

The Department of Geological Sciences

Present Equipment and Future Requirements

(Report by Professor R. P. D. Graham)

MINERALOGY AND CRYSTALLOGRAPHY

Mineral Specimens.- There is an abundance of material for lecture and demonstration purposes, students' working collections, and general class-work in blowpipe analysis, though it is necessary to purchase a certain amount of material from time to time for the latter purpose as stocks become exhausted.

There is, however, a pressing need for funds to maintain the systematic collection of minerals exhibited in the Redpath Museum. This collection is based mainly on a large and exceptionally fine collection which was purchased about 25 years ago, and at that time it was estimated that it included specimens of over 90 per cent of all known mineral species. Since that time upwards of 500 new species have been discovered in various parts of the world, and of these less than 50 are represented in the collection. It is true that there have been some additions to the collection, notably of the mineral collection of the defunct Montreal Natural History Society, but these have been in the nature of duplicates of species already represented in the collection. For maintaining the collection in newly discovered species, less than \$150 has been expended in the past 25 years. To bring the collection back to its former state of completeness would require an immediate expenditure of at least \$2,000, while for its proper future maintenance an annual appropriation of not less than \$300 is essential. (Estimate, \$2,000 and \$300/year)

Crystal Models.- The department possesses a good and quite adequate collection of crystal models in wood for both lecture demonstration and class work. A number of glass models are required, to replace breakages, and there is also need of several models to illustrate crystal structure. (Estimate, \$150 for both)

Goniometers and Accessories.- The department is well equipped with goniometers (for crystal measurement) for both undergraduate and research work. A set of drawing instruments, with set-squares, etc., is needed, those now in use being the property of the professor. (Estimate, \$35.00)

Optical Instruments, etc.- Equipment in instruments for determining the optical characters of crystals is fairly adequate. An immediate need is a refractometer (\$500). There are also required a number of oriented sections of crystals for optical examination (\$200). (Estimate, \$700)