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ALWIN MINING COMPANY LTD. (N.P.L.)

1111 United Kingdom Bldg., • 409 Granville Street, • Vancouver 2, B.C.

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Report on Trojan Property of South Seas Mining, Highland Valley.
(Two visits -Sept. 23 and 26, 1969- courtesy of Pechiney Development Ltd. Geologist in charge is Pierre Sonnenbrucker.)

The property has a long and complicated history of development, based mainly on proving a large open pit type deposit. Diamond drilling has been mainly vertical holes laid out on a surface grid and underground development has been mainly for bulk sampling purposes. The future of the property now seems to be restricted to exploitation of the higher grade breccia pipes since the material between the pipes does not contain sufficient copper to bring the overall grade up to open pit requirements. The Pechiney program includes diamond drilling from underground to outline these breccia pipes.

Shaft (or Mine) Zone- This breccia pipe outcrops near the shaft and is fairly well outlined on the 150' level. An earlier estimate laid out an open pit on this zone to 250' depth with 3.16- 1 ratio. A report by L. J. Manning Associates gives the configuration of this zone as 200' N-S. by 50' E-W. (probably too narrow) and they estimate that an open pit could only go to -70' with a 3-1 ratio. Therefore they recommend underground mining with ore reserves as follows:

Proven and possible	-to -300'	-240,000T. @ 1.77% Cu.
Inferred	to -637.5'	-268,190T.
	Total	508,190T. @ 1.77% Cu.

The inferred tonnage is based on one drill hole which had the same breccia to 637.5', and assumes the same outline and grade. These figures are considered to be reasonable by Pechiney.

N.E. Zone and E. Zone These zones are about the same size and attitude (dip and plunge very steep S.E.) as the shaft Zone, but the average grade is under 1% Cu., All are breccia pipes made up mainly of fragments of Guichon granodiorite, with varying amounts of other local rocks depending on the location. There is no surface outcrop of these two zones, although overburden in the immediate area is light (less than 5').



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Mineralization Copper occurs mainly as coarse chalcopyrite streaks in the matrix of the breccia. Bornite and chalcocite are minor, and hematite as specularite in various forms is very common. Due to the coarseness of the chalcopyrite, wall sampling is very erratic, and bulk sampling is considered to be most accurate. For the same reason, diamond drilling is only a guide to actual grade, though it is necessary to outline the breccia zones. Malachite is quite common on the 150' level, where it is found mainly in the fracture zones in granodiorite near the breccia contacts.

Ground conditions Most of the underground workings are unsupported. Timbering is confined mainly to fault zones and fracture zones near contacts. The workings are nearly all accessible except where water has built up behind accumulated sloughed rock.

W. W. Cummings.