



POSITION DESCRIPTION

Position Title:	Senior Research Technician – Seismic Interpreter
Organisation Unit:	Centre for Coal Seam Gas
Position Number:	3039790
Type of Employment:	Research Professional
Classification:	HEW Level 8

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver **knowledge leadership for a better world**.

UQ ranks in the world's top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (45), the US News Best Global Universities Rankings (52), QS World University Rankings (51), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (60). UQ again topped the nation in the prestigious Nature Index; and secured a greater share of Australian Research Council grants in 2016 (\$24.5 million) than any other university nationally.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience –the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland's highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia's Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 230,000-plus alumni. The University has about 7,000 academic and professional staff and a \$1.7 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences,

sustainable minerals, bioengineering and nanotechnology, as well as social science research.

UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of \$11billion+ (see <http://uniquet.com.au/our-track-record>).

UQ has a rapidly growing record of attracting philanthropic support for its activities and will have further success in this area as an important strategic aim going forward.

Organisational Environment

Australia's onshore natural gas industry has expanded rapidly with the establishment of a new Coal Seam Gas-Liquefied Natural Gas industry in Queensland. In this evolving environment, The University of Queensland recognised a need for a coordinated access point to address the community, government and industry challenges.

The Centre for Coal Seam Gas (CCSG) was established in 2012 to conduct and support research and education within onshore gas, creating a scientific energy platform.

The Centre conducts research and supports education in key discipline areas including economics, business, petroleum engineering, geosciences, water, ecology and social sciences. The Centre also provides independent advice to industry and government on policy or business-relevant matters, leadership on scientific and technical issues as well as strategic planning.

Led by the Centre Director, the Centre is managed by a core team who oversees its operations. Central to the team are five professorial research chairs who cover the areas of geoscience, petroleum engineering, groundwater and social performance.

The Centre draws on the extensive research and educational capabilities across UQ's schools and institutes and collaborates with industry and research organisations, nationally and internationally.

For more information about the Centre, please visit: <https://ccsg.centre.uq.edu.au>

The position will be located in the University's Engineering, Architecture, and Information Technology Faculty (EAIT). Information about the Faculty may be accessed on the Faculty's web site at

<https://www.eait.uq.edu.au>

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - <http://www.uq.edu.au/current-staff/working-at-uq>

The University of Queensland [Enterprise Agreement](#) outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position

This is a project-focussed position which requires delivery of high quality work against a hard, externally driven timeline. The successful applicant will work on several projects in a multidisciplinary research team of geologists, engineers, geophysicists, hydrogeologists and modellers on matters relating to natural gas developments, aquifer modelling and/or carbon capture and storage. You will be working with senior academics, postdoctoral fellows and students to deliver high impact science outcomes. This position will provide the key seismic interpretation to drive the building, attribution and simulation of fit for purpose static and dynamic models of East Australian Basins (especially Surat & Bowen). You will be producing structure maps, undertaking seismic-well ties, depth conversion as well as interpreting seismic horizons, faults and facies on 2D and 3D data in support of a wider regional geological modelling exercise.

The research work will include consultation with experts in the School of Earth & Environmental Sciences and School of Chemical Engineering, and will be conducted in partnership with technical experts in Industry and Government.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Undertake highly specialised seismic attribute analyses, make recommendations, and develop new methods/make improvements where available
- Map seismic horizons, facies and faults
- Evaluate and report on depth conversion options and uncertainties
- Evaluate and report on the seismic response via synthetic and real 2D and 3D data of the lower Surat Basin and underlying Upper Bowen Basin.
- Evaluate and report on the relationship in support of the team regional geologist between core, log, well test and seismic facies.
- Contribute extensively to an integrated basin, play and field analysis.
- Contribute extensively to comprehensive and regular project and milestone reporting so that the achievements are effectively communicated.
- Prepare progress and research reports and journal articles
- Deliver research presentations to various audiences
- Provide specialist knowledge and training to postgraduate students in conjunction with the Senior Geologist Postdoctoral Research Fellow

Service and Engagement

- Establish and maintain close working relationships with stakeholders within the community, coal industry companies and all levels of government, where relevant,
- Engage with fellow researchers in the University of Queensland faculties and collaborating research institutions, where relevant
- Any other duties as directed by the Supervisor

Other

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:

- the [University's Code of Conduct](#)
- requirements of the Queensland occupational health and safety (OH&S) legislation and related [OH&S responsibilities and procedures](#) developed by the University or Institute/School
- the adoption sustainable practices in all work activities and compliance with associated legislation and related University [sustainability responsibilities and procedures](#)
- requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related [responsibilities and procedures](#) developed by the University

Organisational Relationships

The position reports to the Centre Director.

SELECTION CRITERIA

Essential

- Postgraduate qualifications in geology or geophysics or progress towards postgraduate qualifications and extensive relevant experience; or extensive experience and management expertise; or an equivalent combination of relevant experience and/or education/training;
- Extensive experience as a seismic interpreter, including on regional interpretation projects, and knowledge of 2D and 3D seismic interpretation
- Knowledge of the stratigraphy and structure of the Surat and/or Bowen Basin, and seismic data management
- Detailed understanding of technical aspects of seismic interpretation including well ties, fault and horizon mapping, attribute analysis and seismic facies mapping
- Detailed knowledge of petrophysics and the derivation of synthetic seismograms as well as other rock property data and trends from wireline logs.
- Detailed knowledge of depth conversion methodologies and uncertainty assessment.
- Experience in searching, extracting and QC from Queensland public data bases (QDEX) for well and seismic data.
- Experience in working in a multidisciplinary team with geologists and petroleum engineers in the context of a carbon storage project.
- Detailed knowledge of PETREL for seismic interpretation and geo-modelling.
- Strong inter-personal and written communication skills and the ability to relate to disciplines and stakeholders with competing interests and views,
- Experience in collating, analysing and interpreting quantitative and qualitative research data or other similar information,

- The ability to work both collaboratively in a team and independently to high levels of professionalism, personal integrity and transparency, particularly in contentious settings,
- Excellent time management skills and ability to manage a program of work to meet milestones,
- Commitment to following safe work practices.

Desirable

- Awareness of key elements of seismic processing (migration, amplitude processing, phase matching)

The University of Queensland values diversity and inclusion.

Applications are particularly encouraged from Aboriginal and Torres Strait Islander peoples. For further information please contact our Australian Indigenous Employment Coordinator at: atsi_recruitment@uq.edu.au

Applications are also encouraged from women.

This role is a full-time position; however flexible working arrangements may be negotiated.