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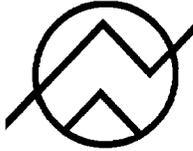
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NORTHERN ORION
EXPLORATIONS LTD

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12-31-00

March 28, 2002

British Columbia Securities Commission
PO Box 10142, Pacific Centre
701 West Georgia Street
Vancouver, BC V7Y 1L2

VIA SEDAR

06.11.10 11:00 AM

Dear Sirs:

Re: Northern Orion Explorations Ltd. (the "Company")
Annual Information Form for Year Ended December 31, 2000

Please find enclosed the Company's Amended Annual Information Form for the fiscal year ended December 31, 2000. The Company is re-filing its 2000 AIF to reflect changes to the original document, which are of a non-substantive nature.

We trust you will find everything in good order.

Yours truly,

"Rodrigo A. Romo"

Rodrigo A. Romo
Legal Assistant
for **NORTHERN ORION EXPLORATIONS LTD.**

Enclosures

- c. Alberta Securities Commission
- c. The Manitoba Securities Commission
- c. Securities Commission of Newfoundland
- c. Nova Scotia Securities Commission
- c. Ontario Securities Commission
- c. Commission des valeurs mobilières du Québec
- c. Saskatchewan Securities Commission
- c. New Brunswick
- c. Prince Edward Island
- c. Northwest Territories
- c. Yukon
- c. Nunavut
- c. Toronto Stock Exchange



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AMENDED ANNUAL INFORMATION FORM

For Year Ended December 31, 2000

October 16, 2001

TABLE OF CONTENTS

2	CORPORATE STRUCTURE	1
2.1	Name and Incorporation.....	1
2.2	Intercorporate Relationships.....	1
3	GENERAL DEVELOPMENT OF THE BUSINESS	2
3.1	Three Year History	2
3.2	Significant Acquisitions and Significant Dispositions.....	4
3.3	Trends.....	4
4	NARRATIVE DESCRIPTION OF THE BUSINESS	4
4.1	General.....	4
4.2	Issuers With Asset-backed Securities Outstanding.....	6
4.3	Issuers With Mineral Projects	7
4.4	Issuers with Oil and Gas Operations.....	18
5	SELECTED CONSOLIDATED FINANCIAL INFORMATION.....	18
5.1	Annual Information.....	18
5.2	Dividends.....	18
5.3	Foreign GAAP	18
6	MANAGEMENT'S DISCUSSION AND ANALYSIS	18
6.1	Form 44-101F2 Disclosure.....	18
6.2	Foreign GAAP.....	22
7	MARKET FOR SECURITIES	22
7.1	Market for Securities	22
8	DIRECTORS AND OFFICERS	23
8.1	Name, Address, Occupation and Security Holding.....	23
8.2	Corporate Cease Trade Orders or Bankruptcies	24
8.3	Penalties or Sanctions.....	25
8.4	Personal Bankruptcies	25
8.5	Conflicts of Interest.....	25
9	ADDITIONAL INFORMATION.....	26
9.1	Additional Information.....	26

PRELIMINARY INFORMATION

The information contained in this Annual Information Form is as at December 31, 2000, unless otherwise stated. Throughout the Annual Information Form ("AIF"), Northern Orion Explorations Ltd. may be referred to as Northern Orion or the Company. Where the context requires, the term Company includes the subsidiaries of the Company. All dollar amounts in this annual information form are in Canadian dollars unless otherwise stated.

2 CORPORATE STRUCTURE

2.1 Name and Incorporation

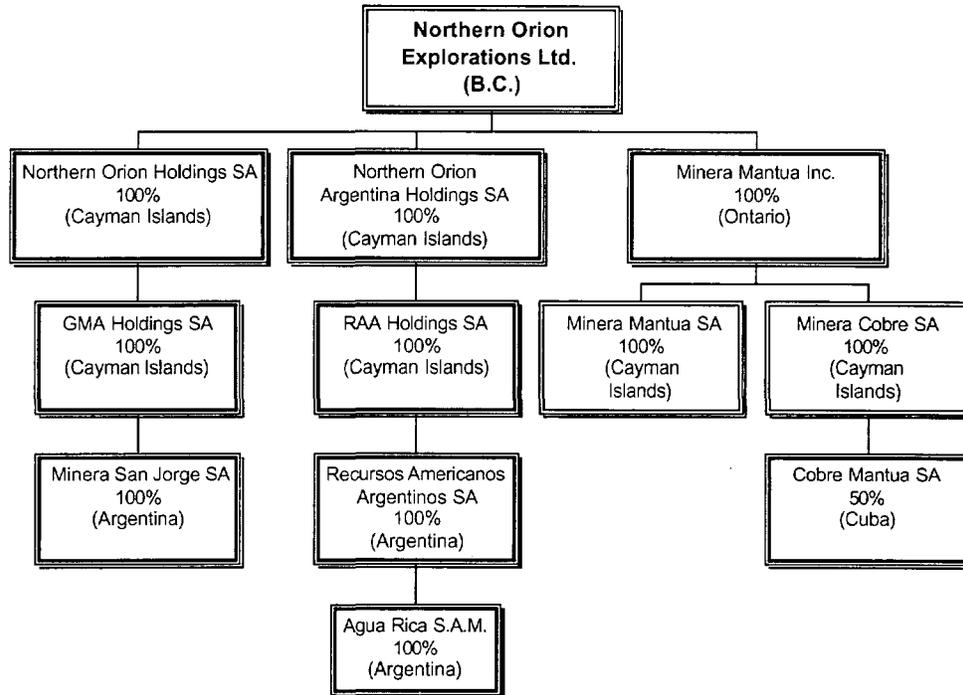
Northern Orion Explorations Ltd. was incorporated with the name Northern Orion Resources Ltd. under the laws of British Columbia by memorandum and articles dated April 30, 1986. On October 31, 1986, the memorandum of the Company was amended to change the name of the Company to Northern Orion Explorations Ltd. On November 28, 1994, the memorandum of the Company was amended to increase the authorized capital from 25,000,000 to 100,000,000 common shares without par value ("Common Shares"), and on October 15, 1997, the memorandum and articles of the Company were amended to increase the authorized capital from 100,000,000 to 700,000,000 shares divided into 500,000,000 Common Shares, 100,000,000 First Preference Shares without par value ("First Preference Shares") and 100,000,000 Second Preference Shares without par value ("Second Preference Shares").

The registered and records offices of the Company are located at 10th Floor, 595 Howe Street, Vancouver, British Columbia V6C 2T5 and its principal executive office is located at Suite 1400, 570 Granville Street, Vancouver, British Columbia V6C 3P1.

2.2 Intercorporate Relationships

The following chart sets forth the name of each material subsidiary of the Company, the jurisdiction of its incorporation and the direct or indirect percentage ownership of the Company in such subsidiary.

Northern Orion Explorations Ltd.
Organizational Structure Chart
As At October 16, 2001



3 GENERAL DEVELOPMENT OF THE BUSINESS

The Company, through its subsidiaries, is engaged in the exploration for, and development and production of, precious and base metals. The Company indirectly owns all of the outstanding shares of Minera San Jorge S.A. ("MSJ") and Recursos Americanos Argentinos S.A. ("RAA"), both Argentine companies that hold interests in mineral properties in Argentina. The Company also owns all of the outstanding shares of Minera Mantua Inc. ("MMI"), an Ontario company that holds an indirect interest in the Mantua property in Cuba.

3.1 Three Year History

Since its incorporation in 1986, the Company has been in the business of acquiring and exploring mineral properties. For the past three years, the Company has been principally engaged in attempting to locate deposits of precious and base metals on its Agua Rica and San Jorge properties in Argentina and attempting to find financing or joint venture partners to bring the Mantua project in Cuba into full production.

Agua Rica Project

As at December 31, 2000, BHP had fully reimbursed the Company for the US\$7.9 million paid to exercise the Agua Rica Option. Under the Joint Operating Agreement, exploration expenditures are shared between RAA and BHP on a 30-70 basis, respectively. During 2000, the Company contributed \$4.4 million (1999 - \$5.6 million) to the project, which includes the Company's 30% share of the total budget. In the second quarter of fiscal 2001, the Company elected to reduce its interest in the Agua Rica Project to approximately 29.12% from the original interest of 30%. As a result, cash calls made by the operator to August 31, 2000, will not be made by the Company.

RAA and BHP are continuing with a work program that is designed to advance the project towards completion of a final feasibility study. Work completed in 1998 included 300 metres of underground drifting, collection of 300 tonnes of bulk sample, pilot mill testing as well as revised capital and operating cost estimates. In the past three years, all the physical work necessary to support a bankable feasibility study has been completed. Base-line environmental studies and process enhancement are ongoing.

San Jorge Project

The original San Jorge copper/gold property, located approximately 90 kilometres northwest of the City of Mendoza in Mendoza, Argentina and 250 kilometres northeast of Santiago, Chile, consisted of seven mining concessions (covering about 5 1/2 square kilometres) and 35 mineral claims (covering about 102 square kilometres) owned by MSJ. The purchase price for the seven concessions was US\$4.015 million. During 2000, the Company expended \$0.414 million in exploration and development expenses on the San Jorge project (versus \$1.7 million in 1999). In fiscal 2000 the Company wrote down the San Jorge project by \$22.027 million due to continuing low metal prices. The property remains in good standing.

In March 1999, GMA and Argentina Mineral Development ("AMD"), an associate of Climax Mining of Australia, entered into an agreement (the "AMD Agreement") that allows for the consolidation of a large land package surrounding the San Jorge property. Both companies agreed to contribute their property holdings and mining rights in San Jorge and the surrounding area into a newly formed holding company with GMA owning 85% and AMD having the remaining 15%. This new company, Minera San Jorge S.A. ("MSJ") is to continue the development of the property, working towards producing a bankable feasibility study. AMD's ownership in the holding company was to be redeemed in exchange for a 2% net smelter return royalty ("NSR") on the mine developed if MSJ produced a feasibility study within three years, obtained financing within another year and committed to construction of a mine within another six months. If AMD's interest were redeemed, GMA would then own 100% of the new company. If the project did not proceed, the ownership structure will remain in place and will allow for potential disposal of each party's interest.

In April 2000, GMA's holding in the San Jorge property was transferred without cost or penalties to MSJ. The transfer was part of the reorganization of Northern Orion's Argentine holdings and part of the settlement with Dr. Ricardo Auriemma.

Areas to the east and southeast of San Jorge, within the expanded property area, contain large IP chargeability anomalies that coincide with anomalous copper-bearing, intercepts in the core of a reconnaissance drill hole, indicating potential for satellite copper systems similar to the San Jorge deposit. The Company is currently evaluating the potential for exploring for and developing additional resources in the satellite areas. However, limited work is planned for 2001 in light of the continued poor metal prices.

Mantua Project

Mining of gold ore commenced in February 1998 and was concluded in September 1999. Prior to achieving commercial production, all costs of start up operations and related interest and overhead were capitalized. During the operation, recovered gold was below expectations and totalled 31,389 ounces of which the Company's share was 15,694 ounces. Due to higher than expected ore clay and fines content field leach times had to be extended to 70 days from the designed 28 days and ultimate gold recoveries were 50% of what was forecast.

In August 2001, the Company and International Barytex Resources Ltd. ("Barytex") announced that they have entered into an option agreement whereby Barytex may acquire the undivided 50% interest of the Company in the Mantua Copper Project in Cuba by the acquisition of 100% of the issued and outstanding

shares in Minera Mantua Inc., a wholly-owned subsidiary of the Company. Geominera S.A., a Cuban company controlled by the government of Cuba, holds the remaining 50% interest in the project.

In order to exercise the option, Barytex must:

- assume and pay all carrying costs relating to Northern Orion's operations in Cuba and the Project;
- complete a bankable feasibility study within 18 months;
- arrange all financing required in order to commence commercial production; and
- commence construction of the project within 120 days of making a production decision.

The project is subject to approximately US \$28 million in subordinated debt owing to the Company from Geominera S.A. in respect of past advances from the Company to fund the exploration and development of the project including mining of a gold-enriched gossan capping the copper deposit.

Under the terms of the Agreement, Barytex may acquire the subordinated debt from the Company, thereby significantly enhancing the economics of the project, in consideration for 4.5 million shares of Barytex. The project is subject to a 2.5% net smelter return royalty from attributable production.

Barytex has retained Hatch, an international engineering firm, to prepare a report on the Mantua Copper Project to qualify the transactions for regulatory approvals.

In 1998 the Delita Project was placed on hold due to low gold prices and a write down of \$8.4 million was recorded representing the costs of exploration of the project to 1998. In March 2000, the Company released its interest in the Delita project and returned the project to Geominera.

3.2 Significant Acquisitions and Significant Dispositions

The Company has made no significant acquisitions as that term is defined under applicable securities rules or significant dispositions during its most recently completed financial year. There have been no transactions with insiders, associates of affiliates of the Company except as otherwise noted.

3.3 Trends

Management does not presently know of any trend, commitment, event or uncertainty that may reasonably be expected to have a material effect on the Company's business, financial condition or results of operations. As disclosed in the management discussion and analysis, restructuring has resulted in a reduction in management fees and operating costs.

4 NARRATIVE DESCRIPTION OF THE BUSINESS

4.1 General

Information contained in this Annual Information Form that is of a scientific or technical nature has been prepared by or under the supervision of Dean McDonald, PhD, PGeo, who is a "qualified person" as the term is defined in National Instrument 43-101. The Company explores for minerals and in fiscal 2000 has been concentrated its efforts on restructuring its business, while maintaining its properties in Argentina and Cuba in good standing. Currently, Northern Orion has interests in three properties in the advanced exploration stage. No definitive ore reserves have yet been identified on any of the properties and the Company is continually evaluating the results and analyzing future potential.

The Company does not directly employ any personnel. Northern Orion conducts its business and exploration activities through consultants, whose employees and consultants supervise and carry out the day-to-day business of the Company. – see Item 8.5 “Conflicts of Interest”.

Risks and Uncertainties

The following list risk factors, while not exhaustive, may apply to the Company due to the nature of its business.

Financing Risks

The Company has no revenue other than interest income. A mining project can typically require five years or more between discovery, definition, development and construction and as a result, no production revenue is expected from any of the Company’s exploration properties in that time frame. All of the Company’s short to medium-term operating and exploration expenses must be paid from its existing cash position or external financing; however, the Company believes it has sufficient capital to fund forecasted levels of operations for at least the next two to three years. Actual funding may vary from that planned due to a number of factors, the most significant of which would be the progress of exploration and development. In the event that changes in market conditions prevent the Company from receiving additional external financing if required, the Company would be forced to review its property holdings and prioritize project exploration to fit within cash availability.

Foreign Countries: Currency Fluctuations and Regulatory Requirements

The Company’s principal areas of activity in fiscal 2000 were Argentina and Cuba, which have different cultural, economic and political environments to that of Canada and the United States. Instability in the Argentinean currency has subjected the Company to some degree of foreign currency risk. Most of the Company’s expenditures in Argentina and Cuba are in United States (US) dollars. The Company minimizes this risk by maintaining most of its cash in Canadian and US dollars outside of Argentina and Cuba.

Exploration and Mining Risks

The business of exploration for minerals and mining involves a high degree of risk. Few properties that are explored are ultimately developed into producing mines. At present, none of the Company's properties has a known body of commercial ore. Substantial expenditures are required to establish ore reserves through drilling, to develop metallurgical processes to extract the metal from the ore and to develop the mining and processing facilities and infrastructure at any site chosen for mining. Although substantial benefits may be derived from the discovery of a major mineralized deposit, no assurance can be given that minerals will be discovered in sufficient quantities to justify commercial operations or that funds required for development can be obtained on a timely basis.

Uninsured Risks

In the course of exploration, development and production of mineral properties, certain risks, and in particular, unexpected or unusual geological and operating conditions including rock bursts, unusual or unexpected formations, formation pressures, cave-ins, land-slides fires, explosions, flooding and earthquakes, power outages, labour disruptions, and the inability to obtain suitable or adequate machinery, equipment or labour may occur. It is not always possible to fully insure against such risks and the Company may decide not to take out insurance against such risks as a result of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the securities of the Company.

Metal Prices, Environmental and other Regulatory Requirements

The economics of developing gold and other mineral properties is affected by many factors, including the cost of operations, variations in the grade of ore mined, fluctuations in metals markets, costs of processing equipment and factors such as government regulations, including regulations relating to royalties, allowable production, importing and exporting of minerals and environmental protection. The Company has a history of losses and it has no producing mines at this time.

The operations of the Company will require licenses and permits from various governmental authorities. There can be no assurance that the Company will be able to obtain all necessary licenses and permits that may be required to carry out exploration, development and mining operations at any of its mineral properties.

Factors beyond the control of the Company may affect the marketability of any gold or other minerals discovered. Metal prices have fluctuated widely, particularly in recent years, and are affected by numerous factors beyond the Company's control, including international economic and political trends, acts of terrorism, expectations of inflation, currency exchange fluctuations, interest rates, global or regional consumption patterns, speculative activities and worldwide production levels. The effect of these factors cannot accurately be predicted.

The Company's operations may be subject to environmental regulations promulgated by government agencies from time to time. Environmental legislation provides for restrictions and prohibitions on spills, releases or emissions of various substances produced in association with certain mining industry operations, such as seepage from tailings disposal areas, which would result in environmental pollution. A breach of such legislation may result in imposition of fines and penalties. In addition, certain types of operations require the submission and approval of environmental impact assessments. Environmental assessments of proposed projects carry a heightened degree of responsibility for companies and directors, officers and employees. The cost of compliance with changes in governmental regulations has a potential to reduce or eliminate the profitability of operations.

Title Matters

Although the Company obtains legal opinions with respect to title to its properties, there is no guarantee that title to such properties will not be challenged or impugned. The Company's mineral property interests may be subject to prior unregistered agreements or transfers or native land claims and title may be affected by undetected defects.

Competition

The mining industry is intensely competitive in all its phases. The Company competes with many companies possessing greater financial resources and technical facilities than itself for the acquisition of mineral concessions, claims, leases and other mineral interests as well as for the recruitment and retention of qualified employees.

4.2 Issuers With Asset-backed Securities Outstanding

N/A

4.3 Issuers With Mineral Projects

Argentine Properties

On November 17, 1994, the Company acquired all of the outstanding shares of Grupo Minera Aconcagua S.A. ("GMA"), a private Argentine company with interests in various exploration projects including the San Jorge Project further described below, from Miramar Mining Corporation ("Miramar"), Grupo R.A. (a group of Argentinean companies controlled by Dr. Ricardo Auriemma) and an Aruba corporation controlled by Dr. Auriemma. The shares of GMA were purchased for 6,000,000 Common Shares (2,600,000 to Miramar, 2,600,000 to Grupo R.A. and 800,000 to the Aruba corporation), and US\$1,073,490 in cash to Grupo R.A. Pursuant to that transaction, Miramar was reimbursed \$650,000 for out-of-pocket costs incurred in acquiring its interest in GMA and structuring the transaction, property maintenance expenditures in Argentina and due diligence work on the properties. An additional 300,000 Common Shares were issued as to 150,000 Common Shares each to two unrelated third parties for finders' fees.

On June 9, 1995, the Company acquired in an arm's length transaction all of the outstanding shares of RAA, a private Argentinean company, from American Resource Corporation, Inc. ("ARC") for 15,000,000 Common Shares. As part of the same transaction, Miramar Finance (Bermuda) Ltd. ("Miramar Bermuda"), a wholly owned subsidiary of Miramar, loaned \$10,000,000 to ARC which was repaid in 1995. ARC has disposed of all 15,000,000 Common Shares issued to it in the RAA transaction.

GMA was transferred back to Dr. Auriemma on April 7, 2000, in part for consideration for settlement of outstanding issues associated with the San Jorge project and as part of the rationalization of Northern Orion's holdings in Argentina. At the same time, the San Jorge project was transferred from GMA to Minera San Jorge S.A. ("MSJ") and a "servidumbre" over surface and access rights was granted to MSJ. The following is a brief description of the Agua Rica and San Jorge exploration projects in which the Company has indirect interests.

Agua Rica Project

The Agua Rica copper/gold property covers an area of about 13.5 square kilometres and is located in Catamarca Province, Argentina. On May 5, 1996, RAA exercised an option (the "Agua Rica Option") to purchase all of the outstanding shares of Agua Rica S.A., a private Argentine company that owns the central mining claims of the Agua Rica property, for a purchase price of US\$7.9 million. Pursuant to an agreement made in September 1993 (the "Joint Operating Agreement"), BHP Minerals International Inc. ("BHP") earned a 70% joint venture interest in the project by spending US\$1 million on exploration and agreeing to reimburse RAA for all costs of exercising the Agua Rica Option. As at December 31, 2000, BHP had fully reimbursed the Company for the US\$7.9 million paid to exercise the Agua Rica Option. Under the Joint Operating Agreement, exploration expenditures are shared between RAA and BHP on a 30-70 basis, respectively. During 2000, the Company contributed \$4.4 million (1999 - \$5.6 million) to the project, which includes the Company's 30% share of the total budget. In the second quarter of fiscal 2001, the Company elected to reduce its interest in the Agua Rica Project to approximately 29.12% from the original interest of 30%. Cash calls made by the operator to August 31, 2000, will not be made by the Company, and the reduction in carrying cost and the related reduction in accounts payable will be reflected in the consolidated financial statements for the year ended December 31, 2001.

Location and Access

The Agua Rica property is located approximately 30 kilometres north of the town of Andalgalá in Catamarca Province, Argentina. The property is at an elevation of 3,300 metres. The original access to the property was by provincial highway to within 20 kilometres and then by four-wheel drive road. In 1997, a road to the property was completed 35 kilometres up the Potrero valley from Andalgalá.

History

City Services Limited explored the Agua Rica property from 1969 to 1972. It carried out geological mapping and geochemical sampling and drilled 27 surface holes and 6 underground holes. Many holes were lost or had poor recovery, but some had 40 to 50 metre intersections of greater than 1% copper and gold grades in the range of 0.3 grams per tonne to 0.5 grams per tonne. In 1994, under the Joint Operating Agreement, BHP commenced a work program of mapping, surface sampling and drilling. Follow-up drilling in 1995 intersected thick intervals of near surface, supergene-enriched chalcocite and covellite mineralization containing significant gold, silver and molybdenum. By the end of 1998, more than 67,000 metres of drilling in 176 holes had defined continuous copper-gold-molybdenum mineralization over an area of 2,000 metres by 1,200 metres and to depths of up to 600 metres below surface.

RAA and BHP are continuing with a work program that is designed to advance the project towards completion of a final feasibility study. Work completed in 1998 included 300 metres of underground drifting, collection of 300 tonnes of bulk sample, pilot mill testing as well as revised capital and operating cost estimates. There was no material activity on the property in 1999 or 2000 as all the physical work necessary to support a bankable feasibility study has been completed. Base-line environmental studies are ongoing.

Geology and Mineralization

Basement rocks near Agua Rica consist of Cambrian-Ordovician metamorphic schists and garnet gneisses that were intruded by an Ordovician-age granite (Capillitas Batholith) and a subsequent cluster of Miocene age porphyries (Farallon Negro Complex). The oldest known intrusive near Agua Rica is the Melcho Monzonite with an age of 8.6 million years. Intrusive activity peaked overall at 7 to 8 million years, but persisted until 5.2 million years (dacite dykes at Capillitas).

The oldest rocks at Agua Rica are Paleozoic metasedimentary units that form the wallrock to the mineralized intrusive complex. The metasediments are intruded by granite, aplite and pegmatite in the Morro Alumbreira area. At Quebrada Seca Norte (Mi Vida) and Trampeadero, the metasediments are intruded by porphyry bodies and are altered mainly to quartz and sericite. Immediately west of Agua Rica the granite has a low-angle fault contact relationship with underlying metasediments suggesting it was thrust over the metasediments.

Dacitic porphyries with well-developed stockworking veins and strong quartz-sericite alteration underlie the central area, containing the principal mineralized areas. The porphyries are cut by an igneous/hydrothermal breccia that has been traced over a vertical extent exceeding 1,000 metres. Upper portions of the breccia exhibit advanced argillic alteration and deeper in the system quartz-sericite alteration is predominant. Supergene enrichment has led to almost complete replacement of chalcopyrite with covellite and chalcocite. Near-surface, high-grade chalcocite zones gradually change downward through the mineralization into mixed chalcocite and covellite zones and then into disseminated covellite zones. Leaching and enrichment is most intense in the central area coincident with silica stockworking and quartz-sericite-pyrite alteration at Quebrada Seca Norte (Mi Vida). Molybdenite occurs primarily as clusters on the edges and in the centres of the veins. In deeper areas, anomalous values of sulphur, arsenic, lead and zinc occur with the copper mineralization.

The presence of higher grade copper (greater than 1%) mineralization in three discrete bodies of supergene enrichment over Quebrada Seca Norte (Mi Vida), Filo Amarillo, and Trampeadero implies that a more extensive enriched zone has been dissected by erosion. Higher-grade gold mineralization (greater than 0.5 grams per tonne) is located on the western side of Quebrada Minas and in hydrothermal breccias in western Trampeadero. Molybdenite is present throughout the system with higher grades occurring in

Trampeadero, Filo Amarillo (greater than 0.07%) and within a deep zone on the south side of Quebrada Seca Norte (Mi Vida).

Geological Resources

In February 1998, BHP reported a new resource estimate, based on 151 diamond drill holes totalling approximately 58,000 metres. At the higher copper cut-off grades, the results show an increase in tonnage of about 30% compared to the previous estimate that was based on 103 holes. A summary of the new estimates of the size and average grades of the mineral resource (in millions of tonnes), shown for different cut-off grades, is as follows:

Cut-off	Tonnes (millions)	Copper %	Molybdenum %	Gold (g/t)	Silver (g/t)	Measured	Indicated	Inferred
0.2%Cu	1,714	0.43	0.032	0.17	3.0	52%	25%	23%
0.4%Cu	750	0.62	0.037	0.23	3.2	70%	21%	9%
0.7%Cu	167	0.99	0.036	0.32	3.3	92%	7%	1%
1.0%Cu	60	1.31	0.040	0.35	4.0	98%	2%	<1%

The resource estimates were prepared in accordance with National Instrument 43-101, The Toronto Stock Exchange's "Disclosure Standards for Companies Engaged in Mineral Exploration, Development & Production" and the Canadian Institute of Mining and Metallurgy classification system. The qualified person responsible for the reserve and resource estimates was Dean McDonald, PhD, P Geo, Exploration Manager, Miramar Mining Corporation.

These were based on results available at the date of calculation. Since the completion of the resource estimation, an additional 25 drill holes have been completed but have not been incorporated in the calculation. In addition, based on drilling to December 31, 1997, BHP has estimated a geologic gold resource in leached caps, which overlie the higher-grade sulphide mineralization using a 0.25 g/t gold cut-off grade, which was publicly disclosed by Northern Orion. This gold may be amenable to recovery by heap leach methods.

Tonnes	89 million
Gold Grade	0.41 g/t
Contained Gold (oz)	1.2 million

These were based on results available at the date of calculation and do not incorporate the results of the abovementioned drill holes completed in 1998.

It has not been established that the gold mineralization at the property may be economically mined.

Initial Feasibility Study

In November 1997, the joint venture released a positive initial feasibility study (the "Study") on the Agua Rica Project, which recommended proceeding with the work to complete a final feasibility study and development plan for the project. The Study was based on resources estimated for the first 40,000 metres of drilling in 103 drill holes completed on the project to the end of 1996. The Study evaluated two development options, both utilizing conventional open pit mining, milling, flotation and concentrate

shipment. The 60K Case examined a single mill line processing 60,000 tonnes per day (“TPD”) of ore throughput, while the 120K Case examined adding a second mill line after year two of production, raising the plant throughput to 120,000 TPD from year three on.

Pit plans were developed by BHP for the 60K and 120K cases, which are summarized as follows:

	60K Case	120K Case
Cut-off Grade	0.4% Cu	0.2% Cu
Daily Ore Production	60,000	120,000
Mine Life (years)	24.4	17
Tonnes (000s)	512,351	681,389
Grades		
- Copper (%)	0.66	0.59
- Gold (g/t)	0.26	0.25
- Silver (g/t)	3.44	3.61
- Molybdenum (%)	0.034	0.033
- Copper Equivalent (%)*	0.97	0.89
Waste (billions of tonnes)	1.2	1.2
Strip Ratio	2.35	1.80

* - The copper equivalent grades are based on in-situ values at the following metal prices: copper at US\$0.80/lb, gold at US\$300 per ounce, silver at US\$5 per ounce and molybdenum at US\$4 per pound. Actual values received will depend on the metal recoveries that may vary for different minerals.

The mine plans were based on information available at the time and do not incorporate the results of the last 73 drill holes, totalling 27,000 metres, including the newly defined Filo Amarillo zone, completed in 1998. New resource and reserve models are to be prepared in 2000/01 incorporating the geological and metallurgical data generated during 1998 and 1999 once a final metallurgical flow sheet has been selected.

Crushing and grinding tests were completed on six ore composites, indicating the ore to be relatively soft. Approximately 200 flotation tests have been completed on ore composites and, based on these tests, recoveries were estimated to be 87% for copper, 50% for gold and 65% for molybdenum producing a copper concentrate grading 33% copper and a separate molybdenum concentrate. Phase 2 pilot-scale metallurgical work was completed in late 1999. Results from the testing of low-grade copper mineralization (0.2 to 0.4%) commonly yield 80% recovery. Higher-grade copper mineralization typically produced concentrates greater than 30% copper with better than 90% recovery. Some ore types also yield 70% recovery of molybdenum.

Capital costs have been estimated (in first quarter 1997 dollars) to be US\$767 million for the 60K Case and US\$1.1 billion for the 120K Case. The capital costs were estimated based on a mix of quotations, experiences of the nearby Alumbreira mine which has a similar capacity, and factored costs from BHP's similar mines elsewhere.

Future Work

The initial Study demonstrates the potential feasibility for the development of a large-scale copper-gold-molybdenum mine at Agua Rica based on 1997 metal prices. Since the publishing of the Initial Feasibility Study, all of the fieldwork necessary for a Bankable Feasibility Study has been completed. The remaining work consists primarily of optimisation studies regarding the evaluations of the mining and processing alternatives together with operating models that could offer the greatest potential returns. Coincident with the optimisation studies, the environmental baseline studies will be concluded.

BHP has presented a budget for the Agua Rica project for the period July 1, 2001, to June 30, 2002. The proposed budget calls for expenditures of US\$1.5 million. The proposed budget and work program is currently being reviewed by the Company.

Fiscal Stability Application

The Agua Rica joint venture filed a fiscal stability application for the project in 1998. The application was approved and guarantees protection for the project from increases in taxes, import duties, royalties and other government-controlled costs for a period of thirty years.

San Jorge Project

The original San Jorge copper/gold property consisted of seven mining concessions (covering about 5 1/2 square kilometres) and 35 mineral claims (covering about 102 square kilometres) owned by MSJ. The purchase price for the seven concessions was US\$4.015 million. During 2000, the Company expended \$0.414 million in exploration and development expenses on the San Jorge project (versus \$1.7 million in 1999). In fiscal 2000 the Company wrote down the San Jorge project by \$22.027 million due continuing low metal prices. The property remains in good standing.

Location and Access

The San Jorge property is located approximately 90 kilometres northwest of the city of Mendoza in Mendoza Province, Argentina and 250 kilometres northeast of Santiago, Chile. The property is accessed from the paved Mendoza-Santiago highway to the town of Uspallata and then 40 kilometres north on a good gravel highway along the Uspallata valley. The property is at an elevation of 2,500 metres and the deposit occurs as a small hill surrounded by flat alluvium plains.

History

Several test pits were dug at San Jorge in the 1960s to investigate outcropping copper-oxide mineralization and in 1964 Compania Minera Aguilar ("Aguilar") optioned the property. Over the next four years, Aguilar completed approximately 950 metres of trenching, 111 kilometres of induced polarization geophysical surveys ("IP") and 32 drill holes for 4,894.5 metres of core. Exploraciones Falconbridge Argentinos ("Falconbridge") optioned the property in 1973 and drilled six holes for 1,126 metres. Falconbridge also sent samples for metallurgical testing.

RAA optioned the property in 1992 and, between 1993 and 1995, 45 reverse circulation holes for a total of 5,518 metres and two core holes totalling 165 metres were drilled. In 1994, metallurgical testing of oxide mineralization from various cutting samples and of an enriched zone was conducted. From 1994 to 1996, 43 reverse circulation holes were drilled for 3,942 metres and eight lines totalling 17.6

kilometres of IP were surveyed over and beyond the mineralized outcrop. The option to RAA was terminated and GMA purchased the property in 1995. Between September 1995 and February 1996 a 5,746-metre drill program was conducted on the property. From this drilling, samples were taken for metallurgical testing.

In March 1999, GMA and Argentina Mineral Development ("AMD"), an associate of Climax Mining of Australia, entered into an agreement (the "AMD Agreement") that allows for the consolidation of a large land package surrounding the San Jorge property. Both companies agreed to contribute their property holdings and mining rights in San Jorge and the surrounding area into a newly formed holding company with GMA owning 85% and AMD having the remaining 15%. This new company, Mnera San Jorge S.A. ("MSJ") is to continue the development of the property, working towards producing a bankable feasibility study. AMD's ownership in the holding company is to be redeemed in exchange for a 2% net smelter return royalty ("NSR") on the mine developed if MSJ produces a feasibility study within three years, obtains financing within another year and commits to construction of a mine within another six months. If AMD's interest were redeemed, GMA would then own 100% of the new company. If the project does not proceed, the ownership structure will remain in place and will allow for potential disposal of each party's interest.

In April 2000, GMA's holding in the San Jorge property was transferred without cost or penalties to MSJ. The transfer was part of the reorganization of Northern Orion's Argentine holdings and part of the settlement with Dr. Ricardo Auriemma.

Geology and Mineralization

San Jorge mineralization consists of a porphyry copper-gold deposit. Mineralization at San Jorge trends northeast and occurs in four approximately horizontal but irregular layers, from top to bottom as follows:

- Leached: A leached cap with copper grades averaging 0.15% copper or less, primarily as green and black copper oxides that should be amenable to dump leaching.
- Oxide: Best developed along the western contact of the granite porphyry with the clastics containing malachite, chrysocolla, tenorite and pitch limonite with grades averaging approximately 0.5% copper and 0.25 grams of gold per tonne at a 0.1% copper cut-off.
- Enriched: Associated with areas of intense faulting and repetitive water recharge, and occurs as sooty and steely chalcocite, covellite, digenite and subordinate chalcopyrite averaging approximately 0.7% copper and 0.20 grams of gold per tonne at a 0.1% copper cut-off.
- Primary: Three high-grade areas have been defined in clastics sedimentary units. Good copper grades in both sedimentary and intrusive rocks have been detected to a depth of 495 metres below surface. Copper occurs dominantly as chalcopyrite with very minor bornite. At a 0.4% copper cut-off, the primary mineralization has an average grade of 0.5% copper and 0.2 grams of gold per tonne.

Gold occurs in native form and uniformly grades 0.2 grams of gold per tonne throughout the copper deposit. Silver distribution is approximately proportional to copper grade and averages 3.5 grams of silver per tonne overall.

Resources

The total indicated and inferred resource at San Jorge for oxide, enriched, and primary mineralization, using a 0.25% copper cut-off, is estimated by Northern Orion to be 381.4 million tonnes grading 0.39 % copper and 0.15 g/t Au for a contained 1.49 million tonnes of copper and 1.8 million ounces of gold. At a 0.4% copper cut-off, the total resource is reduced to 113.1 million tonnes grading 0.60% copper and 0.18 g/t gold for a contained 670,000 tonnes of copper and 636,000 ounces of gold.

The Company, based on open pit mining and heap leaching of the oxide, has estimated an indicated resource and secondary enriched mineralization for solvent extraction and electrowinning (SX/EW) for copper recovery. Assuming a US\$0.85 per pound copper price, a 0.25% copper cut-off, and a 2% NSR with incremental dump leach of low-grade material, an in-pit resource has been estimated at 57.3 million tonnes grading 0.61% copper, for 348,900 tonnes of contained copper. Primary copper-gold mineralization could then potentially be evaluated for a primary milling style of operation, producing concentrates. At today's metal prices this is not economic but gives an idea of the potential of the property if metal prices were to improve.

Metallurgy

In 1997, a metallurgical test program was undertaken to determine the response of the ore to bacterial oxidation. Preliminary results indicated recoveries up to 75% in 250 days. Flotation tests on primary mineralization have given copper recoveries of up to 92% producing concentrates grading 25% copper. Gold is mostly free milling and recoveries of 60% have been achieved.

Exploration

Drilling by GMA and AMD has encountered indications of additional copper mineralization to the northeast, east and southeast of the main San Jorge deposit in a similar geologic setting to the main San Jorge deposit. These results indicate the potential for the expansion of the deposit beyond the current resource.

Areas to the east and southeast of San Jorge, within the expanded property area, contain large IP chargeability anomalies that coincide with anomalous copper-bearing, intercepts in the core of a reconnaissance drill hole, indicating potential for satellite copper systems similar to the San Jorge deposit. The Company is currently evaluating the potential for exploring for and developing additional resources in the satellite areas. However, limited work is planned for 2001 in light of the continued poor metal prices.

Cuban Properties

Acquisition of Properties

The Company entered into a letter of intent dated May 1, 1995, with Miramar and subsequently entered into an agreement dated October 4, 1995 (the "Transaction Agreement"), with Miramar, Red Lion Management Ltd. ("Red Lion") and Richard Dewinetz ("Dewinetz") (collectively the "Vendors") pursuant to which on December 20, 1995, the Company purchased (the "MMI Transaction") from the Vendors all of the outstanding shares of Minera Mantua Inc. ("MMI") in exchange for 24 million Common Shares of the Company. MMI, through Minera Cobre S.A. ("Cobre") and Minera Delita S.A. ("Delita"), both of which became wholly-owned subsidiaries of MMI prior to the completion of the MMI Transaction, has a 50% working interest in the Mantua copper project (the "Mantua Project"), and had the right to earn a 50% working interest in the Delita gold project (the "Delita Project"), respectively. The Mantua Project and the Delita Project are both located in Cuba and are referred to collectively herein as the "Cuban Projects".

Prior to the MMI Transaction, Miramar owned all of the outstanding shares of Cobre and Delita. Miramar acquired all of the outstanding shares of Cobre and Delita from Matlock Mining, N.L. ("Matlock"), an Australian company, pursuant to an agreement dated March 1, 1993 (the "Matlock Purchase Agreement"). Pursuant to the Matlock Purchase Agreement, Miramar paid Matlock share consideration having a value of approximately \$475,000 in respect of the purchase price for the shares of Cobre and Delita and was obligated to pay a further \$350,000 to Matlock (which amount was subsequently paid by the Company). The Matlock Purchase Agreement also provides that (i) Cobre is obligated to repay to Matlock the \$750,000, plus interest, which was invested by Matlock in the Mantua Project and the Delita Project prior to the sale of the shares of Delita and Cobre by Matlock to Miramar pro rata with the return of equity to Miramar, and (ii) Matlock is entitled to receive 12% of the difference between all profits received by Cobre and Delita from their 50% working interests in the respective projects and administrative expenses (to a maximum of US\$150,000 per year for each company) of Cobre and Delita.

Prior to the MMI Transaction, Miramar transferred to MMI all of the outstanding shares of Cobre and Delita and the obligation to pay \$350,000 to Matlock and converted all of its advances to fund the Cuban Projects to April 30, 1995 into shares of MMI. The aggregate cost, as at April 30, 1995, of Miramar's interest in Cobre and Delita, including the amount of \$350,000 payable to Matlock and amounts advanced by Miramar to Cobre and Delita to fund the Cuban Projects, was \$7,188,261. A wholly owned subsidiary of Miramar was indebted to each of Red Lion and Dewinetz in the amount of \$75,000, which amounts were used for the Cuban Projects. Prior to the MMI Transaction, Red Lion and Dewinetz converted such indebtedness into shares of MMI.

Pursuant to the MMI Transaction, Miramar, Red Lion and Dewinetz exchanged all of their shares of MMI for 23,484,850 Common Shares, 257,575 Common Shares and 257,575 Common Shares of the Company, respectively, at an ascribed price of \$2.50 per share. For tax purposes the shares of MMI were transferred to the Company at the respective cost bases of such shares to the Vendors. Accordingly, in the event the Company disposes of the shares of MMI at an amount in excess of such cost bases, the Company will realize a taxable gain on such disposition.

The reserve and resource estimates for the Cuban projects have been prepared in accordance with proposed OSC National Instrument 43-101 and the Canadian Institute of Mining and Metallurgy classification system.

Mantua Project

The Mantua property contains a secondarily enriched copper deposit. It is located in Pinar del Rio Province, western Cuba, 240 kilometres from Havana. The property consists of an 8 square kilometre production concession and an adjoining 11.2 square kilometre area of interest. The site is reached via a four-lane highway from Havana to Pinar Del Rio, which is 65 kilometres east of Mantua. A paved secondary road then links with the site.

Acquisition Agreement

Cobre acquired a 50% working interest in the Mantua Project pursuant to an agreement with Geominera SA ("Geominera") dated August 13, 1993, (as amended, the "Cobre Association Agreement"). Geominera is a Cuban corporation formed by the Cuban Ministry of Basic Industry for the purpose of holding mineral rights and entering into agreements with foreigners for the development of such mineral rights. The Cobre Association Agreement and the related articles of incorporation are the constating documents of Cobre Mantua S.A. ("Comantua"), a Cuban joint enterprise the shares of which are allocated on a 50/50 basis between Geominera and Cobre, with each party's equity capital contribution agreed to have been US\$1 million. Geominera's equity capital contribution was comprised of the

exclusive right to explore, develop, mine and exploit the Mantua Project, together with all previous studies and investigations relating to the Mantua Project. Cobre's equity capital contribution was comprised of the feasibility study on the Mantua Project that was prepared in 1993 together with a cash contribution of US\$20,000. Profits of Comantua are to be distributed 50% to Cobre and 50% to Geominera. Pursuant to the Cobre Association Agreement, Cobre was required to negotiate and obtain all financing necessary for the commercial development of the Mantua Project by June 30, 1995. However, subsequent to the date of the Cobre Association Agreement, Geominera agreed that the June 30 date would be waived so long as Cobre obtained financing when required to develop the Mantua project.

Under the Cobre Association Agreement, in order to repay loans received by Comantua from Cobre, Cobre is entitled to the total net income (after satisfaction of all current obligations in respect of third party financing) of the Mantua Project during the first two years of operations of the mine and the industrial installations. If any such loan amount remains outstanding at the end of that two-year period, Cobre will continue to be entitled to no less than 75% of the net income of the Mantua Project until all such amounts owed are repaid. All major decisions of Comantua require the approval of the representatives of each of Geominera and Cobre; however, all ordinary operating decisions are made by the operations manager who is nominated by Cobre for a period of time equal to 1.5 times the period of time required for Cobre to receive a return of its capital investment.

History and Exploration

In the early 1960s workers from the Instituto de Recursos Minerales, a Cuban government agency, explored the Mantua copper deposit. In 1964 copper mineralization was discovered beneath an iron rich gossanous cap by an exploration program, including drilling, supervised by Soviet geologists. In 1992 Marc Rich & Co., a United Kingdom-based investment firm, completed an additional 12 drill holes, geotechnical investigations and metallurgical test work.

In late 1993 Minera Cobre ("MC") commenced detailed investigations, including an additional 13 drill holes, bulk sampling and metallurgical testing. An 11 tonne metallurgical sample was collected from one of the test shafts for metallurgical testing. A preliminary metallurgical scoping study was completed in the latter part of 1993 on material collected from one drill hole and a metallurgical test program was commenced in February 1994 on material from the 11 tonne bulk sample.

In the summer of 1994 MC drove a 145-metre exploration tunnel to access the ore body and in September and October 1994 extracted 600 tonnes of material for pilot scale metallurgical testing. A pilot plant was operated using material extracted from the tunnel. Pilot plant operations were conducted in two phases, in November and December 1994 and from January to March 1995. Results of these operations confirmed the viability of the preferred processing method.

In 1995 MC identified significant gold values in the gossan cap overlying the main copper deposit, as well as payable gold credits in the copper ore itself, and a zone of anomalous gold values parallel to the copper deposit. A program of work to evaluate the potential for an economic gold operation to recover gold values from the gossan cap was commenced in February 1995. A total of 65 drill holes were completed, delineating a zone of potentially commercial gold values over the centre of the copper deposit. Metallurgical testing has demonstrated the amenability of this material to conventional heap leach recovery methods.

In 1996 a regional exploration program was initiated to identify additional gold occurrences in gossans, saprolites and regional shear structures. In excess of six hundred surface samples were taken throughout the region and some minor gold occurrences were identified.

Drilling in 1997 involved two main phases that included nine diamond drill holes for 655 metres and eight diamond drill holes for 684.7 metres, respectively. Both programs were primarily designed to define the distribution of near surface, gold gossan; however, the second program included two deep holes. Late in the year a single hole was drilled to collect a metallurgical sample.

Geology and Mineralization

The Mantua copper deposit is a secondary enrichment of copper mineralization produced by the weathering of primary sulphide mineralization of volcanogenic-exhalative origin. Copper has been leached from trace amounts of sulphide copper mineralization (chalcopyrite) and re-deposited beneath a gold-rich gossanous cap.

Primary sulphide mineralization, both massive and disseminated, occurs within a 50 to 100 metre thick sequence of inter-layered basic volcanic rocks, shale, siltstones and sandstones. Folding and thrust faulting in the Late Mesozoic was focused between the more competent limestone units causing extensive shearing and brecciation of the volcanic and sedimentary sequence.

The folding of the Mantua and surrounding area rocks is interpreted as a broad syncline and anticline defining an open "S" shape. The eastern limb of the syncline contains the majority of the mineralization defined by drilling. The Mantua copper deposit forms an elongate lens with a northeast to southwest strike, concordant with the enclosing formations. The deposit dips 50 to 70 degrees to the west and has a strike length of 1,300 metres.

Unoxidized mineralization is dominated by pyrite, with some chalcopyrite and sphalerite. The leached cap oxide zone is composed of lateritic iron oxides with essentially no copper content. The supergene zone below this leached cap consists mainly of chalcocite, with cuprite, covellite and some native copper. The secondary-enriched copper zone can be divided into three distinct ore types that may be segregated during mining operations.

Geological Resources

The reserves and resources at Mantua have been calculated by the Company, and have been confirmed by qualified third parties. Within the proposed open pit and assuming a copper price of US\$0.85 per pound, proven and probable reserves are estimated to be 7,525,000 tonnes grading 2.74% copper containing 206,212 tonnes or 454.6 million pounds of copper and additional measured and indicated resources are estimated to be 4,454,000 tonnes grading 0.76% copper containing 33,850 tonnes or 74.6 million pounds of copper. Mine Plan and Capital Cost

After a thorough review of previous test work and a rigorous program of laboratory and pilot tests conducted in Cuba, Chile and Canada from 1993 through 1998, a processing scheme was selected which utilizes modern, proven processing technologies to extract the maximum amount of copper economically possible. These processing steps include grinding, agitation leaching, solvent extraction and, finally, electrowinning for the production of copper cathodes.

The copper ore will be fed as mined directly to an SAG (semi-autogenous grinding) mill, followed by leaching in agitated tanks. A series of counter current decantation thickeners will then wash out all of the copper-containing acid solution. Copper-containing acid solutions will be processed through a solvent extraction circuit to form a strong electrolyte solution from which copper cathodes will be produced by conventional electrowinning. Tailings will be pumped to a nearby impoundment for disposal based on an environmentally sound design.

The preliminary design is for processing facilities capable of treating 750,000 tonnes of high-grade copper ore per annum.

Phase 1 Gold Leaching

Construction of the Phase 1 gold leaching at the Mantua Project commenced in March 1997 and concluded in February 1998. Phase 1 consisted of a heap leach gold operation that was planned to recover approximately 70,000 ounces of gold from the gossan cap over a two-year period at a capital cost of approximately US\$11.6 million. Removal of this material was intended to allow access to the high-grade copper reserve under the gossan cap.

Mining of gold ore commenced in February 1998 and was concluded in September 1999. Prior to achieving commercial production, all costs of start up operations and related interest and overhead were capitalized. During the operation, recovered gold was below expectations and totalled 31,389 ounces of which the Company's share was 15,694 ounces. Due to higher than expected ore clay and fines content field leach times had to be extended to 70 days from the designed 28 days and ultimate gold recoveries were 50% of what was forecast.

Phase 2 Copper Mining

The Phase 2 copper operation is planned to commence after gold leaching is completed. Evaluation of the copper phase is proceeding, with production targeted to average about 40 million pounds of copper cathode per year at a cash cost of US \$ 0.45 per pound.

Capital costs are anticipated to be US\$ 50 million with a moderate pressure and temperature ferric leach process. This process utilizes proven technologies that are in use at other mining operations.

Preliminary financial evaluation by the Company, independently reviewed by Bateman Project Holdings Limited, indicates that an average annual production rate of 39 million pounds of copper cathode can be achieved with direct operating costs of US \$0.445 per pound over a 11 year mine life. This would place the operation in the lower quartile of world copper production costs. Capital costs including contingency are estimated at US \$48.5 million.

In August 2001, the Company and International Barytex Resources Ltd. ("Barytex") announced that they have entered into an option agreement whereby Barytex may acquire the undivided 50% interest of the Company in the Mantua Copper Project in Cuba by the acquisition of 100% of the issued and outstanding shares in Minera Mantua Inc., a wholly-owned subsidiary of the Company. Geominera S.A., a Cuban company controlled by the government of Cuba, holds the remaining 50% interest in the project.

In order to exercise the option, Barytex must:

- assume and pay all carrying costs relating to Northern Orion's operations in Cuba and the Project;
- complete a bankable feasibility study within 18 months;
- arrange all financing required in order to commence commercial production; and
- commence construction of the project within 120 days of making a production decision.

The project is subject to approximately US \$28 million in subordinated debt owing to the Company from Geominera S.A. in respect of past advances from the Company to fund the exploration and development of the project including mining of a gold-enriched gossan capping the copper deposit.

Under the terms of the Agreement, Barytex may acquire the subordinated debt from the Company, thereby significantly enhancing the economics of the project, in consideration for 4.5 million shares of Barytex. The project is subject to a 2.5% net smelter return royalty from attributable production.

Barytex has retained Hatch, an international engineering firm, to prepare a report on the Mantua Copper Project to qualify the transactions for regulatory approvals.

4.4 Issuers with Oil and Gas Operations

N/A

5 SELECTED CONSOLIDATED FINANCIAL INFORMATION

5.1 Annual Information

Five Year Comparative Data

All dollar figures are in thousands except for per share data that is in dollar amounts.

	2000 (\$)	1999 (\$)	1998 (\$)	1997 (\$)	1996(\$)
Total Revenue	66	2,987	3,629	637	2,593 ⁽²⁾
Loss for the year	23,804	18,167	21,287	7,126	1,526 ⁽²⁾
Loss per share	0.28	0.25	0.29	0.10	0.02 ⁽²⁾
Total Assets	83,071	119,265	131,411	138,621	123,819
Long-term Debt	27,254	27,669	33,828	13,567	1,370
Dividends declared	NIL	NIL	NIL	NIL	NIL

(1) As at and for the year ended December 31

(2) Includes a gain on disposal of mineral properties of \$1.3 million or \$0.018 per common share

5.2 Dividends

There are no restrictions that could prevent the Company from paying dividends, however, the Company has not paid any dividends on its common shares since incorporation and has no present intention of paying dividends as it anticipates that all available funds will be invested to finance the growth of the Company.

5.3 Foreign GAAP

N/A

6 MANAGEMENT'S DISCUSSION AND ANALYSIS

6.1 Form 44-101F2 Disclosure

The Company is primarily engaged in the development of its main mineral properties – Agua Rica in Argentina and Mantua in Cuba. Financial constraints on the Company for the past three years have necessitated a significantly reduced scale of all corporate activities. Consequently, many property interests have been evaluated in light of such constraints and released.

Exploration and Development Activities

Agua Rica

Work continued at a reduced level in 2000 at the 30% owned Agua Rica Project in Argentina. The project operator, BHP, completed the 1999/2000 work program in June 2000. The Company's share of the work program (including management fees to the operator) in 2000 was approximately \$682,000 (1999 - \$2,895,000). To date, the Company has funded all required cash calls to meet its commitment to Agua Rica. Due to the persistent weak world copper price in 2000, activities at Agua Rica continued on a reduced scale from previous years. The 1999/2000 work program built on the work performed in completing the Initial Feasibility Study, which was issued in November 1997. The findings of this study indicated that a large low-cost mine could be developed that would have attractive returns on capital invested. On a long-term basis, the Company's share of the capital requirement to develop an open pit mine and concentrator at Agua Rica could be in excess of US\$ 200 million.

Effective June 30, 2001, the Company has elected to reduce its interest in the Agua Rica Project to approximately 29.3% from its original interest of 30%. Cash calls made by BHP as operator will not be made by the Company to BHP with respect to cash calls made to June 30, 2001. A corresponding reduction in carrying cost and accounts payable was reflected in the Company's balance sheet in the second quarter.

Significant progress has been made in the first half of fiscal 2001 with the restructuring of the project that would result in having the BHP and Northern Orion interests held in a single corporate Entity. Each of the companies would own equity reflecting a 70%/30% ownership ratio, which was the ownership until the end of the second quarter of fiscal 2001. Management is continuing to examine all of the Company's options on how best to proceed with this important project including alternative operating scenarios and restructuring of holdings.

Mantua Copper

During fiscal 2000, the Company undertook to seek financing for a bankable feasibility study for the copper mining phase with negotiations underway for funding to complete this study. A final production decision for the copper phase is pending the results of this feasibility study. The Company's ability to develop the copper phase at Mantua is dependent upon obtaining third party financing. A production decision for the copper phase is dependent upon the results of the feasibility study.

Subsequent to the end of the second quarter the Company announced that it had entered into an agreement with International Barytex Resources Limited ("Barytex"). Under the agreement, Barytex has an option to acquire all of the shares of Minera Mantua Inc., a wholly owned subsidiary of the Company through which it holds its 50% interest in the Mantua Copper Project. To exercise its right, Barytex must assume the costs and obligations of the Company's Cuban operation, finance and complete the bankable feasibility study and finance and build the copper mine and plant. During the option period, the Company may nominate two directors to the Barytex board. Subsequent to the exercise of the option, the Company would retain a 2% net smelter royalty in proceeds to Barytex from the mine.

The Company is also owed an aggregate amount of US\$28 million by the project in consideration of previous expenditures. Barytex may, if it elects to proceed to production, acquire this debt in exchange for 4.5 million common shares of Barytex.

Commitments

Until the end of the second quarter of fiscal 2001, the Company had accrued the contribution to the Agua Rica joint venture with BHP. Under the joint venture, exploration and development expenditures are made under the terms of annual work programs and are contributed to on the basis of the respective party's interest. Northern Orion's interest is 30% and BHP has a 70% interest. At June 30, 2001, the Company elected to reduce its interest in the Agua Rica Project to an approximate 29.3% interest. It is expected that total expenditures under the current 12-month program will be approximately \$2.3 million (US\$1.5 million), of which the Company's share is \$0.68 million (US\$0.45 million), including management fees. The Company currently does not have sufficient cash resources to fund its share of the program, and will have to continue to raise capital to maintain its current interest or continue to gradually reduce its interest to a 10% carried interest. This decision will have to be made annually on presentation of the annual budget to the Company by BHP, the operator of the joint venture.

Outlook

Advanced Stage Projects

The Company has evaluated, on a pre-feasibility basis, the potential for developing an SX/EW operation at San Jorge. Even though the results were encouraging, management believes that the project economics could be more attractive with the definition of additional resources through further exploration drilling supplemented by a recovery in the copper price. The Company is seeking a third party with which to form a joint venture to undertake the necessary work program and to complete a final feasibility study.

Exploration Projects

In light of financial constraints, the Company has suspended exploration efforts in all non-core properties. The Company may perform exploration to generate additional new prospects as and when financial resources allow.

Quarterly Information

Two-Year Comparative Data by Quarter

(All Figures expressed in thousands of dollars, except per share amounts)

The following table sets out selected financial information for the four quarters in fiscal 2000:

	Q4 (\$)	Q3 (\$)	Q2 (\$)	Q1 (\$)
Total Revenue	23	29	8	6
Loss for the year	22,467	273	370	694
Loss per share	0.25	0.01	0.01	0.01

The following table sets out selected financial information for the four quarters in fiscal 1999:

	Q4 (\$)	Q3 (\$)	Q2 (\$)	Q1 (\$)
Total Revenue	80	464	1,124	1,319
Loss for the year	5,070	7,581	3,817	1,699
Loss per share	0.12	0.10	0.01	0.02

Liquidity and Capital Resources

General

The Company's financial condition in 2000 continued to be challenged principally due to the level of management fees and administrative overhead, the decision to continue to fund project expenses, and the consequential costs associated with amounts of funds advanced by the Company's controlling shareholder, Miramar Mining Corporation ("Miramar").

Due to the prospective nature of the mineral exploration business and the number of exploration properties held, the Company has a limited ability to generate sources of internal cash flow from operations. The Company has financed the acquisition, exploration and development of its properties through a combination of the issuance of common shares to the public, borrowings from Miramar, attracting other companies to joint venture the evaluation of properties and through third party borrowings.

When, and if, the Company places any of its exploration properties into production, it is anticipated that the resulting cash flows may become sufficient to sustain future operations, exploration and development. At present, the Company lacks the internal financial ability to advance any of its projects to the production stage.

Cash Resources and Liquidity

At the end of fiscal 2000, the Company had a working capital deficiency of \$924,000 compared to a deficiency of \$187,000 at the end of 1999. However, subsequent to the year ended December 31, 2000, the Company arranged a private placement in the amount of \$1,500,000 as further described below under "2001 Financial Restructuring". These funds are not sufficient to continue the full evaluation of all of the Company's mineral prospects. Management of the Company is in the process of further evaluating all of the Company's property interests in order to ensure that value is realized. In addition, all contemplated expenditures are reviewed to ensure that cash commitments are prioritized and that existing capital resources are available to maintain the core properties currently held. Management is evaluating potential new sources of financing to meet the anticipated expenditures required to further advance its projects.

2001 Financial Restructuring

In 2000, Miramar made advances to the Company to fund working capital requirements and various exploration expenditures. Interest was charged on these advances at 8% per annum. As at the end of fiscal 2000, the amount owed to Miramar including advances and capitalized interest payable had accumulated to approximately \$27.3 million.

In February 2001, the Company reached an agreement to restructure and partially settle amounts owing to Miramar. Under the agreement, Miramar agreed to convert convertible debenture, reduce the cap of royalty and net proceeds interest ("Royalty Interest") from \$17,987,000 to \$15,000,000 and restructure the remaining indebtedness of the Company to Miramar to \$6.9 million.

The largest component of the debt restructuring was the conversion of Miramar's convertible debenture, resulting in the issuance of an additional 14.4 million shares to Miramar. A total of \$21.2 million in debt was converted at a per share conversion price of \$1.47.

The Royalty Interest entitles Miramar to receive the economic equivalent of a 2.5% net smelter return royalty on all of the Company's mining interests and to receive 50% of the net proceeds from the sale of any of the Company's mining interests, excluding the San Jorge project in Argentina. The total of the payments under the Royalty Interest is limited to \$15.0 million.

In addition, under the agreement, the remaining indebtedness to Miramar, amounting to \$6.9 million, was consolidated and restructured into two long-term convertible notes that may be converted at \$0.15 per share and are due on demand after June 30, 2002. The new convertible notes no longer require that the Company maintain any minimum level of working capital as was previously required.

The Company continues its process of determining methods to obtain sufficient capital resources to meet its short and medium term financial requirements. Long-term liquidity and capital resources will be dependent upon the successful development and profitable operation of its mineral properties and the availability of capital from the equity markets. In order to maintain financial resources and take advantage of financial leverage, the Company will continue to negotiate with major financial institutions to obtain project financing.

Results of Operations

The Company recorded a loss of \$23.8 million or \$0.28 per share in 2000 compared to a loss of \$18.2 million or \$0.25 per share in 1999. The loss in 2000 includes write-downs on mineral properties (primarily a write down of the San Jorge project), and other assets of \$22.3 million or \$0.26 per share compared to write-downs of mineral properties, inventories, other assets and marketable securities of \$12.3 million or \$0.17 per share in 1999. Excluding write-downs, the Company's loss in 2000 of \$1.6 million compares to a loss of \$4.8 million in 1999. The loss in 1999 reflected the losses from the gold operations in Cuba, the costs of continued curtailment of exploration activities in Argentina and Cuba and costs of depreciation related to the Cuban operating assets. During 2000, the decreased costs were due in part to the reduced scale of operations, a 51 percent reduction in management fees charged by Miramar and an 85 percent reduction in termination and severance costs.

Management's Discussion and Analysis of Financial Conditions and Results of Operations for the year ended December 31, 2000, is set out at pages 5 to 6, inclusive, of the Company's 2000 Annual Report filed via SEDAR on September 21, 2001, under "MD & A – English".

6.2 Foreign GAAP

N/A

7 MARKET FOR SECURITIES

7.1 Market for Securities

The Company's common shares are listed and posted for trading on the Toronto Stock Exchange under the symbol NNO.

8 DIRECTORS AND OFFICERS

8.1 Name, Address, Occupation and Security Holding

The following table sets the names and municipalities of residence of the directors and officers of the Company, their positions held with the Company and their principal occupations.

Name, Office Held and Municipality of Residence	Director Since	Principal Occupation for the Previous Five Years
M. Norman Anderson ⁽¹⁾ Director Vancouver, BC	4-Feb-2000	President of Anderson & Associates
John K. Burns ⁽¹⁾ Chairman of the Board and Director Philadelphia, Pa.	26-May-1995	President & Chief Executive Officer, Frontier Resources Management Inc.
P. Terence O'Kane ⁽¹⁾ Director Vancouver, BC	19-Jun-1999	Self-employed Metallurgical Engineer
Stephen J. Wilkinson ⁽¹⁾⁽²⁾ President, Chief Executive Officer and Director North Vancouver, BC	19-Jun-1999	Self-employed Businessman; 1997-1999, Mining Analyst, Global Mining and Metals Group for RBC Dominion Securities Inc.
David W. Cohen, Chief Operating Officer and Senior Vice President West Vancouver, BC	N/A	Self employed businessman Senior Vice President, Miramar Mining Corporation
Robert Cross Director West Vancouver, BC	13-Mar-2001	Managing Director of Vencourt Capital Inc.
Frank A. Lang Director West Vancouver, BC	02-May-2001	Honorary Chairman of Aurizon Mines Ltd., Chairman of Sultan Minerals Inc., President and Director Cream Minerals Ltd., Valerie Gold Resources Ltd. and Emgold Mining Corporation, Director and/or Officer of other natural resource companies
Sargent H. Berner Secretary Vancouver, BC	N/A	Partner, DuMoulin Black, Barristers and Solicitors

Name, Office Held and Municipality of Residence	Director Since	Principal Occupation for the Previous Five Years
Mary P. Collyer Assistant Secretary Vancouver, BC	N/A	Partner, DuMoulin Black, Barristers and Solicitors
Shannon M. Ross Chief Financial Officer Burnaby, BC	N/A	Chief Financial Officer and Corporate Secretary of the Company since June 29 th 2001; Controller and Corporate Secretary, Dia Met Minerals Ltd., January to July 1999; Controller, Hunter Dickinson Group of companies, 1996 to 1999, Vice President, Corporate Affairs, Quartz Mountain Resources Ltd., January 1990 to present.
Anthony P. Walsh Director West Vancouver, BC	5-Mar-1999	President and Chief Executive Officer, Miramar Mining Corporation
Stephen P. Quin Director West Vancouver, BC	9-Dec-1998	Executive Vice-President of Miramar Mining Corporation

(1) Member of executive committee.

(2) Member of audit committee.

The directors of the Company are elected and hold office until the next annual general meeting of the shareholders, unless any director resigns, is removed, or becomes disqualified earlier.

Based on information provided by the individual directors, as at May 18, 2001, the directors and officers of the Company as a group, beneficially own, directly or indirectly, or exercise control or direction over 70,138,275 common shares or 61.6% of the voting common shares of the Company. As at May 18, 2001, Messrs. Anthony Walsh and Stephen Quin were both directors of Miramar Mining Corporation, which at the time owned 70,012,471 of the 70,138,275 shares held by directors and officers. On May 1, 2001, Mr. Robert Cross obtained an option to purchase up to 60,012,471 shares of the Company, held by Miramar Mining Corporation, at an exercise price of \$0.08 per share expiring on June 30, 2002.

8.2 Corporate Cease Trade Orders or Bankruptcies

To the knowledge of Management, except as otherwise disclosed herein there have been no directors or officers of the company, or any shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, who is, or within the last 10 years before the date of this AIF, was a director or officer of any issuer which, while that person was acting in that capacity:

- (a) was the subject of a cease trade order or similar order, or an order that denied the other issuer access to any exemptions under Canadian securities legislation, for a period of more than 30 consecutive days; or

- (b) became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangements or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets;

Robert Cross, a director of the Company, joined the board of Livent Inc. ("Livent") as part of the M. Ovitz Group in June 1998. Accounting irregularities were subsequently uncovered and Livent declared bankruptcy in late 1998. Thereafter a class action suit was filed against Livent and its directors. Mr. Cross is currently not involved in any actions or proceedings.

8.3 Penalties or Sanctions

To the knowledge of Management, there have been no directors or officers of the Company, or any shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, that have:

- (a) been subject to any penalties or sanctions imposed by any court relating to Canadian securities legislation or by any Canadian securities regulatory authority or has entered into a settlement agreement with a Canadian securities regulatory authority; or
- (b) been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

8.4 Personal Bankruptcies

To the knowledge of Management, there have been no directors or officers of the Company, or any shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, or a personal holding company of any such person has, within the last 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or was subject to or instituted any proceedings, arrangements or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director or officer.

8.5 Conflicts of Interest

From May 2001 until July 31, 2001, the Company received administrative services from Lang Mining Corporation ("Lang Mining"), a private company of which Frank A. Lang, a director of the Company, is the President, a Director and a major shareholder, and reimbursed Lang Mining for expenses.

Since August 1, 2001, management, administrative, geological and other services have been provided by LMC Management Services Ltd., a private company held jointly by the Company and other public companies, to provide services at cost to the various individuals, partnerships and corporate entities currently sharing office space with the Company.

Miramar Mining Corporation ("Miramar") owns approximately 62% of the Corporation and is therefore considered an insider of the Corporation.

During the financial year ended December 31, 2000, the Corporation paid management fees totalling \$420,000 to Miramar (\$861,000 in 1999). A portion of the management fees paid to Miramar was for the payment of the salary of a shared member of senior management of the Corporation, for services performed as an officer of the Corporation.

In December 1999, the Corporation reached an agreement to restructure and partially settle amounts owing to Miramar. Under the agreement, the Corporation issued a royalty and net proceeds interest ("Royalty Interest") entitling Miramar to receive the economic equivalent of a 2.5% net smelter return royalty on all of the Corporation's mining properties and interests to a total of \$17,987,000. The payment of this obligation is limited to payments from the Royalty Interest and a right to receive a portion of the proceeds from the sale of any interest in any of the Corporation's mining interests.

Included in the 1999 debt restructuring, the Corporation issued a promissory note to Miramar and capitalized certain amounts to the convertible debenture as consideration for existing indebtedness. No gain or loss was realized on this restructuring of amounts payable to Miramar. The promissory note was in the face amount of \$6.5 million; bears interest at bank prime plus 2%, and is due on demand after June 20, 2001. The note requires that the Corporation maintain working capital of not less than \$1,000,000 as and from March 31, 2000, to be tested monthly. Subsequent to the end of 1999, \$4.5 million of the principal amount of the promissory note was settled through the issue to Miramar of 15 million shares in the Corporation. In addition, on March 31, 2000, Miramar provided the Corporation with a waiver extending the date for the imposition of the working capital requirement to June 15, 2000.

On April 27, 2001, Northern Orion concluded further restructuring agreements in conjunction with a private placement of \$1,500,000. The placement completed with an arms length investor required Miramar to convert the convertible debenture into common shares, restructure the remaining indebtedness of Northern Orion into a long term convertible note and to option 60 million of its 70 million shares to a third party. The convertible debenture was in an amount of \$21.2 million and was converted into 14.4 million shares of the Corporation at a conversion price of \$1.47 per share. The remaining indebtedness of Northern Orion to Miramar amounted to \$6.9 million and was restructured into convertible notes due after June 30th 2002, and with a conversion price of \$0.15 per Northern Orion share. In addition, the Royalty Interest was reduced from a total obligation of \$18 million to \$15 million and excluded any interest in the San Jorge property in Argentina. Two of the directors of the Company are also directors of Miramar.

The Company's directors and officers may serve as directors or officers of other companies or have significant shareholdings in other resource companies and, to the extent that such other companies may participate in ventures in which the Company may participate, the directors of the Company may have a conflict of interest in negotiating and conducting terms respecting the terms of such participation. In the event that such conflict of interest arises at a meeting of the Company's directors, a director who has such a conflict is required to disclose such conflict and abstain from voting for or against the approval of such a participation or such terms.

To the knowledge of management there are no existing or potential conflicts of interest between the Company, any subsidiary of the Company and a director or officer of the Company, except as disclosed herein.

9 ADDITIONAL INFORMATION

9.1 Additional Information

The information contained in this Annual Information Form is as at December 31, 2000, unless otherwise stated. The Company's management proxy circular for its annual general meeting of shareholders held on June 29, 2001, contains further information, including information relating to directors' and officers' remuneration, principal holders of voting securities, options to purchase securities and interest of insiders in material transactions. Additional financial information is provided in the Company's comparative financial statements for the year December 31, 2000. The financial statements are set out at pages 10 to 27, inclusive, of the 2000 Annual Report, filed via SEDAR on May 23, 2001, under Annual Audited

Financial Statements-English. The applicable sections of those documents are incorporated herein by reference.

The Company will provide to any person, upon written request to the Secretary of the Company, c/o Northern Orion Explorations Ltd., Suite 1400, 570 Granville Street, Vancouver B.C. Canada V6C 3P1, copies of the following documents:

- (i) One copy of the AIF of the Company, together with one copy of any document, or the pertinent pages of any document, incorporated by reference in the AIF;
- (ii) One copy of the comparative financial statements of the Company for its most recently completed financial year together with the accompanying report of the auditor and one copy of any interim financial statements of the Company issued subsequent to the financial statements for its most recently completed financial year;
- (iii) One copy of the information circular of the Company in respect of its most recent annual meeting of the shareholders that involved the election of directors or one copy of any filing prepared in lieu of that information circular as appropriate; and

At any other time, one copy of any other documents referred to in paragraphs (i), (ii) and (iii) above, provided the Company may require the payment of a reasonable charge if a person who is not a security holder of the Company makes the request.

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities, options to purchase securities and interests of insiders in material transactions, where applicable, is contained in the Company's information circular for the most recent annual meeting of the shareholders that involved the election of directors. Additional financial information is provided in the Company's comparative financial statements for its most recently completed financial year.