

MINERAL EVALUATION SECTION ACTIVITIES

by J.G. McArthur

CROWN PROPERTIES MINERAL EVALUATION SURVEY

This project was initiated in 1976 with an evaluation of chromite and asbestos properties in the Lewis Hills (McArthur and Howse, 1977). From January to June, 1977, a preliminary literature review was made of approximately 90 properties or mineral grants. From these, 24 properties were selected for brief field examinations from July to October. A. Howse, the project geologist, was assisted in the field by C. Collins and J. Steiner.

The 24 mineral grants are grouped into 11 mineral prospects. Nine of the prospects contain metallic mineral occurrences which were geologically examined, sampled, and tested by EM-16 magnetometer and geochemical surveys where applicable. The other two prospects are silica deposits; these were subjected to detailed surface sampling.

Detailed reports are now being prepared on these prospects to identify opportunities for further exploration.

MINERAL OCCURRENCE DATA SYSTEM

H. Missan and the writer have made a study of computerized mineral deposits files at other government agencies, namely, the Geological Survey of Canada, Mineral Development Sector (EMR), Ontario Ministry of Natural Resources, Manitoba Department of Mines, Resources and Environmental Management, British Columbia Department of Mines and Petroleum Resources and the United States Geological Survey.

It is proposed to initiate a two part project early in 1978 which will continue and update the manual mineral inventory card system (Hsu, 1974) and the mineral occurrence maps and tables compiled by C. Douglas and E. Hsu and published in 1976, and secondly, to conduct a pilot project to assess the usefulness of a computerized index to the mineral inventory.

The computerized index will contain information on deposit name, owner-operator, location (area, longitude, latitude, U.T.M.), commodities present, size of deposit, type of deposit, ore minerals, status of exploration and development, property status - active/inactive, mine workings, exploration history, production, reserves and bibliography.

It is expected that this computerized index will be compatible with the G.S.C.'s CANMINDEX FILE and the M.E.P.I. FILE (Mineral Establishment and Property Index File) of the Mineral Development Sector.

The office of Resource Analysis of the U.S.G.S. has kindly given to our Department a geological data management software system known as GRASP (Bowen and Botbol, 1975) (geologic retrieval and synopsis program) which is designed for use on an IBM 370-158 computer which is locally available from Newfoundland and Labrador Computer Services. The proposed computerized file will be designed using the GRASP system and will enable on-line retrievals to be made by geologists (from government, industry, and university) after a minimum of training.

OTHER ACTIVITIES

The program of on-site visits to mineral exploration projects and mines continued during 1977; however, due to limited time it was not possible to visit all locations with activity. Early in 1977 a compilation of mineral

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exploration activity for 1976 was initiated using returns from the "Annual Statement of Mineral Exploration Index Data" submitted by the exploration companies. This compilation will be continued on an annual basis.

Preliminary work is underway for further mineral commodity studies and for core storage facilities.

REFERENCES

Bowen, R.W. and Botbol, J.M.

1975: The Geologic Retrieval and Synopsis Program (GRASP); United States Geological Survey professional paper 966, 87 pages.

Hsu, E.

1974: Mineral Inventory; Report of Activities, 1973; Newfoundland Department of Mines and Energy, Mineral Development Division, pages 6-8.

McArthur, J.G. and Howse, A.F.

1977: Crown Properties Mineral Evaluation Survey; Report of Activities, 1976; Newfoundland Department of Mines and Energy, Mineral Development Division, pages 80-84.

REGIONAL LAKE SEDIMENT GEOCHEMICAL SURVEY IN LABRADOR

by P.H. Davenport

Between July and September 1977 a regional lake sediment geochemical survey was carried out in south-eastern Labrador in N.T.S. areas 13B, 13F, 13G, 13H, 13I, 13J and 13O (see Figure 1). Profundal lake sediments and lake waters were sampled at 4304 sites in the 73,000 km² area, which is mainly within the Grenville Structural Province but also includes the uranium deposits at Kitts Pond and Michelin. The sediment samples are being analysed for U, Cu, Pb, Zn, Co, Ni, Ag, F, Mo, As, Mn, Fe and L.O.I., and U, F and pH are being determined on the water samples.

The project was carried out under the Canada-Newfoundland Uranium Reconnaissance Program and

the Canada-Newfoundland Mineral Development Subsidiary Agreement. Field operations and sample preparation and analysis were carried out under contracts let and supervised by the Geochemistry Section of the Geological Survey of Canada.

The results will be compiled as geochemical symbol plot maps with a data listing, and released as an open file from Ottawa and St. John's. Estimated publication date is the start of the 1978 field season. Two further areas in Labrador, the Labrador Trough and in the Churchill Structural Province (Figure 1), comprising an area of about 61,000 km², are to be covered in a similar way in 1978.