# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Research Scientist - Geologist/Mineralogist |
| Job Reference | 64893 |
| Tenure | Indefinite – Full-time (Part-time negotiable) |
| Salary Range | AU$98,735 to AU$106,848 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Kensington, WA |
| 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 | Contact Vaclav Metelka via email at: vaclav.metelka@csiro.au |
| 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](mailto:careers.online@csiro.au) or call 1300 984 220. |

### Role Overview

### The Research Scientist - Geologist/Mineralogist will be required to acquire and interpret a range of data sets including field/laboratory observations and measurements as well as Earth observation (including hyperspectral imaging and geophysical survey) data to facilitate geological, structural and mineral mapping. The role will think across multiple scales on the surface and subsurface, incorporating mineralogy, geochemistry and petrophysics from drill core and field samples with Earth observation and geophysical data sets.

The role of Research Scientist Staff in CSIRO is to conduct innovative research producing scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership, and pursue new ideas and approaches that create new concepts. If you are interested in this exciting and stimulating role, we encourage you to apply. Your unique skill set may fit our motivated and innovative team.

### Duties and Key Result Areas:

* Operate geoscientific sensors (IR spectroscopy, XRD, XRF) in the field and the laboratory.
* Acquire, process, and interpret multisource data (geology, mineralogy, geochemistry).
* Integrate multisource datasets to create higher-level geoscience products, e.g., alteration, litho-structural, or grade models in 3D.
* Validate and process Earth observation data for mineral resources exploration and in mine site processes optimisation.
* Analyse geological and mineral systems at a range of scales, focusing on advancing our ability to detect mineralisation and associated mineralogical changes in regions of significant regolith or younger sedimentary cover.
* Draw on professional expertise, knowledge of multiple disciplines (e.g. geology, mineralogy, geochemistry, remote sensing) 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 fields.
* Produce high-quality technical reports and client presentations as well as scientific papers suitable for publication in globally recognised journals, communicate research at national and international conferences.
* 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 strategies.
* Liaise with clients to clarify their needs and take personal responsibility for client satisfaction.
* Under limited direction, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* Address problems promptly and constructively, selecting the most profitable lines of attack upon a problem, preparing detailed design proposals and experimental protocols.
* Undertake in experimental and observational research activities, often requiring the supervision and training of others to ensure experiments are established following a research design, or as needed.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of ethical business practices, collaboration and enhancement of CSIRO’s reputation.
* 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 doctorate or equivalent research experience or an MSc degree in the field of geosciences.
2. A record of writing high-quality reports and/or publications in peer-reviewed journals.
3. Experience in the application of geoscientific field and laboratory measurement techniques coupled with the ability to analyse and integrate drill core or field sampling data (mine-scale) with Earth observation data in 3D space.
4. Understanding of geological systems from regional- to deposit-scale and experience in applying this knowledge to mining processes optimisation.
5. Experience in standard statistical methods applied to geological, mineralogical, geochemical, or Earth observation data.
6. Demonstrated ability to work within a multi-disciplinary research team, plus the motivation and discipline to carry out autonomous research, to achieve organisational goals.
7. Ability to identify, learn and apply newly available or existing geoscience sensing techniques to geoscientific problems.

## **Desirable:**

1. Experience working in/with the minerals industry or research projects with industry support, focusing on multi-scale mineralogical and geochemical data acquisition and analysis.
2. Experience with commonly used remote sensing and geophysical data (multi/hyperspectral, gamma-ray spectrometry, potential field, imaging radar, LiDAR).
3. Understanding of one or more of the following software packages: TSG, DIffrac.EVA, GoCAD, Leapfrog, ioGAS, ArcGIS, QGIS, ENVI, Geosoft.
4. Knowledge of Python, R or Matlab for more advanced data analytics (machine learning).
5. Experience with acquisition and/or processing of drone-based data.
6. Experience with inversion problems.

Special Requirements

Appointment to this role is subject to the following condition:

* 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:**

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