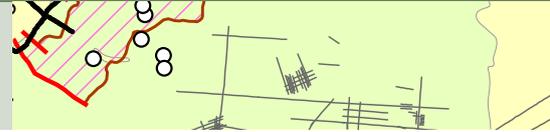


# Towards future energy discovery

## Completion of the Energy Security Program



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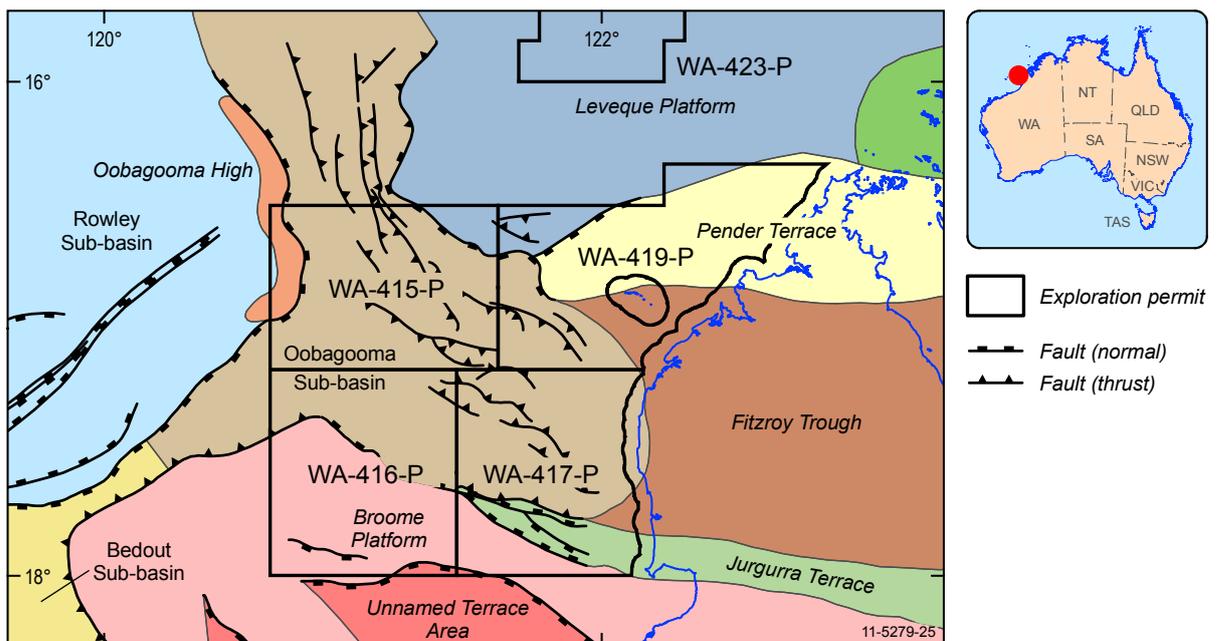
A recent report by Geoscience Australia titled *Towards Future Energy Discovery* gives new impetus for energy and mineral exploration activity across the country and provides important input into Government policy making for Australia's energy future.

Launching the report in Canberra on 20 June 2011, the Minister for Resources and Energy Martin Ferguson AM MP, pointed out that 'Continued exploration for resources is fundamental to maintaining energy security'.

The report provides an overview of Geoscience Australia's Energy Security Program on completion of the program in mid-2011. Although data products and assessments have been released progressively, the report is the first unified compilation of the activities undertaken during the course of the program. It is designed to inform stakeholders of the new opportunities and key products embodied in a range of datasets, regional studies, assessments, maps and publications, most of which can be accessed online.

In 2006 the Australian Government expanded Geoscience Australia's program of seismic acquisition, data enhancement and

client access through the commitment of almost \$134 million over five years to the Energy Security Initiative. A total of \$75 million was allocated to focus on new frontier offshore areas and \$58.9 million was appropriated to identify potential for onshore energy resources such as petroleum, uranium and geothermal. The objective of the initiative has been to provide pre-competitive information to attract investment in offshore and onshore energy exploration by improving the chances of discovery and reducing risk to explorers.



**Figure 1.** Structural map of the offshore Canning Basin showing newly-awarded exploration permits. The new data and pre-competitive knowledge for this area will continue to underpin future acreage releases and attract exploration attention.

Geoscience Australia engaged widely with the state and Northern Territory governments, industry, and other stakeholders to select frontier regions for pre-competitive data acquisition and investigation.

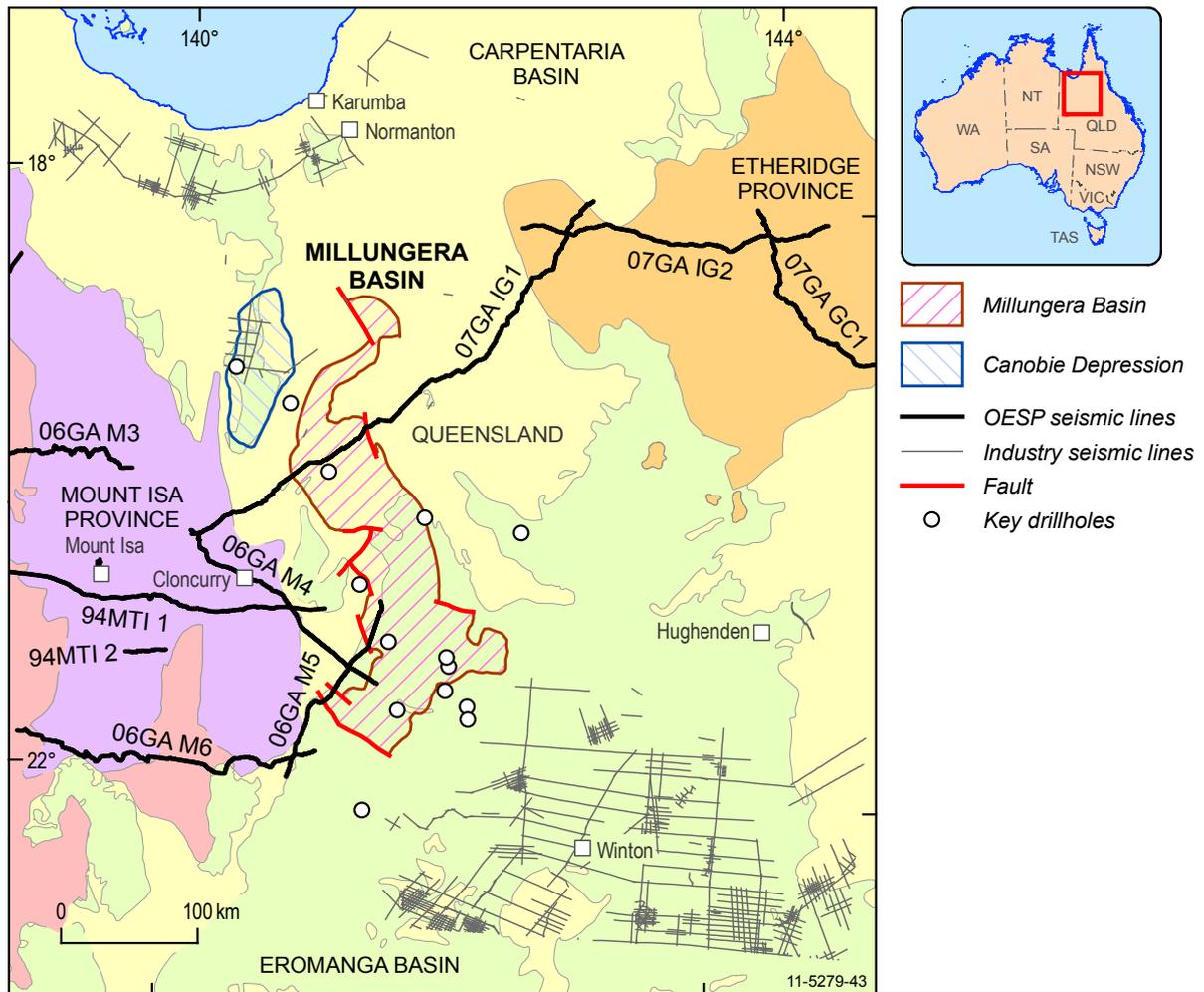
The offshore program targeted frontier basins with the long-term objective of attempting to locate a new hydrocarbon province for Australia. The program focused on the southern and southwest continental margin off Western Australia in the Mentelle, Vlaming, Perth, Southern Carnarvon, Canning and North Perth Basins and the Wallaby Plateau. The focus off eastern Australia was on the remote Capel and Faust basins and the Bass, deepwater Otway and Sorell basins west of Tasmania and south of Victoria.

In addition to the basin analysis and prospectivity assessment work, extensive seabed mapping was undertaken along the southern continental margin and the remote eastern parts of Australia's marine jurisdiction, in support of resource management.

As a result of the Offshore Energy Security Program, exploration companies have guaranteed expenditure of more than \$600 million

in the first three-year term of granted permits in the offshore Canning Basin (figure 1) and the Bremer and Bight basins. In addition, indicative expenditure approaching one billion dollars has been proposed during the second three-year permit period.

The focus of the onshore program was to stimulate exploration for energy resources, including non-renewable resources such as hydrocarbons, uranium and thorium as well as renewable geothermal energy resources. The Onshore Energy Security Program was



**Figure 2.** The recently discovered Millungera Basin, north Queensland. Modelling of the Millungera Basin indicates that potential hydrocarbon-bearing source rocks will be mature over large parts of the basin.



carried out under the National Geoscience Agreement between the Australian, state and Northern Territory governments. Australia-wide activities included acquisition and processing of airborne radiometric and magnetics data and the collection of more than 1300 geochemical samples. Deep seismic and airborne electromagnetic surveys were undertaken, on a regional basis, in most states and the Northern Territory.

The onshore program also produced the first national radiometric map of a continent, discovered a new sedimentary basin in North Queensland with the potential to host energy resources (the Millungera Basin in north Queensland; figure 2) and delivered a number of regional assessment studies and syntheses, which identified favourable areas for uranium, geothermal and mineral exploration.

Data and results from the Onshore Energy Security Program have stimulated tenement take-up, design of drilling programs and led to the discovery of mineralisation, as well as the development of new models and frameworks for energy exploration. The use of data and

products released by Geoscience Australia during the onshore program is estimated to have resulted in additional exploration expenditure by industry in excess of \$300 million.

### ***For more information***

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