# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Research Scientist - Minerals |
| Job Reference | 64042 |
| Tenure | Indefinite |
| Salary Range | AU$98,735 to AU$106,848 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Kensington, Perth |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * All Candidates
 |
| Position reports to the | Team Leader |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Alex Otto via email Alex.Otto@csiro.au*Please do not email your application to Alex Otto. Applications received via this method will not be considered by the selection panel.* |
| 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

CSIRO Mineral Resources evaluates new lab and field technologies for exploration through cover and advancing ore body knowledge. Our multidisciplinary team of researchers and engineers integrates multiple mineralogical and geochemical data sets to address challenges in exploration or mining, and we recognize the importance of understanding the potential and limitations of the respective technologies for geological applications. This position aims at developing new exploration and mining research projects to examine the interplay between host rock composition and fluid flow by integrating structural/microstructural and geochemical datasets at a range of scales and the technological implementation into drilling operations.

The Research Scientist will support CSIRO Mineral’s growing commitment to develop workflows and technologies that provide the opportunity to move towards real time analysis during drilling operations. A key component of the role is for the Scientist to engage with a wide range of stakeholders that includes development of teaching material, conducting workshops and consultations.

The Research Scientist will use their knowledge in natural and physical sciences to combine spectral science of solid matter with results of various micro analytical techniques. The Scientist will also develop analytical protocols and workflows incorporating emerging techniques like the MAIA mapper and combine it with core scanning data such as the HyLogger. Further, the Research Scientist will map mineral systems at all scales in collaboration with the Australian mining and exploration industry. This novel and emerging role in CSIRO will involve working on industry and research projects aimed at studying interactions between host rocks and mineralising fluids, responsible for ore forming processes.

This role will play an important part in leading the engagement with the various stakeholders of NVCL project through Auscope. An overall ability and experience to engage with out of domain specialist as well as the wider community is paramount.

### Duties and Key Result Areas:

* CSIRO requires National Police Checks to be provided by preferred applicants for all new positions. Where matters are disclosed in a National Police Check, only those that are relevant to the position and the ability of the applicant to perform the role will be taken into account.
* Develop technology implementation workflows for real time analysis during drilling operations.
* Design educational outreach material, conduct interviews, workshops and other engagements with stakeholders.
* Establish microanalytical techniques as well as developing analytical protocols and workflows incorporating emerging techniques such as the MAIA mapper with core logging systems (HyLogger).
* Incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research.
* Operate mineralogical and geochemical analytical equipment in the field and lab.
* Produce high quality scientific and/or engineering papers suitable for publication in quality journals and for presentation at national and international conferences.
* Lead small research projects and assist with elements of larger projects including the negotiation of resource requirements, as well as lead, coach and supervise staff to ensure experiments are established in accordance with research design, within agreed timelines and budget.
* Draw on professional expertise, knowledge of other disciplines and research experience, recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, 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 PhD and equivalent research experience in the field of geosciences, physics or similar field of science along with a **record of capability to write high quality reports and/or publications in peer reviewed journals.**
2. Experience of GeoPixe, TSG, as well as application of field techniques for real-time analyses.
3. Understanding of multi-element geochemistry, mineralogy and mineral chemistry with experience of using multiscale datasets to develop geological models.
4. Demonstrated ability to work within a multi-disciplinary research team, including the experience in technology development to implement analytical tasks into prototypes.
5. Experience in characterising solid matter with hyperspectral methods.
6. Experience working in the minerals industry or in research projects with industry support.
7. Demonstrated ability to produce teaching materials for outreach projects for the wider scientific and corporate communities.

## **Desirable:**

1. Experience in understanding the geological controls on the petrophysical properties of rocks
2. Demonstrated experience in the application of traditional and non-traditional isotope systematics to understand fluid-rock interaction.
3. Experience in operating a 4WD off-road, conducting field work (either in Australia or overseas) and willingness to conduct field work in remote locations in Australia as part of this position.
4. Experience in other geoscientific software

Special Requirements

Appointment to this role may be subject to the following conditions:

* 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.

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

Find out more about CSIRO [Mineral Resources](https://www.csiro.au/en/Research/MRF)