JOINT VENTURE PROPOSAL FOR EXPLORATION ON QUEEN CHARLOTTE ISLANDS, B.C.

INTRODUCTION

The Queen Charlotte Islands are within the Insular physiographic region (see Figure 1). The area is underlain by Cenozoic and Mesozoic volcanic and sedimentary rocks.

The sedimentation and volcanism have been strongly influenced by large crustal fractures. The occurrence of widespread volcanic and intrusive activity throughout the geological history of the archipelago has been responsible for widespread hydrothermal activity associated with all major structures. The Queen Charlotte Islands is characterized by very high levels of mercury in areas where structures occur, this is indicative of widespread occurrences of hot spring activity.

Although vein gold mineralization has been known in the past on the Queen Charlotte Islands, it was not until the discovery of the Babe deposit in the early 70's, that the area's potential for low temperature disseminated type deposits became apparent. Throughout the latter half of the 70's a number of companies have become involved in exploring for these deposits.

UMEX has been actively exploring the archipelago since 1974. In the course of the last eight years, systematic evaluation of what were felt to be the most favourable structures had been undertaken. Although some work was done on Moresby Island as well as other smaller Islands, UMEX has placed greatest emphasis on Graham Island. Systematic heavy mineral sampling was done over areas of favourable geology on Graham Island, as well as on selected geological targets on the other Islands.

UMEX'S POSITION

In recent years it has been a policy at UMEX to go the joint venture route in most of its long range regional exploration programs. On the Queen Charlotte Islands, SHELL Canada Resources has been our partner until early in 1982, when SHELL Canada has decided to withdraw completely from mineral exploration. With the demise of SHELL Canada Resources, mineral division, UMEX is in a position to consider a new partner to explore the area.

Most of the ground presently held by UMEX on the Queen Charlotte Islands is subject to a 2.5% net proceeds royalty held by SHELL Canada Resources. Payment of any proceeds to SHELL Canada Resources is only due after the investments and interest payments have been recovered.

CLAIM GROUPS

UMEX holds eight claim groups on the Queen Charlotte Islands all having varying degrees of exploration completed on them. Figures 2 and 3 show the location of these claim groups as well as the regional geology of the Islands.

Table 1 summarizes the work completed on each group as well as relevant assessment dates. In additon to the work listed in Table 1, an airborne VLF-EM and magnetometer survey was completed in 1979 over a large portion of the claims located on Graham Island. This area, shown in Figure 4, extends from Rennell Sound in the west to the Cinola deposit and Y-7 claim group in the east.

..... 2

Bat Claim Group

The Bat claim group consisting of 52 units was staked on a structurally favourable target following re-examination of the 1981 field data. The claims are located on or adjacent to the Sandspit Fault marked by a distinctive break in slope and change in drainage pattern. Except for the possibility of outcrop along the break in slope or along creeks, the entire claim area is covered with relatively thick overburden.

Primary evaluation of the claims would be accomplished by running seismic profiles across the claim in a northeast direction presumed perpendicular to the Sandspit Fault.

Y-7 Claim Group

The Y-7 claim group, staked in 1977, totalling 51 units is located on an west of the Sandspit Fault, approximately 5 km south of the Cinola deposit (see Figure 2).

Assay results from drill core show high base metal values which indicate too great a depth in the system for Au mineralization. Hence our focus has been directed to the eastern portion of the claim group (Y-5 claim) which is presumed cut by both the Sandspit Fault and a splay of it. Due to downfaulting of the eastern portion of the fault, the possibility of younger rocks "higher in the system" could exist beneath these claims.

Work to date on these claims has included a soil geochemical survey end trenching. Trenching confirmed that thick overburden covered the claim.

A seismic survey was initiated in the fall of 1981 in which 1.4 km of seismic line was completed. The survey was abandoned due to deteriorating weather conditions.

Results of the survey indicate overburden cover ranging from 15 to 40 m thick. The rock type beneath the overburden has not been determined but thought to be weathered volcanics or incompetent sediments.

The second seismic line 500 m to the south indicates a different rock type with velocities of about 600 m higher than line 00.

Our recommendation for 1983 is the completion of the seismic survey involving approximately 5.5 km of line.

Shiela Claim Group

The Shiela claims, located on south-central Graham Island (Figure 2), were staked on a linear structure crossing the area as well as evidence of gold bearing quartz veins found on an adjacent property. The area is underlain by hornfelsed argillite intruded by feldspar porphyry and dioritic dykes.

Four drill holes were completed during the 1981 field season to test coincident Ag, Au, As and Hg anomalous zones found during a soil geochemical survey. Although mineralization was absent in core samples, the rock along shear zones was brecciated, silicified and intensely quartz veined.

..... 3

Direct evidence of gold mineralization within quartz veins on an adjacent property located at a lower elevation could possibly suggest that the structure may contain precious mineralization at depth.

The 1983 exploration program for the Shiela Lake area shall be limited to re-examination of existing data, possibly with reference to various elements which could indicate mineralization at depth as well as relevant research on the subject.

A limited program of prospecting and contour soil sampling is recommended for the west portion of the Shiela 1 claim.

NW Claim Group

The NW claim consisting of 37 units were staked in 1981 to determine the source of anomalous gold values found in streams draining the area. The claims were also situated on strike with the SE claims which contain Au, Pb bearing quartz veins.

The entire claim area is underlain by Jurassic Yakoun Formation composed of porphyritic andesitic agglomerate and tuffs with abundant sediments derived from the volcanic rock. The rocks strike to the northwest dipping in both easterly and westerly directions. A granitic intrusive intrudes this formation to the east of the claim group.

A geochemical soil survey for gold, silver and arsenic over 18.5 kilometers of line grid was completed between June 8th and June 14, 1981 covering most of the claim area.

Geological mapping as well as rock sampling along creeks and soil lines was also completed during this time.

The soil geochemical survey yielded poor results with respect to gold. This is probably due to thick overburden.

Higher than average background values with respect to silver were found. Values ranged from .4 to .9 ppm in several areas but due to widely spread grid lines no anomalous zones could be contoured.

A total of 58 rock samples were collected and assay results show that general background values of Yakoun volcanics and sediments is 15 ppb Au.

Silicified narrow northwest trending shears cutting the Yakoun Formation carry gold values ranging from 20 to 725 ppb Au.

Similar shears on the South Easter contains large Au, Pb bearing quartz veins up to 3 m wide. Extensive work was done on the property in the early nineteen hundreds including surface pits, drilling, addits and shafts both at 50 and 100' levels.

The deposit has been described as follows:

"Gold.--Gold is found on the southeasterly claim, northeast of Skidegate Indian village. The deposit is a quartz vein avera-

..... 4

ging 9 feet thick, and is apparently a quartz replacement of a shear-zone in breccias of the Yakoun volcanics. The metallic minerals with which the gold is associated are sulphides, and are irregularly distributed in masses through the quartz gangue.

Grab and some channel samples taken by the management in the open-cuts on the northerly segment of the Main vein are reported to have returned values of from $2.20 to $58.00 across widths of from 1 to over 4 feet.

From the surface down to about 65 feet in the upper workings three small ore-shoots have been indicated and estimated by the management to contain 4,750 tons, values at $12.30 per ton, with an average width of about 6 feet. The attitude of these shoots in the vein system is not definitely known; they may rake northerly or southerly. With the good wishes and definition of vein material exposed on the 100-foot level, coupled with the values existing in the vein between the 50-foot level and surface, it would seem that intensive exploration of the zone on the 100-foot level is certainly warranted in order to determine the possible continuity of the known ore-shoots to this level and the possible occurrence of other ore-shoots at this or other horizons."[1]

The property is presently owned and operated by Island Gold Exploration.

The following work is recommended for the 1983 field season:

1) Re-sample several areas with the use of an auger to obtain deeper soils.

2) Conduct geophysical surveys across shear zones on the property as well as across mineralized quartz veins on the adjacent property to determine similarities.

3) Detailed mapping and rock sampling along strike of shears.

Stib Claim Group

The Stib mineral claims are located on Graham Island of the Queen Charlotte Islands, 25 km north-northwest of Queen Charlotte City. They straddle the upper 3.5 km of Riley Creek just north of the head of Rennell Sound (see Figure 2).

During the 1977 and 1978 field seasons both the Stib and Ant claims were soil sampled and a grid was established over the claims. Based upon these results, detailed rock sampling and geological mapping followed in the 1981 field season, which in turn led to the selection of diamond drill targets during the winter of 1980.

During the 1981 field season a total of 6 diamond drill holes were completed, five of which were on the north side of Riley Creek, one on the south side. The hole depths ranged from 28.35 m to 78.64 m. All six holes were drilled on the extension of the old Courte Antimony Showing located adjacent to the Stib claim west side.

---

[1] Report of the Minister of Mines, B.C., 1914, 1932.

The area underlying the Stib property has been mapped by Sutherland Brown, 1968; B.C. Department of Mines: Bulletin #54 as being composed essentially of Jurassic, Yakoun Formation. Further detailed mapping has revealed that the area was intruded and partly metamorphosed by dioritic "rhyolitic", feldspar porphyry dykes thought to be of Masset Formation of early Tertiary age.

These dykes which trend approximately N 70° W, following a major fault cutting the area, appear to intrude the Yakoun Formation at the boundary between volcanics and sediments. The volcanics to the NE are mainly andesitic agglomerates with volcano-sediments to the SW. The dip of these intrusive dykes is near vertical.

All drill targets were chosen within the dyke rock due to the presence of anomalous Au and Sb values detected in both soil and rock samples.

No work was done on the Ant claim due to the undefined claim boundaries in that area.

Several geophysics lines were run across the dyke and into the encasing Yakoun volcanics and sediments. Both mag and EM 16 were used but results were inconclusive, showing little contrast between rock types.

Drilling Results

All drill holes tested the dyke rock at its northern boundary with the Yakoun volcanics. The dyke rock, generally pinkish-white to light grey in color, varies from very fine crystalline to a coarse feldspar porphyry phase. Varying amounts of pyrite are disseminated throughout the core, up to 10% in some sections. Intense clay alteration and pyritization occurs along shears within the dyke as well as at the contact with the Yakoun agglomerate. Quartz veins carrying both Py and Sb mineralization were intersected at various depths within several diamond drill holes.

Assay results show anomalous Au values associated essentially with the quartz stibnite veins within the dyke rock. These zones are highly anomalous in As. The general background of the dyke rock is 5 ppb Au. DDH #1, which reached a depth of 55.7 m intersected several zones of high Au values. From 15.24 m to 24.38 m gold averaged 521 ppb Au with two small intersections within this zone related to quartz stibnite veining assayed 2250 and 2450 ppb Au respectively. Corresponding As values were 721 to 6750 ppm. Antimony assayed up to 10,350 ppm within this zone. Other intersections were 33.22 m to 33.53 m assaying 2250 ppb Au, 2255 As, and 48.77 to 51.82 m assaying 900 ppb Au, 1244 ppm As.

DDH #5, drilled along strike of DDH #1, showed increasing Au values with depth. Values of 500 ppb Au over 3 m.

Holes #2, 3 and 4, which were in the northern contact of the dyke, were poor with respect to gold mineralization.

Mineralization occurs at a distance of 30 m or more from the northern contact of the dyke rock.

Due to limited drilling information with the mineralized zone of the dyke, no direct correlation can be made between drill holes. The trend and dip of the mineralized zones are also unknown.

..... 6

Metal ratios suggest the gold bearing structures are possibly parallel to the dyke.

Hal Mineral Claim

The Hal claim, located on Ramsay Island (Figure 3), was staked in 1979 to cover a drainage with highly anomalous gold in heavy mineral concentrates. It was examined by prospecting, geological mapping and soil geochemistry. The claim is underlain by interbedded basaltic to rhyolitic flows, ashflows and agglomerates of the Tertiary Masset Formation. Two highly clay altered, pyritic, weakly silicified, northeast trending shear zones were located with erratic gold, mercury, and arsenic values.

A limited program of rock sampling and mapping over anomalous zones is recommended.

Lyell Claim Group

The Lyell claims, located on Lyell Island (Figure 3), was drilled over weakly anomalous zones with respect to gold and coincident arsenic and mercury. A total of 305.4 meters were drilled in 4 holes all intersecting basal Kunga argillites and limestones. All assay results were poor not explaining surface geochemistry.

Renewed interest in these claim groups has been sparked by reports of very encouraging results found by Placer Development Ltd.'s drilling program on an adjacent property.

It would appear that mineralization on these claims is highly structurally related.

Chris and Chris 5 Claims

Insufficient encouragement for gold mineralization was found on these claims to warrant further exploration.

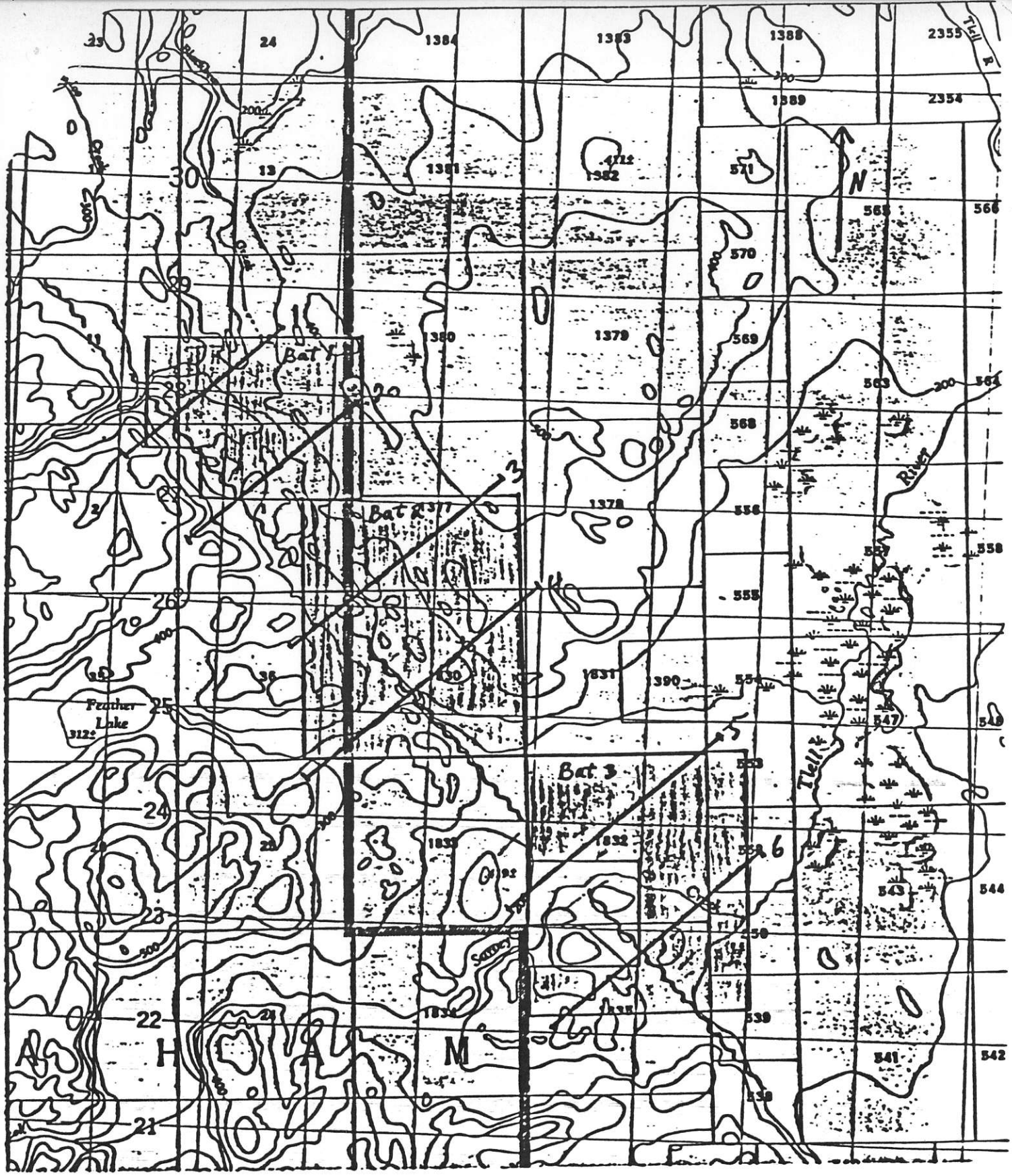

FIGURE 5

BAT CLAIMS 1, 2, 3 CLAIMS
GRAHAM ISLAND
SCALE: 1/50,000

PROPOSED LENGTH AND LOCATION OF LONG SEISMIC LINES. SHORTER FILL-IN LINES WOULD BE RUN BETWEEN LONG LINES OVER STRUCTURALLY FAVOURABLE AREAS INDICATED BY LONG LINES.

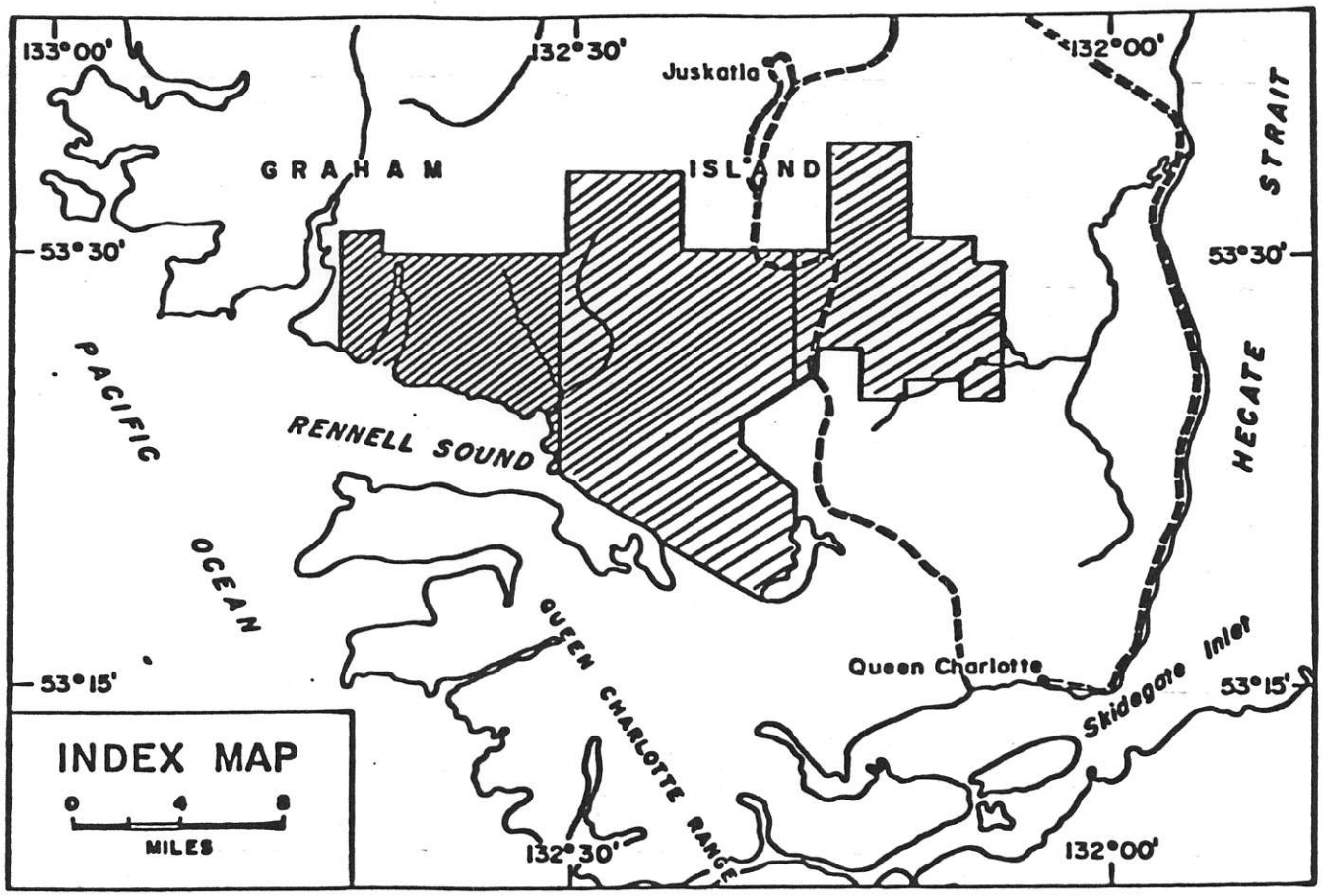

FIGURE 4

AIRBORNE MAGNETOMETER AND VLF-EM SURVEY

COMPLETED 1979 BY AERODAT LTD.

T A B L E 1

Claim Group Name	Year Staked	Assessment Due	No. of Units Per Claim Group	WORK COMPLETED					
				Soil Geochem	Rock Geochem	Geological Mapping	Geophysics	Drilling	Other
Y7	1977	June, Aug. 1968 Dub-11/83 7 West-11/83	51	358 soils for Au, Hg, Cu and Zn	250 samples for Au, Ag, As and Hg	Yakoun Volcanics	Proton MAG-EM-16 and EM-16R seismic	1978-6 DDH 621.5 m 1981-4 DDH 646.2 m	5 small trenches on Y5 claims
Stib	1977 1981	June 1991 March 1985	34	340 soils for Au	90 samples for Au, As, Ag, Hg, Sb	mineralized felsic dyke Yakoun volcanics	minor mag and EM-16 across dyke	1981-6 DDH 282.5 m	
Shiela	1978 1981	1986 March 1983	43	254 soils for Au, Ag, As and Hg	64 samples for Au, Ag, As and Hg	Kunga argillites dioritic intrusive	EM-16 EM-16R	1981-3 DDH 440.1 m	6 organic samples
NW	March 1981	March 1983	37	188 samples for Au, Ag and Hg	58 samples for Au, Ag, As and Hg	sheared Yakoun volcanics	Minor EM-16 across shears		
Bat	Oct. 1981	Oct. 1983	52	119 samples for Au & 26 element ICP					
Lyell	1979	1984 1986	142	780 soil samples for Au, As, Hg	297 samples for Au, As, and Hg	Kunga argillites-felsic dykes		1981-4 DDH 305.4 m	

continued on next page .....

TABLE 1 (cont.)

Claim Group Name	Year Staked	Assessment Due	No. of Units Per Claim Group	WORK COMPLETED					
				Soil Geochem	Rock Geochem	Geological Mapping	Geophysics	Drilling	Other
Hal	1979	June 1983	20	460 soils for Au, As and Hg	28 samples for Au, As, Hg and Ag	Masset formation volcanics			
Chris	1979 1980	March 1983 March 1984	24	265 soils for Au, As and Hg	65 samples for Au, As and Hg	Kunga argillite dioritic intrusive			
Totals			403	2545	652			2295.7	