



CEO comment



Two important recent events for Geoscience Australia were the release of *Towards Future Energy Discovery* by the Minister for Resources and Energy, Martin Ferguson AM MP, on 20 June 2011 and the release of a comprehensive review of Australia's rare earth elements. This issue includes reports on both publications.

Towards Future Energy Discovery provides an overview of Geoscience Australia's Energy Security Program following its completion in mid-2011. This review is the first unified compilation of the activities undertaken during the course of the program. It will inform stakeholders of the new opportunities and key products embodied in a range of datasets, regional studies, assessments, maps and publications.

The major rare-earth-element deposits of Australia: geological setting, exploration, and resources is a comprehensive review of Australia's rare-earth elements which outlines their distribution, geological characteristics, and potential. Because of an expanding portfolio of applications, particularly for developing technologies crucial to our future, these elements are increasingly becoming more attractive commodity targets for the minerals industry.

Geoscience Australia scientists have recently completed a major assessment of the hydrocarbon prospectivity of the northern Perth Basin. The assessment process, which provided an improved understanding of basin evolution and the spatial distribution of key petroleum system elements, is outlined in this issue. The new knowledge generated during this study underpinned the release of area W11-18 in April 2011 as part of the Australian Government's 2011 release of offshore petroleum exploration acreage.

An influential Australian Academy of Science think tank has called for Australian geoscientists to cooperate in an innovative, well-defined and nationally-coordinated strategy to bring competitive advantage to Australian mineral exploration. This issue includes a report on Geoscience Australia's activities within this strategy through the formation of the 'Continental Resource and Energy Systems' project. The aim of the project is to develop continental-scale methods to investigate and model the Australian crust which will guide and attract future minerals and energy exploration.

There is also a report on a recently completed study of the

petroleum prospectivity of the Capel and Faust Basins. These deepwater basins, located 800 kilometres off the east coast of Australia, have previously seen little scientific or petroleum exploration effort. This study used 3D geological modelling at a basin scale to answer key questions about the area's petroleum prospectivity.

This issue also includes an article outlining the geological and geochemical factors which control the formation of calcrete hosted uranium deposits. The article then examines the presence of appropriate source rocks, drainage systems and depositional environments which makes the Paterson region in Western Australia prospective for calcrete-hosted uranium deposits.

As always we welcome your feedback and encourage you to use the email address at the end of each article.



Dr Chris Pigram
CEO Geoscience Australia