



# British Columbia Geological Survey Geological Fieldwork 1977

## URANIUM RECONNAISSANCE PROGRAM

(82F, K, 104N)

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The Uranium Reconnaissance Program in British Columbia is a regional geochemical program managed and funded jointly by the Ministry of Mines and Petroleum Resources and the Department of Energy, Mines and Resources. 1977 marks the second year of the three-year program for which total costs of \$600 000 are being shared equally by the Provincial and Federal Governments.

The Uranium Reconnaissance Program on a Canada-wide basis has been developed by joint Federal-Provincial Agreements in all Provinces except Alberta and Quebec. The main objectives of the program are to provide the mineral industry with high-quality reconnaissance data to assist in the search for new uranium deposits and to provide both levels of Government with nationally consistent systematic data to serve as a basis for uranium resource appraisal.

The mode of operation has been for Energy, Mines and Resources, through the Geological Survey of Canada, to carry out geochemical orientation surveys and to issue tenders for contracts for sample collection, preparation, and analysis. All phases of the program to date have been conducted in close consultation with the Mineral Resources Branch of this Ministry. The Geological Division has been involved in designating areas for orientation and regional surveys, suggesting analysis for elements in addition to uranium, and providing source lists of potential British Columbia-based contractors for sample collection and analysis.

To date, over 90 000 square kilometres in British Columbia have been sampled at a density of one sample site per 12.5 square kilometres in Penticton, Vernon, Seymour Arm, Nelson, Lardeau, and Atlin map-areas. Selection of these areas was in response to widespread exploration for uranium in southeastern British Columbia and near Atlin.

Field sampling in 1976 was carried out by a thirteen-man crew provided by Stokes Engineering and Management Company of Vancouver. The crew was supervised by a Geological Survey of Canada geochemist and a Ministry of Mines and Petroleum Resources geologist. Stream sediment and water samples were collected from 3 563 sample sites. Sample preparation and analysis were contracted out to separate commercial firms. Determination of uranium in stream sediments was done by the Atomic Energy of Canada Laboratory in Ottawa. Water samples were analysed for uranium, fluorine, and pH while stream sediments were analysed for zinc, copper, lead, nickel, cobalt, silver, manganese, iron, and molybdenum in addition to uranium.

Results of the 1976 program were released May 4 of 1977 by way of sample location maps for each of the three map-areas covered, accompanied by computer print-outs of analytical data for all elements. Separate symbol plot maps for each element were also made available.

The 1977 survey was carried out in the Nelson (82F), Lardeau (82K), and Atlin (104N) map-areas. Samples were collected from over 3 600 sites and helicopter-supported fill-in work in the Seymour Arm (82M)

map-area was also completed. As in 1976, Stokes Engineering and Management Company was again awarded a contract to provide sampling crews while Chemex Laboratories of Vancouver performed the major part of the analytical work, also under contract.

Analytical results of this year's program are expected to be released in May of 1978.

Orientation work in the Atlin area, in addition to the regional survey, has led to the proposal that the adjacent Jennings River (104O) and Cassiar (104P) map-areas be covered by the regional program in 1978.

Uranium-related studies by the Geological Division include those of Addie, Christopher, Church, and Preto. Descriptions of these projects are contained elsewhere in this publication.