G3.3 SC2/BF Sulphide Rougher Concentrate

This concentrate consists mainly of talc with accessory poorly crystalline magnesite, muscovite, pyrite, dolomite and a trace of quartz. The heavy product consists mainly of pyrite with a much smaller proportion of non-opaque gangue. Accessory pyrrhotite is present in the heavy product and at least a small percentage of the pyrite has colloform textures typical of supergene pyrite after pyrrhotite. Chalcopyrite occurs as an accessory mineral and sphalerite at trace levels. Both chalcopyrite and sphalerite are largely liberated and generally have a grain size between 0.05 and 0.1 mm.

Both cassiterite and stannite occur in this sample. Most of the cassiterite consists of small grains about 0.05 mm in size which are liberated or are locked with non-opaque gangue. Only minor cassiterite is locked with sulphide. The stannite has a maximum grain size of 0.1 mm and forms liberated grains and grains locked with other sulphides (mainly pyrrhotite and chalcopyrite) and non-opaque gangue.

The results of the heavy liquid separation and tin assay are as follows:

Product	Weight %	Assay % Sn	Distribution % Sn
+10 µm; sp.gr. <3.3	67.6	0.205	36.4
+10 µm; sp.gr. >3.3	16.2	1.33	56.5
-10 µm	16.2	0.168	7.1
Total Sample	100.0	(0.38)	100.0

G4. PHOTOMICROGRAPHS

Photomicrographs showing typical textures are given in Plates G1 to G4.