

100

4.3 Regional Stream Geochemistry

100 stream sediment samples were collected at approximately 200m intervals along the Mainwaring River and its' tributaries. An effective sample density of 8 per sq km was achieved. The -80 mesh fraction was analysed for Cu, Pb, Zn, Fe, Mn, Ag, Au, Sn and W.

Prior to statistical treatment, the data was grouped into two separate populations as defined by A.M.G. longitude 377000E which roughly corresponds to the boundary between acidic volcanics to the east and basic volcanics/phyllites to the west. Background and threshold values have been calculated by Poltock (1981) and are summarised:

	<u>Basic volcanics and phyllites</u>		<u>Acid volcanics</u>	
	Background (ppm)	Threshold (ppm)	Background (ppm)	Threshold (ppm)
Copper	30	125	5	40
Lead	5	15	5	15
Zinc	35	170	5-10	40
Iron	3.6%	7.0%	0.5%	3.4%
Manganese	500	1200	70	250

Two anomalous associations were recognised; Cu, Fe, Zn and Au only. The best Cu-Pb-Zn anomaly was developed in phyllites and carbonates on the western margin of the lease (see plan 72). An area of anomalous gold geochemistry was outlined at the headwaters of the Mainwaring River where values of 25-183ppb Au were recorded. Adjacent to the contact of the acid volcanics and argillites on the Mainwaring River (377000E/5253500N) two values of 290 and 740ppm Pb were recorded. For further information the reader is referred to the report by Poltock (1981). *Do we have a copy?*