

**A VALUATION OF THE
GORDON LAKE PROPERTY
OF
GIANT BAY RESOURCES LTD.
SEPTEMBER 1988**

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EXECUTIVE SUMMARY

The Gordon Lake gold property is located approximately 50 miles north of Yellowknife, Northwest Territories, Canada. Access is by winter road or ski-equipped aircraft from December to April and by float plane from late May to October.

Giant Bay Resources Ltd. owns a 100 percent interest in the 7,149 acre property, subject to a royalty of one percent (1%) of production from commencement of commercial production on all of the claims except the Crown Lease area.

Over the past five years, Giant Bay has expended approximately \$5,000,000 Canadian on exploration of the property. The work consisted of over 40,000 feet of surface and underground diamond drilling, approximately 2,000 feet of percussion drilling, 1,600 feet of 9' x 13' decline, 540 feet of 9' x 13' drift at a level 200 feet below surface, 440 feet of 8' x 5' drifts, and over 800 feet of 5' x 7' raises.

Underground reserves in the No. 1 Zone were calculated in April, 1987 by Dr. Caelles to be 110,600 tons grading 0.50 ounces of gold per ton. In October, 1987, Dr. Graham calculated reserves of only 6,765 tons grading 0.83 ounces per ton. This dramatically reduced tonnage resulted from a variety of factors including a higher cutoff grade (0.5 ounces of gold per ton), a smaller area of influence from drill holes and a more restrictive interpretation of ore continuity. However, Dr. Graham said that "reserves could increase by 50 to 100 percent." For purposes of my cash flow projection, I have estimated reserves above the 200 foot level to be 8,730 tons grading 0.80 ounces of gold per ton.

Open pit indicated and inferred ore reserves in six other zones on the property totalled 9,500 tons, with an estimated average grade of 0.70 ounces of gold per ton. These zones represent small near-surface pods, each estimated to contain about 1,500 tons on average.

For purposes of this valuation, it was assumed that all the ore would be mined by a contractor, hauled to Yellowknife by truck, and custom milled there. Total operating costs were estimated to average \$155 per ton, representing a combination of open-pit and underground costs. Because much of the underground workings are already in place, the total development costs are expected to be less than one million dollars.

Based on a gold price of \$425 U.S., and other assumptions as outlined in this report, the net present value of the cash flow is estimated to be approximately \$3,000,000 Canadian. However, because of the risks in mining, as well as the uncertainty of external factors such as the future gold price, I believe that a reasonable range of value is between \$2,000,000 and \$4,000,000 Canadian.

INTRODUCTION AND TERMS OF REFERENCE

Glanville Management Ltd. was commissioned by Mr. Claus Jensen and Mr. Robert Handfield, President and Vice-President, respectively, of Giant Bay Resources Ltd., to prepare a fair market valuation of the Company's Gordon Lake Property, located about 50 miles north of Yellowknife, Northwest Territories. To accomplish this assignment, I reviewed a variety of reports and documents as outlined below, and had discussions with several professional engineers and geologists who are familiar with the property.

Reports Reviewed:

1. Gordon Lake No. 1 Zone, Northwest Territories: Gold Reserve Estimates, by R. Fergus Graham, Consulting Geologist, October, 1987
2. Report On The 1987 Surface Diamond Drilling and Underground Exploration Program In The No. 1 Zone On Giant Bay Resources Ltd.'s Gordon Lake Gold Property, by Caelles Geological Consultants Ltd., November, 1987
3. Report On The 1987 Surface Diamond Drilling Program (outside the main or No. 1 Zone) On Giant Bay Resources Ltd.'s Gordon Lake Property, by Caelles Geological Consultants Ltd., November, 1987
4. Review of 1987 Exploration Reports And Future Policy, Giant Bay Resources, Gordon Lake Property, by H.K. Taylor, P.Eng., November 9, 1987
5. Summary Report On Giant Bay Resources Ltd.'s Gordon Lake Gold Property, by Caelles Geological Consultants Ltd., April 1987
6. Preliminary Metallurgical Testwork, Gordon Lake Property, Giant Bay Resources Ltd., by Bacon Donaldson & Associates Ltd., December 23, 1986

7. 1985 Mineral Reserve Calculation For The No. 1 Zone of The Gordon Lake Gold Property, by Juan C. Caelles, Ph.D., F.G.A.C., December, 1985
8. A Prefeasibility Study Of The Gordon Lake Property of Giant Bay Resources Ltd., by Arthur T. Fisher & Associates Limited, November 5, 1985
9. Evaluation of AM & GB Claim Group, Gordon Lake Area, For Salish Resources Ltd., by Arthur T. Fisher & Associates Ltd., December 5, 1984
10. 1985 Property Report, Gordon Lake Property, by B. Goad, B.Sc., M.Sc., for Giant Bay Resources Ltd., October, 1985
11. Geological Report On The 1984 Drill Exploration Program On The Giant Bay Resources Ltd. Claim Group, by Juan C. Caelles, Ph.D., F.G.A.C., December 18, 1984

Sections of the above reports and some of the maps have been incorporated in the attached report.

I have visited the property several times prior to 1987, and have met with the following geologists and mining engineers who have worked on or visited the property:

Juan C. Caelles, Ph.D., F.G.A.C. (Geologist)
W. Knutsen, Mining Engineer
J. Mason, Geological Engineer
R. Handfield, Ph.D. (Geologist)
R. Somerville, Consulting Engineer

VALUATION METHODOLOGY

Appendix II provides an introduction to valuation theory and a description of valuation methods utilized in the past. Following is a brief description of the method that has been applied to determine a value for the mineral deposits located in Giant Bay's Gordon Lake Property.

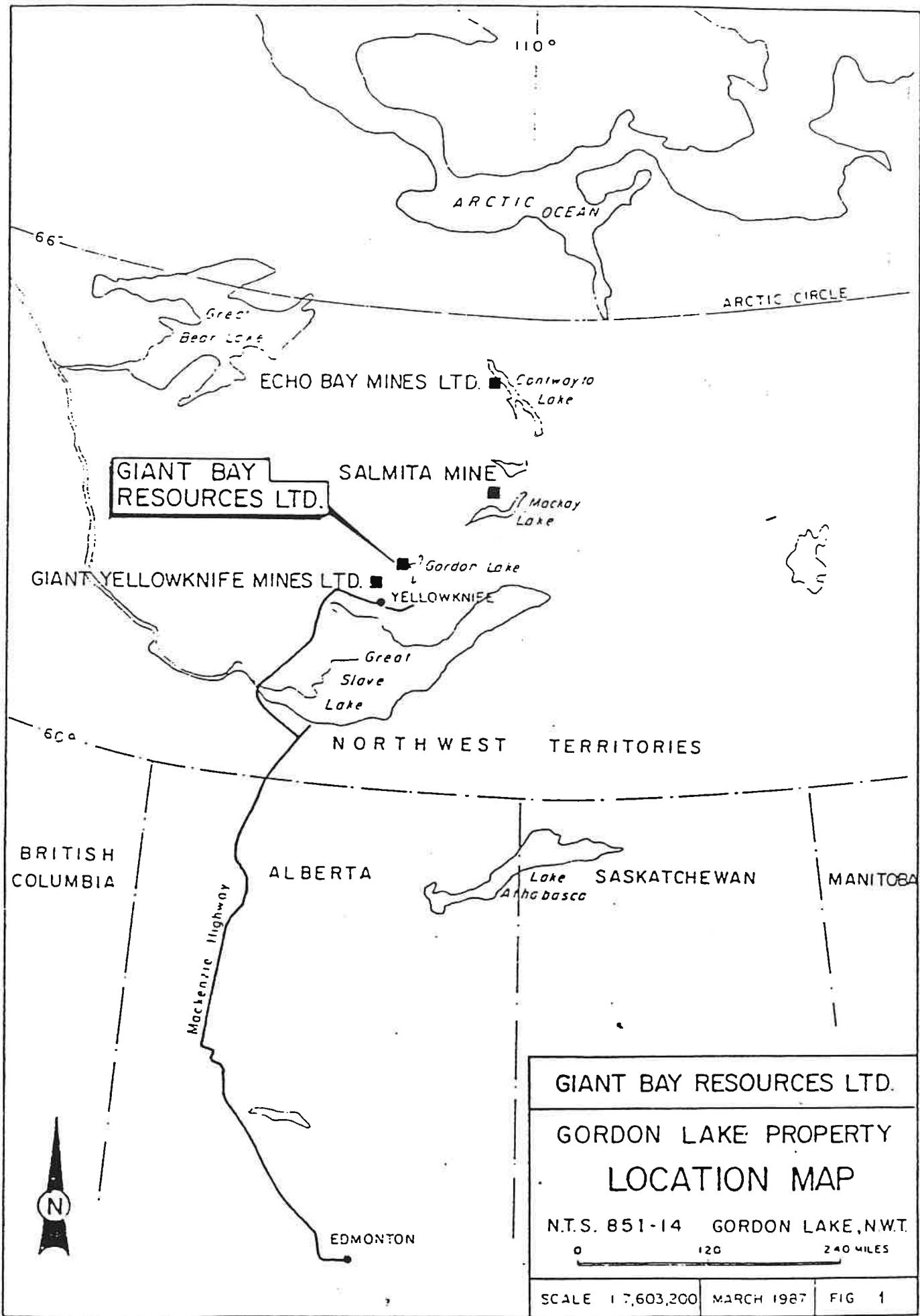
Discounted Cash Flow Method

If cash flows can be estimated with some degree of certainty, the discounted cash flow method is the preferred one. These cash flows are then discounted at an appropriate rate (considering the risk factor) to obtain a net present value.

The discounted cash flow method accounts for all cash inflows (revenues) and outflows (or expenses) such as operating costs, capital costs, and income taxes. It also accounts for risk, inflation, and the cost of money (interest). The discounted cash flow method is forward looking (that is, past expenditures are irrelevant) and is general in application.

LOCATION/ACCESS/CLIMATE

The Gordon Lake Property of Giant Bay Resources Ltd. is located approximately 50 miles north of Yellowknife, Northwest Territories, Canada (see attached map). The claims are on Knight Bay on the southwest side of Gordon Lake. During the winter months the property is accessible by truck via a winter road originating at Tibbit Lake, which is connected to Yellowknife by a year-round road (total distance is 85 miles). This year-round road is called the Ingraham Trail, and runs 50 miles from Yellowknife. The winter road, which is useable from December to April, traverses Gordon Lake at approximately two kilometers from the property camp, and continues north to the Salmita mine and the Lupin Mine, both in the barren lands. The property is also accessible by ski-equipped aircraft ranging in size from a Cessna 185 up to a DC-3 with a 7,000-pound payload. The property is accessible in



GIANT BAY RESOURCES LTD.

SALMITA MINE

GIANT YELLOWKNIFE MINES LTD.

YELLOWKNIFE

NORTH WEST TERRITORIES

BRITISH COLUMBIA

ALBERTA

SASKATCHEWAN

MANITOBA

Mackenzie Highway

EDMONTON

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GORDON LAKE PROPERTY
LOCATION MAP

N.T.S. 851-14 GORDON LAKE, N.W.T.

0 120 240 MILES

SCALE 1:7,603,200 MARCH 1987 FIG 1

summer, when the lakes are free of ice from late May to mid-October, by float-equipped aircraft ranging in size from a Cessna 185 with an 800-pound payload, up to a Twin Otter with a 4,000-pound payload.

Yellowknife has trucking firms with equipment to build and maintain winter roads as well as to truck major equipment and supplies to the property or ore from the property to a mill in Yellowknife.

The climate of the Gordon Lake area is severe, with temperatures ranging from about +30°C in summer to below -40°C for short periods during the winter. Very cold temperatures can be encountered between November and March. Annual rainfall in the area is about 36 inches.

PROPERTY AND OWNERSHIP

The Gordon Lake gold property covers 7,149 acres, of which 4,980 acres are located in the original Gordon Lake property and 2,169 acres were added by the acquisition of the Salish property, a contiguous property to the south. Both claim groups form one continuous property and comprise the mineral claims listed in Table 1, and shown in the attached claim map.

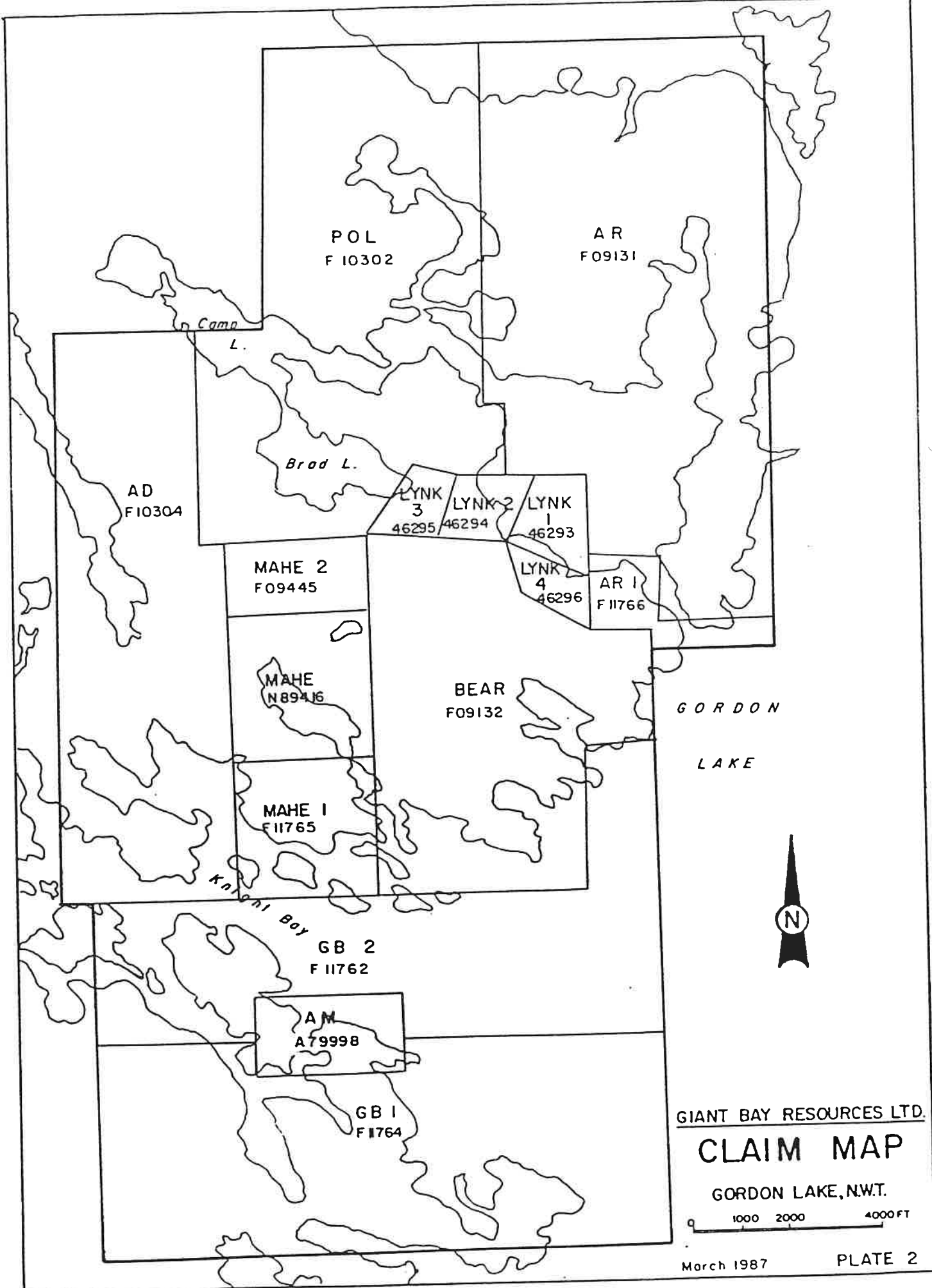
Giant Bay Resources owns a 100% interest in the property, subject to a royalty of 1% of production from commencement of commercial production. The royalty only applies to production from the mineral claims, but not the Crown Lease (Lynk 1 to 4 claims).

TABLE 1

<u>Claim Name</u>	<u>Acreage</u>	<u>Record No.</u>	<u>Expiry Date</u>
<u>Gordon Lake Property</u>			
POL	1,187.9	F 10302	June 6, 1993
AR	723.1	F 09131	January 26, 1991
AD	955.7	F 10304	June 6, 1993
BEAR	816.0	F 09132	January 26, 1991
AR #1	51.6	F 11766	June 6, 1993
MAHE +	206.6	N 89416	March 24, 2009
MAHE #1	206.6	F 11765	June 6, 1993
MAHE #2	103.3	F 09445	June 6, 1993
LYNK 1*	182.2	46293	August 12, 1992
LYNK 2*	182.2	46294	August 12, 1992
LYNK 3*	182.2	46295	August 12, 1992
LYNK 4*	182.2	46296	August 12, 1992
<u>Salish Property</u>			
AM	103.3	A 79998	March 10, 1994
GB-1	878.1	F 11764	November 2, 1990
<u>GB-2</u>	<u>1,188.0</u>	F 11762	December 12, 1990
15 Claims	7,149.0		

+ Crown Lease 3248

* Crown Lease 2450



POL
F 10302

AR
F 09131

AD
F 10304

MAHE 2
F 09445

MAHE
N 89416

MAHE 1
F 11765

BEAR
F 09132

GORDON
LAKE

GB 2
F 11762

AM
A 79998

GB 1
F 11764

LYNK 3
46295

LYNK 2
46294

LYNK 1
46293

LYNK 4
46296

AR 1
F 11766



GIANT BAY RESOURCES LTD.

CLAIM MAP

GORDON LAKE, N.W.T.



March 1987

PLATE 2

HISTORY OF EXPLORATION

The Gordon Lake gold property has had a long history of exploration (see Appendix III for a more detailed history as provided by Juan Caelles, Ph.D., F.G.A.C.) since its discovery by prospectors in 1937.

Relevant work carried out from 1983 to 1987 by Giant Bay consisted of the following: During the years 1983 to 1986 a grid was cut over 2/3 of the property, a magnetic geophysical survey was completed over the whole grid and a VLF geophysical survey over half of it, the property was mapped and prospected in detail, old trenches were sampled and evaluated, 35,250 feet of surface and 2,680 feet of underground diamond drilling and 1,630 feet of percussion drilling were completed, 1,600 feet of 9' x 13' decline, 540 feet of 9' x 13' drift at the -200 foot level, and 540 feet in two raises of 5' x 7' were excavated.

The above-mentioned work led to the discovery of 12 gold-bearing zones, where varying amounts of work were done. The bulk of the work, though, was carried out in the No. 1 Zone.

In 1987 Giant Bay completed a total of 4,248 feet of NQ-sized diamond drilling, distributed among the gold-bearing zones as follows:

No. 1 Zone	1,662	feet
No. T-11/T-2 Zone	920	feet
Salish	<u>1,666</u>	feet
Total	<u>4,248</u>	feet

In addition, 440 feet of 8' x 5' drifts and 289 feet of 5' x 7' raises were excavated in 1987, all in the No. 1 Zone.

PRIOR EXPENDITURES BY GIANT BAY

Expenditures carried out by Giant Bay Resources Ltd. on the Gordon Lake property since 1983 were approximately as summarized below:

1983	\$0.4 million
1984	0.8 million
1985	0.8 million
1986	1.8 million
1987	1.0 million
1988 to date	<u>0.1</u> million
Total Expenditures	<u>\$4.9</u> million

In addition to the above exploration expenditures, 250,000 fully paid shares of Giant Bay Resources Ltd. were issued at a deemed price of \$1.85 per share (consideration of \$462,500) to reduce the overriding royalty from 5% to 1%. As a result, the total of expenditures and share consideration since 1983 was approximately \$5.4 million. This figure excludes any shares issued or cash expended for the Gordon Lake property prior to 1983.

PROPERTY GEOLOGY

The Gordon Lake gold property is located in the Slave Province of the Canadian Shield. It is underlain by the Archean Yellowknife Supergroup, which is locally made up of a turbidite sequence composed predominantly of greywackes, subordinate siltstones, and minor argillites. Several diabase dykes cut the sedimentary sequence (see Caelles, 1987a).

Three periods of folding and two different cleavages have been recognized in the property. The main structures are isoclinal folds characterized by bedding and axial-plane cleavage dipping vertically to very steeply. The sediments have been regionally metamorphosed to the upper greenschist facies.

In most cases bedding is conspicuous but, in a few localities, it is obscured to the extent that individual beds are difficult to recognize. The most typical stratum in the assemblage consists of an arenaceous base grading to a silty or muddy top and it is this gradation of grain size that permits the determination of stratigraphic tops and therefore the recognition of folds in the rocks. The beds all dip steeply with many being overturned; the prevailing trend is northeast in the eastern part of the area and northwest in the western part.

Highly-irregular quartz veining is very common within the property. Two types of quartz are recognizable macroscopically: grey quartz and white quartz. Grey quartz varies in colour from light grey to bluish grey and is, at least locally, cut and injected by white quartz veins. In most places white quartz has a more erratic distribution than the grey variety and often shows evidence of emplacement by forceful injection. The white quartz commonly occurs as isolated blow-outs in low pressure zones and in tension gashes without any discernible access conduit, strongly suggesting local remobilization and emplacement during folding.

Gold mineralization on the property is associated with quartz and, in places, with black, carbonaceous, fine-grained siltstones in zones up to 110 feet wide. The gold is mostly coarse grained with common occurrences of visible gold. The gold-bearing zones are located in areas of structural complexity where drag folding is often present. The quartz structures contain gold values which can be in excess of one ounce of gold per ton and several feet thick in places.

MINERALIZATION

Gold mineralization in the property is spatially associated with quartz "bodies", which, due to the multiphase deformation history of the area, presently occur in several shapes and display various relationships to the preserved structural elements.

The quartz "bodies" occur as tabular veins, as equidimensional "blow-outs", and as strata-bound and sometimes stratiform (up to 100 ft wide in the No. 1 Zone) siliceous zones (see Caelles, 1987a).

All the above-mentioned "quartz-bodies" are known to contain gold. The more economically-significant ones, however, are the veins, and, particularly, the wide siliceous zones. To date, gold-bearing quartz "bodies" have been found in thirteen different zones, namely: No. 1, No. 2, No. 3, No. 4, Bulge, VIV 8, VIV 15, T-11/2, T-15, T-32, Wooferine, Chane and Salish (Plate 3; Caelles, 1987a). Of these zones, the following have proven, probable, or possible ore reserves:

- No. 1 Zone
- No. 2 Zone
- T-11/2 Zone
- Wooferine Zone
- Salish No. 1 Zone
- Salish No. 2 Zone
- Salish No. 3 Zone

RESERVES

No. 1 Zone

In October, 1987, Mr. Fergus Graham (B.Sc., M.Sc., Ph.D. in Geology) calculated the gold reserves in the No. 1 Zone of the Gordon Lake property. Mr. Graham made a 10 day visit to the property and reviewed the reports and drill logs of Dr. Caelles (Project Manager) and others.

The reserves in the No. 1 Zone, as calculated by Graham and summarized below, are substantially lower than those calculated by Caelles (110,600 tons at 0.50 ounces of gold per ton). This reduction resulted from several factors including a higher cutoff grade, a smaller area of influence from drill holes, and a more restrictive interpretation of ore continuity.

Dr. Graham's Reserves

<u>Cut-off Grade (ounces/ton gold)</u>	<u>Tons</u>	<u>Average Grade (ounces/ton gold)</u>
0.5	6,765	0.83*
0.3	10,260	0.66*

- * It should be noted that in calculating reserves, all assays in excess of 2 ounces/ton were cut to 2 ounces/ton.

Of the above reserves, 5,820 tons averaging 0.81 ounces of gold per ton (at a 0.50 ounce cutoff) occur above the 200 ft level.

Mr. Graham summarizes the potential for additional reserves as follow:

"Potential exists for increasing the amount of indicated ore. Within the zone considered, there are at least 38 intersections of between 0.1 and 0.3 ounces of gold per ton, which could be indicative of ore pods similar to those used in

the above calculations. These, together with possible pods of which no indication has yet been found, could increase reserves by 50-100 percent."

"Further ore may occur along strike or down dip, but the potential appears less than in the area of detailed work."

Mr. Hugh K. Taylor, in his report of November 9, 1987, notes the following:

"Considering only the ground above the 200 foot level and presuming a zone width of only 100 feet, the volume of rock is 9 million cubic feet, or nearly 800,000 tons. Graham's estimate of "+0.5 oz/st ore" represents only 0.7% of this, and his "+0.3 oz/st ore" is still barely 1.1%."

No. 2 Zone

The No. 2 Zone extends intermittantly for over 800 feet along strike, of which about 700 feet are on a ridge with continuous outcrop. It has been tested with 8 diamond drill holes and 21 percussion holes, with some excellent results as listed below:

<u>Drill Hole #</u>	<u>Interval</u> (feet)	<u>Length</u> (feet)	<u>Assay</u> (ounces/ton gold)
4	0-5	5	0.37
5	0-10	10	0.50
12	5-15	10	0.55
18	15-20	5	5.55

This zone appears to contain short lenses or shoots, some of which could provide small tonnages of high-grade ore.

T-11/T-2 Zone

The T-11/2 Zone is 800 feet long as indicated by previous trenching, grab sampling, and diamond drilling. However, it appears that the zone pinches and swells, and may therefore only contain shoots of ore grade material. Two previous diamond drill holes both intersected approximately 8 feet averaging 0.40 ounces of gold/ton.

Wooferine

Although this quartz veining zone has been proven to be continuous for 300 feet between the existing drill holes, it appears to be highly irregular and "poddy". One drill hole intersected 1.69 ounces of gold per ton over 4.4 feet at a depth of approximately 50 feet.

Salish No. 1 Zone

This zone is exposed for 100 feet along strike by three trenches. The largest trench extends for 50 feet, of which the three trench samples of the southern half averaged 1.58 ounces of gold per ton (assays cut to 3 ounces/ton) over a width of 3.1 feet.

Salish No. 2 Zone

The No. 2 Zone is adjacent and parallel to the No. 1 Zone in the same quartz zone. Six diamond drill holes were drilled in the No. 1/No. 2 Zone in 1987, totalling approximately 1,500 feet. Three of the better intersections are shown below:

<u>Drill Hole #</u>	<u>Interval</u> (feet)	<u>Length</u> (feet)	<u>Grade</u> (ounces of gold/ton)
S87S111	25.3' to 31.1'	5.8'	0.47
S87S113	47.0' to 52.2'	5.2'	0.91
S87S114	199.4' to 204.4'	5.0'	0.23

Salish No. 3 Zone

The quartz-rich No. 3 Zone, which is located 1,450 feet southeast of the No. 1 Zone, outcrops for a length of 180 feet. At the northwest end it disappears under muskeg, and at the southeast end the zone is covered by water of a small bay of Gordon Lake. Some of the better assay results from trenching and diamond drill holes are shown below:

	<u>Single Width</u>	<u>Gold Assay</u> (ounces/ton)
Trench 1	5.3'	0.28
Trench 2	5.0'	1.97
Trench 3	5.2'	0.28
Trench 4	6.6'	0.48
Trench 5	7.0'	1.32
Drillhole 4	1.5'	1.58

Dr. Juan Caelles, in his report of November, 1987, comments as follows:

"The drilling completed in 1987 is considered very encouraging."

"It is recommended to continue testing the zone with diamond drilling by step-out short drill holes along strike on sections 50 feet apart, including at least a couple of deeper intersections."

Summary of ReservesReserves (Indicated and Inferred)

<u>Zone</u>	<u>Tonnage</u>	<u>Gold Grade</u> (ounces/ton)	
No. 1 (to 200 foot level)	5,820	0.81	Underground
No. 2	2,000	0.60	Open-pit
T-11/T-2	3,000	0.50	Open-pit
Woofarine	1,000	0.80	Open-pit
Salish No. 1	500	1.00	Open-pit
Salish No. 2	2,000	0.80	Open-pit
Salish No. 3	1,000	0.90	Open-pit

As shown above, the indicated underground reserves down to the 200 foot level were calculated by Dr. Graham to be 5,820 tons grading 0.81 ounces of gold per ton, while the total open-pit indicated and inferred reserves were estimated to be 9,500 tons with an average grade of approximately 0.70 ounces of gold per ton. However, as indicated by Dr. Graham, the potential underground reserves in the No. 1 Zone above the 200 foot level could add 50-100% to the existing level. We have assumed a 50% increase to 8,730 tons of underground ore grading 0.80 ounces of gold per ton for purposes of our cash flow analysis. However, we have not included any ore below the 200 foot level in the cash flow calculations shown on page 20.

EXPLORATION POTENTIAL

As noted earlier in this report, both Dr. Graham and Dr. Caelles believe there is significant potential for expanding the indicated reserves in the No. 1 Zone. There are many areas with drill-indicated grades of greater than 0.50 ounces of gold per ton that remain untested.

In addition to the No. 1 Zone, there is a good chance of adding substantial reserves to the indicated and inferred reserves in several other zones in the large property. Exploration work at the property has found gold-bearing mineralization in over 15 separate areas, of which only seven have been considered in the estimation of ore reserves.

MINING PLAN

For purposes of this valuation we have assumed that only the ore reserves above the 200 foot level would be mined. In the No. 1 Zone, underground mining would be most economical since underground workings (decline, raises, and drifts) are already in place. However, additional development footage will be required, some of which could be in ore.

The indicated and inferred reserves in the other zones could all be mined by open pit methods. Some of the narrower higher-grade zones could be extracted by an excavator in a relatively narrow slot.

METALLURGY

Two several-kg samples of drill core from the No. 1 Zone were metallurgically tested by Bacon, Donaldson & Associates Ltd. (Bacon, 1986). The investigation comprised the following tests:

- i) direct cyanidation
- ii) gravity plus flotation
- iii) gravity, flotation and cyanidation of the flotation concentrate

The results of the tests indicated that either flotation or cyanidation (or a combination of flotation followed by cyanidation of the flotation concentrate) will result in an overall recovery of 95% to 96% of the gold and 85% of the silver.

COSTS

Mining Costs

The contract mining costs for the underground reserves are estimated to be approximately \$100.00 per ton, while those for the open pit reserves would be approximately \$50.00 per ton. These costs are more than twice those that could be expected in a more favorable location in southern Canada.

Transportation Costs

Transportation costs to a custom mill in Yellowknife (a total distance of 85 kilometers over a combination of year-round road and winter ice road) are estimated to be approximately \$40.00 per ton.

Milling Costs

Custom milling costs in Yellowknife are estimated to be approximately \$40.00 per ton.

Development Costs

Development costs, including approximately 2,000 feet of underground workings, are estimated to be approximately \$800,000.

DISCOUNTED CASH FLOW EVALUATION

Based on the foregoing reserve estimates and costs, plus other assumptions as outlined below, we have determined the net present value resulting from mining out the reserves in one year.

Estimates and Assumptions

	<u>Tons</u>	<u>Grade</u> (ounces/ton gold)
1. Reserves:		
Underground	8,730	0.80
Open-pit	9,500	0.70
2. Mine Dilution:		
Underground	15% at a grade of 0.30 ounces/ton	
Open-pit	10% at a grade of 0.25 ounces/ton	
3. Mineable Reserves:		
Underground	10,040	0.74 ounces/ton
Open-pit	10,450	0.66 ounces/ton
4. Metallurgical Recovery:		
Gold: 95%		
Silver not included in the calculation		
5. Gold price \$425.00 U.S.		
6. Exchange Rate: \$1.00 Canadian Equals \$0.80 U.S.		

Cash Flows**Revenue:**

Underground:	$10,040 \times 0.74 \times 95\% \times$	$\$ \frac{425}{0.80}$	\$3,750,000
Open-pit:	$10,450 \times 0.66 \times 95\% \times$	$\$ \frac{425}{0.80}$	<u>3,480,000</u>
Total Revenue			<u>\$7,230,000</u>

Operating Costs:

	<u>Underground</u>	<u>Open-pit</u>
Mining	\$100.00	\$ 50.00
Transportation	\$ 40.00	\$ 40.00
Milling	<u>\$ 40.00</u>	<u>\$ 40.00</u>
Total Cost/ton	\$180.00	\$130.00

Underground:	$10,040 \times \$180.00$	\$1,807,000
Open-pit:	$10,450 \times \$130.00$	<u>1,358,000</u>
Total Operating Costs		<u>\$3,165,000</u>

Operating Margin: \$4,065,000

Development Costs: 800,000

Pre-Tax Cash Flow \$3,265,000

Assuming that the above cash flow is generated one year hence, the present value (at a 10% discount rate) would be approximately \$3,000,000. We have made no deductions for income tax since there are approximately \$5,000,000 of exploration and development writeoffs available to shelter the cash flow from income tax.

APPENDIX II
VALUATION METHODOLOGIES

APPENDIX II
VALUATION METHODOLOGIES

This section provides an introduction to valuation theory and a description of valuation methods used in the past.

INTRODUCITON

There are a variety of appropriate methods for valuing mineral properties depending upon the stage, or status, of the property from initial exploration through to production. Some of these stages are outlined below:

- 1) Hypothetical analysis
- 2) Regional program
- 3) Anomalies
- 4) Claims staked (based on anomaly)
- 5) Claims staked (based on "hot" area)
- 6) Additional geological, geochemical or geophysical data
- 7) Development of a model for a target deposit
- 8) One drill hole in a mineralized zone
- 9) Two drill holes in a mineralized zone
- 10) Three drill holes to define a plane of mineralization
- 11) Additional drill holes for establishing inferred reserves
- 12) Preliminary feasibility study
- 13) Enough holes to define proven, probable and possible ore
- 14) Exploratory development
- 15) Feasibility study
- 16) Construction of mine/mill
- 17) Producing mine

Some of the factors that affect the valuation of mining properties, especially at the earlier stages are:

- 1) Local geological controls (faults, contacts, etc.)
- 2) Exploration and/or mining history of the area
- 3) General mining activity in the area
- 4) Comparison to similar geological settings elsewhere in the world
- 5) The "track record" of the exploration geologists
- 6) Presence of valuable minerals or metals (in situ stockpiles, dumps, tailings, etc.)
- 7) Proximity to known reserves
- 8) Staked, leased, or freehold claims
- 9) Infrastructure in place
- 10) Remoteness
- 11) Environmental sensitivities
- 12) Projected metal prices
- 13) General economic and political climate
- 14) Specific interests of a party bidding for the property

VALUATION METHODS USED IN THE PAST

A listing of the valuation methods, followed by brief descriptions of the methods that have been used in the past, is provided below:

- 1) Net present value (NPV) or discounted cash flow (DCF) method
- 2) The DCF method applied to a target or model deposit with the resulting value reduced by a factor to reflect the probability of achieving the target
- 3) Committed future expenditures by optionor plus the additional expenditures required to earn an interest times a probability of making the non-committed expenditure
- 4) Premium or discount on historical costs
- 5) Historical costs plus prudent expenditures for the next phase of work
- 6) Prices paid for comparable properties
- 7) Share price history
- 8) Market premium to, or discount from, share price
- 9) Book value per financial statements

- 10) Price/earnings ratio
- 11) Price/cash flow ratio
- 12) Statistical or probabilistic method
- 13) Replacement value of mine/mill complex
- 14) Value per ton of ore in the ground
- 15) Payback period

1) **Net Present Value (NPV) or Discounted Cash Flow (DCF)**

If cash flows can be estimated or projected with some degree of certainty, the DCF method is the preferred one. Such cash flows are then discounted at an appropriate rate (considering the risk factors) to obtain a net present value.

Some of the requirements, or inputs, for the valuation of a mining property via the DCF approach are: Geology and Mineral Inventory; Mineable Ore Reserves (mining dilution); Mining Method; Metallurgy-Research; Metallurgy-Design (metallurgical recovery); Ancillary Services; Capital Costs; Operating Costs; Marketing; Rights, Ownership; Environmental Impact; Socio-Economic Impact; and Financial Analysis.

The DCF Method accounts for all cash inflows (or revenue) and outflows (or expenses) such as capital costs, operating costs and income taxes. It also accounts for risk, inflation and the cost of money (interest). The DCF method is forward looking (that is, past expenditures are irrelevant) and is general in application.

2) **DCF Adjusted to Reflect the Probability of Success**

For properties at a sufficiently advanced stage such that grade and tonnage can be estimated or projected, one can use a combination of the discounted cash flow method and a probability application. This probability is based on a judgement of the likelihood of achieving a certain grade and tonnage, and, in addition, the chance and timing of proceeding to development.

3) Committed Future Expenditures by Optionor

One can determine the committed future expenditures by an optionor plus the additional expenditures required to earn an interest in the property times a probability of the non-committed expenditures being made. These expenditures should be further reduced by a discount rate to reflect the timing of the expenditures. One can then calculate the value ascribed to the optionee's remaining interest in the property.

4) Premium or Discount on Historical Costs

This method implies a property is worth what has been spent on it (sometimes adjusted to present day dollars by an inflation index), plus a premium if the results are good, or a discount if the results are poor. However, expenditures on a property are not necessarily indicative of value and a premium or discount is a subjective factor. Nevertheless, there is some correlation between costs and results.

5) Historical Costs plus Prudent Budgetted Expenditures

This method simply utilizes past costs and adds the budgetted costs of the next phase of the work. As stated in "4" above, costs are not necessarily a good indicator of value. In addition, adding the costs of the next phase of work ignores the fact that expenditures have to be made (that is, an outlay of cash, which is a negative factor) in order to generate the value. Presumably, though, one budgets future expenditures on the expectation that the expended dollars will add at least that much in value. However, in order for this method to work, the added value has to be twice the budgetted expenditures for the next phase of the work. Although this is possible, the added value could just as easily be less than the expenditures or many times the expenditures.

6) Comparable Properties

This method has been used to establish a value based on a known transaction price of a comparable orebody. In mining, unlike oil and gas, there are no true comparables. Each property is unique with regard to geology, costs, infrastructure and some of the other factors mentioned earlier.

7) Share Price History

This method can give an indication of value, but is only applicable if the shares are listed on a public exchange, and if the company's only major asset is the property to be valued. In addition, the price of a few shares sold is not necessarily reflective of what you could sell all the shares for.

8) Market Premium or Discount on Share Price

This method applies a premium or discount to a market price of a share. The method is subjective, but historical premiums and discounts (based on acquisitions) can be used as a guide to value.

9) Book Value

For exploration companies that capitalize exploration costs until a production or abandonment decision, this method is of little value. You may have unwisely spent exploration dollars, yet they appear on your books as assets. Conversely you may have spent very few dollars, but have a very valuable orebody.

10) Price/Earnings Multiple

This method estimates earnings, which are multiplied by a price/earnings (P/E) multiple. The method is useful for a producing mine or company but is not as good as the discounted cash flow approach. Book items such as amortization and depreciation, which do not affect cash flow, can produce unrealistic values.

11) Price/Cash Flow Ratio

This method estimates cash flows which are then multiplied by a price/cash flow multiple typical of the mining industry. Although this method is acceptable for operating mines, it is not of much value for developing mines where the construction capital has not yet been spent.

12) Statistical or Probabilistic Method

This method is based on a statistical analysis of the average value of an economic deposit (mine), the chance of discoveries becoming economic and of anomalies (drill targets) becoming discoveries. This method is somewhat subjective.

13) Replacement Value

What it costs to build a new mine/mill complex is not relevant to the value of a particular deposit. The mine/mill complex only has a value insofar as it enables one to generate cash flow. Only the salvage or disposal value is relevant if you cannot generate cash flow.

14) Value per ton of Ore in the Ground

This method is extremely arbitrary since the material in the ground has no value until you establish the relationship between grades, recovery, metal prices, costs and so on.

15) Payback Period

This determines when all your investment is repaid and ignores the impact of cash flow in later years. For example, you could invest \$100 million and demand a four year payback. However, your returns could be \$20 million a year for four years (which doesn't payback in four years) and then be \$200 million in year 5. The arbitrary application of the payback method would eliminate this good investment. In addition, the payback method ignores the time value of money (interest). The payback method is useful, though, when investing in politically unstable areas.

APPENDIX III
EXPLORATION HISTORY

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EXPLORATION HISTORY

The Gordon Lake gold property has had a long history of exploration, since its discovery by prospectors in 1937-38.

1938

In that year the Borealis Syndicate carried out intensive prospecting, and extensive trenching, stripping, and sampling of gold-bearing veins and zones, and drilled a few X-ray diamond drill holes (Thompson, 1938).

1944

In that year the Lynk Yellowknife Gold Mines drilled 2,600 ft of E-size core in 18 holes (Knutsen, 1984a). This drilling intersected the No. 1 Zone; nevertheless, due to poor core recovery and the erratic nature of gold assays it was not considered of economic interest at the time, when 0.5 to 1.0 oz/ton gold were sought.

1983

In the late summer of 1983 the Irly Bird Syndicate drilled nine BQ diamond drill holes totalling 2,795 ft and several plugger holes, which intersected gold mineralization of economic grade in three zones: No. 1 Zone (Kidney Pond), No. 2 Zone (Middle Kidney Pond), and No. 3 Zone (Skull) (Humphries, 1983; Knutsen, 1984a). At this time Giant Bay Resources acquired the property.

1984

In the spring and summer of 1984 Giant Bay Resources conducted extensive exploration work on the property. It consisted of:

- a) cutting a grid that partially covered the property with lines spaced 200 ft apart over mineralized zones and its surroundings, and 400 ft apart over the rest of the grid;
- b) completing a magnetometer survey over the cut grid;
- c) mapping the grid at a scale that varied from 40 to 200 ft to the inch;
- d) sampling old workings and trenching newly-discovered showings;
- e) diamond drilling 20,759 ft of BQ core in 64 holes;
- f) percussion drilling of 1,630 ft in 30 holes.

The 1984 surface mapping, trenching, and sampling work is reported by Love (1984), the magnetometer survey by Humphreys (1984), the diamond and percussion drilling results by Caelles (1984), and an ore reserve calculation of the No. 1 Zone based on the existing diamond drilling by Knutsen (1984b). The gold-bearing zones tested in 1984 were (Plate 3):

- a) Zone No. 1 (Kidney Pond Zone in Humphreys's 1983 report); 14,667 ft of BQ core in 25 holes;
- b) Zone No. 2 (Middle Pond Zone in Humphreys's 1983 report); 2,712 ft of BQ core in 8 holes and 1,350 ft of percussion drilling in 21 holes;
- c) Zone No. 3 (Skull Zone in Humphreys's 1983 report); 432 ft of BQ core and 280 ft of percussion drilling in 8 holes;
- d) Zone No. 4 (discovered in 1984); 1,511 ft of BQ core in 7 holes;
- e) Bulge Zone (Main Zone in Knutsen's 1984a report); 718 ft of BQ core in 4 holes;
- f) VIV 8 Zone (VIV 8 in Thompson's 1938 report); 117 ft of BQ core in one hole;
- g) VIV 15 Zone (VIV in Thompson's 1938 report); 602 ft of BQ core in 3 holes.

The following gold-bearing zones, rediscovered in old trenches, were partially sampled but not drill tested in 1984 (Love, 1984):

T-5	T-10	T-19
T-6	T-11	T-28
T-9	T-16	T-32

Knutsen calculated drill-indicated reserves down to the 500 ft level of 700,000 tons grading 0.154 oz/tn gold (uncut assays and no dilution incorporated), including 240,000 tons averaging 0.330 oz/ton gold; contained in the larger tonnage but only down to the 200 ft level he estimated drill-indicated, open-pitable reserves of 310,000 tons grading 0.132 oz/tn gold with a strip ratio of 4.38 to 1.

1985

Giant Bay Resources carried out a winter program consisting of diamond drilling and geophysical surveys, and a summer project including mapping, prospecting, and diamond drilling. It comprised the following work:

- a) extending the previous year's cut grid to the northeast with more closely-spaced lines over the Lynk claims;
- b) running a magnetometer and VLF geophysical surveys over the new part of the grid, and reading orientation lines over known mineralization in the 1984 grid;
- c) diamond drilling of 1,219 ft of BQ and of 943 ft of NQ core in the winter and 4,171 ft of NQ core in the summer.
- d) mapping and prospecting the Lynk claims.
- g) Giant Bay Resources optioned the adjacent property to the south from Salish Resources, which then mapped, prospected, and drilled 340 ft of BQ core in 2 holes.

The exploration work done in 1985 is documented in the following reports: geophysical surveys by Fiset (1985); mapping and prospecting by Goad (1985a; 1985b); and diamond drilling and ore reserves by Caelles (1985). Fisher (1985) completed a prefeasibility study at the end of the 1985 exploration program.

The 1985 diamond drilling was done in the following gold-bearing zones (Plates 2 and 3):

- a) Zone No. 1: 1,219 ft of BQ core in 5 holes and 1,787 ft of NQ core in 7 holes;
- b) Zone No. 4: 331 ft of NQ core in 2 holes;
- c) VIV 15 Zone: 207 ft of NQ core in one hole;
- d) T-11 Zone: 725 ft of NQ core in 4 holes;
- e) T-32 Zone: 324 ft of NQ core in 2 holes;
- f) T-15 Zone: 756 ft of NQ core in 4 holes;
- g) Wooferine Zone: 644 ft of NQ core in 3 holes;
- h) Salish property: 340 ft of NQ core in 2 holes.

At the end of 1985 the mineral inventory at the No. 1 Zone stood at (Caelles, 1985):

324,500 tons grading 0.23 oz/tn gold, including 125,500 tons averaging 0.42 oz/tn gold (assays cut to 3.0 oz/ton gold). The ratio gold to silver is about 1 to 1.

1986

During that year Giant Bay Resources completed the following work:

- a) underground work in the No. 1 Zone: 1,600 ft of 9' x 13' decline, 540 ft of 9' x 13' drift at the 200 ft level, and two 5' x 7' raises totalling 540 ft (Plate 4); 2,615 muck samples and 962 wall and back samples were taken and fire assayed;
- b) underground drilling in the No. 1 Zone: 2,680 ft of NQ core were recovered in 70 holes;
- c) surface drilling: 2,598 ft of NQ core were drilled in two deep and one short holes in the No. 1 Zone, and 2,766 ft of NQ core were recovered from 13 holes from the Lynk claims;
- d) detailed mapping of the mineralized areas in the Lynk claims and the No. 1-No.2-No.3-No.4 Zones was completed, and prospecting of the northeastern part of the property was again carried out.

The surface drilling and mapping of the Lynk claims is reported by Mehner (1986), the underground work and drilling is documented by Burson and Caelles (1986), and the detailed surface mapping of the No. 1 Zone and surroundings is summarized by Stokes (1986).

The surface drilling in the Lynk claims was located as follows (Plate 3):

- a) Wooferine Zone: 1,048 ft of NQ core in 5 holes;
- b) T-11/T-2 Zone: 1,177 ft on NQ core in 6 holes;
- c) Chane Zone: 541 ft of NQ core in 3 holes.

Ore reserves for the No. 1 Zone, still being open at depth and at one end, were calculated by Burson and Caelles (1986) as follows:

<u>Drill-proven reserves*</u>	<u>Drill-probable reserves*</u>
(above -300 ft level)	(between -300 and -600 ft level)
63,000 tons @ .388 oz/tn Au	47,000 tons @ .660 oz/tn Au

* Assays cut to 3.0 oz/tn Au.

1987

In 1987 Giant Bay completed a total of 4,248 ft of NQ-sized diamond drilling, distributed among the gold-bearing zones as follows:

No. 1 Zone	1,662 ft
No. T-11/T2 Zone	920 ft
Salish	<u>1,666 ft</u>
Total	4,248 ft

In addition, 440 feet of 8' x 5' drifts and 289 feet of 5' x 7' raises were excavated in 1987, all in the No. 1 Zone.