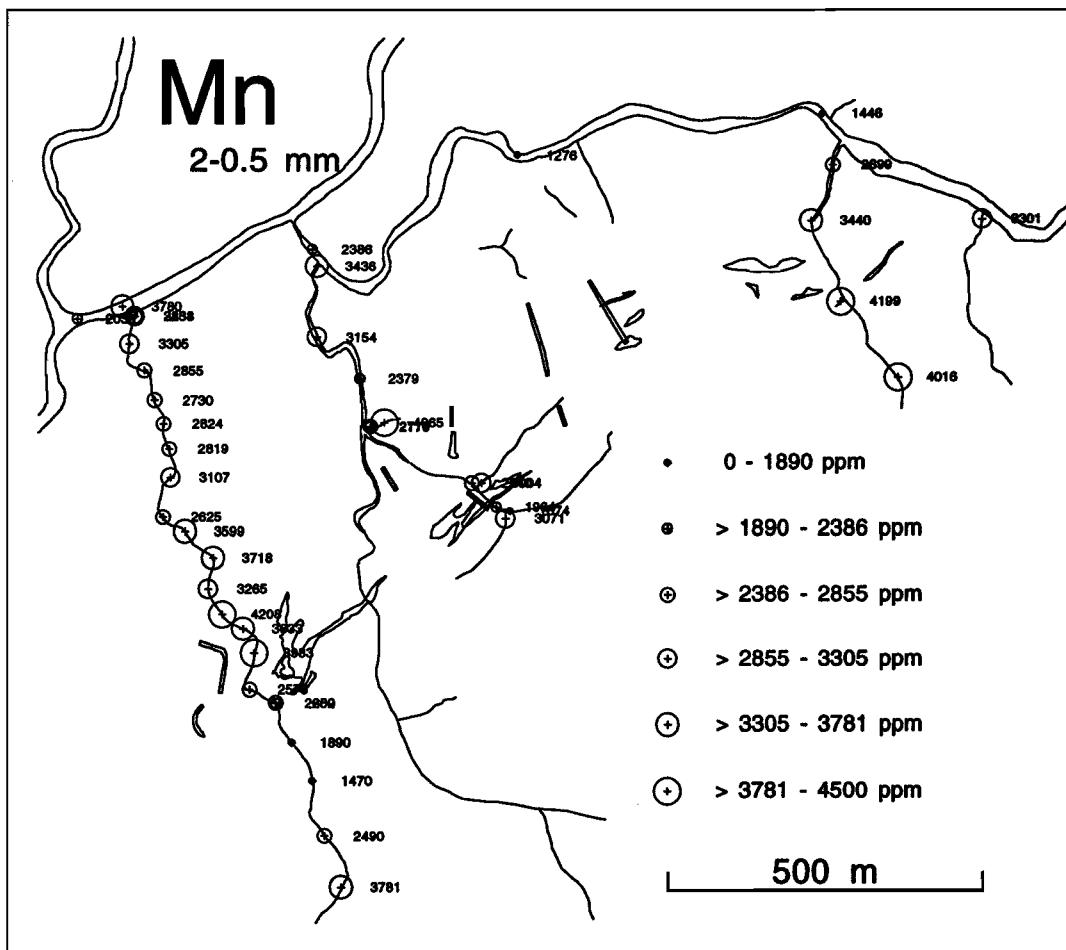
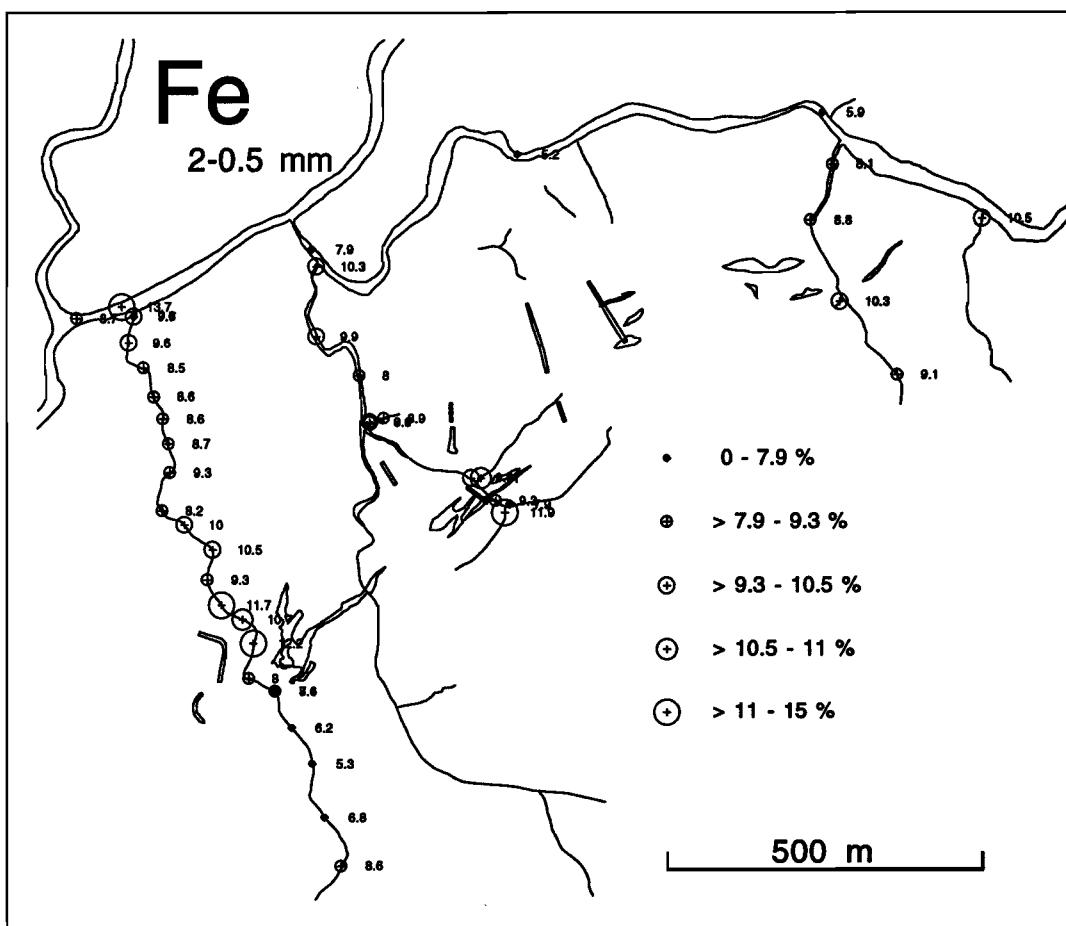


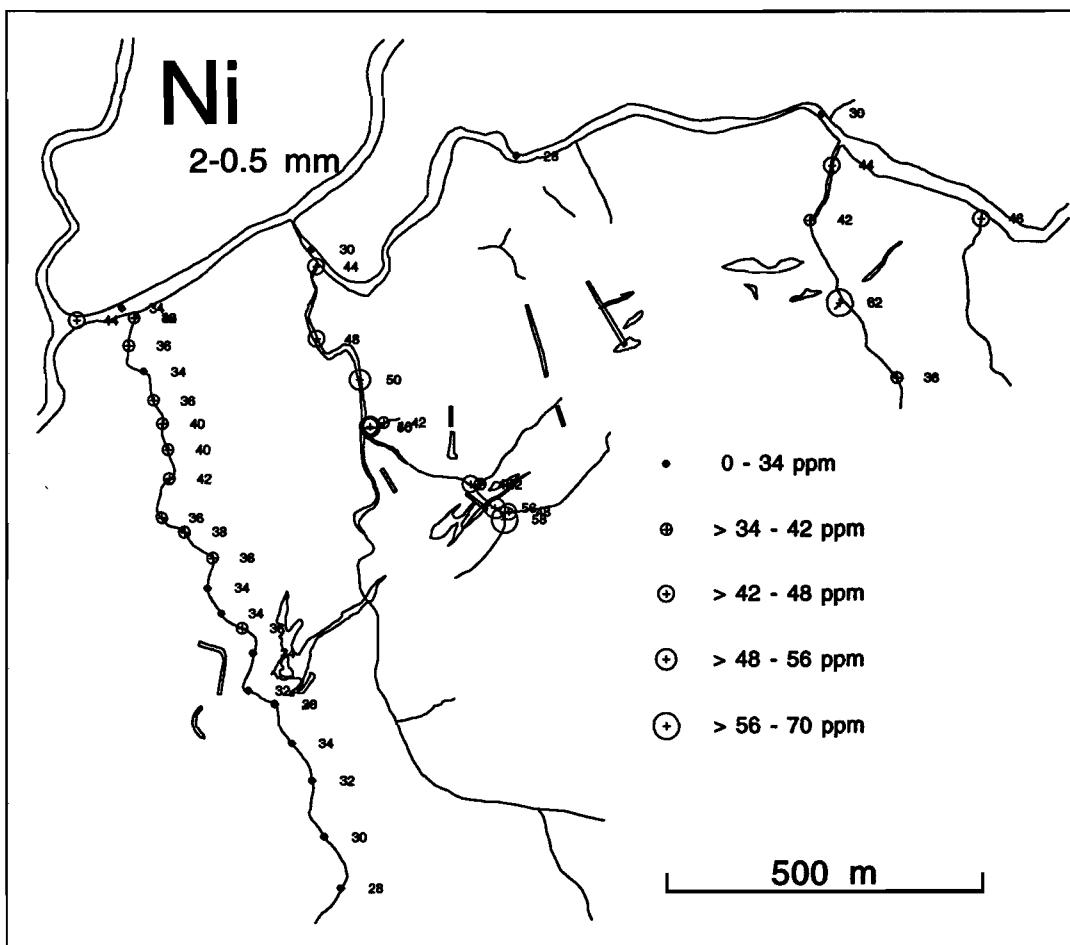
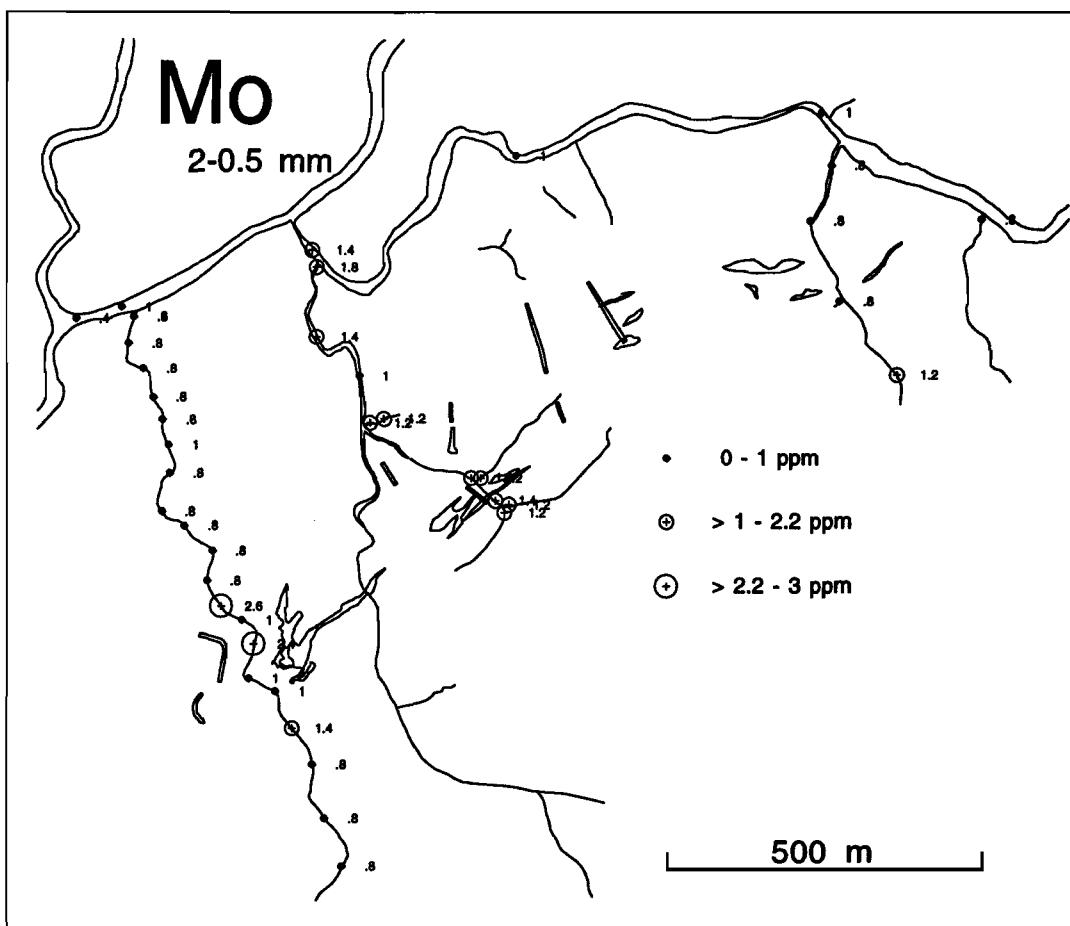


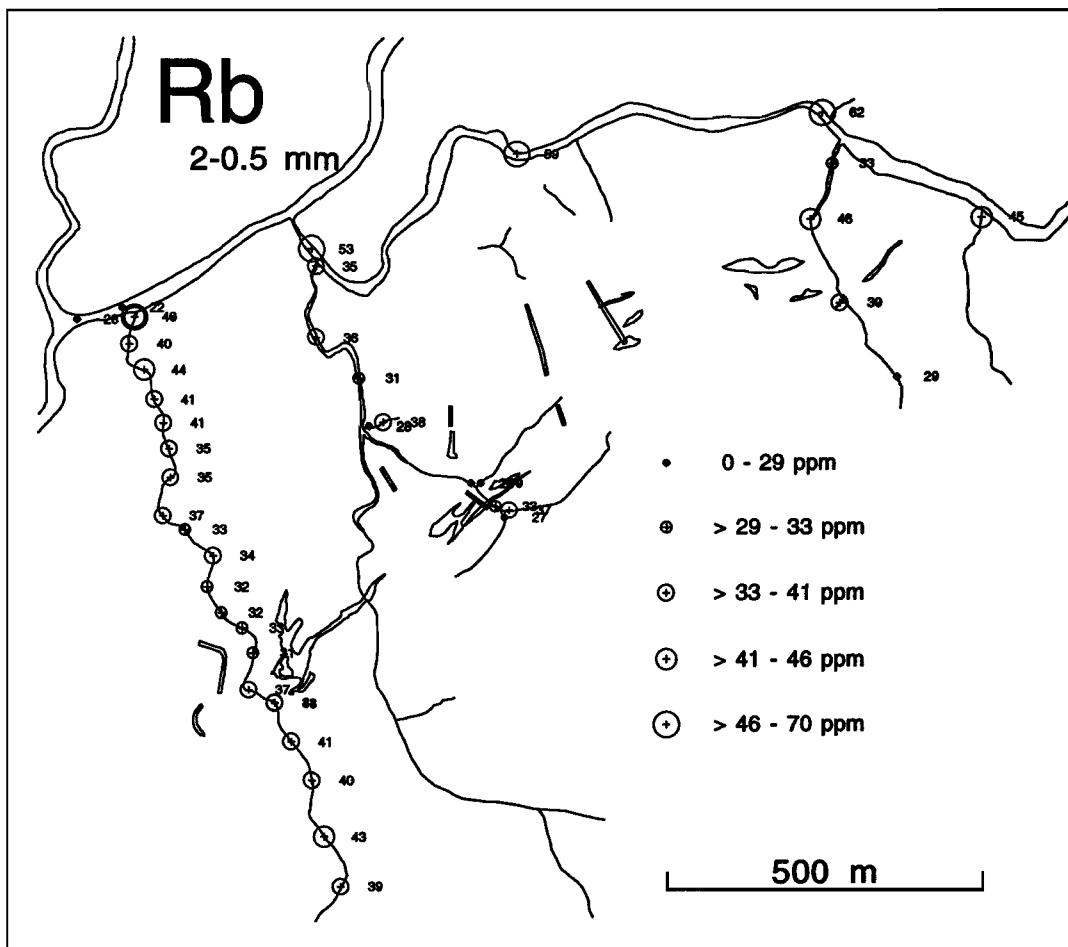
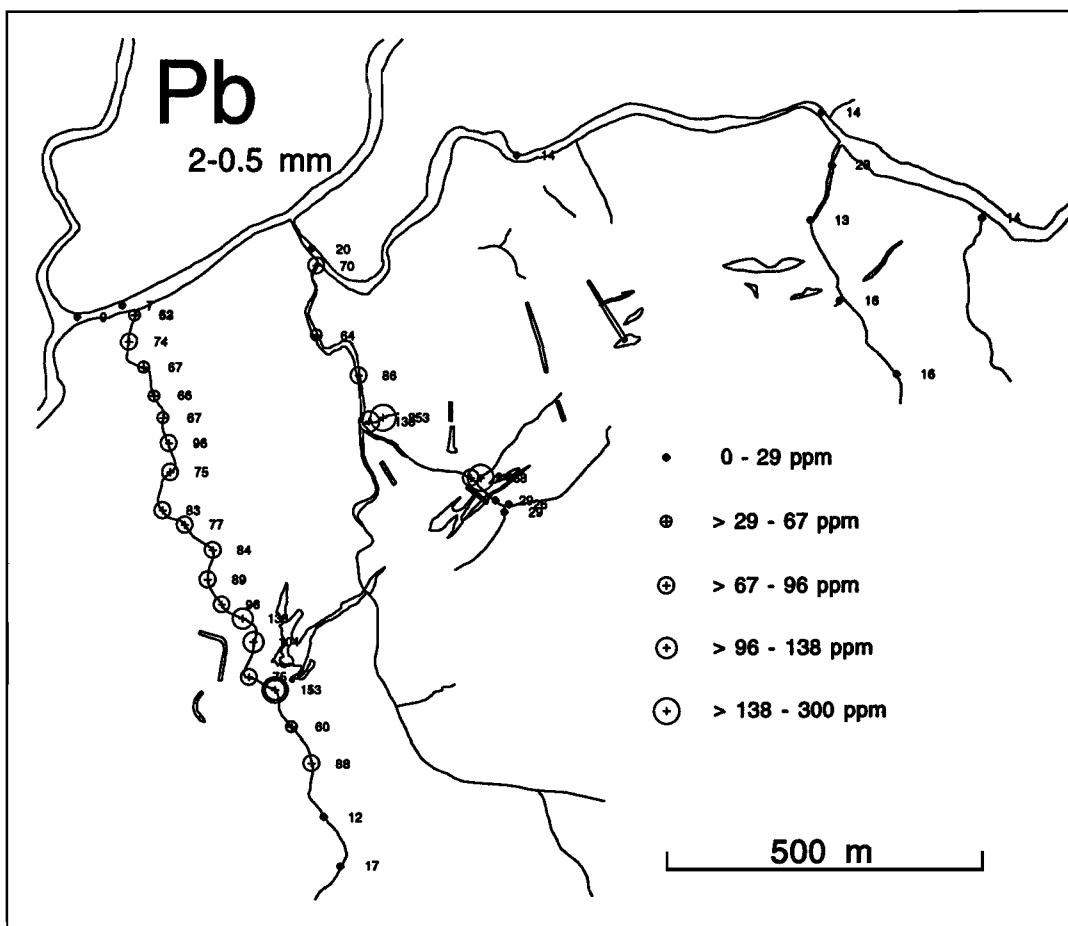


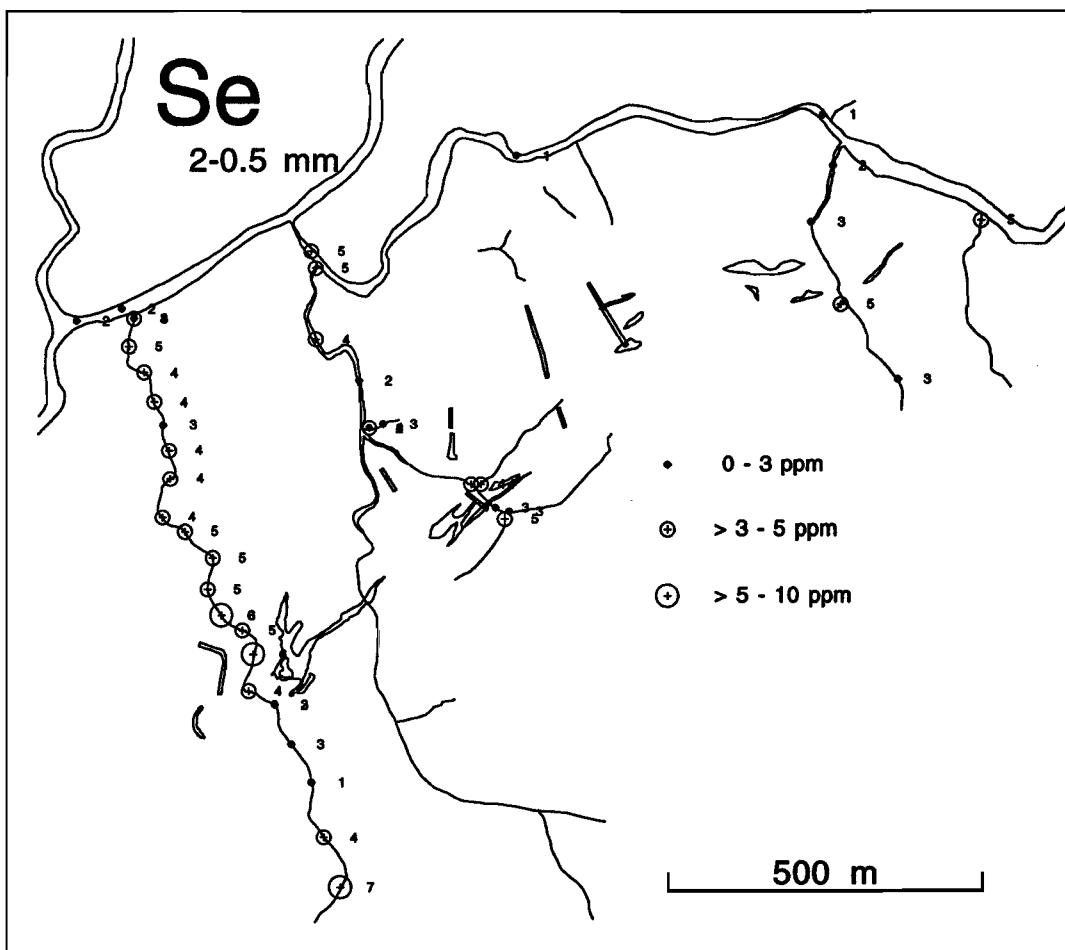
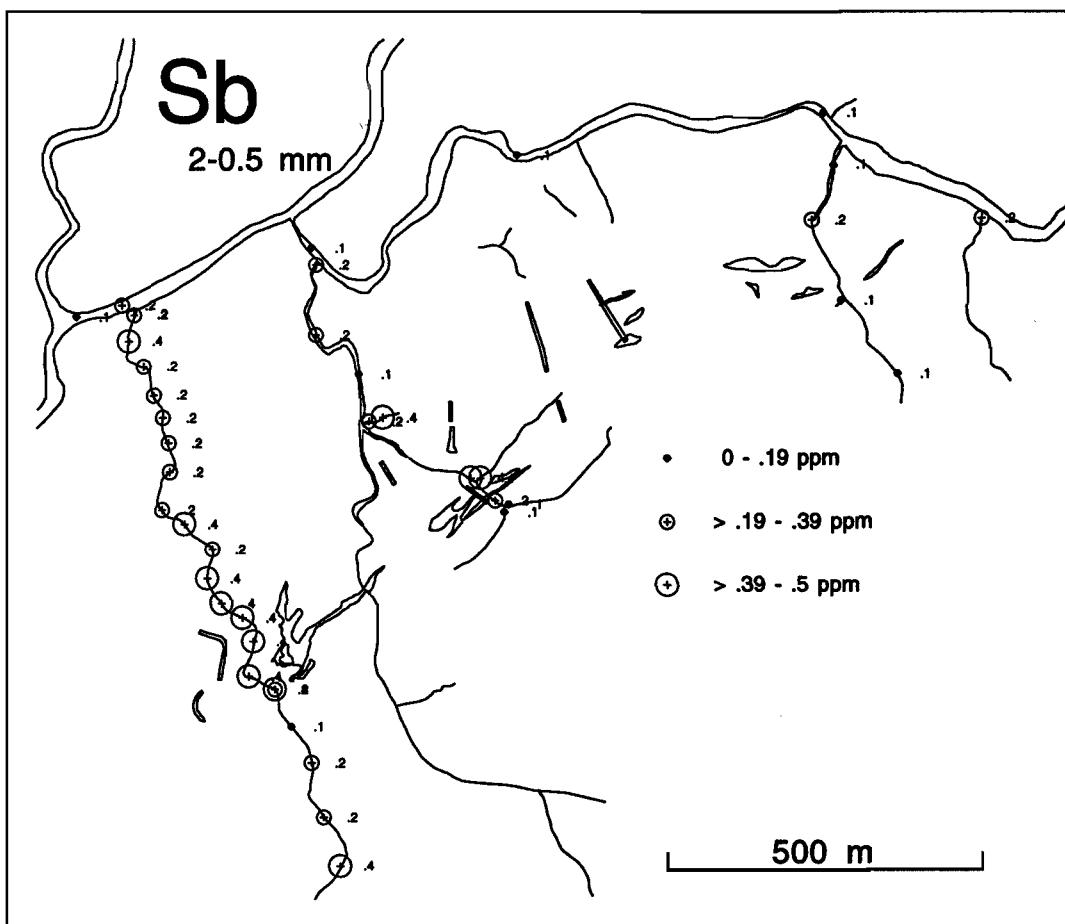


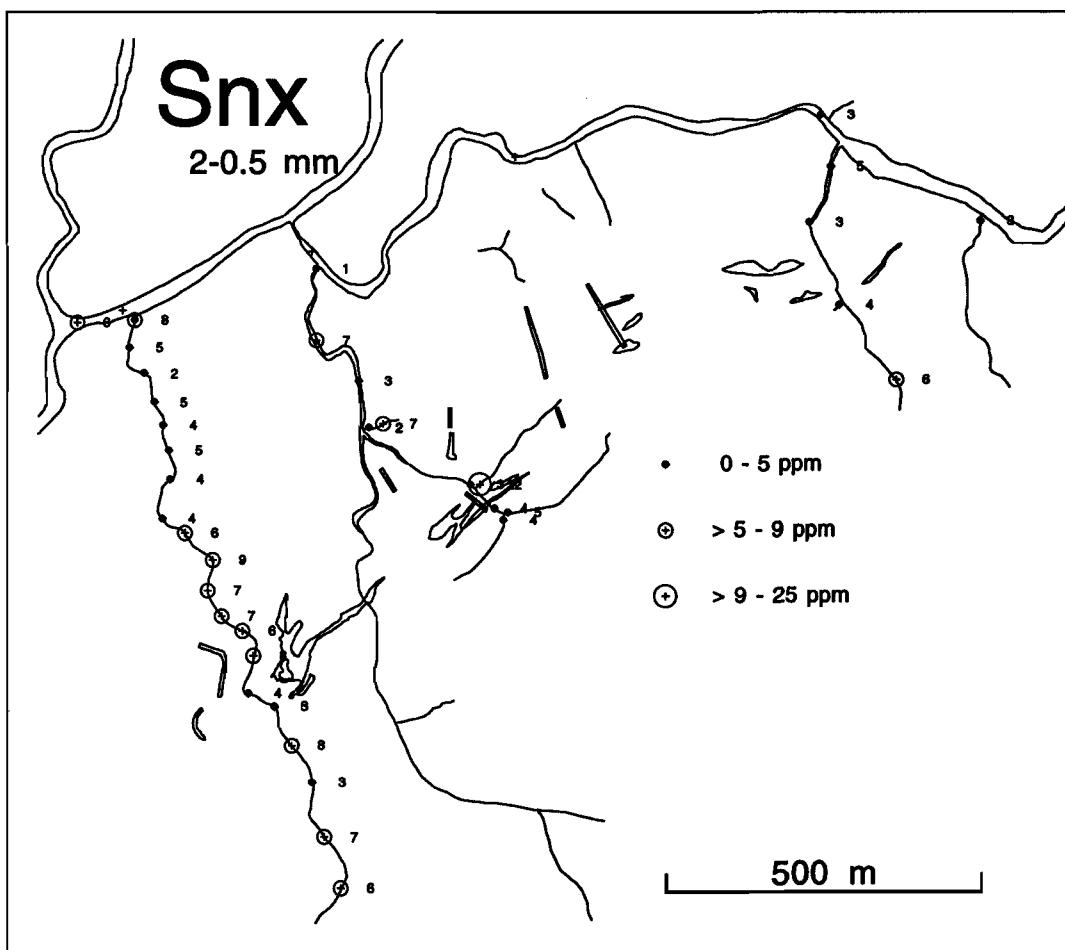
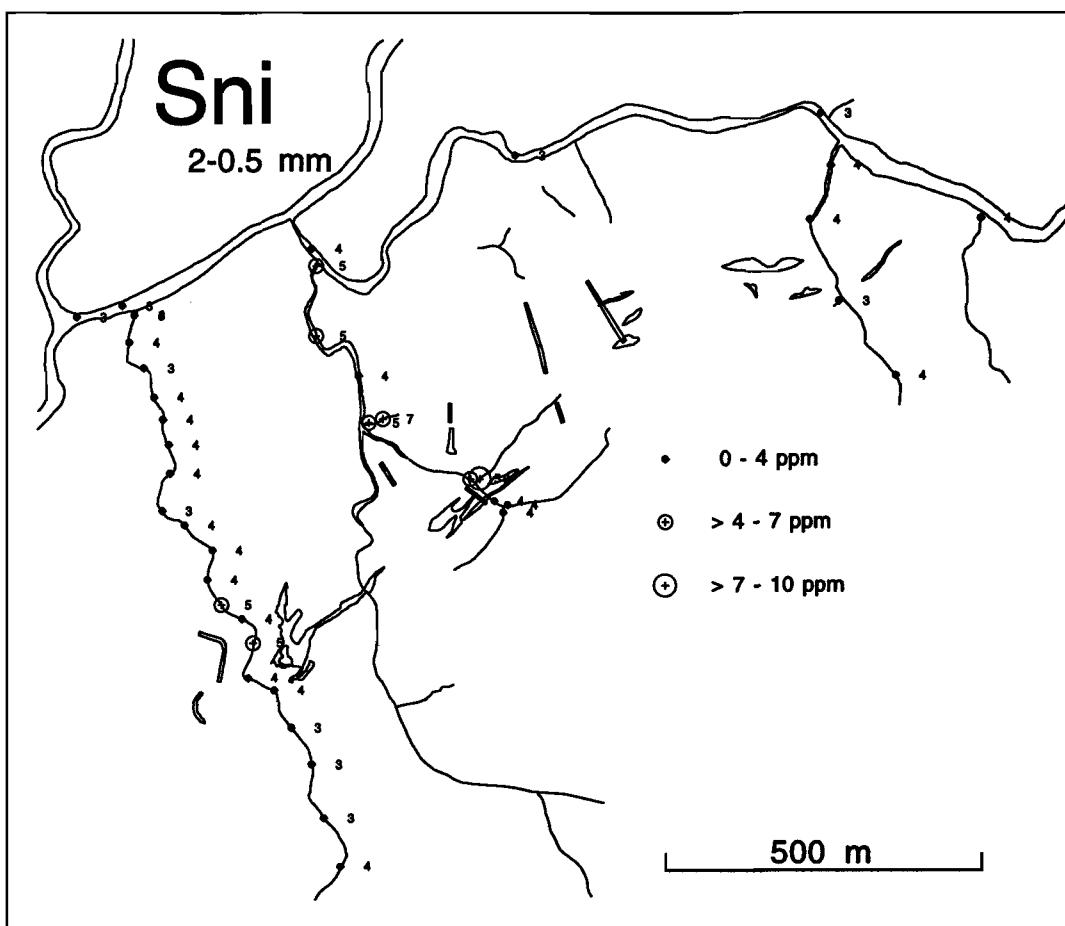


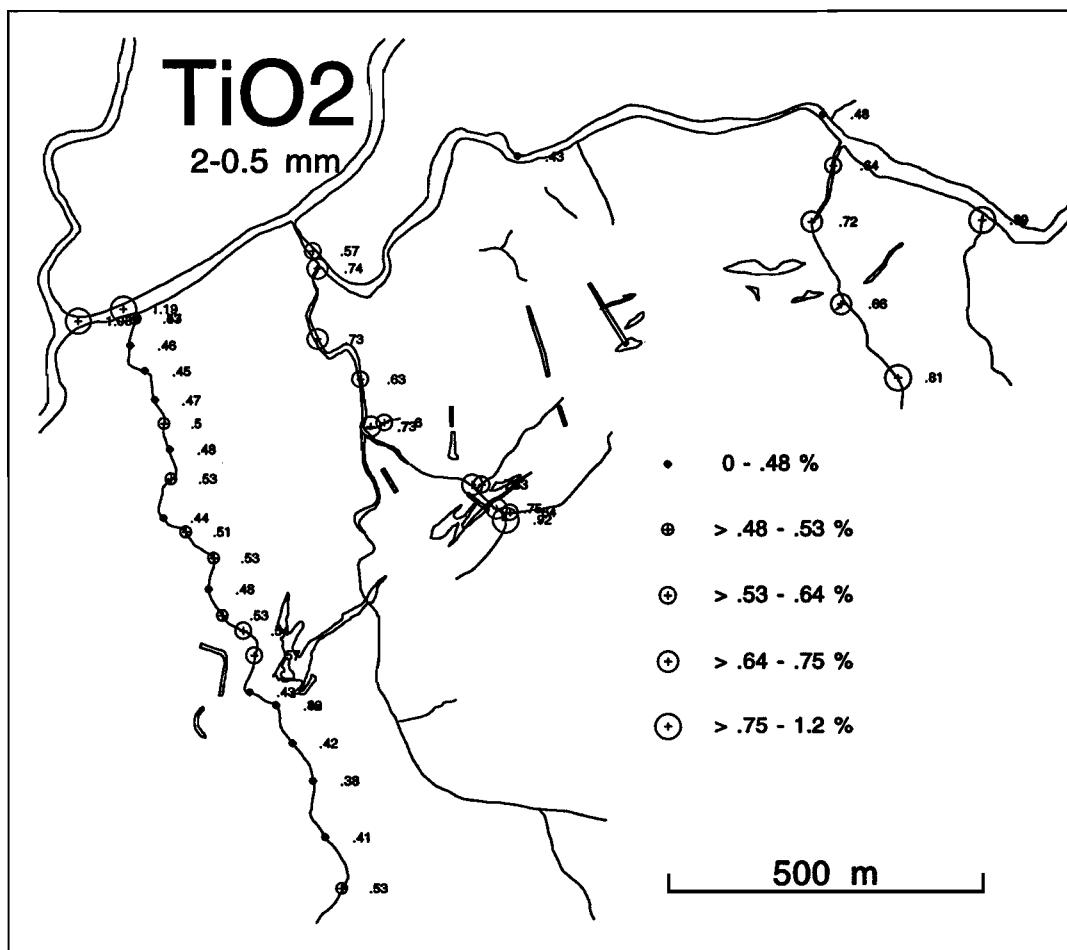
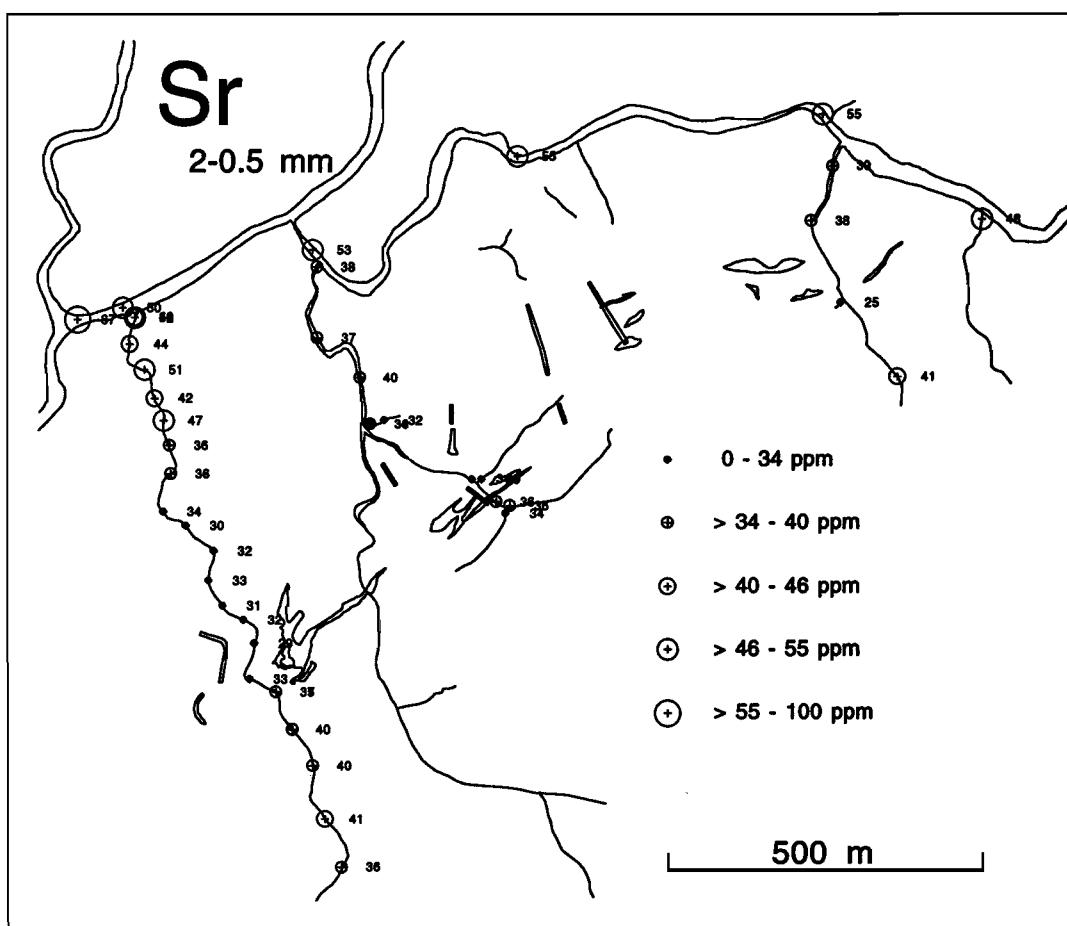


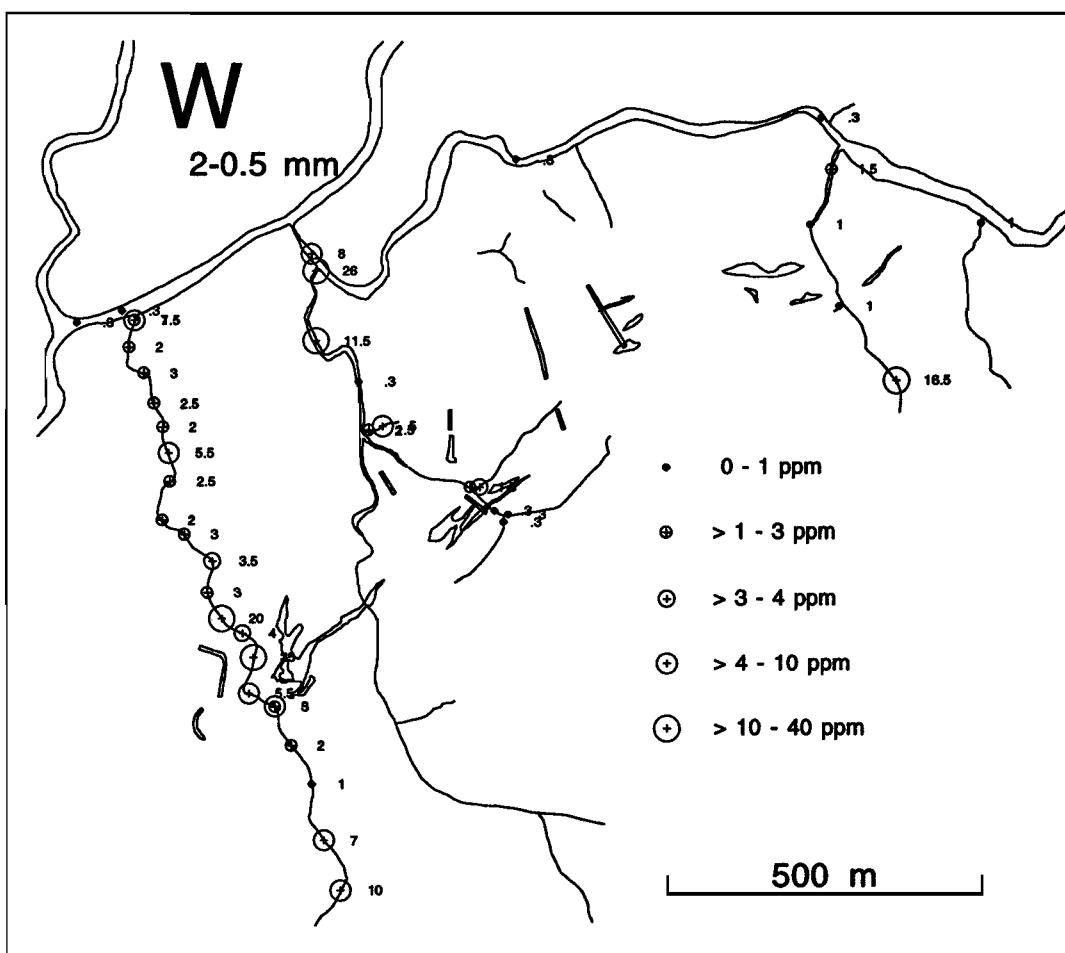
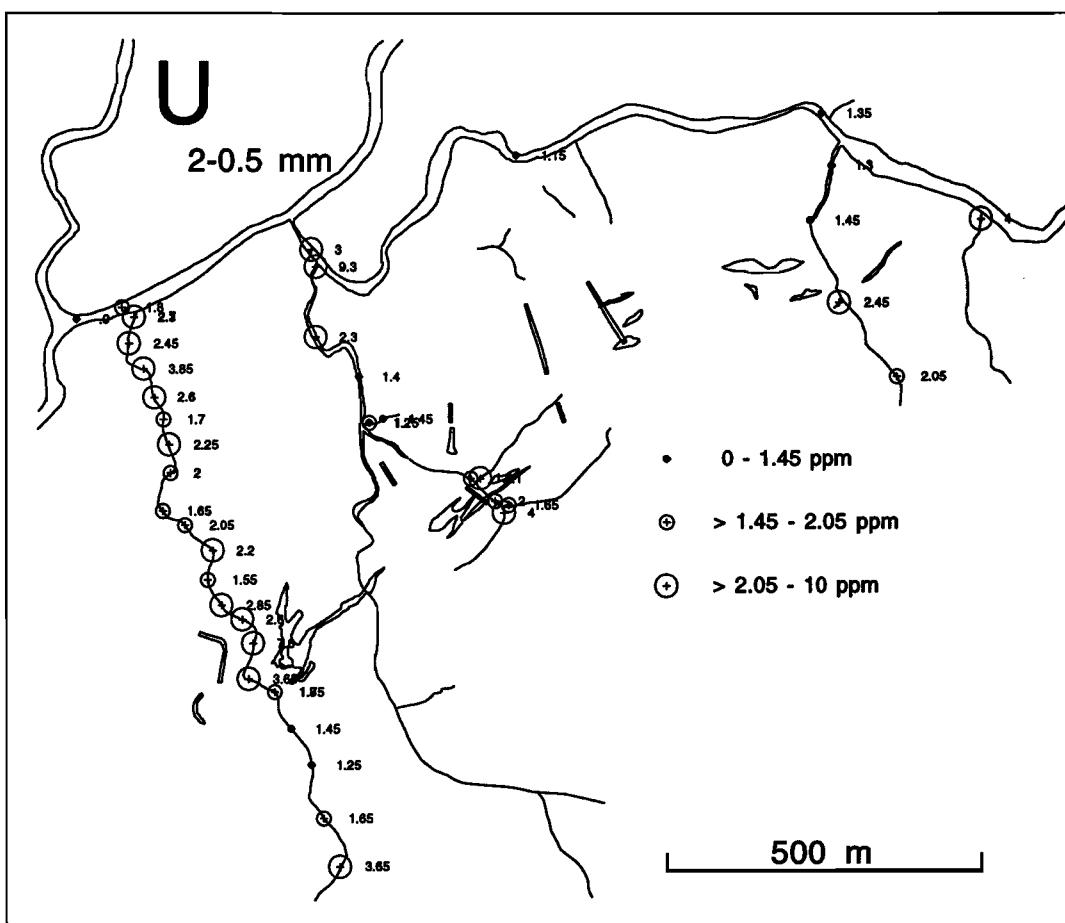


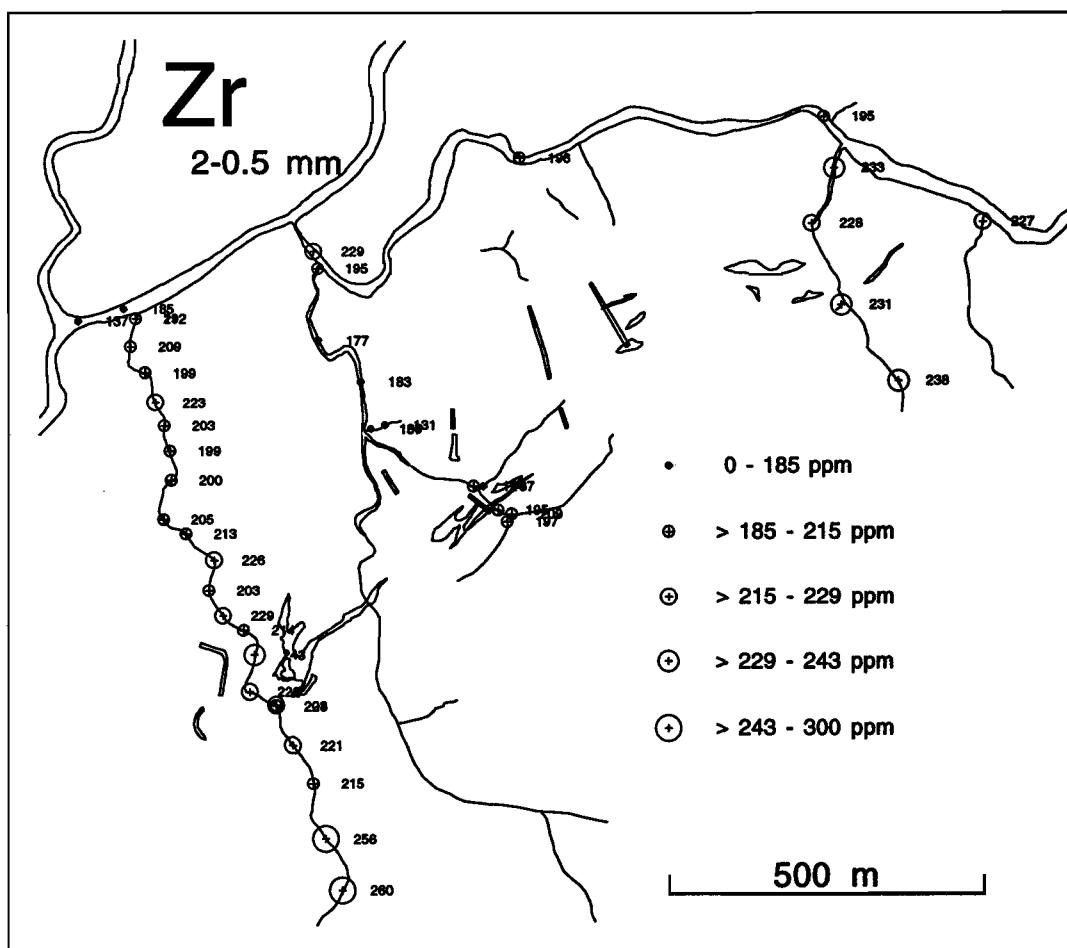
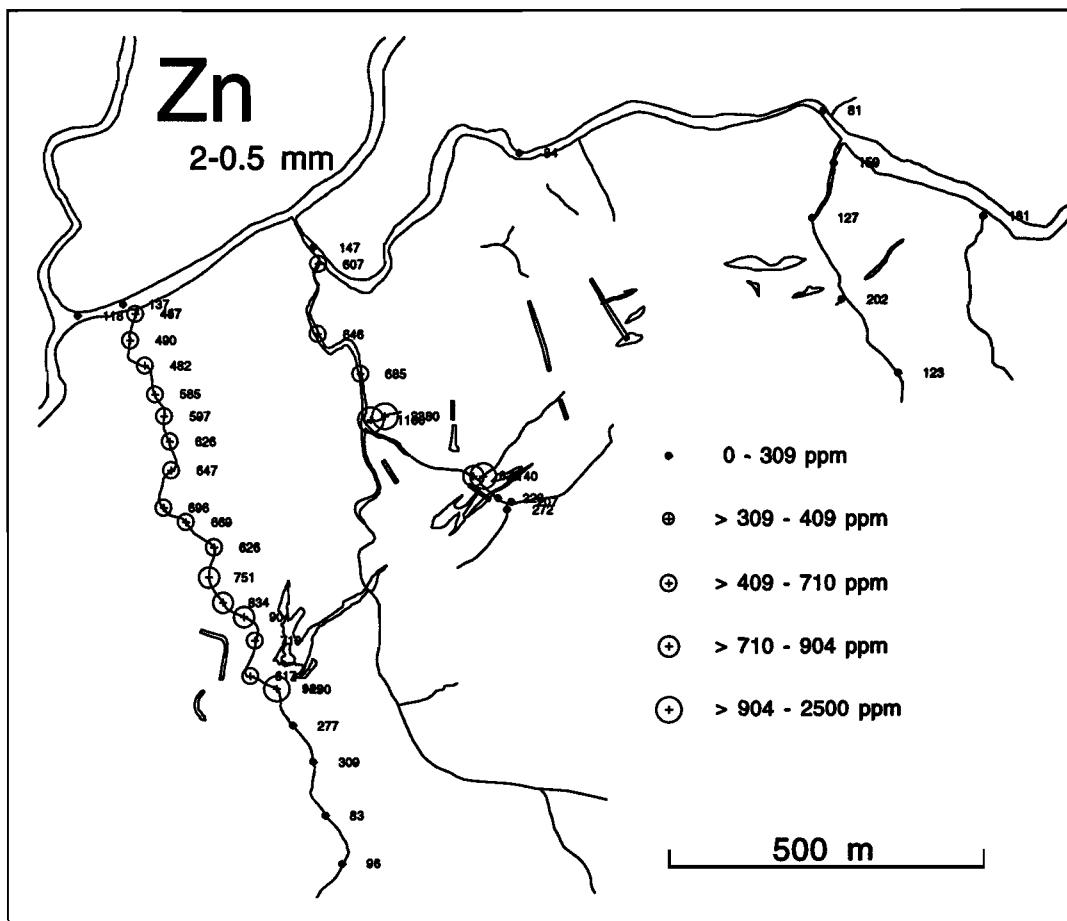


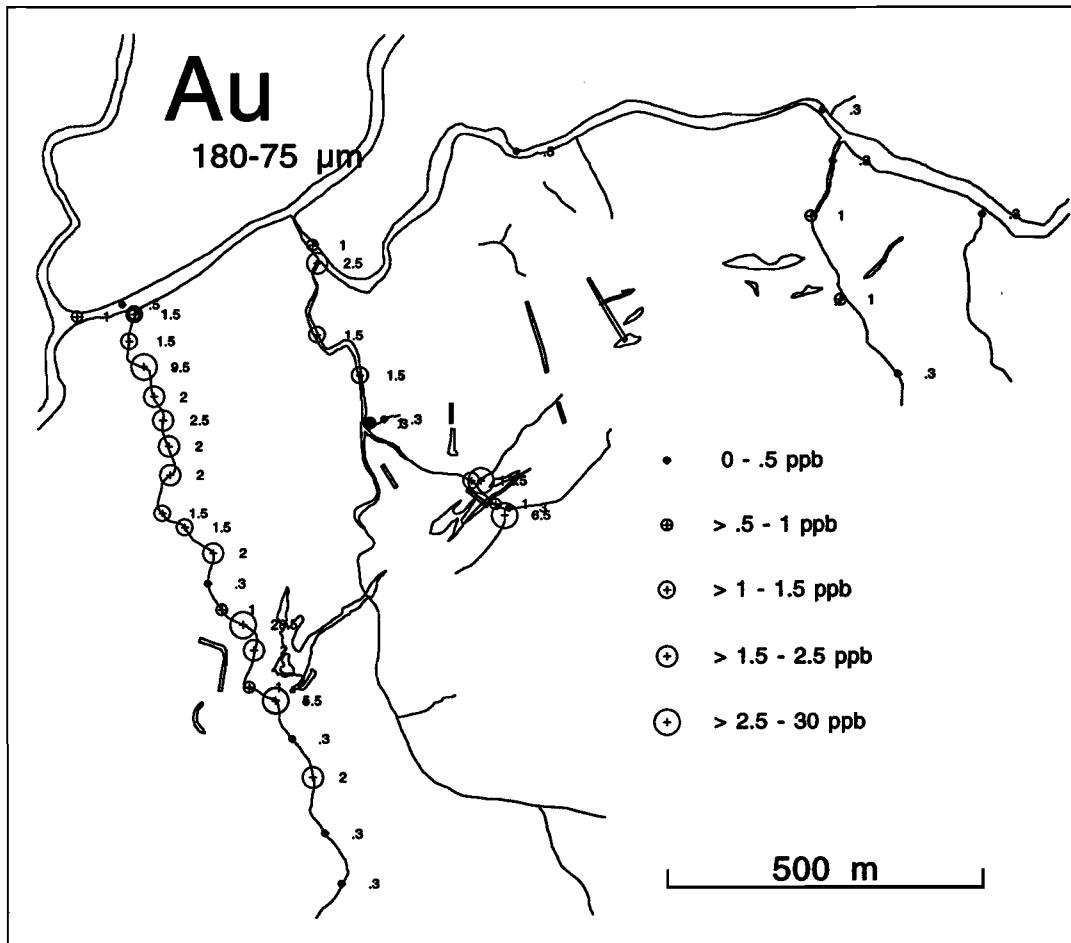
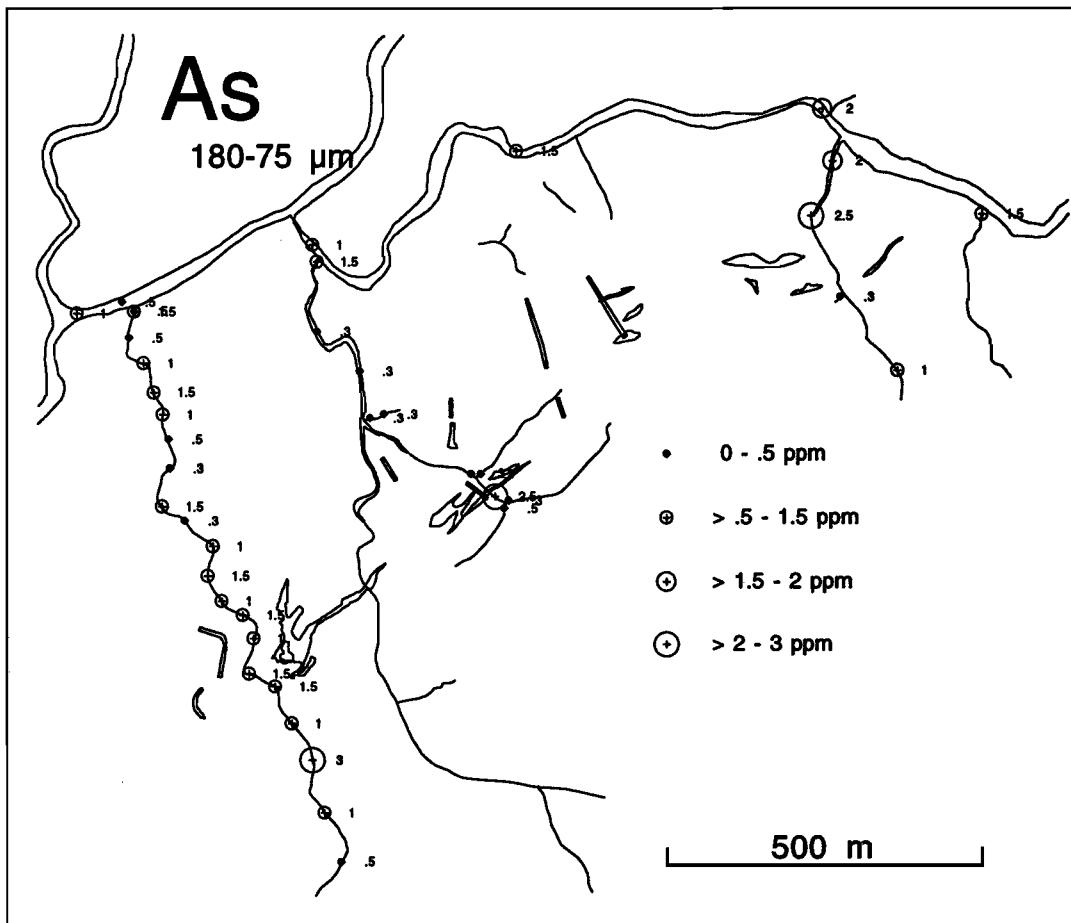


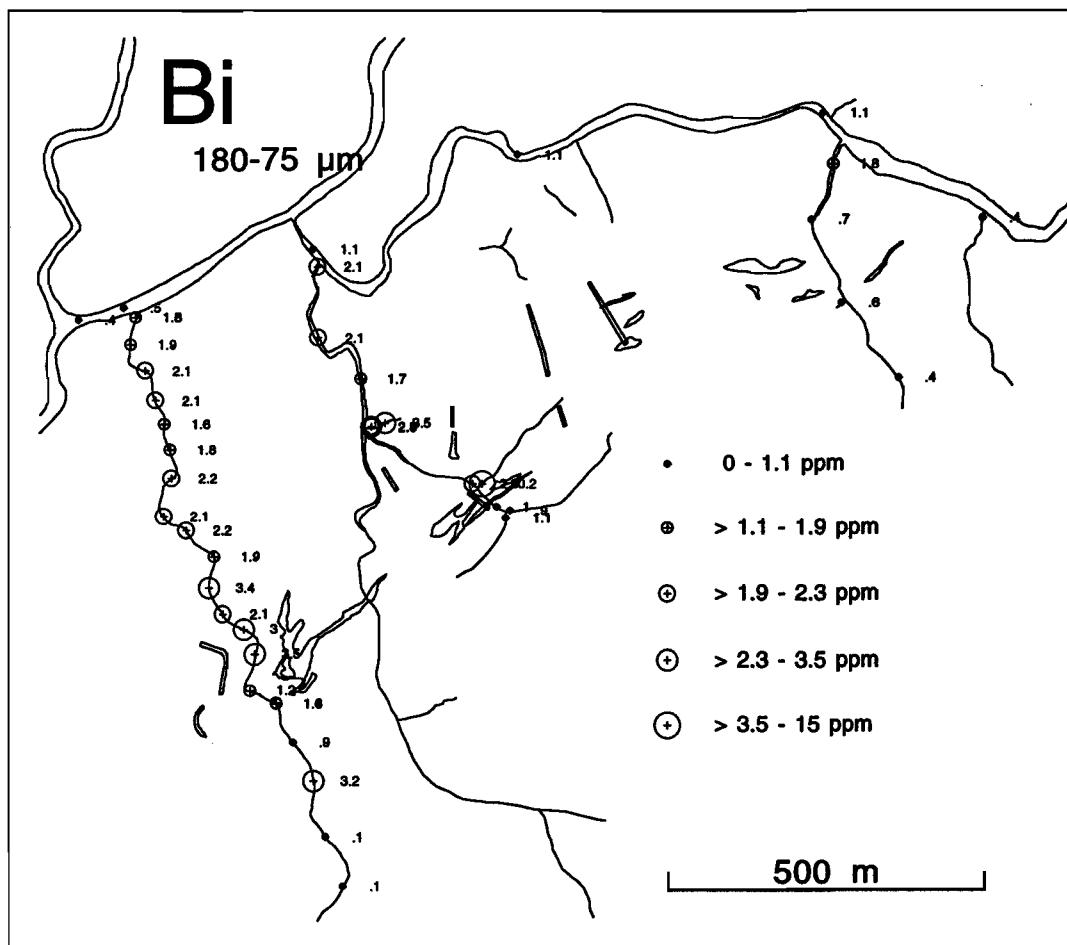
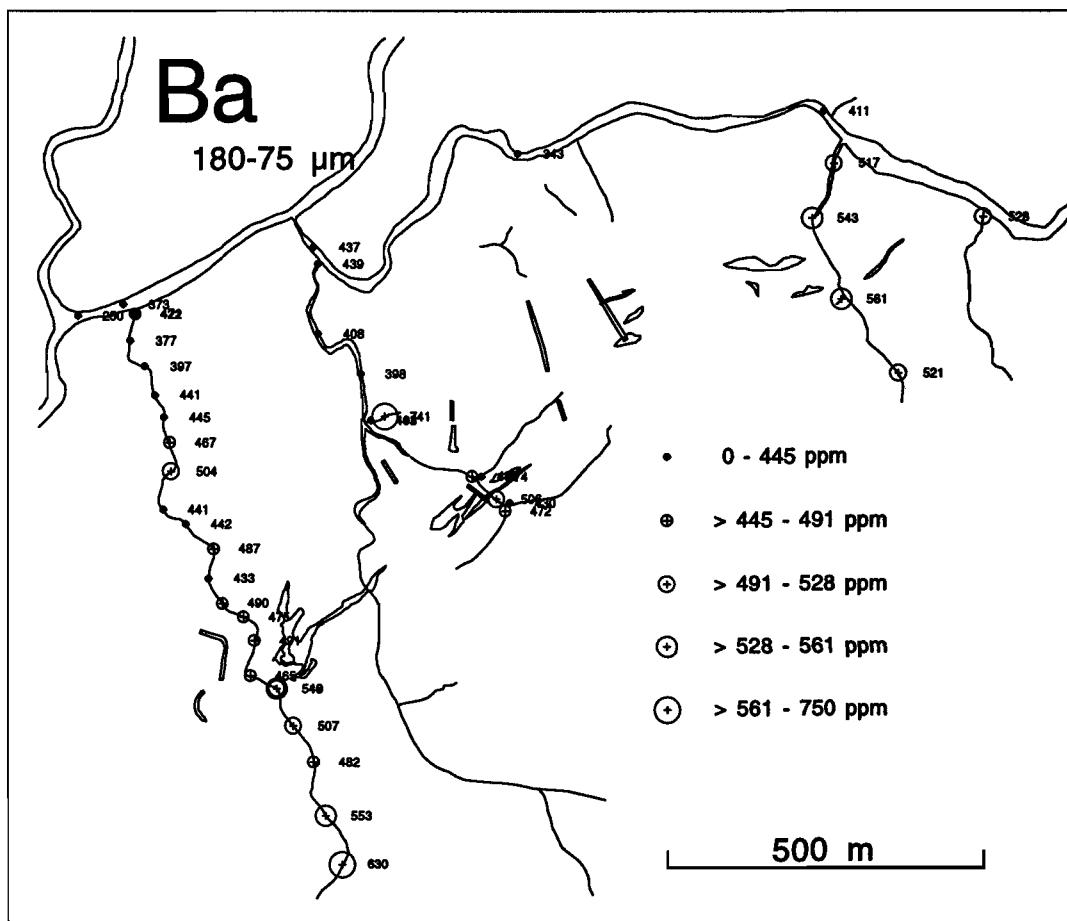


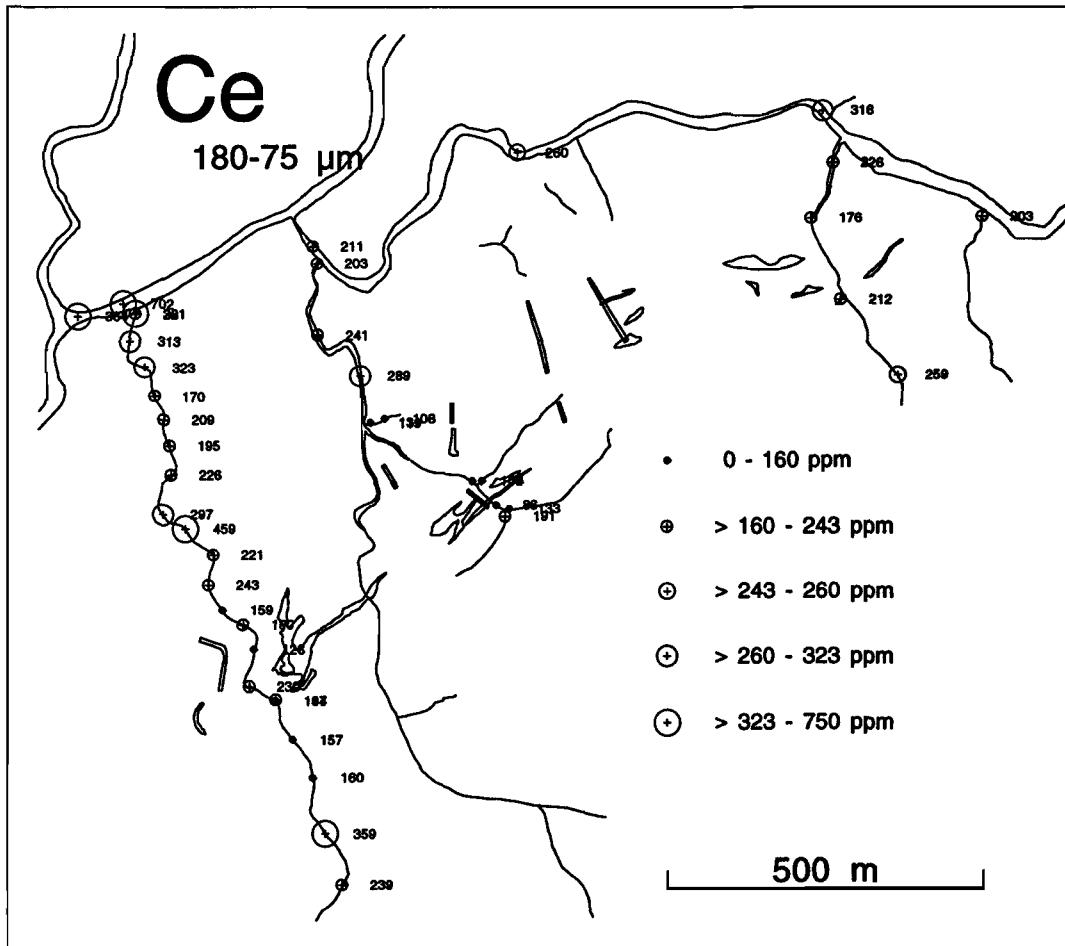
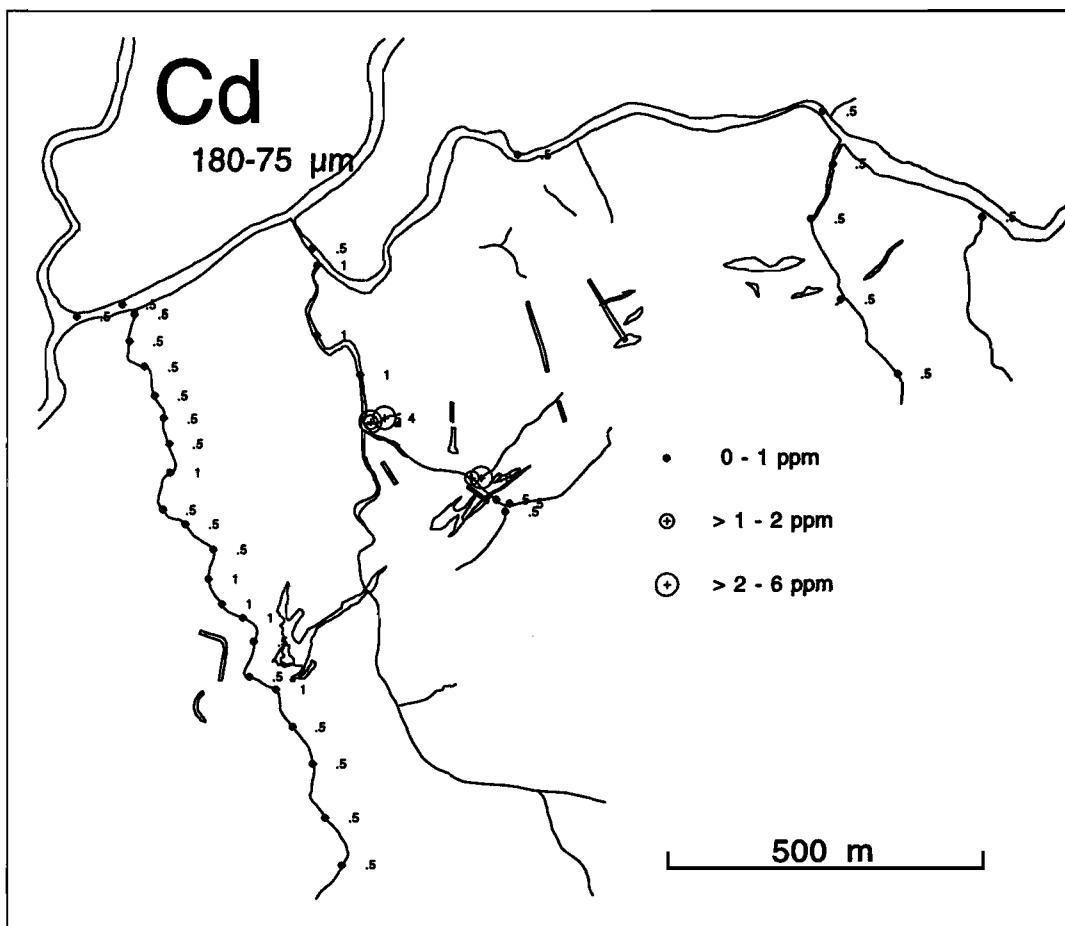


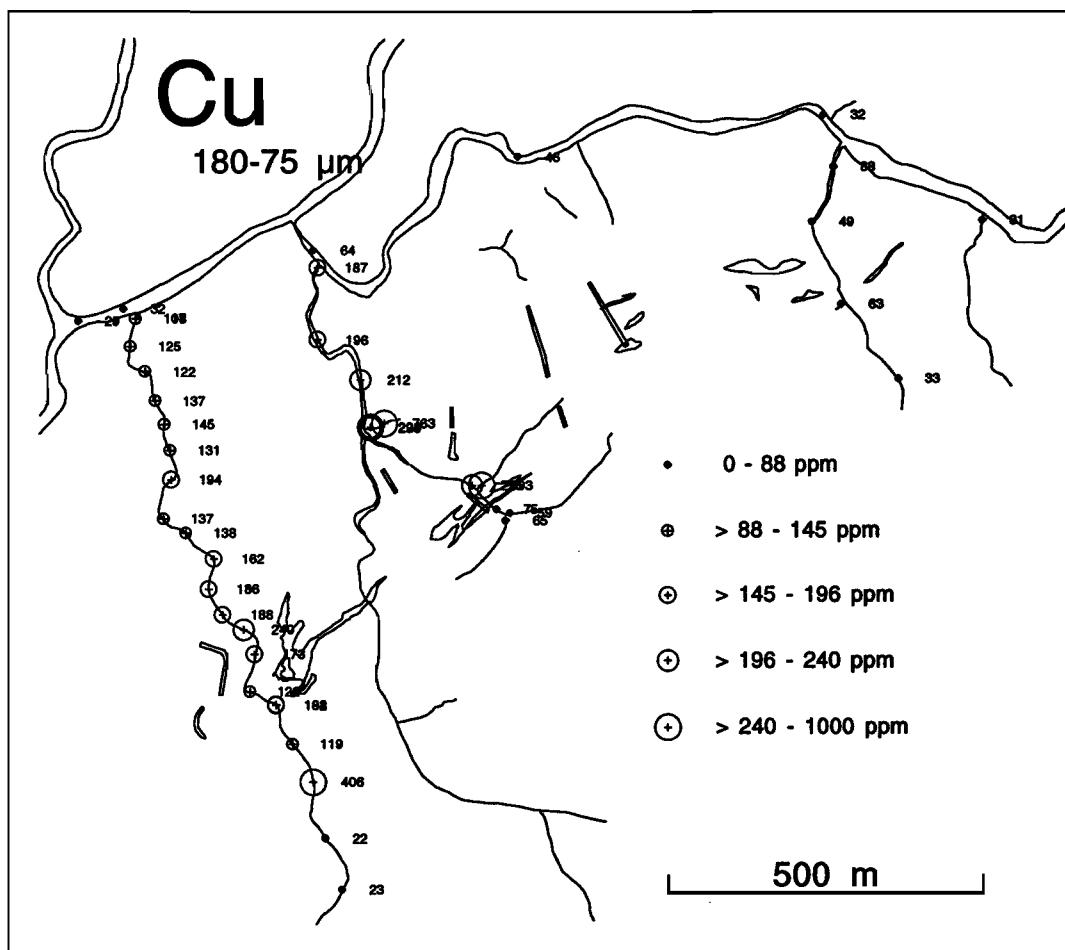
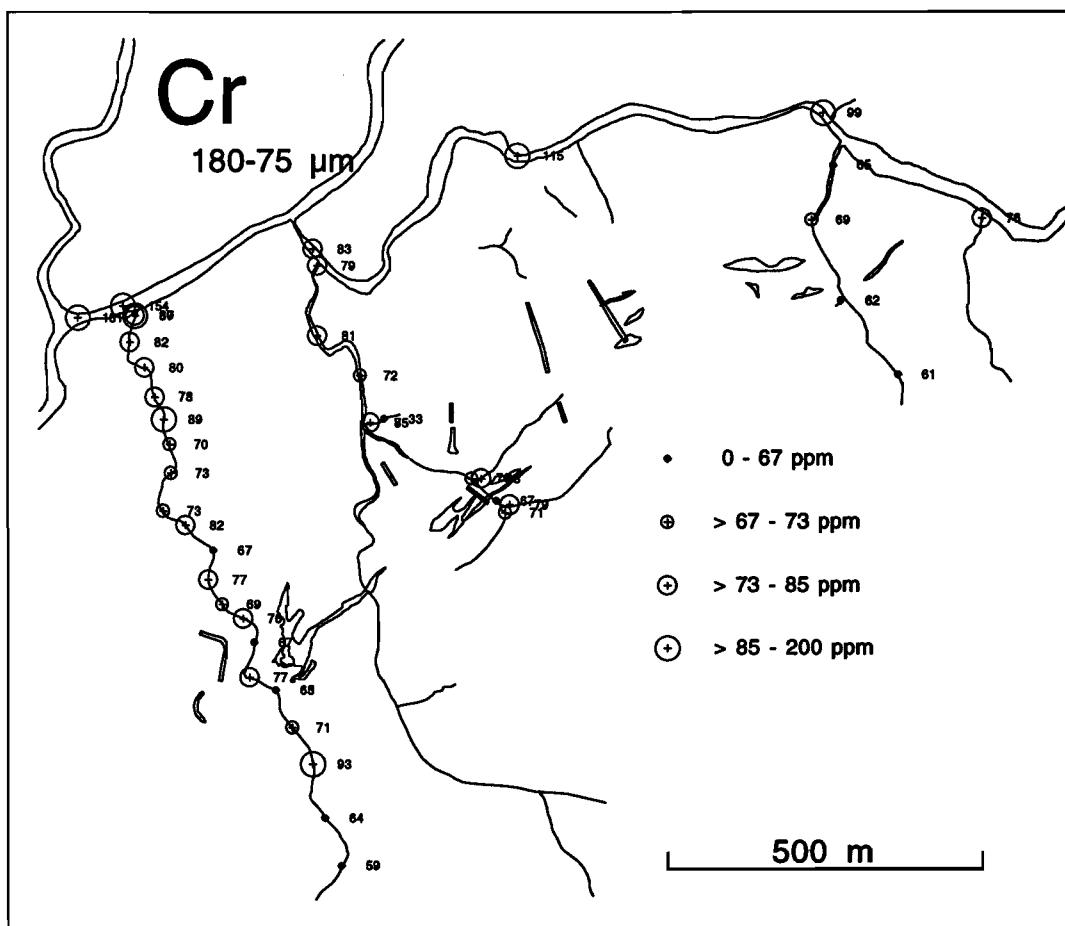


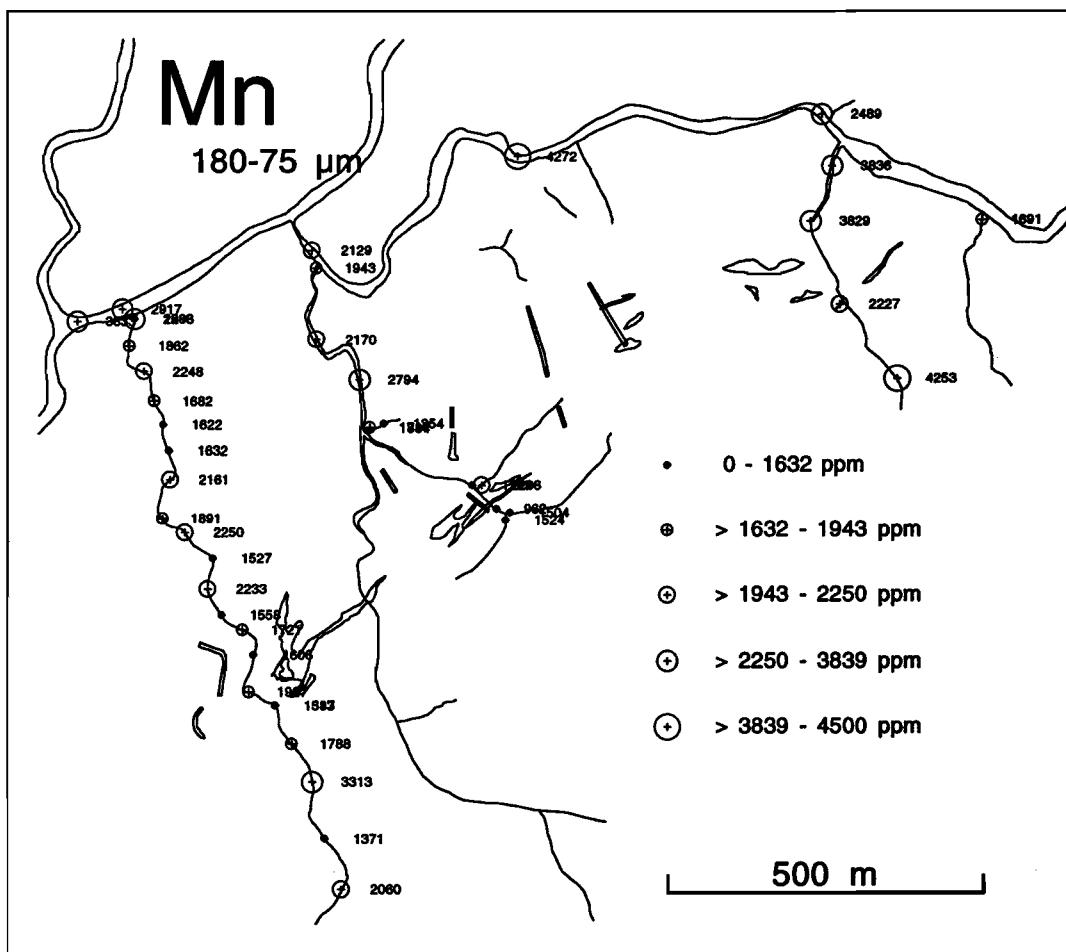
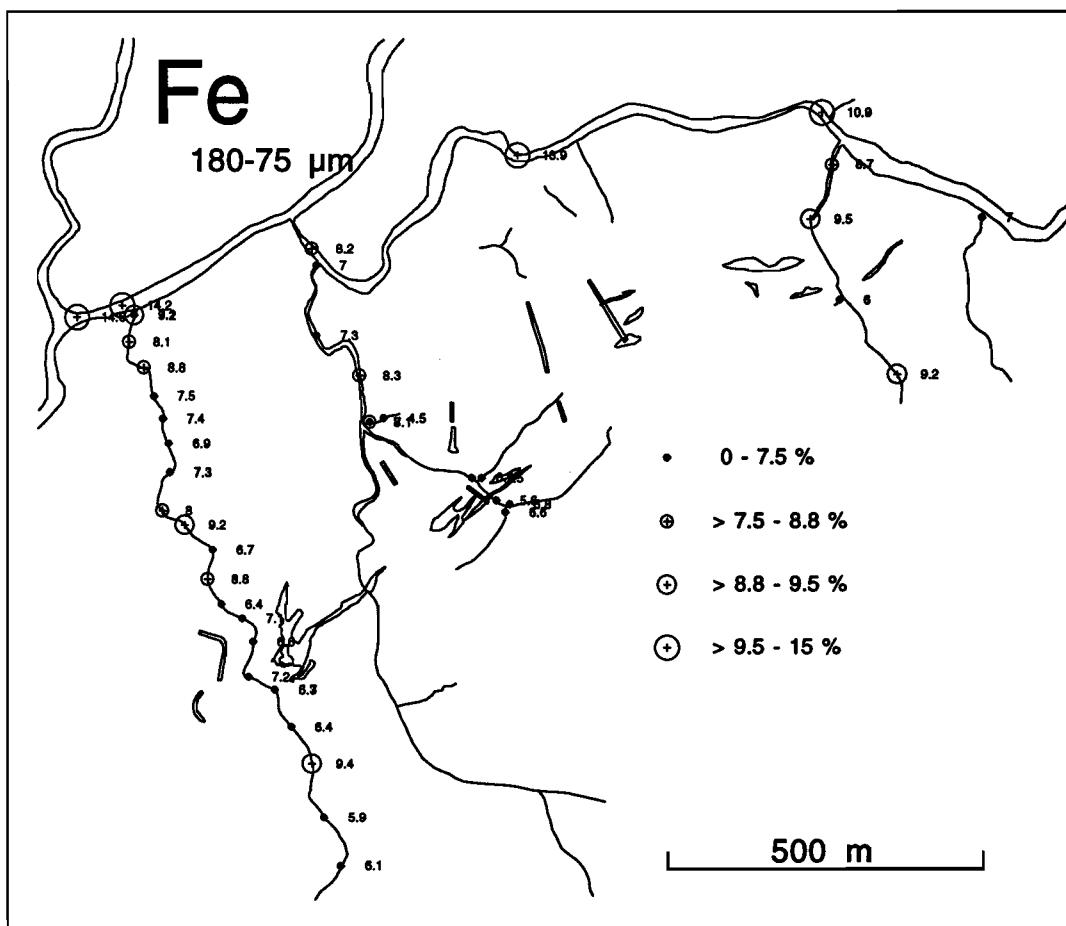


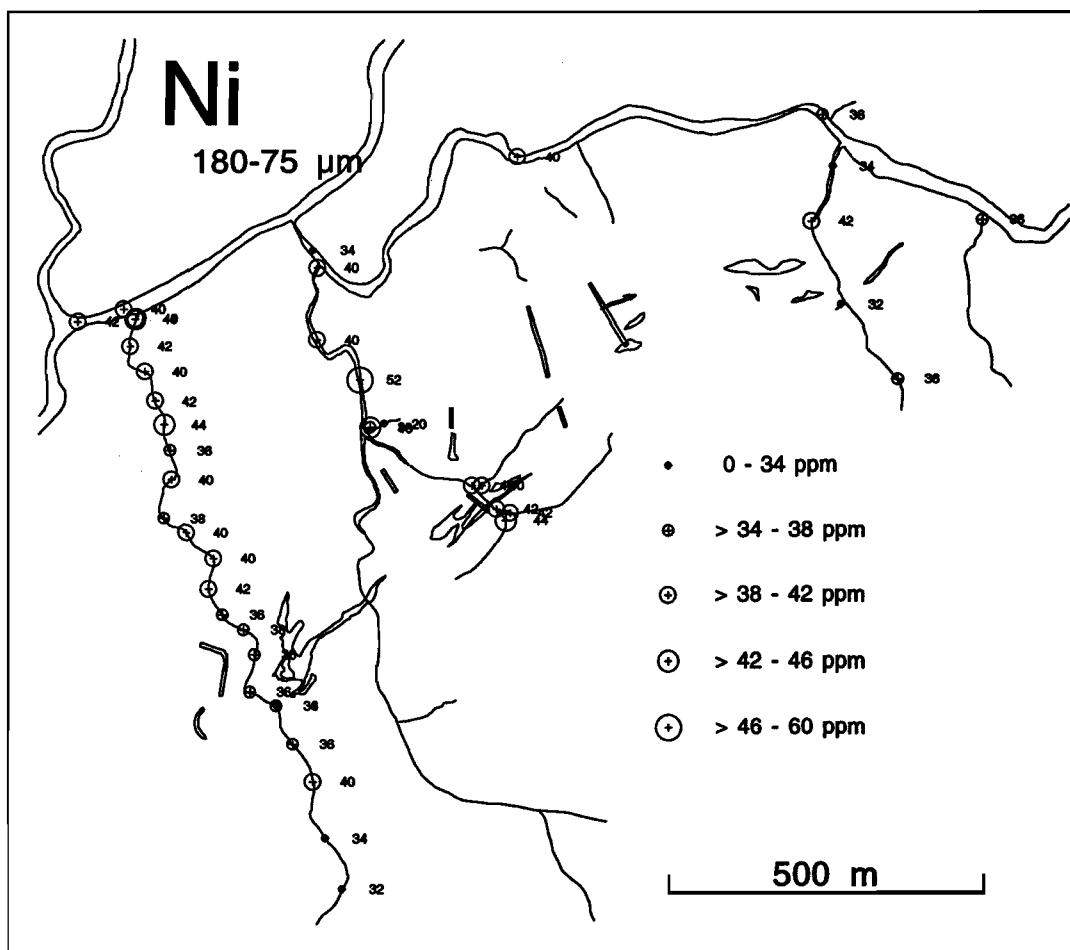
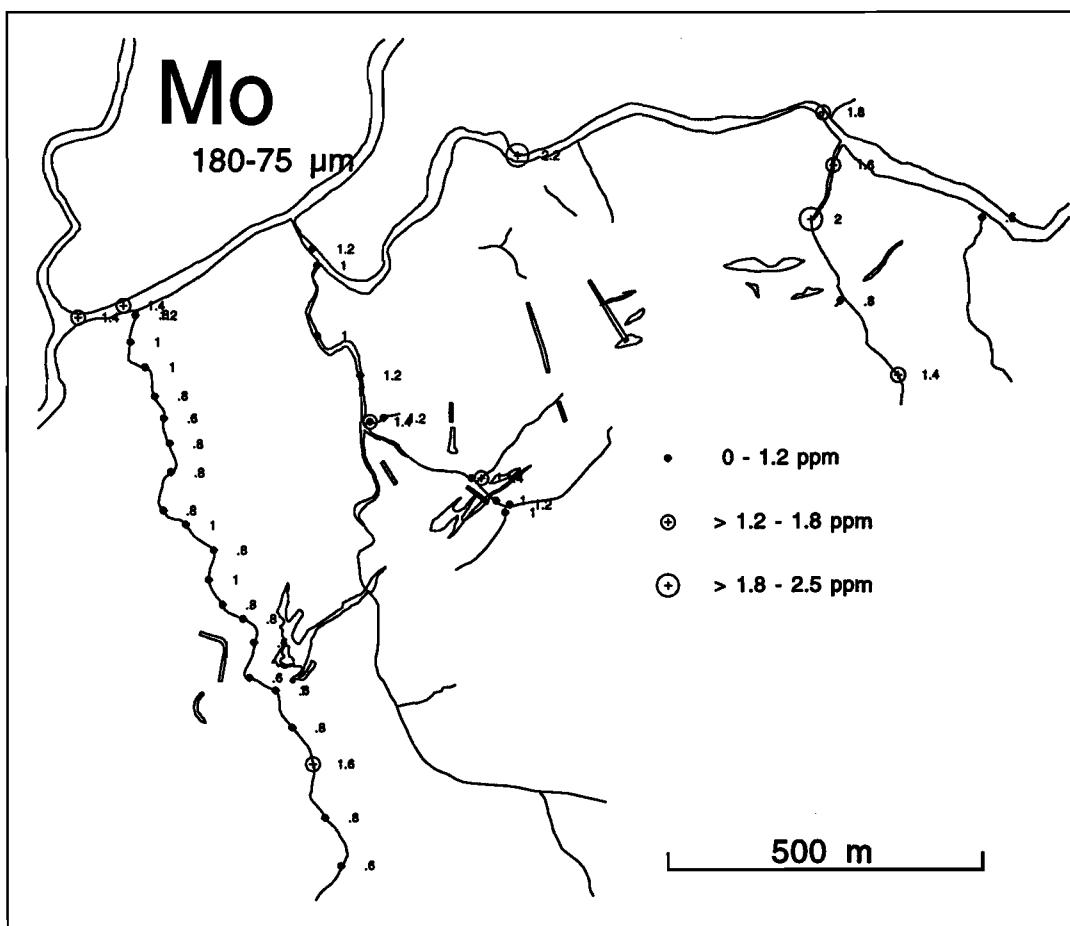


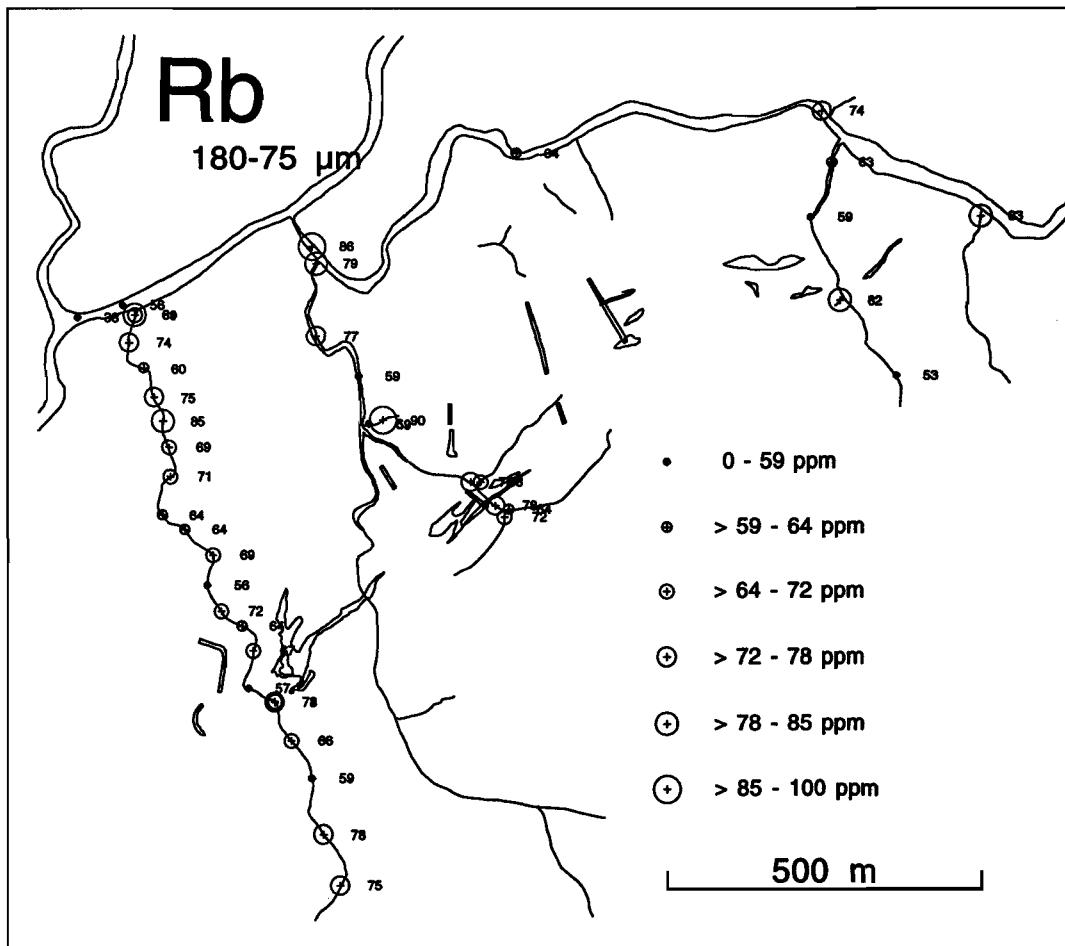
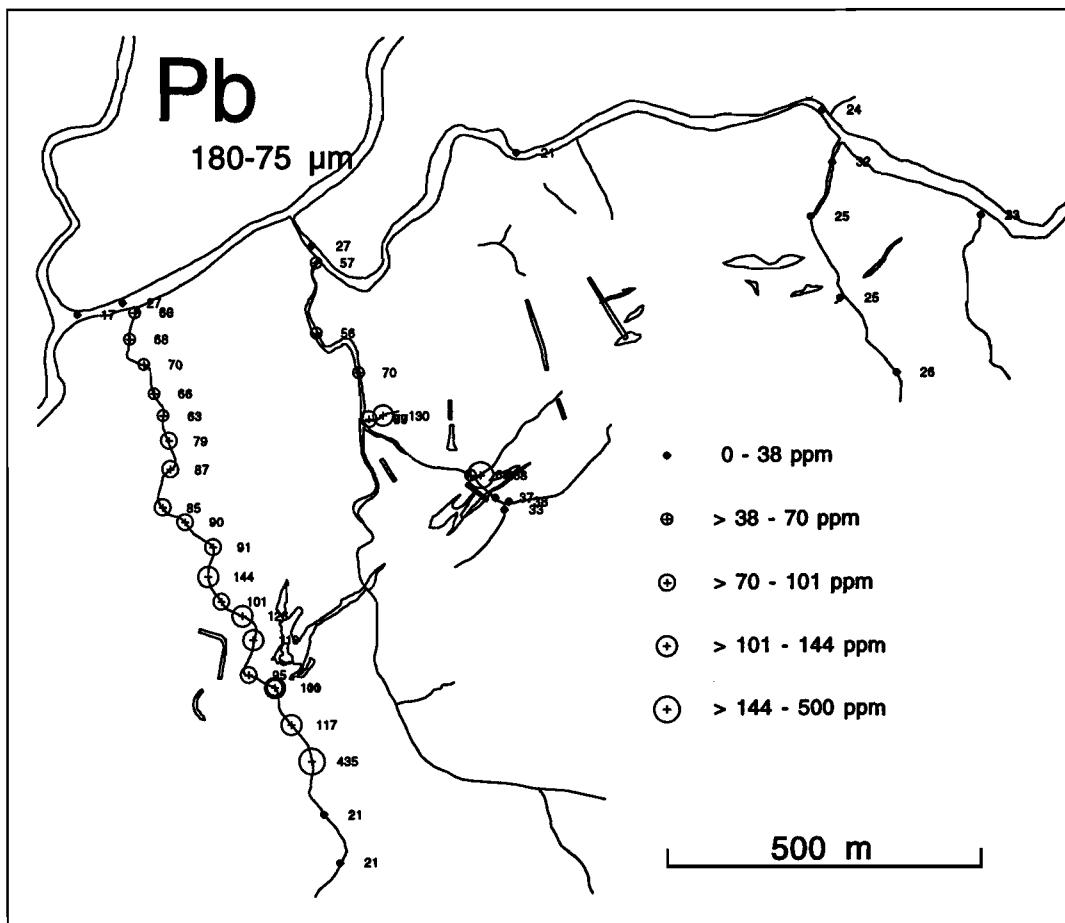


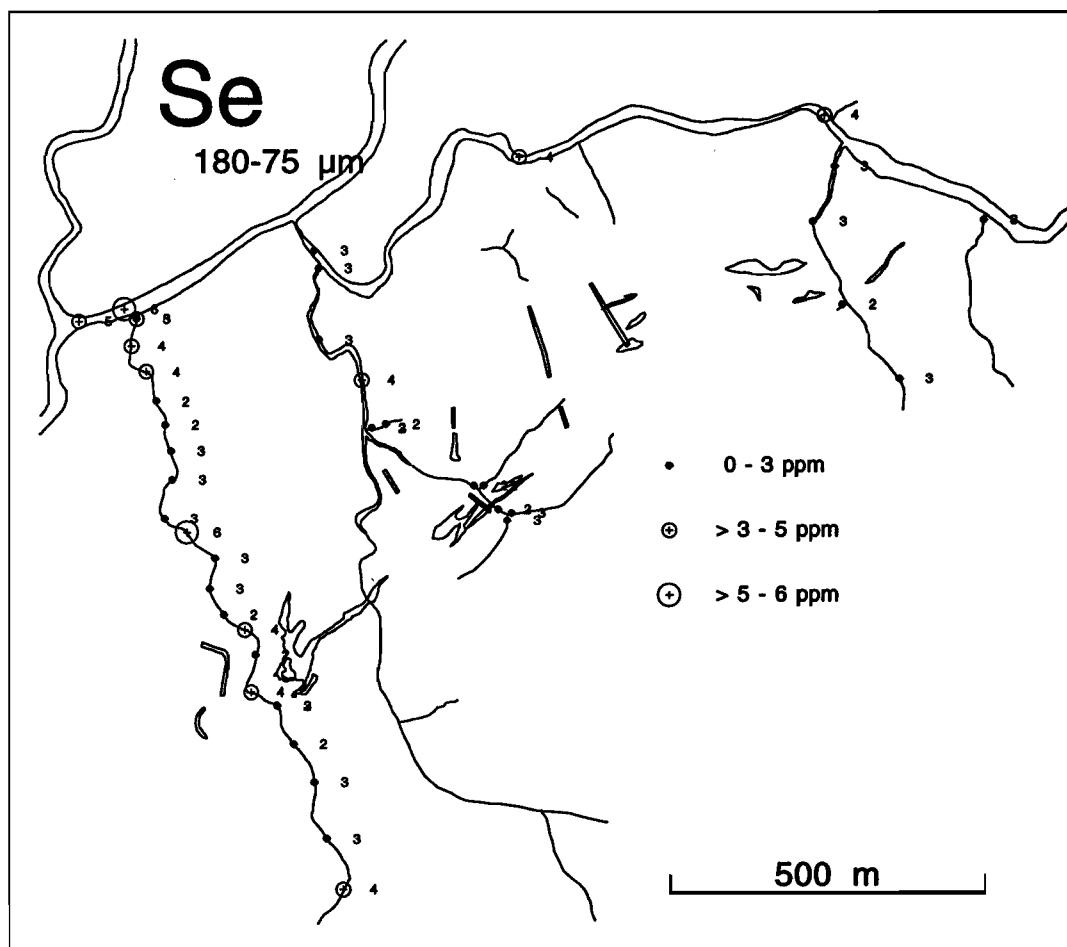
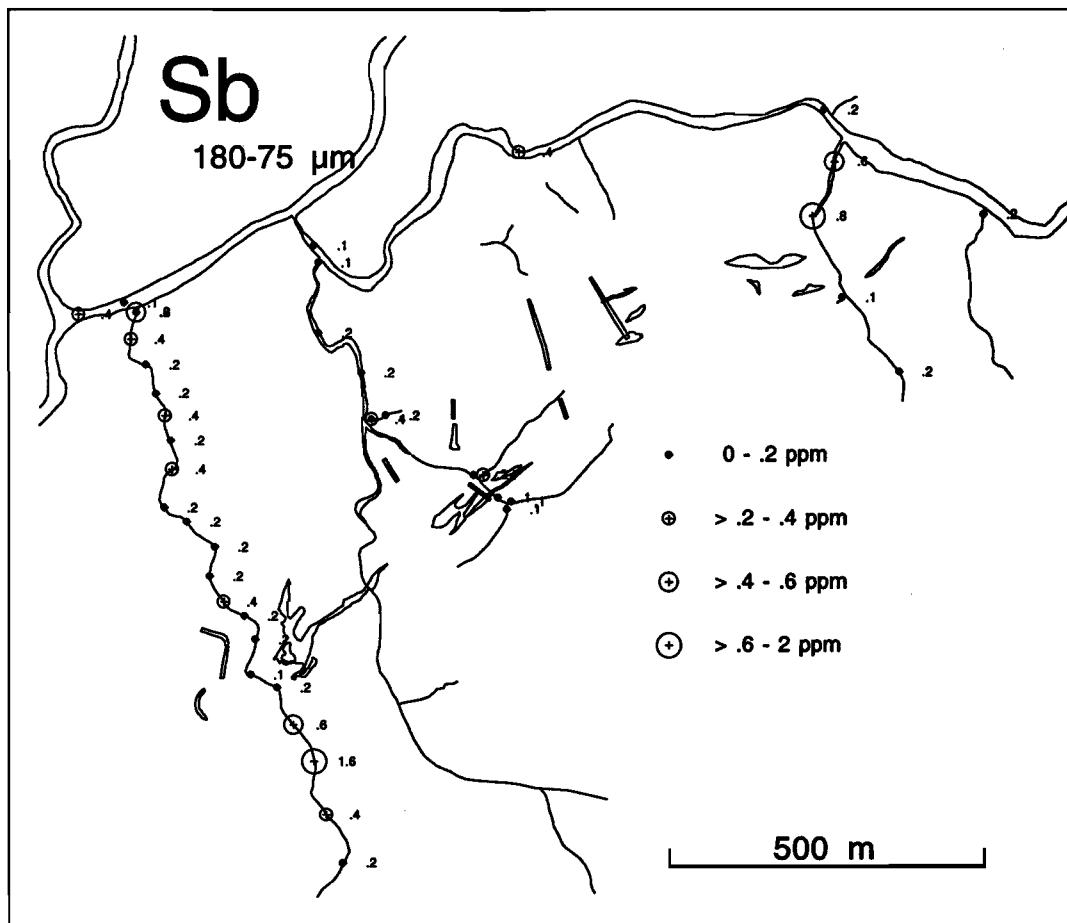


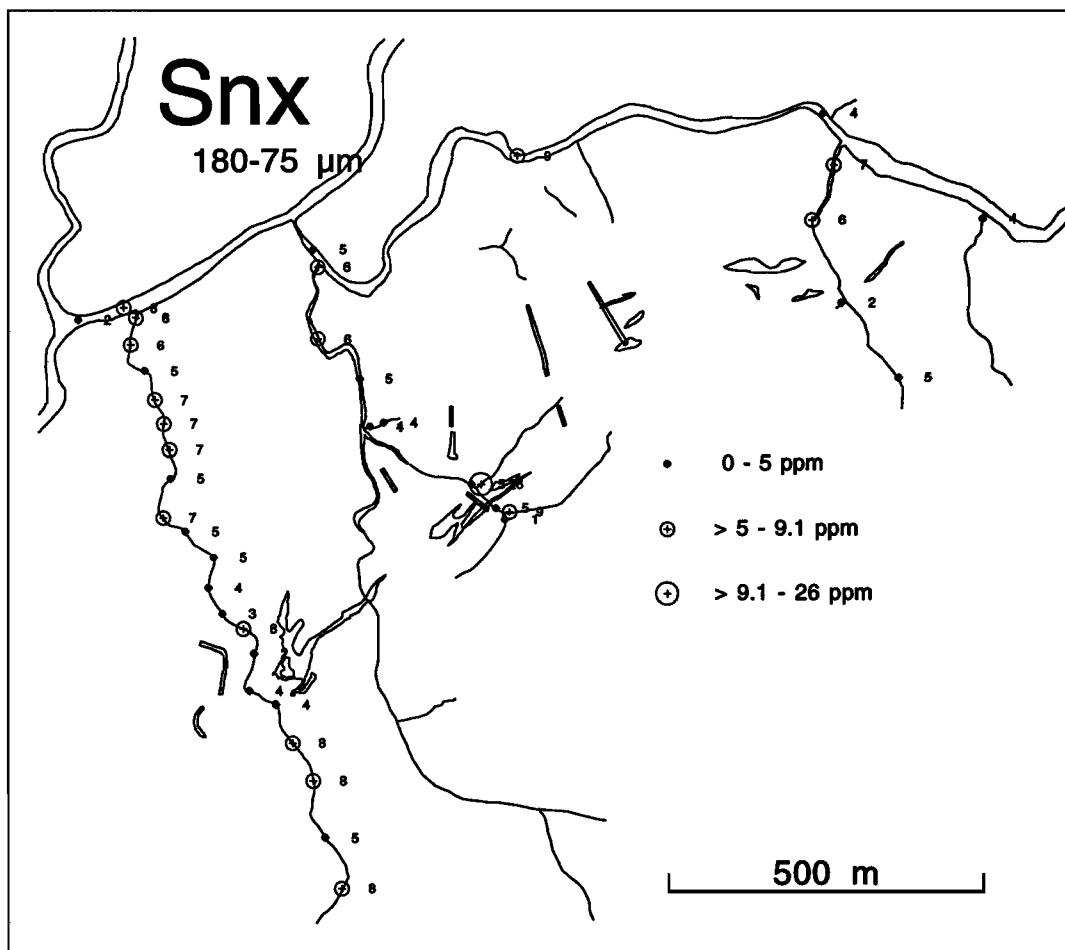
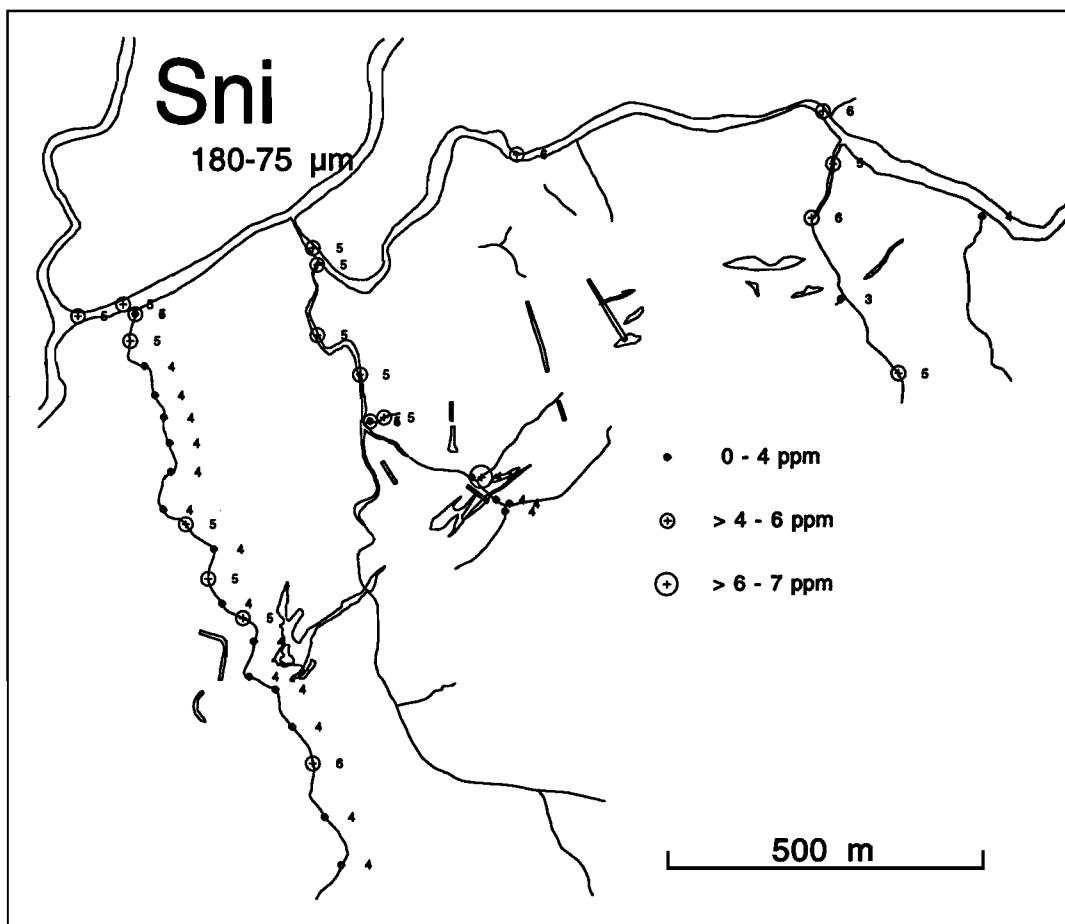


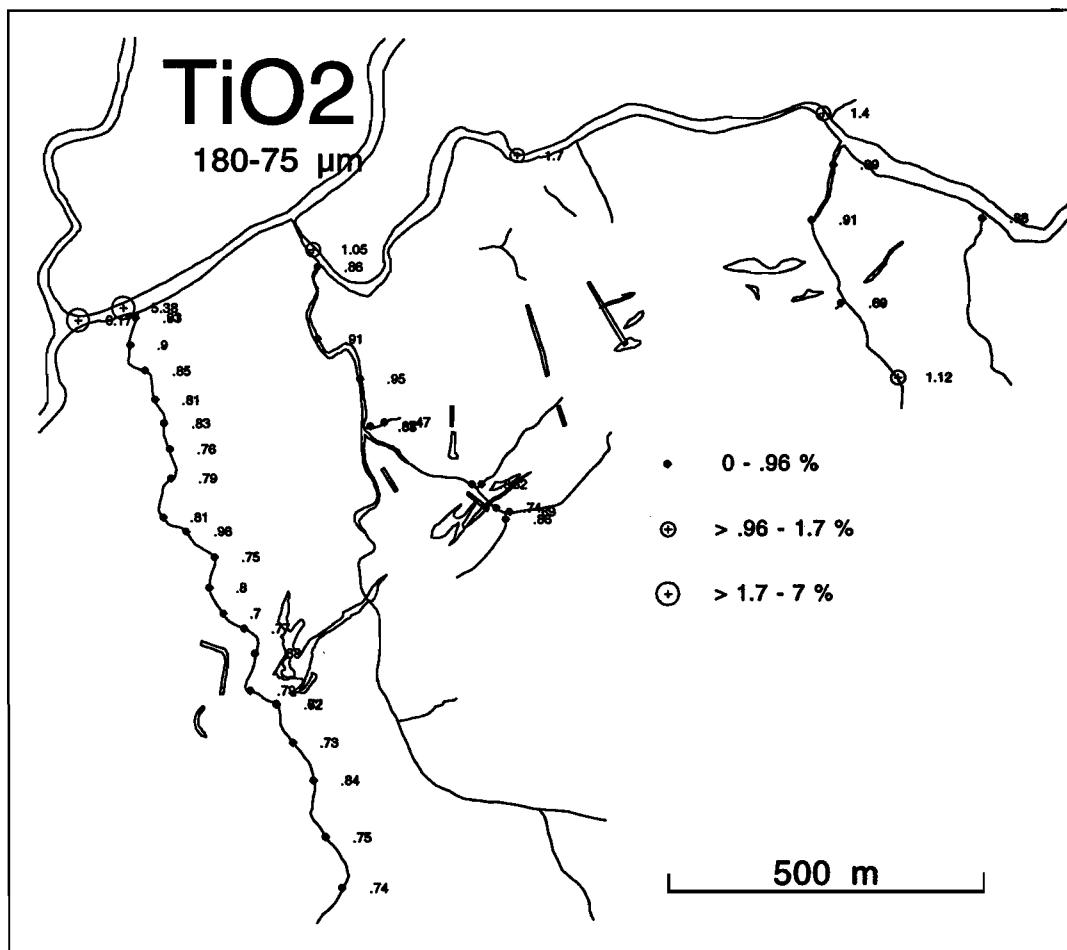
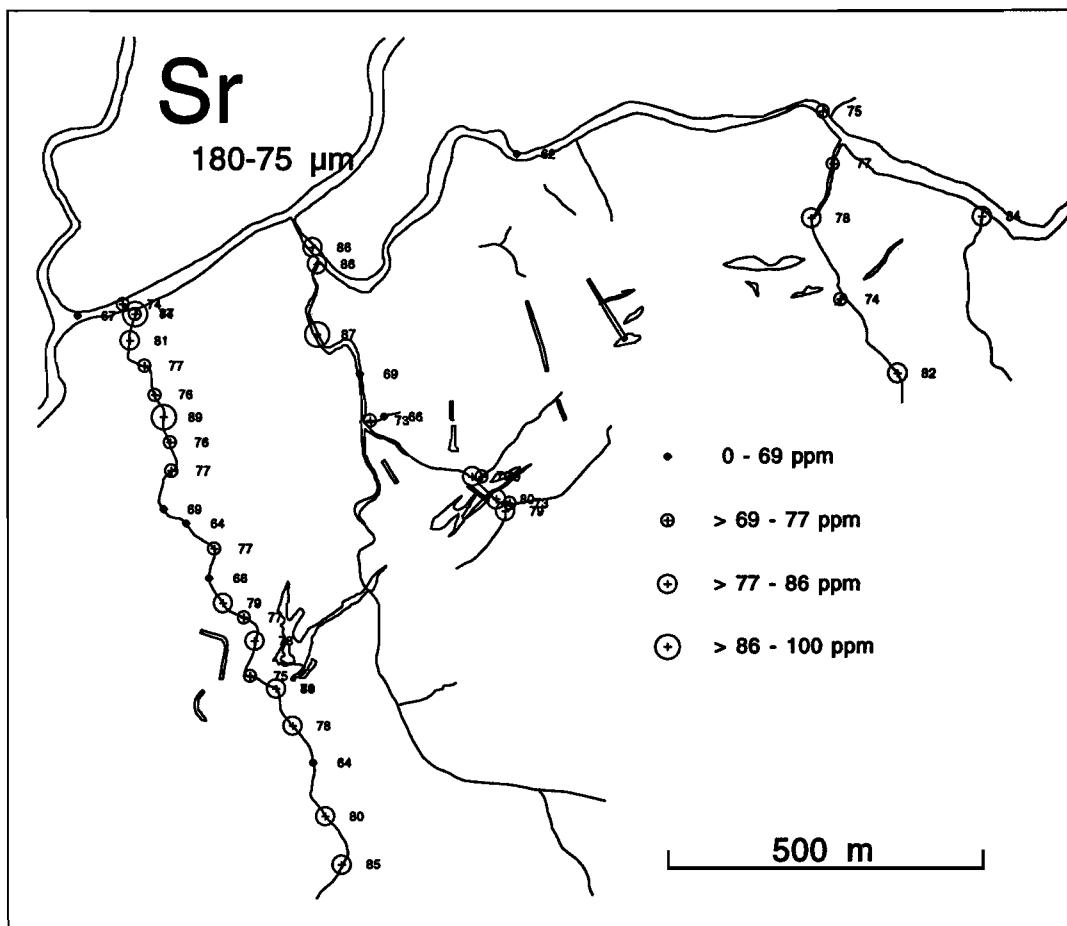


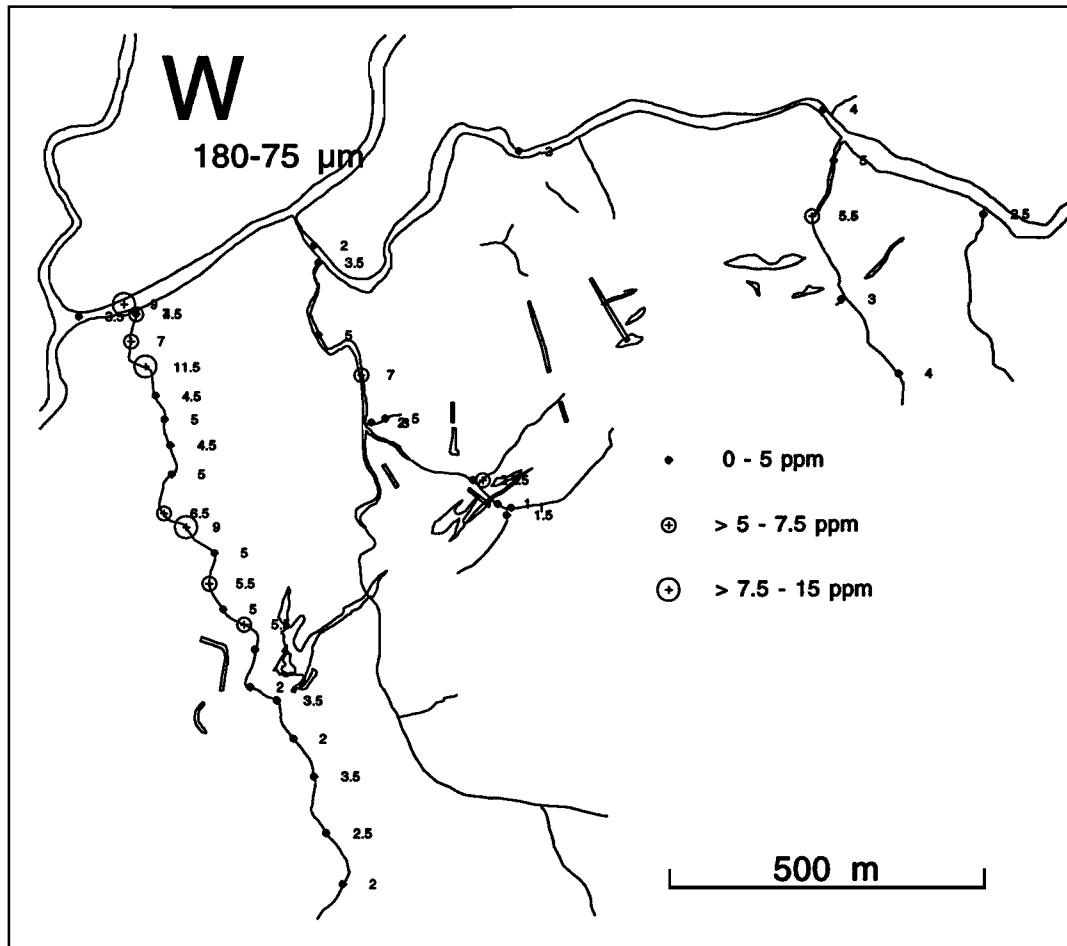
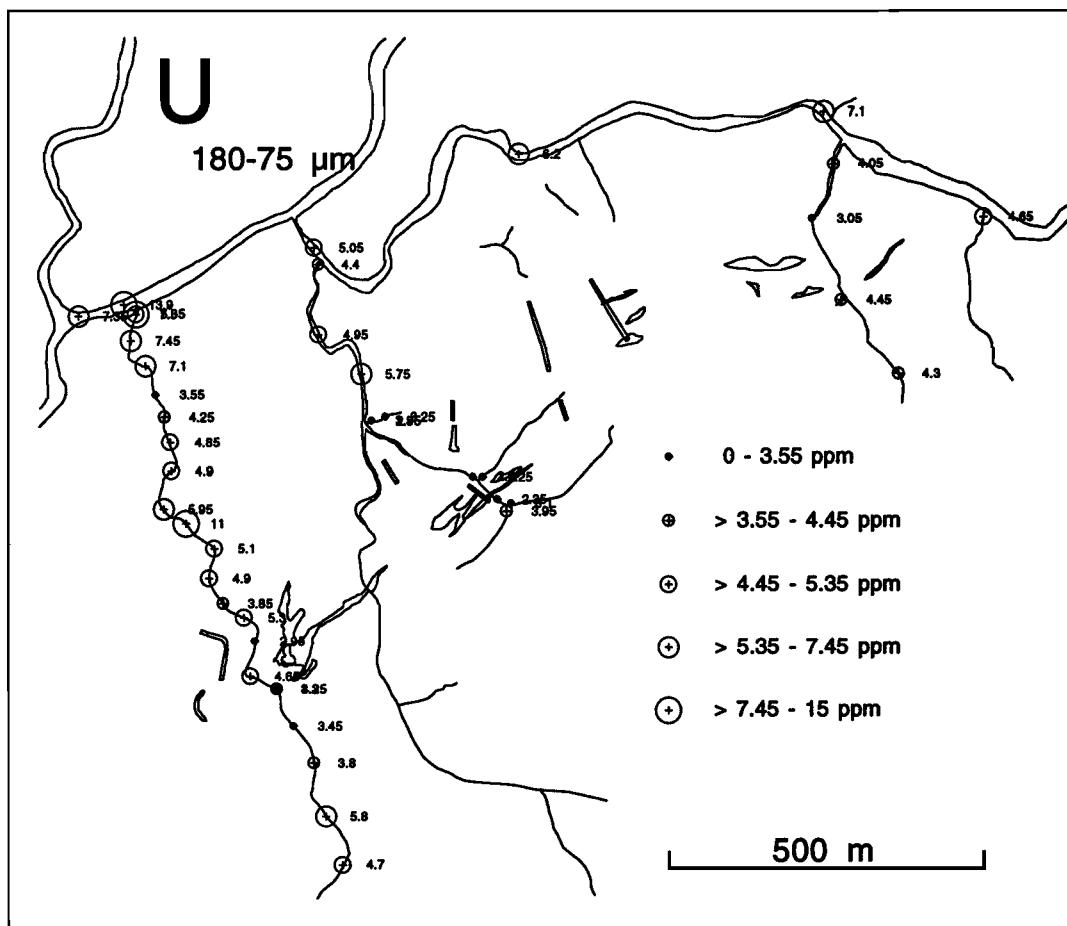


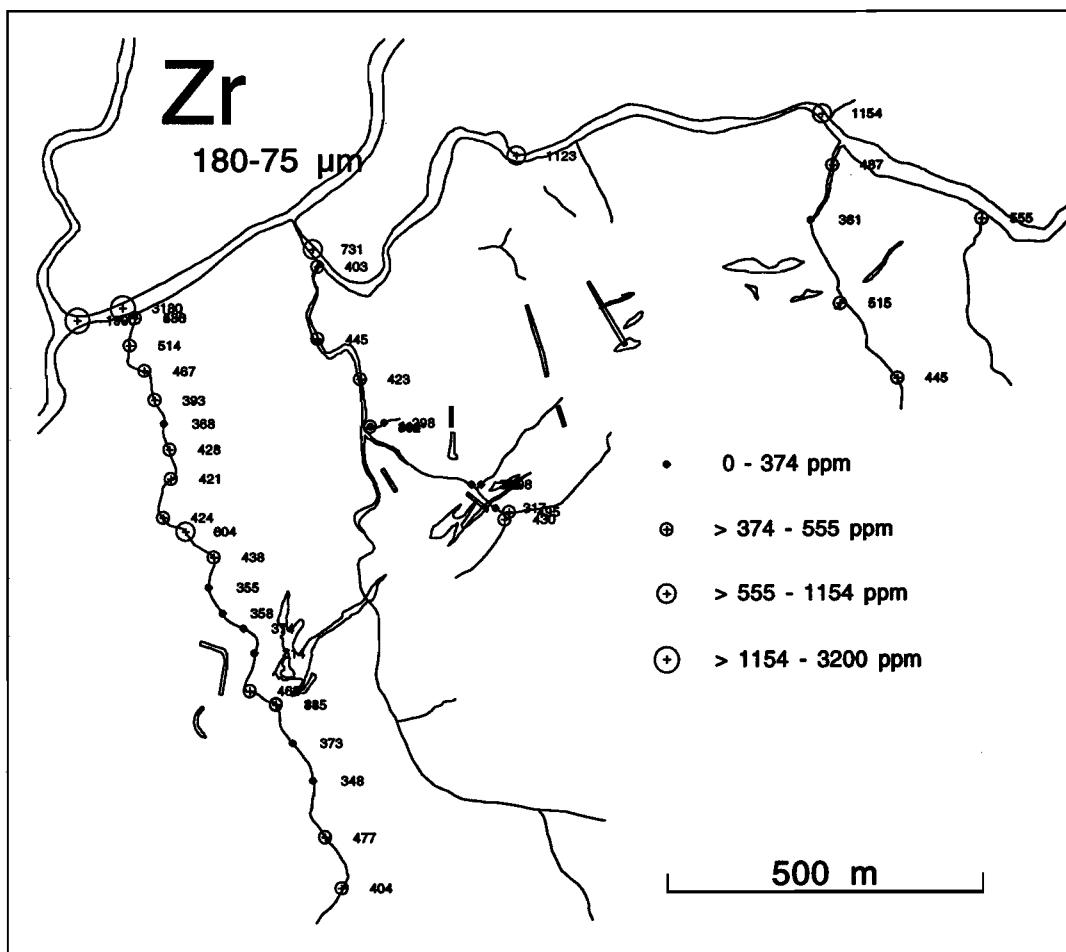
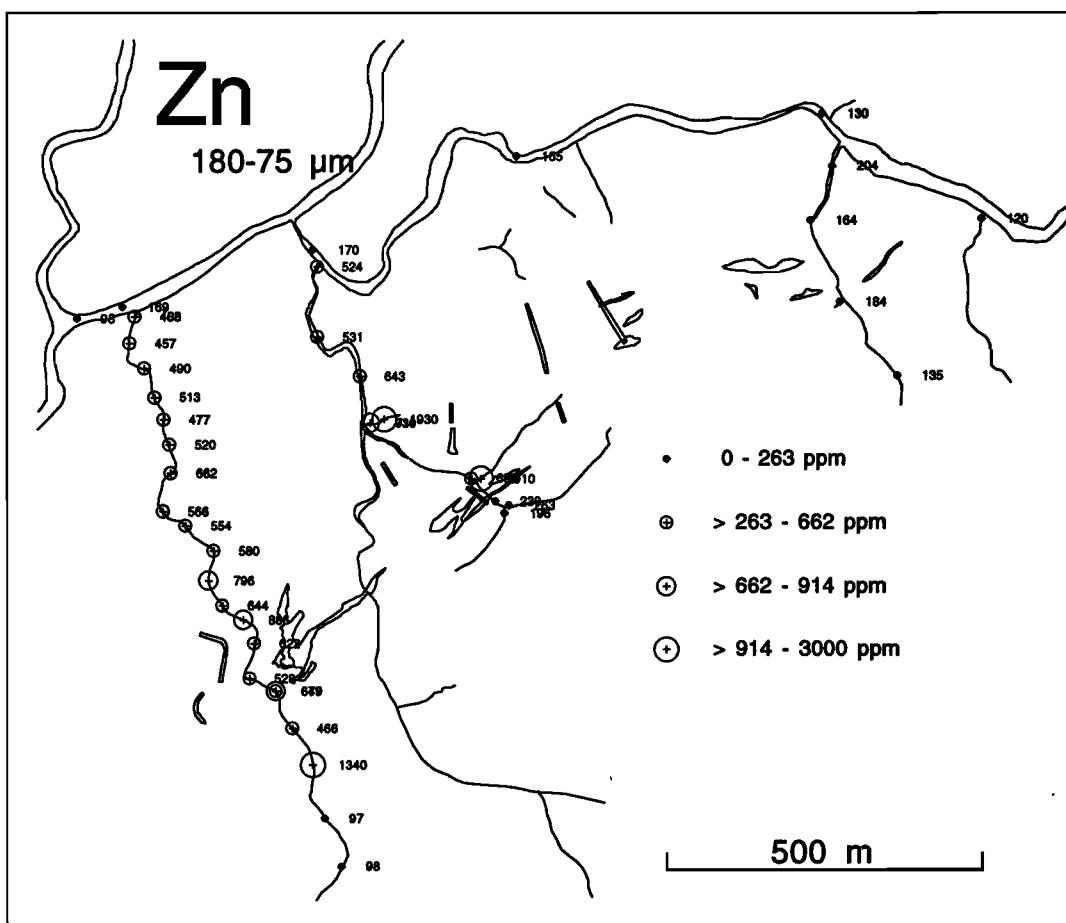


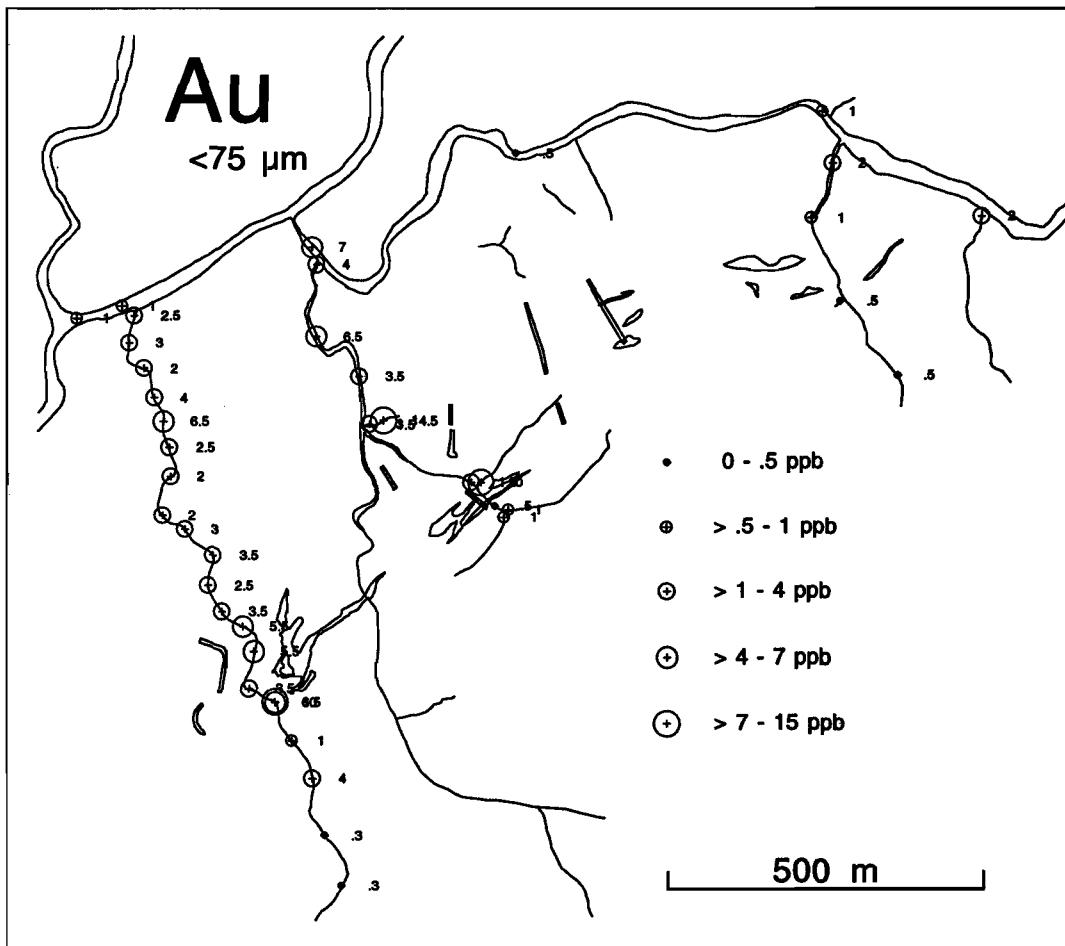
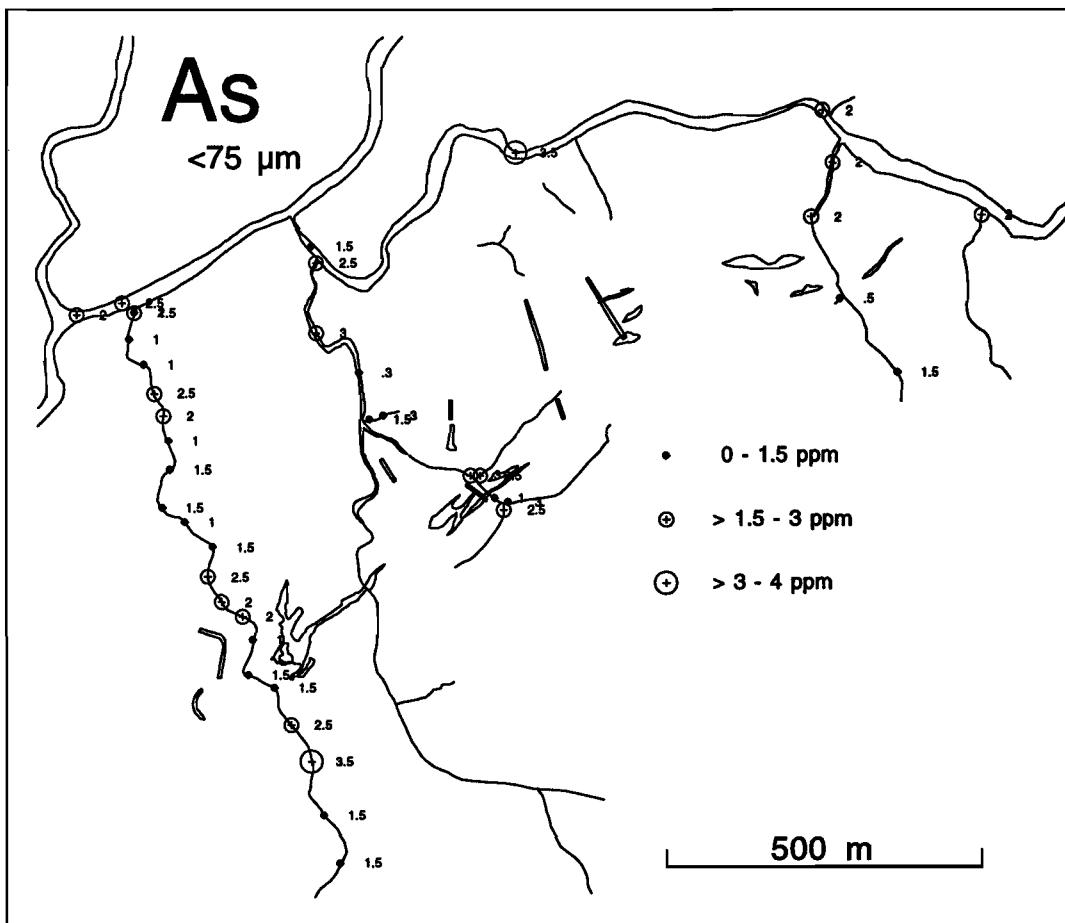


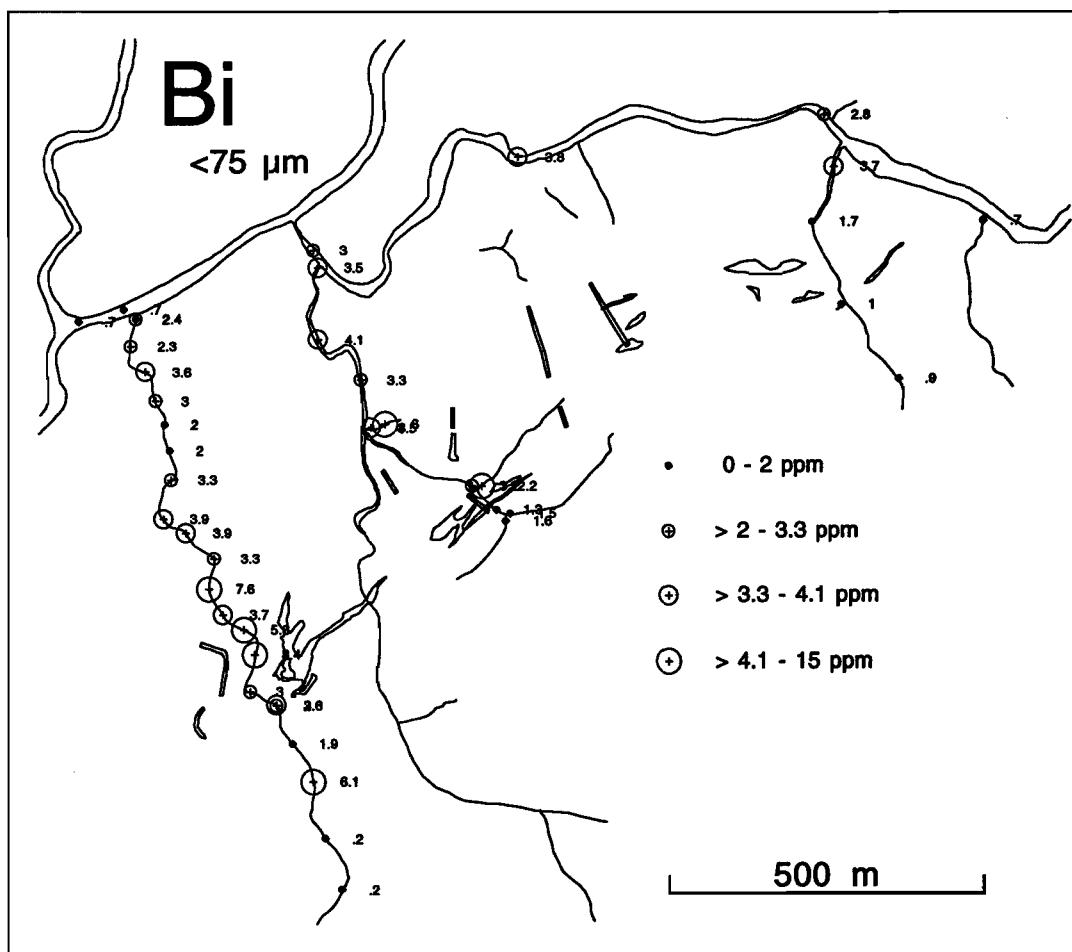
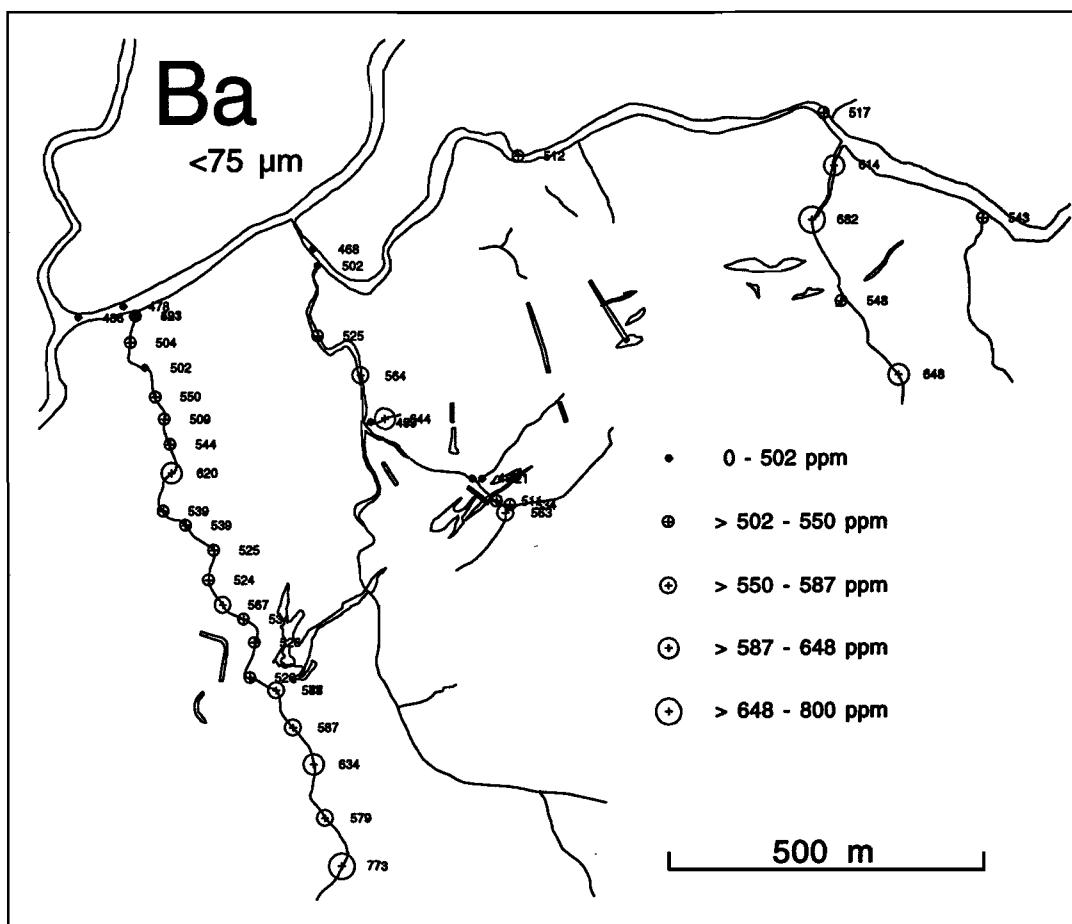


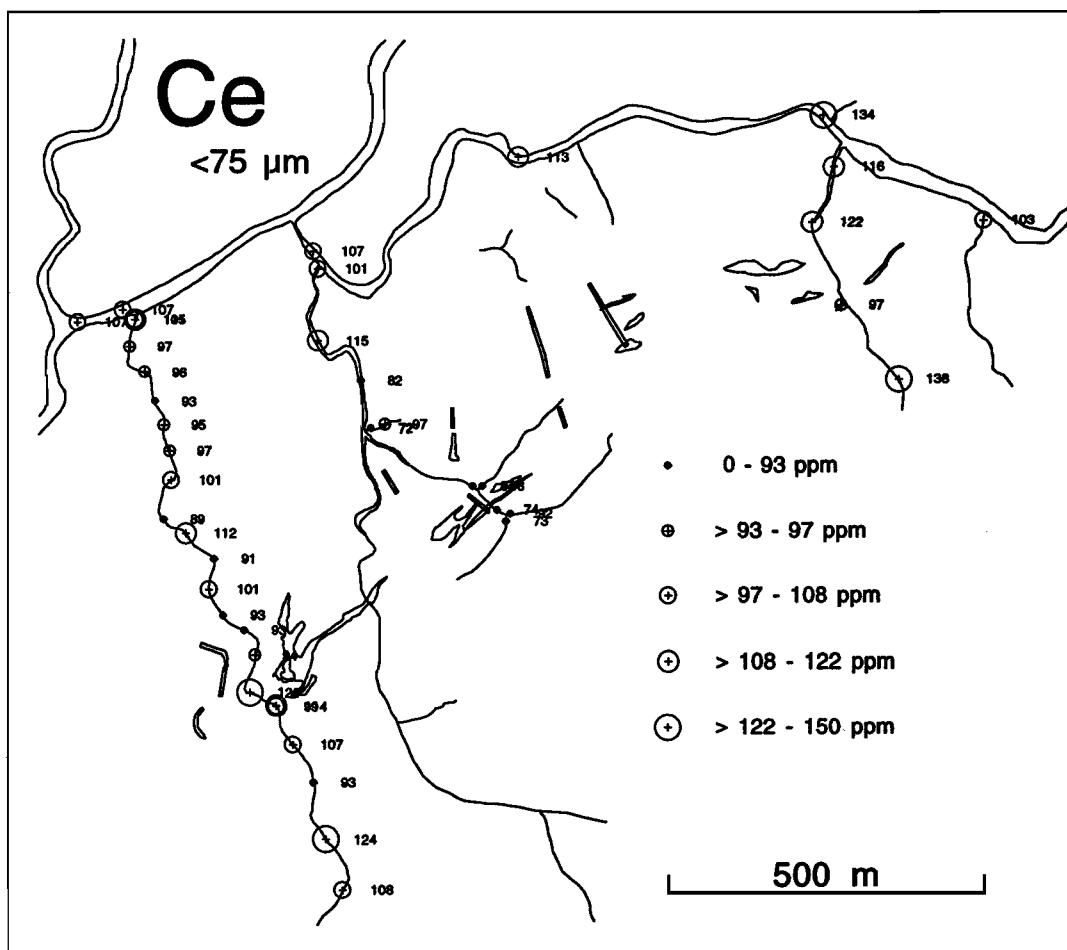
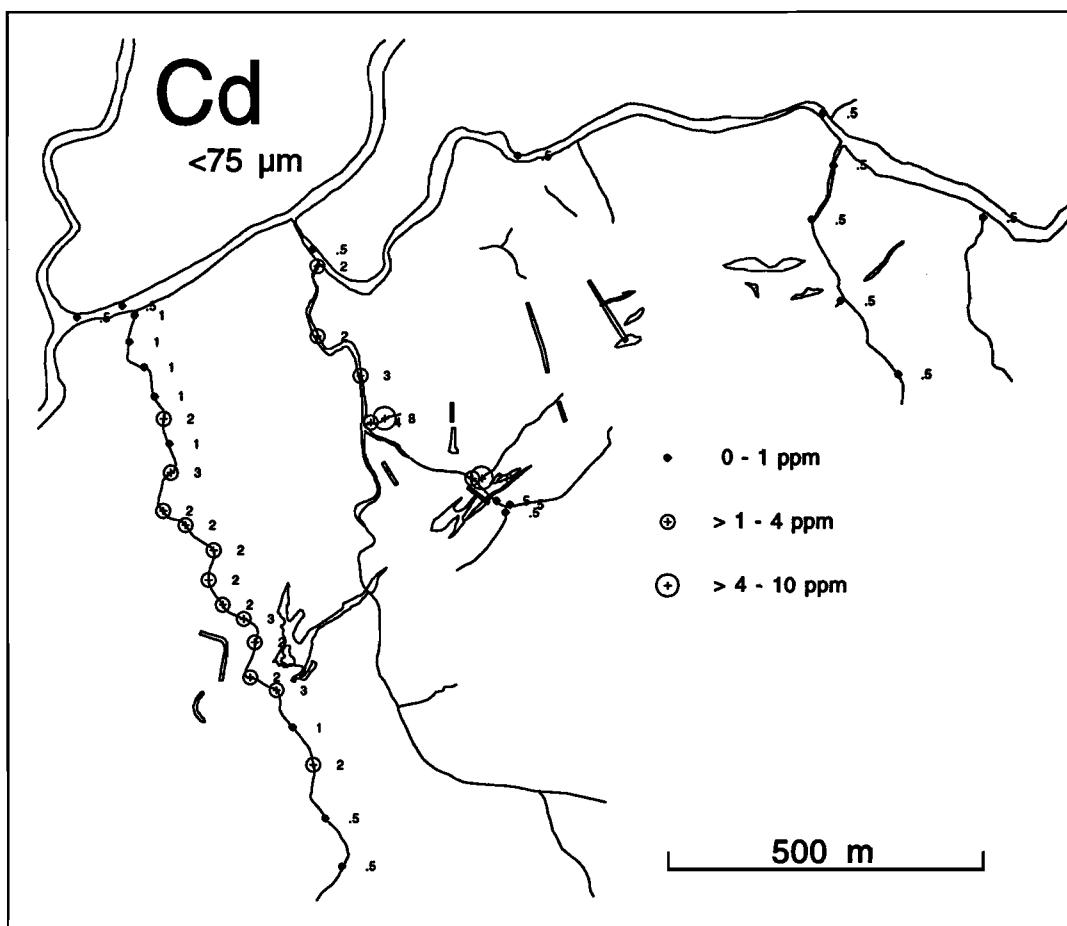


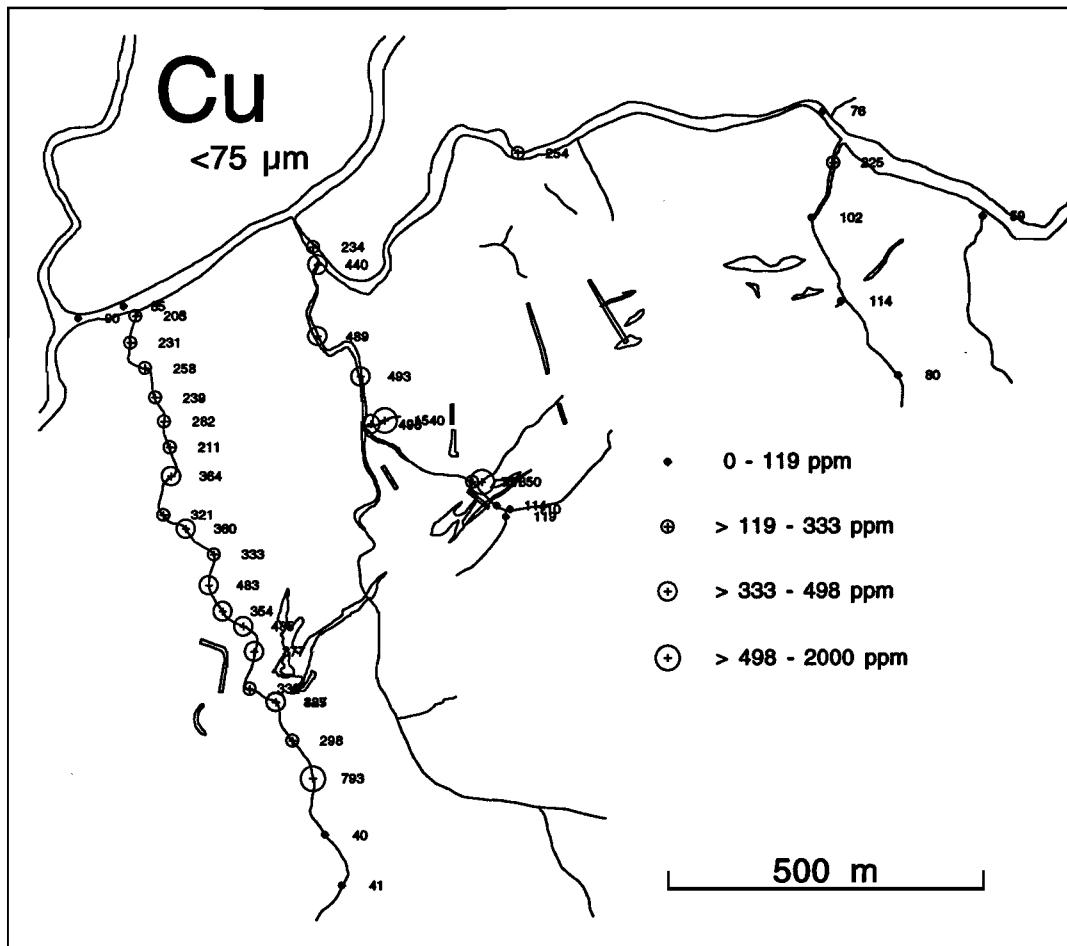
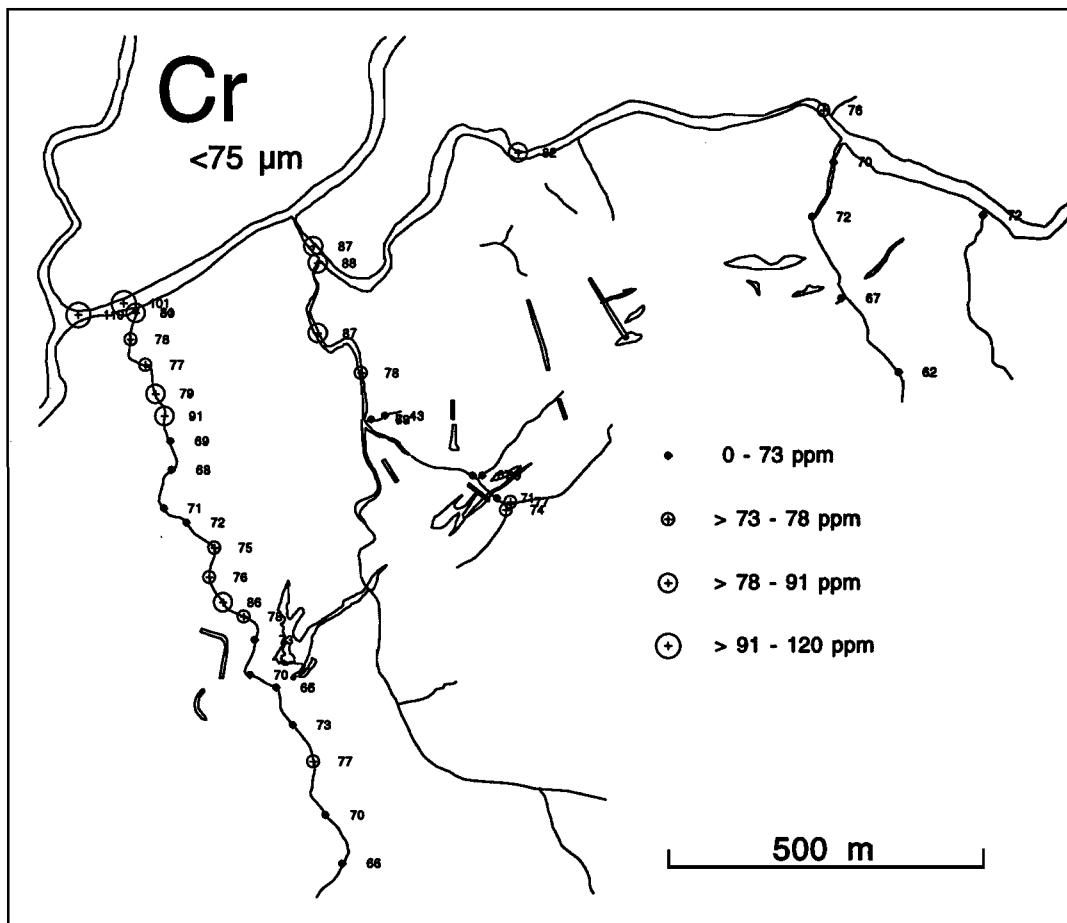


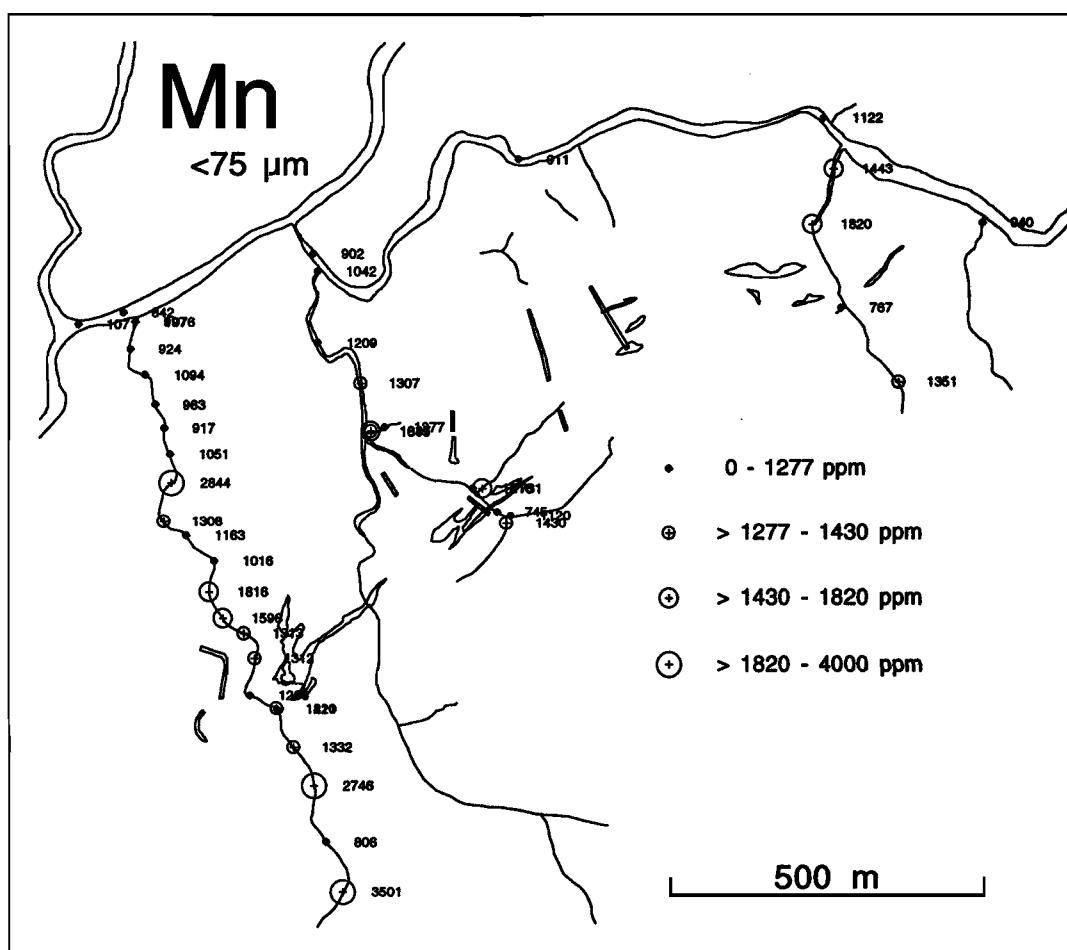
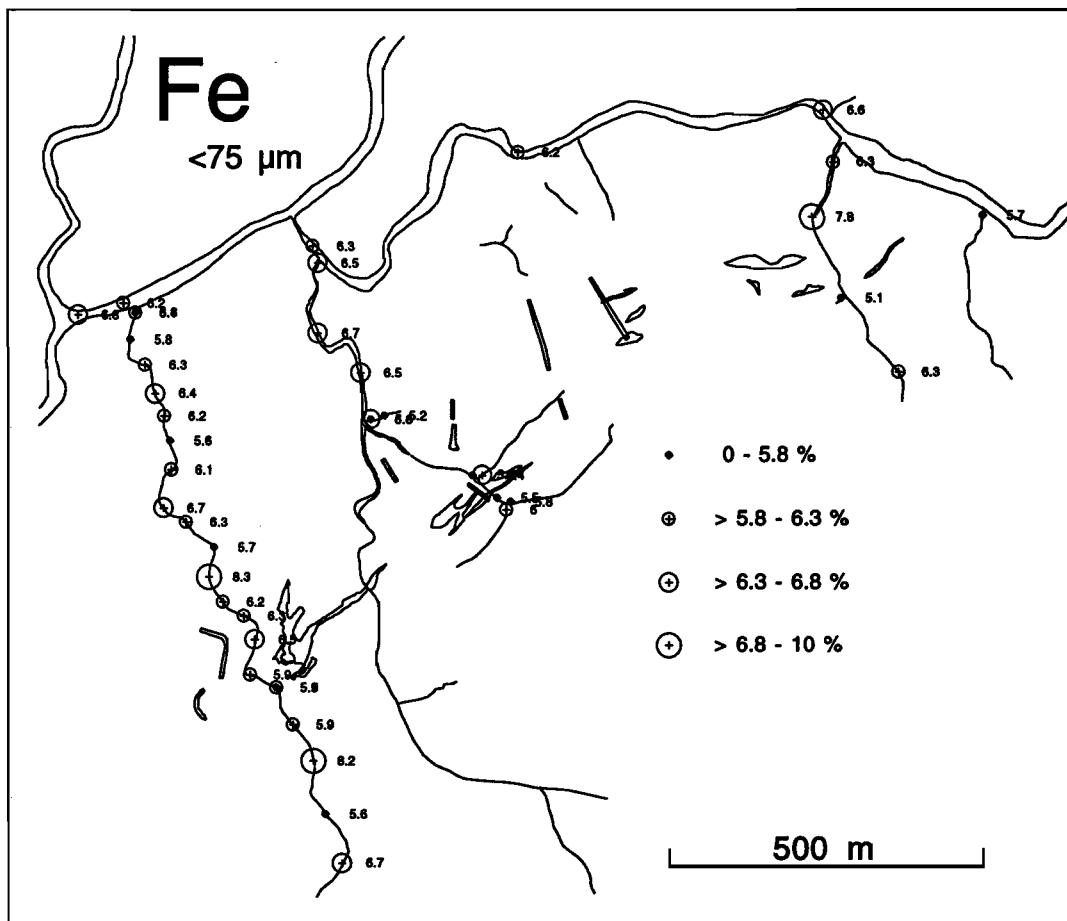


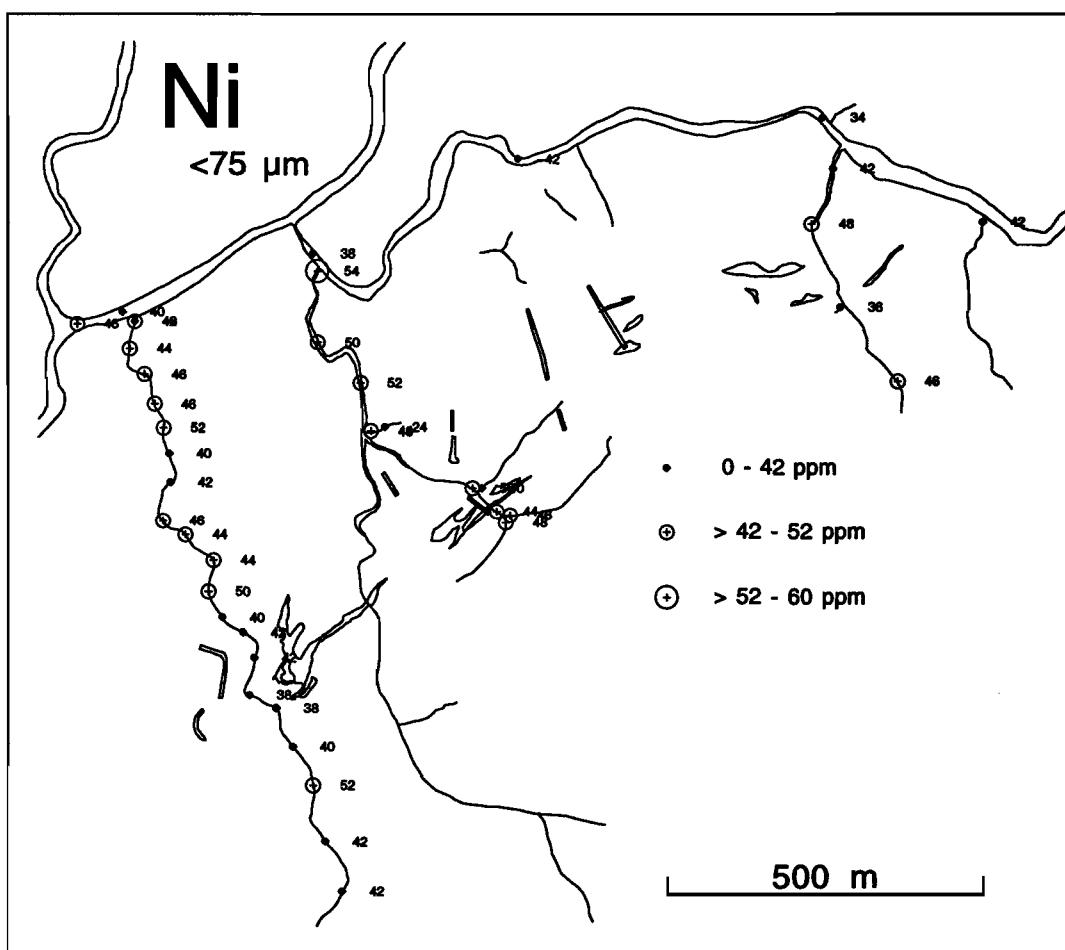
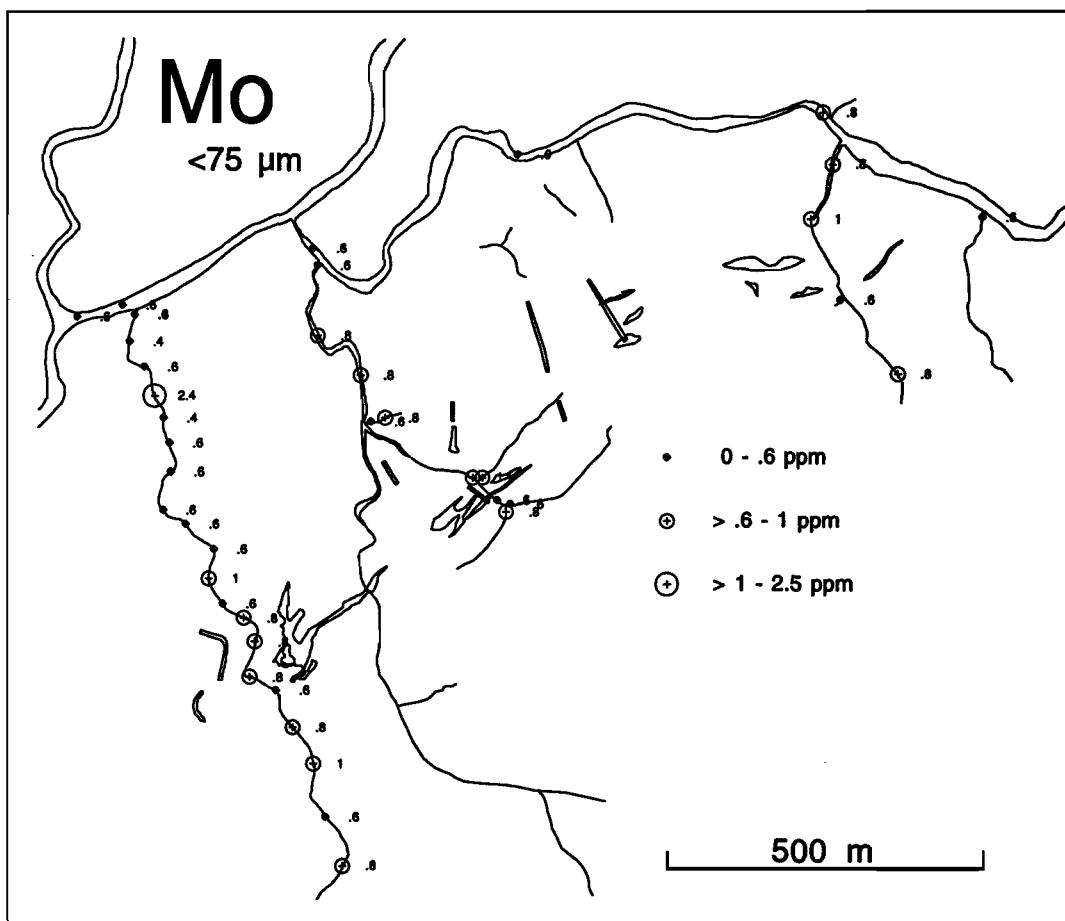


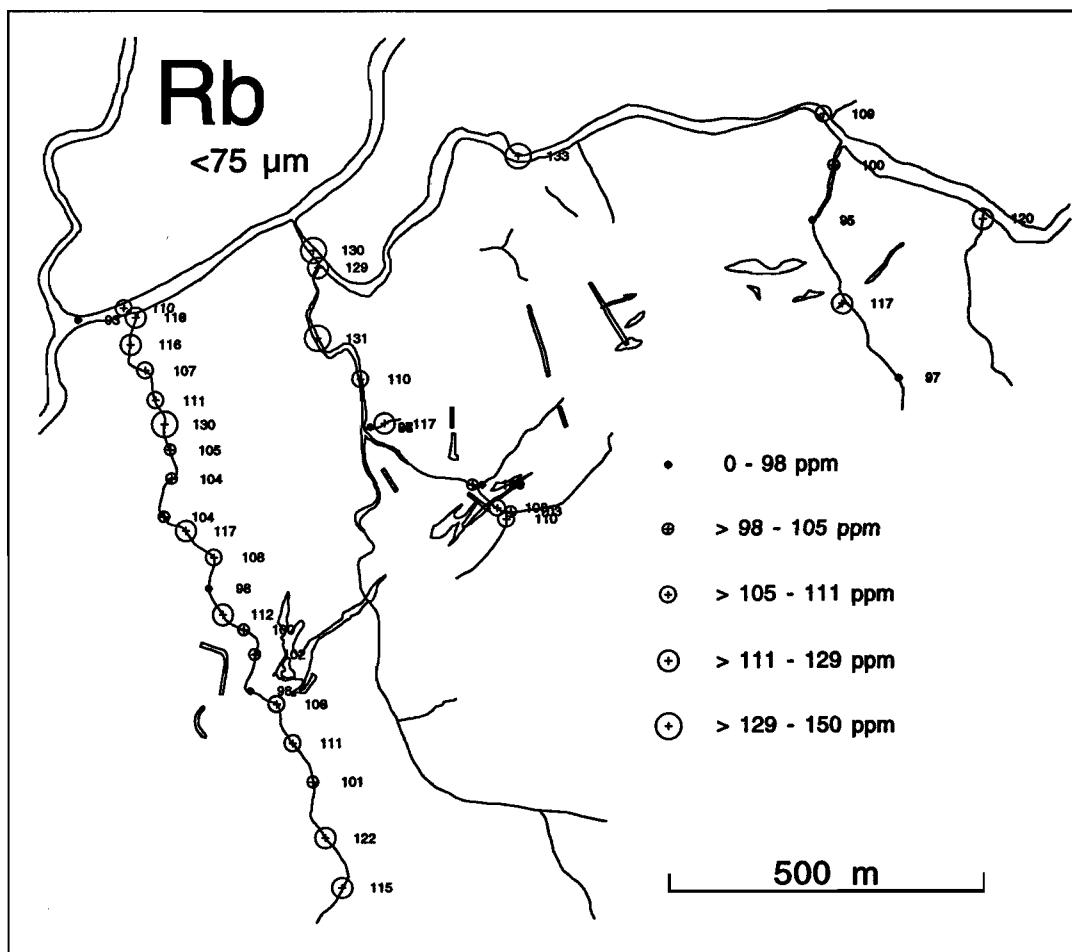
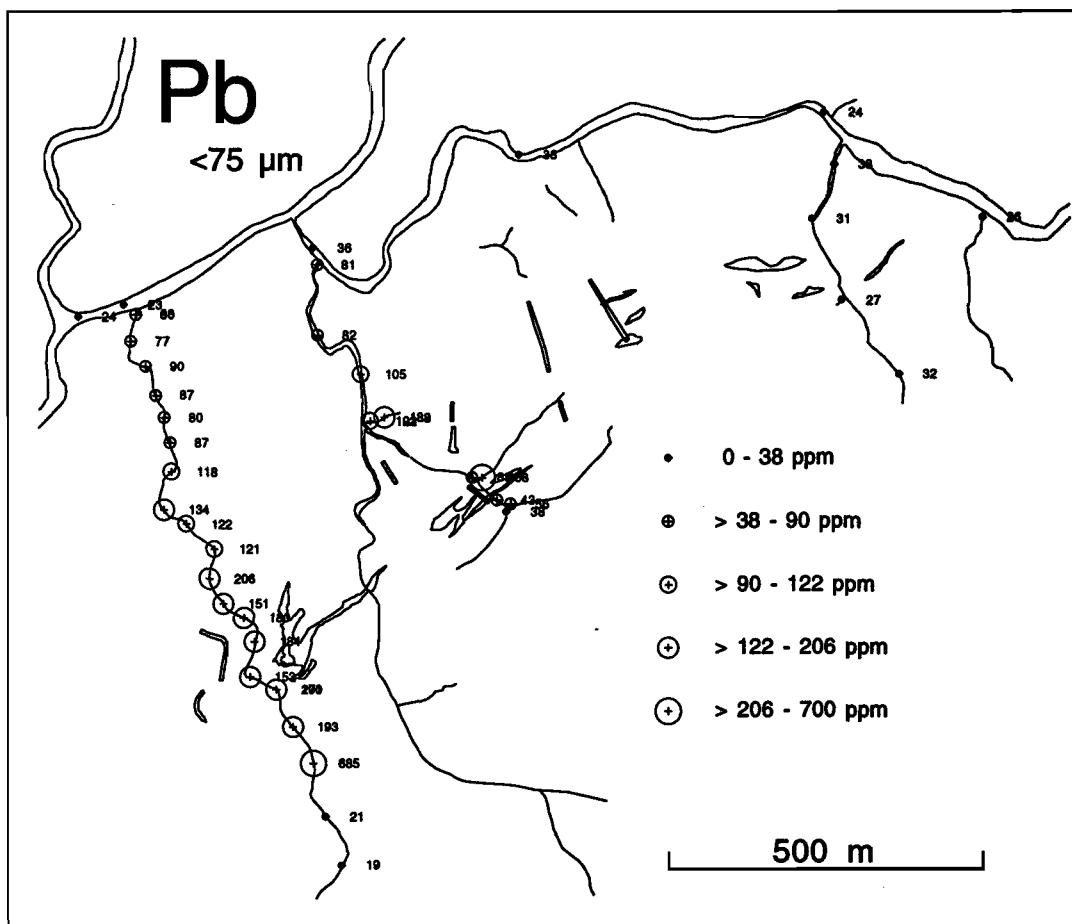


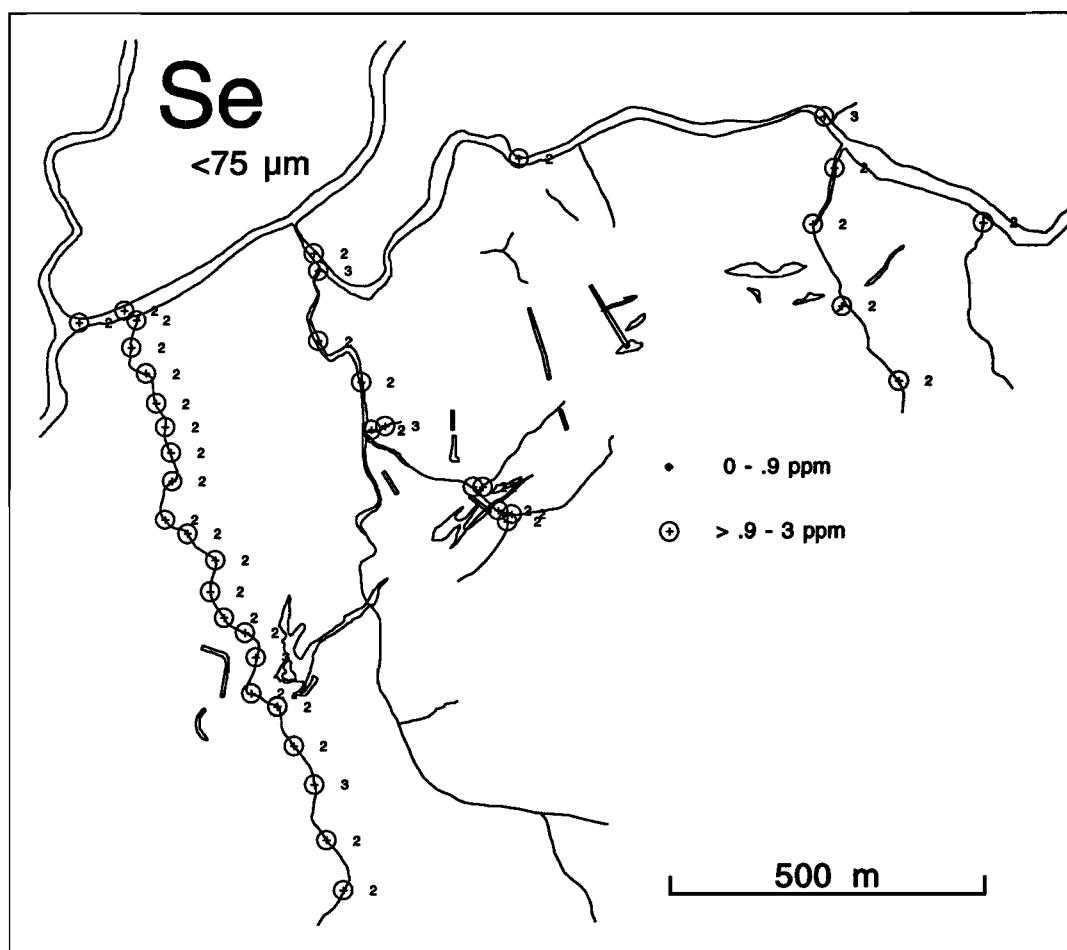
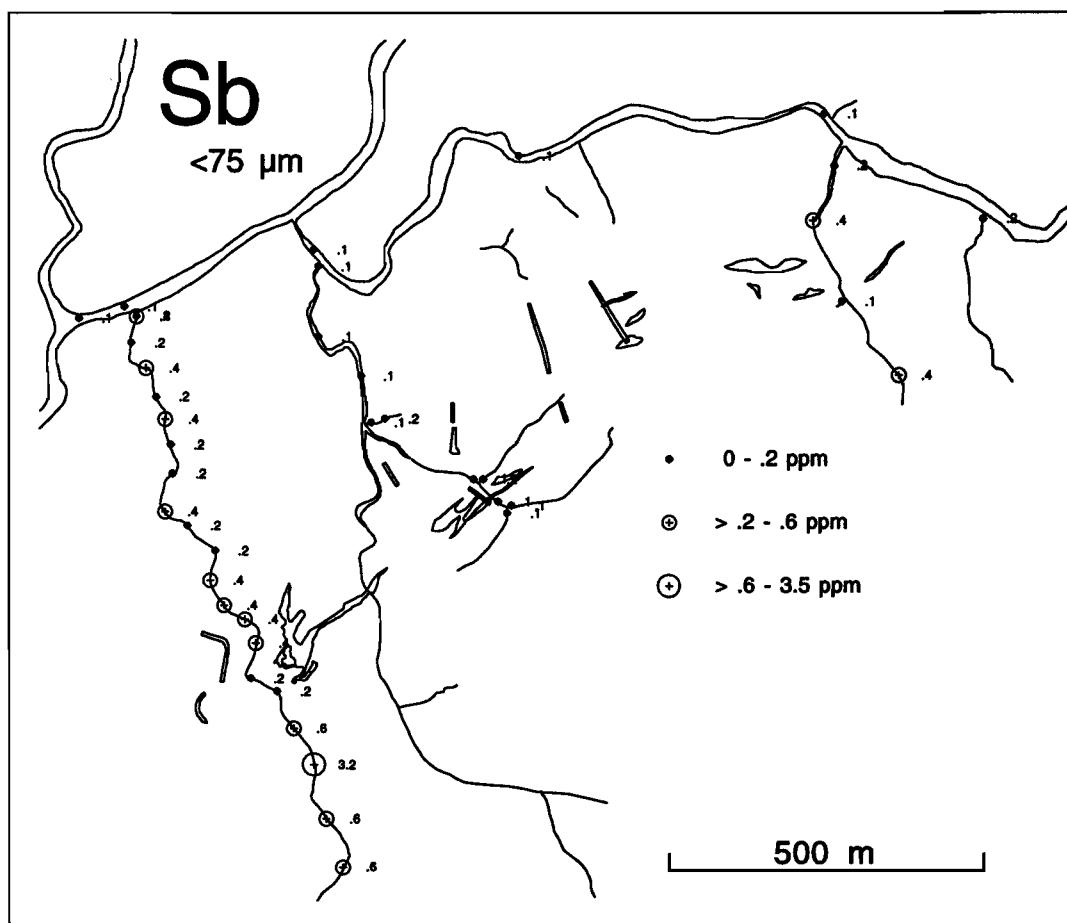


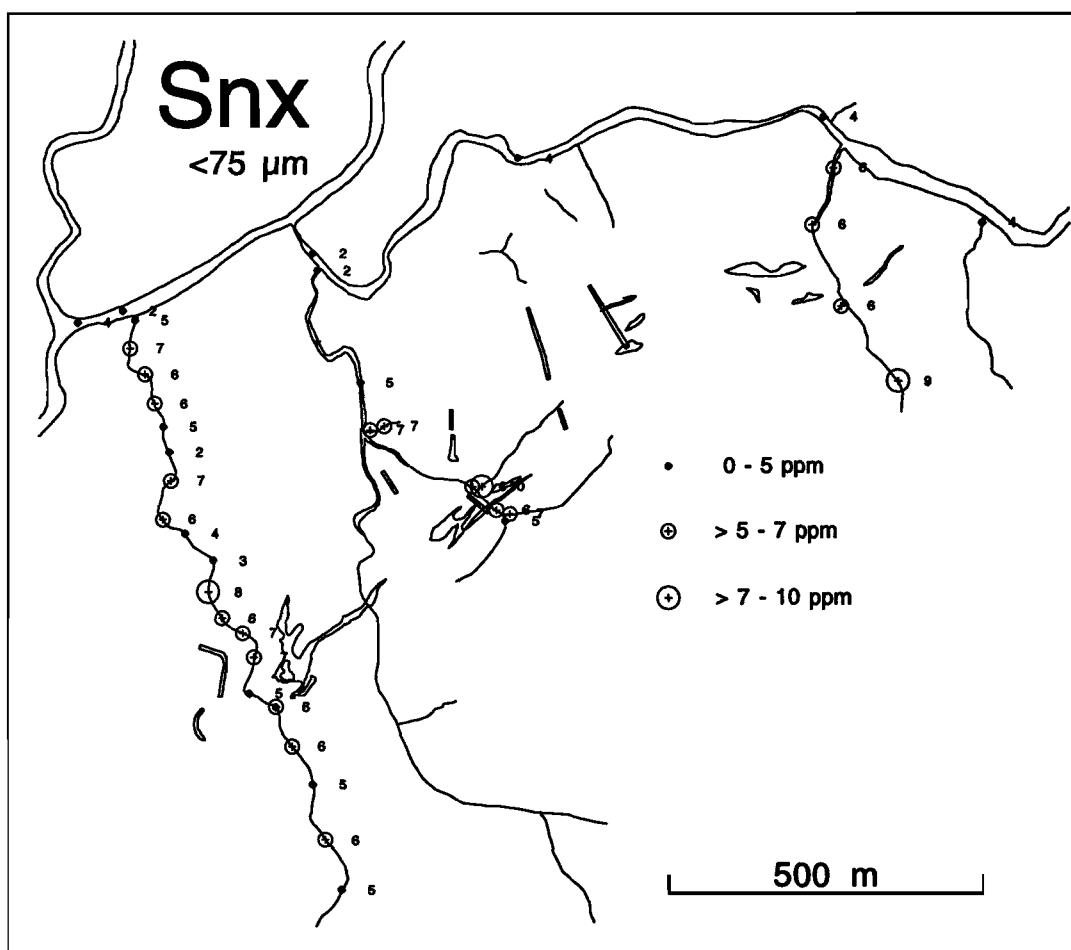
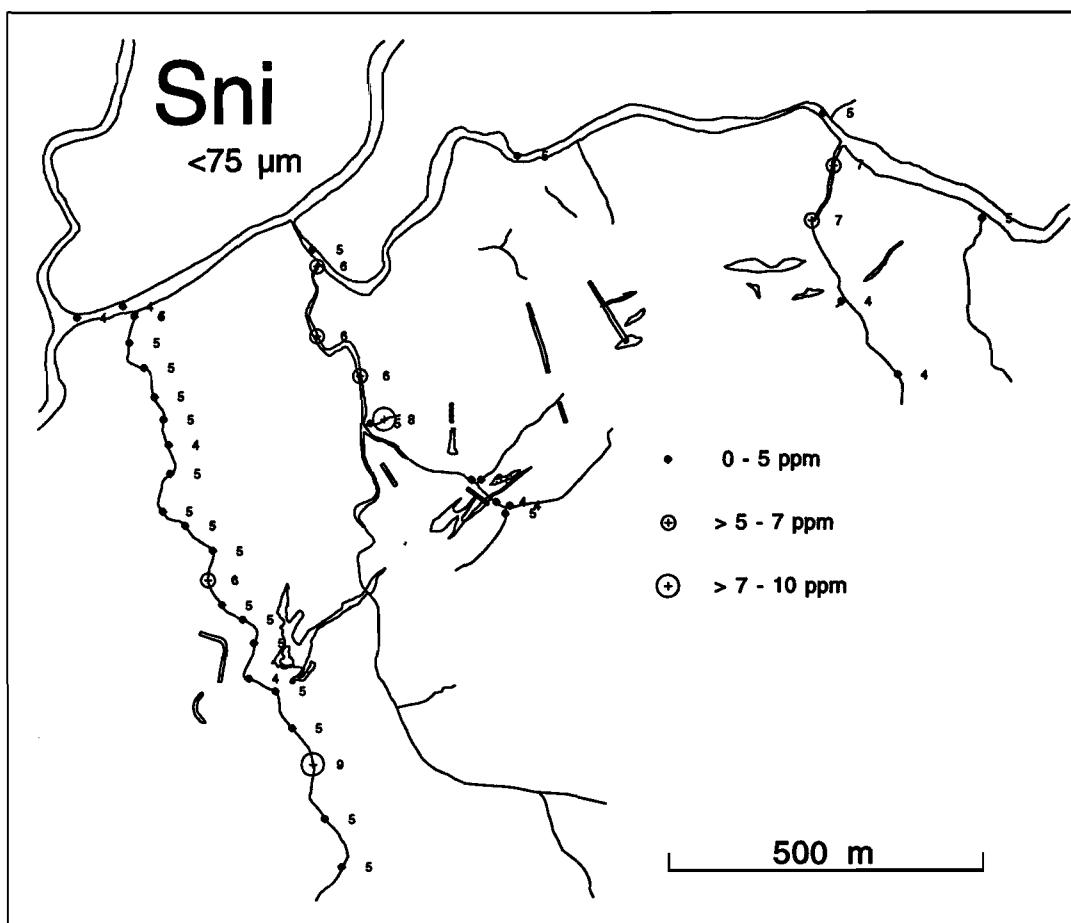


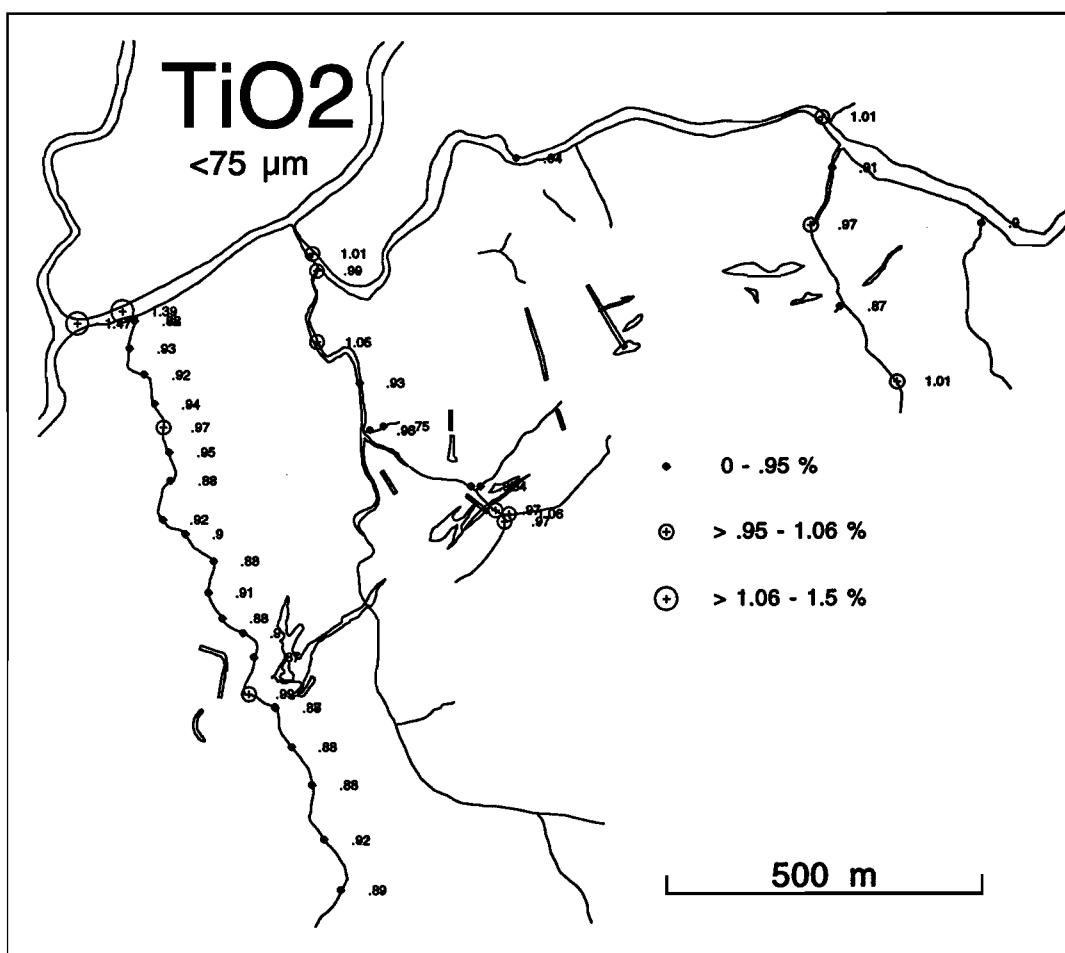
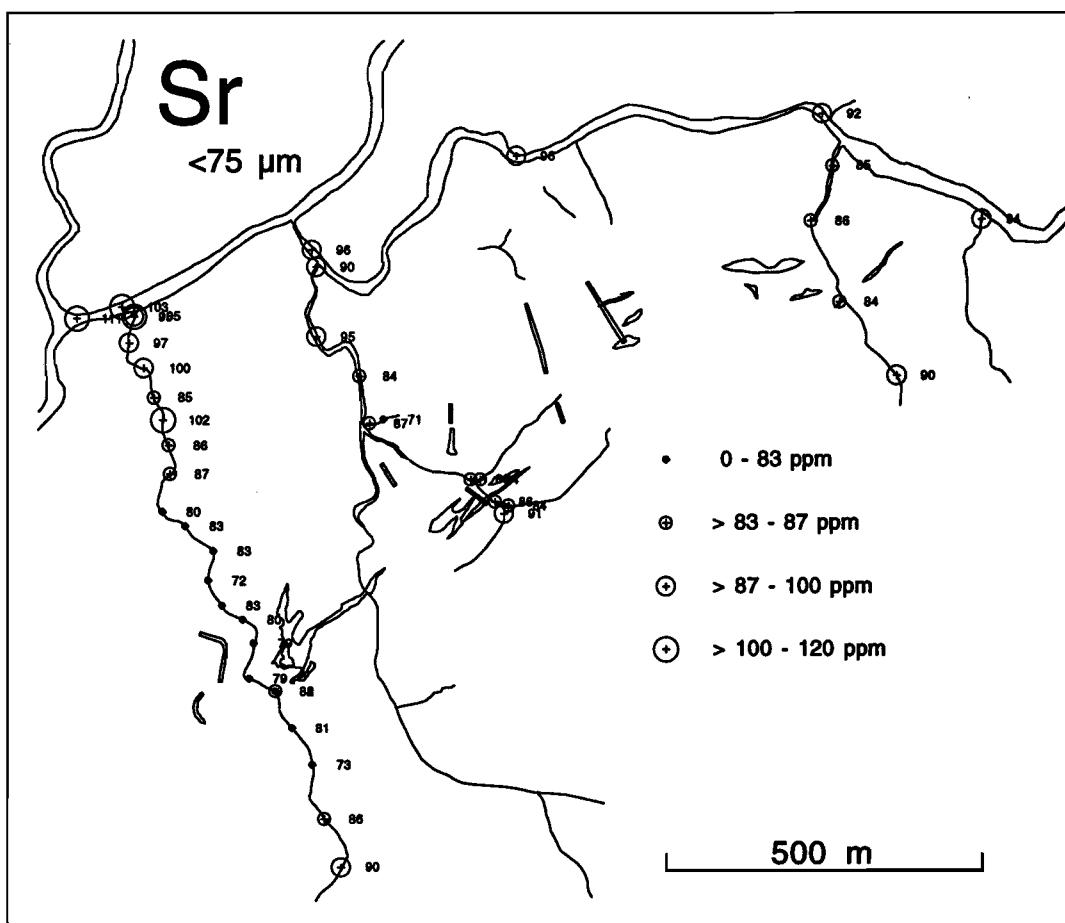


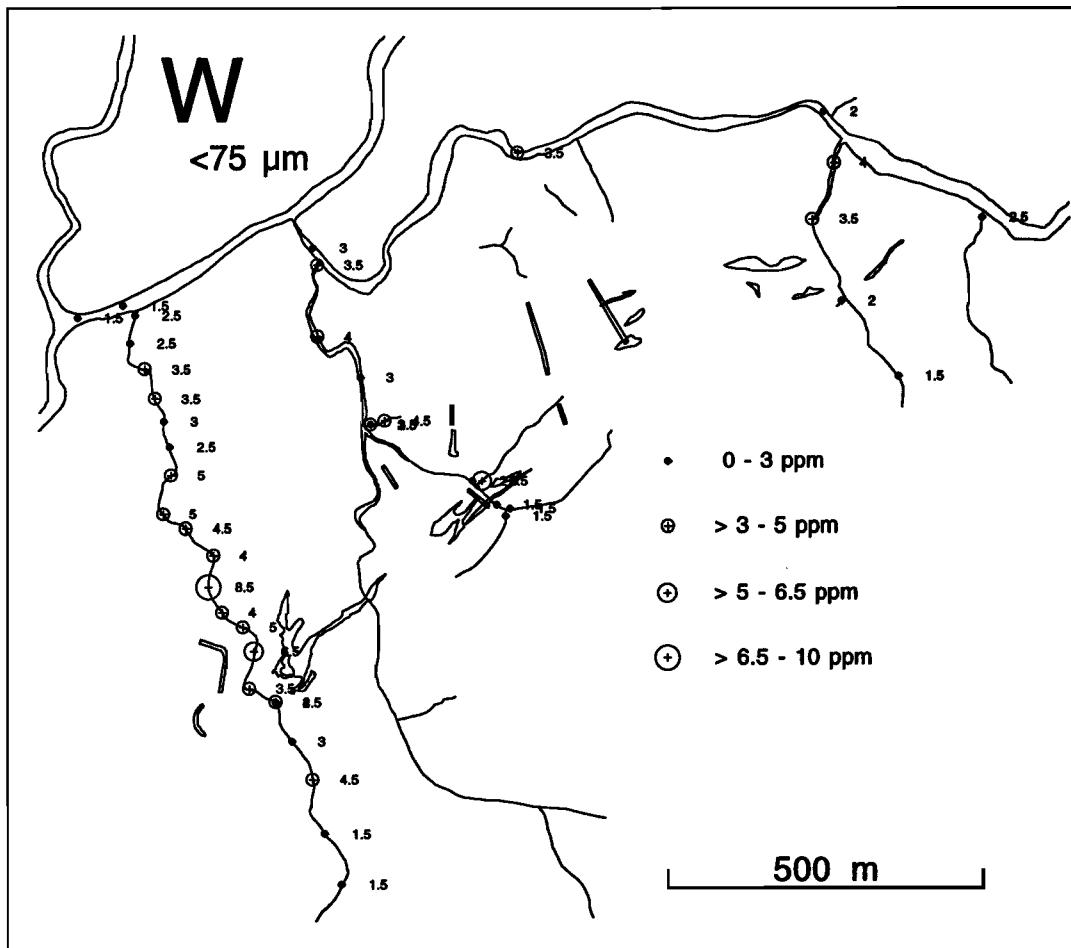
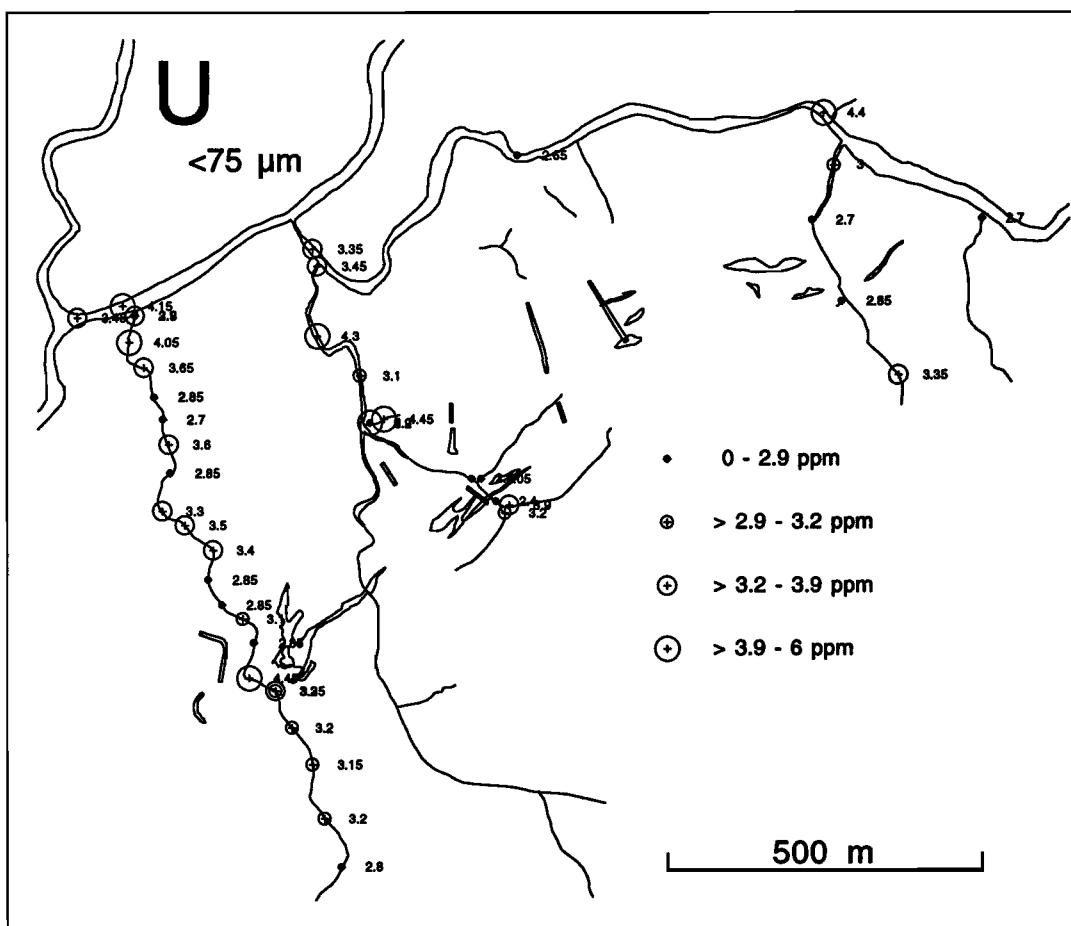


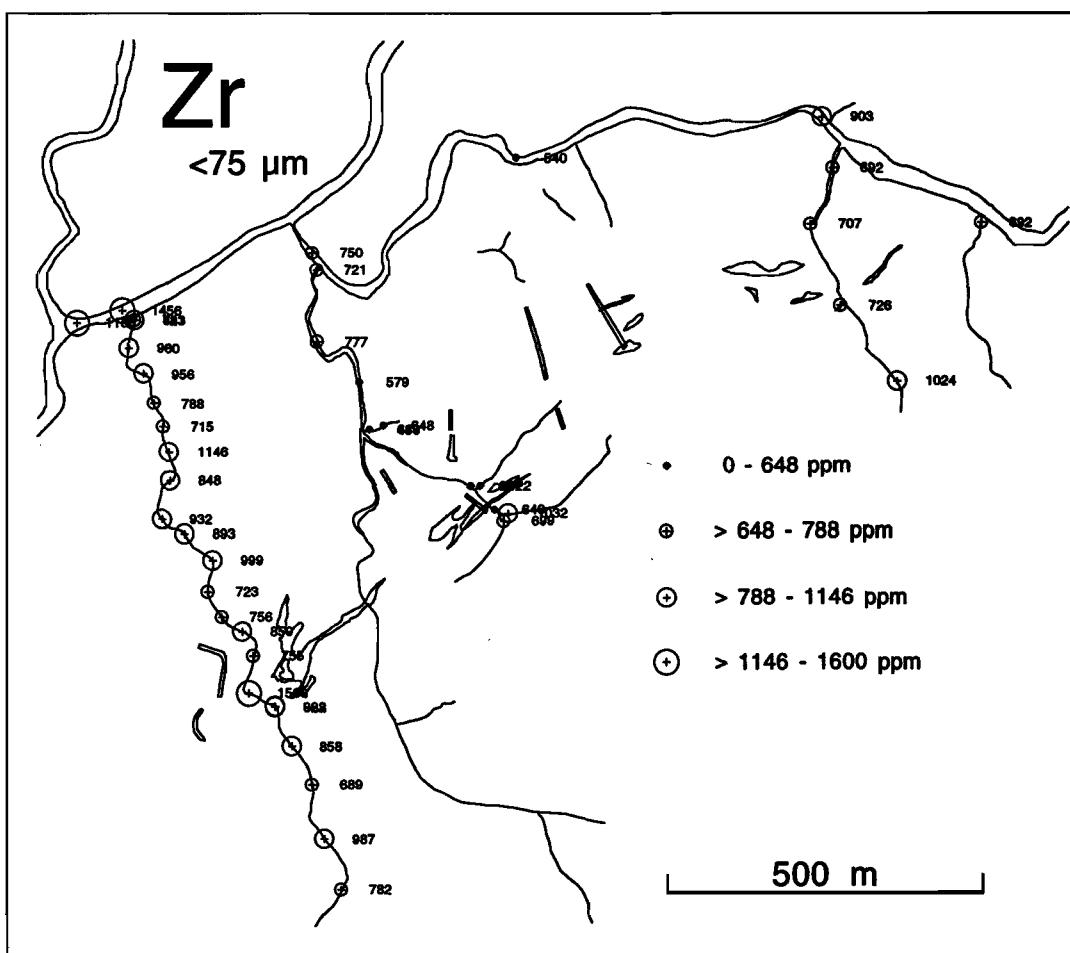
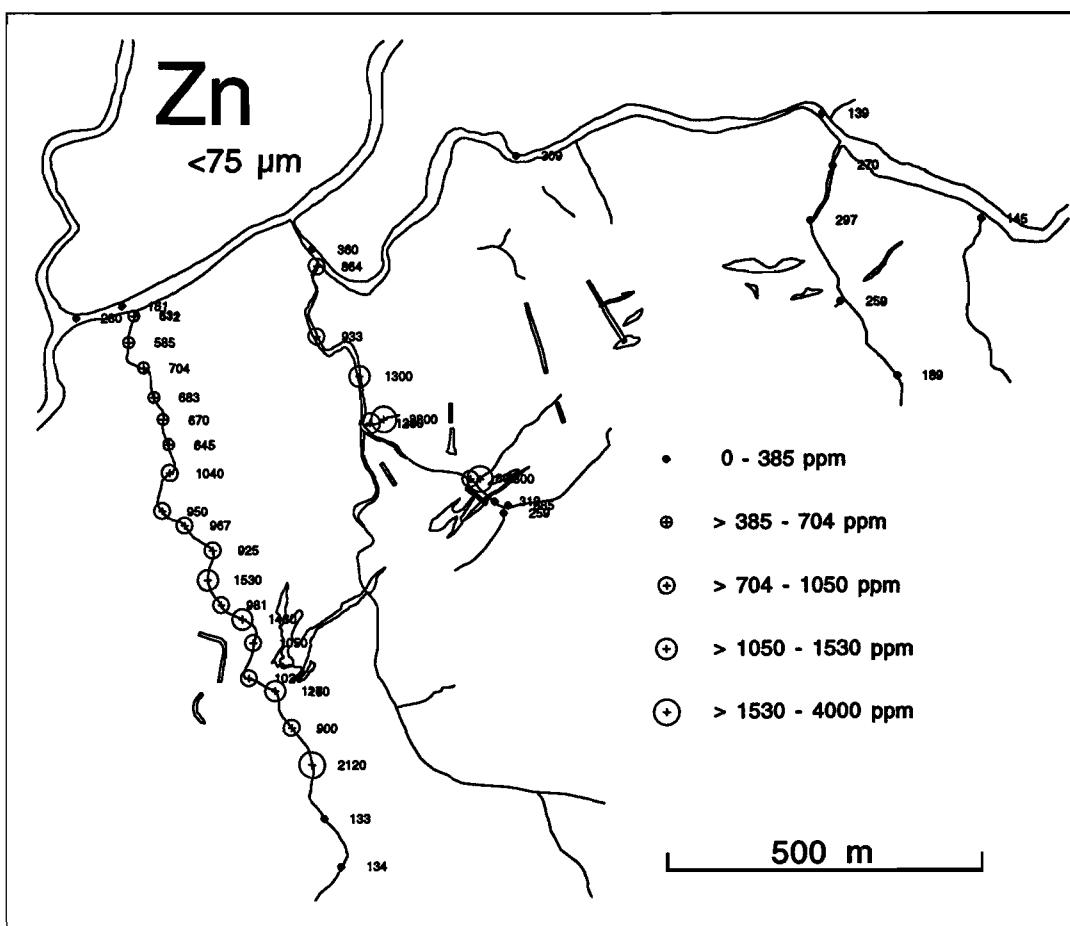












APPENDIX 4

BOX PLOTS

Appendix 4.A Winnecke Orientation Area

Appendix 4.B Oonagalabi Orientation Area

