Regional setting, mineralogy, metal ratios and similarities with nearby deposits favor the first possibility (Callaghan, 1998, Callaghan, 1999).

University of Tasmania Honours student Mathew Street (1999) completed infill sampling of the Lake Newton Prospect holes and came up with similar numbers and conclusions. The Howard's anomaly and Tyndall Creek areas located at the top of the Lake Newton alteration system have both negative $\delta^{34}S$, and high $\delta^{34}S$ associated with typical Lake Newton $\delta^{34}S$ (Figure 4, Sharpe, 1992). These values are associated with carbonate-barite-hematite alteration and minor sphalerite and galena mineralisation. This area represents a high level zone of mixing of hydrothermal fluid with Cambrian seawater. Negative $\delta^{34}S$ result from partioning of heavy sulphur into the oxidised sulphate phase during partial leaching of rock sulphur by low temperature, oxidised waters (Solomon et al., 1988).

A brief description of each sample, its location, sulphide type and $\delta^{34}S$ (reported in ‰ CDT) are summarised in Table 1.

Samples were selected from drillcore intersections of SHD21 and SHD22 and the sulphides for analysis marked before despatch.

Table 1. Sth Henty Sulphur Isotopes, 1999

DDH	Spl_No	From	34S	Mineral	Remarks
SHD21	1080105	286.4	5.76	py	Basaltic lithic breccia, ser-py alt.
SHD21	1080106	315.8	3.45	py	Suite II porphyry, ser-py alt.
SHD21	1080107	321	6.99	py	Massive pyrite
SHD21	1080108	372.2	30.71	py	Cvc dacitic volcaniclastic breccia, ser-CO3 alt, minor py vns.
SHD21	1080109	439	25.64	py	Suite II porphyry, CO3 alt, silica-py vns, BM stringers.
SHD21	1080110	502.4	10.01	py	Suite II porphyry, CO3 alt, carb-py vns.
SHD21	1080111	609.2	8.21	py	Cvc dacitic pumice brxx. ser-py-carb alt.
SHD21	1080112	646	7.01	py	Cvc dacitic pumice brxx. ser-py-carb-chl alt. BM vns.
SHD21	1080113	674.5	4.45	py	Cvc dacitic pumice brxx. ser-py-carb alt.
SHD21	1080114	703	4.39	py	Cvc dacitic pumice brxx. sil-ser-py alt.
SHD21	1080115	726.8	3.92	py	Cvc dacitic pumice brxx. sil-ser-py alt.
SHD21	1080116	769.4	7.98	py	Cvc dacitic VC sst. sil-ser-py alt.
SHD21	1080117	812.6	4.87	py	Cvc dacitic VC sst. carb-ser-py alt.
SHD21	1080118	825.9	5.04	py	Cvc dacitic VC sst. sil-ser-py alt.
SHD21	1080119	855.9	3.94	py	Cvc dacitic pumice brxx. sil-ser-py alt.
SHD21	1080120	876.9	3.3	py	Cvc dacitic pumice brxx. sil-ser-py alt.
SHD21	1080121	911.1	4.43	py	Cvc dacitic pumice brxx. sil-ser-py alt.
SHD22	1080122	127.4	5.8	py	Suite II porphyry, ser-py alt.
SHD22	1080123	179	5.1	py	Suite II porphyry, ser-py alt.
SHD22	1080124	224	5.72	py	Suite II porphyry, sil-ser-py alt.
SHD22	1080125	285	5.04	py	Suite II porphyry, sil-ser-py alt.
SHD22	1080126	328	7.24	py	Suite II porphyry, sil-ser-py alt.
SHD22	1080127	375	6.16	py	Suite II porphyry, sil-ser-py alt.
SHD22	1080128	413.9	5.83	py	Suite II porphyry, carb-ser-py alt.
SHD22	1080129	440.9	5.17	py	Suite II porphyry, carb-ser-py alt.
SHD22	1081031	469.2	9.94	py	Cvc pumice brxx. Ser-py-carb-chl alt.
SHD22	1081032	495.9	6.78	py	Cvc pumice brxx. sil-ser-py alt.
SHD22	1081033	513.8	5.97	py	Cvc pumice brxx. sil-ser-py alt.
SHD22	1081034	572.9	5.43	py	Cvc pumice brxx. sil-ser-py alt.
SHD22	1081035	600	2.77	py	Cvc pumice brxx. sil-ser-py alt.

RESULTS