

21ST CENTURY NON-INVASIVE GOLD AND e-WASTE MINING. NO PITS, TAILINGS DAMS, SMELTERS, OR CYANIDE.

By David H. Smith

The Morgan Report has followed the birth and evolution of an “urban mining” company’s two-pronged solution for some of the resource sector’s stickiest problems. EnviroLeach Technologies’ (EVLLF:OTC; ETI:CA) fully- operational plant is in Surrey, B.C. with 5 more on the drawing board).

Value Proposition #1: A paradigm-shift in the reclamation of precious metals from eWaste - specifically printed circuit boards - set to displace the current global “burn or bury” model, with a 90% environmental footprint reduction.

It works as follows: E-Waste feedstock is shredded to remove plastic, aluminum and steel, with shredded material ground and separated into two concentrates: organic (gold containing substrate), and metallic (holding most of the copper, silver, tin, and remaining gold).

The finely ground substrate is dissolved into a proprietary chemical solution, with gold recovered by adding a reagent and then collected via a process known as “electrowinning”. The gold is then refiner-reprocessed to investment-grade purity from recoveries ranging from 80-90%+ depending on feedstock.

The metallic concentrate is assayed to determine precious and base metal grades, in deciding whether further processing, or shipping for smelting is the best option. Smelting currently recovers the base metals, but successful tests have led the Company toward commercial development of additional recovery applications. The ultimate goal is avoiding a smelter altogether, increasing operating margins via eco-friendly multiple metal extractive solutions.

Their expanding picture is that *“EnviroLeach is focused on the environmentally responsible use of all materials processed. Even the resulting substrate material left over has a variety of uses, such as a cement additive for non-structural concrete applications or feedstock for co-generation plants. Other use cases seek to ensure that every feedstock component is recycled or re-purposed to achieve maximum monetization in a responsible manner.”*



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Value Proposition #2: *Insitu* Recovery (ISR) in the mining of gold, silver, uranium and other metals, side-stepping the use of most environmentally-disruptive mining practices.



Doré bar vs. 95%+ ISR Gold Recovery
(Courtesy Golden Predator)

Both these outcomes are effected using a proprietary, patented non-toxic reagent owned by EnviroLeach. Initial testing at Golden Predator’s Yukon site demonstrates that “undesirables” like arsenic stay in the ground, yielding gold purity with little/ no smelter need; just a refiner for investment-grade .9999 fine bullion processing.

Group 11: A Mining Industry “Skunk Works”? During WW II, a secret operation to incubate and develop war-winning aircraft ideas was set up in California. It still operates as its founder, Kelly Johnson described it, with “small, empowered teams, streamlined processes and (a) culture which values attempting to do things that haven’t been done before.”

The recently-formed Group 11 Technologies, a privately-held operation comprised of EnviroLeach, enCore Energy, and Golden Predator Mining may be cast in this mold.

William Sheriff, Executive Chairman of enCore Energy, commented:

“ We intend to be disruptors in our industry. Mining needs to become less invasive and more sustainable. Group 11 is our response, using a unique combination of proven, proprietary knowledge to lessen the industry’s footprint without any sacrifice of efficiency. ISR for other metals has enormous potential for ESG benefits if cyanide is not required. Combining our team’s expertise in ISR with EnviroLeach’s environmentally-friendly solutions free of acids,

toxic chemicals and cyanide is the key to a very exciting opportunity....Completion of a definitive agreement is subject to a number of conditions including but not limited to final term negotiations, licensing agreements and regulatory approvals.

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Group 11's new proprietary process has been tested on high grade concentrates and is now ready for market and testing on further applications, providing the mining industry for the first time with a commercially viable, sustainable alternative to standard cyanide processes and conventional mining practices which often face community opposition and require slow-moving and expensive regulatory compliance.

The future of mining? How it's Done.

Basically, it's a non-invasive method where you inject solutions under the ground into injection wells. The fluids flow through the rock dissolving the metal and come back up a production well so that you run the fluids through a plant very similar to a water purification plant. In fact, it operates the same exact way on ion exchange. Then you re-inject the stripped fluids back into the ground and continue over and over. You essentially remove the metals from the ground through a series of injection and production wells. No

underground development. No open pits. No waste piles. No leach pads.



ISR Uranium Field (Courtesy enCore Energy)

David Morgan's Take:

I've been in the resource sector for over 40 years, much of that time investing in the micro-cap world, and I've seen speculations come and go. But this proposition that I - along with The Morgan Report team - have been investigating, is probably the best speculation I've seen. It's a technology breakthrough that will help better the mining industry as a whole, and also the environment at large. Those things combined in our world today, along with doing our best with the resources at our disposal, is very meaningful to me. The other part is, "What's the profit potential?" I believe this is an asymmetric trade - something that comes along only rarely. It's so much of a disruptor that few people want to

believe in the possibility. Nevertheless, the Company continues to build out

its model, and I firmly believe it will at some point be recognized by others in the industry.

To Good Not to be true?

Like the appearance and growth of hard rock ore-to-mill processing, and since the 1980's, heap leaching with cyanide before it, ISR will become - wherever and whenever feasible - the ongoing wave of mining's future. Especially for precious metals' recovery - gold, perhaps silver for now - and uranium. The knock-on effect will be to open operations at smaller, complex, or environmentally-sensitive locations that would otherwise take forever to prove/disprove commercial viability. Imagine looking at a "mined out" project needing almost no reclamation, with the only thing missing being the ore itself. With Group 11's creative intellectual capital functioning in a "skunk works"-like atmosphere, the resulting ideas and nuances generated could produce an outcome much greater - and more profitable - than the sum of the constituent companies themselves.

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Disclaimer: David H. Smith owns shares of EnviroLeach and enCore Energy.



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David H. Smith, Senior Analyst for TheMorganReport.com a contributor to MoneyMetals.com and the LODE Cryptographic Monetary System (CSMS) Project. He has investigated precious metals' mines and exploration sites in Argentina, Chile, Peru, Mexico, Bolivia, China, Canada and the U.S. He shares resource sector observations with readers, the media, and North American investment conference attendees.