

# ALTAIR NANOTECHNOLOGIES INC

## FORM 10-K (Annual Report)

Filed 4/12/2000 For Period Ending 12/31/1999

Address	204 EDISON WAY N/A RENO, Nevada 89502
Telephone	(775) 858-3744
CIK	0001016546
Industry	Chemical Manufacturing
Sector	Basic Materials
Fiscal Year	12/31

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE  
ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 1999

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO

### ALTAIR INTERNATIONAL INC.

(Exact name of registrant as specified in its charter)

Province of  
Ontario,

Canada

-----  
(State or other  
jurisdiction  
of incorporation)

1-12497

-----  
(Commission File No.)

None

-----  
(IRS Employer  
Identification No.)

**1725 Sheridan Avenue, Suite 140**

Cody, Wyoming 82414

-----  
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (307) 587B8245

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

Common Shares, no par value

-----  
(Title of Class)

Nasdaq National Market

-----  
(Name of each exchange on which registered)

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES  NO

Indicate by check mark if disclosure of delinquent filers pursuant to

Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

The aggregate market value of the Common Shares held by non-affiliates of the Registrant on March 15, 2000, based upon the closing sale price of the Common Shares on the NASDAQ Stock Market of \$5.813 per share on March 15, 2000, was approximately \$77,185,000. Common Shares held by each officer and director and by each other person who may be deemed to be an affiliate of the Registrant have been excluded. As of March 15, 2000 the Registrant had 15,837,882 Common Shares outstanding.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement for the Annual Meeting of Shareholders to be held on June 1, 2000 are incorporated by reference

in Part III of this Report.

INDEX TO FORM 10-K

PART I.....4  
-----  
Exchange Rate Information.....4  
Item 1: Business.....4  
    General.....4  
    Titanium Pigment Processing Technology.....6  
    The Jig.....9  
    Tennessee Mineral Property.....14  
    Plan of Operation--General.....16  
    Subsidiaries.....17  
    Government Regulation and Environmental Concerns.....18  
    Employees.....18  
    Where You Can Find More Information.....19  
    Glossary of Terms.....19  
    Forward-looking Statements.....21  
    Factors that May Affect Future Results.....21  
        We Have Not Generated Any Operating Revenues or Profits.....21  
        We May Continue to Operate at a Net Loss.....21  
        We May Not be Able to Raise Sufficient Capital to Meet Present and Future Obligations.....22  
        Our Operations Are And Will Be Subject to Extensive Government Regulation.....23  
        Certain of Our Experts and Directors Reside in Canada And May Be Able to Avoid Civil Liability.....23  
        We are Dependent on Key Personnel.....23  
        We May Fail to Identify or Be Unable to Consummate Important Strategic Transactions.....24  
        We May Issue Substantial Amounts of Additional Shares Without Stockholder Approval.....24  
        The Market Price of Our Common Stock Is Extremely Volatile.....24  
        Future Sales of Currently Restricted Securities May Affect the Market Price of Our Common Stock.....25  
        We Have Never Declared A Dividend And May Not For the Foreseeable Future.....25  
        Our Series 12 Jig Is Too Small For Most Commercial Uses.....25  
        Testing Is Incomplete on Our Series 30 Jig.....26  
        Performance Of The Jig In A Commercial Setting May Not Match Test Results.....26  
        The Jig Faces Competition From Alternative Technologies.....26  
        The Jig Faces Competition From Other Jig-like Products.....27  
        The Market for Commodities Produced Using the Jig May Collapse.....27  
        We Are Dependent Upon Others To Manufacture The Jig.....27  
        Certain Key Patents For The Centrifugal Jig Have Expired Or Will Expire In The Near Future.....28  
        We Have Not Completed Testing The Feasibility of Mining The Tennessee Mineral Property.....28  
        We May Be Unable to Obtain Necessary Environmental Permits for the Tennessee Mineral Property.....29  
        Any Operations On the Tennessee Mineral Property May Lead to Environmental Liability.....29  
        We Have Not Yet Confirmed the Viability and Effectiveness of the Processing Technology  
        and Processing Assets.....30  
        Nanoparticles Produced Using the Processing Technology May Be, or Be Perceived As, Substandard.....30  
        The Current Market For TiO2 Nanoparticles Is Limited.....31  
        Our Cost of Production May Exceed Estimates.....31  
        Pending Patent Applications May Be Denied Or Provide Inadequate Protection.....31  
        Use of the Processing Technology May Lead to Substantial Environmental Liability.....32

Item 2.	Properties.....	32
Item 3.	Legal Proceedings.....	33
Item 4.	Submission of Matters to a Vote of Security Holders.....	33
PART II.....		33
-----		
Item 5.	Market for the Common Stock and Related Shareholder Matters.....	33
	Market Price.....	33
	Outstanding Shares and Number of Shareholders.....	34
	Dividends.....	34
	Transfer Agent and Registrar.....	34
	Canadian Taxation Considerations.....	34
Item 6.	Selected Financial Data.....	35
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations.....	36
	Overview.....	36
	Results of Operations.....	37
	Liquidity and Capital Resources.....	38
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk.....	38
Item 8.	Financial Statements and Supplementary Data.....	39
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.....	39
PART III.....		39
-----		
Item 10.	Directors and Executive Officers of the Registrant.....	39
Item 11.	Executive Compensation.....	39
Item 12.	Security Ownership of Certain Beneficial Owners and Management.....	39
Item 13.	Certain Relationships and Related Transactions.....	39
PART IV.....		39
-----		
Item 14.	Exhibits, Financial Statement Schedules and Reports on Form 8-K.....	39

## PART I

This Annual Report on Form 10-K for the year ended December 31, 1999 (this "Form 10-K") contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Exchange Act of 1934, as amended (the "Exchange Act"), that involve risks and uncertainties. Purchasers of any of the common shares, no par value (the "Common Stock") of Altair International Inc. ("Altair" or the "Company") are cautioned that the Company's actual results will differ (and may differ significantly) from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences include those factors discussed herein under "Factors That May Affect Future Results" and elsewhere in this Form 10-K generally. The reader is also encouraged to review other filings made by the Company with the Securities and Exchange Commission (the "Commission") describing other factors that may affect future results of the Company.

### Exchange Rate Information

The following exchange rates represent the noon buying rate in New York City for cable transfers in Canadian dollars, as certified for customs purposes by the Federal Reserve Bank of New York. The following table sets forth, for each of the years indicated, the period end exchange rate, the average exchange rate (i.e., the average of the exchange rates on the last day of each month during the period), and the high and low exchange rates of the U.S. dollar in exchange for the Canadian dollar for the years indicated below, based on the noon buying rates.

	Year Ended December 31,				
	1999	1998	1997	1996	1995
	(Canadian dollar per US dollar)				
High	1.5302	1.5770	1.4398	1.3822	1.4238
Low	1.4440	1.4075	1.3392	1.3310	1.3285
Average	1.4827	1.4894	1.3849	1.3638	1.3725
Year End	1.4440	1.5375	1.4288	1.3697	1.3655

Item 1: Business.

### General

A glossary of technical terms used in the following description of the Company's business is set forth at the conclusion of this Item 1. Unless the context requires otherwise, all references to "Altair," "we," "Altair International Inc.," or the "Company" in this Form 10-K refer to Altair International Inc. and each of its subsidiaries.

Altair International Inc. was incorporated under the laws of the Province of Ontario, Canada in April 1973 for the purpose of acquiring and exploring mineral properties. Since 1994, the Company has also devoted substantial resources to the development and testing of mineral processing equipment for use in the recovery of fine, heavy mineral particles.

During 1996, Altair acquired the rights to the Campbell Centrifugal Jig, since modified and renamed the Altair Centrifugal Jig (the "Jig"), through a merger involving the Company, Fine Gold Recovery Systems, Inc., a wholly owned subsidiary of the Company ("Fine Gold"), and Trans Mar, Inc., a Washington corporation ("TMI"). The Jig is a machine that uses a rotating circular screen and pulsating water to separate valueless mineral particles from more valuable mineral particles based on the differences in their specific gravity. In tests, the Jig has proven capable of segregating and recovering extremely fine mineral particles which are not economically recoverable using existing conventional techniques. Altair is presently testing and customizing the Jig for use in the recovery of heavy minerals such as titanium and zircon. Management believes that the Jig could also be used to recover other minerals such as gold and for environmental remediation. See "--Jig Technology and Proprietary Rights."

Altair has also leased, and is exploring, approximately 14,000 acres of land near Camden, Tennessee (the "Tennessee Mineral Property") to determine whether it would be amenable to large-scale mining for titanium and zircon using the Jig or other equipment. Preliminary reports suggest that the Tennessee Mineral Property contains significant amounts of valuable heavy minerals, including titanium and zircon, and is suitable for a large-scale sand mining operation with a multi-decade life. See "--Tennessee Mineral Property."

In October 1998, Altair acquired an option to enter into a mineral processing lease on a heavy mineral sand stockpile located near Ione, California (the "California Mineral Property"). Although the California Mineral Property was of limited size, existing data suggested that the stockpiled materials graded between 14% and 31% heavy minerals (compared to 2% heavy minerals content in some primary mine locations). During 1999, the Company completed sampling and analysis of the stockpile and determined that, due principally to high concentrations of contaminants, the property is not economically feasible to develop. As a result, Altair allowed the option to expire and wrote off approximately \$94,000 of costs associated with the project.

In November 1999, Altair acquired all patents and technology related to a hydrometallurgical process developed by BHP Minerals International, Inc. ("BHP") primarily for the production of titanium dioxide products from titanium bearing ores or concentrates (the "Processing Technology"), all tangible equipment and other assets used by BHP to develop and implement the Processing Technology and the use for one year (for no fee) of the services of the 18 BHP personnel presently developing the Processing Technology. See "Titanium Pigment Processing Technology." Although Altair intends to continue to invest in the exploration and testing of mineral properties and mineral processing equipment, it expects that a majority of its resources during calendar year 2000 will be focused on the development and exploitation of the Processing Technology.

From a financial and accounting standpoint, the Company is a development stage firm and has been since its inception. To date, the Company has derived no revenues from product sales or otherwise and has experienced an operating loss in every year of operation. In the fiscal year ended December 31, 1999, the Company experienced operating losses of \$2,291,850.

Throughout this Form 10-K, the Company is sometimes referred to or defined as a "development stage" company or firm. Such references are for financial and accounting purposes only and are intended to signify that the Company is devoting substantially all of its efforts to establishing a new business, and planned principal operations have commenced, but there has been no significant revenue therefrom. References to the Company as a development stage company are not intended to imply that exploration activities with respect to the Tennessee Mineral Property or any other mineral deposits have disclosed a commercially viable reserve. For purposes of Regulation S-K, Item 802, Guide 7 promulgated under the Exchange Act of 1934, the Company should be considered an "exploration stage" company.

## **Titanium Pigment Processing Technology**

Acquisition of the Processing Technology. On November 15, 1999, the Company entered into an Asset Purchase and Sale Agreement (the "Asset Purchase Agreement") with BHP pursuant to which the Company purchased all patents and technology related to a hydrometallurgical process developed by BHP primarily for the production of titanium dioxide ("TiO<sub>2</sub>") products from titanium bearing ores or concentrates (i.e., the "Processing Technology"), all tangible equipment and other assets used by BHP to develop and implement the Processing Technology (the "Processing Assets") and the use for one year (for no fee) of the services of the BHP personnel presently developing the Processing Technology.

The purchase price for the Processing Technology and Processing Assets is 15,000,000 Australian Dollars (AUD\$) and was arrived at after extensive arms-length negotiation between Altair and BHP. (The noon buying rate in New York City for an Australian Dollar on March 15, 2000, as reported by the Federal Reserve Bank of New York for customs purposes, was \$.6125 United States Dollars.) Altair initially agreed to pay the purchase price in four equal installments of AUD\$3,750,000, the first of which was made at closing. The second payment, which was originally due February 15, 2000, has been rescheduled, with interest at 15% per annum, until May 15, 2000. The remaining two payments are due and payable on May 15, 2000 and August 15, 2000. The Company funded its first installment of the purchase price using existing cash. It intends to fund future installments primarily through the offer and sale of Common Stock, warrants to purchase Common Stock, and various other debt or equity securities. The Company may also use revenues, if any, generated from the sale of mineral products produced using the Processing Technology to fund part of the May 15, 2000 and August 15, 2000 installments. If the Company fails to pay any of the remaining three installments to the purchase price, the Asset Purchase Agreement provides that it will forfeit to BHP, without a right to reimbursement of any amount of the purchase price paid to date, all right, title and interest in the Processing Technology and Processing Assets.

The Asset Purchase Agreement also requires the Company to pay to BHP, until the earlier of the fifteenth anniversary of November 15, 1999 or the date it has paid an aggregate royalty of AUD\$105,000,000, a quarterly royalty equal to:

- o 1.5% of the international market price of all uncoated TiO<sub>2</sub> pigment produced and sold as a result of the use of the Processing Technology by the Company or a transferee at the Company's mineral properties in Tennessee;
- o 1.5% of the international market price of all uncoated TiO<sub>2</sub> pigment produced and sold as a result of the use of the Processing Technology by BHP or any affiliate of BHP at a specified heavy mineral sand operation located near Auckland, New Zealand;
- o 3% of the international market price of all uncoated TiO<sub>2</sub> pigment produced and sold as a result of the use of the Processing Technology by the Company or a transferee of the Company at any location other than its Tennessee Mineral Property or the Auckland, New Zealand heavy mineral sand operation; and
- o 3% of the sales proceeds (F.O.B. the Company's facility, reduced by the amount of product returns) received by the Company or a transferee of the Company from the sale of any products other than TiO<sub>2</sub> pigment produced through its use of the Processing Technology.

In addition, in connection with the Asset Purchase Agreement, the Company and BHP entered into a Lease dated November 15, 1999, pursuant to which the Company leases approximately 20,000 square feet of laboratory and testing space at BHP's testing facility in Reno, Nevada for a monthly rent of \$15,000. The initial term of the Lease expires on December 31, 2000, subject to automatic renewal for six-month periods at inflation-adjusted rent until terminated by the Company. The Lease grants the Company a right of first refusal in the event BHP intends to sell the building and property subject to the Lease and includes an agreement to negotiate in good faith with respect to the Company's possible purchase of such building and property.

**Description of the Processing Technology.** The Processing Technology is capable of producing conventional TiO<sub>2</sub> pigment products. TiO<sub>2</sub> pigments are finely-sized powders consisting of TiO<sub>2</sub> crystals. These crystals may be either anatase or rutile phase (shape) and approximate 0.18 to 0.22 microns in size. The Processing Technology is also capable of producing TiO<sub>2</sub> nanoparticles, a specialty product with a size range of 10 to 100 nanometers (approximately one tenth the size of conventional pigments). The Company has determined that it will initially use the demonstration plant to produce TiO<sub>2</sub> nanoparticles.

The Processing Technology is fundamentally different from current processing techniques. The process permits exceptional control over particle size, shape, and crystalline form. Other processes are based on either a precipitation of particles from aqueous solution or the formation of crystallites from molten droplets of titanium oxide generated in high temperature flame reactors. While nanoparticle products made by these methods exhibit the surface area and reactivity desired for many applications, they are often amorphous or multiphase materials that grow in particle size and change crystalline phase when subjected to high-temperature processing. In contrast, the Processing Technology produces discrete anatase crystals in nanometer sizes that are thermally stable at 800 degrees Centigrade for 48 hours or more.

The Processing Technology is based on a proprietary dense-phase crystal growth technique which controls crystal formation using a combination of mechanical and fluid dynamics and chemical and thermal control. Through introduction of very small quantities of selected chemicals ("doping elements") during crystal growth, the crystal size, phase, catalytic and photocatalytic activity and size distribution of crystals are controlled within narrow limits and to specification. Other technologies exclude the introduction of doping elements during crystal growth.

**Processing Assets.** The Processing Assets consist principally of a "semi-works" facility located in the leased premises. The plant was built by BHP as a research and development facility, but is capable of producing commercial grade products. The Company intends to commence limited production of TiO<sub>2</sub> products using the Processing Technology and Processing Assets during the first half of 2000. The plant has a nominal annual production capacity of 200 tons of TiO<sub>2</sub> nanoparticles.

**Plans for Development of the Titanium Pigment Processing Technology.** The Company intends to initially employ the Processing Technology for the production and sale of TiO<sub>2</sub> nanoparticles. It has hired a production manager to operate the semi-works plant as a production facility, has commenced product marketing, and is investigating distributor relationships. The plant has certain bottlenecks in the process which limit production capacity. The Company intends to undertake a de-bottlenecking effort during the second half of 2000 which should significantly increase the production capacity of the plant.

The Company is also analyzing other means of exploiting the Processing Technology, including licensing arrangements and joint ventures. The Company believes that, with additional research and development aimed at

commercialization, the Processing Technology will be capable of producing industry standard TiO<sub>2</sub> pigments (larger particle size than nanoparticles). The Company is assessing potential business arrangements which would facilitate the development of this and other additional applications for the Processing Technology.

The raw material used as a feedstock in the production of TiO<sub>2</sub> nanoparticles, and an intermediate in the production of other TiO<sub>2</sub> products, is titanium tetrachloride, a commodity product manufactured by several suppliers and readily available on the open market. Although the Company uses purchased titanium tetrachloride as the feedstock in the production of TiO<sub>2</sub> nanoparticles, the Processing Technology is capable of producing it from an ilmenite raw material.

**Target Market for Products of the Processing Technology.** The Company is initially targeting the markets that utilize the unique optical properties of TiO<sub>2</sub> nanocrystals such as producers of specialty surface coatings and UV protectant cosmetics. Ultra-fine or nano-sized TiO<sub>2</sub> may also be effectively used in battery components and pollution control and detoxification. Coatings and cosmetics utilize the ultraviolet shielding capabilities of the material; pollution control and detoxification processes take advantage of the material's photocatalytic properties; and battery applications utilize the electrochemical capabilities of the material. The current global market for TiO<sub>2</sub> nanoparticles is approximately 3,800 metric tons per year, but the Company expects the nanoparticle market to grow more rapidly than the conventional pigment market as applications for new technologies generate increased demand.

In addition, the Processing Technology is adaptable to make nanocrystals of materials suitable for optoelectronics, ceramics and catalysts as well. Nanomaterials applications being actively pursued by many research groups include flexible ceramics (cast materials such as automobile engines), special catalysts (chemical and petroleum processing), health care products (pharmaceuticals and nano-sized sensors), and optoelectronics. Nano-crystal optoelectronic components can be used to miniaturize computers, electronic devices and expand bandwidth in telecommunications.

**Research, Testing and Development of the Processing Technology.** The Processing Technology is the result of several years of research and development work done by BHP. Although the Company believes the technology is presently commercially viable, it intends to continue the research and development work to both improve the process and develop additional commercial applications for it. Such work will be conducted by the BHP employees whose services were acquired in conjunction with the Processing Technology and Processing Assets. In addition, the Company may consider joint research and development efforts with customers and other interested parties.

**Processing Technology and Proprietary Rights.** The Company believes that the Processing Technology represents a significant improvement in the recovery of titanium from titanium-containing ores, and has the potential to materially reduce processing costs for commodity and specialty products. The two conventional technologies for processing titanium ores are generally known as the chloride and sulphate processes. Altair believes that the Processing Technology is an improvement over these processes in that it offers precise control of crystal size, structure and chemical composition, it uses a wide variety of feedstocks, and it recycles wastes.

BHP has filed numerous patent applications with the United States Patent and Trademark Office ("PTO") with respect to the Processing Technology and has transferred the rights to such applications to the Company. Such applications are in the PTO review process, and no patents with respect to the Processing Technology have been granted to date.

Competition--the Titanium Pigment Processing Technology. There are several producers of TiO<sub>2</sub> nanoparticles, the largest of which has approximately 20% of the market. The Company believes that, with a lower cost structure than its competitors and the ability to produce a more uniform, thermally stable product in a wide variety of sizes within narrow ranges, it may have a competitive advantage that will allow its products to quickly gain market acceptance. However, some producers of TiO<sub>2</sub> nanoparticles are major multinational corporations with far greater financial resources than the Company. These producers also enjoy other advantages over the Company, including established customer relationships and operating histories.

### The Jig

Description of the Jig. The Altair Centrifugal Jig segregates particles based on differences in their specific gravity. Such technology may be categorized as a "gravity separation" process. Gravity separators are widely used in minerals beneficiation because of their relative simplicity, low cost of operation and ability to continuously treat large tonnage throughput. Management believes the Jig will prove able to economically recover smaller particles than can presently be economically recovered by competing gravity technologies. While not yet confirmed through actual operations, the cost to manufacture and operate the Jig is expected to be similar to the cost to manufacture and operate competing gravity separators, which can efficiently process only particles larger than 150 mesh. In contrast, the Company's tests suggest that the Jig will be able to maintain relative efficiency when processing feeds as small as 400 mesh. See "-- Competition -- The Jig". In tests conducted to date using the Jig to process relatively small particles, the Jig has yielded product quality (grade and contaminates) equivalent to that yielded by alternative technologies processing larger particles. See "--Target Markets For the Jig" and "-- Competition -- The Jig".

Several prototype and demonstration Jigs have been built and tested by the Company and TMI. Continued field testing of the Jig is being undertaken to increase the volume capacity, identify any design problems that may reside in the Jig technology, evaluate the Jig's ability to perform sustained operations, determine the potential for downtime during such operations and estimate the anticipated maintenance costs associated with continued operations. In addition, field testing is being carried out to improve operating design for specific applications. There can be no assurance that the testing program will be successful for all applications or that testing will demonstrate the Jig to be economically attractive to end users. See "--Factors That May Affect Future Results."

During 1998, the Company conducted preliminary testing of its Series 30 Jig at a mineral recovery plant operated by a large heavy mineral sand producer located in northern Florida. Results of the testing indicate that the Series 30 Jig is capable of producing separation results comparable in efficiency to those of the Series 12 Jig for zircon concentrates. (Results of tests using the Series 12 Jig are discussed in "Target Markets for the Jig" below). The Series 30 Jig, however, is designed to be capable of processing 500 tons of solids per day, or more than four times the throughput capacity of the Series 12 Jig. The volumes of solids per day that the Series 30 and Series 12 Jigs are actually capable of processing have not been established through testing; however, the Company expects that continued testing will confirm that the two models can process the volumes they have been designed to process. The Company has also begun design work for a larger Jig that would have over twice the processing capacity of the Series 30 Jig. See " -- Research, Testing and Development." Such increased capacity would enhance the Jig's commercial potential for high volume applications such as coal washing and recovery of iron ore fines. Also, multiple units might be used in series or parallel configurations to process high volume operations.

Preliminary demonstration tests conducted by the Company and TMI suggest that the Jig may be commercially viable in a number of applications, including:

- o Recovery of ultra fine gold from waste streams or former tailings;
- o Recovery of zircon, rutile, ilmenite, leucoxene, and other valuable fractions from heavy mineral sand operations, especially from finely sized waste piles;
- o Sulfur and ash removal from fine coal;
- o Recovery of tin and iron ore fines from fine tailings;
- o Concentration of heavy minerals, such as anatase, apatite, barite, cassiterite, chromite, columbite, industrial diamonds, fluorite, various garnets, monazite, tantalite and wolframite;
- o Remediation of nuclear waste.

Target Markets for the Jig. The Company's present focus is on developing markets for the Jig that have the greatest near-term profit potential. Although management of the Company believes that, in the long run, the Jig may potentially be useful for a number of applications, management believes that the most promising markets for the Jig in the short run are for use in processing of heavy mineral sands in order to recover heavy minerals, particularly zircon and titanium.

The Company is seeking to enter into royalty or limited licensing agreements under which the Jig can add value to the beneficiation process, especially the processing of heavy mineral sands. Verification testing with the Series 12 Jig suggests the Jig's potential for recovering zircon from heavy mineral sand dry mill tails in Florida. In Phase 1 and 2 trials conducted by the Company involving separation of commercial grade zircon products from mineral sands, the Series 12 Jig withdrew a larger portion of zircon from the feed ore than other mineral sands processing equipment in use today. In tests on zircon/contaminate feeds conducted by the Company, the Series 12 Jig has yielded greater than 90% zircon concentrates and recovered up to 75% of the zircon fed to the unit. Initial testing of the Series 30 Jig on zircon/contaminate feeds produced results which were generally equivalent to the Series 12 Jig. The Company plans more extensive testing of the Series 30 Jig during 2000. See "-Plan of Operation."

The primary valuable minerals produced from heavy mineral sands are titanium and zircon. Titanium is used primarily as a basic component of titanium dioxide, a pigment used principally as a whitener and opacifier for paper, plastics, and paint. Zircon is used primarily for foundry molds and in the manufacture of certain types of glass and ceramics. The Company believes the domestic and international markets for both of these products are significant and well established. Both are commodities traded in bulk, usually under long-term contracts, and are also sold in 50-100 lbs. bags, usually traded as a spot-priced product. The U.S. Geological Survey has reported that production of titanium dioxide in the United States during 1999 was approximately 1,350,000 metric tons, representing a market value of approximately \$3 billion. The U.S. Geological Survey does not report zirconium production for the United States; however, according to survey data for 1999 prepared by the U.S. Geological Survey, imports of zirconium for consumption in the United States during 1999 were approximately 43,100 metric tons, representing a market value of approximately \$12.9 million. There can be no assurance that testing will demonstrate that the Jig can economically extract heavy minerals from heavy mineral sands or that the Jig will prove attractive to end users.

Business Development-the Jig. Testing conducted to date by the Company indicates the Jig may have economic potential in a wide variety of industries, and management believes the Jig can be used for finely sized heavy minerals recovery, coal cleaning and environmental remediation. See "--Target Markets". During 2000, the Company plans to develop the Jig for use in the processing of heavy mineral sands and other uses that may have near-term profit potential through implementation of the following critical steps:

(1) Continued field testing and demonstration of the Series 12 Jig and experimentation with design manipulations to improve effectiveness for certain specific applications. In addition, sustained operational testing is critical in determining if any material design problems reside in the Jig technology, if the Jig is capable of sustained operation with little downtime, and if its maintenance costs are satisfactory. See "--Research, Testing and Development."

(2) Continued field testing, including sustained operational testing, of the larger volume, more marketable Series 30 Jig. See "--Research, Testing and Development."

(3) Initial engineering and design work for a Jig that will be larger than the Series 30 Jig. See "--Research, Testing and Development."

(4) Separation testing on potential new ore applications such as tin and iron ore fines.

(5) Development of royalty, rental, or limited licensing agreements with prospective industrial users and introduction of the Jigs into targeted markets

Research, Testing and Development of the Jig. Field testing to date suggests that the Jig possesses the ability to process continuous tonnage throughput in several applications. The Jig has multiple operating parameters -- primarily rotational speed, pulsing pressure, and screen characteristics -- which must be adjusted to fit the processing requirements of the particular feed stream being treated. Management believes that more extensive testing is needed to identify the most efficient operating parameters for specifically identified applications. Further, demonstration of sustained operation is critical to marketing efforts. To this end, the Company has installed or is in the process of installing the Jig in several test sites. Specifically designed research, testing and development efforts planned for the upcoming twelve months include the following:

(1) The Company has installed and commenced testing of a Series 30 Jig at a mineral recovery plant located in Northern Florida. Tests conducted by the Company indicate that the Jig is capable of yielding greater than 90% zircon concentrates and recovering up to 75% of the zircon fed to the unit. The Series 30 Jig is designed to process 500 tons per day and is considered to be commercial-sized for this application. A Series 12 Jig unit has also been installed at the sand processing facility in Northern Florida. During 2000, the Company intends to test various plant titanium and zircon feedstreams and to test heavy mineral sand feeds from other Florida locations. Testing utilizing the Jigs is being performed by Company personnel.

(2) The Company has established a Jig testing facility near Reno, Nevada to test samples supplied by mineral companies and other potential users of the Jig. The facility is used for demonstrations of the Jig technology, provides amenability testing for a variety of mineral ores, and serves as a test site for on-going equipment design. The test facility is equipped with a Series 12 Jig, placed in a "closed loop" circuit designed to take an initial charge of solids (0.5 to 2.0 tons) which can be continuously fed in slurry form to the Jig. Concentrate and tails streams produced by the Jig may be accessed for sampling prior to recombination and return to the feed circuit. Testing performed at the test facility during 1999 included amenability testing of ores which may have near term commercial potential for recovery using the Jig. Operation of the Jig test facility is performed exclusively by Company personnel.

(3) Engineering and design work will continue on a Jig having approximately twice the processing capacity of the Series 30 Jig. The Company anticipates that it will be able to complete construction of the first unit by the end of 2000.

Provided that the planned testing of the Jig over the next twelve months as described above is successful, the Company believes the Series 30 Jig would be ready at that time for commercial use in applications involving the recovery of titanium, zircon and gold. While such capabilities of the Jig could then be marketed, the Company expects that the Jig's multiple operating parameters would need to be adjusted to fit the requirements of each particular customer and application. In the event any of the foregoing tests are not successful, the Company expects that it would conduct additional testing, the nature of which would depend upon the results obtained in the above-described tests. During 1999, the Company expended \$113,000 for research, testing and development of the Jig.

**Jig Technology and Proprietary Rights.** In operation, the Jig utilizes a combination of standard mechanical jig and centrifugal technologies. Without having tested the Jig in sustained, commercial operations, management believes production models of the Jig, if completed, will be capable of sustaining high reliability and low maintenance costs in a production environment. Use of the Jig requires no chemical additives. The Series 12 Jig stands about six feet tall, requires floor space of about 25 square feet and weighs approximately 2,000 pounds, while the Series 30 Jig stands about 10 feet tall, requires floor space of about 54 square feet and weighs approximately 7,000 pounds. Recently constructed jigs have been mounted on metal frames along with jig auxiliary equipment--pulse water pump and tank and control panel--for transport by truck and rapid on-site installation.

A conventional jig separates a slurry of mineral particles as it flows across the top of a screen. Water is periodically pulsed up through the screen to eliminate interparticle friction and allow differential settling according to the variations in the net specific gravities of the ore. Heavier minerals are allowed to pass downward through the screen while lighter materials flow across the screen to a discharge point. The Jig operates according to conventional jig principles except that the screen surface is cylindrical and is rotated to subject the particles to centrifugal forces. As currently designed, materials to be processed by the Jig are introduced into the top of the Jig in a slurry mix with water. The slurry is diffused across the top of the interior of a vertical cylindrical screen which is rotating. Water is pulsed through the screen allowing differential separation in the slurry material. Heavy particles pass through the screen, are collected, and exit the machine in a "concentrate" stream. Lighter particles flow down the screen interior, are collected and exit out the bottom of the machine in a separate "tails" stream.

The Company does not intend to establish its own manufacturing facility. Management is considering options for manufacture of the Jig, including manufacturing under contract, exclusive licensing, or a joint venture. The arrangement could eventually include an exclusive license for manufacture, warehousing and distribution of spare parts, as well as maintenance and leasing of the Jig. Currently, the Company has entered into an agreement with a machine shop located in central Tennessee to manufacture three Series 30 Jigs.

Initial patents related to the concept of the Jig as a whole have been issued in the United States, South Africa, United Kingdom, Australia and Canada. These patents expire on various dates between May 1999 and December 2000. A series of second patents with respect to the process by which water is pulsed through the cylindrical screen on the Jig, a critical component differentiating the Jig from competing products, have been issued in the United States, South Africa, Japan, Europe, Australia, Canada, United Kingdom, Germany and France. These patents expire on various dates between January 2010 and January 2011. A third series of patents with respect to an efficiency enhancing component of the Jig have been issued in the United States, Europe, Australia, Japan, South Africa, Canada and Brazil. These patents have expiration dates between April and November 2018.

## **Competition--the Jig.**

Alternative Technologies. Various mineral processing technologies perform many functions similar or identical to those for which the Jig is designed. See "Factors That May Affect Future Results--Competing Products and Alternative Technologies." Minerals processing technologies are generally predicated on the physical and chemical characteristics of the materials being processed. A minerals processor may exploit contrasts in size, specific gravity, hardness, magnetic susceptibility, electrical conductivity, and similar characteristics to selectively extract and concentrate mineral constituents. Minerals processors also exploit variations in chemical reactivity and molecular affinity to selectively separate minerals.

The Jig competes in an arena in which particle specific gravity is the primary criteria for particle segregation and capture. Competing technologies in this arena include the following:

Spirals and Cones. To separate out valuable particles with a spiral or cone, a mineral processor runs a sand-size feed slurried in water through a tilted trough (spiral) or over a convex surface (cone). In this process, fine-sized particles tend to "float" and not settle as quickly as larger particles. The difference in settling speed permits the mineral processor to separate out and extract the more valuable heavy particles. Spirals and cones are most effective in feed sizes larger than 150 mesh.

Froth Flotation Devices. To separate minerals using a froth floatation device, a processor introduces chemical agents into a pool of mixed particles, which agents attach to certain sulfides. Once attached to the chemical agents, the sulfides float to the surface. The froth floatation method can be effective on particles 200 mesh or smaller in size.

Heavy Media Separation. Heavy media separation is a process in which a feed containing both dense and light particles is fed into a solution whose specific gravity is midway between the particles to be separated. The light particles float to the surface of the solution, while the heavy particles sink. Heavy media separation is effective primarily in the removal of ash from coal and in small scale analytic laboratory applications.

The Company believes that, in certain applications, the Jig may prove more efficient, cost effective, or adaptable than spirals and cones, froth floatation devices, or heavy media separation devices. Nevertheless, results from further tests or actual operations may reveal that these alternative technologies are better adapted to any or all of the uses for which the Jig is intended. Moreover, regardless of test results, consumers may view any or all of such alternative technologies as technically superior to, or more cost effective than, the Jig.

Competing Jig-Like Products. The Company believes that the Jig currently faces several forms of competition in the commercial segregation of dense particles contained in feeds between 150 and 400 mesh, including the Kelsey Jig, Falcon concentrators and the Knelsen batch concentrator unit, which are currently being used worldwide. Another centrifugal jig device, the Kelsey jig, has been developed in Australia subsequent to the invention of the Jig. The Kelsey jig is more complicated in design than the Jig, which the Company believes makes it more expensive to manufacture, operate and maintain in a production environment. According to the Kelsey jig's manufacturer, Geo Logics Pty. Ltd., Kelsey jigs are in service at 24 plants worldwide. In addition, Falcon, a Canadian company, produces a concentrator which is used mainly for pre-concentration and scavenging. Their principal applications to date have been in the gold and tantalum industries. There also exists a batch concentrator known as the Knelsen Bowl, which management believes is best suited to small volumes. (A batch concentrator differs from the Jig in that it process a finite "batch" of material, is completely emptied, and then processes a completely new finite batch, while the Jig processes a continuous flow of materials). Knelsen Bowls have been installed in various mining applications, primarily gold, throughout the world. Both the Falcon and Knelsen concentrators utilize different technologies than the technology employed by the Jig.

The Company is a small player in an industry comprised of major mining companies possessing tremendous capital resources. The Company is an insignificant competitive factor in the industry. There is no assurance that competitors, many of whom may have significant capital and resources, will not develop or are not now in the process of developing competitive equipment that may be functionally or economically superior to the Company's equipment.

### **Tennessee Mineral Property**

Description of the Tennessee Mineral Property. The Tennessee Mineral Property consists of approximately 14,000 acres of land that the Company has leased (or has binding commitments to lease) in or near Camden, Tennessee, containing fine, heavy minerals.

### **[MAP GRAPHIC OMITTED]**

From 1996, when the Company began acquiring leases, through 1999, exploration activities on the Tennessee Mineral Property have included geologic mapping, sample collection, drilling of 156 auger holes and preparation of geologic and deposit models. The deposit model also incorporates 40 drill holes completed by an earlier exploration company. Deposit model estimates are consistent with deposit estimates previously determined by other resource companies. The mineralized deposit on the Tennessee Mineral Property has not yet been proven to be a reserve (as defined in Regulation S-K, Item 802, Guide 7 promulgated under the Exchange Act), and the Company's limited operations and proposed plan with respect to it are exploratory in nature.

The production of saleable heavy minerals from heavy mineral sand ore is a two-stage process. At the mine site, heavy mineral ore is treated in a "wet mill" where a 90% total heavy mineral concentrate is prepared typically utilizing gravity separation equipment. This concentrate is then taken to a "dry mill" where individual mineral constituents are extracted using magnetic and high tension electrical separators.

In order to assess the amenability of the Tennessee Mineral Property ore to processing with the Jig, two bulk samples were collected by the Company from the Tennessee Mineral Property. Test work completed by the Company on the first sample during the spring of 1997 suggested the sands can be processed with the Jig. Tests performed by the Company which emphasized recovery have yielded up to 94% heavy mineral recovery with a six-to-one concentration ratio. (Stated differently, after a single pass through the Jig, 94% of the ore's value was concentrated in about one-sixth of its original volume, and five-sixths of the sand rendered a non-valuable discard.) As is typical of gravity separation processing, several passes through the Jig will be necessary to produce a 90% total heavy mineral concentrate. Further, in the event the Tennessee Mineral Property is proven to contain significant heavy mineral reserves the Jig would likely be used in conjunction with traditional gravity separators, primarily spirals, to most efficiently process the sand ore in the "wet mill".

A second bulk sample was collected during late 1997. Approximately 5,000 pounds of representative mineralized material was collected from an exposed sand horizon. This sample was processed by an independent Florida heavy sands producer and the Company utilizing both "wet mill" and "dry mill" processes to produce representative samples of saleable products. The sample results were reviewed by an independent consulting group hired by the Company to prepare a pre-feasibility study of the Tennessee Mineral Property. See "--Plan of Operation." In July 1998, the independent consulting group completed their technical pre-feasibility study of approximately 4,700 acres of the Tennessee Mineral Property known as the "Camden Deposit." The study states that the Camden Deposit contains an indicated resource of 12 million tons of total heavy minerals consisting of 65% titanium-bearing minerals, 15% zircon and 20% non-valuable heavy minerals. It indicated that saleable ilmenite, rutile and zircon products can be produced, and that established markets currently exist for such products. The study then modeled mining and production costs and concluded that the Camden Deposit has the potential to be economically mined via a large-scale sand mining operation with an approximate 20-year life.

Based on the positive results of the consultant's report, the Company initiated a final feasibility study in August 1998. The Company has commenced the design and engineering of the wet concentration process/facilities and has filed an application for a National Pollution Discharge Elimination System permit for a pilot plant facility with the Tennessee Department of Environment and Conservation. Other activities involved in the feasibility study will include additional drilling to further define resource characteristics, detailed analysis of mineralogical characteristics and mine processing methods, larger scale testing of the Series 30 Jig, analysis of product markets, and evaluation of possible strategic alliances. The Company expects that the final feasibility study will be completed during the second half of 2000. If the feasibility study suggests that cost-effective mining of the Tennessee Mineral Property is feasible, mining could begin within 24-36 months after completion of the study, subject to, among other things, the price of, and demand for extractable heavy minerals and the Company's ability to obtain necessary financing, permits, and government approvals. See "--Plan of Operation" and "--Government Regulation and Environmental Concerns."

Subsequent to the completion of the pre-feasibility study, further exploration of the Tennessee Mineral Property by the Company suggested the existence of an additional heavy mineral sands resource of approximately 10 million tons in an area northwest of the Camden Deposit known as the "Little Benton Deposit." Preliminary results indicate that the Little Benton Deposit contains a high-grade titanium mineralization similar to the Camden Deposit. The Company has approximately 7,900 acres under lease in the Little Benton area and intends to conduct further testing of the Little Benton Deposit. If such testing affirms the existence of the indicated resource, and the feasibility study suggests that cost-effective mining of the Tennessee Mineral Property is feasible, the production capacity and/or life of the mining operation could be significantly increased.

Research, Testing and Development of the Tennessee Mineral Property. As discussed in "--Description of the Tennessee Mineral Property" above, in July 1998, an independent consulting group completed a technical pre-feasibility study of approximately 4,700 acres of the Tennessee Mineral Property known as the "Camden Deposit." Based on the positive results of the consultant's report, the Company initiated a final feasibility study in August 1998 which it anticipates will involve additional drilling to further define resource characteristics, detailed analysis of mineralogical characteristics and mine processing methods, larger scale testing of the Series 30 Jig, analysis of product markets, and evaluation of possible strategic alliances. The Company expects that a feasibility study will be completed during the second half of 2000. If the feasibility study suggests that cost-effective mining of the Tennessee Mineral Property is feasible, mining could begin within 24-36 months after completion of the study, subject to, among other things, the price of, and demand for extractable heavy minerals and the Company's ability to obtain necessary financing, permits, and government approvals.

During 1999, the Company incurred \$689,594 in deferred exploration expenditures on the Tennessee Mineral Property. Expenditures were incurred on leasehold minimum advance royalty payments, auger hole drilling, sampling, sample analysis and assay, geological and mineralized deposit characterization studies and other related exploration activities.

Competition--the Tennessee Mineral Property. Based on the exploratory work done to date, the Company anticipates that the saleable products which may be produced from the Tennessee Mineral Property are ilmenite, rutile and zircon. Ilmenite, which may contain 40% to 70% titanium dioxide, is used in the production of titanium dioxide pigment, a specialty chemical used principally as a whitener and opacifier for paper, plastics and paint. According to the U.S. Geological Survey, ilmenite is the most abundant naturally occurring, commercially produced titanium mineral and supplies approximately 90% of the world demand for titaniferous material. Such demand is projected to increase at an annual rate of 2%-3% for the foreseeable future. The United States imports approximately 60% of total ilmenite consumed. There are presently three entities in the United States which produce ilmenite concentrate from heavy mineral sands and virtually all production is used by five titanium pigment producers whose plants are primarily located in the southeastern U.S. Pigment producers use various methods to process ilmenite concentrate into titanium dioxide pigment and require that the concentrate feedstock meet certain chemical and size criteria applicable to the process being used. The Company believes that, if it can economically mine the Tennessee Mineral Property and produce satisfactory products for sale to pigment producers, it may have a competitive advantage in being a domestic producer operating in close proximity to its primary markets.

Rutile, which generally contains greater than 95% titanium dioxide, is also used in the production of titanium dioxide pigment. Its processing costs are significantly less than ilmenite due to the higher concentration of titanium dioxide. Although this greatly enhances its market value, rutile is much less abundant than ilmenite, representing approximately 5% of the total heavy minerals contained in the Tennessee Mineral Property.

Zircon, which is used in ceramic, refractory and foundry applications, represents approximately 15% of the heavy minerals contained in the Tennessee Mineral Property. Zircon sand is currently being produced at three mines in the southeastern U.S. and in several countries around the world. Titanium-bearing minerals and zircon are commonly found and mined together.

#### **Plan of Operation--General.**

With respect to the Jig, the Company's marketing efforts in the near future will continue to be directed to opportunities within North America, with future expansion into foreign markets developing over time. Because the Company does not intend to engage in the actual manufacture of the Jig, it does not expect to purchase a manufacturing facility or any significant manufacturing equipment.

During 2000, the Company expects to hire sales, marketing and production employees for its titanium pigment processing business. The quantity and timing of new hires will be dependent on business activity. As part of the acquisition of the Processing Technology from BHP, the Company received the use, until December 31, 2000, of the services of the eighteen BHP employees developing the Processing Technology. The Company expects to hire these individuals as Altair employees on January 1, 2001.

Management does not otherwise anticipate that the number of Company employees will significantly increase until the Company has sufficient sales and business activity to warrant it. Management expects to hire two to four additional employees during the next 12-month period; however, the actual number of new employees hired will depend on the Company's operating results. If hired, such new employees would be primarily engineering and technical staff to support testing, development and commercialization programs.

## **Subsidiaries.**

Altair International Inc.<sup>1</sup> was incorporated under the laws of the province of Ontario, Canada in April 1973. Altair currently has three wholly-owned subsidiaries, Fine Gold Recovery Systems, Inc., a Nevada corporation ("Fine Gold"), Mineral Recovery Systems, Inc., a Nevada corporation ("MRS"), and 660250 Ontario Limited, an Ontario Corporation, and three indirect wholly-owned subsidiaries, California Recovery Systems, Inc., a Nevada corporation, Altair Technologies, Inc., a Nevada corporation, and Tennessee Valley Titanium, Inc., a Nevada corporation.

Fine Gold was acquired by the Company in April 1994. Fine Gold is, for accounting purposes, a development stage company with no operating revenues earned to date. The Company's acquisition of TMI in February 1996 was effected by merging TMI with and into Fine Gold (the "TMI Merger"). Fine Gold also now includes the operations of a wholly-owned subsidiary of the Company formerly known as Mineral Recovery Systems, Inc., which was merged with and into Fine Gold in June 1996. As discussed below, another wholly-owned subsidiary of the Company, formerly known as Carlin Gold Company, is now operated under the name Mineral Recovery Systems, Inc. The Company intends that Fine Gold will hold and maintain Jig technology rights, including patents, and will enter into a royalty arrangements to allow MRS to develop and commercially utilize the Jig.

MRS was incorporated by the Company in April, 19872. MRS previously has been involved in the exploration for minerals and development of unpatented mining claims in Nevada, Oregon and California. All mining claims have now been abandoned. The Company currently intends that MRS will arrange for the manufacture of the Jig for commercial sales, rental or royalty arrangements with end users. In addition, MRS currently holds, directly or indirectly, all of the Company's interest in the Tennessee Mineral Property, and the Company intends that MRS will continue to lease or acquire and develop mineral properties in the future, particularly properties that contain mineral resources that may be processed with the Jig.

Altair Technologies, Inc. holds all of the Company's interest in the titanium pigment processing technology. California Recovery Systems, Inc. held the company's exploratory rights with respect to the California Mineral Property, which were terminated during 1999. The remaining 100% owned subsidiaries do not presently have any assets or operations.

---

(1) The Company was incorporated in April 1973 under the name Diversified Mines Limited, which was subsequently changed to Tex-U.S. Oil & Gas Inc. in February 1981, then to Ores Resource Ltd. in November 1986, then to Carlin Gold Company Inc. in July 1988, to Altair International Gold Inc. in March 1994, and to Altair International Inc. in November 1996.

(2) MRS was formerly known as Carlin Gold Company. The name change was effective in June 1996.

## **Government Regulation and Environmental Concerns.**

Government Regulation. The Company's exploration of the Tennessee Mineral Property, testing of the Jig, and operation of the titanium pigment processing facility are, and any future testing, operation, construction or mining activities of the Company will be, subject to a number of federal, state, and local laws and regulations concerning mine and machine safety and environmental protection. Such laws include, without limitation, the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response Compensation Liability Act. Such laws require that the Company take steps to, among other things, maintain air and water quality standards, protect threatened, endangered and other species of wildlife and vegetation, preserve certain cultural resources, and reclaim exploration, mining and processing sites. These laws are continually changing and, as a general matter, are becoming more restrictive.

Compliance with federal, state, or local laws or regulations represents a small part of the Company's present budget; nevertheless, continued compliance may be extremely costly, especially if the Company actually commences extraction operations on the Tennessee Mineral Property. If the Company fails to comply with any such laws or regulations, a government entity may levy a fine on the Company or require the Company to take costly measures to ensure compliance. Any such fine or expenditure may adversely affect the Company's development.

The Company is committed to complying with and, to its knowledge, is in compliance with all governmental regulations. The Company cannot, however, predict the extent to which future legislation and regulation could cause the Company to incur additional operating expenses, capital expenditures, and/or restrictions and delays in the development of the Company's products and properties.

Environmental Regulation and Liability. Any proposed mining or processing operation on the Tennessee Mineral Property, at the facility at which the Processing Assets are located or any other property acquired by the Company will be subject to federal, state, and local environmental laws. Under such laws, the Company may be jointly and severally liable with prior property owners for the treatment, cleanup, remediation, and/or removal of substances discovered on the Tennessee Mineral Property or any other property used by the Company, which are deemed by the federal and/or state government to be toxic or hazardous ("Hazardous Substances"). Courts or government agencies may impose liability for, among other things, the improper release, discharge, storage, use, disposal, or transportation of Hazardous Substances. The Company might use Hazardous Substances and, although the Company intends to employ all reasonably practicable safeguards to prevent any liability under applicable laws relating to Hazardous Substances, companies engaged in mineral exploration and processing are inherently subject to substantial risk that environmental remediation will be required.

## **Employees.**

The business of the Company is currently managed by Dr. William P. Long, President and Chief Executive Officer of the Company and Mr. C. Patrick Costin, Vice President of the Company and President of MRS and Fine Gold. In addition, the Company employs a Chief Financial Officer, a senior process engineer, a metallurgist, a geologist, a controller and a part-time employee in an office management and administrative assistance capacity. There are no other employees of the Company or its subsidiaries.

Other than the employment agreements of Dr. Long and Mr. Costin described below, and the employment agreement with the Chief Financial Officer, there are no written employment agreements between the Company or its subsidiaries and their respective personnel. The future success of the Company

will depend, in part, on its ability to attract and retain highly qualified technical, marketing and management personnel. There is no assurance the Company will be successful in retaining or attracting highly qualified individuals in key positions. See "Factors That May Affect Future Results - We are Dependent on Key Personnel."

### **Where You Can Find More Information.**

The Company files annual, quarterly, and current reports, proxy statements, and other information with the SEC. You may read and copy any reports, statements, or other information that the Company files at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. The SEC also maintains an Internet site (<http://www.sec.gov>) that makes available to the public reports, proxy statements, and other information regarding issuers, such as the Company, that file electronically with the SEC.

The Common Stock is quoted on the Nasdaq National Market. Reports, proxy statements and other information concerning the Company can be inspected and copied at the Public Reference Room of the National Association of Securities Dealers, 1735 K Street, N.W., Washington, D.C. 20006.

### **Glossary of Terms.**

Amenability means responsiveness of an ore deposit to processing.

Ash means inorganic residue remaining after coal combustion. Ash is an undesirable component of coal because it reduces thermal value and produces a waste product after combustion.

Assay means to analyze an ore or other substance to determine the presence, absence, and quantity of one or more components.

Beneficiate means to improve the grade of ore by processing.

Centrifugal force means the component of force on a body in curvilinear motion that is directed away from the axis of rotation.

Coal fines means finely pulverized coal particles which will pass through a 28 mesh screen.

Coal washing means processing of pulverized coal to remove ash and pyrite.

Environmental remediation means removal of harmful mineral particles from a site previously altered by human activities.

Heavy minerals sands means beach or dune sands which contain a small fraction of heavy particles. Heavy mineral sands are commercially mined to produce titanium minerals and zircon.

Ilmenite means a titanium-bearing oxide mineral containing variable percentages of iron and used as a raw material in the production of titanium pigments.

Mesh means one of the openings or spaces in a screen. The value (size) of the mesh is given as the number of openings per linear inch.

Mill means a building with machinery for processing ore. Dry mill refers to heavy minerals sand processing of dry materials. Wet mill refers to heavy minerals sand process of material that are mixed with water in slurry.

Mineralized Deposit or Mineral Deposit means a mineralized body which has been delineated by appropriately spaced drilling and/or underground sampling to support a sufficient tonnage and average grade of metals. Such a deposit does not qualify as a reserve until a comprehensive evaluation based upon unit cost, grade, recoveries and other material factors conclude legal and economic feasibility.

Placer means deposits of sand, gravel and other detrital or residual material containing a valuable mineral which has accumulated through weathering and natural mechanical concentration processes. A placer mine is an operation that recovers certain valuable minerals based on differences in specific gravity.

Pyrite means a yellowish-brown mineral sulfide containing iron and sulphur. Pyrite is an undesirable component of coal because sulphur dioxide gas is released when it is burned with coal.

Specific gravity means the ratio of the mass of a solid or liquid to the mass of an equal volume of water at a specified temperature.

Tails or tailings means those portions of washed ore that are regarded as too poor to be treated further, as distinguished from material (concentrates) that is to be smelted or otherwise utilized.

Thermal value means a measure of the ability of a fuel (coal) to produce energy when ignited.

## **Forward-looking Statements.**

This Form 10-K contains various forward-looking statements. Such statements can be identified by the use of the forward-looking words "anticipate," "estimate," "project," "likely," "believe," "intend," "expect," or similar words. These statements discuss future expectations, contain projections regarding future developments, operations, or financial conditions, or state other forward-looking information. When considering such forward-looking statements, you should keep in mind the risk factors noted in this section and other cautionary statements throughout this Form 10-K and the Company's other filings with the Commission. You should also keep in mind that all forward-looking statements are based on management's existing beliefs about present and future events outside of management's control and on assumptions that may prove to be incorrect. If one or more risks identified in this Form 10-K or any other applicable filings materializes, or any other underlying assumptions prove incorrect, the Company's actual results may vary materially from those anticipated, estimated, projected, or intended.

Among the key factors that may have a direct bearing on the Company's operating results are risks and uncertainties described under "Factors That May Affect Future Results," including those attributable to the absence of operating revenues or profits, uncertainties regarding the development and commercialization of the Jig, development risks associated with the Tennessee Mineral Property, risks related to the Company's purchase and proposed development and exploitation of the Processing Technology and Processing Assets and uncertainties regarding the Company's ability to obtain capital sufficient to continue its operations and pursue its proposed business strategy.

## **Factors that May Affect Future Results.**

---

### **RISK FACTORS RELATED TO THE COMPANY GENERALLY**

---

#### **We Have Not Generated Any Operating Revenues or Profits.**

Altair is a development stage company. To date, Altair has not generated revenues from operations or realized a profit. Altair is presently investing substantial resources in the testing and development of the Jig, the exploration of the Tennessee Mineral Property, and the acquisition, development and commercialization of the Processing Technology and Processing Assets. There can be no assurance that the Jig, the Tennessee Mineral Property, the Processing Technology and Processing Assets or any other project undertaken by Altair will ever enable Altair to generate revenues or that Altair will at any time realize a profit from operations.

### **We May Continue to Operate at a Net Loss.**

Altair has experienced a loss from operations in every fiscal year since its inception. Altair's losses from operations in 1998 were \$1,762,088 and its losses from operations in 1999 were \$2,291,850. Although Altair expects to begin product sales of TiO<sub>2</sub> nanoparticles in 2000, total sales will probably not be at a level sufficient to produce a positive net income for the year. Altair will continue to experience a net operating loss until, and if, the Processing Technology and Processing Assets, the Jig and/or the Tennessee Mineral Property begin generating revenues for Altair. Even if the Processing Technology and Processing Assets, the Jig or the Tennessee Mineral Property begin generating revenues, such revenues may not exceed the costs of production. Accordingly, Altair may not ever realize a profit from operations.

### **We May Not be Able to Raise Sufficient Capital to Meet Present and Future Obligations.**

Altair may not be able to obtain the capital necessary to complete the development work necessary to place the Processing Technology and Processing Assets into continuous operation in a commercial setting. In addition, we may be unable to obtain the capital necessary to complete testing and development of the Jig or exploration of the Tennessee Mineral Property. If Altair determines to construct and operate a mine on the Tennessee Mineral Property, Altair will need to obtain a significant amount of additional capital to complete construction of the mine and commencement of operations.

In addition, Altair may need additional capital for necessary or discretionary acquisitions of equipment, properties, intellectual property rights or companies. General and industry market factors or other unforeseen events may also affect Altair's use of and need for capital.

If Altair needs additional capital, it may not be able to obtain the amount of additional capital needed or may be forced to pay an extremely high price for capital. Factors affecting the availability and price of capital may include, without limitation, the following:

- o market factors affecting the availability and cost of capital generally;
- o the performance of Altair;
- o the size of Altair's capital needs;
- o the market's perception of mining, technology, and or minerals stocks;
- o the economics of projects being pursued; and
- o industry perception of Altair's ability to recover minerals with the Jig or Processing Technology.

If Altair is unable to obtain sufficient capital or is forced to pay a high price for capital, Altair may be unable to place the Processing Technology and Processing Assets into continuous operation, complete the testing and production of the Jig, exploration and development of the Tennessee Mineral Property, or otherwise pursue and fully exploit existing or future development opportunities. In addition, because of their size, resources, history and other factors, certain competitors of Altair may have better access to capital than Altair and, as a result, may be able to exploit opportunities more easily or thoroughly than Altair.

### **Our Operations Are And Will Be Subject to Extensive Government Regulation.**

Altair's exploration of the Tennessee Mineral Property, testing of the Jig, and operation of the titanium pigment processing facility are, and any future testing, operation, construction or mining activities of Altair will be, subject to a number of federal, state, and local laws and regulations concerning mine and machine safety and environmental protection. Such laws include, without limitation, the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response Compensation Liability Act. Such laws require that Altair take steps to, among other things, maintain air and water quality standards, protect threatened, endangered and other species of wildlife and vegetation, preserve certain cultural resources, and reclaim exploration, mining and processing sites. These laws are continually changing and, as a general matter, are becoming more restrictive.

Compliance with federal, state, or local laws or regulations represents a small part of Altair's present budget; nevertheless, continued compliance may be extremely costly, especially if Altair actually commences mining operations on the Tennessee Mineral Property. If Altair fails to comply with any such laws or regulations, a government entity may levy a fine on Altair or require Altair to take costly measures to ensure compliance. Any such fine or expenditure may adversely affect Altair's development.

### **Certain of Our Experts and Directors Reside in Canada And May Be Able to Avoid Civil Liability.**

Altair is an Ontario corporation, and a majority of its directors are residents of Canada. In addition, certain of Altair's experts (including its principal accountants and Canadian legal counsel) are located in Canada. As a result, investors may be unable to effect service of process upon such persons within the United States and may be unable to enforce court judgments against such persons predicated upon civil liability provisions of the United States securities laws. It is uncertain whether Canadian courts would (i) enforce judgments of United States courts obtained against Altair or such directors, officers or experts predicated upon the civil liability provisions of United States securities laws or (ii) impose liability in original actions against Altair or its directors, officers, or experts predicated upon United States securities laws.

### **We are Dependent on Key Personnel.**

The continued success of Altair will depend to a significant extent on the services of Dr. William P. Long, President and Chief Executive Officer of Altair, and Mr. C. Patrick Costin, Vice President of Altair and President of Fine Gold and MRS. The loss or unavailability of Mr. Long or Mr. Costin could have a material adverse effect on Altair. Altair does not carry key man insurance on the lives of such key officers.

In addition to the individuals identified above, Altair employs a Chief Financial Officer, senior process engineer, metallurgist, geologist, controller, and administrative assistant. Altair has no other employees. Aside from Dr. Long, Mr. Costin and the Chief Financial Officer, Altair has no employment agreements with any of its personnel. Competition for such personnel is intense, and Altair can provide no assurance that it will be able to attract and maintain all personnel necessary for the development and operation of its business.

**We May Fail to Identify or Be Unable to Consummate Important Strategic Transactions.**

Altair is currently evaluating, and plans to continue to evaluate, licensing or acquiring additional mining products or properties. Altair also plans to remain open to acquiring, or developing strategic relations with other companies that have products, manufacturing capabilities, or other qualities that are compatible with Altair's business objectives. Altair must compete for attractive acquisition or strategic alliance candidates with numerous other companies, many of whom have significantly greater financial and technological resources than Altair. In addition, to the extent Altair is in a competitive position, it may fail to identify or consummate acquisition or strategic alliance opportunities.

Even if Altair identifies and completes such alliances, consummation thereof may require Altair to incur additional debt, amortize expenses related to goodwill and intangible assets, or issue dilutive equity securities, all of which could adversely affect Altair's operating results or financial condition. In addition, a failure by Altair to integrate its operations with that of an ally or acquisition target may adversely affect operating results. Disruptions in operations are likely to be especially severe during the fiscal quarters immediately following any acquisition or alliance transaction, while the operations of the acquired or combined business are being integrated into Altair's operations.

**We May Issue Substantial Amounts of Additional Shares Without Stockholder Approval.**

Altair's Articles of Incorporation authorize the issuance of an unlimited number of shares of Common Stock. All such shares may be issued without any action or approval by Altair's stockholders. In addition, Altair has two stock option plans which have potential for diluting of the ownership interests of Altair's stockholders. The issuance of any additional shares of Common Stock would further dilute the percentage ownership of Altair held by existing stockholders.

**The Market Price of Our Common Stock Is Extremely Volatile.**

The Common Stock was listed on the Alberta Stock Exchange through April 23, 1998 and has been listed on the Nasdaq National Market since January 26, 1998. Between March 24, 1997 and January 23, 1998, our Common Stock was listed on the Nasdaq SmallCap Market. Trading in the Common Stock has been characterized by a high degree of volatility. See "Price Range of Common Stock." Trading in the Common Stock may continue to be characterized by extreme volatility for numerous reasons, including the following:

- o Uncertainty regarding the viability of the Processing Technology;
- o The continued absence of any revenues from the Jig;
- o Uncertainty regarding the viability of mining the Tennessee Mineral Property;
- o Continued dominance of trading in the Common Stock by a small number of firms;
- o Positive or negative announcements by Altair or its competitors;
- o Industry trends, general economic conditions in the United States or elsewhere, or the general markets for equity securities, minerals, and commodities;

- o The announcement of financial or research and development results that differ from analyst and investor expectations, regardless of the health of Altair;
- o Significant changes in future prospects of Altair; and
- o Speculation by short sellers of Common Stock or other persons who stand to profit from a rapid increase or decrease in the price of the Common Stock.

**Future Sales of Currently Restricted Securities May Affect the Market Price of Our Common Stock.**

The resale of "restricted securities" as well as securities held by "affiliates" of Altair, is generally subject to the provisions of Rule 144 ("Rule 144") promulgated under the Securities Act of 1993, as amended (the "Securities Act"). In general, under Rule 144 as currently in effect, a person who has beneficially owned restricted securities for at least one year (including the holding period of any prior owner except an affiliate) would be entitled to sell within any three-month period a number of shares that does not exceed the greater of 1% of the number of shares of Common Stock then outstanding or the average weekly trading volume of the Common Stock during the four calendar weeks preceding the filing of a Form 144 with respect to such sale. In addition, a person who is not deemed to have been an affiliate of Altair at any time during the 90 days preceding a sale, and who has beneficially owned the shares proposed to be sold for at least two years (including the holding period of any prior owners except an affiliate), would be entitled to sell such shares under Rule 144(k) without regard to the requirements described above. Altair is unable to predict the effect that future sales under Rule 144 may have on the then prevailing market price of the Common Stock.

In addition, shares issued upon exercise of options granted pursuant to Altair's employee stock option plans are presently registered under the Securities Act. Subject to certain restrictions on resale by affiliates, such shares may be sold without restriction. The sale of any substantial number of shares of Common Stock may have a depressive effect on the market price of our Common Stock.

**We Have Never Declared A Dividend And May Not For the Foreseeable Future.**

Altair has never declared or paid dividends on the Common Stock. Moreover, Altair currently intends to retain any future earnings for use in its business and, therefore, does not anticipate paying dividends on its Common Stock in the foreseeable future.

---

**RISK FACTORS RELATED TO DEVELOPMENT OF THE JIG**

---

**Our Series 12 Jig Is Too Small For Most Commercial Uses.**

To date, Altair has developed and tested a lower-capacity Series 12 Jig and a higher-capacity Series 30 Jig. Test results on the Series 12 Jig, designed to be capable of processing approximately 120 tons of solids per day, suggest that commercial use of the Series 12 Jig is technically feasible. Nevertheless, the designed capacity of the Series 12 Jig is too small for coal washing, heavy

minerals extraction, and most other intended applications of the Jig, except use in small placer gold mines or similar operations. Even if the Series 12 Jig performs to design specifications in subsequent tests or at a commercial facility, Altair believes that, because of its small capacity, the potential market for the Series 12 Jig is limited.

**Testing Is Incomplete on Our Series 30 Jig.**

The Series 30 Jig is designed to process approximately 500 tons of solids per day. Altair believes that this designed capacity is sufficient for heavy mineral sands processing and many other intended commercial applications. Having completed an initial set of tests on the Series 30 Jig at a heavy minerals sand processing facility in Northern Florida, Altair hopes that it can begin marketing the Series 30 Jig for heavy mineral sands recovery during 2000. Nevertheless, the Series 30 Jig may not prove attractive to potential end users. Even if Altair is successful in leasing the Series 30 Jig to end users, the Series 30 Jig may not prove efficient, durable, or cost-effective enough to satisfy the expectations of end users once operated in an uncontrolled environment. In addition, the introduction of new technologies by competitors could render the Series 30 Jig or larger Jig obsolete or unmarketable or require costly alterations to make it marketable.

**Performance Of The Jig In A Commercial Setting May Not Match Test Results.**

Although test results from controlled tests on the Series 30 Jig suggest that it is capable of separating valuable heavy minerals from mineral sands, the Series 30 Jig has not been operated as part of an actual commercial mineral processing facility. When integrated into actual commercial operations, the Series 30 Jig:

- o may not be able to process sand at its design capacity;
- o may not recover a commercially valuable end product at a commercial viable rate when processing mineral sands;
- o may break down frequently or otherwise be too costly to operate and maintain;
- o may be displaced or rendered obsolete by the introduction of competing technologies or jigs and may be incompatible with developing mining or extraction processes; and
- o may be rendered obsolete by the absence of demand for heavy minerals or other end product of processing.

### **The Jig Faces Competition From Alternative Technologies.**

The centrifugal jig process may not prove superior, either technically or commercially, to alternative technologies. As explained in "Business--the Jig--Competition--Alternative Technologies," various mineral processing technologies perform many functions similar or identical to those for which the Jig is designed. Altair believes that, in certain applications, the Jig may prove more efficient, cost effective, or adaptable than spirals and cones, froth flotation devices, or heavy media separation devices. Nevertheless, results from further tests or actual operations may reveal that these alternative technologies are better adapted to any or all of the uses for which the Jig is intended. Moreover, regardless of test results, consumers may view any or all of such alternative technologies as technically superior to, or more cost effective than, the Jig.

### **The Jig Faces Competition From Other Jig-like Products.**

Altair believes that the Jig currently faces several forms of competition in the commercial segregation of dense particles contained in feeds between 150 and 400 mesh, including the Kelsey Jig, Falcon concentrators and the Knelsen batch concentrator unit, which are currently being used worldwide. Another centrifugal jig device, the Kelsey jig, has been developed in Australia subsequent to the invention of the Jig. According to the Kelsey jig's manufacturer, Geo Logics Pty. Ltd., Kelsey jigs are in service worldwide. In addition, Falcon, a Canadian company, produces a small batch concentrator as well as a machine which is used mainly for pre-concentration and scavenging. Their principal applications to date have been in the gold and tantalum industries. There also exists a batch concentrator known as the Knelsen Bowl. Knelsen units have been installed in various mining applications, primarily gold, throughout the world. Competitors, many of whom may have significant capital and resources, may develop, or be in the process of developing, superior or less expensive alternatives to the Jig.

### **The Market for Commodities Produced Using the Jig May Collapse.**

If the Jig is successfully developed and manufactured, Altair intends to use the Jig, or lease the Jig for use, to separate and recover valuable, heavy mineral particles. Active international markets exist for gold, titanium, zircon, and many other minerals potentially recoverable with the Jig. Prices of such minerals fluctuate widely and are beyond the control of Altair. A significant decline in the price of minerals capable of being extracted by the Jig could have significant negative effect on the value of the Jig. Similarly, a significant decline in the price of minerals being produced or expected to be produced on the Tennessee Mineral Property could have a significant negative effect on the viability of a mine or processing facility on either such property. In addition, because Altair intends to market the Jig primarily to mining companies, a general economic downturn in the mining or mineral industries may have a material adverse effect on Altair.

### **We Are Dependent Upon Others To Manufacture The Jig.**

Altair currently contracts on a per-unit basis with a machine shop located in central Tennessee for assembly of the Jig but has no long-term contract with such entity. If Altair completes testing of the Jig and develops a final production model, Altair does not currently have the know-how or resources to establish its own manufacturing facility. Management is considering options for manufacture of the Jig, including manufacturing under a long-term contract or through an exclusive licensing arrangement or joint venture. Altair may not be able to obtain adequate manufacturing capacity. Moreover, even if a manufacturer is found, it may not be able to cost-effectively produce affordable, high-quality units capable of sustaining continuous operations with low maintenance costs in a production environment.

### **Certain Key Patents For The Centrifugal Jig Have Expired Or Will Expire In The Near Future.**

Initial patents on the Jig have been issued in the United States, South Africa, United Kingdom, Australia and Canada. These patents expire on various dates between May 1999 and December 2000. A series of second patents have been issued with respect to a critical component of the Jig in the United States, South Africa, Japan, Europe, Australia, Canada, United Kingdom, Germany and France. These patents expire on various dates between January 2010 and January 2011. A third series of patents with respect to an efficiency enhancing component of the Jig have been issued in the United States, Europe, Australia, Japan, South Africa, Canada and Brazil. These patents have expiration dates between April and November 2018.

Persons in countries in which Altair has not patented the Jig or certain critical components may develop and market an infringing product. The cost of enforcing patents outside of North America, and similar obstacles, may limit Altair's ability to enforce its patents and keep infringing products out of the market for the Jig.

---

## **RISK FACTORS RELATED TO DEVELOPMENT OF THE TENNESSEE MINERAL PROPERTY**

---

### **We Have Not Completed Testing The Feasibility of Mining The Tennessee Mineral Property.**

The Tennessee Mineral Property is currently in the exploratory stage. An independent consultant hired by Altair has completed a pre-feasibility study on the Tennessee Mineral Property, which study concludes sands on the Tennessee Mineral Property contain commercial quantities of heavy minerals. The preliminary study further concludes that the sands can be economically mined to produce commercial grade products and that established markets exist for such products. Based on these results, Altair has determined to commence a final feasibility study of the Tennessee Mineral Property.

The final feasibility study, commenced during August 1998, will involve the actual design, pricing, and analysis of equipment and facilities that would be used to mine the Tennessee Mineral Property. Altair expects that the feasibility study will be completed in late 2000. If the feasibility study suggests that cost-effective mining of the Tennessee Mineral Property is feasible, a mine would not be operational for 24-36 months after completion of the study. The final feasibility study may indicate that the Tennessee Mineral

Property does not contain minable quantities of heavy minerals or that such deposits are not amenable to large-scale, low-cost mining, as contemplated by Altair. Even if the studies and future testing suggest that mining is economically feasible on the Tennessee Mineral Property, Altair may be unable to obtain the capital, resources, and permits necessary to mine the Tennessee Mineral Property. Moreover, market factors, such as a decline in the price of, or demand for, minerals recoverable at the Tennessee Mineral Property, may adversely affect the development of mining operations on such property.

**We May Be Unable to Obtain Necessary Environmental Permits for the Tennessee Mineral Property.**

In order to begin construction and commercial mining on the Tennessee Mineral Property, Altair may have to obtain additional federal, state, and local permits, none of which Altair has obtained. Because Altair has not yet commenced design of a commercial mining facility in the Tennessee Mineral Property, Altair is not in a position to definitively ascertain which federal, state and local mining and environmental laws or regulations would apply to a mine on the Tennessee Mineral Property. Nevertheless, Altair anticipates that compliance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response Compensation Liability Act would be necessary if Altair determined to commence construction and operation of a mine on the Tennessee Mineral Property. See "-- Government Regulation."

In addition to these federal laws and regulations, Altair anticipates that, if the Tennessee Mineral Property is developed, Altair will be required to obtain a surface mining permit from the State of Tennessee under the Tennessee Mineral Surface Mining Law of 1972. The application for such a permit must be preceded by public notice and must include, among other things, a filing fee, a reclamation and revegetation plan, and a bond to cover the costs of reclamation. Moreover, in connection with its feasibility study of the Tennessee Mineral Property, Altair has filed an application for a National Pollution Discharge Elimination System permit for a pilot plant facility with the Tennessee Department of Environment and Conservation. The application is currently under review. Additional state and federal permits may be required for the construction and operation of the pilot plant Altair can provide no assurance that it will be able to obtain any such permit.

Altair is not aware of any existing local land use restrictions that would outright prohibit mining operations on the Tennessee Mineral Property. Altair has held preliminary discussions with state and federal officials regarding land use issues and permitting requirements, but no decisions have been issued by any regulatory agencies.

**Any Operations On the Tennessee Mineral Property May Lead to Environmental Liability.**

Any proposed mining or processing operation on the Tennessee Mineral Property, or any other property acquired by Altair, will be subject to federal, state, and local environmental laws. Under such laws, Altair may be jointly and severally liable with prior property owners for the treatment, cleanup, remediation, and/or removal of substances discovered on either of the Tennessee Mineral Property or any other property used by Altair, which are deemed by the federal and/or state government to be toxic or hazardous ("Hazardous Substances"). Courts or government agencies may impose liability for, among other things, the improper release, discharge, storage, use, disposal, or transportation of Hazardous Substances. Altair might use Hazardous Substances and, although Altair intends to employ all reasonably practicable safeguards to prevent any liability under applicable laws relating to Hazardous Substances, Companies engaged in mineral exploration and processing are inherently subject to substantial risk that environmental remediation will be required.

---

**RISK FACTORS RELATED TO DEVELOPMENT OF THE  
PROCESSING TECHNOLOGY AND PROCESSING**

---

**We Have Not Yet Confirmed the Viability and Effectiveness of the Processing Technology and Processing Assets.**

The Processing Technology and Processing Assets have not been used by Altair or anyone else in a commercial setting, and may prove ineffective or unreliable when subjected to continuous use. Altair has used the Processing Technology and Processing Assets to effectively produce sample quantities of TiO<sub>2</sub> nanoparticles, but has not completed testing of other product applications. The Processing Technology and Processing Assets may prove wholly or partially ineffective when applied by Altair on a continuous basis in a commercial setting. In addition, the Processing Assets may break down, be costly to maintain or prove unreliable when operated on a continuous basis in a commercial setting. If the Processing Technology proves ineffective or the Processing Assets prove unreliable in a commercial setting, Altair may be unable to recoup the investment in the Processing Technology and Processing Assets.

**Nanoparticles Produced Using the Processing Technology May Be, or Be Perceived As, Substandard.**

In the short run, Altair plans to use the Processing Technology and Processing Assets to produce TiO<sub>2</sub> nanoparticles. Altair has not previously produced or marketed TiO<sub>2</sub> nanoparticles and, to date, has not obtained any orders for TiO<sub>2</sub> nanoparticles. The TiO<sub>2</sub> nanoparticles and other products produced using the Processing Technology and Processing Assets may be of inferior quality to alternative products or, regardless of actual quality, may be perceived as lacking adequate quality or reliability. Even if Altair is able to efficiently produce TiO<sub>2</sub> nanoparticles and other products using the Processing Technology and Processing Assets, it may not be able to sell such products in the marketplace.

### **The Current Market For TiO2 Nanoparticles Is Limited.**

In the short run, Altair plans to use the Processing Technology and Processing Assets to produce TiO2 nanoparticles. The uses for such nanoparticles are limited--primarily cosmetics and surface coatings--and the market for such nanoparticles is small, estimated at 3,800 tons per annum. Even if Altair is able to effectively produce TiO2 nanoparticles and other products using the Processing Technology and Processing Assets, it may not be able to profitably market such products for any of the following reasons:

- o there may be insufficient demand for such products;

- o despite strong initial demand for such products, the market for such products may contract or collapse as a result of a decrease in demand for goods incorporating such mineral products, a worldwide or regional financial crisis, or other unforeseen event;

- o the increased supply of such products as a result of the entrance of Altair or other suppliers into the market may cause the price to drop, reducing or eliminating profitability;

- o such products may be of inferior quality to alternative products or, regardless of actual quality, may be perceived as lacking adequate quality or reliability.

### **Our Cost of Production May Exceed Estimates.**

Altair purchased the Processing Technology and Processing Assets based on the belief that it will be able to produce titanium dioxide and other products more cheaply than many competitors. Altair has not, however, produced any mineral products using the Processing Technology and Processing Assets on a commercial basis. Altair's actual costs of production may exceed those of competitors and, even if its costs of production are lower, competitors may be able to sell titanium dioxide and other products at a lower price than is economical for Altair.

### **Pending Patent Applications May Be Denied Or Provide Inadequate Protection.**

BHP has filed numerous patent applications with the PTO with respect to the Processing Technology and has transferred the rights to such applications to Altair. Such applications are being reviewed by the PTO, and no patents with respect to the Processing Technology have been granted to date. If the applications for any patents related to the Processing Technology are denied, the value of the Processing Technology, and any competitive advantage gained from Altair's ownership of the Processing Technology, will be substantially diminished. Altair can provide no assurance that pending patent applications will be granted.

In addition, persons in jurisdictions outside of the United States in which no application has been filed, or which do not honor United States patents, may develop and market infringing technologies. Also, the cost of enforcing patents outside of North America, as well as other obstacles, may limit the Altair's ability to enforce any patents related to the Processing Technology outside of the United States.

## **Use of the Processing Technology May Lead to Substantial Environmental Liability.**

Any proposed use of the Processing Technology and Processing Assets will be subject to federal, state, and local environmental laws. Under such laws, Altair may be jointly and severally liable with prior property owners for the treatment, cleanup, remediation, and/or removal of substances discovered at the leased Reno, Nevada facility or any other property used by Altair that are Hazardous Substances. Courts or government agencies may impose liability for, among other things, the improper release, discharge, storage, use, disposal, or transportation of Hazardous Substances. Altair might use Hazardous Substances and, although it intends to employ all reasonably practicable safeguards to prevent any liability under applicable laws relating to Hazardous Substances, companies engaged in mineral exploration and processing are inherently subject to substantial risk that environmental remediation will be required.

### **Item 2. Properties**

Altair maintains a registered office at 56 Temperance Street, Toronto, Ontario M5H 3V5. Altair does not lease any space for, or conduct any operations out of, the Toronto, Ontario registered office. In addition, Altair leases 900 square feet of office space at 1725 Sheridan Avenue, Suite 140, Cody, Wyoming 82414, which serves as the corporate headquarters for Altair and its subsidiaries. Altair's lease for the Cody, Wyoming office space may be terminated by either party on 30 days' prior written notice.

In addition, in connection with the Asset Purchase Agreement, Altair and BHP entered into a lease dated November 15, 1999, pursuant to which Altair is leasing approximately 20,000 square feet of laboratory and testing space at BHP's testing facility located at 204 Edison Way, Reno, Nevada, 89502. The initial term of the lease expires on December 31, 2000, subject to automatic renewal for six-month periods at inflation-adjusted rent until terminated by Altair. The lease grants Altair a right of first refusal in the event BHP intends to sell the building and property subject to the lease and includes an agreement to negotiate in good faith with respect to Altair's possible purchase of such building and property.

Fine Gold and MRS lease 5,700 square feet of office space at 230 South Rock Boulevard, Suite 21, Reno, Nevada 89502. The lease for the Reno, Nevada offices expires on January 31, 2002. MRS leases approximately 1,550 square feet of laboratory space at 7950 Security Circle, Reno, Nevada 89506, for its Jig testing operations. The test facility lease may be terminated by either party upon eight weeks prior written notice. Management believes that the existing offices and test facilities of Altair and its subsidiaries are adequate for their current needs. In the event that alternative or additional office space is required, Altair believes it could obtain additional space on commercially acceptable terms.

The Tennessee Mineral Property consists of approximately 14,000 acres of real property located near Camden, Tennessee, which MRS leases (or has binding commitments to lease) from multiple owners of the real property. Such leases grant MRS certain exclusive rights, including the right to explore, test, mine, extract, process, and sell any minerals or other materials found on the land, in exchange for the payment of minimum annual advanced royalty payments prior to commencement of production on the properties (or after commencement of production, to the extent production royalty payments do not equal nominal royalty payments) and, thereafter, production royalty payments in an amount equal to a percentage of the value of minerals mined and sold from the property. See Note 6 to the Consolidated Financial Statements for information regarding present and future minimum advanced royalty payments. The leases typically are for a minimum term of ten years, and may be extended indefinitely at MRS' option, provided Altair is actively conducting exploration, development, or

mining operations. The leases are cancelable by MRS at any time, and are cancelable by the lessor in the event MRS breaches the terms of the lease. The mineralized deposit on the Tennessee Mineral Property has not yet proven to be a reserve, and Altair's operations and proposed plan with respect to it are exploratory in nature. See "Item 1. Business--Tennessee Mineral Property." The Tennessee Mineral Property is accessed by public roads and, to Altair's knowledge, has not been used in prior mining operations.

During 1998 and 1999, Altair incurred \$793,253 and \$689,594, respectively, in deferred exploration expenditures on the Tennessee Mineral Property. Expenditures were incurred on leasehold minimum advance royalty payments, auger hole drilling, sampling, sample analysis and assay, geological and mineralized deposit characterization studies, and other related exploration activities.

### Item 3. Legal Proceedings

Altair is from time to time involved in routine litigation incidental to the conduct of its business. Altair is currently not involved in any suit, action or other legal proceedings, nor is it aware of any threatened suit, action or other legal proceedings which management believes will materially and adversely affect the business or operations of Altair or its subsidiaries.

### Item 4. Submission of Matters to a Vote of Security Holders

Altair did not submit any matters to a vote of security holders during the fourth quarter of the 1999 fiscal year.

## PART II

### Item 5. Market for the Common Stock and Related Shareholder Matters

#### Market Price

In the United States, prior to March 23, 1997, the Common Stock was listed under the symbol "AIGDF" on the over-the-counter bulletin board maintain by the National Association of Securities Dealers. From March 24, 1997 until January 23, 1998, the Common Stock was quoted on the Nasdaq SmallCap Market under the symbol "ALTIF."

Beginning on January 26, 1998, the Common Stock began trading on the Nasdaq National Market under the symbol "ALTIF." The following table sets forth, for the periods indicated, the high and low sales prices for the Common Stock, as reported on the Nasdaq National Market.

Fiscal Year Ended December 31, 1998	Low -----	High -----
1st Quarter (beginning January 26, 1998)	\$8.125	\$15.625
2nd Quarter	7.000	9.625
3rd Quarter	3.000	10.250
4th Quarter	5.875	8.625

Fiscal Year Ended December 31, 1999	Low	High
	-----	-----
1st Quarter	\$6.063	\$9.875
2nd Quarter	4.125	6.875
3rd Quarter	3.875	5.000
4th Quarter	3.453	5.063

The last sale price of the Common Stock, as reported on the Nasdaq National Market, on March 15, 2000 was \$5.813 per share.

### **Outstanding Shares and Number of Shareholders.**

As of March 15, 2000, the number of shares of Common Stock outstanding was 15,837,882 held by 467 holders of record. In addition, as of the same date, the Company has reserved 3,346,700 shares of Common Stock for issuance upon exercise of options that have been, or may be, granted under its employee stock option plans.

### **Dividends**

The Company has never declared or paid dividends on its Common Stock. Moreover, the Company currently intends to retain any future earnings for use in its business and, therefore, does not anticipate paying any dividends on its Common Stock in the foreseeable future.

### **Transfer Agent and Registrar**

The Transfer Agent and Registrar for the Common Stock is Equity Transfer Services, Inc., Suite 420, 120 Adelaide Street West, Toronto, Ontario, M5H 4C3.

### **Canadian Taxation Considerations**

Dividends paid on Common Stock owned by non-residents of Canada are subject to Canadian withholding tax. The rate of withholding tax on dividends under the Income Tax Act (Canada) (the "Act") is 25%. However, Article X of the reciprocal tax treaty between Canada and the United States of America (the "Treaty") generally limits the rate of withholding tax on dividends paid to United States residents to 15%. The Treaty further generally limits the rate of withholding tax to 5% if the beneficial owner of the dividends is a U.S. corporation which owns at least 10% of the voting shares of the Company.

If the beneficial owner of the dividend carries on business in Canada through a permanent establishment in Canada, or performs in Canada independent personal services from a fixed base in Canada, and the shares of stock with respect to which the dividends are paid is effectively connected with such permanent establishment or fixed base, the dividends are taxable in Canada as business profits at rates which may exceed the 5% or 15% rates applicable to dividends that are not so connected with a Canadian permanent establishment or fixed base. Under the provisions of the Treaty, Canada is permitted to apply its domestic law rules for differentiating dividends from interest and other disbursements.

A capital gain realized on the disposition of Common Stock by a person resident in the United States ("a non-resident") will be subject to tax under the Act if the shares held by the non-resident are "taxable Canadian property." In general, Common Stock will be taxable Canadian property if the particular non-resident used (or in the case of a non-resident insurer, used or held) the Common Stock in carrying on business in Canada or, pursuant to proposed amendments to the Act, where at any time during the five-year period immediately preceding the realization of the gain, not less than 25% of the issued and outstanding shares of any class or series of shares of the Company were owned by the particular non-resident, by persons with whom the particular non-resident did not deal at arms' length, or by any combination thereof. If shares of Common Stock constitute taxable Canadian property, relief nevertheless may be available under the Treaty. Under the Treaty, gains from the alienation of Common Stock owned by a non-resident who has never been resident in Canada generally will be exempt from Canadian capital gains tax if the shares do not relate to a permanent establishment or fixed base which the non-resident has or had in Canada, and if not more than 50% of the value of the shares was derived from real property (which includes rights to explore for or to exploit mineral deposits) situated in Canada.

## Item 6. Selected Financial Data

The following table sets forth selected consolidated financial information with respect to the Company and its subsidiaries for the periods indicated. The data is derived from financial statements prepared in accordance with accounting principles generally accepted in Canada ("Canadian GAAP"), which differ in certain respects from those in the United States. See Note 15 of Notes to Consolidated Financial Statements included herein for certain reconciliations to accounting principles generally accepted in the United States ("U.S. GAAP"). The selected financial data should be read in conjunction with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and accompanying notes included herein. All amounts are stated in U.S. dollars.

For the Year Ended December 31,	1999	1998	1997	1996	1995
STATEMENTS OF OPERATIONS					
Revenues from operations	\$ -	\$ -	\$ -	\$ -	\$ -
Operating expenses	2,424,695	2,064,958	1,858,033	1,335,725	438,103
Interest expense	1,966	32,165	43,497	19,373	-
Interest income	(134,811)	(335,037)	(70,059)	(27,872)	(1,000)
Loss from operations	\$ 2,291,850	\$ 1,762,086	\$ 1,831,471	\$ 1,327,226	\$ 437,103
Basic loss per common share from operations	\$ (0.15)	\$ (0.13)	\$ (0.13)	\$ (0.12)	\$ (0.07)
Cash dividends declared per common share	\$ -	\$ -	\$ -	\$ -	\$ -
Deficit, beginning of year	\$ 8,645,021	\$ 6,303,879	\$ 3,956,564	\$ 3,332,064	\$ 2,894,961
Net loss	2,224,408	1,929,539	1,831,471	624,500	437,103
Other items	-	411,603	515,844	-	-
Deficit, end of year	\$ 10,869,429	\$ 8,645,021	\$ 6,303,879	\$ 3,956,564	\$ 3,332,064

BALANCE SHEET DATA						
Working capital	\$ (6,429,243)	\$ 2,991,707	\$ 7,480,153	\$ 2,974,955	\$ 313,502	
Total assets	15,673,908	8,712,052	13,125,804	8,042,888	975,259	
Long-term obligations	-	-	602,451	269,685	-	
Current liabilities	7,563,276	239,512	712,810	308,762	90,910	
Net shareholders' equity	8,110,632	8,472,540	11,810,543	7,464,441	884,349	

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion should be read in conjunction with the consolidated financial statements and notes thereto.

### Overview

From inception through the end of 1993, the Company's business consisted principally of the exploration of mineral properties for acquisition and development. During 1994, the Company's focus changed as it became engaged in the acquisition, development and testing of mineral processing equipment for use in the recovery of fine, heavy mineral particles including gold, titanium, zircon and environmental contaminants. Since that time, the Company has continued exploring mineral properties suitable for development using the Company's patented mineral processing equipment. In November 1999, the Company acquired the Processing Technology and Processing Assets from BHP which it intends to initially use for commercial production of TiO<sub>2</sub> nanoparticles.

On November 15, 1994, the Company executed an option agreement to acquire TMI, a development stage enterprise which owned all patent rights to the Campbell Centrifugal Jig, since modified and renamed the Altair Centrifugal Jig. Since April 1996, the Company has acquired mineral leaseholds on approximately 14,000 acres of land in Tennessee which contain heavy mineral sand deposits. A prefeasibility study issued in July 1998 confirmed the existence of a viable heavy mineral resource, and a subsequent technoeconomic assessment concluded that the property warrants further development. Based on the results of these independent studies, the Company has initiated a final feasibility study and is assessing its options for developing the property.

In November 1999, the Company acquired all patents and technology related to a hydrometallurgical process developed by BHP primarily for the production of titanium dioxide products from titanium bearing ores or concentrates (i.e., the "Processing Technology") all tangible equipment and other assets (i.e., the "Processing Assets") used by BHP to develop and implement the Processing Technology, and the use for one year (for no fee) of the services of the BHP personnel presently developing the Processing Technology.

The purchase price for the Processing Technology and Processing Assets was 15,000,000 Australian Dollars (AUD\$) and is payable in four equal installments. The first installment was paid at closing, two payments are due and payable on May 15, 2000, and the last is due on August 15, 2000. The Company is also required to pay to BHP, until the earlier of the fifteenth anniversary of November 15, 1999 or the date the Company has paid an aggregate royalty of AUD\$105,000,000, a quarterly royalty of from 1.5% to 3% of certain titanium dioxide products produced and 3% of other products sold.

Prior to 1994, the Company operated its minerals business with the intent of receiving income from property sales, joint ventures, or other business arrangements with larger companies, rather than developing and placing

its properties into production on its own. The Company has received no royalty income in the past, and at present, there are no business arrangements or joint venture prospects involving the Company's properties or potential property sales from which the Company expects to receive income. However, during the first half of 2000 the Company intends to initiate limited commercial production of titanium dioxide nanoparticles using the Processing Technology and Processing Assets acquired from BHP.

## **Results of Operations.**

### **Fiscal Years 1999, 1998 and 1997**

The Company has earned no revenues to date. Operating losses before extraordinary items totaled \$2,291,850 (\$0.15 per share) for the 1999 fiscal year, \$1,762,088 (\$0.13 per share) for the 1998 fiscal year, and \$1,831,471 (\$0.13 per share) for the 1997 fiscal year. Principal factors contributing to the losses during these periods were the absence of revenues coupled with the incurrence of operating expenses.

Operating expenses increased from \$1,858,033 during 1997 to \$2,064,960 during 1998 and to \$2,424,695 during 1999. Of these amounts, amortization of the Company's assets (including patents) represented \$590,831, \$555,626 and \$494,104 during 1997, 1998 and 1999, respectively. During 1998, the Company increased the amount of test and development work on the Series 30/16 Jig, began testing of potential new applications for it, initiated the preliminary design work for a larger capacity Jig, and increased its exploration efforts in Tennessee. This higher level of activity caused a direct increase in testing, research, and development costs from \$78,034 in 1997 to \$259,630 and \$290,420 in 1998 and 1999, respectively. In addition, in order to support this higher level of activity, the Company increased the number of employees in its Reno, Nevada office from four to eight personnel and expanded into new leased office space. The costs associated with this additional staffing and office space are reflected in increased wages and administration expenses, testing, research and development expenses, general and office expenses, travel, and occupancy costs in 1998 and 1999 over 1997.

In January 1998, the Common Stock began trading on the Nasdaq National Market System. As a result of the expanded market for the Common Stock, the expenses associated with stock exchange fees, shareholders' meetings and reports, and shareholder relations combined increased to \$319,928 in 1999 and \$345,880 in 1998, compared to \$209,739 in 1997.

In 1999, the Company completed its testing and assessment of the California Mineral Property and determined that it was not economically feasible to develop. As a result, it wrote off \$93,643 of costs associated with the property.

Interest income increased in 1998 over 1997 principally due to interest earned on temporary cash investments following the issuance of \$5,000,000 of 5% convertible subordinated debentures (the "Convertible Debentures") in December 1997. Interest income declined in 1999 from 1998 as a result of the redemption of the Convertible Debentures in August 1998.

As a result of the TMI Merger, Fine Gold assumed all of TMI's liabilities. During 1999 and 1998, Fine Gold extinguished certain of the TMI accounts payable and notes payable at less than the book amounts of such debt. The net of such forgiveness of debt was \$67,442 and \$25,805 in 1999 and 1998, respectively, with neither amount having a material effect on earnings per share. During 1998, the Company redeemed \$2,250,000 of the Convertible Debentures, incurring a redemption premium of \$193,256. See "--Liquidity and Capital Resources." This represented a net loss per share of \$.01. There were no extraordinary items during 1997.

## **Liquidity and Capital Resources.**

The Company has financed its operations since inception primarily by the issuance of equity securities (Common Stock, Convertible Debentures, and options and warrants to purchase Common Stock) with cumulative aggregate net proceeds of \$18,980,061 as of December 31, 1999. The Company received cash proceeds from the sale of Common Stock of \$1,862,500 in 1999 and received cash proceeds from the exercise of options and warrants to acquire Common Stock of \$113,664 and \$2,521,448 in 1998 and 1997, respectively. In addition, during 1997, the Company received net proceeds of \$4,484,156 (\$5,000,000 less \$515,844 costs of issuance) from the issuance of the Convertible Debentures and related warrants.

The Company has earned no revenues from operations and has incurred recurring losses. At December 31, 1999, the Company's accumulated deficit was \$10,869,429, or an increase of \$2,224,408 over the accumulated deficit at December 31, 1998. This increase was due to the net loss for the year.

The Company's cash and short-term investments decreased from \$3,100,577 as of December 31, 1998 to \$153,580 as of December 31, 1999. The decrease is primarily attributable to a cash payment of \$2,422,763 made to BHP for the acquisition of the Processing Technology and Processing Assets, \$1,396,805 expended for operating activities and \$714,893 for the exploration of the Tennessee Mineral Property. During 1998, the Company's cash and short-term investments decreased from \$8,161,770 as of December 31, 1997 to \$3,100,577 as of December 31, 1998. The decrease was primarily attributable to operating activities (\$1,546,590), exploration of the Tennessee Mineral Property (\$793,251) and the redemption of the Convertible Debentures (\$2,337,892).

On March 31, 2000 the Company entered into a stock purchase and equity line of credit agreement with an investor. Under the terms of the stock purchase portion of the agreement, the Company issued to the Investor 1,251,303 shares of Common Stock in exchange for \$6 million. After the initial issuance, additional shares may be issued through a reset provision that compares market price in the reset period to an adjusted original issue price. The investor also received warrants for 250,261 shares of Common Stock exercisable at \$6.76 per share through April 7, 2003.

Under the terms of the equity line of credit, the Company has the option to cause the investor to purchase up to \$10 million of the Company's Common Stock during an 18-month period. The stock is to be issued at a discount to market price with the timing and amounts of purchases at the discretion of the Company (subject to the price of the Company's Common Stock remaining in excess of \$2 per share and the average daily weighted dollar trading volume of the Common Stock being at least 150% of the amount of the additional financing).

The Company intends to use these proceeds to pay the remaining AUD\$11,250,000 due to BHP, fund the estimated \$5.5 million needed for the completion of the feasibility study on the Tennessee Mineral Property, and provide working capital.

## **Item 7A. Quantitative and Qualitative Disclosures About Market Risk.**

Although the Company is an Ontario corporation, it conducts substantially all of its operations in the United States and holds substantially all of its cash in United States Dollar denominated bank accounts. The Company's liability to BHP in connection with the purchase of the Processing Technology and Processing Assets is stated in Australian dollars and is, therefore, subject to exchange rate risk. As a result, the Company's obligation to pay BHP AUD\$7,500,000 On May 15, 2000 and AUD\$3,750,000 on August 15, 2000 will increase as the Australian Dollar becomes stronger against the United States Dollar and will decrease as the Australian Dollar weakens against the United States Dollar. Exchange rates tend to fluctuate widely, and there is a real risk that cost in United States Dollars of repaying the Company's AUD\$11,250,000 obligation may increase significantly during the period between the date of this Form 10-K and the date the Company pays, or is required to pay, such obligation.

By way of illustration, on November 15, 2000, when the Company consummated its purchase of the Processing Technology and Processing Assets, the cost of an Australian dollar in United States Dollars (or the U.S.\$ to AUD\$ exchange rate) was \$.6403. As a result, the Company's AUD\$11,250,000 liability to BHP was equal to U.S.\$7,202,738 on November 15, 1999. Between November 15, 1999 and December 31, 1999, the United States Dollar weakened in relation to the Australian Dollar such that the Company's liability to BHP increased by \$160,862 to \$7,363,600. (An unrealized loss in that amount appears on the Company's Consolidated Statements of Operations and Deficit for the year ended December 31, 1999). However, during the period between January 1, 2000 and March 15, 2000, the United States Dollar strengthened in relation to the Australian Dollar, with the result that the liability to BHP on March 30, 2000 has decreased by \$488,287 from the amount at December 31, 1999 and \$327,425 from the amount at November 15, 1999 to \$6,875,313. Because of the exchange rate exposure on its liability to BHP, the amount in United States Dollars of the Company's liability to BHP will continue to fluctuate until such liability is paid in full.

## **Item 8. Financial Statements and Supplementary Data.**

The financial statements required by this Item appear on pages F-1 through F-17 of this Form 10-K.

## **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.**

None.

## **PART III**

## **Item 10. Directors and Executive Officers of the Registrant**

The information required by this Item is incorporated by reference to the section entitled "Election of Directors" in the Company's definitive proxy statement to be filed with the Commission.

## **Item 11. Executive Compensation**

The information required by this Item is incorporated by reference to the section entitled "Executive Compensation" in the Company's definitive proxy statement to be filed with the Commission.

## **Item 12. Security Ownership of Certain Beneficial Owners and Management**

The information required by this Item is incorporated by reference to the section entitled "Security Ownership of Certain Beneficial Owners and Management" in the Company's definitive proxy statement to be filed with the Commission.

## **Item 13. Certain Relationships and Related Transactions**

The information required by this Item is incorporated by reference to the section entitled "Certain Relationships and Related Transactions" in the Company's definitive proxy statement to be filed with the Commission.

## PART IV

### Item 14. Exhibits, Financial Statement Schedules and Reports on Form 8-K

#### (a) Documents Filed

1. Financial Statements. The following Consolidated Financial Statements of the Company and Auditor's Report are filed as part of this Annual Report on Form 10-K:

- o Report of McGovern, Hurley, Cunningham LLP, for the years ended December 31, 1999, 1998, and 1997
- o Consolidated Balance Sheets at December 31, 1999 and 1998
- o Consolidated Statements of Operations and Deficit for the years ended December 31, 1999, 1998 and 1997
- o Consolidated Statements of Cash Flows for the years ended December 31, 1999, 1998 and 1997
- o Notes to Consolidated Financial Statements

2. Financial Statement Schedule. Not applicable.

#### 3. Exhibit List

Exhibit No. -----	Exhibit -----	Incorporated by Reference/ Filed Herewith ----- Incorporated by reference to Registration
3.1.1	Articles of Incorporation of the Registrant	Statement on Form 10-SB filed with the Commission on November 25, 1996.
3.1.2	Amendment to Articles of Incorporation of the Registrant dated November 6, 1996	Incorporated by reference to Amendment No. 1 to Registration Statement on Form 10 filed with the Commission on December 23, 1996.
3.2	Bylaws of the Registrant	Incorporated by reference to Registration Statement on Form 10-SB filed with the Commission on November 25, 1996.
4.1	Form of Common Stock Certificate	Incorporated by reference to Registration Statement on Form 10-SB filed with the Commission on November 25, 1996.
4.2	Form of Warrant (related to Convertible Debentures)	Incorporated by reference to the Company's Current Report on Form 8-K filed with the Commission on January 13, 1998, as amended by Amendment No. 1 to Current Report on Form 8-K/A, filed on January 21, 1998.
4.3	Form of Series J Warrant	Incorporated by reference to the Company's Quarterly Report on Form 10-Q filed on May 15, 1999.

Exhibit No. -----	3. Exhibit List (continued) Exhibit -----	Incorporated by Reference/ Filed Herewith -----
4.4	Form of Series K Warrant	Filed herewith.
4.5	Form of Series L Warrant	Filed herewith.
	Shareholders Rights Plan Agreement dated	
4.6	November 27, 1998, between Altair International Inc. and Equity Transfer Services Inc.	Incorporated by reference to the Company's Current Report on Form 8-K filed with the Commission on December 29, 1998.
10.1	Performance Escrow Agreement dated February 27, 1996; Performance Escrow Release Schedule	Incorporated by reference to Registration Statement on Form 10-SB filed with the Commission on November 25, 1996.
10.2	Employment Agreement between Altair International Inc. and William P. Long dated January 1, 1998	Incorporated by reference to the Company's Annual Report on Form 10-K filed with the Commission on March 31, 1998, as amended by Amendment No. 1 to Annual Report on Form 10-K/A filed on May 15, 1998.
10.3	Employment Agreement between Fine Gold Recovery Systems Inc. and C. Patrick Costin dated August 15, 1994	Incorporated by reference to Registration Statement on Form 10-SB filed with the Commission on November 25, 1996.
10.4	Employment Agreement between Altair International Inc. and John W. Parsons dated July 6, 1998	Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1998, filed with the Commission on November 13, 1998.
10.5	Altair International Inc. Stock Option Plan adopted by shareholders on May 10, 1996	Incorporated by reference to the Company's Registration Statement on Form S-8 filed with the Commission on July 11, 1997.
10.6	1998 Altair International Inc. Stock Option Plan adopted by Shareholders on June 11, 1998	Incorporated by reference to the Company's Definitive Proxy Statement on Form 14A filed with the Commission on May 12, 1998.
10.7	Escrow Agreement among Altair International Inc., Equity Transfer Services Inc., Thomas P. Campbell and C. Patrick Costin dated June 1, 1994	Incorporated by reference to Registration Statement on Form 10-SB filed with the Commission on November 25, 1996.
10.8	Form of Mineral Lease	Incorporated by reference to the Company's Annual Report on Form 10-K filed with the Commission on March 31, 1998, as amended by Amendment No. 1 to Annual Report on Form 10-K/A filed on May 15, 1998.
10.9	Exploration License with Option dated October 1, 1998	Incorporated by reference to the Company's Annual Report on Form 10-K filed with the Commission on March 18, 1999.

3. Exhibit List (continued)

Exhibit No. -----	Exhibit -----	Incorporated by Reference/ Filed Herewith -----
10.10	Amended and Restated Shareholder Rights Plan dated October 15, 1999, between the Company and Equity Transfer Services, Inc.	Incorporated by reference to the Company's Current Report on Form 8-K filed with the Commission on November 19, 1999.
10.11	Lease dated November 15, 1999, between the Company and BHP Minerals International Inc.	Incorporated by reference to the Company's Current Report on Form 8-K filed with the Commission on November 19, 1999.
10.12	Services Agreement dated November 15, 1999, between the Company and BHP Minerals International Inc	Incorporated by reference to the Company's Current Report on Form 8-K filed with the Commission on November 19, 1999.
10.13	Asset Purchase and Sale Agreement dated November 15, 1999, between the Company and BHP Minerals International Inc	Incorporated by reference to the Company's Current Report on Form 8-K filed with the Commission on November 19, 1999.
23.1	Consent of McGovern, Hurley, Cunningham	Filed herewith.
27	Financial Data Schedule	Filed herewith.

(b) Reports on Form 8-K

The Company filed a Current Report on Form 8-K on November 19, 1999, in which (i) it reported the acquisition of all patents, technology and other assets related to a hydrometallurgical process developed by BHP primarily for the production of titanium dioxide products from titanium bearing ores or concentrates and filed all material transaction documents, and (ii) it filed and reported its Amended and Restated Shareholders Rights Plan dated October 15, 1999, between the Company and Equity Transfer Services, Inc.

(c) Exhibits

---

Exhibits to this Report are attached following page F-17 hereof.

(d) Financial Statement Schedule

---

Not applicable.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on March 29, 2000.

### ALTAIR INTERNATIONAL INC.

By: /s/ William P. Long  
-----

William P. Long,  
President, Chief Executive Officer

### POWER OF ATTORNEY AND ADDITIONAL SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this Form 10-K has been signed by the following persons in the capacities and on the dates indicated. Each person whose signature to this Form 10-K appears below hereby constitutes and appoints William P. Long and Edward Dickinson, and each of them, as his true and lawful attorney-in-fact and agent, with full power of substitution, to sign on his behalf individually and in the capacity stated below and to perform any acts necessary to be done in order to file all amendments and post-effective amendments to this Form 10-K, and any and all instruments or documents filed as part of or in connection with this Form 10-K or the amendments thereto and each of the undersigned does hereby ratify and confirm all that said attorney-in-fact and agent, or his substitutes, shall do or cause to be done by virtue hereof.

<i>Signature</i>	<i>Title</i>	<i>Date</i>
/s/ William P. Long ----- William P. Long	President and Chief Executive  Officer and Director (Principal Executive Officer)	March 29, 2000
/s/ Edward Dickinson ----- Edward Dickinson	Chief Financial Officer  (Principal Financial and Accounting Officer)	March 29, 2000
/s/ James I. Golla ----- James I. Golla	Secretary and Director	March 29, 2000
/s/ George Hartman ----- George Hartman	Director	March 29, 2000

**ALTAIR INTERNATIONAL INC.**

**CONSOLIDATED FINANCIAL STATEMENTS**

DECEMBER 31, 1999

(Expressed in United States Dollars)

**INDEX PAGE**

Auditors' Report	F-2
Consolidated Balance Sheets	F-3
Consolidated Statements of Operations and Deficit	F-4
Consolidated Statements of Cash Flows	F-5
Notes to the Consolidated Financial Statements	F-6 - F-16

F-1

McGovern, Hurley, Cunningham, LLP  
2005 Sheppard Avenue East, Suite 503  
Toronto, Ontario, Canada M2J 5B4

Chartered Accountants  
Telephone: (416) 496-1234  
Fax: (416) 496-0125  
Gen. E-mail: info@mh-ca.com  
Website: www.mhc-ca.com

AUDITORS' REPORT

**To the Shareholders of ALTAIR INTERNATIONAL INC.**

We have audited the consolidated balance sheets of Altair International Inc. as at December 31, 1999 and 1998 and the consolidated statements of operations and deficit and cash flows for the years ended December 31, 1999, 1998 and 1997. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards in Canada. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 1999 and 1998 and the results of its operations and its cash flows for the years ended December 31, 1999, 1998 and 1997 in accordance with generally accepted accounting principles in Canada.

Generally accepted accounting principles in Canada differ in general respects from those applicable in the United States (see Note 15).

*By: /s/ McGOVERN, HURLEY, CUNNINGHAM, LLP*

-----  
*McGovern, Hurley, Cunningham, LLP*  
*Chartered Accountants*

TORONTO, Canada  
February 17, 2000,  
except as to Note 17 which  
is as of April 7, 2000

**ALTAIR INTERNATIONAL INC.  
CONSOLIDATED BALANCE SHEETS**

(Expressed in United States Dollars)

	December 31,	
	1999	1998
	----	----
<b>ASSETS</b>		
Current		
Cash and short-term investments	\$ 153,580	\$3,100,577
Other current assets	980,453	130,642
	-----	-----
	1,134,033	3,231,219
Capital		
Property and equipment (Cost, net of amortization) (Note 4)	2,507,878	462,417
Patents and related expenditures (Cost, net of amortization) (Note 5)	10,001,967	3,609,024
Mineral properties and related deferred exploration expenditures (Note 6)	2,021,052	1,399,802
Goodwill, net	8,978	9,590
	-----	-----
Total Assets	\$15,673,908	\$8,712,052
	=====	=====
<b>LIABILITIES</b>		
Current		
Accounts payable and accrued liabilities	\$ 199,676	\$ 165,979
Current portion of notes payable (Note 7)	7,363,600	73,533
	-----	-----
Total Liabilities	7,563,276	239,512
	-----	-----
<b>SHAREHOLDERS' EQUITY</b>		
Capital stock issued (Note 8) 15,474,915 and 15,174,915 common shares at December 31, 1999 and 1998, respectively	18,324,963	16,462,463
Contributed surplus	655,098	655,098
Deficit	(10,869,429)	(8,645,021)
	-----	-----
Total Shareholders' Equity	8,110,632	8,472,540
	-----	-----
Total Liabilities and Shareholders' Equity	\$15,673,908	\$8,712,052
	=====	=====

See accompanying Notes to the Consolidated Financial Statements.

**ALTAIR INTERNATIONAL INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS AND DEFICIT**

(Expressed in United States Dollars)

	Year Ended December 31,		
	1999	1998	1997
Operating Expenses			
Wages and administration	\$ 373,269	\$ 251,798	\$ 256,033
Testing, research and development	290,420	259,630	78,034
Professional fees	252,337	236,549	293,883
Shareholder relations	209,009	165,063	105,993
General and office	134,949	108,785	74,266
Travel	97,663	106,661	87,777
Occupancy costs	92,581	69,286	43,146
Shareholders' meetings and reports	92,414	119,497	96,308
Insurance	57,580	58,951	48,120
Government fees and taxes	39,236	23,123	25,447
Stock exchange fees	18,505	61,320	7,438
Corporate services	12,170	10,625	8,166
Transfer agent's fees	4,616	14,247	17,390
Bank charges	1,580	2,272	1,589
Loss on foreign exchange	160,619	17,109	123,612
Loss on disposal of fixed assets	--	4,418	--
Write off of mineral properties	93,643	--	--
Amortization	494,104	555,626	590,831
	-----	-----	-----
	2,424,695	2,064,960	1,858,033
Interest on long-term debt	1,966	32,165	43,497
Interest income	(134,811)	(335,037)	(70,059)
	-----	-----	-----
Loss from operations	2,291,850	1,762,088	1,831,471
Premium on redemption of convertible debentures	--	193,256	--
(Gain) on forgiveness of debt	(67,442)	(25,805)	--
	-----	-----	-----
Net loss for the year	2,224,408	1,929,539	1,831,471
Deficit, beginning of the year	8,645,021	6,303,879	3,956,564
Premium on conversion of convertible debentures	--	244,915	--
Accretion of equity element of convertible debentures	--	144,801	--
Convertible debenture issuance costs	--	21,887	515,844
	-----	-----	-----
Deficit, end of the year	\$ 10,869,429	\$ 8,645,021	\$ 6,303,879
	=====	=====	=====
Basic net loss per share from operations (Note 12)	\$ (0.15)	\$ (0.13)	\$ (0.13)
	=====	=====	=====
Net loss per share from premium on redemption of convertible debentures	\$ --	\$ (0.01)	\$ --
	=====	=====	=====
Net income per share from gain on forgiveness of debt	\$ --	\$ --	\$ --
	=====	=====	=====

See accompanying Notes to the Consolidated Financial Statements.

**ALTAIR INTERNATIONAL INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

(Expressed in United States Dollars)

	Year Ended December 31,		
	1999	1998	1997
	-----	-----	-----
Cash flows from operating activities			
Net loss for the year	\$(2,224,408)	\$(1,929,539)	\$(1,831,471)
Items not involving cash:			
Amortization	494,104	555,626	590,831
Gain on forgiveness of debt	(67,442)	(25,805)	--
Write off of mineral properties	93,643	--	--
Unrealized loss on foreign exchange	160,862	--	--
Loss on disposal of fixed assets	--	4,418	--
Interest on long-term debt	--	9,619	--
	-----	-----	-----
	(1,543,241)	(1,385,681)	(1,240,640)
Changes in non-cash working capital balances:			
Other current assets	112,739	(99,450)	(17,637)
Accounts payable and accrued liabilities	33,697	(61,459)	71,444
	-----	-----	-----
Net cash used in operating activities	(1,396,805)	(1,546,590)	(1,186,833)
	-----	-----	-----
Cash flows from investing activities			
Acquisition of pigment processing technology	(2,422,763)	--	--
Purchase of mineral properties and related deferred exploration expenditures	(714,893)	(793,251)	(480,248)
Purchase of capital assets	(231,550)	(146,211)	(237,283)
Purchase of centrifugal jig patents and related expenditures	(37,398)	(168,572)	(46,701)
	-----	-----	-----
Net cash used in investing activities	(3,406,604)	(1,108,034)	(764,232)
	-----	-----	-----
Cash flows from financing activities			
Issuance of common shares for cash, net of share issue costs	1,862,500	--	--
Proceeds from exercise of stock options	--	113,664	1,530,406
Proceeds from exercise of warrants	--	--	991,042
Payment of notes payable	(6,088)	(160,454)	(162,930)
Issuance of convertible debentures	--	--	5,000,000
Convertible debenture issuance costs	--	(21,887)	(515,844)
Redemption of convertible debentures	--	(2,337,892)	--
	-----	-----	-----
Net cash provided by (used in) financing activities	1,856,412	(2,406,569)	6,842,674
	-----	-----	-----
Net increase (decrease) in cash and short-term investments	(2,946,997)	(5,061,193)	4,891,609
Cash and short-term investments, beginning of year	3,100,577	8,161,770	3,270,161
	-----	-----	-----
Cash and short-term investments, end of year	\$ 153,580	\$ 3,100,577	\$ 8,161,770
	=====	=====	=====

## Notes to the Consolidated Financial Statements

### **Note 1. Basis of Presentation**

The United States dollar is the principal currency in which the Company conducts business; accordingly, these consolidated financial statements are expressed in United States dollars.

### **Note 2. Summary of Significant Accounting Policies**

These consolidated financial statements are prepared in accordance with accounting principles generally accepted in Canada. As described in Note 15, these principles differ in certain respects from principles and practices generally accepted in the United States. Summarized below are those policies considered particularly significant for the Company.

#### **Consolidation**

The financial statements include the accounts of the Company and its subsidiaries, Mineral Recovery Systems, Inc., Fine Gold Recovery Systems, Inc., Altair Technologies, Inc, California Recovery Systems, Inc., Tennessee Valley Titanium, Inc. and 660250 Ontario Limited, all of which are 100% owned.

#### **Nature of Operations**

The Company and its subsidiaries are engaged in the business of (1) producing titanium dioxide products, (2) developing mineral processing equipment for use in the recovery of fine and heavy mineral particles, including titanium, zircon, gold and environmental contaminants, and (3) exploring and developing mineral properties in the United States.

#### **Mineral Properties and Related Deferred Exploration Expenditures**

Mineral properties are carried at cost until they are brought into production, at which time they are depleted on a unit-of-production method based on proven and probable reserves. If a property is subsequently determined not to be economic, the property and related deferred costs are written down to net realizable value.

Exploration expenses, as well as advance royalty payments relating to mineral properties in which the Company has an interest, are deferred until the properties are brought into production, at which time they are amortized on a unit-of-production basis. Other general exploration expenses are charged to operations as incurred. The cost of mineral properties abandoned or sold and their related deferred exploration costs are charged to operations in the current year.

The Company reviews its mineral properties on an annual basis to determine if events or changes in circumstances have transpired which indicate that the carrying value of its assets may not be recoverable. The recoverability of costs incurred on the mineral properties is dependent upon numerous factors including exploration results, environmental risks, commodity risks, political risks, and the Company's ability to attain profitable production. In reviewing its mineral properties, the Company estimates the future cash flows expected to result from each asset and its eventual disposition. If the sum of the undiscounted, expected future cash flow is less than the carrying value of the asset, an impairment loss is recognized. It is reasonably possible, based on existing knowledge, that changes in future conditions in the near-term could require a change in the determination of the need for and amount of any writedown.

#### **Administrative Expenditures**

Administrative expenditures are charged to operations as incurred.

#### **Short-term Investments**

Surplus cash of the Company is invested in a diversified portfolio of United States dollar-denominated money market instruments. These investments are liquid and can be converted to cash at any time through the public money market. The carrying amount of the short-term investments approximates their market value.

## **Capital Assets and Amortization**

Capital assets are stated at acquisition cost. Amortization is provided based on the estimated useful life of the assets as follows:

- o Furniture and office equipment - 3, 5 and 7 year straight-line
- o Vehicles - 5 year straight-line
- o Centrifugal jig equipment - 7 year straight-line
- o Jig test facility - 7 year straight-line
- o Pigment production facility - 10 year straight-line

Effective January 1, 1998, the Company changed certain methods of amortization from the declining balance method to the straight-line method. This change has been applied prospectively. The effect of the change on the reported net loss for the year ended December 31, 1998 is not significant.

## **Patents and Related Expenditures**

The Company owns patents with respect to pigment production technology and centrifugal jig technology. Patents are carried at acquisition cost and are being amortized on a straight-line basis over their remaining lives.

The related expenditures are also being carried at acquisition cost and the amortization policies are as follows:

Royalty agreement (Note 3(a)) - 15 year straight-line License agreement - Straight-line over the remaining life of the related patent Mineral recovery technology rights - Straight-line over the remaining life of the related patent

The Company reviews its patents and related expenditures on an annual basis to determine if events or changes in circumstances have transpired which indicate that the carrying value of its assets may not be recoverable. In performing its review, the Company estimates the future cash flows expected to result from each asset and its eventual disposition. If the sum of the undiscounted expected future cash flow is less than the carrying value of the asset, an impairment loss is recognized. It is reasonably possible, based on existing knowledge, that changes in future conditions in the near-term affecting the operating capability and/or marketability of the pigment processing facility and centrifugal jig could require a change in the determination of the need for and amount of any writedown.

## **Research and Development Expenditures**

Research and development expenditures are charged to operations as incurred.

## **Goodwill**

Goodwill is the excess of the cost of the investment in subsidiaries over the estimated fair value of the net assets acquired and is amortized on a straight-line basis over 20 years. Goodwill is written down (to fair value) when declines in value are considered other than temporary based on expected future cash flows of the respective subsidiary.

## **Foreign Currency Translation**

The Company's consolidated operations are integrated and amounts denominated in currencies other than U.S. dollars are translated into U.S. dollars using the temporal method. This method translates monetary balances at the rate of exchange at the balance sheet date, non-monetary balances at historical exchange rates and revenue and expense items at average exchange rates. The resulting gains and losses are included in income (loss) in the reporting period.

## **Use of Estimates**

The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the related reported amounts of revenue and expense during the report period. Actual results could differ from those estimates. Management believes that the estimates are reasonable.

## Financial Instruments

The carrying amounts for other current assets, accounts payable and accrued liabilities, and notes payable on the balance sheets approximate fair value because of the limited term of these instruments. Fair value estimates are made at the balance sheet date based on relevant market information and information about the financial instrument. These estimates are subjective in nature and involve uncertainties in significant matters of judgment and therefore cannot be determined with precision. Changes in assumptions could significantly affect these estimates.

## Income Taxes

In fiscal 1999, the Company adopted the Canadian Institute of Chartered Accountants' recommendations for the accounting of income taxes. The new standard requires the use of the asset and liability method of accounting for income taxes. Under the asset and liability method, future income taxes are recognized for the future income tax consequences attributable to differences between the financial statement carrying values and their respective income tax basis (temporary differences). Future income tax assets and liabilities are measured using enacted income tax rates expected to apply to taxable income in the years in which temporary differences are expected to be recovered or settled. The effect on future income tax assets and liabilities of a change in tax rates is included in income in the period that includes the enactment date. Future income tax assets are evaluated and if realization is not considered more likely than not, a valuation allowance is provided. Previously, the Company followed the deferral method of accounting for income taxes that related the provision for income taxes to the accounting income for the period.

As at December 31, 1999, the valuation allowance is equal to 100% of the future income tax asset. There is no effect on prior years' figures as a result of this change in accounting policy.

## Note 3. Acquisitions

### (a) Intercontinental Development Corporation

In 1996, the Company purchased 66% of the issued and outstanding shares of Intercontinental Development Corporation ("INDECO") for total consideration of \$319,298. The acquisition was accounted for using the purchase method. From 1997 through 1999, the Company acquired the remaining 34% of INDECO shares for total consideration of \$105,584. The entire amount of the purchase price has been allocated to the Centrifugal Jig Royalty Agreement. INDECO, which was dissolved in 1999, had as its sole asset a royalty agreement entitling the corporation to 10% of the cost of manufacturing any Centrifugal Jigs which were placed in production, sold or exploited for profit worldwide.

### (b) Pigment Production Technology and Assets

As of November 15, 1999, the Company entered into an Asset Purchase and Sale Agreement (the "Asset Purchase Agreement") with BHP Minerals International Inc. ("BHP") pursuant to which it purchased all patents and technology related to a hydrometallurgical process developed by BHP primarily for the production of titanium dioxide products from titanium bearing ores or concentrates (the "Technology"), all tangible equipment and other assets used by BHP to develop and implement the Technology (the "Assets") and the use for one year of the services of the BHP personnel presently developing the Technology.

The purchase price for the Technology and Assets was 15,000,000 Australian Dollars (AUD\$) and is payable in four equal installments. The first installment was paid at closing and the second payment, which was originally due February 15, 2000, has been rescheduled by Letter of Amendment, with interest at 15% per annum, until May 15, 2000. The remaining two payments are due and payable on May 15, 2000 and August 15, 2000. If the Company fails to pay any of the remaining three installments, it will forfeit to BHP, without a right to reimbursement of any amount of the purchase price paid to date, all right, title and interest in the Technology and Assets.

The Asset Purchase Agreement also requires the Company to pay to BHP, until the earlier of the fifteenth anniversary of November 15, 1999 or the date the Company has paid an aggregate royalty of AUD\$105,000,000, a quarterly royalty equal to:

o 1.5% of the international market price of all uncoated titanium dioxide pigment produced and sold as a result of the use of the Technology by the Company or a transferee at the Company's mineral properties in Tennessee;

o 1.5% of the international market price of all uncoated titanium dioxide pigment produced and sold as a result of the use of the Technology by BHP or any affiliate of BHP at a specified heavy mineral sand operation located near Auckland, New Zealand;

o 3% of the international market price of all uncoated titanium dioxide pigment produced and sold as a result of the use of the Technology by the Company or a transferee of the Company at any location other than the Tennessee mineral property or the Auckland, New Zealand heavy mineral sand operation; and

o 3% of the sales proceeds received by the Company or a transferee of the Company from the sale of any products other than titanium dioxide pigment produced through the Company's use of the Technology.

In addition, in connection with the Asset Purchase Agreement, the Company and BHP entered into a lease dated November 15, 1999, pursuant to which the Company will lease approximately 20,000 square feet of laboratory and testing space at BHP's testing facility in Reno, Nevada for a monthly rent of \$15,000. The initial term of the lease expires on December 31, 2000, subject to automatic renewals for six-month periods at inflation-adjusted rent until terminated by the Company. The lease grants the Company a right of first refusal in the event BHP intends to sell the building and property subject to the lease.

The Assets have been recorded in the capital asset accounts as pigment production facility (see Note 4), and the Technology has been recorded in the patents accounts as pigment production patents (see Note 5).

**Note 4. Capital Assets**

	December 31, 1999			December 31, 1998		
	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
Furniture and office						
equipment	\$ 76,228	\$ 42,952	\$ 33,276	\$ 65,538	\$ 28,325	\$ 37,213
Vehicles	125,031	68,119	56,912	92,629	44,499	48,130
Centrifugal jig						
equipment	333,028	154,523	178,505	333,028	111,674	221,354
Jig testing facility	45,128	18,583	26,545	45,128	12,555	32,573
Pigment production						
facility	1,925,100	24,064	1,901,036	--	--	--
Centrifugal jigs						
under						
construction	311,604	--	311,604	123,147	--	123,147
	<u>\$2,816,119</u>	<u>\$ 308,241</u>	<u>\$2,507,878</u>	<u>\$ 659,470</u>	<u>\$ 197,053</u>	<u>\$ 462,417</u>

**Note 5. Patents and Related Expenditures**

	December 31, 1999			December 31, 1998		
	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
Pigment production						
patents	\$ 6,773,400	\$ 55,228	\$ 6,718,172	\$ --	\$ --	\$ --
Centrifugal jig						
patents	4,223,800	1,601,052	2,622,748	4,182,262	1,332,821	2,849,441
Royalty agreement	424,881	88,588	336,293	424,604	59,265	365,339
Mineral recovery						
technology rights	243,000	37,385	205,615	243,000	18,692	224,308
License agreement	136,004	16,865	119,139	136,004	6,036	129,968
Patent application	--	--	--	39,968	--	39,968
	\$11,801,085	\$ 1,799,118	\$10,001,967	\$ 5,025,838	\$ 1,416,814	\$ 3,609,024

**Note 6. Mineral Properties and Related Deferred Exploration Expenditures**

The Company's subsidiary, Mineral Recovery Systems, Inc. ("MRS"), has entered into various mineral leases for a 100% interest in approximately 14,000 acres of land in the state of Tennessee, United States with minimum annual advance royalty payments as follows:

Year	Amount
2000	\$ 90,992
2001	152,116
2002	194,513
2003	212,289
2004	423,736
2005 and every year thereafter	430,132

The mineral leases are subject to a production royalty; however, MRS will receive a credit against production royalties for all advance royalties paid. The lessors can only terminate the leases upon failure of MRS to make the minimum payments as required by the leases. During the years ended December 31, 1999 and 1998, approximately \$715,000 and \$793,000, respectively, was incurred on exploration.

**Note 7. Notes Payable**

	1999	1998
Note payable to BHP Minerals International, Inc., \$4,903,600 due May 15, 2000, \$2,460,000 due August 15, 2000 (Note (a))	\$ 7,363,600	\$ -
Notes payable assumed from Trans Mar, Inc., interest payable at various rates, unsecured, principal and interest due December 31, 1999	--	67,442
Note payable, interest payable at 10% per annum, unsecured, blended payments of \$2,000 per month, due April 1, 1999	--	6,091
	\$ 7,363,600	\$ 73,533

(a) Interest is due on \$2,443,600 at 15% per annum from February 16, 2000 to May 15, 2000. The remainder of payments are interest free and secured by pigment production equipment and patents having a net book value of \$8,619,208.

### **Note 8. Capital Stock**

Authorized capital stock of the Company is comprised of an unlimited number of Common Shares. Details of issued and outstanding shares are as follows:

	Shares	Amount
Balance, December 31, 1996	14,686,296	\$11,373,259
Exercise of stock options	362,500	1,530,406
Exercise of warrants	411,229	991,042
Common shares issued on warrants exercised in December 1996	32,720	47,746
Balance, December 31, 1997	15,492,745	13,942,453
Exercise of stock options	17,500	113,664
Common shares issued on conversion of convertible debentures	387,735	3,061,443
Common shares canceled pursuant to settlement agreement with former TMI shareholders	(723,065)	(655,097)
Balance, December 31, 1998	15,174,915	16,462,463
Common shares issued for cash	300,000	1,862,500
Balance, December 31, 1999	15,474,915	\$18,324,963

### **Prospectus**

Pursuant to a prospectus dated March 17, 1999, the Company issued 300,000 common shares and 150,000 warrants for net proceeds of \$1,862,500.

### **Stock Options**

As of December 31, 1999, 3,060,000 Common Shares are reserved for issuance to directors, officers and employees under the Company's stock option plans. The following table summarizes the status of stock options outstanding and exercisable as of December 31, 1999:

		Stock Options Outstanding		Stock Options Exercisable	
		Weighted			
Range of Exercise Prices	Shares	Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
\$2.56 to \$4.13	550,000	2.0	2.98	500,000	2.87
\$4.38 to \$4.94	860,000	4.8	4.46	202,500	4.55
\$5.82 to \$7.50	945,000	3.5	7.07	765,000	7.01
\$8.00 to \$10.00	705,000	3.7	8.83	367,500	8.36

The number of Common Shares available for the granting of options at December 31, 1999 and 1998 was 358,000 and 1,453,000, respectively. The following table summarizes stock option activity for the years ended December 31, 1999 and 1998:

	1999	1998
Outstanding at beginning of year	1,965,000	962,500
Granted during the year	1,550,000	1,020,000
Cancelled	(455,000)	--
Exercised at an average price of \$9.26 (1998)	--	(17,500)
Outstanding at end of year	3,060,000	1,965,000
Currently exercisable	1,835,000	1,540,000

## Warrants

As of December 31, 1999, there were 150,000 warrants issued and outstanding, of which 125,000 warrants entitle the holder to purchase one Common Share at \$9.00 per share on or before the earlier of March 19, 2002 and the date that is 30 days following the fifth day the closing price equals or exceeds \$14.00 per share and 25,000 warrants entitle the holder to purchase one Common Share at \$6.00 per share on or before the earlier of November 30, 2002 and the date that is 30 days following the fifth day the closing price equals or exceeds \$8.00 per share.

## Note 9. Convertible Debentures

On December 29, 1997, the Company issued \$5,000,000 in convertible subordinated debentures due December 29, 2001 (the "Debentures") bearing interest at 5% per annum payable in cash or Common Shares of the Company annually or upon conversion or maturity, at the discretion of the Company. Subject to certain restrictions during the first 180 days after closing, the Debentures were convertible by holders into Common Shares at a conversion rate equal to the lesser of (i) 92% of the average price of the Common Shares for the five trading days prior to submission of a notice of conversion by the holder, or (ii) \$14.36875 per share. The purchasers of the Debentures also received transaction warrants entitling the holders to purchase 75,000 Common Shares on or before December 29, 1999 at a price of \$16.7188 per share. In addition, the placement agent received 105,000 placement warrants entitling the agent to purchase 105,000 Common Shares at \$16.7188 per share on or before December 29, 1999.

During the period May 20, 1998 through July 31, 1998, the holders of the Debentures elected to convert \$2,750,000 of the principal amount of the Debentures and \$66,528 of accrued interest. The conversions were made at a conversion price rate equal to 92% of the average price of the Common Shares for the five trading days prior to submission of the notice of conversion by the holders. These conversions resulted in the issuance of 387,735 Common Shares.

On August 28, 1998, the Company elected to redeem the remaining \$2,250,000 of Debentures using cash previously invested in short-term instruments. The total cash required to redeem the Debentures, including the 10% redemption premium and accrued interest, was \$2,550,938. As of December 31, 1999, all of the warrants had expired unexercised.

## Note 10. Commitments

Under the current employment agreement between the Company and its president, Dr. William P. Long, Dr. Long is entitled to receive payment of 200,000 Common Shares in the event (i) voting control of over 35% of the issued stock is acquired by a person or group of persons in a merger, takeover or similar transaction (a "change of control") and Dr. Long's employment agreement is terminated within 180 days before or at any time after such change of control, or (ii) absent a change of control, if Dr. Long's employment agreement is terminated for any reason except by Dr. Long, by mutual consent, by the Company for cause, or at the end of the term.

## Note 11. Net Loss per Share

The calculation of basic net loss per share from operations is based on the weighted average number of Common Shares outstanding for the year. Net loss used in the calculation is loss from operations increased by the accretion of the equity element of convertible subordinated debentures.

	1999	1998	1997
Loss from operations	\$ 2,291,850	\$ 1,762,088	\$1,831,471
Accretion of equity element of convertible debentures	--	144,801	--
	\$ 2,291,850	\$ 1,906,889	\$1,831,471
Weighted average number of common shares	15,374,093	15,143,020	14,366,457
Basic net loss per share from operations	\$ 0.15	\$ 0.13	\$ 0.13

The existence of stock options, warrants and convertible debentures affects the calculation of loss per share on a fully diluted basis. As the effect of this dilution is to reduce the reported loss per share, the fully diluted loss per share has not been presented.

### **Note 12. Income Taxes**

As of December 31, 1999, the Company has approximately \$ 7,500,000 of non-capital losses carried forward for income tax purposes which, under certain circumstances, are available to reduce future years' income for tax purposes. Approximately \$ 7,300,000 of these losses are subject to expiration beginning in 2003.

### **Note 13. Concentration of Credit Risk**

As of December 31, 1999, the Company had \$115,044 invested in a diversified portfolio of United States dollar-denominated money market instruments in the United States. This portfolio is neither insured nor guaranteed by the United States Government.

### **Note 14. Statements of Cash Flows**

#### **Non-Cash Investing and Financing Activities**

Year ended December 31, 1999: There were no non-cash investing or financing activities.

Year ended December 31, 1998: Convertible debentures having a principal amount of \$2,750,000 and accrued interest of \$66,528 were converted into 387,735 Common Shares with a fair market value of \$3,061,444.

Year ended December 31, 1997: There were no non-cash investing or financing activities.

#### **Cash and Cash Equivalents**

The cash and short-term investments on hand as of December 31, 1999 represent cash and a diversified portfolio of United States dollar-denominated money market instruments which is considered cash equivalent.

#### Supplemental Information

	1999	1998	1997
Interest paid	\$ 1,966	\$ 32,165	\$ 43,497
Interest received	134,811	335,037	70,057

### **Note 15. Differences Between Canadian and United States Generally Accepted Accounting Principles**

The Company prepares its accounts in accordance with accounting principles generally accepted in Canada ("Canadian GAAP") which conform, in all material respects, with accounting principles generally accepted in the United States ("U.S. GAAP"), except as described below.

#### **Development Stage Company**

As of December 31, 1999 the Company would be characterized as a "development stage enterprise" under U.S. GAAP in accordance with Statement of Financial Accounting Standards No. 7 ("SFAS 7"). Under Canadian GAAP, there are no

requirements for the indication or reporting of development stage entities. The following is a summary of the deficit accumulated during the development stage prepared in accordance with SFAS 7:

	Accumulated deficit during the development stage
	-----
Professional fees	\$ 1,604,549
Salaries and wages	2,245,499
Shareholders' expenses	1,291,838
Office and general	2,549,845
Loss on sale of mining claims	101,047
Amortization	2,031,656
Interest on long-term debt	97,001
Write off of mineral properties and related deferred exploration expenditures	1,385,997
Write off of organization costs	8,563
	-----
	11,315,995
Less:	
Interest income	(581,420)
Gain on sale of marketable securities	(35,773)
Lease payments	(143,754)
Gain on forgiveness of debt	(795,973)
Option payments	(70,906)
	-----
Total accumulated loss	9,688,169
Convertible debenture costs	537,731
Share issue costs	60,557
Accretion of equity element of convertible debentures	144,801
Premium on conversion of convertible debentures	244,915
Premium on redemption of convertible debentures	193,256
	-----
Accumulated deficit, December 31, 1999	\$ 10,869,429
	=====

### Foreign Currency Translation

In Canada and the United States, a distinction is made between the measurement and accounting for an enterprise's own transactions in a foreign currency. The Company remeasures its books and records into the functional currency prior to translation into the reporting currency. The Company maintains its books and records in Canadian dollars and the U.S. subsidiaries maintain their books and records in United States dollars. The remeasurement of the Company's financial statements according to U.S. GAAP would not change the results of the consolidated financial statements prepared in accordance with Canadian GAAP.

### Stock Options

Under Canadian GAAP, there is no requirement to record compensation on the issuance of stock options to employees or directors. Under U.S. GAAP, compensation would be accrued on the date of granting of the options, calculated as the difference between the market price and exercise price on the date of the grant. For the fiscal years ended December 31, 1999 and 1998, the exercise price of all stock options granted has been equal to or greater than the market price on the date of the grant and therefore the compensation cost under U.S. GAAP would be nil.

### Reconciliation to Accounting Principles Generally Accepted in the United States

Convertible debenture issuance costs are added to the deficit under Canadian GAAP, but would be recorded as deferred financing costs (an asset), and amortized to expense, under U.S. GAAP. The Company incurred issuance costs of \$21,887 in 1998 and \$515,844 in 1997 that have been charged to deficit under Canadian GAAP. Under U.S. GAAP, the balance sheet at December 31, 1997 would include a deferred financing cost asset of \$515,844 but this amount and the 1998 charges of \$21,887 would be charged to expense in 1998 due to the redemption and conversion of the Debentures during the year (see Note 9). Also, under U.S. GAAP, the premium on conversion of convertible debentures (\$144,801) and the accretion of equity element of convertible debentures (\$244,915) would be

expensed in the Statements of Operations. The following reflects amounts that would have been reported had the Company's consolidated financial statements been prepared on the basis of U.S. GAAP:

	1999	1998	1997
	-----	-----	-----
Convertible debenture issuance costs	\$ --	\$ 537,731	\$ --
Premium on conversion of convertible debentures	--	244,915	--
Accretion of equity element of convertible debentures	--	144,801	--
Net loss for the year	2,224,408	2,856,986	1,831,471
Deficit, beginning of year	8,645,021	5,788,035	3,956,564
Deficit, end of year	10,869,429	8,645,021	5,788,035
Basic net loss per share from operations	\$ (0.15)	\$ (0.19)	\$ (0.13)

There are no other material differences between Canadian GAAP and U.S. GAAP.

#### **Note 16. Uncertainty Due to the Year 2000 Issue**

The Year 2000 Issue arises because many computerized systems use two digits rather than four to identify a year. Date-sensitive systems may recognize the year 2000 as 1900 or some other date, resulting in errors when information using year 2000 dates is processed. In addition, similar problems may arise in some systems which use certain dates in 1999 to represent something other than a date. Although the change in date has occurred, it is not possible to conclude that all aspects of the Year 2000 Issue that may affect the entity, including those related to customers, suppliers, or other third parties, have been fully resolved.

#### **Note 17. Subsequent Events**

(a) Pursuant to three stock purchase agreements dated subsequent to the year end, the Company issued 125,000 Common Shares and 62,500 warrants for gross proceeds of \$500,000. Each warrant entitles the holder to purchase one Common Share at a price of \$6.00 per share on or before the earlier of the third anniversary and the date that is 30 days following the fifth day the closing price equals or exceeds \$8.00 per share.

(b) Pursuant to a stock purchase agreement dated March 3, 2000, the Company issued 166,667 Common Shares and 83,333 warrants for gross proceeds of \$1 million. Each warrant entitles the holder to purchase one Common Share at a price of \$8.00 per share on or before the earlier of March 3, 2004 and the date that is 30 days following the fifth day the closing price equals or exceeds \$10.00 per share.

(c) Subsequent to the year end, 71,300 stock options were exercised for total proceeds of \$335,778.

(d) On March 31, 2000, the Company entered into a stock purchase and equity line of credit agreement with an investor. Pursuant to the common stock purchase agreement, the Company has issued 1,251,303 Common Shares and 250,261 warrants for gross proceeds of \$ 6 million before deducting estimated costs of the issue of \$455,000 and 75,085 warrants.

Each warrant entitles the holder to purchase one Common Share at a price of \$6.76 on or before April 7, 2003.

The 1,251,303 Common Shares are subject to a "repricing period" of 120 days. During the repricing period, additional shares may be issued through a reset provision that compares market price in the repricing period to an adjusted original issue price.

Pursuant to the equity line of credit agreement, the investor will purchase up to \$10 million of the Company's Common Shares over an 18-month period at a discounted market price based on the five lowest closing bid prices of the Common Shares for the ten trading days following the Company's notice. The timing and amounts of the purchases are at the discretion of the Company. Each additional purchase may be no greater than 66.7% of the average daily weighted dollar trading volume of the Common Shares for the twenty days preceding both the notice and closing of the purchase. In addition, the average market value during the same twenty day period must be greater than \$2.00 per share.

#### **Common Stock**

##### **United States**

The Company's Common Shares began trading through the Nasdaq National Market on January 23, 1998 under the symbol "ALTIF". From March 24, 1997 until January 23, 1998, the Common Shares traded under the same symbol on the Nasdaq SmallCap Market. Prior to March 24, 1997, the Common Shares traded on the OTC Bulletin Board under the symbol "AIDGF". On December 31, 1999, the number of record holders was 471 and the Company estimates that on that date there were 9,600 beneficial owners.

The Company has never declared or paid dividends on its Common Shares. Moreover, the Company currently intends to retain any future earnings for use in the business and, therefore, does not anticipate paying dividends on its Common Shares in the foreseeable future.

The following table sets forth, on a quarterly basis, the high and low sales prices during the last two fiscal years for the Common Shares as reported. The prices reported do not include retail mark-up, mark-down or commissions and may not reflect actual transactions.

For the Fiscal Year Ended: (In U.S. Dollars)	December 31, 1999		December 31, 1998	
	-----		-----	
	High	Low	High	Low
First Quarter	\$ 9.88	\$ 6.06	\$15.63	\$ 8.13
Second Quarter	\$ 6.88	\$ 4.13	\$ 9.63	\$ 7.00
Third Quarter	\$ 5.00	\$ 3.88	\$10.25	\$ 3.00
Fourth Quarter	\$ 5.06	\$ 3.45	\$ 8.63	\$ 5.88

## Canada

In Canada, the Common Shares were traded under the symbol "AIL" on the Alberta Stock Exchange (the "ASE") through April 23, 1998. The Company voluntarily removed the Common Shares from the ASE on that date due to increased focus on operations in the United States and diminishing trading volume on the ASE.

## Exchange Rate Information

The following exchange rates represent the noon buying rate in New York City for cable transfers in Canadian dollars, as certified for Customs purposes, by the Federal Reserve Bank of New York. The table sets forth, for each of the years indicated, the period-end exchange rate, the average exchange rate (i.e., the average of the exchange rates on the last day of each month during the period), and the high and low exchange rates of the U.S. dollar in exchange for the Canadian dollar for the years indicated, based on the noon buying rates:

For the Year Ended December 31, (Canadian Dollar per U.S. Dollar)	1999	1998	1997	1996	1995
	----	----	----	----	----
High	1.5302	1.5770	1.4398	1.3822	1.4238
Low	1.4440	1.4075	1.3392	1.3310	1.3285
Average	1.4827	1.4894	1.3849	1.3638	1.3725
Year-End	1.4440	1.5375	1.4288	1.3697	1.3655

## Canadian Taxation Considerations

Dividends paid on Common Shares of the Company owned by non-residents of Canada are subject to Canadian withholding tax. The rate of withholding tax on dividends under the Income Tax Act (Canada) (the "Act") is 25%. However, Article X of the reciprocal treaty between Canada and the United States of America (the "Treaty") generally limits the rate of withholding tax on dividends paid to United States residents to 15%. The Treaty further generally limits the rate of withholding tax to 5% if the beneficial owner of the dividends is a U.S. corporation that owns at least 10% of the voting shares of the subject company.

If the beneficial owner of the dividend carries on business in Canada through a permanent establishment in Canada, or performs in Canada independent personal services from a fixed base in Canada, and the shares of stock with respect to which the dividends are paid are effectively connected with such permanent establishment or fixed base, the dividends are taxable in Canada as business profits at rates which may exceed the 5% or 15% rate applicable to dividends that are not so connected with a Canadian permanent establishment or fixed base. Under the provisions of the treaty, Canada is permitted to apply its domestic law rules for differentiating dividends from interest and other disbursements.

A capital gain realized on the disposition of Common Shares of the Company by a person resident in the United States (a "non-resident") will be subject to tax under the Act if the shares held by the non-resident are "taxable Canadian property". In general, Common Shares will be taxable Canadian property if the particular non-resident used (or in the case of a non-resident insurer, used or held) the Common Shares in carrying on business in Canada or, pursuant to proposed amendments to the Act, where at any time during the five-year period immediately preceding the realization of the gain, not less than 25% of the issued and outstanding shares of any class or series of shares of the Company were owned by the particular non-resident, by persons with whom the particular non-resident did not deal at arm's length, or by any combination thereof. If the Company's Common Shares constitute taxable Canadian property, relief nevertheless may be available under the Treaty. Under the Treaty, gains from the alienation of Common Shares owned by a non-resident who has never been resident in Canada generally will be exempt from Canadian capital gains tax if the shares do not relate to a permanent establishment or fixed base which the non-resident has or had in Canada, and if not more than 50% of the value of the shares was derived from real property (which includes rights to explore for or to exploit mineral deposits) situated in Canada.

**Exhibit 4.4**

**ALTAIR INTERNATIONAL INC.**

**COMMON SHARE PURCHASE WARRANT**

\_\_\_\_\_ **Series K Warrants Warrant Certificate No.** \_\_\_\_\_

Void after 5:00 p.m., Mountain Standard Time on November 30, 2002 or on such earlier date specified herein

**ALTAIR INTERNATIONAL INC.**  
(Incorporated under the laws of Ontario)

This Series K Warrant Certificate ("Warrant Certificate") is to certify that, for value received, \_\_\_\_\_ or registered assigns (the "Holder") shall have the right to purchase from Altair International Inc. (hereinafter called the "Corporation") one fully paid and non-assessable Common Share of the Corporation for each Series K Warrant (individually, a "Warrant") represented by this Warrant Certificate at any time up to 5:00 p.m. (Mountain Standard time) on the earlier of (i) November 30, 2002, and (ii) the date thirty days following the fifth day (whether or not consecutive) the closing price of the Common Shares on the Nasdaq National Market equals or exceeds U.S. \$8.00 (the "Expiry Time"). The exercise price for the purchase of each such Common Share shall be U.S. \$6.00 per share (the "Exercise Price"). The number of Common Shares to be received upon the exercise of each Warrant and the Exercise Price may be adjusted from time to time as hereinafter set forth.

The Warrants shall be subject to the following terms and conditions:

1. For the purposes of this Warrant, the term "Common Shares" means common shares without nominal or par value in the capital of the Corporation as constituted on the date hereof; provided that in the event of a change, subdivision, redivision, reduction, combination or consolidation thereof or any other adjustment under clause 10 hereof, or successive such changes, subdivisions, redivisions, reductions, combinations, consolidations or other adjustments, then subject to the adjustments, if any, having been made in accordance with the provisions of this Warrant Certificate, "Common Shares" shall thereafter mean the shares, other securities or other property resulting from such change, subdivision, redivision, reduction, combination or consolidation or other adjustment.
2. This Warrant Certificate shall be signed by an officer of the Corporation holding office at the time of signing, or any successor or replacement person and notwithstanding any change in any of the persons holding said offices between the time of actual signing and the delivery of the Warrant Certificate and notwithstanding that such officer signing may not have held office at the date of the delivery of the Warrant Certificate, the Warrant Certificate so signed shall be valid and binding upon the Corporation.

3. All rights under any of the Warrants in respect of which the right of subscription and purchase therein provided for shall not theretofore have been exercised shall wholly cease and determine and such Warrants shall be wholly void and of no valid or binding effect after the Expiry Time.

4. The right to purchase Common Shares pursuant to the Warrants may only be exercised by the Holder at or before the Expiry Time by:

(a) duly completing and executing a Subscription Form substantially in the form attached hereto, in the manner therein indicated; and

(b) surrendering this Warrant Certificate and the duly completed and executed Subscription Form to the Corporation at the address specified in clause 22 below together with payment of the purchase price for the Common Shares subscribed for in the form of cash or a certified cheque payable to the Corporation in an amount equal to the then applicable Exercise Price multiplied by the number of Common Shares subscribed for.

5. Upon receipt of the Subscription, this Warrant Certificate, and payment as aforesaid, the Corporation shall cause to be issued to the Holder the number of Common Shares to be issued and the Holder shall become a shareholder of the Corporation in respect of such Common Shares, effective as of the date of receipt by the Corporation of such Subscription Form, Warrant Certificate, and payment and shall be entitled to delivery of a certificate or certificates evidencing such shares. The Corporation shall cause such certificate or certificates to be mailed to the Holder at the address or addresses specified in such Subscription Form within five (5) business days of such receipt and payment as herein provided or, if so instructed by the Holder, held for pick-up by the Holder at the principal office of the registrar and transfer agent of the Common Shares, Equity Transfer Services Inc. (the "Transfer Agent").

6. No fractional shares or stock representing fractional shares shall be issued upon the exercise of any Warrant. In lieu of any fractional shares which would otherwise be issuable, the Corporation shall either pay cash equal to the product of such fraction multiplied by the fair market value of one share of Common Stock on the date of exercise, as determined in good faith by the Corporation's Board of Directors, or issue the next largest whole number of Common Shares at the Corporation's option.

7. The Warrants may not be exercised unless at the time of exercise (i) a registration statement registering the Common Shares issuable upon such exercise is effective under the Securities Act of 1933, as amended (the "1933 Act"), or the transaction in which such shares are to be issued is exempted from the application of the registration requirements of the 1933 Act, and (ii) the Warrant Shares have been registered or qualified under any applicable Canadian, provincial, state securities laws or an exemption from registration or qualification is available under such laws. The Corporation has filed a Registration Statement on Form S-3 registering the Common Shares issuable upon the exercise of the Warrants, which Registration Statement is effective as of the date hereof.

8. The holding of a Warrant shall not constitute the Holder a shareholder of the Corporation nor entitle him to any right or interest in respect thereof except as herein expressly provided.

9. The Corporation covenants and agrees that until the Expiry Time, while any of the Warrants shall be outstanding, it shall reserve and there shall remain unissued out of its authorized capital a sufficient number of Common Shares to satisfy the right of purchase herein provided, as such right of purchase may be adjusted pursuant to clauses 10 and 11 hereof. All Common Shares which shall be issued upon the exercise of the right to purchase herein provided for, upon payment therefor of the amount at which such Common Shares may at the time be purchased pursuant to the provisions hereof, shall be issued as fully paid and non-assessable shares and the holders thereof shall not be liable to the Corporation or its creditors in respect thereof.

10. (a) If and whenever at any time after the date hereof and prior to the Expiry Time the Corporation shall (i) subdivide, redivide or change its then outstanding Common Shares into a greater number of Common Shares, (ii) reduce, combine or consolidate its then outstanding Common Shares into a lesser number of Common Shares or (iii) issue Common Shares (or securities exchangeable for or convertible into Common Shares) to the holders of all or substantially all of its then outstanding Common Shares by way of a stock dividend or other distribution (any of such events herein called a "Common Share Reorganization"), then the Exercise Price shall be adjusted effective immediately after the effective date of any such event in (i) or (ii) above or the record date at which the holders of Common Shares are determined for the purpose of any such dividend or distribution in (iii) above, as the case may be, by multiplying the Exercise Price in effect on such effective date or record date, as the case may be, by a fraction, the numerator of which shall be the number of Common Shares outstanding on such effective date or record date, as the case may be, before giving effect to such Common Share Reorganization and the denominator of which shall be the number of Common Shares outstanding immediately after giving effect to such Common Share Reorganization including, in the case where securities exchangeable for or convertible into Common Shares are distributed, the number of Common Shares that would be outstanding if such securities were exchanged for or converted into Common Shares.

(b) If and whenever at any time after the date hereof and prior to the Expiry Time, the Corporation shall distribute any class of shares or rights, options or warrants or other securities (other than those referred to in clause 10(a) above), evidences of indebtedness or property (excluding cash dividends paid in the ordinary course) to holders of all or substantially all of its then outstanding Common Shares, the number of Common Shares to be issued by the Corporation under this Warrant shall, at the time of exercise of the right of subscription and purchase under this Warrant Certificate, be appropriately adjusted and the Holder shall receive, in lieu of the number of the Common Shares in respect of which the right to purchase is then being exercised, the aggregate number of Common Shares or other securities or property that the Holder would have been entitled to receive as a result of such event, if, on the record date thereof, the Holder had been the registered holder of the number of Common Shares to which the Holder was theretofore entitled upon the exercise of the rights of the Holder hereunder.

(c) If and whenever at any time after the date hereof and prior to the Expiry Time there is a capital reorganization of the Corporation or a reclassification or other change in the Common Shares (other than a Common Share Reorganization) or a consolidation or merger or amalgamation of the Corporation

with or into any other corporation or other entity (other than a consolidation, merger or amalgamation which does not result in any reclassification of the outstanding Common Shares or a change of the Common Shares into other securities), or a transfer of all or substantially all of the Corporation's assets to another corporation or other entity in which the holders of Common Shares are entitled to receive shares, other securities or other property (any of such events being called a "Capital Reorganization"), the Holder, where he has not exercised the right of subscription and purchase under this Warrant Certificate prior to the effective date of such Capital Reorganization, shall be entitled to receive and shall accept, upon the exercise of such right, on such date or any time thereafter, for the same aggregate consideration in lieu of the number of Common shares to which he was theretofore entitled to subscribe for and purchase, the aggregate number of shares or other securities or property which the Holder would have been entitled to receive as a result of such Capital Reorganization if, on the effective date thereof, he had been the registered holder of the number of Common Shares to which he was theretofore entitled to subscribe for and purchase.

(d) If and whenever at any time after the date hereof and prior to the Expiry Time, any of the events set out in clause 10(a), (b) or (c) shall occur and the occurrence of such event results in an adjustment of the Exercise Price pursuant to the provisions of this clause 10, then the number of Common Shares purchasable pursuant to this Warrant shall be adjusted contemporaneously with the adjustment of the Exercise Price by multiplying the number of Common Shares then otherwise purchasable on the exercise thereof by a fraction, the numerator of which shall be the Exercise Price in effect immediately prior to the adjustment and the denominator of which shall be the Exercise Price resulting from such adjustment.

(e) If the Corporation takes any action affecting its Common Shares to which the foregoing provisions of this clause 10, in the opinion of the board of directors of the Corporation, acting in good faith, are not strictly applicable, or if strictly applicable would not fairly adjust the rights of the Holder against dilution in accordance with the intent and purposes hereof, or would otherwise materially affect the rights of the Holder hereunder, then the Corporation may execute and deliver to the Holder an amendment hereto providing for an adjustment in the application of such provisions so as to adjust such rights as aforesaid in such manner as the board of directors of the Corporation may determine to be equitable in the circumstances, acting in good faith. The failure of the taking of action by the board of directors of the Corporation to so provide for any adjustment on or prior to the effective date of any action or occurrence giving rise to such state of facts will be conclusive evidence that the board of directors has determined that it is equitable to make no adjustment in the circumstances.

11. The following rules and procedures shall be applicable to the adjustments made pursuant to clause 10:

(a) any Common Shares owned or held by or for the account of the Corporation shall be deemed not to be outstanding except that, for the purposes of clause 10, any Common Shares owned by a pension plan or profit sharing plan for employees of the

Corporation or any of its subsidiaries shall not be considered to be owned or held by or for the account of the Corporation;

(b) no adjustment in the Exercise Price shall be required unless a change of at least 1% of the prevailing Exercise Price would result, provided, however, that any adjustment which, except for the provisions of this clause 11(b), would otherwise have been required to be made, shall be carried forward and taken into account in any subsequent adjustment;

(c) the adjustments provided for in clause 10 are cumulative and shall apply to successive subdivisions, consolidations, dividends, distributions and other events resulting in any adjustment under the provisions of such clause;

(d) in the absence of a resolution of the board of directors of the Corporation fixing a record date for any dividend or distribution referred to in clause 10(a)(iii) above, the Corporation shall be deemed to have fixed as the record date therefor the date on which such dividend or distribution is effected;

(e) if the Corporation sets a record date to take any action and thereafter and before the taking of such action abandons its plan to take such action, then no adjustment to the Exercise Price will be required by reason of the setting of such record date;

(f) forthwith after any adjustment to the Exercise Price or the number of Common Shares purchasable pursuant to the Warrants, the Corporation shall provide to the Holder a certificate of an officer of the Corporation certifying as to the amount of such adjustment and, in reasonable detail, describing the event requiring and the manner of computing or determining such adjustment; and

(g) any question that at any time or from time to time arises with respect to the amount of any adjustment to the Exercise Price or other adjustment pursuant to clause 10 shall be conclusively determined by a firm of independent chartered accountants (who may be the Corporation's auditors) selected by the board of directors of the Corporation and shall be binding upon the Corporation and the Holder.

12. At least 21 days prior to the latter of the effective date or record date, as applicable, of any event referred to in clause 10, the Corporation shall notify the Holder of the particulars of such event and the estimated amount of any adjustment required as a result thereof.

13. On the happening of each and every such event set out in clause 10, the applicable provisions of this Warrant, including the Exercise Price, shall, ipso facto, be deemed to be amended accordingly and the Corporation shall take all necessary action so as to comply with such provisions as so amended.

14. The Corporation shall not be required to deliver certificates for Common Shares while the share transfer books of the Corporation are properly closed, having regard to the provisions of clauses 10 and 11 hereof, prior to any meeting of shareholders or for the payment of dividends or for any other purpose and in the event of the surrender of

any Warrant in accordance with the provisions hereof and the making of any subscription and payment for the Common Shares called for thereby during any such period delivery of certificates for Common Shares may be postponed for not more than five (5) days after the date of the re-opening of said share transfer books. Provided, however, that any such postponement of delivery of certificates shall be without prejudice to the right of the Holder so surrendering the same and making payment during such period to receive after the share transfer books shall have been re-opened such certificates for the Common Shares called for, as the same may be adjusted pursuant to clauses 10 and 11 hereof as a result of the completion of the event in respect of which the transfer books were closed.

15. Subject as hereinafter provided, all or any of the rights conferred upon the Holder by the terms hereof may be enforced by the Holder by appropriate legal proceedings. No recourse under or upon any obligation, covenant or agreement contained herein shall be had against any shareholder or officer of the Corporation either directly or through the Corporation, it being expressly agreed and declared that the obligations under the Warrants are solely corporate obligations and that no personal liability whatever shall attach to or be incurred by the shareholders or officers of the Corporation or any of them in respect thereof, any and all rights and claims against every such shareholder, officer or director being hereby expressly waived as a condition of and as a consideration for the issue of the Warrants.

16. The Warrants may not be assigned or transferred except as provided herein and in accordance with and subject to the provisions of the 1933 Act and the Rules and Regulations promulgated thereunder and any applicable state, Canadian, and provincial securities laws. Any purported transfer or assignment made other than in accordance with this Section 16 shall be null and void and of no force and effect. Any assignment permitted hereunder shall be made by surrender of this Warrant Certificate to the Corporation at its principal office with the Assignment Form annexed hereto duly executed and funds sufficient to pay any transfer tax. In such event, the Corporation shall, without charge, execute and deliver a new Warrant Certificate in the name of the assignee named in such Assignment Form, and the Warrants represented by this Warrant Certificate shall promptly be cancelled. This Warrant Certificate may be divided or combined with other Warrants which carry the same rights upon presentation thereof at the principal office of the Corporation together with a written notice signed by the Holder thereof, specifying the names and denominations in which new Warrants are to be issued. The terms "Warrant" and "Warrants" as used herein include any Warrants in substitution for or replacement of this Warrant, or into which the Warrant represented by this Warrant Certificate may be divided or exchanged.

17. The Holder may subscribe for and purchase any lesser number of Common Shares than the number of shares expressed in this Warrant Certificate. In the case of any subscription for a lesser number of Common Shares than expressed in this or any successor Warrant Certificate or a transfer of any of the Warrants pursuant to clause 16, the Holder shall be entitled to receive at no cost to the Holder a new Warrant Certificate in respect of the balance of Warrants not then exercised or transferred. Any new Warrant Certificate(s) shall be mailed to the Holder or assignee by the Corporation or, at its direction, the Transfer Agent, within five (5) business days of receipt by the Corporation of all materials required by clauses 5 or 16, as applicable.

18. Each Holder of this Warrant, the Warrant Shares or any other security issued or issuable upon exercise of this Warrant shall indemnify and hold harmless the Corporation, its directors and officers, and each person, if any, who controls the Corporation, against any losses, claims, damages or liabilities, joint or several, to which the Corporation or any such director, officer or any such person may become subject under the 1933 Act or statute or common law, insofar as such losses, claims, damages or liabilities, or actions in respect thereof, arise out of or are based upon the disposition by such Holder of the Warrant the Common Shares issuable upon the exercise of this Warrant in violation of the terms of this Warrant Certificate.

19. If any Warrant Certificate becomes stolen, lost, mutilated or destroyed, the Corporation shall, on such terms as it may in its discretion acting reasonably impose, issue and sign a new Warrant Certificate of like denomination, tenor and date as the Warrant Certificate so stolen, lost, mutilated or destroyed for delivery to the Holder.

20. The Corporation and the Transfer Agent may deem and treat the registered holder of any Warrant Certificate as the absolute owner of the Warrants represented thereby for all purposes, and the Corporation and neither the Corporation nor the Transfer Agent shall be affected by any notice or knowledge to the contrary except where the Corporation or the Transfer Agent is required to take notice by statute or by order of a court of competent jurisdiction. A Holder shall be entitled to the rights evidenced by such Warrant Certificate free from all equities or rights of set-off or counterclaim between the Corporation and the original or any intermediate holder thereof and all persons may act accordingly and the receipt by any such Holder of the Common Shares purchasable pursuant to such Warrant shall be a good discharge to the Corporation and the Transfer Agent for the same and neither the Corporation nor the Transfer Agent shall be bound to inquire into the title of any such Holder except where the Corporation or the Transfer Agent is required to take notice by statute or by order of a court of competent jurisdiction.

21. The Holders of Warrants shall have the power from time to time by an extraordinary resolution (as hereinafter defined):

(a) to sanction any modification, abrogation, alteration or compromise of the rights of the Holders of Warrants against the Corporation which shall be agreed to by the Corporation; and/or

(b) to assent to any modification of or change in or omission from the provisions contained herein or in any instrument ancillary or supplemental hereto which shall be agreed to by the Corporation; and/or

(c) to restrain any Holder of a Warrant from taking or instituting any suit or proceedings against the Corporation for the enforcement of any of the covenants on the part of the Corporation conferred upon the Holders by the terms of the Warrants.

Any such extraordinary resolution as aforesaid shall be binding upon all the Holders of Warrants whether or not assenting in writing to any such extraordinary resolution, and each Holder of any of the Warrants shall be bound to give effect thereto accordingly. Such extraordinary resolution shall, where applicable, be binding on the Corporation which shall give effect thereto accordingly.

The Corporation shall forthwith upon receipt of an extraordinary resolution provide notice to all Holders of the date and text of such resolution. The Holders of Warrants assenting to an extraordinary resolution agree to provide the Corporation forthwith with a copy of any extraordinary resolution passed.

The expression "extraordinary resolution" when used herein shall mean a resolution assented to in writing, in one or more counterparts, by the Holders of Warrants calling in the aggregate for not less than ninety per cent (90%) of the aggregate number of shares called for by all of the Warrants which are, at the applicable time, outstanding.

22. All notices to be sent hereunder shall be deemed to be validly given to the Holders of the Warrants if delivered personally or if sent by registered letter through the post addressed to such holders at their post office addresses appearing in the register of Warrant holders caused to be maintained by the Corporation. All notices to be sent hereunder shall be deemed to be validly given to the Corporation if delivered personally or if sent by registered letter through the post addressed to the Corporation at 1725 Sheridan Avenue, Suite 140, Cody, Wyoming 82414 or such other address as the Corporation shall have designated by written notice to such registered owner. Notice shall be deemed to have been given, if delivered personally when so delivered, and if sent by post on the fifth business day next following the post thereof.

23. This Warrant shall be governed by the laws of the State of Wyoming and the federal laws of the United States applicable therein (within reference to the conflict of laws provisions thereof).

IN WITNESS WHEREOF the Corporation has caused this Warrant Certificate to be signed by its duly authorized officer.

**DATED as of \_\_\_h day of \_\_\_\_\_, 1999.**

**ALTAIR INTERNATIONAL INC.**

*By: /s/William P. Long*

*-----  
William P. Long, President*

Acknowledged and agreed to as of the 7th day of December, 1999.

----- )  
Witness )  
----- )  
Witness )

**SUBSCRIPTION FORM**

**TO BE COMPLETED IF WARRANTS ARE TO BE EXERCISED:**

The undersigned hereby subscribes for \_\_\_\_\_ common shares of Altair International Inc. according to the terms and conditions set forth in the annexed warrant certificate (or such number of other securities or property to which such warrant entitles the undersigned to acquire under the terms and conditions set forth in the annexed warrant certificate). The subscriber acknowledges and agrees that any legend required by applicable law may be placed on any certificates representing common shares delivered to the undersigned.

Address for Delivery of Shares: -----  
-----  
-----  
-----

Attention: -----

Tendered (U.S. \$6.00 per share) Exercise Price \$ -----

Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Witness:     ) -----

) Holder's Name )

) ----- ) Authorized Signature )

) ----- ) Title (if applicable)

Signature guaranteed:

**ASSIGNMENT FORM**

**TO BE COMPLETED IF WARRANTS ARE TO BE ASSIGNED:**

**TO: ALTAIR INTERNATIONAL INC.**

1725 Sheridan Avenue  
Suite 140  
Cody, Wyoming 82414

This Warrant Certificate is hereby transferred to \_\_\_\_\_ residing

at \_\_\_\_\_ for good and valuable consideration. You are hereby instructed to take the necessary steps to effect this transfer.

Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Witness: )

) Holder's Name )

)

) ----- ) Authorized Signature )

)

) ----- ) Title (if applicable) )

)

Signature guaranteed: )

**Exhibit 4.5**

**ALTAIR INTERNATIONAL INC.**

**COMMON SHARE PURCHASE WARRANT**

\_\_\_\_\_ **Series L Warrants Warrant Certificate No. L-\_\_**

Void after 5:00 p.m., Mountain Standard Time on the third anniversary of \_\_\_\_\_ or on such earlier date specified herein

**ALTAIR INTERNATIONAL INC.**  
(Incorporated under the laws of Ontario)

This Series L Warrant Certificate ("Warrant Certificate") is to certify that, for value received, \_\_\_\_\_, or registered assigns (the "Holder") shall have the right to purchase from Altair International Inc. (hereinafter called the "Corporation") one fully paid and non-assessable Common Share of the Corporation for each Series L Warrant (individually, a "Warrant") represented by this Warrant Certificate at any time up to 5:00 p.m. (Mountain Standard time) on the earlier of (i) the third anniversary of \_\_\_\_\_, and (ii) the date thirty days following the fifth day (whether or not consecutive) the closing price of the Common Shares on the Nasdaq National Market equals or exceeds U.S. \$8.00 (the "Expiry Time"). The exercise price for the purchase of each such Common Share shall be U.S. \$6.00 per share (the "Exercise Price"). The number of Common Shares to be received upon the exercise of each Warrant and the Exercise Price may be adjusted from time to time as hereinafter set forth.

The Warrants shall be subject to the following terms and conditions:

1. For the purposes of this Warrant, the term "Common Shares" means common shares without nominal or par value in the capital of the Corporation as constituted on the date hereof; provided that in the event of a change, subdivision, redivision, reduction, combination or consolidation thereof or any other adjustment under clause 10 hereof, or successive such changes, subdivisions, redivisions, reductions, combinations, consolidations or other adjustments, then subject to the adjustments, if any, having been made in accordance with the provisions of this Warrant Certificate, "Common Shares" shall thereafter mean the shares, other securities or other property resulting from such change, subdivision, redivision, reduction, combination or consolidation or other adjustment.
2. This Warrant Certificate shall be signed by an officer of the Corporation holding office at the time of signing, or any successor or replacement person and notwithstanding any change in any of the persons holding said offices between the time of actual signing and the delivery of the Warrant Certificate and notwithstanding that such officer signing may not have held office at the date of the delivery of the Warrant Certificate, the Warrant Certificate so signed shall be valid and binding upon the Corporation.

3. All rights under any of the Warrants in respect of which the right of subscription and purchase therein provided for shall not theretofore have been exercised shall wholly cease and determine and such Warrants shall be wholly void and of no valid or binding effect after the Expiry Time.

4. The right to purchase Common Shares pursuant to the Warrants may only be exercised by the Holder at or before the Expiry Time by:

(a) duly completing and executing a Subscription Form substantially in the form attached hereto, in the manner therein indicated; and

(b) surrendering this Warrant Certificate and the duly completed and executed Subscription Form to the Corporation at the address specified in clause 22 below together with payment of the purchase price for the Common Shares subscribed for in the form of cash or a certified cheque payable to the Corporation in an amount equal to the then applicable Exercise Price multiplied by the number of Common Shares subscribed for.

5. Upon receipt of the Subscription, this Warrant Certificate, and payment as aforesaid, the Corporation shall cause to be issued to the Holder the number of Common Shares to be issued and the Holder shall become a shareholder of the Corporation in respect of such Common Shares, effective as of the date of receipt by the Corporation of such Subscription Form, Warrant Certificate, and payment and shall be entitled to delivery of a certificate or certificates evidencing such shares. The Corporation shall cause such certificate or certificates to be mailed to the Holder at the address or addresses specified in such Subscription Form within five (5) business days of such receipt and payment as herein provided or, if so instructed by the Holder, held for pick-up by the Holder at the principal office of the registrar and transfer agent of the Common Shares, Equity Transfer Services Inc. (the "Transfer Agent").

6. No fractional shares or stock representing fractional shares shall be issued upon the exercise of any Warrant. In lieu of any fractional shares which would otherwise be issuable, the Corporation shall either pay cash equal to the product of such fraction multiplied by the fair market value of one share of Common Stock on the date of exercise, as determined in good faith by the Corporation's Board of Directors, or issue the next largest whole number of Common Shares at the Corporation's option.

7. The Warrants may not be exercised unless at the time of exercise (i) a registration statement registering the Common Shares issuable upon such exercise is effective under the Securities Act of 1933, as amended (the "1933 Act"), or the transaction in which such shares are to be issued is exempted from the application of the registration requirements of the 1933 Act, and (ii) the Warrant Shares have been registered or qualified under any applicable Canadian, provincial, state securities laws or an exemption from registration or qualification is available under such laws. The Corporation has filed a Registration Statement on Form S-3 registering the Common Shares issuable upon the exercise of the Warrants, which Registration Statement is effective as of the date hereof.

8. The holding of a Warrant shall not constitute the Holder a shareholder of the Corporation nor entitle him to any right or interest in respect thereof except as herein expressly provided.

9. The Corporation covenants and agrees that until the Expiry Time, while any of the Warrants shall be outstanding, it shall reserve and there shall remain unissued out of its authorized capital a sufficient number of Common Shares to satisfy the right of purchase herein provided, as such right of purchase may be adjusted pursuant to clauses 10 and 11 hereof. All Common Shares which shall be issued upon the exercise of the right to purchase herein provided for, upon payment therefor of the amount at which such Common Shares may at the time be purchased pursuant to the provisions hereof, shall be issued as fully paid and non-assessable shares and the holders thereof shall not be liable to the Corporation or its creditors in respect thereof.

10. (a) If and whenever at any time after the date hereof and prior to the Expiry Time the Corporation shall (i) subdivide, redivide or change its then outstanding Common Shares into a greater number of Common Shares, (ii) reduce, combine or consolidate its then outstanding Common Shares into a lesser number of Common Shares or (iii) issue Common Shares (or securities exchangeable for or convertible into Common Shares) to the holders of all or substantially all of its then outstanding Common Shares by way of a stock dividend or other distribution (any of such events herein called a "Common Share Reorganization"), then the Exercise Price shall be adjusted effective immediately after the effective date of any such event in (i) or (ii) above or the record date at which the holders of Common Shares are determined for the purpose of any such dividend or distribution in (iii) above, as the case may be, by multiplying the Exercise Price in effect on such effective date or record date, as the case may be, by a fraction, the numerator of which shall be the number of Common Shares outstanding on such effective date or record date, as the case may be, before giving effect to such Common Share Reorganization and the denominator of which shall be the number of Common Shares outstanding immediately after giving effect to such Common Share Reorganization including, in the case where securities exchangeable for or convertible into Common Shares are distributed, the number of Common Shares that would be outstanding if such securities were exchanged for or converted into Common Shares.

(b) If and whenever at any time after the date hereof and prior to the Expiry Time, the Corporation shall distribute any class of shares or rights, options or warrants or other securities (other than those referred to in clause 10(a) above), evidences of indebtedness or property (excluding cash dividends paid in the ordinary course) to holders of all or substantially all of its then outstanding Common Shares, the number of Common Shares to be issued by the Corporation under this Warrant shall, at the time of exercise of the right of subscription and purchase under this Warrant Certificate, be appropriately adjusted and the Holder shall receive, in lieu of the number of the Common Shares in respect of which the right to purchase is then being exercised, the aggregate number of Common Shares or other securities or property that the Holder would have been entitled to receive as a result of such event, if, on the record date thereof, the Holder had been the registered holder of the number of Common Shares to which the Holder was theretofore entitled upon the exercise of the rights of the Holder hereunder.

(c) If and whenever at any time after the date hereof and prior to the Expiry Time there is a capital reorganization of the Corporation or a reclassification or other change in the Common Shares (other than a Common Share Reorganization) or a

consolidation or merger or amalgamation of the Corporation with or into any other corporation or other entity (other than a consolidation, merger or amalgamation which does not result in any reclassification of the outstanding Common Shares or a change of the Common Shares into other securities), or a transfer of all or substantially all of the Corporation's assets to another corporation or other entity in which the holders of Common Shares are entitled to receive shares, other securities or other property (any of such events being called a "Capital Reorganization"), the Holder, where he has not exercised the right of subscription and purchase under this Warrant Certificate prior to the effective date of such Capital Reorganization, shall be entitled to receive and shall accept, upon the exercise of such right, on such date or any time thereafter, for the same aggregate consideration in lieu of the number of Common shares to which he was theretofore entitled to subscribe for and purchase, the aggregate number of shares or other securities or property which the Holder would have been entitled to receive as a result of such Capital Reorganization if, on the effective date thereof, he had been the registered holder of the number of Common Shares to which he was theretofore entitled to subscribe for and purchase.

(d) If and whenever at any time after the date hereof and prior to the Expiry Time, any of the events set out in clause 10(a), (b) or (c) shall occur and the occurrence of such event results in an adjustment of the Exercise Price pursuant to the provisions of this clause 10, then the number of Common Shares purchasable pursuant to this Warrant shall be adjusted contemporaneously with the adjustment of the Exercise Price by multiplying the number of Common Shares then otherwise purchasable on the exercise thereof by a fraction, the numerator of which shall be the Exercise Price in effect immediately prior to the adjustment and the denominator of which shall be the Exercise Price resulting from such adjustment.

(e) If the Corporation takes any action affecting its Common Shares to which the foregoing provisions of this clause 10, in the opinion of the board of directors of the Corporation, acting in good faith, are not strictly applicable, or if strictly applicable would not fairly adjust the rights of the Holder against dilution in accordance with the intent and purposes hereof, or would otherwise materially affect the rights of the Holder hereunder, then the Corporation may execute and deliver to the Holder an amendment hereto providing for an adjustment in the application of such provisions so as to adjust such rights as aforesaid in such manner as the board of directors of the Corporation may determine to be equitable in the circumstances, acting in good faith. The failure of the taking of action by the board of directors of the Corporation to so provide for any adjustment on or prior to the effective date of any action or occurrence giving rise to such state of facts will be conclusive evidence that the board of directors has determined that it is equitable to make no adjustment in the circumstances.

11. The following rules and procedures shall be applicable to the adjustments made pursuant to clause 10:

(a) any Common Shares owned or held by or for the account of the Corporation shall be deemed not to be outstanding except that,

for the purposes of clause 10, any Common Shares owned by a pension plan or profit sharing plan for employees of the Corporation or any of its subsidiaries shall not be considered to be owned or held by or for the account of the Corporation;

(b) no adjustment in the Exercise Price shall be required unless a change of at least 1% of the prevailing Exercise Price would result, provided, however, that any adjustment which, except for the provisions of this clause 11(b), would otherwise have been required to be made, shall be carried forward and taken into account in any subsequent adjustment;

(c) the adjustments provided for in clause 10 are cumulative and shall apply to successive subdivisions, consolidations, dividends, distributions and other events resulting in any adjustment under the provisions of such clause;

(d) in the absence of a resolution of the board of directors of the Corporation fixing a record date for any dividend or distribution referred to in clause 10(a)(iii) above, the Corporation shall be deemed to have fixed as the record date therefor the date on which such dividend or distribution is effected;

(e) if the Corporation sets a record date to take any action and thereafter and before the taking of such action abandons its plan to take such action, then no adjustment to the Exercise Price will be required by reason of the setting of such record date;

(f) forthwith after any adjustment to the Exercise Price or the number of Common Shares purchasable pursuant to the Warrants, the Corporation shall provide to the Holder a certificate of an officer of the Corporation certifying as to the amount of such adjustment and, in reasonable detail, describing the event requiring and the manner of computing or determining such adjustment; and

(g) any question that at any time or from time to time arises with respect to the amount of any adjustment to the Exercise Price or other adjustment pursuant to clause 10 shall be conclusively determined by a firm of independent chartered accountants (who may be the Corporation's auditors) selected by the board of directors of the Corporation and shall be binding upon the Corporation and the Holder.

12. At least 21 days prior to the latter of the effective date or record date, as applicable, of any event referred to in clause 10, the Corporation shall notify the Holder of the particulars of such event and the estimated amount of any adjustment required as a result thereof.

13. On the happening of each and every such event set out in clause 10, the applicable provisions of this Warrant, including the Exercise Price, shall, ipso facto, be deemed to be amended accordingly and the Corporation shall take all necessary action so as to comply with such provisions as so amended.

14. The Corporation shall not be required to deliver certificates for Common Shares while the share transfer books of the Corporation are properly closed, having regard to the provisions of clauses 10 and 11 hereof, prior to any meeting of shareholders or for the payment of

dividends or for any other purpose and in the event of the surrender of any Warrant in accordance with the provisions hereof and the making of any subscription and payment for the Common Shares called for thereby during any such period delivery of certificates for Common Shares may be postponed for not more than five (5) days after the date of the re-opening of said share transfer books. Provided, however, that any such postponement of delivery of certificates shall be without prejudice to the right of the Holder so surrendering the same and making payment during such period to receive after the share transfer books shall have been re-opened such certificates for the Common Shares called for, as the same may be adjusted pursuant to clauses 10 and 11 hereof as a result of the completion of the event in respect of which the transfer books were closed.

15. Subject as hereinafter provided, all or any of the rights conferred upon the Holder by the terms hereof may be enforced by the Holder by appropriate legal proceedings. No recourse under or upon any obligation, covenant or agreement contained herein shall be had against any shareholder or officer of the Corporation either directly or through the Corporation, it being expressly agreed and declared that the obligations under the Warrants are solely corporate obligations and that no personal liability whatever shall attach to or be incurred by the shareholders or officers of the Corporation or any of them in respect thereof, any and all rights and claims against every such shareholder, officer or director being hereby expressly waived as a condition of and as a consideration for the issue of the Warrants.

16. The Warrants may not be assigned or transferred except as provided herein and in accordance with and subject to the provisions of the 1933 Act and the Rules and Regulations promulgated thereunder and any applicable state, Canadian, and provincial securities laws. Any purported transfer or assignment made other than in accordance with this Section 16 shall be null and void and of no force and effect. Any assignment permitted hereunder shall be made by surrender of this Warrant Certificate to the Corporation at its principal office with the Assignment Form annexed hereto duly executed and funds sufficient to pay any transfer tax. In such event, the Corporation shall, without charge, execute and deliver a new Warrant Certificate in the name of the assignee named in such Assignment Form, and the Warrants represented by this Warrant Certificate shall promptly be cancelled. This Warrant Certificate may be divided or combined with other Warrants which carry the same rights upon presentation thereof at the principal office of the Corporation together with a written notice signed by the Holder thereof, specifying the names and denominations in which new Warrants are to be issued. The terms "Warrant" and "Warrants" as used herein include any Warrants in substitution for or replacement of this Warrant, or into which the Warrant represented by this Warrant Certificate may be divided or exchanged.

17. The Holder may subscribe for and purchase any lesser number of Common Shares than the number of shares expressed in this Warrant Certificate. In the case of any subscription for a lesser number of Common Shares than expressed in this or any successor Warrant Certificate or a transfer of any of the Warrants pursuant to clause 16, the Holder shall be entitled to receive at no cost to the Holder a new Warrant Certificate in respect of the balance of Warrants not then exercised or transferred. Any new Warrant Certificate(s) shall be mailed to the Holder or assignee by the Corporation or, at its direction, the Transfer Agent, within five (5) business days of receipt by the Corporation of all materials required by clauses 5 or 16, as applicable.

18. Each Holder of this Warrant, the Warrant Shares or any other security issued or issuable upon exercise of this Warrant shall indemnify and hold harmless the Corporation, its directors and officers, and each person, if any, who controls the Corporation, against any losses, claims, damages or liabilities, joint or several, to which the Corporation or any such director, officer or any such person may become subject under the 1933 Act or statute or common law, insofar as such losses, claims, damages or liabilities, or actions in respect thereof, arise out of or are based upon the disposition by such Holder of the Warrant the Common Shares issuable upon the exercise of this Warrant in violation of the terms of this Warrant Certificate.

19. If any Warrant Certificate becomes stolen, lost, mutilated or destroyed, the Corporation shall, on such terms as it may in its discretion acting reasonably impose, issue and sign a new Warrant Certificate of like denomination, tenor and date as the Warrant Certificate so stolen, lost, mutilated or destroyed for delivery to the Holder.

20. The Corporation and the Transfer Agent may deem and treat the registered holder of any Warrant Certificate as the absolute owner of the Warrants represented thereby for all purposes, and the Corporation and neither the Corporation nor the Transfer Agent shall be affected by any notice or knowledge to the contrary except where the Corporation or the Transfer Agent is required to take notice by statute or by order of a court of competent jurisdiction. A Holder shall be entitled to the rights evidenced by such Warrant Certificate free from all equities or rights of set-off or counterclaim between the Corporation and the original or any intermediate holder thereof and all persons may act accordingly and the receipt by any such Holder of the Common Shares purchasable pursuant to such Warrant shall be a good discharge to the Corporation and the Transfer Agent for the same and neither the Corporation nor the Transfer Agent shall be bound to inquire into the title of any such Holder except where the Corporation or the Transfer Agent is required to take notice by statute or by order of a court of competent jurisdiction.

21. The Holders of Warrants shall have the power from time to time by an extraordinary resolution (as hereinafter defined):

(a) to sanction any modification, abrogation, alteration or compromise of the rights of the Holders of Warrants against the Corporation which shall be agreed to by the Corporation; and/or

(b) to assent to any modification of or change in or omission from the provisions contained herein or in any instrument ancillary or supplemental hereto which shall be agreed to by the Corporation; and/or

(c) to restrain any Holder of a Warrant from taking or instituting any suit or proceedings against the Corporation for the enforcement of any of the covenants on the part of the Corporation conferred upon the Holders by the terms of the Warrants.

Any such extraordinary resolution as aforesaid shall be binding upon all the Holders of Warrants whether or not assenting in writing to any such extraordinary resolution, and each Holder of any of the Warrants shall be bound to give effect thereto accordingly. Such extraordinary

resolution shall, where applicable, be binding on the Corporation which shall give effect thereto accordingly.

The Corporation shall forthwith upon receipt of an extraordinary resolution provide notice to all Holders of the date and text of such resolution. The Holders of Warrants assenting to an extraordinary resolution agree to provide the Corporation forthwith with a copy of any extraordinary resolution passed.

The expression "extraordinary resolution" when used herein shall mean a resolution assented to in writing, in one or more counterparts, by the Holders of Warrants calling in the aggregate for not less than ninety per cent (90%) of the aggregate number of shares called for by all of the Warrants which are, at the applicable time, outstanding.

22. All notices to be sent hereunder shall be deemed to be validly given to the Holders of the Warrants if delivered personally or if sent by registered letter through the post addressed to such holders at their post office addresses appearing in the register of Warrant holders caused to be maintained by the Corporation. All notices to be sent hereunder shall be deemed to be validly given to the Corporation if delivered personally or if sent by registered letter through the post addressed to the Corporation at 1725 Sheridan Avenue, Suite 140, Cody, Wyoming 82414 or such other address as the Corporation shall have designated by written notice to such registered owner. Notice shall be deemed to have been given, if delivered personally when so delivered, and if sent by post on the fifth business day next following the post thereof.

23. This Warrant shall be governed by the laws of the State of Wyoming and the federal laws of the United States applicable therein (within reference to the conflict of laws provisions thereof).

IN WITNESS WHEREOF the Corporation has caused this Warrant Certificate to be signed by its duly authorized officer.

**DATED as of \_\_\_th day of January, 2000.**

**ALTAIR INTERNATIONAL INC.**

*By: /s/William P. Long*

-----

*William P. Long, President*

Acknowledged and agreed to as of the \_\_\_th day of January, 2000.

-----  
Witness

)  
)  
)  
)

-----  
Witness

**SUBSCRIPTION FORM**

**TO BE COMPLETED IF WARRANTS ARE TO BE EXERCISED:**

The undersigned hereby subscribes for \_\_\_\_\_ common shares of Altair International Inc. according to the terms and conditions set forth in the annexed warrant certificate (or such number of other securities or property to which such warrant entitles the undersigned to acquire under the terms and conditions set forth in the annexed warrant certificate). The subscriber acknowledges and agrees that any legend required by applicable law may be placed on any certificates representing common shares delivered to the undersigned.

Address for Delivery of Shares: -----  
-----  
-----  
-----

Attention: -----

Tendered (U.S. \$6.00 per share) Exercise Price \$ -----

Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Witness:     ) -----

) Holder's Name )

) ----- ) Authorized Signature )

) ----- ) Title (if applicable)

Signature guaranteed:

**ASSIGNMENT FORM**

**TO BE COMPLETED IF WARRANTS ARE TO BE ASSIGNED:**

**TO: ALTAIR INTERNATIONAL INC.**

1725 Sheridan Avenue  
Suite 140  
Cody, Wyoming 82414

This Warrant Certificate is hereby transferred to \_\_\_\_\_ residing

at \_\_\_\_\_ for good and valuable consideration. You are hereby instructed to take the necessary steps to effect this transfer.

Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Witness: )

) Holder's Name )

)

) ----- ) Authorized Signature )

)

) ----- ) Title (if applicable) )

)

Signature guaranteed: )

**EXHIBIT 23.1**

[Letter Head of McGovern, Hurley, Cunningham]

**INDEPENDENT AUDITORS' CONSENT**

We consent to the incorporation by reference of our report dated February 17, 2000 (except as to note 17 which is dated as April 7, 2000) in (i) the Registration Statement on Form S-3, Registration No. 333-70763, filed by Altair International Inc. with the Securities and Exchange Commission (the "Commission"), (ii) the Registration Statement on Form S-8 filed by Altair International Inc. with the Commission on July 11, 1997, and (iii) the Registration Statement on Form S-8 filed by Altair International Inc. with the Commission on September 29, 1998 and to the reference to our firm under the heading "Experts" in the Prospectus or Disclosure Document, as applicable, which is a part of each such Registration Statement.

*By: /s/McGovern, Hurley, Cunningham*

-----  
*McGovern, Hurley, Cunningham*  
*Chartered Accountants*

*North York, Canada*  
*April 7, 2000*

## ARTICLE 5

PERIOD TYPE	12 MOS
FISCAL YEAR END	DEC 31 1999
PERIOD START	JAN 01 1999
PERIOD END	DEC 31 1999
CASH	153580
SECURITIES	0
RECEIVABLES	0
ALLOWANCES	0
INVENTORY	0
CURRENT ASSETS	1134033
PP&E	2816119
DEPRECIATION	(308241)
TOTAL ASSETS	15673908
CURRENT LIABILITIES	7563276
BONDS	0
PREFERRED MANDATORY	0
PREFERRED	0
COMMON	18324963
OTHER SE	(10214331)
TOTAL LIABILITY AND EQUITY	15673908
SALES	0
TOTAL REVENUES	0
CGS	0
TOTAL COSTS	0
OTHER EXPENSES	2424694
LOSS PROVISION	0
INTEREST EXPENSE	1966
INCOME PRETAX	(2291850)
INCOME TAX	0
INCOME CONTINUING	(2291850)
DISCONTINUED	0
EXTRAORDINARY	67442
CHANGES	0
NET INCOME	(224408)
EPS BASIC	(.15)
EPS DILUTED	0

<sup>1</sup> Fully diluted EPS not computed on loss.

---

**End of Filing**

Powered By **EDGAR**  
Online

© 2005 | EDGAR Online, Inc.