

A true reflection of the bedrock geochemistry (via stream sediments), however is not attained in all areas due to glacial tills (e.g. near Basin Lake), and plateau development (eg. North of Diamond Hill) where there is a predominance of chemical weathering to physical weathering.

2. Stream Sediments - Results

Five anomalous areas were denoted (see figure 58):

- (a) Three samples anomalous in Zn (up to 330 ppm Zn) occur on north-south trending creek 1.2kms west of the Lake Margaret Township. Sample 27663 also recorded 1.2 ppm Au. Partially sericitized tuffs and black shales outcrop in the vicinity.
- (b) A number of samples anomalous in Cu, Zn and minor Pb (up to 1050 ppm Cu) occur in the vicinity of the Pearl Creek. All anomalous samples were taken south of the Pearl Creek Fault (see Map 2 of Sheppard, 1974) in the vicinity of Siluro - Devonian black shales.
- (c) A single point Zn anomaly (270 ppm) occurs on a tributary creek to Clifford's Creek 800m south of the Middle Sister. There is no indication as to the source of the anomaly.
- (d) High copper anomalies (up to 3800 ppm) occur on Truscott Creek, up to 1km west of and immediately adjacent to the Zeehan Highway. The anomalies are most likely to be due to contamination from Mt. Lyell concentrate, carried in open bin trucks along the highway. An ore truck is also believed to have overturned, two years ago, in the vicinity of the major anomaly. A further single point Zn anomaly (620 ppm Zn) occurs on Truscott Creek, 1km downstream from the Cu anomalies and does not appear to be related to it.
- (e) A sample (27555) from a minor tributary creek just south of Madame Howard's Barite workings assayed at 1.2ppm Au.

3. Rock Chip Geochemistry

Three areas were looked at in detail:

- (a) Diamond Hill
Rock chip sampling for Au of three adits, two trenches and outcrops near the summit of Diamond Hill was carried out (see Figure 59). The workings were within kaolinized quartz feldspar porphyry, following up an E-W quartz vein of moderate south dip. Assays show a concentration of Au within the quartz vein and some Au within the quartz feldspar porphyry within 1m of the vein. The assays are not sufficiently significant to warrant further follow up.
- (b) Quartz feldspar porphyries on Bradshaw's Road
Three areas of quartz-phyric rocks outcropping on Bradshaw's Road were examined and two were systematically sampled and assayed for Au. (See figure 61). No Au was detected.