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CEO comment

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This issue of *AusGeo News* features several reports on Geoscience Australia's research to assist mineral and energy resource explorers as well as our contributions to natural resource management and the alleviation of the effects of climate change on Australia's coastal zone.

Our first article outlines the geophysical techniques used to map the 3D signatures of ore deposits in the Cobar region of New South Wales. The maps utilise geophysical inversions of gravity and magnetic data to produce 3D models of density and magnetic susceptibility (see *AusGeo News* 96). The application of the technique in a sample area showed that it is apparent that the major deposits of the region lie within the changes between alteration types.

This issue includes details of a recent study by Geoscience Australia scientists which has integrated and modelled national geoscientific datasets to generate a weathering intensity index for the Australian continent. Weathering intensity is a fundamental characteristic of the regolith which is the layer of weathered bedrock and sediments that overlies fresh bedrock at depth. The index has broad applications for a range of natural resource management, environmental and mineral exploration issues.

Australia's coastal zone includes major cities and supports major industries such as agriculture, fisheries and tourism and has more than 80 per cent of Australians living within it. Our article outlines Geoscience Australia's contribution to the National Coastal Vulnerability Assessment, which was commissioned by the former Department of Climate Change, and examined the vulnerability of coastal communities to rising sea-levels. The study utilised two nation-wide consistent databases managed by Geoscience Australia; NEXIS which describes Australia's infrastructure and Smartline which outlines coastal geomorphology (or landforms).

I am pleased to report the outcome of additional research and reprocessing of data from the airborne electromagnetic survey over the Kombolgie section of the Pine Creek region in the Northern Territory. There has been a significant improvement to the mapping of conductivity and identifying features, such as unconformities and major structures, at much greater depths than has previously been published.

This issue also includes a report on a seabed mapping survey off northern Australia and an update on the Geothermal Energy Project. New products include geophysical datasets covering the Pine Creek region in the Northern Territory and the Paterson region in Western Australia.

I wish to congratulate Geoscience Australia's recently retired Chief Scientist, Lynton Jaques, who was awarded a Public Service Medal in the recent Australia Day honours. Lynton managed and coordinated the development of the *Australian Energy Resource Assessment* (see *AusGeo News* 98) which provides an authoritative base for debate and policy development on Australia's future energy directions. It was a significant culmination to the contribution Lynton has made to Geoscience Australia and its predecessors over the past 38 years and we wish him well in his retirement.

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