

ISLAND COPPER

Mineralogical Branch Collection

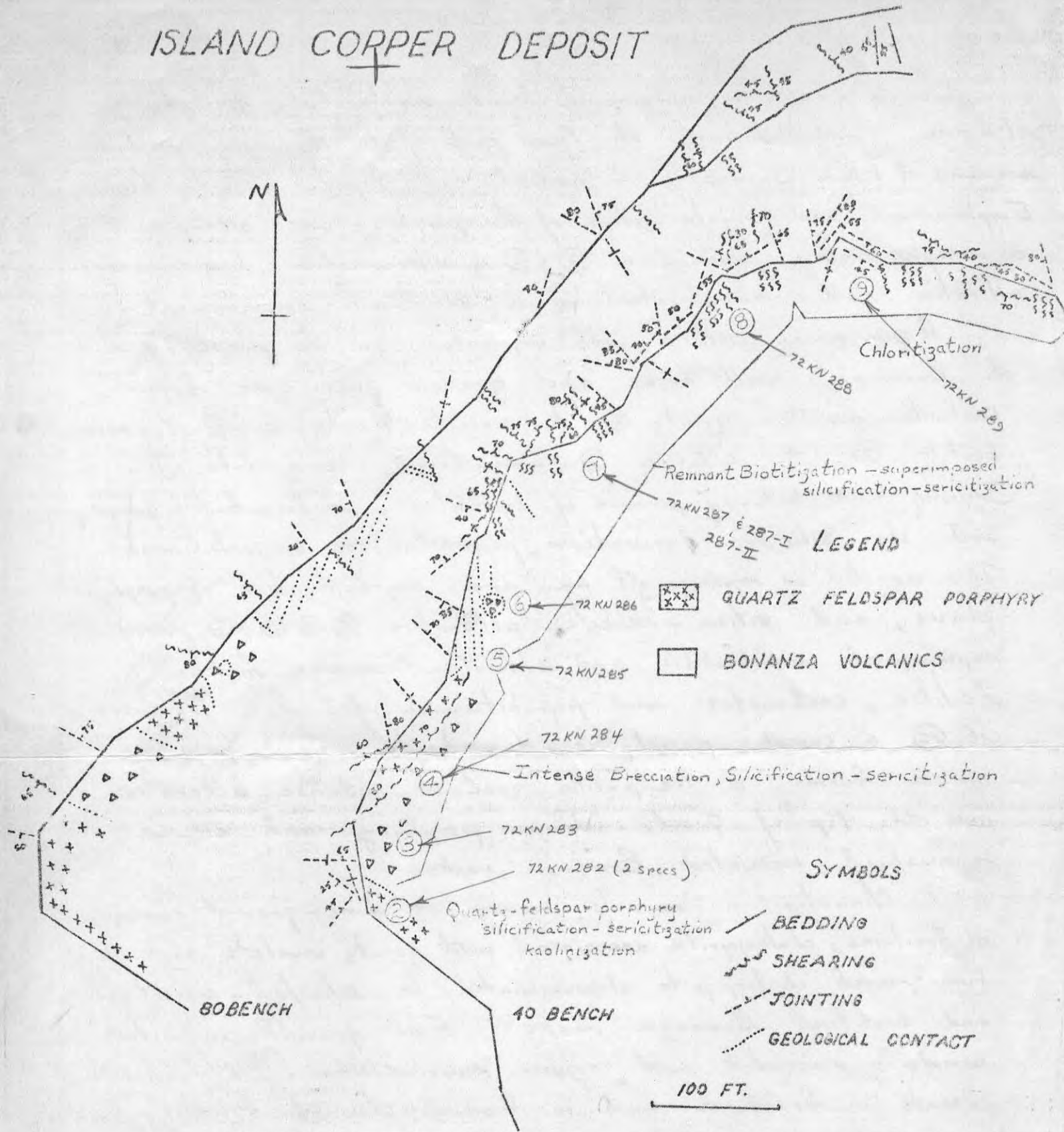
- ① 72 KN 281 Tuff Breccia at Mill-site.
- ✓ ② 72 KN 284 Breccia with rounded porphyry fragments.
- ✓ ③ 72 KN 287 Biotitized Bonanza tuff.
- ✓ ④ 72 KN 289 Chloritized Bonanza tuff.
- ✓ ⑤ 72 KN 290 → II Breccia - pyrophyllite, dumortierite porphyry.
- ✓ ⑥ 72 KN 291 Propylitic Bonanza tuff.
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⑦ Also a zeolite-carbonate vein
72 KN 287 - I
72 KN 284 - I

PROPERTY FILE

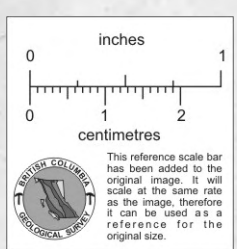
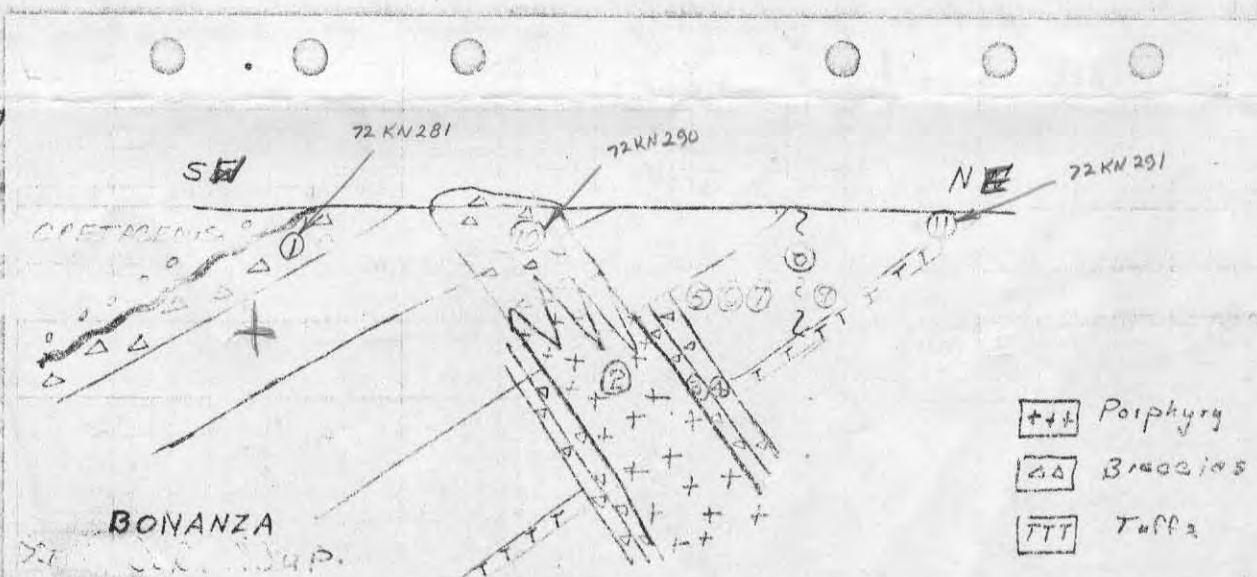
92L158(11W)

ISLAND COPPER DEPOSIT



- LEGEND**
- QUARTZ FELDSPAR PORPHYRY
 - BONANZA VOLCANICS
- SYMBOLS**
- BEDDING
 - SHEARING
 - JOINTING
 - GEOLOGICAL CONTACT

K.E. Northeate
July 24/77



Highly Generalized Cross Section
Showing Stops

PROPERTY FILE

92458 (11W)

Looking North West

ISLAND COPPER DEPOSIT

Quartz - Feldspar porphyry ② trends northwesterly through the pit-area and intrudes the lower part of the Bonanza pyroclastic sequence (Lower Jurassic) of andesitic tuff, lapilli and tuff breccia. Emplacement and crystallization of the porphyry was accompanied by a complex history of brecciation ③ & ④, metasomatism, hydrothermal alteration and mineralization in a subvolcanic environment.

A gross zoning pattern was imprinted on the porphyry and the Bonanza wall rocks and grades outwards from kaolinite-sericite-quartz ② to sericite-quartz ② & ④ to remnant biotite ⑦ to chlorite ⑧ and finally to epidote ⑪.

During and between periods of brecciation, differentiated porphyry and its siliceous derivatives permeated the brecciated rocks.

This resulted in replacement by and crystallization of porphyritic phases, and silica-sericite alteration ⑥ ⑦ ⑧ & ⑨ being superimposed on biotitic and chloritic Bonanza rocks.

Zeilites, carbonates and pyrobitumen fill late fractures ⑩.

At ⑩ a complex pyrophyllite-dumortierite-quartz porphyry-breccia forms a cap-like zone of intense alteration over the top of quartz-feldspar porphyry and altered, mineralized, brecciated Bonanza rocks.

Mineralization consists mainly of fine-grained chalcopyrite in fractures, chalcopyrite associated with quartz veinlets and very fine-grained chalcopyrite disseminated in silicified-sericitized and biotitized Bonanza rocks. Fine grained magnetite is commonly associated with copper mineralization. Malachite occurs in fractures and is found throughout the mineralized zone but is particularly abundant in association with silicified and biotitized rocks.