# Position Details

## Research Scientist/Engineer- CSOF7

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| The following information is for applicants | |
| Advertised Job Title | Principal Research Scientist/Engineer Reservoir Engineering |
| Job Reference | 95281 |
| Tenure | Indefinite, Full-time  Part-time (80%) may be considered for applicants who do not require visa sponsorship due to immigration regulations and requirements |
| Salary Range | AU$146,207 - AU$161,767 per annum (pro-rata for part-time)  plus up to 15.4% superannuation |
| Location(s) | Melbourne (Clayton North), VIC |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Team Leader Reservoir Engineering |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Regina Sander via email at regina.sander@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. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### Role Overview

The role of Principal Research Scientist/Engineer staff is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. The Principal Research Scientist/Engineer may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. The Principal Research Scientist/Engineer will have the opportunity to build and maintain networks, play a lead role in securing project funding, provide scientific leadership, and generate new ideas and approaches that attract support.

The Principal Research Scientist/Engineer Reservoir Engineering is part of the Reservoir Engineering Team, which is made up of researchers, scientists, engineers and technicians who work together to deliver research projects relating to fluid transport and storage in the subsurface. The team has extensive experimental (laboratory) and modelling capability that is constantly evolving.

The Principal Research Scientist/Engineer will bring fresh perspectives, innovative ideas, and strategic vision to collectively shape the future of our research endeavours that support Australia’s decarbonisation objective and energy security. The individual will influence and contribute to the ongoing development of our laboratory-based research focused on underground H2 and CO2 storage, H2 generation in the subsurface, as well as environmental impacts from gas storage and production processes in the subsurface.

The Principal Research Scientist/Engineer Reservoir Engineering is recognised for their demonstrated expertise relating to fluid transport and storage in porous media. Research experience relating to underground hydrogen storage processes and/or coal seam gas reservoirs is essential to this role. They will develop, contribute to and lead scientific research to address real-world challenges that support the energy transition. Significant experience in actively developing, leading and contributing to laboratory-based research to obtain insights into reservoir processes, underpin reservoir modelling, and advance engineering solutions is essential.

The Reservoir Engineering Team within CSIRO’s Energy Business Unit collaborates with other teams to leverage CSIRO’s capability and increase our impact. The Principal Research Scientist/Engineer Reservoir Engineering is expected to develop multi-disciplinary projects and build and work with diverse project teams, including external collaborators as appropriate. Respectful and collegial behaviour is a prerequisite. The candidate will have an extensive professional network which they will leverage to promote CSIRO’s and the Reservoir Engineering Team’s research and obtain funding to support our research.

It is expected that the successful candidate will spend ~50% of their time focussed on external engagement, including management of and contribution to industry/government sponsored projects, and ~50% focussed on continuing to build and develop our research and supporting capability.

### Duties and Key Result Areas

* Contribute to the research direction of the team by identifying research gaps and future trends, and developing project proposals for strategic research to build CSIRO’s capability.
* Support the global competitiveness and ongoing development of the Reservoir Engineering Team’s experimental capability, by contributing original ideas and concepts for novel experimental investigations, and developing and leading relevant strategic research.
* Work collaboratively and respectfully as part of multi-disciplinary and diverse teams to carry out tasks in support of CSIRO’s scientific objectives.
* Provide leadership and mentorship to emerging scientists.
* Communicate and promote CSIRO’s science through publication in peer-reviewed journals and at conferences.
* Generate new and leverage existing networks to build support for research proposals.
* Support the translation of laboratory observations into numerical models for reservoir simulation.
* Provide technical leadership and expertise to projects requiring extensive experience in fluid transport and storage processes in porous media and other expert domains as applicable.
* 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.
* Lead and/or participate in a number of projects simultaneously (including multi-disciplinary, strategic and industry projects).
* Maintain active national and/or international research collaborations in order to access/share leading edge concepts and technology to advance projects.
* Conceive ideas for new projects based on industry/community needs/challenges while identifying potential sources of funding.
* Utilise knowledge and understanding of clients’ business and demonstrate creativity in anticipating client needs.
* Act as a trusted advisor to clients and promote an understanding of client needs amongst other employees.
* Where required, provide advice to policy makers and inform and transfer knowledge to non-scientific audiences.
* Coordinate, allocate and manage resources (people, equipment, facilities, and funds) as required.
* Communicate research results to clients and the scientific community through oral and written reports, which may include the preparation of documents for patent applications.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy and diversity initiatives.
* Other duties as directed.

## **Selection Criteria**

#### Essential

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

1. A PhD (or an equivalent combination of qualifications and research experience) in a relevant field such as Earth Sciences, Petroleum Engineering, Hydrogeology or related discipline.
2. Minimum of 10 years experience post PhD or equivalent in the investigation of fluid transport and storage processes in porous media including significant experience in hydrogen underground storage and/or coal seam gas reservoirs.
3. Significant experience in laboratory-based research, including the design and delivery of experimental studies and its translation into numerical models and application to real-world challenges.
4. Demonstrated ability to develop and undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
5. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.
6. Demonstrated track record of securing external research funding through government grants or industry contracts.
7. Demonstrated ability to communicate openly and respectfully and work collaboratively as a project team member as well as providing effective project leadership.
8. A track record and willingness to mentor and support emerging scientists/engineers.
9. Be recognised as a national authority in the relevant area of expertise and possess knowledge across a range of scientific disciplines.

## **Desirable**

1. Experience in the development of mathematical models for fluid flow and storage in porous rocks.
2. Proficiency in numerical modelling and programming, preferably with expertise in FORTRAN.
3. Demonstrated experience in utilising commercial flow simulation tools to validate laboratory experimental data and conduct field-scale analysis.
4. An understanding of geochemical processes in the subsurface.
5. An understanding of geomechanical processes in the subsurface.

## **Required Competencies**

* **Teamwork and Collaboration:** Creates and fosters an environment in which there is a high level of cooperation within and between teams. Facilitates positive team relationships to build interactions across Business Units and the organisation.
* **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:** Provides leadership that fosters an environment that encourages new ideas and provides support for the development of emerging skills. Creates trust by displaying consistency, understanding, integrity and patience. Plans, seeks, allocates and monitors resources to achieve outcomes.
* **Judgement and Problem Solving:** Resolves major conceptual scientific, technical, commercial or management problems, which have a significant impact upon the field of research, professional function, the Business Unit or the Organisation. Situations faced have little or no precedent and require original concepts and approaches.
* **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:**Is flexible in response to external change or when faced with external constraints. Identifies and promotes the opportunities arising as a result of change.

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

* The successful candidate will undertake a pre-employment background check. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- https://ielts.com.au/

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [CSIRO](https://www.csiro.au/en/research/technology-space/energy) Energy for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted