## URANIUM RECONNAISSANCE PROGRAM
## (82E, 82L, and 82M)

By P. A. Christopher

A federal-provincial geochemical reconnaissance program for uranium was initiated in 1976. This program involved stream and water sampling at a sample interval of approximately one sample per 5 square miles (12.5 square kilometres) in south-central British Columbia. Map areas 82E, 82L, and most of 82M were covered between mid June and mid September by a crew of 13 people under the direction of S. B. Ballantyne, Geological Survey of Canada, Ottawa, and T. Kalnins, British Columbia Department of Mines and Petroleum Resources. Silt and water samples were collected at approximately 3 600 sites. Water samples are being analysed for uranium, fluorine, and pH, and silt samples are being analysed for uranium by neutron activation at the Atomic Energy laboratory in Ottawa, and for copper, lead, zinc, silver, molybdenum, manganese, and cobalt. Analytical results should be available prior to the 1977 field season.

In conjunction with this program, brief examinations of uranium occurrences were carried out in order to evaluate their geological environments. Company exploration in the study area was directed mainly to basal type uranium deposits in unconsolidated sediments below Pliocene (K-Ar whole rock 4.7±0.2 m.y.) and Miocene (?) plateau basalts. The Lassie Lake – Cup Lake, Kallis Creek, Pearson Creek, Hydraulic Lake, Carrott Mountain, and Vidler Creek prospects were examined to evaluate this type of occurrence.

## URANIUM MINERALIZATION IN THE HYDRAULIC LAKE AREA
## (82E/11E, 14E)

By P. A. Christopher

Examinations of basal-type uranium prospects in the Hydraulic Lake area were conducted to establish favourable settings for uranium deposition. Figure 2 shows the general geological settings of known deposits in the Hydraulic Lake area. Uranium mineralization occurs in unconsolidated fluvial sediments that are capped by an impermeable horizon, usually Pliocene or Miocene (?) plateau basalts. The mineralized area northwest of Hydraulic Lake is partly capped by basalt and partly by clay-rich horizons of low permeability within the sedimentary sequence. The uranium-bearing fluvial sediments in the area unconformably overlie metamorphic rocks (Monashee Group), Early Tertiary sedimentary and volcanic rocks (Kettle River Formation), and Nelson, Valhalla, and