

GOTCHA MINERAL CLAIMS

INFORMAL REPORT

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Introduction

This report is a preliminary assessment of some of the accumulated information at hand. This information includes:

- (1) Geologic map 50' to 1" (2) Drill logs for eleven Union Carbide diamond drill holes. (3) Union Carbide report for the Boulder Group 1973 (area since restaked as the Gotcha Claims)
- (4) Geologic report dated 1978 by J.P. Elwell discussing 18 percussion holes.

General Geology

Mineralization^a in the form of coarse grained scheelite is contained in two bands of skarn. The surrounding metasedimentary rocks are mapped as part of the Shuswap Metamorphic Complex. These rocks are complexly folded and isoclinal folds can be expected in the area. The skarn was probably originally a calc silicate in this assemblage but has now been intruded by a post kinematic Cretaceous stock. Faulting in part post dating the Cretaceous stock is evidenced in the area by gouge and intense fracturing found in some outcrops.

Important controls on mineralization are probably (1) faulting (2) folding (3) lithology (4) proximity to Cretaceous intrusion (5) type of intrusion. There are probably others but the above five will be discussed in the light of what can be interpreted from the information at hand.

Faulting

There is evidence for faulting on surface and in the DD holes. The surface evidence suggest an east-west rather than north-south trend but gives no information about possible displacements. Two faults have been postulated for one working hypothesis. Evidence for these is as follows. DD hole 2 intersects a considerable thickness of skarn, more than appears to outcrop updip, this could be explained by a fault causing the band to be intersected twice in the same hole. (see section for DD Hole 2 and 7). The most probable trend for the fault is east - northeast and it may be responsible for the absence of skarn in DD Hole 1. A second fault is postulated to explain the non correlation of skarn from DD Hole 2 to DD Hole 7 (see section for DD Hole 2 and 7). These faults would be normal south dipping with the south side down dropped and they could cause the skarn bands to be repeated in outcrop to the northeast of DD Hole 2 and 7. If this is the case it is not apparent as a boulder train or in soil sample results.

Folding

The area is located in the Shuswap Complex and the rocks therefore are almost certainly complexly folded with the earlier folds isoclinal. The presence of at least one^e phase of folding is suggested by tectonic lineations and the occasional tight minor fold. Foliation measurements in the vicinity of the mineralization are reasonably^a consistent in orientation ruling out the presence of large open folds in the area. Any major folds in the area would probably be isoclinal and therefore best identified by mirror repetitions in the stratigraphy. This can best be checked by looking at the

sections for D D Holes 1 to 11. There appears to be a 3 member lithologic succession composed of skarn (calc silicates), schist, quartzite. The succession may have quartz monzonite (sill?) above or below it. If this lithologic succession is real then there is no evidence to suggest that the two skarn bands are separate limbs of the same fold; nor is there any evidence to suggest that they each represent a single isoclinal fold.

Lithology

Other than the broad scale lithologic succession outlined above not much can be done with the met^amorphic rock types. The skarn, whether it is isochemical or not is certainly high temperature, low pressure as indicated by the presence of wollastonite, diopside and idocrase. These minerals are more prevalent to the east of the area adjacent to the leucocratic quartz monzonite. Scheelite is found in conjunction with idoc^tase and or diopside and in fine grained or coarse grained skarn. It seems to be restricted to the east to within about 250 ft. of the major contact with the leucocratic quartz monzonite.

Intrusive Contacts and Intrusive Rock Types

It is important to differentiate between synkinematic sills and post kinematic stocks. This is best done in the field in part using the presence of absence of tectonic foliation in the rock. The leucocratic quartz monzonite (post tectonic Cretaceous ?) is intersected by D D Hole 1 and probably as sills in D D Holes 2, 7 and 3. Most of the intersections of intrusive rock in the D D Holes

probably represent sills though some represent intersections with discordant intrusive phases. This is most clearly the case in D D Hole 6. It is possible to interpret intrusive contacts as representing positive dipping topography (i.e. not overturned) and to contour the contacts. This is done for the major contacts and a picture of a north-south embayment or pendant emerges, this pendant is deflected or kinked east-west in the region of the of the scheelite mineralization. (see accompanying overlay).

Ore Potential

The engineering report that discusses the results of the percussion drill hole data outlines "drill indicated", "probable" and "possible" ore tonnages and assay values for the two skarn bands.

Lower Skarn Band

A drill indicated tonnage of 5200 tons with an assay value of approximately 1.7% is outlined for the lower band. Probable and possible tonnages are 2010 tons. These are assigned an assay value of 2% (high?). If the lower skarn band is considered to have a strike length of about 200 ft. and to dip northwest towards an east-west striking steep fault or intrusive contact then ~~is~~^{is} a 2 metre thickness is assumed for the band it has a total tonnage of 12000 tons. About 7000 tons are already accounted for, this leaves 5000 tons. If an assay value of (.66%) less than 1% is assigned to this tonnage there are possible additional reserves of 4000 s.t.u.

Upper Band

The upper band can be treated in the same way that is projected to the north and the surface area of the slab calculated. The area of the slab already considered as drill indicated is subtracted and the remaining area assigned a thickness of 2 metres and assay value (.66%) less than 1% to give 4000 s.t.u.

SUMMARY

Projecting^e the strike length of the two skarn bands northwards to an east - west trending intrusive contact or fault provides an additional possible reserves of 8000 s.t.u. over and above those outlined as drill indicated, probable and possible based on the ~~th~~ percussion hole data. Further ore reserves should be looked for at deeper depths and to the north of diamond drill holes 2 and 7. In this region the skarn bands may wrap round the side of the intrusion or be repeated by normal faulting.