

WGR, RAD, J. Baker
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Vancouver, Smithers, ?

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COPPER CLIFF OPTION - N.T.S. 83/K/3(E)

I visited the Copper Cliff property on August 12 accompanied by J. Baker. D. Rae, who mapped the zone of showings in 1976, suggested that it represents a volcanogenic massive sulphide.

The showings are exposed on the south-facing slope of a glaciated valley in the canyon of a tributary stream that runs parallel to the strike (subsequent stream). They are embedded in a vertical sequence of bedded cherts, cherty argillites, and 'greenstones'. No good rhyolites are present and much of the greenstone may be intrusive.

The structure consists of a subvertical dip with a weak slaty cleavage parallel to the north-west (320°) strike of the zone. A moderately well developed 'b' lineation plunges 0 to 30 degrees towards azimuth 140° where cleavage and bedding intersect. Some minor folds were also observed plunging the same direction.

The showings form discontinuous conformable lenses of massive sulphide in one or more horizons, possibly as a result of fold repetition, for a strike-length of 500 feet, and over a vertical distance of 100 feet (based on D. Rae's mapping). Widths are generally less than mining widths (2 - 3 feet average), but some thicker lenses are up to 8 feet wide for short strike-lengths. The copper grade appears to be remarkably good in several accessible parts of the zone.

There are numerous felsitic dikes that traverse the zone at varying angles. These may cause some dilution.

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In summary, the Copper Cliff may be interpreted as a massive volcanogenic sulphide occurrence in bedded cherts. Lineations suggest that the zone is closed to the south-east, but that it is open to the north-west. The limited vertical dimensions of the zone (100 feet \pm) suggest a small target. Any increase in dimensions towards the north-west would have to be demonstrated by electromgnetic surveys.

A longitudinal sketch section parallel to the dip and strike of the zone is appended to illustrate the interpretation.

R.V. Beavon.

RVB:n1
Encl.

Reference: C.S.E. report on Geological Mapping of the Copper Cliff Prospect (1976) by D. Rae.