

Prior to 1970 this ground was held by the Consolidated Syndicate (New Consolidated Gold Fields Australia Proprietary Limited, Mount Lyell Mining and Railway Company Limited and Renison Limited). The area was soil sampled and tin values exceeding 300 ppm Sn were recorded. Subsequent costeaning and rock chip sampling was carried out and the results, though of uneconomic grade, apparently substantiated the high soil values.

This whole zone is outlined by the GAP low order Input anomaly, but it does appear that the tin values decrease northwards into the ground held by Comstaff. It has been defined by linear magnetic anomalies and characteristic induced polarisation responses of very high resistivities with high chargeabilities. The presence of tin within the zone is confirmed by the tin concentrated in the heavy mineral fraction of the Tin Creek sediments.

The source of the metasomatic alteration, hornfelsing and sulphide mineralisation may be a granite porphyry body intruded at depth into the sedimentary sequence, and related to the Devonian Pine Hill adamellite. Shear zones and fault planes could have acted as channel ways for hydrothermal fluids which subsequently replaced detrital minerals in the more permeable beds or crystallised on joints and fractures.

The tin values in the rocks exposed in Costean 1200N are low, which would suggest that the mineralising source lies to the south, probably within the ground now held by C.S.R. Ltd. Tin appears to be disseminated in the sedimentary rocks associated with introduced sulphides and metasomatic alteration of the more arenaceous intercalations. There could be open type structures or sufficiently thick permeable reactive sedimentary/volcanic units in which replacement tupe ore bodies could occur.

- 8.3. The Bassett-Federal structure cannot be traced south-eastwards into Comstaff's ground. It is either truncated by, or feathers out against, the fault controlled Serpentinite Complex. The Complex may have acted as a conduit for granitic hydrothermal solutions, while the reaction between granitic magma and the ultramafite could have caused the precipitation of tin and copper. Physiochemically reactive rock types in the vicinity of such a conduit could