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southwestern margin of the pluton (Unit Ts of Figure 4) would be Triassic or older. An alternative interpretation, suggested by Schiarizza *et al.* (1995a,b), is that only the eastern, heterogeneous part of the pluton correlates with the Mount Skinner Complex, and most of the pluton is Cretaceous or Tertiary quartz diorite to tonalite related to the Coast Plutonic Complex. In this interpretation, the main part of the pluton might be the same age as the small quartz diorite bodies that intrude the Relay Mountain Group to the west, and the pendant of hornfelsed sedimentary rocks might have been derived from the Relay Mountain Group. A sample of quartz diorite from near the southwestern boundary of the pluton has been submitted for U-Pb dating of zircons in an attempt to discard one or both of these interpretations.

AGE AND STRUCTURAL CONTROL OF THE SKINNER GOLD-QUARTZ VEIN SYSTEM

The Skinner gold-quartz vein system occurs within early Late Triassic quartz diorite and diorite of the Mount Skinner Igneous Complex, 5 kilometres north of the north end of Tatlayoko Lake (Figure 4). It is a system of en echelon veins within a presumably structurally controlled lineament that trends 070° (Berniolles, 1991). Work to date has been concentrated on the Victoria vein, at the southwest end of the system, which strikes between 050° and 060° and dips steeply to the northwest. A 170-tonne bulk sample extracted from the vein by Ottarasko Mines Limited in 1992 and 1993 produced over 11 000 grams of gold (average grade 65.83 g/t) and 8000 grams of silver (Meyers, 1993, 1994; Schroeter, 1994).

The Victoria vein has been traced for more than 130 metres. It pinches and swells, locally attaining a thickness of 1.4 metres. The vein walls are defined by slickensided faults, and the veins themselves are cut by parallel faults, at least some of which accommodated sinistral movement. Clay gouge commonly occurs along the vein walls, and sericite and chlorite occur locally along fault surfaces. The vein consists almost entirely of quartz, with minor amounts of pyrite, chalcopyrite, malachite and rare visible gold. Gold values are variable, and concentrations as high as 136 grams per tonne across 0.65 metre have been recorded (Berniolles, 1991). Copper shows little relationship to gold, and is locally concentrated in the wallrock adjacent to the vein.

White mica locally lines vugs and open fractures in quartz of the Victoria vein. A sample provided by Louis Berniolles in 1994 was submitted to the Geochronology Laboratory at the University of British Columbia for K-Ar dating of the mica. The mica separate has recently yielded a preliminary Early to Middle Eocene date of 50 to 54 Ma (J. Mortensen, personal communication, September 1995). This provides a minimum age for the vein and most likely dates the late stages of the hydrothermal system responsible for the veining. If this interpretation is true, then the veining was coincident with dextral movement along the Yalakom fault, which is just 5 kilometres northeast of the Skinner occurrence. This suggests that the Skinner vein system formed along an antithetic sinistral fault system related to the Yalakom fault, although its orientation is slightly more easterly than would be expected for antithetic riedel shears in an ideal simple shear model (*e.g.* Wilcox *et al.*, 1973). The Lingfield Creek and Cheshi Creek faults to the southeast may have had a similar origin, but are likewise oriented slightly more easterly than would be expected. These departures may reflect varying degrees of clockwise rotation in the structural blocks southwest of the Yalakom fault, as is suggested by the structural analysis of Umhoefer and Kleinspehn (1995), who relate this block rotation to the area's position between the Tchaikazan and Yalakom faults.

June 4/96 Berneilles, Louis, remaining plans to mine 400 tons of high-grade

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