

Mine geologist Job Description

A free job description template for Australian mining operations

Company Name: _____

Location: _____

Employment Type: _____

Reports To: _____

Date: _____

DISCLAIMER

This mine geologist job description template is designed to reflect Australian workplace standards and mining industry practices at the time of publication. Mine geologist roles are typically award-free professional positions; confirm the pay and conditions that apply to your business and ensure compliance with all relevant employment laws.

1. Position overview

A mine geologist is a university-qualified professional who translates the geology of an ore body into decisions the mine can act on every day. Working across the pit or underground and the technical office, they map and log geology, sample drilling, build the models that define where the ore is, and guide the operation to dig the right material.

Unlike operational mining roles, a mine geologist is a professional position that is generally award-free — it is not covered by the Mining Industry Award 2020 (MA000011). Pay and conditions for mine geologists are set by individual employment contracts or an enterprise agreement rather than by a modern award.

This template provides a foundation for creating a clear, compliant job description that attracts quality candidates while setting appropriate expectations for the role. Once your technical team is in place, manage FIFO rosters, fatigue and site coverage efficiently with mining rostering software.

2. Key responsibilities

Geological mapping and logging

Mapping and logging pit faces, benches and underground development, and recording lithology, structure, alteration and mineralisation.

Core and chip sampling

Logging and sampling diamond drill core and reverse-circulation (RC) chips, and preparing samples for assay with correct documentation.

Resource and grade modelling

Building and updating geological, resource and grade models from drilling, sampling and survey data to define ore boundaries.

Ore-control and grade-control

Running grade-control on the pit or underground, marking up ore and waste boundaries, and directing operators to the right dig lines.

Drilling and blast support

Guiding drilling programs and working with the mining engineering team on blast design to optimise ore recovery and dilution.

Reconciliation and QA/QC

Reconciling mined tonnes and grade against the model, and maintaining sampling quality assurance and quality control standards.

3. Skills and attributes

- Technical geology: Strong grounding in ore-body geology, structure and mineralisation, with sound logging and interpretation judgement.
- Data and modelling: Confidence with geological and resource modelling software, spatial data and grade estimation.
- Attention to detail: Accuracy in logging, sampling and QA/QC, where small errors can flow through to grade and reconciliation.
- Communication: Clear communication with mining engineers, surveyors, operators and management, both in the field and in reports.
- Teamwork: Collaborative approach across the technical services and operations teams on a busy production site.
- Safety focus: A safety-first mindset in the pit or underground, following all site health and safety procedures and PPE requirements.

4. Qualifications and requirements

Mine geologist is a professional role, so a relevant university degree is essential. Other requirements support field work and professional standing.

- University degree in geology or geoscience (required) — A bachelor's degree (or higher) in geology, geoscience or a closely related discipline is essential
- Professional body membership — Membership of a professional body such as AusIMM is desirable
- Driver's licence — A current driver's licence is desirable for field and site work
- Mine site experience — Prior experience in ore-control, grade-control or resource geology is advantageous
- Working rights (required) — Eligibility to work in Australia

5. Working conditions

- Fly-in fly-out (FIFO) to remote mine sites
- A mix of field work in the pit or underground and technical office work
- Rostered patterns such as 8/6 or even-time swings
- Wearing full personal protective equipment (PPE) in operational areas
- Some continuous coverage across day and night production
- Physically active work outdoors in varied weather and terrain

6. Award information

An award-free professional role

Mine geologists are generally award-free professionals. The Mining Industry Award 2020 (MA000011) explicitly excludes professional employees such as geologists, engineers and scientists, so it does not cover this role.

Because no modern award sets minimum rates for the position, a mine geologist's pay and conditions are set by an individual employment contract or an enterprise agreement. Do not apply MA000011 pay rates to a mine geologist — those rates cover the operational mine workforce, not professional staff. Capture the agreed terms clearly with digital employment contracts.

Which awards apply to whom

MA000011 covers operational mining classifications — production operators, drillers and trades — not geologists. Where a professional-employee award does apply to some scientists, it is the Professional Employees Award 2020 (MA000065); however, many degree-qualified mine geologists sit above award coverage entirely and are engaged on annualised professional contracts.

Always confirm the correct instrument for each role. See the Mining Industry Award guide for context on the operational award that covers the wider mine workforce, and remember it is not the source of a mine geologist's entitlements.

7. Frequently asked questions

About the role

Q: What does a mine geologist do?

A mine geologist maps and logs the geology of a mine, logs and samples drill core and RC chips, and builds and updates geological, resource and grade models. On production sites they run ore-control and grade-control — marking up ore and waste boundaries, reconciling mined grade against the model, and guiding drilling and blast design with the engineering team, all while maintaining sampling QA/QC.

Q: Is a mine geologist an operational or a professional role?

It is a professional role. A mine geologist holds a university degree in geology or geoscience and works in technical services rather than as an operational production employee. This distinction matters for award coverage — professional staff are generally award-free, whereas operators, drillers and trades on the same site may be covered by the Mining Industry Award.

Q: Where does a mine geologist work?

Mine geologists split their time between the field — the open pit or underground development — and the technical office where modelling and reporting happen. Most roles at remote Australian operations are fly-in fly-out (FIFO), working set roster swings such as 8/6 or even-time. Full PPE is required in operational areas. See our guide on FIFO roster patterns for how these swings work.

Q: How is a mine geologist different from an exploration geologist?

A mine geologist works within an operating mine, focused on ore-control, grade-control and resource models that guide daily production. An exploration geologist works earlier in the cycle, searching for and defining new deposits. Both are professional, degree-qualified roles, but the mine geologist's work is tied directly to what the operation digs each shift.

Qualifications

Q: What qualifications does a mine geologist need?

A university degree in geology, geoscience or a closely related discipline is essential — this is a professional role and the degree is non-negotiable. Membership of a professional body such as AusIMM and a current driver's licence are desirable, along with working rights in Australia. Prior ore-control, grade-control or resource geology experience is advantageous but can be built on the job.

Q: Do mine geologists need to be members of AusIMM?

Membership of a professional body such as the Australasian Institute of Mining and Metallurgy (AusIMM) is desirable rather than mandatory for most mine geologist roles. It signals professional standing and is often expected for senior or Competent Person responsibilities under the JORC Code, but entry-level positions typically list it as preferred.

Q: What skills should I look for in a mine geologist?

Look for strong technical geology and interpretation judgement, confidence with resource modelling software and spatial data, and meticulous attention to detail in logging, sampling and QA/QC. Because the role sits between the field and operations, clear communication with mining engineers, surveyors and operators plus a genuine safety focus are just as important as technical depth.

Q: Can I hire a graduate mine geologist?

Yes. Many operations hire graduate geologists straight from a relevant degree and develop them through ore-control and grade-control work under supervision. A clear job description that separates essential requirements (the degree, working rights) from desirable ones (experience, professional membership) helps you attract graduates without over-qualifying the role.

Employment

Q: What award covers a mine geologist in Australia?

Generally none. A mine geologist is an award-free professional — the Mining Industry Award 2020 (MA000011) explicitly excludes professional employees such as geologists, engineers and scientists. Where a professional-employee award applies to some scientists it is the Professional Employees Award 2020 (MA000065), but many mine geologists sit above award coverage entirely and are engaged on individual professional contracts or an enterprise agreement.

Q: Does the Mining Industry Award (MA000011) set a mine geologist's pay?

No. MA000011 covers operational mining classifications — production operators, drillers and trades — not geologists. You should not apply MA000011 pay rates to a mine geologist. Their pay is set by an individual employment contract or an enterprise agreement. Use the Mining Industry Award guide only for context on the operational workforce that the award does cover.

Q: How should I set pay and conditions for a mine geologist?

Because the role is award-free, pay and conditions come from the individual employment contract or enterprise agreement rather than a modern award. Set out the annualised salary or package, roster pattern, FIFO arrangements, allowances and leave clearly and in writing. Digital employment contracts make it easy to capture and store these agreed terms.

Q: What should I include in a mine geologist employment contract?

Key elements include: position title, employment type (typically full-time), salary or package, roster pattern and FIFO point, reporting structure, main duties, work location, and required qualifications. Because the role is award-free, be explicit about entitlements that a modern award would otherwise set. Use our digital employment contracts to simplify this.

Rostering

Q: What roster patterns do mine geologists work?

Mine geologists on remote sites usually work FIFO swings such as 8 days on / 6 days off or even-time arrangements, sometimes with a mix of day and night coverage to support continuous production. The exact pattern is set by the contract or enterprise agreement rather than an award. See FIFO roster patterns explained for common swing structures.

Q: How do I manage fatigue for FIFO mine geologists?

Fatigue management is a core work health and safety obligation on mine sites. Plan roster swings, shift lengths and travel with adequate rest built in, and monitor cumulative hours. Rostering software helps you build compliant patterns and spot fatigue risks early. Our guide on managing fatigue on mining FIFO rosters covers this in detail.

Q: How do I track hours for a salaried mine geologist?

Even for salaried professional staff, tracking time supports fatigue management, site access records and WHS compliance. Use time and attendance tools to record hours worked across the swing so you have visibility of long shifts and cumulative fatigue, without treating the role as award-based hourly pay.

Q: How does WHS apply to mine geologists in the field?

Mine geologists work in the pit or underground, so employers carry the same work health and safety duties as for any site worker — safe systems of work, PPE, and fatigue management across FIFO swings. See mining WHS employer obligations for what you need to have in place, and use rosters software to keep coverage and rest compliant.