# Position Details

## Research Scientist/Engineer - CSOF5

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| The following information is for applicants |
| Advertised Job Title | Research Engineer - Mine Planning |
| Job Reference | 68963 |
| Tenure | Specified Term of 3 years Full-time  |
| Salary Range | AU$98,735 to AU$106,848 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Pullenvale QLD |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian Citizens and Australian Permanent Residents
* New Zealand Citizens who usually reside in Australia
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| Position reports to the | Research Director – Hard Rock Mining |
| Client Focus – Internal | 0% |
| Client Focus – External | 100% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr Ewan Sellers via email at ewan.sellers@csiro.au or phone +61 7 3365 5640 |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply via **Jobs Central**If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220. |

### Role Overview

Research Projects staff in CSIRO collaborate in scientific and technological activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental, observational or technology development work, and in carrying out the more practical aspects of the work.

The role of the Research Engineer - Mine Planning, will be to conduct research into planning, design and optimisation of novel mining methods and ways to improve productivity of current methods. The researcher will apply operations research principles, mining experience, programming and data analytical techniques to evaluate and improve the value of mining operations by advancing extraction techniques such as In-Mine Recovery, Grade engineering, considering new technologies such as sensors, robotics, leaching and cutting.

### Duties and Key Result Areas:

* Incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research.
* Initiate, lead and manage innovative projects in Mining3’s Research Programs.
* Provide technical input to Mining3 projects to drive the implementation new and existing mine planning, scheduling and optimisation concepts on mines worldwide.
* Conduct mining research using data analytics and optimisation techniques.
* Travel to mine sites globally.
* Work with the discrete event simulation and value modelling teams.
* Work with Mining Engineers, Blasting, Geomechanics and processing researchers to consider rock breakage, mine stability and new, energy efficient, processing options.
* Initiate and support implementation of Mining3’s technology.
* Communicate with mining industry personnel regarding current and potential projects.
* Prepare funding applications to support the research.
* Undertake the development of joint research projects.
* Project leader for appropriate Mining3 Projects.
* Prepare research publications and reports.
* Present the results of the research at conferences and seminars.
* Communicate effectively and respectfully in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Produce high quality scientific and/or engineering papers suitable for publication in quality journals and for presentation at national and international conferences.
* Work effectively as part of a multi-disciplinary, often regionally dispersed research team, to undertake independent scientific investigations and carry out associated tasks under the guidance of more senior Research Scientists/Engineers.
* Under the guidance of Senior Research Scientists/ Engineers, work collaboratively and honestly with internal and external colleagues, clients and partners to help define and satisfy objectives for small to medium research projects.
* Assist in leading small research projects, including the negotiation of resource requirements.
* Provide coaching and on-the-job training to technical staff and students to ensure experiments are established in accordance with research design.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Required Competencies:**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. A doctorate in Mining Engineering or equivalent; or a degree combined with equivalent research experience which taken together, are equivalent to this educational standard.
2. Research experience in Mine Planning and Scheduling.
3. Research or experience solving optimization problems for the mining industry.
4. Practical mining experience.
5. Skilled user of Mine Design and Planning software.

## **Desirable:**

1. Research or experience in Geo-Statistics.
2. Research or experience in Mine Data Analytics.
3. Research or experience in Mine Process Management.
4. Research or experience in Application of Operations Research in Mining Engineering
5. Publication record.
6. PhD student supervision.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* Candidates must be willing and able to obtain any medical or police clearances and training required to access mine sites.

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