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ALTAIR NANOTECHNOLOGIES INC

Form S-3

December 13, 2002

As filed with the Securities and Exchange Commission on December 13, 2002

Registration No. 333-\_\_\_\_\_

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM S-3  
REGISTRATION STATEMENT  
Under the  
Securities Act of 1933  
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Altair Nanotechnologies Inc.

-----  
(Exact name of registrant as specified in its charter)

Canada

None

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

-----  
(I.R.S. employer  
identification number)

-----  
William P. Long  
Chief Executive Officer  
Altair Nanotechnologies Inc.  
1725 Sheridan Avenue, Suite 140  
Cody, Wyoming 82414  
(307) 587-8245  
(Name, address, including zip code,  
and telephone number,  
including area code, of agent for service)

Copies to:  
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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement as determined by market conditions.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: [ ]

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: [X]

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: [ ]

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If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box: [ ]

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 CALCULATION OF REGISTRATION FEE

| Title of each class of securities to be registered | Amount to be registered | Proposed maximum offering price per share(1) | Proposed maximum aggregate offering price(1) |
|--|-------------------------|--|--|
| Common shares, no par value                        | 8,202,786(2)            | \$0.56                                       | \$4,593,560                                  |

- (1) Estimated pursuant to Rule 457 solely for the purpose of calculating the registration fee based upon the average of the high and low sales prices for the common shares as reported on the Nasdaq SmallCap Market on December 10, 2002.
- (2) In addition, pursuant to Rule 416 of the Securities Act of 1933, this Registration Statement covers a presently indeterminate number of common shares issuable upon the occurrence of a stock split, stock dividend, or other similar transaction.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the SEC, acting pursuant to said Section 8(a), may determine.

ALTAIR NANOTECHNOLOGIES INC.  
 8,202,786 Common Shares  
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This prospectus relates to the offering and sale of 8,202,786 common shares of Altair Nanotechnologies Inc., without par value. All of the offered shares are to be sold by persons who are existing security holders and identified in the section of this prospectus entitled "Selling Shareholders." Of the common shares offered hereby, 3,062,500 are currently owned by the selling shareholders and 1,335,938 are issuable upon the exercise of outstanding warrants to purchase our common shares. The remaining 3,804,348 offered shares are being registered pursuant to a contractual obligation with one of the

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selling shareholders and represent common shares that we could be required to issue to such selling shareholder pursuant to a Second Amended and Restated Secured Term Note. In addition, pursuant to Rule 416 of the Securities Act of 1933, as amended, this prospectus, and the registration statements of which it is a part, cover a presently indeterminate number of common shares issuable upon the occurrence of a stock split, stock dividend, or other similar transaction.

We will not receive any of the proceeds from the sale of the shares offered hereunder. In the United States, our common shares are listed for trading under the symbol ALTI on the Nasdaq SmallCap Market. On December 10, 2002, the closing sale price of a common share, as reported by the Nasdaq SmallCap Market, was \$0.57 per share. Unless otherwise expressly indicated, all monetary amounts set forth in this prospectus are expressed in United States Dollars.

Our principal office is located at 1725 Sheridan Avenue, Suite 140, Cody, Wyoming 82414 U.S.A., and our telephone number is (307) 587-8245.

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Consider carefully the risk factors beginning on page 2 in this prospectus before investing in the offered shares being sold with this prospectus.  
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Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

Dated December 11, 2002

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### RISK FACTORS

Before you invest in the offered securities described in this prospectus, you should be aware that such investment involves the assumption of various risks. You should consider carefully the risk factors described below together with all of the other information included in this prospectus before you decide to purchase the offered securities.

We have not generated any substantial operating revenues and may not ever generate substantial revenues.

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To date, we have not generated substantial revenues from operations. We have not generated revenues from the jig and have scaled back development efforts for the foreseeable future. We have generated only \$141,576 of sales revenues as of September 30, 2002 and have not completed exploration of the Tennessee mineral property. We can provide no assurance that we will ever generate revenues from the jig or the Tennessee mineral property or that we will generate substantial revenues from the titanium processing technology.

We may continue to experience significant losses from operations.

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We have experienced a loss from operations in every fiscal year since our inception. Our losses from operations in 2000 were \$6,647,367 and our losses from operations in 2001 were \$6,021,532. We will continue to experience a net operating loss until, and if, the titanium processing technology, the jig and/or the Tennessee mineral property begin generating significant revenues. Even if any or all such products or projects begin generating significant revenues, the revenues may not exceed our costs of production and operating expenses. We may not ever realize a profit from operations.

We may not be able to raise sufficient capital to meet future obligations.

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As of September 30, 2002, we had \$306,061 in cash and a working capital deficit of \$2,181,380. Although we have raised additional capital since September 30, 2002, we do not expect that this capital, when combined with projected revenues from nanoparticle sales, will be sufficient to fund our ongoing operations. Accordingly, we will need to raise significant amounts of additional capital in the future in order to sustain our ongoing operations and continue the testing and additional development work necessary to place the titanium processing technology into continuous operation. In addition, we will

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need additional capital for testing and development of the jig or exploration of the Tennessee mineral property. If we determine to construct and operate a mine on the Tennessee mineral property, we will need to obtain a significant amount of additional capital to complete construction of the mine and commence operations.

We may not be able 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 the following:

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- o market factors affecting the availability and cost of capital generally;
- o our financial results;
- o the amount of our capital needs;
- o the market's perception of nanotechnology and/or minerals stocks;
- o the economics of projects being pursued;
- o industry perception of our ability to recover or produce minerals with the jig or titanium processing technology or from the Tennessee mineral property; and
- o the price, volatility and trading volume of our common shares.

If we are unable to obtain sufficient capital or are forced to pay a high price for capital, we may be unable to meet future obligations or adequately exploit existing or future opportunities, and may be forced to discontinue operations.

We have a substantial number of warrants, options and other convertible securities outstanding and may issue a significant number of additional shares upon exercise or conversion thereof.

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As of December 1, 2002, there were outstanding warrants to purchase up to 10,653,506 common shares at a weighted average exercise price of \$1.79 per share and options to purchase up to 3,911,700 common shares at a weighted average exercise price of \$3.98 per share. The existence of such warrants and options may hinder future equity offerings, and the exercise of such warrants and options may further dilute the interests of all shareholders. Future resale of the common shares issuable on the exercise of such warrants and options may have an adverse effect on the prevailing market price of the common shares.

In addition, we have issued a Second Amended and Restated Secured Term Note. Under the Second Amended and Restated Secured Term Note, a conversion right with respect to \$280,000 of principal accrues on each of March 1, 2003, June 1, 2003, September 1, 2003, December 1, 2003 and March 1, 2004. If the amount that would be subject to a conversion right is prepaid prior to the date of accrual, such conversion right does not accrue. Once a conversion right has accrued, the principal amount subject to that conversion right cannot be prepaid unless all principal amounts not subject to a conversion right have been prepaid in full. Each conversion right gives the holder the right to convert the subject principal amount into common shares at a conversion price equal to the lesser of (a) \$1.00 per share and (b) 70% of the average of the closing price of our common shares for the five trading days ending on the trading day immediately preceding the date on which that conversion right accrued.

In order to illustrate the relationship between the market price of our common shares and the issuance of common shares upon the exercise of conversion rights that may accrue under the Second Amended and Restated Secured Term Note, the following table sets forth how many additional common shares would be issued upon the exercise of such conversion rights if such conversion rights accrue and

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the average of the closing price of our common stock for the five trading days ending on the day before each conversion right accrues are (a) \$1.43 or greater, (b) \$0.50 per share, (c) \$0.25 per share, and (d) \$0.10 per share. Such prices are selected for illustration purposes only and do not reflect our actual estimate of the average of the closing price of our common stock for any particular period.

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|   | \$1.43 or<br>Greater | \$0.50  | \$0.25    | \$0.10    |
|---|----------------------|---------|-----------|-----------|
| Shares Issuable(1)                            | 280,000              | 800,000 | 1,600,000 | 4,000,000 |
| Percentage of Outstanding(2)<br>Common Shares | .9%                  | 2.6%    | 5.1%      | 11.8%     |

(1) Assumes that shareholder approval is obtained for the transaction in which we issued the Second Amended and Restated Secured Term Note and all related transactions, that no principal is prepaid, that all conversion rights accrue and are exercised at the same time and that no default occurs and that no penalties or premiums are required to be paid.

(2) Represents percentage of outstanding common shares following exchange assuming the 30,037,939 common shares outstanding on December 1, 2002 are outstanding on the date of conversion.

The potential accrual of such conversion rights may hinder future equity offerings, and the exercise of any conversion rights that accrue may further dilute the interests of all shareholders. The sale in the open market of common shares issuable upon the exercise of conversion rights may place downward pressure on the market price of our common shares. Speculative traders may anticipate the exercise of conversion rights and, in anticipation of a decline in the market price of our common shares, engage in short sales of our common shares. Such short sales could further negatively affect the market price of our common shares.

Our competitors may be able to raise money and exploit opportunities more rapidly, easily and thoroughly than we can.

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We have limited financial and other resources and, because of our early stage of development, have limited access to capital. We compete or may compete against entities that are much larger than we are, have more extensive resources than we do and have an established reputation and operating history. Because of their size, resources, reputation, history and other factors, certain of our competitors may have better access to capital and other significant resources than we do and, as a result, may be able to exploit acquisition and development opportunities more rapidly, easily or thoroughly than we can.

We have pledged substantial assets to secure the Second Amended and Restated Secured Term Note.

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We have pledged all of the intellectual property, fixed assets and common stock of Altair Nanomaterials, Inc., our second-tier wholly-owned subsidiary, to secure repayment of a Second Amended and Restated Secured Term Note with a face value of \$1,400,000 and a due date of March 31, 2004. Altair Nanomaterials, Inc. owns and operates the titanium processing technology we acquired from BHP in 1999. The Second Amended and Restated Secured Term Note is also secured by a pledge of the common stock and leasehold assets of Mineral Recovery Systems, Inc., which owns and operates our leasehold interests in the Camden, Tennessee area. If we default on the Second Amended and Restated Secured Term Note, severe remedies will be available to the holder of the Second Amended and Restated Secured Term Note, including immediate seizure and disposition of all pledged assets.

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We have issued a \$3,000,000 note to secure the purchase of the land and the building where our titanium processing assets are located.

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In August 2002, we entered into a purchase and sale agreement with BHP Minerals International Inc. to purchase the land, building and fixtures in Reno, Nevada where our titanium processing assets are located. In connection with this transaction, BHP also agreed to terminate our obligation to pay royalties associated with the sale or use of the titanium processing technology. In return, we issued to BHP a note in the amount of \$3,000,000, at an interest rate of 7%, secured by the property we acquired. The first payment of \$600,000 of principal plus accrued interest is due February 8, 2006. Additional payments of \$600,000 plus accrued interest are due annually on February 8, 2007 through 2010. If we fail to make the required payments on the note, BHP has the right to foreclose and take the property. If this should occur, we would be required to relocate our titanium processing assets and offices, causing a significant disruption in our business.

Operations using the titanium processing technology, the jig or the Tennessee mineral property may lead to substantial environmental liability.

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Virtually any proposed use of the titanium processing technology, the jig or the Tennessee mineral property would be subject to federal, state and local environmental laws. Under such laws, we may be jointly and severally liable with prior property owners for the treatment, cleanup, remediation and/or removal of any hazardous substances discovered at any property we use. In addition, courts or government agencies may impose liability for, among other things, the improper release, discharge, storage, use, disposal or transportation of hazardous substances. We might use hazardous substances and, if we do, we will be subject to substantial risks that environmental remediation will be required.

Certain of our experts and directors reside in Canada and may be able to avoid civil liability.

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We are a Canadian corporation, and a majority of our directors and our Canadian legal counsel are residents of 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 us 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

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or experts predicated upon United States securities laws.

We are dependent on key personnel.

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

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We may issue substantial amounts of additional shares without stockholder approval.

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

The market price of our common shares is extremely volatile.

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Our common shares are listed on the Nasdaq SmallCap Market. Trading in our common shares has been characterized by a high degree of volatility. Trading in our common shares may continue to be characterized by extreme volatility for numerous reasons, including the following:

- o Uncertainty regarding the viability of the titanium processing technology, the jig or the Tennessee mineral property;
- o Dominance of trading in our common shares by a small number of firms;
- o Positive or negative announcements by us or our competitors;
- o Uncertainty regarding our ability to maintain our listing on the Nasdaq SmallCap Market and/or continue as a going concern;
- o Industry trends, general economic conditions in the United States or elsewhere, or the general markets for equity securities, minerals, or commodities; and
- o Speculation by short sellers of our common shares or other persons who stand to profit from a rapid increase or decrease in the price of our common shares.

We may be delisted from the Nasdaq SmallCap Market.

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Our listing on the Nasdaq SmallCap Market is conditioned upon our compliance with the NASD's continued listing requirements for such market by June 2003, including the \$1.00 per share minimum bid requirement. If the market price for our common shares has not increased to \$1.00 per share for at least 10 consecutive days by June 2003, we expect to be delisted from the Nasdaq SmallCap Market. Delisting from the Nasdaq SmallCap Market may have a significant negative impact on the trading price, volume and marketability of our common shares.

We have never declared a cash dividend and do not intend to declare a cash dividend in the foreseeable future.

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We have never declared or paid cash dividends on our common shares. We currently intend to retain any future earnings, if any, for use in our business and, therefore, do not anticipate paying dividends on our common shares in the foreseeable future.

We may be unable to exploit the potential pharmaceutical application of our titanium processing technology.

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We do not have the technical or financial resources to complete development of, and take to market, any pharmaceutical application of our titanium processing technology. In order for Altair to get any significant, long-term benefit from any potential pharmaceutical application of our technologies, the following must occur:

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- o we must enter into an evaluation license or similar agreement with an existing pharmaceutical company under which such company would pay a fee for the right to evaluate a pharmaceutical use of our technology for a specific period of time and for an option to purchase or receive a license for such use of our technology;
- o tests conducted by such pharmaceutical company would have to indicate that the pharmaceutical use of our technology is safe, technically viable and financially viable;
- o such pharmaceutical company would have to apply for and obtain FDA approval of the pharmaceutical use of our technology, or any related products, which would involve extensive additional testing; and
- o such pharmaceutical company would have to successfully market the product incorporating our technology.

Although we could receive some revenues in various stages of the testing and evaluation of the pharmaceutical application of our technology, we are not expecting to receive significant revenue unless and until an end product incorporating the technology goes to market.

We may not be able to license our technology for TiO<sub>2</sub> pigment production.

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Because of our relatively small size and limited resources, we do not plan to use our titanium processing technology for large-scale production of TiO<sub>2</sub> pigments; we have, however, entered into discussions with various minerals and materials companies about licensing our technology to such entities for large-scale production of TiO<sub>2</sub> pigments. We have not entered into any long-term licensing agreements with respect to the use of our titanium processing technology for large-scale production of TiO<sub>2</sub> pigments and can provide no assurance that we will be able to enter into any such an agreement. Even if we enter into such agreement, we would not receive significant revenues from such license until feasibility testing is complete and, if the results of feasibility testing were negative, would not receive significant revenues at any time.

We may not be able to sell nanoparticles produced using the titanium processing technology.

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We plan to use the titanium processing technology to produce TiO<sub>2</sub> nanoparticles. TiO<sub>2</sub> nanoparticles and other products we intend to initially produce with the titanium processing technology generally must be customized for

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a specific application working in cooperation with the end user. We are still testing and customizing our TiO<sub>2</sub> nanoparticle products for various applications and have no long-term agreements with end users to purchase any of our TiO<sub>2</sub> nanoparticle products. We may be unable to recoup our investment in the titanium processing technology and titanium processing equipment for various reasons, including the following:

- o we may be unable to customize our TiO<sub>2</sub> nanoparticle products to meet the distinct needs of potential customers;
- o potential customers may purchase from competitors because of perceived or actual quality or compatibility differences

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- o our marketing and branding efforts may be insufficient to attract a sufficient number of customers; and
- o because of our limited funding, we may be unable to continue our development efforts until a strong market for nanoparticles develops.

In addition, the uses for such nanoparticles are limited, and the market for such nanoparticles is small. In light of the small size of the market, the addition of a single manufacturer may cause the price to drop to a point at which we cannot produce the nanoparticles at a profit.

Our costs of production may be too high to permit profitability.

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We have not produced any mineral products using our titanium processing technology and equipment on a commercial basis. Our actual costs of production may exceed those of competitors and, even if our costs of production are lower, competitors may be able to sell TiO<sub>2</sub> and other products at a lower price than is economical for Altair.

In addition, even if our initial costs are as anticipated, the titanium processing equipment may break down, prove unreliable or prove inefficient in a commercial setting. If so, related costs, delays and related problems may cause production of TiO<sub>2</sub> nanoparticles and related products to be unprofitable.

We have not completed testing and development of the jig and are presently focusing our resources on other projects.

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We have not completed testing of, or developed a production model of, any series of the jig. We do not expect to complete testing and development of the jig during the coming year and have determined to focus most of our limited resources on the titanium processing technology. We may never develop a production model of the jig.

Even if we complete development of the jig, the jig may prove unmarketable and may not perform as anticipated in a commercial operation.

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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 is completed and performs to design specifications in subsequent tests or at a commercial facility, we believe that, because of its small capacity, the potential market for the Series 12 jig is limited.

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If we complete development of and begin marketing a production model of the Series 30 jig, it may not prove attractive to potential end users, may be rendered obsolete by competing technologies or may not recover end product at a commercially viable rate. Even if technology included in the jig initially proves attractive to potential end users, performance problems and maintenance issues may limit the market for the jig.

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The jig faces competition from other jig-like products and from alternative technologies.

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Various jig-like products and alternative mineral processing technologies perform many functions similar or identical to those for which the jig is designed. Results from further tests or actual operations may reveal that these alternative products and 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 products and technologies as technically superior to, or more cost effective than, the jig.

Certain patents for the jig have expired, and those that have not expired may be difficult to enforce.

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All of the initial patents issued on the jig have expired, and we are unable to prevent competitors from copying the technology once protected by such patents. Additional patents related to the process through which water is pulsed through the cylindrical screen on the jig expire beginning in 2010, and patents for an efficiency-enhancing aspect of the cylindrical screen expire during 2018. The cost of enforcing patents is often significant, especially outside of North America. Accordingly, we may be unable to enforce even our patents that have not yet expired.

We have suspended examining the feasibility of mining the Tennessee mineral property and may not have working capital sufficient to again continue testing efforts.

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Due to a shortage of working capital, we have suspended feasibility testing of the Tennessee mineral property. We do not expect to obtain an amount of working capital sufficient to again start feasibility testing of the Tennessee mineral property in the foreseeable future.

Even if we again commence feasibility testing on the Tennessee mineral property, we are unable to provide any assurance that mining of the Tennessee mineral property is feasible or to identify all processes that we would need to complete before we could commence a mining operation on the Tennessee mineral property. To the extent early feasibility testing yields positive results, we expect feasibility testing to involve, among other things, the following:

- o operating a pilot mining facility to determine mineral recovery efficiencies and the quality of end products;
- o additional drilling and sampling in order to more accurately determine the quantity, quality and continuity of minerals on the Tennessee mineral property;
- o examining production costs and the market for products produced at the pilot facility;
- o designing any proposed mining facility;
- o identifying and applying for the permits necessary for any proposed full-scale mining facility; and

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- o attempting to secure financing for any proposed full-scale mining facility.

Our test production at the pilot plant, economic analysis and additional exploration activities may indicate any of the following:

- o that the Tennessee mineral property does not contain heavy minerals of a sufficient quantity, quality or continuity to permit any mining;
- o that production costs exceed anticipated revenues;

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- o that end products do not meet market requirements or customer expectations;
- o that there is an insufficient market for products minable from the Tennessee mineral property; or
- o that mining the Tennessee mineral property is otherwise not economically or technically feasible.

Even if we conclude that mining is economically and technically feasible on the Tennessee mineral property, we may be unable to obtain the capital, resources and permits necessary to mine the Tennessee mineral property. 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. In addition, as we move through the testing process, we may identify additional items that need to be researched and resolved before any proposed mining operation could commence.

We cannot forecast the life of any potential mining operation located on the Tennessee mineral property.

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We have not explored and tested the Tennessee mineral property enough to establish the existence of a commercially minable deposit (i.e. a reserve) on such property. Until such time as a reserve is established (of which there can be no assurance), we cannot provide an estimate as to how long the Tennessee mineral property could sustain any proposed mining operation.

We may be unable to obtain necessary environmental permits and may expend significant resources in order to comply with environmental laws.

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In order to begin construction and commercial mining on the Tennessee mineral property, we must obtain additional federal, state and local permits. We will also be required to conform our operations to the requirements of numerous federal, state and local environmental laws. Because we have not yet commenced design of a commercial mining facility on the Tennessee mineral property, we are 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, we anticipate having to comply with and/or obtain permits under the Clean Air Act, Clean Water Act and Resource Conservation and Recovery Act, in addition to numerous state laws and regulations before commencing construction or operation of a mine on the Tennessee mineral property. We can provide no assurance that we will be able to comply with such laws and regulations or obtain any such permits. In addition, obtaining such permits and complying with such environmental laws and regulations may be cost prohibitive.

The market for commodities produced using the jig or at the Tennessee mineral property may significantly decline.

If the jig is successfully developed and manufactured on a commercial basis, we intend 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 our control. 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 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 such property.

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#### FORWARD-LOOKING STATEMENTS

This prospectus 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 the previous section and other cautionary statements throughout this prospectus and our periodic filings with the SEC that are incorporated herein by reference. 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 prospectus or any applicable filings materializes, or any other underlying assumptions prove incorrect, our actual results may vary materially from those anticipated, estimated, projected, or intended.

Among the key factors that may have a direct bearing on our operating results are risks and uncertainties described under "Risk Factors," including those attributable to the absence of significant operating revenues or profits, uncertainties regarding the development and commercialization of the titanium processing technology and the jig, development risks associated with the Tennessee mineral property and uncertainties regarding our ability to obtain capital sufficient to continue our operations and pursue our proposed business strategy.

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#### OUR COMPANY'S COMMON STOCK

##### Price Range of Common Stock

Our common shares are quoted on the Nasdaq SmallCap Market under the symbol "ALTI." The following table sets forth, for the periods indicated, the high and low sales prices for our common shares, as reported on our principal trading market at the time.

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| Fiscal Year Ended December 31, 1999 | Low<br>----- | High<br>----- |
|-------------------------------------|--------------|---------------|
| First Quarter                       | \$6.063      | \$9.875       |
| Second Quarter                      | 4.125        | 6.875         |
| Third Quarter                       | 3.875        | 5.000         |
| Fourth Quarter                      | 3.453        | 5.063         |

| Fiscal Year Ended December 31, 2000 | Low<br>----- | High<br>----- |
|-------------------------------------|--------------|---------------|
| First Quarter                       | \$3.625      | \$9.469       |
| Second Quarter                      | 2.750        | 5.625         |
| Third Quarter                       | 2.000        | 4.469         |
| Fourth Quarter                      | 0.719        | 3.500         |

| Fiscal Year Ended December 31, 2001 | Low<br>----- | High<br>----- |
|-------------------------------------|--------------|---------------|
| First Quarter                       | \$1.313      | \$3.438       |
| Second Quarter                      | 2.000        | 2.910         |
| Third Quarter                       | 1.240        | 2.740         |
| Fourth Quarter                      | 1.010        | 1.800         |

| Fiscal Year Ending December 31, 2002 | Low<br>----- | High<br>----- |
|--------------------------------------|--------------|---------------|
| First Quarter                        | \$ 0.750     | \$ 1.560      |
| Second Quarter                       | 0.410        | 1.140         |
| Third Quarter                        | 0.300        | 0.930         |

The last sale price of the common shares, as reported on the Nasdaq SmallCap Market, on December 10, 2002 was \$0.57.

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### Outstanding Shares and Number of Shareholders

As of December 1, 2002, the number of common shares outstanding was 30,037,939, held by approximately 500 holders of record. In addition, as of the same date, we had reserved 5,241,700 common shares for issuance upon exercise of options that have been, or may be, granted under our employee stock option plans and 10,653,506 common shares for issuance upon the exercise of outstanding warrants. In addition, we have issued the Second Amended and Restated Secured Term Note, pursuant to which conversion rights may begin accruing in March 2003.

### Dividends

We have never declared or paid dividends on our common shares. Moreover, we currently intend to retain any future earnings for use in our business and, therefore, do not anticipate paying any dividends on our common shares in the foreseeable future.

### Transfer Agent and Registrar

The Transfer Agent and Registrar for our common shares is Equity Transfer Services, Inc., Suite 420, 120 Adelaide Street West, Toronto, Ontario, M5H 4C3.

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### Canadian Taxation Considerations

Dividends paid on common shares 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 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% 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 our common shares 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, our 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, 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

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by any combination thereof. If the 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.

### USE OF PROCEEDS

All proceeds from any sale of offered shares, less commissions and other customary fees and expenses, will be received by the selling shareholders selling the offered shares. We will not receive any proceeds from the sale of any of the offered shares.

### DILUTION

Our unaudited net tangible book value at September 30, 2002 was \$3,038,825, or approximately \$0.12 per each of the 26,203,902 common shares then outstanding. Accordingly, new investors who purchase shares may suffer an immediate dilution of the difference between the purchase price per share and approximately \$0.12 per share.

### SELLING SHAREHOLDERS

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All of the offered shares are to be sold by persons who are existing security holders of Altair. The selling shareholders acquired their shares, warrants and other rights in private placements of (i) the Second Amended and Restated Secured Term Note, 1,500,000 common shares and a warrant to purchase 750,000 common shares that we completed on November 25, 2002 (and amended on December 4, 2002) and (ii) 1,562,500 common shares and 585,938 warrants that we completed on November 27, 2002.

Of the common shares offered hereby, 3,062,500 are currently owned by the selling shareholders and 1,335,938 are issuable upon the exercise of outstanding warrants. For purposes of this prospectus, we have assumed that the number of shares issuable upon exercise of each of the warrants is the number stated on the face thereof. With respect to the Second Amended and Restated Secured Term Note, we have registered 3,804,348 common shares, which is 1.25 times the number of common shares that would be issuable were all conversion rights to have accrued and then been exercised on November 25, 2002. The actual number of shares that will be issued upon the exercise of conversion rights may be greater or fewer than such number.

The number of shares issuable upon exercise of the warrants and conversion rights that may accrue under the Second Amended and Restated Secured Term Note and available for resale hereunder is subject to adjustment and could materially differ from the estimated amount depending on the occurrence of a stock split, stock dividend, or similar transaction resulting in an adjustment in the number of shares subject to the warrants and conversion rights.

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Beneficial Ownership of Selling Shareholders

The table below sets forth, as of December 1, 2002, the following:

- o the name of each selling shareholder,
- o certain beneficial ownership information with respect to the selling shareholders,
- o the number of shares that may be sold from time to time by each selling shareholder pursuant to this prospectus, and
- o the amount (and, if one percent or more, the percentage) of common shares to be owned by each selling shareholder if all offered shares are sold.

Beneficial ownership is determined in accordance with SEC rules and generally includes voting or investment power with respect to securities. Common shares that are issuable upon the exercise of outstanding options, warrants or other purchase rights, to the extent exercisable within 60 days of December 1, 2002, are treated as outstanding for purposes of computing each selling shareholder's percentage ownership of outstanding common shares.

| Beneficial Owner | Beneficial Ownership<br>Prior to Offering |             | Number of<br>Shares Being<br>Offered | Share<br>upon<br>Offering |
|------------------|---|-------------|--------------------------------------|---------------------------|
|                  | Number of<br>Shares                       | Percent (2) |                                      |                           |
| -----            | -----                                     | -----       | -----                                | -----                     |



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|   |                |         |              |         |
|---|----------------|---------|--------------|---------|
| Doral 18, LLC<br>David White**                  | 1,501,596 (3)  | 4.9%(4) | 6,054,348(5) | 850,0   |
| Cranshire Capital, L.P.<br>Mitchell Kopin**     | 3,192,245 (6)  | 9.9%(7) | 687,500      | 2,504,7 |
| Vertical Ventures, LLC<br>Joshua Silverman**    | 343,750 (8)    | 1.14%   | 343,750      |         |
| Omicron Master Trust(9)                         | 343,750 (9)    | 1.14%   | 343,750      |         |
| ICN Capital Ltd.<br>Paul Moore**                | 85,938 (10)    | *       | 85,938       |         |
| Photon Fund Ltd.<br>Terrence Duffy**            | 343,750 (11)   | 1.14%   | 343,750      |         |
| Lionhart Aurora Fund Ltd.<br>Terrence Duffy**   | 343,750 (12)   | 1.14%   | 343,750      |         |
| All Selling Shareholders as<br>a Group<br>----- | 7,753,183 (13) | 23.08%  | 8,202,786    | 3,354,7 |

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- \* Represents less than one percent of the outstanding common shares.
- \*\* Such individual has authority to make voting and investment decisions with respect to the securities of Altair held by the entity listed above such individual's name.
- (1) Assuming the sale by each selling shareholder of all of the shares offered hereunder by such selling shareholder. There can be no assurance that any of the shares offered hereby will be sold.
- (2) The percentages set forth above have been computed assuming the number of common shares outstanding equals the sum of (a) 30,037,939, which is the number of common shares actually outstanding on December 1, 2002, and (b) the number of common shares subject to warrants and conversion rights held by the person with respect to which such percentage is calculated to the extent exercisable within 60 days of December 1, 2002.
- (3) Includes 1,600,000 common shares issuable by us upon the exercise of warrants held by Doral 18, LLC. Does not include common shares that may be issued pursuant to the Second Amended and Restated Secured Term Note because conversion rights with respect to such common shares do not begin accruing until March 2003.
- (4) Under the terms of the Second Amended and Restated Secured Term Note and warrants held by Doral, Doral is prohibited from exercising any accrued exchange rights or warrants if, after such exercise, it would beneficially own more than 4.999% of the outstanding common shares.
- (5) The number of shares offered exceeds the amount beneficially owned because the amount offered includes 3,804,348 common shares that may be offered upon exercise of conversion rights that may begin accruing in March 2003 under the Second Amended and Restated Secured Term Note. The 3,804,348 common shares registered with respect to the Second Amended and Restated Secured Term Note represents 1.25 times the number of common shares that would be issuable were all conversion rights to have accrued and then been exercised on November 25, 2002. The actual number of shares that will be issued upon the exercise of conversion rights

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- may be greater or fewer than such number.
- (6) Includes 1,555,211 common shares issuable by us upon the exercise of warrants and options held by such person.
  - (7) Cranshire is not permitted to utilize its right to exercise any warrants or options to the extent that, giving effect to such exercise, it would beneficially own in excess of 9.99% of our common shares.
  - (8) Includes 93,750 common shares issuable by us upon the exercise of warrants held by such person.
  - (9) Includes 93,750 common shares issuable by us upon the exercise of warrants held by such person. Omicron Capital, L.P., a Delaware limited partnership ("Omicron Capital"), serves as investment manager to Omicron Master Trust, a trust formed under the laws of Bermuda ("Omicron"). Omicron Capital, Inc., a Delaware corporation ("OCI"), serves as general partner of Omicron Capital, and Winchester Global Trust Company Limited ("Winchester") serves as the trustee of Omicron. By reason of such relationships, Omicron Capital and OCI may be deemed to share dispositive power over the shares of our common stock owned by Omicron, and Winchester may be deemed to share voting and dispositive power over the shares of our common stock owned by Omicron. Omicron Capital, OCI and Winchester disclaim beneficial ownership of such shares of our common stock. No other person has sole or shared voting or dispositive power with respect to the shares of our common stock being offered by Omicron, as those terms are used for the purposes of Regulation 13D-G under the Securities Exchange Act of 1934, as amended. Omicron and Winchester are not "affiliates" of one another, as that term is used for purposes of the Securities Exchange Act of 1934, as amended, or of any other person named in this prospectus as a selling stockholder. No person or "group" (as that term is used in Section 13(d) of the Securities Exchange Act of 1934, as amended, or the SEC's Regulation 13D-G) controls Omicron and Winchester.
  - (10) Includes 23,438 common shares issuable by us upon the exercise of warrants held by such person.
  - (11) Includes 93,750 common shares issuable by us upon the exercise of warrants held by such person.
  - (12) Includes 93,750 common shares issuable by us upon the exercise of warrants held by such person.
  - (13) Includes 3,553,649 common shares issuable by us upon the exercise of warrants held by the selling shareholders.

We believe that the selling shareholders who are individuals have sole voting and investment power with respect to all shares shown as beneficially owned by them. We believe that voting and investment power with respect to shares shown as beneficially owned by selling shareholders who are entities resides with the individuals identified in the preceding table or the notes thereto. There can be no assurance that any of the shares offered hereby will be sold.

### Private Placement of Shares, Warrants and Secured Note

Doral 18, LLC  
-----

On November 25, 2002, we entered into a Note Amendment Agreement dated November 21, 2002, pursuant to which, among other things, (1) the principal amount of an existing secured term note held by Doral was reduced from \$2,000,000 to \$1,400,000 in exchange for the issuance of 1,500,000 common shares, and (2) the secured term note was amended to extend the maturity date from March 31, 2003 to March 31, 2004. In order to effect these amendments to

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the Secured Term Note, the parties entered into a Second Amended and Restated Secured Term Note dated November 21, 2002, which supersedes the prior secured term note.

The Second Amended and Restated Secured Term Note is in the principal amount of \$1,400,000 and is due and payable on March 31, 2004. Interest on the Second Amended and Restated Secured Term Note accrues at the rate 11% per annum and is payable monthly in arrears in cash. Under the Second Amended and Restated Secured Term Note, a conversion right with respect to \$280,000 of principal accrues on each of March 1, 2003, June 1, 2003, September 1, 2003, December 1, 2003 and March 1, 2004. If the amount that would be subject to a conversion right is prepaid prior to the date of accrual, such conversion right does not accrue. Once a conversion right has accrued, the principal amount subject to such conversion right cannot be prepaid unless all principal amounts not subject to a conversion right have been prepaid in full. Each conversion right gives the holder the right to the convert the subject principal amount into our common shares at a conversion price equal to the lesser of, (a) \$1.00, and (b) 70% of the average of the closing price of our common shares for the five (5) trading days ending on the trading day immediately preceding the date with respect to which such conversion right accrued. The Second Amended and Restated Secured Term Note includes standard anti-dilution provisions pursuant to which the exercise price and number of common shares issuable thereunder are adjusted proportionately in the event of a stock split, stock dividend, recapitalization or similar transaction.

In addition, pursuant to the Note Amendment Agreement, we issued to Doral a warrant to purchase 750,000 common shares at the exercise price of \$1.00 per share at any time on or before November 21, 2007. The warrants include standard anti-dilution provisions pursuant to which the exercise price and number of common shares issuable thereunder are adjusted proportionately in the event of a stock split, stock dividend, recapitalization or similar transaction.

Pursuant to a Registration Rights Agreement entered into in connection with the Note Amendment Agreement, we agreed to register the re-sale of all common shares issued under the Note Amendment Agreement and issuable under the Second Amended and Restated Secured Term Note and warrant. If such re-sale registration statement is not effective by March 16, 2003, we will incur penalties as stated in the Registration Rights Agreement, and the failure to cause the registration statement to be effective within 180 days of December 16, 2002 is an event of default under the Second Amended and Restated Secured Term Note.

The shares that may be offered pursuant to this prospectus include the 1,500,000 common shares issued under the Note Amendment Agreement, the common shares issuable upon the exercise of the warrant to purchase 750,000 common

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shares granted in connection with the Note Amendment Agreement and 3,804,348 common shares with respect to conversion rights that may accrue under the Second Amended and Restated Secured Term Note. Such 3,804,348 common shares are 1.25 times the number of common shares that would be issuable were all conversion rights to have accrued and then been exercised on November 25, 2002. The actual number of shares that will be issued upon the exercise of conversion rights may be greater or fewer than such number.

Cranshire Capital, L.P., Vertical Ventures, LLC, Omicron Master Trust, ICN Capital Ltd., Photon Fund Ltd., and Lionhart Aurora Fund Ltd.

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On November 26, 2002, the selling shareholders listed below acquired a total of 1,562,500 common shares, together with 585,938 Series 2002I Warrants to purchase common shares, for an aggregate purchase price of \$625,000 (\$0.40 per unit comprised of one share and 0.375 Series 2002I Warrant). The Series 2002I Warrants are exercisable at \$1.00 per share and expire on November 26, 2007 or, after one year from date of issue or anytime after the shares are registered, the 180th day following the date the closing price of the common shares equals or exceeds \$3.00 for 10 days, whether or not consecutive. The Series 2002I Warrants include standard anti-dilution provisions pursuant to which the exercise price and number of common shares issuable thereunder are adjusted proportionately in the event of a stock split, stock dividend, recapitalization or similar transaction.

The specific acquisitions of each selling shareholder that acquired common shares and warrants in the November 26, 2002 acquisition are as follows:

| Purchaser<br>-----        | Number of Shares<br>----- | Number of Warrants<br>----- |
|---------------------------|---------------------------|-----------------------------|
| Cranshire Capital, L.P.   | 500,000                   | 187,500                     |
| Vertical Ventures, LLC    | 250,000                   | 93,750                      |
| Omicron Master Trust      | 250,000                   | 93,750                      |
| ICN Capital Ltd.          | 62,500                    | 23,438                      |
| Photon Fund Ltd.          | 250,000                   | 93,750                      |
| Lionhart Aurora Fund Ltd. | 250,000                   | 93,750                      |
| Total                     | 1,562,500                 | 583,938                     |

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The shares that may be offered pursuant to this prospectus include such 1,562,500 common shares and the common shares issuable upon exercise of such 585,938 warrants.

### PLAN OF DISTRIBUTION

The Shares. The shares offered by this prospectus may be sold from time to time by the selling shareholders, who consist of the persons named as "selling shareholders" above and those persons' pledgees, donees, transferees or other successors in interest. The selling shareholders may sell the offered shares on the Nasdaq SmallCap Market, or otherwise, at market prices or at negotiated prices. They may sell shares by one or a combination of the following:

- o a block trade in which a broker or dealer so engaged will attempt to sell the offered shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;

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- o purchases by a broker or dealer as principal and resale by the broker or dealer for its account pursuant to this prospectus;
- o ordinary brokerage transactions and transactions in which a broker solicits purchasers;
- o an exchange distribution in accordance with the rules of such exchange;
- o privately negotiated transactions;

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- o if such a sale qualifies, in accordance with Rule 144 promulgated under the Securities Act rather than pursuant to this prospectus; or
- o any other method permitted pursuant to applicable law.

The selling shareholders may also sell shares by means of short sales. Short sales involve the sale by a selling shareholder, usually with a future delivery date, of common shares that the seller does not own. Covered short sales are sales made in an amount not greater than the number of shares subject to the short seller's warrant, conversion right or other right to acquire common shares. A selling shareholder may close out any covered short position by either exercising its warrants or conversion rights to acquire common shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, a selling shareholder will likely consider, among other things, the price of common shares available for purchase in the open market as compared to the price at which it may purchase common shares pursuant to its warrants or conversion rights.

Naked short sales are any sales in excess of the number of shares subject to the short seller's warrant, conversion right or other right to acquire common shares. A selling shareholder must close out any naked position by purchasing shares. A naked short position is more likely to be created if a selling shareholder is concerned that there may be downward pressure on the price of the common shares in the open market.

The existence of a significant number of short sales generally causes the price of the common shares to decline, in part because it indicates that a number of market participants are taking a position that will be profitable only if the price of the common shares declines. Purchases to cover short sales may, however, increase the demand for the common shares and have the effect of raising or maintaining the price of the common shares.

In making sales, brokers or dealers engaged by the selling shareholders may arrange for other brokers or dealers to participate. Brokers or dealers will receive commissions or discounts from such selling shareholders in amounts to be negotiated prior to the sale. Such selling shareholders and any broker-dealers that participate in the distribution may be deemed to be "underwriters" within the meaning of Section 2(11) of the Securities Act of 1933, and any proceeds or commissions received by them, and any profits on the resale of shares sold by broker-dealers, may be deemed to be underwriting discounts and commissions. If a selling shareholder notifies us that a material arrangement has been entered into with a broker-dealer for the sale of shares through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a prospectus supplement, if required pursuant to the Securities Act of 1933, setting forth:

- o the name of each of the participating broker-dealers,
- o the number of shares involved,

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- o the price at which the offered shares were sold,
- o the commissions paid or discounts or concessions allowed to the broker-dealers, where applicable;
- o a statement to the effect that the broker-dealers did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and
- o any other facts material to the transaction.

General. We are paying the expenses incurred in connection with preparing and filing this prospectus and the registration statement to which it

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relates, other than selling commissions. In addition, in the event a selling shareholder effects a short sale of common shares, this prospectus may be delivered in connection with such short sale and the shares offered by this prospectus may be used to cover such short sale. To the extent, if any, that a selling shareholder may be considered an "underwriter" within the meaning of the Securities Act, the sale of the shares by the selling shareholders shall be covered by this prospectus.

We have not retained any underwriter, broker or dealer to facilitate the offer or sale of the offered shares offered hereby. We will pay no underwriting commissions or discounts in connection therewith, and we will not receive any proceeds from the sale of the offered shares.

In order to comply with the securities laws of certain states, if applicable, the offered securities will be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the offered shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available.

### DESCRIPTION OF OFFERED SECURITIES

For a description of the common shares offered hereunder, please refer to the description of the common shares provided in the Current Report on Form 8-K filed with the SEC on July 18, 2002.

### LEGAL MATTERS

The validity of the shares being offered hereby is being passed upon for us by Goodman and Carr LLP, Ontario, Canada.

### EXPERTS

The consolidated financial statements incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2001 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report (which report expresses an unqualified opinion and includes an explanatory paragraph referring to the uncertainty that the Company will be able to continue as a going concern), which is incorporated herein by reference, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

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### INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

As permitted by SEC rules, this prospectus does not contain all of the information that prospective investors can find in the Registration Statement or the exhibits to the Registration Statement. The SEC permits us to incorporate by reference into this prospectus information filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, except as superseded or modified by information contained directly in this prospectus or in a subsequently filed document that also is (or is deemed to be) incorporated herein by reference.

This prospectus incorporates by reference the documents set forth below that we (File No. 1-12497) have previously filed with the SEC pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These documents contain important information about the Company and its financial condition.

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- (a) Our Annual Report on Form 10-K for the year ended December 31, 2001, filed with the SEC on April 1, 2002.
- (b) Our Current Report on Form 8-K filed with the SEC on May 10, 2002.
- (c) Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2002 filed with the SEC on May 15, 2002.
- (d) Our Current Report on Form 8-K filed with the SEC on July 18, 2002.
- (e) Our Quarterly Report on Form 10-Q for the quarter ended June 30, 2002 filed with the SEC on August 14, 2002, as amended by the Amendment 1 to Quarterly Report on Form 10-Q/A filed with the SEC on October 15, 2002, as amended by the Amendment No. 2 on Form 10-Q/A filed with the SEC on October 21, 2002.
- (f) Our Quarterly Report on Form 10-Q for the quarter ended September 30, 2002 filed with the SEC on November 14, 2002.
- (g) Our Current Report on Form 8-K filed with the SEC on November 27, 2002, as amended by Amendment No. 1 to Current Report on Form 8-K/A filed with the SEC on December 4, 2002.
- (h) The description of the common shares contained in our Current Report on Form 8-K filed with the SEC on July 18, 2002.

We hereby incorporate by reference all reports and other documents filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and prior to the termination of this offering.

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### WHERE YOU CAN FIND MORE INFORMATION

We file 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.

In addition, we will provide, without charge, to each person to whom this prospectus is delivered, upon written or oral request of any such person, a copy of any or all of the foregoing documents (other than exhibits to such documents which are not specifically incorporated by reference in such documents). Please direct written requests for such copies to the Company c/o Mineral Recovery Systems at 204 Edison Way, Reno, Nevada 89502, U.S.A., Attention: Ed Dickinson, Chief Financial Officer. Telephone requests may be directed to the office of the Director of Finance at (800) 897-8245.

Our common shares are quoted on the Nasdaq SmallCap 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.

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We have not authorized any dealer, salesperson or other person to give any information or represent anything not contained in this prospectus. This prospectus does not offer to sell or buy any securities in any jurisdiction where it is unlawful. The information in this prospectus is current as of December 11, 2002.  
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8,202,786 Common Shares

ALTAIR NANOTECHNOLOGIES

8,202,786 COMMON SHARES

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Prospectus  
-----

December 11, 2002  
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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution  
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The following table sets forth the various expenses of the offering, sale and distribution of the offered securities being registered pursuant to this registration statement (the "Registration Statement"). All of the expenses listed below will be borne by the Company. All of the amounts shown are estimates except the SEC registration fees.

| Item                             | Amount   |
|----------------------------------|----------|
| SEC Commission registration fees | \$456    |
| NASD registration fees           | \$17,500 |
| Accounting fees and expenses     | \$5,000  |
| Legal fees and expenses          | \$15,000 |
| Blue Sky fees and expenses       | \$3,000  |
| Printing Expenses                | \$1,000  |
| Miscellaneous Expenses           | \$3,044  |
| Total:                           | \$45,000 |

### Item 15. Indemnification of Directors and Officers

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#### Our Bylaws

The Registrant's Bylaws provide that, to the maximum extent permitted by law, the Registrant shall indemnify a director or officer of the Registrant, a former director or officer of the Registrant, or another individual who acts or acted at the Registrant's request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including any amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the Registrant or other entity.

#### The Canada Business Corporations Act

Section 124 of the Canada Business Corporations Act provides as follows with respect to the indemnification of directors and officers:

(1) A corporation may indemnify a director or officer of the corporation, a former director or officer of the corporation or another

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individual who acts or acted at the corporation's request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the corporation or other entity.

(2) A corporation may advance moneys to a director, officer or other individual for the costs, charges and expenses of a proceeding referred to in

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subsection (1). The individual shall repay the moneys if the individual does not fulfill the conditions of subsection (3).

(3) A corporation may not indemnify an individual under subsection (1) unless the individual

(a) acted honestly and in good faith with a view to the best interests of the corporation, or, as the case may be, to the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at the corporation's request; and

(b) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that the individual's conduct was lawful.

(4) A corporation may with the approval of a court, indemnify an individual referred to in subsection (1), or advance moneys under subsection (2), in respect of an action by or on behalf of the corporation or other entity to procure a judgment in its favour, to which the individual is made a party because of the individual's association with the corporation or other entity as described in subsection (1) against all costs, charges and expenses reasonably incurred by the individual in connection with such action, if the individual fulfills the conditions set out in subsection (3).

(5) Despite subsection (1), an individual referred to in that subsection is entitled to indemnity from the corporation in respect of all costs, charges and expenses reasonably incurred by the individual in connection with the defense of any civil, criminal, administrative, investigative or other proceeding to which the individual is subject because of the individual's association with the corporation or other entity as described in subsection (1), if the individual seeking indemnity

(a) was not judged by the court or other competent authority to have committed any fault or omitted to do anything that the individual ought to have done; and

(b) fulfills the conditions set out in subsection (3).

(6) A corporation may purchase and maintain insurance of the benefit of an individual referred to in subsection (1) against any liability incurred by the individual

(a) in the individual's capacity as a director or officer of the corporation; or

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(b) in the individual's capacity as a director or officer, or similar capacity, of another entity, if the individual acts or acted in that capacity at the corporation's request.

(7) A corporation, an individual or an entity referred to in subsection (1) may apply to a court for an order approving an indemnity under this section and the court may so order and make any further order that it sees fit.

(8) An applicant under subsection (7) shall give the Director notice of the application and the Director is entitled to appear and be heard in person or by counsel.

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(9) On an application under subsection (7) the court may order notice to be given to any interested person and the person is entitled to appear and be heard in person or by counsel.

### Employment Agreements With Certain Officers

Pursuant to an employment agreement with William P. Long, the Chief Executive Officer and a director of the Registrant, the Registrant has agreed to assume all liability for and to indemnify, protect, save, and hold Dr. Long harmless from and against any and all losses, costs, expenses, attorneys' fees, claims, demands, liability, suits, and actions of every kind and character which may be imposed upon or incurred by Dr. Long on account of, arising directly or indirectly from, or in any way connected with or related to Dr. Long's activities as an officer and member of the board of directors of the Registrant, except as arise as a result of fraud, felonious conduct, gross negligence or acts of moral turpitude on the part of Dr. Long. In addition, Mineral Recovery Systems, Inc. ("MRS"), a wholly-owned subsidiary of the Registrant, has agreed to assume all liability for and to indemnify, protect, save, and hold harmless Patrick Costin (Vice President of the Registrant and President of MRS) from and against any and all losses, costs, expenses, attorneys' fees, claims, demands, liabilities, suits and actions of every kind and character which may be imposed on or incurred by Mr. Costin on account of, arising directly or indirectly from, or in any way connected with Mr. Costin's activities as manager, officer, or director of MRS or the Registrant.

### Other Indemnification Information

Indemnification may be granted pursuant to any other agreement, bylaw, or vote of shareholders or directors. In addition to the foregoing, the Registrant maintains insurance through a commercial carrier against certain liabilities which may be incurred by its directors and officers. The foregoing description is necessarily general and does not describe all details regarding the indemnification of officers, directors or controlling persons of the Registrant.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions or otherwise, the Registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the

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successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The rights of indemnification described above are not exclusive of any other rights of indemnification to which the persons indemnified may be entitled under any bylaw, agreement, vote of stockholders or directors or otherwise.

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The following exhibits required by Item 601 of Regulations S-K promulgated under the Securities Act have been included herewith or have been filed previously with the SEC as indicated below.

| Exhibit No. | Description   | Incorporated by Reference<br>Filed Herewith (and Sequences)   |
|-------------|---|---|
| 4.1         | Form of common stock certificate  | Incorporated by reference to Report on Form 10-SB filed with the Commission on November 25, 1996, File No. 1-12497.     |
| 4.2         | Second Amended and Restated Secured Term Note dated November 21, 2002   | Incorporated by reference to the Report on Form 8-K filed with the Commission on December 4, 2002, File No. 333-100637. |
| 4.3         | Warrant to Purchase Common Stock (Note Amendment Agreement)   | Incorporated by reference to the Report on Form 8-K filed with the Commission on November 27, 2002, File No. 1-12497.   |
| 4.4         | Form of Series 2002I Warrant  | Incorporated by reference to Report on Form S-3 filed with the Commission on December 4, 2002, File No. 333-100637.     |
| 4.5         | Amended and Restated Shareholder Rights Plan dated October 15, 1999, between the Company and Equity Transfer Services, Inc. | Incorporated by reference to the Report on Form 8-K filed with the Commission on November 19, 1999, File No. 1-12497.   |
| 5           | Opinion of Goodman and Carr LLP as to legality of securities offered  | Filed herewith  |
| 10.1        | Note Amendment Agreement dated November 21, 2002  | Incorporated by reference to the Report on Form 8-K filed with the Commission on November 27, 2002, File No. 1-12497.   |
| 10.2        | Registration Rights Agreement   | Incorporated by reference to the Report on Form 8-K filed with the Commission on November 27, 2002, File No. 1-12497.   |
| 23.1        | Consent of Deloitte & Touche LLP  | Filed herewith  |
| 23.2        | Consent of Goodman and Carr LLP   | Included in Exhibit No. 5 above.  |
| 24          | Powers of Attorney  | Included on the signature page herewith   |

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### Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made of

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the securities registered hereby, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement; notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement; provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3, Form S-8 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Company pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Company hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in the Registration Statement shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company, the Company has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement on Form S-3 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cody, State of Wyoming, on December 11, 2002.

ALTAIR NANOTECHNOLOGIES INC.

By /s/ William P. Long

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William P. Long  
Chief Executive Officer

ADDITIONAL SIGNATURES AND POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated. Each person whose signature to this Registration Statement appears below hereby constitutes and appoints William P. Long and Edward H. 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 Registration Statement, and any and all instruments or documents filed as part of or in connection with this Registration Statement 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.

| Signature<br>-----                                      | Title<br>-----   |
|---|--|
| /s/ William P. Long<br>-----<br>William P. Long         | Chief Executive Officer and Director<br>(Principal Executive Officer and authorized<br>representative of the Company in the United States) |
| /s/ Edward H. Dickinson<br>-----<br>Edward H. Dickinson | Chief Financial Officer and Director<br>(Principal Financial Officer and Principal<br>Accounting Officer)                                  |
| /s/ James I. Golla<br>-----<br>James I. Golla           | Director   |
| /s/ George E. Hartman<br>-----                          | Director   |

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George E. Hartman

Director

-----  
Robert Sheldon

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## EXHIBIT INDEX

### Item 16. Exhibits.

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The following exhibits required by Item 601 of Regulations S-K promulgated under the Securities Act have been included herewith or have been filed previously with the SEC as indicated below.

| Exhibit No. | Description   | Incorporated by Reference<br>Filed Herewith (and Sequence)   |
|-------------|---|--|
| -----       | -----   | -----  |
| 4.1         | Form of common stock certificate  | Incorporated by reference to Report on Form 10-SB filed with the SEC on December 25, 1996, File No. 1-12497.               |
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| 5           | Opinion of Goodman and Carr LLP as to legality of securities offered  | Filed herewith   |
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|      |                                  |  |
|------|----------------------------------|--|
| 10.2 | Registration Rights Agreement    | Incorporated by reference to the Report on Form 8-K filed with November 27, 2002, File No. 1-124 |
| 23.1 | Consent of Deloitte & Touche LLP | Filed herewith   |
| 23.2 | Consent of Goodman and Carr LLP  | Included in Exhibit No. 5 above.   |
| 24   | Powers of Attorney               | Included on the signature page here  |

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