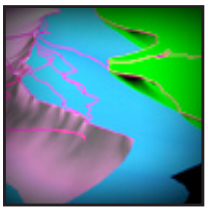

One of Geoscience Australia's main roles is the provision of precompetitive geoscientific information to encourage investment in mineral exploration in Australia. In this issue we report on studies in two of Australia's most important mineral-producing areas, the Yilgarn Craton and the Mt Isa region, arising from our participation in the Predictive Minerals Discovery Cooperative Research Centre (*pmd**CRC).

The Yilgarn Craton in Western Australia is one of Australia's key mineral provinces, producing two-thirds of the gold and more than half the nickel mined in Australia. The main achievement of the project was the building of comprehensive three dimensional maps of the Kalgoorlie-Kambalda and the Norseman-Wiluna region. These maps used solid geology data as a foundation and integrated it with various geophysical, geochemical and geochronological data sets. These new data and the new understanding developed from the project will not only benefit explorers in the Yilgarn Craton but those in other terranes.

Researchers working on the Mt Isa Western Succession project also gave a high priority to building a 3D structural model of the area which incorporated all elements of the mineralising system. The Mount Isa study also used satellite data from a radiometer on board the Terra satellite to map mineralogy on a regional scale with sufficient spatial and spectral detail to be useful for mineral exploration. The resulting new geological framework will provide a new focus for future mineral exploration.

Each year the Australian Government releases new opportunities for offshore petroleum exploration, and permits are at a record high with 184 permits currently in operation. The total offshore area under permit is also at a near record level. Last month another 36 offshore acreage areas in basins around Australia were released for industry bidding and details of these areas are included in this issue.

Also featured are a wide range of articles relating to natural hazards. One article examines how the global infrasound sensor network used to monitor clandestine nuclear detonations could also be utilised to warn of natural disasters such as storms, bolides (meteorites), earthquakes and volcanoes. Another article examines the behaviour of sediments subjected to ground shaking during earthquakes. There is also a report from the Assessment Team sent to recommend assistance measures as part of the Australian Government's response to the Guinsaugon, Philippines, landslide in February this year.

As well, this issue includes reports on Geoscience Australia's contributions to the Australian Government's objective of optimising the accessibility and use of spatial information to assist with government decision making. Our newly released products include the new isotope data uncovering the history of offshore gas accumulations in the North West Shelf and the recently updated version of Australia's maritime boundaries.

As usual we always appreciate your feedback and you may notice that we have included an online rating mechanism with each article allowing you to rate an article with the click of a mouse.

Comment

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