



MEET ELIZABETH

Critical Minerals Researcher James Cook University

Bachelor of Geology (Hons)

Master in Geology applied to mineral and energy resources

What is the focus of your current research, and what inspired you to pursue this area of study?

My research explores how minerals hold onto tiny chemical clues, like fingerprints left in minerals when rocks are deformed deep underground. I study minerals from Mount Isa, a world-famous mining district in Australia. I'm inspired by how minerals store information about geological processes. Their chemistry and structure are like codes waiting to be deciphered, revealing Earth's hidden history.

How do you see your work contributing to the future of the resources sector?

If we understand what minerals are telling us, we can explore for important resources like copper, cobalt, and rare earths in a smarter, more sustainable way. My research aims to improve how we identify the right places to search, reducing risks and supporting more responsible exploration.

What excites you most about working in STEM and being part of the research community at JCU?

STEM is never boring! In geology, one day you're outdoors exploring, another you're in the lab using high-tech equipment, and sometimes you're in your office analysing data at your computer.

At JCU, I love having access to world-class research facilities and working closely with industry partners. This connection between science, technology, and real-world impact keeps me inspired and motivated.

What's a challenge that shaped your journey?

At first, I doubted myself. I never thought I could get involved in science, let alone think about doing a PhD. Impostor syndrome was real. But I learned that discipline and short-term goals build long-term success.

What does 'Shape Our Future' mean to you?

Inspiring the next generation of young people into the industry – especially more young women. It's also ensuring the work we are doing now creates positive lasting outcomes for the communities we operate in.

Your message to future students

My advice: trust the process, take one step at a time and don't let fear stop you. Passion and perseverance matter more than perfection.



Explore what's possible: shapeourfuture.com.au