

Update on Geophysical Survey Progress from the Geological Surveys of Western Australia, South Australia, Northern Territory, New South Wales, Victoria and WA Department of Water (information current on 13 March 2015)

Further information on these surveys is available from Murray Richardson at GA via email at Murray.Richardson@ga.gov.au or telephone on (02) 6249 9229.

Table 1. Airborne magnetic and radiometric surveys

Survey name	Client	Project management	Contractor	Start flying	Line km	Spacing AGL Dir	Area (km ²)	End flying	Final data to GA	Locality diagram (Preview)	GADDS release
Coompana	GSSA	GA	GPX Surveys	7 Feb 2015	255 265	400 m 80 m E-W	85 910	15% complete at 13 Mar 2015	TBA	173 – Dec 2014 p. 24	TBA
Dunmarra	NTGS	GA	GPX Surveys	28 Jun 2014	103 985	400 m 80 m N-S	36 280	100% complete at 10 Oct 2014	Final processed data were received for assessment in Nov 2014.	170 – Jun 2014 p. 24	Released via GADDS 12 Feb 2015
Delamere/Spirit Hills	NTGS	GA	TBA	TBA	96 500 est.	400 m 80 m N-S	33 690	TBA	TBA	The proposed survey covers parts of the Fergusson River, Delamere, Victoria River Downs and Auvergne standard 1:250 k map sheet areas	TBA
Yalgoo	GSWA	GA	TBA	TBA	108 000 est.	100/200 m 50 m E-W	11 200	TBA	TBA	The proposed survey covers parts of the Badja, Thundelarra, Rothsay and Ninghan standard 1:100 k map sheet areas	TBA

Table 2. Gravity surveys

Survey name	Client	Project management	Contractor	Start survey	No. of stations	Station spacing (km)	Area (km ²)	End survey	Final data to GA	Locality diagram (Preview)	GADDS release
Gippsland	GSV	GA	Atlas	30 Jun 2014	1440	12 traverses at 500 m station spacing	8358	100% complete to 21 Jul 2014	Final data expected to be released via GADDS before the end of 2014	170 – Jun 2014 p. 25	TBA
North McArthur Basin	NT	GA	Atlas	16 Sep 2014	7175	4 km regular grid with areas of 2 km infill; 1 area of traverses spaced 4 km apart with a station spacing of 1 km	71 030	100% complete at 4 Nov	Preliminary final data were supplied to GA at the end of Nov	171 – Aug 2014 p. 39	The survey covers all or part of Arnhem Bay, Gove, Mt Evelyn, Mt Marumba, Blue Mud Bay, Katherine, Urapunga and Roper River standard 1:250 k map sheets
Northern Wiso Basin	NT	GA	TBA	TBA	TBA	4 km regular grid with areas of 2 km and 1 km infill	83 240	TBA	TBA	The proposed survey covers parts of the Waterloo, Victoria River Downs, Limbunya, Wave Hill, Newcastle Waters, Beetaloo, Birrindudu, Winnecke Creek, South Lake Woods and Helen Springs standard 1:250 k map sheet areas	TBA

Table 3. AEM surveys

Survey name	Client	Project management	Contractor	Start flying	Line km	Spacing AGL Dir	Area (km ²)	End flying	Final data to GA	Locality diagram (Preview)	GADDS release
Musgrave Region	SA	GA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	The survey area is being defined in the north-west part of SA	TBA

TBA, to be advised.

Australian Rock Properties Database

The latest national database developed by Geoscience Australia (GA), the Australian Rock Properties Database (<http://www.ga.gov.au/explorer-web/rock-properties.html>), was launched at the 2015 ASEG Conference on 17 February. The web application provides a customisable interface to view, select and download data via Lithology Group, Physical Property (density, resistivity, magnetic susceptibility, natural gamma, remanent magnetisation, velocity, porosity)

Province Name, Sample Type and Stratigraphic Unit Name. The data can be chosen for delivery in csv, kml or shape file formats. Please contact Dr Ian Roach (+61 2 6249 9683) at Geoscience Australia for further information.

Airborne Magnetic and Radiometric Grids of Australia

Geoscience Australia recently released the latest versions of the Magnetic Anomaly Grid and Radiometric Grids of Australia (Figs 1, 2). The magnetic grid is in its

6th edition and is a TMI composite grid of the continent with a cell resolution of 3 seconds of arc. The radiometric grids are in their 3rd edition and contain significant improvements in coverage over previous editions. The radiometric grids have a 100 m resolution. The gridded data for the national magnetic and radiometric datasets are available for extraction via GADDS or if the full resolution dataset over the entire continent is required please contact Murray Richardson (+61 2 6249 9229) at Geoscience Australia for further information regarding access.

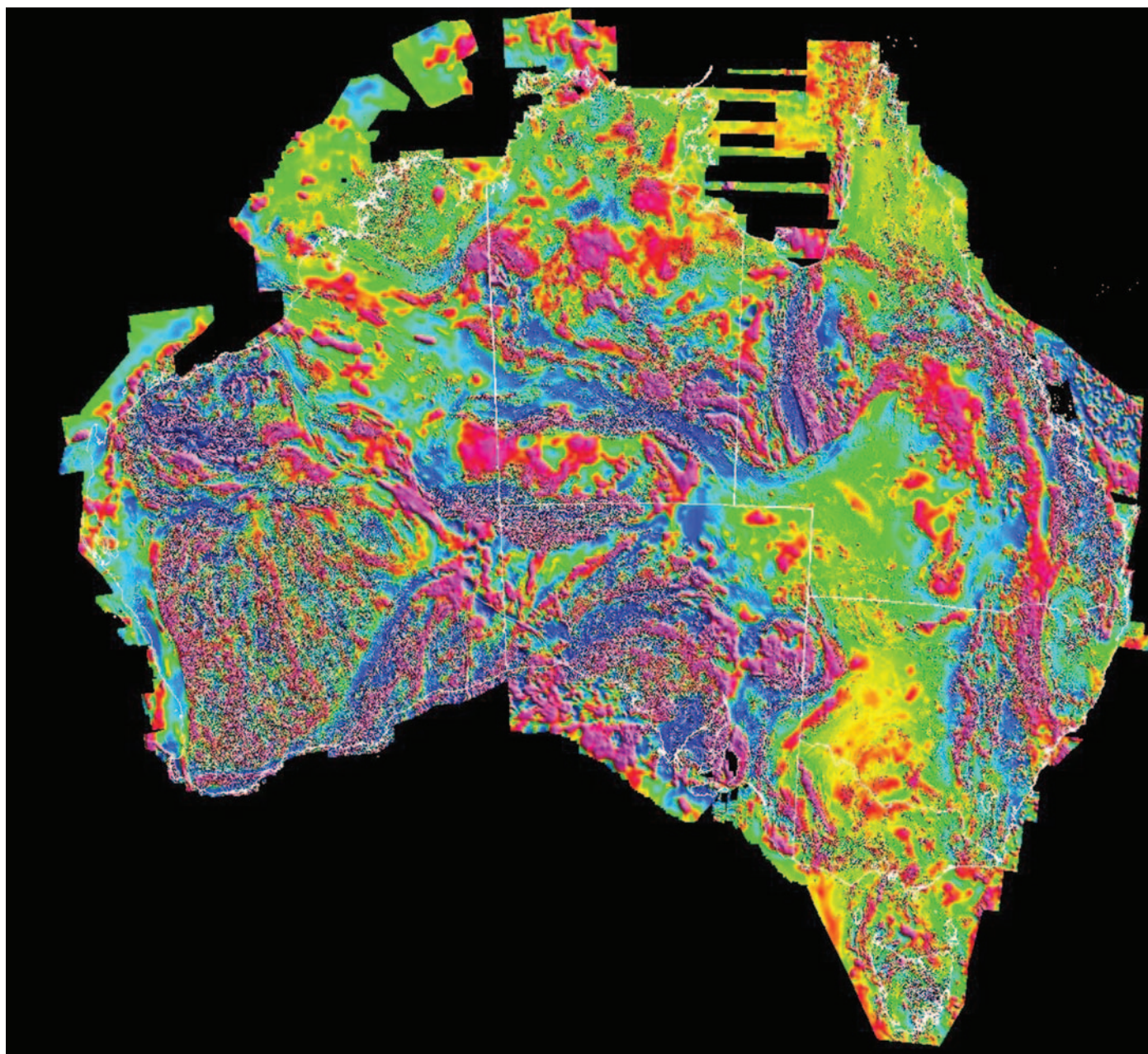


Figure 1. Magnetic map of Australia Version 6.

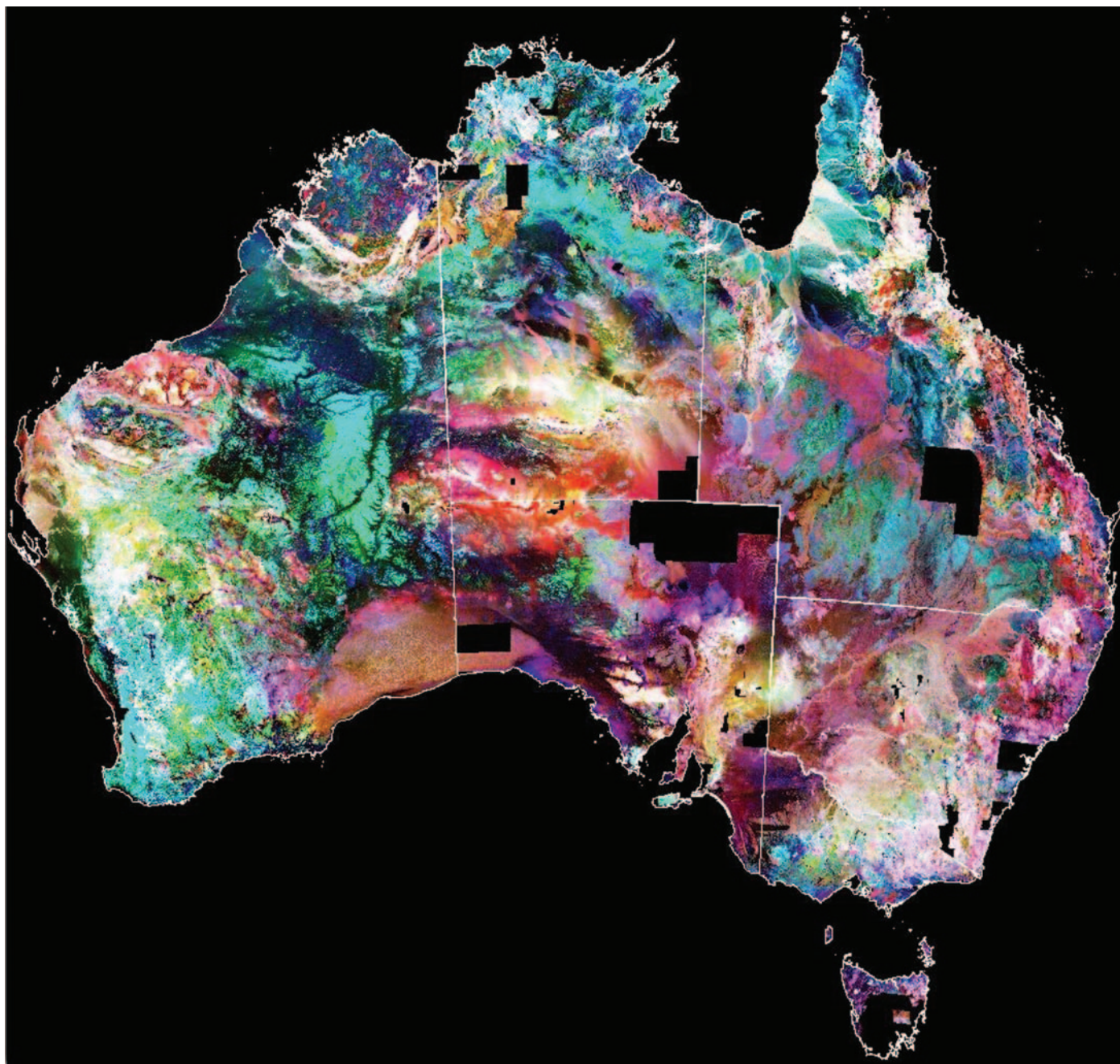
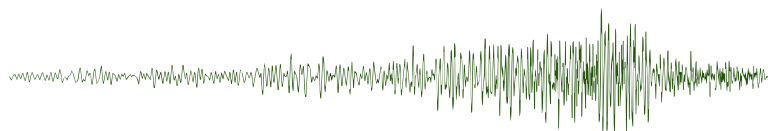
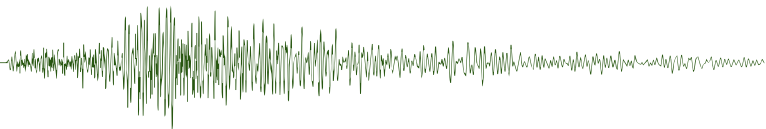


Figure 2. Radiometric map of Australia Version 3.



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New data from old in South Australia

The South Australian Government is custodian of a large amount of geophysical data. Recent changes to the Mining Act allow – under certain conditions – for previously confidential data to be released to the public domain. Prior to the changes in the Mining Act, geophysical data acquired under an Exploration Licence (EL) would remain confidential for the duration of the Licence, and for the duration of any subsequent licences. While the changes in the Act allow for the release of data after 5 years, the large amount of data involved means that the process is not automatic.

ELs containing data to be released to the public domain are announced in the quarterly MESA journal (Mines and Energy SA). Selection of ELs is based on demand. SA Government Geophysicists prepare the data for download via the SARIG website (<https://sarig.pir.sa.gov.au/Map>). The award-winning SARIG allows a user to search for geophysical information using online GIS tools, and download the data free of charge.

Recent additions to the downloadable geophysical data collection include the 1998 Rio Tinto magnetics and radiometrics survey undertaken at Pine

Ridge in the Musgrave Province, and the 2005 Teck Cominco magnetics and radiometrics survey undertaken over the Carrapateena prospect. Examples from these surveys are shown in Figure 1. Other highlights include the ultra-high resolution Teetulpa and Lewis surveys, and a new suite of ground magnetic surveys. Over 130 GB of geophysical data is available for download, with more to come.

For more information contact Phil Heath philip.heath@sa.gov.au

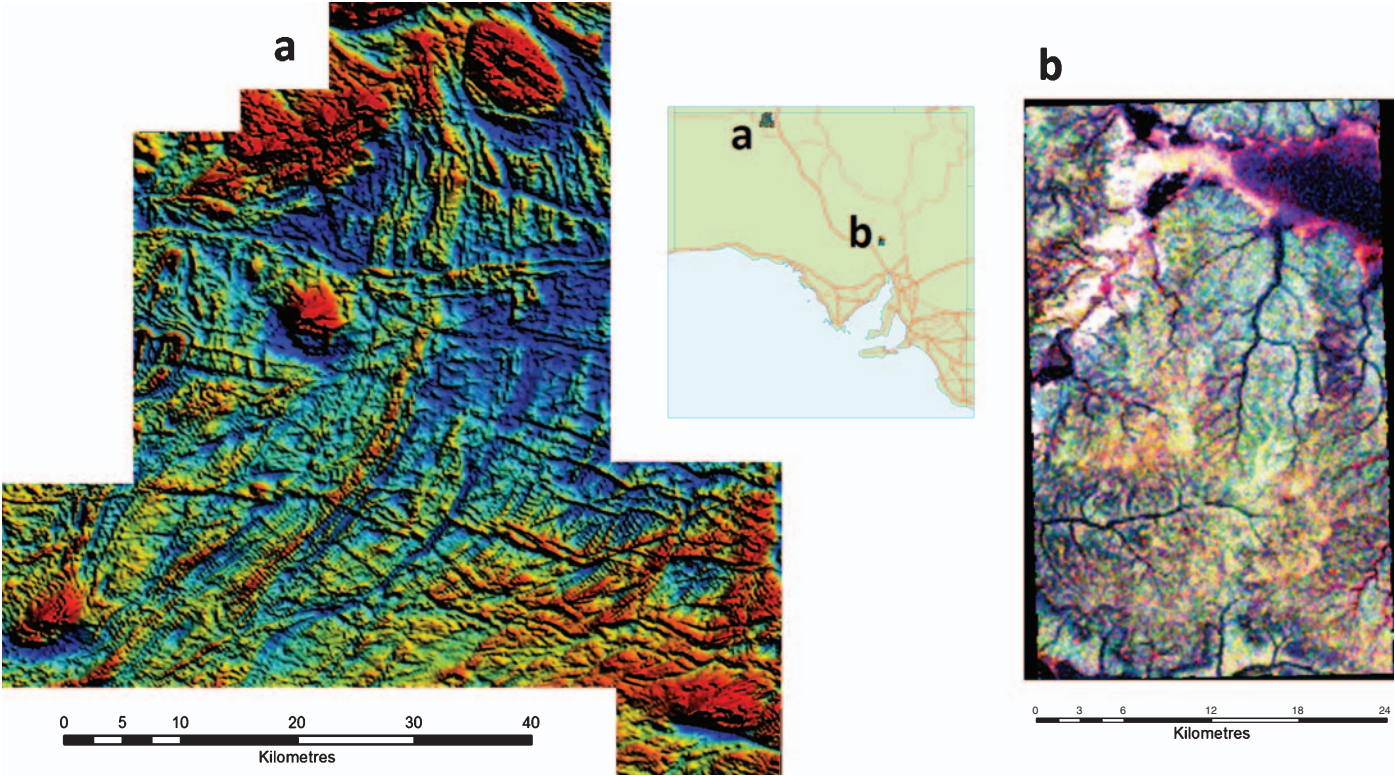


Figure 1. (a) Gridded magnetic data from the 1998 Musgrave survey and (b) a red-green-blue radiometrics image from the 2005 Carrapateena survey.