

ITRONICS INC  
Form 10KSB  
April 15, 2002

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549  
FORM 10-KSB

(Mark One)

ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2001

TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934 (No Fee Required)

For the Transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 33-18582

ITRONICS INC.

(Name of small business issuer in its charter)

Texas

75-2198369

(State or other jurisdiction of  
incorporation or organization)

(I.R.S. Employer Identification Number)

6490 South McCarran Boulevard, Building C, Suite 23 Reno, Nevada

89509

(Address of Principal Executive Offices)

Zip Code

Issuer's telephone number: (775) 689-7696

Securities registered under Section 12(b) of the Exchange Act:

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Title of each class  
Name of each exchange on  
which registered

None

None

Securities registered under Section 12(g) of the Exchange Act:

None

(Title of class)

Check whether the issuer (1) filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the past 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 ( )

Check if disclosure of delinquent filers in response to Item 405 of Regulation S-B is not contained in this form, and no disclosure will be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-KSB or any amendment to this Form 10-KSB. (x)

State issuer's revenues for its most recent fiscal year: \$1,143,253.

The aggregate market value of the voting stock held by non-affiliates, computed by reference to the average of the bid and asked prices for such stock as of March 1, 2002, was \$23,583,938.

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As of March 1, 2002 there were issued and outstanding 81,897,871 shares of the Registrant's Common Stock.

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ITRONICS INC. AND SUBSIDIARIES

2001 FORM 10-KSB ANNUAL REPORT

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### ITEM 1.

#### DESCRIPTION OF BUSINESS.

Itronics Inc. (the Company), is a Texas corporation formed in 1987 and is now based in Reno, Nevada. Through its subsidiaries, the Company specializes in photobyproduct recycling and fertilizer manufacturing, precious metals recovery and refining, mineral economics, and mining technical services. The Company currently operates the following two business segments under separate wholly owned subsidiaries:

1. **Photobyproduct Fertilizer:** \* This segment, known as Itronics Metallurgical, Inc., operates a photobyproduct recycling plant and is developing new silver-gold refining technology. Revenues are generated by photobyproduct management services, sale of silver, and sale of Gold n Gro liquid fertilizer products. Construction of a commercial scale photobyproduct processing and fertilizer manufacturing plant was completed in February 2000.

\*In 1995 Itronics initiated a legal review of various segments of RCRA (Resource Recovery and Conservation Act)law that might pertain to Itronics and its customers. Itronics reached the conclusion that certain of its large scale customers are exempt from RCRA since the value of the customer's portion of the recovered silver exceeds the processing costs charged. Itronics also concluded that once the various photo solutions are 100% utilized in fertilizer or other products, then all Itronics customers will be exempt from RCRA requirements. Itronics believes it is the only organization in the U.S.with the ability to achieve this distinction. Consequently, when referring to the operations of other organizations, or to the general market, the term photowaste is used, and when referring to Itronics' operations the term photobyproduct is

used.

2. Mining Technical Services: This segment, known as Whitney & Whitney, Inc., provides mining and materials management, geology, engineering and economics consulting, and publishes specialized mineral economics and materials financial reports. It employs technical specialists with expertise in the areas of mining, geology, mining engineering, mineral economics, material processing, and technology development. Technical services have been provided to many of the leading U.S. and foreign mining companies, several public utilities with mineral interests, to various state agencies, the U.S. and foreign governments, and the United Nations and the World Bank.

The Company has three wholly owned subsidiaries, Whitney & Whitney, Inc. ("WWI"), Itronics Metallurgical, Inc. ("IMI"), and Itronics California, Inc. (ICI), a 92.5% owned partnership, Nevada Hydrometallurgical Project ("NHP"), and an 81.63% owned joint venture, American Hydromet. A brief description of each organization follows:

1. Itronics Metallurgical, Inc.:

IMI is a wholly owned subsidiary of the Company. IMI was established in 1981 to manage the metallurgical and materials processing operations being developed under WWI and American Hydromet research and development programs. IMI has been the main provider of management services to American Hydromet since 1986. IMI is now managing the photobyproduct fertilizer segment as discussed below. IMI is responsible for precious metal and other material product

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sales, and markets a five ounce silver bar bearing a unique hallmark, "Silver Nevada Miner".

2. Nevada Hydrometallurgical Project:

Nevada Hydrometallurgical Project ("NHP") is a research and development partnership formed in 1981 to fund research into potential commercial applications for certain hydrometallurgical process techniques developed by the U.S. Bureau of Mines Research Center in Reno, Nevada between 1970 and 1979. A number of potential commercial applications were defined by NHP, one of which is the American Hydromet silver/gold refining technique. In late 1985, NHP assigned its interest in the silver/gold refining technique to American Hydromet. NHP retained its proprietary interest in the other potential commercial applications for future developments. NHP continues as a financing and technology owning partnership. The Company owns 92.5% of NHP.

3. American Hydromet:

American Hydromet is a Nevada joint venture that was formed in 1985 to develop certain silver and gold refining/recovery technology and to create business based upon such technology. The photobyproduct fertilizer segment now being managed by IMI is owned by American Hydromet. The ownership interests in American Hydromet are: NHP for 76.5%, IMI for 1%, and American Gold & Silver Limited Partnership ("AG&S") for 22.5%. AG&S is a Nevada limited partnership, for which WWI serves as the general partner and owns a general and limited partnership interest totaling 10.907%. The Company owns a 32.99% limited partnership interest in AG&S. In total, the Company owns approximately 81.63% of American Hydromet.

4. Itronics California, Inc.:

Itronics California, Inc. (ICI) was acquired in March 1999 by Itronics Metallurgical, Inc. ICI, originally named PD West, Inc., was acquired for its phosphoric acid recycling technology. ICI had no business operations in 1999, but plans for the company are to utilize the phosphoric acid technology and it may eventually operate IMI's photobyproduct and fertilizer business in California.

5. Whitney & Whitney, Inc.:

WWI was incorporated in 1977 and is a wholly owned subsidiary of the Company. WWI is primarily a mineral consulting firm that provides technical services to the mining industry. The broad range of services provided by WWI includes mineral economics, geological studies, mining and cost engineering, and project management services. WWI has extensive experience with base metals, precious metals, such as gold and silver, specialty minerals, such as molybdenum and tungsten, coal, and industrial minerals. WWI has performed substantial services for small, medium, and large mining projects. WWI has performed services for many leading U.S. and foreign mining companies, various state agencies, for the United States and several foreign governments and the United Nations. WWI was under contract with the Country of Bolivia from 1986 through early 1992 to assist it in developing its mining industry.

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SUMMARY HISTORY OF OPERATIONS

Whitney & Whitney, Inc. was incorporated in Nevada in 1977 to provide a wide range of technical services to the mining industry. During the 1980's, WWI completed several multi-client fertilizer marketing studies. Also during this time period, WWI was contacted by state and local environmental officials concerning the problem of photographic wastes, laden with silver and other toxic heavy metals, being dumped in local sewer systems.

Over the years, the mining technical services business was highly cyclical, closely following the base and precious metals industries, and specifically, the price of copper, other base metals and gold. This condition pointed out the necessity of expanding the Company's business into new industries. When considering the fertilizer marketing studies previously performed, along with the growing national issue of sewer system contamination with toxic photowastes and silver toxicity to fish, it seemed to be a natural extension of WWI's existing expertise to expand into the photowaste recycling business. In 1987 the decision was made to move forward with research and development of a process to extract silver from photographic wastes and the necessary permits to establish an R&D facility under RCRA were obtained. In 1988 a patent and literature research project regarding the use of photowastes in fertilizer was begun. In 1989 experimentation with processed run of plant liquids as fertilizer was begun. It took until 1997 to develop and demonstrate a satisfactory product and to complete university testing to demonstrate its technical viability. A licensing and sales agreement was signed with a major fertilizer company in 1998, but it took another two years to obtain financing, complete permitting, install an operational plant and to demonstrate that the new technology would work on a commercial scale. By the first quarter of 2001 the Company was finally positioned to develop sales for 13 liquid fertilizer products with the objective of becoming profitable.

A description of some of the obstacles encountered and overcome over the intervening years, follows:

A. In 1988 the Company acquired WWI. The acquisition was structured to obtain approximately \$1.7 million in equity financing to support the photobyproduct fertilizer R&D project. Due to a number of factors, including a change in federal and state laws regarding trading in penny stocks, only a small portion of this funding was received. Consequently, the Company was undercapitalized from the time of acquisition of WWI in 1988.

B. In the initial stages of the R&D project, it was believed that: (1) the primary research on the integrated system for recycling photowaste into fertilizer would take through 1992 to complete, and (2) the R&D effort would be self-supported by increasing photowaste volume at the established service pricing. The basic research for demetallizing photowaste solutions and for refining the silver were substantially complete by the end of 1992. The research on the third segment of the integrated system, converting the demetallized solutions to fertilizer, took four

more years. Initially, it was believed that "run of plant" solution, with minimal major nutrient supplementation, would produce a quality fertilizer product. The early stages of research determined that the product was too dilute and would need to be concentrated by supplementation with the major nutrients, nitrogen, phosphate, and potassium, in order to produce the desired quality product. This factor, combined with the seasonal nature of field testing the products, resulted in the additional years required to perfect and field test the

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mix formulas in the quantities needed for large scale manufacturing.

Initially, it was believed that the R&D effort would be fully supported by photowaste service revenue. Two major factors prevented this. First, during 1992 and 1993, there was reduced enforcement of applicable regulations by various environmental agencies, and, second, during the same period, a competitor entered the Northern Nevada market by offering free service in exchange for the contained silver in photowaste solutions. To prevent loss of customers and to increase volume, the Company instituted three price reductions of approximately 40% each during the period of 1992 to 1994. The result is that 1997 volume was 159% greater than 1992 volume, but service revenue remained essentially the same throughout this time period, producing on-going losses.

During this same time period, the Company worked with environmental officials to obtain strengthened enforcement activity. Enforcement strengthened in 1996 and 1997, not only in Northern Nevada, but in California and most of the other 48 states in the U.S. In 1996 the Nevada regulatory authorities made changes in the Company's permit status that increased the number of used chemical solutions that the Company can process for utilization in fertilizer and other chemical concentrates. Tightening of regulatory enforcement also reduced competitive price pressures by making it more difficult for service companies with minimal compliance capability to continue to offer low cost services. The result was that beginning in 1996 selective increases in service pricing became feasible.

The second and probably the most important factor preventing the R&D project from being self-supporting is that in 1991, photowaste volume limitations were placed on the Company by state and local environmental agencies to prevent large quantities of photowaste being brought from out-of-state to be disposed at Nevada solid waste sites. Unlimited volumes of waste may be brought in as long as they are converted to commercial products and are sold into consumer markets. Photowaste volume reached the threshold of the limitations in 1994. The Company was unable to increase photowaste volume to offset the price reductions dictated by market conditions and the Company's fertilizer products were not yet completed, so the Company's losses continued.

In 1995, 1996, and 1997 the Company placed two of its fertilizer products in a fertilizer comparison program at University of California at Riverside. One product, Gold n Gro 20-1-8 (precursor to Gold n Gro 20-1-7) was rated number one at the end of two years. Since then the Company has developed 18 products and is marketing 9 of them. In 1999 the Company purchased a 3.5 acre site with 35,000 square foot of commercial buildings suited for conversion to a commercial fertilizer manufacturing plant. In 1999 and 2000 funding was acquired to make the conversion, the necessary permits were acquired, and the new plant was demonstrated to operate at the necessary commercial scale while completely meeting the environmental standards by the end of the third quarter of 2000. In 2001 for the first time the Company had an operational plant with the capacity to produce commercial quantities of high quality chelated liquid fertilizer products that are formulated using the demetallized photoliquids.

The Company is now focusing on expanding sales with the objective of achieving output needed for profitable operations. The Company's goal is to expand sales during 2002 to a profitable level. While the fertilizer market is large relative to the level of sales needed by the Company to be profitable, the rate of growth during the 2002 growing season will largely determine whether the Company will achieve sufficient sales volumes to be profitable in the

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following year. The Company's Gold n Gro fertilizers are producing very positive growth responses in the field and the Company has a strong fertilizer marketing partner to introduce the products into the western regional markets, so market penetration will be maximized within the constraints of a mature market.

A more detailed discussion of the business of the Company contained in Item 1 of this report, based on the Company's two business segments which were briefly described above, follows. The operating results of the two segments are discussed in Note 11 to the Consolidated Financial Statements beginning on page 57 of this report.

## PHOTOBYPRODUCT FERTILIZER

### 1. Research and Development

The photobyproduct fertilizer (the American Hydromet Project) segment of the Company has primarily been involved in research and development, with the objective of developing integrated technology that can be used to recycle photobyproduct materials, that recovers all of the silver and all other toxic metals from those materials, and which utilizes "heavy-metal-free" liquid photobyproducts in a chelated liquid multi-nutrient fertilizer product line for turf, ornamentals, and specialty agricultural applications. The status of development of the three integrated components is more fully described below:

The technology was developed in a semi-works plant in Reno. Development of the integrated technology represents a major technical innovation with global potential. There are three separate but integrated functions for handling the waste photoliquids. The first is the solution demetallization and conditioning process. This process is used to demetallize and recondition the metal-bearing photofixers and photodevelopers that are picked up from photousing businesses. This portion of the process is very efficient, recovering over 99.998% of all the contained toxic metals, and a very large percentage of contained iron. There are two products from this part of the operation: (1) a metal-bearing sludge, and (2) the conditioned, demetallized, liquids.

The metal-bearing sludge is dried and passed to the refining operation for separation of the contained silver. This operation is also very efficient. More than 99.5% of the silver contained in the sludge is recovered for sale. The refining was developed specifically to handle the sludges from the liquid demetallization and conditioning process. As such, the other heavy metals and iron contained in the sludge end up in a glass byproduct and are rendered completely inert. The Company has formulated the glass so that with minor additions of other compounds, it can be converted into usable products, such as wall and floor tile. The Company plans to pursue glass product development once the fertilizer is commercially operational.

The integrated process, known as the "American Hydromet Silver-Gold Refining Process" is a technological discovery that has the potential to significantly alter the proprietary commercial gold-silver refining industry world-wide. This proprietary technology is presently being further developed with continuing research and development.

The major innovation in the technology consists of using wet chemistry (hydrometallurgy) to quantitatively separate gold and silver in very pure form, and to entirely eliminate the need for electrolytic refining. The process is used to treat (1) electro-sludges and electro-chips derived from photobyproducts such as developer solutions and scrap film, and (2) zinc precipitates and electrolytic sludges from gold and silver mines such as those found in Nevada and other locations. Based upon the technology, American Hydromet currently has two business activities which are being commercially developed: (1) photobyproduct recycling, and (2) silver/gold refining. The photobyproduct recycling is a spin-off concept and additional spin-off businesses are expected as the American Hydromet process and other

technology associated with it are further developed.

The American Hydromet process is proprietary information. The U.S. Patent Office has issued a process patent on the gold/silver separation process (U.S. Patent No. 4,662,938, dated May 5, 1987). A patent on the same process was issued by South Africa in June, 1986 and patents were issued by Canada and Australia in September, 1989. The patents are owned by American Hydromet. Other portions of the American Hydromet process are believed to be patentable.

A priority objective of American Hydromet is to establish the complete capability for recovering all of the valuable components of photobyproducts for sale and reuse. As a result of the technology American Hydromet has and is developing, it has the potential of becoming a major recoverer and refiner of silver and at the same time it has the opportunity to become a major recycler of photobyproducts.

The reconditioned photoliquids are used as a component of turf and other fertilizers. The fertilizers are chelated liquid multi-nutrient NPK (Nitrogen Phosphorous-Potassium) products containing micronutrients and produce excellent results in application. Development of the fertilizer took more than 9 years and involved a number of stages of development. Important steps in the development of the fertilizer were: (1) patent and applications literature research to determine if similar materials were being used in fertilizer products, (2) initial plot testing, and chemical analysis of "run of plant liquid" to determine the response of turf and different plants to the non-supplemented liquid, (3) an extended period of mix testing and then large-scale field testing of the mixes to determine the suitability for use on turf, (4) development of manufacturing procedures for the chosen mix, and (5) large scale field testing by different types of users to determine acceptability and to identify problems prior to implementing a commercial manufacturing and marketing program. A problem inherent in fertilizer product development is the seasonal nature of the business. Each series of plot tests requires essentially one year because of the seasonal nature of plant growth. This lengthy product development cycle will continue to apply to new fertilizer products that are being developed.

After having made the commitment to this long-term development, Itronics believes it is the only company in the world that has successfully demonstrated the ability to manufacture an environmentally compatible fertilizer product line from liquid photobyproducts. As such, Itronics now has unique proprietary technology for completely recovering the silver and for converting the waste liquids into usable "heavy-metal-free" products, thereby achieving environmentally acceptable total recycle of the waste stream.

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In 1995 the Company began participating in a fertilizer product application comparison program sponsored by the University of California at Riverside. For the second consecutive year, in 1996, Gold'n Gro 20-1-7 was rated Number 1 in the program, which compared "top of the line" multinutrient nitrogen fertilizers produced by leading U.S. fertilizer manufacturers. Gold'n Gro 20-1-7 is registered in California and Nevada. In early 1997, Gold'n Gro 10-0-0 Iron, a fully chelated liquid iron supplement fertilizer, was registered in California and Nevada. In mid 1997, development of Gold'n Gro 10-0-1 Manganese was completed. The manganese, iron and zinc included in this product are in a citrate chelated form supplemented with EDTA chelate, which makes the micro-nutrients readily available to plants. In August 1997, the Company received a national trademark for the name "Gold n Gro".

In early 1998 development of several new Gold n Gro fertilizer products was completed. These include Gold n Gro 20-0-4 for use by nurseries and for vegetables, Gold n Gro 8-12-9 for use as a plant starter for vegetables and field crops, and Gold n Gro 6-3-9 for use by nurseries and for house plants, garden vegetables, grapes, and citrus. In early 1999 a decision was made to focus on just eight products in order to simplify and speed up the introduction into the marketplace. In 2000 this was expanded to 13 products.

In 2000, a small Gold n Gro fertilizer application test began on citrus trees. Initial results were a 40% increase in weight and juice content and a 12% increase in size in Valencia oranges compared to the oranges on check trees. Also,



lemon trees fertilized with Gold n Gro produced 54% more lemons than unfertilized trees. Both tests were done by applying the fertilizer by foliar spray. Testing is now underway on a larger scale, and is being conducted in conjunction with a major university.

A test application of Gold n Gro 4-2-10, a new product, on northern Nevada alfalfa fields has yielded dramatic results. On a northern Nevada farm, a 192 acre field went from a best ever on a third cut of 150 tons up to the new record of 220 tons, or a 33% increase over the second cut and a 48% increase over the best third cut to date. Also of significance, the alfalfa was tested and found to be of "supreme" quality, the highest grade. This is only one set of results from one set of fields under changing weather conditions, but it indicates that Gold n Gro is effective in increasing yield and quality of alfalfa. The Company is currently performing more tests to validate the cost-effectiveness of Gold n Gro fertilizer on alfalfa.

In 2001 the field trials in the alfalfa market were completed. Measured increases in production have ranged from 17 percent to 100 percent. The Gold n Gro fertilizer increases both output and quality on alfalfa that is already being fertilized by the grower, with greater increases on fields that are not fertilized or sparingly fertilized. Although this market is very large, the value of the product in relation to the increase in output is lower than on most of the other crops being evaluated. Because of mixed fertilizer usage habits by the various alfalfa farmers, and because of relatively low crop value, the Company is concentrating its sales efforts and on-going customer development efforts on the higher value crops that have been identified.

The grape nutrition study, initiated in 1999, was continued by the University of California at Davis, but the 2000 work was started late due to the illness of the professor. In addition, at the end of the growing season the grower picked the grapes so that U.C. Davis was not able to obtain measurements from the grapes. The grower's vintner had stated that the grape quality was excellent. The test will be continued for another year. Both Gold n Gro 10-0-0 Iron and Gold n

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Gro 10-0-1 Manganese were used with good results on grapes on the California coast during the 2000 growing season. One grower has been using Gold n Gro 10-0-0 Iron for three years with very acceptable results each year. This grower is a producer of very high quality wines.

During 2001, the Company's Gold n Gro fertilizer marketing effort was focused on the Company's two new sales representatives teaming with our distribution network to present product demonstrations to fertilizer customers and to assist in field trials on various crops. On-going field trials of Gold n Gro fertilizer products continue to show significant improvements in crop production and quality. The trials are providing agronomic data that is being used to develop Gold n Gro nutrition programs for the crops being tested. In 2001 field trials were conducted on alfalfa, cut flowers, herbs, watermelons, plums, lemons, dates, sweet corn, green peppers, tomatoes, and cotton.

The field trials are demonstrating that the Gold n Gro products provide both agronomic and economic benefits in the "specialty agricultural" markets. Specialty agriculture includes vegetables, cut flowers, herbs and spices, and fruits and nuts of all types. These crops are relatively high value compared to field grains such as corn, wheat, and soybeans. Alfalfa is typically considered as a "hay" or "forage" crop and is generally of low to intermediate value when compared to specialty agricultural crops, however, high nutrient content alfalfa for the dairy market often commands a significant price premium which puts it at the low end of specialty agricultural crop values.

In the second quarter a need for two additional micro-nutrient products was identified by our distributor network. Product development was initiated and in early August prototype formulations were delivered to our distributors for evaluation. This project produced one product that will be used in large volume in the California specialty agriculture market. Bulk sales started late in the third quarter. This new development represents an increasing commitment by the distribution network to speed up the introduction of Gold n Gro products into the California market. After completion of the new products, Itronics has developed 18 Gold n Gro products that are either being used or being evaluated for

use.

Field test results using Gold n Gro products have been published for Alfalfa, Fresh Plums, Oranges, Sweet Corn, and Watermelons. The field test results and crop value statistics are summarized in the following table. On a national basis, the Gold n Gro products appear to have the potential to add 10 s of millions of dollars in increased value and output for the indicated crops.

<u>Crop</u>	<u>Crop Increase</u>	<u>Return on Gold n Gro</u>		
		<u>Fertilizer Cost to Grower</u>	<u>Gross Value of the Crop Per Acre</u>	<u>Total USA Crop Acres</u>
Alfalfa	+33%	3 times	\$ 351	23,000,000
Fresh Plums	Larger, Earlier	15 times	\$2,500	140,000
Sweet Corn	+11.5%	30 times	\$1,788	222,800
Oranges	+40%	3 times	\$2,300	842,000
Watermelon	+10.4%	160 times	\$1,670	184,600

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A 3 year field trial on valencia orange trees being carried out with oversight from a major university in southern California is continuing and it appears that the 35 year old trees are responding positively to the fertilization.

During 2001 the Company continued to be offered the opportunity to explore the feasibility of recycling other non-photographic materials into fertilizer. Four waste streams are currently being considered for future recycling and one of these is a high silver content waste stream.

The Company has concluded that certain acid waste streams generated by aerospace and electronics manufacturers may be able to be converted to a form that will fit "Beneficial Use" recycling into fertilizer in association with the processed photochemical materials. Discussions are underway with an aerospace manufacturer that may lead to development of a prototype program that will demonstrate the "Beneficial Use" concept. The Company's distillation technology will be a component of the program.

The Company has identified potential applications for the specially conditioned liquids in the mining industry, and has begun to seek joint venture partners to invest in the needed research and development. This project is more fully discussed on page 23 of this report.

## 2. Operations

The Company now operates a commercial scale plant to receive photobyproduct materials, recover the silver and other metals, and convert the demetallized solutions to a line of liquid fertilizer products. Revenues are generated by photobyproduct management services, sale of silver, and sale of

Gold n Gro liquid fertilizer products. A critical component of this system is to match, within a reasonable range, the incoming volume of photobyproduct solutions with the volume of utilization of those solutions in fertilizer or other manufactured products. At the outset of the technology development program, regulatory constraints were imposed to limit the amount of photobyproduct materials that the Company could handle until a commercial fertilizer was perfected, or some other commercial use for the material was developed. Now that testing of the basic products is complete, and a new recycling facility is in operation, the Company is actively seeking new photobyproduct solution business.

Photobyproduct management services is operating as a regional business with northern Nevada as the center of its activities. The Company is serving more than 200 customers in the northern Nevada market and believes that it has the dominant position in this market. A satellite service operation has been established in the San Francisco Bay Area. Now that a line of commercial fertilizer products has been perfected, and the Company's new recycling plant is operational, the Company is expanding its San Francisco Bay Area and Northern California service operations.

The San Francisco Bay Area is large, but there are at least three strong competitors in the market. Market conditions have changed over the past several years and pricing has adjusted upwards from the lows seen in late 1994. The Company is now able to compete effectively based upon pricing and service quality.

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In late 1995, the Company sold a prototype installation of low temperature vacuum distillation equipment to a large manufacturing company in northern Nevada. This equipment separates the water from the photochemistry without destroying the basic chemical components, and produces a high value concentrate. The separated water is further purified and is usable in manufacturing operations. Nearly 100% water reuse is achieved.

The distillation equipment began operations in March of 1996, and produces concentrate to meet Company standards and produces pure water for re-use in manufacturing. This same manufacturing company bought a second distillation unit in early 1997.

The distillation concentrate has a high silver content and is dominantly composed of ammonium thiosulfate (ATS) and EDTA chelates, the basic chemicals used in photo fixer solutions. Itronics' fertilizer blending technology is designed to utilize the concentrate in fertilizer.

Itronics' plan is to seek companies that handle sufficient volumes of photographic liquids to justify purchase of the distillation equipment. The ATS concentrate can be shipped in interstate commerce as a commercial product, resulting in the opportunity to serve the national market. Successful introduction of this technology will increase the value per gallon of material handled by a factor of five to ten, and will increase the amount of silver handled per gallon of photoliquids received. As the supply of the ATS concentrate grows, so too will the silver refining operation. The transition from low silver content liquids to high silver content liquids will increase the importance of the silver refining operations and silver sales.

Achieving profitability for the photobyproduct fertilizer segment required expansion of the plant from the semi-works scale facility in Reno to a commercial scale. In January 1998 IMI entered into a lease/option agreement to acquire a 35,000 square foot manufacturing facility on three plus acres of land in the Reno-Stead, Nevada area.

The Reno/Stead manufacturing plant purchase was completed on March 31, 1999. Originally, it was planned to move the pilot plant equipment to the new facility in much the same configuration as the existing plant, with some

additional equipment for increased production capacity. However, market acceptance of the Gold n Gro fertilizer products and regulatory changes in California and Oregon that are tightening liquid photochemical waste disposal requirements produced the demand for significantly expanded production capacity. Consequently, the basic concept for the plant configuration was redesigned and significantly expanded.

The building and fire codes and federal hazardous material regulations all changed in 1999, delaying the permitting process while the regulatory agencies developed and implemented guidelines for the new rules.

In late October 1999, the final necessary building permits were received and regulatory approval was obtained to start up operations in the photochemical receiving and processing and silver refining areas. Construction of piping systems and set-up of the tanks and related equipment was completed in February 2000 and the City of Reno issued the certificate of occupancy at that time. A "shake-out" period was begun in which small batches of photobyproducts were processed and small batches of fertilizer were manufactured. The purpose of this period was to test all of the equipment to ensure it meets operating specifications and to train the appropriate personnel in plant operation. Minimal problems were encountered and

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the "shake-out" period was completed at the end of the first quarter of 2000.

By the end of September 2000 the new facility had demonstrated the ability to "demetallize" the received photo liquids to required EPA levels, thereby proving the technical viability of the new technology on a commercial scale.

The photobyproduct management services are typically performed pursuant to an exclusive one year service agreement. The annual contract and service fee provisions are necessary for the Company to recover its substantial investment in technology, and to protect it under the regulatory and business framework in which it must operate.

The photobyproducts are transported to the Company's recycling facility at Reno/Stead, Nevada. All customer materials are logged and recorded. All liquid photobyproducts are tested for silver content and for contaminants, such as chrome. High chrome content wastes are specifically rejected. It has been the experience of the Company that new customers, with limited knowledge of the rules and procedures, may submit materials containing foreign substances. The Company achieves high contaminant control standards by working proactively with its regular customers.

Once testing is completed, the photographic solutions are processed.

The photobyproducts presently being handled by the Company are:

Ammonium Thiosulfate Concentrate

Aqueous Ammonia

Developer

Electro-flake

Film

Fixer

Sodium meta-bisulfite concentrate

Stabilizer

Steel Wool/Metallic Ion Exchange Cartridges

Scrap paper that accompanies film

The Company is evaluating the potential for use of acetic acid in fertilizer. If this proves to be technically feasible, then the Company will begin to accept used acetic acid solutions as well.

In 2001, the photobyproduct fertilizer segment produced 58% of the Company's revenue. Over the next several years, this segment is expected to grow significantly in relation to the mining technical services segment. Consequently a major shift in the Company's operations toward the photobyproduct fertilizer segment is being implemented.

### 3. Markets and Competition

#### I. Photobyproduct Recycling and Silver Refining

There are estimated to be more than 1,500 generators of photographic hazardous waste in the State of Nevada and more than 500,000 throughout the United States. This includes printed

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circuit board manufacturers, photo off- set printers, photographic developers, lithographers, photographers, micro-filming (banks, companies, etc.) and x-ray users (dentists, doctors, hospitals, podiatrists, orthopedic surgeons, veterinarians, radiologists and industrial x-ray users). The Company estimates the total market for recycling this category of waste to be in the range of \$400 to \$500 million.

Nationally, more than 80 million ounces of silver are consumed in photomaterials annually. Approximately 30% of this is lost through disposal in sanitary sewers nationwide. Itronics' technology recovers 99.975% of the silver contained in these waste solutions. Thus, as the photobyproduct re-cycling operation expands, silver refining will become more significant to the Company. The Silver Institute indicates that silver usage in photography is increasing, and will continue to do so over the next several years.

The photowaste management industry is not systematically organized, but is fragmented with many small operators, or large waste haulers. The small operators typically specialize in one or more types of photowaste, but usually prefer film. The large waste haulers pick up all categories of waste, and may also handle film and paper. Photowaste management as a systematic business is not yet organized by any large company in the United States. This is a niche that the Company seeks to fill.

Silver recovery from black and white and x-ray chemistry is an established industry. Silver recovery is typically accomplished at a user's site by specialized recovery equipment. The equipment is normally installed and maintained by way of a service agreement with the vendor, or vendor representative. The service of silver recovery is particularly entrenched in the medical field where the service business supplies a silver recovery unit and also picks up film waste for sale to a waste film processor. Black and white and x-ray chemistry is typically monometallic with silver being the main EP-Toxic metal. The recovery units are only about 90% efficient in routine operation, so significant amounts of the silver are discharged into sanitary sewer systems. This compares to the Company's technology which routinely recovers 99.975% of the silver content.

Metal recovery from color and paper processor chemistry is not as well established, although the silver recovery units used in the medical sector are also used by color processors. A characteristic of color chemistry and paper processing chemistry is that it is polymetallic, and contains from four to seven of the metals listed as EP-Toxic. There are stringent EPA discharge limits for these metals. This sector has the normal competitive factors found in the medical sector, except that most of the companies in the business are only focusing their recovery efforts on silver, while ignoring the other three to six toxic metals commonly known to occur in this chemistry.

Waste film processing is an established competitive industry in the United States. It is highly segmented and characterized by many small processors, most of which are located in the eastern part of the United States. The number of processors in the West Coast is limited. There are believed to be three companies of consequence, one in California, one in Washington State and one in Utah. Some waste film is exported to Korea, Japan and China. Eastman Kodak is now the largest and dominant waste film processor in the eastern U.S. and may be the largest silver recycler in the United States. Kodak purchases scrap film from its large film processing customers.

The Company is aware of digital imaging and its potential impact on usage of conventional

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photography. The potential impact is different for each of the major segments; medical, color photography, and printing/microfiche. Digital imaging has made significant inroads into printing/microfiche processing with an almost 85% reduction in volume of photographic liquids over the past ten years. After several years of experience with digital imaging, it has been observed that after three or four years, there is significant degradation of the quality of digital images, requiring copying onto new disks, which is time consuming and costly. Consequently, microfiche is making a comeback. There has been little visible impact on color photography, although the new digital cameras are getting wider usage. In 2001 it became clear that contrary to popular belief, digital photography is creating a new source of photowastes from internet companies that combine digital imaging services with the ability to print high quality photographs for their customers. The Company had two such customers during 2001, and these customers photobyproduct volume has been increasing dramatically on a monthly basis. Digital methods are being adopted in the medical industry. The medical sector is relatively high growth with the aging U.S. population and therefore digital imaging has had the effect of slowing the growth of waste photo liquids being generated.

A larger impact on photo waste generation has been the pressure for companies to reduce the amount of waste generated at the operating sites. In photography, water was used in copious quantities for film rinsing and large quantities of low chemical content waste liquids were generated. With the tightening of regulation of discharge of contaminated waters to sanitary sewers, the equipment manufacturers have focused on reducing water usage. This attention to reduction of waste water has also contributed to a reduction in the quantities of waste liquids being generated. It is expected that efficiency of use and associated waste reduction will continue, driven by increasing waste disposal costs.

In April 1998 IMI entered into an exclusive sales agreement with Calfran International of Springfield, Massachusetts. After the contract with Calfran was signed, other companies developed acceptable distillation machines, so the Calfran contract was cancelled at year end 2000. Sale of distillers is an integral part of expanding the supply of photochemicals needed to support expanding fertilizer sales.

The distillation equipment now being sold by the Company will contribute to the reduction of water usage in the photographic industry. When the distillation equipment is used, all the recovered water can be re-used. The chemical product is purchased by Itronics, and so photographic waste generation at the user site is completely eliminated. This technology represents an end point for the elimination of water waste in the photographic industry, and is expected to gain wider acceptance as the industry recognizes the benefits inherent in the technology when combined with Itronics service capabilities.

The Company believes that it has the following competitive advantages:

- \* Leading position in developing "total" photobyproduct recycling technology and waste management procedures.
- \* Proprietary solution conditioning process and equipment with the possibility of patent rights and licensing agreements.
- \* Patented low cost silver refining process using wet chemistry (hydrometallurgy) to quantitatively separate silver from photobyproduct materials.

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- \* Proprietary "heavy-metal-free" liquid products that eliminate the need to dispose of treated photographic liquid waste in sewage treatment systems, or solid waste sites(dumps).
- \* Systematic pick up services for photobyproduct generators.
- \* Quantitative material control procedures meeting all EPA reporting guidelines.
- \* Regulated as a precious metals recycler and a hazardous waste transporter, therefore, low cost and proven track record and commitment.
- \* Skilled in converting technical concepts to commercial products and production.
- \* Line of proprietary chelated liquid fertilizer products that are formulated using the "heavy-metal-free" photoliquids.

Environmental restrictions on disposal of chemicals to sewer plants are continuing to tighten throughout the United States so that now the rate of growth for the photobyproduct recycling business is dependent upon the rate and vigor of fertilizer sales growth.

## II. Photobyproduct Fertilizer

The urbanization of the United States has led to the development of an "Urban Fertilizer Market". The total fertilizer market consists of the "Agricultural Market" and the "Urban Market". The Urban Market accounts for at least \$9 billion in annual sales in the United States. The "Specialty Ag" segment of the Agricultural Market is a \$1 billion segment making the total a \$10 billion market.

The Urban market is divided into the "Home Lawn and Garden" segment and the "Professional Care" segment. Neither of these markets is statistically well defined, since both are relatively new as large commercial markets, both are highly fragmented with many small regional suppliers and are growing rapidly. One well known operator in the Home Lawn and Garden and the Professional Care segments is Scotts/Stern's Miracle-Gro. Several other large companies are also active in this market.

Itronics photobyproduct fertilizer Gold'n Gro 20-1-7 was developed for the Urban market as a "turf" product. Its principle customers are home owners, professional lawn service companies, golf courses, turf farms, and large municipal and commercial facilities. Since early 1997, IMI has completed development of an additional 17 fertilizer products. These products cover most of the applications being targeted in the Turf, Ornamental and Professional Grower ("Specialty Ag") markets in the western U.S. In early 1999 the decision was made to focus marketing efforts on eight of these products. In 2000 this was expanded to 13 products. The number of products expanded to 18 in 2001. In 2002 a decision was made to concentrate sales efforts on 9 of these products.

Itronics estimates that more than 100 million gallons of photowaste liquids are generated annually in the United States. The ratio for converting one gallon of photobyproduct to Gold'n Gro 20-1-7 fertilizer is approximately 1 gallon of photobyproduct to 4 gallons of fertilizer. This means that there is enough supply of photobyproduct to support the manufacture of 400 million gallons of photobyproduct fertilizer annually, equivalent to approximately two million tons.

Itronics estimates that on a commercial scale, the combined revenue of photobyproduct services,

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silver and fertilizer will exceed \$10.00 per gallon of photobyproducts received. Consequently, the potential market for these products and services exceeds \$1 billion.

Initially, small volume sales were made intermittently to two turf farm operations, to a regional lawn service company, and to two golf courses in northern Nevada. Making these sales and working with the customers allowed the Company to learn the specific requirements for each market. It also made it possible to assess the feasibility of direct marketing the product as compared to selling to distribution companies who would do the direct marketing. Selling to fertilizer distribution companies is a more efficient method of achieving large scale sales in a reasonable period of time.

In March 1998 IMI signed a definitive manufacturing and distribution agreement with WFS. The five year agreement, with optional five year renewal periods, grants WFS an exclusive license and right to manufacture and market IMI's Gold'n Gro line of fertilizer products in the Turf & Ornamental, and Specialty Ag markets in the states of Arizona, California, Hawaii, Idaho, Oregon and Washington. IMI will manufacture its base products for shipment to various WFS manufacturing and distribution facilities in those six states. In April 1998 IMI began the introduction of the Gold'n Gro line of fertilizer products to WFS store managers and sales staff. WFS has 45 stores in California, with one to three sales people each.

WFS has a manufacturing plant in south central California. The other activity related to implementing the manufacturing and sales agreement with WFS was establishing the logistics for movement of materials between Reno and the WFS manufacturing plant. The logistics and warehousing locations for delivery of manufactured goods from both the IMI Reno manufacturing plant and the WFS manufacturing plant are also being established. The WFS Alpaugh plant is now set up to manufacture the 15 multi-nutrient products being offered. The two other micro-nutrient products, Gold'n Gro 10-0-0 Iron and Gold'n Gro 10-0-1 Manganese, and a new product, Gold'n Gro 9-0-1 zinc, are manufactured in Reno.

The fertilizer industry is in a contraction which appears to be ending. The specialty agriculture markets which had held up well declined rapidly in 2001. A significant contributing factor is believed to be the more than 30 percent appreciation of the dollar against most other currencies which has occurred since the first of 2001. Currency valuations are now grossly distorted when compared to intrinsic values of goods being traded. For example, oranges are being shipped into the western United States from Australia and in 2001 were being sold in California stores at prices lower than locally grown oranges. The prices are lower than the local growers' cost of production. Based on transportation distances alone, this should not be possible. This reversal in the distribution of agricultural food products is affecting all segments of the California specialty agriculture markets. California accounts for more than 51 percent of the specialty agriculture for the United States and so it can be assumed that these factors are affecting the rest of the United States as well.

The California markets are also being impacted by greatly increased energy costs which are now being passed through to the consumers. While this impact is significant, it is much smaller than the impact of inequitable currency valuations. Only Congress and the Federal Government through the U.S. Treasury Department can address the issue of inequitable currency valuations. It is clear that the problems facing basic U.S. industry will not be remedied until



this issue is properly addressed and corrections made.

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The Company is working with its distributors on an on-going basis to identify and implement sales development programs that will increase the rate of market penetration with the Gold'n Gro products. A much greater understanding of the details of the market has been obtained directly from this process. This improved understanding is strengthening the working relationship that has been developed with our distributors and is producing continuing increases in sales in a market that is in a state of rapid decline.

The Company is developing branded products that have the Gold'n Gro trademark. The Company is implementing a plan for consumer sales through its web page and retail outlets. Significant capital, in the form of advertising budgets and the ability to carry large inventories of finished goods, is required to achieve meaningful retail sales. However, the Company is presently providing photobyproduct recycling services to several large chain stores. Because of this, the Company believes it is positioned well to be able to sell branded fertilizer products through the chain store outlets. Implementing and growing the retail sales program is expected to take several years.

#### 4. Seasonality and Working Capital

In analyzing the market and industry competitors, it is apparent that two factors significantly impact the Company's ability to penetrate these markets in a meaningful way. First, the seasonal aspect of photobyproduct and fertilizer sales, which directly results in the second factor, the need for a much higher level of working capital when compared to other industries.

Based on experience, the Company's photobyproduct hauling volume starts each year at comparatively low levels in the first quarter, steadily increases during the second quarter, peaking in June or July, declining during the third quarter, and reaching levels similar to that of the first quarter by year end. Consequently, revenues from both photobyproduct services and silver sales are significantly reduced during six months of each year. The cause of this cyclical pattern is the tourism based economy in Northern Nevada, which has a comparable seasonal pattern. The volume of visitors directly affects photobyproduct volume from consumer photoprocessing companies. To mitigate the seasonal effect on this segment of operations, the Company is focusing its marketing efforts on larger volume customers in the medical, military, printing and industrial photo fields. The seasonality factor for photobyproduct and silver revenues should also be reduced as the Company expands into California and other regional markets that are not as heavily dependent on tourism.

The Company expects fertilizer sales to have a seasonal component, with the primary sales season running from April through October each year, with tapering off beginning in September. In addition to the general seasonal nature of sales caused by normal weather patterns, unusual weather can further affect fertilizer sales. For example, unusually cold or wet spring seasons may delay the growth cycle of various crops for which the Company's fertilizer products are utilized. To overcome weather related effects on fertilizer sales, the Company is evaluating opportunities for markets in the southern areas of the United States where growing seasons are longer and, in some cases, year round.

Due to the seasonal nature of both photobyproduct services and fertilizer sales, the Company must increase its net working capital to a level higher than that of non-seasonal industries. For example, some of the Company's competitors have working capital equal to their annual

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sales. Consequently, ongoing debt and equity funding will be required for the Company to grow, even after a profitable level of operations is achieved.

## 5. Environment and Regulation

### I. Liability

All chemistry has a "cradle to grave" regulatory life span. This term means under Federal law, the prime generator has the ultimate liability for all generated waste as long as it exists. Conventional services, through storing and hauling, relocate the waste to a legal landfill in the West. Liability then remains for the cost of cleanup if the landfill has to be reclaimed or the contamination of groundwater develops.

However, once the spent chemistry reaches the Company's facility and has been processed, the generator's hazardous waste liability has been removed. Using the Company's process, virtually all metals, including most of the iron, are removed. The end result leaves the Company with a non-hazardous "heavy-metal-free" solution which is legal for discharge into the environment. As discussed above, the demetallized liquids are being used in commercial fertilizer products, entirely safe for the environment.

### II. Increased Regulation

While in general the Company's business has benefited substantially from increased governmental regulation of hazardous disposal by private industry, the waste management and recycling industry itself has become subject to extensive, costly and evolving regulation by federal, state and local authorities. The Company makes a continuing effort to anticipate regulatory, political and legal developments that might affect its operations, but may not always be able to do so. The Company cannot predict the extent to which any legislation or regulation may affect future operations.

In particular, the regulatory process requires firms in the Company's industry to obtain and retain numerous governmental permits to conduct various aspects of their operations, any of which permits may be subject to revocation, modification or denial. The Company is not in a position at the present time to assess the extent of the impact of such potential changes in governmental policies and attitudes on the permitting process.

### III. Permits and Inspections

To the best of the Company's knowledge, it has obtained permits from governmental agencies having jurisdiction over it, such as the EPA, Nevada Department of Environmental Protection, Washoe County Health Department and the City of Reno, Nevada. The Company is not required to obtain federal permits, but is required to have, and has obtained, local permits for its photobyproduct recycling facility under the provisions of the Federal EPA. Similar permits will be required of all facilities that the Company may construct. The Company's recycling facility is subject to frequent inspections and to regulations (including certain requirements pursuant to federal statutes) which may govern operating procedures for land, water and air pollution, among other matters. In particular, the Company's operations are subject to the Safe Drinking Water Act, TSCA (Toxic Substances Control Act-pursuant to which the EPA has promulgated regulations concerning the disposal of PCBs), the Clean Water Act (which regulates the

discharge of pollutants into surface waters and sewers by municipal, industrial and other sources) and the Clean Air Act (which regulates emissions into the air of certain potentially harmful substances). Employee safety and health standards under the Occupational Safety and Health Act are also applicable to employees of the Company.

#### IV. Regulatory Direction

For several years the Company has been studying the various regulatory requirements under RCRA and has been working with state and local environmental officials regarding the extent to which hazardous waste regulations apply to the Company's operations. Through this process, the Company reached the conclusion that due to use of photobyproducts as a beneficial ingredient in its fertilizer products, the photobyproducts are not "hazardous waste" as defined in the regulations, and therefore, beneficial materials that are otherwise regulated as hazardous waste, are exempt from most of such regulations. In early 1996 the Company received concurrence from State of Nevada environmental officials that the Company's photobyproduct fertilizer process meets the existing RCRA requirements for exemption from all environmental regulation with the exception that certain presently conducted lab analyses of the photobyproducts will continue to be required. Certain of the Company's large scale customers presently meet the exemption requirements. Present levels of fertilizer sales utilize all the photobyproducts received. Once sales of all the photobyproduct materials are well established in the fertilizer or other commercial products, all the Company's Nevada customers will be exempt from the regulations, including hazardous material transport/manifest rules. The Company believes that this exemption applies nationwide. Therefore, the Company intends to pursue similar concurrence from environmental officials in all applicable states, so that all its customers will be recognized as exempt from the RCRA regulations.

Environmental regulation of photowaste generators has strengthened over the last several years, and that trend is expected to continue. In the past year, heavy metal contamination of fertilizers has become a significant issue in California and other parts of the country. Public concern over this issue is expected to intensify. Management believes that the Gold n Gro line of fertilizer products is uniquely suited to alleviating this environmental concern and that the Company is well positioned to meet future environmental needs.

#### MINING TECHNICAL SERVICES

##### 1. Services offered

The Mining Technical Services segment of the Company offers a wide range of technical services to the mining industry. These include the following:

##### Management Support:

- Assistance in assembling mineral project development agreements and ongoing technical support during project development and after operations begin.
- Advice on mineral development strategy, economic aspects of tax policy, long term investment

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strategy and infrastructure development related to large and small scale mineral development.

- Complete project development plans.

- Expert assistance in contract disputes pertaining to various technical aspects of mineral projects and the development of the technical aspects for contracts.
- Ore reserve audits, metallurgical audits and material balance reviews, and operations reviews on producing mines for senior management, outside investors, or underlying land owners.
- Mineral property appraisals for sale, acquisition, merger or financing.

Other Specialized Technical Services:

- Mineral economics and cost studies.
- Metallurgical process development.
- Open pit and underground mine planning.
- Ore reserve development.

## 2. Operations

The Mining Technical Services segment accounted for 42% of the Company's 2001 consolidated revenue. Two major clients produced 99+% of this revenue. At present one of these clients has one ongoing project. The first involves project management of a Nevada mine property, including sampling, mapping and data compilation and property acquisition services. The purpose of these services is to acquire and organize the land and information necessary to prepare the property for presentation to major mining companies for potential investment for exploration and development activities. The client has decided to accelerate the process of locating a buyer for the property. Consequently, the level of work done by WWI is expected to be reduced in future years.

The second client is a junior mining company with three mineral properties in Nevada. WWI is providing technical assistance in moving these properties into the development and operating stages. WWI is also providing administrative support.

In the fourth quarter of 2000, WWI signed a Pilot Program Contract to evaluate a potential new raw material source for the Company's photobyproduct fertilizer segment. The Contract reimburses WWI for expenses, and if successful, the parties have agreed to work together to market any resulting fertilizer products. WWI completed the Contract early in the second quarter and recommended that the evaluation program be continued for another year. WWI is also evaluating the results and is investigating the potential for speeding up the development program.

The primary source of new business for the Mining Technical Services segment is the reputation of WWI and its key employees. In addition, WWI expands its network of contacts by attendance at various mining association conventions.

In the past WWI has published specialized mineral economics and materials financial reports. WWI is evaluating re-entry into this market, with a goal of producing mining publications targeted for general investors interested in mining.

Prior to 1991, the Company had plans to directly invest or joint venture in mining projects and had formed a subsidiary to enter that market. Those plans were put on hold until completion of the photobyproduct fertilizer R&D program. Now that the R&D program is being converted to commercial operations, the Company has recently taken steps to expand the mining technical services presence in the mining industry, both from a services perspective and from a mining operations perspective.

First, in January 1999 WWI initiated a long term R&D project to replace the use of cyanide in the extraction of metals from silver/gold and gold/copper ores. The new thiosulfate leaching technology being developed under this program utilizes the same technology as the Company's proprietary photochemical recycling process. The project, called Ironics Thiomet, is seeking to establish operating joint ventures at specific mine sites to apply the thiosulfate leaching technology. Second, in March 1999 WWI signed a consulting agreement with Golden Phoenix Minerals, Inc. (GPXM). Under the agreement, WWI will provide management, merger and property acquisition, and technical services to GPXM. It appears likely that GPXM will put its Mineral Ridge Mine into gold production in 2002. In that event, WWI's workload for GPXM is expected to expand. Third, in 2001 WWI successfully completed a water location and drilling project, using advanced geologic technology, for one of its long term clients. WWI is now marketing its experience in this field to potential clients in Nevada.

## ITEM 2.

### DESCRIPTION OF PROPERTY.

#### I. FACILITIES.

Ironics leases approximately 3,000 square feet of office space at 6490 South McCarran Blvd., Building C-23, Reno, Nevada. The Company shares offices with W&W and IMI. W&W has the office equipment and furniture and technical library typically found in a consulting business. IMI leases approximately 2,000 square feet of warehouse space in Reno, Nevada. This space is being used for supply storage.

As previously discussed, IMI has acquired a 35,000 square foot manufacturing facility in Reno-Stead, Nevada. Construction was completed in February 2000 and the Certificate of Occupancy was received at that time. The plant is now in operation.

W&W leases approximately 2,500 square feet of office space in Reno, Nevada. The W&W technical services group was relocated to this space in April 1999.

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#### II. EQUIPMENT.

The actual equipment being used in the recycling process is proprietary information. However, the plant for processing liquid photobyproducts is a fairly typical chemical process facility consisting of appropriate arrangement of tanks and pumps. Solids produced by processing are recovered by filtration.

The refining operation consists of a material handling section, solids roasting, and a melting section. The actual equipment arrangements are proprietary, but the main items are pumps, tanks, filtration equipment, drying ovens, and the melting furnaces.

Capacity at the new facility is now capable of processing up to 100,000 gallons of used photochemicals per month and to manufacture up to 200,000 gallons per month of liquid fertilizer. Refinery capacity is being expanded to produce up

to 50,000 ounces of silver per month.

ITEM 3.

LEGAL PROCEEDINGS.

None

ITEM 4.

SUBMISSION OF MATTERS TO A VOTE OF ITS SECURITY HOLDERS.

The Company held its annual meeting on December 5, 2001. At that time, the shareholders elected the present directors as a group. Following is a summary of the voting:

Directors as a Group:

John W. Whitney

Paul H. Durckel

Alan C. Lewin

Votes:	For	59,984,983
	Against	1,660,314
	Abstain	100,584

PART II

ITEM 5.

MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

(a). Market Information. The securities of the Company are traded on the over-the-counter market, and quoted in the National Quotation Bureau, Inc.'s "pink sheets" and on the NASD Electronic Bulletin Board.

The following table sets forth the high and low bid prices for the Company's common stock for each quarter for 2000, 2001, and the first quarter of 2002, through March 1, 2002.

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	<u>High Bid</u>	<u>Low Bid</u>
3/31/00	\$2.00	\$0.64
6/30/00	\$1.45	\$0.65

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9/30/00	\$0.80	\$0.44
12/31/00	\$0.50	\$0.28
3/31/01	\$0.37	\$0.17
6/30/01	\$0.28	\$0.16
9/30/01	\$0.17	\$0.08
12/31/01	\$0.19	\$0.11
3/1/02	\$0.46	\$0.11

These quotations reflect inter-dealer prices without retail markup, markdown, or commissions, and may not represent actual transactions.

(b) On December 31, 2001 the number of record holders of the Common Shares was approximately 980.

(c) Dividends.

The Company has paid no dividends.

Recent Sales of Unregistered Securities:

Following is a summary of sales of unregistered securities for the fourth quarter of 2001. These securities were issued as restricted common shares which are subject to Rule 144 of the Securities and Exchange Commission. Generally, Rule 144 requires shareholders to hold the shares for a minimum of one year before sale. In addition, officers, directors and more than 10% shareholders are further restricted in their ability to sell such shares. There have been no underwriters of these securities and no underwriting commissions or discounts have been paid.

<u>Transaction Description</u>	Shares	Value
	<u>Issued</u>	<u>Received</u>
Exercise of warrants and options	100,000	\$10,000
Labor services of management, directors and consultants	62,500	16,025
	162,500	\$26,025

The above transactions qualified for exemption from registration under Sections 3(b) or 4(2) of the Securities Act of 1933. Private placements for cash were non-public transactions. The Company believes that all such investors are either accredited or, either alone or with their purchaser representative, have such knowledge and experience in financial and business matters that they are capable of evaluating the merits and risks of the prospective investment.

ITEM 6.MANAGEMENT'S DISCUSSION AND ANALYSIS OR PLAN OF OPERATION

## I. Results of Operations

The Company reported consolidated revenues of \$1,143,253 for the year ended December 31, 2001, compared to \$1,229,423 for the prior year, a decline of 7%. Revenues for the Photobyproduct Fertilizer segment increased by \$162,952 or 32%. This increase was offset by a decline in revenues from the Mining Technical Services segment of \$249,122, or 34%. The consolidated net loss for 2001 was \$3,653,750 or \$0.0466 per share compared to a 2000 loss of \$4,131,722 or \$0.0563 per share. The primary reasons for the decreased loss are reduced sales and marketing costs and no plant start-up costs.

Consolidated cost of sales and operating expenses decreased approximately \$712,800, or 15%, in 2001 compared to 2000. Other income (expense) increased from a net expense of \$513,300 in 2000 to a net expense of \$661,900 in 2001. The primary reasons for the increased other expenses are an increase of \$261,500 in interest expense and reduced interest and other income of \$55,600, which was partially offset by a reduced loss on investments of \$168,400. The increased interest expense is due to the borrowing of a combined \$2 million in 12% convertible notes, mortgage on the Stead plant, and equipment lease financing. To provide a more complete understanding of the factors contributing to the changes in revenues, operating expenses and the resultant operating loss, the discussion presented below is separated into the Company's two operating segments.

PHOTOBYPRODUCT FERTILIZER

	<u>Year Ended December 31,</u>	
	<u>2001</u>	<u>2000</u>
Sales revenue	\$ 665,676	\$ 502,724
Operating income (loss)	(2,703,760)	(3,247,002)

Revenues for the photobyproduct fertilizer segment totaled \$665,676 in 2001, compared to \$502,724 in 2000, an increase of 32%. Fertilizer sales were \$180,435 and \$119,634 for 2001 and 2000, respectively, an increase of 51%. Although the increase in fertilizer sales was less than expected, a number of important developments did occur in 2001. First, a need for two additional micro-nutrient products was identified by our distributor network. Product development was initiated and in early August prototype formulations were delivered to our distributors for evaluation. This project resulted in one product that will be used in large volume in the California specialty agriculture market. Bulk sales started late in the third quarter. This product was the primary reason fertilizer sales increased by 644% in the fourth quarter, compared to the prior year quarter. This new development represents an increasing commitment by the Company's distribution network to speed up the introduction of Gold n Gro products into the California market. Second, during 2001 the Company's Gold n Gro fertilizer marketing effort was focused on the Company's two new sales representatives teaming with our distribution network to present product demonstrations to fertilizer customers and to assist in field trials on various crops. On-going field trials of Gold n Gro fertilizer products continue to show significant improvements in crop production and quality. The trials are providing agronomic data that is being used to develop Gold n Gro nutrition programs for the crops being



tested. In 2001 field trials have been conducted on alfalfa, cut flowers, herbs, watermelons, plums, lemons, dates, sweet corn, green peppers, tomatoes, and cotton. Also, there is increasing pressure in California for fertilizer users to use environmentally sound products, both from a heavy metal standpoint and from using clean water, as opposed to sewer effluent, etc. Distilled water, heavy metal free reconditioned photoliquids, and the cleanest raw materials available are utilized in the manufacture of all Gold n Gro fertilizers. As a result of these developments, there is increasing enthusiasm on the part of the Company s distribution network for the Gold n Gro line of fertilizers.

Photobyproduct volume for photobyproduct recycling services in 2001 increased 42% from 2000 and photobyproduct recycling revenue increased 24%. The 29% sales increase in silver/gold sales reflects the implementation of a purchase and refining agreement with Golden Phoenix Minerals, Inc. (Golden) to process and resell Golden s gold production from its mining operations. IMI processes the gold and sells it to an independent third party. Gold sales under this agreement were \$107,800 and \$49,100 for 2001 and 2000, respectively.

Combined cost of sales and operating expenses for the segment amounted to \$3,369,400 in 2001, compared to \$3,749,700 in 2000, a 10% decrease. Cost of sales increased approximately \$211,000, which includes increases of \$140,200 in materials and direct costs due to increased sales and \$101,000 in payroll costs, due in part to the prior year classification of \$46,400 of plant payroll costs as start-up costs and to additional production personnel to handle increased photobyproduct volume. Operating costs decreased by \$591,200. Depreciation and amortization increased \$110,700 due to the full year of depreciation of the investment in the Reno/Stead manufacturing facility. Sales and marketing decreased \$560,300, reflecting the allocable share of decreased corporate marketing. During 2001 marketing resources were shifted away from general corporate marketing toward more specific fertilizer marketing, primarily by the addition of two fertilizer sales representatives who have focused on the California distribution network. Sales and marketing expenses for 2000 also included costs for Gold n Gro brand and label development, including costs of creating an ad campaign and development of new product labels that were not incurred in 2001.

These changes in revenues and operating expenses resulted in a segment operating loss of \$2,703,760 in 2001, compared to \$3,247,002 in 2000.

#### MINING TECHNICAL SERVICES

	<u>Year Ended December 31,</u>	
	<u>2001</u>	<u>2000</u>
Sales revenue	\$ 477,577	\$ 726,699
Operating income (Loss)	(288,115)	(371,457)

Mining technical services revenue totaled \$477,577 for 2001 compared to \$726,699 for 2000, a decrease of 34%. Included in these revenue figures are pass-through expenses of \$134,675 and \$353,339 for 2001 and 2000, respectively. Excluding these amounts, revenues amounted to \$342,902 and \$373,360 for 2001 and 2000, respectively, a decrease of 8%. The Company s plans to expand the technical services segment are more fully discussed on page 23 of this report.

Combined cost of sales and operating expenses totaled \$765,692 for 2001 compared to \$1,098,156 for 2000, a decrease of 30%. Included in these operating expense figures are pass-through expenses of \$134,675 and \$353,339 for 2001 and 2000, respectively. Excluding these amounts, combined cost of sales and operating expenses amounted to \$631,017 and \$744,817 for 2001 and 2000, respectively, a decrease of 15%. The decreased costs are attributable primarily to reduced corporate marketing efforts.

The above changes in revenues and operating expenses resulted in a segment operating loss of \$288,115 for 2001, compared to \$371,457 for 2000.

## SUMMARY

On a consolidated basis, the various changes in revenues and operating expenses resulted in gross profit (loss) of \$(272,626) for 2001 compared to \$(206,022) for 2000 and an operating loss of \$2,991,875 for 2001 compared to \$3,618,459 for 2000.

## II. Changes in Financial Condition; Capitalization

Cash amounted to \$14,675 as of December 31, 2001 compared to \$17,990 as of December 31, 2000. Net cash used by operations was \$1,927,677 in 2001 compared to \$2,742,056 in 2000. Operating resources utilized to finance the 2001 loss of \$3,653,750 include approximately \$672,000 in expenses paid with the Company's common stock and a net increase in accounts payable and accrued expenses of approximately \$379,100. These sources of cash were partially utilized by an increase in inventory of \$49,900. The inventory was increased in preparation for expanded sales. Cash amounting to approximately \$73,300 was invested in property and equipment in 2001, primarily for the equipment in the manufacturing plant. Financing sources of cash in 2001 included \$1,232,000 in convertible promissory notes, \$514,200 from a mortgage on the Stead plant, \$296,900 in equity from the Swartz agreement, \$192,300 in equipment financing, \$58,500 in loans from an officer/stockholder, and \$50,000 in warrant and option exercises.

Total assets decreased from \$4,609,506 at December 31, 2000 to \$4,558,260 at December 31, 2001. Current assets decreased \$122,100, net property and equipment decreased \$120,500, and other assets increased \$191,300. Other assets increased by \$85,100 due to accepting available for sale marketable securities as payment for services on a mining technical services contract. The stock had a market value of \$313,800 at December 31, 2001, with a cost of \$341,300. In addition, other assets increased by \$78,100 in stock placement costs and by \$51,800 in deferred lease costs from lease and mortgage financing contracts.

Total liabilities increased from \$5,030,707 at December 31, 2000 to \$7,499,382 at December 31, 2001, an increase of approximately \$2,468,700. Of this amount, current liabilities increased \$523,700 and long-term liabilities increased \$1,945,000. The increase in liabilities reflects the Private Placement of \$1.23 million in Convertible Promissory Notes, a \$550,000 mortgage on the Stead plant, \$324,000 in accrued interest on convertible notes, a net increase of \$45,600 in capital lease obligations, and an increase in accounts payable and various accrued expenses of \$288,300.

## III. Working Capital/Liquidity

As discussed in Note 12 to the Consolidated Financial Statements on page 61 of this report, the Company has

implemented a plan to improve its working capital and liquidity through private placements of common shares, conversion of debt to common shares, and payment of consulting and labor services with common shares. Following is a summary of the steps taken to improve the Company's working capital and liquidity during the year ended December 31, 2001:

1. A total of \$1,938,500 was received in convertible promissory notes, mortgage loan, and lease financing.
2. A total of \$346,900 was received from the sale of common stock through the Swartz agreement and from warrant and option exercises.
3. Various expenses including salaries, director fees, and outside services, totaling \$672,000, were paid with common stock.

The result of these steps was to change from a working capital deficit Of \$265,351 to a working capital deficit of \$911,082 at December 31, 2001, a decrease in working capital of approximately of \$645,700. The current asset component of working capital decreased from \$769,300 at December 31, 2000 to \$647,300 at December 31, 2001. The primary changes in the components of current assets were decreases in accounts receivable of \$50,700, stock subscription receivable of \$82,000, and prepaid expenses of \$53,400. These decreases were partially offset by an increase in inventory of \$49,900. The current liability component of working capital increased from \$1,034,700 at December 31, 2000 to \$1,558,400 at December 31, 2001. Significant increases in the components of current liabilities include \$193,100 in accrued expenses, and \$163,600 in current maturities of capital lease obligations, \$55,400 in accrued management salaries, and \$56,000 in accrued interest.

The decreased working capital is primarily a result of two factors. First, fertilizer sales did not expand to the extent anticipated, so operating losses were not reduced as much as expected. Second, since the stock price did not remain at 2000 levels, much of the funding anticipated under the Swartz agreement has not been available. The Company has had limited cash liquidity since the third quarter of 2000. The Company has sought and obtained the funding described above, which has not been sufficient to maintain all obligations on a current basis. However, cash liquidity is being managed and the Company has been able to make sufficient payments to keep all significant creditors working with it. With the rebound in the stock price subsequent to December 31, 2001, significant funds have been received from the Convertible Notes Private Placement, which has temporarily improved cash liquidity. The Company will continue to seek funding from the Convertible Notes Private Placement, and it is anticipated that with the improved stock price, the Swartz agreement will provide more significant funding than in 2001.

For details of other steps to improve the Company's working capital and liquidity taken subsequent to December 31, 2001, see the discussion in Notes 12 and 14 to the Consolidated Financial Statements on pages 61 and 63 of this report.

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#### IV. Forward-Looking Statements

The statements in this Form 10-KSB that are not historical facts or statements of current status are forward-looking statements (as defined in the Private Securities Litigation Reform Act of 1995) that involve risks and uncertainties. Actual results may differ materially.

#### ITEM 7.

#### FINANCIAL STATEMENTS

The response to this Item is submitted under Item 13.

**ITEM 8.**

CHANGE IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

No change was made in the Company's auditors from the prior year.

To the Company's and its management's knowledge, there is no accounting or financial disclosure dispute involving any present or former accountant.

PART III

**ITEM 9.**

DIRECTORS, EXECUTIVE OFFICERS, PROMOTERS AND CONTROL PERSONS: Compliance with Section 16(a) of the Exchange Act

**I. Summary Information.**

The following are the directors and executive officers of the Company:

<u>Name</u>	Age as of <u>12/31/01</u>	<u>Position</u>	<u>Position Held Since</u>
Dr. John W. Whitney	55	President/Treasurer Director	May 1988
Paul H. Durckel	84	Director	September 1995
Alan C. Lewin	55	Director	September 1997
Gregory S. Skinner	47	Secretary	December 1990
Duane H. Rasmussen	71	Vice President; Vice President and General Manager-IMI	November 1997 May 1994

1) For directors, the term of office is until the next annual meeting of shareholders. For officers, the term of office is until the next annual meeting of the Board of Directors, presently scheduled to be held immediately following the annual meeting of the shareholders.

**II. Narrative Information Concerning the Directors and Executive Officers of the Company.**

John W. Whitney:

In addition to being the President and a Director of the Company, 1988 to present, Dr. Whitney

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is the President and a Director of each of the operating subsidiaries, Itronics Metallurgical, Inc. and Whitney & Whitney, Inc. Dr. Whitney also serves as the General Manager of American Hydromet, a joint venture.

He received his Ph.D. in Mineral Economics from Pennsylvania State University in 1976, his M.S. in Mineralogy from the University of Nebraska in 1971, and his B.S. in Geology from the University of Nebraska in 1970. Dr. Whitney has served as President of Whitney & Whitney, Inc. since its formation in 1977.

Prior to his serving as W&W full-time president, Dr. Whitney worked as a consultant for the Office of Technology Assessment, U.S. Congress, doing analysis of various Alaskan mineral issues (1977-1978), a consultant for various government agencies, including the office of Mineral Policy Analysis in the U.S. Department of Interior, and the Washington office of the U.S. Bureau of Mines, consulting firms, law firms and mining companies on a variety of mineral planning issues (1976-1977), as a consultant for BKW Associates, Inc. evaluating mining investment opportunities in Mexico and the Philippines (1973-1975), and as a geologist-mineralogist for Humble Oil & Refining Company and GeoTerrex Ltd. (1971-1972).

Dr. Whitney is an internationally recognized consultant in the field of Metal and Material Resource Economics. Dr. Whitney has presented seminars for various clients on Mining Economics, and has taught a three-credit graduate course on International Metal Economics for the University of Arizona's College of Mines. Dr. Whitney is an Honorary Faculty Member of the Academy for Metals and Materials under the seal of the American Society for Metals. Dr. Whitney has made numerous presentations and written a number of publications on various technical subjects within his broad area of expertise. Dr. Whitney is coinventor of the American Hydromet process technology and holds four patents. Dr Whitney was selected as Nevada's Inventor of the Year for 2000 and became a member of the Inventor's Hall of Fame at the University of Nevada, Reno.

Paul H. Durckel:

Mr. Durckel has served as a director of the Company since September 1995. He received a pre-legal degree from Stanford University in 1940. He has served various companies involved in fertilizer manufacturing and sales for approximately 30 years. He is presently an Independent Real Estate Salesman for Verus Realty. He served Myers Realty, Inc. in varying capacities, including Broker-Salesman, Consultant, Manager, Vice President of Operations, and Director, from 1987 to 2001. His experience in the fertilizer industry includes Vice President and General Manager and Vice President- Operations for American Plant Food Corp., Executive Assistant to the Chairman for Best Fertilizers Co., Vice President and General Manager for Best Fertilizer of Texas, and Vice President and General Manager for Farm Services Co.

Alan C. Lewin:

Mr. Lewin has served as a Director since September 1997. He had previously served as a Director from September 1995 through June 1996. He received a B.A. in Psychology from San Diego State University in 1967. He has extensive operations management experience, primarily in the x-ray film processing chemical industry. His positions include Founder, President and Chief Executive

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Officer of Guardian X-Ray Equipment Service, Inc. from 1976 to 1992, General Manager of Douglas Roesch Communications, Inc. from 1992 to 1994, Technical Sales Representative of Commerce Chemical Company from 1994 to 1996, Vice President of Commodity Resource & Environmental, Inc. from August 1996 to July 1997, and General Manager for a Merry X-Ray branch operation in Los Angeles, California since November 1997.

Gregory S. Skinner, Esq.:

Mr. Skinner has served as secretary and general counsel of the Company and its subsidiaries since December 1990. He obtained his B.A. degree in Economics from the University of California at Berkeley in 1976. He obtained his J.D. degree from Hastings College of the Law, University of California at San Francisco in 1979. He is licensed to practice law in the states of California and Nevada. He is a shareholder in the Law Offices of Skinner, Sutton & Watson, a Professional Corporation, which has offices located in Reno and Incline Village, Nevada. Prior to becoming Secretary of Itronics Inc., Mr. Skinner has provided legal services and advice to Whitney & Whitney, Inc. since 1980.

Duane H. Rasmussen:

Mr. Rasmussen has served as Vice President and General Manager of IMI since May 1994. He became Vice President of the Company in November 1997. He initially joined the Company in 1991 as Assistant Manager and Business Consultant for W&W. He received his B.S. degree in Chemical Engineering from the University of Wisconsin in 1953 and his M.B.A. in Industrial Management in 1955 from the same University. He served as President of Screen Printing Systems, Inc. from 1987 to 1990 and from 1995 to October 1998. Other business experience includes approximately 20 years with Jacobs Engineering Group, Inc. in varying capacities, including Project Manager, Regional Sales Manager, Regional Vice President, and Group Vice President.

ITEM 10.

EXECUTIVE COMPENSATION.

Summary of Cash and Certain Other Compensation

The following table sets forth information as to the compensation of the Chief Executive Officer and the four most highly compensated officers whose compensation for the year ended December 31, 2001 exceeded \$100,000:

Name and Principal Position	Calendar Year	Annual Compensation		Long Term Compensation
		Salary	Bonus	Securities Underlying Options (#)
Dr. John W. Whitney:	2001	\$127,001	\$-0-	-0-
President, Treasurer and Director (1) (2)	2000	\$133,300	\$-0-	-0-
	1999	\$129,534	\$-0-	1,000,000

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Duane H. Rasmussen	2001	\$132,000	\$-0-	-0-
Vice President, VP	2000	\$104,000	\$-0-	-0-
and General Manager	1999	\$84,000	\$-0-	-0-

IMI (3)

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(1) In September 1998 Dr. Whitney converted \$50,000 of unpaid salary by acquiring five units of the Company's 1998 Private Placement, Tranche One. Dr. Whitney exercised 77,500 shares in 1999 and 2000. The remaining 122,500 warrants were assigned to other individuals and were exercised in 2000. Effective January 1, 1999, Dr. Whitney was granted an option for 1,000,000 common shares at \$0.25 per share. The option is exercisable at any time until one year after Dr. Whitney leaves the employment of the Company. The 2001 salary amount includes \$70,000 in unpaid salary, of which Dr. Whitney converted \$60,750 into 675,000 restricted common shares, which were pending issuance on December 31, 2001.

(2) The salary amounts listed above include \$2,001, \$8,300, and \$4,534, for 2001, 2000, and 1999, respectively, that represent compensation paid in common stock for service as a director of the Company. The compensation plan for all directors was 2,500 shares per quarter for 2001.

(3) The 2001 salary amount includes \$40,500 in unpaid salary.

Option Grants in Last Fiscal Year

:

<u>Name</u>	<u>Number of Securities Underlying Options Granted</u>	<u>% of Total Options to Employees in Fiscal Year</u>	<u>Exercise or Base Price</u>	<u>Expiration Date</u>
None	None	-0-		

Aggregated Option Exercises in Last Fiscal Year and Fiscal Year-End Option Values

Options Exercised

:

Shares Acquired on

<u>Name</u>	<u>Exercise (#)</u>	<u>Value Realized</u>
-------------	---------------------	-----------------------

None

Options Unexercised

:

Number of Securities	Value of Unexercised
----------------------	----------------------

Underlying Unexercised	In-the-Money Options
------------------------	----------------------

<u>Options at 12/31/01</u>	<u>At 12/31/01</u>
----------------------------	--------------------

<u>Name</u>	<u>Exercisable</u>	<u>Unexercisable</u>	<u>Exercisable</u>	<u>Unexercisable</u>
Dr. John W. Whitney	1,000,000	-0-	\$ -0- (1)	\$ -0-

(1) If value realized was based on the average of the closing bid and ask prices on December 31, 2001, the value realized would have been \$-0-. The securities under option, common stock of the Company, are restricted under Rule 144 and thus are not tradable within one year of exercise. In addition, as a greater than 10% shareholder of the Company, Dr. Whitney is further

restricted by SEC regulations as to the sale of the Company's securities. The actual value realized, if and when the securities are sold, may be more or less than the value listed above. Consequently, the value of the unexercised options is reported at \$-0-.

ITEM 11.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

a) Security Ownership of Certain Beneficial Owners.

The following table sets forth certain data with respect to those persons known to the Company, as of March 1, 2002, to be the beneficial owners of more than 5% of the outstanding shares of common stock of the Company:

Amount and Nature of Beneficial Ownership

Name and Address of <u>Beneficial Owner</u>	Common Shares Which May Be Common Shares <u>Presently Held</u>	Common Shares Acquired Within <u>60 days</u>	<u>Total</u>	Percent of <u>Class</u>
John W. Whitney				



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P.O. Box 10725				
Reno, NV 89510	14,590,009(3)	1,000,000	15,590,009	18.62

(1) (2)

Richard J. Cavell  
 1013 No. Marshall Dr.  
 Camano Island, WA

4,976,457(4)	-	4,976,457	6.02
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(1) Director

(2) Officer

(3) Includes 100,136 shares owned by John B. Whitney, Dr. John W. Whitney's minor son, and 72,768 shares owned by Maureen E. Whitney, Dr. Whitney's wife. Options for 1,000,000 shares are at \$0.25 per share.

(4) Includes 21,375 shares owned by Bonnie Cavell, Richard Cavell's wife.

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b) Security Ownership of Management.

The following table sets forth as of March 1, 2002, certain information, with respect to director and executive officer ownership of common stock in the Company:

Amount and Nature of Beneficial Ownership

Name and Address of <u>Beneficial Owner</u>	Common Shares Which May Be Acquired Within <u>60 days(1)</u>	Common Shares Presently Held	Total	Percent of Class (2)
Dr. John W. Whitney P.O. Box 10725 Reno, NV 89510 (3) (4)		14,590,009(5)	1,000,000	15,590,009 18.62
Paul H. Durckel 1655 Highway 395				

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Minden, NV 89423 (3)	231,000	36,809	267,809	.32
Alan C. Lewin				
P.O. Box 10725				
Reno, NV 89510 (3)	250,000	-	250,000	.30
Duane H. Rasmussen				
P.O. Box 10725				
Reno, NV 89510 (4)	1,155,516	-	1,155,516	1.40
All directors and				
executive officers as				
a group (5 persons)	17,327,157	1,036,809	18,363,966	21.92

(1) The above option for 1,000,000 shares is at \$0.25 per share and the option for 36,809 shares is related to the 12% Convertible Note Private Placement and is convertible at \$0.15 per share.

(2) The percent of class is based on the sum of 82,722,923 shares outstanding or to be issued as of March 1, 2002 plus, for each individual, the number of common shares as to which the named individual has the right to acquire beneficial ownership within 60 days of March 1, 2002.

(3) Director

(4) Officer

(5) Includes 100,136 shares owned by John B. Whitney, Dr. John W. Whitney's minor son, and 72,768 shares owned by Maureen E. Whitney, Dr. Whitney's wife.

c) Changes in Control

The Company is not aware of any arrangement which at some later date results in changes in control of the Company.

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ITEM 12.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS.

During the Company's two most recent fiscal years, including those of its subsidiaries and affiliates, the Company engaged in no transactions or series of transactions with any director, officer, security holder or family thereof in which the amount involved exceeded \$60,000 except as follows:

1. After approval from the Company's Board of Directors, in March 1999 the Company's subsidiary, WWI, agreed to provide technical services to Golden Phoenix Minerals, Inc. (Golden), a junior mine exploration and development company whose common shares trade on the OTC Bulletin Board. Services are billed monthly and WWI receives a combination of Golden common stock, SEC Rule 144 restricted common stock, and cash. Separately, Dr. Whitney personally agreed to acquire up to 10,000,000 common shares of Golden at \$0.10 per share, making him beneficial owner of more than ten percent of Golden. Any unexercised options under this arrangement can be assigned to WWI. Dr.'s Whitney and Cavell are principals in a group that controls the mining claims underlying one of Golden's two principal exploration and development properties. At December 31, 2001 and 2000 WWI owned 200,000 unrestricted Golden shares, and 2,789,042 and 1,594,366, respectively, of Rule 144 restricted Golden shares. The initial Rule 144 one year period for resale began April, 2000, and continues monthly thereafter. Total amount billed for 2001 and 2000 was \$194,688 and \$301,483, respectively. A total of \$123,757 and \$101,163 is included in accounts receivable at December 31, 2001 and 2000, respectively. At December 31, 2001, the average bid/asked price for Golden common was \$0.105, resulting in a value of shares held on that date of \$313,849.

In the fourth quarter of 2000, the Company's subsidiary, IMI, entered into a purchase and refining agreement with Golden to process and resell Golden's gold production from its mining operations. IMI processes the gold and sells it to an independent third party. Gold sales under this agreement were \$107,813 for 2001 and \$49,144 for 2000.

### ITEM 13.

#### FINANCIAL STATEMENTS, EXHIBITS AND REPORTS ON FORM 8-K.

##### I. List of Financial Statements and Exhibits

###### 1. List of Financial Statements:

- (a) Consolidated Balance Sheets as of December 31, 2001 and 2000.
- (b) Consolidated Statements of Operations and Comprehensive Income for the Years ended December 31, 2001 and 2000.
- (c) Consolidated Statements of Stockholders' Equity (Deficit) for the Years ended December 31, 2001 and 2000.
- (d) Consolidated Statements of Cash Flows for the Years ended December 31, 2001 and 2000.
- (e) Notes to Consolidated Financial Statements.

###### 2. List of Exhibits:

- 21 List of significant subsidiaries.

##### II. Reports on Form 8-K.

None

DECEMBER 31, 2001

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Notes to Consolidated Financial Statements	45
EXHIBITS:	
21 Significant subsidiaries	65

#### STATEMENTS AND SCHEDULES

Schedules not included are omitted for the reason that they are not applicable or not required.

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KAFOURY, ARMSTRONG & CO.  
A PROFESSIONAL CORPORATION  
CERTIFIED PUBLIC ACCOUNTANTS

To the Board of Directors and Stockholders of Itronics Inc.

We have audited the accompanying consolidated balance sheets of Itronics Inc. (a Texas corporation) and subsidiaries as of December 31, 2001 and 2000, and the related consolidated statements of operations and comprehensive income, stockholders' equity (deficit), and cash flows for the years then ended. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with U.S. generally accepted auditing standards. 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 consolidated 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 in the first paragraph present fairly, in all material respects, the consolidated financial position of Itronics Inc. and subsidiaries as of December 31, 2001 and 2000, and the results of their operations and their cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As shown in the financial statements, the Company and its subsidiaries have reported recurring losses from operations, including a net loss of \$3,653,750 during the year ended December 31, 2001, a negative working capital of \$911,082, and a stockholders' deficit balance of \$2,941,122 as of December 31, 2001. The ability to continue as a going concern is contingent primarily upon (a) future profitable operations, and (b) the ability to generate sufficient cash from operations and additional operating capital raised from other sources to meet obligations as they become due. This condition raises substantial doubt about the ability to continue as a going concern. Management's plans regarding this matter are described in Note 12. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/S/ KAFOURY, ARMSTRONG & CO.

Reno, Nevada

March 29, 2002

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ITRONICS INC. AND SUBSIDIARIES  
 CONSOLIDATED BALANCE SHEETS  
 DECEMBER 31, 2001 AND 2000

ASSETS

	<u>2001</u>	<u>2000</u>
CURRENT ASSETS		
Cash	\$ 14,675	\$ 17,990

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Accounts receivable, less allowance for doubtful accounts, 2001, \$7,400;		
2000, \$7,400	166,976	217,719
Account receivable, lease equipment financing	-	2,809
Stock subscription receivable	-	82,000
Inventories	318,595	268,719
Prepaid expenses	100,797	154,191
Current portion of deferred loan fees	46,225	25,910
Total Current Assets	647,268	769,338
PROPERTY AND EQUIPMENT		
Land	215,000	215,000
Building and improvements	1,046,298	1,046,298
Design and construction in progress, manufacturing facility	86,884	48,506
Leasehold improvements	900	900
Equipment and furniture	1,585,995	1,546,477
Vehicles	133,028	133,028
Equipment under capital lease	971,888	896,562
	4,039,993	3,886,771
Less: Accumulated depreciation and amortization	794,750	521,076
	3,245,243	3,365,695
OTHER ASSETS		
Patents, trademarks, and other, less accumulated amortization 2001, \$24,275; 2000, \$23,219	10,171	11,227
Stock placement and organization costs, less		

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accumulated amortization 2001, \$93,128; 2000, \$57,638	155,911	77,812
Marketable securities, available for sale	313,849	228,782
Investment in non-public company	-	30,000
Deferred loan fees, less current portion, less accumulated		
amortization 2001, \$67,546; 2000, \$16,137	138,171	86,335
Investment in American Gold & Silver Ltd.	9,250	9,250
Deposits	38,397	31,067
	665,749	474,473
	\$4,558,260	\$4,609,506

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LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)

	<u>2001</u>	<u>2000</u>
CURRENT LIABILITIES		
Accounts payable	\$ 516,312	\$ 538,333
Accrued management salaries	83,329	27,942
Accrued expenses	319,691	126,632
Insurance contracts payable	30,799	24,943
Interest payable	74,097	18,064
Current maturities of long-term debt	38,255	16,077
Current maturities of capital lease obligations	426,744	263,145
Current maturities of advances from stockholders	25,222	5,222
Current maturities of convertible notes and accrued interest	25,438	-
Other	18,463	14,331

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Total Current Liabilities	1,558,350	1,034,689
LONG-TERM LIABILITIES		
Long-term debt, less current maturities	599,472	59,498
Convertible promissory notes	3,890,029	2,668,000
Accrued interest, convertible notes	540,444	221,855
Capital lease obligations, less current maturities	882,485	1,000,529
Accrued salary due stockholder	15,054	22,254
Deferred gain, less current maturities	13,548	23,882
Total Long-Term Liabilities	5,941,032	3,996,018
Contingency	-	-
	7,499,382	5,030,707
STOCKHOLDERS' EQUITY (DEFICIT)		
Preferred stock, par value \$0.001 per share; authorized 999,500 shares; issued and outstanding 2001, 0 shares; 2000, 0 shares	-	-
Common stock, par value \$0.001 per share; authorized 250,000,000 shares; issued and outstanding 2001, 80,999,392; 2000, 75,017,412	80,999	75,017
Additional paid-in capital	10,829,459	9,761,976
Accumulated deficit	(14,062,234)	(10,408,484)
Common stock to be issued	152,960	117,151
Accumulated other comprehensive income (loss)	(27,403)	9,141
Common stock options outstanding, net	85,097	23,998
	(2,941,122)	(421,201)



\$ 4,558,260      \$ 4,609,506

The accompanying notes are an integral part of these financial statements.

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ITRONICS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME

FOR THE YEARS ENDED DECEMBER 31, 2001 AND 2000

	<u>2001</u>	<u>2000</u>
REVENUES		
Fertilizer	\$ 180,435	\$ 119,634
Photobyproduct recycling	239,126	192,768
Silver and gold	246,115	190,322
Mining technical services	477,577	726,699
Total Revenues	1,143,253	1,229,423
COST OF SALES	1,415,879	1,435,445
Gross Profit (Loss)	(272,626)	(206,022)
OPERATING EXPENSES		
Depreciation and amortization	351,416	224,262
Research and development	50,142	41,496
Sales and marketing	1,252,931	1,897,013
Plant start-up costs	-	174,979
General and administrative	1,064,760	1,074,687
	2,719,249	3,412,437
Operating (Loss)	(2,991,875)	(3,618,459)
OTHER INCOME (EXPENSE)		

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Interest expense	(635,058)	(373,596)
Interest income	3,183	58,053
Other	-	712
Gain (loss) on investments	(30,000)	(198,432)
Total Other Income (Expense)	(661,875)	(513,263)
(Loss) before provision for income tax	(3,653,750)	(4,131,722)
Provision for income tax	-	-
Net Income (Loss)	(3,653,750)	(4,131,722)
Other comprehensive income (loss)		
Unrealized gains (losses) on securities	(36,544)	(83,658)
Comprehensive Income (Loss)	\$(3,690,294)	\$(4,215,380)
Weighted average number of shares outstanding	78,349,197	73,324,348
Earnings (Loss) per share	\$ (0.0466)	\$ (0.0563)

The accompanying notes are an integral part of these financial statements.

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ITRONICS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

FOR THE YEARS ENDED DECEMBER 31, 2001 AND 2000

<u>COMMON STOCK</u>		ADDITIONAL		COMMON STOCK		TOTAL
NUMBER OF		PAID-IN	ACCUMULATED	TO BE	OTHER	
<u>SHARES</u>	<u>AMOUNT</u>	<u>CAPITAL</u>	<u>DEFICIT</u>	<u>ISSUED</u>		

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Balance, December 31, 1999	70,828,231	\$70,828	\$ 8,013,746	\$ (6,276,762)	\$104,061	\$ 96,572	\$ 2,008,
Sale/issue of common stock	4,189,181	4,189	1,748,230	-	13,090	-	1,765,
Net (loss) for the year ended							
December 31, 2000	-	-	-	(4,131,722)	-	-	(4,131,7
Other comprehensive income for							
the year ended December 31, 2000	-	-	-	-	-	(83,658)	(83,6
Common stock options outstanding	-	-	-	-	-	20,225	20,
Balance, December 31, 2000	75,017,412	75,017	9,761,976	(10,408,484)	117,151	33,139	(421,2
Sale/issue of common stock	5,981,980	5,982	1,067,483	-	35,809	-	1,109,
Net (loss) for the year ended							
December 31, 2001	-	-	-	(3,653,750)	-	-	(3,653,7
Other comprehensive (loss) for							
the year ended December 31, 2001	-	-	-	-	-	(36,544)	(36,5
Common stock options outstanding	-	-	-	-	-	61,099	61,
Balance, December 31, 2001	80,999,392	\$80,999	\$10,829,459	\$(14,062,234)	\$152,960	\$57,694	\$(2,941,1

The accompanying notes are an integral part of these financial statements.

ITRONICS INC, AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
FOR THE YEARS ENDED DECEMBER 31, 2001 AND 2000

	<u>2001</u>	<u>2000</u>
Cash flows from operating activities		
Net income (loss)	\$(3,653,750)	\$(4,131,722)
Adjustments to reconcile net loss to cash used by operating activities:		
Depreciation and amortization	351,416	224,262
Interest on convertible notes	324,027	221,855
Marketable securities received for services	(121,612)	(146,780)
Loss on investments	30,000	198,432
Bad debts	-	11,275
Stock option compensation	61,099	55,278
Other	-	4,516
Expenses paid with issuance of common stock/debt:		
Interest expense	3,738	-
Consulting expenses	411,109	737,297
Directors fees	6,003	24,900
Salaries	251,159	124,934
Operating expenses	8,978	1,425
(Increase) decrease in:		
Trade accounts receivable	50,743	(3,905)
Inventories	(49,876)	(213,738)
Prepaid expenses, deposits and other	20,173	(64,958)

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Increase (decrease) in:

Accounts payable	71,849	155,913
Accrued expenses and contracts payable	307,267	58,960
Net cash used by operating activities	(1,927,677)	(2,742,056)
Cash flows from investing activities:		
Acquisition of property and equipment	(73,315)	(818,565)
Acquisition of marketable securities	-	(198,432)
Acquisition of intangibles and investments	(47,777)	(3,413)
Sale of equipment	415	-
Net cash used by investing activities	(120,677)	(1,020,410)
Cash flows from financing activities:		
Proceeds from sale of stock	346,921	739,748
Proceeds from stockholders/long-term debt	1,997,013	3,146,572
Payments on debt	(298,895)	(248,151)
Net cash provided by financing activities	2,045,039	3,638,169
Net increase (decrease) in cash	(3,315)	(124,297)
Cash, beginning of year	17,990	142,287
Cash, end of year	\$ 14,675	\$ 17,990

The accompanying notes are an integral part of these financial statements.

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ITRONICS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2001 AND 2000

(continued)

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	<u>2001</u>	<u>2000</u>
Supplemental Disclosures of Cash Flow		
Information:		
Cash paid during the period for interest	\$ 254,260	\$ 187,151
Schedule of non-cash financing transactions:		
Settlement of debt/accruals by		
issuance of common stock:		
Accounts payable	93,870	-
Stock subscription receivable	-	82,000
Equipment financed with long-term debt	39,844	62,190
Equipment financed with capital leases	40,597	20,164
Deferred loan fees on debt/capital leases	77,008	88,765
Acquisition of assets by issuance of		
common stock:		
Stock/debt placement costs	85,865	31,895
Deferred loan fees on debt	16,500	-
Equipment	-	2,675
Acquisition of assets by issuance of debt:		
Stock/debt placements costs	10,000	-

The accompanying notes are an integral part of these financial statements.

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ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

NOTE 1 - Summary of Significant Accounting Policies:

## Company's Activities:

The Company, a Texas corporation, was incorporated on October 29, 1987. The Company was to seek out and obtain through an acquisition and/or merger transactions, assets which could benefit its shareholders. In May of 1988, the Company acquired Whitney & Whitney, Inc. and its related entities through the issuance of its common stock. This acquisition was accounted for using the pooling of interests method. The Company, through its subsidiaries, is involved in mining technical services, photobyproduct recycling and related silver recovery, and liquid fertilizer manufacturing.

## Financial Statement Estimates and Assumptions:

The preparation of financial statements in conformity with accounting principles generally accepted in the U.S. requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

## Principles of Consolidation:

The consolidated financial statements include the accounts of Itronics Inc. and its subsidiaries owned and/or controlled by the Company as follows:

	2001	2000
	<u>PERCENTAGE</u>	<u>PERCENTAGE</u>
Whitney & Whitney, Inc.	100.00	100.00
Itronics Metallurgical, Inc.	100.00	100.00
Itronics California, Inc.	100.00	100.00
Nevada Hydrometallurgical Project (A Partnership)	92.50	92.50
American Hydromet (A Joint Venture)	81.63	81.63
American Gold & Silver (A Limited Partnership)	43.84	43.84

Whitney & Whitney, Inc. is the general partner for American Gold & Silver. As such, the Company has control over American Gold & Silver and has included it in its consolidation.

American Gold & Silver and Nevada Hydrometallurgical Project possess no material tangible assets or liabilities.

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 ITRONICS INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

No amount for minority interests is reflected in the consolidated balance sheets as the equity of minority interests in the net losses exceed the carrying value of the minority interests.

No amount for minority interests is reflected in the consolidated statement of operations since losses applicable to the minority interest in each subsidiary exceed the minority interest in the equity capital of each subsidiary. As a result, losses applicable to the minority interest are charged against the majority interest. When future earnings materialize, the majority interest will be credited to the extent of such losses previously absorbed.

All significant intercompany accounts and transactions have been eliminated in the consolidation.

Revenue Accounting for Contracts:

When the mining technical services segment of the Company is responsible for the procurement of materials and equipment, property, or subcontracts in its consulting business, it includes such amounts in both revenues and cost of sales. The amount of such pass-through costs included in both mining consulting revenues and cost of sales for the year ended December 31, 2001 and 2000 were \$134,676 and \$353,339, respectively.

Accounts Receivable Allowance Account:

The Company uses the allowance method to account for uncollectible accounts receivable.

Inventories:

Inventory is determined utilizing the lower of cost or market value determined on the average cost valuation method and consists primarily of unprocessed silver bearing photobyproducts, fertilizer raw materials and saleable fertilizer.

Following is a summary of finished goods and raw materials inventories as of December 31, 2001 and 2000:

	<u>2001</u>	<u>2000</u>
Finished goods	\$ 59,741	\$118,460
Raw materials	258,854	150,259
	\$318,595	\$268,719

Cost of the silver in solution inventory is either the actual cost, or 80% of the fair market value of the silver content of the photobyproducts as determined by laboratory assays (See Note 13).

ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

Property and Equipment:



Property and equipment are stated at cost. Depreciation is computed by accelerated and straight-line methods over five to forty years. Capital lease equipment is amortized using accelerated and straight-line methods over five to twenty years. Accumulated amortization on capital lease equipment is \$201,784 and \$105,966 at December 31, 2001 and 2000, respectively.

Repairs and maintenance are charged to operations as incurred.

Intangible Assets:

Intangible assets are amortized by the straight-line method over the following lives:

	<u>YEARS</u>
Patents	17
Stock/debt placement and organization costs	5
Deferred lease costs	3-5

Research and Development:

The Company's fertilizer production process was previously in the research and development stage. Wages, benefits, rent, and other costs associated with ongoing research are expensed as research and development expenses when incurred.

Advertising:

The Company advertises its products in various trade publications and general newspaper supplements. It also promotes the Company in various business publications, television, and internet media. Such advertising costs include the creative process, costs of production, and placement costs of the ads themselves. All advertising costs are expensed as incurred. Total advertising expense was \$72,030 and \$266,430 for the years ended December 31, 2001 and 2000, respectively.

Income Taxes:

The Company has accounted for income taxes to conform to the requirements of Statements of Financial Accounting Standards (SFAS) No. 109, Accounting for Income Taxes. Under the provisions of SFAS 109, an entity recognizes deferred tax assets and liabilities for future tax consequences of events that have already been recognized in the Company's financial statements or tax returns. The measurement of deferred tax assets and liabilities is based on provisions of the enacted tax law. The effects of future changes in tax laws or rates are not anticipated. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized.

Loss per Common Share:

Loss per common share is calculated based on the consolidated netloss for the period

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

divided by the weighted average number of common shares outstanding during 2001 and 2000. Common stock equivalents are not included, as their effect would be antidilutive.

Common Stock:

The Company's common shares have, subject to the provisions of any series of Preferred Stock, certain rights, including one vote per share, on a non-cumulative basis, and a ratable portion of any dividends that may be declared by the Board of Directors. The Company may from time to time issue common shares that are restricted under Rule 144 of the Securities and Exchange Commission. Such restrictions require the shareholder to hold the shares for a minimum of one year before sale. In addition, officers, directors and more than 10% shareholders are further restricted in their ability to sell such shares.

NOTE 2 - Reclassification:

The prior year's financial statements have been reclassified, where necessary, to conform with the current year presentation.

NOTE 3 - Long-Term Debt:

Long-term debt at December 31, 2001 and 2000 is comprised of the following (all debt payments are applied to outstanding interest owed at date of payment prior to being applied to the principal balance). The carrying amount approximates fair value. The fair value of long-term debt is based on current rates at which the Company could borrow funds with similar remaining maturities.

DECEMBER 31,

2001

2000

Notes due to unrelated parties:

Notes payable secured by vehicles due at varying dates

through 2006. The monthly payments total \$1,920,

including interest at 10.5% to 11.0% per annum.

\$ 65,581

\$75,575

Note payable secured by real property due May 2016.

Monthly payment is \$6,601, including interest

at 12% per annum.

542,058

-

Financing contract secured by equipment due May 2006.

Monthly payment is \$806, including interest at 17.99%	30,088	-
Less current portion due within one year	(38,255)	(16,077)
Total long-term liabilities due to unrelated parties	\$599,472	\$59,498

ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

DECEMBER 31,

2001                      2000

Convertible Promissory Notes:

Three year convertible promissory notes due November 2002 through February 2003, including interest at 12% per annum. The notes and accrued interest are convertible into the Company's restricted common stock at \$0.50 per share at any time through November 18, 2002 and February 16, 2003.

\$ 47,000                      \$ 47,000

Three year convertible promissory notes due at varying dates through February 2003, including

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interest at 9% per annum. The notes and accrued interest are convertible into the Company's restricted common stock at prices ranging from \$0.65 to \$1.18 per share at any time through dates ranging from January to February 2003.

	2,621,000	2,621,000
--	-----------	-----------

Three year convertible promissory notes due at varying dates through December 2004, including interest at 12% per annum. The notes and accrued interest are convertible into the Company's restricted common stock at prices ranging from \$0.10 to \$0.15 per share at any time through dates ranging from March to December 2004.

	1,242,029	-
--	-----------	---

Accrued interest on convertible promissory notes	545,882	221,855
--	---------	---------

Less current portion due within one year	(25,438)	-
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Total Long Term Convertible Promissory Notes	\$4,430,473	\$2,889,855
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Loans from Stockholders/Related Transactions:

Advances from officer/stockholder. Due on demand, with interest accruing at 12% per annum.

	\$20,000	\$ -
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Unsecured note payable to a stockholder in the amount of \$10,000, dated December 28, 1994.

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Monthly payments of \$220, including interest at 11.5%, began January 1998 and continued to December 2000. No demand has been made for payment.

	5,222	5,222
	25,222	5,222
Less current portion due within one year	(25,222)	(5,222)
Total long-term liabilities due to stockholders	\$ -	\$ -

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ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

Long-term debt matures as follows:

<u>YEAR</u>	UNRELATED	CONVERTIBLE	<u>STOCKHOLDERS</u>
	<u>PARTIES</u>	<u>NOTES</u>	
2002	\$ 38,255	\$ 25,438	\$ 25,222
2003	41,312	3,125,954	-
2004	41,499	1,304,519	-
2005	40,898	-	-
2006	30,110	-	-
2007-2016	445,653	-	-
	\$637,727	\$4,455,911	\$ 25,222

NOTE 4 - Major Customers:

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Fertilizer sales for the years ended December 31, 2001 and 2000 include \$146,824 and \$40,740, respectively, from one major customer. The customer is one of the largest fertilizer distribution companies in the country.

Silver and gold sales for the year ended December 31, 2001 includes \$154,800 and \$51,708 from two major customers. Silver and gold sales for the year ended December 31, 2000 includes \$49,144 and \$45,991 from two major customers.

Technical services revenue (including pass through funds described in Note 1) for the year ended December 31, 2001 includes \$281,042 and \$194,688 from two major customers which represents 59% and 41%, respectively, of technical services revenues. Technical services revenue (including pass through funds described in Note 1) for the year ended December 31, 2000 includes \$366,967 and \$301,483 from two major customers which represents 50% and 41%, respectively, of technical services revenues. Receivables from these major customers as of December 31, 2001 and 2000 amount to \$126,607 and \$137,632, which represents 97.5% and 77.4%, respectively, of consulting accounts receivable.

The Company's major technical services customers operate within the mining industry, both nationally and internationally. Due to the nature of the Company's operations, the major sources of sales revenues may change from year to year.

NOTE 5 - Income Taxes:

The following is a reconciliation of the federal statutory tax and tax rate to the Company's provision for taxes and its effective tax rate.

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ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

	<u>2001</u>		<u>2000</u>	
	PERCENT		PERCENT	
	OF		OF	
	PRE-TAX		PRE-TAX	
	<u>AMOUNT</u>	<u>INCOME</u>	<u>AMOUNT</u>	<u>INCOME</u>
Federal tax at statutory rate	\$-	- %	\$-	- %
Temporary differences, primarily bad debt and				

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compensation related expenses	-	- %	-	- %
Non-deductible expenses	-	- %	-	- %
Utilization of NOL	-	- %	-	- %
Total Income Tax Expense	\$-	0.0%	\$-	0.0%

The Company's consolidated net operating loss available for carryforward to offset future taxable income and tax liabilities for income tax reporting purposes expire as follows:

<u>Year Ending December 31:</u>	<u>Net Operating Loss</u>
2002	\$ 26,089
2003	14,737
2005	65,113
2006	430,403
2007	188,146
2008	113,253
2012	322,525
2018	377,944
2019	1,605,954
2020	3,254,375
2021	2,876,850
	\$9,275,389

The Company's total deferred tax assets, and deferred tax asset valuation allowances at December 31, 2001 and 2000 are as follows:

	<u>2001</u>	<u>2000</u>
Total deferred tax assets	\$ 3,265,475	\$ 2,298,877
Less valuation allowance	(3,265,475)	(2,298,877)

Net deferred tax asset	\$	-	\$	-
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## ITRONICS INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

## NOTE 6 - Stock Option and Purchase Plans:

The Company adopted a debt restructuring plan which included the private placement of its common shares and/or warrants to acquire common shares at a minimum of \$0.10 per share. The warrants issued under this plan are exercisable at varying dates through November 2, 2002.

On March 31, 1998 the Company began a private placement offering to raise \$2 million in equity funds. Included in the offering was one two year warrant for each two common shares acquired. A total of 5,000,000 warrants were issued in Tranche 1 and 2 of the offering, with an exercise price of \$0.25 and \$0.40 per share for years one and two of the exercise period, respectively. The warrants were exercisable at varying dates through January 2001.

In February 1999 the Company began the final tranche of the 1998 Private Placement. A total of 1,172,063 two year warrants were issued in connection with the final tranche, with an exercise price of \$0.75 and \$1.00 for years one and two of the exercise period, respectively. The warrants were exercisable at varying dates through August 2001.

In November 1999 the Company began a private placement of three year convertible notes to raise \$2.5 million. The placement was completed in February 2000 and raised a total of \$2,668,000. The notes and accrued interest are convertible to restricted Common Shares at varying dates through February 2003, with conversion prices ranging from \$0.50 to \$1.18.

In October 2000 the Company completed the registration of 10,000,000 common shares in connection with its agreement with Swartz Private Equity, LLC. (Swartz) to raise \$15 million over three years. As part of the agreement, Swartz received a five year warrant for 2,400,000 shares at \$0.55 per share and it received five year warrants for 331,033 shares based on the exercise of the Company's put rights during 2001. The exercise price of these warrants range from \$0.0825 to \$0.308, but are subject to downward reset provisions.

In March 2001 the Company began a private placement of three year convertible notes. A total of \$1,242,029 was raised in 2001. The notes and accrued interest are convertible to restricted common shares at varying dates through December 2004, with conversion prices ranging from \$0.10 to \$0.15.

In addition, the Company has granted options and warrants to acquire common shares to certain officers, directors, employees, and consultants of the Company. The options are exercisable at varying dates through December 2004, except for the 1,000,000 options granted to an officer/stockholder, which expire one year after the end of his employment. The number of outstanding options and warrants was 1,542,865 and 1,454,900 shares at December 31, 2001 and 2000, respectively.



## ITRONICS INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

Following is a summary of all warrant and option activity for the years ended December 31, 2001 and 2000.

	<u>NUMBER OF SHARES</u>	
	<u>2001</u>	<u>2000</u>
Under option, beginning of year	10,157,683	6,989,016
Granted	11,624,567	6,613,846
Exercised	(500,000)	(2,472,243)
Expired	(1,373,441)	(972,936)
Under option, end of year	19,908,809	10,157,683
Average price for all options granted and exercised	\$0.14	\$0.55

Compensatory Stock Options:

Included in the above options and warrants are compensatory options to acquire 87,965 and 353,900 common shares for December 31, 2001 and 2000, respectively. These options were granted to various employees and consultants at varying dates during 2001 and 2000. The options for 2001 are exercisable at any time over three years from the date of grant, with exercise prices of 1,065 shares at \$0.25, 15,000 shares at \$0.35, 15,900 shares at \$0.40, 32,000 shares at \$0.50, and 24,000 shares at \$0.90. The options for 2000 are exercisable at any time over three years from the date of grant, with exercise prices of 213,200 shares at \$0.25, 9,700 shares at \$0.40, 24,000 shares at \$0.50, 70,000 shares at \$0.75, and 37,000 shares at \$0.90. The Company applies APB Opinion 25 in accounting for these stock options. Total compensation, based on the fair market values of the stock on the grant dates is \$-0- and \$123,990 for December 31, 2001 and 2000, respectively. These amounts are being amortized over the three year lives of the options, which resulted in compensation expense of \$61,099 and \$55,278 for December 31, 2001 and 2000, respectively, and deferred compensation as of December 31, 2001 and 2000 of \$63,147 and \$124,246, respectively. 186,000 shares of prior year options were exercised during 2000.

If the Company were to apply the provisions of FASB Statement No. 123 to these options, using the fair value method, compensation expense would have been \$678 and \$173,686 for December 31, 2001 and 2000, respectively. Net loss and loss per share would have been impacted as follows:

	<u>2001</u>	<u>2000</u>
Net Income (Loss):		

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As reported	\$(3,653,750)	\$(4,131,722)
Pro forma	\$(3,593,329)	\$(4,250,130)

Earnings (Loss) per share:

As reported	\$ (0.0466)	\$ (0.0563)
Pro forma	\$ (0.0459)	\$ (0.0580)

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ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

The pro forma amounts were estimated using the Black-Scholes option pricing model with the following assumptions for 2001 and 2000:

	<u>2001</u>	<u>2000</u>
Dividend yield	0%	0%
Risk-free interest rate	5.02%	5.13%
Expected life	3 years	3 years
Expected volatility	21.64%	60.86%

NOTE 7 - Common Stock to be Issued:

The following summarizes stock transactions commencing prior to December 31, with stock issued or to be issued subsequent to that date:

	<u>2001</u>	<u>2000</u>
Payment of consulting and operating fees	\$ 33,232	\$ 47,050

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Payment of director fees	1,200	2,925
Payment of salaries	114,790	67,176
Payment of interest	3,738	-
	\$152,960	\$117,151

NOTE 8 - Accrued Expenses:

The following is the composition of accrued expenses as of December 31:

	<u>2001</u>	<u>2000</u>
Accrued salaries and vacation	\$ 59,118	\$ 51,829
Federal and state payroll taxes	170,391	21,239
Sales tax	34,182	564
Audit and annual meeting costs	56,000	53,000
	\$319,691	\$126,632

NOTE 9 - Related Party Transactions:

Several promissory notes are held by stockholders at December 31, 2001 and 2000 (see Note 3 for terms).

ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

\$98,383 and \$46,654 of the accrued management salaries as of December 31, 2001 and 2000, respectively, is for salary in arrears due to several officer/stockholders and employee/stockholders. Of the above amount, \$22,254 is due a former officer/stockholder of Whitney & Whitney, Inc. for salary in arrears as of December 31, 2001. The individual retired on December 31, 1998 and will receive payment of the back salary over several years. The individual has agreed not to make demand for \$15,054 of the arrearages prior to January 1, 2003. Interest, compounded monthly at

12% per annum, amounted to \$4,635 and \$4,923 for 2001 and 2000, respectively. Total accrued interest due this individual is \$14,953 at December 31, 2001. Interest accrued at 12% per annum on salary due other officer/stockholders in 2001 amounted to \$3,738, and was paid in 2002 by issuance of 26,550 shares of restricted common stock.

Consulting and labor services amounting to \$636,377 and \$860,642 for 2001 and 2000, respectively, were paid by issuance of 3,948,381 and 1,163,798 shares, respectively, of common stock. The shares were or are to be issued at varying dates in 2000, 2001 and 2002.

After approval from the Company's Board of Directors, in March 1999 the Company's subsidiary, WWI, agreed to provide technical services to Golden Phoenix Minerals, Inc. (Golden), a junior mine exploration and development company whose common shares trade on the OTC Bulletin Board. Services are billed monthly and WWI receives a combination of Golden common stock, SEC Rule 144 restricted common stock, and cash. Separately, Dr. Whitney personally agreed to acquire up to 10,000,000 common shares of Golden at \$0.10 per share, making him beneficial owner of more than ten percent of Golden. Any unexercised options under this arrangement can be assigned to WWI. Dr.'s Whitney and Cavell are principals in a group that controls the mining claims underlying one of Golden's two principal exploration and development properties. At December 31, 2001 and 2000 WWI owned 200,000 unrestricted Golden shares, and 2,789,042 and 1,594,366, respectively, Rule 144 restricted Golden shares. The initial Rule 144 one year period for resale began in April 2000, and continues monthly thereafter. Total amount billed for 2001 and 2000 was \$194,688 and \$301,483, respectively. A total of \$123,757 and \$101,163 is included in accounts receivable at December 31, 2001 and 2000, respectively. At December 31, 2001, the average bid/asked price for Golden common was \$0.105, resulting in a value of shares held on that date of \$313,849.

In the fourth quarter of 2000, the Company's subsidiary, IMI, entered into a purchase and refining agreement with Golden to process and resell Golden's gold production from its mining operations. IMI processes the gold and sells it to an independent third party. Gold sales under this agreement were \$107,813 and \$49,144 for 2001 and 2000, respectively.

For related party transactions subsequent to December 31, 2001, see Note 14.

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ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

NOTE 10 - Lease Commitments and Rent Expense:

Operating Leases

The Company leases its corporate office facility under a non-cancelable agreement which expires June 30, 2002. Monthly payments are \$4,868.

A wholly owned subsidiary of the Company, IMI, leases storage facilities on a month-to-month basis and, therefore, no long-term binding contractual obligation exists with regards to minimum lease payments. The monthly rent payment is \$1,000.

The Company is committed under non-cancelable operating leases for the use of office space, a vehicle and office equipment. The monthly lease payments total \$3,475 and expire on various dates through the year ending December 31, 2006.

Future minimum rental commitments at December 31, 2001, under these operating lease agreements are due as follows:

2002	\$59,439
2003	9,184
2004	7,261
2005	7,261
2006	4,235
	\$87,380

Total rental expense included in the statements of operations for the above leases for the years ended December 31, 2001 and 2000 are \$108,940 and \$115,710, respectively.

#### Capital Leases

In December 1998 the Company entered into a lease agreement to acquire two computers. The lease term is for three years, with monthly payments of \$154. There is a \$1 purchase option at the end of the lease.

At varying dates in 1999 the Company's subsidiaries, WWI and IMI, entered into leases to finance the equipment for the manufacturing facility in Reno/Stead, Nevada and for computer equipment. The leases totaled \$987,315. Of this amount \$408,788 was received in cash, of which \$65,033 was in connection with two sale/leaseback transactions of computer and office equipment. The lease periods range from three to five years, and the total monthly lease payments are \$24,192. With the exception of two leases, all have buyout options for \$1 at the end of the lease. The remaining two leases have buyout provisions totaling \$9,667.

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At varying dates in 2000 the Company and its subsidiaries entered into leases primarily for financing purposes. The leases totaled \$543,832, of which \$437,636 was received in cash. The lease periods range from three to five years, and the total monthly lease payments are \$13,737. All the leases have buyout options for \$1 at the end of the lease.

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At varying dates in 2001 the Company and its subsidiaries entered into leases both for new plant equipment and for financing purposes. The leases totaled \$288,881, of which \$192,282 was received in cash. The lease periods range from four to five years, and the total monthly lease payments are \$7,413. All the leases have buyout options for \$1 at the end of the lease, with the exception of one lease which has a fair market value purchase option at the end of the lease, which is anticipated to be a nominal amount.

As of December 31, 2001 lease payments totaling \$106,198 were in arrears but were paid subsequent to December 31, 2001. As of March 29, 2002 lease payments totaling \$105,381 are in arrears. The Company is making ongoing payment arrangements with the lessors to avoid action that may be adverse to the Company.

All of the above described leases are secured by the equipment acquired or financed under the lease.

Future minimum lease commitments at December 31, 2001 are due as follows:

2002	\$ 649,308
2003	531,870
2004	379,037
2005	114,689
2006	11,321
	1,686,225
Less: amounts representing interest	(376,996)
	\$1,309,229

### NOTE 11 - Business Segments:

The Company and its subsidiaries operate primarily in two business segments as identified in Note 1. The following defines business segment activities:

Photobyproduct Fertilizer:                      Photobyproduct recycling,  
    Silver recovery,  
    Fertilizer production and Sales

Mining Technical Services:                      Mining industry services

The photobyproduct fertilizer segment operates principally in the Northern Nevada and Southern California areas and, to a lesser extent, the Northern California area. The primary source of revenue for this segment is from the pick-up and processing of photobyproducts, recovery of

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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silver therefrom, and sales of Gold n Gro fertilizer products. The customer base is diverse and includes organizations in the photo-processing, printing, x-ray and medical fields. Fertilizer sales are concentrated in the same geographic markets and the customer base is principally in commercial markets, including golf courses, turf farms, and specialty agriculture which includes vegetables, fruit, and nut trees.

The mining technical services segment performs its services primarily out of the Company's Reno, Nevada offices, but its source of clients is not limited to organizations based locally. It has served both national and international clients in the past. As discussed in Note 4, at present the segment is serving primarily two clients in the gold mining industry, who have several operations in different areas of the United States.

The Company measures segment performance based on operating income or loss. At present there are no intercompany revenues. Costs benefiting both segments are incurred by both the Company and by Whitney & Whitney, Inc. Such costs are allocated to each segment based on the estimated benefits to the segment. General and administrative costs incurred by the Company that have no other rational basis for allocation are divided evenly between the segments. Cost allocation percentages are reviewed annually and are adjusted based on expected business conditions for the year.

Operating income (loss) by business segment:

	<u>2001</u>	<u>2000</u>
Photobyproduct Fertilizer:		
Revenues:		
Fertilizer sales	\$ 180,435	\$ 119,634
Photobyproduct recycling	239,126	192,768
Silver and gold sales	246,115	190,322
	665,676	502,724
Cost of sales and operating expenses	3,319,294	3,533,251
Research and development	50,142	41,496
Plant start-up costs	-	174,979

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	3,369,436	3,749,726
Operating (Loss)	\$(2,703,760)	\$(3,247,002)

Mining Technical Services:

Technical services revenues	\$ 477,577	\$ 726,699
Cost of sales and operating expenses	765,692	1,098,156
Operating (Loss)	\$(288,115)	\$(371,457)

General and administrative expenses of \$159,527 and \$235,054 incurred by Itronics Inc. were equally divided between the two segments for 2001 and 2000, respectively.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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Reconciliation of segment revenues, cost of sales, gross profit (loss), and operating income (loss) to the respective consolidated amounts:

	<u>2001</u>	<u>2000</u>
Revenues		
Photobyproduct Fertilizer	\$ 665,676	\$ 502,724
Mining Technical Services	477,577	726,699
Consolidated Revenues	\$ 1,143,253	\$ 1,229,423
Cost of Sales		
Photobyproduct Fertilizer	\$ 1,039,300	\$ 828,349
Mining Technical Services	376,579	607,096
Consolidated Cost of Sales	\$ 1,415,879	\$ 1,435,445



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Gross Profit (Loss)		
Photobyproduct Fertilizer	\$ (373,624)	\$ (325,625)
Mining Technical Services	100,998	119,603
Consolidated Gross Profit (Loss)	\$ (272,626)	\$ (206,022)

Operating Income (Loss)		
Photobyproduct Fertilizer	\$(2,703,760)	\$(3,247,002)
Mining Technical Services	(288,115)	(371,457)
Consolidated Operating Income (Loss)	(2,991,875)	(3,618,459)
Other Income (Expense)	(661,875)	(513,263)
Consolidated Net Income (Loss) before taxes	\$(3,653,750)	\$(4,131,722)

Other segment information:	<u>2001</u>	<u>2000</u>
Capital expenditures by business segment:		
Photobyproduct Fertilizer	\$ 151,763	\$ 695,217
Mining Technical Services	1,459	187,565
Consolidated Capital Expenditures	\$ 153,222	\$ 882,782

Depreciation and amortization expense by business segment:

Photobyproduct Fertilizer		
Depreciation	\$ 160,845	\$ 118,155
Amortization	144,862	76,889
	305,707	195,044

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Mining Technical Services

Depreciation	18,083	13,752
Amortization	27,626	15,467
	45,709	29,218
Consolidated Depreciation and Amortization	\$ 351,416	\$ 224,262

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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Identifiable assets by business segment (net of accumulated depreciation, accumulated amortization, and allowance for doubtful accounts):

<u>ASSET DESCRIPTION</u>	<u>2001</u>		<u>2000</u>	
	<u>PHOTO- BYPRODUCT FERTILIZER</u>	<u>MINING TECHNICAL SERVICES</u>	<u>PHOTO- BYPRODUCT FERTILIZER</u>	<u>MINING TECHNICAL SERVICES</u>
Current Assets				
Cash	\$ 8,599	\$ 4,066	\$ 11,892	\$ 3,838
Accounts receivable, net	40,782	126,194	43,718	174,001
Account receivable, lease equipment financing	-	-	2,809	-
Inventories	316,769	1,826	266,893	1,826
Deferred loan fees, current	36,234	9,991	20,500	5,410
Prepaid expenses	47,612	3,397	50,617	4,532
	449,996	145,474	396,429	189,607

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Property and Equipment, net				
Land	215,000	-	215,000	-
Building and improvements	998,573	-	1,025,532	-
Construction in progress,				
manufacturing facility	86,884	-	48,506	-
Leasehold improvements	778	-	801	-
Equipment	995,509	114,825	1,051,341	148,505
Vehicles	62,283	1,287	83,089	2,325
Equipment under capital lease	589,827	174,275	572,039	210,840
	2,948,854	290,387	2,996,308	361,670
Other Assets, net				
Patents, trademarks, and other	10,171	-	11,227	-
Marketable securities	-	313,849	-	228,782
Inter-company investments/loans	-	1,745,665	-	1,435,705
Deposits	18,387	19,812	11,057	19,812
Deferred loan fees	121,581	16,590	70,023	16,312
	150,139	2,095,916	92,307	1,700,611
	\$3,548,989	\$2,531,777	\$3,485,044	\$2,251,888

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ITRONICS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001 AND 2000

Reconciliation of segment assets to consolidated assets:

	<u>2001</u>	<u>2000</u>
Total Assets:		

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Photobyproduct Fertilizer	\$ 3,548,989	\$ 3,485,044
Mining Technical Services	2,531,777	2,251,888
Total Segment Assets	6,080,766	5,736,932
Itronics Inc. assets	16,278,194	12,622,324
Less: inter-company elimination	(17,800,700)	(13,749,750)
Consolidated Assets	\$ 4,558,260	\$ 4,609,506

NOTE 12 - Going Concern:

The Company's consolidated financial statements have been presented on the basis that it is a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The Company and its subsidiaries have reported recurring losses from operations, including a net loss of \$3,653,750 during the year ended December 31, 2001, a negative working capital of \$911,082, and a stockholders' deficit balance of \$2,941,122 as of December 31, 2001. These factors indicate the Company and its subsidiaries' ability to continue in existence is dependent upon their ability to obtain additional long-term debt and/or equity financing and achieve profitable operations. 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 the Company and its subsidiaries be unable to continue in existence.

Prior to acquiring Whitney & Whitney, Inc. in 1988, the Company registered 1,777,000 common shares for public offering. Due to security law changes immediately subsequent to the offering, the offering did not raise sufficient equity capital to complete the Company's business plan. In order to solve the Company's liquidity problems, management implemented a plan of obtaining equity through private placements of preferred and common shares, conversion of debt to common shares, and payment of consulting and other labor services with common shares.

In addition to continuing the above described efforts, development of the technology necessary to manufacture fertilizer from photobyproducts has been completed. In March 1998 the Company's subsidiary, Itronics Metallurgical, Inc., signed a definitive manufacturing and distribution agreement with Western Farm Services, Inc. (WFS). The agreement gives WFS the exclusive license and right to manufacture and market the Golden Gro line of fertilizer products in the states of Arizona, California, Hawaii, Idaho, Oregon and Washington. The agreement is for five years, with five year renewal options.

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In January 2000 the Company began a Private Placement of 9% Convertible Promissory Notes to raise \$2.5 million. A total of \$2,631,000 was received. In addition, a total of \$711,239 was received in 2000 from the exercise of warrants from the 1999 and earlier private placements.

In October 2000 the Company completed the registration of 10,000,000 common shares in connection with its agreement with Swartz Private Equity, LLC. to raise \$15 million over three years. The Company received \$296,922 under this agreement during the year ended December 31, 2001.

In March 2001 the Company began a Private Placement of 12% Convertible Promissory Notes and received a total of \$1,232,029 during the year ended December 31, 2001. The Private Placement has been extended into 2002, and through March 29, 2002, an additional \$614,500 has been raised.

NOTE 13 - Off-Balance Sheet Risks and Concentration of Credit Risk:

The Company occasionally maintains bank deposits in excess of federally insured limits. The Company's risk is managed by maintaining its accounts in one of the top five largest banks in the country.

As of December 31, 2001, a significant portion of the Company's accounts receivable is concentrated with one mining industry client. This concentration of credit risk is somewhat mitigated due to the fact that WWI is closely assisting the client with its capital raising efforts and with development of its mining and exploration projects.

Increase or decrease in photobyproduct recycling service and silver extraction revenues has a direct relationship with federal, state, and local regulations and enforcement of said regulations. Fertilizer revenues could be impacted by crop cycles, seasonal variations, and weather patterns.

The ability to recognize a net profit from silver recovery sales is based on the fair market value of silver (London five day average) at the time the photobyproducts are obtained versus the fair market value of silver when recovered silver is sold. Most customers are given an 80% silver credit against recycling services based on the content of silver in the photobyproducts. If the fair market value of silver declines, the possibility exists that the 80% credit, plus operating costs associated with the silver extraction, could exceed the revenues generated at the time the silver is sold.

Management's plan to reduce the market risk of silver is to increase the volume of photobyproducts and the resultant silver recovery, and then to implement a hedging program in which silver will be sold forward, thereby matching the price to be received to the price paid to the Company's customers.

As a handler of photobyproduct materials, the Company is subject to various federal, state, and local environmental, safety, and hazardous waste regulations. The Company believes that its policies and procedures for handling hazardous wastes are in compliance with the applicable laws and regulations and are consistent with industry standards. Costs for these compliance

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ITRONICS INC. AND SUBSIDIARIES

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activities are expensed as incurred. As the Company's photobyproduct fertilizer business expands, the various laws and regulations that are applicable to the Company's activities will change. During 1996, the Company received concurrence from the State of Nevada environmental officials that the Company's photobyproduct fertilizer process meets the existing requirements for exemption from all environmental regulations, except toxic metal content standards, and with the exception that certain presently conducted lab analyses of the photobyproducts will continue to

be required. Certain of the Company's large scale customers presently meet the exemption requirements. Once all the photobyproducts are utilized in the fertilizer or other commercial products, all the Company's customers will be exempt.

NOTE 14 - Subsequent Events:

Subsequent to December 31, 2001, \$614,500 was received from the private placement of three year 12% convertible notes. The notes are convertible into restricted common stock at prices of \$0.15 to \$0.25 per share. The Company may call the notes prior to the due date and, in that event, the note holder will have thirty days to decide whether to convert the note and interest to stock.

Subsequent to December 31, 2001, new capital leases in the amount of \$111,956 (original principal amount) were incurred primarily for acquisition of plant equipment.

Subsequent to December 31, 2001 an officer/stockholder loaned WWI \$125,000 and 600,000 shares of GPXM stock, which was subsequently sold for \$83,045. WWI subsequently repaid 200,000 shares of the GPXM stock out of shares already held by it.

On February 27, 2002 the Amended and Restated Investment Agreement was completed with Swartz Private Equity, LLC. (Swartz). The Agreement was amended to eliminate future warrants to be granted to Swartz related to the Company's exercise of its put rights. In partial consideration for the execution of the Agreement, Swartz received an additional commitment warrant to purchase 360,000 shares of common stock at an exercise price of \$0.238 per share. Other significant changes to the agreement include extending the term to February 27, 2004, eliminating the six month minimum commitment fee, eliminating the right of first refusal on capital raising transactions and easing restrictive covenants on such transactions.

The following summarizes common stock activity from January 1, 2002 through March 29, 2002:

	<u>ISSUED</u>		<u>TO BE ISSUED</u>	
	<u>SHARES</u>	<u>AMOUNT</u>	<u>SHARES</u>	<u>AMOUNT</u>
Labor and consulting services	1,247,745	\$275,739	-	\$ -
Director fees	7,500	1,200	-	-
Conversion of notes payable and accrued interest	56,540	34,851	-	-
Interest on deferred salaries	26,550	3,738	-	-
Warrant exercise	-	-	100,000	10,000
	1,338,335	\$315,528	100,000	\$10,000

## ITRONICS INC. AND SUBSIDIARIES

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In addition, approximately \$69,000 in labor and consulting services has been incurred in the first quarter 2002 that will be paid in stock.

## NOTE 15 Earnings (Loss) Per Share:

Following is a reconciliation of Net Income (Loss) and Weighted average number of shares outstanding, in the computation of earnings (loss) per share (EPS) for the years ended December 31, 2001 and 2000.

	<u>2001</u>	<u>2000</u>
Net Income (Loss)	\$(3,653,750)	\$(4,131,722)
Less: Preferred stock dividends	-	-
Basic EPS income (loss) available to common stockholders	\$(3,653,750)	\$(4,131,722)
Weighted average number of shares outstanding	78,349,197	73,324,348
Common equivalent shares	-	-
	78,349,197	73,324,348
Per share amount	\$ (0.0466)	\$(0.0563)

Warrants, options, and shares to be issued, totaling 21,274,807 and 8,014,432 shares as of December 31, 2001 and 2000, respectively, could potentially dilute future EPS. No diluted EPS is presented as the effect of including these shares is antidilutive.

SIGNIFICANT SUBSIDIARIES

EXHIBIT 21

<u>NAME</u>	<u>STATE OF INCORPORATION</u>	<u>NAMES UNDER WHICH THEY DO BUSINESS</u>
Whitney & Whitney, Inc.	Nevada	Same
Itronics Metallurgical, Inc	Nevada	Same
Itronics California, Inc.	California	Same
Nevada Hydrometallurgical Project (A Partnership)	Nevada	Same
American Hydromet (A Joint Venture)	Nevada	Same

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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.

ITRONICS INC.

Date: April 11, 2002

By: /S/ JOHN W. WHITNEY

John W. Whitney

President, Treasurer and Director

(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Company and in the capacities and on the dates indicated.

Date: April 11, 2002

By: /S/ JOHN W. WHITNEY

John W. Whitney

President, Treasurer and Director

(Principal Executive and Financial  
Officer)

Date: April 11, 2002

By: /S/ MICHAEL C. HORSLEY



Michael C. Horsley

Controller

(Principal Accounting Officer)

Date: April 11, 2002

By: /S/ PAUL H. DURCKEL

Paul H. Durckel

Director

Date: April 11, 2002

By: /S/ ALAN C. LEWIN

Alan C. Lewin

Director