

COMPUTER UNIT

by

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The primary objective of the Computer Unit is to help meet the data processing needs of the scientific staff of the Mineral Development Division. The unit is developing computer-supported systems for the compilation and management of resource data (lake sediment geochemistry, metallogeny, lithogeochemistry) collected by project geologists. This will ensure ready access to the data by provincial and federal government agencies and mineral exploration companies. The machine used for the Division's computing needs is the Amdahl V/6 installed at the Computer Resource Center at Higgins Line. Access to the computer is provided through the use of three high speed terminals, a graphics terminal and a dial-up terminal.

The main types of data that have been collected by geologists and are stored on the computer are from projects in the following areas:

- i) lake sediment geochemistry
- ii) stream sediment geochemistry
- iii) water geochemistry
- iv) lithogeochemistry

v) mineral deposit studies

vi) surficial aggregate resource evaluation

A number of computer programs are available to geologists for storing, manipulating and displaying data. These programs include: SPSS, SAS, GRASP, SIR. In addition, plotting programs are used for the graphic display of data, *e.g.*, plots of Harker variation diagrams, plots of the spatial distribution of mineral occurrences within a given area, plots of ternary diagrams, etc.

Future plans include:

- i) the use of contouring programs for displaying spatially distributed data (*e.g.* geochemical data).
- ii) the digitizing of geology maps in order to provide an integrated approach for displaying resource data, *e.g.*, displaying certain geological environments with associated mineralization and geochemical anomalies.
- iii) the development of "user-friendly" computer programs for use by geologists in maintaining and manipulating earth science data.