

Special Reports on Mining in Ontario and Toronto's Global Reach – 2022-23 edition

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Selections of the approved transcript may be included in the final editorial.

Can you provide an overview of Simcoe Geoscience Limited and the company's evolution within the mining industry?

Simcoe Geoscience Limited was established in 2015 and quickly became one of the leading geophysical suppliers in Ontario and Canada. Our first initiative in the market was to develop a modern design for IP prospecting that would translate across all diverse types of mineral deposits, including Critical Metals, Precious Metals, and more. Simcoe has since also broadened its offering to cover additional exploration techniques required by clients with Gravity meters useful for finding Critical Metals, Magnetometers, Magnetotellurics (MT), and Electromagnetics giving the company a wide range of targeting approaches.

How have geophysical technologies evolved over time, and what methods are the highest in demand today?

One of the most used methods is induced polarization (IP) and resistivity - measuring two components that complement each other during data interpretation. Simcoe has implemented Alpha IP™ - the next-generation geophysical method for drill targeting. Discovery success has been as high as 75% or more with the technology, varying with each target's characteristics.

Until now and even today, Direct Current Resistivity and Induced Polarization systems have used extensive wiring – typically long spans hooked up to electrodes and dragged through the bush. This form of wired systems is an old trend; instead, Simcoe Geoscience has formulated innovative approaches using discrete “nodes” that can be laid out on a survey line to as long as 5 kilometers or more in a single setup. This opens new frontiers to a whole new exploration realm because this configuration translates to high definition and extended depths of investigation. Wired IP systems have historically “scratched the surface” to 150 m or less, and now, with Alpha IP™, we can routinely explore and target from 0.5 km to 1.5 kilometer and even more. Nodes also mean NO line cutting -- which saves cost and permits hassles in forested, swampy, environmentally sensitive, or challenging terrain.

Simcoe has tapped other trends, including the provisioning of systems for Critical Metals exploration for minerals that are in short supply and highly demanded. We have added advanced new fleets of systems to provide these capabilities for targeting these deposits, including Gravity, Magnetic, Electromagnetic, and Magnetotelluric systems – these technologies will all play key roles in finding the next generations of Critical, Precious and other minerals.

Do you see Simcoe as being in competition with the airborne surveying?

There are different rules, requirements, and capabilities for different systems. With airborne systems you are far from the buried target and traversing quickly, and thus the data tends to be “blurrier” than the equivalent ground geophysics product. With airborne surveying you also need to have the aircraft, high end measuring systems, systems that can measure while traveling at speed, and pilots. It is generally a more expensive measurement technique. Airborne surveying is more used for reconnaissance as opposed to detail. With ground geophysics, you get good productivity and higher definition as you are closer to the buried target and on a more stable platform which gives the maximum in survey resolution.

What inspired the creation of Simcoe’s own service line?

From working in industry, one of Simcoe’s founding Directors and geoscientists, Riaz Mirza believed that he could offer a valuable next generation geophysical offering with the Alpha IP™ technology. He wanted something that was repeatable, deep, and high definition. Mirza ultimately developed a wireless technology, which in addition to operational advantages in the field, also delivered the desired level of definition and depth with the added benefit of eliminating electromagnetic coupling (effects which degrade the quality of standard wired survey data – especially near surface).

What are the biggest pain points for explorers in Ontario today, and how can Simcoe help assuage these?

The industry is going into a downward cycle where it is difficult to access and raise capital. Exploration expenditures depend on explorers’ ability to go to the capital markets and finance themselves. It is harder now, in part, due to a lack of risk tolerance from investors and other factors. Another element that plagues Ontario explorers is the challenge in attracting young professionals to what is a dynamic and challenging career path. This access to skilled labor is currently a great challenge across industry in Ontario and globally.

Do you have a final message about what makes Simcoe a good partner to work with?

Simcoe is differentiated in the market through our unique combination of technology and service. Our high-definition proprietary Alpha IP™ is wireless and high definition, and requires no line cutting, a great benefit for explorers in forested and swampy areas – it is even possible to survey over unfrozen lakes. Moreover, Simcoe Geoscience also prides itself on the outstanding service - instead of the usual case where the geophysical crew just acquires the data and drops it in the client’s inbox; we offer a continuing complementary service that gives the client a detailed view of all of the data; the resulting 2D and 3D models; and the corresponding drill targets. Simcoe is looking to lead in terms of adding value to explorers and we are delighted that Alpha IP™ and our other surveys are finding new deposits in Ontario and beyond.