# Position Details

## Research Scientist/Engineer- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Fe ore geoscientist lead |
| Job Reference | 69447 |
| Tenure | Specified Term of 3 years  Full-time |
| Salary Range | AU$113,338 to AU $132,811 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 | Australian/New Zealand Citizens and Australian Permanent Residents |
| Position reports to the | Team Leader, Mineral Resources |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Margaux Le Vaillant via email at [Margaux.Levaillant@csiro.au](mailto:Margaux.Levaillant@csiro.au) or phone +61 8 6436 8676 |
| 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 role of Research Scientist Staff in CSIRO is to conduct innovative research leading to 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.

CMR Discovery Program has developed and is focussed on developing several large, multiyear, multi-sponsor Fe-Ore projects to deliver guaranteed revenue for future budget cycles. This multi-billion-dollar industry provides a major revenue stream into the Australian economy; however, in recent years the quality of Fe-Ore has been falling, partly due to the lack of fundamental research into the geological development of Fe-Ores.

As a research scientist within Mineral Resource you will undertake research aimed at advancing our capability to map the chemistry of mineral systems, the controls on metal transport and the processes of mineral deposition within mineral systems, while developing applications to mineral exploration. The position will support CSIRO Mineral’s growing commitment to map systems at all scales in collaboration with the Australian mining and exploration industry.

The Research Scientist will use their knowledge in 3D modelling, petrology, mineralogy*,* mineral chemistry*,* geochemistry and geology *of* Iron Ore systems and combine it with results of various micro analytical techniques.

One of the main undertaking for the successful applicant will be as part of a large project that commenced on June 1, 2020, entitled “Landscape history in the Pilbara and its impact on iron ore deposits” (M557 - O2D-218956). This project with many competing interests demands both internal co-ordination and external customer relationship management to ensure effective knowledge translation from the project.

This position requires a sound technical background in iron ore, structural geology and geochronology and will have had both a strong research record and industry background to enable effective knowledge transfer between collaborators and researchers (CSIRO, UWA and Curtin University) that form part of this, and other Fe-Ore projects. You will work with the Fe-Ore science lead within the CSIRO, Erick Ramanaidou, and sponsor representatives to identify further research areas for ongoing project development. Significant hands on iron ore industry experience is essential; however, the research experience of the role will enable them to be an active part of the research team in addition to acting in a co-ordinating role for the project research activities. Ideally this experience will include some or all of geochemistry, structural and microstructural geology, spectral sensing, mineralogy and 3D geological modelling as well as knowledge of how these factors impact mining and processing. In addition, to this the CSIRO Mineral Resources team is working with the South Australian Government to establish whole-of-value chain Fe-Ore projects. These talks have thus far led to engagements of the CSIRO Futures team, Processing and Discovery to help update the South Australian governments magnetite strategy, facilitating some industry engagement, to work towards South Australia realising Fe-Ore value delivery into their state.

CSIRO Mineral Resources evaluates new laboratory and field technologies for exploration through cover and advancing ore body knowledge. Our multidisciplinary team of researchers and engineers integrates multiple mineralogical, geochemical and geophysical datasets to address challenges in exploration or mining, and we recognise the importance of understanding the potential and limitations of the respective technologies for geological applications.

### 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.
* Operate mineralogical and geochemical analytical equipment in the field and laboratory.
* 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.
* Work and develop projects that delivers high-impact research with strategic relevance to the Minerals industry.
* Foster collaboration and interactions between scientists and clients, matching client needs with research outcomes.
* 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 procedures and policy, Diversity initiatives and Making Safety Personal 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:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

## **Selection Criteria**

#### Essential

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

1. A doctorate and/or equivalent research experience in the field of geosciences, along with a **record of capability to write high quality reports and/or publications in peer reviewed journals.**
2. Experience in generating 3D geological models using drill hole geochemistry, downhole geophysics, and geological mapping. Experience using Leapfrog, GoCAD, Vulcan software as well as implicit modelling such as Map2Loop and geomodeller is welcome.
3. Experience in interpreting downhole/airborne geophysical data and geochemistry to define stratigraphy and overlying weathering mantle
4. Ability to apply studies of microscale processes and geochronology results to exploration for ore systems
5. Demonstrated ability to work within a multi-disciplinary research team, plus the motivation and discipline to carry out autonomous research, to achieve organisational goals.
6. Experience working in the minerals industry or in research projects with industry support, particularly in work experience relevant to iron ore systems

## **Desirable:**

1. Strong conceptual and analytical skills.
2. Ability to deal with ambiguity and uncertainty, to work collaboratively, be self-motivated and to demonstrate initiative.
3. Experience in operating a 4WD off-road, conducting field work including in remote locations in Australia.
4. A significant record of science innovation and creativity plus the ability to apply well developed research skills to scientific investigations.

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.
* Travel within Australia, as well as field visits to mine sites and exploration camps, will be required.

## **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: <http://www.csiro.au/en/Research/MRF>

At **CSIRO Mineral Resources**, we recognise that the capability of our people is key to our success and provide the support for our people to develop, grow and reach their full potential. We offer a diverse and inclusive environment and strongly believe that our culture drives performance. Working at CSIRO you will be rewarded with a dynamic and challenging career path and an attractive remuneration package that includes a generous superannuation scheme, flexible work options, travel, and multiple leave options including paid maternity and parental leave.

The position will **be based at the Australian Resources Research Centre**, Perth, Western Australia, which offers outstanding facilities in a new and growing research environment. You will also have access to other world-class facilities based at the universities in Perth where CSIRO has collaborative arrangements in place, and at other CSIRO sites across Australia. Travel within Australia, as well as field visits to mine sites and exploration camps, will be required.