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REPORT  
ON

TASU  
ROCKS  
AND  
SECTIONS

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## TASU ROCK SECTIONS

### (A) TUNNEL DEPOSIT ROCK TYPES

#### 1. Basement Rock

Microscopically - greenish-gray, fine to medium grained altered volcanic containing numerous calcite and chlorite stringers plus some epidote.

Occurs - appears to be the footwall rock below the tunnel

copper-magnetite deposit, crystallized with only slight alteration.

#### Microscopically

T 38 @ 365'

A highly altered, granular andesite.

Feldspar - 40% - almost completely altered to carbonate

Quartz - 30% - fine grained groundmass

Chlorite, epidote - 25% - probably resulting from the alteration

of the feldspar in large part, finely altered, andesite porphyry.

Plus trace of arsenite, 1% metallics, etc.;

Differs from dykes and/or other volcanics in the ore zone by being almost completely altered and containing considerable quartz.

#### 2. "Dark, fine grained dyke rock" - T 26

Occurs - rarely in the tunnel deposit as narrow post ore dykes;

more common on the T-Bone.

Reflects - presence of micro-blue (some low) birefringence.

Microscopically - a fine grained, crystalline aggregate

phenocrysts well developed.

## TASU ROCK SECTIONS

### (A) TUNNEL DEPOSIT ROCK TYPES

#### 1. Basement Rock

Megascopically a greenish-gray, fine to medium grained altered volcanic containing numerous calcite and chlorite stringers plus some epidote.

Occurs - appears to be the footwall rock below the tunnel copper-magnetite deposit.

#### Microscopically

T 38 @ 365'

A highly altered, granular andesite

Feldspar - 40% - almost completely altered to carbonate

Quartz - 30% - fine grained groundmass

Chlorite, epidote - 25% - probably resulting from the alteration of the ferro-mags in large part.

Plus trace of apatite, 1% metallics, etc.;

Differs from dykes and/or other volcanics in the ore zone by being almost completely altered and containing considerable quartz.

#### 2. "Dark, fine grained dyke rock" - T 26

Occurs - rarely in the tunnel deposit as narrow post ore dykes; more common on the T-Bone.

Microscopically - a fine grained, crystalline aggregate

composed of:

Feldspar - 50% - Labradorite

Augite (or diopside?) 35%

Chlorite and epidote - 10%

Apatite - as needles - 1%

Metallics - replacement in part - 2%

Plus slight quartz

Differs in being well crystallized with only slight alteration.

Apatite needles are distinctive. The rock can best be described as a basalt.

3. "Fresh andesite porphyry" - T 27 @ 132'

Occurs - as wide, steeply dipping dykes, probably related to pre-ore faults in the 'tunnel copper magnetite zone'.

Megoscopically - a grayish, slightly altered, andesite porphyry.

Microscopically

Composed of:

Plagioclase - 60% - An<sub>53</sub> - (Labradorite)

Epidote (clinzoisite), plus chlorite - 20%

Carbonate - 5%

Plus 3% metallics, slight quartz, etc.

Differs -- presence of ultra-blue (anomalous) firefringence, moderate alteration, and slight quartz. Absence of ferro-mags phenocrysts well developed.

4. "Fine grained, fresh greenstone porphyry"

T 26 @ 168'

Occurs - Dykes similar to #3.

Megoscopically - a fine grained, grayish andesite with feldspar phenocrysts only slightly developed.

Microscopically

Composed of:-

Plagioclase - 60% - An<sub>55</sub> (labradorite)

Chlorite - etc. 20% plus

Carbonate - 5% plus

Quartz - less than 5%

Plus 3% disseminated metallics.

Rock is a slightly porphyritic andesite

Differs - alteration only slight, feldspar lathes appear fresh.

5. "Close-grained porphyry"

T 29 @ 67'

Occurs - dyke rock similar to #4 and #5.

Megoscopically - small greenish-yellow feldspar phenocrysts in a light-gray, finely granular groundmass. Numerous calcite stringers. Appears a slightly porphyritic andesite.

Microscopically

Composed of:

Plagioclase - 20% (An<sub>45</sub> - Andesive) - mainly as phenocrysts now replaced by ferro-mags.

Plus Feldspathic groundmass - 50%

Ferro-mag - 20% - mottled, identification very difficult - replaces feldspar phenocrysts.

Quartz 5%

Plus trace of metallics and apatite and veined by calcite and quartz plus an isotropic mineral.

Differs - light in color, slightly granular appearance - the replacement of the phenocrysts is almost complete thus a distinctive feature (the opposite of a diabase).

6. "Diorite Porphyry"

T 38 @ 386'

Occurs - rarely as small dykes in the copper-magnetite zone. May be related to an underlying intrusive.

Megoscopically

Medium grained, greenish-gray slightly granular rock with well-defined hornblende and some large, but diffused, plagioclase phenocrysts.

Microscopically

Plagioclase - 40% - An<sub>50</sub> (labradorite)

Hornblende - 20% (some alteration to chlorite)

Quartz - 5%

Trace of apatite. Remainder is fine grained, feldspathic groundmass.

Differs - presence of hornblende and large feldspar phenocrysts.

Rock could be termed a "hornblende-diorite porphyry".

GENERAL

The Tasu field terms for rocks are o.k. to date. Quartz is low in all rocks but the basement. No true granitic rock has yet been encountered.

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Vancouver, B.C.  
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