ALTAIR NANOTECHNOLOGIES INC
Form 10-K
March 14, 2008

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

FORM 10-K

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2007

[ ] 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)

Canada	1-12497	33-1084375
(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:

Common Shares, no par value	NASDAQ Capital Market
(Title of Class)	(Name of each exchange on which registered)

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

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

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 [X]

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 [X] 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 Report or any amendment to this Report. [ ]

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, 2007, based upon the closing stock price of the common shares on the NASDAQ Capital Market of $3.54 per share on June 30, 2007, was approximately $198,229,173. 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 10, 2008, the Registrant had 84,356,301 common shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement on Schedule 14A for the Registrant's 2008 Annual Meeting of Shareholders are incorporated by reference in Part III as specified.

INDEX TO FORM 10-K

PART I

This Annual Report on Form 10-K for the year ended December 31, 2007 (this "Report") 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 Report 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 Report refer to Altair Nanotechnologies Inc. and all of its consolidated subsidiaries. Altair currently has one wholly owned subsidiary, Altair US Holdings, Inc., a Nevada corporation. Altair US Holdings, Inc. directly or indirectly wholly owns Altairnano, Inc., a Nevada corporation, Mineral Recovery Systems, Inc., a Nevada corporation ("MRS"), and Fine Gold Recovery Systems, Inc., a Nevada corporation ("Fine Gold"). AlSher Titania LLC, a Delaware limited liability company, is 70% owned by Altairnano, Inc. We have registered or are in the process of registering the following trademarks: Altair Nanotechnologies®, Altair Nanomaterials®, Altairnano™, TiNano®, Nanocheck® and RenaZorb®. Any other trademarks and service marks used in this Report are the property of their respective holders.

Item 1: Business

We are a Canadian corporation, 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 three divisions, a Power and Energy Group (formally known as the Advanced Materials and Power Systems Division), a Performance Materials Division, and a Life Sciences Division. Our research, development, production and marketing efforts are currently directed toward three primary market applications that utilize our proprietary technologies:

- Power and Energy Group
  - The design, development, and production of our nano lithium Titanate battery cells, batteries, and battery packs as well as related design and test services.
  - The development, production and sale for testing purposes of electrode materials for use in a new class of high performance lithium ion batteries called nano lithium Titanate batteries.

- Performance Materials Division
  - Through AlSher Titania, the development and production of high quality titanium dioxide pigment for use in paint and coatings, and nano titanium dioxide materials for use in a variety of applications including those related to removing contaminants from air and water.
  - The testing, development, marketing and/or licensing of nano-structured ceramic powders for use in various application, such as advanced performance coatings, air and water purification systems, and nano-sensor applications.

1

- Life Sciences Division
  - 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 human patients undergoing kidney dialysis.
  - The development of a manufacturing process related to a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of companion animals.

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, 2007, 2006 and 2005, contract services revenues comprised 55%, 67%, and 70%, respectively, of our operating revenues. In the summary of our business below, we describe our various research products in connection with our description of the business segment to which each relates.

Our Proprietary Nanomaterials and Pigment 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 seven 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, 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, and lanthanum products.

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.

Power and Energy Group

Primary Products

Nano lithium Titanate batteries and electrode materials

We are developing, marketing, producing and selling our proprietary rechargeable lithium ion battery, which we have branded as our nano lithium Titanate batteries. We are also seeking to develop, license, manufacture and sell our proprietary lithium titanate spinel (“LTO”) electrode materials for use in batteries being developed by other companies.

As explained in greater detail below, principal features used to compare rechargeable batteries including power, discharge rates, energy density, cycle life, calendar life and recharge time. In laboratory and field tests, our nano lithium Titanate batteries have exhibited power, rates of charge, operating temperature range, cycle life, and expected calendar life that far exceed those of rechargeable batteries currently being used for target applications. We believe that with these strengths our nano lithium Titanate batteries are superior alternatives for rechargeable battery uses that require power, durability and exposure to the elements. These include all types of electric automobiles, electric utility services and uninterruptible power supplies.

Key Business Developments in Power and Energy

Phoenix Relationship. In January 2007, we entered into a multi-year purchase and supply agreement with Phoenix Motorcars, Inc., succeeded by Phoenix MC, Inc. ("Phoenix"), for lithium nano lithium Titanate battery packs to be used in electric vehicles produced by Phoenix. Contemporaneously, Phoenix placed firm purchase orders for 35KWh battery pack systems valued at $1,040,000 and placed an indicative blanket purchase order for up to 500 battery pack systems to be delivered during 2007 (projected value at the time between $16 and $42 million). The second release order valued at $2,210,000 was placed in May 2007. Due to a slow down in production relating primarily to delays in Phoenix obtaining funding, projected orders for 2007 of between $16 and $42 million for 2007 were not achieved.

After title passed to Phoenix for the first-generation battery packs produced under the two release orders, internal testing and modeling revealed a module configuration problem. Our research indicated that the manner in which battery modules within the battery packs were configured could, under certain rare circumstances, cause battery modules within the first-generation battery packs to overheat and fail. The configuration issue relates specifically to the configuration and structure of the first-generation electric battery packs and does not indicate an issue in our core lithium Titanate cell technology or in our battery modules for stationary applications, which are of a completely different design. We met with Phoenix and presented several work-arounds to ensure safe use of the first-generation battery packs. Unable to define an acceptable work-around, we agreed to replace 47 of the existing packs sold to Phoenix by means of a credit against re-designed second-generation battery packs and related engineering services. Modeling and design of the modules for the second-generation battery packs is substantially complete. Once testing and computer modeling confirm that the revised design resolves the potential overheating issue, we expect to commence delivery of second-generation battery packs to Phoenix. We are currently negotiating a development and supply agreement with Phoenix.

AES Relationship. In July 2007, we entered into a multi-year development and equipment purchase agreement with AES Energy Storage, LLC ("AES"), a subsidiary of global power leader The AES Corporation. The AES Corporation is one of the world's largest power companies, with operations in 28 countries on five continents. The AES Corporation generation and distribution facilities have the capacity to serve 100 million people worldwide. Under the terms of the deal, we are working jointly with AES to develop a suite of energy storage solutions specifically for AES. These energy storage products are expected to deliver in excess of 1 megawatt of power and 500 kilowatt-hours of energy. We are working with AES to apply these products and systems at strategic points within the electrical grid to more efficiently deal with congestion, peak energy consumption, and real-time fluctuations in electricity supply and demand. We believe that the quick response time, extended life, and power profile of our batteries and energy storage products are well suited to improving performance in these areas with lower environmental impact than traditional generation solutions.

On August 3, 2007, we received an initial $1,000,000 order in connection with the AES Joint Development and Equipment Purchase Agreement for a 500 kilowatt-hour energy storage product. In accordance with this purchase order, two 1 megawatt stationary battery packs (energy equivalent for each pack based on anticipated operational time is 250 kilowatt-hours of energy each) were manufactured in Indiana and completed according to the delivery schedule in December 2007. This initial product is intended for use as a short-term duration buffer to regulate the frequency and voltage of the electrical utility system grid. This buffering is called Regulation Services, and it serves to smooth the short term supply-demand imbalances inherent in power generation and delivery, thereby improving the quality of power delivered. The stationary battery packs have been connected to the electrical grid and full testing has commenced. Assuming the successful testing of these packs, we expect our development relationship with AES to continue through 2008.

Alcoa Relationship. In September 2006, we signed an agreement with Alcoa's AFL Automotive business to jointly develop a battery pack system. This collaboration brings together our innovative nano lithium Titanate battery technology and AFL Automotive's expertise in vehicle electrical distribution systems, power management electronics and its substantial presence as a world renowned supplier to the automotive market. AFL Automotive is also a major supplier of lightweight, high strength aluminum components to the automotive industry. The agreement provides for the delivery of an integrated battery pack system for the medium-duty hybrid truck market using our nano lithium Titanate battery technology and AFL Automotive's electrical interconnect and application technology to integrate the battery pack system into the vehicle's electrical architecture. The scope of the joint development agreement involved system design, development and prototyping. During the development and prototyping phase of this agreement, each party was responsible for its own costs and expenses. Any revenues received in connection with the sale of the prototype battery would be shared based on the proportion of documented costs incurred in connection with this project. No significant revenues or expenses were incurred in connection with this agreement in 2006 or 2007. Based on work performed to date, both parties informally agreed in 2007 to shift focus from a product designed for the medium-duty hybrid truck market to a specialty power application. After reviews of a specialty cell and new pack concept that we are proposing are completed by ALCOA, we expect to negotiate a new development agreement by the third quarter of 2008.

Department of Energy Contracts. On September 9, 2006, approval was finalized on the $2.5 million grant received from the U.S. Department of Energy. Of the $2.5 million, $2.4 million will be available, after the deduction of administrative fees, to fund research for the following programs: Battery technology, Nanosensors, and Nanomaterials characterization. This is a prime grant under which we are directly responsible for the contract administration. The Nanosensors and Nanomaterials characterization programs are discussed subsequently under the related divisions. The battery technology program consists of two objectives, 1) Design, Synthesis, and Testing of Li-ion Hosts for Cathode Service and 2) Development, Testing, and Demonstration of High Rate Low Temperature Lithium Ion Battery, funded in the amounts of $508,000 and $606,000 respectively in 2006. Objective 1 under the grant continues research on optimized anode and cathode materials for high power, safe, fast charge batteries. The agreement anticipates that this work will be accomplished over 24 months. This research will also extend the collaboration with Rutgers University for prototype cell testing. Objective 2 furthers the investigation of extreme temperature range battery performance and extends over 12 months. During 2007, the program associated with objective 2 was extended through September 2008. Of this grant, $1,114,000 is allocated to the battery optimization program. Work continues as planned under these objectives. Through December 31, 2007 $706,865 in revenue has been recognized in connection with this grant.

Target Markets

According to information supplied by JMP Securities in January 2007, the market for power storage devices is approximately $55 billion ($31 billion lead acid, $9 billion alkaline, $8 billion lithium ion, and $7 billion all

other). Lithium ion and advanced technology 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 and Nickel Metal Hydride, or NiMH, batteries in automobiles, electric vehicles, and hybrid electric vehicles where direct electrical energy for starting and passing will assist the gasoline engines. Also, the development of power storage systems for stationary power, electric utility grid services and wind, fuel cell and solar generation systems will require enhanced battery capabilities.

Our technology provides a fundamental building block for a new generation of rechargeable batteries. Currently our primary markets are in the electric vehicle sector and electric utility grid services. As discussed above, we have an active development and supply relationship with Phoenix for electrical vehicle battery packs and AES in the electrical grid market. We have also provided electrode materials, cells, batteries and battery packs to, and had early stage discussions with, various established automobile companies that are evaluating our technology for use in hybrid electric vehicles and plug-in electric vehicles. These discussions could lead to commercial relationships that will be characterized by a revenue stream consisting of one or more of development funding, materials manufacturing and royalties.

We are focusing our marketing and development efforts on markets presently dominated by Nickel Cadmium, or NiCd, and Nickel Metal Hydride, or NiMH, batteries, such as automobiles, in which rapid charging, long cycle life and the additional power from the rapid discharge should prove advantageous and in stationary power applications such as electric grid services and uninterruptible power supply, where rapid charging, long calendar life, low maintenance, tolerance to temperature extremes and power resulting from rapid discharge should prove advantageous.

Key Features

Rechargeable batteries are made from various materials, each of which has certain characteristics or tendencies, depending upon how the products are 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 latter type of leakage is referred to as "self discharge" and is a natural tendency of all batteries at a rate that 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.

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 density 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.

The principal advance we have made is in the optimization of nano-structured lithium 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%, or more, of initial battery capacity and 10 minute discharges with 90%, or more, capacity utilizations.

Our 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 rechargeable batteries described in the subsection entitled "Competition" below.

Our 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 our nano-structure LTO. In January 2007, we completed 25,000 deep charge/discharge cycles of our innovative battery cells. Even after 25,000 cycles the cells still retained over 80% of their original charge capacity. This represents a significant improvement over conventional, commercially available rechargeable battery technologies such as lithium ion, NiMH and NiCD. These other commercially available rechargeable batteries typically retain that level of charge capacity only through approximately 1,000 deep charge/discharge cycles. Nano-structured LTO offers a near-term promise of lithium nano-titanate batteries that exhibit rapid charge and discharge, longer cycle life and safer performance than either currently available NiMH or lithium ion batteries. These results support the feasibility of a power lithium nano-titanate battery pack half the size of those currently being tested for hybrid electric vehicle applications.

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-structured LTO cells. In contrast, common lithium ion technology possesses virtually no charging capabilities at this low temperature, and the other rechargeable battery types described in the subsection entitled "Competition" below take 10 to 20 times longer to charge at this low temperature.

We are also testing the safety of batteries made using our nano-structured LTO. Graphite negative electrode materials used in typical lithium ion batteries 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 about 250°C. In May 2006, we completed a safety testing cycle for lithium ion battery products using our nano-structure LTO that replaces the graphite used in "standard" lithium ion batteries. In the safety testing cycle, we subjected our batteries to temperatures up to 240o C, which is more than 100o C above the temperature at which graphite-based batteries can exhibit thermal run away and explode. In addition, we performed high-rate overcharge, puncture, crush,

drop and other comparative tests alongside a wide range of graphite-based battery cells with no malfunctions, explosions or safety concerns exhibited by our nano-structured LTO cells. In comparison, the graphite cells, put to the same tests, routinely smoked, caught fire and exploded.

We recently discovered a potential problem with the configuration of modules comprising the first-generation battery packs sold to Phoenix. In the first-generation battery packs, 48 individual cells comprise one module, and 28 modules comprise one battery pack. The configuration problem was discovered by our researchers in the course of an exhaustive testing and computer modeling process to investigate possible modes of potential failure in our battery modules. Their analysis revealed that, under certain rare circumstances battery modules as configured for use in Phoenix vehicles, might overheat and fail. This potential problem relates specifically to the configuration and structure of the first-generation electric battery packs and does not indicate an issue in our core lithium Titanate cell technology or in our battery modules for stationary applications, which are of a completely different design. We have substantially completed the modeling and design of the modules for the second-generation battery packs for delivery to Phoenix that we expect will eliminate the overheating risk.

The current generation of batteries made with our nano-structured LTO exhibit lower energy density at room temperatures. If density is measured by weight, our batteries made with our nano-structured LTO have energy densities that are better than lead acid, NiCd and NiMH batteries and approximately 70% of conventional lithium ion batteries. This indicates that our lithium Titanate batteries may be more suited to power applications that are not limited as to physical size of the battery as opposed to consumer product uses such as cell phones and laptop computers.

Proprietary Rights

We have been awarded four U.S. and several international patents protecting this technology including: 1) Method for producing catalyst structures, 2) Method for producing mixed metal oxides and metal oxide compounds, 3) Processing for making lithium titanate, and 4) Method for making nano-sized and sub-micron-sized lithium-transition metal oxides. The U.S. patents expire in 2020, 2021 and 2022.

We have filed five U.S. patent applications directed to a variety of inventions related to aspects of our electrochemical cells: “Nano-Materials – New Opportunities for Lithium Ion Batteries”; “Methods for Improving Lithium-Ion Battery Safety”; “Method for Preparing a Lithium-Ion Cell”; “Method for Preparing a Lithium-Ion Battery”; and, “Method for Synthesizing Nano-Sized Lithium Titanate Spinel.”

Competition

Advanced Lithium Ion Batteries. We are not aware of any commercial products available with the same characteristics as our nano-structured LTO and our nano lithium Titanate batteries and battery packs. A competitor company has recently announced an advanced Li-Ion battery. This battery appears to have some advantages over other types of common Li-Ion batteries, but appears to lack certain features, such as cycle life and performance at temperature extremes, that distinguish our batteries from the competition. In addition, we believe, many large companies, such as automobile manufacturers, are attempting to develop lithium ion batteries that are suitable for high-power applications such as hybrid electric vehicles and plug-in hybrid electric vehicles. Many of these companies have significant human and financial resources, a well-known brand name, existing distribution channels and other advantages over us. Were such companies to develop a product technology with features that are similar or superior to those of our nano lithium Titanate batteries, that company would have a significant competitive advantage.

Existing Technologies. Lead acid, NiCd and NiMH batteries presently dominate our target markets. Lead acid batteries are used everyday by anyone who drives an automobile or operates an electric-powered wheel chair, scooter or golf cart. They are also the battery-of-choice for uninterruptible power supplies. Lead acid batteries are an inexpensive, relatively simple to manufacture, mature, reliable technology that possesses a relatively low self discharge rate. The modern sealed versions also need little or no maintenance. However, lead acid batteries are quite heavy, giving them very poor weight to energy and power ratios, which limit practical use to stationary and transportion applications. They also suffer from long recharge times, 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. The highly toxic metal, lead, and highly corrosive sulfuric acid used in lead acid batteries render them environmentally unfriendly.

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; however, 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 re-charge after moderate periods of storage. More seriously, NiCd batteries are exceedingly environmentally unfriendly. The metal cadmium is toxic and can cause 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.

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 lead acid 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 cycle ability, possessing a recharge 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 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 lead acid. 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 lead to larger power and / or energy densities. Lithium ion batteries are stable, charge somewhat rapidly (in hours), 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 has a life of about 3 years, whereas the vehicles in which they are used have lifetimes as long as 10 to 15 years and require many hundreds, even thousands, of charge/discharge cycles. Conventional lithium ion batteries also do not function well at extremely hot or cold temperatures.

The Performance Materials Division

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, or AHP. 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.

We believe that AHP 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. AHP uses a dense-phase crystal growth technique that controls crystal formation using a combination of mechanical, fluid dynamics, chemical and thermal control. We believe that costs 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.

In April 2007, we announced the formation of a joint venture company, called AlSher Titania. AlSher Titania represents a joint venture with The Sherwin-Williams Company, one of the world's leading manufacturers of paint and durable coatings. AlSher Titania will combine the Altairnano Hydrochloride Pigment (AHP) process and the Sherwin-Williams Hychlor Pigment (SWHP) process and other technologies to develop and produce high quality titanium dioxide pigment for use in paint and coatings, as well as nano titanium dioxide materials for use in a variety of applications including those related to removing contaminants from air and water.

As part of the formation of AlSher Titania, we granted Alsher Titania an exclusive license to use Altairnano’s technology (including its hydrochloric pigment process) for the production of titanium dioxide pigment and other titanium containing materials (other than battery or nanoelectrode materials). We received no consideration for the license other than our 70% ownership interest in Alsher Titania. Certain potential improvements in the technology are licensed back to us subject to a royalty equal to the greater of 5% of the nets sales price of derivative products or 10% of the gross margin on such products. Absent early termination, the license extends through the expiration of the underlying patents.

Our contribution to the joint venture also included certain pilot plants assets with a book value, net of depreciation, of $3,110,000. Sherwin agreed to contribute cash to Alsher Titania and a license agreement related to a technology for the manufacture of titanium dioxide using the digestion of ilmenite in hydrochloric acid.

Target Markets and Marketing Plans/Efforts

Assuming testing and development is successful, AlSher Titania will produce pigment products for Sherwin-Williams and other customers in the worldwide titanium dioxide pigment market. White titanium dioxide pigment is mainly used in the production of paints, plastics, and paper and the total world market is valued at approximately $9 billion US according to a report issued by TZ Minerals in 2006, with a projected average annual growth in excess of 3% through 2015.

Research, Testing, Development and Licensing Status

Sherwin-Williams Relationship. Through our joint venture with Sherwin-Williams, we intend to commercialize the AHP technology in three stages, namely a piloting program, a 5,000 ton per anum demonstration plant and a 70,000 ton per anum commercial plant. Our commitment to build and commission the initial pilot plant was successfully completed at the end of February 2008. Test results under the piloting program to date have been positive and are expected to continue through the end of May 2008. Beginning in the second quarter of 2008, AlSher expects to prepare cost studies in anticipation of constructing the 5,000 ton per annum demonstration plant.

Western Oil Sands Relationship. In January 2004, we entered into a license agreement with Western Oil Sands, Inc., or Western Oil, with respect to its possible use of the AHP 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 AHP on heavy minerals derived from oil sands in Alberta, Canada. The agreement also contemplated a three-phase, five-year program pursuant to which the parties would work together to further evaluate, develop and commercialize the AHP. In the first phase of the program, which was extended through December 2006, we, along with Western Oil, evaluated the AHP to confirm that the AHP will produce pigment from oil sands and to complete a characterization study.

During December 2006, Western Oil requested an additional extension of phase one to allow them to perform additional characterization of the feedstock source prior to committing to phase two of the license agreement workscope. In light of the broad exclusive license granted to Western Oil in the initial agreement, we declined to extend the terms of the license in order to preserve our flexibility in other potential licensing arrangements that may not involve an exclusive license for Western Oil. Nonetheless, we continued to work with Western Oil, under a paid contract through December 31, 2007, to assist them in various development activities associated with production of a pigment feedsource at a pilot plant located in our building. In the fourth quarter of 2007, Western Oil agreed to relocate its pilot plant from our building as of the end of March 2008 to one of its facilities. AlSher Titania expects to discuss an alternative license with Western Oil and/or other partners in 2008.

Proprietary Rights

We have been awarded four U.S. and 15 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. Two new patent applications have also been filed recently.

Competition

Existing pigment production technologies are owned and guarded by the top tier producers that developed the technologies. Such producers typically do not grant licenses to competitors. As a result, companies seeking to enter into the pigment production business generally are required to use alternative technologies. 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 AHP. We believe there are no competing new technologies to produce titanium dioxide pigment.

Secondary Products and Projects in Performance Materials in Progress

The secondary products and projects in our Performance Materials Division are all projects with either limited revenue potential or which are at an early state of research or development, but which provide, and may continue to provide, supplemental income and the potential of future products to us.

Advanced Performance Coatings

We have developed thermal spray grade nanomaterial powders that can be applied as a coating on the surface of metals by standard thermal spray techniques. Our nanomaterials coatings possess enhanced toughness and increased hardness while retaining a flexible coating layer. These features contribute to superior abrasive wear resistance over the conventional coating of the similar materials. The nanomaterial coatings also demonstrate improved porosity over standard thermal spray powders making them more resistant to corrosive attack. We believe these performance improvements will enable longer periods between maintenance, repairs and examinations of these critical components, therefore improving the economics of the industrial application. Such nanomaterial based thermal spray products could be used in a variety of harsh environment applications such as aerospace propulsion systems, gas turbines, medical applications, heavy machinery in all industries, boilers for power plants, waste incinerators, and the oil and gas industry.

In March 2006, we entered into a supply and distribution agreement with Sulzer Metco, a publicly-traded Swiss company involved in the design, manufacture and supply of thermal spray materials, equipment and integrated system solutions for the industrial market. Under the terms of the agreement, the companies agreed to jointly select and manage the commercialization of licensed products comprising or incorporating our nano-structured titanium dioxide and nano-structured yttria stabilized zirconium oxide. When an Altair nano-structured powder is designated to be supplied under the agreement, Sulzer Metco has the right to be the exclusive distributor of that product in the spray coating field assuming that certain purchase and other commitments are met. Through December 31, 2007, the anticipated progress under this agreement has not been achieved. We believe the market for each such 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. In light of the limited size of the potential market, we do not expect these performance coatings to be a material source of revenue in the long term. As such, we have shifted our focus from the development of products under this agreement to our other partners in the Power and Energy Group and in Life Sciences.

In July 2007, we signed an agreement with PPG Industries, Inc. (“PPG”), as a sub-contractor to their United States Air Force Research Labs grant. Under the terms of this grant, we will work jointly with PPG to develop a nanometal oxide material and dispersion concentrates to create a primer to be utilized in aerospace applications. The total value of the agreement is $290,000 over an 18 month term. We also received a $200,000 purchase order in July from a division of PPG, PRC-DeSoto International, Inc., to perform research and development over a 6 month period related to the same objectives as the grant noted above. Through December 31, 2007 approximately $202,000 of revenue has

been recorded in connection with these contracts. It is anticipated that a research and development agreement that will build upon the work currently being performed will be negotiated with PRC-DeSoto International, Inc. in the first quarter of 2008.

Based on the work conducted by us to date, we have discovered new nanomaterial technology that works well in aerospace applications as a replacement for hexavalent chromium, which historically has been the compound of choice for preventing corrosion. However, hexavalent chromium is also highly toxic. PPG is the leading supplier of coatings for the global aerospace market. The results of all testing completed to date by PPG and their customers has been positive with all tests passed. Our nanometal oxide primer offers PPG and their customers a much safer and more environmentally compliant alternative that may also reduce their remediation costs and their impact on the environment.

We believe the market for these advanced products may be very large in the longer term after thorough testing has been completed in various applications. The unique flexibility and bend ability of these coatings may allow them to expand into markets currently being served by low temperature applied coatings.

Proprietary Rights

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.

We have filed several patent applications directed to metal oxides, including: “Nano-Structured Iron Oxide”; “Nano-Structured Indium-Doped Iron Oxide”; and, “Method for Low Temperature Production of Nano-Structured Iron Oxide Coatings.”

We have filed a patent application entitled, “TEFLON Replacements and Related Production Methods.

Nanosensors Research Program

Since September 2003, pursuant to a teaming/research agreement with Western Michigan University funded by the Department of Energy, we have been engaged in the development of a technology used in the detection of chemical, biological and radiological agents. We generated approximately $15,000 and $482,000 in revenues through December 2006 and 2005, respectively, as part of this program. In August 2006, $981,000 of the $2.5 million Department of Energy research grant received by Altair and its partners was allocated to the continuation of this program. Of this amount, we recognized approximately $897,000 of revenues over the life of this program of which $500,000 was earned by and paid to Western Michigan University under a subcontract. The workscope associated with this grant builds upon the accomplishments and progress made under the prior grants and will focus on increasing the signal strength and selectivity of the sensing devices developed. The ultimate goal is to develop a unique nanosensor-based platform for the error-free, “lab on a chip” detection of chemical, biological and radiological agents for hazard materials remediation and threat detection. During 2006, we developed a portable, hand held, sensing device. We have since developed a second-generation hand held device and are currently testing the device with the current library of sensing molecules for identification of a multiplicity of agents, as well as newly synthesized compounds.

In August 2006, we signed a subcontract with the University of Reno, Nevada to act as a subcontractor under a $1,095,000 grant awarded to them by the Department of Energy to continue development of nanosensors for the detection of chemical, biological and radiological agents. This subcontract provides for total payments to Altair of $250,000 through May 2008. This project is an outgrowth of, and builds on the research initiated with, the Western Michigan University program. We generated approximately $174,000 of revenues over the life of this program through December 31, 2007. The overall workscope of this project will focus on homeland security applications relating to novel fluorescent and electroluminescent receptor molecules. Our role in the overall project is intended to be the synthesis and development of suitable lanthanum and other metal-based nanoparticles for initiating reactions between target chemical and radiological agents. We have demonstrated the viability of lanthanide particles and complexes for the detection of nerve agents and are currently working on development of a prototype sensing device with a novel sensing mechanism.

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 Department of Energy 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 would receive $750,000 under a grant award from the Department of Energy for collaborative research and development work beginning October 1, 2005 and continuing through December 2006. This grant was extended through August 30, 2007 to allow for completion of the research activities with no adjustment to the original amount awarded. In March 2007 we executed a $356,000 subcontract with the UNLVRF for follow-on work related to the solar hydrogen project being funded by the Department of Energy Phase IV grant award. This subcontract expired on December 31, 2007 and no further extensions will be requested. Revenues of approximately $349,000 were recorded in connection with these contracts through December 31, 2007.

The development work involved, 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. As a result of this funding support, we have acquired several state-of-the-art systems for deposition and evaluation of thin films used to construct hydrogen generating solar cells. We studied iron-based oxide materials for solar cell applications utilizing the aforementioned systems, concentrating on enhancing film performance through addition of doping elements to the iron oxide films and exploring deposition methods to obtain the best sunlight-to-hydrogen conversion efficiencies. Progress was made in both the use of plasma enhanced chemical vapor deposition for these films and production of porous electrode substrates during 2007. Further Department of Energy funding for this program has not been received and contract work will be discontinued.

Life Sciences

RenaZorb® Products

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; however, 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.

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.

Target Markets

Our pharmaceutical product RenaZorb was developed to treat elevated phosphate levels in human patients with chronic kidney disease specifically in patients with stage five, end stage renal disease. According to the National Kidney Foundation web page referenced on March 7, 2008, there are 20 million adults with chronic kidney disease of which 500,000 are in stage five. In November 2007 the Cardiovascular and Renal Drugs Advisory Committee of the Federal Drug Administration ("FDA") recommended that phosphate binders be used to treat hyper-phosphatemia in stage four kidney patients. According to the Medline Plus web page supported by the U.S. National Library of Medicine and the National Institutes of Health referenced on March 7, 2008, an additional 400,000 patients with significant kidney function loss are classified as being at stage four.

Research, Testing and Development

In January 2005, we signed a license agreement with Spectrum Pharmaceuticals, Inc., 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. In June 2006, Spectrum issued to us 100,000 restricted shares of their common stock at the then current market value of $3.88 per share in connection with the first milestone payment due upon demonstration of satisfactory lanthanum serum levels. An additional 40,000 shares were also issued in payment of research and development services provided by us in 2006. Additional payments by Spectrum are contingent upon the achievement of various milestones in the testing, regulatory approval and sale of RenaZorb. Although work continues to refine and test RenaZorb, no milestones were achieved in 2007.

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;

14

- milestone payments upon obtaining approval from the FDA and similar regulatory agencies in Europe and Japan to market RenaZorb;

- 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.

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. Pre-clinical testing to determine safety and toxicity will take one to two years and is required before Spectrum can submit an investigational new drug application to the FDA. 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; however, 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. Spectrum has begun the process of information and data collection and presentation required to file an investigational new drug application with the FDA, which is the first stage of seeking regulatory approval. The filing is now expected to occur in early 2009.

Assuming future testing, development and regulatory approvals of RenaZorb proceed at the rate we expect, the aggregate value of all the first year payments and all potential stock premiums, milestone payments and other payments to us over the first 7-9 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.

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, as well as aluminum hydroxide-based products such as Gaviscon manufactured by Glaxo Smith Kline, both of which are available over the counter. Renagel manufactured by Genzyme and Phoslo, manufactured by Fresenius Medical Care, are available only by prescription. In addition, Fosrenol, another lanthanum based active pharmaceutical agent developed by Shire Pharmaceuticals of the UK, is available only by prescription.

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 are 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.

In October 2007, the FDA granted Genzyme marketing approval for Renvela for dialysis patients. Renvala is Genzyme's next generation version of Renagel but has lower incidents of gastrointestinal adverse effects.

Phoslo is a calcium acetate phosphate binder that produced approximately $40 million in revenues in 2006. In October 2006, Nabi Biopharmaceuticals sold Phoslo, an oral drug used by dialysis patients to reduce phosphorus absorption, in a deal worth $150 million to Fresenius Medical Care. In January 2007, Fresenius submitted an application to extend use of Phoslo to stage four chronic kidney disease patients.

Fosrenol was introduced in the United States in January 2005 and, according to a Shire Pharmaceutical Group news release dated February 21, 2008, has increased its average share of the total US phosphate binding market to 8.6 % in 2007 from 8.5 % in 2006. Worldwide sales of Fosrenol during 2007 reportedly totaled $102.2 million, with US sales reportedly being $62.1 million. Fosrenol is marketed as large chewable tablets with a proposed dosage of 1.5 to 3.0 grams active drug per day, 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, 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. No adverse side effects were reported in all animal testing conducted on RenaZorb, which to date included three separate testing protocols. 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.

Renalan

Renalan is a highly active, lanthanum-based nanomaterial with low intestinal solubility and excellent in-vitro phosphate binding. Animal testing of 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 chronic kidney disease in companion animals
- Palatable with normal food intake 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. According to information published in the Textbook of Veterinary Internal Medicine by Stephen J. Ettinger, DVM and Edward C. Feldman, DVM, the dog chronic kidney disease population is variously estimated at between 0.5% and 7% of population, resulting in a worldwide chronic kidney disease population of between 0.75 million and 10.5 million dogs. The textbook estimates that the cat chronic kidney disease population is estimated at between 1.6% and 20% of total population, resulting in a worldwide chronic kidney disease 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 chronic kidney disease population of approximately 4.2 million and a dog chronic kidney disease population of about 1.2 million.

Research, Development and Licensing

In May 2006, we entered into a collaborative research, license and commercialization agreement with the Elanco Animal Health Division of Eli Lilly and Company ("Elanco"). Under the terms of the agreement, Elanco has exclusive rights to develop animal health products using our nanotechnology-based products. The agreement gives us specific rights with respect to the manufacture of these products for Elanco. Upon successful completion of proof of concept studies performed by Elanco for each nanotechnology–based product selected by the joint development committee, a $100,000 fee will be charged for the exclusive license rights to develop and commercialize each of these products. The proof of concept study relating to the first pharmaceutical product was completed in December 2006, and the related license fee of $100,000 was received.

Other payments by Elanco under the contract are contingent upon the achievement of various milestones in the testing, regulatory approval and sale of each product selected for development and commercialization. Additional, contingent consideration under the license agreement may include the following:

- milestone payments for each product that is submitted for regulatory acceptance in the United States, with additional fees due upon regulatory approval;

- sublicense revenue based on a percentage of all payments and consideration received from third parties to whom Elanco has granted a sub-license;

- royalty payments based upon a percentage of net sales on a product by product, country by country basis;

- performance bonus based on cumulative net sales targets for each product: and

- manufacturing royalties for each product that is manufactured by a 3rd party to be paid for the first three years that the product is sold or distributed.

In September 2007, we entered into a stage II development services agreement with Elanco. Pursuant to the agreement, over a multi-year period, we will develop a manufacturing process related to a test-stage active pharmaceutical ingredient. This development work will include making certain regulatory filings, installing related equipment, and providing related services. Based on the 2006 collaborative research agreement discussed above, Elanco has the exclusive right to develop and market this pharmaceutical ingredient. Elanco has agreed to fund substantially all of the development process, at a cost of approximately $2,500,000. Revenue under this agreement is recognized on a percentage of completion basis utilizing costs incurred to date in relation to total projected costs for the project. Revenues of approximately $929,000 were recorded through December 31, 2007 in connection with this agreement and $1,571,000 of backlog remains to be billed through 2010.

The active pharmaceutical ingredient must undergo animal 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 as a drug. The FDA approval process for companion animal use is expected to take two to three years to complete; however timing for FDA and other regulatory approval of drug candidates is unpredictable. Elanco, with technical assistance from us, is responsible for the clinical trials and other activities necessary to obtain regulatory approval of the active pharmaceutical ingredient. Elanco has begun the process of information and data collection and presentation required to commence in 2008 seeking regulatory approval.

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

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 or effectiveness.

In October 2006, Bayer HealthCare submitted and application to the European Food Safety Authority (“EFSA”) for a new food additive for adult cats to restrict internal phosphorus absorption. In October 2007, EFSA released a positive opinion on the safety and efficacy of Lantharenol as a feed additive for cats to restrict the absorption of phosphorus. Bayer has not yet launched Lantharenol.

Other Nanomaterials Research

In September 2006, the Nanomaterials characterization program was funded by $311,000 of the $2.5 million Department of Energy grant. This research is conducted in collaboration with the University of California, Santa Barbara, or UCSB, to investigate the interaction of our nanomaterials with various non-aqueous environments. This research focuses on interaction mechanisms between cells and nanoparticles, with the goal of understanding how specific chemical, physical, and electrical properties of these nanoparticles influence that interaction. Our research with UCSB will examine a range of microbes that have environmental or societal importance. The results of this research are expected to provide the basis for both 1) predicting potential negative impacts of specific nanoparticle characteristics on the environment and human health and 2) developing novel antimicrobial agents and surface treatments that could defeat antibiotic-resistant strains of harmful microbes. Work on the grant is continuing with the last characterization of the interaction of the bacteria and nano particles. At this time, two publications documenting final results are in progress. Revenues of approximately $205,000 have been recorded through December 31, 2007 relating to this program.

Research and Development Expenses

Total research and development expenses were $15,443,703, $10,077,231, and $5,073,478, for the years ended December 31, 2007, 2006 and 2005, respectively, while research and development costs funded by customers were $5,050,202, $2,897,859, and $1,962,162, for the years ended December 31, 2007, 2006 and 2005, respectively.

Dependence on Significant Customers

During the year ended December 31, 2007, we recorded revenues from four major customers, each of which accounted for 10% or more of revenues as follows: Phoenix Motorcar, Inc. revenues of $3,047,687 and Department of Energy revenues of $706,865 in the Power and Energy Group; Revenues from Western Oil Sands, Inc. of $1,198,525 and Department of Energy revenues of $499,773 in the Performance Materials Division; and Eli Lilly/Elanco revenues of $1,088,829 and Department of Energy revenues of $204,801 in the Life Sciences Division.

The revenue associated with the backlog of work to be performed in connection with our significant customers is approximately $1,579,000 for Eli Lilly/Elanco through 2010 and $249,000 for the Department of Energy through 2008.

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. We also subject to laws governing the packaging and shipment of some of our products, including our nano lithium Titanate batteries. 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 processing sites and package potentially flammable materials in appropriate ways.

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. 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.

19

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, power and energy group, and life sciences segments is presented in Note 17, 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 17, Business Segment Information, of Notes to Consolidated Financial Statements in Part IV.

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 Altairnano, Inc. (f/k/a Altair Nanomaterials, Inc.) were direct wholly-owned subsidiaries of Altair US Holdings, Inc., while Tennessee Valley Titanium, Inc. previously a wholly-owned subsidiary of MRS, has been dissolved.

Altair acquired Fine Gold in April 1994. Fine Gold has earned no operating revenues to date. Fine Gold acquired the intellectual property associated with the now defunct Altair jig, a fine particle separation device for use in minerals processing, in 1996.

Mineral Recovery Systems, Inc., or MRS, was incorporated 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 and the holding of mineral leases in Tennessee. Other than a single mineral lease related to the remediation site in Tennessee, MRS does not continue to hold any properties or leases. The wholly-owned subsidiary of MRS, Tennessee Valley Titanium, which never held any assets or operations, was dissolved on July 7, 2006.

Altair Nanomaterials, Inc. was incorporated in 1998 as a wholly-owned subsidiary of MRS and holds all of our interest in our nanomaterials and titanium dioxide pigment technology and related assets. Altair Nanomaterials Inc. was subsequently renamed Altairnano, Inc. on July 6, 2006.

AlSher Titania LLC was incorporated in April 2007 as a joint venture company which is 70% owned by Altairnano, Inc. This company was formed to combine certain technologies of Altairnano, Inc. with the Sherwin-Williams Company in order to develop, market, and produce titanium dioxide pigment for use in a variety of applications.

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 that 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.

20

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.

Beginning in 1996, we entered into leases for mineral property near Camden, Tennessee and owned the rights to the Altair jig. However, we have terminated our leases on all of the Tennessee mineral properties except for one and are limiting our expenditures on our centrifugal jig to patent maintenance expenses.

In November 1999, we acquired all the rights of BHP Minerals International, Inc., or 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.

We have experienced an operating loss in every year of operation. In the fiscal year ended December 31, 2007, we experienced a net loss of $31,470,621.

Employees

Our business is currently managed by Mr. Terry Copeland, President, Mr. Edward Dickinson, Chief Financial Officer, Dr. Bruce Sabacky, Chief Technology Officer, Mr. Doug Ellsworth, Vice President – Life Sciences, Mr. Steven Balogh, Vice President – Human Resources, and Mr. Jeffrey McKinney, Vice President and Chief Patent Counsel. Dr. Alan J. Gotcher was the President and Chief Executive Officer of the Company until February 27, 2008. We have 105 additional regular employees. Through December 31, 2007, we have employment agreements with Messrs. Gotcher, Dickinson, Sabacky and Copeland. On March 10, 2008, we signed employment agreements with Mr. McKinney and Mr. Balogh.

During 2008, we may hire between 35 and 45 additional employees, primarily in research and development and operations. Such additional hiring, if it occurs, will be dependent upon business conditions.

Available Information

We file 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.

We make available, free of charge on our Internet website located at www.altairnano.com, our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q, any current reports on Form 8-K filed since our 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, we provide electronic or paper copies of our filings free of charge upon request.

Enforceability of Civil Liabilities Against Foreign Persons

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 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 impose liability in original actions against us or our directors, officers or experts predicated upon U.S. securities laws.

Forward-Looking Statements

This Report 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. 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 Report and our other filings with the SEC. 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 Report 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.

Item 1A. Risk Factors

An investment in our common shares and related derivative securities involves significant risks. You should carefully consider the risks described in this Report before making an investment decision. Any of these risks could materially and adversely affect our business, financial condition or results of operations. In such case, you may lose all or part of your investment. Some factors in this section are forward-looking statements.

We may continue to experience significant losses from operations.

We have experienced a net loss in every fiscal year since our inception. Our losses from operations were $33,067,474 in 2007, $17,681,415 in 2006 and $10,481,853 in 2005. Even if we do generate operating income in one or more quarters in the future, subsequent developments in our industry, customer base, business or cost structure, or an event such as significant litigation or a significant transaction, may cause us to again experience operating losses. We may never become profitable for the long-term, or even for any quarter.

Our quarterly operating results have fluctuated significantly in the past and will continue to fluctuate in the future, which could cause our stock price to decline.

Our quarterly operating results have fluctuated significantly in the past, and we believe that they will continue to fluctuate in the future, due to a number of factors, many of which are beyond our control. If in future periods our operating results do not meet the expectations of investors or analysts who choose to follow our company, our stock price may fall. Factors that may affect our quarterly operating results include the following:

- fluctuations in the size and timing of customer orders from one quarter to the next;
- timing of delivery of our services and products;
- addition of new customers or loss of existing customers;
- positive or negative business or financial developments announced by our key customers;
- our ability to commercialize and obtain orders for products we are developing;
- costs associated with developing our manufacturing capabilities;
- new product announcements or introductions by our competitors or potential competitors;
- the effect of variations in the market price of our common shares on our equity-based compensation expenses;

23

- acquisitions of businesses or customers;
- technology and intellectual property issues associated with our products; and
- general economic trends, including changes in energy prices, or geopolitical events such as war or incidents of terrorism.

A majority of our revenue has historically been generated from low-margin contract research services; if we cannot expand revenues from other products and services, our business will fail.

Historically, a majority of our revenues has come from contract research services for businesses and government agencies. During the years ended December 31, 2007, 2006 and 2005, contract services revenues comprised 55%, 67%, and 70% respectively, of our operating revenues. Contract services revenue is low margin and unlikely to grow at a rapid pace. Our business plan anticipates revenues from product sales and licensing, both of which are higher margin than contract services and have potential for rapid growth, increasing in coming years. If we are not successful in significantly expanding our revenues from higher margin products and services, our revenue growth will be slow, and it is unlikely that we will achieve profitability.

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 conflicting patents or defects in our 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 shares 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 harm our ability to generate revenues and, as a result, our business and operations.

24

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.

Because our products are generally components of end products, the viability of many or our products is tied to the success of third parties' existing and potential end products.

Few of the existing or potential products being developed with our nanomaterials and titanium dioxide pigment technology are designed for direct use by the ultimate end user. Phrased differently, most of our products are components of other products. For example, our nano-structured LTO battery materials and batteries are designed for use in end-user products such as electric vehicles, hybrid electric vehicles and other potential products. Other potential products and processes we and our partners are developing using our technology, such as titanium dioxide pigments, life science materials, air and water treatment products, and coatings, are similarly expected to be components of third-party products. As a result, the market for our products is dependent upon third parties creating or expanding markets for their end-user products that utilize our products. If such end-user products are not developed, or the market for such end-user products contracts or fails to develop, the market for our component products would be expected to similarly contract or collapse. This would limit our ability to generate revenues and would harm our business and operations.

The commercialization of many of our technologies is dependent upon the efforts of commercial partners and other third parties over which we have no or little control.

We do not have the expertise or resources to commercialize all potential applications of our nanomaterials and titanium dioxide pigment technology. For example, we do not have the resources necessary to complete the testing of, and obtain FDA approval for, RenaZorb and other potential life sciences products or to construct a commercial facility to use our titanium dioxide pigment production technology. Other potential applications of our technology, such as those related to our nano-structure LTO electrode materials, coating materials and dental materials, are likely to be developed in collaboration with third parties, if at all. With respect to these and substantially all other applications of our technology, the commercialization of a potential application of our technology is dependent, in part, upon the expertise, resources and efforts of our commercial partners. This presents certain risks, including the following:

- we may not be able to enter into development, licensing, supply and other agreements with commercial partners with appropriate resources, technology and expertise on reasonable terms or at all;

- our commercial partners may not place the same priority on a project as we do, may fail to honor contractual commitments, may not have the level of resources, expertise, market strength or other characteristics necessary for the success of the project, may dedicate only limited resources to, and/or may abandon, a development project for reasons, including reasons, such as a shift in corporate focus, unrelated to its merits;

- our commercial partners may be in the early stages of development and may not have sufficient liquidity to invest in joint development projects, expand their businesses and purchase our products as expected or honor contractual commitments.

25

- our commercial partners may terminate joint testing, development or marketing projects on the merits of the projects for various reasons, including determinations that a project is not feasible, cost-effective or likely to lead to a marketable end product;

- at various stages in the testing, development, marketing or production process, we may have disputes with our commercial partners, which may inhibit development, lead to an abandonment of the project or have other negative consequences; and

- even if the commercialization and marketing of jointly developed products is successful, our revenue share may be limited and may not exceed our associated development and operating costs.

As a result of the actions or omissions of our commercial partners, or our inability to identify and enter into suitable arrangements with qualified commercial partners, we may be unable to commercialize apparently viable products on a timely and cost-effective basis, or at all. Our business is not dependent upon a single application of our technology; however, we will not become profitable and be able to sustain operations in the long run if we fail to commercialize several of our potential products.

Our battery business has been harmed by the design issue associated with the Phoenix battery, and our ability to continue our battery business will be dependent upon our ability to address related concerns.

As a result of a risk associated with the battery packs we designed for use in electric cars produced by Phoenix, we recently agreed to replace 47 of the first-generation battery packs sold to Phoenix. This has harmed our relationship with Phoenix and with other current and potential purchasers of our battery products and technology. If the new battery we design and develop for Phoenix does not address the noted module configuration issue and is not otherwise safe and effective, we will be unable to continue our supply arrangement with Phoenix over the long term. In addition, the design issues with Phoenix have, and will continue to, create concerns among other current and potential customers. Any failure to address issues associated with the battery packs we supplied to Phoenix will also harm our ability to attract and retain customer for other applications of our battery technology.

If we acquire or invest in other companies, assets or technologies and we are not able to integrate them with our business, or we do not realize the anticipated financial and strategic goals for any of these transactions, our financial performance may be impaired.

As part of our growth strategy, we routinely consider acquiring or making investments in companies, assets or technologies that we believe are strategic to our business. We do not have extensive experience in conducting diligence on, evaluating, purchasing or integrating new businesses or technologies, and if we do succeed in acquiring or investing in a company or technology, we will be exposed to a number of risks, including:

- we may find that the acquired company or technology does not further our business strategy, that we overpaid for the company or technology or that the economic conditions underlying our acquisition decision have changed;

- we may have difficulty integrating the assets, technologies, operations or personnel of an acquired company, or retaining the key personnel of the acquired company;

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our ongoing business and management's attention may be disrupted or diverted by transition or integration issues and the complexity of managing geographically or culturally diverse enterprises;

- we may encounter difficulty entering and competing in new product or geographic markets or increased competition, including price competition or intellectual property litigation; and

- we may experience significant problems or liabilities associated with product quality, technology and legal contingencies relating to the acquired business or technology, such as intellectual property or employment matters.

In addition, from time to time we may enter into negotiations for acquisitions or investments that are not ultimately consummated. These negotiations could result in significant diversion of management time, as well as substantial out-of-pocket costs. If we were to proceed with one or more significant acquisitions or investments in which the consideration included cash, we could be required to use a substantial portion of our available cash. To the extent we issue shares of capital stock or other rights to purchase capital stock, including options and warrants, existing stockholders would be diluted. In addition, acquisitions and investments may result in the incurrence of debt, large one-time write-offs, such as acquired in-process research and development costs, and restructuring charges.

We intend to expand our operations and increase our expenditures in an effort to grow our business. If we are unable to achieve or manage significant growth and expansion, or if our business does not grow as we expect, our operating results may suffer.

During the past several years, we have significantly increased our research and development expenditures in an attempt to accelerate the commercialization of certain products, particularly our nano-structured LTO electrode materials and battery systems. Our business plan anticipates continued additional expenditure on development, manufacturing and other growth initiatives. We may not achieve significant growth. If achieved, significant growth would place increased demands on our management, accounting systems, network infrastructure and systems of financial and internal controls. We may be unable to expand associated resources and refine associated systems fast enough to keep pace with expansion, especially as we expand into multiple facilities at distant locations. If we fail to ensure that our management, control and other systems keep pace with growth, we may experience a decline in the effectiveness and focus of our management team, problems with timely or accurate reporting, issues with costs and quality controls and other problems associated with a failure to manage rapid growth, all of which would harm our results of operations.

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

We have limited financial, personnel 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 will not generate substantial revenues from our life science products unless proposed products receive FDA approval and achieve substantial market penetration.

We have entered into development and license agreements with respect to RenaZorb, a potential drug candidate for humans with kidney disease, and other life science products. Most of the potential life sciences applications of our technologies are subject to regulation by the FDA and similar regulatory bodies. In general, license agreements in the life sciences area call for milestone payments as certain milestones related to the development of the products and the obtaining of regulatory approval are met; however, the receipt by the licensor of substantial recurring revenues is generally tied to the receipt of marketing approval from the FDA and the amount of revenue generated from the sale of end products. There are substantial risks associated with licensing arrangements, including the following:

- Further testing of potential life science products using our technology may indicate that such products are less effective than existing products, unsafe, have significant side effects or are otherwise not viable;

- The licensees may be unable to obtain FDA or other regulatory approval for technical, political or other reasons or, even if it obtains such approval, may not obtain such approval on a timely basis; and

- End products for which FDA approval is obtained, if any, may fail to obtain significant market share for various reasons, including questions about efficacy, need, safety and side effects or because of poor marketing by the licensee.

If any of the foregoing risks, or other risks associated with our life science products were to occur, we would not receive substantial, recurring revenue from our life science division, which would adversely affect our overall business, operations and financial condition.

As manufacturing becomes a larger part of our operations, we will become exposed to accompanying risks and liabilities.

We have not produced any products using our nanomaterials and titanium dioxide pigment technology and equipment on a sustained commercial basis. In-house or outsourced manufacturing is becoming an increasingly significant part of our business. As a result, we are becoming increasingly subject to various risks associated with the manufacturing and supply of products, including the following:

- If we fail to supply products in accordance with contractual terms, including terms related to time of delivery and performance specifications, we may be required to repair or replace defective products and may become liable for direct, special, consequential and other damages, even if manufacturing or delivery was outsourced;

- Raw materials used in the manufacturing process, labor and other key inputs may become scarce and expensive, causing our costs to exceed cost projections and associated revenues;

- Manufacturing processes typically involve large machinery, fuels and chemicals, any or all of which may lead to accidents involving bodily harm, destruction of facilities and environmental contamination and associated liabilities;

28

- As our manufacturing operations expand, we expect that a significant portion of our manufacturing will be done overseas, either by third-party contractors or in a plant owned by the company. Any manufacturing done overseas presents risks associated with quality control, currency exchange rates, foreign laws and customs, timing and loss risks associated with overseas transportation and potential adverse changes in the political, legal and social environment in the host county; and

- We may have, and may be required to, make representations as to our right to supply and/or license intellectual property and to our compliance with laws. Such representations are usually supported by indemnification provisions requiring us to defend our customers and otherwise make them whole if we license or supply products that infringe on third-party technologies or violate government regulations.

Any failure to adequately manage risks associated with the manufacture and supply of materials and products could lead to losses (or small gross profits) from that segment of our business and/or significant liabilities, which would adversely affect our business, operations and financial condition.

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

As of December 31, 2007, we had approximately $50.1 million in cash and cash equivalents. As we take additional steps to enhance our commercialization and marketing efforts, or respond to acquisition opportunities or potential adverse events, our use of working capital may increase significantly. In any such event, absent a comparatively significant increase in revenue, we will need to raise additional capital in order to sustain our ongoing operations, continue unfinished testing and additional development work and, if certain of our products are commercialized, construct and operate facilities for the production of those 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 common shares;

- our financial results, particularly the amount of revenue we are generating from operations;

- the amount of our capital needs;

- the market's perception of companies in one or more of our lines of business;

- the economics of projects being pursued; and

- the market's perception of our ability to execute our business plan and any specific projects identified as uses of proceeds.

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.

29

Our past and future operations may lead to substantial environmental liability.

Virtually any prior or future use of our nanomaterials and titanium dioxide pigment technology is subject to federal, state and local environmental laws. In addition, we are in the process of reclaiming mineral property that we leased in Tennessee. Under applicable environmental 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. If we incur any significant environmental liabilities, our ability to execute our business plan and our financial condition would be harmed.

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 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 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 Terry Copeland, our President, Edward Dickinson, our Chief Financial Officer, and Dr. Bruce Sabacky, our Chief Technology Officer. We have key man insurance on the life of Dr. Sabacky. We do not have agreements requiring any of our key personnel to remain with our company. The loss or unavailability of any or all of these individuals would harm our ability to execute our business plan, maintain important business relationships and complete certain product development initiatives, which would harm our business.

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

Our articles of incorporation authorize the issuance of an unlimited number of common shares 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 common shares would further dilute the percentage ownership of our company held by existing stockholders.

The market price of our common shares is highly volatile and may increase or decrease dramatically at any time.

The market price of our common shares is 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 our technology or any of our product initiatives, 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.

The market price for our common shares may be affected by various factors not directly related to our business or future prospects, including the following:

- 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 shares. We currently intend to retain any future earnings, if any, for use in our business and, therefore, do not anticipate paying dividends on our common shares in the foreseeable future.

We are subject to various regulatory regimes, and may be adversely affected by inquiries, investigations and 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 the execution of our business plan.

Through such audits, inquiries and investigations, we or a regulator may determine that we are out of compliance with one or more governing rules or laws. Remedying such non-compliance diverts 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. We may also be subject to lawsuits as a result of alleged violation of the securities laws or governing corporate laws. Any charge or allegation, and particularly any determination, that we had materially violated a governing law would harm our ability to enter into business relationships, recruit qualified officers and employees and raise capital.

Item 1B. Unresolved Staff Comments

None

Item 2. Description of Property

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 100,000 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%. Payments of $600,000 plus accrued interest are due on February 8 of each of 2009 and 2010.

In July 2007, we signed a new lease agreement effective as of July 1, 2007 for 30,000 square feet of space in the Flagship Business Accelerator Building located at 3019 Enterprise Drive, Anderson, Indiana. The space is used for the production of prototype batteries and battery cells. The lease is for an initial term of 5 years with a single one-year renewal term. Total rent to be paid over the 5 year term including real estate taxes is $570,625. The landlord provided the first $110,000 in additional leasehold improvements at no cost. We plan to complete the move from the current office and laboratory space leased in the Flagship Enterprise Center Building, an aggregate of 8,199 square feet, to the Accelerator Building by late February 2008.

During 2007, we leased an aggregate 8,199 square feet of office and laboratory space in the Flagship Enterprise Center Building located at 2701 Enterprise Drive in Anderson, Indiana under five separate leases. Total rent for the combined leased premises, including normal utilities, real estate taxes and common area fees was approximately $10,364 per month. This rent is net of a 20% rent subsidy offered by local government entities. In exchange for that rent subsidy, we have 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. This commitment will expire when the rental agreements terminate and the premises is vacated in late February 2008. As of December 31, 2007, approximately 1,500 square feet of office space was still occupied in the Flagship Enterprise building.

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 have terminated the mineral leases on all but the primary lease for our Tennessee mineral property that is subject to remediation. Remediation work on the properties has been completed and reviewed by the applicable regulatory authorities. Final inspections and full release is expected to occur in the fall of 2008. Future remediation costs are not expected to be significant.

Item 3. Legal Proceedings

We are not subject to any pending legal proceedings other than ordinary routine litigation incidental our business.

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 2007 fiscal year.

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.

Fiscal Year Ended December 31, 2006	Low	High
1st Quarter	$1.98	$3.74
2nd Quarter	$2.69	$4.21
3rd Quarter	$2.80	$3.82
4th Quarter	$2.52	$3.83

Fiscal Year Ended December 31, 2007	Low	High
1st Quarter	$3.02	$3.10
2nd Quarter	$3.52	$3.67
3rd Quarter	$3.20	$3.31
4th Quarter	$4.10	$4.28

The last sale price of our common shares, as reported on the NASDAQ Capital Market on March 10, 2008, was $2.50 per share.

Outstanding Shares and Number of Shareholders

As of March 10, 2008, the number of common shares outstanding was 84,356,301 held by approximately 453 holders of record. In addition, as of the same date, we have reserved 4,789,581 common shares for issuance upon exercise of options that have been, or may be, granted under our employee stock option plans and 1,141,706 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.

Securities Authorized for Issuance under Equity Compensation Plans

We have stock option plans administered by the Compensation Committee of our Board of Directors that provide for the granting of options to employees, officers, directors and other service providers of the Company. Security holders have approved all option plans. The following table sets forth certain information with respect to compensation plans under which equity securities are authorized for issuance at December 31, 2007:

33

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	4,166,207	$2.81	6,072,330
Equity compensation plans not approved by security holders	None	N/A	None
Total	4,166,207	$2.81	6,072,330

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, 2007.

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 Federal Income Tax 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 that owns at least 10% of the voting shares of the Company.

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

A capital gain realized on the disposition of common 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 shares in carrying on business in Canada or where at any time during the five-year period immediately preceding the realization of the gain, not less than 25% of the issued and outstanding shares of any class or series of shares of the Company, 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 U.S. 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.

This summary is of a general nature only and is not intended to be, nor shall be construed to be, legal or tax advice to any particular holders of common shares. Accordingly, holders of common shares are urged to consult their own tax advisors for advice with regard to their particular circumstances.

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 of America ("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,	2007	2006	2005	2004	2003
STATEMENTS OF OPERATIONS					
Revenues	$ 9,108,483	$ 4,323,960	$ 2,806,535	$ 1,151,892	$ 72,851
Operating expenses	$ (42,175,957)	$ (22,005,375)	$ (13,288,388)	$ (8,056,847)	$ (5,858,061)
Interest expense	$ (134,254)	$ (171,500)	$ (207,189)	$ (194,180)	$ (454,415)
Interest income	$ 1,101,682	$ 654,182	$ 750,306	$ 96,229	$ 1,879
Gain (Loss) on foreign exchange	$ (1,292)	$ (1,550)	$ 1,524	$ 626	$ (193)
Loss on extinguishment of debt	$ -	$ -	$ -	$ -	$ -
Loss from continuing operations before minority interests' share	$ (32,101,338)	$ (17,200,283)	$ (9,937,212)	$ (7,002,280)	$ (6,237,939)
Minority interests' share	$ 630,717	$ -	$ -	$ -	$ -
Net Loss	$ (31,470,621)	$ (17,200,283)	$ (9,937,212)	$ (7,002,280)	$ (6,237,939)
Basic and diluted net loss per common share	$ (0.45)	$ (0.29)	$ (0.17)	$ (0.14)	$ (0.19)
Cash dividends declared per common share	$ -	$ -	$ -	$ -	$ -
BALANCE SHEET DATA					
Working capital	$ 39,573,052	$ 25,928,376	$ 21,482,766	$ 7,663,264	$ 3,565,039
Total assets	$ 73,858,635	$ 43,120,573	$ 33,464,016	$ 15,547,021	$ 11,659,754
Current liabilities	$ (14,328,781)	$ (3,499,862)	$ (2,427,543)	$ (376,773)	$ (397,141)
Long-term obligations	$ (1,200,000)	$ (1,800,000)	$ (2,400,000)	$ (2,880,311)	$ (2,686,130)
Minority Interest in Subsidiary	$ (1,369,283)	$ -	$ -	$ -	$ -
Net shareholders' equity	$ (56,960,571)	$ (37,820,711)	$ (28,636,473)	$ (12,289,937)	$ (8,576,483)

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 corporation, 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 three divisions, a Power and Energy Group (formally known as the Advanced Materials and Power Systems Division), a Performance Materials Division, and a Life Sciences Division. Our research, development, production and marketing efforts are currently directed toward three primary market applications that utilize our proprietary technologies:

- Power and Energy Group
  - The design, development, and production of our nano lithium Titanate battery cells, batteries, and battery packs as well as related design and test services.
  - The development, production and sale for testing purposes of electrode materials for use in a new class of high performance lithium ion batteries called nano lithium Titanate batteries.
- Performance Materials Division
  - Through AlSher Titania, the development and production of high quality titanium dioxide pigment for use in paint and coatings, and nano titanium dioxide materials for use in a variety of applications including those related to removing contaminants from air and water.
  - The testing, development, marketing and/or licensing of nano-structured ceramic powders for use in various application, such as advanced performance coatings, air and water purification systems, and nano-sensor applications.
- Life Sciences Division
  - 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.
  - The development of a manufacturing process related to a test-stage active pharmaceutical ingredient, which is designed to be useful in the treatment of companion animals.

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, 2007, 2006 and 2005, contract services revenues comprised 55%, 67%, and 70%, respectively, of our operating revenues. In the summary of our business below, we describe our various research products in connection with our description of the business segment to which each relates.

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) produce battery packs for the transportation market, (2) provide research to further develop battery electrode materials, nanosensors, and nanomaterials characterization, (3) to participate in a joint venture combining the technologies of the partners in order to develop and produce titanium dioxide pigment for use in a variety of applications, (4) to develop a suite of energy storage solutions for the stationary power market and (5) to develop battery backup power systems for Naval applications. In addition, we have entered into a licensing agreement for RenaZorb, our pharmaceutical candidate for treatment of chronic renal failure in humans, and have licensed all potential pharmaceutical products for animal applications. We have made product sales consisting principally of battery packs and nano lithium Titanate. 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 and animal application licensees in obtaining regulatory approval for the drugs, or other products, 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. Revenues from product sales, commercial collaborations and contracts and grants increased significantly in 2007 but operating expenses also increased as we added employees and committed additional funds to our customer contracts, battery initiative, and pigment process technology. 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 nano lithium Titanate batteries and battery materials to be a source of such higher-margin revenues. Consequently, during 2007, we continued to expand the scope of our Power and Energy Group by (1) hiring additional staff and increasing temporary personnel to handle production demand (2) leasing additional laboratory and production space in Indiana, and (3) acquiring test and production equipment. Also in our Performance Materials and Life Sciences Divisions, the level of staffing and production equipment was increased to expand our manufacturing capabilities for titanium dioxide pigment and pharmaceutical products for animal applications.

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:

- In July 2007, we entered into a multi-year development and equipment purchase agreement with AES Energy Storage, LLC, a subsidiary of global power leader The AES Corporation. Under the terms of the deal, we are working jointly with AES to develop a suite of energy storage solutions specifically for AES. The first two 1 megawatt prototype stationary battery packs were manufactured at our Indiana facility and were completed according to the delivery schedule in December 2007. These packs have been connected to the electrical grid and full testing has commenced. Assuming the successful testing of these packs, we expect for our development relationship with AES to continue through 2008.

- In January 2007, we entered into a multi-year purchase and supply agreement with Phoenix for lithium nano lithium Titanate battery packs to be used in electric vehicles produced by Phoenix. Due to a slow down in production relating primarily to delays in Phoenix obtaining funding, projected orders for 2007 were not achieved. In 2008, after becoming aware of a potential module configuration problem in the first-generation Phoenix battery packs manufactured in 2007, we agreed to replace 47 of the packs of the existing packs sold to Phoenix by means of a credit against re-designed second-generation battery packs and related engineering services. Modeling and design of the modules for the second-generation battery packs is substantially complete. Once testing and computer modeling confirm that the revised design resolves the potential overheating issue, we expect to commence delivery of the second-generation battery packs to Phoenix. We are currently negotiating a development and supply agreement with Phoenix.

- Spectrum must begin the testing and application processes necessary to receive FDA approval of RenaZorb and related products. Spectrum has begun the process of information and data collection and presentation required to file an investigational new drug application with the FDA, which is a condition precedent to commencing human testing and the first stage of seeking regulatory approval. We do not expect the application to be filed until early 2009. In order for RenaZorb to be successful in the foreseeable future, it is important that Spectrum, with our assistance, submit its investigation new drug application by early 2009 and continue with testing.

- We have formed the AlSher Titania joint venture with The Sherwin-Williams Company to develop and produce titanium dioxide pigment for use in paint and coatings. The 100 ton per annum pilot plant is now producing pigment material for evaluation and to provide engineering data to complete a cost study by mid 2008 relating to the anticipated scale up to a 5000 ton per anum demonstration plant. The success of this joint venture and initial pilot plant trials is integral to continuing development and the ultimate commercialization of AHP.

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 $27,220,357 at December 31, 2006 to $50,146,117 at December 31, 2007. During 2007 we sold 895,523 and 11,428,572 of our common shares in two separate private placements for net proceeds to us of approximately $40.5 million. Exercises of stock options and warrants and other cash inflows increased cash by $8.8 million. These increases were offset by cash used to fund operations and purchased fixed assets of approximately $22 million, and by a $3.9 million reclassification of auction rate notes from short term investments to long term (refer to Financial Statement Footnote 3) during 2007.

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 $17,888,368 in 2007, and we expect to increase funding of operations by approximately $15 million to approximately $33 million in 2008, net of anticipated revenues, based upon budgeted revenue growth and expansion of our production capabilities in 2008. We expect to substantially increase revenues 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 products, particularly our nano lithium Titanate batteries, our energy storage products and nano-structured LTO. During 2007, we continued making significant expenditures for our battery initiative, added staff and equipment for the manufacture of nanoparticle products, increased the capital investment in plant equipment relating to pigment process development and increased our sales and marketing efforts. In 2008, we intend to increase spending for the battery initiative, manufacturing of the potential drug candidates, and pigment process development. We estimate that our current cash and short-term investments balance is sufficient to support our operations through the end of 2009 based on budgeted cashflow projections.

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 2007 strategic private placements of securities, we do not presently have any plans to pursue additional debt or equity financing during 2008 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 original 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 three payments of $600,000 of principal plus accrued interest were due and paid on February 8, 2006, 2007, and 2008. Future payments of principal and interest are due annually on February 8, 2009 and 2010.

Capital Commitments and Expenditures

The following table discloses aggregate information about our contractual obligations and the periods in which payments are due as of December 31, 2007:

Contractual Obligations	Total	Less Than 1 Year	1-3 Years	4-5 Years	After 5 Years
Notes Payable	$ 1,800,000	$ 600,000	$ 1,200,000	$ -	$ -
Interest on Notes Payable	252,000	126,000	126,000	-	-
Contractual Service Agreements	1,636,778	1,570,778	66,000	-	-
Facilities and Property Leases	662,250	218,768	252,232	191,250	-
Unfulfilled Purchase Orders	3,253,949	3,253,949	-	-	-
Total Contractual Obligations	$ 7,604,977	$ 5,769,494	$ 1,644,232	$ 191,250	$ -

In connection with the formation of the AlSher Titania joint venture, we committed to complete our pigment processing pilot plant and commissioned the plant by the end of February 2008. Total capital expenditures, labor and development costs associated with this effort are expected to total approximately $3.9 million. Through December 31, 2007, approximately $3.3 million of costs associated with the pigment processing pilot plant have been incurred.

A total of approximately $4.8 million was anticipated to be spent on labor, equipment and building improvements and other implementation expenses related to preparations to manufacture our pharmaceutical products in 2007. Of this amount, approximately $706,000 was incurred through December 31, 2007.

In July 2007, we signed a new lease agreement for 30,000 square feet of space in the Flagship Business Accelerator Building located at 3019 Enterprise Drive, Anderson, Indiana. The move from the current office and laboratory space leased in the Flagship Enterprise Center Building, an aggregate of 8,199 square feet, to the Accelerator Building was completed by late February 2008. We have spent approximately $273,000 on build-out and leasehold improvements, net of the $110,000 credit received from the landlord through December 31, 2007.

We purchased equipment for our Reno, Nevada facility for use in the development and expansion of our current advanced battery materials production capabilities. Through December 31, 2007, approximately $1,200,000 was expended on production equipment.

In 2008, we plan to spend approximately $11.2 million, including outstanding commitments at December 31, 2007 of approximately $103,047, on production and tooling equipment associated with our Power and Energy Systems Group and continuing the expansion of our Life Sciences manufacturing capabilities.

39

In 2008, after becoming aware of a module configuration problem in the first-generation Phoenix battery packs manufactured in 2007, we agreed to replace 47 of the packs by means of a credit against re-designed second-generation battery packs and related engineering services and recorded a warranty liability of $2,856,902 in the December 31, 2007 financial statements. It is anticipated that we will fulfill this warranty obligation in 2008 by providing replacement deliverables of second-generation battery packs and related engineering services.

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, share-based compensation, revenue recognition, overhead allocation, allowance for doubtful accounts, inventory, 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, 2007, the carrying value of these assets was $13,606,904, or 18% 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.

- Share-Based Compensation. We have a stock incentive plan that provides for the issuance of stock options, restricted stock and other awards to employees and service providers. We calculate compensation expense under SFAS 123R using a Black-Scholes Merton 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 11 of Notes to the Consolidated Financial Statements, are appropriate and reasonable.

- 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 collectability is probable. During 2007, our revenues were derived from three sources: product sales, commercial collaborations, and contract research and development. 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 upon delivery of the product, unless specific contractual terms dictate otherwise. 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. Payments received in advance relating to future performance of services or delivery of products are deferred until the performance of the service is complete or the product is shipped. Upfront payments received in connection with certain rights granted in contractual arrangements are deferred and amortized over the related time period over which the benefits are received. Based on specific customer bill and hold agreements, revenue is recognized when the inventory is shipped to a third party storage warehouse, the inventory is segregated and marked as sold, the customer takes the full rights of ownership and title to the inventory upon shipment to the warehouse per the bill and hold agreement. When contract terms include multiple components that are considered separate units of accounting, the revenue is attributed to each component and revenue recognition may occur at different points in time for product shipment, installation, and service contracts based on substantial completion of the earnings process.

- Accrued Warranty. We provide a limited warranty for battery packs and energy storage systems. A liability is recorded for estimated warranty obligations at the date products are sold. Since these are new products, the estimated cost of warranty coverage is based on cell and module life cycle testing and compared for reasonableness to warranty rates on competing battery products. As sufficient actual historical data is collected on the new product, the estimated cost of warranty coverage will be adjusted accordingly. The liability for estimated warranty obligations may also be adjusted based on specific warranty issues identified.

- Overhead Allocation. Facilities overheads, which are comprised primarily of occupancy and related expenses, and fringe benefit expenses, are initially recorded in general and administrative expenses and then allocated monthly to research and development expense based on labor costs. Facilities overheads and fringe benefits 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 collectability 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.

- Inventory. The Company values its inventories generally at the lower of cost (first-in, first-out method) or market. We employ a full absorption procedure using standard cost techniques. The standards are customarily reviewed and adjusted annually. Overhead rates are recorded to inventory based on normal capacity. Any idle facility costs or excessive spoilage are recorded as current period charges.

- 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. We have 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, 2007. Management has, therefore, established a full valuation allowance against its net deferred income tax assets as of December 31, 2007. Due to the significant increase in common shares issued and outstanding from 2005 through 2007, Section 382 of the Internal Revenue Code may provide significant limitations on the utilization of our net operating loss carry forwards. As a result of these limitations, a portion of these loss and credit carryovers may expire without being utilized.

Results of Operations

Fiscal Year 2007 vs. 2006

Revenues increased by $4,784,523 from $4,323,960 in 2006 to $9,108,483 in 2007, while operating expenses increased by $20,170,582, from $22,005,375 in 2006 to $42,175,957 in 2007. As a result, our loss from operations increased by $15,067,474, from $17,681,415 in 2006 to $33,067,474 in 2007.

Product sales increased from $961,380 in 2006 to $4,058,281 in 2007. The volume of battery packs sold to Phoenix Motorcars Inc. grew from 11 in 2006 to 50 in 2007 resulting in a $2,293,329 increase in product sales. The remaining increase of $803,572 reflects a higher level of sales volume for prototype battery cells, battery modules, nano lithium Titanate, and other nanomaterial products. Based on Phoenix's request, we continue to segregate and hold 47 of the 50 packs in a storage facility pending receipt of their new Generation II vehicle design specifications. Three of the packs were shipped to Phoenix.

License fees decreased by $464,720 from 2006 to 2007. In 2006, license fees of $464,720 associated with the Spectrum Pharmaceutical and Elanco Animal Health contracts was recorded. In 2007, no additional milestones were achieved under these contracts.

Commercial collaborations revenues increased from $1,420,151 in 2006 to $2,909,650 in 2007 primarily due to $1,662,033 of increased billings associated with new contacts signed in 2007 with AES, the second phase of Elanco Animal Health development contract, and PPG. This increase was offset by $172,534 of non-recurring collaborations that were finalized in 2006.

Contract and grant revenues increased from $1,477,709 in 2006 to $2,140,552 in 2007, principally as a result of billings of $649,725 under the $2.5 million Department of Energy Earmark relating to the momentum gained in the project that was originally effective in September 2006, billings of $121,916 under our subcontract with PPG signed in July 2007 and billings of $140,731 under the University of Reno Nanosensors subcontract effective in January 2007. This increase was partially offset by a reduction in revenues of $249,528 primarily relating to the subcontract with the University of Nevada, Las Vegas Research Foundation and the National Science Foundation grant that were coming to completion in 2007.

Cost of sales - product increased by $4,129,556, from $1,034,431 in 2006 to $12,007,330 in 2007. This increase is driven by the increase in battery pack sales and other changes in product sales discussed above. Positive margins have not yet been achieved associated with the sale of battery packs due to scaling issues, and a portion of the revenues relating to the battery packs is dependent upon the receipt of Zero Emission Credits. Through December 31, 2007, no ZEV credits have been sold by Phoenix Motorcars, Inc. As higher production volumes and cost reduction efforts are achieved and ZEV credits are paid, the margin on battery pack sales is expected to become positive.

Cost of sales - warranty and inventory reserves increased by $6,843,343 in 2007 from 2006. $3,927,353 of this increase relates to a write-off of all inventory balances on hand at December 31, 2007 of $2,529,938 relating to battery cells and modules, and a $1,397,415 write-off of cells ordered in 2007 for delivery in 2008. The remaining increase of $2,915,990 relates to warranty reserves of $59,088 and $2,856,902 recorded based upon 2007 battery product sales to AES and Phoenix, respectively. The write off of inventory associated with the Phoenix battery packs and the warranty recorded in connection with Phoenix resulted from our decision to replace 47 of the Phoenix packs manufactured in 2007 under warranty provisions and the proposal of a new prototype battery that utilizes a different module configuration and cell format (refer to the Key Business Developments in Power and Energy section under Item 1 – Business for further discussion).

Research and development, or R&D expense increased by $5,366,472, from $10,077,231 in 2006 to $15,443,703 in 2007. Research and development payroll costs increased by $2,602,663 including fringe benefits expenses due to an increase in headcount of 24. Temporary labor costs also increased by $572,597 primarily due to the growth in battery pack production and construction/testing of the pigment pilot plant. Excluding labor, research and development expenses in the Power and Energy Systems Group increased by $1,474,013 primarily due to the AES development agreement signed in 2007 and an increased focus on developing potential new battery products. Excluding labor, research and development expenses in the Life Sciences Division increased by $394,160 primarily due to work billed to us under our subcontract with the University of California Santa Barbara relating to the Department of Energy grant and signing of the second phase of the development contract with Elanco Animal Health in 2007. Excluding labor, research and development expenses increased by $298,758 in the Performance Materials Division primarily due to the construction and testing of the pigment pilot plant (increase of $353,947), increased spending on existing and new billable contracts (increase of $209,260), offset by non-recurring collaborations and subcontracts completed in 2006 (decrease of $264,449). The remaining increase relates to other internal research and development.

General and administrative expenses increased by $3,275,069, from $7,495,180 in 2006 to $10,770,249 in 2007. Stock based compensation expense, a non-cash item, increased by $1,876,880 due to a higher level of new employees eligible for and receiving option grants, as well as an overall higher level of employees who received retention grants in January 2007; payroll costs including fringe expense increased by $669,130 due to expansion of the executive team as well as other related increases in recruiting, relocation, and travel of $511,219; fringe benefit expenses allocable to all general and administrative personnel increased by $479,949 primarily due to a higher level of bonus earned in 2007; and accounting fees increased by $227,824 primarily due to tax reviews and re-filing of tax returns undertaken in 2007 in response to new accounting pronouncements. These increases were partially offset by $401,484 of expenses associated with a flood at our headquarters in Reno, Nevada in January 2006 and a decrease of $88,449 in other general and administrative expenses.

Interest income increased by $447,500 from $654,182 in 2006 to $1,101,682 in 2007. On average a higher level of cash was available for investment in 2007, $16 million in 2007 versus $10 million in 2006.

Fiscal Year 2006 vs. 2005

Revenues increased by $1,517,425 from $2,806,535 in 2005 to $4,323,960 in 2006, while operating expenses increased by $8,716,987, from $13,288,388 in 2005 to $22,005,375 in 2006. As a result, our loss from operations increased by $7,199,562, from $10,481,853 in 2005 to $17,681,415 in 2006.

Product sales increased from $149,373 in 2005 to $961,380 in 2006 due to our first sales of battery packs to Phoenix Motorcars, Inc. Of the 11 battery packs ordered, four were shipped and seven were billed and held by us based upon the written request of Phoenix, which complied with the revenue recognition criteria described in the Securities and Exchange Commission “Staff Accounting Bulletin No. 104 – Revenue Recognition in Financial Statements”. The remaining seven packs were shipped according to instructions from Phoenix by the end of January 2007.

Commercial collaborations revenues increased from $825,723 in 2005 to $1,420,151 in 2006 primarily due to $495,182 of increased billings to Western Oil Sands resulting from an amendment to their license and development agreement signed in October 2005 and an increase of $115,848 in RenaZorb development revenues paid by Spectrum Pharmaceuticals.

Contract and grant revenues increased from $1,136,439 in 2005 to $1,477,709 in 2006, principally as a result of billings of $746,438 under the $2.5 million Department of Energy Earmark that was effective in September 2006 and $66,266 under the $250,000 Indiana Advanced Energy Technologies Program grant awarded in November 2005. This increase was partially offset by a reduction in the revenues of $466,200 for the August 2004 subcontract with Western Michigan University that was fully expended in February 2006.

Research and development, or R&D, expense increased by $5,003,753, from $5,073,478 in 2005 to $10,077,231 in 2006. During 2006, the battery initiative, which was initially staffed in the fourth quarter of 2005, was expanded over the year to include three new employees and performance of the research to develop and improve our nano-structured LTO and cell design utilized in the nano lithium Titanate batteries. As a result, expenditures for the battery initiative increased by $2,707,214 in 2006. In addition, pre-production and commercialization costs relating to nano-structured LTO increased by $992,038. We also increased our commitment to pigment process technology in 2006 by hiring a full time General Manager and developing a pilot plant, with a resulting increase in expenditures of $830,398. Expenditures for contract and grant work increased by $588,329 primarily as a result of the new $2.5 million Department of Energy earmark effective in September 2006. These increases were partially offset by decreases in other research and development activities.

44

Sales and marketing expenses increased by $339,018 from $1,539,765 in 2005 to $1,878,783 in 2006. Excluding the payment of a $500,000 fee in 2005 to RBC Capital Markets in connection with the RenaZorb licensing agreement, sales and marketing expenses increased by $839,018 in 2006. This increase reflects the addition of two positions on the sales team to focus on the Life Sciences Division and Power and Energy Group of $218,247, and expenses incurred of $620,771 to promote our nano lithium Titanate batteries installed in our prototype all electric vehicle and the expansion of general corporate marketing activities.

General and administrative expenses increased by $1,923,726, from $5,571,454 in 2005 to $7,495,180 in 2006. Stock based compensation expense, a non-cash item, increased by $1,539,788 as a result of implementing FAS 123 (R); we incurred approximately $401,484 of expenses associated with a flood at our headquarters in Reno, Nevada in January 2006; legal fees associated with patent work increased by $328,807; and payroll expense increased by approximately $140,700 due mainly to staff additions. These increases were partially offset by a decrease of $509,082 in Sarbanes Oxley compliance costs from 2005, the first year of implementation.

Interest income decreased by $96,124, from $750,306 in 2005 to $654,182 in 2006. On average a higher level of cash was available for investment in 2005.

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 2007 and 2006 was 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, 2007 and 2006
(Unaudited)

	Quarter Ended March 31	Quarter Ended June 30	Quarter Ended September 30	Quarter Ended December 31
Year Ended December 31, 2007:				
Revenues	$ 1,140,932	$ 3,065,868	$ 3,370,134	$ 1,531,549
Operating Expenses	$ 6,630,398	$ 8,915,384	$ 9,619,193	$ 16,710,982
Net Loss	$ (5,181,467)	$ (5,430,583)	$ (6,130,210)	$ (14,728,362)
Loss per Common Share: (1)				
Basic and Diluted	$ (0.07)	$ (0.08)	$ (0.09)	$ (0.20)

45

Year Ended December 31, 2006:				
Revenues	$ 545,296	$ 1,056,828	$ 749,898	$ 1,971,938
Operating Expenses	$ 5,270,989	$ 4,985,237	$ 4,908,681	$ 6,840,468
Net Loss	$ (4,560,064)	$ (3,789,018)	$ (4,054,686)	$ (4,796,513)
Loss per Common Share: (1)				
Basic and Diluted	$ (0.08)	$ (0.06)	$ (0.07)	$ (0.08)

(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-4 through F-35 of this Report.

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

Not applicable.

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, 2007. Based upon this evaluation, our chief executive officer and our chief financial officer have concluded that, as of December 31, 2007, 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, 2007. 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, 2007, 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.

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 2007 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

On January 29, 2008, we signed a contract with the United States Navy for $2,488,859 directed towards the development of battery backup power systems in naval applications. Under the terms of the contract which runs through November 30, 2008, we will develop an optimized battery cell employing nano-sized lithium titanate electrode materials and then demonstrate the performance and safety attributes of the cell. We will also develop and demonstrate a modular system design for utilization of the product technology in multiple military applications, including energy and power storage for naval applications.

On February 11, 2008, we signed a contract with Melpar BVBA, a company incorporated under Belgian law to provide services relating to defining and implementing sales and marketing strategies in Europe. At the same time, we entered into an agreement with Rik Dobbelaere, the owner of Melpar, under which he will serve as the President of our European operations and report to our President. Total annual compensation is a monthly payment in US dollars of approximately $40,000 to Melpar under its agreement and an annual target bonus under our incentive bonus plan equal to up to 60% of base compensation to Melpar under its agreement. In addition, Mr. Dobbelaere is entitled under his agreement to receive 100,000 stock options under our stock incentive plan.

The term of both agreements is indefinite unless cancelled by either party with three months notice. If we terminate the Melpar agreement, we will be required to pay a cancellation fee of three months contract value (approximately U.S. $120,000) if the termination occurs during the first three months, a cancellation fee of six months contract value (approximately U.S. $240,000) if the termination occurs between 6 and 12 months after commencement of the term, a cancellation fee of 12 months contract value (approximately U.S. $480,000) if the termination occurs between 12 and 24 months after commencement of the term and a cancellation fee of 18 months contract value (approximately U.S. $720,000 if the termination occurs more than 24 months after the end of the term.

Our Compensation and Nominations Committee may make discretionary bonuses from time to time if it determines, after considering the total base salary, annual incentive bonus and equity-based compensation to the executive, that the total compensation otherwise earned by the executive underrepresented the value or contribution of the executive during the year. In connection with the 2007 bonus plan, the Compensation and Nominations Committee determined on January 3, 2008 to grant Alan Gotcher a total bonus of $428,600 in cash and 75,591 common shares (valued at $347,718 based upon a closing price of $4.60 per share on January 2, 2008). Of the total bonus, $253,661 in cash and 44,737 common shares represented a discretionary bonus above that determined pursuant to the terms of the Company's incentive plan.

On March 10, 2008 we entered into employment agreements with Jeffrey A. McKinney, Vice President and Chief Patent Counsel, and Stephen Balogh, Vice President Human Resources. Under the employment agreement, Mr. McKinney and Mr. Balogh are entitled to a annual base salary in an amount not less than $215,000 and $193,800, respectively. In addition, each is entitled to an annual bonus target opportunity equal to 60% of his base salary upon achievement of certain performance measures, and standard health and other benefits. The employment agreement also include terms related to the assignment of inventions to the Company, protection of confidential information, and 12-month non-competition and non-solicitation covenants.

Under each of the employment agreements, if the employee's employment is terminated by themselves for good reason, which includes, among other things, (a) the Company requiring the employee to relocate his place of employment without his consent, or (b) a material adverse change in the employee's title, position, and/or duties 90 days before or within one year after a change of control, the employee is entitled to a severance benefit equal to his base salary and health benefits for one year. The one-year base salary severance benefit will be extended to 16 months if either (a) the employee terminates for good reason on or before March 10, 2010 on account of a relocation that is more than 50 miles from his initial place of employment, or (b) the employee consents to a relocation of his employment, but subsequently terminates his employment with the Company for good reason on or before the two-year anniversary of such relocation.

If either employee's employment is terminated by the Company without cause, each is entitled to a severance benefit equal to his base salary for one year, health benefits for 18 months, and a lump sum bonus payment equal to 60% of his base salary paid for the year in which his termination occurred. The one-year base salary severance benefit will be extended to 16 months if either (a) the employee terminates for good reason on or before March 10, 2010 on account of a relocation that is more than 50 miles from his initial place of employment, or (b) the employee consents to a relocation of his employment, but his employment is subsequently terminated by the Company without cause on or before the two-year anniversary of such relocation. Neither employee is entitled to any severance if his employment is terminated at any time by the Company with cause or by the employee without good reason.

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.

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
- Consolidated Balance Sheets, December 31, 2007 and 2006
- Consolidated Statements of Operations for Each of the Three Years in the Period Ended December 31, 2007
- Consolidated Statements of Shareholders' Equity and Comprehensive Loss for Each of the Three Years in the Period Ended December 31, 2007
- Consolidated Statements of Cash Flows for Each of the Three Years in the Period Ended December 31, 2007
- Notes to Consolidated Financial Statements

2. Financial Statement Schedule. Not applicable.

Exhibit List.

See the Exhibit Index following the signature page hereof.

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 13, 2008.

ALTAIR NANOTECHNOLOGIES INC.

By: /s/ Terry Copeland
Terry Copeland,
President

Date: March 13, 2008

POWER OF ATTORNEY AND ADDITIONAL SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the following persons in the capacities and on the dates indicated have signed this Report. Each person whose signature to this Report appears below hereby constitutes and appoints Terry Copeland 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 Report, and any and all instruments or documents filed as part of or in connection with this Form Report 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
/s/ Terry Copeland Terry Copeland	President, (Principal Executive Officer)	March 13, 2008
/s/ Edward Dickinson Edward Dickinson	Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	March 13, 2008
/s/ Alan J. Gotcher Alan J. Gotcher	Director	March 13, 2008
/s/ Michel Bazinet Michel Bazinet	Director	March 13, 2008

/s/ Jon N. Bengtson	Director	March 13, 2008
Jon N. Bengtson		
/s/ George Hartman	Director	March 13, 2008
George Hartman		
/s/ Robert Hemphill II	Director	March 13, 2008
Robert Hemphill II		
/s/ Pierre Lortie	Director	March 13, 2008
Pierre Lortie		

Exhibit Index

Exhibit No.	Description	Incorporated by Reference/ Filed Herewith (and Sequential Page #)
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. **
4.2	Amended and Restated Shareholder Rights Plan dated October 15, 1999, with 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 (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	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 (Amended and Restated)	Filed herewith
10.4	Standard Form of Stock Option Agreement under 2005 Stock Incentive Plan	
10.5	Standard Form of Restricted Stock Agreement under 2005 Stock Incentive Plan	Filed herewith

10.6	Installment Note dated August 8, 2002 (re Edison Way property) in favor of BHP Minerals International, Inc.	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.
10.7	Trust Deed dated August 8, 2002 (re Edison Way property) with BHP Minerals International, Inc.	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.

10.8	Employment Agreement dated December 17, 2006 with Edward Dickinson	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on February 21, 2006. **
10.9	Employment Agreement dated December 17, 2006 with 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.**
10.10	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.**
10.11	Lease dated October 1, 2005 (Main 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. **
10.12	Lease dated August 1, 2006 (Indiana Office Additional Space) with Flagship Enterprise Center	Incorporated by reference to the Annual Report on Form 10-K filed with the SEC on March 13, 2007.**
10.13	Placement Agent Agreement dated December 13, 2006 with Cowen and Company, LLC	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on December 13, 2006. **
10.14	Purchase and Supply Agreement dated January 8, 2007 with Phoenix Motorcars, Inc.*	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on January 12, 2007. **
10.15	Department of Energy Grant Agreement dated September 9, 2006 with the U.S. Department of Energy	Incorporated by reference to the Annual Report on Form 10-K filed with the SEC on March 13, 2007.**
10.16	2007 Annual Executive Incentive Bonus Plan *	Incorporated by reference to the Annual Report on Form 10-K filed with the SEC on March 13, 2007. **
10.17	Subcontract dated March 6, 2007 with U.N.L.V.	Incorporated by reference to the Company's Quarterly Report on Form 10-Q filed with the SEC May 10, 2007. **
10.18	Contribution Agreement dated April 24, 2007 with the Sherwin-Williams Company and AlSher Titania*	Incorporated by reference to the Current Report on Form 8-K filed with the SEC on April 30, 2007. **

10.19	License Agreement dated April 24, 2007 with the Sherwin-Williams Company and AlSher Titania	Incorporated by reference to the Current Report on Form 8-K filed with the SEC on April 30, 2007. **

10.20	Flagship Business Accelerator Tenant Lease dated July 1, 2007 with the Flagship Enterprise Center, Inc.	Incorporated by reference to the Company's Quarterly Report on Form 10-Q filed with the SEC August 9, 2007. **
10.21	Amendment dated August 17, 2007 to Altair Executive Employment Agreement between the Company and Alan Gotcher	Incorporated by reference to the Current Report on Form 8-K filed with the SEC on August 17, 2007, File No. 001-12497
10.22	Amendment dated August 17, 2007 to Altair Executive Employment Agreement between the Company and Edward Dickinson	Incorporated by reference to the Current Report on Form 8-K filed with the SEC on August 17, 2007, File No. 001-12497
10.23	Amendment dated August 17, 2007 to Altair Executive Employment Agreement between the Company and Bruce Sabacky	Incorporated by reference to the Current Report on Form 8-K filed with the SEC on August 17, 2007, File No. 001-12497
10.24	Development Services Agreement executed on September 25, 2007 between the Company and Elanco Animal Health*	Incorporated by reference to the Current Report on Form 8-K filed with the SEC on September 27, 2007, File No. 001-12497
10.25	Employment Agreement dated November 13, 2007 with Terry Copeland	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on November 16, 2007.**
10.26	Registration Rights Agreement dated November 29, 2007 with Al Yousuf LLC	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on November 30, 2007.**
10.27	Letter agreement dated April 21, 2006 with JP Morgan Securities, Inc.	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on November 30, 2007.**
10.28	Letter agreement dated September 24, 2007 with JPMorgan Securities, Inc.	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on November 30, 2007.**
10.29	Employment Agreement dated December 7, 2007 with Bruce Sabacky	Incorporated by reference to the Company's Current Report on Form 8-K filed with the SEC on December

	7, 2007.**	
10.30	Subcontract dated January 29, 2008 with the Office of Naval Research	Filed herewith.
10.31	Service Agreement dated February 11, 2008 with Melpar BVBP	Filed herewith.
10.32	Mandate & Contractorship Agreement dated February 11, 2008 with Rik Dobbelaere	Filed herewith
10.33	Employment Agreement dated March 10, 2008 with Jeffrey A. McKinney.	Filed herewith
10.34	Employment Agreement dated March 10, 2008 with Stephen Balogh	Filed herewith

21	List of Subsidiaries	Incorporated by reference from Item 1 of this report.
23.1	Consent of Perry-Smith 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-15a 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.

Altair Nanotechnologies Inc.
and Subsidiaries

Consolidated Financial Statements as of December 31, 2007 and 2006 and for Each of the Three Years in the Period Ended December 31, 2007 and Reports of the Independent Registered Public Accounting Firm

ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES

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 consolidated balance sheets of Altair Nanotechnologies, Inc. and subsidiaries (the "Company") as of December 31, 2007 and 2006 and the related consolidated statements of operations, changes in stockholders' equity and comprehensive gain (loss) and cash flows for each of the three years in the period ended December 31, 2007. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with 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 audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2007 and 2006 and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2007, in conformity with U.S. generally accepted accounting principles.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Altair Nanotechnologies, Inc. and subsidiaries' internal control over financial reporting as of December 31, 2007, 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 11, 2008 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ Perry-Smith LLP

Sacramento, California
March 11, 2008

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 Altair Nanotechnologies, Inc. and subsidiaries' (the "Company") internal control over financial reporting as of December 31, 2007, 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, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
ON INTERNAL CONTROL OVER FINANCIAL REPORTING
(Continued)

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2007, 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, 2007, and the related consolidated statements of operations, changes in shareholders' equity and comprehensive gain (loss), and cash flows for the year then ended and our report dated March 11, 2008 expressed an unqualified opinion.

/s/ Perry-Smith LLP

Sacramento, California
March 11, 2008

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

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

	December 31, 2007	December 31, 2006
ASSETS		
Current Assets		
Cash and cash equivalents	$ 50,146,117	$ 12,679,254
Investment in available for sale securities	-	14,541,103
Accounts receivable, net	1,317,819	1,129,825
Accounts receivable from related party, net	-	495,000
Notes receivable from related party, current portion	1,638,510	-
Product inventories	-	169,666
Prepaid expenses and other current assets	799,387	413,390
Total current assets	53,901,833	29,428,238
Investment in Available for Sale Securities	4,564,814	1,306,420
Property, Plant and Equipment, net	14,548,837	11,229,406
Patents, net	720,433	805,248
Notes Receivable from related party	-	330,000
Other Assets	122,718	21,261
Total Assets	$ 73,858,635	$ 43,120,573
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Trade accounts payable	$ 7,814,037	$ 1,533,047
Accrued salaries and benefits	2,239,110	840,219
Accrued warranty	2,915,990	-
Accrued liabilities	759,664	526,596
Note payable, current portion	600,000	600,000
Total current liabilities	14,328,781	3,499,862
Note Payable, Long-Term Portion	1,200,000	1,800,000
Minority Interest in Subsidiary	1,369,283	
Total Liabilities	16,898,064	5,299,862
Commitments and Contingencies		

Stockholders' Equity		
Common stock, no par value, unlimited shares authorized; 84,068,377 and 69,079,270 shares issued and outstanding at December 31, 2007 and December 31, 2006	163,780,176	115,989,879
Additional paid in capital	5,489,604	2,002,220
Accumulated deficit	(111,823,809)	(80,353,188)
Accumulated other comprehensive (loss)/gain	(485,400)	181,800
Total Stockholders' Equity	56,960,571	37,820,711
Total Liabilities and Stockholders' Equity	$ 73,858,635	$ 43,120,573

See notes to the consolidated financial statements.

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

	Year Ended December 31,		
	2007	2006	2005
Revenues			
Product sales	$ 4,058,281	$ 961,380	$ 149,373
License fees	-	464,720	695,000
Commercial collaborations	2,909,650	1,420,151	825,723
Contracts and grants	2,140,552	1,477,709	1,136,439
Total revenues	9,108,483	4,323,960	2,806,535
Operating Expenses			
Cost of sales - product	5,163,987	1,034,431	69,489
Cost of sales - warranty and inventory reserves	6,843,343	-	-
Research and development	15,443,703	10,077,231	5,073,478
Sales and marketing	2,000,799	1,878,783	1,539,765
General and administrative	10,770,249	7,495,180	5,571,454
Depreciation and amortization	1,953,876	1,519,750	1,034,202
Total operating expenses	42,175,957	22,005,375	13,288,388
Loss from Operations	(33,067,474)	(17,681,415)	(10,481,853)
Other Income (Expense)			
Interest expense	(134,254)	(171,500)	(207,189)
Interest income	1,101,682	654,182	750,306
(Loss)/gain on foreign exchange	(1,292)	(1,550)	1,524
Total other income (expense), net	966,136	481,132	544,641
Loss from continuing operations before minority Interests' share	(32,101,338)	(17,200,283)	(9,937,212)
Less: Minority interests' share	630,717	-	-
Net Loss	$ (31,470,621)	$ (17,200,283)	$ (9,937,212)
Loss per common share - Basic and diluted	$ (0.45)	$ (0.29)	$ (0.17)
Weighted average shares - Basic and diluted	71,008,505	59,709,487	57,766,557

See notes to the consolidated financial statements.

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

	Common Stock		Additional Paid In	Accumulated	Deferred Compen-sation	Accumulated Other Compre-hensive Gain	
	Shares	Amount	Capital	Deficit	Expense	(Loss)	Total
BALANCE, JANUARY 1, 2005	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 $1,676,959	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
Comprehensive loss:							
Net loss	-	-	-	(17,200,283)	-	-	(17,200,283)
Other comprehensive income, net of taxes of $0	-	-	-	-	-	353,800	353,800
Comprehensive loss	-	-	-	-	-	-	(16,846,483)
Share-based compensation	-	281,514	$ 2,002,220	-	-	-	2,283,734
Exercise of stock options	189,449	347,653	-	-	-	-	347,653
Exercise of warrants	236,168	455,670					455,670
Issuance of restricted stock	77,875	-	-	-	-	-	-
Elimination of deferred compensation expense (upon adoption of new	-	(165,336)	-	-	165,336	-	-

accounting standard)							
Common stock issued, net of issuance costs of $2,056,336	9,259,259	22,943,664					22,943,664
BALANCE, DECEMBER 31, 2006	69,079,270	$ 115,989,879	$ 2,002,220	$ (80,353,188)	$ -	$ 181,800	$ 37,820,711

(continued)

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

	Common Stock		Additional Paid In	Accumulated	Deferred Compensation	Accumulated Other Comprehensive Gain	
	Shares	Amount	Capital	Deficit	Expense	(Loss)	Total
BALANCE, DECEMBER 31, 2006	69,079,270	$ 115,989,879	$ 2,002,220	$ (80,353,188)	$ -	$ 181,800	$ 37,820,711
Comprehensive loss:							
Net loss	-	-	-	(31,470,621)	-	-	(31,470,621)
Other comprehensive loss, net of taxes of $0	-	-	-	-	-	(667,200)	(667,200)
Comprehensive loss	-	-	-	-	-	-	(32,137,821)
Share-based compensation	-	397,767	3,487,384	-	-	-	3,885,151
Exercise of stock options	280,914	625,603	-	-	-	-	625,603
Exercise of warrants	2,314,189	6,248,314	-	-	-	-	6,248,314
Issuance of restricted stock	69,909	-	-	-	-	-	-
Common stock issued, net of issuance costs of $2,504,558	12,324,095	40,518,612					40,518,612
BALANCE, DECEMBER 31, 2007	84,068,377	$ 163,780,176	$ 5,489,604	$ (111,823,809)	$ -	$ (485,400)	$ 56,960,571

(concluded)

See notes to the consolidated financial statements.

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

	Year Ended December 31,		
	2007	2006	2005
Cash flows from operating activities:			
Net loss	$ (31,470,621)	$ (17,200,283)	$ (9,937,212)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	1,953,876	1,519,750	1,034,202
Minority interest in operations	(630,717)	-	-
Variable accounting on stock options	-	-	297,138
Securities received in payment of license fees	(13,580)	(529,620)	(595,000)
Amortization of discount on note payable	-	-	119,689
Share-based compensation	3,885,151	2,283,734	162,880
Shares issued for services	-	-	-
Loss on disposal of fixed assets	-	107,276	81,203
Accrued interest on notes receivable	(89,435)	-	-
Changes in operating assets and liabilities:			
Accounts receivable, net	(187,994)	(527,657)	(102,569)
Accounts receivable from related party, net	495,000	(495,000)	-
Notes receivable from related party, net	(1,219,075)	(330,000)	-
Product inventories	230,887	(169,666)	-
Prepaid expenses and other current assets	(385,997)	(159,323)	(71,472)
Other assets	(101,457)	49,939	(53,000)
Trade accounts payable	5,097,665	664,890	507,978
Accrued salaries and benefits	1,398,891	130,870	554,791
Accrued warranty	2,915,990	-	-
Accrued liabilities	233,048	217,307	168,104
Net cash used in operating activities	(17,888,368)	(14,437,783)	(7,833,268)
Cash flows from investing activities:			
Sale of available for sale securities	33,675,001	30,150,000	6,300,000
Purchase of available for sale securities	(23,045,912)	(23,901,446)	(27,089,656)
Purchase of property and equipment	(4,066,388)	(4,542,921)	(2,466,230)
Net cash provided by (used in) investing activities	6,562,701	1,705,633	(23,255,886)

(continued)

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

	Year Ended December 31,		
	2007	2006	2005
Cash flows from financing activities:			
Issuance of common shares for cash, net of issuance costs	$ 40,518,612	$ 22,943,663	$ 19,338,262
Proceeds from exercise of stock options	625,603	347,653	1,828,900
Proceeds from exercise of warrants	6,248,314	455,670	4,828,567
Payment of notes payable	(600,000)	(600,000)	-
Minority interest	2,000,000		
Net cash provided by financing activities	48,792,530	23,146,986	25,995,729
Net increase (decrease) in cash and cash equivalents	37,466,863	10,414,836	(5,093,425)
Cash and cash equivalents, beginning of period	12,679,254	2,264,418	7,357,843
Cash and cash equivalents, end of period	$ 50,146,117	$ 12,679,254	$ 2,264,418
Supplemental disclosures:			
Cash paid for interest	$ 105,000	$ 105,000	None
Cash paid for income taxes	None	None	None

Supplemental schedule of non-cash investing and financing activities:

For the year ended December 31, 2007:

- We received 1,000,000 shares of common stock valued at $106,518 in connection with the Phoenix Motorcar, Inc. January 2007 purchase agreement. The investment was recorded with an offset to deferred revenue.
- We issued 75,575 shares of restricted stock to employees and directors having a fair value of approximately $236,538 for which no cash will be received.
- We made property and equipment purchases of $1,183,235 which are included in trade accounts payable at December 31, 2007.
- We had an unrealized loss on available for sale securities of $667,200.

For the year ended December 31, 2006:

- We issued 77,875 shares of restricted stock to employees and directors having a fair value of approximately $281,000 for which no cash will be received.

- We made property and equipment purchases of $59,252 which are included in trade accounts payable at December 31, 2006.
- We had an unrealized gain on available for sale securities of $353,800.

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.
- We had an unrealized loss on available for sale securities of $172,000.

See notes to the consolidated financial statements.

ALTAIR NANOTECHNOLOGIES INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2007, 2006, AND 2005
(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 of America, 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 primary facilities are located in Reno, Nevada, of approximately 100,000 square feet, and in Anderson, Indiana, of approximately 30,000 square feet.

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"), and (4) Altairnano, Inc. ("ANI"), (collectively referred to as the "Company"), all of which are 100% owned and (5) AlSher Titania LLC, which is 70% owned by ANI. All of the subsidiaries are incorporated in the United States of America. Inter-company 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, 2007, 2006 and 2005, we incurred net losses of $31,470,621, $17,200,283, and $9,937,212, respectively. At December 31, 2007 and 2006, we had stockholders' equity of $56,960,571 and $37,820,711, 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 anticipated option and warrant exercises will be sufficient to enable us to continue as a going concern through 2009.

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.

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 that are highly liquid and have insignificant interest rate risk and maturities of 90 days or less are classified as cash and cash equivalents. Investments that do not meet the definition of cash equivalents are classified as held-to-maturity or available-for-sale.

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, 2007 and 2006, we had cash deposits of approximately $8.7 million and $3.0 million, 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 value 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. The allowance for doubtful accounts at December 31, 2006 was $62,185. As of December 31, 2007 and 2005, Management determined that all amounts due were fully collectible accordingly; no allowance was recorded. Actual losses related to collection of accounts receivable for the years ended December 31, 2007, 2006 and 2005 were insignificant.

Inventory – The Company values its inventories generally at the lower of cost (first-in, first-out method) or market. We employ a full absorption procedure using standard cost techniques. The standards are customarily reviewed and adjusted annually. Overhead rates are recorded to inventory based on normal capacity. Any idle facility costs or excessive spoilage are recorded as current period charges.

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.

F-11

Notes Receivable – Notes receivable consists of amounts due from customers for services and product sales, net of an allowance on notes receivable. We determine an allowance on notes receivable based on a review of the customer's financial status performed on a bi-annual basis. Notes receivable are also reviewed to determine if discounts are required to be booked for notes that are not issued at prevailing market rates. At December 31, 2007, no allowance or discounts were required to be recorded. Interest income is calculated and recognized according to the contractual terms of the notes receivable. In the event an allowance on notes receivable is required or the note is in default, the accrual of interest income will be discontinued. The accrual of interest income resumes if the customer's financial status indicates that collection is likely or the default is cured.

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.

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 — As of January 1, 2006, we adopted the provisions of Statement of Financial Accounting Standards ("SFAS") No. 123 (R), Accounting for Stock-Based Compensation. Under the provisions of SFAS 123 (R), we are required to measure the cost of services received in exchange for an award of equity instruments based on the grant-date fair value of the award. That cost is recognized over the period during which services are provided in exchange for the award, known as the requisite service period (usually the vesting period). Prior to January 1, 2006, the Company accounted for those plans under the recognition and measurement provisions of APB "Opinion" No. 25, Accounting for Stock Issued to Employees, and related Interpretations, as permitted by FASB Statement No 123, Accounting for Stock-Based Compensation.

We have made the transition to SFAS 123 (R) using the modified prospective method. Under the modified prospective method, SFAS 123 (R) is applied to new awards and to awards modified, repurchased, or cancelled after January 1, 2006. 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 January 1, 2006 are being recognized over the period that the remaining requisite services are rendered. The compensation cost relating to unvested awards at January 1, 2006 is based on the grant-date fair value of those awards. Under this method of implementation, no restatement of prior periods has been made.

As a result of adopting Statement 123 (R) on January 1, 2006, the Company's net loss for the year ended December 31, 2006 is $1,907,711 higher than if it had continued to account for share-based compensation under Opinion 25. Basic and diluted loss per share for the year ended December 31, 2006 would have been $(0.26), if the Company had not adopted Statement 123 (R), compared to reported basic and diluted earnings per share of $(0.29). We have not recorded income tax benefits related to equity-based compensation expense as deferred tax assets are fully offset by a valuation allowance. As a result, the implementation of SFAS 123 (R) did not impact the Statement of Cash Flows for the year ended December 31, 2006.

The following table illustrates the effect on net loss and loss per share if the Company had applied the fair value recognition provisions of Statement 123 to options granted under the company's stock option plans for the year ended December 31, 2005. For purposes of this pro forma disclosure, the value of the options is estimated using a Black-Scholes option-pricing model and amortized to expense over the options' vesting periods.

	December 31, 2005
Net loss, as reported	$ (9,937,212)
Deduct: stock-based employee compensation expense included in reported net loss, net of $0 related tax effects	353,198
(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)
Pro forma net loss	$ (11,086,745)
Loss per common share (basic and diluted):	
As reported	$ (0.17)
Pro forma	$ (0.19)

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. Our revenues are 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 upon delivery of the product, unless specific contractual terms dictate otherwise. 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. Payments received in advance relating to the future performance of services or delivery of products are deferred until the performance of the service is complete or the product is shipped. Upfront payments received in connection with certain rights granted in contractual arrangements are deferred and amortized over the related time period over which the benefits are received. Based on specific customer bill and hold agreements, revenue is recognized when the inventory is shipped to a third party storage warehouse, the inventory is segregated and marked as sold, the customer takes the full rights of ownership and title to the inventory upon shipment to the warehouse per the bill and hold agreement. When contract terms include multiple components that are considered separate units of accounting, the revenue is attributed to each component and revenue recognition may occur at different points in time for product shipment, installation, and service contracts based on substantial completion of the earnings process.

Accrued Warranty — We provide a limited warranty for battery packs and energy storage systems. A liability is recorded for estimated warranty obligations at the date products are sold. Since these are new products, the estimated cost of warranty coverage is based on cell and module life cycle testing and compared for reasonableness to warranty rates on competing battery products. As sufficient actual historical data is collected on the new product, the estimated cost of warranty coverage will be adjusted accordingly. The liability for estimated warranty obligations may also be adjusted based on specific warranty issues identified.

Minority Interest — In April 2007, the Company and The Sherwin-Williams Company ("Sherwin") entered into an agreement to form AlSher Titania LLC, a Delaware limited liability company ("AlSher"). AlSher is a joint venture combining certain technologies of the Company and Sherwin in order to develop and produce titanium dioxide pigment for use in paint and coatings and nano titanium dioxide materials for use in a variety of applications, including those related to removing contaminants from air and water. Pursuant to a Contribution Agreement dated April 24, 2007 among Altairnano, Sherwin, and AlSher, Altairnano contributed to AlSher an exclusive license to use Altairnano's technology (including its hydrochloride pigment process) for the production of titanium dioxide pigment and other titanium containing materials (other than battery or nanoelectrode materials) and certain pilot plants assets with a net book value of $3,110,000. Altairnano received no consideration for the license granted to AlSher other than its ownership interest in AlSher. Sherwin agreed to contribute to AlSher cash and a license agreement related to technology for the manufacture of titanium dioxide. As a condition to enter into the second phase of the joint venture, we agreed to complete the pigment pilot processing plant and related development activities by January 2008. The costs associated with this effort are expected to be partially reimbursed by AlSher. Altairnano contributes any work in process and fixed assets associated with completion of the pigment pilot processing plant to the AlSher joint venture. For each reporting period, AlSher is consolidated with the Company's subsidiaries because the Company has a controlling interest in AlSher and any inter-company transactions are eliminated (refer to Note 1 – Basis of Preparation of Consolidated Financial Statements). The minority shareholder's interest in the net assets and net income or loss of AlSher are reported as minority interest in subsidiary on the condensed consolidated balance sheet and as minority interest share in the condensed consolidated statement of operations, respectively

Overhead Allocation — Facilities overhead, which is comprised primarily of occupancy and related expenses, and fringe benefit expenses are initially recorded in general and administrative expenses and then allocated to research and development and product inventories based on relative 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 Notes 11 and 12, were included in the computation of diluted loss per share as they were anti-dilutive. Stock options and warrants to purchase a total of 5,307,913, 6,534,747, and 4,097,756 shares of common stock were excluded from the calculations of diluted loss per share for the years ended December 31, 2007, 2006 and 2005, respectively.

Accumulated Other Comprehensive Gain/(Loss) — Accumulated other comprehensive gain/(loss) consists entirely of unrealized gain/(loss) on the investment in available for sale securities. The components of comprehensive loss for the years ended December 31, 2007, 2006 and 2005 are as follows:

	Year Ended December 31,		
	2007	2006	2005
Net loss	$ (31,470,621)	$ (17,200,283)	$ (9,937,212)
Unrealized gain (loss) on investment in available for sale securities, net of taxes of $0	(667,200)	353,800	(172,000)
Comprehensive loss	$ (32,137,821)	$ (16,846,483)	$ (10,109,212)

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 accrue interest and penalties on underpayment of income taxes related to unrecognized tax benefits as a component of income tax expense in our consolidated statements of operations. 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.

Recent Accounting Pronouncements — In May 2007 the Financial Accounting Standards Board ("FASB") issued FASB Staff Position No. FIN48-1 "Definition of Settlement in FASB Interpretation No. 48". This staff position provides guidance on how an enterprise should determine whether a tax position is effectively settled for the purpose of recognizing previously unrecognized tax benefits. This guidance is effective upon the initial adoption of Interpretation 48, which we implemented as of January 1, 2007, as discussed below. The adoption of this staff position did not impact our cash flows or financial results.

In June 2006, the FASB issued FASB interpretation No. 48 (“FIN 48”), Accounting for Uncertainty in Income Taxes – an interpretation of FASB Statement No. 109. FIN 48 clarifies the accounting for uncertainty in income taxes recognized in a company’s financial statements in accordance with FASB Statement No. 109, Accounting for Income Taxes. FIN 48 also prescribes a recognition threshold and measurement standard for the financial statement recognition and measurement of an income tax position taken or expected to be taken in a tax return. In addition, FIN 48 provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. Only tax positions that meet the more-likely-than-not recognition threshold at the effective date may be recognized or continue to be recognized upon adoption.

We adopted the provisions of FIN 48 on January 1, 2007. Upon adoption we had no uncertain tax positions. We did not recognize any increase in the liability for unrecognized tax benefits as a result of the implementation of FIN 48. Our results of operations and cash flows were not impacted by the adoption of this interpretation.

We accrue interest and penalties on underpayment of income taxes related to unrecognized tax benefits as a component of income tax expense in our consolidated statements of operations. No amounts were recognized for interest and penalties upon adoption of FIN 48.

In April 2007, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards No. 159, The Fair Value Option for Financial Assets and Financial Liabilities (“SFAS 159”), which will become effective for the first fiscal year that begins after November 15, 2007. This statement permits entities to choose to measure many financial instruments and certain other items at fair value that are not currently required to be measured at fair value. Any unrealized gains and losses associated with the instruments or other balances for which the fair value option has been elected are reported in earnings at each subsequent reporting date. We did not elect to fair value any of our financial assets or liabilities.

In December 2006, the Financial Accounting Standards Board (“FASB”) released Statement of Financial Accounting Standards No. 157 – Fair Value Measurements. This statement defines fair value in generally accepted accounting principles (“GAAP”), and expands disclosures about fair value measurements. This standard applies under other accounting pronouncements that require or permit fair value measurements and is intended to increase consistency and comparability. This statement shall be effective for financial statements issued for fiscal years beginning after November 15, 2007. The adoption of FASB 157 is not expected to have a material impact on our financial position, results of operations or cash flows.

In June 2007, the FASB ratified EITF Issue No. 07-3, “Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities” (EITF 07-3). EITF 07-3 requires non-refundable advance payments for goods and services to be used in future research and development (R&D) activities to be recorded as assets and the payments to be expensed when the R&D activities are performed. EITF 07-3 applies prospectively for new contractual arrangements entered into beginning in the first quarter of fiscal year 2008. Prior to adoption, we recognized these non-refundable advance payments in excess of $5,000 as assets and expensed amounts less than $5,000 upon payment. The adoption of EITF 07-3 is not expected to have a significant impact on our consolidated financial statements.

In December 2007, the FASB issued SFAS No. 141 (revised 2007), "Business Combinations" (SFAS No. 141(R)). Under SFAS No. 141(R), an entity is required to recognize the assets acquired, liabilities assumed, contractual contingencies, and contingent consideration at their fair value on the acquisition date. It further requires that acquisition-related costs be recognized separately from the acquisition and expensed as incurred, restructuring costs generally be expensed in periods subsequent to the acquisition date, and changes in accounting for deferred tax asset valuation allowances and acquired income tax uncertainties after the measurement period impact income tax expense. In addition, acquired in-process research and development (IPR&D) is capitalized as an intangible asset and amortized over its estimated useful life. The adoption of SFAS No. 141(R) will change our accounting treatment for business combinations on a prospective basis beginning in the first quarter of fiscal year 2009.

In December 2007, the FASB issued SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements—an amendment of ARB No. 51" (SFAS No. 160). SFAS No. 160 changes the accounting and reporting for minority interests, which will be recharacterized as non-controlling interests and classified as a component of equity. SFAS No. 160 is effective for us on a prospective basis for business combinations with an acquisition date beginning in the first quarter of fiscal year 2009. The adoption of SFAS No. 160 will not significantly impact our consolidated financial statements.

In December 2007, the U.S. Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin 110 (SAB 110) to amend the SEC's views discussed in Staff Accounting Bulletin 107 (SAB 107) regarding the use of the simplified method in developing an estimate of expected life of share options in accordance with SFAS No. 123(R). SAB 110 is effective for us beginning in the first quarter of fiscal year 2008. Since we have never utilized the simplified method in developing an estimate of expected live of share options, the adoption of SAB 110 will not impact our consolidated financial statements.

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 (long-term) consists of auction rate corporate notes and investments in common stock as discussed below.

The auction rate corporate notes are long-term instruments with expiration dates through 2017. Through the third quarter of 2007, the interest was settled and the rate reset every 7 to 28 days and historically these investments were classified as short-term investments. However, in the fourth quarter of 2007 due to a change in the liquidity of the auction rate market, sell orders have exceeded bid orders in that market, and the interest relating to these investments was reset to a contractual rate of London Interbank Offering Rate plus 50 basis points, which is not a market rate. Based on this change in the liquidity, these investments were evaluated to determine if there was impairment at December 31, 2007. Our evaluation included consultation with our investment advisors, assessment of the strength of the financial institution paying the interest on these investments, and a probability-weighted discounted cash flow analysis. 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 impaired at December 31, 2007. Since the auction rate markets have not recovered and the outlook for recovery is not certain, the $3,912,014 book value of these investments was reclassified from short-term to long term investments as of December 31, 2007.

Investment in available for sale securities (long-term) consists of 240,000 shares of Spectrum Pharmaceuticals, Inc. ("Spectrum") common stock. Although the Spectrum shares are eligible for resale under Rule 144, the Company currently intends to hold them indefinitely. The shares were received as payment of licensing and product improvement fees in connection with a license agreement for RenaZorb. Upon receipt, the shares were recorded at their market value as measured by their closing price on the NASDAQ Capital Market, resulting in a recorded basis of $1,138,200. At December 31, 2007, their fair value was approximately $652,800 representing an unrealized holding loss of approximately $485,400. We evaluated this investment to determine if there is an other than temporary impairment at December 31, 2007. Our evaluation took into consideration published investment analysis, status of drug candidates in development, analysts recommendations, insider trading activity, 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, 2007.

4. PRODUCT INVENTORIES

Product Inventories consisted of the following at December 31, 2007 and 2006:

	2007	2006
Raw Materials	$ -	$ -
Work in Process	-	112,500
Finished Goods	-	
Demonstration Units	-	57,165
Total product inventories	$ -	$ 169,666

As products reach the commercialization stage, the related inventory is recorded. The costs associated with products undergoing research and development are expensed as incurred. As of December 31, 2006 inventory consisted primarily of battery modules in various stages of the manufacturing process.

Due to uncertainties regarding saleability of our inventory resulting from our decision to replace 47 of the Phoenix battery packs manufactured in 2007 due to a potential module configuration problem and the related proposal to utilize a new prototype battery for future production, all inventory on hand at December 31 2007 targeted for the future manufacture of Phoenix battery packs of $2,529,939 was charged to cost of sales in the consolidated statement of operations.

5. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consisted of the following as of December 31, 2007 and 2006:

	2007	2006
Machinery and equipment	$ 14,265,125	$ 13,198,410
Building and improvements	3,926,754	3,319,806
Furniture, office equipment & other	560,215	548,368
Total	18,752,094	17,066,584
Less accumulated depreciation	(4,203,257)	(5,837,178)
Total property and equipment	$ 14,548,837	$ 11,229,406

Depreciation expense for the years ended December 31, 2007, 2006, and 2005 totaled $1,869,061, $1,434,935, and $949,387, respectively.

6. PATENTS

Patents consisted of the following at December 31, 2007 and 2006:

	2007	2006
Patents and patent applications	$ 1,517,736	$ 1,517,736
Less accumulated amortization	(797,303)	(712,488)
Total patents and patent applications	$ 720,433	$ 805,248

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, for each of the years ended December 31, 2007, 2006 and 2005, respectively. For each of the next five years, amortization expense relating to intangibles is expected to be approximately $85,000 per year.

7. ACCOUNTS RECEIVABLE AND NOTES RECEIVABLE FROM RELATED PARTY

Related Party Accounts Receivable activity consisted of the following at December 31, 2007 and 2006:

	2007	2006
Beginning Balance - January	$ 495,000	$ -
Additions	1,851,894	495,000
Less cash collected	(2,346,894)	-
Ending Balance - December	$ -	$ 495,000

Based on battery pack orders fulfilled in the fourth quarter of 2006 for Phoenix Motorcars, Inc. (“Phoenix”), a total of $825,000 was recorded as revenue of which 60% - $495,000 was reflected in accounts receivable due in 30 days and 40% - $330,000 was recorded as a note receivable per terms of the 2006 orders (refer to notes receivable activity below).

Payment terms based on the January 2007 Purchase and Supply Agreement with Phoenix are as follows: 33% of the release order value is due upon placement of the order, 27% is due within 30 days of the receipt of the invoice by Phoenix, and 40% is due in the form of a note payable as described below. Through December 31, 2007, $2,346,894 of cash was received from Phoenix, of which $1,072,500 was prepaid against release orders. Of the prepaid balance, $1,005,737 was applied to accounts receivable and $66,763 is recorded in deferred revenue.

Related Party Notes Receivable activity consisted of the following at December 31, 2007 and 2006:

	2007	2006
Beginning Balance - January	$ 330,000	$ -
Additions	1,219,075	330,000
Plus interest earned	89,435	-
Ending Balance	1,638,510	300,000
Less current portion	1,638,510	-
Long term portion	$ -	$ 330,000

On December 31, 2006, we received a $330,000 unsecured note receivable from Phoenix Motorcars, Inc. in connection with the sale of battery packs, which bears interest at 10.5%. The principal and interest are due by December 30, 2008 with no pre-payment penalty. Notes receivable issued in 2007 carry interest at prime plus 1% as set forth in the Wall Street Journal and are due within 360 days of the delivery date based on the terms of the January 2007 Phoenix Motorcars, Inc. supply agreement. The due date of these notes is accelerated if Phoenix sells the Zero Emission credits associated with the sales of motorcars containing our battery packs.

8. ACCRUED WARRANTY

Accrued warranty consisted of the following at December 31, 2007 and 2006:

	2007	2006
Beginning Balance – January	$ -	$ -
Additions	2,915,990	-
Ending Balance – December	$ 2,915,990	$ -

We provided a limited warranty for battery products sold under the January 2007 purchase and supply agreement with Phoenix and the July 2007 AES development agreement. Additions of $59,088 and $2,856,902 were recorded in connection with the 2007 AES and Phoenix purchases, respectively. The warranty amount recorded relating to the Phoenix battery packs resulted from our decision to replace 47 of the Phoenix battery packs manufactured in 2007 due to a potential module configuration problem that could result in overheating.

9. ACCRUED LIABILITIES

Accrued liabilities consisted of the following at December 31, 2007 and 2006:

	2007	2006
Accrued interest	$ 115,500	$ 154,000
Accrued use tax	48,630	13,209
Accrued property tax	40,220	36,057
Accrued mineral lease payments	66,022	62,372
Accrued reclamation costs	11,166	14,410
Accrued straight line rent	61,998	42,143
Deferred revenue	413,270	194,391
Other	2,838	10,014
	$ 759,644	$ 526,596

10. NOTES PAYABLE

Notes payable consisted of the following at December 31, 2007 and 2006:

	2007	2006
Note payable to BHP Minerals International, Inc.	$ 1,800,000	$ 2,400,000
Less current portion	(600,000)	(600,000)
Long-term portion of notes payable	$ 1,200,000	$ 1,800,000

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. Payments are due in February of each year beginning in 2006. All payments have been made through February 8, 2008. Additional payments of $600,000 plus accrued interest are due annually on February 8, 2009 and 2010.

11. STOCK BASED COMPENSATION

At December 31, 2007, we have a stock incentive plan, administered by the Board of Directors, which provides for the granting of options and restricted shares to employees, officers, directors and other service providers of the Company. This plan is described in more detail below. The compensation cost that has been charged against income for this plan was $3,885,151 and $2,008,271 for the year ended 2007 and 2006, respectively. Of this amount, $802,863 and $433,763 was recognized in connection with restricted stock and options granted to non-employees for the year ended 2007 and 2006, respectively.

In 2005, we followed the measurement provisions of SFAS 123 for stock options issued to non-employees utilizing a Black-Scholes Merton option-pricing model. No stock options were granted to non-employees for the year ended December 31, 2005. The amount of expense related to restricted stock, included in the consolidated statements of operations under the provisions of APB Opinion No. 25, at December 31, 2005 was $106,819. During the year ended 2005, the variable accounting method to record expense associated with modifications of stock options was utilized in accordance with APB 25. Variable accounting requires that changes in the intrinsic value of such modifications be recorded as periodic income or expense. We recorded compensation expense of $353,198 related to modified stock options for the year ended December 31, 2005.

Stock Options

The total number of shares authorized to be granted under the 2005 stock plan was increased from 3,000,000 to an aggregate of 9,000,000 based on the proposal approved at the annual and special meeting of shareholders on May 30, 2007. Prior stock option plans, under which we may not make future grants, authorized a total of 6,600,000 shares, of which options for 5,745,500 were granted and options for 1,358,300 are outstanding and unexercised at December 31, 2007. 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. The estimated fair value of equity-based awards, less expected forfeitures, is amortized over the awards' vesting period utilizing the graded vesting method. Under this method, unvested amounts begin amortizing at the beginning of the month in which the options are granted.

In calculating compensation recorded related to stock option grants for the years ended December 31, 2007 and 2006, 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:

	2007	2006
Dividend yield	None	None
Expected volatility	85%	94%
Risk-free interest rate	4.60%	4.80%
Expected life (years)	4.85	4.61

The computation of expected volatility used in the Black-Scholes Merton option-pricing model is based on the historical volatility of our share price. The expected term is estimated based on a review of historical and future expectations of employee exercise behavior. No stock options were granted to non-employees for the year ended December 31, 2005.

A summary of option activity under our equity-based compensation plans as of December 31, 2007, and changes during the year then ended is presented below:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at January 1, 2007	3,278,222	$ 3.06	5.9	$ 1,366,105
Granted	1,924,882	2.85		
Exercised	(280,914)	2.25		
Forfeited/Expired	(755,983)	4.24		
Outstanding at December 31, 2007	4,166,207	$ 2.81	7.0	$ 6 ,024,389
Exercisable at December 31, 2007	2,597,487	$ 2.71	5.9	$ 4,030,311

Shares issued to non-employees reflected in the table above include 605,000 shares outstanding at January 1, 2007, 151,000 shares granted, and 110,000 shares exercised during the year ended December 31, 2007, resulting in 646,000 shares outstanding and 490,334 exercisable at December 31, 2007.

The weighted-average grant-date fair value of options granted during 2007 and 2006 was $2.05 and $2.29, respectively. The weighted-average grant-date fair value of options calculated in accordance with FAS 123 granted during 2005 was $2.11. The total intrinsic value of options exercised during the years ended December 31, 2007, 2006, and 2005 was $510,745, $314,010, and $3,103,587, respectively.

A summary of the status of non-vested shares at December 31, 2007 and changes during the year then ended, is presented below:

	Shares	Weighted Average Grant Date Fair Value
Non-vested shares at January 1, 2007	877,542	$ 2.97
Granted	1,924,882	2.85
Vested	(966,494)	2.95
Forfeited/Expired	(267,210)	2.26
Non-vested shares at December 31, 2007	1,568,720	$ 2.96

Non-vested shares relating to non-employees reflected in the table above include 97,500 shares outstanding at January 1, 2007, 151,000 shares granted and 92,834 shares exercised during the year ended December 31, 2007, resulting in 155,666 non-vested shares outstanding at December 31, 2007.

As of December 31, 2007, there was $1,142,280 of total unrecognized compensation cost related to non-vested options granted under the plans. That cost is expected to be recognized over a weighted average period of one year. The total fair value of options vested during the year ended December 31, 2007 was $1,969,070.

Cash received from warrant and stock option exercises for the years ended December 31, 2007, 2006, and 2005 was $6,873,917, $803,323, and $6,657,467, respectively.

Restricted Stock

Our stock incentive plan provides for the granting of other incentive awards in addition to stock options. During the year ended December 31, 2007, the Board of Directors approved grants of 75,575 shares of restricted stock under the plan with a weighted average fair value of $3.13 per share. Restricted shares have the same voting and dividend rights as the Company's unrestricted common shares, vest over a two-year period and are subject to the employee's continued service to the Company. Prior to the implementation of FAS 123 (R), we recorded the issuance of restricted stock with an offsetting entry to a contra-equity account and amortized the balance over the vesting period. Effective January 1, 2006, we changed our accounting method to comply with FAS 123 (R) and eliminated the contra-equity account. Compensation cost for restricted stock is now recognized in the financial statements on a pro rata basis over the vesting period.

A summary of the changes in restricted stock outstanding during the year ended December 31, 2007 is presented below:

	Shares	Weighted Average Grant Date Fair Value
Non-vested shares at January 1, 2007	120,207	$ 2.96
Granted	75,575	3.13
Vested	(102,259)	3.01
Forfeited/Expired	(5,666)	2.65
Non-vested shares at December 31, 2007	87,857	$ 3.07

Non-vested shares relating to non-employees reflected in the table above include 81,875 shares outstanding at January 1, 2007, 75,575 shares granted and 85,926 shares vested during the year ended December 31, 2007, resulting in 71,524 non-vested shares outstanding at December 31, 2007.

As of December 31, 2007, we had $269,559 of total unrecognized compensation expense, net of estimated forfeitures, related to restricted stock which will be recognized over the weighted average period of 1.8 years.

12. WARRANTS

Warrants — Warrant activity for the years ended December 31, 2007, 2006, and 2005 is summarized as follows:

	2007	2006	2005
	Weighted Average Exercise	Weighted Average Exercise	Weighted Average