

## 8. Report on Bubs Hill prospect

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The Bubs Hill prospect is situated on the northern flank of Bubs Hill, 20 km east of Queenstown. The sulphides occur in the Gordon Limestone which locally consists of interbedded limestone and dolomitic limestone containing chert fragments. The limestone is gently folded and is generally flat lying (fig. 7). It extends over a vertical distance of over 180 m at Bubs Hill.

The sulphides are predominantly galena and sphalerite, which occur in irregular veins and patches in association with coarsely crystalline calcite and quartz. The veins, which are generally less than 100 mm in width, either trend approximately W to NW or are subhorizontal and are possibly parallel to bedding of the limestone. The distribution of these veins is erratic and the content of galena and sphalerite is variable. Reid (1964) recorded four separate occurrences of mineralisation at elevations of 555 m (sphalerite-rich), 576 m (galena-rich), 643 m (sphalerite-rich) and 667 m (galena-rich). It is possible that the deposits are restricted to particular horizons within the limestone.

It is evident that the sulphide veins are too small and erratic to be mined individually and the prospect should be investigated to determine the possibility of a large relatively low grade deposit that could be worked by open cut methods.

Systematic sampling of the mineralised limestone, preferably at right angles to the direction of the veins, should be carried out in the area of known mineralisation to indicate the possible metallic content of the exposed deposits.

There are several possible methods for investigation of the deposits but the least expensive is probably to conduct a geochemical soil survey over the northern flank of the hill on a grid pattern (grid spacing approximately 30 m) to determine the extent of the mineralisation. For a detailed survey the traverses should trend approximately N-S, but a preliminary E-W traverse along the lower slopes of the hill may indicate the extension of mineralisation. Soil samples should preferably be taken just above bedrock but must be at least 0.3 m below the surface. An alternative approach, or a follow-up if the soil survey indicates an extensive anomaly, would be to make bulldozer cuts at right angles to the long axis of the mineralisation (or the anomalous zone) to enable systematic sampling of the limestone.

## REFERENCES

- GEE, R.D. 1963. Structure and petrology of the Raglan Range. *Bull.geol. Surv.Tasm.* 47.
- REID, K.O. 1964. *The geology of the Princess River area.* B.Sc. Thesis University of Tasmania : Hobart.

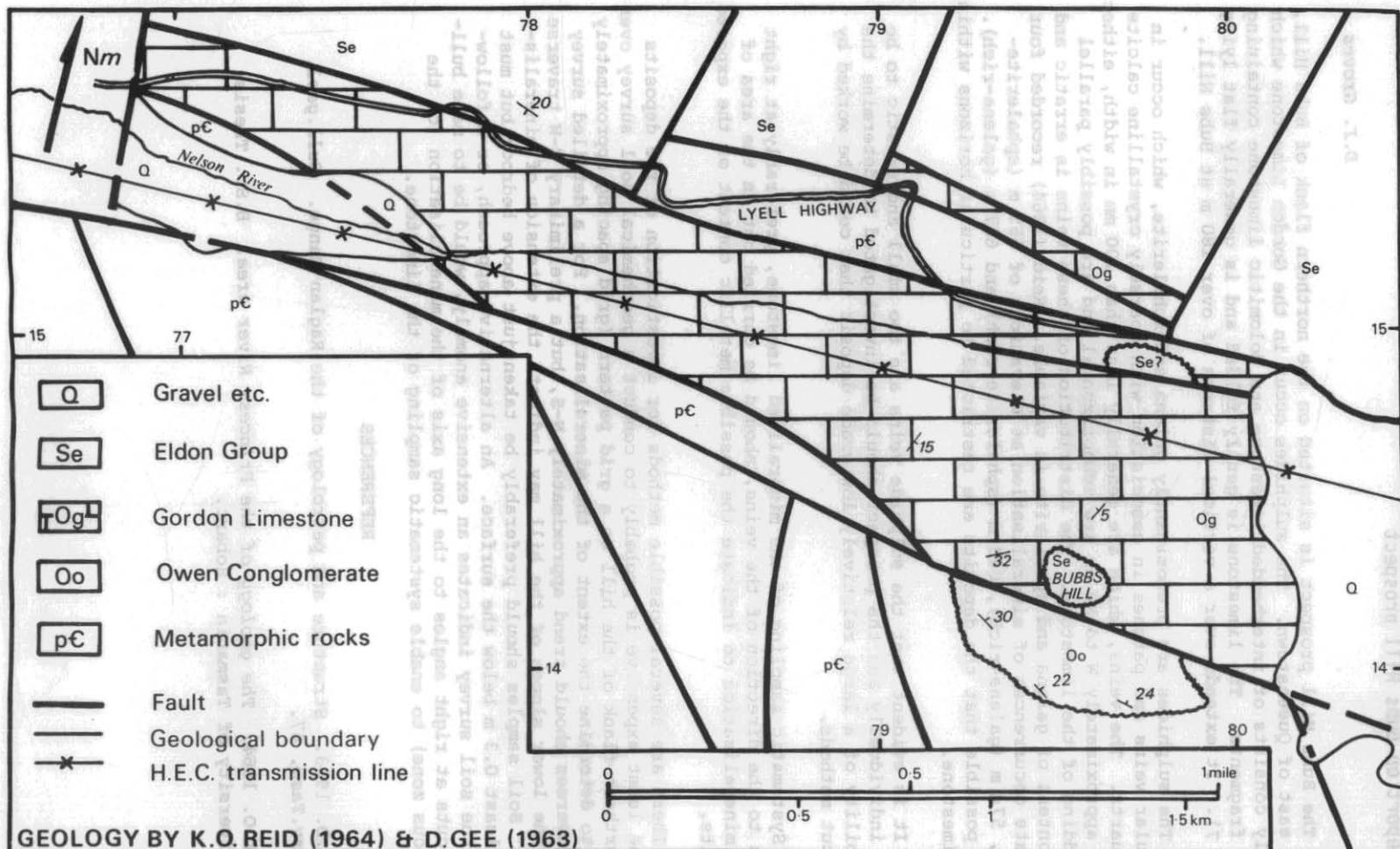


Figure 7. Geological sketch map of Bubs Hill area.

5 cm