TRAILBLAZER
RESOURCES TECHNOLOGY & CRITICAL MINERALS

JAMES COOK UNIVERSITY AUSTRALIA

Resources Technology and Critical Minerals Trailblazer

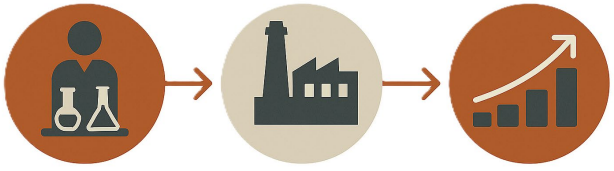
Transforming how industry, universities and research work together

Supporting optimization of resource operations by developing new technologies

Equipping innovators with the skills and knowledge to transform the sector

Project

Advancing the Buchanan Dome Critical Minerals Project through Advanced Geological and Metallurgical Studies



Curtin University

IN COLLABORATION WITH

The University Of Queensland AUSTRALIA

JAMES COOK UNIVERSITY AUSTRALIA

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Advancing the Buchanan Dome Critical Minerals Project through Advanced Geological and Metallurgical Studies

Project Description

Problem

The project represents Queensland's first major lithium-bearing pegmatite system with spodumene as the primary lithium mineral. Significant lithium enrichment has also been identified within country rocks around the pegmatite bodies. Technical work is required to de-risk the resource, define extraction pathways and advance the project toward pre-commercial development.

Aims

Define geological controls on pegmatite-hosted and country rock-hosted lithium mineralisation.

Evaluate commercially viable extraction routes for pegmatite and country rock mineralisation.

Investigate commercial pathways toward integration into a Queensland-based lithium battery supply chain.

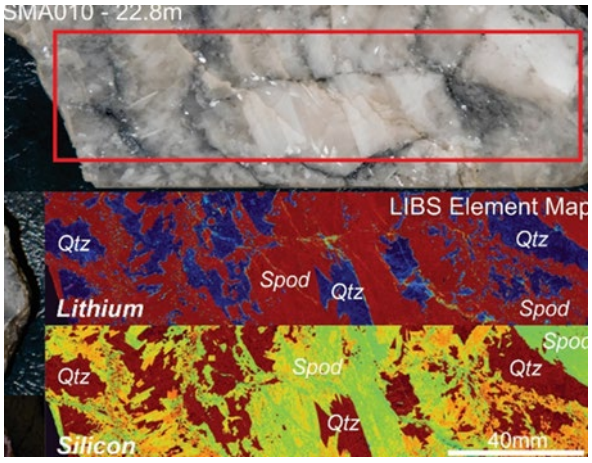

Image modified from Hines, B. 20 April 2026 Spodumene discovered at Georgetown – A first for Queensland. Core Matters, Geological Survey of Qld.

Partnerships

Collaborators

James Cook University – Geoscience, Engineering

Industry – Strategic Metals Australia

Project Lead

Dr Youseph Ibrahim, JCU

Contributions

Industry ~ $2.8m

Trailblazer ~ $0.5m

Total Project Value ~ $3.3m

June 2026

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