

ALTAIR NANOTECHNOLOGIES INC  
Form 10-K  
March 16, 2006

**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, 2005**

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

**ALTAIR NANOTECHNOLOGIES INC.**

(Exact name of registrant as specified in its charter)

<b>Canada</b>	<b>1-12497</b>	<b>33-1084375</b>
(State or other jurisdiction of incorporation)	(Commission File No.)	(IRS Employer Identification No.)

**204 Edison Way**  
**Reno, Nevada 89502-2306**

\_\_\_\_\_  
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (775) 856-2500

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 Capital Market  
(Name of each exchange on which registered)

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES  NO

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES  NO

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. [ ]

---

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of “accelerated filer” and “large accelerated filer” in Rule 12b-2 of the Exchange Act (Check one):

Large accelerated filer [ ]      Accelerated filer [X]      Non-accelerated filer [ ]

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act): YES [ ] NO [X]

The aggregate market value of the common shares held by non-affiliates of the Registrant on June 30, 2005, based upon the average bid and asked price of the common shares on the NASDAQ Capital Market of \$2.96 per share on June 30, 2005, was approximately \$174,009,000. 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 3, 2006, the Registrant had 59,352,519 common shares outstanding.

#### **DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Registrant’s Proxy Statement on Schedule 14A for the Registrant’s 2006 Annual Meeting of Shareholders are incorporated by reference in Part III as specified.

**INDEX TO FORM 10-K**

<b><u>PART I</u></b>	1
<u>Item 1. Business</u>	1
<u>Item 1A. Risk Factors</u>	23
<u>Item 1B. Unresolved Staff Comments</u>	28
<u>Item 2. Properties</u>	29
<u>Item 3. Legal Proceedings</u>	29
<u>Item 4. Submission of Matters to a Vote of Security Holders</u>	30
<b><u>PART II</u></b>	31
<u>Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	31
<u>Item 6. Selected Financial Data</u>	33
<u>Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.</u>	34
<u>Item 7A. Quantitative and Qualitative Disclosures About Market Risk</u>	43
<u>Item 8. Financial Statements and Supplementary Data.</u>	43
<u>Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.</u>	43
<u>Item 9A. Controls and Procedures</u>	44
<u>Item 9B. Other Information</u>	45
<b><u>PART III</u></b>	45
<u>Item 10. Directors and Executive Officers of the Registrant</u>	45
<u>Item 11. Executive Compensation</u>	45
<u>Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	45
<u>Item 13. Certain Relationships and Related Transactions</u>	45
<u>Item 14. Principal Accountant Fees and Services</u>	45
<b><u>PART IV</u></b>	46
<u>Item 15. Exhibits, Financial Statement Schedules and Reports on Form 8-K</u>	46

Table of Contents

**PART I**

*This Annual Report on Form 10-K for the year ended December 31, 2005 (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 Securities 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 shares") of Altair Nanotechnologies Inc. are cautioned that our 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 "Item 1A. Risk Factors" and elsewhere in this Form 10-K generally. The reader is also encouraged to review other filings made by us with the Securities and Exchange Commission (the "SEC") describing other factors that may affect future results of the Company.*

Unless the context requires otherwise, all references to "Altair," "we," "Altair Nanotechnologies Inc.," or the "Company" in this Form 10-K refer to Altair Nanotechnologies Inc. and all of its subsidiaries. Altair currently has one wholly-owned subsidiary, Altair US Holdings, Inc., a Nevada corporation. Altair US Holdings, Inc. directly or indirectly wholly-owns Altair Nanomaterials, Inc., a Nevada corporation, Mineral Recovery Systems, Inc., a Nevada corporation ("MRS"), Fine Gold Recovery Systems, Inc., a Nevada corporation ("Fine Gold") and Tennessee Valley Titanium, Inc., a Nevada corporation.

**Item 1: Business**

We are a Canadian company, with principal assets and operations in the United States, whose primary business is developing and commercializing nanomaterial and titanium dioxide pigment technologies. We also provide contract research services on select projects where we can utilize our resources to develop intellectual property and/or new products and technology. Our research, development, production, marketing and sales efforts are currently directed toward six market applications that utilize our proprietary technologies:

Advanced Materials

- o The marketing and licensing of titanium dioxide pigment production technology.
- o The marketing and production of nano-structured ceramic powders for thermal spray applications.
- o The development of nano-structured ceramic powders for nano-sensor applications.
- o The development of titanium dioxide electrode structures in connection with research programs aimed at developing a lower-cost process for producing titanium metals and related alloys. Development of this product is largely inactive as we seek a business partner.

Air and Water Treatment

- o The development, production and sale of photocatalytic materials for air and water cleansing.
- o The marketing of Nanocheck products for phosphate binding to prevent or reduce algae growth in recreational and industrial water.

Alternative Energy

- o The development, production and sale of nano-structured lithium titanate spinel, lithium cobaltate and lithium manganate spinel materials for high performance lithium ion batteries.
- o The design and development of power lithium ion battery cells, batteries and battery packs as well as related design and test services.
- o The development of materials for photovoltaics and transparent electrodes for hydrogen generation and fuel cells.

Table of Contents

Lanthanum based Pharmaceutical Products

- oThe co-development of RenaZorb, a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of elevated serum phosphate levels in patients undergoing kidney dialysis.
- oThe testing of Renalan, a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of elevated serum phosphate levels in companion animals suffering from chronic renal disease.

Chemical Delivery Products

- oThe development of TiNano Spheres, which are rigid, hollow, porous, high surface area ceramic micro structures that are derived from Altair's proprietary process technology for the delivery of chemicals, drugs and biocides.

Biocompatible Materials

- oThe development of nanomaterials for use in various products for dental implants, dental fillings and dental products, as well as biocompatible coatings on implants.

We also provide contract research services on select projects where we can utilize our resources to develop intellectual property and/or new products and technology. In the near term, as we continue to develop and market our products and technology, contract services will continue to be a substantial component of our operating revenues. During the years ended December 31, 2005, 2004 and 2003, contract services revenues comprised 70%, 99% and 88%, respectively, of our operating revenues.

**Our Nanomaterials and Titanium Dioxide Pigment Business**

**Background and Description of Process**

Most of our existing products, potential products and contract research services are built upon our proprietary nanomaterials and titanium dioxide pigment technology. We acquired the basis for this technology from BHP Minerals International, Inc. in 1999 and, over the past six years, have continued to expand and refine various applications of the technology. Today, we use the technology in order to produce various finely-sized powders that have current or potential applications in a wide range of industries, including pharmaceuticals, titanium dioxide pigment, photocatalytic oxidation products, catalyst structures, protective thermal spray powders, algae control and high performance rechargeable batteries. Although the existing and potential applications are varied, each is directly or indirectly built upon the ingenuity of our management, research and development staff and engineering team and our proprietary nanomaterials and titanium dioxide pigment technology.

This nanomaterials and titanium dioxide pigment technology enables our production of conventional titanium dioxide pigment products that are finely-sized powders consisting of titanium dioxide crystals. These powders approximate 170-300 nanometers in size. This technology is also capable of producing titanium dioxide and other metal and mixed metal oxide nanomaterials. These are specialty products with a size range of 10 to 100 nanometers (approximately one tenth the size of conventional titanium dioxide pigment). The primary products currently being produced in the processing plant are titanium dioxide, lithium titanate spinel, lanthanum products and stabilized zirconia nanomaterials. The technology also enables the production of customized products for catalyst support structures, thermal barrier coating materials and porous titanium oxide electrode structures for titanium metal production.

## Table of Contents

Our nanomaterials and titanium dioxide pigment technology is fundamentally different from current commercial processing techniques. Other processes are based on either a precipitation of materials from a solution or the formation of crystallites from molten droplets of titanium oxide generated in high temperature flame reactors. Our process is a dense-phase crystal growth technique which controls crystal formation using a combination of mechanical, fluid dynamics, chemical and thermal control. Our process permits exceptional control over particle size, shape, and crystalline form. Our titanium dioxide processing technology produces discrete anatase crystals in nanometer sizes and may be doped to be thermally stable up to 800 degrees centigrade. By remaining stable in high-temperature processing, nanomaterials produced by our titanium dioxide pigment processing technology retain the desired nanomaterials size and crystalline phase. In addition, our technology is designed to minimize process effluents needing environmental remediation and to accept a wide variety of low-cost, naturally occurring titanium feed stocks.

Using this technology, we are in various stages of research, development and marketing of numerous products and potential products. We also use this technology to provide contract research services on select projects where we can utilize our resources to develop intellectual property and/or new products and technology. The following sections describe the research and development services we provide and the principal projects we are using our nanomaterials and titanium dioxide pigment technology to develop.

### **Contract Research Services**

In addition to doing research and development work for our own benefit, we provide these services to others, principally in commercial collaboration arrangements and under government grants. During 2006, we expect to utilize our nanomaterials and titanium dioxide pigment technology under the following:

- a contract with Western Oil Sands, Inc. for the production of titanium dioxide pigment and pigment-related products from oil sands. We have constructed a pilot separation plant for Western Oil Sands, Inc. in our Reno, Nevada facility that we are using under contract to develop the process for recovering titanium dioxide from oil sands. At December 31, 2005 and 2004, we had approximately \$642,000 and \$200,000, respectively, of work remaining to be done on existing contracts;
- a contract with Western Michigan University to develop nanosensors for the detection of chemical, biological and radiological agents. At December 31, 2005 and 2004, we had approximately \$16,000 and \$500,000, respectively, of work to be done under existing contracts. We expect to continue the project under an announced federal earmark grant that is estimated to provide \$1,000,000 to us over approximately one year;
- a grant awarded by the National Science Foundation to fund joint development work on next generation lithium ion power sources. At December 31, 2005 and 2004, we had approximately \$349,000 and \$33,000, respectively, of work remaining to be done on existing contracts. The work to be done under the contract backlog at December 31, 2005 is expected to run through June 30, 2007; and
- an agreement with the University of Nevada, Las Vegas Research Foundation to act as a subcontractor under a \$3,000,000 grant awarded to them by the U.S. Department of Energy for joint research activities related to solar hydrogen production. At December 31, 2005 and 2004, we had approximately \$623,000 and \$400,000, respectively, of work to be done under the agreement.

We expect that contract research services will be a significant portion of our revenues in the short-term but will decline in significance if we are successful in bringing nanoparticle and other products to market and license our technologies. Total research and development expenses were \$5,073,478, \$2,189,150 and \$1,961,744 for the years ended December 31, 2005, 2004 and 2003, respectively, while research and development costs funded by customers were \$1,962,162, \$1,144,389 and \$64,249 for the years ended December 31, 2005, 2004 and 2003, respectively.





### Table of Contents

During the year ended December 31, 2005, we recorded revenues from four major customers, each of which accounted for 10% or more of revenues. Revenues from Western Michigan University were \$481,519; revenues from Western Oil Sands, Inc. were \$616,515, and revenues from the UNLV Research Foundation were \$492,818. All of these customers are in the performance materials business segment. Revenues from Spectrum Pharmaceuticals, Inc., a life sciences segment customer, were \$729,271.

### **Trademarks**

We have registered or are in the process of registering the following trademarks: Altair Nanotechnologies®, Altair Nanomaterials®, Altairnano™, TiNano®, Nanocheck™ and RenaZorb®.

### **The Performance Materials Division**

#### **Primary Products**

#### **The Altair Hydrochloride Pigment Process (AHPP)**

We have named the portion of the nanomaterials and titanium dioxide pigment technology that was developed to produce high quality titanium dioxide pigment the Altair Hydrochloride Pigment Process (AHPP). This package of technologies includes four US patents, trade secrets and know-how developed over nine years of research and development. The technology represents a comprehensive process to extract heavy minerals such as titanium from raw materials, produce a high quality titanium dioxide pigment and minimize environmental impact.

#### Key Features

The AHPP is the first new, comprehensive technology to produce titanium dioxide pigment in over fifty years and takes advantage of new technologies to enable high quality pigment production. Titanium dioxide pigment is produced in bulk and is used principally as a whitener and opacifier for paper, plastics and paint. The AHPP uses a dense-phase crystal growth technique which controls crystal formation using a combination of mechanical, fluid dynamics, chemical and thermal control. A third party engineering study suggests that cost associated with this process will be lower than costs associated with alternative processes. All hydrochloric acid waste streams can be recycled to recover acid, and the waste solids generated from the purification process are easily manageable iron oxides.

#### Target Markets and Marketing Plans/Efforts

We intend to benefit from the AHPP through technology license agreements with large materials companies under which we would receive royalties and other payments. We do not anticipate being a manufacturer of pigments or competing directly in the pigment market. Our market approach has been to target chemical manufacturing and mining companies who are addressing the market for high grade titanium dioxide pigment. In general, European and North American companies have substantial investment in traditional chloride- and sulfate-based methods of producing pigment and so will be slow to adopt new technology like our AHPP. However, companies and governments in the developing world have stated that they see substantial value in being self-sufficient in titanium dioxide production both from an economic as well as a political viewpoint. These geographies are also swifter to adopt new technology as they have less infrastructure and investment tied to traditional methods of pigment production.

### Table of Contents

In April 2005, we signed a memorandum of understanding with Bateman Engineering NV (“Bateman”) to form a joint venture combining our hydrochloride pigment process technology with Bateman’s engineering, design and construction expertise. We expect that the joint venture, Altair-Bateman Titania, Inc. (“ABT”), will offer customers an integrated resource for technology development, engineering, design and construction of pigment processing projects. We expect that the joint venture will be funded entirely by Altair and Bateman, with each having equal shareholding and Altair having voting control. We expect the joint venture to help in marketing the AHPP, particularly in developing countries which have little or no local production capacity.

In marketing the process, the first step is detailed analysis of the ore to be processed to ensure it can produce the quality of titanium dioxide required. Assuming positive results, this is followed by a process designed to demonstrate the feasibility of the overall manufacturing process with a small pilot plant, and then, if successful, a larger scale plant. This is the normal course for establishing a new chemical plant that can ultimately produce in excess of 100,000 tons of pigment per year. During each of these phases, we expect to receive consulting and engineering study fees through the ABT joint venture. If a full plant is constructed, we would expect to begin receiving royalty payments.

### Research, Testing, Development and Licensing Status

The AHPP is substantially developed and, in a test environment, we are able to extract titanium from raw materials in order to produce a high quality titanium dioxide pigment. The AHPP is not, however, a one-size-fits-all technology and needs to be customized to the particular needs of any potential licensee. As described below, we have entered into a license with Western Oil Sands, Inc. (“**Western**”) with respect to the AHPP. In addition to our work with Western, we have submitted phased development proposals for the testing and economic evaluation of our titanium pigment production technology to several companies. As illustrated by the description of our license with Western below, any license of the AHPP will involve various stages of testing and development tailored to the licensee’s specific needs. Such licenses may involve incremental payments and development services along the way but will lead to significant revenue only if a full-scale commercial titanium pigment production facility is constructed.

In January 2004, we entered into a license agreement with Western with respect to its possible use of the AHPP for the production of titanium dioxide pigment and pigment-related products at the Athabasca Oil Sands Project in Alberta, Canada, and elsewhere. Upon execution of the agreement, we granted Western an exclusive, conditional license to use the AHPP on heavy minerals derived from oil sands in Alberta, Canada. The agreement also contemplates a three-phase, five-year program pursuant to which the parties will work together to further evaluate, develop and commercialize the AHPP. In the first phase of the program, Western is expected to spend \$650,000 (\$500,000 of which is scheduled to be paid to Altair for work performed) to evaluate the AHPP and confirm that the AHPP will produce pigment from oil sands. During 2004, we received several bulk samples of oil sand material from Western, processed them in various configurations to obtain mineral concentrates, and processed the concentrates using the AHPP to recover the titanium dioxide. We have now completed in excess of 75% of the work scope included in phase one with satisfactory results.

In October 2005, we entered into a phase one extension agreement with Western that will extend phase one until December 2006 in order to complete the characterization and demonstrate mineral recovery feasibility. A pilot plant has been constructed to demonstrate mineral recovery and will be used to prepare bulk ilmenite concentrates for AHPP pilot plant trials.

## Table of Contents

Assuming phase one is successful, Western may elect to commence phase two, the construction of a demonstration titanium pigment production facility using the AHPP. If phase two is successful, Western may elect to commence phase three, the construction and operation of a full-scale commercial titanium pigment production facility using the AHPP.

The scope of the license granted to Western under the agreement will vary with Western's commitment to the project. The initial license, related to use of the AHPP on heavy minerals derived from oil sands in Alberta, Canada, will terminate if Western fails to complete phase one and will convert to a non-exclusive license if Western commences phase two but fails to complete, or spend at least \$25 million in an effort to complete, phase two.

If Western completes phase one and commences phase two, Western's license will be expanded to include the right to use the AHPP for the production of titanium dioxide pigment and pigment-related products from oil sands resources, primary ore resources and titanium deposits in Canada and Minnesota and for the production of titanium dioxide pigment and pigment-related products from oil sands resources world wide. This expanded license will continue on an exclusive basis if Western completes phase two and completes, or spends at least \$50 million in an effort to complete, phase three. This expanded license will continue, but on a non-exclusive basis, if Western completes phase two but, after spending more than \$5 million but less than \$50 million on phase three, does not complete phase three. If Western does not commence, or spends less than \$5 million with respect to, phase three, the expanded license terminates.

If commercialization occurs, Western is required to pay Altair royalties based on a percentage of net sales revenue from any production facility.

## Proprietary Rights

We have been awarded four U.S. and several international patents protecting this technology including: 1) Processing titaniferous ore to titanium dioxide pigment, 2) Processing aqueous titanium chloride solutions to ultrafine titanium dioxide, 3) Processing aqueous titanium solutions to titanium dioxide pigment and 4) Method For Producing Mixed Metal Oxides and Metal Oxide Compounds. The U.S. patents expire in 2020 and 2021.

## Competition

Existing chloride pigment technologies are guarded by the top tier producers that developed the technologies. Licenses are not typically granted by top tier companies to emerging nation companies because of the complexity of the process and difficulty in extracting revenues from those countries. By contrast, we are willing to license our AHPP. Companies assessing the viability of our process to manufacture pigment from their resource are also evaluating alternatives, including producing mineral concentrates for sale to pigment producers and producing a high value synthetic rutile to be sold to pigment producers as feed stock. They may elect to commercialize either of these alternatives instead of producing pigment by the AHPP. We believe there are no competing new technologies to produce titanium dioxide pigment.

## **Advanced Materials and Power Systems Initiative**

### Key Concepts

Rechargeable batteries are made from various materials, each of which has certain characteristics or tendencies, depending upon how configured. Some of the key concepts used when comparing rechargeable batteries include the following:

- Power: A battery's power rating is its ability to deliver current while maintaining its voltage.
- Discharge: Discharge refers to the dissipation of a battery's stored energy as a result of intended transfer of that energy (either gradually or in one or more large bursts) or as a result of the unintended leakage of that energy. This leakage is referred to as "self discharge" and is a natural tendency of all batteries for which the rate is proportional to temperature. A "deep discharge" refers to the discharge of substantially all of the stored energy in a battery between recharges. In general, deep discharges reduce the cycle life of batteries.
- Energy density: A battery's energy density relates to the total unit volume of materials comprising a battery that will deliver a watt hour of energy. A battery with high energy density will deliver more energy per unit volume than a battery with lower energy density.
- Cycle life: The ability of a rechargeable battery to accept a charge tends to diminish as a result of repeat charge/discharge cycles. A battery's "cycle life" is the number of times it can be charged and discharged without a significant reduction in its ability to accept a charge.
- Calendar life: A battery's calendar life relates to the period of time that a battery will preserve its capability to deliver a significant portion of its newly-built energy storage capacity.
- Recharge time: Recharge time is the minimum amount of time it takes to replenish a battery's energy.

## Table of Contents

Other important factors include the cost, safety, environmental friendliness and extreme temperature performance of a battery. Although being on the positive side of each of the characteristics is desirable in all rechargeable batteries, the importance of these various characteristics depends primarily upon the anticipated use of a battery. For example, high power, which is important in a hand-held cordless power tool is not very important in a battery designed to power a cell phone because a cell phone needs very little power; however, high specific energy may be important in a cell phone battery because consumers desire to be able to use a cell phone for a long time between recharge and want to carry as little weight and volume as possible.

## Background and Comparison

Prior to 1990, nickel cadmium (“NiCd”) and lead acid (“PbA”) technologies dominated the rechargeable battery market. During the 1990’s, nickel metal hydride (“NiMH”) and lithium ion rechargeable batteries emerged and currently hold high volume positions in various markets alongside NiCd and PbA.

NiCd batteries are inexpensive and fairly rugged, have the longest cycle life of currently available rechargeable battery types, work best on deep discharge cycles and accept recharge at moderately fast rates, but charging rates must be reduced by a factor of 5 to 10 at temperatures below 0°C (32°F) and above 30°C (86°F). On the other hand, NiCd batteries suffer from relatively low energy density and relatively high self discharge rates necessitating charge after moderate periods of storage. More seriously, NiCd batteries are exceedingly environmentally unfriendly. The metal cadmium is toxic and causes several acute and chronic health effects in humans, including cancer. As a result, NiCd usage is being severely restricted and/or phased-out altogether by some countries.

PbA batteries are used everyday by anyone who drives an automobile or operates a wheel chair, electric scooter or golf cart. They are also the battery-of-choice for uninterruptible power supplies. PbA is an inexpensive, relatively simple to manufacture, mature, reliable technology that possesses a relatively low self discharge rate, and the modern sealed versions need little or no maintenance. However, PbA batteries are quite heavy, giving them very poor weight to energy and power ratios, which limit practical use to stationary and wheeled applications. They also suffer from long recharge times and relatively low energy capacities and cannot be stored for long periods in a discharge state without service-life failure. In addition, they possess a very limited deep discharge cycle life, and thermal runaway can occur with improper charging. As with NiCd batteries, the highly toxic metal, lead, and highly corrosive sulfuric acid render PbA batteries environmentally unfriendly.

The metal hydride used in NiMH technology is a direct replacement for cadmium in NiCd batteries. Thus, NiMH batteries share and improve upon the attributes of NiCd batteries, yet introduce problems of their own. On the positive side, NiMH batteries improve upon the energy capacity and power capabilities of NiCd (for the same size cell) by 30% to 40%. Since they contain only mild toxins, NiMH batteries are more environmentally friendly than both PbA and NiCd batteries. Like NiCd batteries, NiMH batteries can be charged in about 3 hours. Charging rates must be reduced by a factor of 5 to 10 at temperatures below 0°C (32°F) and above 40°C (104°F). NiMH batteries suffer from poor deep cycleability, possessing a capability of the order of 200 to 300 cycles. While NiMH batteries are capable of high power discharge, dedicated usage in high current applications limits cycle life even further. Shelf life is poor, on the order of three years. As noted above, NiCd batteries possess high self discharge rates, but this problem is exacerbated by up to 50% in NiMH systems. NiMH batteries are intolerant to elevated temperature and, as a result, performance and capacity degrade sharply above room temperature. The most serious issue with NiMH involves safety accompanying recharge. The temperature and internal pressure of a NiMH battery cell rises sharply as the cell nears 100% state of charge, necessitating the inclusion of complex cell monitoring electronics and sophisticated charging algorithms in order to prevent thermal runaway. While NiMH technology is gaining prominence within the electric vehicle (EV) market and dominates the hybrid electric vehicle (HEV) market, this gain is placing pressures on the limited supply of nickel, potentially rendering the technology economically infeasible for these applications as the demand continues to rise.

Of all of the available metals for use as a basis for practical batteries, lithium is the most reactive and least dense, allowing for batteries with high specific energy. Conventional lithium ion batteries exhibit voltages of about 3.6V as compared to about 1.2V for NiCd and NiMH and 2.0V for PbA. There is a relationship between power P, voltage V and current I. This relationship is best summarized by this formula:  $P=IV$ . Power is also defined as the time rate of energy transfer; thus higher voltages typically lend to larger power and / or energy densities. Lithium ion batteries are stable, charge rapidly, exhibit low self discharge, and require very little maintenance. Except as explained below, the safety, cycle life (about 300 to 400 cycles), calendar life (about 3 years), environmental impact and power of lithium ion batteries is comparable to those of NiMH and NiCd batteries.

Conventional, graphite-based, lithium ion batteries are the batteries of choice in small electronics, such as cell phones and portable computers, where high energy and light weight are important. These same attributes are desired for electric vehicle, hybrid electric vehicle, power tool and uninterruptible power supply markets. However, these applications are principally high power demand applications and/or pose other demands on usage, such as extremes of temperature, need for short recharge times, high proportional (to stored energy) current rates and even longer extended lifetimes. Because of safety concerns related principally to the presence of graphite, conventional graphite-based lithium ion batteries sufficiently large for such power uses are considered unsafe. In addition, current lithium ion technology is capable of about 300 to 400 cycles and a life of about 3 years. But vehicle lifetimes can be as long as 10 to 15 years and require many hundreds, even thousands, of charge/discharge cycles. In addition, conventional lithium ion batteries do not function well at extremely hot or cold temperatures.

## Table of Contents

The safety problems inherent in conventional lithium ion batteries are mostly explainable in terms of their inability to deliver rapid discharge or function in extreme temperatures and stem from the use of graphite as the active material in the batteries' negative electrode. In a lithium battery environment, graphite becomes very reactive with components of the battery's electrolyte system. Upon manufacturing a lithium ion battery and subjecting the battery to its first charge/discharge cycle, the electrolyte will partially break down at the negative electrode, forming a passivating layer. This layer serves to protect the electrode from further electrolyte breakdown, but the layer is highly electrically resistant to the passage of electrolyte components (the lithium ions) needed to make the battery functional. This in turn limits the discharge rates but, more seriously, renders the battery un-chargeable at cold temperatures. If charging a cell at severely low temperatures is attempted, two dangerous conditions may result: (1) lithium plates in sharp projections called dendrites can form and contact the positive electrode, electrically shorting the cell and possibly resulting in thermal runaway, and (2) plated metallic lithium is very reactive with the electrolyte system, which can cause the battery to enter thermal runaway.

New negative electrode materials are needed to solve these problems. In addition, new positive electrode materials are needed to address the cycle life and cost issues associated with current lithium ion technology.

## Altair Developments

The principal advance we have made is in the optimization of nano-structured lithium titanate spinel oxide ("LTO") electrode materials that replace graphite electrode materials used in the negative electrode of current lithium ion batteries. When used with a positive electrode from a common lithium ion battery, battery cells operate at very high charge and discharge rates. Our current non-optimized cells are capable of recharge times of 10 minutes to 90% of capacity and 10 minute discharges with 90% capacity utilizations.

Nano-structured LTO is non-reactive with the electrolytes used in common lithium ion systems. This greatly reduces the negative electrode resistance, and thus, passage of lithium ions to the electrode surface. Since the material is nano-structured, the surface area available to lithium ions is greatly enhanced - by up to 100 times - over graphite based systems. The material allows for a greatly facilitated, thus rapid, access to the active sites necessary for battery function. In addition, the small size of the nanoparticles dramatically reduces the distance from the surface to inner active sites, further reducing resistance to high rate operation. These characteristics permit our battery cells to deliver more power, and recharge much faster than, other types of batteries described above.

Nano-structured LTO is termed a zero strain material, meaning that the material essentially does not change shape upon the entry and exit of a lithium ion into and from the particle. Since most battery materials suffer from this mechanical stress and strain (this particle fracturing reduces the life of the battery), battery calendar life and cycle life is greatly enhanced using Altair's LTO.

Our nano-structured LTO also represents a breakthrough in low- and high-temperature performance. Nearly 90% of room temperature charge retention is realized at -30°C from Altair's nano LTO cells. In contrast, common lithium ion technology possesses virtually no charging capabilities at this low temperature, and the other battery types discussed take 10 to 20 times longer to charge.

## Table of Contents

Safety testing has just been initiated on our lithium ion technology. Initial tests, including short circuit tests on large format cells, demonstrate the inherent safety of the Altair technology. Graphite negative electrode materials are known to suffer from thermal runaway issues at temperatures above 130°C, while lithium titanium spinel oxides are known to be safe for an additional 120°C or up to temperatures of 250°C. Our nano structured LTO cells have been heated to 235°C and exhibit no dangerous behavior. In addition, our batteries have been subjected to forced discharge, over charge, over discharge, nail penetration, crush and drop tests and have exhibited no dangerous behavior. Our batteries have passed every safety and abuse condition that they have been subjected to. Especially under the conditions of forced discharge, over charge, over discharge, and high temperature abuse testing, conventional lithium ion batteries typically fail in a violent mode that includes fire and explosion.

All rechargeable batteries present a threat to the environment. When recycled properly, however, batteries made with nano-structure LTO are expected to have a lower impact on the environment than existing rechargeable battery types.

On the negative side, the current generation of batteries made with our nano-structured LTO exhibit low energy density. If density is measured by weight, our batteries made with our nano-structured LTO have energy densities that are better than PbA and NiCd batteries and approximately 70% of those of NiMH. Energy densities of batteries made with our nano-structured LTO are lower than those of traditional lithium ion batteries.

The next steps in the development program call for the optimization of the positive electrode materials to complement the work that has been completed on the negative electrode. This will result in a matched negative electrode/positive electrode pair. In parallel with the next phase of development, work is being conducted with other organizations to provide an electrolyte that will deliver a conducting layer consistent with the matched electrodes. This work will consist of optimizing the electrolyte for conductivity as well as other physical properties such as heat dissipation.

## Target Markets and Marketing Plans/Efforts

According to information supplied by Telcordia (subsidiary of Science Applications International) the market for rechargeable batteries is approximately \$6 billion, \$3 billion of which is taken by lithium ion batteries. These lithium ion rechargeable batteries are expected to gradually increase their share of the world rechargeable battery market. New developments indicate that high power batteries of this type will ultimately be developed for application as replacements for lead acid batteries in automobiles, electric vehicles, and hybrid automobiles where direct electrical energy for starting and passing will assist the gasoline engines. Also, the development of fuel cells and solar generation systems will require enhanced battery capabilities.

Our technology provides a fundamental building block for a new generation of rechargeable batteries. Our marketing efforts are focused on developing relationships with high volume battery manufacturers who will integrate our materials into new battery designs. Early stage discussions have taken place with several manufacturers with a view to developing a joint development program that will use the Altair electrode materials as the basis for a new generation of batteries. These discussions could lead to commercial relationships that will be characterized by a revenue stream consisting of one of more of development funding, materials manufacturing and royalties.

We are focusing our marketing and development efforts on markets presently dominated by NiCd or NiMH batteries, such as power tools and automobiles, in which rapid charging, long cycle life and the additional power from the rapid discharge should prove advantageous. Secondly, we intend to pursue markets, such as cell phone batteries, presently dominated by lithium ion batteries, which are characterized by slow charge and discharge rates and high specific energy. Because of the lower specific energy of the current generation of batteries made with our nano-structured LTO, we believe that initial acceptance of our batteries in the small electronics market will be limited, unless and until we can improve the specific energy of our batteries or persuade producers that the benefits of extremely rapid recharge exceed the benefits of slow discharge.





Table of Contents

Research, Testing and Development

In December 2004, we completed work under Phase I of a National Science Foundation (“NSF”) grant for development of electrode nanomaterials for next generation lithium ion power sources. The results of the research, announced on February 10, 2005, indicated that lithium ion batteries prepared with nano-structured LTO negative electrode materials exhibit rapid charge and discharge rates, improved cycle life performance and a decrease in specific energy density when compared to conventional lithium ion, NiCd and NiMH battery materials. In June 2005, we were awarded a grant of \$476,850 from the NSF for Phase II. Phase I work was designed to optimize the negative electrode materials and Phase II is designed to develop positive electrode materials, thus resulting in matched negative electrode-positive electrode materials for optimum electrochemical performance.

In addition to our work under the NSF grants, we have been conducting our own internal research and development work on advanced battery materials. In October 2005, we significantly expanded our battery initiative projects by adding thirteen highly qualified, advanced battery scientists, engineers, manufacturing and marketing specialists, several of whom are located at a new facility in central Indiana. At both this and our Reno facility, we are installing manufacturing equipment for the production of prototype lithium ion cells, batteries and battery packs in sufficient quantities to demonstrate end-user products in power tools, automobiles, trucks and buses. In January 2006, our battery research and development team successfully completed a testing program for lithium ion battery cells containing our nano-structured lithium titanate electrode materials. The test results demonstrated that the performance of the lithium ion battery cells exceeded the system-level power requirements set forth by the U.S. Council for Automotive Research FreedomCAR Energy Storage System Performance Goals for hybrid electric vehicles (HEVs), as well as the system-level power requirements published by major U.S. automakers. The battery cells using our nano-structured LTO materials in battery cell tests developed for HEV applications demonstrated a useable state-of-charge range twice that of conventional NiMH batteries presently used in hybrid electric vehicles. Nano-structured LTO offers a near-term promise of lithium ion batteries that exhibit rapid charge and discharge, longer cycle life and more inherently safe performance than either currently available NiMH or lithium ion batteries. These results support the feasibility of a power lithium ion battery pack half the size of those currently being tested for HEV applications.

In April 2005, we signed a partnering agreement with Advanced Battery Technologies, Inc. (“Advanced Battery”), a U.S. and Chinese-owned company, for the development of lithium polymer batteries in China. The agreement covers the incorporation of our nano-structured LTO electrode materials into Advanced Battery's existing polymer battery product lines on a testing and development basis. It specifically focuses on development of high power, lithium polymer batteries for use in electric vehicles where long life cycles and fast charge times are desirable. We have provided Advanced Battery with sample nano-structured LTO for their use in design and development of the batteries. Advanced Battery's phase I testing of batteries using our battery electrodes showed that the nano-structured LTO electrode materials are performing as anticipated and have significantly improved recharging capability. We received an order for and have shipped 2,200 pounds of lithium titanate spinel electrode nanomaterials to Advanced Battery for use in their development program for polymer lithium ion batteries for electric vehicles. These materials are intended for use in the construction of developmental polymer lithium ion batteries designated to power one electric bus and one electric sedan. We expect road testing of the batteries in these vehicles in 2006.

## Table of Contents

### Proprietary Rights

We have been issued four U.S. patents: (1) “Process for making lithium titanate”, which expires in 2022, (2) “Process for making nano-sized and sub-micron sized lithium-transition metal oxides”, which expires in 2023, (3) “Method for producing mixed metal oxides and metal oxide compounds”, which expires in 2022, and (4) “Process for making nano-sized stabilized zirconia”, which expires in 2022. We have also filed a patent application titled “High Performance Lithium Titanium Spinel for Electrode Material” with Ntera. In October 2004, we were awarded a European patent for our “Process for Making Lithium Titanate”, a product used in the development of lithium ion batteries and super capacitors.

### Competition

Competing technologies are discussed in the “Background and Comparison” subsection above. There are presently no commercial products available with the same characteristics as our lithium titanate spinel, but others are conducting research on similar materials. Based solely on our review of published information, it appears that our development work is at a more advanced stage than others being reported.

### **Nanochek™**

We have developed a compound that has an affinity for certain oxy anions, including phosphate and arsenate. We believe the best near-term potential application for this material is the removal of phosphate from recreational waters, industrial waters used for cooling and aquariums to arrest the growth of algae.

### Key Feature

Nanochek is a lanthanum-based compound that can be used to treat water for the removal of phosphates. It has no reported human health hazards and works effectively in existing filtration units without the need of purchasing additional equipment.

The management of swimming pool water is a difficult and time-consuming task. The chemical balance of the water must be carefully monitored to ensure that it does not become fouled with algae, or grow too much bacteria. Either of these will make the water smell and look unpleasant, and can be a health hazard. Nanochek is designed to safely deprive algae of the phosphate nutrients required for them to grow and reproduce; and therefore, in conjunction with a commercial sanitizer, Nanochek reduces or minimizes algae formation.

### Target Markets and Marketing Plans/Efforts

We are in the process of marketing Nanochek products to companies that already sell products into the recreational water treatment market including pool and spa chemical companies. The marketing effort so far has been focused on the major suppliers of chemicals to the recreational water market - swimming pools and spas, both private and public. These suppliers provide a distribution channel that has the potential for rapid market entry. When our potential customers complete the necessary testing, and if we are able to enter into a long-term relationship with one or more such suppliers, we expect to generate revenue in the form of royalties and in connection with our supply of key ingredients. The business relations with these companies will result in revenue to Altair from royalties and the supply of manufactured Nanochek. Nanochek’s ability to bind with the phosphate in water and effectively “starve” the algae makes it an ideal adjunct to algaecide-based water treatment. As such it is seen as line extension for the pool chemical suppliers.



## Table of Contents

We are in discussion with the top three recreational water chemical suppliers. These discussions are at various stages of maturity and two of the suppliers are actively testing Nanocheck.

## Research, Testing and Development

We have conducted in-house tests for phosphate removal in swimming pool simulations and recreational water companies have performed materials and pool testing that shows effective phosphate removal, pool water turbidity reduction and good phosphate binding kinetics. Larger scale swimming pool tests being performed by a recreational water company began in mid-August 2004 and are continuing. Delays occurred, first due to internal issues within the recreational water company and then due to the effects of hurricanes in the locale where tests were to be conducted. As a result, tests are now scheduled through the summer of 2006. Negotiations with major pool chemical companies are underway and if testing is successful and sales agreements are entered into, significant sales of products incorporating Nanocheck, if any, may begin in 2006.

## Proprietary Rights

We have filed two U.S. patent applications for the application of this product entitled "Rare Earth Compositions and Structures for Removing Phosphates from Water" and "Ceramic structure for removing toxic elements from water."

## Competition

Pool chemicals are a commodity market with price, merchandising and small functional advances providing differentiation. There are already a few other phosphate binding products on the market. These products are high maintenance, usually requiring weekly service. We believe that Nanocheck offers high phosphate binding capacity with a longer service life. Although field trials of Nanocheck are still under way, early indications are that it can be added to a swimming pool and then left for a month or two without requiring attention.

## **Secondary Products and Research and Development Projects in Progress**

### **Thermal Spray Grade Powders (TSGP)**

We have developed thermal spray grade nanomaterial powders that can be applied on the surface of metals by standard thermal "gunning" techniques. We have sold approximately one ton of our powders to F.W. Gartner Thermal Spraying Company for thermal application onto heavy-duty ball valves. Ball valves made of solid titanium alloys have been introduced to control the flow and containment of hot acidic slurry solutions in high pressure acid leach technologies applied to metal extraction of nickel/cobalt ores. To extend the life of these critical components, a ceramic coating is applied via a thermal spray process. These coatings must be impervious to the acidic solution and provide protection against wear from the abrasive solid particles.

## Table of Contents

Our nanomaterials coatings possess enhanced toughness and increased hardness; these features contribute to superior abrasive wear resistance over the conventional coating of the same material. The nanomaterial coatings also demonstrate improved porosity over standard thermal spray powders making them more resistant to corrosive attack. We believe that improvements will enable longer periods between maintenance, repairs and examinations of these critical components, therefore improving the economics of the industrial application. Such thermal spray products could be used in a variety of harsh environment applications such as aerospace propulsion systems, blades and vanes, medical applications, textile and paper machinery, boilers for power plants, waste incinerators, oil and gas industry, etc.

In November 2003, we contracted the National Research Council of Canada to demonstrate, test and evaluate our powders and prepare specification sheets of standard thermal spray gunning instructions to advise specialty thermal spray shops how to apply our material. The goal of the project was to produce titania coatings by thermal spraying using nano-structured titania powders developed by Altair and compare and contrast to conventional titania powders. The coatings were characterized and evaluated to determine various characteristics, including porosity and abrasion resistance. The report, completed in the first quarter of 2004, concluded that our powders were more abrasion resistant than conventional powders. Since that time, we have prepared sample packages of our thermal spray grade powders for customer testing.

F.W. Gartner Thermal Spraying Company, Mogas Industries, Inc. and Perpetual Technologies researchers have reported on the use of our nanomaterial powders in tests to determine the bond strength, corrosion and abrasion resistance and the porosity after applying ours and competitors' materials on metal using Vacuum Plasma Spray and Atmosphere Plasma Spray. The results of these researchers' tests indicate that our novel coatings possess enhanced toughness and increased hardness; these features contribute to its superior abrasive wear resistance over the conventional coating of the same material. Ball valves with the new coatings have been introduced into different high pressure acid leach autoclave installations over the past two years.

We are currently in discussions with a potential distributor that has the capability to test and qualify our thermal spray products, fund the development of new products and market the same. The distributor is currently testing two of our products. We believe the market for each TSGP product may be 2-5 tons annually in the near term with possible growth to as much as 20-30 tons per product annually in the future.

Our thermal spray grade powders are protected by U.S. Patent titled, "Processing aqueous titanium chloride solutions to Ultrafine titanium dioxide", which expires in 2020. We have also been issued a U.S. Patent titled "Process for making nano-sized zirconia" which expires on November 2, 2021.

## **Nanosensors Program**

In September 2003, we entered into an agreement with Western Michigan University ("WMU") to provide research services and materials to support research involving a technology used in the detection of chemical, biological and radiological agents. The teaming/research agreement with WMU, funded by the Department of Energy ("DOE"), provided for total payments to Altair of \$356,500 over a two-year period. In September 2004, the DOE awarded a stage 2 contract for the project under which we will continue joint development work for the design, synthesis and characterization of nanosensors for chemical, biological and radiological agents. Altair will receive an additional \$672,000 over the two-year term of the stage 2 contract. WMU and Altair have a teaming agreement partnership for seeking Federal support for nanotechnology research and development and will utilize the new grant funding equally.

## Table of Contents

In the fiscal year 2006 congressional direction, Altair was awarded \$2.5 million for DOE research grants using our nanoparticle technology. Of this amount, \$1 million will be committed to the continuance of the nanosensor project with WMU and most of the remainder will be utilized in the development and testing of battery materials. We expect that contracts for the nanosensor project will be in place by mid-2006 and we anticipate that prototype hand-held sensors will enter the development and demonstration phase in the second quarter of 2006.

### **Hydrogen Generation using Solar Energy and Water**

In November 2004, we entered into an agreement with the University of Nevada, Las Vegas Research Foundation to act as a subcontractor under a \$3,000,000 grant awarded to them by the DOE for joint research activities related to solar hydrogen production at a refilling station under development in Las Vegas. The agreement, which was effective through December 31, 2005, provided for payments to Altair of \$400,000 for research and development work utilizing nanotechnology processes for the production and commercialization of solar-based hydrogen technologies. In November 2005, we were notified that we will receive \$750,000 under a grant award from the DOE for collaborative research and development work beginning October 1, 2005 and continuing through December 2006.

The development work is expected to involve, among other tasks, enhancement of the solar cell to be used at the proposed refilling station. The solar cell device converts light and water directly into hydrogen fuel in a highly efficient, renewable and carbon-free process using photo-catalytic nano-crystalline thin films to gather photons of incident light and convert them into electrons to directly split water into its constituent elements. We expect to be able to use our nanomaterials synthesis technology to develop low cost processing for, and further improve the performance of, the thin film electrodes in these solar cells. Our efforts will focus on iron oxide-based materials and include development of film deposition methods and synthesis routes for the optimized metal oxide nanomaterials.

### **Catalyst Support and Electrode Structures for Titanium Metals**

In January 2004, we entered into a contract with Titanium Metals Corporation (“TIMET”) to provide custom oxide feedstocks for a novel, four-year, titanium metal research program funded by the Department of Defense, Defense Advanced Research Projects Agency (“DARPA”). We became a subcontractor for the DARPA program with responsibility to design and develop a titanium oxide electrode structure and supply TIMET optimized titanium oxide feedstock to produce 50 pounds of titanium metal per day in batch production demonstrations. The DARPA program sought to lower the cost of titanium metal and titanium metal alloys through the use of a new process for making titanium metal (the “FFC Cambridge Process”) and thereby enable a broader market use and lower the cost of military applications. During the course of the contract, which has now expired, we provided TIMET with specified quantities of feedstock materials as their preferred supplier. We currently are seeking alternative sponsors and partners.

According to the AMPTIAC Quarterly, a Department of Defense-sponsored publication, current global production of titanium metal is approximately 50,000 tons per year at a market value of \$600 million. AMPTIAC estimates that, due to the current state of manufacturing, titanium is produced at only about 1/20th of its current potential world volume. It is widely believed that a reduction of cost in the manufacturing process will expand the use of titanium metal in a wider range of applications that include lightweight armored military vehicles, the manufacture of automotive components and components for utility plants, oil and gas drilling, and lightweight and durable consumer goods. Our intent is to develop a suitable process for making the titanium dioxide electrodes used by the FFC Cambridge Process but not ultimately to manufacture the electrodes. We would most likely license the technology for manufacture of the titanium dioxide electrodes to producers of metal using the FFC Cambridge Process or their suppliers.

## Table of Contents

We have been awarded one US patent protecting the catalyst and electrode structure technologies entitled “Method for producing catalyst structures”, which expires in 2021.

### **Photocatalytic Materials**

Our proprietary high-photocatalytic nano titanium dioxide product, irradiated by ultraviolet light, accelerates eradication of most airborne bacteria, viruses, mold, spores and fungi. Ultraviolet light has long been used in hospitals and other critical environments to kill bacteria, viruses and other contaminants and its benefits are proven and well-known. The oxidizing effect produced by ultraviolet light and Altair’s nano titanium dioxide converts chemical and biological contaminants into benign elements - carbon dioxide, water vapor and other materials.

Altair has sold its high-photocatalytic nano titanium dioxide product for use in air cleaning devices manufactured and distributed by Genesis Air, Inc. (“Genesis Air”). The Genesis Air device is being tested in dozens of poor air quality environments including casinos, meat packing plants, military quarters, bowling alleys and the like and is designed to simply fit into existing heating, ventilation and air conditioning systems.

### **Our Life Sciences Business**

#### **Primary Products**

##### **RenaZorb® Products**

In the second quarter of 2002, we initiated research and development efforts directed toward the utilization of nanomaterials in the pharmaceuticals industry. In July 2002, we announced the development of a new active pharmaceutical ingredient (“API”) for the treatment of hyperphosphatemia (elevated serum phosphate levels) in patients undergoing kidney dialysis, as well as a new drug delivery system using inorganic ceramic nanomaterials. This API, given the name RenaZorb, showed excellent capacity for phosphate removal in laboratory tests using standard in-vitro (laboratory) procedures.

In January 2005, we signed a license agreement with Spectrum Pharmaceuticals, Inc. (“Spectrum”) which grants Spectrum exclusive worldwide rights to develop, market and sell RenaZorb. Upon signing the license agreement, Spectrum issued to us 100,000 restricted shares of their common stock, purchased 38,314 restricted shares of our common stock at the then current market value of \$2.61 per share, and also paid us \$100,000 in connection with the license agreement. Additional payments by Spectrum are contingent upon the achievement of various milestones in the testing, regulatory approval and sale of RenaZorb.

Additional, contingent consideration under the license agreement may include the following:

- purchases of a specified dollar amount of common stock of the Company at a premium above market price upon the reaching of various milestones representing progress in the testing and obtaining of regulatory approval for RenaZorb;
- milestone payments upon obtaining approval to market RenaZorb from the FDA and similar regulatory agencies in Europe and Japan;
- milestone payments as certain annual net sales targets are reached;
- royalty payments based upon a percentage of net revenue from sales of RenaZorb in each country (subject to adjustment for combined products and in other circumstances) as long as patents applicable to that country remain



valid; and

· technology usage payments thereafter until generic competition emerges.

Assuming the testing, development and regulatory approvals of RenaZorb proceed at the rate reasonably expected by the Company, the aggregate value of all the first year payments and all potential stock premiums, milestone payments and other payments to the Company over the first 5-7 years of the license agreement could reasonably range between \$9 million and \$14 million. Assuming a drug containing Renazorb receives timely regulatory approval, the market for phosphate controlling drugs continues to grow at projected rates, and the product becomes a leader in the market place, the total revenues to the Company over the life of the license agreement could exceed \$100 million.

### Key Features

RenaZorb is a highly active, lanthanum-based nanomaterial with low intestinal solubility and excellent in-vitro phosphate binding. Animal testing of RenaZorb has been conducted in dogs, cats and rats, but no human tests have yet been conducted. Based upon our initial laboratory and animal testing, we believe that RenaZorb may offer the following advantages over competing products:

- Lower dosage requirements because of better phosphate binding per gram of drug compared with existing or currently proposed drugs;
- Fewer and less severe side effects because of less gassing and lower dosage; and
- Better patient compliance because of fewer and smaller tablets

## Table of Contents

### Target Markets

Our pharmaceutical product RenaZorb was developed to treat elevated phosphate levels in patients with chronic kidney disease, especially in patients with end stage renal disease. According to information published by AnorMED, the worldwide market for phosphate binders for chronic renal failure patients is approximately \$400 million to \$600 million annually.

### Research, Testing and Development

RenaZorb must undergo animal and human testing and receive approval from the FDA in the U.S. and similar regulatory bodies in other parts of the world before it can be approved for marketing. Human testing typically takes 1 to 2 years and, if merited by the results of human testing, the process of seeking U.S. regulatory approval typically takes between 3 and 5 years. We believe, however, that the FDA's approval of Fosrenol, a chemically related drug, by the FDA and other regulatory bodies may accelerate the approval process for RenaZorb but note that timing for FDA and other regulatory approval of drug candidates is unpredictable. Spectrum, with technical assistance from Altair, is responsible for the clinical testing and other activities necessary to obtain regulatory approval of RenaZorb.

We have supplied Spectrum with test quantities of RenaZorb in order to conduct in-vivo animal testing. The tests were completed in September 2005 and, although we have been informed that the results were positive and we have received a copy of the test results, Altair has not received the milestone payment of 100,000 shares of Spectrum Pharmaceuticals, Inc. stock called for in the agreement. Spectrum asserts that the milestone has not been met. In order to resolve this disagreement and the damage claims of both Altair and Spectrum, Altair and Spectrum entered the early stages of a dispute resolution process as required by our license agreement.

In November 2005, the respective chief executive officers of the two companies participated in a meeting at which a total settlement of all issues in dispute was reached. The settlement included the agreement by Spectrum to pay Altair 100,000 shares of Spectrum Pharmaceuticals, Inc. stock and an additional 40,000 shares of Spectrum Pharmaceutical, Inc. stock for payment of certain Altair claims and rights to certain improvements made by Altair in the preparation and performance of lanthanum carbonate chemistries.

In January 2006, Spectrum notified us that it would not honor the settlement agreement reached at the November 2005 meeting. Altair and Spectrum re-initiated the dispute resolution process as required by our license agreement. This process may delay the product development process and our receipt of our next milestone payment and could lead to the payment or receipt of monetary damages.

### Proprietary Rights

We have applied for patent protection for the manufacture of RenaZorb and a wide range of similar compounds for the application as an orally administered phosphate binder for patients suffering from end stage renal disease. These patent applications are "Rare earth metal compounds, methods of making and methods of using the same", "Devices for removing phosphate from biological fluids", "Processes for making rare earth metal oxycarbonates" and "Rare-earth metal composites for treating hyperphosphatemia and related methods".

### Competition

Existing phosphate binders include Tums antacid, which contains calcium carbonate, and also aluminum hydroxide-based products such as Gaviscon manufactured by Glaxo Smith Kline, both of which are available over the counter, as well as Renagel manufactured by Genzyme, which is available only by prescription. In addition, Fosrenol,

another lanthanum based active pharmaceutical agent developed by Shire Pharmaceuticals of the UK, received approval from the United States FDA in October 2004.

## Table of Contents

While over-the-counter phosphate binders are relatively inexpensive, they have several disadvantages. In high doses, calcium carbonate-containing phosphate binders such as Tums may cause increased blood pressure and increased risk of cardiovascular disease and is generally not recommended for long-term use by dialysis patients. With prolonged use, aluminum hydroxide-based phosphate binders, such as Gaviscon, may cause toxic neurological effects and are generally avoided by physicians. Aluminum dementia has been widely reported in kidney dialysis patients using these products.

The prescription phosphate binder Renagel is relatively expensive (approximately \$2,800 per patient per year), has a high dosage requirement (2 x 800 mg or 4 x 400 mg capsules/tablets or more three times per day) and water intake is required. The most common side effects related to the use of Renagel include nausea (7% of patients), constipation (2% of patients), diarrhea (4% of patients), gas or bloating (4% of patients) and heartburn or indigestion (5% patients).

Fosrenol is marketed as large chewable tablets with a proposed dosage of 1.5 to 3.0 grams active drug per day. As with all medicines, Fosrenol has some side effects, primarily associated with the gastrointestinal system including bloating, GI upset and vomiting. It has been reported that the use of Fosrenol increases serum lanthanum levels compared with levels in patients taking a placebo. RenaZorb, which is nanotechnology based, is expected to be developed in a tablet dosage form with a projected dosage of 0.6 to 3.0 grams API per day. Although we have done no human testing on RenaZorb, we believe RenaZorb has the potential for fewer side effects, lower cost and better patient compliance. We base these possible advantages upon in vitro testing conducted by Altair in which RenaZorb was compared to lanthanum carbonate tetrahydrate ("LCTH"), the API in Fosrenol. Our in vitro testing showed that RenaZorb binds 30% more phosphate per gram of drug than LCTH, therefore requiring a lower dose. Lower dose often correlates well with a reduction of observed side effects in chemically related compounds. In all animal testing conducted on RenaZorb, which to date included three separate testing protocols, no adverse side effects were reported. In all testing, RenaZorb was administered to the animals by mixing the drug with the food they eat. In no case was there any reduction in the amount of food the animals consumed when RenaZorb was mixed with the food. The drug appears to be tasteless.

Both RenaZorb and Fosrenol involve the binding of phosphate by lanthanum compounds. In fact, the end product of the binding mechanism is identical; lanthanum phosphate is the product formed. Based on laboratory tests conducted by Altair comparing RenaZorb with LCTH, the API in Fosrenol, RenaZorb RZB 012, one of the two drug candidates, required 30% less drug to bind the same amount of phosphate and shows less lanthanum going into solution in simulated stomach fluid at various pH values. In addition, in Altair's testing, using methods published by AnorMed, RenaZorb reacts with phosphate more rapidly. In 20 minute simulated stomach acid tests conducted by Altair, RenaZorb absorbed approximately 140 mg of phosphate and LCTH absorbed approximately 60 mg of phosphate.

## **Renalan**

During 2004, we recognized that companion animals (cats and dogs), like humans, also suffer from hyperphosphatemia during chronic renal failure. We determined that this condition could be treated with similar chemistry to RenaZorb, so we initiated a project to develop a similar product. We have named this potential product Renalan. The RenaZorb licensing agreement with Spectrum applies only to the human market, thus leaving us free to license the chemistry into the animal health market. We are actively pursuing a partner to license the product and supply this to the companion animal market. The product could be sold either as a drug candidate requiring regulatory approval, or it could be marketed as a food supplement which potentially would provide a faster route to market. There is no currently established product on the market to specifically address hyperphosphatemia in animals; however a new over-the-counter product called Epakitin has just been released in the United States which appears to target the complaint.



## Table of Contents

### Key Features

Renalan is a highly-active, lanthanum-based nanomaterial with low intestinal solubility and excellent in-vitro phosphate binding. Animal testing of RenaZorb/Renalan has been conducted in dogs, cats and rats. Based upon our initial laboratory and animal testing, we believe that Renalan may offer the following benefits:

- Specifically targeted to address hyperphosphatemia in companion animals
- Palatable with manageable regime
- Can be administered in powder form which can be mixed with the pet's food

### Target Markets

Renalan was developed to treat elevated phosphate levels in animals with chronic kidney disease (CKD). According to information published in the Textbook of Veterinary Internal Medicine by Stephen J. Ettinger, DVM and Edward C. Feldman, DVM, the dog CKD population is variously estimated at between 0.5% and 7% of population, resulting in a worldwide CKD population of between 0.75 million and 10.5 million dogs. They go on to state that the cat CKD population is estimated at between 1.6% and 20% of total population, resulting in a worldwide CKD population of between 2.8 million and 35 million cats. Using the rest of the data in their textbook and average life expectancy curves yields a worldwide cat CKD population of approximately 4.2 million and a dog CKD population of about 1.2 million.

### Research, Testing and Development

Renalan could be marketed either as a drug or as a food supplement. As a drug, the product would enter an FDA approval process that would be expected to take two years to complete; however timing for FDA and other regulatory approval of drug candidates is unpredictable. As a food supplement the product requires no regulatory approval, and so has the potential to be in the market more rapidly than as a drug; however, we would be unable to make certain effectiveness claims if it were marketed as a food product. Any future animal health company partner would determine the marketing strategy for the product, and therefore the level of additional testing required before the product can enter the market. We are in discussions with various animal health companies regarding future development of Renalan.

### Proprietary Rights

We have filed one U.S. patent application for this product entitled "Compositions and methods for treating hyperphosphatemia in domestic animals". Additionally, Renalan is a compound very similar to RenaZorb and is protected by the patent applications discussed under "RenaZorb" above.

### Competition

There are no well established products on the market that specifically target hyperphosphatemia in companion animals. In late 2005, Vetoquinol, a French animal health company, released Epakitin in the US. Vetoquinol positions Epakitin as a chitosan-based phosphate binder and uremic reducer for chronic kidney disease in dogs and cats. The product has not been on the market long enough to determine its market strength.

Table of Contents

**Secondary Products and Research and Development Projects in Progress**

**TiNano® Spheres**

Our proposed chemical delivery system involves depositing active chemicals on or inside hollow spheres made of titanium dioxide and other metal oxide materials, including nanomaterials.

Because of the early stage of development of this chemical delivery system, we are unable to state with any certainty how (or if) such a delivery system would be used and, if used, what the uses for such system would be and what the comparative advantages, side effects and other aspects of such a delivery system would be. Nevertheless, we believe that the following uses of a nanomaterials-based chemical delivery system are feasible:

- New delivery forms for existing drugs;
- Delivery methods for new drugs;
- Enhanced delivery of hard to dissolve drugs;
- Delivery of sustained release drugs; and
- Delivery of dual action drugs

Altair's hollow sphere structures may be able to deliver active chemicals or drugs in a sustained release fashion because the active component could be "mounted" on both the outside surface and inside the hollow ball structure. The dissolution and availability of the surface-mounted active component would likely be different than the active component inside the hollow spheres. Material inside the hollow structure will possibly be released more slowly compared to surface-mounted material. An additional feature of Altair's nanomaterials-based hollow structures is that two different active substances could be mounted, one inside the hollow spheres and another on the surface. This allows the possibility for dual action pharmaceuticals to be developed using this technology.

During 2005, we started early investigation of the potential of TiNano Spheres by engaging in collaborative research projects with other companies. This research is at an early stage, and it is premature to determine the market potential for this technology.

We have filed two patent applications regarding this field including: (1) "Pharmaceutical composition and structure containing rare earth porous particles" and (2) "Pharmaceutical composition with controlled surface area."

**Dental Materials**

During 2005, we engaged a potential commercial partner to determine market suitability for dental materials utilizing our nano-sized zirconia. We expect the results from this research during 2006 and at that time we will be able to determine market potential.

Table of Contents

**Government Regulation and Environmental Concerns**

**Government Regulation**

Most of our current and proposed activities are subject to a number of federal, state, and local laws and regulations concerning machine and chemical 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 we 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.

Compliance with federal, state, or local laws or regulations represents a small part of our present budget. If we fail to comply with any such laws or regulations, however, a government entity may levy a fine on us or require us to take costly measures to ensure compliance. Any such fine or expenditure may adversely affect our development.

We are committed to complying with and, to our knowledge, are in compliance with, all governmental regulations. We cannot predict the extent to which future legislation and regulation could cause us to incur additional operating expenses, capital expenditures, and/or restrictions and delays in the development of our products and properties.

**Environmental Regulation and Liability**

Any proposed processing operation at our main operating facility in Reno, Nevada or any other property we use will be subject to federal, state, and local environmental laws. In addition, our cleanup efforts on the Tennessee mineral property have been, and will continue to be, subject to such 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 substances discovered at any other property used by us, to the extent the substances 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. We use Hazardous Substances in our testing and operations and, although we employ reasonable practicable safeguards to prevent any liability under applicable laws relating to Hazardous Substances, companies engaged in materials production are inherently subject to substantial risk that environmental remediation will be required.

**Financial Information about Segments and Foreign Sales**

Information with respect to assets, net sales, loss from operations and depreciation and amortization for the performance materials and life sciences segments is presented in Note 14, Business Segment Information, of Notes to Consolidated Financial Statements in Part IV.

Information with respect to foreign and domestic sales and related information is presented in Note 14, Business Segment Information, of Notes to Consolidated Financial Statements in Part IV.



## Table of Contents

### **Subsidiaries**

Altair Nanotechnologies Inc. was incorporated under the laws of the province of Ontario, Canada 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 Orex Resources Ltd. in November 1986, then to Carlin Gold Company Inc. in July 1988, then to Altair International Gold Inc. in March 1994, then to Altair International Inc. in November 1996 and then to Altair Nanotechnologies Inc. in July 2002. In July 2002, Altair Nanotechnologies Inc. redomesticated from the Ontario Business Corporations Act to Canada's federal corporate statute, the Canada Business Corporations Act.

Altair US Holdings, Inc. was incorporated by Altair in December 2003 for the purpose of facilitating a corporate restructuring and consolidation of all U.S. subsidiaries under a U.S. holding company. At the completion of the corporate restructuring, Fine Gold, MRS and Altair Nanomaterials, Inc. were direct wholly-owned subsidiaries of Altair US Holdings, Inc., while Tennessee Valley Titanium, Inc. remained a wholly-owned subsidiary of MRS.

Fine Gold was acquired by Altair in April 1994. Fine Gold has earned no operating revenues to date. Fine Gold acquired the intellectual property associated with the Altair jig, a fine particle separation device for use in minerals processing, in 1996. Altair intends that Fine Gold will hold and maintain jig technology rights, including patents.

MRS was incorporated by Altair in April, 1987 and was formerly known as Carlin Gold Company. MRS previously has been involved in the exploration for minerals on unpatented mining claims in Nevada, Oregon and California. All mining claims have now been abandoned. MRS currently holds, directly or indirectly, all of Altair's interest in the Tennessee mineral property, where we formerly held mineral leases on approximately 14,000 acres. We have terminated the mineral leases on all but approximately 1,300 acres as of December 31, 2005 and will terminate these remaining leases as soon as possible. The wholly-owned subsidiary of MRS, Tennessee Valley Titanium, does not have any assets or operations.

Altair Nanomaterials, Inc. was incorporated in 1998 as a wholly-owned subsidiary of MRS and holds all of the Company's interest in our nanomaterials and titanium dioxide pigment technology and related assets.

### **Corporate History**

Altair Nanotechnologies Inc. was incorporated under the laws of the Province of Ontario, Canada in April 1973 for the purpose of acquiring and exploring mineral properties. It was redomesticated in July 2002 from the Business Corporations Act (Ontario) to the Canada Business Corporations Act, a change which causes Altair to be governed by Canada's federal corporate statute. The change reduced the requirement for resident Canadian directors from 50% to 25% of the board of directors, which gives us greater flexibility in selecting qualified nominees to our board.

During the period from inception through 1994, we acquired and explored multiple mineral properties. In each case, sub-economic mineralization was encountered and the exploration was abandoned.

Since 1996, we have leased mineral property near Camden, Tennessee and owned the rights to the Altair jig. However, we are disposing of the Tennessee mineral properties and limiting our expenditures on our centrifugal jig to patent maintenance expenses.

In November 1999, we acquired all the rights of BHP Minerals International, Inc. ("**BHP**") in the nanomaterials and titanium dioxide pigment technologies and the nanomaterials and titanium dioxide pigment assets from BHP. We are employing the nanomaterials and titanium dioxide pigment technology as a platform for the sale of contract services, intellectual property licenses and for the production and sale of metal oxide nanoparticles in various applications.



## Table of Contents

We have experienced an operating loss in every year of operation. In the fiscal year ended December 31, 2005, we experienced a net loss of \$9,937,212.

### **Employees**

The business of Altair is currently managed by Dr. Alan J. Gotcher, President and Chief Executive Officer of the Company, Mr. Edward Dickinson, Chief Financial Officer, Mr. Douglas Ellsworth, Senior Vice President, Dr. Bruce Sabacky, Vice President of Research and Engineering and Mr. Roy Graham, Senior Vice President. We have 56 additional regular employees and one full-time temporary employee in research and development. We have employment agreements with Messrs. Gotcher, Dickinson, Ellsworth, Sabacky and Graham.

During 2006, we may hire up to 25 additional employees, primarily in research and development and operations. Such additional hiring, if it occurs, will be dependent upon business conditions.

### **Available Information**

The Company files annual, quarterly and current reports and other information with the SEC. These materials can be inspected and copied at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Copies of these materials may also be obtained by mail at prescribed rates from the SEC's Public Reference Room at the above address. Information about the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of the SEC's Internet site is [www.sec.gov](http://www.sec.gov).

The Company makes available, free of charge on its Internet website located at [www.altairnano.com](http://www.altairnano.com), its most recent Annual Report on Form 10-K, its most recent Quarterly Report on Form 10-Q, any current reports on Form 8-K filed since the Company's most recent Annual Report on Form 10-K and any amendments to such reports as soon as reasonably practicable following the electronic filing of such report with the SEC. In addition, the Company provides electronic or paper copies of its filings free of charge upon request.

### **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 Item 1A and other cautionary statements throughout this Form 10-K and our 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, our actual results may vary materially from those anticipated, estimated, projected, or intended.**

Table of Contents

***Item 1A. Risk Factors***

***We may continue to experience significant losses from operations.***

We have experienced a loss from operations in every fiscal year since our inception. Our losses from operations were \$10,481,853 in 2005 and \$6,904,955 in 2004. We will continue to experience a net operating loss until, and if, the applications of our nanomaterials and titanium dioxide pigment technology begin generating revenues in excess of our operating expenses. Even if any or all applications of the nanomaterials and titanium dioxide pigment technology 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.

***Our patents and other protective measures may not adequately protect our proprietary intellectual property, and we may be infringing on the rights of others.***

We regard our intellectual property, particularly our proprietary rights in our nanomaterials and titanium dioxide pigment technology, as critical to our success. We have received various patents, and filed other patent applications, for various applications and aspects of our nanomaterials and titanium dioxide pigment technology and other intellectual property. In addition, we generally enter into confidentiality and invention agreements with our employees and consultants. Such patents and agreements and various other measures we take to protect our intellectual property from use by others may not be effective for various reasons, including the following:

- Our pending patent applications may not be granted for various reasons, including the existence of similar patents or defects in the applications;
  - The patents we have been granted may be challenged, invalidated or circumvented because of the pre-existence of similar patented or unpatented intellectual property rights or for other reasons;
- Parties to the confidentiality and invention agreements may have such agreements declared unenforceable or, even if the agreements are enforceable, may breach such agreements;
- The costs associated with enforcing patents, confidentiality and invention agreements or other intellectual property rights may make aggressive enforcement cost prohibitive;
- Even if we enforce our rights aggressively, injunctions, fines and other penalties may be insufficient to deter violations of our intellectual property rights; and
- Other persons may independently develop proprietary information and techniques that, although functionally equivalent or superior to our intellectual proprietary information and techniques, do not breach our patented or unpatented proprietary rights.

Because the value of our company and common stock is rooted primarily in our proprietary intellectual property rights, our inability to protect our proprietary intellectual property rights or gain a competitive advantage from such rights could have a material adverse effect on our business.

In addition, we may inadvertently be infringing on the proprietary rights of other persons and may be required to obtain licenses to certain intellectual property or other proprietary rights from third parties. Such licenses or proprietary rights may not be made available under acceptable terms, if at all. If we do not obtain required licenses or proprietary rights, we could encounter delays in product development or find that the development or sale of products requiring such licenses is foreclosed.

Table of Contents

***Our competitors have more resources than we do, which may give them a competitive advantage.***

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 be able to exploit acquisition, development and joint venture opportunities more rapidly, easily or thoroughly than we can. In addition, potential customers may choose to do business with our more established competitors, without regard to the comparative quality of our products, because of their perception that our competitors are more stable, are more likely to complete various projects, are more likely to continue as a going concern and lend greater credibility to any joint venture.

***We may not be able to generate substantial revenues from the licensing of RenaZorb.***

On January 28, 2005, we entered into a license agreement with Spectrum Pharmaceuticals, Inc. under which we granted Spectrum the exclusive worldwide rights to develop, market and sell RenaZorb, a potential drug candidate for patients with kidney disease, for human therapeutic and diagnostic applications. Under the terms of the license, we will not generate substantial recurring revenues unless and until Spectrum completes clinical testing of RenaZorb and applies for and receives marketing approval from the FDA and similar regulatory agencies worldwide, begins marketing products containing RenaZorb and experiences substantial, sustained market penetration with such products. There are substantial risks associated with that process, including the following:

- further testing conducted by Spectrum may indicate that RenaZorb is less effective than existing products, is unsafe, has significant side effects or is otherwise not viable;
- Spectrum may be unable to obtain FDA or other regulatory approval of RenaZorb for technical, political or other reasons or, even if it obtains such approval, may not obtain such approval on a timely basis;
- products containing RenaZorb may not be accepted in the market for various reasons, including questions about its efficacy, safety and side effects or because of poor marketing by Spectrum;
- Spectrum may terminate the license agreement, experience financial or other problems or otherwise fail to effectively test, seek approval for and market RenaZorb;
- the arbitration currently ongoing (see Item 3, Legal Proceedings) could seriously delay commercialization of RenaZorb: and
  - prior to or following regulatory approval, superior products may be developed and introduced into the market.

If any of the foregoing risks, or other risks associated with developing pharmaceutical products were to occur, we would not receive substantial, recurring revenue from our license with Spectrum.

***Our lithium titanate spinel, with potential application in the rechargeable battery market, has not been commercialized and may not generate significant revenue.***

We are still testing and developing our lithium titanate spinel nanomaterial technology, which has potential applications in rechargeable batteries. Although we have entered a partnering agreement with Advanced Battery Technologies, Inc. for the development of lithium polymer batteries in China and have supplied them with nanomaterials for their use in design and development of the batteries, the project is in the early stages and substantial design, development and testing work remains to be done. We have not entered into written partnering or development agreements with any other battery manufacturers or end users. Even if Advanced Battery or other potential partners are successful in producing battery products with our nanomaterial technology:

## Table of Contents

- batteries utilizing the technology may not exhibit expected charge rates, discharge rates or durability run time or other features when used in real world applications;
- batteries incorporating the technology may not meet the distinct needs of potential customers, applications or industries or otherwise prove competitive with existing technologies or technologies under development on account of technical limitations, such as a short run time between charges;
- marketing and branding efforts by us, a potential strategic partner or others may be insufficient to attract a sufficient number of customers; and
- competitors may have developed, or be in the process of developing, batteries or materials that are better suited to our target markets than batteries using our materials.

### ***We may not benefit from licenses to use our technology for titanium dioxide pigment production.***

Because of our relatively small size and limited resources, we do not plan to use our titanium processing technology for large-scale production of titanium dioxide pigments. We have entered into discussions with various minerals and materials companies about licensing our technology to such entities for large-scale production of titanium dioxide pigments. To date, we have entered into a license agreement with only one such entity, Western Oil Sands, Inc. Under our license agreement with Western Oil Sands, we expect to receive a limited amount of revenue during the early testing and development phase of the agreement but will receive significant royalties only if Western Oil Sands and licensees of Western Oil Sands determine in their discretion, after testing at a demonstration plant, to construct or license the construction of a full-scale titanium pigment production facility. If we enter into other license agreements, we expect that, as with the Western Oil Sands agreement, we would not receive significant revenues from such licenses unless and until feasibility testing yielded positive results and the licensee determined, in its discretion, to construct and operate a titanium pigment production facility.

### ***We may not be able to sell nanoparticles produced using our nanomaterials and titanium dioxide pigment technology.***

We plan to use the nanomaterials and titanium dioxide pigment technology to produce titanium dioxide nanoparticles for various applications. Titanium dioxide nanoparticles and other products we intend to initially produce with the nanomaterials and titanium dioxide pigment technology generally must be customized for a specific application working in cooperation with the end-user. We are still testing and customizing our titanium dioxide nanoparticle products for various applications and have no long-term agreements with end-users to purchase any of our titanium dioxide nanoparticle products. We may be unable to recoup our investment in the nanomaterials and titanium dioxide pigment technology and nanomaterials and titanium dioxide pigment equipment for various reasons, including the following:

- products utilizing our titanium dioxide nanoparticle products, most of which are in the research or development stage, may not be completed or, if completed, may not be readily accepted by expected end-users;
- we may be unable to customize our titanium dioxide nanoparticle products to meet the distinct needs of potential customers;
- potential customers may purchase from competitors because of perceived or actual quality or compatibility differences;
  - our marketing and branding efforts may be insufficient to attract a sufficient number of customers; and
- because of our limited funding, we may be unable to continue our development efforts until a strong market for nanoparticles develops.

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

We have not produced any pigments, nanoparticles or other products using our nanomaterials and titanium dioxide pigment technology and equipment on a sustained commercial basis. Our actual costs of production, or those of our licensees, may exceed those of competitors. Even if our costs of production are lower, competitors may be able to sell titanium dioxide and other products at a lower price than is economical for us or our licensees.

Table of Contents

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

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 nanomaterials and titanium dioxide pigment assets are located. In connection with this transaction, 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 was due and paid 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 primary operating assets and offices, causing a significant disruption in our business.

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

As of March 3, 2006, we had approximately \$19.5 million in cash, an amount sufficient to fund our ongoing operations for approximately 2-3 years at current working capital expenditure levels. However, we may use our existing capital sooner than projected in connection with capital expenditures, transactions, litigation or other events that are not currently reflected in our projections. We may also use more capital than projected as we expand our research, development and marketing efforts. Unless we experience a significant increase in revenue, we will need to raise additional capital in the future in order to sustain our ongoing operations, continue unfinished testing and additional development work and, if certain of our products have been commercialized, produce and market such products.

We 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 the following:

- market factors affecting the availability and cost of capital generally;
- the price, volatility and trading volume of our shares of common stock;
- our financial results, particularly the amount of revenue we are generating from operations;
  - the amount of our capital needs;
  - the market's perception of nanotechnology and/or chemical stocks;
  - the economics of projects being pursued; and
- the market's perception of our ability to generate revenue through the licensing or use of our nanoparticle technology for pharmaceutical, pigment production, nanoparticle production and other uses.

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.

***Operations using the nanomaterials and titanium dioxide pigment technology or our Tennessee mineral property may lead to substantial environmental liability.***

Virtually any prior or future use of the nanomaterials and titanium dioxide pigment technology is subject to federal, state and local environmental laws. In addition, we have constructed a pilot plant on, and are in the process of reclaiming mineral property that we leased in Tennessee. 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.





Table of Contents

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

We are a Canadian corporation, and three 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 U.S. securities laws. It is uncertain whether Canadian courts would (i) enforce judgments of U.S. courts obtained against us or such directors, officers or experts predicated upon the civil liability provisions of U.S. securities laws or (ii) impose liability in original actions against us or our directors, officers or experts predicated upon U.S. securities laws.

***We are dependent on key personnel.***

Our continued success will depend to a significant extent on the services of Dr. Alan J. Gotcher, our Chief Executive Officer and President, Edward Dickinson, our Chief Financial Officer, Douglas Ellsworth and Roy Graham, our Senior Vice Presidents and Dr. Bruce Sabacky, our Vice President of Research and Engineering. The loss or unavailability of any or all of these individuals could have a material adverse effect on our business and the market price of our shares of common stock. We have key man insurance on the lives of Dr. Gotcher and Dr. Sabacky. We do not have agreements requiring any of our key personnel to remain with our company.

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

Our articles of incorporation authorize the issuance of an unlimited number of shares of common stock that may be issued without any action or approval by our stockholders. In addition, we have various stock option plans that have potential for diluting the ownership interests of our stockholders. The issuance of any additional shares of common stock would further dilute the percentage ownership of our company held by existing stockholders.

***We have a substantial number of warrants and options outstanding and may issue a significant number of additional shares upon exercise thereof.***

As of March 3, 2006, there were outstanding warrants to purchase up to 1,318,556 shares of common stock and options to purchase up to 2,541,200 shares of common stock. The existence of such warrants and options, and any additional warrants and options we issue in the future, may hinder future equity offerings, and the exercise of such warrants and options may further dilute the interests of all shareholders. The shares of common stock issuable upon the exercise of many of our outstanding warrants are subject to resale registration statements, and all of our options are subject to a registration statement on Form S-8. Accordingly, future resale of the shares of common stock issuable on the exercise of such warrants and options in most cases occurs immediately after exercise and may have an adverse effect on the prevailing market price of the shares of common stock.

***The market price of our common stock may increase or decrease dramatically at any time for any or no reason.***

The market price of our common stock, like that of the securities of other early stage companies, may be highly volatile. Our stock price may change dramatically as the result of announcements of product developments, new products or innovations by us or our competitors, uncertainty regarding the viability of the nanomaterials and titanium dioxide pigment technology, significant customer contracts, significant litigation or other factors or events that would be expected to affect our business, financial condition, results of operations and future prospects. In addition, the market price for our common stock may be affected by various factors not directly related to our business or future prospects, including the following:

Table of Contents

- Intentional manipulation of our stock price by existing or future shareholders or a reaction by investors to trends in our stock rather than the fundamentals of our business;
- A single acquisition or disposition, or several related acquisitions or dispositions, of a large number of our shares, including by short sellers covering their position;
- The interest of the market in our business sector, without regard to our financial condition, results of operations or business prospects;
- Positive or negative statements or projections about our company or our industry, by analysts, stock gurus and other persons;
- The adoption of governmental regulations or government grant programs and similar developments in the United States or abroad that may enhance or detract from our ability to offer our products and services or affect our cost structure; and
- Economic and other external market factors, such as a general decline in market prices due to poor economic indicators or investor distrust.

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

We have never declared or paid cash dividends on our common stock. 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 stock in the foreseeable future.

***We are subject to various regulatory regimes, and may be adversely affected by allegations that we have not complied with governing rules and laws.***

In light of our status as a public company and our lines of business, we are subject to a variety of laws and regulatory regimes in addition to those applicable to all businesses generally. For example, we are subject to the reporting requirements applicable to Canadian and United States reporting issuers, such as the Sarbanes-Oxley Act of 2002, the rules of the Nasdaq Capital Market and certain state and provincial securities laws. We are also subject to state and federal environmental, health and safety laws, and rules governing department of defense contracts. Such laws and rules change frequently and are often complex. In connection with such laws, we are subject to periodic audits, inquiries and investigations. Any such audits, inquiries and investigations may divert considerable financial and human resources and adversely affect our execution of our business plan. In addition, through such audits, inquiries and investigations, we or a regulator have from time to time determined, and may in the future determine, that we are out of compliance with one or more governing rules or laws. Remedying such non-compliance may divert additional financial and human resources. In addition, in the future, we may be subject to a formal charge or determination that we have materially violated a governing law, rule or regulation. Any charge, and particularly any determination, that we had materially violated a governing law would likely have a material adverse effect on the market price of our stock, our ability to execute our business plan and our ability to retain and attract qualified management.

***Item 1B. Unresolved Staff Comments***

None

Table of Contents

***Item 2. Properties***

Our corporate headquarters is located at 204 Edison Way, Reno, Nevada 89502 in a building we purchased in August 2002. Our nanomaterials and titanium dioxide pigment assets are located in this building which contains approximately 80,000 square feet of production, laboratory, testing and office space. We have pledged our corporate headquarters and associated land to secure a promissory note we issued to BHP Minerals International, Inc. in the amount of \$3,000,000, at an interest rate of 7%. The first payment of \$600,000 of principal plus accrued interest on such promissory note was due and paid February 8, 2006.

In addition, we lease 4,744 square feet of office and laboratory space in the Flagship Enterprise Center Building located at 2701 Enterprise Drive in Anderson, Indiana. The space is used for the production of prototype batteries and battery cells. The lease was entered into in October 2005 for an initial term of three years with the option for subsequent one-year renewals. Total rent for the leased premises, including normal utilities, real estate taxes and common area fees is scheduled to be \$7,907 per month during the first year (increasing to \$8,302 per month during the second year and \$8,697 per month during the third year). This rent is net of a 20% rent subsidy offered by local government entities. In exchange for that rent subsidy, the Company has agreed that operations conducted at the leased premises will remain in Madison County, Indiana for at least three years after the expiration of the three-year subsidy period. In addition to the government rent subsidy, Landlord has authorized a \$100,000 rental credit, the net effect of which is to giving the Company free rent during the first year of the Lease.

We also maintain a registered office at 360 Bay Street, Suite 500, Toronto, Ontario M5H 2V6. We do not lease any space for, or conduct any operations out of, the Toronto, Ontario registered office.

We believe that the existing offices and test facilities of Altair and its subsidiaries are adequate for our current needs. In the event that alternative or additional office space is required, we believe we could obtain additional space on commercially acceptable terms.

As mentioned above in *Subsidiaries*, we have terminated the mineral leases on all but approximately 1,300 acres of our Tennessee mineral property and intend to terminate the remaining leases as soon as possible. Remediation work on the properties has been substantially completed. Certain re-vegetation measures, the planting of small trees, cannot be completed until late winter 2006. Once completed, the applicable regulatory authorities will review and, if acceptable, approve completion of remediation work and a multi-year monitoring plan. Future remediation costs are not expected to be significant.

***Item 3. Legal Proceedings***

In June 2005, the Company filed a Complaint against Rudi E. Moerck, former President and a director of the Company, alleging breach of his Employee Confidential Information and Inventions Agreement (the "Information Agreement") and seeking declaratory relief, injunctive relief and damages. Specifically, the Company requested that Mr. Moerck be ordered to assign his rights in certain patent applications to the Company, return all Company proprietary information in his possession to the Company and to delete/destroy Mr. Moerck's copies of all such information. Mr. Moerck filed a timely Answer to the Complaint. Subsequently, Mr. Moerck executed and delivered the requested patent application assignments. The Company executed a settlement agreement with Mr. Moerck, which the Company believes will fully preserve and protect the Company's interests in its proprietary information. Prior to the execution of the Settlement Agreement, Mr. Moerck provided the Company with several Offers of Judgment against him in this case. The Company accepted an Offer of Judgment against Mr. Moerck, where he agreed that he breached his Employee Confidential Information and Inventions Agreement and he has complied with all terms of the Offer of Judgment, including the return of all Company Confidential Information. This suit has now officially been concluded.



Table of Contents

On July 29, 2005, the Company was served with a complaint in the matter of Louis Schnur v. Al Moore, Altair Nanotechnologies, Inc. and Does 1 through 10, filed in the U.S. District court, Central District of California. On October 13, 2005 the Company filed a counterclaim (the "Company's Counterclaim") against Mr. Schnur for declaratory relief, asking the Court to issue a declaration that: (1) Altair did not improperly disclose material, non-public information in violation of any statute; (2) Altair did not breach its fiduciary duties to its shareholders; and (3) Altair had no duty or ability to prevent an individual from purchasing Altair common stock from an individual shareholder. Mr. Schnur timely filed an Answer to the Company's Counterclaim on November 2, 2005. On February 23, 2006, The Company announced that the lawsuit titled Louis Schnur v. Al Moore, Altair Nanotechnologies Inc. and Does 1 through 10 filed on or about July 26, 2005, has been dropped by Mr. Schnur with prejudice and without any monetary remuneration to Mr. Schnur. Also, Mr. Schnur, Mr. Moore and Altair Nanotechnologies Inc. have signed a Mutual Agreement that there will be no additional lawsuits pertaining to the allegations made in the Louis Schnur v. Al Moore, Altair Nanotechnologies, and Does 1 through 10 suit. Additionally the Mutual Agreement prevents any lawsuit or claim over anything that has occurred or any allegations made prior to the signing of the Mutual Agreement. The Company reiterates that Altairnano management had not breached its fiduciary duties to its shareholders and that the lawsuit was completely without merit. This suit has now officially been concluded without any finding of wrongdoing by Altair and with no monetary award or settlement made to Mr. Schnur.

The Company and Spectrum Pharmaceuticals, Inc. ("Spectrum") are parties to an arbitration arising out of a License Agreement between the parties. After Altair notified Spectrum of several claims it had for compensation under the Agreement, Spectrum formally initiated the arbitration by filing its claims for unspecified breach of contract damages on September 30, 2005. The Company answered by denying all of Spectrum's claims for relief and bringing counterclaims of its own, including specific performance of a milestone payment for 100,000 shares of Spectrum common stock. On November 28, 2005, the chief executive officers of the parties and their counsel met and reached an oral settlement agreement that, despite Spectrum's claims for \$2,000,000 in unspecified damages, resolved all issues in the arbitration without any payment of funds by either company and a payment to Altair of 40,000 shares of Spectrum stock. The oral agreement was reduced to writing by the parties' legal counsel, but Spectrum has refused to sign the written agreement. Spectrum now continues to seek monetary damages based upon alleged breaches of the License Agreement. The Company is requesting that the arbitration panel enforce the parties' oral settlement agreement, or, in the alternative, dismiss all of Spectrum's claims and award the Company damages in its counterclaims.

The arbitration is occurring under the auspices of the American Arbitration Association ("AAA"). The AAA has appointed a three-person panel of arbitrators, and has stated that the arbitration will take place in Irvine, California. No proceedings have yet occurred in front of the AAA panel. Because the arbitration is in its early stages, the likelihood of an unfavorable outcome and an estimate of the amount or range of potential loss is not known.

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

We did not submit any matters to a vote of security holders during the fourth quarter of the 2005 fiscal year.

Table of Contents**PART II*****Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*****Market Price**

Our common shares are traded on the Nasdaq Capital 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.

<b>Fiscal Year Ended December 31, 2004</b>	<b>Low</b>	<b>High</b>
1st Quarter	\$2.20	\$4.40
2nd Quarter	\$2.05	\$3.58
3rd Quarter	\$0.95	\$2.37
4th Quarter	\$1.50	\$3.17
<b>Fiscal Year Ended December 31, 2005</b>		
1st Quarter	\$1.93	\$6.52
2nd Quarter	\$2.53	\$4.38
3rd Quarter	\$2.40	\$3.40
4th Quarter	\$1.93	\$2.82

The last sale price of our common shares, as reported on the Nasdaq Capital Market on March 3, 2006, was \$3.65 per share.

**Outstanding Shares and Number of Shareholders**

As of March 3, 2006, the number of common shares outstanding was 59,352,519 held by approximately 500 holders of record. In addition, as of the same date, we have reserved 3,606,000 common shares for issuance upon exercise of options that have been, or may be, granted under our employee stock option plans and 1,318,556 common shares for issuance upon exercise of outstanding warrants.

**Dividends**

We have never declared or paid cash 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.

Table of Contents**Securities Authorized for Issuance under Equity Compensation Plans**

We have stock option plans administered by the Board of Directors that provide for the granting of options to employees, officers, directors and other service providers of the Company. All option plans have been approved by security holders. The following table sets forth certain information with respect to compensation plans under which equity securities are authorized for issuance at December 31, 2005:

<b>Plan Category</b>	<b>Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)</b>	<b>Weighted-average exercise price of outstanding options, warrants and rights (b)</b>	<b>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)</b>
<b>Equity compensation plans approved by security holders</b>	2,533,200	\$2.69	3,568,000
<b>Equity compensation plans not approved by security holders</b>	None	N/A	None
<b>Total</b>	2,533,200	\$2.69	3,568,000

**Recent Sales of Unregistered Securities**

Except as previously reported, we did not sell any securities in transactions that were not registered under the Securities Act in the quarter ended December 31, 2005.

**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.

**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 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.

Table of Contents

A capital gain realized on the disposition of 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, 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 Stock 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, which were listed on a prescribed stock exchange, 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 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.

**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 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,

	2005	2004	2003	2002	2001
<b><u>STATEMENTS OF OPERATIONS</u></b>					
Revenues	\$ 2,806,535	\$ 1,151,892	\$ 72,851	\$ 253,495	\$ 42,816
Operating expenses	\$ (13,288,388)	\$ (8,056,847)	\$ (5,858,061)	\$ (8,110,206)	\$ (6,064,348)
Interest expense	\$ (207,189)	\$ (194,180)	\$ (454,415)	\$ (1,151,388)	\$ (1,881,077)
Interest income	\$ 750,306	\$ 96,229	\$ 1,879	\$ 2,105	\$ 148,980
Gain (Loss) on foreign exchange	\$ 1,524	\$ 626	\$ (193)	\$ (835)	\$ (402)
Loss on extinguishment of debt	\$ -	\$ -	\$ -	\$ (914,667)	\$ -
Net Loss	\$ (9,937,212)	\$ (7,002,280)	\$ (6,237,939)	\$ (9,921,496)	\$ (7,754,031)
Basic and diluted net loss per common share	\$ (0.17)	\$ (0.14)	\$ (0.19)	\$ (0.40)	\$ (0.39)
Cash dividends declared per common share	\$ -	\$ -	\$ -	\$ -	\$ -
<b><u>BALANCE SHEET DATA</u></b>					
Working capital	\$ 21,482,766	\$ 7,663,264	\$ 3,565,039	\$ (204,365)	\$ (81,154)
Total assets	\$ 33,464,016	\$ 15,547,021	\$ 11,659,754	\$ 8,914,405	\$ 10,853,243
Current liabilities	\$ (2,427,543)	\$ (376,773)	\$ (397,141)	\$ (604,503)	\$ (714,689)
Long-term obligations	\$ (2,400,000)	\$ (2,880,311)	\$ (2,686,130)	\$ (3,905,040)	\$ (1,462,060)
Net shareholders' equity	\$ (28,636,473)	\$ (12,289,937)	\$ (8,576,483)	\$ (4,404,862)	\$ (8,676,494)



Table of Contents

***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**

We are a Canadian company, with principal assets and operations in the United States, whose primary business is developing and commercializing nanomaterial and titanium dioxide pigment technologies. We are organized into two divisions, a Performance Materials Division and a Life Sciences Division. Our research, development, production and marketing efforts are currently directed toward six market applications that utilize our proprietary technologies:

**Advanced Materials**

- o The marketing and licensing of titanium dioxide pigment production technology.
- o The marketing and production of nano-structured ceramic powders for thermal spray applications.
- o The development of nano-structured ceramic powders for nano-sensor applications.
- o The development of titanium dioxide electrode structures in connection with research programs aimed at developing a lower-cost process for producing titanium metals and related alloys. Development of this product is largely inactive as we seek a business partner.

**Air and Water Treatment**

- o The development, production and sale of photocatalytic materials for air and water cleansing.
- o The marketing of Nanocheck products for phosphate binding to prevent or reduce algae growth in recreational and industrial water.

**Alternative Energy**

- o The development, production and sale of nano-structured lithium titanate spinel, lithium cobaltate and lithium manganese spinel materials for high performance lithium ion batteries.
- o The design and development of power lithium ion battery cells, batteries and battery packs as well as related design and test services.
- o The development of materials for photovoltaics and transparent electrodes for hydrogen generation and fuel cells.

**Lanthanum based Pharmaceutical Products**

- o The co-development of RenaZorb, a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of elevated serum phosphate levels in patients undergoing kidney dialysis.
- o The testing of Renalan, a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of elevated serum phosphate levels in companion animals suffering from chronic renal disease.

**Chemical Delivery Products**

- o The development of TiNano Spheres, which are rigid, hollow, porous, high surface area ceramic micro structures that are derived from Altair's proprietary process technology for the delivery of chemicals, drugs and biocides.

**Biocompatible Materials**

- o The development of nanomaterials for use in various products for dental implants, dental fillings and dental products, as well as biocompatible coatings on implants.

## Table of Contents

We also provide contract research services on select projects where we can utilize our resources to develop intellectual property and/or new products and technology.

Our revenues have been, and we expect them to continue to be, generated by license fees, product sales, commercial collaborations and contracts and grants. We currently have agreements in place to (1) provide research involving a technology used in the detection of chemical, biological and radiological agents, (2) license and evaluate our pigment production process for the production of titanium dioxide pigment and pigment-related products from titanium-bearing oil sands, (3) supply nano-sized anode and cathode materials for design and development of high capacity lithium ion battery and super capacitor applications, and (4) provide research utilizing nanotechnology processes for the production and commercialization of solar-based hydrogen technologies. In addition, we have entered into a licensing agreement for RenaZorb, our potential pharmaceutical product, and we have made product sales consisting principally of battery materials and thermal spray products. Future revenues will depend on the success of our contracted projects, the results of our other research and development work, the success of the RenaZorb licensee in obtaining FDA approval for the drug, and the success of our marketing efforts with respect to both product sales and technology licenses.

## **General Outlook**

We have generated net losses in each fiscal year since incorporation. In fiscal 2005, we generated our first licensing revenues when we licensed RenaZorb to Spectrum. Revenues from product sales, commercial collaborations and contracts and grants increased significantly in 2005 but operating expenses also increased as we added employees and committed additional funds to our customer contracts, battery initiative, pigment process technology and sales and marketing efforts. Our gross profit margins on customer contracts for research and development work are very low, and in order that we may be profitable in the long run, our business plan focuses on the development of products and technologies that we expect will eventually bring a substantial amount of higher-margin revenues from licensing, manufacturing, product sales and other sources. We expect our advanced battery materials to be a source of such higher-margin revenues. Consequently, during 2005, we greatly expanded the scope of our battery initiative by (1) hiring thirteen highly qualified advanced battery scientists, engineers, manufacturing and marketing specialists, (2) leasing office, laboratory and production space in Indiana, and (3) acquiring test and production equipment.

As we attempt to significantly expand our revenues from licensing, manufacturing, sales and other sources, some of the key near-term events that will affect our long term success prospects include the following:

- We must continue the development work on our advanced battery materials, produce sufficient quantities of batteries and battery cells for test purposes, obtain satisfactory test results and successfully market the materials. Toward that end, we have hired additional employees, are constructing test and production facilities and are purchasing equipment. Our intent is to initially market our battery materials to the automotive industry where we must be able to demonstrate to prospective customers that our lithium battery materials offer significant advantages over existing technologies.
- Spectrum must begin the testing and application processes necessary to receive FDA approval of our RenaZorb product. Animal testing of RenaZorb was completed in September 2005 and, although we have been informed that the results were positive and we have received a copy of the test results, Altair has not received the milestone payment of 100,000 shares of Spectrum Pharmaceuticals, Inc. stock called for in the agreement. Altair and Spectrum entered the early stages of a dispute resolution process as required by our license agreement. This process will likely delay the product development process and our receipt of our next milestone payment.



## Table of Contents

- Licensing and product purchase commitments for our Nanocheck swimming pool product are currently under discussion. Successful completion of potential license agreement(s) and product purchase commitments are essential for the commercialization of the Nanocheck product, which could bring manufacturing and licensing revenue in 2006.
- The initial phase of work for the Western Oil Sands license agreement has been expanded and will run through December 31, 2006. We must successfully complete the initial phase, and Western Oil Sands must decide to proceed with phase 2 work for this project to continue to move toward commercialization.
- In April 2005, we entered into a joint venture with Bateman Engineering NV (“Bateman”) to combine our hydrochloride pigment process technology with Bateman’s engineering, design and construction expertise. The joint venture, Altair-Bateman Titania, Inc., will offer customers an integrated resource for technology development, engineering, design and construction of pigment processing projects. We anticipate that the joint venture will be funded entirely by Altair and Bateman, with each having equal shareholding and Altair having voting control. We expect to make a significant capital investment in the venture and, in order to recover our investment, we must be successful in licensing the pigment process technology.

Although it is not essential that all of these projects be successful in order to permit substantial long-term revenue growth, we believe that full commercialization of several of our technologies will be necessary in order to expand our revenues enough to create a likelihood of our becoming profitable in the long term. We are optimistic with respect to our current key projects, as well as others we are pursuing, but recognize that, with respect to each, there are development, marketing, partnering and other risks to be overcome.

## **Liquidity and Capital Resources**

### **Current and Expected Liquidity**

Our cash and short-term investments increased from \$7,357,843 at December 31, 2004 to \$23,054,074 at December 31, 2005. In early February 2005, the market price of our common shares increased significantly. As a result, 2,839,281 warrants and 379,000 options were exercised, resulting in cash proceeds to us of \$4,903,487. During the remainder of 2005, additional warrants and stock options were exercised, resulting in additional cash proceeds of \$1,753,980. Additionally, on February 14, 2005, we sold 5,000,000 of our common shares which had been previously registered in a shelf registration for net proceeds to us of approximately \$19.3 million.

We intend to use these funds for working capital, capital expenditures, research and development activities and the acquisition of other technologies. Net cash used in operations was \$7,833,268 in 2005, and we expect this amount to remain approximately the same in 2006. We currently have contracts in place that are expected to generate approximately \$1,453,000 of revenues in 2006, and we expect to substantially add to this amount by entering into new contracts and increasing product sales. However, this increase in revenues will be dependent on our ability to secure customer contracts and successfully market our Nanocheck, thermal spray, battery material and other products. Cash outflows will increase in 2006 due primarily to staff additions, operating expense increases and increased capital expenditures. During 2005, we began making significant expenditures for our battery initiative, added staff and equipment for the manufacture of nanoparticle products and increased our sales and marketing efforts. In 2006, we intend to significantly increase spending for the battery initiative and pigment process development. We estimate that our current cash and short-term investments balance is sufficient to support our operations for approximately 2-3 years at projected revenue and expenditure levels.





Table of Contents

Historically, we have financed operations primarily through the issuance of equity securities (common shares, convertible debentures, stock options and warrants) and by the issuance of debt. In light of our recent public offering of securities, we do not presently have any plans to pursue additional debt or equity financing during 2006 but reserve the right to do so if deemed necessary in connection with an unexpected business opportunity or need. We do not have any commitments with respect to future financing and may, or may not, be able to obtain such financing on reasonable terms, or at all. We have a single note payable in the principal amount of \$3,000,000 that does not contain any restrictive covenants with respect to the issuance of additional debt or equity securities by Altair. The first principal payment of \$600,000 plus accrued interest was due and paid on February 8, 2006. Future payments of principal and interest are due annually on February 8, 2007 through 2010.

**Capital Commitments and Expenditures**

The following table discloses aggregate information about our contractual obligations including notes payable, mineral lease payments, contractual service agreements, facilities lease payments and unfulfilled purchase orders, and the periods in which payments are due as of December 31, 2005:

<b>Contractual Obligations</b>	<b>Total</b>	<b>Less Than 1 Year</b>	<b>1-3 Years</b>	<b>4-5 Years</b>	<b>After 5 Years</b>
Notes Payable	\$ 3,000,000	\$ 600,000	\$ 1,200,000	\$ 1,200,000	\$ -
Interest on notes payable	525,000	105,000	294,000	126,000	-
Mineral Leases*	86,386	81,586	4,800	-	-
Contractual Service Agreements	789,631	777,131	12,500	-	-
Facilities Leases	206,872	31,626	175,246	-	-
Unfulfilled Purchase Orders	1,208,662	1,208,662	-	-	-
<b>Total Contractual Obligations</b>	<b>\$ 5,816,551</b>	<b>\$ 2,804,005</b>	<b>\$ 1,686,546</b>	<b>\$ 1,326,000</b>	<b>\$ -</b>

\* Although we expect to terminate all mineral leases as soon as is practicable, the obligations are included here because they are not yet terminated.

The major capital expenditures during 2005 were \$1,480,000 for construction of dry rooms and purchase of equipment for the battery initiative, \$356,000 for equipment for the UNLV solar hydrogen project, \$275,000 for production equipment, \$198,000 for pigment production equipment, \$113,000 for new accounting software and network equipment and \$106,000 for equipment for the WMU nanosensor project. At December 31, 2005, we had \$1,195,000 of outstanding commitments for capital additions, of which approximately 90% are for the battery initiative.

Table of Contents

**Critical Accounting Policies and Estimates**

Management based the following discussion and analysis of our financial condition and results of operations on our consolidated financial statements. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our critical accounting policies and estimates, including those related to long-lived assets, stock-based compensation, revenue recognition, overhead allocation, allowance for doubtful accounts and deferred income tax. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our consolidated financial statements. These judgments and estimates affect the reported amounts of assets and liabilities and the reported amounts of revenues and expenses during the reporting periods. Changes to these judgments and estimates could adversely affect the Company's future results of operations and cash flows.

- **Long-Lived assets.** Our long-lived assets consist principally of the nanomaterials and titanium dioxide pigment assets, the intellectual property (patents and patent applications) associated with them, and a building. Included in these long-lived assets are those that relate to our research and development process. These assets are initially evaluated for capitalization based on Statement of Financial Accounting Standards ("SFAS") No. 2, *Accounting for Research and Development Costs*. If the assets have alternative future uses (in research and development projects or otherwise), they are capitalized when acquired or constructed; if they do not have alternative future uses, they are expensed as incurred. At December 31, 2005, the carrying value of these assets was \$8,746,543, or 26% of total assets. We evaluate the carrying value of long-lived assets when events or circumstances indicate that an impairment may exist. In our evaluation, we estimate the net undiscounted cash flows expected to be generated by the assets, and recognize impairment when such cash flows will be less than the carrying values. Events or circumstances that could indicate the existence of a possible impairment include obsolescence of the technology, an absence of market demand for the product, and/or the partial or complete lapse of technology rights protection.

- **Stock-Based Compensation.** We have three stock option plans which provide for the issuance of common stock options to employees and service providers. Although SFAS No. 123, *Accounting for Stock Based Compensation*, encourages entities to adopt a fair-value-based method of accounting for stock options and similar equity instruments, it also allows an entity to continue measuring compensation cost for stock-based compensation for employees and directors using the intrinsic-value method of accounting prescribed by Accounting Principles Board ("APB") Opinion No. 25, *Accounting for Stock Issued to Employees*. We have elected to follow the accounting provisions of APB 25 and to furnish the pro forma disclosures required under SFAS 123 for employees and directors, but we also issue warrants and options to non-employees that are recognized as expense when issued in accordance with the provisions of SFAS 123. We calculate compensation expense under SFAS 123 using a modified Black-Scholes option pricing model. In so doing, we estimate certain key assumptions used in the model. We believe the estimates we use, which are presented in Note 2 of Notes to Consolidated Financial Statements, are appropriate and reasonable. As explained in Note 2 to the Consolidated Financial Statements, the Financial Accounting Standards Board has issued a revision to SFAS 123 ("SFAS 123R") that eliminates the alternative of applying the intrinsic value measurement provisions of APB 25. We are required to adopt SFAS 123R no later than January 1, 2006. Although we have not yet quantified the effects of adoption, it is expected that the new standard will result in significant additional expense depending upon the nature and amount of stock-based compensation awards which may be granted.



Table of Contents

- Revenue Recognition. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or service has been performed, the fee is fixed and determinable, and collectibility is probable. During 2005, our revenues were derived from four sources: license fees, commercial collaborations, contract research and development and product sales. License fees are recognized when the agreement is signed, we have performed all material obligations related to the particular milestone payment or other revenue component and the earnings process is complete. Revenue for product sales is recognized at the time the purchaser has accepted delivery of the product. Based on the specific terms and conditions of each contract/grant, revenues are recognized on a time and materials basis, a percentage of completion basis and/or a completed contract basis. Revenue under contracts based on time and materials is recognized at contractually billable rates as labor hours and expenses are incurred. Revenue under contracts based on a fixed fee arrangement is recognized based on various performance measures, such as stipulated milestones. As these milestones are achieved, revenue is recognized. From time to time, facts develop that may require us to revise our estimated total costs or revenues expected. The cumulative effect of revised estimates is recorded in the period in which the facts requiring revisions become known. The full amount of anticipated losses on any type of contract is recognized in the period in which it becomes known.
- Overhead Allocation. Facilities overhead, which is comprised primarily of occupancy and related expenses, is initially recorded in general and administrative expenses and then allocated monthly to research and development expense based on labor costs. Facilities overheads allocated to research and development projects may be chargeable when invoicing customers under certain research and development contracts.
- Allowance for Doubtful Accounts. The allowance for doubtful accounts is based on our assessment of the collectibility of specific customer accounts and the aging of accounts receivable. We analyze historical bad debts, the aging of customer accounts, customer concentrations, customer credit-worthiness, current economic trends and changes in our customer payment patterns when evaluating the adequacy of the allowance for doubtful accounts. From period to period, differences in judgments or estimates utilized may result in material differences in the amount and timing of our bad debt expenses.
- Deferred Income Tax. Income taxes are accounted for using the asset and liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Future tax benefits are subject to a valuation allowance when management is unable to conclude that its deferred income tax assets will more likely than not be realized from the results of operations. The Company has recorded a valuation allowance to reflect the estimated amount of deferred income tax assets that may not be realized. The ultimate realization of deferred income tax assets is dependent upon generation of future taxable income during the periods in which those temporary differences become deductible. Management considers projected future taxable income and tax planning strategies in making this assessment. Based on the historical taxable income and projections for future taxable income over the periods in which the deferred income tax assets become deductible, management believes it more likely than not that the Company will not realize benefits of these deductible differences as of December 31, 2005. Management has, therefore, established a full valuation allowance against its net deferred income tax assets as of December 31, 2005.

Table of Contents

**Results of Operations**

**Fiscal Year 2005 vs. 2004**

Revenues increased by \$1,654,643 in 2005 over 2004, while operating expenses increased by \$5,231,541. As a result, our loss from operations increased by \$3,576,898, from \$6,904,955 in 2004 to \$10,481,853 in 2005.

In January 2005, we licensed Renazorb to Spectrum and received \$695,000 of license revenues, the first license revenues received by Altair.

Contract and grant revenues increased from \$591,890 in 2004 to \$1,136,439 in 2005, principally as a result of billings under an agreement with the University of Nevada, Las Vegas Research Foundation that was entered into in November 2004. Revenues in connection with this agreement increased by approximately \$460,000 from 2004 to 2005.

Commercial collaborations revenues increased from \$552,499 in 2004 to \$825,723 in 2005 due to increased billings to Western Oil Sands for design and construction of a pilot plant and increased staff time spent on the project.

Product sales increased from \$7,503 in 2004 to \$149,373 in 2005 as a result of sales of battery materials and thermal spray materials.

Research and development (“R&D”) expense increased by \$2,884,328, from \$2,189,150 in 2004 to \$5,073,478 in 2005. We made a significant resource commitment to the battery initiative project beginning in early 2005 and in addition, during the fourth quarter of 2005, we hired thirteen employees with extensive scientific, engineering, manufacturing and marketing experience in the battery industry. As a result, expenditures for the battery initiative increased by \$1,298,660 in 2005. We also increased our commitment to pigment process technology development with a resulting increase in expenditures of \$256,914. Expenditures for contract and grant work increased primarily as a result of new grants received in late 2004 and in 2005. Expenditures under the National Science Foundation grant for development of advanced battery materials increased by \$121,388 in 2005, expenditures under the UNLV Research Foundation grant for development of solar hydrogen generation cells increased by \$170,412 and expenditures under the Western Michigan University grant for development of nanosensors increased by \$59,690 in 2005. The scope of work under phase 1 of the Western Oil Sands contract was expanded in 2005 and we also constructed a pilot plant for the project. As a result, charges under the contract increased by \$256,050 in 2005. In April 2005, we entered into a joint venture with Bateman Engineering NV to promote the development of the pigment process technology and we incurred \$136,403 of expenses during the year in connection with the venture. The remaining increase in R&D expenditures of approximately \$584,000 was incurred for management, facilities, equipment and other support functions for R&D.

Table of Contents

Sales and marketing expenses increased by \$1,204,544, from \$335,221 in 2004 to \$1,539,765 in 2005. The increase is due to payment of a \$500,000 fee to RBC Capital Markets in connection with the RenaZorb licensing agreement, increased payroll expense resulting from the addition of five new employees and increased business development activities.

General and administrative expenses increased by \$944,892, from \$4,626,562 in 2004 to \$5,571,454 in 2005. Consulting costs incurred to comply with the Sarbanes-Oxley Act increased by \$632,010 in 2005; legal fees associated with patent work and general corporate matters increased by \$454,485; stock option compensation expense and deferred compensation expense associated with restricted stock issuances, both non-cash items, increased by \$390,566; rents paid for additional laboratory space increased by \$156,000; utilities increased by \$68,106 due primarily to increased production and R&D activity; payroll expense increased by approximately \$100,000 due mainly to staff additions and increased labor overhead costs and recruiting, and relocation expense increased by \$96,902 as a result of staff additions. These increases were partially offset by a decrease in investor relations expense of \$687,709 resulting from a cutback in our investor relations programs, and a decrease in general consulting of \$260,587.

Interest income increased by \$654,077, from \$96,229 in 2004 to \$750,306 in 2005 due to the significant increase in cash available for investment that was generated through the sale of common shares and the exercise of warrants and options in early 2005.

**Fiscal Year 2004 vs. 2003**

Our revenues increased significantly from \$72,851 in 2003 to \$1,151,892 in 2004 as a result of new customer contracts we entered into under which we provided research and development work on a variety of projects.

Cash used in operations increased by \$1,615,302 from \$4,004,805 in 2003 to \$5,620,108 in 2004 due to increased R&D and general and administrative (“G&A”) expenses. We added staff in R&D in order to meet the workload created by new customer contracts and we added staff in G&A primarily to meet the requirements of the Sarbanes-Oxley Act. Other increases in these expenses are discussed below.

Operating losses increased from \$5,785,210 in 2003 to \$6,904,955 in 2004. Although revenues increased significantly in 2004, this increase was more than offset by increases in R&D and G&A expenses.

Revenues from commercial collaborations increased by \$524,803, from \$27,696 in 2003 to \$552,499, in 2004. Revenues in 2003 were derived from two customers. In late 2003 and during 2004, we entered into new contracts which generated the substantial increase in revenues. Our commercial collaborations included projects to (1) provide custom oxide feedstocks for a titanium metal research program funded by the Department of Defense, (2) license and evaluate our pigment production process for the production of titanium dioxide pigment and pigment-related products from titanium-bearing oil sands, (3) develop advanced aerospace materials, and (4) evaluate our pigment production process for the production of titanium dioxide pigment from titanium-bearing minerals.

Revenues from contracts and grants increased by \$555,337, from \$36,553 in 2003 to \$591,890, in 2004. We had one customer contract in place during the last half of 2003, and we entered into two additional contracts during 2004. Our contracts and grants revenues were generated by projects to (1) provide research involving a technology used in the detection of chemical, biological and radiological agents, (2) supply nano-sized anode and cathode materials for design and development of high capacity lithium ion battery and super capacitor applications, and (3) provide research utilizing nanotechnology processes for the production and commercialization of solar-based hydrogen technologies.



Table of Contents

Increased customer contract work was the primary driver behind the increase in R&D expenses in 2004. R&D labor costs increased by \$339,410 in 2004 due to the addition of four R&D employees, the cost of temporary employees doing R&D work, salary increases for existing employees and an increase in the cost of employee benefit plans. RenaZorb development expenses increased by \$157,300 in 2004 as a result of animal testing, laboratory and other costs. Out-of-pocket costs for customer projects increased by \$220,819 in 2004 due to the increase in the amount of customer contract work being done. These increases were partially offset by a decrease in stock option expense allocable to R&D of approximately \$264,000 as a result of a reduction in value of repriced stock options. Repriced stock options are revalued at each reporting date based on the market price of our common shares on that date. Any increase or decrease in the value of the options is recorded in the accounts. We also experienced a decrease in development expenses for other products of approximately \$60,000 and a decrease in minerals R&D of approximately \$224,000. During 2004, our board of directors made the decision to dispose of the Tennessee mineral properties. In accordance with this, we began terminating the mineral leases and prepared plans for remediation of the property and sale of the pilot plant. As of December 31, 2004, we had terminated the mineral leases on 4,750 acres out of a total of approximately 8,700 acres originally under lease.

Sales and marketing expenses increased by \$120,843, from \$214,378 in 2003 to \$335,221 in 2004, primarily as a result of additional labor costs for time spent on sales and marketing activities.

Our general and administrative expenses increased by \$1,825,111, from \$2,801,451 in 2003 to \$4,626,562 in 2004. G&A labor increased by \$483,161 in 2004 due to salary increases, employee bonuses, an increase in the cost of employee benefit plans and the net addition of three new employees. Investor relations expenses increased by \$305,681 in 2004 as a result of increased investor relations programs aimed at increasing investor awareness of Altair. In 2004, we incurred an expense of \$235,000, representing the value of common shares issued to a shareholder in connection with an agreement with a shareholder resolving various issues, including claims for reimbursement for payments allegedly made by the shareholder for and on behalf of the Company and a dispute over registration rights of certain common shares owned by the shareholder. Consulting fees increased by \$270,000 in 2004, primarily as a result of consultants hired to assist with marketing and product development in both the performance materials and life sciences divisions. Legal expenses increased by \$257,467 in 2004, due to patent costs associated with performance materials and life sciences products, and a settlement agreement involving a shareholder. Accounting fees increased by \$123,897 in 2004, primarily as a result of costs associated with the Sarbanes-Oxley Act. General office expenses increased by \$172,258 in 2004, primarily as a result of additional purchases of office supplies and equipment as well as higher costs for utilities, telephone, postage and printing. Director fees and expenses increased by \$108,579 in 2004 due to the addition of two non-employee directors and an increase in the fees paid to directors. Insurance expense increased by \$64,872 in 2004 as a result of increased premiums for liability insurance. Shareholder information expenses increased by \$43,031 in 2004 due to annual report printing and mailing costs; the number of shareholders owning our stock increased substantially in 2004. These increases were partially offset by a decrease in stock option expense of approximately \$194,000 which occurred due to a reduction in value of repriced stock options.

Interest expense decreased by \$260,235, from \$454,415 in 2003 to \$194,180 in 2004. The decrease is due to the payoff of our note payable to Doral 18, LLC in September 2003.

Interest income increased by \$94,350, from \$1,879 in 2003 to \$96,229 in 2004, as a result of increased invested cash balances.



Table of Contents**Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

Not Applicable.

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

The following Supplementary Financial Information for the fiscal quarters ended March 31, June 30, September 30 and December 31 in each of the years 2004 and 2005 were derived from our unaudited quarterly consolidated financial statements filed by us with the SEC in our Quarterly Reports on Form 10-Q with respect to such periods (except for 4th quarter data).

**Supplementary Financial Information by Quarter, 2005 and 2004  
(Unaudited)**

	Quarter Ended March 31	Quarter Ended June 30	Quarter Ended September 30	Quarter Ended December 31
<b>Year Ended December 31, 2005:</b>				
Revenues	\$ 1,027,580	\$ 502,881	\$ 585,405	\$ 690,669
Operating Expenses	\$ 3,325,584	\$ 2,554,426	\$ 2,939,565	\$ 4,468,813
Net Loss	\$ (2,245,959)	\$ (1,919,078)	\$ (2,176,826)	\$ (3,595,349)
Loss per Common Share: (1)				
Basic and Diluted	\$ (0.04)	\$ (0.03)	\$ (0.04)	\$ (0.06)
<b>Year Ended December 31, 2004:</b>				
Revenues	\$ 139,749	\$ 154,233	\$ 346,907	\$ 511,003
Operating Expenses	\$ 1,822,763	\$ 2,283,269	\$ 1,766,962	\$ 2,183,853
Net Loss	\$ (1,710,757)	\$ (2,154,032)	\$ (1,440,324)	\$ (1,697,167)
Loss per Common Share: (1)				
Basic and Diluted	\$ (0.04)	\$ (0.04)	\$ (0.03)	\$ (0.03)

(1) Loss per common share is computed independently for each of the quarters presented. Therefore, the sum of the quarterly loss per common share amounts does not necessarily equal the total for the year.

**Financial Statements**

The financial statements required by this Item appear on pages F-5 through F-27 of this Form 10-K.

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

The information called for by this item was previously reported on a Current Report on Form 8-K filed with the SEC on August 24, 2005 which discloses the termination of our engagement of Deloitte & Touche LLP and on a Current Report on Form 8-K filed with the SEC on September 30, 2005 which discloses the engagement of Perry-Smith LLP as the Company's accountants.

No report of Deloitte & Touche LLP on the financial statements of the Company for the fiscal years ended December 31, 2003 or December 31, 2004 contained an adverse opinion or a disclaimer of opinion or was qualified or modified as to uncertainty, audit scope, or accounting principles.

During the fiscal years ended December 31, 2003 and December 31, 2004, and during the interim period between January 1, 2005 and the date of the Form 8-K filed on August 24, 2005, there were no disagreements with Deloitte & Touche LLP on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure which disagreement, if not resolved to the satisfaction of Deloitte & Touche LLP, would have caused it to make reference to the subject matter of the disagreements in its reports. There were no “reportable events,” as described in Item 304(a)(1)(v) of Regulation S-K, during the fiscal years ended December 31, 2003 and December 31, 2004, and from January 1, 2005 to the date of this Report.

Table of Contents

***Item 9A. Controls and Procedures***

Disclosure Controls and Procedures. Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as of December 31, 2005. Based upon this evaluation, our chief executive officer and our chief financial officer have concluded that, as of December 31, 2005, our disclosure controls and procedures were effective in ensuring that information required to be disclosed by the Company in reports that it files under the Exchange Act is recorded, processed, summarized and reported within the time periods required by governing rules and forms.

Internal Control Over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Internal control over financial reporting includes those written policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America;
- provide reasonable assurance that our receipts and expenditures are being made only in accordance with authorization of our management; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of assets that could have a material effect on our consolidated financial statements.

Internal control over financial reporting includes the controls themselves, monitoring and internal auditing practices and actions taken to correct deficiencies as identified.

Our management assessed the effectiveness our internal control over financial reporting as of December 31, 2005. Our management’s assessment was based on criteria for effective internal control over financial reporting described in “Internal Control - “Integrated Framework” issued by the Committee of Sponsoring Organizations of the Treadway Commission. Our management’s assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of our internal control over financial reporting. Our management reviewed the results of its assessment with the Audit Committee of our Board of Directors. Based on this assessment, our management determined that, as of December 31, 2005, we maintained effective internal control over financial reporting.

Perry-Smith LLP, independent registered public accounting firm, who audited and reported on our consolidated financial statements included in this report, has issued an attestation report on management’s assessment of internal control over financial reporting. This attestation report appears on pages F-2 and F-3 of this report.

Table of Contents

**Changes In Internal Control Over Financial Reporting.** There were no significant changes (including corrective actions with regard to significant deficiencies or material weaknesses) in our internal controls over financial reporting that occurred during the fourth quarter of fiscal 2005 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

***Item 9B. Other Information***

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 SEC.

***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 SEC.

***Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

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 SEC.

***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 SEC.

***Item 14. Principal Accountant Fees and Services***

The information required by this Item is incorporated by reference to the section entitled “Principal Accounting Fees and Services” in the Company’s definitive proxy statement to be filed with the SEC.

Table of Contents**PART IV*****Item 15. 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 Auditors' Report are filed as part of this Annual Report on Form 10-K:

- Report of Independent Registered Public Accounting Firm
- Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting
- Report of Former Independent Registered Public Accounting Firm
- Consolidated Balance Sheets, December 31, 2005 and 2004
- Consolidated Statements of Operations for Each of the Three Years in the Period Ended December 31, 2005
- Consolidated Statements of Shareholders' Equity and Comprehensive Loss for Each of the Three Years in the Period Ended December 31, 2005
- Consolidated Statements of Cash Flows for Each of the Three Years in the Period Ended December 31, 2005
- Notes to Consolidated Financial Statements

2. *Financial Statement Schedule.* Not applicable.

3. *Exhibit List.*

<b>Exhibit No.</b>	<b>Description</b>	<b>Incorporated by Reference/Filed Herewith (and Sequential Page #)</b>
3.1	Articles of Continuance	Incorporated by reference to the Current Report on Form 8-K filed with the SEC on July 18, 2002. **
3.2	Bylaws	Incorporated by reference to the Amendment No. 1 to Annual Report on Form 10-K/A filed with the SEC on March 10, 2005. **
4.1	Form of Common Stock Certificate	Incorporated by reference to Registration Statement on Form 10-SB filed with the SEC on November 25, 1996. **



Table of Contents

<b>Exhibit No.</b>	<b>Description</b>	<b>Incorporated by Reference/Filed Herewith (and Sequential Page #)</b>
4.2	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 SEC on November 19, 1999. **
10.1	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, File No. 333-33481 filed with the SEC on July 11, 1997.
10.2	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 SEC on May 12, 1998. **
10.3	Altair Nanotechnologies Inc. 2005 Stock Incentive Plan	Incorporated by reference to the Company's Registration Statement on Form S-8, File No. 333-125863, filed with the SEC on June 16, 2005.
10.4	Installment Note dated August 8, 2002 (re Edison Way property)	Incorporated by reference to the Company's Amendment No. 1 to Registration Statement on Form S-2, File No. 333-102592, filed with the SEC on February 7, 2003.
10.5	Trust Deed dated August 8, 2002 (re Edison Way property)	Incorporated by reference to the Company's Amendment No. 1 to Registration Statement on Form S-2, File No. 333-102592, filed with the SEC on February 7, 2003.
10.6	Technology License Agreement dated September 29, 2003, with Bateman Luxembourg SA *	Incorporated by reference to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 14, 2003.
10.7	License Agreement for Altair TiO2 Pigment Technology between Altair Nanotechnologies, Inc. and Western Oil Sands, Inc. *	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on February 3, 2004. **
10.8	Settlement Agreement with Louis Schnur et al	Incorporated by reference to the Company's Amendment No. 2 to Registration Statement on Form S-3, File No. 333-117125, filed with the SEC on

July 30, 2004.

10.9	Employment Agreement of Douglas Ellsworth	Incorporated by reference to the Company's Quarterly Report on Form 10-Q filed with the SEC November 15, 2004.**
10.10	Employment Agreement of Edward Dickinson	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on February 21, 2006.**



Table of Contents

<b>Exhibit No.</b>	<b>Description</b>	<b>Incorporated by Reference/Filed Herewith (and Sequential Page #)</b>
10.11	Employment Agreement of Alan J. Gotcher, Ph.D.	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on February 21, 2006.**
10.12	License Agreement dated January 28, 2005 with Spectrum Pharmaceuticals, Inc.*	Incorporated by reference from the Company's Current Report on Form 8-K filed with the SEC on February 4, 2005.**
10.13	Letter Agreement dated February 11, 2005 between the Company and Maxim Group LLC	Incorporated by reference from the Current Report on Form 8-K filed by the Company on February 15, 2005. **
10.14	Subcontract between the UNLV Research Foundation and Altair Nanomaterials, Inc.	Incorporated by reference to the Company's Quarterly Report on Form 10-Q filed with the SEC August 15, 2005. **
10.15	Lease (Indiana Office) with Flagship Enterprise Center	Incorporated by reference to the Company's Quarterly Report on Form 10-Q filed with the SEC November 14, 2005. **
21	List of Subsidiaries	Incorporated by reference from Item 1 of this report.
23.1	Consent of Perry-Smith LLP	Filed herewith.
23.2	Consent of Deloitte & Touche LLP	Filed herewith.
24	Powers of Attorney	Included in the Signature Page hereof.
31.1	Rule 13-14(a)/15d-14a Certification of Chief Executive Officer	Filed herewith
31.2	Rule 13-14(a)/15d-154a Certification of Chief Financial Officer	Filed herewith
32.1	Section 1350 Certification of Chief Executive Officer	Filed herewith
32.2	Section 1350 Certification of Chief Financial Officer	Filed herewith

\*Portions of this Exhibit have been omitted pursuant to Rule 24b-2, are filed separately with the SEC and are subject to a confidential treatment request.

\*\* SEC File No. 1-12497.

48

---

Table of Contents

**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 15, 2006.

ALTAIR NANOTECHNOLOGIES, INC.

By: /s/ Alan J. Gotcher

---

Alan J. Gotcher,  
President and Chief Executive Officer

Date: March 15, 2006

**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 Alan J. Gotcher 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.

Signature	Title	Date
<u>/s/ Alan J. Gotcher</u> Alan J. Gotcher	President, Chief Executive Officer and Director (Principal Executive Officer)	March 15, 2006
<u>/s/ Edward Dickinson</u> Edward Dickinson	Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	March 15, 2006
<u>/s/ Michel Bazinet</u> Michel Bazinet	Director	March 15, 2006
<u>/s/ Jon N. Bengtson</u> Jon N. Bengtson	Director	March 15, 2006
<u>/s/ James I. Golla</u>	Director	March 15, 2006

James I. Golla

/s/ George Hartman

Director

March 15, 2006

George Hartman

/s/ Christopher E. Jones

Director

March 15, 2006

Christopher E. Jones

/s/ David King

Director

March 15, 2006

David King

Table of Contents

***Altair Nanotechnologies Inc.  
and Subsidiaries***

*Consolidated Financial Statements as of December 31,  
2005 and 2004 and for Each of the Three Years in the  
Period Ended December 31, 2005 and Report of  
Independent Registered Public Accounting Firm*

---

Table of Contents

**ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES**

**TABLE OF CONTENTS**

	<b>Page</b>
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	F-1
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL OVER FINANCIAL REPORTING	F-2-F-3
REPORT OF FORMER INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	F-4
<b>FINANCIAL STATEMENTS:</b>	
Consolidated Balance Sheets, December 31, 2005 and 2004	F-5
Consolidated Statements of Operations for Each of the Three Years in the Period Ended December 31, 2005	F-6
Consolidated Statements of Stockholders' Equity and Comprehensive Loss for Each of the Three Years in the Period Ended December 31, 2005	F-7-F-8
Consolidated Statements of Cash Flows for Each of the Three Years in the Period Ended December 31, 2005	F-9-F-10
Notes to Consolidated Financial Statements	F-11-F-27

---

Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Shareholders and Board of Directors  
Altair Nanotechnologies, Inc. and Subsidiaries

We have audited the accompanying consolidated balance sheet of Altair Nanotechnologies, Inc. and subsidiaries (the "Company") as of December 31, 2005 and the related consolidated statements of operations, changes in shareholders' equity and comprehensive loss and cash flows for the year then ended. 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 audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated 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. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, based on our audit, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2005 and the consolidated results of their operations and their cash flows for the year ended December 31, 2005, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of the Company's internal control over financial reporting as of December 31, 2005, based on criteria established in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 9, 2006 expressed an unqualified opinion on management's assessment of the effectiveness of the Company's internal control over financial reporting and an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ PERRY-SMITH LLP

Sacramento, California  
March 9, 2006

Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

---

The Shareholders and Board of Directors  
Altair Nanotechnologies, Inc. and Subsidiaries

We have audited management's assessment, included in the accompanying Management's Report on Internal Control Over Financial Reporting, that Altair Nanotechnologies, Inc. and subsidiaries (the "Company") maintained effective internal control over financial reporting as of December 31, 2005, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO criteria"). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management's assessment and an opinion on the effectiveness of the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

---

(Continued)

In our opinion, management's assessment that the Company maintained effective internal control over financial reporting as of December 31, 2005, is fairly stated, in all material respects, based on the COSO criteria. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2005, based on the COSO criteria.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of the Company as of December 31, 2005, and the related consolidated statements of operations, changes in shareholders' equity and comprehensive loss, and cash flows for the year then ended and our report dated March 9, 2006 expressed an unqualified opinion.

/s/ PERRY-SMITH LLP

Sacramento, California  
March 9, 2006

F-3

---

Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of  
Altair Nanotechnologies Inc.  
Reno, Nevada

We have audited the accompanying consolidated balance sheet of Altair Nanotechnologies Inc. and subsidiaries (the "Company") as of December 31, 2004, and the related consolidated statements of operations, stockholders' equity, and cash flows for the years ended December 31, 2004 and 2003. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of the Altair Nanotechnologies Inc. and subsidiaries as of December 31, 2004, and the results of their operations and their cash flows for the years ended December 31, 2004 and 2003, in conformity with accounting principles generally accepted in the United States of America.

/s/ DELOITTE & TOUCHE LLP

Salt Lake City, Utah  
March 7, 2005

F-4

---

Table of Contents**PART I - FINANCIAL INFORMATION****Item 1. Financial Statements**

**ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**  
(Expressed in United States Dollars)

	December 31, 2005	December 31, 2004
<b>ASSETS</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 2,264,418	\$ 7,357,843
Investment in available for sale securities	20,789,656	-
Accounts receivable	602,168	499,599
Prepaid expenses and other current assets	254,067	182,595
<b>Total current assets</b>	<b>23,910,309</b>	<b>8,040,037</b>
<b>Investment in Available for Sale Securities</b>	<b>423,000</b>	<b>-</b>
<b>Property, Plant and Equipment, net</b>	<b>8,169,445</b>	<b>6,513,907</b>
<b>Patents, net</b>	<b>890,062</b>	<b>974,877</b>
<b>Other Assets</b>	<b>71,200</b>	<b>18,200</b>
<b>Total Assets</b>	<b>\$ 33,464,016</b>	<b>\$ 15,547,021</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>Current Liabilities</b>		
Trade accounts payable	\$ 808,905	\$ 81,030
Accrued salaries and benefits	709,349	154,558
Accrued liabilities	309,289	141,185
Note payable, current portion	600,000	-
<b>Total current liabilities</b>	<b>2,427,543</b>	<b>376,773</b>
<b>Note Payable, Long-Term Portion</b>	<b>2,400,000</b>	<b>2,880,311</b>
<b>Total Liabilities</b>	<b>4,827,543</b>	<b>3,257,084</b>
<b>Commitments and Contingencies (Notes 7, 10 and 12)</b>		
<b>Stockholders' Equity</b>		
Common stock, no par value, unlimited shares authorized;		
59,316,519 and 49,775,694 shares issued and		

outstanding at December 31, 2005 and December 31, 2004	92,126,714	65,505,630
Accumulated deficit	(63,152,905)	(53,215,693)
Deferred compensation expense	(165,336)	-
Accumulated other comprehensive loss	(172,000)	-
<b>Total Stockholders' Equity</b>	<b>28,636,473</b>	<b>12,289,937</b>
<b>Total Liabilities and Stockholders' Equity</b>	<b>\$ 33,464,016</b>	<b>\$ 15,547,021</b>

See notes to the consolidated financial statements.

F-5

---

Table of Contents

**ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(Expressed in United States Dollars)

	Year Ended December 31,		
	2005	2004	2003
<b>Revenues</b>			
License fees	\$ 695,000	\$ -	\$ -
Product sales	149,373	7,503	8,602
Commercial collaborations	825,723	552,499	27,696
Contracts and grants	1,136,439	591,890	36,553
Total revenues	2,806,535	1,151,892	72,851
<b>Operating Expenses</b>			
Cost of product sales	69,489	1,361	1,731
Research and development	5,073,478	2,189,150	1,961,744
Sales and marketing	1,539,765	335,221	214,378
General and administrative	5,571,454	4,626,562	2,801,451
Depreciation and amortization	1,034,202	904,553	878,757
Total operating expenses	13,288,388	8,056,847	5,858,061
<b>Loss from Operations</b>	<b>(10,481,853)</b>	<b>(6,904,955)</b>	<b>(5,785,210)</b>
<b>Other Income (Expense)</b>			
Interest expense	(207,189)	(194,180)	(454,415)
Interest income	750,306	96,229	1,879
Gain (loss) on foreign exchange	1,524	626	(193)
Total other income (expense), net	544,641	(97,325)	(452,729)
<b>Net Loss</b>	<b>(9,937,212)</b>	<b>(7,002,280)</b>	<b>(6,237,939)</b>
<b>Preferential Warrant Dividend</b>	<b>-</b>	<b>-</b>	<b>(592,486)</b>
<b>Net Loss Applicable to Shareholders</b>	<b>\$ (9,937,212)</b>	<b>\$ (7,002,280)</b>	<b>\$ (6,830,425)</b>
<b>Loss per common share - Basic and diluted</b>			
	\$ (0.17)	\$ (0.14)	\$ (0.19)
<b>Weighted average shares - Basic and diluted</b>			
	57,766,557	48,677,283	36,222,026

See notes to the consolidated financial statements.

Table of Contents

**ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE LOSS**  
(Expressed in United States Dollars)

	Common Stock Shares	Common Stock Amount	Accumulated Deficit	Accumulated Deferred Compen- sation Expense	Other Compre- hensive Loss	Total
BALANCE, JANUARY 1, 2003	30,244,348	\$ 43,787,850	\$ (39,382,988)	\$ -	-	\$ 4,404,862
Stock options issued to non-employees	-	64,346	-	-	-	64,346
Variable accounting on stock options	-	903,668	-	-	-	903,668
Shares issued under Employee Stock Purchase Plan	873,480	606,675	-	-	-	606,675
Stock warrants issued	-	101,416	-	-	-	101,416
Preferential warrant dividend	-	592,486	(592,486)	-	-	-
Shares issued for settlement of debt	695,052	280,000	-	-	-	280,000
Shares issued for interest	277,169	133,315	-	-	-	133,315
Shares issued for services	213,102	89,297	-	-	-	89,297
Exercise of stock options	478,100	488,836	-	-	-	488,836
Exercise of warrants	3,210,328	3,417,109	-	-	-	3,417,109
Common stock issued	7,196,783	4,324,898	-	-	-	4,324,898
Net loss	-	-	(6,237,939)	-	-	(6,237,939)
BALANCE, DECEMBER 31, 2003	43,188,362	54,789,896	(46,213,413)	-	-	8,576,483
Stock options issued to non-employees	-	270,560	-	-	-	270,560
Modification of stock options issued to employee	-	39,000	-	-	-	39,000
Variable accounting on stock options	-	136,212	-	-	-	136,212
Shares issued for services	200,000	413,000	-	-	-	413,000
Exercise of stock options	561,900	902,109	-	-	-	902,109
Exercise of warrants	5,825,432	8,954,853	-	-	-	8,954,853
Net loss	-	-	(7,002,280)	-	-	(7,002,280)
	49,775,694	65,505,630	(53,215,693)	-	-	12,289,937

BALANCE, DECEMBER  
31, 2004

*(continued)*

F-7

---

Table of Contents

**ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE LOSS**  
(Expressed in United States Dollars)

	Common Stock		Accumulated	Deferred	Accumulated	
	Shares	Amount	Deficit	Compensation	Other	Total
				Expense	Comprehensive	
					Loss	
BALANCE, DECEMBER 31, 2004	49,775,694	\$ 65,505,630	\$ (53,215,693)	-	\$ -	\$ 12,289,937
Comprehensive loss:						
Net loss	-	-	(9,937,212)	-	-	(9,937,212)
Other						
comprehensive loss, net of taxes of \$0	-	-	-	-	(172,000)	(172,000)
Comprehensive loss:	-	-	-	-	-	(10,109,212)
Modification of stock options issued to employees	-	56,060	-	-	-	56,060
Variable accounting on stock options	-	297,138	-	-	-	297,138
Exercise of stock options	1,204,500	1,828,900	-	-	-	1,828,900
Exercise of warrants	3,201,511	4,828,567	-	-	-	4,828,567
Issuance of restricted stock	96,500	272,155	-	(272,155)	-	-
Amortization of deferred compensation expense	-	-	-	106,819	-	106,819
Common stock issued, net of issuance costs of \$2,081,989	5,038,314	19,338,264	-	-	-	19,338,264
BALANCE, DECEMBER 31, 2005	59,316,519	\$ 92,126,714	\$ (63,152,905)	(165,336)	\$ (172,000)	\$ 28,636,473

*(concluded)*

See notes to the consolidated financial statements.



Table of Contents

**ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**(Expressed in United States Dollars)**

	Year Ended December 31,		
	2005	2004	2003
<b>Cash flows from operating activities:</b>			
Net loss	\$ (9,937,212)	\$ (7,002,280)	\$ (6,237,939)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	1,034,202	904,553	878,757
Stock options issued to non-employees	-	270,560	64,346
Modification of stock options issued to employees	56,060	39,000	-
Shares issued for interest	-	-	133,315
Shares issued for services	-	413,000	89,297
Issuance of stock warrants	-	-	101,416
Variable accounting on stock options	297,138	136,212	903,668
Securities received in payment of license fees	(595,000)	-	-
Amortization of discount on note payable	119,689	194,182	181,090
Amortization of deferred compensation expense	106,819	-	-
Loss on disposal of fixed assets	81,203	34,716	25,661
Changes in assets and liabilities:			
Accounts receivable, net	(102,569)	(486,275)	119,535
Prepaid expenses and other current assets	(71,472)	(103,408)	(56,589)
Other assets	(53,000)	-	-
Trade accounts payable	507,978	(4,225)	(247,461)
Accrued salaries and benefits	554,791	56,371	(60,203)
Accrued liabilities	168,104	(72,514)	100,302
<b>Net cash used in operating activities</b>	<b>(7,833,268)</b>	<b>(5,620,108)</b>	<b>(4,004,805)</b>
<b>Cash flows from investing activities:</b>			
Purchase of available for sale securities	(27,089,656)	-	-
Sale of available for sale securities	6,300,000	-	-
Purchase of property and equipment	(2,466,230)	(748,680)	(92,400)
Proceeds received from sale of property and equipment	-	-	4,675
<b>Net cash used in investing activities</b>	<b>(23,255,886)</b>	<b>(748,680)</b>	<b>(87,725)</b>

*(continued)*



Table of Contents

**ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(Expressed in United States Dollars)

	Year Ended December 31,		
	2005	2004	2003
<b>Cash flows from financing activities:</b>			
Issuance of common shares for cash, net of issuance costs	\$ 19,338,262	\$ -	\$ 4,324,898
Issuance of shares under Employee Stock Purchase Plan	-	-	606,675
Proceeds from exercise of stock options	1,828,900	902,109	488,836
Proceeds from exercise of warrants	4,828,567	8,954,853	3,417,109
Payment of notes payable	-	-	(1,120,000)
<b>Net cash provided by financing activities</b>	<b>25,995,729</b>	<b>9,856,962</b>	<b>7,717,518</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(5,093,425)</b>	<b>3,488,174</b>	<b>3,624,988</b>
<b>Cash and cash equivalents, beginning of period</b>	<b>7,357,843</b>	<b>3,869,669</b>	<b>244,681</b>
<b>Cash and cash equivalents, end of period</b>	<b>\$ 2,264,418</b>	<b>\$ 7,357,843</b>	<b>\$ 3,869,669</b>
<b>Supplemental disclosures:</b>			
Cash paid for interest	None	None	\$ 140,009
Cash paid for income taxes	None	None	None

**Supplemental schedule of non-cash investing and financing activities:****For the year ended December 31, 2005:**

- We made property and equipment purchases of \$219,897 which are included in trade accounts payable at December 31, 2005.
- We issued 96,500 shares of restricted stock to employees and directors having a fair value of \$272,155 for which no cash will be received. (See Note 8).

**For the year ended December 31, 2004:**

- None

**For the year ended December 31, 2003:**

- We issued 695,052 common shares to Doral 18, LLC in payment of \$280,000 of principal on our note payable. The conversion of the note resulted in additional interest expense of \$133,315.
- On or about June 2, 2003, we repriced warrants, held by a shareholder, for 796,331 common shares. The repriced warrants have an incremental fair value of \$176,472 and have been accounted for as a preferential warrant dividend.

- In September 2003, we entered an agreement with a shareholder wherein the shareholder agreed to exercise 631,882 warrants that had an exercise price of \$1.00 each. In return, we issued the shareholder 631,882 new warrants having an exercise price of \$1.75 each. The new warrants have a fair value of \$416,014 and have been accounted for as a preferential warrant dividend.

*(concluded)*

See notes to the consolidated financial statements.

F-10

---

Table of Contents

**ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS  
FOR THE YEARS ENDED DECEMBER 31, 2005, 2004, AND 2003  
(Expressed in United States Dollars)**

---

**1. DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION**

**Description of Business** — We are a Canadian company, with principal assets and operations in the United States, whose primary business is developing and commercializing nanomaterial and titanium dioxide pigment technologies. We also provide contract research services on select projects where we can utilize our resources to develop intellectual property and/or new products and technology.

**Principles of Consolidation** — The consolidated financial statements include the accounts of Altair Nanotechnologies Inc. and its subsidiaries which include (1) Altair US Holdings, Inc., (2) Mineral Recovery Systems, Inc. (“MRS”), (3) Fine Gold Recovery Systems, Inc. (“FGRS”), (4) Altair Nanomaterials, Inc. (“ANI”), and (5) Tennessee Valley Titanium, Inc. (“TVT”), (collectively referred to as the “Company”), all of which are 100% owned. All of the subsidiaries are incorporated in the United States of America. Intercompany transactions and balances have been eliminated in consolidation.

**Basis of Presentation** — The accompanying consolidated financial statements have been prepared on a going concern basis which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. As shown in the consolidated financial statements for the years ended December 31, 2005, 2004 and 2003, we incurred net losses of \$9,937,212, \$7,002,280 and \$6,237,939, respectively. At December 31, 2005 and 2004, we had stockholders’ equity of \$28,636,473 and \$12,289,937, respectively.

The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should we be unable to continue as a going concern. Our continuation as a going concern is dependent upon our ability to generate sufficient cash flow to meet our obligations on a timely basis, to obtain additional financing or refinancing as may be required, to develop commercially viable products and processes, and ultimately to establish profitable operations. We have financed operations through operating revenues and through the issuance of equity securities (common stock, convertible debentures, stock options and warrants), and debt (term notes). Until we are able to generate positive operating cash flows, additional funds will be required to support operations. We believe that current working capital, cash receipts from anticipated sales and funding through sales of common stock will be sufficient to enable us to continue as a going concern through 2007.

**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Use of Estimates** — The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires that we 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 reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Table of Contents

**Cash, Cash Equivalents and Investment in Available for Sale Securities (short-term)** — Cash, cash equivalents and investment in available for sale securities (short-term) consist principally of bank deposits, institutional money market funds and corporate notes. Short-term investments which are highly liquid, have insignificant interest rate risk and maturities of 90 days or less are classified as cash and cash equivalents. Investments which do not meet the definition of cash equivalents are classified as held-to-maturity or available-for-sale in accordance with the provisions of Statement of Financial Accounting Standards No. 115, *Accounting for Certain Investments in Debt and Equity Securities*.

Our cash balances are maintained in bank accounts that are insured by the Federal Deposit Insurance Corporation (“FDIC”) up to a maximum of \$100,000. At December 31, 2005 and 2004, we had cash deposits of approximately \$1.9 million and \$300,000, respectively, in excess of FDIC insurance limits.

**Investment in Available for Sale Securities (long-term)** — Investments acquired with the intent to hold for more than one year are classified as long-term investments. Available for sale securities (long-term) includes publicly-traded equity investments which are classified as available for sale and recorded at market using the specific identification method. Unrealized gains and losses (except for other than temporary impairments) are recorded in other comprehensive income (loss), which is reported as a component of stockholders’ equity. We evaluate our investments on a quarterly basis to determine if a potential other than temporary impairment exists. Our evaluation considers the investees’ specific business conditions as well as general industry and market conditions.

**Accounts Receivable** — Accounts receivable consists of amounts due from customers for services and product sales, net of an allowance for losses. We determine the allowance for doubtful accounts by reviewing each customer account and specifically identifying any potential for loss. Management determined that all amounts due were fully collectible as of December 31, 2005 and 2004. Accordingly, there is no allowance for losses reflected in our financial statements. Actual losses related to collection of accounts receivable for the years ended December 31, 2005, 2004 and 2003 were insignificant.

**Property, Plant and Equipment** — Property, plant and equipment are stated at cost less accumulated depreciation. Depreciation is recorded using the straight-line method over the following useful lives:

Furniture and office equipment	3-7 years
Vehicles	5 years
Nanoparticle production equipment	5-10 years
Building and improvements	30 years

**Patents** — Patents related to the nanoparticle production technology are carried at cost and amortized on a straight-line basis over their estimated useful lives, which range from 14 to 17 years.

**Research and Development Expenditures** — The costs of materials, equipment, or facilities that are acquired or constructed for a particular research and development project and that have no alternative future uses (in other research and development projects or otherwise) are expensed as research and development costs at the time the costs are incurred. Research and development expenditures related to materials and equipment or facilities that are acquired or constructed for research and development activities and that have alternative future uses (in research and development projects or otherwise) are capitalized when acquired or constructed. Research and development expenditures, which include the cost of materials consumed in research and development activities, salaries, wages and other costs of personnel engaged in research and development, costs of services performed by others for research and development on behalf of the company and indirect costs are expensed as research and development costs when incurred.



Table of Contents

**Foreign Currency Translation** — Asset and liability accounts, which are originally recorded in the appropriate local currencies, are translated into U.S. dollars at year-end exchange rates. Revenue and expense accounts are translated at the average exchange rates for the period. Transaction gains and losses are included in the accompanying consolidated statements of operations. Substantially all of our assets are located in the United States of America.

**Stock-Based Compensation** — Our stock option plans are subject to the provisions of Statement of Financial Accounting Standards (“SFAS”) No. 123, *Accounting for Stock-Based Compensation*. Under the provisions of SFAS 123, employee and director stock-based compensation expense is measured using either the intrinsic-value method as prescribed by Accounting Principles Board (“APB”) Opinion No. 25, *Accounting for Stock Issued to Employees*, or the fair value method described in SFAS 123. We have elected to follow the accounting provisions of APB 25 for our employee and director stock-based awards and to furnish the pro forma disclosures required under SFAS 123.

In accordance with APB 25, we use the variable accounting method to record expense associated with modifications of stock options issued to employees. Variable accounting requires that changes in the intrinsic value of such modifications be recorded as periodic income or expense.

We account for stock options and warrants issued to non-employees in accordance with SFAS 123. In calculating compensation related to non-employee stock option grants, the fair value of each stock option is estimated on the date of grant using the Black-Scholes option-pricing model and the following weighted average assumptions:

	2005	2004	2003
Dividend yield	None	None	None
Expected volatility	107%	61%	65%
Risk-free interest rate	3.70%	3.17%	2.33%
Expected life (years)	1.72	5.40	4.10

To estimate compensation expense that would be recognized under SFAS 123 for all stock-based awards, we have used the modified Black-Scholes option pricing model. If we had accounted for our stock options issued to employees and directors using the accounting method prescribed by SFAS 123, our net loss and loss per share would be as follows:



Table of Contents

	Year Ended December 31,		
	2005	2004	2003
Net loss applicable to shareholders, as reported	\$ (9,937,212)	\$ (7,002,280)	\$ (6,830,425)
Deduct: stock-based employee compensation expense included in reported net loss applicable to shareholders, net of \$0 related tax effects	353,198	445,772	903,668
(Add): total stock-based employee compensation expense determined under fair value based method for all awards, net of \$0 related tax effects	(1,502,731)	(1,536,945)	(590,908)
Pro forma net loss applicable to shareholders	\$ (11,086,745)	\$ (8,093,453)	\$ (6,517,665)
Loss per common share (basic and diluted):			
As reported	\$ (0.17)	\$ (0.14)	\$ (0.19)
Pro forma	\$ (0.19)	\$ (0.17)	\$ (0.18)

In calculating pro forma compensation related to employee stock option grants, the fair value of each stock option is estimated on the date of grant using the Black-Scholes option-pricing model and the following weighted average assumptions:

	2005	2004	2003
Dividend yield	None	None	None
Expected volatility	103%	61%	65%
Risk-free interest rate	3.99%	3.55%	3.16%
Expected life (years)	2.83	5.30	5.00

**Long-Lived Assets** — We evaluate the carrying value of long-term assets, including intangibles, when events or circumstance indicate the existence of a possible impairment, based on projected undiscounted cash flows, and recognize impairment when such cash flows will be less than the carrying values. Measurement of the amounts of impairments, if any, is based upon the difference between carrying value and fair value. Events or circumstances that could indicate the existence of a possible impairment include obsolescence of the technology, an absence of market demand for the product, and/or continuing technology rights protection.

**Revenue Recognition** — We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or service has been performed, the fee is fixed and determinable, and collectibility is probable. During 2005, our revenues were derived from license fees, product sales, commercial collaborations and contracts and grants. License fees are recognized when the agreement is signed, we have performed all material obligations related to the particular milestone payment or other revenue component and the earnings process is complete. Revenue for product sales is recognized at the time the purchaser has accepted delivery of the product. Based on the specific terms and conditions of each contract/grant, revenues are recognized on a time and materials basis, a percentage of completion

basis and/or a completed contract basis. Revenue under contracts based on time and materials is recognized at contractually billable rates as labor hours and expenses are incurred. Revenue under contracts based on a fixed fee arrangement is recognized based on various performance measures, such as stipulated milestones. As these milestones are achieved, revenue is recognized. From time to time, facts develop that may require us to revise our estimated total costs or revenues expected. The cumulative effect of revised estimates is recorded in the period in which the facts requiring revisions become known. The full amount of anticipated losses on any type of contract is recognized in the period in which it becomes known.

F-14

---

Table of Contents

**Overhead Allocation** — Facilities overhead, which is comprised primarily of occupancy and related expenses, is initially recorded in general and administrative expenses and then allocated to research and development based on labor costs.

**Net Loss per Common Share** — Basic earnings per share is computed using the weighted average number of common shares outstanding during the period. Diluted earnings per share is computed using the weighted average number of common and potentially dilutive shares outstanding during the period. Potentially dilutive shares consist of the incremental common shares issuable upon the exercise of stock options and warrants. Potentially dilutive shares are excluded from the computation if their effect is antidilutive. We had a net loss for all periods presented herein; therefore, none of the stock options and warrants outstanding during each of the periods presented, as discussed in Note 8, were included in the computation of diluted loss per share as they were antidilutive. Stock options and warrants to purchase a total of 4,097,756, 7,865,431 and 14,122,431 shares of common stock were excluded from the calculations of diluted loss per share for the years ended December 31, 2005, 2004 and 2003, respectively.

**Accumulated Other Comprehensive Loss** — Accumulated other comprehensive loss consists entirely of unrealized loss on the investment in available for sale securities. The components of comprehensive loss for the years ended December 31, 2005, 2004 and 2003 are as follows:

	<b>Year Ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
Net loss	\$ (9,937,212)	\$ (7,002,280)	\$ (6,237,939)
Unrealized gain (loss) on investment in available for sale securities, net of taxes of \$0	(172,000)	-	-
Comprehensive loss	\$ (10,109,212)	\$ (7,002,280)	\$ (6,237,939)

**Deferred Income Taxes** — We use the asset and liability approach for financial accounting and reporting for income taxes. Deferred income taxes are provided for temporary differences in the bases of assets and liabilities as reported for financial statement purposes and income tax purposes. We have recorded a valuation allowance against all net deferred income tax assets. The valuation allowance reduces deferred income tax assets to an amount that represents management's best estimate of the amount of such deferred income tax assets that more likely than not will be realized.

**Fair Value of Financial Instruments** — Our financial instruments such as cash and cash equivalents and long-term debt, when valued using market interest rates, would not be materially different from the amounts presented in the consolidated financial statements.

**Deferred Compensation Expense** — The issuance of restricted stock under our stock incentive plan is recorded at its intrinsic value as deferred compensation expense in the shareholders' equity section of the balance sheet and is amortized to expense over the period in which the shares are subject to restriction.

Table of Contents

**Recent Accounting Pronouncements** — As described above in *Stock Based Compensation*, we account for stock-based compensation awards issued to employees using the intrinsic value measurement provisions of APB 25. Accordingly, no compensation expense has been recorded for stock options granted to employees with exercise prices greater than or equal to the fair value of the underlying common stock at the option grant date. On December 16, 2004, the FASB issued Statement of Financial Accounting Standards No. 123 (revised 2004), *Share-Based Payment* (“SFAS 123R”) which eliminates the alternative of applying the intrinsic value measurement provisions of Opinion 25 to stock compensation awards issued to employees. The new standard requires enterprises to measure the cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award. That cost will be recognized over the period during which an employee is required to provide services in exchange for the award, known as the requisite service period (usually the vesting period).

We have not yet quantified the effects of the adoption of SFAS 123R, but it is expected that the new standard will result in significant stock-based compensation expense. The pro forma effects on net loss and loss per share if we had applied the fair value recognition provisions of original SFAS 123 on stock compensation awards (rather than applying the intrinsic value measurement provisions of Opinion 25) are disclosed above in *Stock Based Compensation*. Although such pro forma effects of applying original SFAS 123 may be indicative of the effects of adopting SFAS 123R, the provisions of these two statements differ in some important respects. The actual effects of adopting SFAS 123R will be dependent on numerous factors including, but not limited to, the valuation model chosen by the Company to value stock-based awards, the assumed award forfeiture rate, the accounting policies adopted concerning the method of recognizing the fair value of awards over the requisite service period, and the transition method (as described below) chosen for adopting SFAS 123R.

SFAS 123R will be effective for our fiscal year beginning January 1, 2006, and requires the use of either the Modified Prospective Application Method or the Modified Retrospective Method. Under the Modified Prospective Method, SFAS 123R is applied to new awards and to awards modified, repurchased, or cancelled after the effective date. Additionally, compensation cost for the portion of awards for which the requisite service has not been rendered (such as unvested options) that are outstanding as of the date of adoption shall be recognized as the remaining requisite services are rendered. The compensation cost relating to unvested awards at the date of adoption shall be based on the grant-date fair value of those awards as calculated for pro forma disclosures under the original SFAS 123. In addition, companies may use the Modified Retrospective Application Method. This method may be applied to all prior years for which the original SFAS 123 was effective or only to prior interim periods in the year of initial adoption. If the Modified Retrospective Application Method is applied, financial statements for prior periods shall be adjusted to give effect to the fair-value-based method of accounting for awards on a consistent basis with the pro forma disclosures required for those periods under the original SFAS 123.

In March 2004, the FASB Emerging Issues Task Force (“EITF”) reached consensus on several issues being addressed in EITF Issue No. 03-1, *The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments*. The consensus provides guidance for evaluating whether an investment is other-than-temporarily impaired and was effective for other-than-temporary impairment evaluations made in reporting periods beginning after June 15, 2004. The disclosure provisions of EITF 03-1 continue to be effective for the Company’s consolidated financial statements for the year ended December 31, 2005.

On November 3, 2005, the FASB issued FASB Staff Position (“FSP”) Nos. FAS 115-1 and FAS 124-1, *The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments*. This FSP addresses the determination as to when an investment is considered impaired, whether that impairment is other than temporary, and the measurement of an impairment loss. This FSP also includes accounting considerations subsequent to the recognition of an other-than-temporary impairment and requires certain disclosures about unrealized losses that have not been recognized as other-than-temporary impairments. This FSP nullifies certain requirements of EITF Issue 03-1, and supersedes EITF Topic No. D-44, *Recognition of Other-Than-Temporary Impairment upon the Planned Sale of a Security Whose Cost Exceeds Fair Value*. The guidance in this FSP amends FASB Statement No. 115, *Accounting for*

*Certain Investments in Debt and Equity Securities.* The FSP is effective for reporting periods beginning after December 15, 2005. The Company does not anticipate any material impact to its financial condition or results of operations as a result of the adoption of this guidance.

F-16

---

Table of Contents

In May 2005, the FASB issued Statement of Financial Accounting Standards No. 154, *Accounting Changes and Error Corrections* ("SFAS 154"), which replaces Accounting Principles Board Opinions No. 20, *Accounting Changes* and SFAS No. 3, *Reporting Accounting Changes in Interim Financial Statements-An Amendment of APB Opinion No. 28*. SFAS 154 provides guidance on the accounting for and reporting of accounting changes and error corrections. It requires retrospective application to prior periods' financial statements for changes in accounting principle, unless it is impracticable to determine either the period-specific effects or the cumulative effect of the change. SFAS 154 is effective for accounting changes and corrections of errors made in fiscal years beginning after December 15, 2005. The Company does not expect the adoption of SFAS 154 to have a material impact on its consolidated financial position, results of operations or cash flows.

**Reclassifications** — Certain reclassifications have been made to prior period amounts to conform to classifications adopted in the current year.

**3. INVESTMENT IN AVAILABLE FOR SALE SECURITIES**

Investments in available for sale securities (short-term) consist of auction rate corporate notes. The notes are long-term instruments with expiration dates through 2043. Interest is settled and the rate is reset every 7 to 28 days.

Investment in available for sale securities (long-term) consists of 100,000 restricted shares of Spectrum Pharmaceuticals, Inc. ("Spectrum") common stock received in January 2005. The shares are "restricted securities," as defined in Rule 144 and are not registered for resale. They will be eligible for resale under Rule 144 beginning in January 2006. The shares were received as partial payment of licensing fees when Spectrum entered into a license agreement for RenaZorb™. On receipt, the shares were recorded at their market value of \$595,000 as measured by their closing price on the Nasdaq Capital Market. At December 31, 2005, their fair value was \$423,000, representing an unrealized holding loss of \$172,000. We evaluated this investment to determine if there is an other than temporary impairment at December 31, 2005. Our evaluation took into consideration published investment analysis, a recent substantial increase in institutional ownership of the investee's common stock and other factors. Based on our evaluation and our ability and intent to hold the investment for a reasonable period of time sufficient for an expected recovery of fair value, we do not consider this investment to be other than temporarily impaired at December 31, 2005.

Table of Contents**4. PROPERTY, PLANT AND EQUIPMENT**

Property, plant and equipment consisted of the following as of December 31, 2005 and 2004:

	2005	2004
Machinery and equipment	\$ 9,977,474	\$ 7,743,357
Building	2,430,952	2,335,979
Furniture, office equipment & other	377,716	201,314
<b>Total</b>	<b>12,786,142</b>	<b>10,280,650</b>
Less accumulated depreciation	(4,616,697)	(3,766,742)
<b>Total property and equipment</b>	<b>\$ 8,169,445</b>	<b>\$ 6,513,907</b>

Depreciation expense for the years ended December 31, 2005, 2004, and 2003 totaled \$949,387, \$818,861 and \$793,077, respectively.

**5. PATENTS**

Patents consisted of the following at December 31, 2005 and 2004:

	2005	2004
Patents and patent applications	\$ 1,517,736	\$ 1,517,736
Less accumulated depreciation	(627,674)	(542,859)
<b>Total patents and patent applications</b>	<b>\$ 890,062</b>	<b>\$ 974,877</b>

All patents are being amortized on a straight-line basis over their useful lives with a weighted average amortization period of approximately 16.5 years. Amortization expense was \$84,815, \$85,692 and \$85,680 for the years ended December 31, 2005, 2004 and 2003, respectively, which represented the amortization relating to the identified intangible assets still required to be amortized under SFAS 142. For each of the next five years, amortization expense relating to intangibles is expected to be approximately \$85,000 per year.

**6. ACCRUED LIABILITIES**

Accrued liabilities consisted of the following at December 31, 2005 and 2004:

	2005	2004
Accrued interest	\$ 87,500	\$ -
Accrued use tax	50,866	2,689
Accrued property tax	27,600	23,046
Accrued mineral lease payments	77,936	62,153
Accrued reclamation costs	20,500	21,607
Other	44,887	31,690
	<b>\$ 309,289</b>	<b>\$ 141,185</b>

Table of Contents**7. NOTES PAYABLE**

Notes payable consisted of the following at December 31, 2005 and 2004:

	2005	2004
Note payable to BHP Minerals International, Inc.	\$ 3,000,000	\$ 2,880,311
Less current portion	(600,000)	-
Long-term portion of notes payable	\$ 2,400,000	\$ 2,880,311

On August 8, 2002, we entered into a purchase and sale agreement with BHP Minerals International, Inc. (“BHP”) wherein we purchased 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. Interest did not begin to accrue until August 8, 2005. As a result, we imputed interest and reduced the face amount of the note payable by \$566,763, which was then amortized to interest expense from inception of the note through August 8, 2005. 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.

**8. STOCK OPTIONS, RESTRICTED STOCK AND WARRANTS**

**Stock Options** — We have a 1996 Stock Option Plan, a 1998 Stock Option Plan and a 2005 Stock Incentive Plan, all administered by the Board of Directors and providing for the granting of options to employees, officers, directors and other service providers of the Company. Options granted under the plans generally are granted with an exercise price equal to the market value of a common share at the date of grant, have five- or ten-year terms and typically vest over periods ranging from immediately to three years from the date of grant.

Stock option activity for the years ended December 31, 2005, 2004, and 2003 is summarized as follows:

	2005		2004		2003	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding at beginning of year	3,293,700	\$ 2.28	3,668,600	\$ 3.11	4,061,700	\$ 3.83
Granted during the year	687,000	3.30	1,055,000	2.03	1,010,000	1.10
Cancelled/ Expired	(243,000)	3.06	(868,000)	5.31	(925,000)	6.20
Exercised	(1,204,500)	1.53	(561,900)	1.61	(478,100)	1.02
Outstanding at end of year	2,533,200	\$ 2.69	3,293,700	\$ 2.28	3,668,600	\$ 3.11
Options exercisable at year end	1,739,325	\$ 2.59	2,708,700	\$ 2.41	3,181,100	\$ 3.38
Weighted average fair value of options granted during the year		\$ 2.11		\$ 1.15		\$ 0.51





Table of Contents

The following table summarizes information about stock options outstanding at December 31, 2005:

Range of Exercise Prices	Stock Options Outstanding			Stock Options Exercisable		
	Shares	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	
\$ .80 to \$1.53	874,000	4.8	\$ 1.10	774,000	\$ 1.11	
\$2.00 to \$2.25	538,000	4.3	2.18	309,125	2.17	
\$2.56 to \$3.62	369,000	6.9	3.13	116,500	2.96	
\$4.07 to \$6.125	752,200	4.1	4.71	539,700	4.92	
	2,533,200	4.8	\$ 2.69	1,739,325	\$ 2.59	

In March 2006, we issued 250,641 stock options to employees under the Company's bonus plan. These are deemed issued in 2005 and are included in pro forma compensation under SFAS 123 in Note 2.

We have elected to follow the measurement provisions of APB 25, under which no recognition of expense is required in accounting for stock options granted to employees and directors for which the exercise price equals or exceeds the fair market value of the stock at the grant date. Generally, stock options are granted at an option price at or greater than fair market value on the date of grant. We recorded compensation expense, as a component of general and administrative expense, of \$297,138, \$136,212 and \$903,668 for stock options that had been previously repriced and are accounted for under variable accounting in accordance with APB 25 for the year ended December 31, 2005, 2004 and 2003, respectively. In addition, we recorded \$56,060 and \$39,000 as a component of general and administrative expense for the year ended December 31, 2005 and 2004, respectively, for employee options for which the expiration date was extended.

We follow the measurement provisions of SFAS 123 for stock options issued to non-employees. We recorded compensation expense, as a component of general and administrative expense, of \$0, \$270,560 and \$64,346, for stock options granted to non-employees for the years ended December 31, 2005, 2004, and 2003, respectively.

**Restricted Stock** — The 2005 Stock Incentive Plan provides for the granting of other incentive awards in addition to stock options. During the year ended December 31, 2005, the Board of Directors granted 96,500 shares of restricted stock under the plan with a weighted average fair value of \$2.82 per share. The shares vest over two- or three-year periods. Compensation cost for restricted stock is recognized in the financial statements on a pro rata basis over the vesting period. During the year ended December 31, 2005, we recorded \$106,819 of compensation cost in general and administrative expense which represented the pro rata vesting of restricted shares issued.

Table of Contents

**Warrants** — Warrant activity for the years ended December 31, 2005, 2004, and 2003 is summarized as follows:

	2005		2004		2003	
	Warrants	Weighted Average Exercise Price	Warrants	Weighted Average Exercise Price	Warrants	Weighted Average Exercise Price
Outstanding at beginning of year	4,571,731	\$ 1.90	10,453,831	\$ 1.71	9,170,171	\$ 1.92
Issued	250,000	5.27	60,000	2.50	5,331,827	1.31
Expired	(101,667)	3.41	(116,668)	3.14	(837,839)	2.72
Exercised	(3,201,508)	1.51	(5,825,432)	1.54	(3,210,328)	1.38
Outstanding at end of year	1,518,556	\$ 3.17	4,571,731	\$ 1.90	10,453,831	\$ 1.71
Currently exercisable	1,518,556	\$ 3.17	4,571,731	\$ 1.90	10,453,831	\$ 1.71

The following table summarizes information about warrants outstanding at December 31, 2005:

Range of <u>Exercise Prices</u>	Warrants Outstanding		Warrants Exercisable		
	Warrants	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Warrants	Weighted Average Exercise Price
\$1.00 to \$2.00	650,224	2.0	\$ 1.85	650,224	\$ 1.85
\$2.50 to \$3.50	343,332	0.9	3.09	343,332	3.09
\$4.00 to \$5.265	525,000	1.7	4.86	525,000	4.86
	1,518,556	1.6	\$ 3.17	1,518,556	\$ 3.17

The warrants were issued in conjunction with debt offerings, issuance of common stock, and payment for outside services. To estimate costs related to the issuance of warrants, we have used the Black-Scholes option pricing model and the following assumptions for warrants issued during the year ended December 31, 2005: expected life of 1.72 years, volatility of 107%, annual rate of quarterly dividends of 0 and risk free interest rate of 3.7%. Warrant costs of \$639,459 for the year ended December 31, 2005 were recorded as common stock issuance costs. Warrants issued during the years ended December 31, 2004 and 2003 were issued as components of equity offerings. The warrants expire on various dates ranging from May 2006 to February 2009.

## 9. OTHER TRANSACTIONS

On February 14, 2005, we sold 5,000,000 common shares to institutional investors. The sales were made at \$4.05 per share with net proceeds to the Company, after expenses, of approximately \$19.3 million. The placement agent also received a warrant to purchase 250,000 shares of our common stock at \$5.27 per share. The warrant has a four-year term. Using a Black-Scholes pricing model, we estimate that the warrant has a value of \$639,459; this amount was recorded as common stock issuance costs.

On or about June 2, 2003, we reduced the exercise price of 796,331 warrants to \$1.00 per share. As a result of these repricings, we recorded a preferential warrant dividend of \$176,472 as of the repricing date. The warrants had been previously issued with exercise prices ranging from \$2.50 to \$4.50.

F-21

---

Table of Contents

In September 2003, we entered into an agreement with a shareholder wherein the shareholder agreed to exercise 631,882 warrants that had an exercise price of \$1.00 each. In return, we issued to the shareholder 631,882 new warrants having an exercise price of \$1.75 each. The new warrants have a fair value of \$416,014 and were recorded as a preferential warrant dividend.

On August 6, 2002, we adopted an Employee Stock Purchase Plan ("ESPP") which allows employees to purchase common shares at the fair market value through payroll deductions. Through December 31, 2003, a total of 864,584 common shares were issued under the ESPP at prices ranging from \$0.33 to \$2.10 per share. No shares were issued under the ESPP in 2004. The ESPP terminated on August 31, 2004.

**10. LEASES**

*Operating Leases* — We lease certain premises for office space and other corporate purposes. Operating lease commitments at December 31, 2005 were:

Year ending December 31:

2006 \$ 31,626

2007 \$ 96,970

2008 \$ 78,276

Lease expense for the years ended December 31, 2005, 2004, and 2003 totaled \$181,549, \$28,207 and \$33,239, respectively.

**11. INCOME TAXES**

Because of the net operating losses and a valuation allowance on deferred tax assets, there was no provision for income taxes recorded in the accompanying consolidated financial statements for each of the three years in the period ended December 31, 2005.

A reconciliation of the federal statutory income tax rate (35%) and our effective income tax rates is as follows:

	<b>Year Ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
Federal statutory income taxes (benefit)	\$ (3,478,025)	\$ (2,450,798)	\$ (2,390,649)
Expiration of net operating loss carryforwards	(61,123)	-	-
Other, net	91,109	3,875	3,821
Valuation allowance	3,448,039	2,446,923	2,386,828
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Table of Contents

The components of the deferred tax assets consisted of the following as of December 31, 2005 and 2004:

	2005	2004
Deferred tax assets:		
Net operating loss carryforwards	\$ 13,645,639	\$ 10,570,378
Basis difference in long-lived assets	414,591	175,722
Other	158,271	-
Total deferred tax assets	14,218,501	10,746,100
Deferred tax liabilities:		
Accrued vacation	-	(35,838)
Total deferred tax liabilities	-	(35,838)
Valuation allowance	(14,218,501)	(10,710,262)
Net deferred tax assets	\$ -	\$ -

The net operating loss carryforwards total \$38,942,190 as of December 31, 2005 and will expire at various dates as follows:

2006-2010	\$ 2,101,479
2011-2015	\$ 1,376,501
2016-2020	\$ 4,776,779
2021-2025	\$ 30,687,431

Due to the significant increase in common stock issued and outstanding from 2003 through 2005, Section 382 of the Internal Revenue Code may provide significant limitations on the utilization of net operating loss carryforwards of the Company. As a result of these limitations, a portion of these loss and credit carryovers may expire without being utilized.

## 12. COMMITMENTS AND CONTINGENCIES

**Contingencies** — The Company is subject to claims in the normal course of business. Management, after consultation with legal counsel, believes that liabilities, if any, resulting from such claims will not materially effect the Company's financial position or results of operations.

**Litigation** — We are currently not aware of any investigations, claims, or lawsuits which we believe could have a material adverse effect on our consolidated financial position or on our consolidated results of operations.

**Significant Contracts** — In September 2003, we entered into an agreement with Western Michigan University ("WMU") to provide research services and materials to support research involving a technology used in the detection of chemical, biological and radiological agents. In September 2004, the Department of Energy ("DOE") awarded a stage 2 contract for the project under which we are continuing joint development work for the design, synthesis and characterization of nanosensors for chemical, biological and radiological agents. Altair will receive an additional \$672,000 over the two-year term of the stage 2 contract. Revenues of \$481,519 were recorded in 2005 under this contract as a component of contracts and grants revenues in the consolidated statements of operations.



Table of Contents

In January 2004, we entered into a license agreement with Western Oil Sands, Inc. with respect to its possible use of the Altair Hydrochloride Pigment Process (“AHPP”) for the production of titanium dioxide pigment and pigment-related products at the Athabasca Oil Sands Project in Alberta, Canada, and elsewhere. Upon execution of the agreement, we granted Western Oil Sands an exclusive, conditional license to use the AHPP on heavy minerals derived from oil sands in Alberta, Canada. The agreement also contemplates a three-phase, five-year program pursuant to which the parties will work together to further evaluate, develop and commercialize the AHPP. In the first phase of the program, Western Oil Sands and Altair will evaluate the AHPP and confirm that the AHPP will produce pigment from oil sands. Assuming phase one is successful, Western Oil Sands may elect to commence phase two, the construction of a demonstration titanium pigment production facility using the AHPP. If phase two is successful, Western Oil Sands may elect to commence phase three, the construction and operation of a full-scale commercial titanium pigment production facility using the AHPP. Revenues of \$616,515 were recorded in 2005 under this contract as a component of commercial collaborations revenues in the consolidated statements of operations.

In June 2004, we were awarded a National Science Foundation grant of \$100,000 to fund joint development work on next generation lithium ion power sources with Hosokawa Micron’s Nanoparticle Technology Center and Rutgers University’s Energy Storage Research Group. The grant was effective July 1, 2004 and we completed work under Phase I in December 2004. The results of the research indicated that lithium ion batteries prepared with nano-structured lithium titanate spinel anode materials exhibit rapid charge and discharge rates, improved cycle life performance and a decrease in specific energy density when compared to conventional lithium ion, nickel cadmium and nickel metal hydride battery materials. In June 2005, we were awarded a grant of \$476,850 from the NSF for Phase II. Phase I work was designed to optimize the anode electrode materials and Phase II is designed to develop cathode electrode materials, thus resulting in matched anode-cathode electrode materials for optimum electrochemical performance. Revenues of \$162,102 were recorded in 2005 under this contract as a component of contracts and grants revenues in the consolidated statements of operations.

In November 2004, we entered into an agreement with the University of Nevada, Las Vegas Research Foundation (“UNLVRF”) to act as a subcontractor under a \$3,000,000 grant awarded to them by the DOE for joint research activities related to solar hydrogen production at a refilling station under development in Las Vegas. The agreement provides for payments to Altair of \$400,000 for research and development work utilizing nanotechnology processes for the production and commercialization of solar-based hydrogen technologies. In November 2005, we entered into an agreement with UNLVRF for collaborative research and development work under a Phase III grant award from the DOE that provides for payments to Altair of \$750,000 for work beginning October 1, 2005 and continuing through December 2006. Revenues of \$492,818 were recorded in 2005 under this contract as a component of contracts and grants revenues in the consolidated statements of operations.

In January 2005, we signed a licensing agreement with Spectrum Pharmaceuticals, Inc. (“Spectrum”) which grants Spectrum exclusive worldwide rights to develop, market and sell RenaZorb™. Upon signing the agreement, Spectrum issued to us 100,000 restricted shares of their common stock at the then market value of \$5.95 per share, purchased 38,314 restricted shares of our common stock at the then current market value of \$2.61 per share, and also paid us \$100,000 in connection with the licensing agreement. Additional payments by Spectrum are contingent upon the achievement of various milestones in the testing, regulatory approval and sale of RenaZorb™. Revenues of \$729,271 were recorded in 2005 under this contract, of which \$695,000 was recorded as a component of license fees revenues in the consolidated statements of operations.



Table of Contents

In November 2005, we were awarded a \$250,000 grant from the Indiana Advanced Energy Technologies Program initiative. The Indiana Energy Group, a division of the Office of the Indiana Lieutenant Governor, administers the program. The grant funding must be used to manufacture products containing products that are not currently in the U.S. market and that are above industry standard in terms of energy efficiency (e.g. hybrid automobiles, fuel cells) and/or incorporate an innovative technology, such as nanotechnology, that allows the product to save energy. We will use the grant funding to install production and test equipment for product application development in our development and manufacturing center in Anderson, Indiana. Pilot manufacturing is anticipated to begin by the end of the first quarter of 2006.

**13. RELATED PARTY TRANSACTIONS**

On December 31, 2003, we entered into a consulting agreement with Advanced Technology Group LLC (“ATG”), whose managing partner is David King, a Director of the Company. The agreement stipulates that ATG will furnish consulting services in reviewing potential federal grant opportunities and providing proposal development assistance on selected programs for a period of one year. The agreement was subsequently extended through December 31, 2005. Under the terms of the agreement, ATG is paid on a contingency basis at a rate of 6% of the first \$1,000,000 in grant monies secured from applications prepared in any calendar year plus 3.5% of any cumulative amounts over \$1,000,000. ATG also agreed to provide consulting services at a rate of \$200 per hour upon request of the Company. During the year ended December 31, 2004, we paid ATG \$6,000 in fees in connection with securing a \$100,000 grant from the National Science Foundation and \$4,500 in fees for consulting work in connection with product marketing. During the year ended December 31, 2005, ATG earned \$2,833 for certain consulting services and \$28,611 in connection with our National Science Foundation Phase II grant application, which is recorded as a component of accrued liabilities on the consolidated balance sheets at December 31, 2005.

**14. BUSINESS SEGMENT INFORMATION**

Management views the Company as operating in two business segments: Performance Materials and Life Sciences. The Performance Materials segment produces advanced materials for paints, coatings, sensors, power systems, alternative energy devices and materials for improving process technologies. The Life Sciences segment produces pharmaceutical products, drug delivery products and dental materials.

The accounting policies of these business segments are the same as described in Note 2 to the consolidated financial statements. Reportable segment data reconciled to the consolidated financial statements as of and for the fiscal years ended December 31, 2005, 2004, and 2003 is as follows:

	Net Sales	Loss From Operations	Depreciation and Amortization	Assets
<b>2005:</b>				
Performance Materials	\$ 2,081,764	\$ 4,418,912	\$ 933,273	\$ 7,173,902
Life Sciences	724,771	191,149	5,506	500,914
Corporate and other	-	5,871,793	95,423	25,789,200
<b>Consolidated Total</b>	<b>\$ 2,806,535</b>	<b>\$ 10,481,853</b>	<b>\$ 1,034,202</b>	<b>\$ 33,464,016</b>

Table of Contents**2004:**

Performance Materials	\$ 1,151,892	\$ 4,475,013	\$ 839,974	\$ 5,567,685
Life Sciences	-	250,855	1,307	104,534
Corporate and other	-	2,179,087	63,272	9,874,802
Consolidated Total	\$ 1,151,892	\$ 6,904,955	\$ 904,553	\$ 15,547,021

**2003:**

Performance Materials	\$ 72,851	\$ 2,771,433	\$ 809,344	\$ 5,362,003
Life Sciences	-	51,451	-	-
Corporate and other	-	2,962,326	69,413	6,297,751
Consolidated Total	\$ 72,851	\$ 5,785,210	\$ 878,757	\$ 11,659,754

In the table above, corporate and other expense in the Loss From Operations column includes such expenses as business consulting, general legal expense, accounting and audit, general insurance expense, non-employee and employee variable accounting stock option compensation expense, shareholder information expense, investor relations, and general office expense.

For the year ended December 31, 2005, we had sales to four major customers, each of which accounted for 10% or more of revenues. Total sales to these customers for the year ended December 31, 2005 and the balance of their accounts receivable at December 31, 2005 were as follows:

Customer	Sales - Year Ended December 31, 2005	Accounts Receivable at December 31, 2005
<b><u>Performance Materials Division:</u></b>		
Western Michigan University	\$ 481,519	\$ 118,478
Western Oil Sands	\$ 616,515	\$ 166,031
UNLV Research Foundation	\$ 492,818	\$ 160,053

**Life Sciences Division:**

Spectrum Pharmaceuticals, Inc.	\$ 729,271	\$ 30,881
--------------------------------	------------	-----------

For the year ended December 31, 2004, we had sales to three major customers, each of which accounted for 10% or more of revenues and all of which were made in the performance materials business segment. Total sales to these customers for the year ended December 31, 2004 and the balance of their accounts receivable at December 31, 2004 were as follows:

Customer	Sales - Year Ended December 31, 2004	Accounts Receivable at December 31, 2004
<b><u>Performance Materials Division:</u></b>		
Titanium Metals Corp.	\$ 152,550	\$ 39,382
Western Michigan University	\$ 491,320	\$ 319,739

Western Oil Sands	\$	314,359	\$	67,191
-------------------	----	---------	----	--------

F-26

---

Table of Contents

For the year ended December 31, 2003, we had sales to three major customers, each of which accounted for 10% or more of revenues and all of which were made in the performance materials business segment. Total sales to these customers for the year ended December 31, 2003 and the balance of their accounts receivable at December 31, 2003 were as follows:

<b>Customer</b>	<b>Sales - Year Ended December 31, 2003</b>	<b>Accounts Receivable at December 31, 2003</b>
<b><u>Performance Materials Division:</u></b>		
Titanium Metals Corp.	\$ 9,000	\$ -
Western Michigan University	\$ 36,553	\$ 12,620
New Zealand Steel	\$ 18,696	\$ -

Revenues for the years ended December 31, 2005, 2004 and 2003 by geographic area were as follows:

<b>Geographic information (a):</b>	<b>Revenues - Year Ended December 31, 2005</b>	<b>Revenues - Year Ended December 31, 2004</b>	<b>Revenues - Year Ended December 31, 2003</b>
United States	\$ 2,101,551	\$ 817,052	\$ 52,442
Canada	641,515	314,540	174
Other foreign countries	63,468	20,300	20,236
Total	\$ 2,806,534	\$ 1,151,892	\$ 72,851

(a) Revenues are attributed to countries based on location of customer.

**15. SUBSEQUENT EVENTS**

In January 2006, a rainstorm in the Western Nevada area caused significant flooding in Reno, including our office and plant facility at 204 Edison Way. Although the interruption to our business activities was minor, we experienced damage to our building and certain equipment. Costs associated with the flood are expected to be approximately \$450,000.