

APPENDIX B

MINERALOGY OF COMPOSITE HEAD SAMPLES PC1, PC2, SC1, SC2
AND ORE SAMPLE No. 1 (STAGE I)

B1. INTRODUCTION

Four composite head samples of Mt Bischoff ore (-1.70 mm) were submitted for mineralogical analysis. The samples consist of two porphyry composites (PC1 and PC2) and two sulphide composites (SC1 and SC2).

B2. PROCEDURE

A portion of each of the four samples was sized at 30, 52, 72, 150 and 300 mesh (500, 300, 210, 105 and 53 microns) to produce six size fractions. The five coarsest size fractions were separated in tetrabromoethane at a specific gravity of 2.96 and in Clerici's Solution at a specific gravity of 4.0. All of the heavy liquid separates as well as the -53 microns finest fraction were analysed for tin and the tin distribution between these products calculated. Polished sections (PS22414-53) were made of both the 2.96 to 4.0 and the >4.0 sp.gr. products. These polished sections were examined in reflected light.

A small portion of each composite head sample was finely ground and its bulk mineralogy determined by X-ray diffraction. Selected heavy liquid products were also examined by transmitted light in temporary oil mounts and under a stereobinocular microscope. Selected minerals were identified with the electron microprobe.

Both the relative proportions of the tin minerals as well as their liberation in the heavy products were determined by gross counting. The absolute amounts of these minerals were calculated from the tin assays assuming all of the tin occurs in these minerals.

For each sample the >4.0 sp.gr. heavy products of two size fractions (-500 +300 and -210 +105 microns) were digested to remove 'acid soluble' minerals including sulphides, iron oxides and acid soluble tin minerals. Only a small proportion of residue was left. Each of the -500 +300 μ m residues was wet-screened at 300, 150, 75 and 53 μ m and each of the -210 +105 μ m residues was wet-screened at 150, 75 and 53 μ m. After drying and weighing, each of the resulting size fractions was examined briefly microscopically and the whole fraction pulverised and analysed for tin.