

supported by the geological environment, alteration and metal associations, immobile element geochemistry and stable isotopes of carbon and oxygen (Callaghan 1998b, Huston and Camprad, 1998).

Although sulphur isotopes do provide a vector to mineralisation (lighter $\delta^{34}\text{S}$ indicates higher hydrothermal fluid/seawater ratios), alteration mapping and standard metallic element analysis is cheaper and more efficient. Sulphur isotope studies will be of more academic interest than immediate practical use for exploration. It is recommended limited sulphur isotope studies of different styles of alteration within the district be completed as part of sponsored research projects.

A district wide mineralising event with porphyry copper-epithermal characteristics has effected the Cambrian volcanics just prior to and during deposition of the Tyndall Group. Very few ancient submarine epithermal-porphyry style deposits have been recorded in the literature.

This district has the potential to host a variety of deposits including large low grade copper-gold deposits (eg Prince Lyell), high grade copper deposits (eg North Lyell), high grade Henty style deposits and potentially Lihir type deposits. The source of the hydrothermal fluids has not yet been identified but could include any of the complex rock suites found at the CVC/Tyndall Group boundary or even the Cambrian granites occurring just to the east of the mineralised strip of volcanics.

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