

Australian Mining

CAREERS GUIDE

prospect.

**Mine life
stickers**

Inside

Mining. Reimagined.

From artificial intelligence to virtual reality and robotics, the future of mining is digital.

Make your career matter

Whether it's climate action, conservation or human resources you're interested in, there's a mining career for you.

See yourself in mining

The face of mining has changed and everybody is welcome. Start your career search here.



PAGE 42



The support I get is unreal... they're always keen to teach me anything as long as I'm willing to learn.

Jeb Stewart
Plant Mechanic Apprentice
New Hope Group



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The goal is to leave a positive and long-lasting legacy and I am proud to play a key role.

Will Wettenhall
Environment & Community Manager
Agnico Eagle



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Mining matters

From smartphones to EVs to advanced health care, every thing around us relies on the minerals and metals we mine.

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Introducing...

...the engineer, the AI specialist, the geologist, the accountant, the environmentalist. There's a career for everyone in mining.

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Smart mines

Mining's embrace of advanced technology has ushered a new era of resource extraction – and new career opportunities.

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Rehabilitation is a priority for industry. Did you know mining is the third largest employer of environmental scientists?

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Mine life stickers

From hard hats to haul trucks – and even some camp wildlife – stickers to activate the creative side of your STEM minds.

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Day in the life

Hear from Lawrence, a Production Metallurgist and Yuriz, an Automation Engineer, about a typical day on-site.

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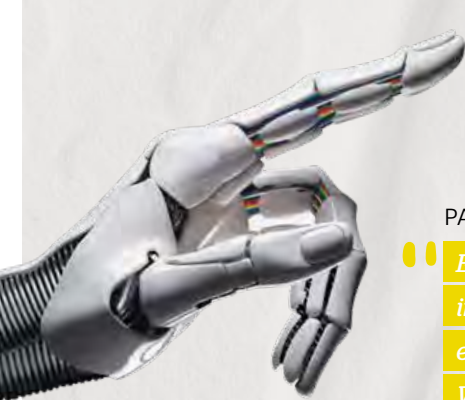
Mine games

Take a break from exploring your career options and put your new knowledge about the mining industry to the test.

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Hunter powerhouse

Australia's oldest open-cut mine is being transformed into a hydropower plant and solar farm after 115 years of mining.



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Every day I'm utilising my interest in technology and chemical engineering background. My advice? Work hard, be brave...

Yuriz Mayolie
Automations Engineer
South32



PAGE 37

What it means for me is that I'm able to come to work every day and advance a cause I believe in.

Serge Radojevic
Head of Renewables
Idemitsu Australia



prospect.

Minerals Council of Australia
Ph. + 612 6233 0600
Email. info@minerals.org.au
minerals.org.au

Warning: Please be aware that this guide may contain the names or images of Aboriginal and/or Torres Strait Islander people who may now be deceased.

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*Asks you
 the wrong question
 no wonder she is*



PAGE 08

I was intrigued by statistics and data so I switched my degree to explore the field further.

Alexia Fassetta
 Graduate Data Engineer
 Rio Tinto



PAGE 08

Teachers would tell me that gaming would never get me anywhere. Joke's on them.

Stephen Hutchinson
 Asset Operations Centre Technician
 Newmont



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Periodic table

...of Mining Careers! Career progression, high salaries and global opportunities are some of the perks of a mining career.

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Diversity & inclusion

Creating an environment in which everyone feels safe to bring their authentic self to work is a priority for industry.

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Indigenous partners

The mining industry respects and values Indigenous peoples and is committed to delivering social and economic outcomes.

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Health & safety

Keeping mine workers safe is the focus of H&S teams. That extends to workers' mental health and well-being, too.

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Decarbonisation

Australia's miners are coming up with new and unique ways to decarbonise the industry and give back to communities.

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Apprenticeships

Quality tradespeople are some of the most in-demand mine workers. Set yourself up for life with an apprenticeship.

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Training pathways

Whether you're a school leaver or looking for a career change, there are countless study and training pathways into mining.

48

University

Mining relies on a diverse range of skilled professionals across its operations. Stand out from the crowd.



PAGE 13

I'm passionate about balancing environmental management with wildlife conservation.

Allei Spice
 Land Management Coordinator
 Glencore



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I don't think Paraburdoo was expecting a 6 ft 3 male with a face full of makeup to get off the plane.

Hayden Forsyth
 Production Superintendent
 Rio Tinto

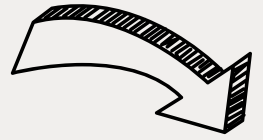


Cover image

AngloGold Ashanti's Sunrise Dam geologists Renos and Tashana completed Bachelor of Applied Science degrees at Curtin University, Western Australia. Tashana is also a former president of Curtin's Women In Mining and Resources (WIMAR) Club, providing students industry experience and networking opportunities.



Where could a career
in mining take you?



Broaden your prospects

Australia's mining industry is looking for motivated and enthusiastic young people to help shape its future.

With more career paths than ever, Australia's mining industry has opportunities spanning entry-level trades, engineering and earth sciences to automation and robotics, conservation and community engagement.

Mining's use of technology has been a major catalyst for change in the industry, introducing safer, healthier workplaces and new careers in emerging fields such as data science, virtual reality and artificial intelligence.

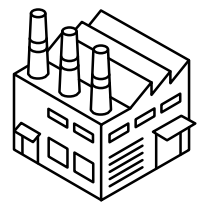
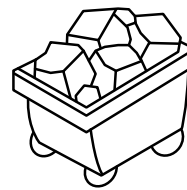
Modern mining is also committed to sustainable practices. Environmental planning starts well before mining begins, and involves consultation with local communities and Traditional Owners. Environmental scientists, hydrogeologists and cultural heritage advisers are just some of the roles crucial to managing environmental and social impacts.

Reducing carbon emissions is another industry priority. Miners are achieving this by reducing their reliance on diesel fuel, generating cleaner energy, minimising water use and the circular economy. The search for minerals critical to these and other clean technologies is generating new job opportunities in the global race to net zero.

Australia is a leading producer of over 45 essential minerals, including lithium for batteries, copper for electric cars and cobalt for wind turbines. The sector has added 50,000 jobs over the last five years and thousands of new traineeships and apprenticeships.

With so many dynamic, high paid jobs in the industry there has never been a better time to explore where a career in mining could take you. After all, the clean energy transition starts underground. We look forward to your induction!

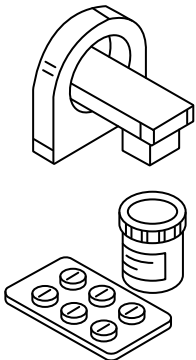
WHY MINING MATTERS...



MINING MATTERS

If you want high tech health

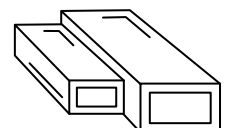
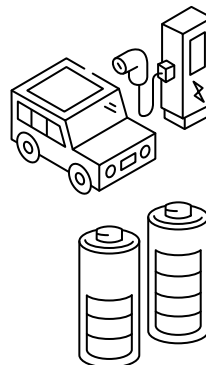
High tech health care depends on the minerals and metals we mine. Gold nanotechnology is the new focus of advanced medicine, delivering antibodies into cancerous tumours. Rare earth elements are used in medical imaging, such as x-rays and MRIs, while nuclear medicine is used to diagnose and treat illnesses like cancer. Copper kills viruses and bacteria on contact, titanium is used to make surgical implants and lithium powers medical devices.



MINING MATTERS

If you want electric vehicles

Manufacturing an EV battery requires more than a dozen minerals. With EV numbers to reach 145 million by 2030 – higher if governments accelerate climate ambitions – sustainable mining has never been more important. According to the International Energy Agency, an EV uses six times more minerals than a conventional car. At least 30 times as much lithium, nickel, rare earth elements and other key minerals will be required by the EV industry by 2040.





“ Mining careers are being reimagined for a changing world. We’re looking for tomorrow’s problem-solvers, innovators and leaders. ”

Tania Constable
Minerals Council of Australia, CEO

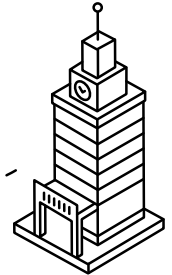
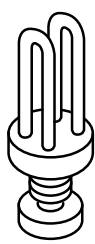
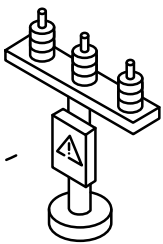


»»» **Serena Rodrigues** graduated from the University of Western Australia with a Bachelor of Science and Master of Mechanical Engineering. She began her career as a Maintenance Engineer and has worked her way up to Superintendent. Today, Serena manages a team of maintenance supervisors who look after teams of auto electricians, heavy diesel mechanics and light vehicle mechanics.



Serena
Superintendent
Loading & Drilling

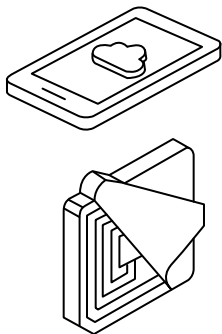
Roy Hill



MINING MATTERS

If you want the latest gadgets

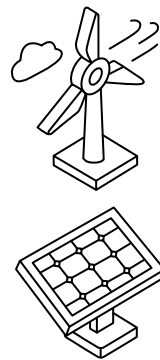
From smartphones to earpods to laptop computers, minerals are what makes electronic devices smaller, faster and more advanced. According to CISCO, there are more than 29 billion networked devices globally – that’s 3.6 devices per person. And mining supplies the world’s insatiable demand for consumer electronics. Every smartphone contains more than 40 mined metals and minerals, including copper, gold, silicon, manganese, silver and zinc.



MINING MATTERS

If you want a zero emissions future

Renewable energy generation, such as wind and solar, and the transition to a low carbon economy is made possible by mining. Permanent magnets in wind turbines and the photovoltaic cells in solar panels require rare earth elements, while battery storage is heavily dependent on lithium, nickel and cobalt. As electricity networks expand to accommodate increasingly electrified cities, large quantities of copper and aluminium will also be needed.



Learn more: **30 Things**

Learn more: **30 Things: Futurist**

Learn more: **30 Things: Sports**

INTRODUCING...

THE APPRENTICE



Apprentice Heavy Diesel Fitter

Name: Keely

Company: Mackay FutureFit Academy BHP

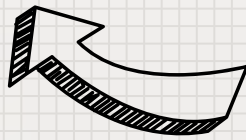
Qualification: Working towards qualifications

"The best part of the job is the constant hands-on learning. There's always a different part of the machine to learn, tear down, diagnose or fix. The work-life balance is also a great benefit. I love throwing a line in the water and getting the rig dirty exploring different tracks around the area."

The best part of the job is the constant hands-on learning.

The work-life balance is also a great benefit.

Keely
BHP



Learn more about
BHP's FutureFit Academy

THE ENGINEER



Mining Engineer

Name: Lucy Barrie

Company: Mount Isa Mines, Glencore

Qualification: Bachelor of Mining Engineering

"Since graduating from UNSW in 2020, I've gained valuable experience in mining engineering, focusing on scheduling and electrical priorities. I'm passionate about using data to drive efficiency and ensure operations stay on track. I recommend Glencore's vacation work program for anyone looking to start a career in mining – I've learned so much and met incredible people along the way."

I'm passionate about using data to drive efficiency and ensure operations stay on track.

stay on track.

Lucy
Glencore



THE ENVIRONMENTALIST

Environment & Community Manager

Name: Will Wettenhall

Company: Fosterville Gold Mine, Agnico Eagle

Qualification: Bachelor of Environmental Science (Hons)

"I am passionate about maximising positive outcomes for the environment and community through transparent environmental reporting, implementing industry-leading environmental management practices and meaningful community engagement. Ultimately, the goal is to leave a positive and long-lasting legacy and I am proud to play a key role in continuing to deliver on that commitment at our operation."

Our goal is to leave a positive and long-lasting legacy on the environment and the local community.

Will
Agnico Eagle



It takes thousands of employees and hundreds of skillsets to run a mine. No matter your area of interest, level of education, or previous experience, there's a mining career for you.



THE GRADUATE

My brain works at 110% when I'm on the pit floor as I must keep my distance from big trucks, dozers and diggers.

Fateh
AngloGold Ashanti

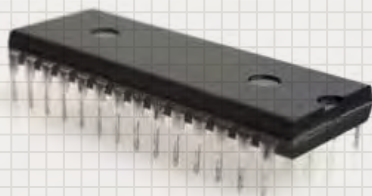
Graduate Geologist

Name: Fateh Salleh

Company: Tropicana Gold Mine, AngloGold Ashanti

Qualification: Bachelor of Science (Applied Geology)

"Each day begins with entering drilling reports into the database and running the haulage report. Then I hop in the car and drive down to the bottom of the pits to observe the action. My brain works at 110 per cent whenever I'm on the pit floor. During lunch, we gather in the office to watch blasts go off on the TV – it's like watching fireworks! After a long day, I love going on a 5km run on the Marble Gum track around the camp. The sunset behind the bush is very pretty at this time of day."



THE AI SPECIALIST

I'm passionate about leveraging AI to enhance efficiency globally.

Claudia
Rio Tinto



AI Project Lead

Name: Claudia Haugg

Company: Rio Tinto

Qualification: Bachelor of Science (Mechatronics Engineering Systems)

"As a mechatronics engineer with a love for technology, it's an absolute dream come true to be part of innovating future technologies with a world leader in mining automation. Our goal at Rio Tinto is to drive innovation and create lasting positive impact. I apply my mechatronics background to autonomous technologies, optimise fixed plant systems, and contribute to safe, sustainable operations."



THE ACCOUNTANT

Project Accountant

Name: Jock Blacket

Company: Peak Downs Mine, Thiess

Qualification: Bachelor of Commerce (Finance and Financial Management Services)

"After graduation, I was keen for an interesting role in a growing and exciting sector. The lure of a regional lifestyle was also a big factor. One of the most interesting things about being based on site is the opportunity to see how my work contributes to the operation as a whole. Managing and reporting costs, completing end-of-month reports, as well as supporting the Lead Team with project requests, gives me a great chance to apply all of my skills."



To any students considering mining, I would say, just give it a go!

Jock
Thiess



Advanced tech calls for new skills

Virtual reality, artificial intelligence, blockchain - the Australian mining industry's embrace of advanced technology is paving the way for a new era of resource extraction.

Australian mining has never been safer, smarter or more environmentally responsible, and that is largely down to the industry's massive investment and deployment of emerging technologies.

Automation

Australia is the world leader in mine automation. Autonomous vehicles, including trucks, haulage systems and drilling rigs are used at greater scale and integration in Australia than anywhere else in the world.

Around 80 per cent of Rio Tinto's haul truck fleet across its Pilbara sites is autonomous. BHP and Roy Hill, as well as miners like Anglo American and Newmont, also operate autonomous rigs and fleets capable of functioning without human intervention, improving efficiency and worker safety.

Robotics

Robots play a vital role in mine inspections, maintenance and exploration. Equipped with sensors and cameras, robots improve safety by carrying out tasks in hazardous or hard-to-reach areas. They assist with material handling, are deployed down-hole for geological data collection and are used in the design and monitoring of blasting operations. Almost 30 per cent of Australian robotics companies cater to the mining sector, according to GlobalData.

Virtual reality

Virtual reality has transformed training and mine planning in Australia. VR simulations allow operators to undergo immersive training experiences in a controlled, safe environment, simulating real-life mining scenarios such as equipment operation or emergency response.

Additionally, VR is used for mine design and planning. Engineers can explore virtual mine layouts, assess terrain and make changes in a digital environment before actual excavation begins. This results in more efficient planning and safer mine designs.

Remote operation centres

Entire command centres have emerged over the past decade to build and manage autonomous fleets of trucks, trains and processing machinery. And they're being run by everyone from gamers to engineering graduates.

Rather than being located alongside the mine, these command centres can be placed anywhere, including in cities and regional centres, meaning fewer people need to fly in and out of remote mines as part of day-to-day work. Technology is bringing mining jobs closer to where you live while creating a more flexible workplace.

Artificial intelligence

With vast amounts of data now being generated from sensors, equipment and operational systems, AI is being used to provide advanced analytics to predict failures, optimise performance and reduce downtime.

AI is also being utilised in exploration to identify new mineral deposits. By analysing geological data, AI can detect patterns and predict the likelihood of mineral-rich areas, reducing the need for extensive drilling and exploration.

Blockchain

Further down the supply chain, blockchain is being explored for its potential in improving transparency and accountability in the mining industry. It enables secure, tamper-proof tracking of minerals from the mine to the end consumer, ensuring ethical sourcing and reducing fraud.

Australian mining companies are experimenting with blockchain to verify the origin of materials like gold and lithium, giving consumers and investors greater confidence in the ethical sourcing of resources.

Mining is a high tech, high skilled industry and well ahead of most other industries in adopting new technologies.

Amanda Lacaze
Lynas Rare Earths, CEO



Learn more:
lynasrareearths.com



➤➤➤ Komatsu supports work readiness with virtual and augmented reality simulators and tools, as well as the Komatsu Training Academy – two purpose built education centres in Brisbane and Perth.

➤➤➤ Packed with military-grade hardware, Newmont's Smarthog inspection robot is transforming underground mine safety at Cadia.

Newmont



Automation Engineer Graduate

Name: Tianchen Lou

Company: Newmont

Qualification: Bachelor of Science (Mechatronics, Robotics and Automation Engineering); Master of Mechatronics Engineering

... on mine automation:

"I really wanted to work in an industry where automation is a heavy investment. With how fast the world of mining is changing, I noticed – even as a student – that there was a lot of investment in this space, from autonomous haul trucks to autonomous loaders and various robotic advancements. I wanted to be part of that, which is why I joined Newmont."

... **on a mining career:** "For anyone considering a career in mining, two things stand out. First, a respect for safety – this is a non-negotiable. Safety always comes first due to the nature of the industry and the risks involved. Second, strong communication skills. On a daily basis, I interact with multiple contractors, vendors, support engineers from around the world, and even our quarry manager. Clear and effective communication is essential to doing the job well."

... on the energy transition:

"The mining industry is critical to the transition to renewables. Whether it's building wind turbines, expanding power grids, or manufacturing solar panels, all the necessary materials still come from mining. Our job is to extract these resources safely and efficiently while respecting the environment and the Traditional Landowners."



➕ Learn more: komatsu.com.au

.....

Top new skills the mining industry is looking for:

- ➕ Data science & analytics
- ➕ Automation & robotics
- ➕ AI & machine learning
- ➕ Remote operations systems
- ➕ Cybersecurity
- ➕ Geospatial & GPS technology
- ➕ Predictive maintenance
- ➕ Digital twin technology
- ➕ Cloud computing



➕ Learn more: newmont.com



Graduate Data Engineer

Name: Alexia Fassetta

Company: Rio Tinto

Qualification: Bachelor of Data Science (Economics)

... **on my career:** "I first became interested in data science through a conversation with a co-worker at my local pizza shop about traffic optimisation. I was intrigued by statistics and data so I switched my degree to explore the field further. This decision ultimately led me to a fulfilling career in mining innovation."

... **on my day-to-day:** "I work in the Information Services and Technology team, supporting large-scale architectural projects that integrate raw production data from multiple sources. Ensuring data integrity is crucial as it drives key operational decisions across the business. My role also involves working on strategies to increase ore production."

... **on working together:** "Working in mining means collaborating with diverse teams to develop innovative solutions that drive business outcomes. The Graduate Program has been an incredible opportunity to work alongside inspiring individuals from different disciplines. I value the relationships I've built."

Learn more: riotinto.com



UNSW



New technologies require new skills and the lab is a significant step forward in harnessing virtual reality to train and upskill our teams.

Dan van der Westhuizen
Anglo American Australia, CEO

VIRTUAL REALITY

Breaking ground - virtually

A world of experiential learning awaits the next generation of mining students - on campus and on mine sites.

Revolutionising the mining industry with its advanced virtual reality, augmented reality and holographic technologies is UNSW's Immersive Technology Lab.

The Lab's immersive tools, including the 360-degree Advanced Visualisation and Interaction Environment, allow students and industry professionals to practice complex tasks and explore potential hazards around a mine site in a risk-free setting.

Virtual learning isn't just the domain of universities. Miners like New Hope Group, Komatsu and Rio Tinto rely on the tech to support workplace readiness.

Anglo American's investment in a VR laboratory was another step in its technology journey. Australian CEO Dan van der Westhuizen said the lab allowed workers to learn key skills in a safe and supportive environment.

Last year, Anglo American's 10-year vision for a 'mine of the future' became a reality when all of its underground coal mines in the Bowen Basin began operating simultaneously from Remote Operation Centres (ROC). Through automation, ROC workers use data analytics to safely and efficiently run operations underground.

REMOTE MINING

Wanted: Gamers

Crushing rocks has never been safer - or more fun - for a new generation of mine workers whose tool of the trade is an X-box controller. Stephen Hutchinson, Asset Operations Centre Technician at Newmont's Cadia mine in NSW, uses the controller to operate the underground rock breakers to crush big rocks that block machinery and can stop production.



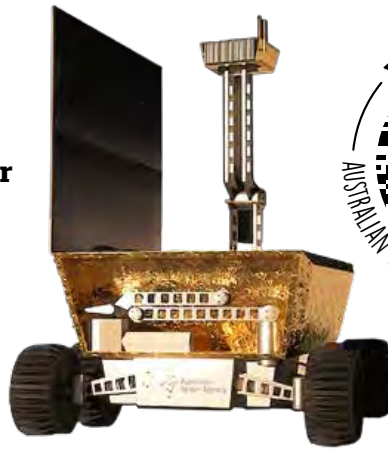
Back when I was in school, teachers would tell me that gaming would never get me anywhere. Joke's on them.

Stephen
Newmont

'Roo-ver'

Meet the Moon Rover

»»» The Aussie-made Moon Rover, affectionately known as 'Roo-ver,' represents a groundbreaking step for the Australian space sector.



COLLABORATION

To the moon and beyond!

Australia is emerging as a key player in global space science and exploration – and it's taking inspiration from mining.

Australia's mining expertise is being leveraged to develop advanced automation and remote technology for space exploration. Spearheaded by AROSE (Australian Remote Operations for Space and Earth) and backed by the Australian Space Agency, the "Roo-ver" lunar rover is the result of collaboration among researchers, mining companies and corporate partners.

Part of NASA's Artemis program, Roo-ver will collect lunar soil and rocks for analysis, with the aim of extracting

oxygen – a key step for human survival on the Moon and, potentially, Mars.

Investment in automation and robotics by Aussie miners like BHP, Rio Tinto and others is helping AROSE adapt these technologies for remote space missions, illustrating the synergy between Earth-based industries and space exploration. AROSE hopes the initiative is the first step towards a thriving space industry in Australia and will help inspire more young Australians to explore careers in STEM.

Learn more: riotinto.com
Automating Australia's place in space

What's most gratifying is the connection AROSE has fostered between the resources and space sectors.

Michelle
AROSE



AROSE Program Director

Name: Michelle Keegan

Position: Director of Resources and Space, AROSE

Qualification: Bachelor of Engineering (Mining); Master of Science (Mineral Economics)

... **looking back:** "I spent 30 years working in mining, and led an advanced technology development group at a global mining company focused on creating the next generation blueprints used to build new mines. My background in mining has enabled me to build a resources advisory board at AROSE which brings innovative minds from the mining sector into the design of the moon rover."

... **looking forward:** "Taking what we do well on Earth to Space, optimising and bringing it back to Earth, is the goal. If we can shape our next generation mines through a new lens, taken from solving the hardest challenges in Space, we can truly accelerate our ambitions. Even better if we can help the Space sector solve their challenges by learning from what we do well on Earth. Cross-sector collaboration!"

AI spans the entire mining value chain



Mine

Autonomous vehicles

Self-driving trucks, drills and loaders use AI for navigation and operation, enhancing efficiency and safety.

Processing

Plant optimisation

AI systems monitor and control processing plants, adjusting parameters for performance and to reduce energy use.

Inventory

Ore sorting

AI-powered sensors and machine learning sort ore from waste material, improving ore quality and reducing costs.

Rail

Predictive maintenance

AI analyses transportation sensor data to predict failures and schedule maintenance, reducing downtime and costs.

Port

AI-powered cranes

AI systems control cranes for loading and unloading bulk materials, improving speed, precision and safety.

Shipping

Dynamic routing

AI algorithms analyse weather data, sea conditions and vessel performance to determine the most efficient and safe routes.

Market

Demand forecasting

AI models can be used to forecast demand for mining products, allowing companies to adjust output and inventory.

“Mining done in the right way is essential for the societies in which we live in.”

Simon Trott
Rio Tinto, Chief Executive Iron Ore



Maximising good for responsible mining

Mine rehabilitation and land management is highly regulated, better implemented and more transparent than ever before.

Mine rehabilitation

Australia’s miners rehabilitate thousands of hectares of mined land every year and invest millions of dollars in research to continually improve rehabilitation practices.

The industry is highly regulated and miners work closely with local communities, governments, scientists and Traditional Owners to ensure mined land is properly rehabilitated. Mining companies must lodge rehabilitation bonds and develop rehabilitation plans even before mining begins.

There are hundreds of rehabilitation projects underway at any given time, such as ERA’s Ranger uranium mine rehabilitation in the Northern Territory or Whitehaven’s completed rehabilitation of the Sunnyside coal mine in New South Wales.

Rehabilitation efforts are considerable and can last many years. Since 2010, Glencore has planted over one million trees, shrubs and grasses at its McArthur River mine rehabilitation project in the NT. The one-millionth tree – a native Eucalyptus camaldulensis, or red river gum – was cultivated in the mine’s on-site nursery from seeds collected from the local region.

Responsible partner

Australia’s mining industry is also a world leader in responsible water management and environmental protection. The MCA developed a water accounting framework that is now used globally to help track water use, reduce waste and improve water use efficiency. The industry also follows the Towards Sustainable Mining (TSM) framework, which tracks annual safety and environmental performance, as well as engagement with host communities.

Preserving biodiversity

One of the key objectives of mine management is to manage impacts to preserve biodiversity, which means protecting native species and their habitats. Mining companies across Australia are actively involved in efforts to protect endangered species and support national biodiversity research.

For example, Glencore partnered with Aussie Ark to help prevent the extinction of native mammals in the Upper Hunter region of NSW, including the Tasmanian devil. Queensland Metals’ Mount Isa Mines is supporting the conservation work of Southern Gulf Natural Resource Management focusing on the endangered Carpentarian grasswren.

Fosterville Gold Mine Fosterville, Victoria



Environmental Officer

Name: Tessa Fitzpatrick
Company: Fosterville, Agnico Eagle
Qualification: Bachelor of Science (Earth Sciences)

... on my career:

“As an environmentalist, I know the vital role a healthy environment plays in every aspect of our lives. I’ve chosen to work at FGM to gain insight into the industry whilst making a genuine contribution to responsible environmental management on site.”

Agnico Eagle



Stawell Gold Mines

Tessa
Environmental Officer

Les
Geology Technician



Geology Technician

Name: Les Riddell
Company: Fosterville, Agnico Eagle
Qualification: Currently studying for a Bachelor of Environmental Science to become an Ecologist

... on my career:

"Working at Fosterville has been truly rewarding. The transition from retail to mining has offered me a unique opportunity to directly contribute to sustainable practices and witness the mine's positive impact first-hand. I have six children, so leaving the next generation with a positive attitude and healthy environment is close to my heart."

Progressive rehabilitation at New Hope Group's New Acland coal mine in Queensland, and Whitehaven's completed rehabilitation of Sunnyside coal mine in New South Wales.

Environmental team members Peter and Steph monitor plant growth as part of progressive rehabilitation efforts underway at Stawell gold mine in Victoria.

New Hope Group
New Acland QLD

2005

2024

Learn more:
newhopegroup.com.au

Whitehaven
Gunnedah NSW

2018

2022

Learn more:
whitehavencoal.com.au

Thiess



Environmental Specialist (Graduate program)

Name: Oli Baddeley

Company: Worsley Alumina, South32

Qualification: Bachelor of Science (Environmental Management)

... **on my graduate experience:**

"I undertook my first-year rotation at Cannington mine in Queensland, embracing the FIFO lifestyle. A highlight was immersing myself in the culture and wider community. The even time roster provided great work-life balance and the opportunity to travel, and I built strong friendships with many of my colleagues."

... **on what I learned:**

"As a graduate, I gained experience in everything from monthly and annual reporting, analysing and monitoring data, conducting sampling and flora and fauna management. I also worked with a team of graduates exploring development of a wellness app – an innovative tool that could have practical benefits for the well-being of all South32 employees."

... **on the program:**

"For those considering a graduate program, I'd say give it a go and take every opportunity the industry provides for career development and personal growth. South32's program offers exposure to many aspects of mining operations with supportive mentors and engagement across the business."

 Learn more south32.net



Ashlee
Environmental Engineer

>>> Environmental Engineer Ashlee Cox is part of the Thiess rehabilitation team responsible for restoring mined land in the Hunter Valley.

REHABILITATION

Ingenuity drives rehabilitation

Mining companies are restoring thousands of hectares of mined land at any given time in Australia.

Environmental Engineer Ashlee Cox is part of the Thiess rehabilitation team progressively restoring land at a mine in the Hunter Valley, New South Wales.

Ashlee joined Thiess as a casual environmental undergraduate in 2022 while undertaking full-time study for her Bachelor of Environmental Science and Management. She has benefited from the skills and experience of industry professionals, having taken part in three vacation programs across locations in NSW and Queensland.

During this time, she worked on research projects such as microbat monitoring in NSW, and improving environmental management processes on a mine site in Queensland.

The objective of rehabilitation is to restore mined land for productive use, whether that be farming, native habitat, wetlands, or even recreation. Mine site rehabilitation is heavily regulated and planned well in advance of mine closure.

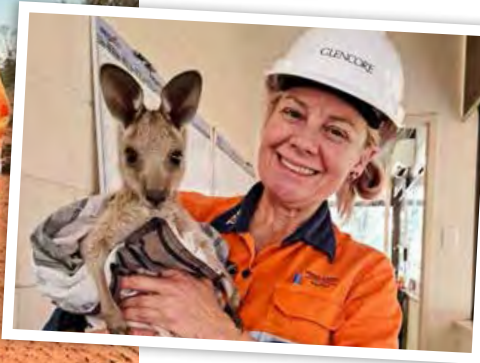
In Western Australia, Yancoal transformed its coal mine near Collie into a water sports hub. Today, Lake Kepwari is a major tourism drawcard for the state. On the other side of the country, Yancoal's former Rhondda Colliery in the Hunter Valley is being transformed into a haven for revheads – a motor park with a Formula 1-designed driving circuit.

 Learn more thiess.com

 Learn more yancoal.com.au



Eamon
Environmental
Specialist



Glencore



**Land Management
Coordinator**

Name: Allei Spice
Company: Newlands, Glencore
Qualification: Licenses and certifications including emergency wildlife response and venomous snake relocation

... **on my day-to-day:** "My role is dynamic and ever-changing. It includes site works like fencing, firebreak maintenance and rehabilitation of flora and fauna habitat, as well as animal management such as relocating snakes and other wildlife. It's rewarding to ensure the safety and preservation of local species while working alongside Traditional Owners on cultural heritage initiatives."

... **on working together:** "I work closely with teams from across the site, from earthworks to wildlife relocation, ensuring all aspects of land management are effectively coordinated. Mentoring Indigenous Pathways Program participants and supporting community engagement initiatives allows me to give back and inspire a strong, positive culture."

... **on my career:** "Every day is a new challenge, but I'm passionate about balancing environmental management with wildlife conservation. The variety of the role keeps me engaged and passionate about what I do."

»»» BHP Environmental Specialist Eamon is helping relocate baby dingos trying to make a home in the West Musgrave village.

Learn more:
glencore.com.au

Learn more:
bhp.com

CONSERVATION

Leading conservation efforts

From ghost bats to endangered turtles, Australia's miners are stepping up to protect the nation's unique wildlife.

Australia's miners do a lot more than just preserve existing ecosystems; they invest millions of dollars annually to increase populations of Australia's endangered animals and bird species.

BHP's two-year partnership with Biota Environmental Sciences and Helix Molecular Solutions is shedding light on the mysterious Pilbara Olive Python. Rio Tinto is working with the Wik-Waya Traditional Owners to protect

endangered turtles from feral pigs on beaches near its bauxite mine at Weipa in Queensland. In the Northern Territory, Agnico Eagle has monitored a population of rare ghost bats near its Union Reef project since 2018.

As the mining industry's focus turns increasingly to greater sustainability, the demand for professionals who can balance resource extraction with wildlife conservation is growing.

Flat-pack homes for native wildlife

IGO's Forrestania environmental team is trialling ReHabitat Pods to help small native animals like the Western Quoll move safely across disturbed land. The biodegradable pods, designed by conservation startup ReHabitat, break down into a thick layer of mulch which retains moisture to aid regeneration.

Similarly, Talison Lithium's environmental team, in partnership with Blackwood

Basin Group, installed 16 safe nesting boxes around Schwenke's Dam at its Greenbushes operation. Built by local community groups, the boxes complement previous conservation efforts like cockatoo breeding tubes and floating islands.

Hundreds of similar projects by miners are underway nation-wide as part of the industry's commitment to conservation.



IGO



Talison

Key

EARTH SCIENCES

ENGINEERING

SKILLED TRADES

PHYSICAL SCIENCES

COMPUTER SCIENCE

THE PERIODIC TABLE OF

MINING CAREERS



Career progression, high salaries and global opportunities are just some of the perks of a career in mining. So let's get started!

Mi.e MINING ENGINEER								
Mi.p MINE PRODUCTION ENGINEER	Ge.e GEOTECHNICAL ENGINEER							
Me.e MECHANICAL ENGINEER	El.e ELECTRICAL ENGINEER							
Ex.g EXPLORATION GEOLOGIST	S.mi SURFACE MINING ENGINEER	Mi.s MINE SAFETY ENGINEER	Ha.t HAUL TRUCK DRIVER	D.op DRAGLINE OPERATOR	Pr.m PROCESS METALLURGIST	Hy.m HYDRO-METALLURGIST	Py.m PYRO METALLURGIST	Ai.s AI SPECIALIST
Ge.t GEOLOGICAL TECHNICIAN	Hyd HYDROGEOLOGIST	M.eq MINING EQUIPMENT ENG.	Ta.e TAILINGS ENGINEER	D.me DIESEL MECHANIC	Ele ELECTRICIAN	Ex.m EXTRACTIVE METALLURGIST	Fl.e FLOTATION ENGINEER	Da.s DATA SCIENTIST
Ex.m EXPLORATION MANAGER	Dr.e DRILLING ENGINEER	D.en DRILLING ENGINEER	M.ha MATERIALS HANDLING ENG.	Wel WELDER	Sh.f SHOT FIRER	Me.e METALLURGICAL ENGINEER	M.pr MINERALS PROCESSING ENG.	Me.m METALLURGICAL MODELLER
Ge.a GEOCHEMICAL ANALYST	Ge.s GEOPHYSICAL SURVEYOR	F.ma FIELD MAPPING SPECIALIST	U.mi UNDERGROUND MINING ENG.	U.ni UNDERGROUND NIPPER	Ma.t MAINTENANCE TECHNICIAN	M.la MINE LABOURER	Pr.c PROCESS CONTROL ENG.	La.t LABORATORY TECHNICIAN
G.sp GIS SPECIALIST	Co.l CORE LOGGER	D.sc DATA SCIENTIST	Dr.o DRONE OPERATOR	R.sy REMOTE SYSTEMS TECHNICIAN	Ic.s ICT SUPPORT OFFICER	Ad.o ADMINISTRATION OFFICER	Sp.c SPECIALIST CHEMIST	M.su METALLURGIST SUPERINTENDENT

© Minerals Council of Australia



E.sc ENVIRONMENTAL SCIENTIST	Eco ECOLOGIST	Ai.q AIR QUALITY SPECIALIST	Wa.q WATER QUALITY SPECIALIST	En.c ENVIRONMENTAL COMPLIANCE	La.r LAND RECLAMATION
C.re COMMUNITY RELATIONS	S.en STAKEHOLDER ENGAGEMENT	S.pe SOCIAL PERFORMANCE	In.r INDIGENOUS RELATIONS	C.li COMMUNITY LIAISON OFFICER	So.i SOCIAL IMPACT ASSESSOR

Building a career path in mining is elementary!



START HERE

Whether you're passionate about the earth sciences, spend your weekends reverse engineering electronics or are a whiz with numbers, there's a career in the mining industry for you. Simply start with your preferred area of study and take a look at some of the corresponding jobs available in mining.

									C.fi CHIEF FINANCIAL OFFICER
			Ms.o MINE SAFETY OFFICER	O.sp OH&S SPECIALIST	Ch.x CHIEF EXECUTIVE OFFICER	Co.a CORPORATE AFFAIRS MGR	Go.a GOVERNMENT AFFAIRS MGR	Co.s COMPANY SECRETARY	
			Em.r EMERGENCY RESPONSE CO.OR	O.hy OCCUPATIONAL HYGIENIST	Mi.m MINE MANAGER	In.c INTERNAL COMMS MGR	C.re COMMUNITY RELATIONS MGR	F.an FINANCIAL ANALYST	
M.le MACHINE LEARNING ENG.	Cy.s CYBERSECURITY ANALYST	En.e ENERGY EFFICIENCY SPEC.	Sa.c SAFETY COMPLIANCE	Re.s RESPIRATORY SPECIALIST	G.co GENERAL COUNSEL	M.re MEDIA RELATIONS SPECIALIST	Hu.r HUMAN RESOURCES MGR	I.re INVESTOR RELATIONS MGR	
Re.o REMOTE OPERATIONS SPEC.	I.se IOT/SENSORS ENGINEER	Me.s MECHATRONICS SPECIALIST	Oc.n OCCUPATIONAL NURSE	Sa.e SAFETY ENGINEER	Tr.d TRAINING & DEVELOPMENT	Co.e CONTENT WRITER/EDITOR	M.aq MERGERS & ACQUISITIONS	P.fi PROJECT FINANCE MGR	
Vr.d VR DEVELOPER	Au.r AUGMENTED REALITY SPEC.	So.e SOFTWARE ENGINEER	Be.s BEHAVIOURAL SAFETY ANALYST	H.sa HEALTH & SAFETY INSPECTOR	Ev.c EVENTS COORDINATOR	So.m SOCIAL MEDIA MANAGER	Fi.p FINANCIAL PLANNER	Co.m CONTRACTS MANAGER	
Di.t DIGITAL TWIN ENGINEER	T.in TECHNOLOGY INTEGRATION	Ch.m CHANGE MANAGER	Fl.c FLEET COORDINATOR	Pr.m PROJECT MANAGER	Ma.m MARKETING MANAGER	In.m INSURANCE MANAGER	Co.t COMMODITY TRADER	S.ch SUPPLY CHAIN SPECIALIST	
D.so DRONE SOFTWARE DEVELOPER	Ri.a RISK ASSURANCE MANAGER	I.in INCIDENT INVESTIGATOR	St.s STRATEGY SPECIALIST	Of.m OFFICE MANAGER	Fi.m FINANCIAL MODELLER	P.ma PROCUREMENT MANAGER	C.an CREDIT ANALYST	Acc ACCOUNTANT	

Wa.m WASTE MANAGEMENT	Mi.c MINE CLOSURE MANAGER	W.bi WILDLIFE BIOLOGIST	En.e ENVIRONMENTAL EDUCATOR	Su.m SUSTAINABILITY MANAGER	Re.a REGULATORY AFFAIRS
S.co SUSTAINABILITY COORDINATOR	La.a LAND ACCESS SPECIALIST	Hu.r HUMAN RIGHTS ADVISER	Et.c ETHICS & COMPLIANCE	Cu.h CULTURAL HERITAGE OFFICER	Co.r CONFLICT RESOLUTION



Diversity is putting a modern face on Australian mining

Mining has come a long way since the 1980s and '90s. Creating an environment in which everyone feels safe to bring their authentic self to work is a priority for the industry.

Australia's mining sector thrives on diverse perspectives which only comes from employing people from diverse backgrounds. It's also important the mining workforce reflect the communities in which miners live and work, and that means actively seeking people across age groups, caring responsibilities, cultural backgrounds, physical abilities, gender identity and sexual orientation.

Women in mining

Women made up 22 per cent of the mining workforce in 2023-24 (ABS). The number of women employed full time in the mining industry has increased from 9,100 in 2003-04 to 52,800 in 2023-24 – a 480 per cent increase.

While much work still needs to be done to encourage women to consider a career in mining, company programs are making a difference. In 2016, BHP set out to achieve gender balance globally by 2025. It is well on its way. There are over 10,000 more women working at BHP now than in 2016, with women representing 37.1 per cent of its workforce. At Rio Tinto in Australia 25.1 per cent of employees are female and 57 per cent of the 235 graduates recruited in 2024 were women. It is a similar story at Roy Hill, Lynas Rare Earths and others.

Indigenous Australians

Indigenous Australians working in the mining industry continues to increase thanks to higher wages, opportunities for investment and world-leading regulatory settings that promote engagement with host Traditional Custodian communities.

Tailored pathways are available for Indigenous Australians, including apprenticeships, traineeships and graduate opportunities. Many companies also provide mentoring, career development and cultural awareness training.

Rainbow pride

Mining companies are making strides in supporting LGBTIQ+ employees, with initiatives like Pride Month celebrations and participation in events like Mardi Gras. Workplace programs, resource groups and employee networks committed to allyship and inclusivity operate in many workplaces, including at Anglo American, South32, Rio Tinto and Glencore. Thiess, for example, has an Allies Committee to connect and advocate for LGBTIQ+ employees, while BHP's Jasper group focuses on inclusion and diversity.

Career transitions

It doesn't matter in which field you began your career, or what decade, mining is increasingly open to individuals transitioning from other sectors. Electricians, mechanics, teachers, or those returning to work after raising children, can find well-paid and flexible roles in mining. Transferable skills are as valuable as industry-specific qualifications. For example, mining companies recruited airline pilots and cabin crew for their skills in operations and safety during the COVID-19 pandemic, demonstrating the sector's adaptability.



Rio Tinto

Whitehaven is proud to be empowering Aboriginal and Torres Strait Islander people and communities through employment, skills development and education opportunities.

Paul Flynn

Whitehaven, CEO & Managing Director



Rainbow trucks, trains and even cranes are making a statement on mine sites across the country.



Roy Hill



It starts with a sense of belonging, creating a workplace where people want to be ... and where they can share in the value they create.

Gerhard Veldsman
Hancock Prospecting, CEO Operations



Mine manager

Name: Miami Leadbitter
Company: Rio Tinto
Qualification: Graduate Diploma (Mining Engineering, Mining and Mineral Engineering); Master of Mining Engineering

... **on my career:** "I am the Mine Manager at Hope Downs 4. I'm responsible for the entire mining team – moving dirt with the diggers, putting it on the back of the trucks, overseeing blasting activities, ensuring dewatering of the pits, and managing mine water. A big part of my job is also fostering a great culture within the team, making sure everyone is happy and, most importantly, ensuring that everyone goes home safe."

... **on my pathway:** "I am a proud Noongar woman and fourth-generation miner from the Collie coal mining town in WA's southwest. I finished school in Year 11 and decided to go to TAFE, where I earned a diploma in civil and structural engineering. From there, I jumped into mining. I went to university while working full-time and studying full-time, eventually earning a master's in mining."

... **on the next generation:** "If we want to give Indigenous people a voice in the lands that we are mining, we have to give them a pathway in. And what better way to do that than by working together? If we have Indigenous leaders in decision-making positions within organisations, we can drive real change. To the next generation of Indigenous leaders: be strong, be powerful, be courageous and be proud of who you are. Know your worth. Know that you are good at what you do."

Pink trucks, trains and heavy machinery are a common sight at Roy Hill in the Pilbara. They represent Hancock Prospecting chair Gina Rinehart's commitment to breast cancer research and awareness. Women make up 1 in 4 workers at Roy Hill – higher than the industry average.



Learn more royhill.com.au

Neurodiversity

Creating inclusive environments for neurodiverse individuals, including those with autism spectrum disorders (ASD), ADHD and dyslexia, is a priority for the mining industry.

Since 2017, BHP has collaborated with Curtin University's Autism Academy for Software Quality Assurance and other organisations to foster inclusion. Through this initiative, BHP has welcomed more than 20 neurodiverse interns into roles such as software development, data science and engineering. A similar partnership between Rio Tinto, Curtin University and the Australian Computer Society offers internship pathways for people with ASD.



.....

Women in mining

105%

Higher wages

Women working in mining are the highest paid of any industry, with total average weekly earnings 105.3% above the national average in 2023-24.

ABS

13 weeks

Paid parental leave

Most mining companies (74%) offer an average 13 weeks universal paid parental leave and 15.7 weeks for primary carer paid parental leave – well above the national average.

Workplace Gender Equality Agency

Learn more: riotinto.com





Truck Driver

Name: Loxy

Company: South Flank, BHP

Background: Proud Western Australian mother and grandmother. Loxy joined the mining industry 17 years ago and has driven trucks ever since. She turned 72 in March 2025.

... **on my career:** "I truly love my job, especially working with younger people – it keeps me young! But seeing how the mining industry has progressed, to support and embrace women into roles that were previously male dominated, is wonderful. I joined BHP because I heard about South Flank being near on gender balance from frontline to senior leaders, and I hadn't experienced this in all my working years – it's fantastic!"

Stay true to yourself, stay focused, and seize every opportunity that comes your way!

Loxy
BHP

Learn more:
bhp.com



Hancock Prospecting



I have been able to bring my training to a work environment and use the skillset that I developed in the army.

Apollo Jones
Production Supervisor, Roy Hill



Ginbata Airport
Newman, WA

»»» Roy Hill was treated to a flyover by two F-35A Lightning II aircraft before a stopover at the mine's Ginbata Airport as part of RAAF training operations. It was another opportunity to strengthen ties between two of Australia's essential industries – mining and defence.



Pathways for ADF veterans

Hancock Prospecting's Veterans Employment Program supports former military personnel transition into mining.

Australian Defence Force veterans are finding new careers in mining thanks to Veterans4Jobs, a nationally recognised program launched in 2023 by Hancock Prospecting. The program matches veterans with jobs in mining and agriculture that align with their expertise and values.

Hancock Prospecting's approach enhances workforce diversity but also underscores the company's commitment to veterans' well-being and economic empowerment.

Tailored onboarding, mentorship and leadership opportunities ensure a seamless shift for ex-military to corporate environments.

The initiative is part of Hancock's broader commitment to supporting the veteran community, including philanthropic efforts in partnership with groups like Working Spirit, RSL, Commando Welfare Trust and Soldier On.

Learn more
veterans4jobs.com.au

Thought leaders of a different kind

South32 Decarbonisation Principal Emily Kendall knows first hand the challenges faced by those who think differently in neurotypical workplaces.

After over a decade working across the resources sector and experiencing the feeling of being misunderstood and undervalued, the young neurodiverse chemical engineer went on to launch a Neurodiversity Network in Perth called 'Minds of All Kinds'.

The Network champions neurodivergent individuals and workplaces, and holds networking events to share knowledge, experiences and advocate for change.

"When those who think differently feel safe and valued, they are more likely to contribute their unique talents," said Emily. "Companies that actively seek to include neurodiverse individuals are better positioned to adapt to changing market demands and foster innovation."



Maritza
Senior Resource
Development Geologist

»»» Maritza Constantinou balances being a mum and a Senior Geologist at FGM, and right, Yancoal's Helen Neville.



WORK-LIFE BALANCE

Making space for mining mums

Australia's miners are welcoming more mums onto mine sites as workplaces become more flexible and accommodating.

For Maritza Constantinou, it was a love of earth sciences – and a suggestion from dad – that led her to pursue a student geologist position at Fosterville Gold Mine (FGM) in central Victoria. That was more than a decade ago.

Since 2011, Maritza has held various positions at FGM, including Graduate Geologist, Production Geologist, Near-Mine Exploration Geologist, Project Geologist, and finally her current role as Senior Resource Development Geologist. But her most important role to date, hands down, is 'mum'.

"Fosterville has given me the opportunity to grow my career and continue to learn while still being home every night to my family," said Maritza, a mother of two. "I wouldn't want it any other way."

Australia's top miners know that mums have some of the best communication skills and multitasking abilities in the game. DIDO, FIFO and split shift rosters provide parents a more flexible schedule, while better access to remote sites cuts down travel time. Workplaces are also becoming more female-friendly with more private spaces, PPE made for women and even childcare services.

Helen Neville is a Haul Truck Operator at Yancoal's Yarrabee mine in Queensland. An even-time roster and supportive partner makes balancing motherhood and work in the mines easier.

"The biggest challenge was stepping out of my comfort zone to learn new skills. I'm proud of what mining has allowed me to achieve financially for my family."

» I am passionate about getting more women into the mining industry and about the role of mining on social and community development.

Vanessa Torres
South32, Chief Operating Officer



» I don't think Paraburdoo was expecting a 6ft 3 male with a face full of makeup to get off the plane.

Hayden
Rio Tinto



Production Superintendent

Name: Hayden Forsyth

Company: Amrun, Rio Tinto

Qualification: Bachelor of Science (Chemistry)

... **on my career:** "I was looking for a career change and my dad told me he'd seen job opportunities with Rio Tinto in Paraburdoo, across the country in Western Australia. I wasn't convinced at first and so I googled Paraburdoo. It had a population of 1,600, the coast was five hours away and the town had one supermarket and a pub! But my dad sold it to me that I could make a career for myself there."

... **on overcoming bias:** "It wasn't easy in the beginning. It took persistence to shift the mentality and be seen not as 'Hayden, the gay person', but as 'Hayden, the person who's passionate about his job and career'. My first On Job Trainer, Lara, took me under her wing. She was a voice for me on site when I often felt I didn't have one for myself. Her support and guidance led me to feel like I could bring my whole self to work, and without that, I wouldn't have progressed to where I am today."

... **on Everyday Respect:** "I've started to see a different Rio Tinto following the *Everyday Respect* report. I know we have a long way to go, but it's good to see steps in the right direction. I've witnessed incredible cultural change during my time here. I truly feel valued and I've also led the LGBTQ+ Mentoring Program and Thrive Ambassador program for our Thrive network – a visible network of LGBTQ+ staff and allies."



Wangan and Jagalingou-owned business Woongal Environmental Services provides environmental monitoring and reporting services at Bravus Mining and Resources' Carmichael mine.

Woongal's team of Indigenous rangers combine traditional cultural practices with modern ways of working to help manage the habitat of the endangered Black-throated Finch around the mine and the 33,000-hectare conservation area.



Learn more:
bravusmining.com.au



Bravus

Working together

The mining industry respects and values Australia's Indigenous cultures, knowledge and histories, and is committed to supporting social and economic opportunity and aspirations.

Much of the land on which mining occurs is covered by native title and land rights regimes. More than 60 per cent of operating mines are also located near Aboriginal and Torres Strait Islander communities. Each community is an integral partner in mining's social and economic contribution to Australia.

Living our values

Many mining companies have built strong and lasting relationships with Traditional Custodians over many decades. Companies collaborate with Traditional Custodians and their communities to identify areas of cultural or historical significance. This informs mine design and operations and together they protect and promote culturally significant heritage.

As mine planning evolves and the industry integrates rehabilitation and closure planning early in mine design, Traditional Custodians also share their knowledge to support biodiversity conservation and environmental management activities.

Australian mining companies often partner with Traditional Custodians to develop business enterprises that revolve around collecting native seeds for revegetation and conducting ethnobotanical studies recording traditional knowledge of the flora around the mine.

Skills for the future

Aboriginal and Torres Strait Islander people make up approximately 6 per cent of the mining workforce and around 10 per cent of all mining trainees and apprentices identify as Aboriginal or Torres Strait Islander.

From entry level roles to mid-career professionals all the way to senior appointments and women re-entering the workforce, there are company programs aimed at supporting every level of the career development cycle.

Companies are also actively staying ahead of the curve to identify the skills of the future. New roles in automated haulage, mine planning with a focus on end of mine life or working with Traditional Custodians to preserve and protect cultural heritage are just some of the skillsets demanded of the modern workforce.

The jobs and skills of the future start at school which is why many companies also partner with youth organisations focused on Aboriginal and Torres Strait Islander young people, such as the Clontarf and Stars Foundations, and work independently with remote schools to foster links and support young people.

Lynas Rare Earths



» Lynas Rare Earths is a long-time member of the Laverton Cross Cultural Association supporting the Laverton Aboriginal Art Gallery, youth engagement and development activities near its Mt Weld mine in WA. Pictured is Lynas Vice President Corporate Affairs Jennifer Parker and Mhairi Dunbar, People and Culture Manager Australia.

INDIGENOUS SUPPLIERS

Partnering with communities

Mining’s enduring partnerships with Aboriginal and Torres Strait Islander communities extends beyond jobs and skills.

Miners invest millions of dollars every year in community-led projects, ranging from art spaces to cultural centres, heritage projects and seed banks, and even the provision of health services.

Aboriginal and Torres Strait Islander businesses also reap the benefits of providing essential services to the industry. In 2023, Australia’s miners procured goods and services worth more than a billion dollars from Indigenous suppliers, including Traditional Custodian enterprises.

Australia’s Rio Tinto Chief Executive Kellie Parker said the mining industry can create real value for host communities.

“We strive to employ locally and buy locally in Australia – especially from Indigenous, small and regional businesses. It’s about providing opportunities to help these businesses grow and in doing so, creating new jobs and training opportunities.”

According to Supply Nation, a national directory connecting Indigenous businesses with industry, the social return on investment is significant. For every dollar of revenue, Indigenous businesses create \$4.41 of economic and social value.

Aboriginal and Torres Strait Islander people are partners in the success of Australia’s minerals industry.



Global Chief Advisor Indigenous Relations

Name: Chris Croker

Company: Rio Tinto

Qualification: Bachelor of Engineering (Mining Engineering); Master of Business Administration

... **on my career:** “I am a Luritja man from Central Australia. I’ve worked extensively across Australia, the United States and Canada as a mining engineer, and as a senior executive and strategy advisor pioneering Indigenous employment, economic development and self-determination initiatives.”

... **on empowerment:** “Hiring Indigenous employees is just the start of the journey. We also need to create culturally safe environments within our company to support, retain and value Indigenous Peoples in our workforce. That will rely heavily on building cultural competency among our non-Indigenous employees and continuing to evolve our company culture to one of deeper respect and support of Indigenous Peoples and cultures.”

... **on the future:** “I’m optimistic that someday in the future, strong and empowered Indigenous communities will be the new normal. Indigenous people bring unique skills, resilience, knowledge and perseverance that equip us to lead and excel in leadership positions. I’m excited to have joined a company that’s driven to making that a reality.”

With a will, a desire and a bit of hard work, we can make really great things happen.

Chris Croker
Rio Tinto



Lynas Rare Earths

» Carey Group is a 100 per cent First Nations-owned business contracting its services to a growing list of top miners. Established by Aboriginal businessman Daniel Tucker in 1995, Carey prioritises Indigenous employment and training. In 2024, Lynas signed a five-year mining contract with Carey Group for Lynas’ high grade Mt Weld rare earths mine. The contract creates around 50 ongoing jobs. Technologies to improve efficiency and productivity will be a focus of the new mining fleet provided by Carey.

We're a huge operation at MRM but it's something I'm really proud to be part of.

Yanni
Glencore



Metallurgy Planning Support Officer

Name: Yanni Mavromatis
Company: McArthur River Mine, Glencore
Qualification: MRM traineeship

... **on my career:** "I applied for the MRM Traineeship as I was looking for a challenge while working somewhere where I could develop my career with formal training. I've been at MRM ever since (2017). I've had a variety of different job roles before I started working out here as I worked for labour hiring companies. This job is very different from the rest, but I have enjoyed it the most."

... **on my typical day:** "I work in a team to manage the maintenance and repairs of our metallurgy operations where our product is processed. A usual day for my role is organising parts for upcoming jobs and maintenance. I also manage the application parts list and maintenance schedule tasks in our system for the team doing the job, as well as creating, editing and maintaining weekly maintenance plans."

... **on the mining industry:** "What surprised me about my job was just how large and complex the operations are and just how much goes on behind the scenes to make everything work. The most challenging but also the most exciting part is how dynamic and fast-paced the role is. Different challenges are thrown at you every day and we're always working to improve."



Glencore graduates Adam Gould and Michael Piper with Glencore's NSW Pathways Coordinator Natalie Anderson, and below, Adam Gould on the job.

SKILLS & TRAINING

Programmed for job readiness

Australia's miners provide long-term, sustainable pathways into the mining industry for First Nation's people.

Glencore Coal Australia's First Nations Pathways Program gives Aboriginal and Torres Strait Islander people the chance to explore a career in mining.

NSW Pathways Coordinator Natalie Anderson said job readiness and mine experience was the focus of the program. "Participants are offered the chance to develop essential skills and explore employment opportunities in roles they may have never considered, all while getting paid," she said.

Program graduate Michael Piper said: "The program has changed the direction of my life, it has given me peace of mind and stability. It can open up so many doors, the opportunities are endless."

The 26-week work experience program is delivered in two phases across Glencore Coal operations in New South Wales' Upper Hunter Valley, and Queensland's Bowen Basin.

At completion, participants will have fulfilled the requirements to obtain a Certificate II in Surface Extraction, as well as gained work-ready skills.

Learn more:
glencore.com.au



Glencore

Don't think about it. Apply. I've met some wonderful friends. I'd highly recommend it to anybody thinking about it.

Adam Gould
Glencore

Thiess



Superintendent Community & Indigenous Affairs

Name: Kelsey Smith

Company: Roy Hill

Pathway: Indigenous Participation Program

... **on my career:** "I am a Banjima woman from Roebourne, a small Aboriginal community in the Pilbara. After high school I applied for the Indigenous Participation Program at Rio Tinto to see what mining had to offer and worked there for five years in health and safety. In 2017 I moved to Perth and saw Roy Hill was offering FIFO operator roles at the mine. This role gave me more insight into how mining works and my passion for the industry grew. My leaders saw my potential and took me off the equipment into coordinating mining projects which took my career to the next level."

... **on giving back:** "I am now in my 15th year in the mining industry. My role includes mentoring our Aboriginal employees, engaging with our Traditional Owners, protecting heritage sites and giving back to local communities. I am fortunate that my career brings together my culture and passion. I strongly urge young Aboriginal people to do the same and apply through the different pathways that the mining industry has to offer."

... **on a career highlight:** "Being a finalist in the Women in Industry awards (2022) was an unreal moment. Having the support of our Chairman, Mrs Rinehart, who through her generosity flew my mum over to Sydney to be by my side, made it an incredible experience. I'm beyond grateful for the support and opportunities Roy Hill has given me."



Thiess' Connect. Yarn. Grow program is setting a new industry standard in workplace inclusion.

CONNECTIONS

Connect. Yarn. Grow.

Inclusive workplaces are the first step towards creating meaningful career opportunities for Indigenous Australians.

Australia's miners and mine contractors are committed to creating meaningful career opportunities for Aboriginal and Torres Strait Islander peoples.

An industry leader in reconciliation, Thiess initiated site-based yarning circles in 2023, which culminated in the launch of the inaugural Connect. Yarn. Grow. conference in May 2024.

Connect. Yarn. Grow. enabled Thiess business leaders to gain insights into the lived experiences of Indigenous employees. The conference highlighted areas for improvement across the Thiess Group and provided a clear

roadmap for creating a culturally safe workplace. Since its inception, Connect. Yarn. Grow. has won multiple awards and set an industry benchmark for inclusion.

Guided by its Reconciliation Action Plan, Thiess has also enhanced recruitment, retention and professional development opportunities for its Indigenous workforce. With 552 Indigenous employees across 33 sites, Thiess is embedding what it has and continues to learn into its policies, training and mentoring programs.



Building connections, deeper relationships and trust is fundamental to the path to reconciliation.

Ivan Vella
IGO, Managing Director & CEO



Learn more: igo.com.au

Learn more royhill.com.au

A safe, healthy and respectful workforce is essential to our success and ensuring that we all return home safely every day.

Michael Wright
Thiess, Executive Chair & CEO



Health and safety is at the heart of every mining operation

Australia's mining industry is steadfast in its commitment to ensuring that every worker returns home safe and healthy, both physically and mentally.

Mining activities are inherently high-risk. Machinery, shafts, loose soil, noise, chemicals and flammable materials are part of everyday mining activities. To address these challenges, the industry employs a comprehensive approach combining leadership, compliance, culture and behavior, with a focus on managing critical risks.

Safety improvements

Australia is a global leader in mine safety and innovation. Over the past two decades, significant advances in technology and equipment have enhanced risk management.

Tools like 3D drone mapping of underground mines, monitoring of methane emissions, remote equipment operation and transforming safety practices have helped to minimise workers' exposure to dangerous processes and environments.

Technological advancements, paired with increasingly sophisticated systems, have driven reductions in injury-related workers' compensation claims since 2000.

Careers in safety

Careers in mine safety extend far beyond the role of occupational health and safety officers. The mining industry employs emergency response coordinators, occupational hygienists, risk managers, training managers, nurses and paramedics.

Those with a psychology or mental health background are also finding new opportunities in the mining industry, with many mine sites providing access to psychologists, counsellors, wellness coaches and personal trainers.

From graduate programs to mid-career transitions, career pathways are diverse. Successful safety professionals excel in compliance management and adapt swiftly to evolving circumstances.

Respectful workplaces

Sexual harassment and discrimination are unacceptable in any workplace. Following the Australian Human Rights Commission's *Respect@Work* report, the mining industry strengthened its commitment to fostering respectful

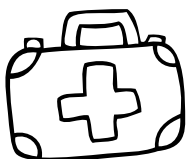
environments. Many mining companies have taken it a step further – reporting publicly on systemic gaps within their own operations and working collaboratively to address issues. This has supported an industry-wide conversation about respectful workplaces and the result is real and meaningful change on the ground.

Workplace incidents are treated with the utmost seriousness, reflecting the industry's zero tolerance approach to bullying, harassment and abuse.

Mental health initiatives

By prioritising safety, respect and mental health, Australia's mining industry continues to evolve into an employer of choice. Counselling services are often available alongside employee assistance programs and peer support networks.

Most large miners also work in partnership with organisations like Beyond Blue, Blue Tree Project, Lifeline and the Black Dog Institute to support mental health initiatives both within the workplace and the wider community.



By prioritising safety, respect and mental health, Australia's mining industry continues to evolve into an employer of choice.



Learn more:
bravusmining.com.au



Bravus



Peer supporters
 Carmichael mine



Workplace Support Manager

Name: Kanae Dyas

Company: Anglo American

Qualification: Bachelor of Psychology; Diploma of Workplace Health and Safety. 2024 Women in Resources Inclusion and Diversity Champion for managing Anglo American's award-winning Workplace Support Program.

... on my day-to-day: "No two days are ever the same. I cover anything from case management, return to work, health and hygiene, to development of H&S strategies and risk mitigation programs. Sometimes I'm working in Inclusion and Diversity and Transformational Change. It's exciting and can be hard to explain as it's quite non-conventional yet extremely rewarding."

... on my inspiration: "My family has worked in health services for many years. My mother was one of the first PNG registered nurses and her brother is the District Health Commissioner of the Eastern Highlands. I think this is where it may have begun. My family has always been supportive and I draw inspiration from them and those around me. I want to demonstrate to my children that anything is possible and to follow your passion."

... on personal development: "Building strong technical experience coupled with tertiary education is vital. I've also involved myself in external opportunities to further develop my skills. Be a sponge and throw yourself into every learning and development opportunity whether it's a course, a research program, a new task or project, or a new technology. Align yourself with people who know and demand more as you will grow from these experiences. Never stop learning."

Learn more:
australia.angloamerican.com

»»» Carmichael Peer Supporters Justin Arthur (Mechanical Supervisor, DRA Global), Sarah Payne (Truck Operator, Mackerler Group) and Justin Thompson (Safety Advisor, Bravus).

HEALTH & SAFETY

Safety is everyone's business

Building a strong, supportive community is the first step in ensuring the physical and mental safety of the workforce.

For more than 1,200 workers, the Carmichael coal mine in central Queensland is their home away from home. Whether it's managing physical risks or addressing mental health challenges, the goal for Bravus is the same: to ensure everyone goes home in better shape than they arrived.

Bravus' FIFO workforce is supported by health and wellness initiatives, social events and fitness programs, in addition to its Peer Supporter Program.

Two of the Bravus' fleet of 200-tonne CAT 796AC mining trucks were fitted with trays painted in 'Peer Supporter purple' to remind its workforce that support is available should they be going through a tough time.

Mining and Resources Health and Safety Manager, Graeme Furnell said looking after each other's mental health while working away from usual support networks was fundamental to Carmichael's Peer Supporter Program.

"Everyone needs an avenue to get things off their chest. The beauty of the peer-on-peer support system is that it builds on existing relationships," he said.

The program trains peer supporters among the workforce to offer a listening ear, build connections and guide colleagues to professional services when needed.

Bravus



Bravus



BEFORE IT WAS YOURS,
IT WAS MINED



IF IT DOESN'T FLOW
AND DIDN'T GROW,
IT WAS MINED



REDUCE
REUSE
RECYCLE



prospect.
minerals.org.au





prospect.

minerals.org.au

See yourself
in mining



Mining.
Reimagined.



Rockstar 



Al
ALUMINIUM

Ree
RARE EARTHS

RESOURCING TOMORROW
AUSTRALIAN MINING




Learn more:
igo.com.au



Ventilation Officer

Name: Dirk Garland

Company: Nova, IGO

Qualification: Bachelor of Engineering (Mining Engineering)

... **on being a graduate:** "I joined the IGO Graduate Program in 2019 and now work at IGO fulltime out here at Nova as the Ventilation Officer. I'd previously done this role whilst on the Graduate Program so all of the skills I learned back then I'm putting into place now."

... **on the work:** "A project that I worked on in the ventilation space was with our secondary fans underground, making them remote operable so we can switch them on and off from the surface. We can reduce the amount of time the fans are on and then in turn the amount of power the fans are consuming."

... **on IGO:** "IGO has been a great company to work for. I've thoroughly enjoyed my time here and been looked after very well. I've had lots of opportunity. It's the way to go if you're looking for a graduate role."

IGO



IGO workers stretch before their shift and right, Health and Wellbeing Manager Davina Pellicano with Barry.

WELL-BEING PROGRAMS

Mine safety isn't just physical

Keeping mine workers safe is always the priority and that extends to workers' mental health and well-being, too.

Every day is a good day to ask R U OK? at IGO. At its nickel, copper and cobalt operations in Western Australia, a custom-tailored health and well-being program, I-GO Well, aims to inspire employees to look after their physical, mental and financial well-being.

From 'Two-Minute Moves' – designed to inspire people to take energising micro-breaks throughout their day – to free health screenings, fitness challenges, like The Pushup Challenge and well-being days, IGO's health and

safety team take a holistic approach to worker well-being. Psychosocial safety is just as important as physical safety at IGO.

Checking in on mates is especially important when working away from home. Mental health is supported through peer support programs, workshops and visiting professionals. Sometimes the perfect mood booster is a morning tea with special guest, Barry the goodboi (pictured) after a FIFO Mental Health Group check-in.



Funds for emergency flights

Many of Australia's miners, including Roy Hill, Glencore and Whitehaven Coal, play a crucial role in improving regional and remote health outcomes through partnerships with organisations like the Royal Flying Doctor Service (RFDS) and Westpac Rescue Helicopter Service (WRHS).

Roy Hill donated \$8 million to the RFDS in 2023 to buy a state-of-the-art aircraft that will help save lives in the most

isolated corners of WA, enhancing medical outreach and emergency response capabilities. Similarly, Whitehaven's partnership with WRHS supports a service essential to the communities around its coal operations in the Gunnedah Basin of NSW.

These kinds of partnerships help to bridge healthcare gaps and provide critical services to improve the well-being of remote populations.



Team members aid 'injured' workers during simulated mine rescues as part of emergency response competitions in Victoria (above) and the NT (right).



NAERC

EMERGENCY RESPONSE

Emergency drills for safety

Every year mine rescue teams come together to test their skills responding to simulated mine rescue emergencies.

Emergency response training plays a key role in keeping mine sites safe and prepared for emergencies. Competitions like the Victorian Mine Rescue Competition (VMRC) and the Northern Australia Emergency Response Competition (NAERC) hosted by the Minerals Council of Australia are priority events each year for mine emergency response teams.

At these and similar events across Australia, teams put their skills to the test in simulated rescue operations, gaining critical experience and feedback from judges.

An important part of the competition is the involvement of local police, fire and ambulance services to improve community-wide preparedness.

The role of emergency responders, safety managers and volunteers is vital in maintaining high safety standards on and around mine sites. Team members are trained to respond effectively to emergencies, while safety managers oversee operational protocols, ensuring compliance with health and safety regulations.



There's nothing more important than ensuring that at the end of the working day, we all return home safely to our families.

Earl Melamed
Glencore, Head of Global Coal Assets

Safety first

Cameran is also a member of the Mt Weld Emergency Response Team and a Health and Safety Representative.



Mine Geologist

Name: Cameran Rowan
Company: Lynas Rare Earths
Qualification: Bachelor of Science (Geology)

... **on my career:** "Resources play a pivotal role in the WA economy. Studying geology helped align myself with industry and future job prospects. I applied for vacation work with Lynas during the third year of my degree. This gave me an insight into life as a FIFO geologist and more broadly the lifestyle attached to working in mining. It was an invaluable experience which set me up to work in the industry."

... **on being a graduate:** "The best part of my vacation and graduate positions was interacting with colleagues from diverse backgrounds and professions. It was through these conversations and sharing of knowledge, coupled with their extensive industry experience, that gave me an opportunity to learn and grow as a geologist. Their openness to engage also made me understand the human element to working in mining."

... **on the future:** "The mining industry is expansive and exciting. Whether you want to travel the globe or stay in Australia, miners often have a global perspective. You'll develop your communication skills. The emphasis on health and safety becomes pivotal. Ultimately, a mining career gives you skill sets that are highly transferable and in demand. And there is the added satisfaction that my career contributes to the Australian economy and the delivery of critical natural resources globally."

My day ...at Worsley

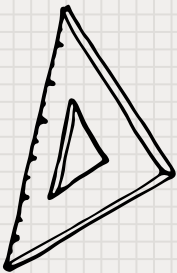
Yuriz Mayolie

Automations Engineer | South32
Bachelor of Engineering
(Chemical Engineering)



Every day I'm utilising my interest in technology and my chemical engineering background. My advice? Work hard, be brave and pursue your interests!

▶▶▶ Yuriz



6:30 am

I greet my teammates and start up my laptop. Every morning I check three things: my emails, process control weekend duty log and shift handover reports. After getting an idea of what my day will look like, I take out my planner and allocate hours to my top tasks for the day.

10:00 am

After troubleshooting some issues with reliability and shift engineers, my next meeting is with the process control engineers, where we discuss weekend duty calls. Then we do round the room checks for top items of the week and work that will be affecting anyone else.

2:00 pm

One thing about process control changes, we get so many of them! I'm given a handover regarding a change in how we operate our calciner wash factors. Then I head to the control room to talk to the operators and note down any concerns they might have.



5:45 am

I meet up with my carpool to head to site. We catch each other up on our weekends and sometimes grab warm drinks from the nearest drive-through. Normally we have four people in the carpool so we each only drive once per week. It's great.

7:30 am

Technology daily stand-up where the entire technology team gathers around the open space and starts the meeting with a safety or value share. Our lead is great at calling out all technology work for the day and any expected service downtime or known issues.

11:30 am

Another meeting! One of our tanks is coming offline and we're planning to commission a bypass line to utilise a different tank and prevent losses arising from maintenance windows. Afterwards, I head down to our crib room and have my lunch.

4:00 pm

The day goes by so quickly! I meet up with my carpool members and we head home. Depending on the weather and my mood, I might fit in some light exercise or a quick game session before I hit the showers. Then I prep dinner and chat with my housemates.

Learn more:
south32.net



My day ...at Tanami

Lawrence Alago

Production Metallurgist | Newmont
Bachelor of Science (Chemical Engineering
and Extractive Metallurgy)



5:00 am

I pull on my hi-vis long sleeve shirt, pants and steel toecaps and head to the dry mess where I have breakfast and pack my lunch for the day ahead. Then I hop on the first bus from the mine campsite to the processing plant where I work.

8:30 am

This week on-site I am doing the daily accounting for the processing plant. This involves collating all gold production-related data across different departments and logging it in our metallurgy database. I also do an inspection with oxygen addition to our leaching tanks, crucial for our gold recovery.

4:00 pm

Lab results from yesterday's plant performance are done. I assess these values, update our daily accounting and prepare for tomorrow's KPI reporting. I attend my last meeting for the day, reviewing events that happened across different departments in processing and critical tasks for tomorrow.

7:30 pm

After dinner at the dry mess, I celebrate the successful week by having drinks with coworkers at the wet mess (bar) in a responsible way. Before bunkering down, I triple-check my alarms are in place so I don't miss my flight back home!

6:00 am

I grab a coffee and check my emails and the processing plant trends to see how it performed overnight. I attend a couple of meetings, looking at safety and production in my department, as well as KPIs and critical tasks across the different processing departments.

2:00 pm

I have an appointment with the Graduate Environmental Advisor regarding the water balance for the whole site. Between the two of us, we look after the data collection and collation required to run simulations that we use to project water usage and identify areas for usage reduction.

6:00 pm

I start to wind down from the busy day I had today. As I am flying out tomorrow, I prepare handover notes to summarise all the events that happened during my week on-site. Once completed, I pack up and take the bus back to camp.



I learnt a lot throughout my time as a graduate with Newmont. I am always looking forward to learning new things and meeting new people.

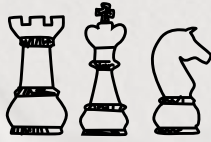
▶▶▶ **Lawrence**



Learn more:
newmont.com

Time out

Mine games



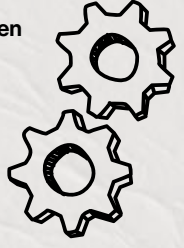
G B C K Y B T D D C O P P E R V A N A D I U M B
 R J G E O T H E R M A L S O L A R F A R M S J N
 E P H O T O V O L T A I C P O W E R G R I D O C
 E M M N O S U S T A I N A B I L I T Y R P I M K
 N N W I N D T U R B I N E S H B M H N L T E N F
 H B O C I R C U L A R E C O N O M Y A A G L E B
 Y N I I J S H D Y G R A P H I T E T S A Y L E K
 D N O W T G Y G N F M Y T J M S I I R C E R S Y
 R B P I K A R L M N C U J L E N N O O K U H E C
 O H R S T E C R A Y E B I N U O T B C T C Y L A
 G G E H N I S I H R Y G A M B S A I P O L I C R
 E M W E P E S L F N T G O R Y L N A W D I L I B
 N U O P I I A N T I N U A R T D C C Y S M E H O
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 B H O F C W O U M R E T C N O Y P E I L T E V T
 G T R K W D I A I D T F C B N R H T N I E R C R
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 T L Y K U Y G I B N Y A G S L F B F O O C Y R D
 R N H P N N B M U D C J I R L E O R V N T P T I
 N E T Z E R O U P E E U H T E T G L A K I O C N
 R E N E W A B L E S M U O G Y N I H T C O L E G
 M P P C R S M A R T G R I D L D E I I M N I L F
 E M I S S I O N R E D U C T I O N R O K C C E P
 J T W W W E N E R G Y E F F I C I E N C Y Y S G

Energy transition

Find the listed words

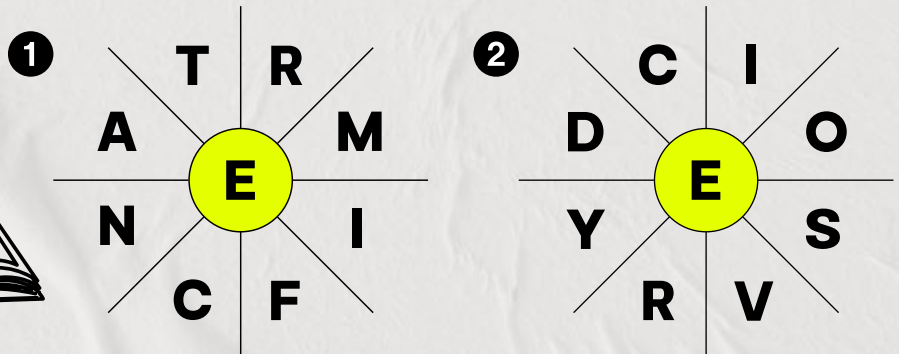
Words run horizontally, vertically and diagonally.

- | | |
|--------------------|----------------|
| Alumina | Green hydrogen |
| Battery storage | Graphite |
| Bioenergy | Hydropower |
| Biomass | Hydrogen |
| Carbon capture | Innovation |
| Carbon neutral | Lithium |
| Carbon trading | Manganese |
| Circular economy | Net zero |
| Climate action | Neodymium |
| Cobalt | Nickel |
| Copper | Photovoltaic |
| Decarbonisation | Platinum |
| Dysprosium | Powergrid |
| Electric vehicles | Renewables |
| Electrification | Silicon |
| Emission reduction | Smartgrid |
| Energy efficiency | Solar farms |
| Energy policy | Sustainability |
| Energy transition | Vanadium |
| Geothermal | Wind turbines |



Wordwheel

Create as many words as possible
 You can only use each letter once and every word must contain the letter in the centre of the wheel.



Rock stars



Aries

A natural born leader, Aries is an enthusiastic and driven employee with enviable determination. They might start at the bottom, but Aries' drive and enthusiasm ensures they won't stop until they are the boss – or maybe the mine manager.



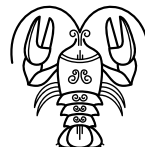
Taurus

Dependable and patient, Taurus is drawn to stable, long-term work that rewards loyalty. Although bull-headed at times, Taurus is a team player with excellent attention to detail and an aptitude for contracts and process-driven tasks.



Gemini

Gemini is imaginative, versatile and energetic, although liable to grow bored with routine. With a quick wit and abundance of charm, Gemini might enjoy the travel and autonomy of being a mine engineering contractor.



Cancer

Intuitive and self-motivated, although sometimes maligned as overly sensitive, Cancer thrives in workplaces that value culture and community. Cancer is not afraid of hard work and is well suited to social performance and advocacy roles.



Leo

Leo is creative, broad-minded and sometimes prideful. A well-paid career with enough autonomy to keep them ahead of the pack is important to Leo. Warm-hearted Leo is a favourite with colleagues and is often found in managerial roles.



Virgo

Analytical and meticulous, Virgo will never leave a job half-done. Quick to judge their own work (and everybody else's), Virgo creates order from chaos and is well suited to science and technology roles that demand exacting standards.



Cryptogram

Decode the message

Each letter in the phrase has been replaced with a random number. Try to decode the message.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

26 19 10 20 24 10 15 4 10 4 10 7 16 23 26 7 15 4 5 11 26 11 13 4
 5 26 15 7 26 5 8 4 22 10 7 16 7 13 8 4 22



Double stack

Solve the anagrams

Use the circled letters to complete the final word or phrase.

LINMMAIUU

O CIHMRUM

NESGAUMIM

LVSEIR

INTAUIMT

NUIAUMR

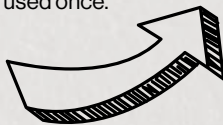
NZIIOCMRU

ANSWER

Math squares

Fill in the missing numbers

The missing values are whole numbers between 1 and 9. Each number is only used once.



1

	+		+		23
x		+		÷	
	-		-		-6
+		x		+	
	+		-		4
29	15	5			

2

	÷		+		10
x		x		-	
	x		-		41
-		+		+	
	÷		+		8
15	17	12			



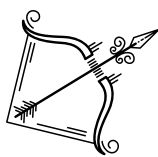
Libra

Capable, loyal and charming, Libra is a team player that will accomplish any task and make friends along the way. Libra has excellent negotiation skills and is well suited to roles that allow them to be creative problem solvers.



Scorpio

Determined, magnetic and sometimes intense, secretive Scorpio will go full throttle when committed to a goal. With an unshakeable drive and laser focus, Scorpio often performs best in research, data and science roles.



Sagittarius

Optimistic and good-humoured, Sagittarius is idealistic and full of good ideas. Travel and autonomy may help alleviate boredom, which is a common gripe of Sagittarius. Careers that offer variety over repetition, and plenty of scope, are a good match.



Capricorn

Extremely cool under pressure, Capricorn is unstoppably efficient but is often times fatalistic and prone to overwork. Capricorns love a challenge and are always looking for the next project. They are equally at home in highly creative or data-driven roles.



Aquarius

Aquarius is honest, loyal and a true humanitarian. Independent by nature, Aquarius wants to leave the world a better place. Earth sciences and cultural heritage might be fields of interest for out-of-the-box Aquarius.



Pisces

Imaginative and highly perceptive, Pisces seek personal fulfillment over financial gain. The 9-5 grind can be stifling for Pisces. Pisces are suited to careers that value their empathetic nature, such as counselling and human resources.

Mine pit to become Hunter powerhouse

Australia's miners are coming up with unique ways to decarbonise the industry and give back to communities.

Mining has an important role in the global shift to net zero emissions, both in the production of minerals critical for a low emissions future and by reducing emissions across their operations.

The manufacture of solar panels, wind turbines, batteries and hybrid and electric vehicles depend on the extraction and processing of minerals such as cobalt, silver, copper, nickel, lithium, rare earth elements and zinc.

Australia is a plentiful source of these and other minerals, and the sector is already experiencing jobs growth from increased global demand.

Committed to net zero

The Minerals Council of Australia and its member companies support the Paris Agreement and have an ambition to reach net zero by 2050.

The mining industry is reducing its carbon footprint by deploying everything from electric vehicles to autonomous haulage to renewable energy coupled with battery storage.

The industry is also giving more consideration to end-of-mine life uses and how old mines can become a source of new energy generation.

Muswellbrook hydropower

Australia's oldest open-cut mine is being transformed into a pumped hydro powerhouse. After 115 years of productive mining, a hydropower plant and solar farm is planned for Idemitsu Australia's Muswellbrook Coal mine in the Hunter Valley. It will feed renewable energy into the grid for NSW families and businesses.

Water will be stored in the old mining pit and pumped uphill using renewable energy. When demand is high, that water will be released through turbines in pipes back into the mine pit to provide around eight hours of clean power.

An extension of the local highway will run across the site, which also includes plans for an industrial and training precinct, to improve regional connectivity and visitor access.

The Muswellbrook Energy, Training and Industry Precinct is progressing, said Idemitsu Australia CEO Steve Kovac.

"We have a long-standing commitment to the community of Muswellbrook that is deeply important to us," he said. "We want to do what we can to turn an otherwise empty pit into an exciting new project that provides jobs and further diversifies our portfolio as a company."

It is impossible to imagine a transition to new forms of energy and electrification without the indispensable minerals and the know-how to extract them from the earth.

Geraldine Slattery
BHP, President Australia



Learn more:
idemitsu.com.au





Idemitsu Australia



Head of Renewables

Name: Serge Radojevic
Company: Idemitsu Australia
Qualification: Bachelor of Laws; Bachelor of Commerce; Master of Business Administration

... **on my career:** "I'm really excited to be part of an enormous intergenerational movement that is transitioning from the fossil fuels that we've been so reliant on, and continue to be so reliant on, with the transition to renewable energy. What it means for me is that I'm able to come to work every day and advance a cause and enable my employer to really be a sustainable transitioning company."

... **on the project scale:** "The works at Muswellbrook Pumped Hydro will be a huge undertaking. The length of tunnelling, excavation and civil works is tremendous. We have to excavate and build a large reservoir and underground pipelines to connect the upper and lower reservoirs. Then the turbine powerhouse needs to be connected to those pipelines and installed in a cavern-like structure deep underground. We're building a 100-year asset, so everything must be built to stand the test of time."

Miners harness wind and solar to decarbonise operations



Head of Mining Electrification and Technology

Name: Darren Kwok

Company: Perenti Contract Mining

Qualification: Bachelor of Commerce (Management and Marketing)

... **on my career:** "I started my career in custom cars and progressed to supplying vehicles to mining companies. Underground mining was unlike anything I'd done before. My team looks after everything tech-related in-pit, underground, on-machine, as well as operational data and electrification. We look at new technologies and ways of doing things to improve safety and performance."

... **on electrification:** "In underground mining, the question of electrification isn't 'if', it's 'when'. One reason is environmental, but eventually electric equipment underground could be the best equipment for the job. It's faster, cleaner, doesn't give off as much heat, has less vibration and is easier to manage. Technology is moving quickly and we want to be ready for it."

... **on choosing mining:** "Mining is rewarding in so many different ways. You can see different parts of the world and solve unique, interesting challenges that can materially make the industry safer, more efficient and more productive. If you want to solve big problems and work with interesting people from all walks of life, mining is the industry for you."

Bellevue Gold



You don't have to start in mining to be in mining.

Darren Kwok
Perenti Contract Mining

Learn more: bellevuegold.com.au



AngloGold Ashanti



Newmont

RENEWABLE ENERGY

Australia's big miners are turning to renewable energy to power remote operations and meet clean energy targets.

Miners like Rio Tinto, BHP, Bellevue Gold, Newmont and AngloGold Ashanti are harnessing the power of the sun to bring clean energy to their mine sites and surrounding communities.

Bellevue Gold's 26MW solar farm (that's 47,000 solar panels!) in the WA Goldfields will mean the site can operate on 100 per cent renewable energy, helping it deliver on its aims for net zero emissions by 2026.

Similarly, AngloGold Ashanti is building a 61MW wind and solar farm at its Tropicana gold mine. A 13MW battery storage system will underpin electricity generation for the site.

Combined, these companies are building over 385MW worth of solar farms across areas of remote Australia, including the Pilbara and Queensland.

"The Pilbara is well-positioned to take advantage of renewable power with land, access to people, and abundant wind and solar resources," said Rio Tinto Iron Ore Chief Executive Simon Trott.

"Our Pilbara electricity grid is Australia's largest privately-owned grid and ensures we have the initial infrastructure required for the energy transition."

Learn more: minerals.org.au



Learn more:
anglogoldashanti.com



Toyota

ELECTRIC VEHICLES

EVs cut mining footprint

Electric utility vehicles and trucks are being rolled out across mine sites to increase efficiency and reduce emissions.

AngloGold Ashanti debuted a trial of the world's largest electric underground truck in 2023 at Sunrise Dam in WA. The vehicle can carry a whopping 65,000 kg and produces 80 per cent less heat, all while emitting zero emissions.

In 2024, IGO shared a landmark study which confirmed the technical feasibility of converting an underground mining fleet from diesel to battery-electric vehicles – another step towards industry one day achieving a fully electric mine.

In the Pilbara, Rio Tinto's Gudai-Darri iron ore mine is a world leader in both automation and mine electrification with a 34MW solar plant able to supply around a third of its electricity needs.

More recently, BHP has partnered with Toyota Australia to trial the first-ever battery electric HiLux double cab ute prototype at its Port Hedland operations. The vehicle will be used in applications traditionally performed by diesel-powered light vehicles.

Wheels turn on electric buses at Roy Hill

Roy Hill has taken delivery of state-of-the-art electric buses at its Pilbara mine site and Port Hedland operations.

The new fleet of electric buses will reduce the miner's reliance on diesel. The 53-seat vehicles have been custom-designed to withstand the rugged Pilbara conditions and provide a quieter, safer and more comfortable ride for staff during their daily commute to and from the mine village.

Roy Hill has been an industry leader in the use of innovation and adoption of new technologies under Executive Chairman Gina Rinehart's leadership.

Roy Hill General Manager Mining, Ian Wallace said: "The electric buses will improve operational efficiency through lower fuel costs, reduced maintenance expenses and improved performance and reliability."

Roy Hill



Learn more
royhill.com.au

There's always something happening ... you have to be agile, creative and think of the possible.

Bronwyn
Albemarle Lithium



Sustainability Manager

Name: Bronwyn Bell

Company: Albemarle Lithium

Qualification: Bachelor of Engineering (Environmental); Master of Science (Mineral Economics)/Master of Business

... on sustainability: "I wanted to work in mining since I was about 15. It was so big and such an important industry for Australia, but it also had real impacts – positive and negative – on the environment and community. I was determined to be a part of it so I could help the world source essential mining products in a way that was sustainable."

... on the energy transition: "I currently work for a lithium company, so everything is about the energy transition – how we can change the way we power our modern lives using products that align with a circular economy, reduce emissions and minimise our footprint."

... on my career: "I've had so many fantastic opportunities in the mining sector. I've lived in different parts of Australia, travelled overseas, studied, met my husband, worked on billion-dollar projects, tackled tough problems and worked with some amazing people. No day is the same. There's always something happening and you have to be agile, creative and think of the possible. It's a heck of a lot of fun."



Learn more:
albemarle.com



CONSIDERING AN APPRENTICESHIP?

AUSTRALIAN MINING

Your pathway to a career in mining



The Apprentice

Name: Oscar Keogh

Company: Mandalay Resources

Qualification: Certificate III in Mobile Plant Technology

... **on my career:** "Inspired by my dad's work at Mandalay, I decided to do work experience in the workshop and loved it. After working during the school holidays, I started a school-based apprenticeship. Post year 12, I transitioned to full-time. Though it's taken a bit longer, I'm nearly qualified and enjoying every moment."

... **on working together:** "Learning my trade at Mandalay Resources has been an incredible experience. Collaborating with skilled professionals, tackling challenging tasks and learning hands-on has been invaluable. The camaraderie and teamwork in the workshop make every day rewarding, and I'm excited to continue growing in my role servicing and repairing surface and underground machinery."

... **on the future:** "I'm excited to finish my apprenticeship and transition to shift work, continuing my journey and exploring other mines. My goal is to become a top diesel mechanic and mentor future mechanics. I anticipate one of the biggest challenges will be adapting to night shifts, but I'm ready for it."

Quality tradespeople are some of the most in demand employees on a mine site. Apprenticeships are a way to earn while you learn, and often lead to long and successful careers in the industry.

Mining apprenticeships combine on-the-job training with structured learning to provide practical trade skills and a nationally recognised qualification. Typically lasting 3-4 years, common

qualifications include Certificate III and IV in fields like engineering, electrical trades, or heavy diesel mechanics.

Apprentices often work in remote locations, gaining real-world exposure to mining operations. Candidates will usually need to have completed year 10 prior to commencing an apprenticeship, however mature age candidates are usually also welcome to apply.



Heavy Diesel Fitters Daniel Harrison and apprentice Oscar Keogh in the workshop at Mandalay Resources' Costerfield gold and antimony operations in central Victoria.



▶▶ **Did you know...**

Costerfield mine is Australia's only producer of antimony – the silvery-gray metalloid used in renewable tech, high end electronics and defence products.



The Mentor

Name: Daniel Harrison
Company: Mandalay Resources
Qualification: Certificate III in Mobile Plant Technology

... **on my career:** "I began my career at Mandalay Resources as a Plant Operator and soon realised I wanted to become a Heavy Diesel Fitter. When the opportunity arose, I eagerly started an adult apprenticeship. Four years later, I'm now qualified and part of the crew, enjoying my journey to becoming a successful Diesel Mechanic."

... **on working together:** "I've greatly appreciated the mentorship from my colleagues throughout my apprenticeship. The chance to grow and learn both in the workshop and underground, servicing and repairing mobile machinery, has been invaluable. It's especially unique at Mandalay Resources, given it's a small vein mine with custom machinery."

... **on the future:** "The future holds endless opportunities, especially in the mining world right now. I'm excited to continue with Mandalay Resources, eager to learn and grow as much as possible, and begin my journey of mentoring others."

Mining apprenticeships

Apprenticeships offer skills development, hands-on experience, industry certifications and unbeatable career growth opportunities.

Heavy diesel mechanic

Essential for maintaining and repairing mining trucks, loaders and other heavy machinery.

Boilermaker/welder

High demand for fabricating and maintaining metal structures and equipment on mine sites.

Electrician

Critical for installing and maintaining electrical systems, power distribution and machinery.

Mechanical fitter

Required for maintaining mechanical components of mine equipment and machinery.

Surface mining operator

Includes training in the operation of the heavy machinery used in open-pit mining operations.

Underground mining operator

Specialised training for underground equipment such as drills and loaders.

Auto electrician

Specialises in the electrical systems of heavy mining vehicles, and are in high demand.

Plant mechanic

Involved in maintaining fixed plant equipment, essential for continuous mining operations.

Diesel fitter

A specific focus on diesel-powered engines used in mining vehicles and machinery.

Process plant operator

Involved in the operation of ore processing plants, essential for mineral extraction.

Blasting technician

Critical in preparing and executing blasting for both surface and underground mining.

Driller

In high demand for mineral exploration and production, particularly in large-scale operations.

Surveyor

A key role in exploration and extraction, and important during the planning of projects.



Learn more mandalayresources.com

Learn more apprenticeships.gov.au



Mobile Plant Mechanic Apprentice

Name: Ben Fletcher

Company: Komatsu

Qualification: Apprenticeship Program

... **on my career:** "I started my apprenticeship with Komatsu in 2022 and have never looked back. Mining and agricultural machinery have always been a keen interest of mine. The scope of work I have been exposed to ranges from component rebuilding all the way up to ultra class mine machinery new builds and full rebuilds. I have loved the variety."

... **on the opportunities:** "I was awarded Komatsu's National First Year Apprentice of the Year Award. During my third year, I took part in the Great Endeavour Rally in Komatsu's APP830 team. We raised funds for the Endeavour Foundation and provided mechanical support for the other rally members. This was a very rewarding experience."

... **on the future:** "Once I have completed my apprenticeship, I have plans to work within Komatsu's Construction and Utility Division. This is a huge privilege, allowing me to expand my mechanical knowledge of Komatsu machinery. Down the track, I would like to pursue a Technical Service or Mining Fleet Manager position. There are endless opportunities to grow your career with Komatsu."

 Learn more:
komatsu.com.au

Stawell Gold Mines



»»» Bonnie is a third year apprentice boilermaker at Stawell Gold Mine, and right, apprentices from The Bloomfield Group.



The Bloomfield Group

APPRENTICESHIPS

Making your trade in mining

With high demand for qualified tradespeople, there's never been a better time to consider an apprenticeship in mining.

Many of Australia's miners offer robust apprenticeship programs in partnership with schools and training providers.

The Bloomfield Group has been fostering new careers for school leavers for over 40 years, providing apprentices both on-the-job training and academic support through a recognised Registered Training Organisation.

At New Hope Group's Bengalla Mining Company, apprentices undertake an 18-week Mining & Energy Skills program at Muswellbrook TAFE alongside on-site training as part of a four-year apprenticeship.

New Hope Group believes developing, coaching and leading young people, and introducing them to the mining industry, is critical to its success.

Glencore's Apprentice Programs at its coal and metals businesses give aspiring tradespeople the skills and experience to build a career in mining. It is a similar story at Roy Hill, where generous study time and access to trade-specific mentors across the business is a focus.

Mining apprenticeships are typically open to applicants of any age, although completion of Year 10 is often a requirement. Visit company websites to learn more about specific programs.



New Hope Group



Glencore



How to get an apprenticeship

...IN 5 EASY(ISH) STEPS



1.

Explore your talents

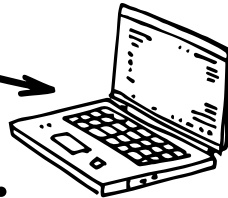
Identify your strengths and interests. Are you mechanically minded or great with your hands? Ask family and friends for their thoughts.



2.

Research apprenticeships

Learn how apprenticeships work and explore financial support options that might be available to you, as well as your rights and responsibilities.



3.

Find an apprenticeship

Deep dive company websites, job boards or government apprenticeship portals. Keep an eye on the social media pages of mining companies.



4.

Submit an application

This is your time to shine! Showcase any relevant skills, experience and demonstrate your strong work ethic in a resume or an online application form.



5.

The interview process

Talk to a careers counsellor or google interview tips. If you know somebody in the industry, reach out to them. Most importantly, show some passion and enthusiasm. It will take you a long way.

GOOD LUCK!!



Learn more here:
yourcareer.gov.au
apprenticeships.gov.au

COMPANY PROGRAMS

Traineeships

Traineeships typically involve an agreement between the trainee and a company, whereby the company agrees to providing training in a specific vocation. Traineeships are shorter than apprenticeships – usually 12-24 months – and focus on roles requiring technical, administrative, or operational skills. A trainee can usually begin a traineeship while at school, about to finish school or recently graduated high school. They are also suitable for an older person looking to transition into a new career.

Some examples

- ▶ Glencore First Nations Pathways Program
- ▶ Whitehaven Dump Truck Operator Traineeship Program
- ▶ BHP Maintenance Associate Traineeship
- ▶ Roy Hill Traineeship Program
- ▶ Thiess New to Industry Haul Truck Traineeship Program
- ▶ The Bloomfield Group Operator Traineeship

Apprenticeships

An apprenticeship is a paid, structured training arrangement, typically 3.5 to 4 years duration. The training combines practical experience at work alongside complementary off-the-job training with a Registered Training Organisation. On successful completion, apprentices are issued with a nationally recognised qualification and have on-the-job skills, usually in a skilled trade occupation.

Some examples

- ▶ Glencore Apprenticeship Program
- ▶ Thiess Apprenticeship Program
- ▶ Newmont Apprenticeships
- ▶ BHP FutureFit Academy
- ▶ Komatsu Apprentice Program
- ▶ Roy Hill Apprenticeship Program
- ▶ Rio Tinto Apprenticeship Programs

The benefits of an apprenticeship:

- ⊕ **Develop a skillset**
Immediately practice the practical, hands-on skills you learn during an apprenticeship – and get paid.
- ⊕ **Straight from school**
Young school leavers (on completing Year 10) can gain the skills and experience to start a career.
- ⊕ **Build a network**
Making connections during an apprenticeship can lead to future job opportunities and mentorship.
- ⊕ **Secure full-time work**
An apprenticeship will often turn into a long-term job if you demonstrate passion and commitment.

Qualifications required for an apprenticeship:

- ⊕ **You must be:**
 - An Australian citizen or;
 - a foreign national with permanent residency
 - a New Zealand passport holder living in Australia for at least six months
 - hold an appropriate visa subclass.



CONSIDERING A QUALIFICATION?

Learn more:
yancoal.com.au



Field Service Fitter

Name: Liberty Cullen

Company: Hastings Deering

Qualification: Dual diploma Agribusiness and Agriculture: Certificate III in Mobile Plant Technology

... **on my career:** "I made the transition from the agricultural industry to mining in 2018 because of the strong focus on safety advocacy, as well as the opportunity to work on large machines! I spent four years at two underground mining operations – one at a hard rock gold mine and the other at a coal mine – before starting my apprenticeship with Hastings Deering in 2021."

... **on my apprenticeship:** "The best part of my apprenticeship was the access to training and expert knowledge. Hastings Deering has its own Registered Training Organisation in Brisbane, where we complete our TAFE blocks. The trainers support us throughout our apprenticeship. The hardest part was trying not to learn everything at once – like they say, crawl before you walk. It's important to fully understand something before doing it, otherwise you could risk injuring yourself or someone else."

... **on the mining industry:** "It still amazes me how many different jobs are available in the mining sector. I work a 7 days on/7 days off roster assisting the mines in Blackwater with labour support, diagnostics, machine remobilisation or delivery. Your trade skills aren't just limited to spinning spanners. If you value safety and have a passion for understanding how things work, an apprenticeship offers a great pathway into the industry."

Yancoal



Yancoal trainees (above) and right, trainees from McArthur River Mine's Local Language Employment Program which provides opportunities for people living locally or connected to local language groups.



Glencore

Entry-level traineeships provide pathway into mining

Traineeships deliver the perfect blend of practical skills and formal qualifications required for a career in mining.

Whether you're a school leaver or looking for a career change, Australia's miners offer a range of traineeships beyond heavy machinery and haulage.

Administrative traineeships provide pathways into HR, finance and supply chain management. Laboratory traineeships prepare participants for work in sample testing, essential for mineral processing and quality control.

Environmental traineeships focus on sustainability practices in areas like biodiversity monitoring, water management and mine rehabilitation.

For those with a love of rail, Aurizon's Network Control Trainees undertake a 6-month in-house training program learning how to direct heavy haul trains safely across rail networks from mines

to ports. Trainee Train Drivers complete a 6-month training program to become qualified drivers. Aurizon also offers apprenticeships and traineeships for Diesel Mechanics, Mechanical Rail Signalling and in Electrical Rail Signalling.

One of the largest training centres turning out future mine workers is BHP's FutureFit Academy. The Academy provides nationally recognised certifications in plant maintenance and production as part of 12 month traineeships conducted at purpose-built learning centres in Perth in Western Australia and Mackay in Queensland.

Participants receive a competitive annual salary from day one and, upon successful completion, are offered permanent positions with BHP.



Learn more:
newhopegroup.com.au

New Hope Group



Ella
Operator

»»» Operators Ella Graham and inset, Jodi Keane-Venz are right at home in the driver's seat of the big trucks at New Acland Coal Mine.

NO EXPERIENCE REQUIRED

Looking for a career change?

Not every mining role requires experience or qualifications. Many just require enthusiasm and a willingness to learn.

Every week, hundreds of entry-level positions on mine sites across the country are advertised online by Australia's miners.

New Hope Group (NHG) embarked on its first entry-level intake last year following Queensland Government approval of its New Acland Mine Stage 3.

Ella Graham, a former vet nurse turned Operator, was one of the new-to-industry starters. Now Ella is driving some of New Acland Coal's largest vehicles, including its CAT haul trucks.

"I was chasing a lifestyle change and more flexibility, so when a friend sent me the job ad on Facebook, I jumped at the opportunity," said Ella.



New Hope Group

"The team has been so welcoming and supportive, and the emphasis on safety and well-being has blown me away."

Jodi Keane-Venz was a hairdresser for three decades before she swapped the scissors for safety gear at New Acland.

"I'm a respected member of the team who has the opportunity to learn from some of the best operators and technicians in the industry. I'm very lucky," said Jodie.

Brendan Dyson, a primary school teacher of 22 years turned Operator, is another new starter.

"You obviously need to maintain a high level of professionalism as a teacher," said Brendan. "I am proud to report the professionalism at the mine matches that of the classroom."

I was nervous to start with, but I thought what's there to lose? I took the leap and I'm grateful I did. I'm really enjoying it.

Brendan
New Hope Group



BHP FutureFit Academy

Learn more bhp.com



The trainer

Name: Dan

Dan is a New to Industry Trainer at BHP's FutureFit Academy in Mackay, Queensland. His job is to prepare students for mine site roles.

... **on the possibilities:** "The trainees that take on board our training continue to thrive. Once they go to site, they might be a truck driver for six months but there are opportunities to continue schooling and keep bettering themselves. In a few years they could be whatever they want. They could be the next Site Senior Executive."



The graduate

Name: Valerie

Valerie graduated BHP's FutureFit Academy in Perth, Western Australia. Today she is a Mechanical Fitter – Fixed Plant Machinery in Port Hedland.

... **on following her dreams:** "It's been a dream for me. I've always wanted to work for BHP and never felt I had anything to offer. In high school I always wanted to be a mechanic but in those days I was told girls didn't do apprenticeships. However, BHP let me follow my dreams in becoming a mechanical fitter. My advice: don't delay."

Where to study TAFE pathways



Hydrogeologist

Name: Zach Rossato

Company: Alligator Energy

Qualification: Diploma of Applied Science; Bachelor of Science (Hydrology)

... **on my career:** "My interest in hydrogeology was sparked while undertaking an elective topic in environmental science at university. Initially I was studying archaeology. I took a break from study and worked as a Process Technician in a malthouse which gave me a wealth of experience operating a wide range of plant and machinery. During this time, I returned to part time study and eventually secured a Hydrogeology Technician role at an ISR (in situ recovery) uranium mine."

... **on my day-to-day:** "My day can be quite diverse. I can be undertaking data analysis, running groundwater models, reviewing bore logs, or writing technical reports in the office. I could also be out in the field for days or a week at a time collecting data through field tests and groundwater sampling, or supervising well installations. Hydrogeologists are also heavily involved in the day to day production activities of an operating ISR."

... **on the future:** "I'm excited to see the development of Alligator Energy's Samphire ISR project and the progression of the Big Lake greenfields discovery, as well as the continued use of Australian-mined uranium to support global energy needs. It will also be interesting to see ISR technology applied to other minerals, such as what Envirocopper is undertaking."

 Learn more:
alligatorenergy.com.au

North Metropolitan TAFE WA

- ▶ Cert II Autonomous Workplace Operations
- ▶ Cert III Engineering – Mechanical Trade
- ▶ Cert III Engineering – Fabrication Trade
- ▶ Cert III Engineering – Technical
- ▶ Cert III Mining Exploration
- ▶ Diploma of Surveying

 northmetrotafe.wa.edu.au

South Metropolitan TAFE WA

- ▶ Cert II Autonomous Workplace Operations
- ▶ Cert III Civil Construction Plant Operations
- ▶ Cert III in Engineering – Mechanical Trade
- ▶ Cert III Engineering – Fabrication Trade
- ▶ Cert III Mobile Plant Technology
- ▶ Cert III Process Plant Operations
- ▶ Cert IV Autonomous Control & Remote Ops

 southmetrotafe.wa.edu.au

Central Regional TAFE WA

- ▶ Cert III Engineering – Mechanical Trade
- ▶ Cert III Mobile Plant Technology
- ▶ Cert III Resource Processing
- ▶ Cert III Surface Extraction Operations
- ▶ Diploma Surface Operations Management

 centralregionaltafe.wa.edu.au

TAFE Queensland

- ▶ Cert III Engineering – Mechanical Trade
- ▶ Cert III Engineering – Fabrication Trade
- ▶ Cert III Mobile Plant Technology
- ▶ Cert III Process Plant Operations

 tafeqld.edu.au

TAFE NSW

- ▶ Cert III Engineering – Mechanical Trade
- ▶ Cert III Engineering – Fabrication Trade
- ▶ Cert III Electrotechnology Electrician

 tafensw.edu.au

TAFE South Australia

- ▶ Cert II Resources & Infrastruct. Work Prep
- ▶ Cert III Resource Processing
- ▶ Cert III Civil Construction Plants Ops
- ▶ Cert III Heavy Comm Vehicle Mech Tech
- ▶ Cert III Engineering – Mechanical Trade
- ▶ Diploma Environmental Monitoring & Tech

 tafesa.edu.au

CDU TAFE NT

- ▶ Cert II Engineering
- ▶ Cert III Engineering – Mechanical Trade
- ▶ Cert III Civil Construction Plant Ops
- ▶ Cert IV Work Health and Safety

 cdu.edu.au

Box Hill Institute VIC

- ▶ Cert III Surface Extraction Operations
- ▶ Cert IV Process Plant Technology
- ▶ Diploma Surface Ops Management

 boxhill.edu.au

Suni TAFE VIC

- ▶ Cert III Heavy Comm Vehicle Mech Tech
- ▶ Cert III Automotive Electrical Tech
- ▶ Cert III Mobile Plant Technology
- ▶ Course in Mining Pathways (coming soon)

 sunitafe.edu.au

Federation TAFE VIC

- ▶ Cert III Engineering – Mechanical Trade
- ▶ Cert IV Engineering

 federation.edu.au

 Learn more at
tafecourses.com.au

..... **Select courses only.** Visit websites for current offerings.

VOCATIONAL EDUCATION

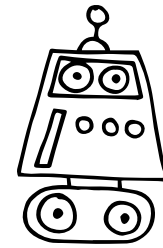
Pathway to mining or further study

TAFE qualifications are designed to prepare students for the workforce. But they can also be used to enhance existing skills or meet criteria for further study.

Source: tafecourses.com.au



Glencore



Automation quals a VET first

Australia's first VET automation qualifications were the product of a partnership between Rio Tinto, South Metropolitan TAFE and the Western Australian Government. Developed and accredited in 2018 and 2019, the qualifications include the Certificate II in Autonomous Workplace Operations and the Certificate IV in Autonomous Control and Remote Operations.

Rio Tinto runs 397 autonomous trucks across its iron ore business as part of its Autonomous Haulage System, as well as autonomous trains, drills and charge trucks. The qualifications aim to equip the current workforce with the automation and technology skills and provide new pathways into the industry.

And it's not only in automation that Rio Tinto is helping to develop tomorrow's workforce. They have also partnered with North Metropolitan TAFE to address the rail industry skills shortage in Western Australia, and BlueChilli and Amazon Web Services to create the Future Minds Accelerator, a program helping young people develop critical thinking, automation and coding skills.

 Learn more at southmetrotafe.wa.edu.au

>>> Glencore's Ashlee Baker referred her mother-in-law Jules (pictured) for a traineeship at United Wambo Joint Venture as part of the Sons and Daughters Program.

ENTRY-LEVEL TRAINEESHIPS

Family time on the clock

A unique program is providing new training opportunities for family and friends at United Wambo in NSW.

It wasn't a traditional Sunday roast but Ashlee Baker, an Environment and Community Officer, enjoyed her crib break with her mother-in-law, Jules thanks to Glencore's Sons and Daughters Program at United Wambo Joint Venture in NSW.

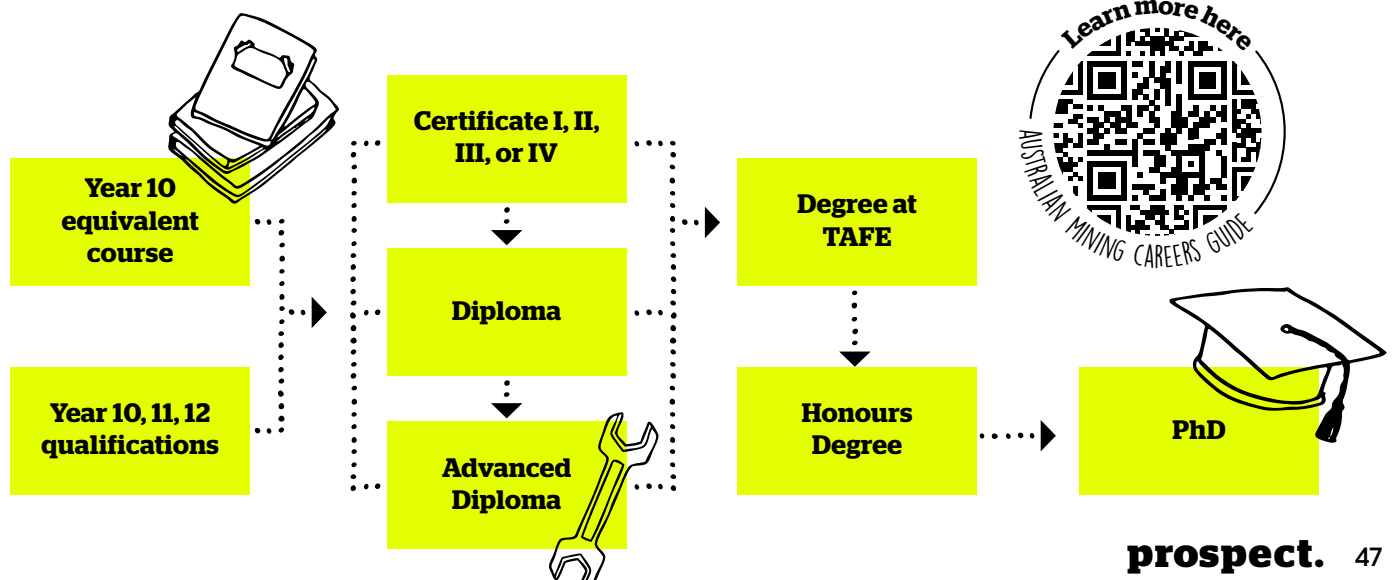
"It's not every day you get to have crib with your mother-in-law," said Ashlee. "It's a great initiative. Jules got to join me at work as a trainee operator."

The program encourages the referral of family members for entry-level roles. Ashlee referred Jules as part of the initiative. Participants are employed by a labour provider for the duration of the traineeship.

"I was excited to see her at work and proud to witness her successfully complete her traineeship," said Ashlee.

"By allowing its workforce to refer family members for entry level positions, the crews at United Wambo were quickly filled with our loved ones, giving them the best head start and support through their traineeships."

After starting her own career as a trainee operator driving haul trucks, Ashlee went on to excel in environmental science studies. She joined the Glencore Graduate Program last year and is now a full-time Environment and Community Officer at the Hunter Valley Operations Joint Venture.



CONSIDERING UNIVERSITY?



Graduate Engineer Mechanical/Mining

Name: Iain Riek

Company: GEMCO, South32

Qualification: Bachelor of Engineering (Mechanical)

... **on my background:** "I graduated school and spent a week at uni before dropping out and decided I was going to go and play with race cars, completing trade apprenticeships as both a mechanic and maintenance fitter and gaining a diploma in motorsport. But over the years I still felt the desire to go back and study engineering, which I did in 2015."

... **on my career:** "I work in the production planning team, focusing on short-term planning, pit designs and mining strategies. There's always a new challenge, whether technical, practical, or operational. I most enjoy the problem-solving aspects of my job. I'd encourage students to diversify their knowledge and really enjoy their life while studying. When it comes time to looking at next steps, graduate programs offer a great opportunity to explore career paths."

... on working FIFO:

"FIFO life takes some getting used to, both as a young engineer just starting out and when you get a bit older and have a family. The remoteness can be a bit of a shock. On the flip side, these limitations teach you to be self-sufficient, can be an adventure, the job pays well and you get the positive lifestyle aspects."

Learn more: south32.net

MIEX



Programs like MiEX (above and right) and NExUS (below) help students prepare for a career in the mining industry.

PROFESSIONAL DEVELOPMENT



Developing future miners

Industry partnerships bridge theoretical learning with real world experience to prepare students for the workforce.

Australia's mining sector works closely with universities to ensure graduates are job-ready. Industry-academic partnerships help shape course content that reflects industry needs, as well as the latest technology, sustainability practices and safety standards.

Companies provide students hands-on experience through internships, vacation and graduate programs. Some companies even sponsor students or provide mentorship programs to guide them into the workforce.

In South Australia, NExUS (National Exploration Undercover School) is a prestigious summer school supported by industry, government, geoscience institutions and academia. Administered through the University of Adelaide, NExUS focuses on fieldwork and research, networking opportunities and skills development to support the next generation of geoscientists.

A new partnership between industry and academia is the MiEX (Minerals Industry Experience) program. Designed to introduce students to the diverse career opportunities within the mining industry, students engage with industry professionals, visit operational sites and explore areas such as geoscience, processing, technology and mine engineering. The two-week paid experience for first-year university students encourages participants to pursue mining-related disciplines.



NEXUS

Learn more about NExUS: set.adelaide.edu.au/nexus

AngloGold Ashanti



I love the sense of ownership that comes from the results of my work. It gives me the sense that I am part of the team...

John Macaldo
Senior Mechanical Engineer



Senior Mechanical Engineer John Macaldo is among the more than 100 participants of AngloGold Ashanti Australia's graduate program over the past six years.

GRADUATE PROGRAM

Graduates tap rich vein

AngloGold Ashanti graduates are building long-term careers in the Goldfields region of Western Australia.

John Macaldo is a Senior Mechanical Engineer at Tropicana gold mine. He graduated with a Master of Professional Engineering (Mechanical) from the University of Western Australia in 2018.

"When I started as a graduate, the engineering team at Tropicana was quite small. I learned a lot by being thrown into the deep end," he said. "Fast forward to today, I am now a senior mechanical engineer within a team of 6-8 and I am continuing to grow."

It is a similar story for Exploration Geologist Russia Zeedan, who graduated from Curtin University with a Bachelor of Applied Science (Applied Geology) before entering the graduate program and taking up a position at Sunrise Dam gold mine in 2021.

"My job is unbelievably cool. As an exploration geologist, I am required to

work with many different departments on the various projects that aid our collective goal of producing ounces. It's all about finding and interpreting economic gold deposition," she said.

"I get to work hundreds of metres underground within host rocks that are 2.67 million years old! I get to see the result of mineralisation processes with my own eyes."



AngloGold Ashanti



What to study Mining degrees

Australian mining relies on a diverse range of skilled professionals across its operations. Here are some of the more common degrees that could set you up for a career mining.

- + Bachelor of Mining Engineering
- + Bachelor of Science (Geology)
- + Bachelor of Engineering (Metallurgical Engineering)
- + Bachelor of Engineering (Civil Engineering)
- + Bachelor of Engineering (Mechanical Engineering)
- + Bachelor of Engineering (Electrical Engineering)
- + Bachelor of Engineering (Chemical Engineering)
- + Bachelor of Environmental Engineering
- + Bachelor of Environmental Science
- + Bachelor of Occupational Health and Safety
- + Bachelor of Science (Geophysics)
- + Bachelor of Surveying
- + Bachelor of Commerce (Mining or Resource Management)
- + Bachelor of Laws (specialisation in Mining or Resources Law)



My job is unbelievably cool. I get to work hundreds of metres underground within host rocks that are 2.67 million years old!

Russia
AngloGold Ashanti

Whitehaven



Whitehaven's Gunnedah mine closure team and right, Olivia Hulbert.



Senior Mine Geologist

Name: Melissa Giddens
Company: Murrin Murrin, Glencore
Qualification: Bachelor of Science (Geology)

... **on my career:** "What attracted me to Murrin Murrin was that it was a nickel commodity. I've come from a gold background so nickel was exciting and a new commodity to learn. Across any mining operation there's lots of work opportunities. You can be an operator on a dump truck or a dozer digger to being a surveyor, a geologist or an engineer. It's a great industry in which to build a career."

... **on working FIFO:** "I work an 8/6 roster so eight days on six days off. I enjoy that roster because you're home every second weekend. Murrin Murrin is a great place to work and I'd recommend it to anyone. The people are great – they're all really nice here. It feels like a family and the work is pretty fun, too."

MINE CLOSURE

Getting a head start on mine closure

Team work and community engagement are perks of the job for ultra-marathon runner Olivia Hulbert.

Environmental Advisor Olivia Hulbert is part of the mine closure unit at Whitehaven Coal in Gunnedah, NSW. The unit is responsible for planting and monitoring native trees and grasses to restore diverse ecosystems to strict regulatory standards.

"I have always been passionate about the environment but it wasn't until university that I realised the significant opportunities within mining to support environmental management," she said.

"In mine rehabilitation, we work to a strict criterion. This includes the types of vegetation seeded and planted. We source seed and tube stock that has a local provenance and the species that are selected are based on a specific plant community type."

Olivia joined Whitehaven in 2022 after earning a Bachelor of Environmental Science and Management from the University of Newcastle. Her role involves compliance reporting, environmental monitoring and crew awareness aimed at progressing sites towards closure. A highlight for Olivia is engaging with the community.

"Showcasing the work the mine closure team does is really rewarding. We also provide opportunities for the community to get involved in rehabilitation activities such as tree planting," she said.

When not restoring mined land, Olivia is training for ultra-marathons. "Trail running! When I am not at work, I am on the trails training for my next ultra-marathon race."

Learn more: newmont.com

"Mining offers diverse, rewarding careers that allow young people to build practical skills and solve real-world challenges using cutting-edge technology."

Mark Rodgers
 Newmont, Managing Director Asia Pacific





I hope to leave a meaningful and positive impact in any area where I have worked.

Jordan Seah
Mechatronics Engineer



WORKING FIFO

Creating content on the fly

Documenting life as a FIFO worker in Western Australia comes naturally for Mechatronics Engineer Jordan Seah.

Mechatronics Engineer Jordan Seah has experienced it all (almost!) since joining Rio Tinto as a graduate Control Systems Engineer in 2023. He has worked across multiple departments, gaining invaluable experience in everything from mine development, minerals processing and marine services to iron and steel distribution.

"I've had the privilege of working with over 15 teams within Rio Tinto," said Jordan, who graduated from Curtin University with a Bachelor of Engineering – Mechatronics, Robotics and Automation Engineering. "I hope to

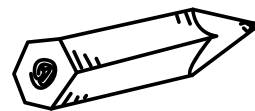
leave a meaningful and positive impact in any area where I have worked."

These days he is a FIFO worker at Rio Tinto's Dampier Operations in WA. An Electrical and Controls SCS Asset Management graduate, Jordan handles maintenance planning and engineering using his skills in data analysis. He was Rio Tinto's Graduate of the Year in 2024.

Jordan is also a content creator. He makes 'day-in-the-life' videos showcasing life as a FIFO worker.

"I'm always looking for the next opportunity for my development!"

+ Learn more: riotinto.com



How to land a Graduate gig

...BEFORE YOU LEAVE UNI

Graduate programs are very competitive and places are limited. But there are things you can do to make your CV stand out from the crowd.

- +** **Vacation work**
Apply for vacation work offered by some mining companies to get hands on experience and start building your networks.
- +** **Get involved**
Join a student chapter or society to meet industry professionals. AusIMM and Society for Mining, Metallurgy & Exploration (SME) run chapters.
- +** **Scholarships**
Scholarships are available from big miners, some universities and industry groups, like AusIMM, SME and WA Mining Club.
- +** **Mentoring**
Explore mentoring opportunities through established groups like Women in Mining and Resources Queensland (WIMARQ) or reach out to industry professionals.
- +** **Career days**
Mining companies regularly attend careers days. After all, they are on the lookout for the next generation of talented graduates, too.
- +** **Online presence**
Maintain a LinkedIn profile or similar that demonstrates some industry knowledge and a passion for the industry.
- +** **Further study**
Consider an Honours or Master's degree. Plenty of graduates pursue further study even once they're secured employment.

+ Learn more about graduate programs at au.prosple.com

The best approach you can take for your career is to give everything a go.

Max
Dyno Nobel



Drill and Blast Engineer

Name: Max Galwey

Company: Dyno Nobel

Qualification: Bachelor of Engineering (Mining)

... **on choosing mining:** "In a last-minute decision, I swapped from primary school education to engineering as I wasn't completely sure, and engineering offered more flexibility in the first year of uni. Within six months I was sold and entered the mining major to study and work with explosives. After finishing my degree, I started a graduate program at Dyno Nobel in the DynoConsult team."

... **on my career:** "My advice is to always look for opportunities. Dyno Nobel gave me the chance to see other departments like explosive manufacturing, research and development. Now I am working onsite as a drill and blast engineer, deciding what product to load and how best to detonate the blast. No two days are the same: you're always growing problem solving skills."

... **on the lifestyle:** "I'm currently working a hybrid role, sometimes on FIFO for months, in Brisbane or on the road. Each has its pros and cons, but it keeps the work fresh and exciting. Naturally, FIFO can be tough being away from friends and family, but it makes the time at home more memorable and breaks up the Monday to Friday routine. As a student, the best approach you can take for your career is to give everything a go."

Learn more:
dynonobel.com

ANSTO

Charlie Graduate Process Engineer



Graduate Process Engineer Charlie Stanwix completed ANSTO's Year in Industry Program in 2022 while earning her Bachelor of Chemical Engineering and Commerce.

NUCLEAR TECHNOLOGIES

New skills for the next frontier

As industrial applications for nuclear science and technology grow, training nuclear professionals is increasingly important.

ANSTO (Australia's Nuclear Science and Technology Organisation) is driving Australia's nuclear expertise, and with advancing industrial nuclear applications and the AUKUS submarine program, the call for nuclear science professionals is growing.

ANSTO's Graduate and Year in Industry programs offer STEM students the chance to contribute to Australia's future nuclear workforce and resources sector.

Charlie Stanwix is a Graduate Process Engineer at ANSTO, working in the Minerals group. She completed the Year in Industry Program in 2022 while earning her Bachelor of Chemical Engineering and Commerce from UNSW. Charlie works with rare earth elements, a crucial element in renewables and electrification technologies like wind turbines and electric vehicles.

"Take on every opportunity, especially if it's out of your comfort zone," Charlie advises new graduates.



I've grown so much professionally and personally during my time at ANSTO.

Charlie
ANSTO

ANSTO is proud to support the next generation of resource sector professionals.

In addition to Graduate and Year in Industry programs, ANSTO offers a range of cadetships, internships, apprenticeships and scholarships.

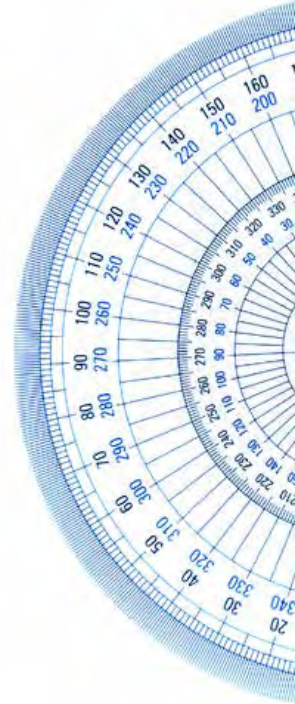
Learn more
ansto.gov.au/careers

Where to study Top mining universities

Australia has more top tier universities

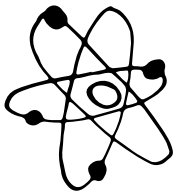
offering mining-related degrees than almost anywhere in the world.

- + **Curtin University** (curtin.edu.au) WA
- + **University of Western Australia** (uwa.edu.au) WA
- + **University of Queensland** (uq.edu.au) QLD
- + **Central Queensland University** (cqu.edu.au) QLD
- + **James Cook University** (jcu.edu.au) QLD
- + **University of New South Wales** (unsw.edu.au) NSW
- + **University of Wollongong** (uow.edu.au) NSW
- + **University of Newcastle** (newcastle.edu.au) NSW
- + **University of Sydney** (sydney.edu.au) NSW
- + **University of Adelaide** (adelaide.edu.au) SA
- + **Charles Darwin University** (cdu.edu.au) NT
- + **Monash University** (monash.edu.au) VIC
- + **University of Melbourne** (unimelb.edu.au) VIC
- + **Federation University** (federation.edu.au) VIC
- + **Australian National University** (anu.edu.au) ACT
- + **University of Tasmania** (utas.edu.au) TAS



I really enjoy the hands-on work and the real life applications.

Kate Flower-Donaldson
Applied Research Chemist
ANSTO



COMPANY PROGRAMS

Cadetships

Similar to apprenticeships and traineeships in that they involve earning and learning, cadetships are geared towards people studying at university or high school students planning on commencing a university degree. Cadetships allow the cadet to complete tertiary studies while being employed and gaining professional experience, and can provide a pathway to permanent employment. Companies may also help pay for study costs.

Some examples

- ▶ Yancoala Mining Engineering Cadetship
- ▶ Whitehaven Cadetship Program
- ▶ ANSTO Cadetship Program

What next?

With so many options, choosing the right career or the right course can be overwhelming. Fortunately there are some great resources.

- + **Careers Directory**
minerals.org.au/careers
- + **Good Universities Guide**
gooduniversitiesguide.com.au
- + **Your Career**
yourcareer.gov.au



Vacation programs

Vacation and internship programs are for people undertaking an undergraduate degree. Students gain hands-on experience and apply skills and knowledge learned at university to real-life projects. These programs vary in length and frequency and can include opportunities to work in both office-based roles or in remote locations. Completing a vacation or internship program can help participants secure a graduate program position.

Some examples

- ▶ BHP Internship Program
- ▶ IGO Vacation Program
- ▶ Roy Hill Vacation Program
- ▶ Glencore Vacation Program
- ▶ Thiess Vacation Program

Graduate programs

Graduate programs are designed for people who have completed or are nearing the end of their university degree. Duration typically runs for 18 months to two years with participants rotating through different areas of the business. Programs provide mentoring, on-the-job training and professional development. Successful participants are offered a permanent role with the company. Tailored Indigenous graduate programs are also often available.

Some examples

- ▶ South32 Graduate Program
- ▶ Glencore Graduate Program
- ▶ The Bloomfield Group Graduate Program
- ▶ Orica Global Graduate Program
- ▶ BHP Graduate Program



AUSTRALIAN
— MINING —

NOW HIRING

Australia's world-class mining industry needs motivated people of all ages, genders, experience and skillsets. With so many career pathways, there's never been a better time to make your career in mining.



minerals.org.au



Resourcing tomorrow
**Australian
Mining**