

The microcrystalline quartz extended as vein-like and elongate masses along the boundaries between the sulphides and the altered gangue minerals. Considerable amounts of the clinozoisite and chlorite were replaced by it.

SMD 13 at 1005m

1629 Sphalerite-pyrite-minor chalcopyrite in grossularite-vesuvianite skarn.

The usual habit of the sphalerite is in roughly parallel-oriented elongate composite individuals of 2 - 8 mm x 0.5 - 3 mm. Only a small proportion is finer than 0.5 mm, and of equant or highly irregular shape.

The larger elongate sphalerites are composites of polysynthetically twinned anhedral of 0.5 - 2 mm sizes. Lamellar marcasitic pyrite (a derivative of pyrrhotite), chalcopyrite and binary hematite-marcasite grains of 0.08 - 0.3 mm sizes are sited in triple grain boundary junctions within the granular aggregates of sphalerite. There is about 3% chalcopyrite, 6% pyrite and 2% hematite amongst 50% of sphalerite. The remainder is the gangue.

Very fine chalcopyrite (5 - 30 microns), sparse fine pyrrhotite, marcasitic pyrite and hematite, are dispersed as inclusions through the individual twinned sphalerites. These minute inclusions will not be eliminated, even by the finest grinding.

However, the principal proportion of the sphalerite will free from gangue minerals, pyrite and chalcopyrite during