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### ***Itronics Begins Tests to Recover Silver and Gold From Leached Mine Tailings and From Virgin Ore Using Its KAM-Thio Technology***

RENO, Nev., Aug. 08, 2017 (GLOBE NEWSWIRE) -- Itronics Inc. (ITRO), a diversified producer of GOLD'n GRO zinc fertilizers and silver products and a green technology development Company, today reported that it has entered into a strategic partnership with a Nevada based silver-gold mining company to test Itronics' KAM-Thio technology on silver-gold heap leach tailings and on virgin silver-gold ore from a silver-gold deposit the mining company is developing for production.

The initial testing has three objectives. The first is to determine if KAM-Thio is able to recover any residual silver and gold from ore that has been processed using cyanide heap leaching technology. The cyanide leaching process recovered approximately 90 percent of the gold and about 60 percent of the silver that was in the ore.

The technical target for the testing is to determine if KAM-Thio can recover any of the 40 percent of silver remaining in the leach tailings. Tests will also evaluate whether any gold will be simultaneously recovered.

The second objective is to determine if KAM-Thio can recover silver and gold from virgin silver-gold ore, using ore samples obtained from a new silver-gold deposit that the mine company is developing.

The third objective of the leach tests is to determine how many pounds of KAM-Thio are required per ton of leach solution to solubilize silver and gold from the already leached tailings and from virgin ore. In cyanide leaching the amount of cyanide used in the leach solutions ranges from 0.5 pounds to 2.0 pounds of cyanide per ton of leach solution. Reporting the required amount of KAM-Thio in pounds per ton of leaching solution will make it easier to evaluate the efficiency of KAM-Thio relative to cyanide.

If positive results are obtained from the leach tests, further tests will be conducted to optimize recoveries and to optimize the use of KAM-Thio. The optimization studies would be part of the feasibility analysis required to put the technology into commercial use at the mine company's operations.

Itronics' plan is to generate substantial additional revenues by developing site specific KAM-Thio technology use through mining joint ventures. KAM-Thio chemical sales would be non-seasonal and would significantly supplement fertilizer sales, which are seasonal.

Internal testing of silver recovery from silver-bearing glass slag generated by the Itronics' silver refining operation has already shown that the KAM-Thio completely recovers the silver from the glass. Itronics also believes that some gold will be recovered in the testing. The recoverability of gold using KAM-Thio is unknown, but the photo-liquids that Itronics processes to recover silver do contain a tiny amount of gold which is recovered and has always been a minor component in the silver bullion that the Company produces. Also, one of Nevada's largest gold mining companies is using calcium thiosulfate, a different thiosulfate based chemistry, as a gold leaching reagent that replaces cyanide at one of its Nevada mining operations. Historical work using thiosulfate chemistry to solubilize gold from ore was performed and published in the late 1800's and in the early 1900's before cyanide, which is a better solvent for gold, was developed and showed that gold could be solubilized by the thiosulfate compounds used at that time.

Tests to neutralize cyanide using de-silvered photographic liquid by Itronics in the early 1990's neutralized cyanide and recovered a significant amount of residual silver and gold from the tailings. Previous testing by Itronics, working with an independent laboratory, has shown that KAM-Thio is able to neutralize cyanide in cyanide leach solutions. The Company believes that the amount of KAM-Thio required to neutralize the cyanide is in a range that is theoretically appropriate for leaching of gold and silver from ore that can be leached by cyanide.

The amount of KAM-Thio added to the leach solution to accomplish the neutralization of the cyanide is several times greater than is required for fertilization of plants. Because of this, there is the potential to dilute the neutralized cyanide water with fresh water and use it as fertilizer for reclamation and revegetation at the mine site, or for fertilization at other locations. This would be an environmentally attractive way of using the water at the end of the leaching cycle. Since KAM-Thio has been extensively tested and has been in use for many years as an effective, high quality environmentally safe commercial fertilizer, mine site permitting for this use should be straightforward.

Itronics believes that a two-step leaching process for silver-gold ores may be the best way to commercialize the KAM-Thio technology. Step one would be to use cyanide to recover most of the gold and some of the silver from virgin ore. Step two would use KAM-Thio to recover much of the remaining silver and gold and to neutralize the cyanide from the first step. Theoretically, the residual waters from step two could be used as low grade fertilizer for site remediation and for fertilizer at other locations. Use of this approach would maximize gold and silver recovery and completely neutralize the cyanide used for gold recovery, providing a very attractive environmental sustainability profile for future silver-gold mining developments.

If the current test work successfully recovers a significant amount of the residual silver in the tailings, then the first commercial application for KAM-Thio would be silver-gold mine tailings processing. The Company believes that there are hundreds of millions of tons of tailings that have been generated cumulatively by silver-gold mining in Nevada since the early 1980's. The Company believes that tailings reprocessing using KAM-Thio technology may be commercially possible in Nevada.

Nevada agriculture produces high quality alfalfa for domestic and foreign use. The alfalfa farms are at remote locations not far from many of the Nevada silver-gold mines and might be a market for the low grade, but environmentally clean, fertilizer that would be generated by tailings reprocessing. Some of the Nevada mine companies own ranches in Nevada that grow alfalfa.

The Company's technical services subsidiary, Whitney & Whitney, Inc., has more than 20 years' experience with cyanide applications in gold and silver mining, and it now has more than 25 years' experience with the use of complex thiosulfate chemistry in liquid fertilizers, including application of the fertilizers to the soil, and improved mechanisms for making nutrients from the fertilizers available to plant roots through the soil. This experience makes the Company highly qualified to develop mining applications for KAM-Thio in silver-gold mining.

Itronics is favorably located in Reno, Nevada. Much of Nevada's gold and silver is produced using cyanide heap leach technology. Nevada as one of the top 10 gold producing areas in the world is one of the largest potential markets in the world for adoption of KAM-Thio technology. This market is obviously in Itronics' backyard.

The results of the described test work and the identity of the mine company strategic partner are prohibited from publication by a mutual confidentiality

agreement, but can be released by mutual agreement of the parties.

#### 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 at: [http://www.amazon.com/s/ref=bl\\_sr\\_lawn-garden?ie=UTF8&field-brandtextbin+GOLD%27n+GRO&node+2972638011](http://www.amazon.com/s/ref=bl_sr_lawn-garden?ie=UTF8&field-brandtextbin+GOLD%27n+GRO&node+2972638011). Due to expanded retail customer interest, GOLD'n GRO fertilizer may now be purchased in Reno, Nevada at "Buy Nevada First Gift Shop", 4001 S. Virginia St., Reno, NV 89502. As retail interest expands, new retailers will be added.

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