

Eigenform's Self-Teaching Scientific AI Goes Live in the Field with Lightning Minerals and NextMaps

First real-world deployment of transparent, self-improving AI aims to accelerate critical mineral discovery across Lightning Minerals' Australian portfolio.

PERTH, WA, AUSTRALIA, July 14, 2026 /EINPresswire.com/ -- [Eigenform](#) today announced the first

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Our models have been learning how to learn since the beginning, but now they're doing it using the messiest dataset on Earth: Earth itself.”

Dr. Jen Dodgson

public deployment of its autonomous scientific AI models through strategic joint ventures with [NextMaps](#) and [Lightning Minerals](#) Ltd (ASX: L1M), applying years of research in recursive machine learning and scientific reasoning to provide resource mapping and mineral exploration across Lightning's Australian exploration portfolio.

Eigenform was founded in 2019 with backing from the National University of Singapore to develop AI systems

capable of accelerating scientific discovery, with research spanning recursive self-improvement, transparent reasoning and adaptive models that evolve alongside problem-specific data.

Eigenform's AI systems are designed around a simple principle: the world's most valuable scientific problems cannot be solved by pattern matching alone: progress depends on generating hypotheses, testing competing explanations and incorporating new evidence into an evolving understanding of the underlying system.

Mineral exploration provides an ideal proving ground for this approach. Exploration teams must combine incomplete historical records, drilling results, geophysics, geochemistry, satellite imagery and geological interpretation while making decisions under significant uncertainty. Eigenform's models are designed to assist this process by automating much of the analytical workflow while exposing every stage of its reasoning for review.

Unlike many AI systems that operate as opaque black boxes, Eigenform's models produce transparent, reproducible analyses that can be inspected, validated and extended by domain experts. The systems are designed for deployment within customer-controlled environments, allowing organisations to retain ownership of their data while enabling models to continuously

adapt to proprietary information that was never part of their original training.

Through the collaboration, Lightning Minerals will integrate Eigenform's technology into exploration programmes across its Australian projects, combining geological expertise with AI-assisted target generation and data analysis to accelerate exploration workflows and identify new opportunities, combining them with the NextMaps West Australian focused mining intelligence platform to zoom in on high-prospectivity regions.

Eigenform CEO Dr. Jen Dodgson said, "This is the first public deployment of a model ecosystem we've been building for years. Scientific discovery is fundamentally an iterative process of proposing ideas, testing them against reality and learning from the results. This is an exciting opportunity to see how our systems will behave in the wild. We always believed that the real world was the ultimate test for an AI, and are looking forward to deploying our models on deposits across Australia, working with some of the best in the business to get even better."

Lightning Managing Director Troy Brice said the agreement showed the company was executing on its strategy to build a more advanced science enabled, AI resourced mining exploration company and be disciplined in how it invests capital.

"Exploration success is increasingly determined not only by the quality of the ground you hold, but by how effectively you can interrogate geological data, prioritise opportunities and deploy exploration capital," Brice said. "Importantly, this collaboration is not about replacing geological expertise - it is about enhancing it. By combining advanced AI-assisted geological analytics with Lightning's experienced exploration team, we believe we can make better-informed decisions, reduce exploration uncertainty and accelerate the pathway toward defining a maiden Mineral Resource at Mt Turner and Tungsten definition at the Warby Project."

NextMaps Founder Owen Hackenberg, commented: "We believe combining exploration intelligence, spatial analytics and explainable AI can significantly reduce the time required to evaluate historical geological information, identify priority exploration opportunities and support more informed exploration decisions."

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