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**CANADA-BRITISH COLUMBIA AGREEMENT ON MINERAL DEVELOPMENT
GEOLOGICAL SURVEY OF CANADA - GEOSCIENCE PROGRAM
SEMI-ANNUAL PROGRESS REPORT
APRIL 1, 1993 TO SEPTEMBER 30, 1993**

C1.11 INTERIOR PLATEAU SUBPROGRAM

C1.111 Geology, southwest Anahim Lake and northern Mt. Waddington (P. van der Heyden, CD)

Progress:

During the report period, P. van der Heyden (GSC) completed the following work:

- 1) 1:50,000 scale mapping of the Bussel Creek east-half (92N/14E) and Tatla Lake (92N/15) map areas (in conjunction with P. Mustard-BC MDA term employee);
- 2) initiated the preparation of 1:50,000 scale open file maps of NTS 93C/3 (Charlotte Lake), 93C/4 (Junker Lake), 92N/14 (Bussel Creek), and 92N/15 (Tatla Lake) map areas, which are scheduled for completion in January 1994.
- 3) prepared and submitted samples for geochronometric and petrographic analyses. Geochronometry of samples from the Charlotte Lake and Junker Lake, being done at the GSC's Geochronology Laboratory in Ottawa, is nearing completion. Geochronometry of samples from the Tatla Lake and Bussel Creek areas, being done at the GSC's Geochronology Laboratory in Ottawa and at the University of British Columbia, is in progress. Some preliminary results were received during the report period.
- 4) initiated the preparation of two GSC Current Research papers, (together with P. Mustard) that document the geology and stratigraphy of the Bussel Creek (east-half) and Tatla Lake map areas (papers to be published in GSC Paper 94-1A).

Scientific Results:

Auriferous arsenopyrite-quartz veins, hosted by small quartz diorite and felsite intrusions near Perkins Peak (Bussel Creek map area), occur in fault-bounded lenses below the base of the early Late Cretaceous imbricate thrust zone. The auriferous quartz veins may be late-stage extension veins that formed perpendicular to thrust faults following compression. Other gold bearing quartz veins in the study area also appear to be spatially associated with thrust faults.

Early Cretaceous marine sediments immediately west of the Yalakom fault were deposited along the western edge of the Jura-Cretaceous Tyaughton basin. They are deformed by northeasterly verging folds and thrusts of the early Late Cretaceous Waddington thrust belt. Albian-Cenomanian sediments and volcanics (Silverquick conglomerate

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