

Petrographic descriptions of a specimen from Royal George

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67-6, DDH ccc 9, 517', Royal George

The specimen is a small piece of core consisting of medium to coarse-grained quartz carbonate material mineralised with a light metallic looking sulphide and also containing a black silicate.

Under the microscope the polished thin section is divided by a single crystal of carbonate 3.5 mm across, running right through the section from side to side. The carbonate contains inclusions of idiomorphic sulphide, quartz, feldspar and tourmaline, and very fine granular aggregates of these minerals.

On one side of the large calcite crystal, sulphide is the principal mineral. The sulphide is isotropic and cannot be scratched by a steel needle. It is strongly pleochroic from yellow to white and is identified with pyrite. In general the pyrite is idiomorphic, but it is traversed by fine irregular veinlets of calcite, and sometimes of fluorite, which have penetrated along the cleavages.

Besides calcite and fluorite there is some euhedral quartz and feldspar and interstitial microcrystalline siliceous material. On the other side of the calcite crystal are irregular granular masses of calcite, quartz, feldspar, fluorite and tourmaline both mixed and in mono-mineralic aggregates, with microcrystalline siliceous matrix. Cassiterite was not positively identified, but very minute crystals with difficultly ascertainable properties are plentiful.

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