## Press Release Archives: 11/20/2018

Itronics Inc. (OTC:ITRO), a diversified producer of GOLD'n GRO zinc fertilizers and silver products and a green "Zero Waste" technology development Company, today announced sales results and summarized its operations and growth projects for the third quarter and first nine months ended September 30, 2018.

Total third quarter sales were up 10.8 percent, driven by a 19 percent increase in GOLD'n GRO fertilizer sales. Total Revenues for the nine months ended September 30, 2018 were \$1,010,250 compared to \$1,431,342 in the same period in 2017. The nine-month sales decrease is because GOLD'n GRO fertilizer sales were significantly lower in the first half of 2018 compared to the 2017 first half due to adverse weather conditions in the Company's major California markets.

GOLD'n GRO sales continue strong, with the fourth quarter through November 15, 2018 being 50 percent higher than the comparable 2017 fourth quarter period, demonstrating the effectiveness of Itronics' expanded sales effort. This effort was catalyzed by addition of two sales persons in the third quarter. One of these persons is highly experienced in all aspects of sales development and management and has been brought on board to become GOLD'n GRO sales manager.

Silver bullion sales were down compared to the prior year period due to delays in producing high grade silver concentrate which is used as raw material for the Company's Breakthrough E-Scrap (computer waste) refining technology. Preparation of another bullion shipment is nearing completion and is expected to be shipped in December. Due to timing of settlements, sales revenue from this shipment is expected to be reported in the first quarter of 2019.

In a press release dated November 13, 2018 the Company announced that it has successfully completed start up testing of a centrifuge that will be used in its hydrometallurgical operations to perform liquid/solids separations. It has been taking about five months to do the liquid/solid separations to produce enough high-grade silver concentrates to support a refining campaign to produce a bullion shipment. The centrifuge will shorten the production time to less than a month and completely eliminate this bottleneck.

During the third quarter the Company reported that its E-Scrap circuit board supplier, NEW2U Computers, has become the first nonprofit in northern Nevada to achieve the Responsible Recycling (R2:2013) certification. This certification is designed to help ensure the quality, transparency, environmental and social responsibility of electronics recycling facilities and their downstream vendors including Itronics.

The Company is continuing to research the use of its KAM-Thio technology. It has one mining application research project underway with Comstock Mining Inc. whose operations are located near Virginia City, Nevada. Itronics subsidiary, Whitney & Whitney, Inc., is developing a process flowsheet that is being designed specifically to benefit from the mineral characteristics of the leached rock in Comstock Mining's American Flat stockpile at its Virginia City operations. Based on test work completed to date, it appears that after removal of metal, nitrogen, sulfur and other impurities it may be possible to use the washed rock to prepare saleable aggregate and mineral materials. Further testing is planned. The ability to sell the stockpile materials would make this a "Zero Waste" process for mining and would create a new industrial minerals revenue stream from silver and gold mining in the Comstock Mining District.

The Company has identified a category of industrial cyanide contaminated waste generated by the Aluminum Industry as a potential candidate for clean up using the KAM-Thio technology. The waste stream is "Spent Potliner" and is typically heavily contaminated with cyanide generated during the aluminum smelting process. Discussions are underway to establish an R & D program to determine if the KAM-Thio technology can clean up this material. If it can, then it may be possible to create a new "Zero Waste Technology."

Spent Potliner is generated as a waste product at all of the world's aluminum smelters. Presently there is not a technology that is able to economically clean up this material and make it environmentally safe. The Company has completed a global review of the published research into the characteristics of this material and concluded that the KAM-Thio technology may work to clean this material so that its components may be used to produce commercial products for sale. Discussions are underway with certain potentially interested aluminum smelting companies to establish a test program to determine if the KAM-Thio technology can clean up the Spent Potliner. The R & D project is expected to include funding to cover Itronics' evaluation costs.

During the third quarter the Company began testing a zinc and manganese containing waste material being generated by a large alkaline battery recycling company to determine if zinc and manganese ingredients can be produced for use in manufacturing the GOLD'n GRO micronutrient fertilizers. Initial tests have been positive and so the Company plans to continue to evaluate this material.

On October 23, 2018 Itronics announced that its subsidiary, Whitney & Whitney, Inc., has measured surface 0.4 ounce per ton gold and 5 percent copper at the Auric Gold & Minerals, Inc. Fulstone Silver Zinc Copper Gold exploration project, which is located in the Yerington Mining District in Nevada. Previous surface sampling has shown the presence of anomalous silver, zinc, copper, and lead. Interested readers should refer to the press release for additional information.

## 2018 First Nine Month Sales Results

Unaudited Revenues for the third quarter, and 9 months ended September 30, 2018 together with comparative figures for 2017 are presented below:



#### **Operational Developments**

Itronics is aggressively advancing development of its sustainability maximizing portfolio of new "Zero Waste" technologies whose objective is to create new non-seasonal lines of business using the Company's core technologies. The Company's plan is to operate these technologies and to expand the scale of operations as funding and market conditions permit. The current focus of the hydromet and pyromet refining technology extensions is on pilot scale development of refining e-scrap that contains recoverable silver, gold, and palladium and recoverable base metals including copper and tin, while at the same time recovering iron and sulfur for use as raw materials for manufacturing GOLD'n GRO micronutrient zinc fertilizers.

The Company's 3.5 acre site with a 35,000 square foot manufacturing plant in Stead, Nevada is a major asset and is strategically located near a rail siding. It is next to the Reno-Stead Airport, and is being used for chemical processing and manufacturing. This facility is also the Company's research and development site. Itronics expects this property to continue to increase in value as the Company continues to expand its manufacturing and research and development on new "Zero Waste" technologies.

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In early May the Company announced that it had acquired an exclusive one-year option to purchase a 48-acre, 60,000 square foot manufacturing facility located at Wabuska, Nevada for a purchase price of \$1.6 million. The site is zoned for fertilizer manufacturing, chemical manufacturing, and foundry operations. It has four dry product silos and four liquid product tanks with a total volumetric capacity of almost 300,000 gallons and is adjacent to a rail siding. The purchase option includes almost nine acre feet of water rights and there are two water wells on site. The site includes a large electrical power supply and a large natural gas supply. This is a long-term strategic site acquisition for commercial expansion of Itronics portfolio of "Zero Waste Technologies".

GOLD'n GRO Fertilizers. During the first 20 years of its distribution agreement with Nutrien Ag Solutions, the GOLD'n GRO line of eleven Greentech fertilizers was created, field tested, and labeled for use in Nevada, California and other states. Commercial sales of its GOLD'n GRO 9-0-1+7% Zn began in 2002 in California, followed by GOLD'n GRO 9-0-2 +3% Zn microblend in 2004. The GOLD'n GRO micronutrient fertilizer sales have grown substantially since that time.

These fertilizers are very competitive because of superior field demonstrated effectiveness in providing micronutrients when applied through drip and microsprinkler irrigation for tree crops such as almonds and pistachios, vegetable crops such as tomatoes, and lettuce, field crops such as cotton and sileage corn, and for wine and table grapes in the central valley in California. The GOLD'n GRO fertilizers benefit commercial growers by improving crop quality and yield, and by improving the tilth of the soil when used for soil application over a period of several years.

The Greentech base liquids for these fertilizers are manufactured at the Reno facility using spent de-silvered photographic liquids. The Company's hydromet processing is now recovering iron and sulfur for use as raw materials for manufacturing GOLD'n GRO micronutrient fertilizers. Being able to source high-quality low-cost zinc from zinc flue dusts and other zinc-bearing powders in the future is expected to contribute to longer term stable competitive pricing to our distributors for these Greentech based high quality fertilizers.

Access to rail service is expected to make the GOLD'n GRO micronutrient fertilizers cost competitive nationally in bulk when shipped by rail. The Company's goal is to use the reduced cost that rail delivery provides to establish a significant national market share in zinc, iron, and manganese micronutrient fertilizers. The Company also plans to use the proven long-term stability of these fertilizers to develop an international market for the GOLD'n GRO fertilizers. The Wabuska Manufacturing Facility will be used by the Company to expand its operations to meet the needs of the national and international markets.

In March 2017 Itronics announced that its goal for minimum stable storage of four years for its GOLD'n GRO micronutrient fertilizers has been significantly exceeded. Stability has now been demonstrated to exceed eleven years. GOLD'n GRO micronutrient liquid zinc fertilizer is now stable enough so that a customer from anywhere in the world could purchase the fertilizer, ship it a long distance, hold it in a warehouse until needed, and then use it, or distribute it to farmers or farm retailers for seasonal needs.

A potential customer can justify purchasing GOLD'n GRO in larger quantities for use over more than one fertilizer season due to freight cost savings that greatly exceed the interest cost of the funds used to make the purchase. The freight savings make this a profitable transaction for United States based customers, both distributors and growers. The Company believes that this interest cost saving compared to shipping cost would apply to foreign purchasers as well.

In May 2017 the Company placed a consumer fertilizer, GOLD'n GRO 6-3-9+4% Sulfur, for retail sales through Buy Nevada First Gift Shop, located at 4001 S. Virginia St. in Reno. The fertilizer is a plant food for use on house plants and garden plants and has been generating on-going sales. Due to the enthusiastic customer response to this fertilizer, the Company added a lawn fertilizer, GOLD'n GRO 20-1-7+3% Sulfur, to this retail offering. This fertilizer is for lawns and can be used for fertilization from early spring to late fall. The Company started this retail program in response to many northern Nevada customer requests.

In 2016 The Company identified a new environmental benefit that may be obtained by using GOLD'n GRO fertilizers to reduce the uptake of cadmium from the soil by vegetable crops.

The Company's distributor performed field tests in 2016 that demonstrated that two of the GOLD'n GRO fertilizers, when applied together, are able to reduce cadmium uptake from high cadmium content soil by broccoli and romaine lettuce to a level of "non-detect" in harvestable plants. Two application approaches have been identified to reduce cadmium soil availability to the plants. This new program requires some changes to farming practices and may increase farming costs, so implementation of this new fertilization program to control cadmium uptake in vegetables is on hold until regulatory issues pertinent to control of cadmium in food crops are resolved.

E-Scrap Refining and Silver Production. The Company is now operating its refining operation on an intermittent basis. Its development focus is on optimizing furnace operating procedures and on optimizing the refining chemistry. This work is providing quantitative data that is being used to evaluate the profitability of refining e-scrap to recover its silver, gold, palladium, copper, and tin content. The refining operation is producing green energy, silver bullion, and silver-bearing glass. The production is non-seasonal and will increase Itronics sales as production continues and expands in 2019 and future years.

Now that intermittent e-scrap refining is underway, the Company is focusing on expanding the FeLix, SuLix hydromet pilot plant and improving its operational efficiency. The addition of a centrifuge to the process will be a significant step in expanding this operation. The Company is now planning on installing and expanding the hydrometallurgy leaching operations at its new Wabuska location where it has room to do this at a scale that will be required for larger commercial operations.

The FeLix, SuLix leaching technology pilot operation five times scale up is fully operational for use for batch leaching. It is being used as a pilot-scale batch operation to separately leach iron and sulfur from the low-grade silver concentrate produced by the Company in its photoliquid de-silvering operation. This project is intended to supply the high silver content concentrates required by the e-scrap refining operations.

The leaching operations have become a production bottleneck due to the length of time required to separate the leaching liquid from the residual silver-bearing solids using standard filtration methods. It now takes about five months to do this for both process steps and to produce enough material for production of a silver bullion shipment. The Company is planning to use centrifuge technology to resolve this bottleneck. Laboratory centrifuge studies have been on-going and have provided the technical information needed to specify a suitable type of centrifuge for this operation. A pilot scale centrifuge has been located and is being rented, with an option to purchase if the pilot scale testing is successful. Testing of this machine was completed in early November. The completed testing demonstrates that the centrifuge will shorten the five- month elapsed time to one month or less. The Company has now made arrangements to purchase the centrifuge.

The Company's strategic joint venture with Disability Resources New2U Computers, which employs people with disabilities, is providing a reliable supply of circuit boards that have been stripped to the Company's specifications for processing. The Company has entered into an agreement for sales of its silver

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bullion, and a separate agreement for sales of its silver-copper bearing glass. With these agreements in place, the financial terms are known and sales can be increased as production expands. The green energy generated by the breakthrough refining process is reducing the power cost for refining by about 50 percent.

New2U Computers is now Itronics main supplier of scrap circuit boards. Receipt of the R2:2013 certification is providing New2U Computers the credibility to acquire new and larger recycling contracts with local businesses, including hospitals and waste management companies, which is making it possible for New2U Computers to increase the supply of E-Scrap circuit boards to support Itronics refining expansion.

Disability Resources/New2U Computers has also received ISO 14001:2015 and OHSAS 18001:2007 certifications and is the first northern Nevada nonprofit to receive these certifications. Disability Resources supports approximately 150 children and adults in all of its programs. Part-time employment and job training are provided.

Research into availability of e-scrap in northern Nevada has identified a large enough supply of circuit boards (e-scrap) to support a hundred times increase in the Company's pilot scale e-scrap refining operation. The Company has now begun planning to expand the pilot operation in stages, by adding more furnaces, to increase the capacity of the operation by at least 100 times.

KAM-Thio Process Development. The KAM-Thio technology is being developed by re-purposing one of the already proven and field tested GOLD'n GRO fertilizers. Development of this technology is expected to add non-seasonal sales from the silver/gold mining industry, and potentially from other industries.

The Company has been informed about a large industrial waste stream (Spent Pot Liner generated in aluminum refining) where it may be possible to use the KAM-Thio technology to neutralize cyanide and recover commercial products for sale (new "Zero Waste" Technology). Discussion as to how this might be accomplished has been underway for some time with certain potentially interested parties. At this point it looks like joint-venture development is going to be the best approach. The waste stream is very large, is generally classified as a toxic waste, and is produced at aluminum refining sites world-wide, but is not associated with production of precious metals. This project is expected to include funding to reimburse ltronics costs for the testing to determine if KAM-Thio will work on this material.

The Company has three commercial objectives for KAM-Thio commercial joint venture development: (1) non-seasonal sales of KAM-Thio chemistry, (2) using its proprietary technology for recovering silver and other metals from liquids, when applicable, to recover the metals from the KAM-Thio leaching liquids to produce silver-bearing concentrates for processing by the Company, (3) licensing fees or profit sharing to provide a return on the large cumulative investment that Itronics has made to create this revolutionary breakthrough technology, (4) to create additional "Zero Waste Technologies" to include the sale of different commercial products.

The Company's plan is to introduce and operate the KAM-Thio technology through licensing joint ventures with mining companies that have suitable silver/gold deposits and leached mine tailings that need remediation. In house study of the requirements to actually use KAM-Thio leaching at a mine site indicates that a recovery system consisting of leaching followed by metal recovery will have to be developed as a customized process for each mine that is considered. The new processing system will include neutralization of residual cyanide in the ore that is being treated making this a revenue producing environmental remediation and metal recovery process that is non-seasonal.

The Company is continuing to work cooperatively with Comstock Mining Inc. whose operations are located in the Comstock Mining District near Virginia City, Nevada. Itronics subsidiary, Whitney & Whitney, Inc. is developing a process flowsheet that is being designed specifically to benefit from the mineral characteristics of the leached rock in Comstock Mining's American Flat stockpile at its Virginia City operations. Based on test work completed to date, it appears that after removal of metal, nitrogen, sulfur and other impurities it may be possible to use the washed rock to prepare saleable aggregate and mineral materials. Further testing is planned to evaluate this possibility. The ability to sell the stockpile materials, would make this a "Zero Waste" process for mining and would create a new industrial minerals revenue stream from silver and gold mining in the Comstock Mining District.

Zinc Flue Dust Process Development. An Itronics press release dated March 17, 2015 announced a technical breakthrough by successfully testing electrowinning as a process to recover metallic zinc powder from zinc enriched liquids that are produced by leaching zinc oxide from zinc bearing flue dust. The innovative zinc recycling technology Itronics is developing is expected to eliminate the waste completely by converting all components to saleable goods (a new "Zero Waste Technology). The process being developed may use up to 40 percent less electrical energy compared to conventional zinc refining. The potential energy savings would be a strong economic driver for the project. This work was put on hold in the second half of 2015 while higher priority projects are being completed.

Development of the zinc flue dust recovery technology is desirable to the Company due to cost savings that could be achieved by using recovered zinc to replace primary zinc that is currently purchased for manufacture of the GOLD'n GRO zinc micronutrient fertilizers.

The Company's smaller leach reactor system is being upgraded so that it can be used for the necessary pilot scale leaching test work that must be completed to perfect the new process. A time table to proceed with this work has not yet been established. The Company has reached agreement with a zinc flue dust producer who will supply material for testing once a decision is made to proceed with this development project.

Itronics plans to develop and expand the zinc flue dust processing technology at its Wabuska location.

Battery Recycling Evaluation: The Company is studying the potential use of the electricity generating contents of silver batteries and "non-rechargeable" alkaline batteries as a source of raw material for use in manufacturing the GOLD'n GRO fertilizers and for silver production. Once the Company has completed the testing and start-up of e-scrap refining, it will evaluate processing of silver oxide batteries which have to be crushed or ground up prior to introduction into the refining furnace. Processing silver oxide batteries would increase the silver feed to the refinery for use in refining e-scrap and would be non-seasonal.

Alkaline batteries contain potassium, zinc, and manganese. The potassium and zinc are recoverable using Itronics' leaching technology and are raw materials needed for manufacturing GOLD'n GRO fertilizers. The Company has begun laboratory evaluation of sample material provided by one of the largest alkaline battery recyclers in the United States to develop leaching technology to solubilize zinc and manganese. The work has produced positive results. The lab work will be continued and may be expanded due to potential cost savings in raw materials for manufacturing GOLD'n GRO fertilizers.

The Company will continue to develop this technology as funding and market opportunities become available.

One of the expected outcomes of developing the processes necessary to recover zinc and other raw materials from zinc bearing flue dusts and alkaline

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batteries is to provide low cost raw materials for the GOLD'n GRO fertilizers which should allow the Company to manufacture very low cost competitive, high quality fertilizers. This creates the opportunity to greatly expand fertilizer sales, which in turn will increase the Company's demand for more waste products to turn into raw materials.

Auric Fulstone Project. An Itronics press release dated January 20, 2015 announced that its subsidiary Whitney & Whitney, Inc. has identified surface high grade zinc-lead-silver mineralization at its Auric Gold & Minerals Fulstone copper-gold exploration project. Within the Auric Fulstone project area, the Company has discovered surface high grade zinc, lead, and silver mineralization that contains anomalous molybdenum in a large area that is geochemically anomalous for zinc. It has also discovered high grade copper mineralization that contains anomalous gold and molybdenum in a separate area that is anomalous for copper. Discovery of the potential for significant zinc, lead, silver, and molybdenum mineralization increases the economic attractiveness of the project by adding potentially significant near surface zinc, lead, silver, and molybdenum values to the over-all copper and gold values that are expected to be identified as the project is explored.

At the end of 2016 Auric Gold & Minerals received an advance from a project partner for the purpose of staking up to 28 additional lode claims to expand the claim coverage of the high-grade zinc anomaly that has been identified in the Fulstone Project Area. The claims were staked in the first quarter 2017. In the second quarter an update of the confidential Fulstone project technical report was started and was completed early in the third quarter. In the fourth quarter a second update of the Fulstone project report was started and was completed in January 2018. The updated report identifies 5 target areas and recommends drilling two investigative holes in each target area.

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The Auric Fulstone Project is about 15 miles west of the Wabuska property which could serve as a support location for future exploration activities at the project site. Having a near-by Company owned base can facilitate project development. The Company is continuing to evaluate options for developing this project.

### About Itronics

Headquartered in Reno, Nevada, Itronics Inc. is a "Creative Green Technology" Company which produces GOLD'n GRO specialty liquid fertilizers, silver bullion, and silver-bearing glass. The Company's goal is to achieve profitable green technology driven organic growth in specialty GOLD'n GRO fertilizers, silver, zinc, and minerals. The Company's technologies maximize the recovery and uses of metals and minerals and by doing this maximize sustainability.

Through its subsidiary, Itronics Metallurgical, Inc., Itronics is the only company with a fully permitted "Beneficial Use Photochemical, Silver, and Water Recycling" plant in the United States that converts 100 percent of the spent photoliquids into GOLD'n GRO liquid fertilizers, silver bullion, and silver bearing glass. This is internationally recognized award winning "Zero Waste" Technology. The Company is developing a portfolio of environmentally beneficial "Zero waste" processing and mining technologies. Itronics has received numerous domestic and international awards that recognize its ability to successfully use chemical science and engineering to create and implement new environmentally green recycling and fertilizer technologies.

The Company's environmentally friendly award winning GOLD'n GRO liquid fertilizers, which are extensively used in agriculture, can be used for lawns and houseplants, and are available at the Company's "e-store" on Amazon.Com. Due to expanded retail customer interest, GOLD'n GRO fertilizer may now be purchased in Reno, Nevada at the "Buy Nevada First Gift Shop" at 4001 S. Virginia St.

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