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A. M. Richmond
Mining Engineer

701 Stock Exchange Bldg.
Vancouver, B. C.,

July 14th, 1947

D. S. Tait, Esq.,
602 Stock Exchange Bldg.
Vancouver, B. C.

Dear Mr. Tait:

Re: Peacock Group, Quadra Island, B. C.

The notes which follow as part of this letter summarize our brief examination of the Peacock Group of copper claims, which are situated to the north and northwest of Gowlland Harbour, Quadra Island, B.C., about 120 miles northwest of Vancouver. We made the examination on the 4th of July, 1947, arriving at the beach at approximately 7:20 AM and leaving again by airplane at 6:PM. We were shown over the property by Mr. Harry Kenward, who informed us there were 16 claims in the area covered by the recent stakings.

Access to the property for examination purposes is best done by charter plane from Vancouver, the trip each way taking approximately 1 hour. For development and mining purposes, the property is accessible by boat to Campbell River or to Gowlland Harbour, with road and trail from the beach to the various showings. The road from the north shore of Gowlland Harbour follows the valley north and northwest for approximately 1-1/2 miles, and was at one time used as a wagon road to take out shipments of copper ore; the road is now overgrown with bracken, and woul require possibly $3000 to put it in repair for cars. From the end of the road to the best showing at 2 miles from the beach, an additional 1/2 mile of road would be required for mining purposes, and the cost might be $5000. A trail, now overgrown with bracken and willows joins the road to the best copper showing, above referred to, and illustrated on the sketch with this letter. For purposes of preliminary work it would require possibly $250 in trail work to clear the brush and remove windfalls, and clear around the small beaver-dam, and otherwise rehabilitate a trail from the beach to the showing.

Copper showings have been known on Quadra Island for many years, and several descriptions of the workings are contained in the Minister of Mines Reports for B.C., and in Memoir 23 of the Geological Survey of Canada. From these references it would appear that the most active period of development and exploration was between 1914 and 1919, at a time when high copper prices prevailed. During this period several hundred tons of sorted copper ore, grading between 315 and 5 per cent copper were mined from scattered open cuts, hauled to the beach at Gowlland Harbour and shipped to the smelters at Tyee and Tacoma.

In examining the property today, it would appear that those who were shipping the ore were not very much interested in doing dead-work, but rather in getting out copper ore with a minimum of development work. The result was that shipments were obtained by open-cut quarrying methods and when values became low in one part of the open-cut, or if the cut became too deep, the mining was stopped and started again at another point where the ore was more easily obtained. This has resulted in the partial development of several scattered copper showings, from each of which a small tonnage has been shipped.

We looked at nine different areas where open-cut mining methods had been employed, between the beach and the showing illustrated on the attached sketch. In each case, the copper showing had occurred in and close to a zone of fracturing, containing some faulting and many joint planes, usually of east to west strike (sometimes north to northwesterly striking) and in the volcanic rocks. The volcanic rocks are for the most part an amygdaloidal basalt; sometimes tuffaceous and less frequently, andesitic types are seen. The copper minerals in order of prominence are chalcocite, chalcopyrite, bornite and native copper, with malachite, and the black and red oxides of copper, all occurring in small amounts, either as fillings in the amygdules of the basalt, or in very small veinlets and impregnations in the area of the shearing and joint planes. Associated minerals are calcite, quartz and epidote.

The volcanic rocks have been described in detail by J. A. Bancroft in his Memoir 23 GSC., and he shows them as occupying a belt about 4 miles wide on the southwest side of Quadra Island, trending generally northwesterly, and being underlain by argillaceous and cherty sediments, and marbleized limestone. The evidence shows the whold to be underlain by the granodiorite-diorite rocks of the Coast Range batholith. The nearest outcrop of granitoid rocks to the best showings of copper ore, is approximately 2-1/2 miles to the northeast of the area detailed on the attached sketch. The grantoid rocks are considered to be the source of the mineralizing solutions, as they are intrusive into the older overlying sediments and volcanic rocks. The depth below the surface to the granite rocks is not known, but it may be two or three thousand feet, more or less. I believe the deposits could go to considerable depth before undergoing any marked change in mineral types.

The sketch of the nine opencuts, attached hereto, at a point about two miles north of the beach at Gowlland Harbour, shows the best outcrop area of copper mineralization we were shown. The opencuts indicate an area 325 feet long by possibly 75 to 100 feet wide, which has been mineralized with chalcocite, chalcopyrite, and associated oxides of copper, the mineral impregnating the amygdaloidal basalt and tuffaceous rocks for a considerable distance on each side of the east-west trending joint planes. No shipments have apparently been made from this showing, as it has not been connected to the beach by a road, and the material removed from the several cuts has been piled alongside of the cuts. Mineralization seems to be fairly uniform over the entire area, and I took six samples of the various open-cuts and dumps alongside the cuts. The assays were decidedly encouraging. A composite sample of the six opencut grab samples showed 4.6% copper, 0.35 ounces silver and trace in gold per ton. The six samples referred to assayed between 2.75% copper and 6.45% copper per ton, each sample consisting of 30 to 50 pieced of material broken from the cut or ore piles.

Approximately 1/2 a mile to the southeast, an opencut about 20 by 50 feet in area returned an assay of 3.15% copper from a grab sample of 75 pieces taken over the area. This area was the second one of importance.

I am of the opinion that a limited amount of opencut stripping at the area shown on the sketch, could result in opening up a considerable area of copper ore. With an area of possible 32,500 square feet, each foot of depth would give roughly 2600 tons of material, and a depth of but 300 feet on such an area could amount to over three-quarters of a million tons. After the surface area has been rather closely defined by opencutting, I would recommend, the drilling of not less than six holes (each would be about 250 feet long) into the area from the northern side of the showings, (where there is a draw from which at least 100 to 150 feet of depth could be obtained below the outcrop area) to determine the value of the occurrence below the surface.

At no place on the property has the copper occurrence been probed for more than but a few feet. I believe the showings could extend to a considerable depth. J. A. Bancroft, on page 125, of Memoir 23 states his opinion of the area near Gowlland Harbour (and north) as follows: "It will be surprising if within this area, some of these small deposits of copper sulphides, chiefly chalcocite, do not prove to be valuable low-grade copper propositions." Todate nothing has been shown to disprove this possibility, and believe it can be tested for a comparatively small amount of money. Of the 11 samples I took during our examination, the lowest assay I had was 2.15% copper, from material I thought would be less than 1.0% copper, judging by the amount of malachite stain on the area sampled, and the other assays ran as high as 6.45% with an arithmetic average of all the samples of more than 4.5% copper. The silver and gold content is negligible, save when the ores are treated in large tonnage lots, the silver being about a third of an ounce per ton, and gold only a trace per ton. However, with copper 20¢ per pound, allowing for 90% recovery, and the usual refining and smelting deductions, the ore of 4.5% grade would have a net value, before mining and shipping costs, of approximately $9.75 per ton. The possibility of developing a comparatively large tonnage of copper ore with a relatively small expenditure, is quite attractive and I would recommend that $10,000 be obtained if possible for this purpose. This money should be spent first at the best showing, using $1500 of it for opencut work, (best done I believe with a small gasoline driven jack-hammer and blasting a large number of 2 to 3 foot holes into the surface rocks) and then if encouraged by the results, drilling at least six flat to minus 45 degree dipping holes under the surface outcroparea, from the draw which runs just to the north of the main cuts and shallow shaft. This work would tell the story. If poor results were obtained, I would be in favor of abandonning the property, but I believe the results will be favorable to the extent that a much larger program of development drilling and underground work would then be required.

The general economic conditions are quite favorable, except for water, which would have to be obtained in the lakes some distance to the north of the showings (about 1 to 2 miles.) Power would have to be

diesel driven in the event of mining operation on any scale. Topography is not unduly rugged, and elevations are all below about 1000 feet above sea-level. There is timber available for mining purposes, but as to its ownership I do not know.

The property has merit and is an attractive development project for speculative funds, where the returns could be large for a nominal initial expenditure.

Yours faithfully,

Consulting Mining Engineer.

AMR/mdi
Attached: Sketch and assay certificates.

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J. R. Williams & Son
Provincial Assayers
576 Seymour St.

Vancouver, B.C. July 7, 1947

Result: Made on samples of ore submitted by A.M. Richmond, Esq. M.E.

Mark	Gold ozs.p/t	Silver	Copper %	V_2O_5	
Sample No.1322			5.40		Across 3.5' from showing on east side of road 1/2 mile from beach. (shaft show)
1323			4.90		Across 3.0' from showing about 400' north on road, right side.
1324			6.35		Specimen of 18" highgrade showing in cut next to north of sample 1323.
1325			2.15		Grab sample in cut to north, where rails and car still remain, large cut.
1326			3.15		Grab over area 20' x 50' at cut 1/2 mi. southeast of main showings.
1327			6.45		At main showing see sketch grab sample
1328			6.15		"
1329			3.35		"
1330			5.10		"
1331			2.75		"
1332			4.00		"
Composite Nos 1327/1322 in equal parts	trace	0.34	4.60	0.17	

(original assay sheet signed by both Williams and Richmond)

(the above samples were taken from Quadra Island, B.C. Peacock Group)

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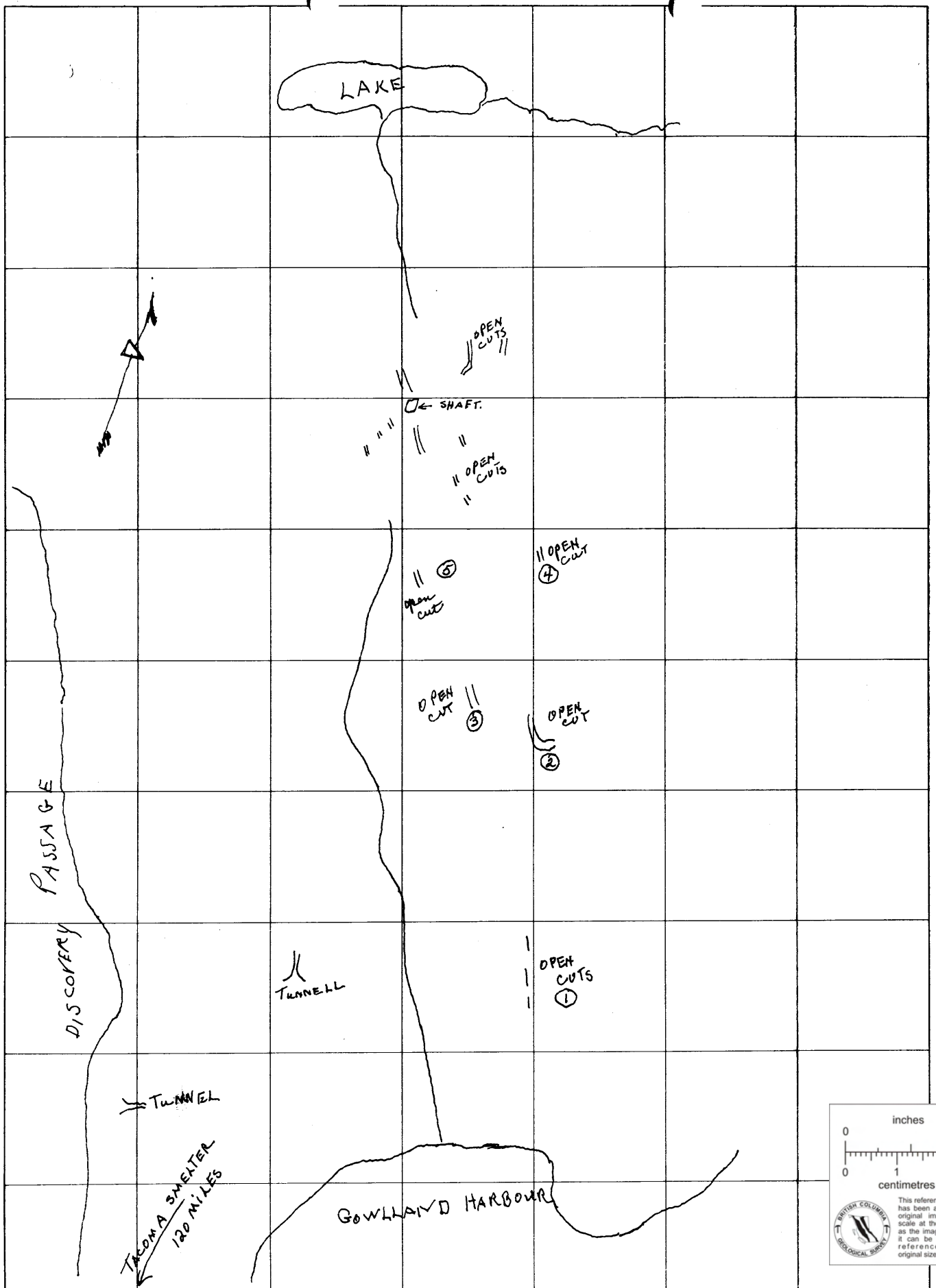

PEACOCK GROUP M.C'S.
QUADRA ISLAND B.C.

APPROX SCALE : 1 IN = 1500 FT.