TRAILBLAZER
RESOURCES TECHNOLOGY & CRITICAL MINERALS

JAMES COOK UNIVERSITY AUSTRALIA

Resources Technology and Critical Minerals Trailblazer

Transforming how industry, universities and research work together

Supporting optimization of resource operations by developing new technologies

Equipping innovators with the skills and knowledge to transform the sector

Project

Optimising the Geophysical Ore Body Model to aid Discovery of New Critical Mineral Deposits

RESEARCH → INDUSTRY COLLABORATION → IMPACT

Curtin University

IN COLLABORATION WITH

THE UNIVERSITY OF QUEENSLAND AUSTRALIA

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Optimising the Geophysical Ore Body Model to aid Discovery of New Critical Mineral Deposits

Project Description

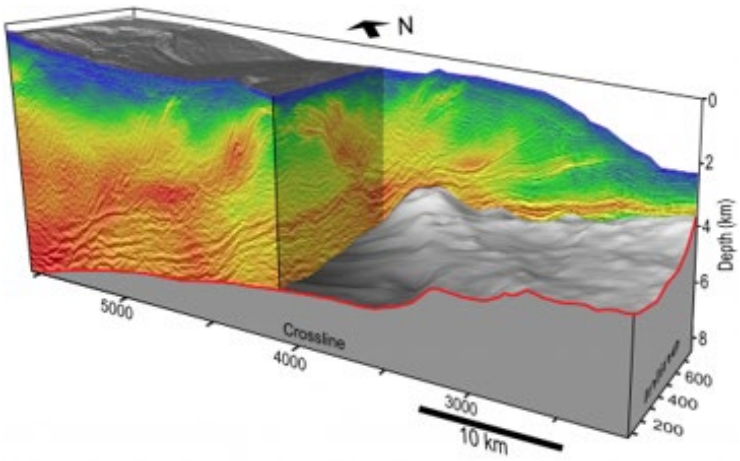
Problem

Current geophysical techniques do not reliably distinguish between barren and mineralised areas.

Aims

Characterise the geophysical responses of IOCG, base metal and porphyry mineralisation.

Integrate 3D geology, petrophysics and AI modelling to classify geophysical anomalies and detect mineralisation signatures.



Partnerships

Collaborators

James Cook University – Physical Sciences, Geoscience

Industry – Anglo American, Strategic Energy Resources

Government – CSIRO

Project Lead

Dr Lauren Waszek, JCU

Contributions

Industry ~ $4.75m

Trailblazer ~ $0.55m

Total Project Value ~ $5.3m

June 2026
For further information on JCU Trailblazer projects please send enquiries to: EGRU@jcu.edu.au

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