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This report was prepared by T.M. (Tom) Waterland in 1975 prior to his venture into Provincial politics. When he became a member of Bill Bennet's cabinet as Minister of Mines & Forests - he disassociated him self from the Company.

A great deal of new information has been obtained re the property since he made his report through diamond drilling, engineering and geological work.

PORCHER ISLAND GOLD MINES LTD.

PROPERTY FILE

1035617-07
M.F. 103

A PROPOSAL

- f o r -

PARTICIPATION

PREPARED BY:

T.M. WATERLAND, P. ENG.
MINING ENGINEER

S U M M A R Y

Porcher Island Gold Mines Ltd. is a private company incorporated in the Province of British Columbia, Canada. The company has an authorized capital of 3,000,000 shares of which 791,000 shares have been issued.

This company owns six Crown-granted and ⁸four located mineral claims on the northern tip of Porcher Island, some 25 miles from the port of Prince Rupert.

The gold veins on these claims were previously mined by the Noah Timmins Mining Corporation of Montreal, and the Reward Mining Company of Vancouver.

In the 1930's, the Timmins Mining Corporation mined the Surf Point veins from the "100" level through to surface, a vertical distance of about 100 feet. (See ~~Dwgs. Nos. 1 & 2.~~)

During this time the Reward Mining Company mined several veins from the 400 foot level through to surface -- a distance varying up to 300 feet.

These two companies combined their claims and attempted, in the late 1930's, to extend the lower "400" level under the Surf Point veins for the purpose of mining these veins. Financial difficulties and disagreement amongst minority shareholders forced the suspension of the operation in 1939.

Porcher Island Gold Mines Ltd. have acquired 100 percent title to the six Crown-granted mineral claims which were formerly mined

by the above two companies.

It has been demonstrated that the gold veins have a much greater vertical extent than originally thought. A very limited diamond drilling programme can place several hundred thousand tons of good grade gold ore in a "proven" category.

The tidewater location of the mine, the competent rock conditions and the present state of development of the mine all lend to the possibility of placing the mine into production and operating it at a minimal cost.

It is proposed to place the mine into production at a rate of 150 tons per day. At this rate, sufficient ore reserves can be proven to sustain the operation for many years.

The present value of the net profits of this operation for the first six years, after deduction of required capital outlay has been conservatively estimated at \$2,795,000.

Proposals for participation in this mining venture are given in Proposal for Participation, page 9 of this report.

The writer (Thomas M. Waterland) and the president of Porcher Island Gold Mines Ltd., Mr. T.M. Waterland Sr., are both Professional Mining Engineers with many years of underground mining experience throughout Canada. If a prospective participant in this venture should exercise option "a", then the mining operation will be directed and managed by Messrs. Waterland. If a prospective participant should exercise option "b", then Messrs. Waterland would make their mining and engineering expertise available to the participant if it is desired.

PORCHER ISLAND GOLD MINES LTD.

LOCATION:

The Porcher Island Gold Mines Ltd. mining property is located on the northern tip of Porcher Island, about 25 miles from Prince Rupert, British Columbia (see attached map).

The main entrance to the mine is located some 400 feet from tidewater and thus low cost water transportation is available for supplies to the mine and for shipping mine concentrates.

HISTORY:

Quartz pyrite veins containing excellent gold values were discovered on the northern tip of Porcher Island in the early 1920's.

The Timmins Corporation acquired the Surf Point claims and in 1933 placed the Surf Point Mine into production at a mining rate of 35 tons per day (see Dwg. No. 1).

The prevailing geological theories at the time indicated that the veins were of limited vertical extent and thus the Timmins Corporation did little work to prove the vertical extent of the veins.

In 1936, the Reward Mining Company of Vancouver purchased the adjoining mineral claims and immediately began an underground exploration programme.

In 1937, The Reward Mining Company purchased the Surf Point mill and a 75 percent interest in the Surf Point mineral claims.

Mapping by several prominent geologists had indicated that their theory of deposition of the Surf Point veins showed that these veins would have much greater vertical extent than originally anticipated.

The Reward Mining Company were to drive a tunnel under the Surf Point veins and thus prove that these veins did indeed extend to this lower level (see Dwg. No. 1). The cost of driving this tunnel was more than had been anticipated and the company was in financial difficulty by the time the downward extension of the first Surf Point vein ("G" vein) was reached. The minority shareholders (25 percent) of the Surf Point claims forced the company into receivership and operations were suspended.

The Security Commission did allow the mining of a small amount of ore from this "G" vein in order to pay off back wages of the company.

Mr. T.M. Waterland Sr., president of Porcher Island Gold Mines Ltd., managed The Reward Mining Company until several months before its closure in 1938.

Nothing was done on the mining property and ownership of the various claims did not change until 100 percent title to all the mineral claims was obtained by Porcher Island Gold Mines Ltd. in 1973. Acquisition of the property was prompted by the rising price of gold and Mr. Waterland's familiarity with the mining property.

Messrs. T.M. Waterland Sr. and Jr., Mining Engineers, visited the mine property in 1973 and found the underground mine workings to be in excellent condition.

Random samples were taken in the drift at the end of the 400 level tunnel. This drift had been driven a short distance on the first Surf Point vein that had been intersected on the lower level. Assays of the samples taken were:

Gold	1.45 oz/ton	and	1.97 oz/ton
Silver	1.57 oz/ton	and	0.45 oz/ton

It has therefore been demonstrated that at least one of the Surf Point veins extend to the 400 level. There is nothing to indicate that all of the Surf Point veins should not be intersected on the lower level.

A very limited amount of underground development will be required to prepare the veins for mining. The mine is, in fact, developed almost to the point that it is now ready for production.

The tidewater location of the property, the competent rock conditions and present state of development all indicate a relatively low cost and thus very profitable mining operation for Porcher Island Gold Mines Ltd.

GEOLOGY:

Porcher Island lies within the region of the Coast Range Batholith which occupies almost the entire region of the west coast of British Columbia. This great batholith consists mainly of granodiorite and quartz diorite, but contains many inclusions of the older rocks into which the batholith was injected. One of these inclusions occupies an area of which Porcher Island is a part.

Much of Porcher Island is occupied by older intruded rocks, but there are many small and a few large bodies of quartz diorite and in one of these, the veins of the Porcher Island Gold Mines Ltd. deposits are situated. These are a series of auriferous quartz pyrite veins occurring in a N 20° E zone along the axis of an arch of flow layers.

As has been stated, the original theories of the Porcher Island Gold veins thought them to be mineralized surface tension cracks and thus of limited vertical extent. The development work carried out by the Reward Mining Company, however, proved that at least one of these veins extends to the 400 level. There is no reason to believe that all of the veins will not continue downwards for many hundreds of feet.

The following notes and quotations from several prominent British Columbia Mining Geologists support this opinion.

No. 1

N.E. Nelson, Chief Engineer - Granby Consolidated Mining & Smelting Company - made inspections of the property in 1932 and 1935. No underground work had been done here at that time. In his 1935 report he stated that the showings on the Patterson group were better than the surface showings at the Surf Point mine, from which 10,000 tons of 0.7 oz.

gold ore had been milled during the preceding two years. He was quite optimistic in this report. He felt certain that the several veins would extend downward for several hundred feet. He cut 9 samples from Patterson's surface trenches. These averaged 1.8 oz. of gold per ton over an average width of 9 inches.

No. 2

Dr. Victor Dolmage - Prominent Consulting Geologist - Vancouver, B.C., inspected the property in December, 1936. The following is a quote from his report on this visit. "The vertical extent of the individual veins is greater than the length but seems to be not greater than a few hundred feet. The various veins, however, are not in the same horizontal zone but are distributed over a vertical range of many hundred and probably thousands of feet. Several of the veins in the Surf Point mine appear, from diamond drilling, to have been bottomed at shallow depth and because of this it was thought by the operators (Timmins) that all veins would be found to bottom at approximately the same elevation -- thus they abandoned the Edge Pass claims since these lie at elevations lower than the Surf Point veins. However, subsequent work done by the Reward Mining Company has shown that at least 2 of the 5 veins discovered extend below the level of their tunnel which is 400 feet lower than the main working level of the Surf Point mine. It seems probable, from the nature of their occurrences, that veins will be found hundreds and probably thousands of feet below sea level." Unquote.

No. 3

Quote - from Dr. Alexander Smith's paper "Control of ore by primary Igneous Structures - Porcher Island - British Columbia". A bulletin of the Geological Society of America - 1947.

"The veins (Surf Point Mine) were formerly considered to occupy tension cracks of limited vertical range (200 to 300 feet) formed by cooling near the roof of the intrusive. Reconstruction of the form of the intrusive, using the flow structures, platy and linear, and the trend of the schists, indicates that the veins of the Surf Point mine lie about 1,000 feet below the roof of the stock. Hence, a much greater vertical range for ore zones is suggested-- --At depth the deposits should continue to occur along the axis of the arch -- i.e., in a zone striking N-20° E. and dipping 80° S.E." Unquote.

No. 4

A.M. Richmond, Mining Engineer - Vancouver, B.C. Quoting from his report of January 1939

"The inference to be drawn from the geological studies which have been made and from a study of both the Surf Point and Edye Pass underground workings, is that there is every reasonable possibility that the vein fracturing may extend to at least 1,000 feet below the present surface. The vein fractures are well defined both underground and on the surface at the Edye Pass property".

The following are assays on ore intersections from a series of diamond drill holes put in by the Timmins Corp. Most of these are approximately 50' below their main level. The figures show the width in feet and ounces of gold per ton: 23.7' - 0.21 oz., 21.0' - 0.04 oz., 2.0' - 3.10 oz., 5.2' - 0.20 oz., 5.0' - 0.16 oz., 0.7' - 1.04 oz. 6.0' - 0.63 oz., 6.0' - 0.10 oz., 2.0' - 0.66 oz. "The significant thing about these D. Drill results, when studied in conjunction with results underground at the Edye Pass mine, is that it would appear almost certain that the ore fractures at the Surf Point mine should continue to at least the Edye Pass low tunnel and considerably below -- the individual ore shoots within any one fracture may be erratic and probably frequent in occurrence." Unquote.

There is, therefore, sufficient physical evidence and expert opinion available to conclude that the downward extension of the Surf Point veins is almost a certainty.

In order to remove any possible doubt regarding the continuation of these veins before large sums of capital are committed, it is suggested that a limited diamond drilling programme be carried out from the existing 400 level workings.

PROPOSAL FOR PARTICIPATION

IN PORCHER ISLAND GOLD MINES LTD.

There is no reason to believe that the Surf Point veins do not extend to and considerably below the "400" level with the same frequency as they occur on the 300 level. Due to the vagaries inherent to ore deposition, it would be unreasonable to expect commitment of funds for the outright purchase of the property or for financing to production without first further testing the downward extension of the Surf Point veins.

The downward extension of the Surf Point veins to and below the "400" level can be adequately demonstrated with approximately 4,000 feet of diamond drilling and assay of drill cores. Diamond drilling with "A-Q" size wireline diamond drilling can be contracted for a total cost of \$12.50 per foot drilled. The cost of assaying and administration of such a drill programme should not exceed \$10,000.00.

It is therefore proposed that a prospective participant provide \$60,000.00 to carry out such a drill programme.

With affirmative diamond drill results, the prospective participant would then have the option of one of the following:

- (a) Provide the \$774,000.00 required to place the property into production and thereby acquire a 40% participation in the company.

The actual value of 40% of the company's present value is \$1,118,000 and thus a discounted cost of 30% is offered.

- (b) Purchase the entire company for a total price of \$1,957,000. This also represents a 30% discounted price of the actual present value.

If this option is selected, then the cost of the diamond drilling programme will be credited towards purchase.

These discounted prices will allow for equitable returns on invested capital even with downward variations in projected gold prices. Higher gold prices which are as likely as lower gold prices will further enhance the value of the mine.

The mine life can reasonably be expected to be much more than the six years used in the present value calculation although no value has been assigned to this future income.

A P P E N D I X I

P R E S E N T V A L U E

- o f -

P O R C H E R I S L A N D G O L D M I N E P R O F I T S

A P P E N D I X I

PRESENT VALUE OF PORCHER ISLAND GOLD MINE PROFITS:*

The gross profit of the Porcher Island Gold Mines operation will be in the order of:

Year 1	.....	\$1,577,250
Year 2	.....	\$1,978,500
Year 3	.....	\$1,978,500
Year 4	.....	\$1,978,500
Year 5	.....	\$1,978,500
Year 6	.....	\$1,978,500

When Canadian Provincial and Federal taxation policies are finalized and after allowances for ore depletion, exploration and capital cost, write-offs, etc., the mining taxation should not exceed 50% of gross profits.

The net profits of this operation will therefore be in the order of:

Year 1	.....	\$788,625
Year 2	.....	\$989,250
Year 3	.....	\$989,250
Year 4	.....	\$989,250
Year 5	.....	\$989,250
Year 6	.....	\$989,250

* This present value calculation is based on a six year mining life. The actual mine life should be much more than this and thus the anticipated profits will continue on for many more years.

PRESENT VALUE:

The present value of the net income from the mining operation for the first six years at 16% compound interest is as follows:

<u>NET INCOME</u>	<u>DUE IN YEARS</u>	<u>FACTOR</u>	<u>PRESENT VALUE</u>
\$788,625	1	.86957	\$ 685,764
\$989,250	2	.75614	748,011
\$989,250	3	.65752	650,451
\$989,250	4	.57175	565,603
\$989,250	5	.49718	491,835
\$989,250	6	.43233	427,682

TOTAL PRESENT VALUE
OF NET INCOME \$3,569,346

Total capital expenditure required:

Development cost as per Appendix II \$286,093

Capital cost as per Appendix III

Concentrator \$412,500

Dock \$ 25,000

Miscellaneous Costs \$ 50,000

TOTAL CAPITAL COST..... \$773,593

The present value of the mining property is therefore:

Present value of income \$3,569,346

Less capital outlay required
to achieve production \$ 773,593

PRESENT VALUE \$2,795,753

A P P E N D I X I I

C O S T E S T I M A T E F O R P L A C I N G

P O R C H E R I S L A N D G O L D M I N E S L T D .

S U R F P O I N T M I N E I N T O P R O D U C T I O N

A P P E N D I X I I

COST ESTIMATE FOR PLACING PORCHER ISLAND GOLD MINES LTD., SURF
POINT MINE INTO PRODUCTION:

1. Clear portal site, construct ore bin and set up 20-man camp.

 2. Rehabilitate mine, install water system, air compressors,
 air pipe and mine track.

 3. Drive 480' of 6' x 8' cross cut and approximately 600' of
 drift on veins.

 4. Undercut stopes and prepare for production.
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COST SUMMARY:

I.	Assemble mining and camp equipment in Vancouver	\$ 1,250.00
II.	Barge Equipment, Vancouver to Porcher Island	6,900.00
III.	General site preparation on Porcher Island -- including construction of tidewater crib and ore bin. (To be carried out concurrently with equipment assembly and barging.)	14,000.00
IV.	Camp set-up, mine rehabilitation wages	11,473.00
V.	Crew mobilization	1,955.00
VI.	Air service--Prince Rupert - Porcher Island -- for duration of Stage I	3,105.00
VII.	Expeditor wages and vehicle in Prince Rupert for duration of job	1,725.00
VIII.	Mining equipment rentals	32,117.00
IX.	Camp equipment rentals and services	8,000.00
X.	Mining rehab. materials	22,500.00
XI.	Development consumables	9,130.00
XII.	Stope preparation consumables	5,000.00
XIII.	Diesel fuel	10,680.00
XIV.	Camp supplies, food, etc.	10,000.00
XV.	Crew wages (mining phase)	104,300.00
XVI.	Misc. building materials, timber, plywood, nails, steel plate, etc.	<u>6,000.00</u>
	SUB TOTAL	\$ 244,836.00

Technical Supervision
Transportation Administration
@ 5% \$ 12,250.00

SUB TOTAL 257,086.00

Add 10% contingencies 25,708.00

TOTAL \$286,093.00

COST DETAIL

ITEM I: No detail required \$ 1,250.00

ITEM II: No detail required 6,900.00

ITEM III:

D-7 Caterpillar (or equivalent)
7 hours per day @ \$52.00 per hour
Maximum of 20 days required
140 hours @ \$52.00 \$ 7,280.00

Labour --- 2 men work 12 hours
per day (pay for 14) for 20 days
@ \$6.90 per hour
93.00
\$6.90 x-14 x 2 x 20 = 3,864.00

Wage overhead 773.00

Miscellaneous equipment 1,150.00

Room & board allowance
@ \$46.00 per day 920.00
\$ 6,707.00

TOTAL ITEM III: \$13,987.00

ALLOW \$14,000.00

ITEM IV:

Wages for camp set-up and mine
rehabilitation -- ½ total crew
(see item XV) for 11 days
11 days @ \$1,043.00 = \$11,473.00 \$11,473.00

ITEM V:

Crew mobilization
Total 17 men required
Allow \$115.00 per man
for transportation \$ 1,955.00

ITEM VI:

Air service -- allow one Beaver
Aircraft trip every second day
for 3 months @ \$69.00 per trip
45 days @ \$69.00 \$ 3,105.00

ITEM VII:

Expeditor wages and vehicle in
Prince Rupert -- allow \$575.00
per month -- 3 months \$ 1,725.00

ITEM VIII:

<u>ITEM</u>	<u>MONTHLY RENTAL</u>
20-lamp charger & lamps	\$ 115.00
2 gasoline power saws	115.00
1 - 200 amp arc. welder	172.50
1 - oxy-acetylene welding outfit	52.00
2 12-B Eimco mucking machines	920.00
2 - Getman KD 2 ore carriers	2,070.00
2 - 600 C.F.M. compressors	3,680.00
5 - Air leg drills c/w hoses	1,438.00
4 stopers c/w hoses	1,150.00
1 bit grinder	57.50
2 - 18" air fans	172.50
1 - 3" x 2" x 3" duplex pump	69.00
1 air receiver	40.25
1 water pressure tank	40.25
1 gas tester	17.25
1 front-end loader	2,300.00
1 - 10 H.P. slusher & scraper	460.00
Misc. small tools	230.00
Battery locomotive & mine cars	<u>1,500.00</u>
TOTAL MONTHLY RENTALS	\$14,599.00
2.2 months @ \$14,599.00	\$32,117.00

ITEM IX:

Camp Equipment Rentals

<u>ITEM</u>	<u>MONTHLY RENTAL</u>
2 - 10 man bunk trailers	\$ 690.00
1 wash car	520.00
1 kitchen-diner	520.00
1 recreation office	230.00
1 - 10 KW light plant	400.00
Beds, bedding, etc.	437.00
Cooking & eating utensils	207.00
First aid supplies	115.00
Fire protection	60.00
Laundry service	116.00
Oil heater for dry	40.00
Deep freeze	40.00
Wringer Washer	40.00
Radio & television	58.00
Radio-telephone	58.00
Miscellaneous	<u>115.00</u>
TOTAL MONTHLY RENTALS	\$3,645.00
2.2 months @ \$3,645.00	\$ 8,000.00

ITEM X:

Mine Rehabilitation Materials

<u>ITEM</u>	<u>COST</u>
Mine rail -- 2800' @ \$4.00/ft.	\$11,200.00
Ties, spikes	1,400.00
2" light wall water & 3" L.W. Air: 3300' @ \$2.00/ft.	6,600.00
Couplings, valves, etc.	700.00
Track hardware (switches, etc.)	500.00
Ventilation ducting - 20" 2,000' @ \$1.05	<u>2,100.00</u>
TOTAL	\$22,500.00

ITEM XI:

Development Consumables

	<u>\$/Ft. of drift</u>
Drill bits and steel Assume 25 holes per round and \$0.12/ft. drilled	\$2.90/ft.
Rock drill, R & M and lubricants @ \$0.05/ft. drilled	\$1.25/ft.
Explosives:	
Powder	\$3.45/ft.
Caps	\$0.55
Misc.	<u>\$0.10</u>
Total Explosives ...	\$4.15 <u>\$4.15/ft.</u>
TOTAL CONSUMABLES/FT.	\$8.30/ft.
TOTAL FOR 1100' DEVELOPMENT 1100 x 8.30	\$ 9,130.00

ITEM XII:

Stope preparation consumables
Allow, \$ 5,000.00

ITEM XIII:

Diesel fuel for light plant,
compressor, etc.
300 gal/day for 89 days @ \$0.40/gal. \$10,680.00

ITEM XIV:

Camp supplies, food stuffs, etc.
Allow \$9.00 per man day for
66 days - 17 men \$10,000.00

ITEM XV:

Crew Wages
Crew requirements/shift
2 Development Miners \$ 254.00/shift
1 Stope Preparation Miner 127.00/shift

Item XV (con't.)

2 Trammers & Nippers	\$ 172.00/shift	
1 Mechanic	<u>110.00/shift</u>	
TOTAL PER SHIFT	\$ 663.00/shift	
12 men - 2 shifts/day	\$1,326.00/day	
1 superintendent	85.00/day	
1 cook	69.00/day	
1 flunky	60.00/day	
1 First aid man - timekeeper	60.00/day	
1 General surface	<u>69.00/day</u>	
TOTAL DIRECT WAGES PER DAY	\$1,669.00/day	
Wage overhead @ 25%	<u>417.00</u>	
TOTAL WAGE COST PER DAY	\$2,086.00	
50 days @ \$2,086.00		\$104,300.00

ITEM XVI:

Miscellaneous building materials		
No detail required		\$ 6,000.00

A P P E N D I X I I I

C A P I T A L C O S T S

A P P E N D I X I I I

CAPITAL COSTS

FLOTATION CONCENTRATOR CAPITAL COST:

Until detailed mill design work is carried out and a survey of used milling equipment available is made, a detailed estimate of concentrator cost cannot be made.

The current rule-of-thumb for concentrator capital cost is to assume a capital cost of from \$2,000.00 to \$2,500.00 per ton of daily concentrator capacity.

In order to err on the conservative side, a figure of \$2,750.00 per ton of daily capacity will be used.

The concentrator capital cost will, therefore, not exceed:

\$2,750.00 x 150 tons per day
OR \$412,500.00

MINING EQUIPMENT CAPITAL COST:

The mining of the Porcher Island Gold Mines Ltd., gold pyrite veins will be by means of a simple open stoping mining method.

All of the mining equipment required can be obtained on rental-purchase agreements based on 10% of capital cost per month. The equipment will thus be paid for within one year of acquisition.

The monthly cost will be of about the same magnitude as the development equipment cost. In order to be conservative, however, the monthly cost will be increased by 10%.

The monthly equipment rental cost will be reduced to nil at the end of year one of operation as equipment will be owned by that time.

The first year mining cost has thus been increased by the monthly rental cost of \$35,328.00 divided by the monthly tonnage of 3,300 tons, or by \$10.70/t

No mining equipment capital outlay will therefore be required.

DOCK CAPITAL COST:

A dock can be constructed on tidewater for an estimated cost of \$50,000.00, of which the Provincial Government has indicated they will pay 50% or \$25,000.00.

The cost of the dock will therefore be \$25,000.00

Miscellaneous Capital Cost

Allow \$50,000.00

\$10.70/t

A P P E N D I X I V

P R E L I M I N A R Y M I N I N G

- a n d -

O P E R A T I N G C O S T E S T I M A T E

A P P E N D I X I V

PRELIMINARY MINING AND OPERATING COST ESTIMATE:

ASSUMED CONTROLS:

1. Average minimum mining width -- 2'-6".
2. Drilling pattern -- stoper holes with 3 hole "V" pattern will provide 1.8 tons per 8' hole.
3. Each two-man stope crew will cycle 20 holes drilled and blasted per shift, or $1.8 \times 20 = 37$ tons per crew shift. Four crews can therefore mine 148 tons per day. This tonnage together with development ore will provide an average of 150 tons per day of ore.
4. After initial development is completed, then two development crew shifts per day will be required to maintain developed ore ahead of production crews.
5. Wage costs will be 60% of total mining cost. This figure is conservative and is based on extensive narrow vein mining experience. Major items of mining equipment will be purchased on a rental-purchase plan and the 40% of non-wage mining cost will be more than sufficient to provide for consumables and equipment maintenance.
6. In order to generate operating capital, development ore will be sorted and shipped to smelters at Tacoma, Washington or Trail, British Columbia while mill construction is

underway. This ore will have a gross value of about \$100,000.00.

7. Monthly camp rentals, camp personnel wages and food allowances are included for preliminary estimating purposes. It may, however, be advisable to provide high speed water transportation so that crews can commute the 24 miles from Prince Rupert each day. In any event, a camp will be acquired on a rental-purchase agreement and thus these rentals will not be a continuing cost.

DIRECT MINING COST

MINING CREW REQUIREMENTS & COST:

	<u>Total \$/day</u>
8 Stope Miners @ \$85.00/day	\$680.00
4 Development Miners @ \$85.00/day	340.00
3 Trammers @ \$65.00/day	195.00
3 Labourers @ \$60.00/day	180.00
2 Mechanics @ \$85.00/day	170.00
3 Supervisors -- including Supt. @ \$75.00/day	225.00
2 Cooks @ \$65.00/day	130.00
2 Flunkies -- general roustabouts	100.00
1 First Aid Man - Timekeeper	<u>60.00</u>

TOTAL (28 men) \$2,080.00/day

Wage Burdens:

Canada Pension Plan, U.I.C., W.C.B.,
Hospital Plan, etc. @ 25% \$ 520.00/day

TOTAL WAGE COST \$2,600.00/day

60% of mining cost = \$2,600.00/day

OR \$ 17.33/ton of ore

THEREFORE, TOTAL MINING COST IS

\$28.90/ton

CAMP COST

MONTHLY RENTALS:

As per rentals in Appendix II except add one additional 10-man bunk trailer.

Monthly rentals \$3,990.00/month

OR \$181.00/day for 22 day months.

Camp food stuffs, supplies, etc., allow \$9.00 per man day for a daily cost of \$252.00/day

TOTAL DAILY CAMP COST:

Rentals \$181.00/day

Supplies \$252.00/day

TOTAL PER DAY \$433.00

CAMP COST PER TON OF ORE MINED \$ 2.85

CONCENTRATOR OPERATING COSTS

Allow \$7.00/ton

CONCENTRATE SHIPPING:

Shipping from Porcher Island to Tacoma, Washington--
-- allow \$20.00/ton of concentrate.

As pure concentrates run 8 oz. gold per ton and ore
grade is 0.5 oz. Ton concentrate ratio is 16:1. Shipping
cost per ton of ore mined is, therefore \$1.25/ton

Smelter Charge -- (American Smelting and Refining)
cost of \$36.00/ton of concentrate at February, 1974 in-
creased by 15% to \$41.40/ton of concentrate or:

$\frac{41.40}{16}$ \$2.60/ton ore

\$433.00

TOTAL COST PER TON ORE MINED:

\$ 2.80

Direct Mining	\$28.90/ton
Camp Cost	2.89/ton
Shipping Concentrate	1.25/ton
Smelting Cost	<u>2.60/ton</u>
Total Direct Cost	\$35.64/ton
General Administration, over- sales, etc. Allow	<u>\$ 5.00/ton</u>

TOTAL COST \$40.64/ton

COST PER OUNCE OF GOLD PRODUCED:

(After mining equipment is paid out)

The Surf Point Mine operated a 35 ton-per-day mill and, with some hand sorting, maintained mill head grades of +0.7 oz. gold per ton. Although selected blasting will be used, hand sorting will not be practical under todays wage costs. A mining dilution of 25% will be allowed to give a mill head grade of 0.525 oz/ton.

American Smelting and Refining Company will pay 92.5% of contained gold after a deduction of .02 oz. per ton. That is, they will pay for:

$$92.5\% (.525 - 0.02) = \dots\dots\dots .467$$

At a total cost of \$40.64 per ton of ore, the cost per ounce of gold produced is, therefore $\dots\dots\dots$ \$87.00

PROFIT PER TON OF ORE MINED:

Assuming a gold price of \$200.00 per ounce when production commences about one year after project start-up, the value of ore mined will be:

$$.467 \times 200 = \dots\dots\dots \$93.40$$

Total cost of the ore is $\dots\dots\dots$ \$40.64

Therefore, gross operating profit is $\dots\dots\dots$ \$52.76

Based on mining 150 tons per day on a five day per week basis for 50 weeks per year, the gross yearly profit is:

$$150 \times 5 \times 50 \times \$52.76 \dots\dots\dots \$1,978,500.00/\text{year}$$

*During year one when mining equipment is being acquired, the total cost will be \$10.70 per ton higher or $\dots\dots\dots$ \$51.34/ton

The gross operating profit for this year will, therefore, be \$42.06 per ton for a years' profit of:

$$150 \times 5 \times 50 \times \$42.06 \dots\dots\dots \underline{\underline{\$1,577,250.00}}$$

* See Appendix III