



APPLIED GEOLOGY

SUMMARY STATEMENT

By E. W. Grove

GENERAL REVIEW

Emphasis on the various roles of the Applied Geology Section staff changed somewhat during 1980. All seven offices maintained operations with regard to mineral exploration, mining, prospectors' assistance, and technical assistance to the industry and public. The Mineral Exploration Incentive Program initiated in 1978 was dropped in April, but new mineral land-use studies more than compensated with increased time demands.

DISTRICT GEOLOGISTS

The number of assistance grants to *bona fide* prospectors increased from 141 in 1979 to 150 in 1980. Of these, only 17 were novices partnered with experienced grantees. Only a very few of the grantees were unable to complete their programs, and most spent far more than the required time in the field. The number of new mineral finds, samples submitted, claims staked, and, more importantly, the number of option commitments also reached new levels.

The Fourth Annual Mineral Exploration Course for Prospectors was again held in May, but the location was changed from Selkirk College in Castlegar to David Thompson University Centre in Nelson. Field courses in geochemistry and geophysics remained similar to previous years, but at the demand of previous graduates the geology content was increased. The geology portion was staffed by the district geologists, under the supervision of A. F. Shepherd, the geochemistry session by Stan Hoffman (BP Minerals Limited), and geophysics by Jules Lajoie (Cominco Ltd.). W. S. Read acted as over-all coordinator.

Winter basic geology and prospecting courses were held at more than 20 different centres during the year. The reduction from previous years was due to increased demands for other services.

MINERAL EXPLORATION INCENTIVE PROGRAM

The Mineral Exploration Incentive Program, instituted in 1978 to help a faltering exploration industry, was dropped on March 31, 1980. Applications during 1978 resulted in contractual agreements with 46 exploration companies and individuals. All programs were completed by February 15, 1980 and all payments made before March 31, 1980.

Payments to the 46 contractors totalled \$290 077 and were responsible for the initiation and completion of \$3 655 298 worth of mineral exploration. In addition, 255 persons were employed on these projects, with a total of 12 097 man days involved. A breakdown of the work produced shows that it involved more than

\$700 000 in diamond-core drilling, the establishment of 300 kilometres of control grid lines and 58 kilometres of B.C.L.S. control survey stations, \$51 700 worth of geologic mapping, more than 50 kilometres of detailed geophysical surveys, the analysis of more than 10 500 rock, silt, and soil samples, and the purchase of more than \$46 000 in remote helicopter services.

All projects required the submission of assessment reports which can be viewed by the public after the confidentiality period expires.

In addition to the obvious economic spin-off from 46 projects, some of the 1979/1980 projects will be ongoing. These include:

- (1) Banwan Gold Mines Ltd. (Porcher Island),
- (2) Consolidated Cinola Mines Ltd. (Queen Charlotte Island),
- (3) Dimac Resource Corporation (Clearwater),
- (4) Granges Exploration Aktiebolag (Capoose Lake),
- (5) Hallmac Mines Ltd. (Sandon),
- (6) Penresh Explorations Ltd. (Golden), and
- (7) Scottie Gold Mines Ltd. (Stewart).

GEOHERMAL INVESTIGATIONS

Involvement in geothermal investigations in 1980 was continued by E. W. Grove and B. N. Church as members of several steering committees on Meager Creek development. In addition, previous geological studies by Church on the sedimentary and volcanic basins of central British Columbia were used as the basis for the development of concepts for exploration for hot water systems for use of small communities and industries.

CORE STORAGE

Coal core from the northeast coalfield has been stored at the Charlie Lake facility since 1976. The current Regulations require that core designated as essential be shipped to Charlie Lake for storage. The core and accompanying maps and logs are treated as confidential under the limits of the Regulations.

There is now more than 135 000 metres of core from northeast exploration programs in storage. Considerable use has been made of this core by industry as well as university and government geologists and engineers. Examination rates for the use of the core and facilities are twenty dollars (\$20.00) per party per day and fifty cents (\$ 0.50) per core box examined. The facilities are open all year, except on holidays and weekends.

MINERAL LAND—USE STUDIES

Field and office studies related to mineral land use have become an increasingly large aspect of the work performed by the Applied Geology Section. These studies include field examination of sites for ecological reserves, recreation areas, wilderness proposals, and parks. In addition, numerous requests for mineral and placer reserves from various levels of government and Crown corporations form a steady stream through all offices, and all require field and office examination.

Another aspect of mineral land use that requires considerable input is Crown land prioritization. It is a committee process, involving various ministries and public groups, which examine large tracts of land or subregional districts for best resource use. The South Moresby, Spruce Lake, Clinton Subregional Plan, and the Libby Pondage Area studies are examples where input from the Applied Geology Section and other personnel of the Geological Division attempt to prevent alienation of mineral resources.

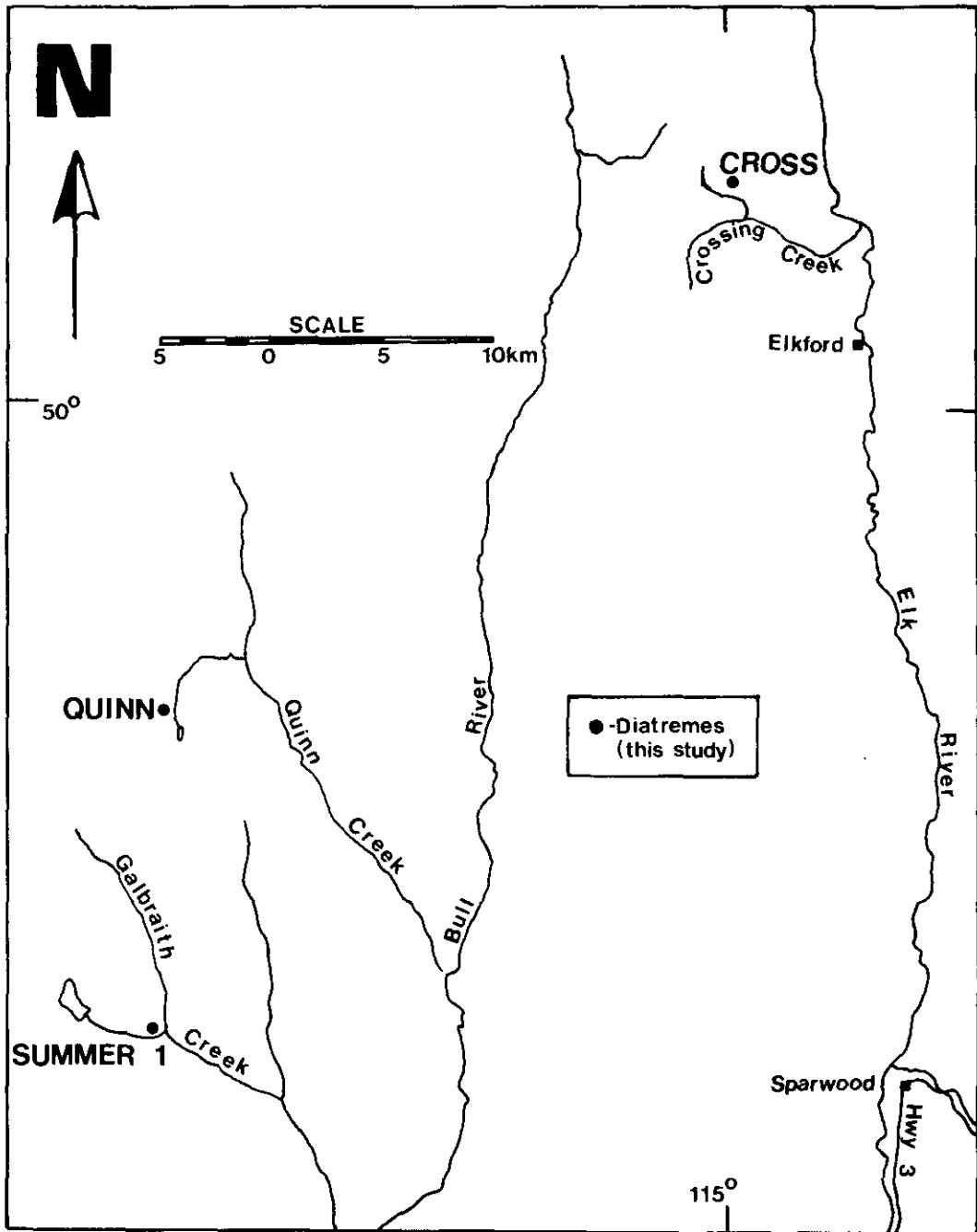


Figure 32. Location of three diatremes (Cross, Quinn, and Summer 1) discussed in this study, NTS 82G and 82J.