

675342  
92L/12

**Paper 24 — 10:30 a.m.**

*The Island Copper Cu-Mo Mine, Port Hardy, British Columbia.*

JOHN LAMB, Utah Mines Limited, Port Hardy, B.C.

The Island Copper Mine, located on Quatsino Sound near Port Hardy, is the only operating porphyry copper deposit on Vancouver Island. Discovered in 1967, it has been in production for ten years. The original ore reserve was approximately 300 million tons grading 0.50% Cu and 0.017% Mo. Well over 120 million tons of ore has been mined to date, as well as about 370 million tons of waste rock.

The deposit is in Bonanza sub-group rocks, the top member of the Vancouver Group, ranging in age from upper Triassic to lower Jurassic. The group is a volcanic-sedimentary succession of basaltic flows, pillow lavas, limey sediments and andesitic to rhyolitic pyroclastic rock. It constitutes the main rock unit on Vancouver Island.

A narrow, irregular, digitating quartz-feldspar porphyry dyke, trending west-northwest subparallel to the formational trend, is the structure around which the ore is draped. In plan, the orebody has the shape of a long flattened ellipse and in cross section it resembles an inverted "U", inclined northward. The dyke lies between the limbs of the "U" and passes through the crestal zone. Bedding observations in the north wall of the pit suggest the presence of a broad asymmetrical antiform plunging steeply south-southwest toward the mid-section of the orebody.

The orebody is strongly fractured, with most of the sulphide minerals forming thin intersecting veinlets on fracture surfaces. Approximately 75% of the ore is in the volcanic wall rock, with the remainder being in porphyry or nearby associated breccias.

CIM  
Dist 6  
Victoria  
act/81

92L/12