

RENEWAL ANNUAL INFORMATION FORM
OF



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For the fiscal year ended December 31, 2004

Dated March 29, 2005

TABLE OF CONTENTS

PRELIMINARY NOTES	1
CURRENCY AND EXCHANGE RATES	1
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS.....	1
CORPORATE STRUCTURE OF THE ISSUER	3
GENERAL DEVELOPMENT OF THE BUSINESS.....	5
DESCRIPTION OF THE BUSINESS.....	7
RISK FACTORS	34
DIVIDENDS	41
DESCRIPTION OF CAPITAL STRUCTURE	41
MARKET FOR SECURITIES.....	43
DIRECTORS AND OFFICERS.....	44
LEGAL PROCEEDINGS.....	46
AUDIT COMMITTEE INFORMATION.....	47
INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS.....	48
TRANSFER AGENTS AND REGISTRARS.....	49
MATERIAL CONTRACTS.....	49
INTERESTS OF EXPERTS	50
ADDITIONAL INFORMATION	50
GLOSSARY OF MINING TERMS.....	51
GLOSSARY OF UNITS	53

PRELIMINARY NOTES

Throughout this Annual Information Form ("AIF"), Northern Orion Resources Inc. is referred to as the "Issuer" or "Northern Orion". All information contained herein is as at March 29, 2005, unless otherwise stated.

CURRENCY AND EXCHANGE RATES

This AIF contains references to Canadian dollars and United States dollars. All dollar amounts referenced, unless otherwise indicated, are expressed in United States dollars and Canadian dollars are referred to as "Canadian\$" or "Cdn\$".

The Issuer publishes its financial statements in United States dollars. Minera Alumbrera Limited ("MAA"), in which the Issuer acquired an indirect 12.5% interest on June 24, 2003, also publishes its financial statements in United States dollars. See "General Development of the Business – Three Year History and Significant Acquisitions".

The closing, high, low and average exchange rates for the United States dollar in terms of Canadian dollars for each of the three years ended December 31, 2004, as reported by the Bank of Canada, were as follows:

	Year Ended December 31		
	2004	2003	2002
Closing	Cdn\$1.20	Cdn\$1.29	Cdn\$1.58
High	Cdn\$1.40	Cdn\$1.58	Cdn\$1.61
Low	Cdn\$1.17	Cdn\$1.29	Cdn\$1.51
Average ⁽¹⁾	Cdn\$1.30	Cdn\$1.40	Cdn\$1.57

(1) Calculated as an average of the daily noon rates for each period.

On March 29, 2005, the Bank of Canada noon rate of exchange was \$1.00 = Cdn\$1.2136.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This AIF contains "forward-looking statements". Forward-looking statements include, but are not limited to, statements with respect to the estimation of mineral reserves and resources, the realization of mineral reserve estimates, the timing and amount of estimated future production, costs of production, capital expenditures, success of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims and limitations on insurance coverage. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Issuer to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, risks related to international operations; risks related to joint venture operations; actual results of current exploration activities; changes in project parameters as plans continue to be refined, future prices of gold and copper; possible variations in ore reserves, grade or recovery rates, accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of development or construction activities, as well as those factors discussed under "Risk Factors". Although the Issuer has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future

events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

Cautionary Note to United States Readers Concerning Estimates of Measured, Indicated and Inferred Resources

This AIF uses the terms "Measured", "Indicated" and "Inferred" Resources. United States investors are advised that while such terms are recognized and required by Canadian regulations, the United States Securities and Exchange Commission (the "SEC") does not recognize them. "Inferred Resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred resource will ever be upgraded to a higher category. Under Canadian rules, estimates of Inferred Resources may not form the basis of feasibility or other economic studies. United States investors are cautioned not to assume that all or any part of Measured or Indicated Resources will ever be converted into reserves. United States investors are also cautioned not to assume that all or any part of an Inferred Mineral Resource exists, or is economically or legally mineable.

CORPORATE STRUCTURE OF THE ISSUER

NAME AND INCORPORATION

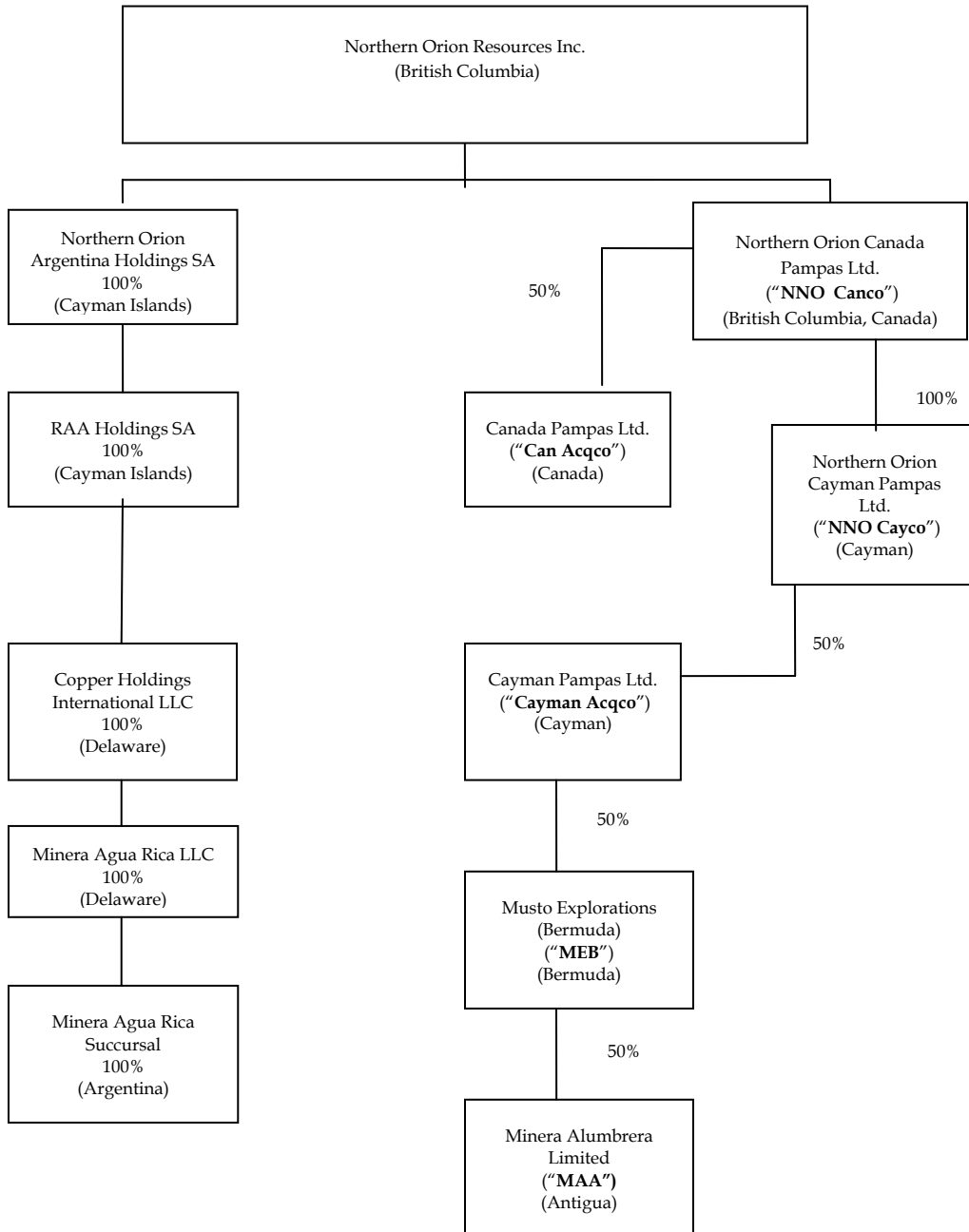
The Issuer was incorporated under the name “Northern Orion Resources Ltd.” pursuant to the *Company Act* (British Columbia) (now the *Business Corporations Act* (British Columbia)) on April 30, 1986. On October 31, 1986, the memorandum of the Issuer was amended to change the Issuer’s name to “Northern Orion Explorations Ltd.” On November 28, 1994, the memorandum of the Issuer was amended to increase its authorized capital from 25,000,000 to 100,000,000 common shares without par value (“Common Shares”). On October 15, 1997, the memorandum and articles of the Issuer 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 and 100,000,000 Second Preference Shares without par value. On June 16, 2003, the authorized share capital was then increased to 900,000,000 shares divided into 700,000,000 Common Shares, 100,000,000 First Preference Shares without par value and 100,000,000 Second Preference Shares without par value and the name of the Issuer was changed to “Northern Orion Resources Inc.”.

The registered and records office of the Issuer is located at 10th Floor, 595 Howe Street, Vancouver, British Columbia, V6C 2T5 and its principal executive office is located at Suite 250, 1075 West Georgia Street, Vancouver, British Columbia, V6E 3C9.

INTERCORPORATE RELATIONSHIPS

The Issuer conducts operations through foreign direct and indirect subsidiaries and branches (“subsidiaries”). The following chart sets forth the name of each material subsidiary of the Issuer, the jurisdiction of its incorporation or organization and the direct or indirect percentage ownership of the Issuer in such subsidiary as at the date of this AIF.

CORPORATE STRUCTURE



Unless the context requires otherwise, all references in this AIF to the "Issuer" include the Issuer and its subsidiaries.

GENERAL DEVELOPMENT OF THE BUSINESS

OVERVIEW

The Issuer, Northern Orion Resources Inc., is engaged in the exploration for, and the development of, precious and base metals through direct and indirect foreign subsidiaries and branches. Its principal asset is its 12.5% interest in the Bajo de la Alumbrera gold/copper mine in the Catamarca Province, Argentina (the "Alumbrera Mine"). The Issuer also owns a 100% interest in the Agua Rica copper-gold-molybdenum project in the Catamarca Province, Argentina (the "Agua Rica Project"), and has an undivided 50% interest in the Mantua Project in Cuba. See "Description of the Business".

The Issuer's principal geographical area of activity is Argentina. The economic and political environment of Argentina is less stable than that of Canada and the United States. Any changes in regulations or shift in political attitude in Argentina is beyond the control of the Issuer and may adversely affect its business. Future development and operations may be affected in varying degrees by such factors as government regulations (or changes thereto) with respect to concentration of ownership, restrictions on production, exchange controls, income taxes, expropriation of property, repatriation of profits, environmental legislation, land use, water use, land claims and mine safety. The effect of these factors cannot be accurately predicted. Instability in the Argentinean currency has subjected the Issuer to an increased foreign currency risk. However, most of the Issuer's expenditures in Argentina are in United States dollars. The Issuer minimizes the exchange rate risks associated with its operations by maintaining most of its cash in Canadian and United States dollars outside of Argentina. See "Risk Factors".

The mining industry is intensely competitive in all its phases. The Issuer competes with many companies possessing greater financial resources and technical facilities, for the acquisition of mineral concessions, claims, leases and other mineral interests as well as for the recruitment and retention of qualified personnel. See "Risk Factors".

The Issuer has 16 employees – five at its principal executive office and eleven in Argentina. The services of the Issuer's Chief Executive Officer and Chairman are provided under contract. The Issuer conducts its exploration activities in Argentina through consultants.

RECENT DEVELOPMENTS

On February 17, 2005 the Issuer completed a short form prospectus offering of 34,250,000 units of the Issuer at a price of Cdn\$3.65 per unit for gross proceeds of Cdn\$125,012,500. Each unit consists of one common share and one-half of one common share purchase warrant. Each whole warrant will entitle the holder to subscribe for one additional common share at a price of Cdn\$6.00 and will expire on February 17, 2010. The warrants issued as part of the units are listed on the Toronto Stock Exchange under the trading symbol "NNO.WT.A".

THREE YEAR HISTORY AND SIGNIFICANT ACQUISITIONS

The Issuer did not complete any significant acquisitions during its most recently completed financial year. Since early 2004, the Company has been in discussions with third parties regarding the sale of the Mantua Project. An option agreement with Newport Explorations Ltd. relating to the project was also terminated in October 2004. See "Description of the Business – Mantua Project". As there is no assurance that an agreement will be completed to the satisfaction of the Issuer, a write-down of \$22,209,000 was recorded in the fourth quarter of 2004 in respect of the Mantua Project.

On April 8, 2004, the Issuer's Common Shares were listed and posted for trading on the American Stock Exchange, under the symbol " NTO".

During fiscal 2003, the Issuer, through its subsidiaries, acquired the 72% interest in the Agua Rica Project that it did not already own for US\$12.6 million, of which US\$9 million was deferred by way of a non-interest bearing secured loan from BHP Minerals Exploration Ltd. ("BHP") maturing June 30, 2005, and a 12.5% interest in the Alumbrera

Mine for total consideration of \$88.6 million plus acquisition costs of \$2.9 million, of which \$28.6 million was deferred by way of a secured loan from Rio Algom Limited. \$3.6 million of the amount owing to Rio Algom was repaid in 2003, leaving a balance of \$25 million at December 31, 2003. The loan was to mature on May 30, 2005, but was refinanced on March 1, 2004 pursuant to a secured term facility in the principal amount of \$24.5 million by Bayerische Hypo-und Vereinsbank AG ("HVB").

For further details of the acquisitions see "Description of the business – Alumbra Mine" and "Description of the Business – Agua Rica Project". In connection with the acquisitions, the Issuer completed a \$2.6 million non-brokered private placement of units, a \$3 million convertible debt financing and a \$77 million special warrant private placement. The issuance of the common shares and share purchase warrants on exercise of the special warrants was qualified by prospectus.

During 2004, the Issuer conducted ongoing engineering development and financing activities on Agua Rica, including efforts to update the work that had been completed prior to 2004. This work is expected to continue through most of 2005. In October 2004, the Issuer commissioned further engineering development work on the Agua Rica project suitable for financing requirements. The work is being undertaken by Hatch Associates Ltd. and is expected to be completed by the end of 2005. A re-estimation of the Agua Rica resources was completed in March 2005. See "Description of the Business – Agua Rica Project". The Issuer has also been in discussions with various financing and smelter groups with a view to advancing the Agua Rica project in a timely and beneficial manner.

During 2003/2004 a delineation drilling program at Alumbra updated an existing assay database. Based on updated geological models and redesign of the ultimate pit and phase sequencing, the operator of the Alumbra mine has reported the inclusion of additional ore reserves. The Issuer has determined that its share of the additional reserves could represent an increase of 4% in the net present value of its total reserves. See "Description of the Business – Alumbra Mine –Status and Update"

Since the acquisition of its 12.5% interest in the Alumbra Mine, the Issuer has benefited from significant cash flows from production. From acquisition to December 31, 2004, the Issuer has received \$49,635,000 in cash distributions from Alumbra, and has used part of these funds to make prepayments on the HVB term loan. The Issuer repaid \$6,960,000 of the term loan in 2004 and a further \$9,000,000 in February 2005, leaving a balance of \$8,540,000 as at March 29, 2005. The Issuer expects that the term loan will be completely repaid by December 31 2005 or earlier.

During the fiscal years ended December 31, 2001 and 2002, financial constraints had necessitated a significant reduction in the Issuer's activities. The Issuer's principal focus during this period was on reducing costs and maintaining its principal properties. Due to market conditions and depressed copper prices from 1998 through 2000, the Issuer was dependent upon its controlling shareholder, Miramar Mining Corporation ("Miramar"), for financial support.

The Issuer subsequently restructured its financial relationship with Miramar. Approximately Cdn\$21.2 million of outstanding convertible debt owed to Miramar was converted into Common Shares, the Issuer's remaining indebtedness to Miramar (approximately Cdn\$6.9 million) was consolidated into promissory notes (the "Notes"), convertible into Common Shares of the Issuer and the maximum amount payable by the Issuer to Miramar under a previously granted Royalty and Proceeds Interest in respect of the Issuer's interest in the Agua Rica Project and the Mantua Project was reduced from approximately Cdn\$18 million to Cdn\$15 million. In connection with the debt restructuring, Miramar granted an option on the Notes and all but 1 million of the approximately 7 million common shares of the Issuer then held by Miramar to a company controlled by Robert Cross. The restructuring of the Issuer was completed in June 2002 when the Cross option was exercised and the Notes were converted into Common Shares of the Issuer. The shares acquired on exercise of the option and conversion of the Notes were redistributed and Miramar ceased to be a controlling shareholder of the Issuer as a result. Mr. Cross was subsequently appointed a director and the Chairman of the Issuer.

DESCRIPTION OF THE BUSINESS

The Issuer's principal assets are its interest in the Alumbreira Mine and the Agua Rica Project in Catamarca Province, Argentina. See "General Description of the Business - Significant Acquisitions". The Issuer also holds an undivided 50% interest in the Mantua Project, a gold/copper project in Cuba.

ALUMBRERA MINE

Pursuant to the terms of a purchase agreement effective as of April 2, 2003 (the "Purchase Agreement"), Rio Algom agreed to sell to Wheaton River Minerals Ltd. ("Wheaton") and the Issuer its 25% interest in the company which owns and operates the Alumbreira Mine, a gold/copper mine in the Catamarca Province, Argentina (the "Alumbreira Acquisition"). On closing of the Alumbreira Acquisition on June 24, 2003, the Issuer acquired an indirect 12.5% ownership interest in MAA, a company incorporated under the laws of Antigua and Barbuda and registered as a branch in Argentina.

The project finance in connection with the Alumbreira Mine was comprised of three senior loans and four subordinated loans provided by MAA's shareholders and their affiliates, which senior loans were repaid in their entirety in May 2004. Rio Algom was party to a common security agreement (the "Common Security Agreement") dated as of February 26, 2003, between MAA, all of its lenders and the other parties thereto. The Common Security Agreement provided for a common security package for the rateable benefit of the senior lenders. Rio Algom was also party to a Transfer Restrictions Agreement dated as of February 26, 1997, among MAA, its shareholders, various lenders and other parties (the "Transfer Restrictions Agreement"). The Transfer Restrictions Agreement contains the primary restrictions on transfers of debt and equity interests in MAA.

Pursuant to the terms of the Purchase Agreement the Issuer and Wheaton each acquired their proportionate interest in: (i) certain assigned loan rights in connection with debt then owed to Rio Algom by MAA, including Rio Algom's rights and obligations under certain financing documents (including the Common Security Agreement and the Transfer Restrictions Agreement described above); (ii) the shares in the capital of Musto Explorations (Bermuda) Ltd. ("MEB"), including the rights and obligations under an agreement amongst the shareholders of MAA (the "MAA Shareholders Agreement"); and (iii) Rio Algom's rights and obligations under certain other agreements relating to Rio Algom's interest in MEB, including a shareholders agreement governing the affairs of MEB.

The rights and obligations of each of the Issuer and Wheaton, through their subsidiaries, in respect of each other as the beneficial owners of 25% and 75%, respectively, of the issued and outstanding shares of MEB are governed by the terms of a shareholders agreement that includes, among other things, provisions respecting restrictions on the direct or indirect sale, assignment, transfer or other dealing with any equity securities in the capital of or shareholders' loans made to any of them or any equity securities of MAA; a right of first offer in the event of any proposed disposition of equity securities of or shareholders loans in any of the parties to the agreement, MEB or MAA; the composition of the Board of Directors of MEB and the subsidiaries of Wheaton and the Issuer that are jointly owned; unanimous approval requirements for certain fundamental changes relating to the business and affairs of MEB, except in specified circumstances.

Pursuant to the MAA Shareholders' Agreement, the MAA board of directors is comprised of four members, two of which are nominated by Xstrata and two of which are nominated by MEB. The chairman (appointed by Xstrata) has a casting vote. The MAA Shareholders' Agreement also stipulates that certain fundamental actions can only be taken with the unanimous consent of the directors of MAA.

Information contained in this AIF that is of a scientific or technical nature relating specifically to the Alumbreira Project has been prepared by or under the supervision of B. Terrence Hennessey, P. Geo and Harry Burgess, P. Eng of Micon International Limited ("Micon"), each of whom is a "qualified person" as the term is defined in National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"), and is derived from a report (the "Micon Report") prepared by the foregoing entitled "Technical Report on the Mining and Processing Assets of Minera Alumbreira Ltd. in Argentina" dated May, 2003, which is available for viewing under the Issuer's profile on www.sedar.com. During 2004, a delineation drilling program at Alumbreira updated an existing geological database. Based on updated geological models and redesign of the ultimate pit and phase sequencing, the operator of the

Alumbrera Mine has reported the inclusion of additional ore reserves. (See “Alumbrera Mine – Update and Status”).

Property Description and Location

The Alumbrera Mine consists of the following five facilities, with support offices located in Tucumán, Catamarca City, Rosario and Buenos Aires:

- an open pit mine, processing facilities and central administration offices at Alumbrera, Catamarca; a 316 km concentrate slurry pipeline through Catamarca and Tucumán Provinces;
- a 202 km, 220 kilovolt power line from the project's substation at El Bracho, Tucumán;
- a filter plant and rail loading facilities at Cruz del Norte, Tucumán; and
- a port, handling facilities and train maintenance facilities at San Martín near Rosario, Santa Fé.

The open pit mine is located on a 600 ha mining lease at Alumbrera, near Belén in northwestern Argentina, 1,100 kms northwest of Buenos Aires. The mining lease granted to MAA encompasses all mineralized areas of the deposit. Immediate mine infrastructure and other mine facilities cover an additional permitted surface area of 5,200 ha. The mine is located in a valley west of the easternmost range of the Andes at an elevation of 2,600 m above sea level.

The Alumbrera Mine processes ore through conventional crushing, grinding, sulphide flotation and gravity gold circuits. Concentrate slurry from the processing facilities is pumped 316 kms to a filter plant at Cruz del Norte. Concentrates from the filter plant are shipped 830 kms by rail from Cruz del Norte, Tucumán to Puerto Alumbrera. The port is located in San Martín, Rosario in the Province of Santa Fé. The port operation and maintenance facilities are contained within a 12 ha lease which includes a rail-switching yard with approximately 8,200 m of rail. Port facilities include a rail car unloading building and 50,000 t storage shed.

All mining prospects in the Farallón Negro district, the region including Alumbrera, are enclosed by a 344 km² national mineral reserve and are owned and administrated by Yacimientos Mineros de Agua de Dionisio ("YMAD"), a quasi-government mining company. The 20-year mining lease that encloses the Alumbrera Mine was granted to MAA by YMAD pursuant to an agreement (the "UTE Agreement") in April 1994, as amended in February 1997. The UTE Agreement defines the working relationship between the parties, including royalty obligations, and requires that ownership of the facilities and infrastructure revert to YMAD after completion of operations.

Royalties

MAA is required to pay a 3% royalty (the "Boca Mina Royalty") to the provincial government of Catamarca. The royalty is calculated on the value of mineral substances at the mine mouth after certain allowable deductions. MAA commenced payments of the Boca Mina Royalty in 1998. MAA has reported that its calculation of the Boca Mina Royalty in its life-of-mine plan cash flows is the equivalent of a 2% charge against revenue after deduction of offsite smelting and refining charges.

Under the terms of the UTE Agreement, MAA is also obliged to pay a royalty to YMAD equal to 20% of net proceeds after capital recovery to begin in the fiscal year following the one in which positive net proceeds are realized. To date, no payments have been made. However, pursuant to an amendment made to the UTE Agreement in 1997, MAA has paid an advanced royalty of US\$10 million toward the 20% royalty. An additional balance of 2 million pesos has been paid in the fiscal year ending June 30, 2003.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

Alumbrera is about 1,100 kms northwest of Buenos Aires and six hours by paved and dirt roads from the airport at San Miguel de Tucumán. Located in Hualfin District, Belén Department, Catamarca Province, the deposit is 95 kms

northeast of the town of Belen and approximately 50 road-kms northwest of Andalgalá. The project is served by air and all-weather roads. MAA has scheduled flights to and from Tucumán and the mine site, and bus transport to and from both Catamarca and Tucumán. On average, more than 2,000 people are transported by road and more than 1,200 people are transported by air, either to or from the mine site every month. An internal bus service runs on a continual schedule, transporting personnel to and from job sites, accommodation and recreation facilities within the mine site.

The climate is arid to semi-arid with topography and vegetation similar to the Arizona-Sonora desert. The Alumbrera Mine is near the boundary between the Sierras Pampeanas and Puna physiographic provinces and the area is sparsely populated. Average temperature is 17°C to 18°C and average minimum and maximum temperatures range between 8°C and 10°C and 22°C and 27°C. Temperatures can be as low as minus 10°C in the winter and as high as 40°C in the summer. Average mean rainfall is 160 mm, occurring predominantly during the months of December through March. Light snows can occur in July.

Mine site infrastructure includes offices, a warehouse, a laboratory, a medical centre, a permanent camp and workshops. Site facilities include two accommodation camps, catering, medical and indoor and open-air recreation facilities. The mine's main water supply originates from a bore field, Campo Arenal, and is delivered to the mine site through a 30 km pipeline. The mine maintains a 1.7 million m³ water reservoir. A 202 km long 220-kilovolt power line provides electrical power to the mine site from a substation at El Bracho, Tucumán. The power line, with 530 transmission towers, was constructed to provide access to the national power grid.

Topographically, (prior to commencement of mining) the deposit at the Alumbrera Mine was a bowl-shaped, ellipsoidal depression oriented northeast-southwest (1,900 m by 1,200 m) surrounded by ridges formed mostly by andesitic breccia of the Farallon Negro volcanics. The floor of the bowl covers an area of 2.5 kms². It is characterized by altered yellowish and reddish rocks that are the oxidized and weathered "surface rind" of hydrothermally altered and mineralized zones that were easily weathered in the recent geologic past, thereby forming the bowl.

History

The Alumbrera area has been known for its veins of copper and gold deposits and alum since at least the 19th century. Small-scale mining activity took place at the end of the 19th century and during the early 20th century at the southern edges of the present mine area. In 1950, the Alto la Alumbrera veins were sampled by the government for copper and gold. In 1961, the map on which "Bajo de la Alumbrera" is mentioned for the first time was published. In 1963, a mapping and geochemical survey defining a deposit of disseminated/scattered copper was conducted. In 1969, YMAD carried out a thorough geological geochemical prospecting program and completed four short drill holes for a total depth of 226 m.

From 1973 to 1976, YMAD requested that the national government carry out more detailed studies. The government, through the NOA MINERO (Argentine Northwest Mining) Plan of the National Service of Mining and Geology, carried out a geophysical study (induced polarization and magnetism) and commenced a drilling program. Drilling was completed over several years with 5,000 m drilled in 1974 and 1975 and 1,000 m drilled in 1976. YMAD carried out resource mapping and evaluation from available drill holes. From 1975 to 1982, the United Nations supervised the ongoing exploration program. YMAD and a military manufacturer continued intermittent drilling to complete a total of 18,970 m and 71 drill holes for the period 1968 to 1981.

From 1985 to 1988, YMAD investigated open pit mining and heap leaching of ore from the central gold-rich oxidized zone. An additional 1,283 m of drilling, averaging 50 m per hole, was completed. Feasibility studies were prepared in 1986 and 1988.

From 1992 to 1993, another feasibility study was conducted. Geological exploration activity included geotechnical investigations, a core relogging program and a diamond drilling program, mineralogical assessments and a complete reinterpretation of the deposit geology. A geology and metal grade block model of the deposit was generated.

In October 1994, MAA completed a 20-hole, 8,000 m diamond drill hole program. Drilling was concentrated in the southern flank of the orebody and within the area to be mined during the first five years of the open pit life. In 1995, MAA commenced mining activities in the mine area. In August 1997, project commissioning commenced with the

processing of the first ore from the mine. In December 1999, the mine achieved production and performance tests under terms of project financing.

MEB negotiated an interest in the project from YMAD in 1990, establishing MAA as the entity to exploit the deposit in 1993. MIM purchased a 50% interest in MAA in 1994. MEB, with a 50% remaining interest in MAA, was subsequently acquired by Rio Algom and North Ltd. in 1995. Rio Tinto plc ('RTP') acquired North Ltd. in August 2000. Billiton acquired Rio Algom in October 2000. BHP and Billiton merged during 2001 to form BHP Billiton. Wheaton purchased RTP's 25% share in March 2003. In July 2003, MIM's 50% interest was acquired by Xstrata plc.

Geological Setting

Regional Geology

Alumbrera was emplaced in the late Miocene Farallón Negro - Capillitas volcanic flow and breccia complex, situated in the Sierra de Capillitas. This high-potassium calc-alkaline shoshonitic to banakitic volcanism is the easternmost expression of subduction related volcanism which appears to have developed in block-faulted areas on Palaeozoic crystalline basement along the Andean Cordillera in the late Miocene. The Farallón Negro complex lies near the boundary of nearly flat and 30° east dipping segments of the subducting Nazca Plate, a discontinuity expressed by the east-west boundary between the Puna and Sierras Pampeanas provinces, by a 50 km right-lateral offset in the Andes crest and by the east-west trend of Neogene volcanoes of the Ojos de Salado chain west of Alumbrera and the Farallón Negro centre.

Alumbrera and its host stratovolcano lie between two northeast-trending lineaments, the Hualfin and Aconquija, which may have localized volcanism and mineralization in tension fractures between them. The volcanism was controlled by sinistral pull-apart tectonics along a major northwest trending lineament. The Farallón Negro volcanic and intrusive complex was a stratovolcano formerly up to 6 kms high and approximately 16 kms in diameter, which evolved from more mafic pyroxene andesites to more hornblende and biotite bearing andesites and dacites. Volcanism was followed by the emplacement of the mineralization-related dacite porphyries. The location of the dacite porphyries coincides with the eruptive centres of the former andesite-dacite stratovolcano, whose roots they intruded.

Deposit Geology

The Alumbrera alkalic dacite porphyries were intruded about 8 million years ago into the roots of the Farallón Negro volcano. The intrusion-generated large-scale hydrothermal circulation resulted in alteration and mineralization of the porphyry itself and its volcanic host rocks. Subsequent erosion has exposed the upper part of the volcano and its porphyry system to a level that is favourable for mining. Rocks exposed at surface were originally at depths of approximately 2.8 kms and at 0.6 to 0.8 kilobars lithostatic pressure.

The Farallón Negro host rocks are about 90% autobrecciated flows in a thick-bedded sequence of fragment-poor to fragment-crowded weakly to strongly porphyritic potassic andesite. The remaining 10% is comprised of lithic and non-porphyritic flow units.

The primary mineralized rocks of Alumbrera consist of a series of porphyritic intrusions. A total of seven distinctive porphyritic intrusions have been recognised, which form stocks (earliest units) and dyke-like bodies (youngest units) that extend to the outer edge of the deposit with some of the dykes forming a radial pattern around the central stocks. The individual porphyry units can be distinguished by their phenocryst content, but primarily are classified by their cross cutting intrusive relationships. Geochemically the dacites are typical for subduction-related potassic igneous rocks (shoshonites) from mature continental arc settings.

Exploration

The mining rights to the Alumbrera Mine held by MAA are limited to a 2,000 m by 3,000 m rectangle (600 ha in size) approximately centred on the open pit mine. This area, referred to as the contract area, is slightly larger than the ultimate pit rim dimensions. No exploration is conducted by MAA outside of the contract area.

Known mineralization in the pit has been fully delineated to the northwest and southeast. However, to the northeast, towards the crusher, and to the southwest, mineralization is cut off by faults that are parallel to the dominant faulting direction. It is possible that a small amount of mineralization remains to be discovered in these areas if it can be shown that they have been down-faulted.

Since 1999, exploration efforts in the MAA contract area have been limited. In 2002, a small geophysical survey consisting of a limited amount of induced polarization surveying was conducted to look for disseminated sulphides in these areas. Results were not available at the time of Micon's visit, although it is anticipated that a certain amount of diamond drilling will be required in the future to test this potential. It is not anticipated that any significant discoveries with material impact on the project will be made here.

Because of the very limited area of mineral rights involved and the dominance of the area by the open pit mine, further exploration work is not anticipated. Any exploration by MAA outside of the contract area would require a new agreement with YMAD.

Mineralization

The mineralogy of the primary (unweathered) ore consists of chalcopyrite (+/-bornite), native gold and pyrite. Gold occurs mainly in chalcopyrite. Gold values correlate closely with copper values in primary mineralization and ratios are very consistent through the deposit.

Ore grades correlate with lithology. The highest copper-gold grades are associated with intense potassic (quartz-magnetite) alteration of two of the earliest mineralized porphyritic intrusions and in adjacent biotized or potassium feldspar altered andesites. Younger porphyries are less mineralized or barren. The majority of the copper is primary and occurs as chalcopyrite in disseminated grains and in veinlets. Copper and gold are positively correlated with gold occurring in association with early pyrite-chalcopyrite-magnetite as free gold grains in the 10 to 50 micron range.

The occurrence of gold within chalcopyrite, together with magnetite and pyrite, suggests that the gold was transported by the same fluids as the other metals and that this fluid was oxidized. Near-surface oxidation and supergene enrichment appear limited at the Alumbrera Mine. Consequently, the economic-grade sulphide mineralization extends upward almost to surface.

The upper portion of the orebody has been subject to weathering and can be sub-divided into two distinct zones, an upper, thin, leached zone, and a lower sulphide enriched zone. The leached zone contains oxide and carbonate copper minerals, including soluble species. Gold values appear largely unaffected by leaching. The sulphide-enriched zone is complex and contains chalcocite, covellite, native copper and chalcopyrite in varying proportions. The intensity of chalcocite decreases with depth and is absent in fresh (primary) ore. Leaching and oxidation near the surface generally does not extend to deeper than 30 m. Rare and erratic deeper oxidation is attributed to enhanced permeability caused by local fracturing and faulting. The corresponding underlying zone of supergene enrichment is erratic in its development, occurring at depths to 150 m in some places and being barely recognizable in others.

Drilling

The Alumbrera Mine has been worked on by at least four different companies with numerous drilling campaigns since YMAD commenced work in 1969. Both reverse circulation and diamond drilling has been performed, however, the database is composed predominantly of diamond core data. The diamond drill programs were completed using both NQ-sized core and HQ-sized core (47.6 mm and 63.5 mm core diameter, respectively).

270 holes were drilled on a nominal 50 m by 50 m pattern over the entire deposit. However, due to shorter lengths on some holes, this density decreases somewhat at the deepest pit elevations. All holes were drilled on N75°/N255° oriented sections, with dips varying between vertical and minus 60°. This orientation was chosen so as to best outline faults in the dominant fault strike direction, many of which have material post-mineralization movement or control the intrusion of the host porphyry and mineralizing fluids.

After the 1998-99 resource definition drilling program it became apparent that it was necessary to drill a few more holes to increase data density at the deeper elevations of the pit. This was required in order to improve geological controls on the model and upgrade some of the indicated resources to the measured category based on the models used to estimate mineral resources and kriging variances seen during grade interpolation. It was decided that an additional 14 holes would be drilled to fill in areas of low confidence. These have recently been drilled but were not included in the June 2002 reserve estimate. There is no known requirement for further drilling of the existing resource. A minor amount of exploration drilling is still required near the edges of the pit.

Sampling and Analysis

Exploration samples were sawn (core) or split (reverse circulation) and sent to ALS Chemex ("ALS") in Mendoza for further preparation and analysis, following which the assay results were reported by ALS.

Exploration samples were analysed for gold using a 50 g fire assay with a flame AAS finish after nitric acid/aqua regia digestion of the bead. This method has a detection limit of 0.01 ppm and is suitable for the low gold grades seen at Alumbra. Samples were analysed for copper and silver using an aqua regia mixed-acid digestion and elemental determination by flame AAS. The detection limits for copper and silver by this method are 100 ppm and 1.0 ppm, respectively. Silver values are not checked by fire assay methods as they are not reported as an ore reserve and form a minor portion of the value of minerals recovered.

Minor element analyses have been routinely carried out on approximately 10% of samples in order to determine background levels of elements of interest within the ore and surrounding waste rock of the orebody. These analyses were intended to determine base line quantities of potentially toxic metals available to be released into the environment. Samples were randomly selected and analyzed for antimony, arsenic, bismuth, cadmium, lead, mercury, molybdenum, selenium, tellurium and zinc. Additional sampling was conducted in areas identified to have lead and zinc bearing veins.

Sulphur and sulphate analyses were also conducted in order to estimate the amount of pyrite within the deposit so as to aid in the prediction of acid mine drainage potential as well as to predict rougher and cleaner cell loads within the concentrator while treating certain ore types. Sulphur was determined through a Leco infrared detection of sulphur dioxide from combustion of sulphide.

Drill Core Samples

During logging, the MAA geologist selects the portions of each hole to be sampled based primarily on mineralization. Using visual inspection, the location of the 0.15% copper boundary would be estimated and sampling would commence approximately 50 m before this estimated position. Samples were selected on three m intervals regardless of lithologic contacts and geological variation in the core. Once selected, the core to be sampled was sawn in half with a diamond saw and one half of the core retained for future reference. All sampling and core storage took place at the core logging facility.

Reverse Circulation Samples

Reverse circulation samples were collected in the field at the drill rig over 3 m intervals after being split in the ratio 3:1 at the sampler. The smaller sample was sent for analysis and the larger fraction retained on site for the duration of the drill program in order to provide additional samples for check analyses or bench scale flotation testwork. The larger fraction was discarded after the completion of each program.

Blast Hole Sampling

MAA samples all blast holes in the open pit except when the geology supervisor considers it unnecessary due to, for example, duplicate holes or holes too closely spaced. One sample is collected per hole from the cone of cuttings surrounding the collar. Sampling is performed by cutting two opposing channels into the cone and through its full depth to the bench floor. A sample of approximately 15 to 20 kgs is collected from one wall of each of the two channels. Samples are split in a Gilson splitter and sent to the mine laboratory. For one in every five samples

collected from certain areas of the Alumbrera pit a second sample split is collected from the Gilson splitter and sent to ALS for check analysis.

Sample Quality

The program set up to monitor the quality of the assay database consisted of the following procedures:

- the use of internal standards by the laboratory;
- the use of MAA submitted standard samples with each sample batch;
- regular re-analysis of pulps by the laboratory;
- re-analysis of pulps as requested by MAA;
- check analysis of randomly selected pulps by a second laboratory; and
- ¼ core re-sampling of selected sample intervals mixed with each batch.

Data validation protocols are built into the data-entry system used by MAA to prevent hole-depth, over-lapping logging/sampling intervals or hole-name validation errors.

Security of Samples

MAA's core logging and storage facility is located in the administration and warehouse building cluster beside the concentrator. These facilities are approximately 1 km behind the mine's security gatehouse which is manned 24 hours a day, 365 days a year. They are secure from entry by non-MAA personnel. Exploration samples are shipped from this location using scheduled mine delivery trucks bringing in general supplies.

Ore Reserves and Mineral Resources

All ore reserves and mineral resources provided herein in respect of the Alumbrera Mine are estimated using the current (1999) version of the Australasian Code for Reporting of Mineral Resources and Ore Reserves (the "JORC Code"), the Australian and RTP worldwide standards. The following definitions are reproduced from the JORC Code, and differ from the definitions of the same terms adopted by the Canadian Institute of Mining, Metallurgy ("CIM") as the CIM Standards on Mineral Resources and Reserves Definitions, which definitions are contained in this AIF under "Glossary of Mining Terms".

The term "Mineral Resource" means a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

The term "Inferred Mineral Resource" means that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.

The term "Indicated Mineral Resource" means that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

The term "Measured Mineral Resource" means that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from

locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and/or grade continuity.

The term "Ore Reserve" means the economically mineable part of a Measured or Indicated Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.

The term "Probable Ore Reserve" means the economically mineable part of an Indicated, and in some circumstances Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

The term "Proved Ore Reserve" means the economically mineable part of a Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

The Ore Reserves for the Alumbrera Mine as at December 31, 2002 as extracted from the May 2003 Micon report, are set forth in the following table. (See "Alumbrera Mine – Update and Status" for Ore Reserves as of December 31, 2004).

Alumbrera Ore Reserves as of December 31, 2002⁽¹⁾

Material	Category	t (million)	Au g/t	Cu (%)	Contained Au (million ozs)	Contained Cu (Mt)
In Situ	Proved	234	0.68	0.58	5.08	1.360
	Probable	23	0.49	0.47	0.36	0.108
	Total	257	0.65	0.57	5.44	1.468
Stockpiles	Proved	111	0.41	0.36	1.46	0.400
	Probable	0	0	0	0	0
	Total	111	0.41	0.36	1.46	0.400
Total	Proved	345	0.59	0.51	6.54	1.760
	Probable	23	0.49	0.47	0.36	0.108
	Total	368	0.58	0.51	6.90	1.868

(1) The Ore Reserves for the Alumbrera Mine set out in the table above have been prepared by MAA. The Ore Reserves are classified as Proved and Probable, and are based on the JORC Code.

There are currently no Mineral Resources to report for the Alumbrera Mine.

Mineral Processing and Metallurgical Testing

The economic mineralogy of the primary, unweathered ore consists of chalcopryrite, native gold and pyrite in a simple textural relationship. Chalcopryrite occurs in disseminated grains and in veinlets; copper and gold are positively correlated, with the gold occurring as free grains or, more usually, as inclusions within the chalcopryrite. As a classic porphyry copper-gold deposit, it is expected that the ore should respond to conventional sulphide flotation for recovery of gold bearing copper concentrate.

As a project now past its fifth full year of production [as at the date of the Micon Report], there is a wide range of metallurgical testing and operating experience available and planned, including original feasibility studies and

process design laboratory and pilot scale testing, post-commissioning laboratory and plant scale process optimization, and post-commissioning laboratory testing and simulation studies in support of strategic planning and development.

The feasibility study metallurgical testing confirmed the amenability of the orebody to conventional copper porphyry processing. Although the programme was possibly not as systematic in establishing the metallurgical response of the orebody as has been the case on other similar projects, Micon considers that the testing adequately addressed all the expected issues and generated appropriate criteria for process design. These criteria have been generally confirmed by operating experience to date.

MAA decided in 2001 to install a third grinding line and a pebble crushing circuit in order to meet the objective of maintaining concentrate production at lower ore grades over the life-of-mine. Based on its operating experience to date, MAA has not increased the capacity of the flotation circuit or other areas.

Together with the feasibility study testing, post-commissioning operating results and process optimisation, it appears that an adequate and comprehensive programme of testing and study has been conducted in support of the recent expansion and the life-of-mine plan.

Mining and Milling Operations

Standard truck and shovel mining techniques operations are employed in the open pit mine, utilizing 42 m³ shovels and 220 t haul trucks to move both ore and waste. Mining is carried out on 17 m benches, with 2 m sub-drill, which suit the size of the equipment necessary for the production rate.

Current mineral reserves have a low waste to ore ratio of an average of 1.8:1. Operation of the mine is carried out at an elevated cut-off grade, which is reduced over the mine life to the economic cut-off grade. This practice requires that some ore be stockpiled for later processing. The average reserve grade is 0.51 % copper and 0.58 Au g/t.

The mining rate in fiscal 2002 marginally exceeded 300,000 tpd for a total of approximately 112 mt of material mined, comprised of approximately 39 mt of ore and 73 mt of waste. The total material mined is planned to increase to an average of 355,000 tpd, approximately 130 mt per annum, for the fiscal years 2004 to 2007, after which time waste stripping reduces significantly.

MAA employs approximately 800 permanent staff and 400 contractors, of whom approximately 500 staff and 200 contractors work in the mining department. Argentina is a highly unionized country with industry-based unions and very prescriptive labour agreements. MAA worked closely with the representative Union and Argentine Labour Ministry to negotiate an initial, one-union bargaining agreement. This was renegotiated in the second year resulting in the introduction of an innovative and flexible, four-year labour agreement which was renewed in 2003 for a further four-year period.

The original plant uses a conventional porphyry copper flotation circuit with proven, large scale equipment. The plant produces two products, a copper flotation concentrate containing the major gold credit and doré bullion from gravity recovery of coarser free gold. The original design capacity was 80,000 tpd with a utilisation of 94%, equivalent to 29.2 mt per year. Provision was made for expansion to 100,000 tpd by the addition of a third grinding line, in order to maintain metal production as the ore grade decreases.

MAA has increased the capacity of the original plant to approximately 100,000 tpd by the addition of the third grinding circuit, albeit using smaller equipment than that already installed. The expansion also included a pebble crushing circuit to handle critical size material from the semi-autogenous grinding ("SAG") mills, of which about 1 to 1.5 mt, at 0.4% copper, already had been accumulated. The planned utilization for 2003 is 93%, increasing to 94% in 2007.

MAA expects that the ball mills will become the limit to throughput with the expanded circuit, particularly on softer ore. Although the cleaner flotation circuit is a constraint to feed metal, this will not be a problem except on the softest, high grade ore, as lower ore grade will compensate for the increased throughput. MAA has not identified any other areas that require expansion, although it acknowledges that increased utilisation in most areas is required.

The mined ore is crushed in a 1,540 mm by 2,770 mm gyratory crusher. The crushed ore is conveyed 1.7 kms to an 80,000 t live capacity stockpile. The ore is drawn from the stockpile by apron feeders to conveyors feeding three parallel grinding circuits. The two original grinding lines each consist of an 11 m diameter, 5.14 m long SAG mill and two 6.1 m diameter, 9.34 m long ball mills operating in closed circuit with hydrocyclones. The third grinding line, which was commissioned in August 2002, consists of a 8.53 m diameter, 4.27 m long SAG mill and a 5.03 m diameter 8.84 m long ball mill, both of which are reconditioned second-hand units. It has been the practice to remove and stockpile the minus 35 mm critical size pebbles from the SAG mill discharge when processing harder ores with lower throughput rate. A circuit was commissioned in August 2002 for crushing the stockpiled pebbles and the newly generated pebbles, as required. The pebbles are conveyed via a surge bin to a crusher operating in open circuit and the crushed pebbles will be conveyed via a surge bin to each of the three SAG mill feed conveyors.

SAG and ball mill discharge is pumped to a cluster of hydrocyclones, one cluster for each ball mill. Hydrocyclone underflow discharges to the ball mill feed, with a minor proportion diverted via two centrifugal gravity concentrators for each cluster, for removal of coarser free gold. Hydrocyclone overflow at 80% passing 150 micron gravitates to the flotation circuit. The gravity concentrate is transferred to the secure gold room for further cleaning and smelting with fluxes to bullion.

After conditioning with reagents, the hydrocyclone overflow passes to the rougher flotation circuit consisting of 32 100 m³ mechanical flotation cells. MAA has concluded that there is sufficient rougher cell capacity to accommodate the increased throughput. Rougher concentrate is reground in one or two 5.0 m diameter, 7.32 m long ball mills operating in closed circuit with hydrocyclones, and centrifugal gravity concentrators for further free gold recovery. The reground rougher concentrate passes to the cleaner flotation section, consisting of 14 pneumatic flotation cells arranged for two stages of cleaning and a cleaner scavenger, all in closed circuit. The concentrate from the second stage cleaner is the final product and the tailings from the cleaner scavenger are now recirculated to the rougher circuit, although as commissioned these cells operated in open circuit producing final tailings.

Final concentrate is thickened to 63% solids in two 30 m diameter thickeners and for storage in surge tanks before being pumped via a 316 km long, 175 mm diameter pipeline to MAA's filter plant near Tucumán. Positive displacement pumps at the mine site and two booster stations elevate the concentrate to a high point from where it flows by gravity 150 kms to the filter plant. At the filter plant, the concentrate is stored in surge tanks and thickened prior to three 120 m³ continuous belt filter presses, which reduce the moisture content to 7.5%. The filters discharge to a storage building, where a front-end loader reclaims the filter cake for rail transport 830 kms to the port near Rosario.

Tailings from the process plant flow by gravity pipeline for 8.5 km to an engineered, centreline dam constructed across the Vis Vis canyon. Distribution is effected by spigotting along the upstream face of the dam. Supernatant water is pumped back to the process plant and seepage is collected downstream of the dam and pumped back. The dam is raised using waste rock with a core of selected material and remains a significant capital cost throughout the life of the mine. MAA retains Knight Piesold as its consultant for tailings dam management and construction quality control.

Markets and Sales Contracts

MAA's objective is to sell 90% to 95% of its concentrate production through frame contracts, with the balance for sale into the spot market. This should reduce the annual average treatment and refining charges and should provide short-term flexibility of production, sales and revenue against budget.

Sales and marketing operates from the port facilities, with a specialist consultant being retained for annual contracts exceeding 30,000 t, and MIM Japan retained through a negotiated sales agency agreement for annual contracts into the Far East and for general market intelligence in this region.

As at December 31, 2004, MAA reported that it had 16 frame contracts in place for the sale of its concentrate, including a few long-term contracts with traders and smelters, established to cater to the increased production scheduled by the life-of-mine plan. The lowest annual commitment is for 20,000 t and the largest is for 100,000 t. The earliest contract expiry date is December 31, 2006 and the latest expiry date is December 31, 2009. Smelter locations are in Europe, India, the Far East, Canada and Brazil.

Environmental Considerations

Permitting

The main environmental permit is the original Environmental Impact Report ("EIR"), which was prepared to 1988 World Bank guidelines and was approved in 1997 as part of the project approval process. Under the terms of the UTE Agreement, MAA is responsible for compliance with the commitments made in the EIR and the cost of reclamation and closure. There are currently no significant areas of non-compliance. The EIR must be updated bi-annually as two separate reports for approval by the Tucumán and Catamarca provincial authorities. Micon understands that the 2001 EIR update was received and accepted by the provincial authorities. Other statutory environmental controls are the water license associated with the fresh water supply from Campo Arenal (Catamarca) and the filter plant discharge license (Tucumán).

In addition to the direct statutory controls, the UTE Agreement and its requirement for consultation with YMAD on strategic issues, including closure, impact on environmental management.

Third party auditors are utilized to review key environment areas such as tailings storage facility design, construction and management. Through Xstrata and the other shareholders, MAA conducts regular audits of its environment programs to ensure that corporate, community and statutory standards have been adequately identified and are being adhered to.

Compliance

Under the terms of the UTE Agreement, commitments made in the EIR reside with MAA. In response to these commitments, MAA currently is implementing a revised environmental management system. Various initiatives have been taken and are ongoing to ensure compliance, which is demonstrated by routine monitoring of air and water quality against background levels.

Of particular significance is the commitment to zero discharge, which is implemented by intercepting and pumping back surface and near surface groundwater downstream of the tailings storage facility. Despite design considerations, a seepage plume has developed in the natural groundwater downstream of the facility, albeit currently well within MAA's concession, due to the area's complex structural geology. A series of pump back wells have been established to capture the seepage, which is characterised by high levels of dissolved calcium and sulphate. The pump back wells will be augmented over the life of the mine in order to contain the plume within the concession and monitoring wells will be provided for the Vis Vis River. Based on the latest ground water model, the pump back system will need to be operated for several years after mine closure.

The other potentially significant environmental risk lies with the concentrate pipeline. This pipeline crosses areas of mountainous terrain, significant rivers, high rainfall and active agriculture. Any rupture of the pipeline poses an environmental risk from spillage of concentrate. Subsequently, control structures and river crossing protection have been, and continue to be, installed in order to minimize the risk of breakage and spillage, a program of geotechnical inspection has been implemented to monitor landslide risk areas, and routine physical surveillance of the pipeline route is carried out.

Reclamation and Closure

Although the fixed assets of the project revert to YMAD on final termination of commercial production, MAA is legally responsible for reclamation and closure costs in its capacity as operator of the Alumbra Mine. MAA is committed to stabilizing tailings and waste rock against potential acid generation and water pollution and, to this end, is conducting progressive rehabilitation on the tailings storage facility and waste rock dumps. Other activities include contaminated land remediation, removal and stabilization of potentially acid generating road base material, securing pit safety and closure of infrastructure. The ultimate requirement is to achieve final landforms that do not require MAA's presence post closure.

MAA has prepared an Interim Mine Closure Plan in response both to commitments in the EIR and to meet the requirements of those existing shareholders who are signatories to the Australian Minerals Council Code for

Environmental Management. MAA's closure planning is an ongoing process that is refined as operations plans are revised and operational and monitoring data are evaluated. Closure costs are revised on an annual basis.

Ongoing rehabilitation is recognized as part of routine operations and associated costs are included in the project's financial plan. Testing is being completed in order to generate information regarding the potential for acid generation from waste materials, and initial testing of capping materials has been completed. Progressive rehabilitation commenced in 2002.

Bond-Posting

MAA makes provisions for reclamation and closure in its 2002 life-of-mine plan and financial statements, however, MAA is not required to post a bond in connection with its reclamation and closure obligations and no cash provisions are being made.

Capital Costs

The Alumbreira Mine was commissioned in 1998 after the expenditure of approximately \$1.233 billion of project development capital. After additional capital expenditure of approximately \$79 million in 1999, on-going annual sustaining and project capital has been expended since that time at a rate of approximately \$26 million per fiscal year.

Approximately \$29 million, \$18 million, \$30 million, and \$25 million was expended in the fiscal years ended June 30, 2000, 2001, 2002, and 2003 respectively. In 2003, Alumbreira decided to change its fiscal year from a June 30 year-end to a December 31 year-end. In the six months ended December 31, 2003, \$9 million was spent on capital expenditures, and in the fiscal year ended December 31, 2004, a further \$23 million was spent on capital expenditures.

Projected Capital Expenditures for Fiscal 2005 to 2013

The following table indicates capital estimates included in Micon's estimates of future annual cash flows:

Projected Capital Expenditures for Fiscal 2005 to 2013									
Item	2005	2006	2007	2008	2009	2010	2011	2012	2013
(US\$ in millions)									
Mining	10.3	4.8	4.8	4.2	5.1	1.7	2.1	-	-
Tailings Dam	2.8	2.4	2.4	2.4	2.3	2.3	2.2	2.2	0.1
Concentrator	2.6	1.8	1.8	1.6	2.1	1.3	1.4	2.1	1.8
Administration	0.28	0.32	0.32	0.14	0.3	0.13	0.15	0.05	-
Filter Plant, Rail and Port	0.22	0.19	0.19	0.15	0.08	0.81	0.35	0.16	0.05
Closure Cost	-	-	-	-	-	-	-	-	23.5
Total	<u>16.2</u>	<u>9.5</u>	<u>9.5</u>	<u>8.4</u>	<u>9.9</u>	<u>6.3</u>	<u>6.3</u>	<u>4.5</u>	<u>25.5</u>

Taxes

MAA is subject to taxation in the form of income tax and IVA tax, the latter of which is a value added tax applicable to purchases of goods and services at a rate of 21%. Full reimbursements for IVA tax are available to mining companies and a net reimbursement over the life of the mine of \$23.5 million is included in the cash flow projections.

The statutory tax rate applicable to MAA as a mining company is 30% as compared to the statutory tax rate of 35% for non-mining companies. This rate is protected under a fiscal stability regime which also provides for favoured treatment in terms of special deductions for interest paid on foreign loans.

Potential changes to the tax regime, resulting from the current Argentine political, economic and social crisis, are a risk to the estimated levels of future cash flow. However, it is not expected that any increased taxation would have a material effect on the value of the property, given the current fully developed stage of the operations and the high levels of projected annual cash flows.

Production Estimates and Cash Flow Projection

The MAA operation is expected to draw the majority of its economic value from the sale of copper and gold in concentrate. In addition, a doré containing gold and silver is produced on-site. Production is derived from ore mined at the Alumbreira Mine. The total scheduled ore to be mined and processed and the gold and copper output, as at the date of the Micon Report are set forth in the following table:

Production Schedule

Item	2005	2006	2007	2008	2009	2010	2011	2012	2013
Ore Milled (mt)	36.62	36.80	36.97	37.23	37.33	37.19	37.23	37.23	17.61
Gold Grade (g/t)	0.63	0.58	0.64	0.54	0.60	0.77	0.59	0.29	0.29
Copper Grade (%)	0.54	0.50	0.55	0.48	0.60	0.65	0.54	0.28	0.29
Gold Production ('000 ozs)	529	483	529	442	511	684	507	203	96
Copper in Concentrate ('000 t)	175	161	177	156	198	216	178	85	41

See "Alumbreira Mine – Update and Status " for updated information, including information relating to the mining of additional ore reserves. There is no change to production other than to extend the life of the deposit and this is an annual review and update. Should metal prices in the future be substantially lower, it is possible that these additional years of life do not materialize at that time.

The Issuer does not as a matter of course make public projections as to future sales, earnings or other results. The projected capital expenditures, production estimates, cash flow and other projections included in this AIF have been prepared by Micon and have been extracted from the Micon Report, unless specifically stated. The projected capital expenditures, production estimates, cash flow and other projections have been included in this AIF based on the requirements of Canadian securities regulations and were not prepared with a view toward compliance with the published guidelines of the SEC or the guidelines established by the Canadian Institute of Chartered Accountants or the American Institute of Certified Public Accountants for preparation and presentation of prospective financial information.

Neither the Issuer's Independent Registered Chartered Accountants, nor the Independent Registered Chartered Accountants of MAA have examined or compiled any of the accompanying prospective financial information and, accordingly, have not and do not express opinions or any other form of assurance with respect thereto. The cash flow projections are subjective in many respects and thus susceptible to interpretations and periodic revisions based on actual experience and recent developments. While presented with numerical specificity, the cash flow projections were not prepared by Micon on behalf of the Issuer in the ordinary course and are based upon a variety of estimates and hypothetical assumptions made by Micon with respect to, among other things, industry performance, general economic, market, interest rate and financial conditions, sales, cost of goods sold, operating and other revenues and expenses, capital expenditures and working capital of the Alumbreira Mine, and other matters which may not be realized and are inherently subject to significant business, economic and competitive uncertainties and contingencies, all of which are difficult to predict and many of which are beyond the Issuer's or MAA's control. Accordingly, there can be no assurance that the assumptions made in preparing the cash flow projections will prove

accurate, and actual results may be materially greater or less than those contained in the cash flow projections. For these reasons, as well as the bases and assumptions on which the cash flow projections were compiled, the inclusion of such cash flow projections herein should not be regarded as an indication that the Issuer or MAA, or any of their respective affiliates or representatives, considers such information to be an accurate prediction of future events, and the cash flow projections should not be relied upon as such. None of such persons assumes any responsibility for the reasonableness, completeness, accuracy or reliability of such cash flow projections. No party nor any of their respective affiliates or representatives has made, or makes, any representation to any person regarding the information contained in the cash flow projections and none of them intends to update or otherwise revise the cash flow projections to reflect circumstances existing after the date when made or to reflect the occurrence of future events even in the event that any or all of the assumptions are shown to be in error.

The overall base case cash flow projections for the Alumbreira Mine as set forth in the May 2003 Micon Report are set forth in the following table: See also "Alumbreira Mine –Status and Update.

Cash Flow Projections

Year	Payable Gold Production ⁽¹⁾	Payable Copper Production ⁽¹⁾	Net Revenue ⁽²⁾	Total Operating Costs ⁽³⁾	Cash Flow Before Taxes and Debt Service	Cash Flow After Capital Costs and Tax – Available for Equity Distribution – Issuer's 12.5% Share
	(ozs)	(t)	(US\$)	(US\$)	(US\$)	(US\$)
2005	528,749	174,692	407,761,336	216,409,807	166,643,302	12,332,538
2006	483,270	161,297	373,369,843	213,082,150	142,975,295	13,724,832
2007	529,178	176,864	409,173,936	213,277,141	177,865,316	17,298,672
2008	441,692	155,784	352,715,138	200,943,997	136,000,838	11,900,073
2009	511,088	197,758	432,121,254	184,121,143	229,168,686	20,052,260
2010	683,782	215,742	511,175,545	181,107,968	313,236,066	27,408,156
2011	506,875	177,719	403,319,966	165,456,950	223,150,616	19,525,679
2012	203,466	84,714	180,235,927	137,821,921	33,952,287	2,970,825
2013	96,097	41,487	87,149,170	74,216,925	(14,732,739)	1,174,533
Total	3,984,197	1,386,057	3,157,022,115	1,586,438,002	1,408,259,667	126,387,568

(1) Production figures refer to the total quantity of payable metal produced.

(2) A constant gold price of US\$320 per oz and a copper price of US\$0.80 per lb have been assumed.

(3) Adjusted for foreign exchange and inflation.

The estimates of annual cash flow assume that the current mining rate of approximately 111 mt of ore and waste per year will increase to approximately 130 mt per year by fiscal 2004 and will continue at that level for four years, after which time waste mining will diminish significantly. Ore will be mined from the pit until fiscal 2011 and for a final two years, fiscal years 2012 and 2013, low grade ore, which comprises a portion of the long term inventory stockpile, will be reclaimed from stockpile for processing. Over the projected operating life of ten years, MAA's operations are expected to generate a total undiscounted net cash flow, after senior debt service and taxes and available for distribution to shareholders, of approximately \$1.12 billion, of which the Issuer's 12.5% share upon completion of the acquisition of the Alumbreira Mine will equal approximately \$140 million. The senior project debt of \$154 million (as at December 31, 2003) was repaid in its entirety in May 2004.

Sensitivity analyses have been performed to test the impact on project economics of changes in the price of the metals produced. Net present values for 50% of BHP's 25% share of cash flows available to shareholders after full debt service and taxes have been estimated for metal prices 10% higher and lower than the base case prices. The results of these sensitivity analyses are set forth in the following table:

Input Parameter	Total net Present Value (Issuer's 12.5% share) (US\$ in millions)		
Discount Rate (% per year)	0	10	15
Base Case Prices	140	89	73
Base Case Prices +10%	173	110	91
Base Case Prices – 10%	106	66	54

ALUMBRERA MINE – UPDATE AND STATUS

During 2003/2004 a delineation drilling program at Alumbraera updated an existing assay database. Based on updated geological models and redesign of the ultimate pit and phase sequencing, the operator of the Alumbraera mine has reported the inclusion of additional ore reserves. The Issuer has determined that its share of the additional reserves at Alumbraera could represent an increase of 4% in the net present value of its total reserves.

The following information that is of a scientific or technical nature with respect to activities on the Alumbraera Mine has been prepared by or under the supervision of Luis A. Rivera, who is a "qualified person" as defined in NI 43-101, and who is employed by MAA as the Manager of the Mine Technical Services Department.

As a result of the drilling campaign, the Ore Reserves for the Alumbraera Mine as at December 31, 2004, are reported as follows:

Alumbraera Ore Reserves as of December 31, 2004⁽¹⁾

Material	Category	t (million)	Au g/t	Cu (%)	Contained Au (million ozs)	Contained Cu (Mt)
In Situ	Proved	240	0.59	0.54	4.6	1.3
	Probable	22	0.41	0.41	0.3	0.1
	Total	262	0.58	0.53	4.9	1.4
Stockpiles	Proved	110	0.40	0.35	1.4	0.4
	Probable	0	0	0	0	0
	Total	110	0.40	0.35	1.4	0.4
Total	Proved	350	0.53	0.48	6.0	1.7
	Probable	22	0.41	0.41	0.3	0.1
	Total	372	0.52	0.48	6.3	1.8

Notes:

- (1) The Ore Reserves for the Alumbraera Mine set out in the table above have been prepared by MAA and have been calculated as of December 31, 2004 in accordance with the recommendations of the Australian Institute of Mining and Metallurgy - Joint Ore Reserve Committee (the "JORC" code), which for reporting purposes is considered equivalent and comparable to the Canadian Institute of Mining, Metallurgy and Petroleum's National Instrument 43-101. The Ore Reserves are classified as Proved and Probable, and are based on the JORC Code.
- (2) Reserves were calculated using a gold price of \$350 per ounce and \$0.90 per pound of copper.
- (3) Appropriate operating cost and recovery rates from the operation were utilized.
- (4) Data shown is 100% of total reserves at the Alumbraera Mine. The Issuer's share of the total reserves is 12.5%.

AGUA RICA PROJECT

General

The Issuer currently owns 100% of the Agua Rica Project, a large porphyry-style copper-gold-molybdenum-silver deposit located in the northwestern province of Catamarca in Argentina. In 2003, the Issuer acquired the 72% interest in the Agua Rica Project that it did not previously own from BHP Minerals International Exploration Inc. ("BHP") for a purchase price of \$12.6 million. BHP agreed to defer \$9 million of the purchase price without

interest, until June 30, 2005. The deferred payment is secured by a pledge of the interests of the Delaware limited liability companies, Copper Holdings International LLC and Minera Agua Rica LLC through which the Agua Rica Project is held. Prior to this acquisition, the Issuer held a 30% interest in the Agua Rica Project, which interest was reduced to 28% in 2002.

Under a joint operating agreement between RAA Holdings S.A., an indirect subsidiary of the Issuer and BHP, BHP formerly managed and operated the project and exploration expenditures were shared by BHP (70%) and the Issuer (30%) in proportion to their respective interests in the project. BHP completed the 2001/2002 work program in June 2002. The Issuer's share of the work program (including management fees to the operator) in the financial year ended December 31, 2001 was approximately \$303,000 (2000 - \$545,000), but was not paid at the election of the Issuer and therefore contributed to the dilution of the Issuer's interest in the Agua Rica Project from 30% to 28%. Due to the continued weak world copper price in 2002, activities at Agua Rica in 2002 were placed on hold until the Issuer's acquisition of the remaining 72% interest from BHP. Work programs in the past two years have been built upon the work performed in completing the initial feasibility study, which was issued in November 1997. The 2004 work program for approximately \$1.4 million consisted of ongoing engineering development activities, environmental monitoring, and care and maintenance. In late 2004, the Issuer commissioned a further study on the Agua Rica project suitable for financing. The study is being prepared by Hatch Associates Ltd. and is expected to be completed by the end of 2005. The Issuer has also been in discussion with financing and smelter groups regarding the development of the Agua Rica Project.

Hatch Report

Information contained in this AIF that is of a scientific or technical nature relating specifically to the Agua Rica Project has been prepared by or under the supervision Callum Grant, P. Eng, of Hatch Associates Ltd. ("Hatch") and Gary Giroux, P. Eng of Giroux Consultants Ltd., each of whom is a "qualified person" as the term is defined in NI 43-101, and is derived from a report (the "Hatch Report") prepared by the foregoing entitled "Northern Orion Resources Inc. Agua Rica Project, Argentina" dated March 24, 2005, which is available for viewing under the Issuer's profile on www.sedar.com. As used in the extracted text below, "Joint Venture" means the joint venture between the Issuer's subsidiary and BHP.

Property Description, Location and Access

Agua Rica is located in the northwestern Argentine province of Catamarca approximately 200 kms from the provincial capital, and 25 kms to the north of the nearest settlement of Andalgalá. The property covers an area of approximately 12.5 km² with its centre point at an approximate latitude of 27° 26' South, longitude 66° 16' West.

Any future production from a mining operation at Agua Rica would be subject to a 3% "mine-mouth" royalty payable to the provincial Catamarca government. This equates to an approximate 2% Net Smelter Royalty equivalent.

To Hatch's knowledge, no environmental liabilities apply to the property.

Accessibility, Climate, Local Resources, Infrastructure, and Physiography

The Agua Rica property lies in a rugged range of mountains known as the Sierra de Aconquija that runs northeast-southwest through this eastern flank of the Andes. Towards the south and north of the Sierra de Aconquija, the mountain range gives way to gentler terrain as the basinal areas known as Campo Arenal in the north and Salar de Pipanaco in the south and west are approached. Locally around the property itself, the terrain reaches to over 3,500 m and is dissected by steeply eroded V-shaped valleys covered by partially consolidated scree, poorly developed soils (less than 1 m thick), and scrubby, sparse vegetation. The terrain in the area is rugged with more than 80% having slopes greater than 25°, and over 40% with slopes over 35°. Sediment control and water erosion during the summer rainy season are issues that have and will continue to require mitigation in any development activities at the site.

The climate in this part of Argentina is generally mild and typical of this arid north-western region of Argentina. The mountain ranges of Catamarca act to interrupt the passage of humid air from the north east that causes the heavy summer rainfall. The flanks of the mountain range to the north of Agua Rica tends to be significantly drier than the

immediate area around the project site and also towards the south where olives are intensively cultivated around Andalgalá. Annual precipitation is in the order of 300 mm, with the highest rainfall occurring in January (114 mm measured in Quebrada Minas in 1996). The warmest months are December and January (approximately 30°C) while in the winter months of June, July, and August the temperatures can fall to below 0°C at higher elevations.

Access to the site is via the principal road developed by the Joint Venture to service its exploration programs. This routing follows the Potrero valley northwards to the site from Andalgalá over a distance of some 20 kms. An alternative routing via the town of Capillitas to the north of the project site is more circuitous and is longer in both distance and time.

Andalgalá is a town of some 11,000 inhabitants and serves as the local centre for agriculture in the area, principally the cultivation of olives and walnuts. The town provides adequate facilities for small commercial businesses, automobile shops, some fabrication, small hotels, schools, and a hospital.

History

Since the early 1900s, the mining of copper and the semi-precious stone rhodochrosite has been recorded from the region around Agua Rica from several small-scale, artesanal mines, principally at Capillitas immediately to the west of the project site. Activities at Agua Rica itself date back to the period 1959-1965 when a restricted area known as Mi Vida was explored around Quebrada Minas and three small adits were driven.

The first systematic exploration work at Agua Rica dates back to the early 1970s when Compañía Cities Services Argentina S.A. ("Cities Services") examined the property (known at that time as Mi Vida) and completed several drillholes from pads located at the lower elevations of the geological sequence, i.e. close and adjacent to Quebrada Minas. While Cities Services recognised the significant potential for a porphyry type of copper occurrence, other aspects such as the epithermal "overprint" carrying precious metals and the potential for supergene enrichment at higher elevations was not fully appreciated, and so little follow-up work was carried out. By the late 1970s, the property had reverted back to its original Argentine owner, Recursos Americanos Argentinos S.A. ("RAA").

In the early 1990s, RAA optioned the property to BHP on the basis of 30% RAA, and 70% BHP. Also at that time, the Issuer concluded an agreement with RAA to acquire a majority share of its exploration holdings throughout Argentina, including Agua Rica, and in this way the Issuer became BHP's joint venture partner in the subsequent extensive exploration of the property from 1994 until late 1998. During this period, the Joint Venture carried out a series of field programs including basic mapping, geochemical (rock chip) sampling, and geophysics from which the larger potential of the property was recognised, particularly related to zones of secondary enrichment and evidence pointing to a post-porphyry epithermal stage of precious metals mineralization.

By 1995, a major program of diamond drilling was underway together with more detailed mapping and surface sampling, aerial photography for generation of accurate topography, metallurgical testwork principally at BHP's Reno, USA, Lakefield's Santiago, Chile, and Mintek's South African laboratories, geophysical investigations to identify locations for the supply of water for a future mining and milling operation, plus various work programs to examine technical issues to support an Initial Feasibility Study of the project in 1997 (the "IFS").

In 1997, the Joint Venture completed the IFS on the basis of an Inverse Distance Squared "103-hole resource model" in which two open pit options, one at 60,000 tpd and the other at 120,000 tpd, were investigated. The IFS was subsequently updated in 1998 (the kriged "150-hole model") and again in 1999 (the "176-hole model"). This latest 176-hole model dated March 1999 (using a combination of Ordinary and Indicator Kriging) comprises all of the drilling information available on the property. A summary of these principal resource estimates prepared by the Joint Venture is provided as follows (all at a 0.20% Cu cutoff grade):

Model	Date	Measured & Indicated Resource					Inferred				
		Mt	Cu %	Mo %	Au g/t	Ag g/t	Mt	Cu %	Mo %	Au g/t	Ag g/t
103-Model	02/1997	1,450	0.44	0.028	0.19	3.0	217	0.44	0.028	0.19	3.0
150-Model	01/1998	1,329	0.46	0.032	0.19	2.19	385	0.32	0.031	0.11	2.51
176-Model	03/1999	932	0.48	0.030	0.19	3.1	362	0.48	0.030	0.19	3.1

Source: Joint Venture Report, March 1999

In 1999, the Joint Venture halted field exploration activities at Agua Rica and, other than ongoing environmental monitoring, no additional work of any significance has taken place since that time.

NI 43-101 establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects including the requirement that mineral resources and mineral reserve estimates be based on the definitions adopted by the Canadian Institute of Mining, Metallurgy and Petroleum on August 20, 2000 ("CIM 2000"). CIM 2000 also requires separate disclosure of mineral resources and mineral reserves. The Agua Rica resource and reserve estimates were prepared by BHP prior to the implementation of NI 43-101 and the adoption of the CIM 2000, and more current data as to the reserve and resource estimates is not available to the Issuer. BHP's resource and reserve estimates respecting Agua Rica were prepared in accordance with the 1995 Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC 1995"), which was appropriate under the rules in effect at the time these estimates were prepared. If the proven and probable reserves estimates for Agua Rica had been calculated and combined under CIM 2000, there would not be any significant difference between this total and the combined proven and probable reserve figures determined by BHP in accordance with JORC 1995.

Geological Setting

Agua Rica lies to the east of, and is spatially related to, the prominent Farallón Negro Volcanic Complex covering 700 km² and hosting the producing Alumbrera Mine. At a regional and tectonic scale, this complex sits between the high mountainous plateau of the Puna to the northwest and the basin and range province of Sierras Pampeanas, of which the Sierra de Aconquija is one example. Within the Farallón Complex and its immediate vicinity, several metalliferous occurrences have now been exposed including Alumbrera and Agua Rica, other porphyry types such as Cerro Atajo and Bajo del Durazano, as well as smaller polymetallic and gold/silver vein deposits.

The main unit of the Farallón complex is a series of volcanic breccias with related basalts, basaltic andesites, and dacites, all representing elements of a strato-volcanic complex that has been deeply eroded. Agua Rica lies on the flank of this ancient strato-volcano (8.5 to 5.5 million years before present) and compared to the Alumbrera complex has no major extrusive units present.

The geological setting of Agua Rica and the principal mineralogy/rock types includes:

- meta-sedimentary rocks of the Sierra Aconquija Complex (country rocks);
- locally minor outcrops of granites or granitoid stocks of Ordovician age;
- a series of Tertiary intrusives notably early, weakly-mineralized Melcho intrusives;
- two irregular bodies of feldspar porphyry that form the main host for porphyry copper mineralization;
- various distal porphyries interpreted as late-stage events of no economic significance;
- several types and generations of hydrothermal breccia related to epithermal precious metal mineralization that overprinted the earlier copper-molybdenum stage.

Significant structural deformation and movement has been recorded at Agua Rica, principally related to the prominent fault zone now occupied by the Quebrada Minas creek that is believed to have formed the locus and zone of weakness for intrusion of the porphyry stocks. Low-angle reverse faulting is believed to have contributed to thickening of leached zones particularly on the west of the deposit, while to the east (Trampeadero), north-south faulting has promoted deep leaching at a local scale.

Rapid uplifting, “unroofing”, intrusion of breccias, and subsequent erosion are believed to have been the principal factors in the genesis of the varied primary and secondary enriched mineralization at Agua Rica.

Deposit Types

During exploration of the deposit, BHP and the Issuer’s geologists identified several different ore types at Agua Rica that were formalised into a classification system for block modelling and resource estimation. In general terms, these ore types fall within three main categories that in turn can be related to the evolutionary history of mineralization on the property, the interpreted geological model, and the style of the mineralization:

- Stage 1:** early porphyry mineralization associated with the Seca and Trampeadero porphyries: quartz stockwork and disseminations of pyrite, molybdenite, chalcopyrite, and rare bornite and pyrrhotite;
- Stage 2:** an overprinting epithermal event carrying precious metals and copper sulphosalts and best exemplified in the central Quebrada Minas breccia body that separates the Seca and Trampeadero porphyries, and in the Trampeadero porphyry itself;
- Stage 3:** supergene enrichment of hypogene copper mineralization forming an extensive blanket of higher copper values, now partially eroded into remnants on both sides of Quebrada Minas.

These three stages and deposit types form the basis for Agua Rica’s resource and are found within three principal zones, namely Seca Norte on the east and Trampeadero on the west with Quebrada Minas breccia in the centre, all combining to form an elongated zone measuring approximately 2.75 kms long (east-west) by approximately 2.5 km wide (north-south). The principal characteristics of these three bodies are summarised as follows:

Seca Norte: an enriched porphyry sequence of Cu-Mo-Au, with a core rich in Cu-Mo flanked by a haloe of Mo to the south and west. In area, measures approximately 400 m by 400 m over a vertical interval of approximately 500 m (level 3,400 m to below 2,950 m);

Quebrada Minas: dominated by epithermal sulphides within a funnel-shaped hydrothermal breccia unit that formed the conduit for deep-seated hydrothermal fluids. Outcrops in Quebrada Minas measure approximately 300 m by 300 m between approximately level 3,000 m to approximately 2,500 m;

Trampeadero: forming the eastern third of the deposit, displays both epithermal and porphyry styles of mineralization. Occurs over a vertical interval of 300 m as an elongated unit 500 m east-west by 400 m north-south.

Ore types at Agua Rica have been formalized by BHP and the Issuer into a classification system that reflects both mineralogy and metallurgy. Classifications in the latest, 176-hole geological model are based principally on:

- contaminant elements, principally on the basis of the As-bearing mineral, enargite;
- mineralogy: for example primary and secondary copper minerals;
- mineralogical texture: for example, coarse versus finer-grained covellite;
- alteration: based on variations in clay facies alteration products.

A total of 13 ore type zones were classified using this scheme, and can be summarized as follows:

Major “Dirty” Ore Types: occur principally in the Trampeadero and Quebrada Minas zones with dominant mineralogy consisting of covellite, chalcocite, digenite, and enargite with minor sphalerite and galena, and abundant molybdenite locally (for example on the eastern fringe of the zone);

Major “Clean” Ore Types: generally confined to the Seca porphyry unit: covellite, chalcocite, chalcopyrite, and digenite. Locally abundant molybdenite.

These two ore types comprise over 80% of the mineralization at Agua Rica with the balance made up of minor “clean” and “dirty” ore types within the three mineralized zones.

Exploration

Agua Rica has been explored through the sequential and systematic application of exploration programs involving basic mapping and sampling at the earlier stages, through more detailed investigations using ground geophysics and geochemistry, to a drilling campaign of 176 diamond drill holes and underground bulk sampling to confirm grade and provide material for metallurgical testwork.

The principal programs and the relevant results can be summarised as follows:

- Cities Services (1970-1972): geological mapping, alteration studies, rock geochemistry, and diamond drilling with helicopter access aimed at a copper-porphyry target at the lower elevations in the Quebrada Minas and southern flank of the property;
- the Joint Venture: originally involving RAA prior to its acquisition in 1995, this comprehensive exploration involved a 5-year period of geological mapping and rock geochemistry, a regional BLEG survey, an aerial photographic survey, a regional airborne magnetic/radiometric survey, and a total of 176 diamond drill holes completed over the period 1994 through 1998. At an early stage of the Joint Venture, the work programs were based on recognition that Agua Rica offered greater exploration potential than the early work had indicated, principally the occurrence of blankets of secondary enrichment at the higher elevations of the property on the Seca and Trampeadero sides of Quebrada Minas, and the importance of a later epithermal over-printing event with associated precious metal mineralization. During this period, an extensive network of drill roads was developed to the highest levels of the mineral system.

The 1993-1998 exploration at Agua Rica was completed by BHP as the operator of the Joint Venture, and involved both BHP staff and contractors for specific field programs such as geophysics, drilling, and underground bulk sampling. Hatch believes that these work programs have been carried out to industry standards, and that the information generated provides a reliable database for resource estimation and evaluation of the production potential of the property.

Drilling

Drilling was carried out at Agua Rica between 1992 and 1998 in four campaigns:

- 1) Cities Services (1972-73): 7,927 m in 38 holes of less than 200 m in length successfully intercepted porphyry-style mineralization; however, owing to poor recovery and the small size of the core (BX and AX), the assay results were not used in the subsequent resource estimates of the Joint Venture;
- 2) Joint Venture, Phase 1 (1994/95): 14,802 m in 39 holes to depths of approximately 450 m were completed by the contractor Boytec (Chile) using HXWL and NXWL diamond core;
- 3) Joint Venture, Phase 2 (1996): 26,995 m of HXWL and NXWL diamond core completed in 64 vertical and inclined drillholes of up to 700 m by a combination of contractors including Connors, Perfoeste, and Boytec;
- 4) Joint Venture, Phase 3 (1997-98): the final phase of diamond drilling on the property totalled approximately 23,000 m for an accumulated total of approximately 65,000 m for the Joint Venture.

In all of the Joint Venture programs, core recovery was typically in the 80-90% range, and all holes were surveyed by down-the-hole instruments. The later phases of the drilling included holes specifically for geotechnical evaluation of the ground conditions for a future open pit operation.

The Phase 2 and 3 programs were designed to drill off the property on 100 m north-south sections across the east-west trend of the mineralization.

Sampling Method and Approach

The Joint Venture's sampling programs have followed the following general methodologies:

- standard 2 m core samples sawn in half at site, with one half being returned to the core box and the other bagged for sample preparation (in later stages, core shipped to Andalgala for preparation);
- logging by qualified geologists recorded an extensive data set of observations and measurements including lithology, alteration mineralogy, sulphide/oxide mineralogy, sulphide percentages, structural features, veining, and iron oxide characteristics;
- geotechnical data collected by qualified technicians included RQD and fracture frequency by 2 m core intervals for use in subsequent geotechnical studies into open pit and underground mining;
- all core was routinely photographed before geological and geotechnical logging took place;
- all data collected through the logging procedures has been computerized.

All sample preparation and assaying was completed by industry standard laboratories such as Bondar Clegg (early programs) and by SGS for the later programs.

The drilling and sampling programs covered the majority of the entire extent of known mineralization on the property both laterally and vertically, and provide a reliable basis for understanding the distribution of mineralization and variations with rock type, alteration, etc. In the central core of the deposit (Quebrada Minas), some deep holes to +700 m below surface elevation were stopped before reaching the limits of the mineralization.

Sample Preparation, Analysis and Security

Two different sample preparation protocols have been used at Agua Rica:

- Holes AR-1 to AR-39: at a sample prep facility supervised by Bondar Clegg in Coquimbo, Chile, samples were crushed entire 2 m half-core to approximately 60% passing -8 mesh, with a further step of pulverizing of a 1/8 or 1/16 split to 150 mesh (30g). Assaying completed by Bondar Clegg in La Serena, Chile, using fire assaying for Au and multi-acid digestion for AA assaying of Ag, Cu, Pb, Zn, Mo, and As;
- Holes AR-40 through the end of the drill programs (i.e., the bulk of the drilling programs): core samples crushed under the supervision of the company SGS to produce a sub-sample at 150 mesh (30g). Sample preparation in Mendoza, Argentina, with assaying by SGS, Santiago, Chile, using fire assaying for Au (50g) aqua regia digestion for AA analysis of Ag, Cu, Mo, Pb, Zn, As, Sb, and Fe.

In addition to assaying for contained metal values, density determinations are available for over 2,000 core samples collected from the drill programs. This data was collected from dried whole-core using the caliper method, and classified by lithology and mineralogy. In general, density increases with increasing Fe, Cu, Zn, and Pb content reflecting the sulphide content. For block modeling and resource estimation, a density value was calculated for each rock type from this base data.

Approximately 5% of the drill samples were randomly selected for check assaying at independent laboratories, as follows:

- early drilling (AR-1 through AR-39)
 - primary laboratory: Bondar-Clegg, La Serena, Chile
 - check laboratories: Chemex (Toronto) and Acme (Vancouver)
- later drilling (after AR-40)
 - primary lab: SGS, Santiago, Chile

- check labs: Bondar-Clegg (Chile), Chemex (Toronto), and Acme (Vancouver)

BHP's standards program consisted of selecting pulps with less than a 10% relative difference from the four check laboratories, and inserting these pulps in the sample stream as their standards.

The results from these QA/QC procedures are discussed below.

Data Verification

Results of QA/QC Programs

In early 1998, Mineral Resources Development, Inc. ("MRDI") was contracted by BHP to audit the sample and assaying QA/QC procedures employed by the Joint Venture during its drilling programs at Agua Rica. This audit arose from statistical evaluation of the check assay results in 1997 indicating a relative low bias of 6% in copper assays from the primary SGS, Santiago laboratory compared to the check assay results at Chemex and Acme (using median values):

Average of Copper Results for 1,245 samples (ppm)

	Bondar-Clegg	SGS	Chemex	Acme	Average of Median
Mean	3,485	3,350	3,676	3,628	3,564
Mean-Median/Median	2.2%	6.0%	3.1%	1.8%	

(Source: MRDI, January 1998)

Good agreement between assays for both Au and Mo were noted by MRDI during its audit. With respect to the copper bias, MRDI concluded in its report of January 1998:

"...MRDI found BHP's practices meet or exceed those found in the mining industry, excepting that the recently instituted check assaying program indicated a low bias exists in copper assays performed by SGS, Santiago; the relative difference compared to check assay results is estimated to be 6 relative percent. While the bias is conservative, inasmuch as copper is under-estimated, differences greater than 5 relative percent may effect mine planning, reserve estimation, and net present value; at a minimum, selective re-assaying is warranted."

However the statistical analysis of the check assay results by Cu grade also showed that the greatest inter-laboratory differences occurred at low copper grades of less than 0.05% Cu, and hence would not have a significant impact on resource calculations. Nevertheless, an additional check assaying program was undertaken by BHP in 1998, selecting those samples that had returned significant (+/-20%) differences between the primary and the three original check laboratories for shipment and assaying at Chemex Laboratories in Vancouver. This involved some 1,700 samples and replacement of the re-assayed Chemex assays in the Agua Rica assay database used for the 176-hole resource model (the latest and most up-to-date resource for the property). Comparisons of these Chemex results versus three independent check labs were as follows:

Average of Copper Results from re-assay program (ppm)

	Bondar-Clegg	SGS	Chemex	Acme	Average of Median
Mean	4,693	4,571	4,812	4,804	4,720

(Source: BHP memorandum, June 1998)

An additional, more detailed audit of the check assaying procedures at Agua Rica was completed in mid-1999 by Pincock, Allen & Holt ("PAH"). In their report, PAH concluded that the check error rates were within industry

standards, that the amount of cross-lab checking was “good” to “excellent”, and that the assay database was suitable for a feasibility-level study.

Hatch concludes that any bias in copper assaying was adequately addressed through the 1998 re-assay program, and that therefore the database used for the latest 176-hole geological and resource model is sufficiently reliable within industry standards of resource reporting.

Bulk Sampling Program, 1998

In late 1998, two underground adits with a combined length of 350 m were driven for the purposes of collecting metallurgical samples of different ore types and for grade confirmation. The two adits, one at Trampeadero side (250 m) and the other at Seca (100 m), were driven by the contractor Redpath Más Errazuriz over a period of 58 days during which four bulk samples were collected and shipped to the Mintek metallurgical plant in Johannesburg, South Africa.

Since the adits were driven horizontally along two pilot drill holes, a detailed comparison of the original assay results could be made against wall and face channel samples and muck samples, all of which were taken on a round-by-round basis. Average comparisons of the drill hole values (“DDH”) versus the bulk sampling face channels taken round by round (“Faces”) provide additional support for the reliability of the drill data used for resource estimation:

		Cu %	Mo %	Au g/t	Ag g/t	Length (m)
SECA	DDH	0.53	0.022	0.41	0.88	100
	Face	0.53	0.024	0.37	1.30	
TRAMPEADERO	DDH	0.95	0.094	0.15	6.01	250
	Face	1.10	0.090	0.203	9.24	

Adjacent Properties

Approximately 20 kms to the west of Agua Rica, the Issuer holds an interest in a central portion of the Cerro Atajo copper property which forms a prominent gossan zone on the southwest facing slopes of the Aconquija range of mountains. In 2003, NNO applied to the province for the balance of the Cerro Atajo property which was vacant at that time. During the 1990s, the Joint Venture explored and sampled an area of 15 km² around Cerro Atajo identifying a 1100 m by 600 m zone of vuggy silica, alunite, quartz and clay alteration centred over a swarm of dacite porphyry dykes with a peripheral zone of less intense alteration. Although no fresh sulphides can be seen at surface, mineralization reported from drilling by Placer Ltd in the 1970s records occurrences of pyrite, chalcopyrite, tetrahedrite, and chalcocite. Copper oxides are common at surface within the propylitically altered volcanics at their contact with quartz-sericite altered vein zones. A total of 456 rock chip samples were collected by the Joint Venture and returned elevated values in the central quartz-alunite zone in Au (20-76 ppb), Pb (150-1000 ppm), and Mo (10-21 ppm). The Joint Venture concluded from its field work that the alteration and geochemical zoning at Cerro Atajo suggests the presence of a large porphyry stock at depth, and possibly porphyry-style mineralization.

The Alumbreira Mine is approximately 34 kms to the west of Agua Rica. The Alumbreira Mine is operated by MAA, a joint venture between Xstrata (50%), Wheaton (37.5%), and the Issuer (12.5%), with Xstrata acting as manager of the mine. At the date of the Report, MIM Holding Limited owned the 50% interest now owned by Xstrata. Since the date of the Report, the Issuer and Wheaton have acquired the Billiton BHP interest. See “Alumbreira Acquisition”.

Alumbreira was originally discovered, explored, and studied by various parties in the 1960s and 1970s, but it was not until the 1990s that the property reached the production stage after MIM acquired the Canadian company Musto Explorations which had completed a final program of drilling at the site. Following a construction period of approximately 3 years and expenditures of US\$1.3 billion (a 32% over-run), the mine went into production at a rate of 80,000 tpd in early 1998. For the year ended December 2004, the operation mined and processed 32.2 million tonnes of ore grading 0.56% Cu and 0.72g/t Au.

Alumbrera lies in the same general geological setting as Agua Rica but closer to the center of the regional Farallón Negro volcanic complex. It is a typical copper porphyry deposit with Proved and Probable open pit and stockpile reserves with an average grade of 394 mt at 0.48% Cu and 0.53 Au g/t as stated by MAA in June 2004.

Metallurgical Characteristics

The metallurgical characteristics and processing parameters have been investigated in three phases of work completed by the BHP/NNO joint venture in 1997 through 1999. The initial scoping type testwork was conducted as Phase 1 in 1997 at BHP's Center for Minerals Technology and led to a flowsheet design and a feasibility study. The testwork investigated the mineralogy of the ore and its mineral processing characteristics, particularly with regards to its amenability to grinding, flotation, liquid-solid separation and dewatering.

This work was followed by more detailed Phases 2 and 3 test programs in 1999 whereby the operating parameters were confirmed and optimized. The programs further investigated the ore mineralogy and concentrate recovery through batch, locked-cycle and pilot plant grinding and flotation. The test campaigns identified the processing parameters required in each unit operation for a technically viable operation to produce marketable concentrates. These programs were completed by the major facilities, Mintek and Lakefield Research, who are recognized specialists in the mineral processing industry.

The Agua Rica ore occurs in the Quebrada Minas, Quebrada Seca Norte and Trampeadero regions. During the first phase of metallurgical testing, the major copper minerals were identified to be chalcocite, covellite, digenite, chalcopyrite and bornite. The occurrences of mineral combinations depend on the region of deposit. For example, fine chalcocite-covellite-digenite occurs in Quebrada Seca Norte and Trampeadero regions, while coarse covellite occurs in Quebrada Minas region.

On completion of the full 176 holes on the property, the geology of the ore body was redefined and expanded to include six metallurgical types for metallurgical testing. These represent 80% of the deposit according to the major copper mineralogy and contained minor elements, such as lead, zinc, arsenic and sulphur, that affect concentrate grades. Metallurgical testing was conducted on drill core rejects to determine the set of processing conditions that will produce acceptable concentrate grades from the range of ores.

The pilot plant campaigns completed at the Mintek laboratory in South Africa established flowsheets for the recovery of copper and molybdenum concentrate from the Agua Rica deposit. Further review and optimization of the metallurgical parameters will take place as part of Hatch's current study to support financing of the project.

Resource Estimates

Geologic continuity at Agua Rica is well established through geologic mapping and drill hole interpretation. Grade continuity has been quantified for each Domain and each variable by semivariogram analysis. The classification procedure used for this deposit employs the grade continuity for copper and molybdenum, considered at this time to be the two most important economic variables. The classification scheme was as follows:

Measured: Blocks estimated in pass 1 for both copper and molybdenum using search ellipse dimensions equal to ¼ the semivariogram ranges.

Indicated: Blocks not classified but estimated in at least pass 2 for both copper and molybdenum using search ellipse dimensions equal to ½ the semivariogram ranges.

Inferred: All remaining blocks estimated

The results are summarized at key Cu cutoff grades in the following tables:

Agua Rica Resource Estimates, March 2005 (176-Hole Model)

<i>MEASURED RESOURCE</i>						<i>INDICATED RESOURCE</i>					
Cut-off %Cu	Mt	Cu %	Mo %	Au g/t	Ag g/t	Cut-off %Cu	Mt	Cu %	Mo %	Au g/t	Ag g/t
0.20	601	0.52	0.031	0.23	3.7	0.20	856	0.39	0.030	0.17	3.0
0.40	354	0.68	0.034	0.27	3.8	0.40	318	0.56	0.036	0.24	3.3
0.70	117	1.00	0.037	0.33	3.6	0.7	43	0.88	0.032	0.35	3.0
1.00	40	1.33	0.036	0.37	4.0	1.00	8	1.21	0.026	0.42	3.8

<i>INFERRED RESOURCE</i>						<i>MEASURED + INDICATED</i>					
Cut-off % Cu	Mt	Cu %	Mo %	Au g/t	Ag g/t	Cut-off % Cu	Mt	Cu %	Mo %	Au g/t	Ag g/t
0.20	972	0.36	0.036	0.14	2.1	0.20	1,457	0.44	0.030	0.19	3.3
0.40	331	0.50	0.052	0.16	2.2	0.40	671	0.62	0.035	0.26	3.6
0.70	100	0.75	0.052	0.18	3.1	0.70	160	0.96	0.035	0.34	3.4
1.00	26	1.00	0.029	0.24	2.3	1.00	48	1.31	0.035	0.38	4.0

(Source: Hatch Report)

Interpretation and conclusions

Hatch and Giroux Consultants have completed a feasibility-level resource estimate of the Agua Rica copper-gold-molybdenum-silver deposit located in Catamarca Province, Argentina. The principal conclusions from this work completed during the first quarter of 2005 are:

- The geological understanding and interpretation of the deposit have been well developed through a sequential series of field programs completed during the 1990s by the Joint Venture's staff. In addition to drill programs totaling 176 core holes, a number of geological and mineralogical studies provide an excellent basis for interpreting porphyry, epithermal, and secondary enrichment phases of the mineralization.
- The quality of the assay and related data is of sufficient quality to support the resource estimates summarized in this report. This Hatch conclusion is also supported by two qualified independent audits of the drill hole information completed in 1998 and 1999.
- The 1998/99 Joint Venture geological interpretation has been reviewed by Hatch and adequately represents the deposit characteristics, spatial geometry of different zones and lithologies, and structural setting of the mineralization. The geological model has been based on detailed interpretations on section and bench plan and contains a coding system with all the required detail for resource estimation and subsequent mine design to a feasibility level, including distribution of metallurgical types.
- The 2005 Hatch estimates are globally similar to earlier BHP estimates but differ locally and in the extent of Inferred mineralization at the margins of the deposit. These differences have been reconciled and validated through comparisons of drill hole data versus blocks particularly in common areas covered by the additional 26 holes drilled in the latter stages of the field programs. Differences compared to the earlier "150 Hole" models can be explained by the additional drill holes, revised variography, the limits to which Inferred material is carried, and procedural details of the Ordinary Kriging methodology applied.
- Hatch concludes that the 2005 resource estimates are suitable and adequate for subsequent mine planning to a feasibility study level.

MANTUA PROJECT

The Issuer holds an indirect undivided 50% interest in the gold/copper Mantua Project in Cuba. Geominera S.A. ("Geominera"), a Cuban company 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, holds the remaining 50% interest in the project.

Since 2004, the Company has been in discussions with third parties regarding the sale of the Mantua Project. As there is no assurance that an agreement will be completed to the satisfaction of the Issuer, the Issuer decided to write-down the Mantua Project. As a result of this, and the termination of the Newport Option in October 2004, as described below, a write-down of \$22,209,000 was recorded in the fourth quarter of 2004. The Mantua Project is no longer considered by the Company to be a material property.

The Issuer acquired all of the outstanding shares of Minera Mantua Inc. ("MMI") from a group of vendors, including Miramar, in 1995. When it acquired MMI, through Minera Cobre S.A., the Issuer had a 50% working interest in the Mantua Project.

The 50% working interest in the Mantua Project was acquired pursuant to an agreement with Geominera dated August 13, 1993 (the "Cobre Association Agreement"). The Cobre Association Agreement and the related articles of incorporation are the constating documents of Cobre Mantua S.A. ("Comantua"), a Cuban joint enterprise corporation, the shares of which are allocated on a 50/50 basis between Geominera and the Issuer's indirect subsidiary, Minera Cobre S.A.

Geominera's contribution to the joint enterprise was the exclusive right to explore, develop, mine and exploit the Mantua Project, and all previous studies and investigations relating to the Mantua Project. The Issuer's contribution included a feasibility study on the Mantua Project prepared in 1993 and an initial cash contribution of \$20,000. Profits of the joint enterprise are to be distributed 50% to Minera Cobre S.A., the Issuer's subsidiary, and 50% to Geominera. Pursuant to the Cobre Association Agreement, the Issuer was required to negotiate and obtain all financing necessary for the commercial development of the Mantua Project by June 30, 1995. Geominera subsequently agreed to waive the June 30, 1995 date, provided that Minera Cobre S.A. obtained financing to develop the Mantua Project. In September 2003, the Issuer was advised by Geominera that the Office of Mineral Resources of Cuba has issued a request for a proposal for re-commencement of work on the property.

Under the Cobre Association Agreement, Comantua 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 any mine, in repayment of advances made by it to the joint enterprise. If any advances remain outstanding at the end of that two-year period, Comantua will continue to be entitled to no less than 75% of the net income of the Mantua Project until all such advances are repaid. All major decisions of Comantua require the approval of the representatives of each of Geominera and the Issuer; however, all ordinary operating decisions are made by the operations manager who is appointed by the Issuer for a specified period of time.

Efforts continued in 2002 to arrange financing for a bankable feasibility study for the copper mining phase of the Mantua Project. The Issuer's ability to develop the copper phase at Mantua is dependent upon obtaining third party financing. In August 2001, the Issuer optioned its interest in the project to International Barytex Resources Ltd. ("Barytex"), an arm's length third party, which assumed the carrying costs of the project and committed to raising adequate financing and to complete a bankable feasibility study on the project within 18 months. In April 2002, Barytex announced that it was unable to secure the necessary financing to complete the feasibility study on suitable terms and terminated the option. A portion of the unpaid carrying costs previously assumed by Barytex was settled by the optionee through the issuance of common shares in the capital of Barytex to the Issuer. In September 2002, the Issuer granted an option on its interest in the Mantua Project to Newport (the "Newport Option") pursuant to which Newport assumed the carrying costs of the project and issued 400,000 common shares to the Issuer at a deemed price of Cdn\$0.26 per share. Pursuant to the terms of the Royalty and Proceeds Interest, Miramar received 200,000 of these shares. The Newport Option was terminated in October 2004. Notwithstanding the termination of the option, the Issuer has been making the payments required to keep the Mantua Property in good standing.

The Mantua Project is also subject to approximately \$28 million in subordinated debt owed to the Issuer and the 2.5% net smelter returns and proceeds royalty in favour of Miramar.

Information contained in this AIF that is of a scientific or technical nature relating specifically to the Mantua Project has been prepared by or under the supervision of Callum Grant, P. Eng of Hatch, who is a qualified person as defined in NI 43-101.

Property Description, Location and Access

The Mantua Project property contains a secondarily enriched copper deposit. It is located in Pinar del Rio Province, western Cuba, 240 kms from Havana. The property consists of an 8 km² production concession and an adjoining 11.2 km² area of interest. The site is reached via a four-lane highway from Havana to Pinar Del Rio, which is 65 kms east of Mantua. A paved secondary road then links with the site.

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, the Issuer, through Minera Cobre S.A., commenced detailed investigations, including an additional 13 drill holes, bulk sampling and metallurgical testing. An 11 t 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 t bulk sample.

In the summer of 1994, Minera Cobre S.A. drove a 145 m exploration tunnel to access the ore body, and, in September and October 1994, extracted 600 t 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, Minera Cobre S.A. 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 m and eight diamond drill holes for 684.7 m, 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 m 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° to the west and has a strike length of 1,300 m.

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.

RISK FACTORS

An investment in securities of the Issuer is speculative and involves significant risks which should be carefully considered by prospective investors before purchasing such securities. In addition to the other information set forth elsewhere in this AIF, the following risk factors should be carefully reviewed by prospective investors:

Investment in securities of Northern Orion involves a significant degree of risk and should be considered speculative due to the nature of Northern Orion's business and the present stage of its development.

Exploration, Development and Operating Risks

Mining operations generally involve a high degree of risk. The Issuer's operations are subject to all the hazards and risks normally encountered in the exploration, development and production of gold, silver and copper, including unusual and unexpected geologic formations, seismic activity, rock bursts, cave-ins, flooding and other conditions involved in the drilling and removal of material, any of which could result in damage to, or destruction of, mines and other producing facilities, damage to life or property, environmental damage and possible legal liability. Although adequate precautions to minimize risk will be taken, milling operations are subject to hazards such as equipment failure or failure of retaining dams around tailings disposal areas which may result in environmental pollution and consequent liability.

The exploration for and development of mineral deposits involves significant risks which even a combination of careful evaluation, experience and knowledge may not eliminate. Major expenses may be required to locate and establish mineral reserves, to develop metallurgical processes and to construct mining and processing facilities at a particular site. Whether a mineral deposit will be commercially viable depends on a number of factors, some of which are: the particular attributes of the deposit, such as size, grade and proximity to infrastructure; metal prices which are highly cyclical; and government regulations, including regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting of minerals and environmental protection. The exact effect of these factors cannot be accurately predicted, but the combination of these factors may result in the Issuer not receiving an adequate return on invested capital.

Uncertainty in the Estimation of Ore Reserves and Mineral Resources

The figures for ore reserves and mineral resources contained or incorporated by reference in this AIF are estimates only and no assurance can be given that the anticipated tonnages and grades will be achieved, that the indicated level of recovery will be realized or that ore reserves could be mined or processed profitably. There are numerous uncertainties inherent in estimating ore reserves and mineral resources, including many factors beyond the Issuer's control. Such estimation is a subjective process, and the accuracy of any reserve or resource estimate is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation. Short-term operating factors relating to the ore reserves, such as the need for orderly development of the ore bodies or the processing of new or different ore grades, may cause the mining operation to be unprofitable in any particular accounting period. In addition, there can be no assurance that gold, silver or copper recoveries in small scale laboratory tests will be duplicated in larger scale tests under on-site conditions or during production.

Inferred mineral resources that are not mineral reserves do not have demonstrated economic viability.

Fluctuation in gold, silver or copper prices, results of drilling, metallurgical testing and production and the evaluation of mine plans subsequent to the date of any estimate may require revision of such estimate. The volume and grade of reserves mined and processed and recovery rates may not be the same as currently anticipated. Any material reductions in estimates of Ore Reserves and Mineral Resources, or of the Issuer's ability to extract these Ore Reserves, could have a material adverse effect on the Issuer's results of operations and financial condition.

Need for Additional Reserves

Because mines have limited lives based on proven and probable reserves, the Issuer must continually replace and expand its reserves. The life-of-mine estimates included in this AIF for the Alumbreira Mine may not be correct. The Issuer's ability to maintain, or increase its annual production of gold and copper will be dependent in significant part on its ability to bring new mines into production and MAA's ability to expand reserves at the Alumbreira Mine. The Alumbreira Mine has an estimated mine life of ten years. The Issuer does not anticipate that further exploration at the Alumbreira Mine will result in a material increase to ore reserves.

Limited Experience Placing Projects into Production

Northern Orion has limited experience in placing mineral deposit properties of the scale of Agua Rica into production. Its ability to do so will be dependent upon engaging the services of additional appropriately experienced personnel. There can be no assurance that the Issuer will have available to it the necessary expertise when and if the Issuer places mineral deposit properties into production.

Commodity Prices

The price of the Common Shares, the Issuer's financial results and exploration, development and mining activities have previously been, or may in the future be, significantly adversely affected by declines in the price of gold and copper. Gold and copper prices fluctuate widely and are affected by numerous factors beyond the Issuer's control such as the sale or purchase of gold by various central banks and financial institutions, interest rates, exchange rates, inflation or deflation, fluctuation in the value of the United States dollar and foreign currencies, global and regional supply and demand, and the political and economic conditions of major gold and copper-producing countries throughout the world. The price of gold and copper has fluctuated widely in recent years, and future serious price declines could cause continued development of and commercial production from the Issuer's properties to be impracticable.

Depending on the price of gold and copper, cash flow from mining operations may not be sufficient and the Issuer could be forced to discontinue production and may lose its interest in, or may be forced to sell, some of its properties. Future production from the Issuer's mining properties is dependent on gold and copper prices that are adequate to make these properties economic. Furthermore, reserve calculations and life-of-mine plans using significantly lower gold and copper prices could result in material write-downs of the Issuer's investment in mining properties and increased amortization, reclamation and closure charges. In addition to adversely affecting the Issuer's reserve estimates and its financial condition, declining commodity prices can impact operations by requiring a reassessment of the feasibility of a particular project. Such a reassessment may be the result of a management decision or may be required under financing arrangements related to a particular project. Even if the project is ultimately determined to be economically viable, the need to conduct such a reassessment may cause substantial delays or may interrupt operations until the reassessment can be completed.

Copper concentrate from the Alumbreira Mine is shipped to smelters in Europe, India, the Far East, Canada and Brazil. Transportation costs of copper concentrate could increase substantially due to an increase in the price of oil or a shortage in the number of vessels available to ship concentrate to smelters.

Legal Proceedings

Proceedings have been commenced against the Issuer in Argentina by a former director of the Issuer. See "Legal Proceedings". While the Issuer considers the claims to be unfounded and the Issuer's legal counsel in Argentina has advised that the claims are unlikely to prove successful, the outcome is not certain. The proceedings are subject to procedural and substantive laws of Argentina which differ from those in the Issuer's governing jurisdiction and the effect of such differences is difficult to assess. There is no assurance that the Issuer will be wholly successful in

defending against the claims. If the Issuer is not successful or is only partially successful in its defence, there is a risk that the damages could exceed the estimated maximum of US\$17,530,000.

Insurance and Uninsured Risks

The Issuer's business is subject to a number of risks and hazards generally, including adverse environmental conditions, industrial accidents, labour disputes, unusual or unexpected geological conditions, ground or slope failures, cave-ins, changes in the regulatory environment and natural phenomena such as inclement weather conditions, floods and earthquakes. Such occurrences could result in damage to mineral properties or production facilities, personal injury or death, environmental damage to the Issuer's properties or the properties of others, delays in mining, monetary losses and possible legal liability.

Although the Issuer maintains insurance to protect against certain risks in such amounts as it considers to be reasonable, its insurance will not cover all the potential risks associated with a mining company's operations. The Issuer may also be unable to maintain insurance to cover these risks at economically feasible premiums. Insurance coverage may not continue to be available or may not be adequate to cover any resulting liability. Moreover, insurance against risks such as environmental pollution or other hazards as a result of exploration and production is not generally available to the Issuer or to other companies in the mining industry on acceptable terms. The Issuer might also become subject to liability for pollution or other hazards which may not be insured against or which the Issuer may elect not to insure against because of premium costs or other reasons. Losses from these events may cause the Issuer to incur significant costs that could have a material adverse effect upon its financial performance and results of operations.

Environmental Risks and Hazards

All phases of the Issuer's operations are subject to environmental regulation in the various jurisdictions in which it operates. These regulations mandate, among other things, the maintenance of air and water quality standards and land reclamation. They also set forth limitations on the generation, transportation, storage and disposal of solid and hazardous waste. Environmental legislation is evolving in a manner which will require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors and employees. There is no assurance that future changes in environmental regulation, if any, will not adversely affect the Issuer's operations. Environmental hazards may exist on the properties on which the Issuer holds interests or on the properties which are being acquired pursuant to the Acquisition which are unknown to the Issuer at present and which have been caused by previous or existing owners or operators of the properties.

Government approvals and permits are currently, and may in the future be, required in connection with the Issuer's operations. To the extent such approvals are required and not obtained, the Issuer may be curtailed or prohibited from continuing its mining operations or from proceeding with planned exploration or development of mineral properties.

Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in mining operations or in the exploration or development of mineral properties may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

Amendments to current laws, regulations and permits governing operations and activities of mining and exploration companies, or more stringent implementation thereof, could have a material adverse impact on the Issuer and cause increases in exploration expenses, capital expenditures or production costs or reduction in levels of production at producing properties or require abandonment or delays in development of new mining properties.

Environmental Risks at the Alumbreira Mine

A seepage plume has developed in the natural groundwater downstream of the tailings facility, within MAA's concession. A series of pump back wells have been established to capture the seepage, which is characterized by

high levels of dissolved calcium and sulphate. It will be necessary to augment the pump back wells over the life of the mine in order to contain the plume within the concession and to provide for monitoring wells for the Vis Vis River. Based on the latest ground water model, the pump back system will need to be operated for several years after mine closure. The concentrate pipeline at the Alumbrera Mine crosses areas of mountainous terrain, significant rivers, high rainfall and active agriculture. Although various control structures and monitoring programs have been implemented, any rupture of the pipeline poses an environmental risk from spillage of concentrate.

Subsequently, control structures and river crossing protection have been, and continue to be, installed in order to minimize the risk of breakage and spillage, a program of geotechnical inspection has been implemented to monitor landslide risk areas, and routine physical surveillance of the pipeline route is carried out.

Permitting

The Issuer's operations in Argentina and Cuba are subject to receiving and maintaining permits from appropriate governmental authorities. Although MAA currently has all required permits for its operations as currently conducted, there is no assurance that delays will not occur in connection with obtaining all necessary renewals of such permits for the existing operations or additional permits for any possible future changes to operations. Prior to any development on any of its properties, the Issuer must receive permits from appropriate governmental authorities. There can be no assurance that the Issuer will continue to hold all permits necessary to develop or to commence or to continue operating at any particular property.

Infrastructure

Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants, which affect capital and operating costs. Unusual or infrequent weather phenomena, sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Issuer's operations, financial condition and results of operations.

Business Interruption Risks at the Alumbrera Mine

The failure or rupture of the pipeline, depending on the location of such occurrence, could result in significant interruption of operations of MAA and could adversely affect the Issuer's financial condition and results of operations.

The Alumbrera Mine is located in a remote area of Argentina. On average, more than 2,000 people are transported by road and more than 1,200 people are transported by air, to and from the mine site every month. A serious accident involving a bus or plane could result in multiple fatalities. The disruption of these services could also result in significant disruption to the operations of MAA and have an adverse effect on the financial condition and operations of the Issuer.

Land Title

Although the title to the properties owned and proposed to be acquired by the Issuer was reviewed by or on behalf of the Issuer, no formal title opinions were obtained by the Issuer and, consequently, no assurances can be given that there are no title defects affecting such properties. Title insurance generally is not available, and the Issuer's ability to ensure that it has obtained secure claim to individual mineral properties or mining concessions may be severely constrained. The Issuer has not conducted surveys of the claims in which it holds direct or indirect interests and, therefore, the precise area and location of such claims may be in doubt. Accordingly, the Issuer's mineral properties may be subject to prior unregistered liens, agreements, transfers or claims, including native land claims, and title may be affected by, among other things, undetected defects. In addition, the Issuer may be unable to operate its properties as permitted or to enforce its rights with respect to its properties.

Foreign Operations

Most of the Issuer's operations are currently conducted in Argentina, and as such the Issuer's operations are exposed to various levels of political, economic and other risks and uncertainties. These risks and uncertainties vary from

country to country and include, but are not limited to, terrorism; hostage taking; military repression; expropriation; extreme fluctuations in currency exchange rates; high rates of inflation; labour unrest; the risks of war or civil unrest; expropriation and nationalization; renegotiation or nullification of existing concessions, licenses, permits and contracts; illegal mining; changes in taxation policies; restrictions on foreign exchange and repatriation; and changing political conditions, currency controls and governmental regulations that favour or require the awarding of contracts to local contractors or require foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction.

Changes, if any, in mining or investment policies or shifts in political attitude in Argentina may adversely affect the Issuer's operations or profitability. Operations may be affected in varying degrees by government regulations with respect to, but not limited to, restrictions on production, price controls, export controls, currency remittance, income taxes, expropriation of property, foreign investment, maintenance of claims, environmental legislation, land use, land claims of local people, water use and mine safety.

Failure to comply strictly with applicable laws, regulations and local practices relating to mineral right applications and tenure, could result in loss, reduction or expropriation of entitlements, or the imposition of additional local or foreign parties as joint venture partners with carried or other interests.

The occurrence of these various factors and uncertainties cannot be accurately predicted and could have an adverse effect on the Issuer's operations or profitability.

Economic and Political Instability in Argentina

The Alumbreira Mine and the Agua Rica Project are located in Argentina. There are risks relating to an uncertain or unpredictable political and economic environment in Argentina. In the short term, significant macroeconomic instability in the region is expected to negatively impact on the business environment and may lead to longer term negative changes in the national approach taken to ownership by foreign companies of natural resources. Argentina recently suffered severe economic difficulties including a significant currency devaluation in early 2002, although in management's view there have been generally recognized improvements in economic and social conditions in the past 20 months. The operations of MAA may be affected in the foreseeable future by these conditions.

In response to the political and economic instability in Argentina, in January 2002 the Argentine government announced the abandonment of the one-to-one peg of the Argentina peso to the US dollar. A severe devaluation of the peso permitted the expansion of exporting activity and the decrease of imports.

During the economic crisis, Argentina defaulted on foreign debt repayments and, from November 2002 to January 2003, Argentina defaulted on the repayment on a number of official loans to multinational organizations. In January 2003, the International Monetary Fund agreed to reschedule certain debt owed by Argentina and approved a short term credit line to repay debts to multinational organizations that could not be postponed. Since late 2004, the Argentine government has been presenting proposals to its creditors to restructure its debt. The Argentine government expects that its proposals will be accepted.

There is the risk of political violence and increased social tension in Argentina as a result of the economic crisis and Argentina has experienced increased civil unrest, crime and labour unrest. In addition, the government has also renegotiated or defaulted on contractual arrangements. Roadblocks and pickets by activists (piqueteros), members of the local communities, unemployed people and unions can occur on most national and provincial routes without notice. There have been some minor disruptions to access routes near the Alumbreira mine site about one year ago which did not affect the supply of goods to the mine. Although there has not been any recurrence of disruptions in the past several months, there is no assurance that disruptions will not occur in the future which will affect the supply of goods. Civil disruptions may become more frequent if the economic situation in Argentina continues to deteriorate and may significantly disrupt the continuous supply of goods.

Certain events could have significant political ramifications to MAA in Argentina. In particular, serious environmental incidents such as the rupture of the concentrate pipeline, contamination of groundwater and surface water downstream of the tailings dam due to uncontrolled migration of the sulphate plume of other events which would constitute a major breach of EIR commitments.

The Alumbrera mining prospects are owned by YMAD, a quasi-governmental mining Issuer, pursuant to an Argentine mining law which granted YMAD such rights. YMAD has granted a mining lease to MAA pursuant to the UTE Agreement. Significant political changes in Argentina which impact foreign investment and mining in general, or YMAD or MAA's rights to the Alumbrera mining prospects in particular, could adversely impact MAA's ability to operate the Alumbrera Mine.

Certain political and economic events such as: (i) the inability of MAA to obtain US dollars in a lawful market of Argentina or to effect the lawful transfer of US dollars to the senior lenders; (ii) acts or failures to act by a government authority in Argentina; and (iii) acts of political or social violence in Argentina, could have a material adverse effect on MAA's ability to operate the Alumbrera Mine and make payments due to senior lenders and may constitute an event of default under the terms of the security for the senior project debt.

Foreign Subsidiaries

The Issuer conducts operations through foreign (Cayman Islands, Delaware, Argentina, Cuba and Antigua) subsidiaries, joint ventures and divisions, and substantially all of its assets are held in such entities. Accordingly, any limitation on the transfer of cash or other assets between the parent corporation and such entities, or among such entities, could restrict the Issuer's ability to fund its operations efficiently. Any such limitations, or the perception that such limitations may exist now or in the future, could have an adverse impact on the Issuer's valuation and stock price.

Competition

The mining industry is competitive in all of its phases. The Issuer faces strong competition from other mining companies in connection with the acquisition of properties producing, or capable of producing, precious and base metals. Many of these companies have greater financial resources, operational experience and technical capabilities than the Issuer. As a result of this competition, the Issuer may be unable to maintain or acquire attractive mining properties on terms it considers acceptable or at all. Consequently, the Issuer's revenues, operations and financial condition could be materially adversely affected.

Additional Capital

The mining, processing, development and exploration of the Issuer's properties, may require substantial additional financing. Failure to obtain sufficient financing may result in delaying or indefinite postponement of exploration, development or production on any or all of the Issuer's properties or even a loss of property interest. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, the terms of such financing will be favourable to the Issuer. Low gold prices during the five years prior to 2002 adversely affected the Issuer's ability to obtain financing, and low gold and copper prices could have similar effects in the future.

Joint Ventures

The Issuer holds an indirect 12.5% interest in the Alumbrera Mine, the other 37.5% and 50% interests being held by Wheaton River and Xstrata plc, respectively. The Issuer's interest in the Alumbrera Mine is subject to the risks normally associated with the conduct of joint ventures. The existence or occurrence of one or more of the following circumstances and events could have a material adverse impact on the Issuer's profitability or the viability of its interests held through joint ventures, which could have a material adverse impact on the Issuer's future cash flows, earnings, results of operations and financial condition: (i) disagreement with joint venture partners on how to develop and operate mines efficiently; (ii) inability of joint venture partners to meet their obligations to the joint venture or third parties; and (iii) litigation between joint venture partners regarding joint venture matters.

Commodity Hedging

The Issuer's current policy is not to hedge future metal sales, however, this policy may change in the future. MAA does hedge some metal sales. Hedging of metal sales may require margin activities. Sudden fluctuations in the price of the metal being hedged could result in margin calls that could have an adverse effect on the financial position of the Issuer or MAA.

There is no assurance that a commodity hedging program designed to reduce the risk associated with fluctuations in metal prices will be successful. Hedging may not protect adequately against declines in the price of the hedged metal. Although hedging may protect the Issuer and MAA from a decline in the price of the metal being hedged, it may also prevent the Issuer and MAA from benefiting fully from price increases.

Exchange Rate Fluctuations

Exchange rate fluctuations may affect the costs that the Issuer incurs in its operations. The Issuer's costs in Cuba and Argentina are incurred principally in US dollars. The Issuer's costs in Canada are incurred principally in Canadian dollars. The appreciation of non-US dollar currencies against the US dollar can increase the cost of gold and copper production in US dollar terms. From time to time, the Issuer may transact currency hedging to reduce the risk associated with currency fluctuations. The Issuer does not presently have any foreign currency hedge transaction outstanding. There is no assurance that its hedging strategies will be successful. Currency hedging may require margin activities. Sudden fluctuations in currencies could result in margin calls that could have an adverse effect on the Issuer's financial position.

Government Regulation

The mining, processing, development and mineral exploration activities of the Issuer are subject to various laws governing prospecting, development, production, taxes, labour standards and occupational health, mine safety, toxic substances, land use, water use, land claims of local people and other matters. Although the Issuer's mining and processing operations and exploration and development activities are currently carried out in accordance with all applicable rules and regulations, no assurance can be given that new rules and regulations will not be enacted or that existing rules and regulations will not be applied in a manner which could limit or curtail production or development. Amendments to current laws and regulations governing operations and activities of mining and milling or more stringent implementation thereof could have a substantial adverse impact on the Issuer.

Labour and Employment Matters

Production at the Alumbrera Mine will be dependant upon the efforts of MAA's employees and may be affected by MAA's relationship with both its unionized and non-unionized employees. In addition, relations between the Issuer and its employees may be impacted by changes in the scheme of labour relations which may be introduced by the relevant governmental authorities in whose jurisdictions the Issuer carries on business. Adverse changes in such legislation or in the relationship between MAA with its employees may have a material adverse effect on the Issuer's business, results of operations and financial condition.

Acquisition Strategy

As part of the Issuer's business strategy, it has sought and will continue to seek new mining and development opportunities in the mining industry. In pursuit of such opportunities, the Issuer may fail to select appropriate acquisition candidates or negotiate acceptable arrangements, including arrangements to finance acquisitions or integrate the acquired businesses and their personnel into the Issuer. The Issuer cannot assure that it can complete any acquisition or business arrangement that it pursues, or is pursuing, on favourable terms, or that any acquisitions or business arrangements completed will ultimately benefit the Issuer's business.

Market Price of Common Shares

The Common Shares of the Issuer are listed on the TSX and the AMEX. Securities of small-cap companies have experienced substantial volatility in the past, often based on factors unrelated to the financial performance or prospects of the companies involved. These factors include macroeconomic developments in North America and globally and market perceptions of the attractiveness of particular industries. The Issuer's share price is also likely to be significantly affected by short-term changes in gold or copper prices or in its financial condition or results of operations as reflected in its quarterly earnings reports. Other factors unrelated to the Issuer's performance that may have an effect on the price of the Common Shares include the following: (i) the extent of analytical coverage available to investors concerning the Issuer's business may be limited if investment banks with research capabilities do not continue to follow the Issuer's securities; (ii) the lessening in trading volume and general market interest in the Issuer's securities may affect an investor's ability to trade significant numbers of Common Shares; (iii) the size

of the Issuer's public float may limit the ability of some institutions to invest in the Issuer's securities; and (iv) a substantial decline in the price of the Common Shares that persists for a significant period of time could cause the Issuer's securities to be delisted from the TSX and/or AMEX, further reducing market liquidity.

As a result of any of these factors, the market price of the Common Shares at any given point in time may not accurately reflect the Issuer's long-term value. Securities class action litigation often has been brought against companies following periods of volatility in the market price of their securities. The Issuer may in the future be the target of similar litigation. Securities litigation could result in substantial costs and damages and divert management's attention and resources.

Helms-Burton

Cuban properties held by the Issuer may be subject to political risks arising out of the regulatory restrictions imposed by the United States on commerce and relations with Cuba. In 1996, a new United States federal law, the "Helms-Burton Act", was passed. It grants US companies whose Cuban properties were confiscated in 1958-1959 during the transition of the Cuban government to a communist government, the right to bring action in US district court against foreign nationals that "traffic" in, or make use of, confiscated property, subject to the authority of the President of the United States to suspend the right of a potential plaintiff. Although the Issuer does not believe that its Cuban properties or the minerals extracted from such properties, if any, will be subject to such claims, there can be no assurance that potential claimants do not exist or will not seek to bring an action against the Issuer. Investment in Cuba has also been subject to certain legal, political and economic risks as a result of the relations between the United States and Cuba that may adversely affect the Issuer's ability to obtain equipment, personnel and other resources should it decide to conduct any further exploration activities in Cuba. In addition, communist governments in a number of countries have expropriated private property in the past, in many cases without adequate compensation. There can be no assurance that the Cuban government will not expropriate the Issuer's Cuban properties in the future.

DIVIDENDS

There are no restrictions that could prevent the Issuer from paying dividends. However, the Issuer has not paid any dividends on its Common Shares since incorporation. At present all available funds are invested to finance the growth of the Issuer. Any decision to pay dividends on the Common Shares in the future will be made by the board of directors of the Issuer on the basis of the earnings, financial requirements and other conditions existing at such time.

DESCRIPTION OF CAPITAL STRUCTURE

GENERAL DESCRIPTION OF CAPITAL STRUCTURE

The authorized share capital of the Issuer consists of 900,000,000 shares divided into 700,000,000 Common Shares, 100,000,000 First Preference Shares without par value and 100,000,000 Second Preference Shares without par value. As at March 29, 2005, 148,476,482 (December 31, 2004 - 112,248,149) Common Shares were issued and outstanding as fully paid and non-assessable shares.

The holders of the Common Shares are entitled to receive notice of and to attend and vote at all meetings of the shareholders of the Issuer and each Common Share confers the right to one vote in person or by proxy at all meetings of the shareholders of the Issuer. The holders of the Common Shares, subject to the prior rights, if any, of the holders of any other class of shares of the Issuer, are entitled to receive such dividends in any financial year as the board of directors of the Issuer may by resolution determine. In the event of the liquidation, dissolution or winding-up of the Issuer, whether voluntary or involuntary, the holders of the Common Shares are entitled to receive, subject to the prior rights, if any, of the holders of any other class of shares of the Issuer, the remaining property and assets of the Issuer.

As at March 29, 2005, the Issuer had 39,466,415 share purchase warrants outstanding which expire May 29, 2008, are exercisable at a price of Cdn\$2.00 per share (the "**Series A Warrants**") and are listed for trading on the TSX

under the symbol NNO.WT. On February 17, 2005, 17,125,000 share purchase warrants (the “**Series B Warrants**”) were issued in conjunction with its short-form prospectus offering. The Series B Warrants expire on February 17, 2010, are exercisable at a price of Cdn\$6.00 per share and are listed for trading on the TSX under the symbol NNO.WT.A.

Neither the Series A Warrants nor the Series B Warrants confer upon a holder thereof any right or interest whatsoever as a shareholder of the Issuer, including but not limited to the right to vote at, to receive notice of, or to attend meetings of shareholders or any other proceedings of the Company nor entitle the holder to any right or interest in respect thereof except as provided in the applicable trust indenture governing the warrants. All Series A Warrants rank pari passu with all other Series A Warrants and all Series B Warrants rank pari passu with all other Series B Warrants, whatever may be the actual date of issue of the class of same. The exercise price and the number of common shares issuable upon exercise of the Series A Warrants and the series B are both subject to adjustment in certain circumstances as more fully set forth in the respective trust indentures pursuant to which the Series A Warrants and the Series B Warrants, respectively, were issued. No adjustment in the exercise price or the number of Common Shares purchasable upon the exercise of the warrants will be required to be made unless the cumulative effect of such adjustment or adjustments would change the exercise price or the number of Common Shares purchasable upon exercise by at least 1%. No fractional Common Shares will be issuable upon the exercise of any of the Series A Warrants or the Series B Warrants, and no cash or other consideration will be paid in lieu of fractional shares.

As at March 29, 2005, the Issuer had outstanding non-trading share purchase warrants to acquire Common Shares as follows:

Number of Warrants/Shares	Expiry Date	Exercise Price
100,000	April 23, 2005	Cdn\$1.50
200,000	May 8, 2005	Cdn\$1.50
1,000,000	March 1, 2007	Cdn\$4.74

The Issuer has a stock option plan pursuant to which the directors of the Issuer are authorized to grant options to directors, officers, employees and consultants of the Issuer and its subsidiaries to a maximum of 10% of the issued and outstanding Common Shares at the time of grant (“Rolling Stock Option Plan”). The Rolling Stock Option Plan was approved at the Issuer’s Annual General Meeting in June 2004 and was implemented effective February 23, 2005. As at March 29, 2005, a total of 9,392,500 stock options were outstanding as follows:

Number of Options/Shares	Expiry Date	Exercise Price
235,000	August 30, 2006	Cdn\$1.50
660,000	February 6, 2008	Cdn\$1.30
150,000	April 26, 2008	Cdn\$1.70
5,870,000	June 16, 2010	Cdn\$1.35
77,500	June 23, 2010	Cdn\$1.35
35,000	October 24, 2010	Cdn\$2.60
300,000	March 11, 2009	Cdn\$3.15
1,990,000	June 4, 2011	Cdn\$3.15
75,000	October 21, 2011	Cdn\$3.17

The stock option plan also provides for share appreciation rights in favour of holders of options granted under the stock option plan. A holder of an option under the stock option plan is entitled to elect to terminate such option, in whole or in part, and, in lieu of receiving the Common Shares to which the terminated option relates, to receive that number of Common Shares disregarding fractions, which, when multiplied by the fair value of the Common Shares

to which the terminated option relates (which is the average of the high and low board lot prices for the Common Shares on the TSX for the immediately preceding five trading days), has a total value equal to the product of the number of such Common Shares multiplied by the difference between the fair value and the exercise price per share of such Common Shares, less any amount required to be withheld on account of income taxes.

RATINGS

The Issuer has not been issued ratings from any ratings organization.

MARKET FOR SECURITIES

The Common Shares are listed for trading on the TSX under the symbol "NNO" and the Series A Warrants and Series B Warrants are listed for trading on the TSX under the symbols "NNO.WT" and "NNO.WT.A", respectively. The Common Shares are also listed for trading on the AMEX under the Symbol "NTO".

The Common Shares traded as follows on the TSX:

Month	Volume	High	Low
March 1-29, 2005	30,010,663	Cdn\$4.18	Cdn\$3.29
February 2005	39,700,900	Cdn\$3.80	Cdn\$3.38
January 2005	18,625,095	Cdn\$4.06	Cdn\$3.16
December 2004	6,938,624	Cdn\$3.50	Cdn\$3.15
November 2004	12,432,065	Cdn\$3.69	Cdn\$2.87
October 2004	11,585,036	Cdn\$3.53	Cdn\$3.11
September 2004	5,747,308	Cdn\$3.22	Cdn\$2.45
August 2004	7,040,601	Cdn\$2.94	Cdn\$2.27
July 2004	4,941,408	Cdn\$3.18	Cdn\$2.51
June 2004	9,693,162	Cdn\$3.40	Cdn\$2.95
May 2004	10,733,154	Cdn\$3.39	Cdn\$2.75
April 2004	17,422,809	Cdn\$4.28	Cdn\$2.89
March 2004	14,533,322	Cdn\$4.28	Cdn\$3.07
February 2004	9,894,954	Cdn\$3.80	Cdn\$2.90
January 2004	25,921,409	Cdn\$3.79	Cdn\$2.90

The Series A Warrants traded as follows on the TSX:

Month	Volume	High	Low
March 1-29, 2005	3,767,800	Cdn\$2.30	Cdn\$1.54
February 2005	3,721,700	Cdn\$1.98	Cdn\$1.67
January 2005	4,381,500	Cdn\$2.22	Cdn\$1.55
December 2004	890,839	Cdn\$1.85	Cdn\$1.61
November 2004	1,487,060	Cdn\$2.11	Cdn\$1.47
October 2004	1,713,533	Cdn\$1.85	Cdn\$1.50
September 2004	858,115	Cdn\$1.60	Cdn\$1.15
August 2004	461,480	Cdn\$1.46	Cdn\$1.05
July 2004	437,548	Cdn\$1.60	Cdn\$1.25

June 2004	2,239,283	Cdn\$1.75	Cdn\$1.41
May 2004	1,725,850	Cdn\$1.87	Cdn\$1.49
April 2004	1,037,801	Cdn\$2.53	Cdn\$1.65
March 2004	5,410,800	Cdn\$2.54	Cdn\$1.67
February 2004	1,348,410	Cdn\$2.35	Cdn\$1.59
January 2004	4,173,076	Cdn\$2.15	Cdn\$1.57

The Series B Warrants traded as follows on the TSX:

Month	Volume	High	Low
March 1-29, 2005	1,838,500	Cdn\$0.95	Cdn\$0.58
February 17-28, 2005	4,320,200	Cdn\$0.79	Cdn\$0.51

PRIOR SALES

The Issuer issued the following non-trading securities during the financial year ended December 31, 2004:

Date of Issue	Number of Securities Issued	Price / Exercise Price	Expiry Date, if Applicable
March 1, 2004	1,000,000 share purchase warrants	Cdn\$4.74	March 1, 2007
March 11, 2004	300,000 stock options	Cdn\$3.15	March 11, 2009
June 4, 2004	1,990,000 stock options	Cdn\$3.15	June 4, 2011
October 21, 2004	75,000 stock options	Cdn\$3.17	October 21, 2011

DIRECTORS AND OFFICERS

NAME, ADDRESS, POSITION, OCCUPATION AND SECURITY HOLDING

The name, province or state, and country of residence, position or office held with the Issuer and principal occupation for the immediately preceding five years of each of the directors and executive officers of the Issuer are as follows:

Name and Residence	Office or Position Held	Director Since	Principal Occupation for the Previous Five Years
David Cohen ⁽³⁾ British Columbia, Canada	President, Chief Executive Officer and Director	2002	President and Chief Executive Officer, Northern Orion Resources Inc.; 2000-2002, Vice-President and Chief Operating Officer, Northern Orion Explorations Ltd.; 1997-2001, Sr. Vice President, Miramar Mining Corporation.
Robert Cross ⁽³⁾ British Columbia, Canada	Chairman of the Board and Director	2001	Executive Chairman, Northern Orion Resources Inc., 2002 to present; Private investor
John K. Burns ⁽¹⁾⁽²⁾ Pennsylvania, USA	Director	1995	Lead Director of Emgold Mining Corporation, Director of Hunter Energy LLC and DDX LLC both of Denver Colorado, 2002-2003, Managing Director of FRM Management LLC, Chicago Illinois, formerly Managing Director, 1991-1996, Global Head of Commodity Derivatives, Barclays Metals, Barclays Bank PLC London England., 1996-1999, Frontier Resources Management, Inc., both of Chicago, Illinois.

Name and Residence	Office or Position Held	Director Since	Principal Occupation for the Previous Five Years
Robert Gayton ⁽¹⁾ (2) British Columbia, Canada	Director	June 2004	Chartered Accountant; and Director of a number of public companies including Western Silver Corporation from 2004 to present, Bema Gold Corporation 2003 to present, Nevsun Resources Ltd. 2003 to present, Amerigo Resources Inc. 2004 to present and Intrinsyc Software from 1992 to present.
Michael Beckett ⁽¹⁾ (2)(3) United Kingdom	Director	June 2004	1999-2005, Chairman of Endeavour Mining Capital Corp, Chairman and/or Director of a number of other public resource companies, including 1995-2005 Northam Platinum Limited, 1992-2005 Sibelco Minerals & Chemicals Limited and 2002-2005 Orica Ltd.; 1975-1990 former Managing Director of Consolidated Goldfields plc.
Hong Dih Lee British Columbia, Canada	VP Finance and Chief Financial Officer	N/A	VP Finance and Chief Financial Officer, Northern Orion Resources Inc.; 2003-2004, Chief Financial Officer, Manhattan Minerals Corp.; 1996-2003, Chief Financial Officer, Diamond Fields International; 1996-2001, Controller and Accounting Manager, Ivanhoe Mines Ltd.
Pablo Marcet Buenos Aires, Argentina	General Manager – Argentina	N/A	General Manager, Argentina, Northern Orion Resources Inc. 2003 to present; Country Manager, BHP Billiton, (Argentina 1996-2003, Tanzania 1992-1995).

(1) Member of audit committee.

(2) Member of executive compensation and corporate governance committee.

(3) Member of environmental committee.

The term of office of each of the Issuer's directors expires at the Issuer's next annual general meeting at which directors are elected for the upcoming year. The Issuer's last annual general meeting took place on June 4, 2004.

AGGREGATE OWNERSHIP OF SECURITIES

As at December 31, 2004, the directors and officers of the Issuer, as a group, beneficially owned, directly or indirectly, or exercised control or direction over, 1,746,161 Common Shares constituting 1.56% of issued and outstanding Common Shares.

CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS

Other than as described below, to the knowledge of the Issuer, none of the Issuer's directors or executive officers or any shareholder holding a sufficient number of securities of the Issuer to affect materially the control of the Issuer:

- (a) is, as at the date of this AIF, or has been, within the ten years before the date of this AIF, a director or executive officer of any company, that while that person was acting in that capacity;
 - (i) was the subject of a cease trade or similar order or an order that denied the relevant company access to any exemption under securities legislation, for a period of more than 30 consecutive days;
 - (ii) was subject to an event that resulted, after the director or executive officer ceased to be a director or executive officer, in the company being the subject of a cease trade or similar order or an order that denied the relevant company access to any exemption under securities legislation, for a period of more than 30 consecutive days; or
 - (iii) within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets;

- (b) has, within the ten years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, officer or shareholder; or
- (c) has been subject to:
 - (i) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
 - (ii) 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.

Robert Cross, a director of the Company, joined the board of Livent Inc. ("Livent") in June 1998. In connection with management changes brought about by a US based investment group, accounting irregularities were subsequently uncovered and Livent declared bankruptcy in late 1998. Thereafter, class action suits were filed against Livent and its directors. Mr. Cross was named in one suit which was subsequently dismissed, and he is currently not involved in any legal actions in connection with these proceedings.

Robert Gayton was director/officer of Newcoast Silver Mines Ltd. at the date of a Cease Trade Order issued by the British Columbia Securities Commission on September 30, 2003 and by the Alberta Securities Commission on October 31, 2003 for failure to file financial statements. The orders were revoked on October 23, 2003 and March 25, 2004 respectively.

CONFLICTS OF INTEREST

David Cohen, the President and a director of the Issuer, is a director of Newport, which had acquired an option in respect of the Issuer's Mantua Project. Mr. Cohen joined the board of Newport after the option agreement was entered into. The option was terminated in 2004. See "Description of the Business – Mantua Project".

Except as disclosed herein, to the knowledge of management of the Issuer, there are no existing material conflicts of interest between the Issuer or any subsidiary of the Issuer and a director or officer of the Issuer or any subsidiary of the Issuer. Directors and officers of the Issuer and its subsidiaries may serve as directors and/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 Issuer or any of its subsidiaries may participate, the directors of the Issuer may have a conflict of interest in negotiating and conducting terms in respect of such participation. In the event that such conflict of interest arises at a meeting of the Issuer's board of 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 participation or such terms.

The information as to ownership of securities of the Issuer, corporate cease trade orders, bankruptcies, penalties or sanctions, and existing or potential conflicts of interest has been provided by each insider of the Issuer individually in respect of himself or herself.

LEGAL PROCEEDINGS

In May 2004, the Issuer received notice of proceedings commenced against it on March 23, 2004 in the National Commercial Court No. 13, Secretariat No. 25, Argentina by Ricardo Alfredo Auriemma (the "Claimant"), formerly a director of the Issuer and a former director and officer of certain of the Issuer's subsidiaries, claiming damages in the amount of \$177,720,000 for alleged breaches of agreements entered into by Claimant, the Issuer's former parent and the Issuer. The Claimant alleges that the agreements entitle him to a preemption right (*derecho de prioridad*) to participate in acquisitions by Northern Orion in Argentina and claims damages in connection with the acquisition by Northern Orion of its 12.5% equity interest in the Alumbrera project. The Issuer considers the allegations to be unfounded and has been advised by its Argentine counsel that the action is without merit. A statement of defence to

the claim has been filed and production of evidence has commenced and is ongoing. Based on the advice of counsel and on the evidence produced to date, the Issuer considers the likelihood of success by the Claimant to be remote. Even if successful, the amount of damages is not expected to exceed US\$17,530,000, plus interest and litigation costs and fees, based on a valuation of the claim made by an independent Argentine court-appointed expert.

The Claimant also commenced on February 2, 2004 in the National Labour Court No. 64, Argentina a labour claim against the Issuer based on termination of an alleged employment relationship with the Issuer, claiming damages in the amount of US\$713,880. A statement of defence has been filed and the proceedings are in the production of evidence stage. The Issuer has been advised by its Argentine counsel that this claim is also unfounded.

The Issuer has been named as a third party in a proceeding between Minerales Patagónicos S.A. ("MP") vs. Grupo Minero Aconcagua S.A. filed on December 19, 2003 in the National Commercial Court No. 20, Secretariat No. 40, Argentina. MP claims the restitution of certain mining properties or the payment of damages if restitution is not feasible. MP has not indicated the amount of damages sought or offered evidence for their assessment. These proceedings have not yet reached the evidentiary stage. The Company has been advised by its Argentine counsel that the claim is unfounded.

Except as described above, the Issuer is not a party to any material legal proceedings and is not aware of any such proceedings known to be contemplated.

AUDIT COMMITTEE INFORMATION

AUDIT COMMITTEE MANDATE

The Issuer's audit committee has a charter (the "Audit Committee Charter") in the form attached to this AIF as Schedule "A".

COMPOSITION OF THE AUDIT COMMITTEE

The following are the members of the Issuer's audit committee:

Robert Gayton (Chairman)	Independent ①	Financially literate ①
Michael Beckett	Independent ①	Financially literate ①
John K. Burns	Independent ①	Financially literate ①

① As defined by Multilateral Instrument 52-110 ("MI 52-110").

RELEVANT EDUCATION AND EXPERIENCE

The following is a description of the education and experience of each audit committee member that is relevant to the performance of his or her responsibilities as an audit committee member:

Michael Beckett

Mr. Beckett currently serves as Chairman of Audit Committees for Watts Blake Bearne Plc, UK, London Clubs International PLC, UK, and Northam Platinum, South Africa as well serves as Member of Audit Committee for MyTravel Plc, UK. He previously served as Chairman of Audit Committee for Clarksons PLC, UK from 1990 to 2004 and until 2003 for Thomas Miller, UK. Mr. Beckett has also served as Member of Audit Committee for Consolidated Goldfields' Finance and Investment Division from 1976 to 1989.

John K. Burns

Mr. Burns has served as CFO and Risk Manager of Drexel Burnham Lambert Trade Finance Inc. New York, New York and acted as Managing Director of Structured Derivative Finance at Barclays Metals Group, Barclays Bank PLC London as well as serving as the Chair of the Audit Committee of Emgold Corporation, Vancouver, Canada. Presently, Mr. Burns is a member of the Audit Committee of Emgold Corporation, Vancouver, Canada. He has

completed basic undergraduate courses in accounting and finance at the Wharton School of the University of Pennsylvania.

Robert Gayton

Dr. Gayton, F.C.A., graduated from the University of British Columbia in 1962 with a Bachelor of Commerce and in 1964 earned the chartered accountant (C.A.) designation while at Peat Marwick Mitchell. Dr. Gayton joined the Faculty of Business Administration at the University of British Columbia in 1965, beginning 10 years in the academic world, including time at the University of California, Berkeley, earning a Ph.D. in business. Dr. Gayton rejoined Peat Marwick Mitchell in 1974 and became a partner in 1976 where he provided audit and consulting services to private and public companies in the resource and non-resource fields until 1987. Dr. Gayton resigned from Peat Marwick Mitchell in 1987 and has since provided financial consulting services to various businesses. Dr. Gayton is a director of several public companies.

RELIANCE ON CERTAIN EXEMPTIONS

At no time since the commencement of the year ended December 31, 2004 has the Issuer relied on an exemption in Section 2.4 of MI 52-110 (*De Minimis Non-audit Services*), Section 3.2 of MI 52-110 (*Initial Public Offerings*), Section 3.3(2) of MI 52-110 (*Controlled Companies*), Section 3.4 of MI 52-110 (*Events Outside Control of Member*), Section 3.5 of MI 52-110 (*Death, Disability or Resignation of Audit Committee Member*) or Section 3.6 of MI 52-110 (*Temporary Exemption for Limited and Exceptional Circumstances*), on an exemption from MI 52-110, in whole or in part, granted under Part 8 of MI 52-110 (*Exemptions*) or on Section 3.9 of MI 52-110 (*Acquisition of Financial Literacy*).

AUDIT COMMITTEE OVERSIGHT

At no time since the commencement of the year ended December 31, 2004 was a recommendation of the audit committee to nominate or compensate an Independent Registered Chartered Accountant not adopted by the board of directors of the Issuer.

PRE-APPROVAL POLICIES AND PROCEDURE

The Audit Committee has adopted specific policies and procedures for the engagement of non-audit services as set out in the Audit Committee Charter attached as Schedule "A" hereto.

INDEPENDENT REGISTERED CHARTERED ACCOUNTANTS SERVICES FEES (BY CATEGORY)

The aggregate fees billed by the Issuer's Independent Registered Chartered Accountants in the years ended December 31, 2004 and 2003 are as follows:

	Audit Fees	Audit Related Fees	Tax Fees	All Other Fees	Total Fees
2004	\$97,518	\$Nil	\$46,359	\$16,198	\$160,075
2003	\$240,144	\$Nil	\$40,483	\$69,174	\$349,801

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

In March 2003, an insider of the Issuer and two associates of insiders of the Issuer purchased in aggregate 505,000 of 4,000,000 units issued by the Issuer on a private placement basis.

During fiscal 2004, 2003 and 2002, the Issuer paid administrative expenses of Cdn\$202,025, Cdn\$191,958 and Cdn\$169,000, respectively, to LMC Management Services Ltd., a private company which had a director and an

officer in common with the Issuer and provides services to the Issuer on a cost recovery basis. The director and the officer in common resigned from the Issuer in June 2004 and March 2004, respectively.

During the fiscal 2004, 2003 and 2002, the Issuer paid legal fees of Cdn\$230,552, Cdn\$296,912 and Cdn\$104,328, respectively, to a law firm of which two officers of the Issuer are partner and associate counsels.

In August 2002, an insider and an associate of an insider of the Issuer each purchased 10,000,000 common shares and 10,000,000 common share purchase warrants of the Issuer on a private placement basis for aggregate consideration of \$2,000,000. Proceeds of the private placement were used for working capital purposes and to conduct due diligence related to a potential acquisition. In March 2003, an insider of the Issuer and two associates of insiders of the Issuer purchased in aggregate 5,050,000 of 40,000,000 units issued by the Issuer on a private placement basis.

In March 2002, ValGold Resources Ltd., a company with, at the time, two common directors (now only one common director) with the Issuer, purchased 8,333,333 common shares and 500,000 share purchase warrants of the Issuer on a private placement basis for total consideration of \$500,000. Proceeds of the private placement were used for working capital purposes and to conduct due diligence related to a potential acquisition.

In 2001 and 2002, the Issuer concluded a restructuring of debts owing by it to its former controlling shareholder, Miramar. The debt restructuring resulted in the conversion by Miramar of the convertible portion of a previously issued convertible debenture at Cdn\$1.47 per share (14,439,621 common shares were issued to Miramar as a result of the conversion), the consolidation of all other indebtedness of the Issuer to Miramar into convertible promissory notes (the "**Convertible Notes**"), the reduction of the maximum amount payable under a previously granted proceeds and royalty interest in favour of Miramar from approximately Cdn\$18 million to Cdn\$15 million, and the amendment of the proceeds interest to exclude any proceeds of sale of the Issuer's San Jorge property. In connection with the debt restructuring, Miramar granted 1341180 Ontario Limited an option (the "**Option**") to purchase all but 10 million of the common shares of the Issuer then held by Miramar and the Convertible Notes until June 30, 2002. Robert Cross, the principal of 1341180 Ontario Limited, became a director of the Issuer subsequent to negotiation of the debt restructuring and the Option. In June 2002, 1341180 Ontario Limited exercised the Option with respect to 18 million common shares and assigned to third parties the Option on an additional 30 million common shares and on the Convertible Notes.

Except as otherwise disclosed, no director, senior officer or principal shareholder of the Issuer, or any associate or affiliate of the foregoing, has had any material interest, direct or indirect, in any transaction within the three most recently completed financial years or during the current financial year prior to the date of this AIF that has materially affected or will materially affect the Issuer.

TRANSFER AGENTS AND REGISTRARS

TRANSFER AGENTS AND REGISTRARS

The Issuer's transfer agent and registrar is Pacific Corporate Trust Company, 625 Howe Street, 10th Floor, Vancouver, British Columbia, V6C 3B8.

MATERIAL CONTRACTS

MATERIAL CONTRACTS

Contracts of the Issuer, other than contracts entered into in the ordinary course of business, that are material to the Issuer and that were entered into by the Issuer between January 1, 2002 and December 31, 2004 are listed below:

- Financial advisory services agreement dated January 31, 2005, between the Issuer's subsidiary RAA Holdings SA ("RAA") and Endeavour Financial International Corporation ("EFI") pursuant to which EFI will act as RAA's financial advisor and assist in obtaining financing (other than the raising of equity)

capital) for the development of the Agua Rica project. EFI will be paid a monthly fee, fees based on certain milestones and a success fee based on transaction value.

INTERESTS OF EXPERTS

NAMES OF EXPERTS

B. Terrence Hennessey, P. Geo, independent consulting geologist, and Harry Burgess, P. Eng, independent mining engineer, both of Micon and both "qualified persons" as defined in NI 43-101, are the authors responsible for the preparation of the Micon Report.

The information of a scientific and technical nature under the heading "Description of the Business – Alumbra Mine – Update and Status" was prepared by or under the supervision of Luis Rivera, an employee of MAA, and a "qualified person" as defined in NI 43-101.

Callum Grant, P. Eng. of Hatch, and Gary Giroux, P. Eng., of Giroux Consultants Ltd., both independent consulting geologists and "qualified persons" as defined in NI 43-101, are the authors responsible for the preparation of the Hatch Report.

The information of a scientific and technical nature on the Mantua Project was prepared by or under the supervision of Callum Grant, P. Eng of Hatch, an independent consulting geologist and a "qualified person" as defined in NI 43-101.

Deloitte & Touche LLP, Independent Registered Chartered Accountants, provide auditor's reports with respect to the audited financial statements of the Issuer.

INTERESTS OF EXPERTS

None of the experts named under "Names of Experts", when or after he prepared the statement, report or valuation, had or received any registered or beneficial interests, direct or indirect, in any securities or other property of the Issuer or of one of the Issuer's associates or affiliates (based on information provided to the Issuer by the experts) or is or is expected to be elected, appointed or employed as a director, officer or employee of the Issuer or of any associate or affiliate of the Issuer.

ADDITIONAL INFORMATION

Information relating to the Issuer is available under the Issuer's profile at www.sedar.com. Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Issuer's securities, and securities authorized for issuance under equity compensation plans, where applicable, is contained in the Issuer's information circular for its most recent annual general meeting of security holders involving the election of directors. Additional financial information is provided in the Issuer's financial statements and management's discussion and analysis for the Issuer's most recently completed financial year.

GLOSSARY OF MINING TERMS

In this AIF, unless there is something in the subject matter or context inconsistent therewith, the following terms shall have the respective meanings set out below:

“Ag” means silver

“As” means arsenic

“assay” means the chemical analysis of mineral samples to determine the metal content

“Au” means gold

“capital expenditure” means all other expenditures not classified as operating costs

“composite” means combining more than one sample result to give an average result over a larger distance

“concentrate” means a metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore

“crushing” means initial process of reducing ore particle size to render it more amenable for further processing

“Cu” means copper

“cutoff grade” means the minimum metal grade at which a ton of rock can be processed on an economic basis

“deposit” means a mineralized body which has been physically delineated by sufficient drilling, trenching, and/or underground work, and found to contain a sufficient average grade of metal or metals to warrant further exploration and/or development expenditures; such a deposit does not qualify as a commercially mineable ore body or as containing mineral reserves, until final legal, technical and economic factors have been resolved

“dilution” means waste, which is unavoidably mined with ore

“dip” means angle of inclination of a geological feature/rock from the horizontal

“fault” means the surface of a fracture along which movement has occurred

“Fe” means iron

“flotation” means the process by which the surface chemistry of the desired mineral particles is chemically modified such that they preferentially attach themselves to bubbles and float to the pulp surface in specially designed machines. The gangue or waste minerals are chemically depressed and do not float, thus allowing the valuable minerals to be concentrated and separated from the undesired material

“footwall” means the underlying side of an orebody or stope

“gangue” means non-valuable components of the ore

“grade” means the measure of concentration of the applicable metal within mineralized rock

“hanging wall” means the overlying side of an orebody or slope

“haulage” means a horizontal underground excavation which is used to transport mined ore

“hydrocyclone” means a process whereby material is graded according to size by exploiting centrifugal forces of particulate materials

“igneous” means Primary crystalline rock formed by the solidification of magma

“Indicated mineral resources” means that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and test

information gathered through appropriate techniques from location such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed

“Inferred mineral resources” means that part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes

“kriging” means an interpolation method of assigning values from samples to blocks that minimizes the estimation error

“lenticular” means in the form of elongated lenses

“lithological” means geological description pertaining to different rock types

“Measured mineral resources” means that part of a mineral resource for which quantity, grade or quality, densities, shape, physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity

“mill” means a plant where ore is ground fine and undergoes physical or chemical treatment to extract the valuable metals

“milling” means a general term used to describe the process in which the ore is crushed and ground and subjected to physical or chemical treatment to extract the valuable metals to a concentrate or finished product.

“mine” means an excavation in the earth for the purpose of extracting minerals. The evacuation may be an open pit on the surface or underground workings

“Mineral / Mining Lease” means a lease area for which mineral rights are held

“mineral reserve” means the economically mineable part of a measured or indicated mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A mineral reserve includes allowances for dilution and losses that may occur when the material is mined

“mineral resources” means a concentration or occurrence of natural, solid, inorganic or fossilized organic material in or on the earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge

“mineralization” means the concentration of minerals within a body of rock

“Mo” means molybdenum

“ore” means a metal or mineral or a combination of these of sufficient value as to quality and quantity to enable it to be mined at a profit

“Pb” means lead

“Proven mineral reserve” means the economically mineable part of a measured mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified

“Probable mineral reserve” means the economically mineable part of an indicated mineral resource, and in some circumstances a measured mineral resource, demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified

“Sb” means antimony

“sedimentary” means pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks

“stratigraphy” means study of stratified rocks in terms of time and space

“Strike” means direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction

“sulfide” means sulfur bearing mineral

“tailings” means finely ground waste rock from which valuable minerals or metals have been extracted

“thickening” means process of concentrating solid particles in suspension

“total expenditure” means all expenditures including those of an operating and capital nature

“variogram” means statistical representation of the characteristics (usually grade)

“Zn” means zinc

GLOSSARY OF UNITS

“cm” means a centimetre	“mm” means a millimetre
“g” means gram or grammes	“moz” means a million troy ounces
“g/t” means grammes per metric tonne	“mtpa” means a million metric tonnes per annum
“ha” means a hectare	“mw” means a million watts
“hrs” means hours	“oz” means a fine troy ounce equalling 31.10348 grammes
“k” means one thousand units	“ppb” means parts per billion
“kg” means a kilogram	“ppm” means parts per million
“km” means a kilometre	“tpd” means tonnes per day
“km²” means a square kilometre	“t” means a metric tonne
“koz” means one thousand fine troy ounces	“US\$m” means a million United States Dollars
“kt” means one thousand metric tonnes	“US\$” means United States Dollar
“kWh/t” means kilowatt hour per tonne	“US\$/oz” means United States Dollars per fine troy ounce
“lb” means pound	“US\$/t” means United States Dollars per tonne
“m” means a metre	“°” means degrees
“m²” means a square metre – measure of area	“°C” means degrees centigrade
“m³” means a cubic metre	“%” means percentage
“mt” means a million metric tonne	“ ’ ” means minutes

SCHEDULE "A"

AUDIT COMMITTEE CHARTER

(as revised on January 31, 2005)

I. Mandate

The primary function of the audit committee (the "Audit Committee") of the board of directors (the "Board") of Northern Orion Resources Inc. (the "Company") is to assist the Board in fulfilling its financial oversight responsibilities by reviewing: the financial reports and other financial information provided by the Company to any governmental or regulatory body or other stakeholders; the Company's systems of internal controls regarding finance and accounting; and the Company's auditing, accounting and financial reporting processes. Consistent with this function, the Audit Committee should encourage continuous improvement of, and should foster adherence to, the Company's policies, procedures and practices at all levels. The Audit Committee's primary duties and responsibilities are to:

- Serve as an independent and objective party to monitor the Company's financial reporting and internal control system and review the Company's financial statements and other financial information that is made publicly available.
- Review and assess the performance of the Company's external auditors.
- Provide an open avenue of communication among the Company's external auditors, financial and senior management and the Board.

II. Composition

The Audit Committee shall be comprised of at least three directors as determined by the Board, each of whom shall be an "independent" (within the meaning Sections 121 and 803(a) of the Amex Company Guide and Rule 10A-3 under the Securities Exchange Act of 1934, as amended) and an "unrelated" (within the meaning of Section 472 of the TSX Company Manual) director, free from any relationship that, in the opinion of the Board, would interfere with the exercise of his or her independent judgment as a member of the Audit Committee.

At least one member of the Audit Committee shall have accounting or related financial management expertise and be financially sophisticated. All members of the Audit Committee shall be financially literate and have a working familiarity with basic finance and accounting practices. For the purposes of this Charter, the definition of "financially literate" is the ability to read and understand a balance sheet, an income statement and a cash flow statement. The definition of "accounting or related financial management expertise" is the ability to analyze and interpret a full set of financial statements, including the notes attached thereto, in accordance with Canadian and United States generally accepted accounting principles. The definition of "financially sophisticated" means that he or she has past employment experience in finance or accounting, requisite certification in accounting, or other comparable experience or background with results in the individual's financial sophistication, including, but not limited to, being or having been a chief executive officer, chief financial officer or other senior officer with financial oversight responsibilities.

The members of the Audit Committee shall be elected by the Board at its first meeting following the annual shareholders' meeting. Unless a Chairperson is elected by the full Board, the members of the Audit Committee shall designate a Chairperson by a majority vote of the full Audit Committee membership.

III. Meetings

The Audit Committee shall meet at least on a quarterly basis, or more frequently as circumstances dictate. As part of its job to foster open communication, the Audit Committee should meet at least annually with the Chief Financial Officer and the external auditors in separate sessions.

IV. Responsibilities and Duties

To fulfill its responsibilities and duties, the Audit Committee shall:

Documents/Reports Review

1. Review and update this Charter annually.
2. Review the organization's annual and quarterly financial statements and any reports or other financial information submitted to any governmental or regulatory body, or to the public, including any certification, report, opinion, or review rendered by the external auditors.

External Auditors

3. Review annually the performance of the external auditors who shall be ultimately accountable to the Board and the Audit Committee as representatives of the shareholders of the Company.
4. Obtain annually a formal written statement of external auditors setting forth all relationships between the external auditors and the Company, consistent with Independence Standards Board Standard 1.
5. Review and discuss with external auditors any disclosed relationships or services that may impact the objectivity and independence of the external auditors.
6. Take, or recommend that the full Board take, appropriate action to oversee the independence of the external auditors.
7. Recommend to the Board the selection and, where applicable, the replacement of the independent external auditors nominated annually for shareholder approval.
8. At each meeting, consult with the external auditors, without the presence of management, about the quality of the Company's accounting principles, internal controls and the completeness and accuracy of the Company's financial statements.
9. Review with management and the external auditors the audit plan for the year-end financial statements and intended template for such statements.
10. Review and pre-approve all audit and audit-related services and the fees and other compensation related thereto, and any non-audit services, provided by the Company's external auditors. The pre-approval requirement is waived with respect to the provision of non-audit services if:
 - i. the aggregate amount of all such non-audit services provided to the issuer constitutes not more than 5 percent of the total amount of revenues paid by the Company to its external auditors during the fiscal year in which the non-audit services are provided;

- ii. such services were not recognized by the Company at the time of the engagement to be non-audit services; and
- iii. such services are promptly brought to the attention of the Audit Committee and approved prior to the completion of the audit by the Audit Committee or by 1 or more members of the Audit Committee who are members of the Board to whom authority to grant such approvals has been delegated by the Audit Committee.

Financial Reporting Processes

- 11. In consultation with the external auditors, review with management the integrity of the organization's financial reporting process, both internal and external.
- 12. Consider the external auditors' judgments about the quality and appropriateness of the Company's accounting principles as applied in its financial reporting.
- 13. Consider and approve, if appropriate, changes to the Company's auditing and accounting principles and practices as suggested by the external auditors and management.
- 14. Review significant judgments made by management in the preparation of the financial statements and the view of the external auditors as to appropriateness of such judgments.
- 15. Following completion of the annual audit, review separately with management and the external auditors any significant difficulties encountered during the course of the audit, including any restrictions on the scope of work or access to required information.
- 16. Review and resolve any significant disagreement(s) among management and the external auditors in connection with the preparation of the financial statements, and report the outcome of such resolution to the full Board.
- 17. Review with the external auditors and management the extent to which changes and improvements in financial or accounting practices have been implemented.
- 18. Establish procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal controls or auditing matters, and the confidential, anonymous submissions by employees of concerns regarding questionable accounting or auditing matters.
- 19. Review the certification process set forth in the Company's Disclosure Controls and Procedures Policy.
- 20. Retain special counsel and other experts and consultants to advise the Audit Committee, when appropriate.

Other

- 21. Review and assess the adequacy of the Company's Code of Ethics for Directors, Officers and Employees and Code of Ethics For Financial Reporting Officers.

V. Annual Work Plan

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Review MD&A and financial information in periodic reports	X	X	X	X
Review accounting systems and procedures	X	X	X	X

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Consult with the external auditors (without management) about the quality of the Company's accounting principles, internal controls and the completeness and accuracy of the Company's financial statements	X	X	X	X
Participate in a telephonic meeting with management and the external auditors prior to earnings releases	X	X	X	X
Pre-approve all audit services, audit-related services and non-audit services provided by the external auditors	X	X	X	X
Review audit plan and year-end statements template				X
Review external auditors' letter of recommendation		X		
Review financial and accounting human resources		X	X	
Review Audit Committee's charter, annual work plan and membership			X	
Review external auditor's formal written statement		X		
Review and recommend year-end financial statements	X	X		
Review external auditors' work, independence and fees		X		
Recommend external auditors to the Board to conduct the audit of the Company for the ensuing year		X		
Review certification process set forth in the Company's Disclosure Controls and Procedures Policy		X		
Review and reassess the adequacy of the Code of Ethics for Directors, Officers and Employees and Code of Ethics for Financial Reporting Officers	X	X		