

GEOLOGY CAREER SNAPSHOT



BOOST YOUR EMPLOYMENT PROSPECTS



Explore your options, clarify your career goals



Build your networks



Gain course relevant experience



Fine tune your job application skills



Show initiative, engage in extra-curricular activities and stand out

For further ideas, access the [JCU Job Ready](#)

Geology

The Earth is a system in which land, life, oceans and atmosphere are all connected; from the smallest minerals and rocks, to continents on the move and global tectonic processes.

Geology provides the clues we need to unravel the evolution of the Earth and the origins of life. We live in a dynamic world with a changing climate, in which Geology is vital to answering the fundamental questions of energy, water & environmental sustainability, and for discovering the minerals and resources essential for the technological advance and progression of society. Emerging technologies in the hands of the next generation of Geologists offer solutions to long-term sustainable use of resources and mitigating against the natural hazards and forces of nature, from earthquakes and volcanic eruptions, to tsunamis and landslides.

With the rise in demand for renewable energies and new technologies, geoscientists play an integral role in helping discover the new materials that are used to make these products. The role of hydrogeologists, physical geographers, environmental scientists

and geologists, in tackling pressing environmental issues related to climate change, groundwater, soils, and environmental remediation is rapidly growing.

All Geologists, Geophysicists and Hydrogeologists

\$2,192
Weekly Pay ?

Moderate
Future Growth ?

Unavailable
Unemployment ?

11,900 workers
Employment Size ?

Very high skill
Skill level rating ?

83% Full-Time
Full-Time Share ?

50 hours
Average full-time ?

40 years
Average age ?

25% female
Gender Share

Source: [Job Outlook](#), August 2020

Careers in Geology

There are plenty of options to choose from in a wide range of industries, such as civil construction, energy, environment protection, mine site remediation, mapping and managing the natural resources, mineral and fossil fuels exploration, mining and extraction, consulting, Natural History Museums, research, academia, secondary teaching in science.

These opportunities need to be evaluated according to your goals and preferences.

Consider what you are hoping to gain for your career from the position:

- developing knowledge
- understanding the history of climate change

- discovering minerals to build new environmentally friendly technologies
- protecting and restoring environment etc.

Consider your work preferences:

- office vs fieldwork;
- “coalface” vs policy/big picture;
- private industry vs government or community;
- city vs bush,
- Australia vs overseas,
- Fly In Fly Out vs regular schedule,
- contract work vs permanent position

Sample positions include:

- Structural Geologist with Shell
- Mine Technician/Graduate Geologist with Regis Resources
- Junior Exploration Field Geologist with the startup Earth AI
- Graduate Engineering Geologist with WSP
- Hydrogeologist with SRK Consulting
- Mine Geologist with Red River Resources Ltd
- Compliance Adviser with Australian Securities Exchange (ASX) – resources sector focus
- Contaminated Land Consultant (Graduate) with EESI Group
- Mining Officer with Central Land Council representing Aboriginal land owners’ interests with respect mining of their land
- GIS and Environmental Science Analyst with RACQ – natural hazards focus
- Project Geologist with Fortescue Metals Group
- Modelling Geologist with BHP
- Assessment Officer with Government of South Australia for new and existing mining leases
- Research Scientist/Ore Deposit Geologist with CSIRO

**Note: Not all of these positions will be available to graduates without prior experience or additional study.*

What are JCU Geology Graduates Doing?

The [JCU Alumni LinkedIn page](#) provides information on over 1250 alumni who have listed 'Geology' within their **LinkedIn profile**.

The top fifteen employers listed on these LinkedIn profiles are: James Cook University, BHP, Evolution Mining, Rio Tinto, Glencore, Minjar Gold Pty Ltd., Newcrest Mining, MMG Limited, Gnostic Exploration Services, Geoscience Australia, Fortescue Metals Group, CSIRO, Gold Fields, Anglo American and Newmont Corporation. Top ten technical skills listed were: Geology, Geological Mapping, Mineral Exploration, Mining, Minerals, Gold, Earth Science, Sampling, Logging, Base Metals. (Retrieved in August, 2020).

Investigate career paths of individual JCU Alumni and connect with them.

Workplace Experience and Identifying Opportunities

Gaining **career relevant experience** can improve your job prospects, confidence and help you stand out against other applicants.

While you can develop exposure to various natural environments, solid communication, negotiation, collaboration and project management skills through volunteering for environmental protection organisations, you can develop geology specific technical professional skills through your course but also vacation work and internships. It is of essence that you keep a diary of your experiences, recording any key tasks and skills used to deliver those tasks, main challenges and how you tackled them, any measurable results, what you would do differently next time, how you liked the experience, your energy and engagement levels. These notes will help you choose the right career path and tell compelling stories about your competencies in your job application documents and interviews.

Keep **reviewing job descriptions** in areas of your interest and note the technical skills that you will need to develop to be considered for those positions, eg Mapinfo, Leapfrog, GeoBank, Vulcan, GoCad, IOGAS etc.

You may also like to gain data science related micro credentials through [MOOCs](#) to give yourself additional advantage for *hybrid jobs* –e.g. geology and IT/Data.

Volunteering opportunities are listed:

- [JCU Careers and Employability](#)
- [FNQ Volunteers](#)
- [Volunteering North Queensland](#)
- [Townsville Community Directory](#)
- [Cairns Community Directory](#)

Geology specific **vacation experiences and internships** can be found in the general student experience job boards and graduate recruitment directories such as:

- [GradAustralia](#)
- [GradConnection](#)
- [LinkedIn](#)

As well as in mining specific directories:

- [HotRubble](#)
- [CareerMine](#)

Most large mining companies that employ geology graduates offer "vacation programs". For example:

- [Shell](#)
- [Barrinco](#)
- [KCGM](#)
- [Newcrest](#)
- [Santos](#)
- [Evolution Mining](#)

Further opportunities can be identified by reviewing **careers tabs of the companies** listed in the following directories:

- [Iminico](#)
- [Mininglink](#)
- [AZO Mining](#)
- [Mining and Exploration](#)
- [Queensland Resources Council](#)

Tap into **online forums** e.g. [Glassdoor](#) and [Whirlpool Forum](#) to view discussions on employers and recruitment requirements and experiences.

Graduate Employment

Many large organisations, including those that offer vacation experience, run **graduate programs** - paid structured professional development positions, where new hires are provided on the job training and mentoring by the employer.

The organisation **recruits students throughout their final year of study** for commencement in the following year. Applications open as early as March so it is essential that you pencil

in the dates and start preparing at least one year in advance.

Graduate programs are competitive so it is important to understand what is expected and work towards ensuring you have the skills, knowledge and experience required.

Smaller organisations offer a smaller number of entry level positions with specific responsibilities within the business. Please refer to the directories listed above to identify organisations of your choice.

Many government agencies involved in managing environment land and resources also run graduate programs, for example:

- [Geoscience Australia](#)
- [Department of Natural Resources, Mines and Energy](#)

Many environment- related positions list geology as one of the relevant qualifications. For careers in environment please refer to JCU [Career Snapshot in Environmental Practice](#).

Networking and Professional Associations Industry Bodies

The yearly [JCU Careers Fair](#) held in March is a good opportunity to meet the local employers.

Other networking opportunities include professional symposia and conferences organised by professional organisations. Most of them offer discounted or free of charge student membership.

- [GSA Earth Sciences Student Symposium \(GESSS\)](#)
- [Geological Society of Australia](#)
- [Australasian Institute of Mining and Metallurgy](#)
- [Australian Institute of Geoscientists](#)
- [Association of Applied Geochemists](#)
- [Society of Economic Geologists](#)
- [Petroleum Exploration Society of Au](#)
- [Au Society of Exploration Geophysicists](#)
- [Environment Institute of Australia and New Zealand](#)
- [World's Geoscience Organisations](#)
- [Australian & International Geoscience](#)