



CEO comment



Dr Chris Pigram – CEO Geoscience Australia

This issue includes an article showing the application of airborne electromagnetic (AEM) surveying to mapping uranium mineral systems for uranium exploration in the Lake Frome region of South Australia. This area is Australia's premier sandstone-hosted uranium province, and hosts the only In Situ Recovery uranium mines currently operating in Australia, at Beverley and Honeymoon. The Frome AEM Survey is the last, but largest, of the three regional AEM surveys flown under the Onshore Energy Security Program, and covers roughly 10 per cent of the area of South Australia. The article discusses the application of regional AEM surveying for mapping under-cover geology in this highly prospective area, that has led to a much better mapping of palaeovalleys that host uranium mineral systems, as well as the sedimentary and fault systems that control uranium transport and deposition.

A report has been provided on the interpretation of the deep seismic reflection profiles from the Arrowie Basin in South Australia and the Burke River Structural Zone of the Georgina Basin in northwest Queensland. The research focused on their stratigraphic and structural architecture and was consequently utilised in petroleum systems maturation modeling to increase the understanding of their petroleum potential.

July 2012 marked the 40th anniversary of the Landsat, a series of satellites which has provided Australia with valuable images for over three decades. According to NASA, the Landsat series of satellites has produced 'the longest unbroken data stream of Earth's surface as seen from space'. Geoscience Australia is now preparing for Landsat 8 which will be ready for launch in February 2013 and will ensure the continuity of medium resolution satellite imagery of the type that supports a huge range of government programs.

This issue provides preliminary analyses from two marine surveys undertaken by Geoscience Australia to provide seabed environmental information to support assessments of CO₂ storage potential of the Vlaming and Petrel Sub-basins. Data from these multi-disciplinary studies are currently being assessed, and the outputs from this work will be used to inform and support the ongoing National CO₂ Infrastructure Plan (NCIP) being undertaken by the Department of Resources, Energy and Tourism.

Geoscience Australia and the CSIRO joined with several Australian State and Territory government agencies and international organisations to produce the ASTER maps which will provide mining and exploration companies with more accurate and detailed information than ever before. These first continent-wide scale maps of their type in the world provide detailed information on mineral components of rocks and soil, as well as a zoom capability which allows geoscientists to view images from thousands of kilometres wide to just a few kilometres.

Amazing geological features are the subject of *Uluru and Kata Tjuta: a geological guide* which was recently released by Geoscience Australia. Readers and visitors will find this book a valuable resource to assist their awareness, understanding and enjoyment of this special place.



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