

## ENVIROLEACH (CSE: ETI)

### Disrupting the E-Waste Recycling Industry

April 22, 2020

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#### KEY POINTS

- EnviroLeach has developed a proprietary, patented technology that according to the company is positioned to offer an environmentally sustainable and cost-effective solution for the extraction of precious metals.
- Enviroleach's technology has broad applicability across two sectors: e-waste recycling and gold mining.
- The EnviroLeach process offers these industries an alternative to cyanide and acid-based solutions. All ingredients in EnviroLeach's formula are FDA-approved for human consumption.
- EnviroLeach appears to be an early mover, with little or no direct competition in either of its targeted sectors according to management.
- E-Waste is one of the fastest-growing waste stream in the world. In 2018, approximately 50 million metric tons of E-Waste was generated world-wide.

#### alphaDIRECT CATALYST MONITOR

- Definitive feedstock supply agreement with Jabil.
- Definitive ore processing agreement with operating gold miner.
- Cash flow breakeven operations (company expects by end of Q3 2020).
- Equity offering to fund plant expansion.
- Uplist to TSX and then NASDAQ.

#### KEY STATISTICS

**Founded:** 2016 **HQ:** Burnaby, BC **Ticker:** ETI  
**Share Price:** \$0.84 **Shares Outstanding:** 70.34M  
**Market Cap:** \$57.68M **Avg. Volume (10 day):** 96.98K  
*\*As of 4/21/2020*

Additional *alphaDIRECT* content: [ETI](#)

#### THE *alphaDIRECT* INSIGHT

##### The Opportunities

EnviroLeach Technologies believes it is poised to become a global leader in environmentally sustainable precious metal extraction technologies. They assert that their proprietary, patented technology offers the only cost-effective and environmentally sustainable solution for the extraction of precious metals such as gold and platinum. EnviroLeach plans to monetize its technology by the sale of precious metal extracted from electronic waste. It also plans to monetize its technology through an ore-concentrate processing service for mining companies.

##### The Obstacles

Enviroleach needs to "cross the chasm" from proven scientific breakthrough to scaled-up commercial production. Enviroleach will need to resolve several issues, including ramping production at its initial plant, securing supply agreements from key partners, and raising capital for additional plants.

## COMPANY BACKGROUND

EnviroLeach Technologies has invented an environmentally sustainable, “best in class” process to extract precious metals from various feedstocks. EnviroLeach intends to initially apply its technology to extract valuable metals from two key feedstocks: electronic waste (“E-Waste”) and mining concentrates. The Company is now ramping production at its initial commercial plant in Vancouver, BC. Its growth plan contemplates two business models: for e-waste, the sale of gold and other metals extracted from purchased feedstock; for mineral ore, royalty-based processing services. EnviroLeach was pre-revenue in 2019 but intends to reach cash flow breakeven in 2020. The company’s stock is currently traded on the Canadian Stock Exchange under the symbol ETI; the company intends to uplist to the Toronto Stock Exchange and then NASDAQ over the next one to two years.

## A DISRUPTIVE TECHNOLOGY

EnviroLeach owns a proprietary, patented process that is non-cyanide, water-based, and pH-neutral, using only FDA-approved additives and ambient temperature water. The chemical formulation is also completely re-usable and is captured at the end of the extraction process to be recirculated into the extraction processing circuit. The technology was developed through \$20 million invested over four years of extensive research that utilized inorganic electrochemistry and metallurgical sciences. EnviroLeach has completed hundreds of thousands of individual tests and assays in addition to successful full-scale commercial testing in 2019.

The EnviroLeach process involves combining five FDA-approved ingredients with water and then applying a proprietary, new diamond-based electrochemical process. The process offers similar or better leach kinetics versus cyanide on most ores and concentrates. The basic process is:



Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

**Material Preparation** - E-Waste is shredded and then ground to liberate metals from non-metals. Methods such as magnetic separation to separate iron, eddy

current to remove aluminum and screening to separate different size fractions are followed by air density table and electrostatic separation to remove the majority of base and precious metals.

*Leach Process* - EnviroLeach uses a water-based lixiviant containing safe inorganic ingredients which operate in near neutral pH and at ambient temperature and pressure. The host material (non-metallics and dust) is added to a premixed solution containing the lixiviant at a set solid-to-liquid ratio by weight. The resulting slurry is agitated for a predetermined period.

*Solids/Liquids Separation* - The mixed slurry is pumped to a vacuum belt filter to separate solids from the pregnant solution. The liquid is sent to the pregnant solution pre-treatment tank. The separated solids (filter cake) are rinsed to maximize recovery of the solution which contains reagents (lixiviant) and dissolved valuable metals. The rinse fluid is then sent to the rinse water storage/treatment tank. The post rinse (dry) filter cake is sent to third parties for use in a variety of products or further processing.

*Metals Recovery* - The pregnant solution is pumped through a series of electrowinning cells to recover precious metals from solution. Gold-plated electrodes are removed and sent to a gold refinery once they reach their maximum capacity.

*Analysis and Regeneration* - The depleted solution is transferred to a holding tank where it is analyzed for formula strength, oxygen reduction potential, pH and then automatically adjusted by way of electro-chemical enhancement and lixiviant additions as required.

The Company asserts the following benefits from its process:

- ✓ Environmentally friendly
- ✓ Broad applicability spectrum
- ✓ Fast leach kinetics
- ✓ No detoxification
- ✓ Safe, reusable and sustainable
- ✓ Reduces permitting timelines

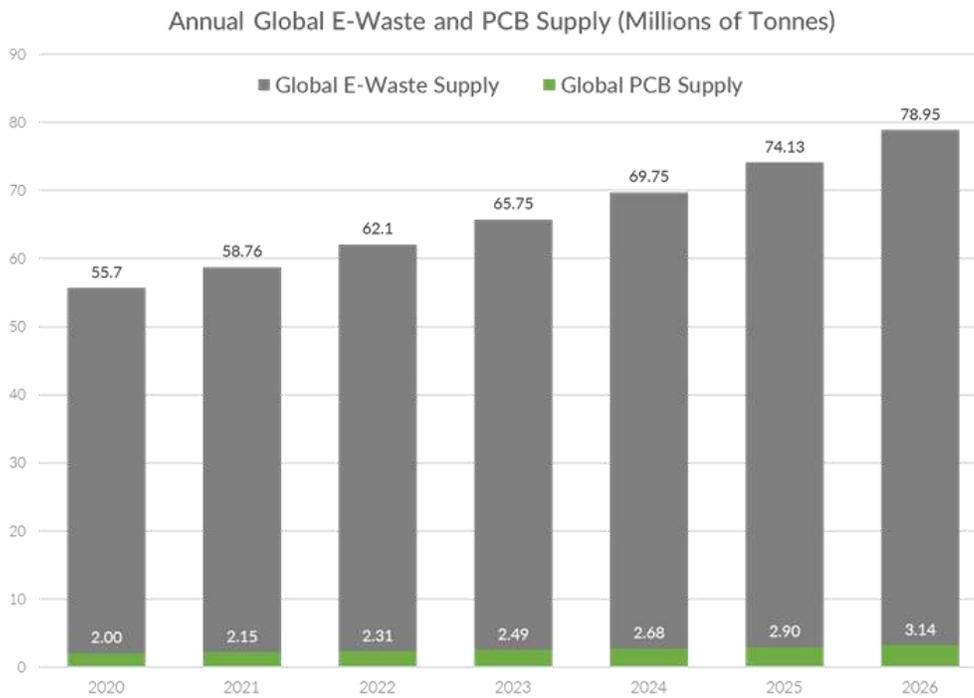
The Company especially highlights the environmental benefits of its process. They consider these to be the key environmental benefits:

- Non-toxic chemistry
- Leaching solution is recyclable
- No off-gassing or water effluent
- Ambient operating pressure, temperature and neutral pH
- Recycling of metals conserves natural resources
- Over 90% reduction in CO<sub>2</sub> emissions versus smelters

- Reduces use of cyanide and mercury in mining
- No tailings ponds for mines
- No landfilling of solid waste

## POTENTIAL SOLUTION TO A LARGE AND GROWING PROBLEM

EnviroLeach intends to apply its technology to monetize one of the biggest and fastest-growing waste streams in the world, electronic waste (E-Waste). E-Waste is defined as any appliance or device with a battery, electric cord, or plug. A growing component to the E-Waste stream is end of life electronics (EOLE); one half of E-Waste generated is personal electronic devices. The volume of E-Waste generated annually is expected to increase to over 78 million metric tons annually by 2026. Only approximately 20% of global E-Waste is currently recycled. E-Waste represents approximately 70% of the hazardous waste directed to landfills.



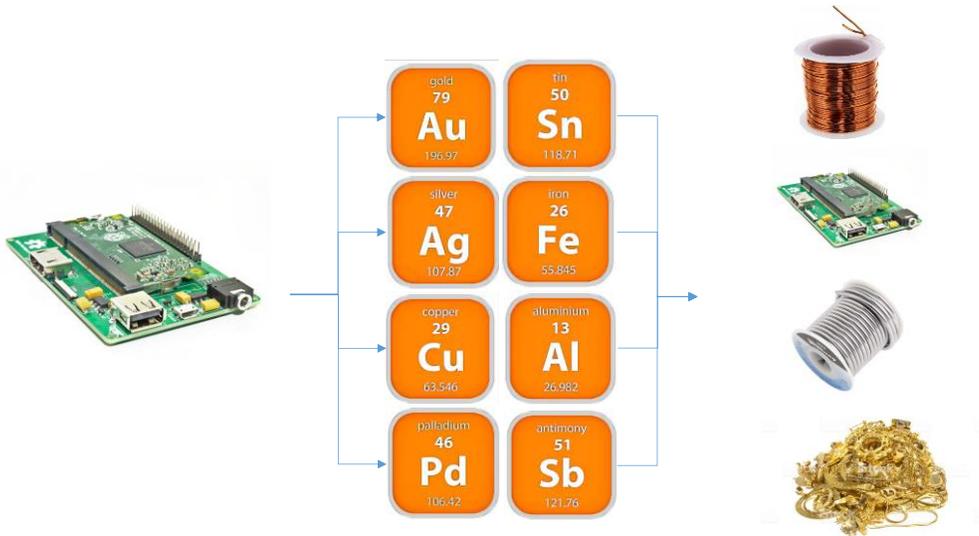
Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

EnviroLeach expects no shortage of feedstock for the foreseeable future. According to Transparency Market Research, global production of printed circuit boards (PCB) used in electronics is expected to grow from 2.0 million metric tons per year to over 3.14 million metric tons by 2026 and continue to grow after that at an annual rate of 7.3%. In North America alone, annual e-waste production is expected to grow from 397,000 metric tons to 642,000 metric tons by 2026.

The main value driver in E-Waste recycling or disposal is the disassembly and extraction of precious and base metals from PCBs. PCBs represent over 90% of the value of E-Waste. PCBs host high values of metals including gold, silver, copper, tin, and platinum group metals. PCBs are estimated to contain between 35 and 100 times the amount of gold per ton versus gold-bearing ores.

A typical PCB from a mobile phone will contain the following metals stated as a percentage of total mass:

- Gold: 0.01% to 0.10%
- Silver: 0.10% to 0.33%
- Copper: 16% to 34%
- Nickel: 0.1% to 2.6%
- Tin: 0.5% to 4.0%



Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

EnviroLeach intends to source e-waste feedstock from three levels of suppliers:

Level 1 Suppliers are primarily large aggregators who currently sell directly to smelters. Feedstock from level 1 suppliers is readily available, but is also the lowest margin source of E-Waste.

Level 2 Suppliers are primarily E-Waste wholesalers typified by medium-sized recyclers, small aggregators, and original equipment manufacturers (OEMs). This group has access to a large quantity of material but no direct relationships with smelters and typically sell to third parties. Feedstock supply from level 2 suppliers can be processed at higher margin than that of Level 1.

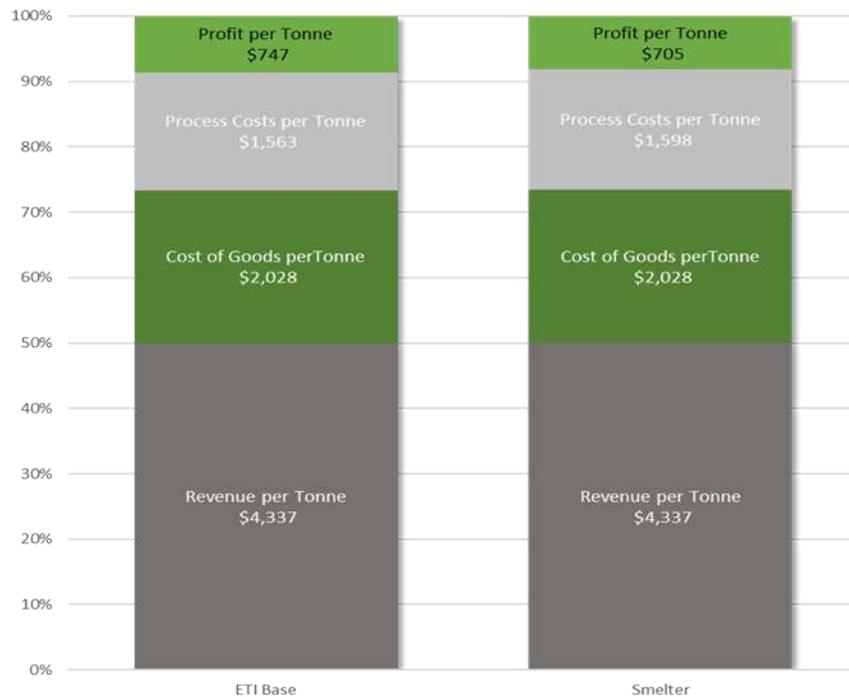
Level 3 Suppliers are typified by small recyclers, educators, associations, and retail chains. This is a diverse group motivated by a simplified and often environmentally friendly solution for disposal of their E-Waste. By providing a

simplified solution to these suppliers, EnviroLeach is working to capture a significant portion of this high margin feedstock supply.

## AN ALTERNATIVE TO SMELTING FOR PCB RECYCLING

Smelting continues to be the main commercial process used to recover precious and base metals from E-Waste. Although effective in recovering copper and precious metals, the smelting process is energy-intensive, produces toxic waste and does not recover all the valuable contained metals. Smelting of the PCBs is expensive, inefficient and unreliable because the majority of the material is non-metallic. The composition of PCB substrate material is carbon-based and as a result, the burning of this material produces excessive emissions. The payout rates for base and precious metals are low. The loss of, and the subsequent non-payment, for tin and other metals is significant and represents \$300 to \$900 per metric ton of PCBs. The loss of gold and palladium from smelting or mechanical processes is approximately 15% to 35%.

Based on management’s analysis, the EnviroLeach process (as it stands today) offers equivalent economics with better terms and lower environmental impact. Management estimates equivalent economics...



Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

... but the benefits are superior, in management’s opinion.

## EnviroLeach vs Smelters...

	SMELTERS	ENVIROLEACH
Effective Recoveries of Precious Metals	Yes	Yes
Eco Friendly & Sustainable Process	No	Yes
30 Day Payment Terms	No	Yes
Whole Component Processing	No	Yes
Low Greenhouse Gas Emissions	No	Yes
No Landfilling of Tailings/Waste	No	Yes
Higher payable metals including Tin	No	Yes
No Minimum Shipment Amounts	No	Yes
Third Party Assay Validation	No	Yes
Domestic Treatment & Shipping	No	Yes

Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

## SECOND LARGE OPPORTUNITY IN MINING INDUSTRY

The gold mining industry has traditionally used mercury, cyanide and acid-based leaching and smelting to recover gold from ores and mineral concentrates. These methods, though effective, suffer from negative environmental impacts and increasingly, permitting issues. Currently, the majority of primary gold production employs cyanide leaching or concentration followed by smelting. Although new alternatives such as chlorine, sodium thiosulfate, thiourea, and others have been proposed, none have proven to be either an economic alternative to cyanide or environmentally sustainable. In fact, there have been no significant advances in hydrometallurgy since the introduction of cyanide since the 1800s. The gold industry is increasingly coming under pressure to develop and adopt new technologies for processing ores.

EnviroLeach believes that it has little or no competition in the mining sector for eco-friendly solutions that offer economic alternatives to cyanide. Management analyzes the various mineral extraction alternatives this way:

	Enviro Leach	Cyanide	Thioarea	Thiosulphate	Thiocyanate	Bisulphide	Ammonia	Chlorine
Applicability Spectrum	Broad	Broad	Limited	Limited	Limited	Limited	Limited	Limited
pH Sensitivity	Low	High	High	High	Low	High	High	High
Temp Sensitivity	Low	Low	High	Medium	High	Medium	High	Medium
Reagent Concentrate Sensitivity	Low	Low	High	High	High	High	High	High
Leach Kinetics	Fast	Medium	Fast	Fast	Medium	Slow	Fast	Fast
Toxicity	Low	High	High	Low	High	High	High	High
Highly Acidic Or Highly Caustic	No	Yes	Yes	No	Yes	Yes	Yes	Yes
WGK Value (H2O Hazard Classes)	1	3	2	1	1	2	2	2
Consumption Rate	Low	Low	High	High	High	Medium	Low	Medium
Reusability/Recyclability	High	Medium	Low	Medium	Medium	Medium	High	Medium
Detox Costs	N/A	High	High	Medium	High	High	High	Medium
Requires Off Gas Control	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Requires Elevated Temperature	No	No	No	No	Yes	Yes	Yes	No
Costs compared to Cyanide	Higher	N/A	Higher	Higher	Higher	Lower	Higher	Similar
Capital Costs	Low	Medium	High	High	High	Medium	High	High

Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

Enviroleach’s mining solution results in reduced shipments of mine concentrates to smelters. Reductions in transportation costs, insurance costs and smelter processing fees enhance mine project economics and give mine operators greater control over the complete mine operating cycle. Due to the remote location of many mines, savings in transportation cost can significantly improve profitability.

Furthermore, the EnviroLeach technology is effective for treating difficult concentrates such as those with high arsenic values. The company’s technology will allow operators to unlock the potential value of many deposits located in environmentally sensitive areas that cannot be otherwise developed using current extraction methods.

Management envisions three primary applications of its technology in the mining sector:

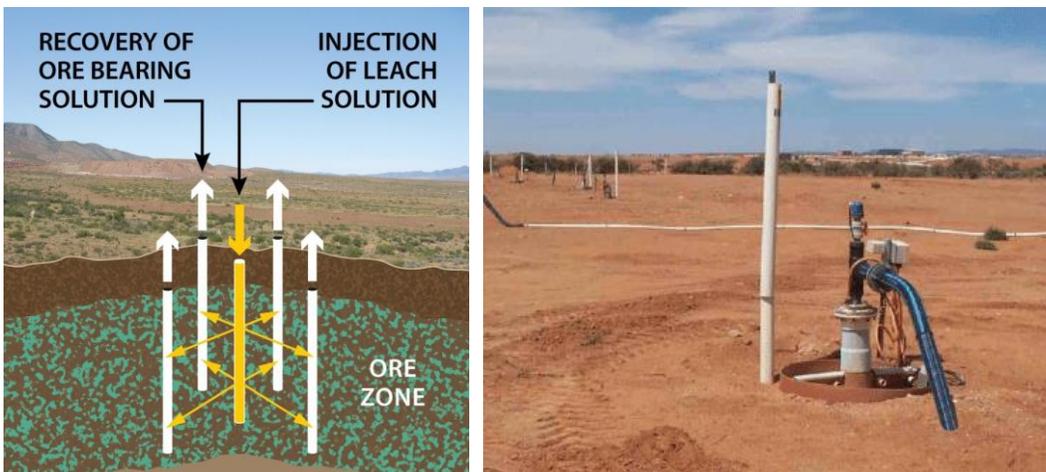
<p><b>Gravity Concentrates</b></p>	<p>The EnviroLeach process is very effective in the recovery of gold from high-grade gravity concentrates and table/jig tailings. It offers the only cost-effective alternative to cyanidation and smelting.</p>
<p><b>Flotation Concentrates</b></p>	<p>The EnviroLeach process is very effective in the recovery of gold from flotation concentrates. It offers the only cost-effective alternative to cyanidation and smelting.</p>
<p><b>In-Situ Recovery</b></p>	<p>The EnviroLeach process is breaking new ground with the introduction of in-situ or in-place gold mining. This non-invasive mining process limits environmental damages and unlocks the value of smaller, previously uneconomic, deposits.</p>

Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

Management is especially enthusiastic about in-situ leaching (aka in-situ recovery, or ISR) for gold, because it can offer significant economic and environmental benefits. ISR is a well-established process used for other minerals, especially copper and uranium. EnviroLeach believes its proprietary lixiviant can be used to cost-effectively leach gold at the mine site and negate the need for extensive infrastructure and processing facilities.

Wikipedia defines ISR as follows:

*In-situ leaching (ISL), also called in-situ recovery (ISR) or solution mining, is a mining process used to recover minerals such as copper and uranium through boreholes drilled into a deposit, in situ. In situ leach works by artificially dissolving minerals occurring naturally in a solid state. The process initially involves the drilling of holes into the ore deposit. Explosive or hydraulic fracturing may be used to create open pathways in the deposit for solution to penetrate. Leaching solution is pumped into the deposit where it makes contact with the ore. The solution bearing the dissolved ore content is then pumped to the surface and processed. This process allows the extraction of metals and salts from an ore body without the need for conventional mining involving drill-and-blast, open-cut or underground mining. The lixiviant varies according to the ore deposit: for salt deposits the leachate can be fresh water into which salts can readily dissolve. For copper, acids are generally needed to enhance solubility of the ore minerals within the solution. For uranium ores, the lixiviant may be acid or sodium bicarbonate.*



Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

EnviroLeach recently announced a Letter of Intent to form a new joint venture named Group 11 Technologies to pursue ISR of gold from underground deposits. EnviroLeach will partner with publicly-traded mining companies enCore Energy (TSX.V: EU) and Golden Predator Mining (TSX.V: GPR). Initial ownership positions in Group 11 will be: EnviroLeach 40%, enCore 40% and Golden Predator 20%.

## MULTI-FACETED BUSINESS MODEL

EnviroLeach intends to pursue a variety of business models in order to monetize its technology, depending mainly on the market opportunity. Management has summarized its strategy this way:

### Business Model

	<b>E-Waste</b>	<b>Mining</b>
<b>Company Owned Facilities</b>	Purchase & Process PCBs Extract maximum metal value	N/A N/A
<b>Licensing Royalties</b>	Per tonne royalty charges Processing charges Chemical charges	Per tonne processing Chemical charges
<b>Research &amp; Testing Program Lab Services</b>	Assays Consulting services	Ongoing pilot research Assays Consulting services

Source: EnviroLeach Technologies, Inc.,  
Company Presentation, March 2020.

## E-Waste Progress

The Company is currently pursuing two concurrent strategies to commercialize its technology in the e-waste sector.

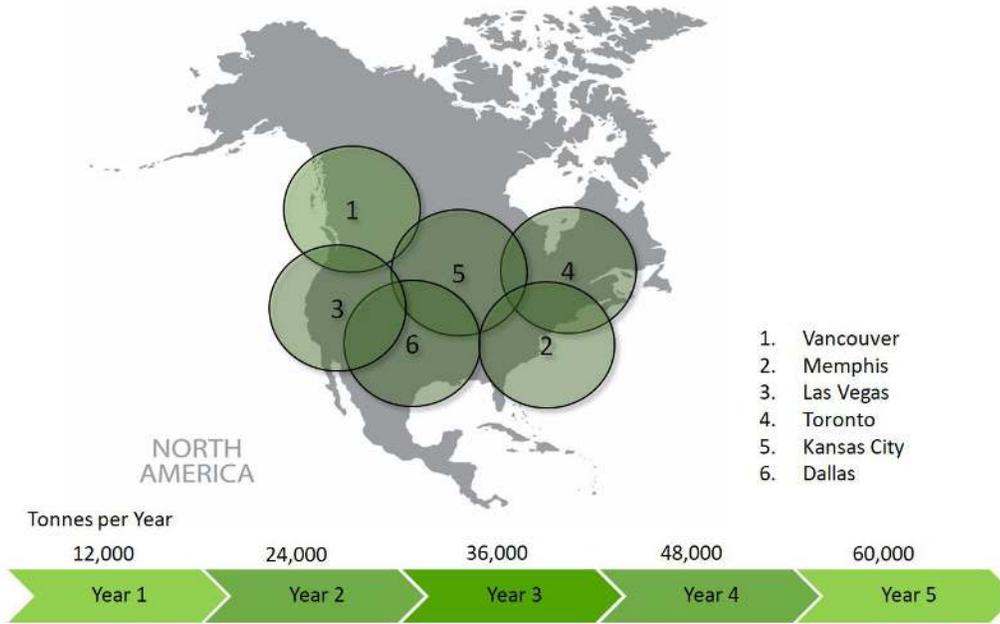
First, the company is ramping up operations at its new facility in Surrey, BC (near Vancouver) in Canada. EnviroLeach considers the facility to be a commercial-scale pilot plant. Processing operations are expected to increase over the coming two calendar quarters to achieve throughput rates at an annualized capacity of 7,200 tons per year by the third quarter.



Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

As the pilot plant matures, EnviroLeach plans incremental market penetration through the addition of corporately owned plants across North America.

Between 2021 and 2024 EnviroLeach plans to build five additional plants each with an annual capacity of 12,000 metric tons. These plants will be located close to large markets in order to minimize logistical costs. Each additional plant represents a compounded market penetration rate of 1.5% of the North American PCB market per year over a five-year timeline, with a total market penetration of 10% over the period.



Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

Looking at the unit economics, management models a single facility to process approximately 12,000 metric tons of PCB annually (working on a 24 hour per day, 7 days per week basis). Based on the total metal value of \$3,383.06 per tonne (45 grams of gold per tonne), the company projects a feedstock supplier could expect a maximum return of \$1,884.71 per tonne (55.7% of total metal value) from a smelter, less transportation cost. This sets the maximum value that EnviroLeach would have to compensate any supplier and indicates a resulting base case cost of goods. The base cost to operate a facility includes a fixed and variable component. The variable component includes charges for the chemicals utilized in the hydrometallurgical process, charges for assays and testing, and for maintenance of the processing facility. These charges amount to \$443.56 per metric ton of raw feedstock processed. The fixed charges include the facility workforce and supervision, overheads and administration.

The second concurrent strategy is to develop an E-Waste Royalty revenue stream where established large-scale E-Waste processors will have the opportunity to license and use EnviroLeach’s technology using a royalty model. The royalty model is expected to be attractive to large-scale recyclers as an alternative to sending E-Waste directly to a smelter. EnviroLeach is now approaching large recyclers that may be seeking an opportunity to construct a facility and begin processing E-Waste directly. Other prospects are processors

with facilities that currently shred PCB materials and are seeking to expand the capability of their existing facility.

Management appears to be enthusiastic about its progress in the e-waste sector, mainly because many of its self-defined milestones have been reached.

## E-waste Division

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- |  |  |
|--|--|
| <b>Vancouver Production Facility Commenced</b> | <ul style="list-style-type: none"><li>• Commercial production commenced – <b>COMPLETED</b></li><li>• Licensing, Certification (R2/RIOS) - <b>COMPLETED</b></li><li>• Capacity 20 tonnes per day <b>UNDERWAY</b> - anticipated completion - Q3 2020</li><li>• Broad feedstock capability - <b>COMPLETED</b></li></ul>   |
| <b>Jabil relationship</b>                      | <ul style="list-style-type: none"><li>• Completed IP/patent investigations - <b>COMPLETED</b></li><li>• Completed chemistry lab- scale testing - <b>COMPLETED</b></li><li>• Preliminary agreement in place - <b>COMPLETED</b></li><li>• Completed chemistry pilot-scale studies at Memphis facility - <b>COMPLETED</b></li><li>• Vancouver facility full-scale 20,000 lb. production testing - <b>COMPLETED</b></li><li>• Vancouver facility full-scale 80,000 lb. production testing - <b>UNDERWAY</b></li><li>• New client/supplier agreement negotiations - <b>UNDERWAY</b></li></ul> |
| <b>Numerous Global Recyclers &amp; OEM's</b>   | <ul style="list-style-type: none"><li>• Full-scale testing starts February 2020 - <b>UNDERWAY</b></li><li>• Includes: USA, Canada, Germany, Switzerland, Italy, China, Poland, SA, etc.</li><li>• International smelter &amp; refinery agreements in place - <b>COMPLETED</b></li></ul>  |

*Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.*

## Mining Progress

The business model for the mining sector envisions a royalty revenue stream from third-party mining operators. Over 100 well-known mining companies operating in more than 20 countries have been in contact with EnviroLeach resulting in many testing programs, joint ventures, or due diligence sampling investigations. The company continues to work with select mining companies to optimize the chemistry and processes.

An ongoing pilot project with the gold exploration and development company Golden Predator Mining Corp., delivered positive results as announced in November 2019. Due to that success, the two parties had planned to increase the scope of testing in 2020. However, Golden Predator recently announced the sale of this project. Upon completion of the transaction, EnviroLeach will pursue this opportunity with the project's new owner. EnviroLeach is also continuing test programs for other mine operators. Test results are confidential, but management indicates that this testing is increasing operating intelligence, which in turn enables them to refine their commercial strategy to be attractive to mining operators.

Management indicates EnviroLeach has also reached many milestones in the gold mining sector.

## Mining Division

### Testing Underway with Major Gold Producers

Gold recoveries in excess of 97% - **COMPLETED**

Initial pilot-scale studies - **COMPLETED**

Bulk-scale on 2.7 tonnes concentrate test - **COMPLETED**

Gold recoveries in excess of 97%

Poured 294.42 ounces gold from bulk-scale test

Favorable economic analysis

### Global Gold Miners

Over 250 requests for information from global gold miners

First pilot plant commissioned in 2019 - **COMPLETED**

In-situ recovery studies - **INITIATED**

*Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.*

## COMPETITIVE ADVANTAGES

EnviroLeach's suite of intellectual property is protected by two patents and an third patent pending. The preliminary patent, filed in June 2016, covers the lixiviant formulation and the methods of its use. The second patent application covers a diamond-based electrochemical process technology. The third applies to the recovery and re-use of chemical formulations. Additionally, the technology includes trade secrets that have been discovered through development and testing of the technology and auxiliary processes.

EnviroLeach's technology offers the following competitive advantages over incumbent processes.

## Advantages for E-Waste

Most sustainable alternative for PCB recycling
Lower costs than smelting
Faster payment on metals
Assay accuracy/transparency
Domestic solution – lower shipping costs
Zero environmental footprint
Direct to processor model creates market efficiency
Higher payments to upstream recyclers
On-Site metals recovery
Meets social guidelines

## Advantages for Gold Mining

	Cyanide	Smelters	EnviroLeach
Tailings Pond Required	Yes	No	No
Tailings Monitoring Required	Yes	No	No
Stringent Safety Regulations	Yes	No	No
Cyanide Destruct Unit Required	Yes	No	No
High Cost Remediation Bond	Yes	No	No
Permitting Limitations	Yes	No	No
Assay Transparency	Yes	No	Yes
Immediate Payment	Yes	No	Yes
On-Site Metals Recovery	Yes	No	Yes
Meets Social Guidelines	No	No	Yes
Environmentally Friendly	No	No	Yes

Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

## RISK ASSESSMENT

Investors should consider the following risks faced by EnviroLeach.

**Pre-Revenue:** EnviroLeach has not generated meaningful revenue since inception. If EnviroLeach does not develop its business as anticipated, it may never achieve revenue or profitability.

**Competition:** If competitors launch competing or more effective technology, or if EnviroLeach is unable to effectively develop and apply new technology and know-how to meet the needs of customers, its financial condition and results of operations could be adversely affected.

**Financing Risk:** EnviroLeach will likely have to raise additional funding to execute its business plan and generate revenue in the future. If it is not able to

raise additional financing or if it has to do so at unfavorable terms, the company's ability to remain in business would be adversely affected.

**Operational Risk:** In order to commercialize its products and technology, EnviroLeach will have to scale its manufacturing processes, which require the building of new plants in various locations, the continuation of developing strategic partnerships, and sourcing increased materials for processing in order to scale its operations.

**Regulatory Risk:** EnviroLeach is subject to health and safety, environmental, zoning, and other regulatory requirements to operate its pilot plant. Failure to comply with ongoing regulatory requirements would adversely impact operations.

**Intellectual Property Risk:** EnviroLeach's success and ability to compete depends on protecting its proprietary technology and intellectual property. The inability to protect its proprietary rights or if it incurs significant costs to do so could impair its ability to operate profitably.

**Key Personnel:** EnviroLeach's success relies on the efforts of senior management. Any departure by key members could impair its ability to operate successfully.

**Commodity Risk:** EnviroLeach's operations result in commodity-related revenues which are correlated to the price of gold and other metals. A significant change in the prices of could adversely impact profitability and EnviroLeach's ability to compete in the market.

**Litigation Risk:** Litigation related to intellectual property, international trade, environmental health and safety, labor agreements, and other activities may adversely impact operations and financial results.

**Dilution:** EnviroLeach will likely need to raise additional funds in the future, which may dilute ownership interests for existing shareholders.

**Government regulations:** The waste and recycling industries are subject to local, state and federal regulations. Regulations may change which could require additional capital investment or a loss of profitability.

**Commodity pricing:** The price of commodities which are recycled can change which may alter the company's profitability.

**Liquidity:** EnviroLeach is a micro capitalization company with minimal float and trading volume.

## MANAGEMENT OVERVIEW

### *Mr. Jack Kiland, Chairman of the Board, Director*

Mr. Kiland has over 50 years' experience in several successful start-up ventures. He was the co-founder and Managing Director of Casino Data Systems (CDS), a successful NASDAQ listed company which employed over 400 people in Las Vegas, NV. CDS specialized in technology-driven products for the gaming industry, serving 120+ Casino customers world-wide. CDS was sold to Aristocrat Technologies Inc. for \$180 million.

### *Mr. Mel Lavitt, Vice Chairman, Director*

Mr. Lavitt has over 50 years of investment banking expertise in emerging growth high tech and middle-market companies. His professional career included hundreds of capital market transactions accounting for several billion dollars of equity and debt financing. Mr. Lavitt also served as a Director of Jabil from September 1991 to January 2016, is on the advisory board of two private companies, TELUS International and Deserve, Inc., and on the board of directors of Storage Engine.

### *Mr. Duane Nelson, Chief Executive Officer, President, Director*

Mr. Nelson has more than 40 years of experience in founding, financing and advising emerging private and public companies and is the founder and CEO of EnviroLeach. He has founded several successful ventures. Most recently he was the CEO and co-founder of Silvermex Resources Inc., a past TSX listed gold and silver producer which was sold for \$235 Million in 2013. He is the founder of Quotemedia Inc., a successful financial market data company established in 1998, a leading provider of global financial stock market data for the Toronto Stock Exchange, NASDAQ OTC, and others.

### *Mr. Greg Pendura, Director*

Mr. Pendura has more than 35 years of experience in founding, financing and advising emerging private and public companies. Mr. Pendura spent 12 years in the public sector with Resin Systems Inc. An original founder of the company he retired in 2007 as President, CEO and Chairman of the Board.

### *Kenneth C. McNaughton M.A.Sc., Director*

Mr. McNaughton is Vice President and Chief Explorations Officer for Pretium Resources. He is a professional geological engineer with over 30 years of global experience developing and leading mineral exploration programs. He was Senior Vice President, Exploration for Silver Standard Resources Inc.

*Mr. Court Anderson, Director*

Mr. Anderson is currently a lawyer at Henson & Efron, P.A. specializing in litigating business disputes. He was named a Minnesota Attorney of the Year in 2014 by Minnesota Lawyer. He has litigated disputes in dozens of federal and state courts throughout the country, with many of his cases involving shareholder and securities disputes, complex contracts, and a variety of business-related torts. Mr. Anderson regularly advises boards and officers on corporate governance issues and their legal obligations, mitigating legal risk and exposure. He graduated from Southwest Minnesota State University, summa cum laude, with a B.S. degree in accounting, and thereafter obtained a Juris Doctorate, cum laude, from the University of Minnesota Law School.

*Mr. Ish Grewal M.A.Sc., P.Eng, Executive Vice President*

Mr. Grewal has 25 years+ experience in the metallurgical and mineral processing industry, focused on research and development, mineral and hydrometallurgical processing and metal recovery systems. Prior to joining EnviroLeach, he was president and co-founder of Met-Solve Laboratories Inc. He has published and presented numerous technical papers in fields of hydrometallurgy, gravity concentration and dense media separation. He earned his Masters degree in Metals & Materials Engineering from The University of British Columbia.

*Mr. Wayne Moorhouse, Chief Operating Officer*

Mr. Moorhouse has extensive experience in corporate team building and overseeing company growth. He has held senior management positions with mining and civil construction companies and acted as the COO, CFO, Corporate Secretary or President of several TSX and TSX Venture Exchange listed companies and their subsidiaries, including Roxgold Inc., Midnight Sun Mining Corp., Silvermex Ltd. and Genco Resources Ltd. He has a proven record at an operating level and as a financial executive with experience covering all stages of a company's life, from incorporation through successful operations and mergers and acquisitions.

*Mr. Hanif Jafari, M.Eng., Chief Technical Officer*

Mr. Jafari, was most recently an associate researcher with UBC for over two years focusing on chemical analysis, analyzing test work data for processing plants, and applying processing methods such as floatation and leaching, gravity and magnetic concentration. In addition, he has worked as a field and mining engineer on various projects from 2007 to 2011.

*Mr. Don Weatherbee, CPA, CMA, CITP, B.Comm, Chief Financial Officer*

Mr. Weatherbee, a graduate of the University of Alberta with a Bachelor of Commerce, brings 25 years of finance and accounting experience. This experience includes over 15 years at senior executive positions with both private and publicly traded companies, with 12 years as CFO. Don has previously worked at the KMC Mining Corporation and Luscar Ltd., which are in the mining sector.

*Dr. Monica Jimenez Correa, PhD., Director of Laboratory Operations*

Dr. Jimenez Correa holds a PhD in Chemical Engineering from the University of Sao Paulo, Brazil. After nearly a decade working in hydrometallurgical techniques applied to recycled metals from electronic waste, she joined EnviroLeach in 2017. Dr. Jimenez Correa has published several academic and technical papers in separation techniques such as solvent extraction, ion exchange, and metal precipitation.

#### Board Member & Executive Shares and Share Options

SHARE OWNERSHIP	SHARES	SHARE OPTIONS	TOTAL	%
JACK KILAND	2,381,976	400,000	2,781,976	3.86%
MEL LAVITT	126,500	500,000	626,500	0.87%
DUANE NELSON	2,039,961	1,900,000	3,939,961	5.47%
GREG PENDURA	685,336	900,000	1,585,336	2.20%
KEN MCNAUGHTON	250,000	400,000	750,000	1.04%
COURT ANDERSON	23,827	400,000	423,827	0.59%
ISH GREWAL	186,200	500,000	686,200	0.95%
WAYNE MOORHOUSE	59,033	450,000	509,033	0.71%
DON WEATHERBEE	218,787	550,000	768,787	1.07%
HANIF JAFARI	238,478	600,000	838,478	1.16%
	6,210,098	6,700,000	-12,910,098	17.93%
<b>PERCENTAGE OWNERSHIP</b>	<b>8.80%</b>	<b>9.93%</b>	<b>18.73%</b>	

Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

## MANAGEMENT'S FINANCIAL PROJECTIONS

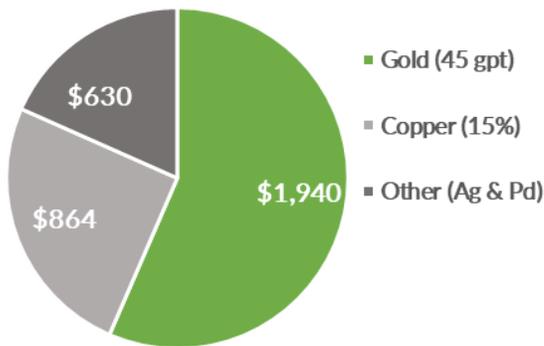
Management has budgeted growth and earnings as modeled below. Please keep in mind that this forecast was developed by EnviroLeach, and represents their growth plan only as of the date of this publication. ***alphaDIRECT was not involved in formulating this forecast, and does not endorse these figures.*** These are forward-looking statements made by management. Please review the safe harbor statement regarding forward-looking statements as presented in EnviroLeach's press releases and SEDAR filings.

**Key Assumptions**

**Feedstock Cost**

Vancouver	\$1,700/t (\$0.77/lbs)
Future Plants	\$1,198/t (\$0.54/lbs)
Vancouver Plant Capacity	7,200 Mt/year
Future Plant Capacity	12,000 Mt/year

**Model Low Grade PCB Value \$3,434 per tonne**



Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

**Financial Projections**

(In USD \$)

	2020	2021	2022	2023	2024
<b>E-Waste Production (tonnes of PCB)</b>					
Vancouver Plant	3,586	7,171	7,171	7,171	7,171
Corporate Plants	-	3,000	24,000	48,000	60,000
<b>Total Annual Production</b>	<b>3,586</b>	<b>10,171</b>	<b>31,171</b>	<b>55,171</b>	<b>67,171</b>
Mining Royalty Revenue	\$ 150,000	\$ 1,224,000	\$ 4,213,620	\$ 7,322,335	\$ 8,118,241
E-Waste Royalty Revenue	\$ -	\$ 1,101,600	\$ 4,119,984	\$ 7,258,663	\$ 9,352,214
Vancouver Plant Revenue	\$ 12,313,325	\$ 25,119,183	\$ 25,621,566	\$ 26,133,998	\$ 26,656,677
Corporate Plant Revenue	\$ -	\$ 11,270,585	\$ 91,967,972	\$ 187,614,664	\$ 239,208,696
<b>Total Annual Revenue</b>	<b>\$ 12,463,325</b>	<b>\$ 38,715,367</b>	<b>\$ 125,923,143</b>	<b>\$ 228,329,659</b>	<b>\$ 283,335,829</b>
Raw Material Supply	\$ 6,094,615	\$ 17,630,285	\$ 50,097,479	\$ 73,982,152	\$ 91,028,740
Ex-Plant Processing Costs	\$ 2,474,970	\$ 7,935,116	\$ 28,701,123	\$ 53,297,374	\$ 66,614,658
Operating Costs	\$ 2,361,470	\$ 5,053,311	\$ 14,574,022	\$ 25,258,455	\$ 30,015,056
<b>Total Expenses</b>	<b>\$ 10,931,056</b>	<b>\$ 30,618,713</b>	<b>\$ 93,372,623</b>	<b>\$ 152,537,981</b>	<b>\$ 187,658,454</b>
<b>Gross Profit</b>	<b>\$ 1,532,269</b>	<b>\$ 8,096,654</b>	<b>\$ 32,550,520</b>	<b>\$ 75,791,678</b>	<b>\$ 95,677,375</b>
Amortization	\$ 400,000	\$ 1,000,000	\$ 3,400,000	\$ 5,800,000	\$ 6,400,000
Minority Interest	\$ 228,343	\$ 588,219	\$ 599,983	\$ 611,983	\$ 624,222
Lab Costs	\$ 579,280	\$ 926,731	\$ 2,037,686	\$ 3,351,889	\$ 4,068,386
Corporate G&A	\$ 1,200,000	\$ 2,040,000	\$ 3,121,200	\$ 4,244,832	\$ 5,412,161
<b>Interest</b>	<b>\$ -</b>	<b>\$ 1,067,603</b>	<b>\$ 4,215,951</b>	<b>\$ 5,588,352</b>	<b>\$ 2,187,561</b>
<b>Net Profit</b>	<b>\$ (875,354)</b>	<b>\$ 2,474,101</b>	<b>\$ 19,175,699</b>	<b>\$ 56,194,623</b>	<b>\$ 76,985,044</b>
Taxes	\$ -	\$ -	\$ 2,632,334	\$ 16,858,387	\$ 23,095,513
<b>Enviroleach Net Income</b>	<b>\$ (875,354)</b>	<b>\$ 2,474,101</b>	<b>\$ 16,543,365</b>	<b>\$ 39,336,236</b>	<b>\$ 53,889,531</b>
<b>Enviroleach EBITDA</b>	<b>\$ (475,354)</b>	<b>\$ 4,541,704</b>	<b>\$ 26,791,651</b>	<b>\$ 67,582,974</b>	<b>\$ 85,572,605</b>
<b>Cash Position</b>					
Cash Expenses	\$ (12,710,336)	\$ (33,585,444)	\$ (98,531,509)	\$ (160,134,702)	\$ (197,139,001)
Cash Proceeds	\$ 6,177,491	\$ 31,330,306	\$ 100,544,692	\$ 202,112,393	\$ 275,271,790
Mohave Royalty	\$ (82,169)	\$ (247,410)	\$ (455,421)	\$ -	\$ -
Taxes	\$ -	\$ -	\$ -	\$ (2,632,334)	\$ (16,858,387)
Capital Purchases	\$ (1,000,000)	\$ (24,480,000)	\$ (24,969,600)	\$ (12,734,496)	\$ -
Interest	\$ -	\$ (488,531)	\$ (3,421,316)	\$ (5,694,109)	\$ (3,455,511)
Equity	\$ 6,222,222	\$ -	\$ 740,741	\$ -	\$ -
Debt Financing	\$ 592,791	\$ 27,471,079	\$ 26,884,413	\$ 7,843,911	\$ -
<b>Net Cash/(Debt) Balance</b>	<b>\$ (592,791)</b>	<b>\$ (28,063,870)</b>	<b>\$ (54,156,284)</b>	<b>\$ (33,239,533)</b>	<b>\$ 24,579,358</b>
Total Shares Outstanding	76,667,000	76,667,000	80,667,000	80,667,000	80,667,000
EPS	-\$ 0.01	\$ 0.03	\$ 0.21	\$ 0.49	\$ 0.67
EBITDA Multiplier Valuation	9	\$ 0.53	\$ 2.99	\$ 7.54	\$ 9.55
PE Multiplier Valuation	15	\$ 0.48	\$ 3.08	\$ 7.31	\$ 10.02
PE Multiplier Valuation	20	\$ 0.65	\$ 4.10	\$ 9.75	\$ 13.36

Source: EnviroLeach Technologies, Inc., Company Presentation, March 2020.

## SHAWN SEVERSON FOUNDING PARTNER

Mr. Severson founded *alphaDIRECT* Advisors, a division of EnergyTech Investor, LLC, in 2016 after seeing a significant communication and information gap developing between companies and the financial community. Mr. Severson has over 20 years of experience as a senior research analyst covering the technology and cleantech industries. Previously, he was Managing Director at the Blueshirt Group where he was the head of the Energy, Environmental and Industrial Technologies practice. Prior to the Blueshirt Group, Mr. Severson was at JMP Securities where he was a Senior Equity Research Analyst and Managing Director of the firm's Energy, Environmental & Industrial Technologies research team. Before joining JMP, he held senior positions at ThinkEquity, Robert W. Baird (London) and Raymond James. He began his career as an Equity Research Associate at Kemper Securities. He was frequently ranked as a top research analyst including one of the Wall Street Journal's "Best on the Street" stock pickers and multiple awards as Starmine's top three stock pickers.



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