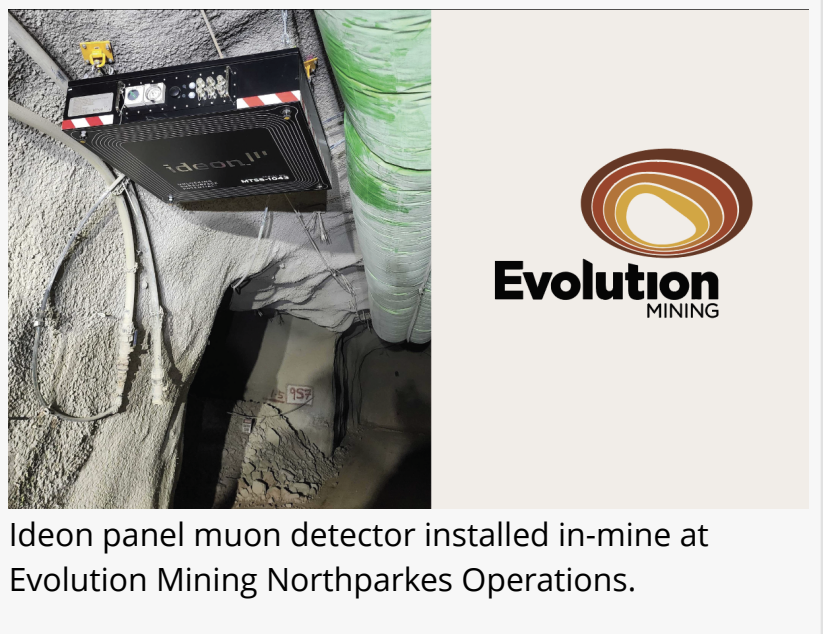


# Ideon Activates REVEAL™ for Caving Solution at Australia's First Block Cave Mining Operation

*Evolution Mining Initiates Commercial Contract for Full Cave Imaging at Northparkes Mine*

VANCOUVER, BRITISH COLUMBIA, CANADA, December 19, 2024 /EINPresswire.com/ -- Canadian subsurface intelligence leader [Ideon Technologies](#) has activated its supernova-powered solution for subsurface cave imaging at [Evolution Mining](#) Northparkes Operations in New South Wales, Australia. This is the world's first commercial in-mine muon tomography system deployment, taking place just three months after the release of the [REVEAL™ for Caving solution](#) and successful field trial results.



Ideon panel muon detector installed in-mine at Evolution Mining Northparkes Operations.

The Ideon REVEAL™ for Caving solution allows mining companies to remotely monitor progression of cave propagation in 4D, significantly reducing geological uncertainty in understanding the rock volume and how it is evolving in and around the cave over time.

It delivers a high-resolution, high-volume, high-velocity Earth model that delineates the location of the cave relative to both the background geology and the target ore body. In turn, this understanding gives mine operators the ability to mitigate emerging geotechnical risk, achieve greater production predictability, and proactively manage cave growth.

Northparkes Operations was the first operating block cave in Australia and is a pioneer in applying innovative technology to deliver consistent low-cost production of copper and gold. Evolution Mining's Chief Technical Officer, Nancy Guay, said, "Evolution sees enormous opportunity in using technology such as Ideon at our Northparkes Operations to improve our confidence in the height and 3D shape of the cave. Activating Ideon muon sensors on the extraction level of the E26LIN cave, which is around 530 m deep, will provide an accurate image of the full cave back and muck pile on a cadence that is aligned with our monthly reporting cycle. We anticipate this technology will provide predictive modelling of the cave growth, greater



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*Nancy Guay, Chief Technical Officer, Evolution Mining*

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Block caving involves undermining an ore body and then allowing it to collapse under its own weight. While the method delivers lower-cost recovery, high production rates, and reduced waste and environmental impact, it also comes with reduced visibility as to what is happening in and around the active cave. “Once initiated, the block cave’s propagation needs to be understood and tracked; however, operators have widely spaced data points to track the cave as it grows,” explained Ideon CEO and Co-Founder Gary Agnew. “Other monitoring methods offer

point measurements only, leaving operators to apply a conservative interpretation to what is happening inside the cave as they safely manage the ever-changing parameters of its edges, the air gap inside the cave, and the muck pile forming at the cave bottom. The Ideon REVEAL™ for Caving solution reduces this uncertainty by imaging the entire cave back in full, at a resolution never before possible, and on a cycle that directly delivers subsurface intelligence that informs production planning and geotechnical risk mitigation. Cave operators reduce subsurface uncertainty with Ideon, improving decision-making, operating more safely, getting more product to market more quickly, and doing so at a lower unit cost.”

The Ideon REVEAL™ Platform – now available for Exploration, Geotech, Resources, and Caving – is a subsurface intelligence solution that comprises proprietary hardware (that delivers a new-to-the-world data source) ruggedized for the most remote exploration sites and demanding of noisy in-mine environments, software, integrated imaging systems, and advanced data analysis and interpretation.

Using sub-atomic particles created from supernova explosions in space (called muons) to image deep beneath the Earth's surface, Ideon creates high-resolution multi-dimensional models that help geologists identify, map, and characterize mineral deposits and other geological features such as caves and voids. Ideon also offers patented multi-sensor fusion capabilities that enable seamless data collection and integration from our proprietary sensors and third-party data. Ideon’s AI-powered workflow transforms the geological model into a high-resolution dynamic Earth model to inform ongoing operations.

About Evolution Mining and Northparkes Operations ([www.evolutionmining.com.au](http://www.evolutionmining.com.au))

Evolution Mining (ASX: EVN) is a leading, globally relevant gold miner. Evolution operates six mines, comprising five wholly owned mines – Cowal in New South Wales, Ernest Henry and Mt Rawdon in Queensland, Mungari in Western Australia, and Red Lake in Ontario, Canada, and an 80% share in Northparkes in New South Wales.

About Ideon Technologies ([www.ideon.ai](http://www.ideon.ai))

Ideon Technologies uses the energy from supernova explosions to image deep beneath the Earth's surface. A spin-off from TRIUMF (Canada's particle physics lab), Ideon is a world pioneer in cosmic-ray muon tomography. By transforming muon data into reliable density maps, Ideon helps geologists identify, map, characterize, and monitor geological features with confidence. This reduces risk and cost of traditional methods, while saving time, optimizing return, and minimizing environmental impact across the mining value chain. In turn, this is helping accelerate the world's transition to low-impact mining and transform how companies find the critical minerals required to power the global shift to clean energy – improving peoples' lives and enhancing economic prosperity.

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