

product were made in order to concentrate this mineral. No wolframite was observed in either the  $>3.3$  sp.gr. products or in the high-intensity magnetic products referred to above and it is concluded, therefore, that tungsten occurs in this ore in scheelite only.

Only traces of cassiterite were noted in the  $>3.3$  sp.gr. non-magnetic products, which have tin assays of 0.1 to 0.26%; consequently an attempt was made to locate tin in spinel and in garnet. The minus 75 plus 33  $\mu\text{m}$   $>3.3$  sp.gr. non-magnetic product was examined using an electron microprobe. No stannospinel was found but some tin was detected in garnet and a more detailed study was undertaken. Randomly selected points in each of 70 garnet grains were analysed for tin: at a detection limit of 0.1% Sn, 20 grains contained no detectable tin but the mean tin value in the 70 grains analysed was 0.26% Sn (value corrected for atomic number, absorption and fluorescence). The maximum value noted was 1.3% Sn.

In order to assess the distribution of tin in garnet and cassiterite, the amount of garnet in the ferromagnetic products and the various non-magnetic specific gravity products was estimated visually, with the results given in Table A-4.

In approximate terms, therefore, the distribution of tin in the ore is calculated to be as in Table A-5 (some data from Table A-3).

These values are semi-quantitative only but indicate that 35 to 50% of the tin in the ore is in solid solution in garnet. Where cassiterite was identified in the  $>3.3$  specific gravity products a moderate proportion in the plus 33- $\mu\text{m}$  material was locked with garnet whereas liberated grains were common in the minus 33 plus 9  $\mu\text{m}$  material.