

081

5. EXPLORATION

A brief discussion was held with Mike McEwen, Mine Geologist, about exploration techniques. Detailed geological mapping, costeaning and diamond drilling are the main exploration tools, together with ground magnetics and occasionally induced polarisation. Difficulty is experienced in differing between carbonate and stanniferous gossans. Both are similar in appearance - brown to red massive goethite with no primary textures. Geochemical analysis is used to differentiate between them. A number of gossan samples were examined in the collection at the geology office.

The range of metal values in the gossan is as follows:

Sn	20 -	200 ppm	Co	±30 ppm
Pb	20 -	2 000 ppm	Ag	>20 ppm
Zn	500 -	5 000 ppm	Li	5-10 ppm
Mn	5 000 -	10 000 ppm	Ba	>300 ppm
As	50 -	500 ppm	Cu	(not available)

In areas of poor outcrop geochemical and magnetic surveys are useful in tracing ore horizons. The Oonah-Crimson Creek Formation boundary is well defined geochemically in the soils, while the ore horizons can be determined by the low order, but characteristic, magnetic signatures of the haematitic cherts (see fig 4).

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