

TEXADA

VGB
Mar. 14/87

FAME

Vananda Gold Ltd., Texada Island Property

Summary of 1986-87 Program

883651

The program of exploration on Vananda Gold's Texada Island property is an ongoing one. The phases of this program which have recently been completed involve geological mapping, grid establishment (line-cutting) and soil sampling, some surveying to establish claim boundaries, and compilation of much pre-existing information. For the purposes of providing background information, two reports by G.R. Peatfield, who reviewed the history and setting of the property, are included with this summary. A detailed report summarizing all this work is in preparation, pending receipt of the latest data and preparation of various maps and drawings.

Subsequent to the initial review, a base-line was established in the area of the Cornell Mine and the Florence and Security occurrences (see attached map). Flagged cross-lines were established for control and in the final analysis the surface geology covering much of the area between the Cornell and Little Billie mines was mapped by Art Ettlenger, at a scale of 1:2,500. Mr. Ettlenger's map (see attached) is included with this summary. This geological mapping has to a degree confirmed the picture outlined by previous work, but has added numerous details. The most important observation is that there appears to be a good correlation between areas of bleaching or "white-rock" development in the limestones and zones of copper skarn mineralization. This could have profound implications in the search for new blind skarn zones. Of particular interest in this regard is a large area of bleaching or marble development north and east of the Cornell Mine, south of Little Billie, and adjacent to the Canada LaFarge quarry dump. This area deserves extensive work, especially if the results from the recently collected but as yet unanalyzed soil samples are encouraging.

Geochemistry on the Texada property has been undertaken in two phases. The first program concentrated on four small grids (Sentinel, Cornell, Florence and Security - see grid location map). Soil samples, of B-horizon material, were analyzed by Acme Analytical Labs for Au (FA/AA) and 30 elements (ICP). The analytical certificates are attached; sample numbers are such that results can be plotted for each grid. Rough hand-drawn plots for Au and Cu are included for three of the grids.

At Sentinel, a north-trending Zn and Pb anomaly (see attached) confirms the trace of known zinc-lead mineralization in a vertical breccia structure in limestone. On the Cornell, Florence and Security grids, extensive gold soil anomalies appear to indicate generally northeasterly-trending zones, more extensive than copper anomalies, suggesting the presence of gold mineralization not related to copper-gold skarns. This hypothesis is a new one and requires aggressive follow-up.

Following on from the results of the first geochemical program, a much more extensive grid was laid out (Vananda Grid - see grid location map). This grid has been established and totally sampled; analytical results are available only for the northwest portion, essentially the area of the old Security grid. Samples were analyzed, again by Acme, for Au (MIBK-AA) and Cu, Pb, Mo, As, and Co (ICP).

Results from this phase of sampling have been most encouraging, essentially confirming the sampling on the Security grid, and showing that the general east-west trend of anomalies is well defined for gold, although less so for other elements. Some limited comparative work suggests that the MIBK-AA technique for Au is as effective, and considerably less expensive, than the FA/AA technique. Accordingly, the former procedure will be employed from now on.

G. R. Peatfield

G.R. Peatfield, Ph.D., P.Eng.

GRP/sp
Mar. 5, 1987

1.0

INTRODUCTION

In November 1986, Vananda Gold Ltd. commissioned MineQuest Exploration Associates Ltd. to assess the potential of Vananda's mineral property on Texada Island, to recommend a program to test this potential, and to prepare a report suitable for inclusion in a prospectus.

Accordingly, G.R. Peatfield, P.Eng., who is directly familiar with the property, and who has recently examined the available data on the exploration and production history of the property in some detail, prepared such a report. The report embodies observations made on visits to the property during 1986, condensed results of several programs previously undertaken on the property, and a synthesis of much of the available historical data on the mines which operated within the present property boundary.

The northern portion of Texada Island has been an important mining area, on an intermittent basis, since the late 19th century. The principal periods of activity were between 1897 and 1919, during which time the gold-copper-silver skarn deposits at Vananda produced about 250,000 tonnes of high-grade ore; from 1948 to 1952, when one of these mines produced 58,000 tonnes of slightly lower grade ore; and from 1952 to 1976, when the large magnetite skarn deposits near Gillies Bay on the west side of the island produced some 10 million tonnes of iron concentrate with byproduct copper, gold and silver. The sites of all these former producers lie within the present Vananda Gold Ltd. property.

The skarn deposits are contained within rocks of the Triassic "Texada group" (Karmutsen Group) volcanics and "Marble Bay formation" (Quatsino Formation) limestone, intruded by Jurassic quartz dioritic to gabbroic plugs, dykes and stocks. There are two distinct families of skarn deposits,

as evidenced by their geological setting, mineralogy, and metal ratios. Those of principal interest at this time are the gold-copper-silver deposits at Vananda.

There is an extensive body of reporting, especially on the Vananda area deposits, most of which is listed in the Bibliography. Of this, the reports by Winter (1984, 1985) provide a comprehensive summary of the general situation and history of the property.

2.0

LOCATION, ACCESS AND TERRAIN

The property lies between the villages of Vananda and Gillies Bay, on northern Texada Island, about 80 kilometres northwest of Vancouver (see Figure 1). Access is by highway and ferry to Powell River and thence by ferry to Blubber Bay at the north end of the island. Light aircraft can land at the airport near Gillies Bay. Numerous public and private roads provide ready access to most of the property.

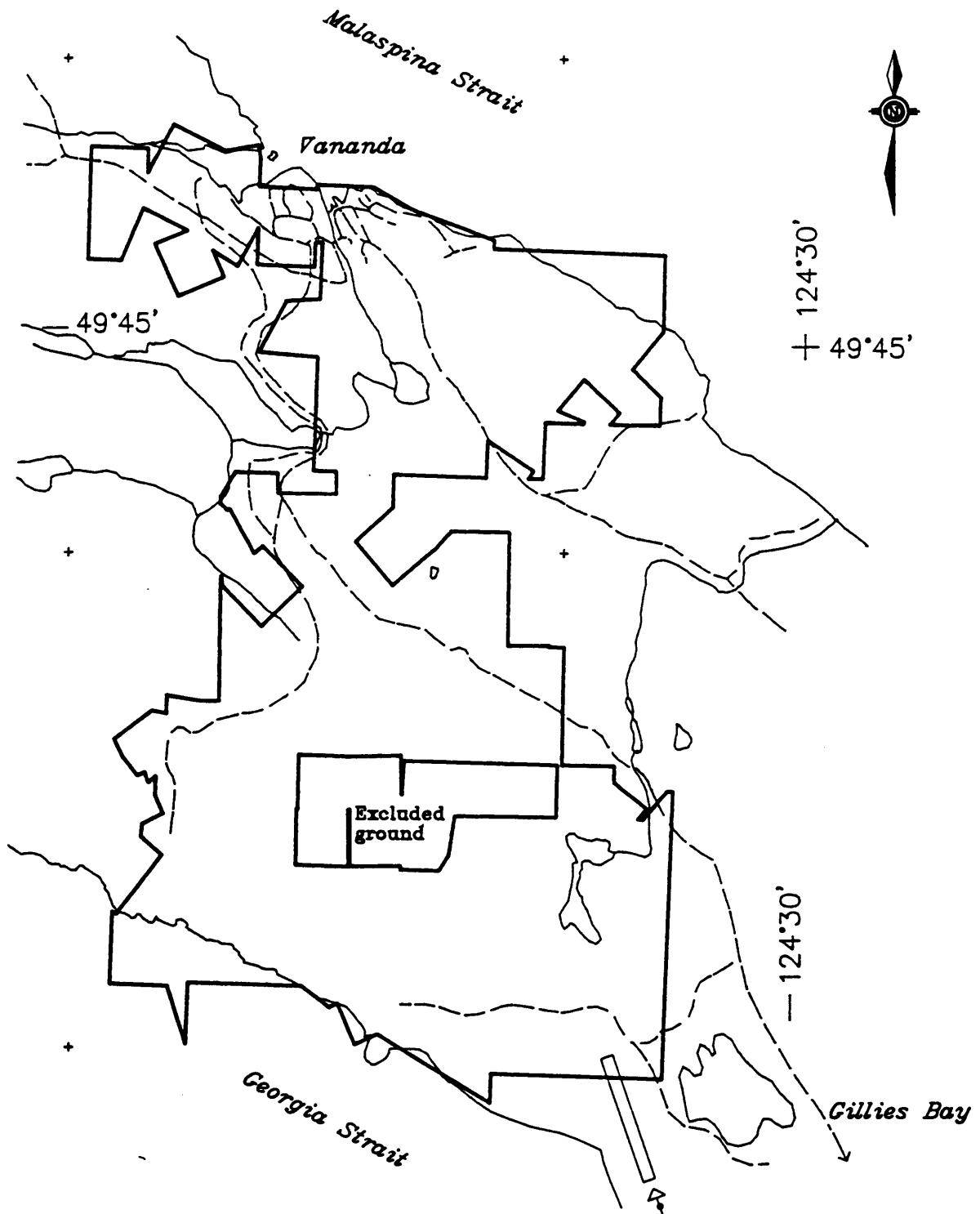
The terrain on the property is moderate; the gently rolling hills have a total relief of the order of 250 metres. Forest cover is locally heavy, with considerable second growth. Much of the area of immediate interest lies within and adjacent to the settlement of Vananda.

3.0

PROPERTY STATUS

Texada Island is one of the oldest mining camps in the Province, and as a result the property situation is very complex. In some cases, separate ownership exists for base and precious metals; this is further complicated by the limestone quarries, which do not hold their tenure under the terms of the Mineral Act.

Vananda Gold Ltd's property holdings on Texada Island consist of three small mining leases, 31 Crown Granted Claims or Fractional Claims, and 89 located (two post) mineral claims or fractional mineral claims. Figure 2 shows a rough outline of the property but it is not based on any comprehensive recent survey and does not show the location of individual claims. Appendix I is a listing of the present property holdings. The above information is derived from data in the possession of Vananda Gold Ltd.; no independent check has been made, either of the records or of staking in the field. Detailed surveys are recommended.



VANANDA GOLD LTD.		
TEXADA ISLAND PROPERTY NANAIMO, B.C.		
PROPERTY OUTLINE		
DATE: NOV. '86	N.T.S.: 92F/10E, 15E	FIGURE: 2
MINEQUEST EXPLORATION ASSOCIATES LTD.		

4.0 HISTORY AND SUMMARY OF PREVIOUS WORK

Texada Island has had a long and complex mining history, much of which involves mines located on the present Vananda Gold Ltd. property. This history, along with some of the exploration history of the property, is summarized in point form in Appendix II. The limestone operations are not considered here.

The sequence of events can be divided into several distinct episodes. Early work, prior to 1895, was concentrated on iron deposits, with some very small copper ore shipments from related occurrences. Between 1895 and 1919, most of the activity was on the gold-copper-silver skarn deposits of the Vananda Camp, which were developed and which sustained production during this period. The final closure of these mines was related to the severe decline in copper prices following the First World War.

Between 1927 and 1930, a concerted effort was made to revive the Vananda mines. Properties were consolidated, and considerable preparatory work and diamond drilling were undertaken, with somewhat mixed success. Interest then waned until 1942, when properties were again consolidated and considerable exploration performed, culminating in the Little Billie mine being put in production again, and operating from 1948 to 1951. Closure of this mine marked the end of this phase of activity.

The year 1951 marked the beginning of real interest in the iron mines on the west side of the island. Mining of these large magnetite deposits, with byproduct copper, gold and silver, continued from 1952 until 1976. This represents a period of sustained and important mineral production from the present Vananda Gold Ltd. property.

Apart from a few sporadic programs there was little work in the Vananda Camp until 1970, when the latest phase of property assembly began. Serious ground work, consisting mostly of geophysics and diamond drilling, commenced in 1977, and has continued with some interruptions to the present.

Until the latest phase of work, commissioned by Vananda Gold Ltd., many of the programs were undertaken essentially in isolation, and results have not been compiled in any systematic way. Such compilation is currently in progress, and will form the basis upon which programs are designed.

This brief review has concentrated solely on events which took place within the boundaries of the present Vananda Gold Ltd. property. No attempt has been made to treat activities on the many occurrences, mostly high-grade gold showings, on properties lying immediately to the west.

5.0

GEOLOGY

The regional geology of Texada Island has not been comprehensively studied since the work of McConnell (1914), although numerous published and unpublished maps and reports treat various isolated areas or specific problems.

The Vananda Gold property is underlain by a succession of mid-Mesozoic volcanic and sedimentary strata (see Figure 3). McConnell (1914) described the andesitic to basaltic "porphyrites" of the Lower Jurassic(?) "Texada group" overlying Triassic or Jurassic limestones of the "Marble Bay formation". The recent compilation by Muller (1977) of the geology of Vancouver Island and adjacent islands classified the volcanic rocks on northern Texada Island as Karmutsen Group (middle to upper Triassic) and the limestones as the overlying upper Triassic Quatsino Formation. Clearly either McConnell's stratigraphy or Muller's assignment is in error; subsequent studies strongly imply the former, and suggest that the limestones in fact overlie the volcanic strata. A third possibility is that both Karmutsen and Bonanza Group (Jurassic) volcanic rocks are represented; further field work would be required to prove or disapprove this hypothesis.

The volcanic and sedimentary strata have been cut by at least two types of intrusive rocks, thought to be of Mesozoic age. The more common, typified by the Gillies Lake Stock in the area of the Texada iron mines, is principally composed of quartz diorite and granodiorite. Near Vananda, closely associated with the gold-copper mines, are smaller bodies of diorite, diorite porphyry, and locally more basic intrusive rock. Numerous dykes, generally porphyritic, may be associated with either intrusive family. Such limited studies as have been undertaken suggest that the intrusive rocks are Jurassic or older (Carson, et al., 1971).

TABLE 1 - PRODUCTION FIGURES FOR TEXADA ISLAND MINES

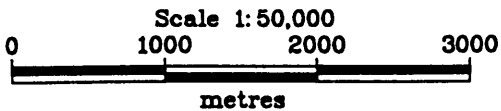
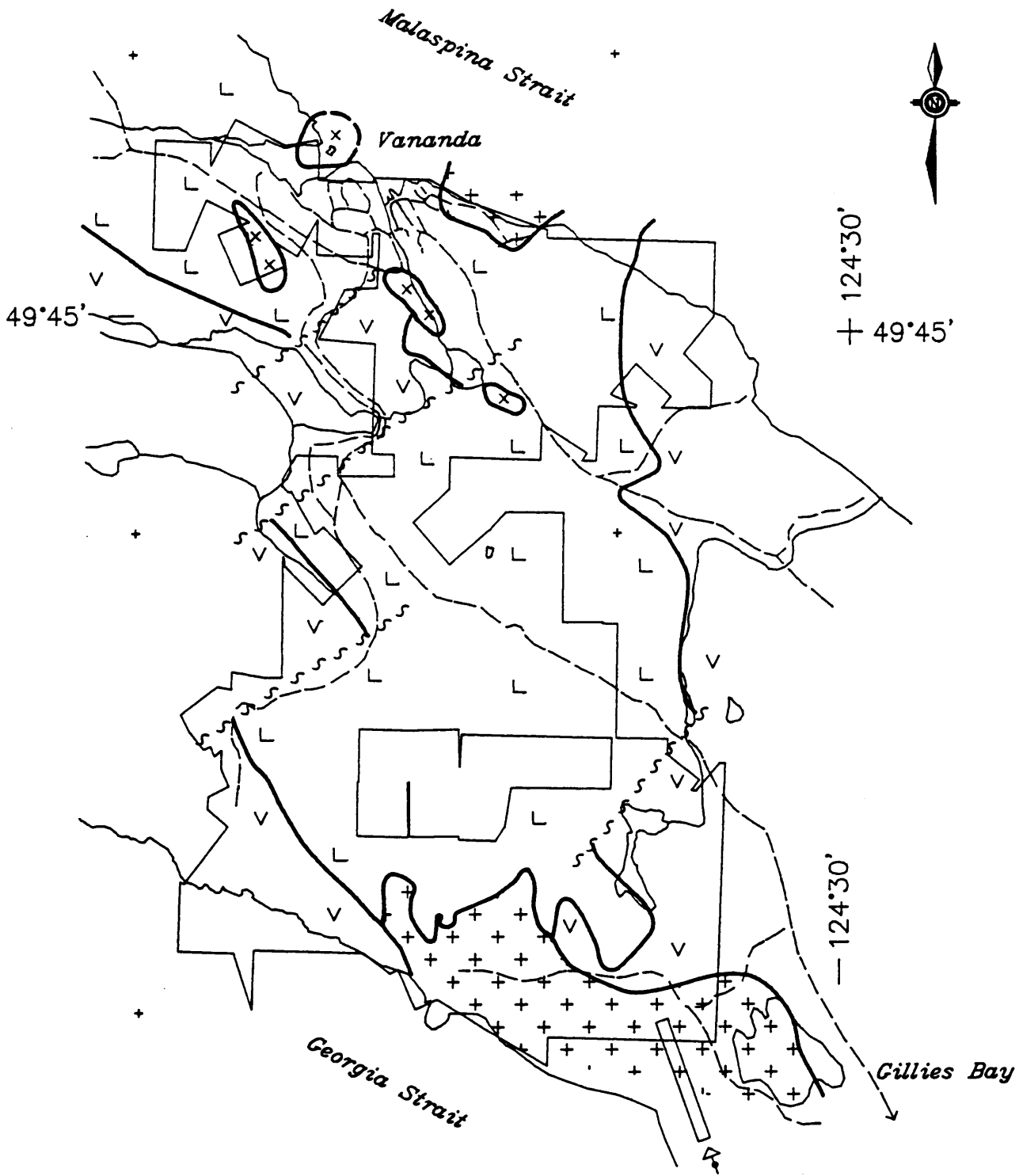
<u>Mine</u>	<u>Period</u>	<u>Prod.(tonnes)</u>	<u>Au(g)</u>	<u>Ag(g)</u>	<u>Cu(kg)</u>	<u>Fe conc. (tonnes)</u>
Copper Queen	1903-1907	3,326 ²	37,175 ³	279,380 ³	148,330 ³	
Copper Queen	1907-1917	749 ²	9,891	75,238	32,417	
Cornell	1897-1919	40,687	471,085	2,194,471	1,368,512	
Little Billie	1896-1916	5,711	50,085	220,458	136,837	
Little Billie	1948-1952	58,000	313,083	977,846	682,261	
Marble Bay	1899-1929	<u>199,210⁴</u>	<u>1,544,100</u>	<u>12,620,500</u>	<u>6,788,900</u>	
Total Vananda		307,683	2,425,419	16,367,893	9,157,257	
Lake	1901-1921	946	3,017	35,955	47,659	
Prescott ⁵	1885-?	733	2,799	31,787	38,964	
Texada Iron ⁶ (Prescott, Yellow Kid, Paxton and Lake Mines	1952-1956	2,000,000	-7	-7	-7	1,300,000
	1957-1961	3,289,900	156,570	2,989,430	2,759,900	1,709,800
	1962-1966	5,168,900	281,950	5,374,600	6,220,400	2,590,300
	1967-1971	5,840,200	235,760	7,876,800	9,814,300	2,730,500
	1972-1976	<u>4,501,900</u>	<u>213,280</u>	<u>7,403,480</u>	<u>7,945,700</u>	<u>2,030,900</u>
Total Texada Iron		20,800,900	887,560	23,644,310	26,740,300	10,361,500

1. Figures are from MinFile, except for Copper Queen 1903-07 which are from Cox (1944).
2. These figures do not accord well with the reported mining history (including leasing) for this deposit, which suggests substantially more tonnage was mined.
3. These figures are approximate, derived by calculating backward from reported grade figures.
4. This figure is uncertain - MinFile gives 1906 production as 95,020 tonnes; I have assumed 9,502 tonnes, which is comparable to other years and yields commensurate grade figures.
5. Although this production is listed as Prescott, it may in fact refer to mining near the Paxton deposit.
6. All figures pertaining to these deposits are rounded slightly.
7. No copper concentrates were produced in this period.

TABLE 2 - PRODUCTION GRADES FOR TEXADA ISLAND MINES

Mine	Years	Tonnes	Au(g/t)	Ag(g/t)	Cu%
Copper Queen	1903-1907	3,326 ¹	11.2 ²	84.0 ²	4.5 ²
Copper Queen	1907-1917	749 ¹	13.2	100.5	4.3
Cornell	1897-1919	40,687	11.6	53.9	3.4
Little Billie	1896-1916	5,711	8.8	38.6	2.4
Little Billie	1948-1952	58,000	5.4	16.9	1.2
Marble Bay	1899-1929	<u>199,210³</u>	<u>7.8</u>	<u>63.4</u>	<u>3.4</u>
Total Vananda		307,683	7.9	53.2	3.0
Lake	1901-1921	946	3.2	38.0	5.0
Prescott	1895-?	733	3.8	43.4	5.3
Texada Iron	1957-1976	18,800,900 ²	0.05	1.25	0.14

1. These figures, from Cox (1944) and B.C. MinFile respectively, do not accord well with the reported mining history (including leasing) for this deposit.
2. These figures are approximations.
3. This figure is uncertain - MinFile gives 1906 production as 95,020 tonnes; I have assumed 9,502 tonnes, which is comparable to other years and yields commensurate grade figures.



LEGEND

- + Quartz diorite
- x Diorite, gabbro
- L Quatsino limestone
- V Karmutsen volcanics
- ~ Fault

VANANDA GOLD LTD.		
TEXADA ISLAND PROPERTY NANAIMO, B.C.		
PROPERTY GEOLOGY		
DATE: NOV. '86	N.T.S.: 92F/10E, 15E	FIGURE: 3
MINEQUEST EXPLORATION ASSOCIATES LTD.		

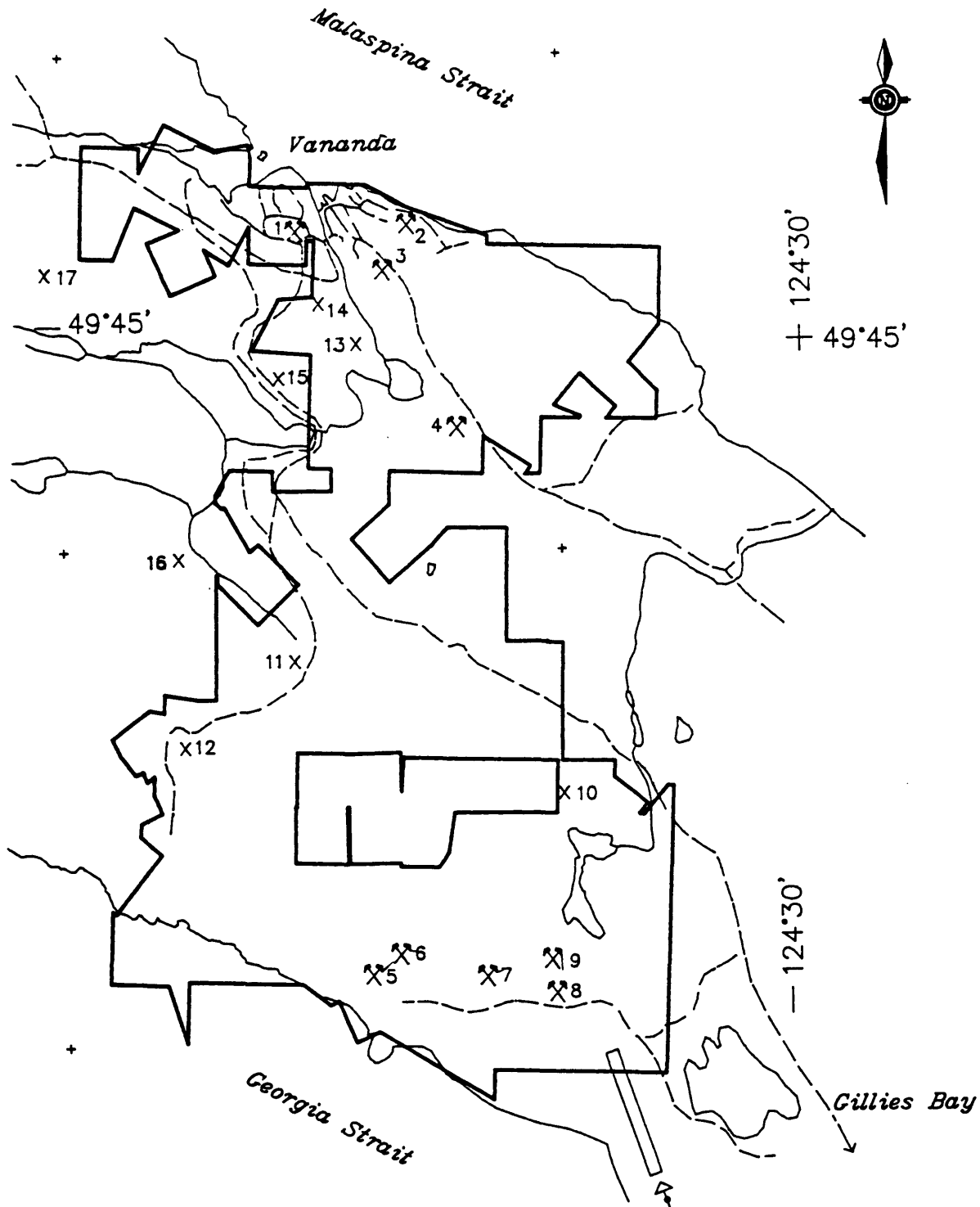
6.0

MINERAL DEPOSITS

Several types of mineral deposits have been explored and in some cases exploited on Texada Island, since the beginning of mining history in the late 1800's (see Figure 4). Of these, the most important (not including the very extensive limestone quarries in the Marble Bay formation) are the iron-copper skarns on the west side of the island near Gillies Bay, and the gold-copper-silver skarn deposits near Vananda. Both types have had considerable production, as shown in Table 1. Although the Vananda deposits have produced far fewer tonnes of ore, their unit values were much higher than those of the iron-copper skarn deposits. They are a much more attractive exploration target at present, given their relatively high precious metal tenors. Table 2 shows the average grades of material mined from various deposits.

The Vananda gold-copper-silver deposits consisted of narrow relatively short lenses with very substantial down-plunge projections. Typical dimensions of the larger individual shoots would be about 4 x 25 x 150 metres, or about 60,000 tonnes. These lenses or shoots generally consist of bornite and chalcopyrite in a gangue of garnet, epidote, and diopside with lesser amounts of tremolite, wollastonite and other calc-silicate minerals, contained completely within the massive limestones, usually with associated local bleaching of the limestone to form "white rock". Free gold and native silver have been reported, and molybdenite is a widespread but minor constituent. Details are available in the published reports of McConnell (1914) and Stevenson (1945).

The Texada Iron deposits (see McConnell, 1914; Sangster, 1969; Sutherland Brown and Merrett,

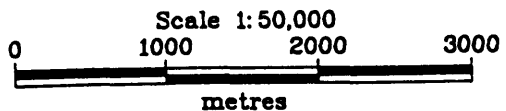


MINES

- 1 Marble Bay Au,Cu,Ag
- 2 Little Billie Au,Cu,Ag
- 3 Copper Queen Au,Cu,Ag
- 4 Cornell Au,Cu,Ag
- 5 Prescott Fe,Cu,Au,Ag
- 6 Yellow Kid Fe,Cu,Au,Ag
- 7 Paxton Fe,Cu,Au,Ag
- 8 Lake Fe,Cu,Au,Ag
- 9 Lake Cu,Au,Ag

SHOWINGS

- 10 Sentinel Pb,Zn,Ag,Au
- 11 Commodore Cu,Pb,Ag,Au
- 12 Ideal Pit Zn,Au,Ag
- 13 Florence Fe,Cu,Au
- 14 Security Fe,Cu,Au
- 15 Priest Lake Au,pyr.
- 16 Holly Au
- 17 Marjorie Au



VANANDA GOLD LTD.		
TEXADA ISLAND PROPERTY NANAIMO, B.C.		
LOCATION OF MINES AND MINERAL OCCURANCES		
DATE: NOV. '86	N.T.S.: 92F/10E, 15E	FIGURE: 4
MINEQUEST EXPLORATION ASSOCIATES LTD.		

1964; Meinert, 1984) are normal magnetite-chalcopyrite skarns developed near the contacts of limestone, volcanics and quartz diorite intrusions. These in general have very low copper contents, as disseminated chalcopyrite, but there are a few related lenses of high-grade copper mineralization, almost exclusively chalcopyrite.

Also present on the island, although not presently known on the Vananda Gold property, are numerous showings of gold-silver mineralization in quartz or quartz-carbonate veins and shear-zones in volcanic rocks, especially on the western side of the limestone belt. Some of these contain locally spectacular gold mineralization. Another occurrence of some considerable academic interest is the recent Northair Mines Ltd. discovery near Priest Lake, immediately west of the Vananda Gold Ltd. property. F.G. Hewett (personal communication, June 1986) reports that a flat-lying limey horizon, less than 50cm thick and contained within the western volcanic package, contains abundant pyrite, traces of chalcopyrite, and locally substantial gold values. Unfortunately, the tonnage potential appears to be limited, and Northair have relinquished their option on the property.

HOLLY
An

Numerous other mineral showings of various types, mostly copper-gold-silver and zinc or lead, are found in shears, veins and "replacements" on and adjacent to the Vananda Gold property. One of considerable interest consists of an apparently concordant zone within limestone in the Ideal Cement quarry toward the southern end of the property. Mineralization consists of irregular zones of granular semi-massive pyrite and sphalerite; grab samples taken by D. Constable (Winter, 1984) and by Canamax Resources Inc. assayed as follows:

	<u>Au(g/t)</u>	<u>Ag(g/t)</u>	<u>Zn%</u>	<u>Pb%</u>	<u>Cu%</u>
Constable	5.1	15.1	12.70	0.09	0.09
Canamax	6.1	15.2			

While there is no body of ore of this type exposed in the quarry wall, there is a pronounced IP anomaly some distance downdip from the showing; the presumed source lies at no great depth and could easily be tested by a few short vertical drill holes.

7.0

SIGNIFICANT EXPLORATION RESULTS

The property has a long and complex history, as can be judged by reference to Appendix I and to the reports listed in the Bibliography. In the process of the work, several significant events took place:

- 1) In the 1920's numerous drill holes in the area of the Vananda mines, especially the Cornell, returned good intersections (Lakes, 1930), which have been only partially followed-up. The best reported intersection, near the Cornell, was 7 metres grading 14.7 g/tonne Au and 11% Cu. The precise location of these holes is not known.
- 2) Toward the end of the second phase of mining at the Little Billie, several underground holes tested the downward extension of the ore-bodies, with attractive intersections (McLean, 1956). One intersection, in a possible new zone, was 5 metres (core length) grading 8.5 g/tonne Au and 2.69% Cu.
- 3) In 1979, Shima Resources drilled several holes in a gravity anomaly southeast of the Little Billie, with some interesting results (Winter, 1985). The best intersection was 2 metres grading 3.5 g/tonne Au and 1.68% Cu, as part of a total intersection of 16 metres grading 1.4 g/tonne Au and 1.31% Cu.
- 4) In 1984, Cartier Resources drilled several holes near the Cornell, with discouraging results, and one hole below the lower workings of the Little Billie, which cut 2.65 metres grading 7.9 g/tonne Au, 29.8 g/tonne Ag, and 1.98% Cu.

A summary of various significant diamond drill intersections, where data are available, is presented as Appendix III.

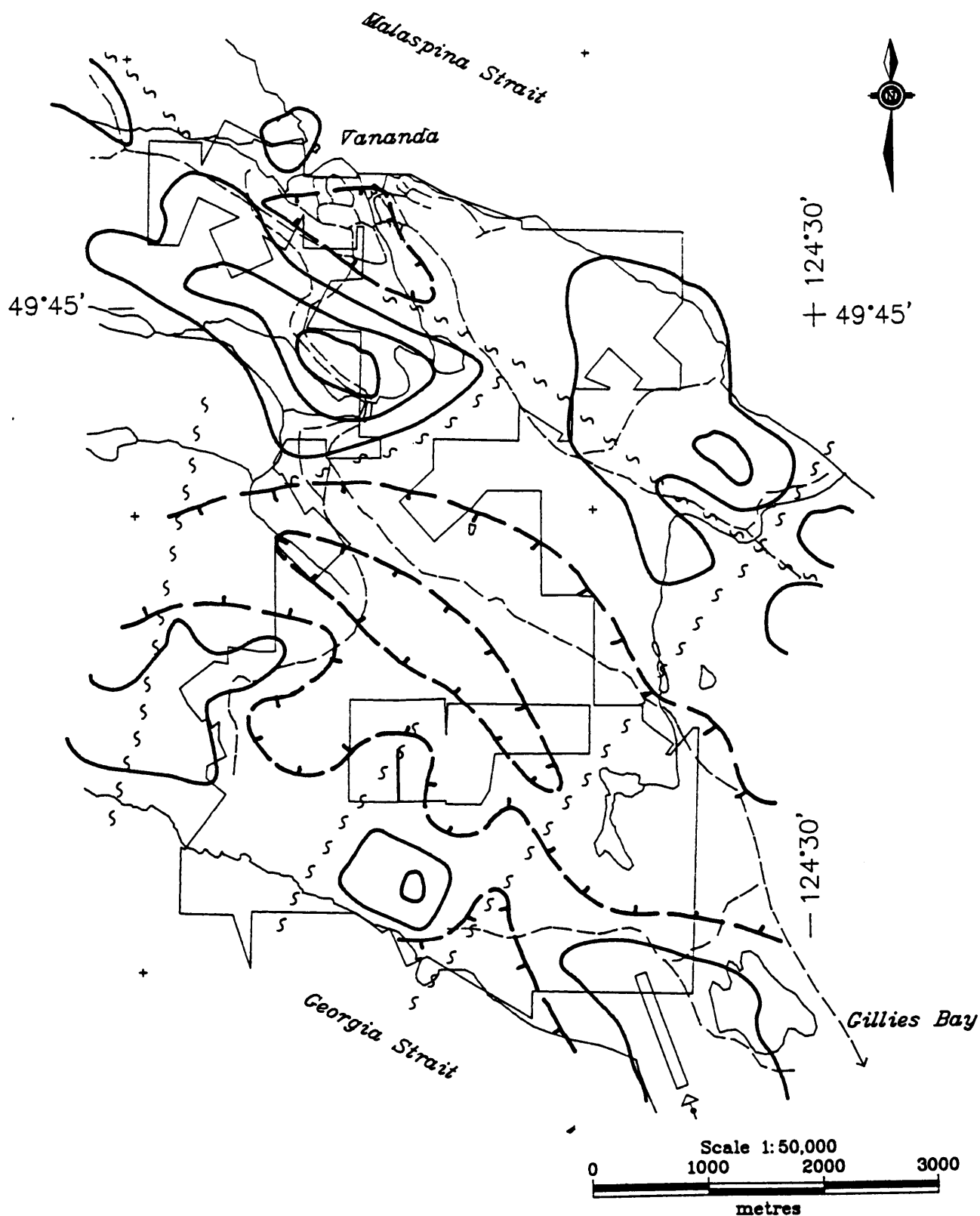
8.0

DISCUSSION




Vananda Gold Ltd. has assembled a very comprehensive and attractive land package covering both the Texada iron mines and all of the significant gold-copper-silver mines (former producers) in the Vananda area. These latter deposits produced significant tonnages of good grade ore from elongate, steeply-plunging shoots of skarn mineralization with restricted cross-sectional area but very considerable (250 metres plus) vertical extent. Such shoots were very difficult to explore for, especially in the early days when most exploration was by sinking and drifting. Notwithstanding considerable diamond drilling in the intervening years, there is still abundant potential for locating more such shoots, both adjacent to old workings and elsewhere. The property can in no way be construed as fully explored.

Exploration targets exist, for example, in surface showings (in trenches) and diamond drill hole intersections from early work in the Florence-Security area northwest of the Cornell mine. These intersections have not been followed up. Aeromagnetic trends and anomalies (see Figure 5) remain to be interpreted and followed up. In the Shima Resources phase of exploration, a reconnaissance gravity survey (see Figure 6) was completed over much of the property, and more intensive geophysical surveys (induced polarization, VLF-EM, gravity and magnetics) were completed on three restricted grids to test previously outlined gravity anomalies. Some targets were diamond drilled, but others remain to be tested.

Similarly, Cartier Resources completed some induced polarization surveys, with mixed results. All these untested target areas should be subjected to a concerted effort consisting of geological mapping and some state-of-the-art geophysical and geochemical techniques. Even after this has been done and targets identified, it will be important to remember the limited cross-sectional area of the high-grade shoots.



LEGEND

-  Aeromagnetic high
-  Aeromagnetic low
-  Interpreted fault

VANANDA GOLD LTD.		
TEXADA ISLAND PROPERTY NANAIMO, B.C.		
AEROMAGNETICS		
DATE: NOV. '86	N.T.S.: 92F/10E, 15E	FIGURE: 5
MINEQUEST EXPLORATION ASSOCIATES LTD.		

Since the old-timers mined to economic cutoffs in direct-shipping ore, there is little information available on the character of possible fringe mineralization. Such information will be difficult to acquire but would be extremely useful for directing drilling programs. In addition, a good understanding of the geometry and controls of individual ore shoots will be very valuable.

In summary, there seems little doubt that additional bodies of gold-copper-silver ore remain to be discovered. Although these will be difficult to explore for, this should not be beyond the capabilities of modern geological, geophysical and geochemical techniques. Such bodies constitute attractive targets.

Other significant exploration targets, such as the gold-silver-zinc mineralization in the so-called "pit zone" are worthy of followup, but should not be allowed to detract from the main thrust of the program.

9.0

CONCLUSIONS

- 1) The Vananda Gold Ltd. property contains several important exploration targets, and is well located with regard to transportation and infrastructure.
- 2) The most important targets for the immediate term are deposits of the Vananda gold-copper-silver skarn type.
- 3) Significant exploration potential exists in the neighbourhood of the old mines, especially below the lower levels of the Little Billie, and elsewhere on the property.
- 4) Individual mines, or clusters of elongate vertical shoots, have the potential (based on historical experience) to produce as much as 200,000 tonnes of good grade gold-copper-silver ore.
- 5) A reasonable target to aim for in any single deposit would be 200,000 tonnes of material grading 5 to 12 g/tonne Au, 20 to 100 g/tonne Ag, and 1.5 to 3.5% Cu. There is geological potential for several such deposits.
- 6) Detailed geological surveys coupled with geophysics and followed by extensive diamond drilling will be necessary to prove such tonnages.
- 7) The skarn gold-copper-silver deposits can be readily subdivided on the basis of metal ratios into gold-dominant (Vananda) and gold-subordinate (Texada) types. More work is necessary to establish whether the geological settings and wall-rock chemistry are recognizably different.

- 8) Significant potential exists for the discovery of good grade gold-copper mineralization within and immediately adjacent to old workings. For example, an estimate by the Little Billie manager at the time of closure was that there was 17,500 tons grading 0.16 oz/ton gold and 1.3% copper remaining above the sixth level (McLean, 1956). Good intersections exist below the sixth level and require follow-up.
- 9) Significant potential exists elsewhere on this extensive property. For example, in the Florence-Security area, northwest of the Cornell Mine, several surface trenches and diamond drill holes completed in the 1920's cut significant intersections which have not to date been followed up (see Appendix III).