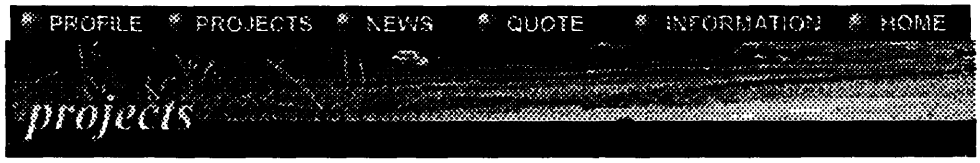


888662

TEXADA ISLAND PROPERTIES

A REPORT ON THE POTENTIAL ECONOMICS OF THE LITTLE BILLY MINE, TOGETHER WITH THE VOLUNTEER, FLORENCE AND SECURITY PROSPECTS.

• POTENTIAL ECONOMICS

The following report sets out, in simple format, the potential profitablity if the proposed expioration activities on the Little Billy, Volunteer, and Florence/Security prospects are successful.

At the present time there is a possible ore reserve indicated by core drilling in the Little Billy of 176,000 tonnes grading 0.22 opt. gold and 1.7% copper. Additionally ore grade material has been encountered in surface prospecting on the Volunteer and Florence/Security prospects.

Thus, given the prospective nature of the project, a number of assumptions had to be made in order to develop a basic econometric model.

• ASSUMPTIONS

1. The ore reserve in the Little Billy of 176,000 tonnes, currently classified as possible, would be upgraded to the category of proven by a drilling program conducted from underground. An additional 176,000 tonnes of probable ore would then be added by further drilling.
2. Similar tonnages would be developed in the Volunteer / Florence / Security prospects by drilling from surface, i.e. 176,000 tonnes proven and 176,000 tonnes probable.
3. Thus the ore reserve to be considered would be 352,000 tonnes proven and 352,000 tonnes probable, grading 0.22 opt. gold and 1.7% copper.
4. The Little Billy would be an underground mine, developed and serviced from a decline access tunnel, established at a 12% gradient.
5. The Volunteer and / or Florence / Security mines would be open pit operations.
6. The Little Billy mine would be developed by a contractor but operated by the owner.
7. The Volunteer and / or Florence / Security mines would be developed and operated by contractor.
8. Crude ore, uncrushed, would be hauled to an appropriately located processing plant, incorporating crushing, grinding and froth flotation. A bulk gold/copper concentrate would be shipped out for further treatment.
9. Tailings disposal would be close to the processing plant. Disposal of tailings would comply fully with environmental regulations, and selection of the disposal site would have direct bearing on the location of the process plant.
10. Power and process water, together with other infrastructure elements, would be

available close by and the costs minimal.

11. The processing plant would operate seven days per week, in order to provide steady operating conditions and a minimum of stop and start-up. The mine would operate five days per week. Both facilities would operate fifty weeks per year, with a two week break for major maintenance at year end.
12. A production rate of 300 tonnes per day is assumed, or 105,000 tonnes per year.
13. It is assumed that a used, suitably sized, process plant would be available and that it could be moved in its entirety to a selected site on Texada Island.
14. Underground mining equipment would also be purchased used.

CAPITAL COST	$'s (Canadian)
Exploration:	
Little Billy shaft rehab. and dewatering.	500,000
Underground maintenance and drilling	500,000
Volunteer exploration and drilling	250,000
Florence/Security exploration and drilling	250,000
	1,500,000
Mine Development:	
Access ramp, at 12% gradient, to a depth of 240 meters, by contract.	
2,000 meters at $2,000 per meter.	4,000,000
Allowance for safety cut~outs, passing bays, sumps, etc.	
100 meters at $1,000 per meter.	100,000
Stope preparation, to provide 50,000 tonnes of mineable ore.	
300 meters at $1,800 per meter.	540,000
	4,640,000
Mine Equipment:	
Site preparation	10,000
Surface buildings	40,000
Office furniture/equipment	6,000
Change room facillities/showers	20,000
Maintenance shop equipment	12,000
Small tools	6,000
Compressor/air lines (used)	60,000
Transformers/electrical distribution	20,000
Pumps/water lines	20,000
Fans/ventilation ducting	20,000
Development jumbo (used)	120,000
Long hole jumbo (used)	80,000

Jackleg drills (4 - used)	10,000
Scooptrams (2 - used)	160,000
Service and personnel vehicles (used)	20,000
	604,000
Process Plant: Purchased used, moved to and erected on Texada Island. 300 tpd. capacity.	3,000,000
Tailings Disposal:	200,000
Process Water:	200,000
Permitting:	200,000
Working Capital (Including Inventory): Allow three months operating cost:	2,700,000
SUB TOTAL	**13,044,000**
Contingency: Allow 15%:	1,956,000
TOTAL CAPITAL	**$15,000,000**

OPERATING COST

Mining:		$(Can)'s. per year
Supervision:	1 Mine Foreman	80,000
Development:	1 crew, 3 men	180,000
Production drilling/blasting:	1 crew, 2 men	120,000
Production ore haulage:	1 crew, 2 men	100,000
Support services:	2 crews, 4 men	160,000
Processing:		
Supervision:	1 Plant Foreman	60,000
Crushing section/4 shifts:	4 men	160,000
Grinding section/4 shifts:	4 men	160,000
Flotation section/4 shifts:	4 men	160,000
Support services/1 shift:	2 men	60,000
Maintenance/Electrical:		
Supervision:	1 General Foreman	60,000
Mechanical: 2 surface/l u/g	3 men	150,000
Electrical: 1 surface/l u/g	2 men	100,000
Helpers/trainees:	2 men	60,000
Management/Administration:		
General Manager:	1	120,000
Secretary:	1	30,000
Chief Engineer:	1	80,000

Geologist:	1	60,000
Surveyor:	1	40,000
Assayer:	1	40,000
Helpers/trainees:	2	60,000
Chief Accountant:	1	60,000
Clerks/bookkeepers:	2	60,000
Warehouse/supplies:	2	60,000
Total Personnel:	48	
Direct labour cost:		**$2,220,000**
Indirect labour cost, at 30% of direct:		666,000
Total Labour Cost:		**$2,886,000**
Supplies/Utilities cost, at 60:40 labour:supplies ratio		$1,924,000
Operating Cost per Year, in $'s (Canadian)		**$4,810,000**
Operating Cost per Tonne, in $'s (Canadian)		**$45.80**

Operating Cost by Activity:

With supplies/utilities distributed between mining / processing / maintenance / management in the ratios 40/40/10/10:

	$'s (Can.) per tonne
Mining	$15.25
Processing	14.75
Maint./Elect.	6.40
Manag./Admin.	9.40
Total	**$45.80**

REVENUE

Annual ore tonnage:	105,000
Ore reserve grade:	0.22 opt. gold 1.70% copper
Gross ore value per tonne, with gold at $385 U.S./oz.and $1.00 U.S. = $1.37 Can.	$116 Can. for gold
and with copper at $1.00 U.S./lb. and $1.00 U.S. = $1.37 Can.	$51 Can. for copper
Gross ore value per tonne:	$167 Can.
Process recovery:	90%
Net of process value:	$150 Can.
Concentrate copper grade:	30%
Concentrate gold grade:	4.0 opt.

Concentration Ratio:	20:1
Concentrate smelter charges:	$200 Can. / tonne of conc. $10 Can. / tonne of ore.
Concentrate freight charges:	$60 Can. / tonne of conc. $3 Can. / tonne of ore.
Net value per tonne of ore:	$137 Can.
Revenue per Year	**$14,400,000 Can.**

SUMMARY - PROJECT ECONOMICS

	$'s (Can).
Capital Cost	$15,000,000
Annual Revenue	$14,400,000
Annual Operating Cost	$4,810,000
Annual Operating Profit (before taxes and head office costs)	**$9,590,000**

Notes:

1. - To this point only the Little Billy has been considered.

2. - If after three years no more ore had been found in the Little Billy, mining operations would shift to the Volunteer and the Florence/Security, contingent on exploration having been successful in these areas. It is visualised at this point that these would be open pit operations, with the stripping, ore mining and ore haulage handled by contractor. Additional expenditure would be required, for site preparation and pre-stripping.

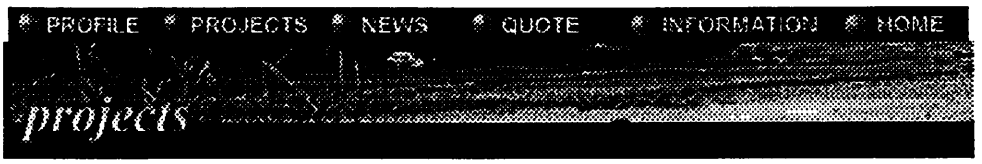
Assuming a 4 to 1 waste to ore stripping ratio, and a $3.00 per tonne contractor's cost, the cost for delivering a tonne of ore to the mill would be about $15.00 (Can.), i.e. very close to the Little Billy underground cost. Thus, if the ore reserve grades remained the same and mining/processing rates were maintained at 300 tonnes per day, the project economics would also remain unchanged.

• CONCLUSIONS

1. - **The exploration objective**, of finding in the Little Billy / Volunteer / Florence / Security areas, a proven / probable reserve of 704,000 tonnes grading 0.22 opt. gold and 1.70% copper would, if successful, generate a solidly profitable venture over a period of six to seven years.

2. - Upside potential is repesented by the possibility of finding more ore of higher grade. Ore tenors in the Van Anda mines have, in the past, generally been in the order of 0.3 Opt. gold and 3% copper.

BY: J.PETER DAVIES
MINERALS CONSULTANT
JULY 1996



PROPERTY HISTORY

The Texada Island mining camp has produced mineral wealth since the 1880's. A partial chronology (Giles Peatfield, 1986) indicates the significant events that have shaped the history of this property. The property includes:

1. Four past-producing gold-copper skarn deposits of the Vananda Camp, which includes the Marble Bay Mine, the Little Billy Mine, the Copper Queen Mine and the Cornell Mine.

2. Four open pit iron-copper skarn deposits referred to collectively as Texada Iron Mines. These include the Prescott, Yellow Kid, Paxton and Lake deposits. In addition, there were at least four horizontal underground deposits mined beneath, and peripheral to the open pits.

3. Four limestone quarries, one of which has been shut down.

Gold production totalled 85,500 ounces from the four gold mines and 31,300 ounces from the iron deposits. Copper production from Texada Iron Mines was 59 million pounds and 23 million pounds from the Vananda deposits. Texada Iron Mines also produced 10,000,000 long tons of iron concentrate from 20,000,0000 long tons of ore. The limestone quarries have produced approximately 50 million tons with Holnam Industries continuing to produce 4 million tons per annum.

TABLE 1: PRODUCTION HISTORY OF TEXADA ISLAND MINES

Table 1, from Peatfield (1986), summarizes production history of the individual deposits:

MINE	PERIOD	PRODUCTION (Tons)	AU (M Oz.)	AG (M Oz.)	CU (M Lbs.)	FE. CONC (Tons)
Copper Queen	1903-1917	4,500	1,660	12,500	398,000	
Cornell	1897-1917	44,750	16,600	77,400	3,016,000	
Little Billy	1896-1952	70,000	12,800	42,260	4,446,350	
Marble Bay	1899-1929	220,000	54,460	445,000	15,000,000	
Total Vananda		**339,350**	**85,520**	**577,160**	**22,860,350**	
Texada Iron Mines	**1952-1976**	**23,000,000**	**31,300**	**833,900**	**58,900,000**	**11,400,000**

HISTORY: CHRONOLOGY OF TEXADA ISLAND MINES:

(Peatfield, 1986)

- **1873** James Richardson of the Geological Survey of Canada examines the iron ranges on the west coast of the Island.
- **1875** The iron deposits are acquired by the Puget Sound Iron Company.
- **1880** The Little Billy is located.
- **1885** G.M. Dawson (GSC) examines the shoreline of Texada Island, searching for Cretaceous coal measures, and revisiting the west coast magnetite deposits.
- **1885-1890** The Prescott produces some iron ore, and some high-grade copper/gold/silver ore in 1885.
- **1895** The Copper Queen is located.
- **1896** The Little Billy commences production.
- **1897** The Cornell is located and commences production.
- **1898** The Marble Bay is located.
- **1899** The Marble Bay commences production.
- **1901-1904** Pacific Steel Company leases the Prescott and ships iron ore to Irondale, Washington, U.S.A.
- **1903** The Copper Queen commences production.
- **1907** The Lake Mine ships 1,000 tons of copper ore.
- **1908-1909** R.G. McConnell (GSC) examines Texada, preparing (GSC Memoir 58-1914) the only complete report ever to be published on the geology of the Island.
- **1916** The Little Billy closes.
- **1917** The Copper Queen closes.
- **1919** The Cornell & Marble Bay close.
- **1922** All the buildings on the iron mines are destroyed by fire.
- **1927-1928** Some geophysics and diamond drilling are undertaken in the Little Billy, Copper Queen and Cornell camps.
- **1929** The Marble Bay ships a small amount of ore.
- **1930** Central Copper and Gold Co. Ltd. assembles the Little Billy, Copper Queen and Cornell properties and surrounding ground, and a comprehensive report is written by Arthur Lakes. A total of 25 diamond drill holes are completed, with some encouraging results.
- **1942-1945** Industrial Metals Mining Co. Ltd. assembles the Little Billy, Copper Queen, Cornell and Marble Bay mines, de-waters, and cleans up the Little Billy, does considerable diamond drilling, and installs machinery. Surface geology is mapped by C.S. Ney in 1942/43 (Ney, 1943). V. Dolmage (1944) reports briefly on the mines in 1944. In late 1944, Pioneer Gold Mines options the property and takes over management (Cox, 1944).
- **1944** J.S. Stevenson of the B.C. Department of Mines, studies the Little Billy mine (Stevenson, 1945).

- **1945** The Little Billy, Copper Queen and Cornell mines are sold to Vananda Mining Company, who commence deepening the Little Billy shaft from 400 feet to 600 feet.

- **1948** Vananda Mines (1948) Ltd. is formed to take over the property of Vananda Mines Ltd., although management is held by Sheep Creek Gold Mines Ltd. A 150 tpd mill is installed at the Little Billy and begins production in November 1948 (Hamilton, 1948).

- **1948-1951** Milling at the Little Billy continues on an intermittent basis. Late in 1951 the Little Billy and Copper Queen mines are connected with a drift on the sixth level. The area below the Copper Queen is diamond drilled with discouraging results, and that below the Little Billy with several very good intersections (McLean, 1956).

- **1951** Texada Mines Ltd. purchases the holdings of the Puget Sound Iron Company.

- **1952** Production of iron concentrates begins at Texada Iron Mines.

- **1956** The mill circuits at Texada Iron Mines are changed to recover by-product "chalcopyrite". Production of iron and copper concentrates continues to 1976.

- **1965** Bethex Explorations Ltd. options the Little Billy from Ideal Cement Company, who are in the process of assembling property on Texada Island. Bethex is interested in the molybdenum possibilities, and clean out and sample on the 80 level. They also drill four diamond drill holes totalling 988 feet. (Coveney, 1966). Bethex program coincided with Bethlehem Copper go-ahead and most field programs were dropped.

- **1969** Sangster (1969) publishes the results of his studies of the iron-copper skarn deposits of Vancouver and Texada Islands.

- **1970** By this time, Ideal Cement Company has acquired most of the mineral claims in the Vananda area. John Lamb writes a short report outlining a proposal for a comprehensive exploration program designed to search for more copper/gold/silver deposits, (Lamb, 1970).

- **1975** Ideal Cement completes an aeromagnetic survey and compilation of the technical data on the project (Anderson, 1976).

- **1976** Ideal Cement completes a limited amount of ground magnetics on the ground immediately north-east of Priest Lake, on ground which is not presently part of the Vananda Gold property. Results are inconclusive (Mullen, 1977). This year also marks the last production from the Texada Iron Mines.

- **1977** Shima Resources, a public company, is formed and acquires the Ideal Cement Co. mineral rights under a lease arrangement.

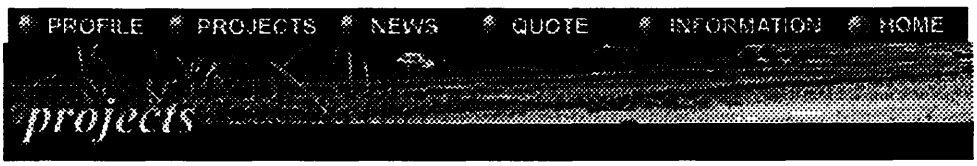
- **1977-1980** Shima does considerable geophysics including gravity, magnetics and IP (Ager, 1978 & Ager and Berreta, 1979), along with a geological synthesis and diamond drilling (Fahmi, 1978, 1980 a&b 1981). This aggregates 16 holes, of which 11 test a gravity anomaly south-east of the Little Billy workings, with generally discouraging results. One hole cuts 16 metres of 1.3% Cu; the gold values are 1.41 g/tonne.

- **1981** The property is consolidated by a private company, Marble Bay Holdings Ltd., which acquires an option on the property from Ideal Basic Industries and Ideal Cement.

- **1984** Cartier Resources Inc. acquires the property by purchasing the shares of Marble Bay Holdings to acquire the option, and in 1984 drills 1,338 metres in 10 diamond drill holes (Winter, 1984/1985). Nine of these are designed to test reported (Lakes, 1930) high-grade intersections north-west of the Cornell but are not successful. The tenth hole cuts mineralization below the sixth level of the Little Billy, grading 1.98% Cu, 7.89 g/tonne Au, and 29.8 g/tonne Ag over 2.65 metres. Geophysical surveys are carried out (Candy & White, 1985).

- **1986** Vananda Gold Ltd. is formed, and negotiates an Option Agreement with Cartier to explore the property. Some field work is undertaken by Vananda Gold, and a detailed compilation of the old data began under the supervision of MineQuest Exploration Associates Ltd.

- **1987** Vananda Gold begins extensive soil geochem survey undertaken in Vananda camp; earns 100% interest in property.
- **1988-1990** Joint Venture with Freeport McMoRan Gold.
- **1988-1990** Majority of property surveyed by magnetics, induced polarization, geochemical, and geological mapping. A total of 29 diamond drill holes were completed. Significant results were obtained around the Little Billy mine. Freeport McMoRan abandoned the Joint Venture following sale of parent company.
- **1991-1993** Vananda Gold Ltd. conducts further IP surveys and completes 36 diamond drill holes.
  - Tonnage at Little Billy = 200,000 (.3 opt Au/2% Cu/1 opt Ag)
  - Tonnage at Texada Iron Mines = 3 Million Tonnes (50% Mag./1.5% Cu)
- **1991-1993** Engineering studies underway for production of copper, gold, silver, magnetite, and wollastonite. Plans drawn up for building mill at Texada Iron Mines site.
- **1994 - 1996** Company consolidates (5 old for 1 new), becoming Consolidated Van Anda Gold Ltd.
  - All Texada Island claim holdings pre-paid to the year 2002.
  - Engineering studies on magnetite production completed and processing mill being constructed to meet 1997 demand requirements.
  - Engineering studies completed on the reserve potential of the Little Billy Mine/Vananda Gold Camp which indicates excellent potential based on further exploration.



TEXADA ISLAND PROPERTIES

Following is a brief report prepared by
J. Peter Davies, Minerals Consultant on:

1. - The reserve position at the Little Billy Mine, with recommendations for further work.

2. - Other exploration possibilities on the Texada Island holdings of Van Anda Gold, including the Volunteer, and the Florence and Security prospects.

Introduction

Texada Island is located about seventy miles northwest of Vancouver, British Columbia, between Vancouver Island and the mainland. Access is easy. The climate is temperate.

The Van Anda Gold property holdings on Texada Island total approximately 7,000 acres. Additions are currently in progress.

The northern part of Texada, underlying Van Anda Gold's holdings, has been the focus of intermittent minerals activity since before the turn of the century. The principal producers have been as follows:

Mine	Period	Production Tons	Gold opt.	Silver opt.	Copper % Cu
Little Billy	1896-1952	70,000	.18	0.60	1.3
Cornell	1897-1917	44,750	.37	1.73	3.4
Marble Bay	1899-1919	220,000	.25	2.02	3.4
Copper Queen	1903-1917	4,500	.37	2.78	4.4
Texada Iron Mines (Iron Ore)	1952-1976	23,000,000	.001	.036	0.14

It is important to note that the Texada Mines' primary product was iron ore. Copper was minor in content but constituted a significant by-product. Gold and silver were very minor. The operation would not be competitive today with open pit iron mines in Australia and Brazil.

The other four producers mined high grade gold/silver ores, and though small

would be economically viable today if enough of a reserve could be developed to justify the capital investment.

General Geology

The basal underlying geologic formation on Texada is the Karmutsen, of Upper Triassic age. It is comprised principally of basalts, pillow lavas, tuffs and submarine flows.

It is overlain conformably by the Quatsino Limestone formation, also of Upper Triassic age. It outcrops extensively over the northern half of Texada and covers most of the ground controlled by Van Anda Gold Limited.

Three major northwest-trending faults traverse the Karmutsen / Quatsino sequence, namely the Holly, Marble Bay and Little Billy.

Additionally the sequence has been cut by numerous stocks and dykes. The largest of these is a quartz monzonite intrusive, on the southwest side of the Island, and it is along its contact with the Quatsino limestone that the Texada Mines iron ore bodies occur. They are contained in epidote / garnet skarn zones, where the diorite overhangs the limestone thus forming a structural trap, close to the limestone / volcanics contact.

Intrusives also occur on the northeast side of the Island, associated with the gold / copper occurrences. The Little Billy stock is a quartz diorite, similar in composition to the Texada Mines monzonite intrusive. The other intrusives are of hornblende diorite or hornblende quartz diorite, and are probably related to the larger monzonite / diorite intrusives.

The relationship of the gold / copper deposits to their diorite / limestone contact is not as clear-cut as is that of the iron ore bodies to their monzonite / limestone contact, though they also are associated with skarns (principally wollastonite and garnet). Also exploration of the gold / copper deposits on the northeast side of the Island has not yet penetrated to depth, to the level of the limestone/volcanics contact. Neither has there been a search specifically for embayments in the limestone / diorite contact where the diorite overhangs and beneath which ore might lie. Finally the fault structures on the northeast side of Texada Island, i.e. those of the Little Billy and the Marble Bay, may have had an influence which is not yet fully understood on the formation of the gold / copper deposits.

It is in the context of the above observations that the following report, with its conclusions and recommendations, is cast.

The Little Billy Mine

The ore bodies mined in the Little Billy have been small, of less than 50,000 tons, associated with wollastonite skarn, distributed along the contact of the Little Billy stock with the Quatsino limestone. The total shipped is reported as having been 70,000 tons, grading 0.18 opt. gold, 0.60 opt. silver, and 1.3% copper.

Results From Core Drilling

Limited core drilling was carried out in the Little Billy before the last closure in 1952. It was done from the bottom level, i.e. the #600, at 142 meters below datum. Results were reviewed in a brief report by D. MeLean, dated March 10, 1956.

Additional drilling was carried out from surface, to below the 600 level, by the Freeport-McMoran Gold Company in 1988/1989, and the results summarized by C.N.Forster in a report dated October 1989. His figures show an "indicated and potential reserve" of 205,000 tons, grading 0.279 opt. gold and 2.37% copper.

Further drilling from surface, by Van Anda Gold in 1991, showed that the mineralized zone previously drill-indicated below the 600 level extends in a northerly direction at least as far as section 997ON. This confirmed the findings of McClean, in 1956, and gave substance to the calculations of Forster, in 1989.

The results from these three phases of core drilling have been plotted on five vertical sections, namely 9824N, 9887N, 9918N, 9950N and 9970N. These are attached as Figures 2 though 6.

The sections suggest the development of an embayment in the diorite and the emplacement of the mineralization, in skarn, below the diorite "overhang". The embayment is still present in the southern most section, 9824N, where it appears that the zone is plunging in a southerly direction.

A drill indicated reserve has been calculated, using the simplified ore outlines shown on the geologic sections. The shapes are obviously idealized, and must be more accurately defined by close spaced core drilling before they can be raised to the category of "proven and probable". The results are summarized as follows:

Tonnage and grade for the four sections 9887N through 9970N are lower than those calculated by Forster. However, they include a considerable quantity of barren skarn, and they do not include two small, potential ore, outliers on 9887N and 9950N.

Section	Tonnes	Gold opt.	Copper % Cu
9887N	65,000	.243	1.29
9918N	57,000	.144	1.52
9950N	41,000	.274	2.26
9970N	13,000	.314	2.92
TOTALS	**176,000**	**.223**	**1.71**
Also: 9824N	57,000	.075	0.82

The low grade intercept in hole T89-9, on section 9824N, lies 50 meters deeper than the ore in the other sections. Also it lies within a diorite embayment. It could be the beginning of a new, and deeper ore shoot and warrants further exploration.

Proposed Exploration Program

Consideration was given at first to core drilling the area of interest, which lies below the 600 level, from surface. However it quickly became apparent that the Little Billy ore bodies, small and irregular and located more than 200 meters below ground level, could not be effectively delineated by such a program. Quite apart from the expense of drilling the necessary number of close-spaced holes, there would be concerns involving the direction and the dip of the holes at that depth.

It was concluded that the most effective way of confirming and delineating the mineralized areas would be by detailed mapping of the old workings and short core holes drilled from underground drill stations. The 600 level is the obvious location.

With this in mind it will be necessary to dewater the mine, and to rehabilitate the shaft at least to the point that it can provide access and supplies to an underground drilling program with assurance and safety.

Cost Estimate

A rough estimate of the cost of dewatering and rehabilitating the shaft tendered informally by the Tonto Construction Company of Toronto, was $500,000 (Can). This appears reasonable, and could involve 30 man-months at $10,000 per man-month, plus an allowance of $200,000 for equipment rental, utilities and supplies. It could be expected that approximately six months would be required to complete the work.

The cost of underground mapping and drilling could amount to an additional $500,000 (Can). This would include provision for 5,000 meters of NQ core drilling at $60.00 (Can) per meter, geological supervision, operation and maintenance of the shaft and the hoisting facilities, and dewatering. It would also include provision for minor slashing of the drift on the 600 level, in order to establish small drill stations. Broken rock would be stowed rather than hoisted. This portion of the program would extend over an additional six months.

Other Exploration Possibilities

Discussion

Viewed simplistically, known mineral deposits on the northern half of Texada Island may be classified into four categories:

1. - Iron ores, exemplified by the Texada Mines magnetite / skarn deposits, located near the southwest coast. As noted elsewhere in this report these could not be profitably exploited in today's competitive markets, given the availability of low cost iron ores from Australia and Brazil.

2. - Magnetite / chalcopyrite ores, commonly found on the periphery of the Texada Mines magnetite / skarn deposits, near the limestone contact. On occasion the copper content alone could make their exploitation profitable.

3. - Gold / Copper ores, as exemplified by the gold / copper / skarn deposits of the Little Billy mine, located close to Vananda on the northeast coast. Given sufficient tonnage, these could be profitably mined.

4. - Small, high grade, erratic gold showings, scattered broadly over the northern half of the Island. Although these have offered encouragement in the past, they have never been developed to anything approaching consistent profitability.

Of these four categories, 2. and 3. offer promise, and under category 3 the Little Billy has already been addressed.

Under category 2, magnetite / chalcopyrite ores, the zone encountered in deep drilling to the north of the Texada Mine, representing the northerly extension of the 18-106 deposit as it trends towards and around the Northwest Diorite area, appears to be too low in copper content to support underground mine development.

The Volunteer Prospect

However magnetite / chalcopyrite has been reported on the Volunteer Claim, by McConnell in 1914, and Forster makes favorable mention of it in his report of October 1989. He notes that the Volunteer intrusive constitutes "an excellent igneous trap". He also notes the "strong magnetics" and the "elevated gold geo-chemistry in the soils".

This prospect is located about half a mile west of the Marble Bay mine, near Vananda, on the northeast coast of the Island.

The surface showings are reported as magnetite skarn, outcropping along the contact between a diorite intrusive and Quatsino Limestone. McConnell notes three magnetite lenses, from 30 to 50 feet in length and 10 to 15 feet in width, which have formed along the contact of the intrusive with limestone, with the central lens resting on limestone below. Thus there appears to be a diorite "overhang", and as Forster notes, an igneous trap.

The Volunteer intrusive is the second largest in the northern portion of the Island, second only in extent to the Texada Mines monzonite intrusive, four miles to the south. Its surface covers an area of approximately one half mile by one quarter, with the long axis oriented in a northwestery direction. Thus it parallels the Marble Bay Fault and lies about one quarter of a mile to the southwest of it.

Proposed Exploration Program

The obvious exploration target would be the contact of the intrusive with the limestone, close to the basal volcanics. Based on the limited geologic structural data available, this could be at a depth, very approximately, of about 700 feet.

Any core drilling program should be preceded by detailed geologic mapping of the surface, geochemical sampling, and ground-based magnetometric surveying.

Cost Estimate

The cost of a 10 hole, 2000 meter core drilling program, using NQ wire-line, would be about $200,000 (Can). Cost of the precursor geologic, geochemical and geophysical programs should be less than $50,000. The program should be comfortably completed in less than six months, and it could, and should, accompany the Little Billy program in order to reduce management and overhead costs.

The Florence and Security Prospects

The Florence and Security prospects, which would fall under category 3. above, are located adjacent to the Marble Bay Fault, about one mile southeast of the Volunteer prospect and the Marble Bay mine. See Figure 1. They are both noted in McConnell's report, but little work had been done on them at that time, and very little appears to have been done since.

Although the showings are small, they are associated with diorite intrusives as well as the Marble Bay Fault, and their geologic setting is similar to that of the Cornell Mine, which was a significant producer. Both the diorite and the Marble Bay fault could have formed structural traps, and exploration efforts on these prospects should be carried out with this in mind.

Exploration Program / Cost Estimate

The exploration methodology and level of effort on Florence / Security should be about the same as that on the Volunteer, i.e. they should include additional geologic mapping, geochemical and geophysical surveying, and core drilling. A total of about $250,000 should be budgeted, over a period of about six months. Thus it also could run concurrently with the Little Billy program, following work on the Volunteer.

Conclusions and Recommendations

1. - Previous operations at the Little Billy Mine yielded ore grading about 0.20 opt. gold and 1.5% copper.

2. - Core drilling below the bottom level, i.e. the 600, has indicated extensions of the ore-bearing structures to depth, with an indicated resource tonnage approaching 200,000 tonnes, at a grade of 0.23 opt. gold / 1.8% copper.

3. - Further core drilling is warranted, in order to add to this tonnage and to demonstrate an economically mineable reserve.

4. - Dewatering and rehabilitation of the Little Billy shaft and hoisting facilities will be necessary, so that the necessary core drilling may be carried out from the 600 level.

5. - Further exploration is warranted at the Volunteer, and at the Florence and Security. This should take the form of surface geological mapping, geochemical and geophysical work, and core drilling.

6. - Total cost of the Little Billy, Volunteer, Florence and Security programs would

be about $1.5 million (Can).

7. - The programs would run concurrently, and would extend over a period of one year.

8. - Conditions on the northern part of Texada Island are conducive to the development of additional production operations. Most importantly the grade of the ore is high. Additionally, largescale limestone mining is already a major activity on the Island, the prospective areas are readily accessible, the climate is temperate, the population is mining-experience, ground is sound, and water inflow is minimal. Finally, the availability today of highly mobile, underground rubber-tired mining equipment will make for flexible, low cost, selective mining operations, given the good ground conditions and the absence of heavy water flows.

BY: J.PETER DAVIES
MINERALS CONSULTANT
JULY 1996