

the strongest anomaly on line 22. The hole did not detect any significant mineralisation. A small pyritic vitric siltstone unit at the top of the Howard's basalt may be responsible for the IP response.

An IP anomaly over the Lake Newton Prospect disseminated sulphide mineralisation has been well tested by old drillholes HA7 and HA8 as well as the new program of drilling.

The Henty Canal area in the vicinity of the South Henty Fault also has a prominent IP response. This alteration has been tested by Pasminco drillholes YNC14 and YNC15.

3.3 Sulphur Isotopes

Two separate sulphur isotope studies for the Lake Newton prospect were completed between 1997 and 2000. The corresponding reports for these are located in Appendix 4.

Sulphur isotope studies have defined a distinct zonation of $\delta^{34}\text{S}$ within the Lake Newton Prospect with the Cu-Au mineralised core having lighter $\delta^{34}\text{S}$ (~6) than the surrounding Pb-Zn anomalous halo (~12). The zonation is similar to that defined by basemetal geochemistry and alteration mapping (Callaghan, 1998, Callaghan, 1999). All of these techniques provide vectors to the proximal alteration system. Gold anomalous alteration is associated with low $\delta^{34}\text{S}$ (Callaghan, 1999).

The zonation reflects one of two possible mechanisms for the formation of the alteration system:

- 1) Mixing of low $\delta^{34}\text{S}$ magmatic derived fluids with higher $\delta^{34}\text{S}$ reduced Cambrian seawater circulating through the upper volcanic pile.
- 2) Mixing of VHMS type, seawater dominated hydrothermal fluid with low $\delta^{34}\text{S}$ (from scavenged rock sulphur) with higher $\delta^{34}\text{S}$ reduced Cambrian seawater circulating through the upper volcanic pile.

Stable Isotopes of Sulphur along with metal and alteration zonation provide good vectors within the hydrothermal system.

4.0 Environmental Impacts and Rehabilitation

A summary of the environmental impacts and rehabilitation activities on the South Henty EL is provided on Table 1. The main impact was caused by the site preparation and access track construction for the drilling program. Of the total 4030m² disturbed by diamond drilling, 2960m² has yet to be rehabilitated. Other exploration activities (track cutting, rockchip sampling etc) caused only minor disturbance.

5.0 DISCUSSION

Goldfields are forced to relinquish the southern part of EL8/96 after the expiry date of 14/6/2001. The northern part has been retained after granting of an extension of term.