# Position Description

## Postdoctoral Fellowship– CSOF4

The following information is for applicants

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| Advertised Job Title**:** | Postdoctoral Fellowship in Hydraulic Fracturing |
| Job Reference: | 59058 |
| Salary Range: | AU $82,450 to AU $93,280 plus up to 15.4% superannuation |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian Citizens Only  Australian/New Zealand Citizens and Australian Permanent Residents Only   * All Candidates |
| Percentage of Client Focus - Internal: | 50% |
| Percentage of Client Focus - External: | 50% |
| Reports to the: | Team Leader |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries: | Mr James Kearvia email: [james.kear@csiro.au](mailto:james.kear@csiro.au), Please do not email your application directly to Mr Kear. Applications received via this method may not be considered by the selection panel. |
| Contact Details For Applying: | If you experience difficulties applying on line, call 1300 984 220 or email [careers.online@csiro.au](mailto:careers.online@csiro.au). |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon |

## Role Overview:

**Postdoctoral Fellowships** at CSIRO provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships will help launch their careers, provide experience that will enhance their career prospects, and facilitate the recruitment and development of potential leaders for CSIRO.

Postdoctoral Fellows **are appointed for three years or part time equivalent** and will work closely with a leading Research Scientist or Engineer in their respective field. They carry out innovative, impactful research of strategic importance to CSIRO with the possibility of novel and important scientific outcomes. They present the findings in appropriate publications and at conferences.

In this role the successful applicant will undertake hydraulic fracturing research using a range of investigative approaches including laboratory and field experimentation, numerical modelling, and analytical methods. A key focus of the fellowship will be to develop software tools and analytical approaches to improve the effectiveness and assess the environmental sustainability of hydraulic fracturing applications in coal seam and shale gas stimulation.

Applicants with a strong technical background coupled with a desire to create new approaches to understand complex issues and clearly communicate findings are encouraged to apply.

## Duties and Key Result Areas:

* Under the direction of senior research scientists, carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes.
* Assist in the development and deployment of novel technology to evaluate, predict or measure hydraulic fracturing growth.
* Contribute to high-profile research projects to develop tools to predict and measure the environmental sustainability of onshore petroleum activities.
* Carry out autonomous research to produce high quality scientific and/or engineering input into professional client reports.
* Publish and present work at conferences as agreed with your supervisor.
* Make a contribution to the effective functioning of the research team and help deliver CSIRO’s organisational objectives and plans**.**
* Undertake an appropriate training and development program developed by CSIRO.
* 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.
* 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.

**CSIRO’s postdoctoral training program**is developed between the Postdoctoral Fellow and a CSIRO scientist or engineer. The program will focus on enhancing the Fellows’ capabilities to the level expected of an independent researcher and will include on-the-job and course-based development encompassing:

* Discipline-specific techniques and protocols
* Professional growth
* Project management
* Communication and influencing skills
* Working and collaborating with others

<http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postdoctoral-fellowships>

## CSIRO Competencies:

1. **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.**
2. **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.**
3. **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.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **Independence: Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
6. **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:

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

1. A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as Hydraulic Fracturing, Risk Analysis or Environmental Engineering
2. Experience in undertaking technical projects relevant to petroleum, mining, environmental, geothermal or related industries.
3. Excellent written communication skills with demonstrated experience in the preparation of professional technical reports.
4. A work or personal history that demonstrates a strong sense of responsibility with proven high levels of initiative

## Desirable Criteria:

1. Existing professional network within industry or productive existing collaborations with academic and/or research institutions.
2. Awareness of environmental, social and industrial issues around unconventional gas development.

To be appointed as a Postdoctoral Fellow within CSIRO, candidates are required to have **submitted** their PhD at the time of commencement, as a minimum requirement, if PhD conferment has not been obtained. If a candidate has submitted, but their PhD has not yet been formally attained, the starting salary will be AU$82,450Upon CSIRO receiving written confirmation that the PhD has been awarded (within a six month period from commencement date), the salary will be increased to the negotiated level and the difference will be back-paid to the Officer’s start date.

## Special Requirements:

Appointment to this role may be subject to conditions including security/national police/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents 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/>

As part of the project portfolio, the team undertakes hydraulic fracturing field research at client sites in Australian and Internationally. There may be an opportunity for the successful applicant to participate in this work and therefore willingness to participate in fieldwork activities with durations of 1 to 2 weeks, several times per year would be favourably considered.

## About CSIRO:

We imagine. We collaborate. We innovate. To find out more visit us [online](http://www.csiro.au/)!

Find out more about CSIRO [Energy](https://www.csiro.au/en/Research/EF)