

mineralogy of Strike Copper Galore Creek Deposits

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Galore Creek

104 G/3

epidatized cyanite porphyry primarily quartz, most widespread central zone planks it on E. ~~unreceptive~~ Unreceptive to Cu min's.

dark cyanite porphyry - south end of central zone. Finely disseminated in gneiss. Few pseudocumate phenos. Found Cu min's part central zone - in rock like base - (could be indochana?)

fracture cyanite porphyry host - rock matrix. Cu deposits in highly fractured phase.

Cu min in central zone - tabular, steeply dipping zones bounded by feldspathoid & biotitized cyanite porph, volcanic & cataclastic bx, pseudo-breccia metabasals, 'spotted' metabasals, layered meta-tuffite & metabasalts + intensely altered unidentifiable rocks: 'mottled breccias'

primary  $epy > bn \gg cc$   $cpy/bn = 10$  magnetite common + apatite

calcite - anhydrite - gypsum common near zone

shown. anhydrite calcite orthoclase biotite garnet epidate  
diopside chlorite sericite pseudoserite

magnetite or verulite, bx matrix & biotite (possible explosion breccia).

biotite - cs - fg disseminated in all rock types, also as verulite - e.g. + anhyd - mt - cpy

garnet - disseminated biotite + orthoclase in central zone, less in epi porph. light brown to brownish black. comp and so gr 20 concentrated near large epi sy porph dyke.

epidate - Fe-rich type, high birefr. mainly disseminated in epi porph; also with cpy in central zone

chlorite - alter of biotite + hb

diopside - with garnet + biotite in N part central zone.

also forms shown with biotite + mt + orth + anhyd + cpy

sericite - replaces orthoclase

phengite in veins with anhyd/gyps/calcite

albite - in calcite veins, also possible in porphyry matrix.

brecciation adj. cyanite contacts caused by intrusion; hydraulic pulses.

- orthoclase - biotite pseudo-bx different to diatrych from bx.

- exotic interbedded bx clasts in magnetite bx - carried up from depth.

Cu min's apparently not controlled by lithology N30W/45SE on metabasals & 'spotted' rocks.

Skarn features

- abundant garnet, particularly along spine & near dyke
- diorite follows stock contact
- garnet/biotite matrix of breccia
- magnetite abundant, as needles & discs, rarely masses.

The main skarn zone is located along the contact zone, extending about 100m from the contact zone. The skarn zone is composed of garnet, biotite, magnetite, and other minerals. The garnet is particularly abundant and is often found in large masses. The biotite is also abundant and is often found in large masses. The magnetite is found as needles and discs, and is often found in large masses. The skarn zone is bounded by a diorite stock contact. The diorite is composed of plagioclase, quartz, and other minerals. The contact zone is characterized by a brecciated texture, with garnet and biotite matrix. The skarn zone is a result of the reaction between the diorite and the surrounding rocks. The reaction is controlled by the presence of water and the temperature and pressure conditions. The skarn zone is a common feature in contact metamorphic belts.