

Update on Geophysical Survey Progress from the Geological Surveys of Western Australia, South Australia and WA Department of Water (Information current at 14 June 2013)

Tables 1–3 show the continuing acquisition of the airborne magnetic, radiometric, gravity and AEM data of the Australian continent.

Accompanying locality maps for Tables 1 and 2 can be found in Figures 1 and 2 respectively. All surveys are being managed by Geoscience Australia (GA).

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 (also see Figure 1)

Survey name	Client	Contractor	Start flying	Line (km)	Spacing AGL Dir	Area (km ²)	End flying	Final data to GA	Locality diagram (Preview)	GADDS release
Marree	GSSA	UTS	29 Oct 12	130 473	400 m 80 m N–S	46 169	100% complete @ 10 May 13	TBA	160 – Oct 12 p16	TBA
Widgiemooltha – Norseman	GSWA	Thomson	15 Nov 12	131 900	100 m 50 m E–W	11 520	100% complete @ 4 Apr 13	TBA	161 – Dec 12 p16	6 June 2013
Browse Basin	GA	TBA	TBA	184 547	800 m 80 m asl N–S	123 187	TBA	TBA	164 – Jun 13 p19	TBA
WA EIS Phase V	GSWA	TBA	TBA	Approx. 582 000	100 m 50 m Line E–W Tie N–S	52 000	TBA	TBA	This issue	TBA

TBA, to be advised.



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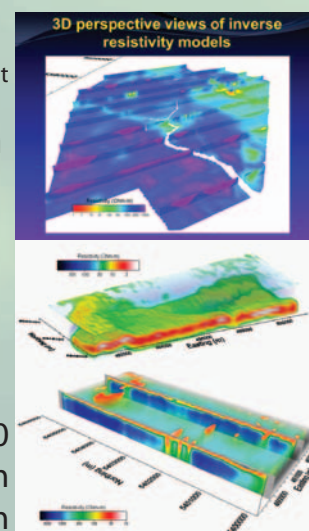


Table 2. Gravity surveys (also see Figure 2)

Survey name	Client	Contractor	Start survey	No. of stations	Station spacing (km)	Area (km ²)	End survey	Final data to GA	Locality diagram (Preview)	GADDS release
Esperance	GSWA	TBA	TBA	TBA	2.5 km and 1 km along roads/tracks	TBA	TBA	TBA	158 – Jun 12 p23	Quotation request closed 30 May 2013
Woomera Prohibited Area	DMITRE	Daishsat Pty Ltd	2 May 13	34 500	1 km/2 km regular grid	TBA	TBA	TBA	163 – Apr 13 p17	TBA
North Perth – Gingin Brook	WA Dept of Water	Atlas Geophysics	9 Apr 13	1230	1.5 km regular grid	TBA	100% complete @ 7 Jun 13	TBA	163 – Apr 13 p17	TBA
Southern Wiso Basin	NT	TBA	TBA	3342 to 3856	4 km regular grid	TBA	TBA	TBA	This issue	Quotation request closed 4 June 2013

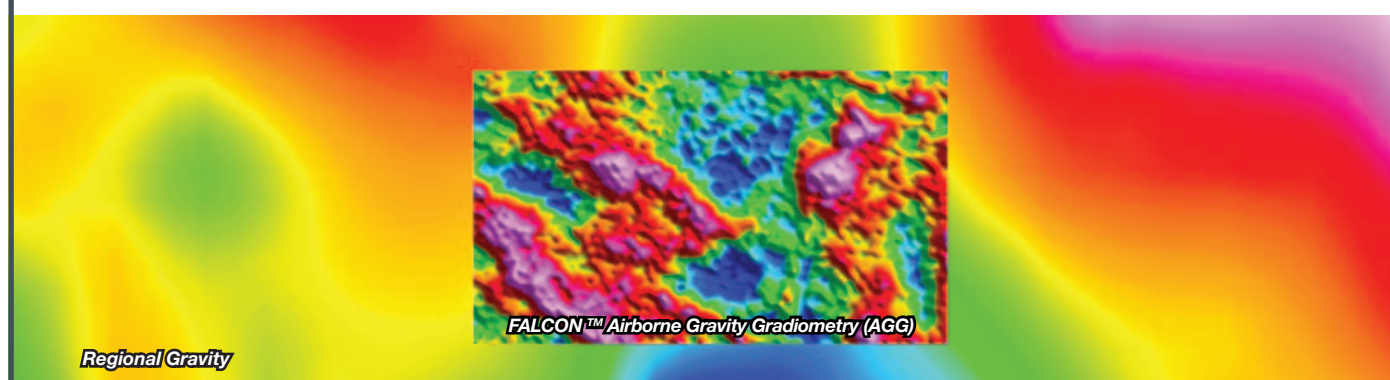
TBA, to be advised.

Table 3. AEM surveys

Survey name	Client	Contractor	Start flying	Line (km)	Spacing AGL Dir	Area (km ²)	End flying	Final data to GA	Locality diagram (Preview)	GADDS release
Swan/Scott Coastal Plain and Albany/Esperance	WA Dept of Water	Fugro Airborne Surveys	25 Mar 13	8607	300/600 m	TBA	100% complete @ 15 May 13	TBA	163 – Apr 13 p17	TBA

TBA, to be advised.

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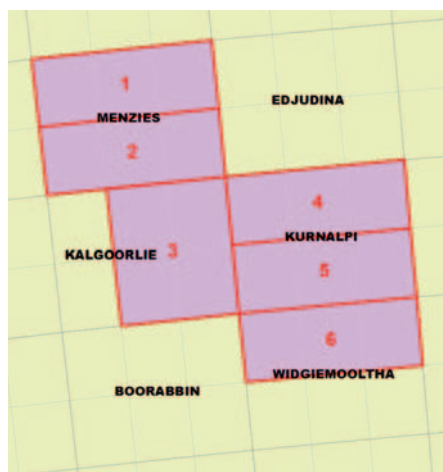


Fig. 1. Locality diagram outlining the WA EIS Phase V Airborne magnetic and radiometric survey (also see Table 1).

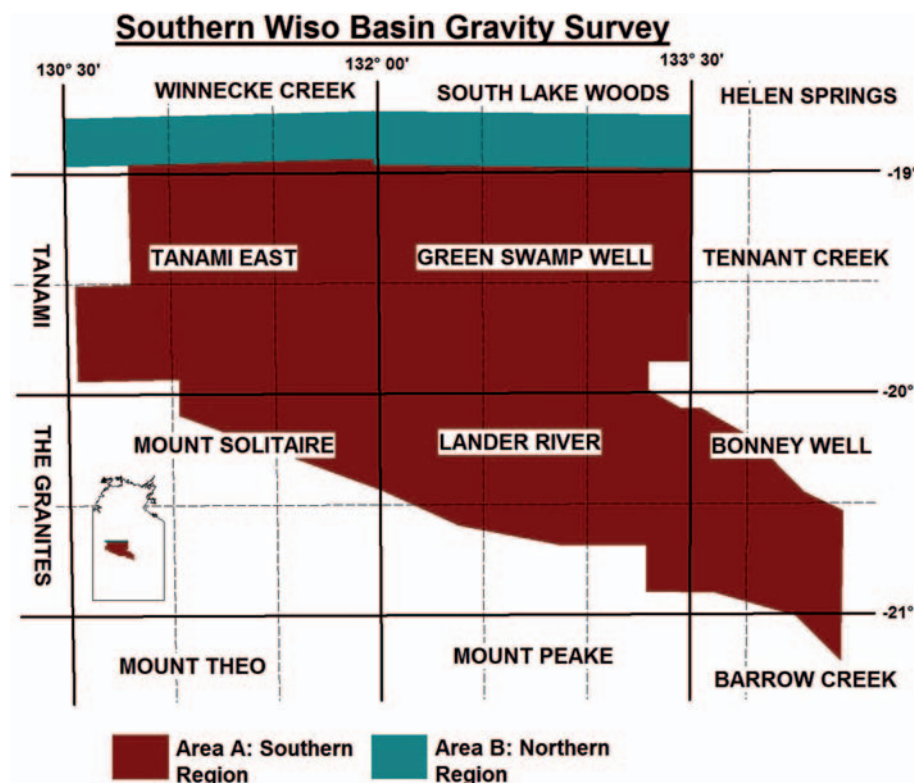


Fig. 2. Locality diagram outlining the Southern Wiso Basin gravity (also see Table 2).



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Geonics TEM-67 TEM power module, 90V	6	\$9 500
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Queensland Government announces \$30 million Future Resources Programme

The Geological Survey of Queensland, as part of the Department of Natural Resources and Mines (DNRM), has received \$30 million over the next three years (2013–14 to 2015–16) under the Future Resources Programme from the Newman Government. This money will be used to fund seven initiatives that will support Queensland's resources and exploration industries.

This funding boost has been made possible by the monies raised through the competitive cash bidding process and represents a return on this investment by industry.

The individual initiatives proposed include:

- Industry Priorities Initiative;
- Mount Isa Geophysics Initiative;
- Geochemical Data Extraction Initiative;
- Collaborative Drilling Grants Initiative;
- Core Library Extension Initiative;
- Cape York Mineral Resource Assessment Initiative; and
- Seismic Section Scanning Initiative.

The Industry Priorities Initiative (\$2.5 million per year) will run for the duration of the Programme. Industry will be consulted through the Queensland Exploration Council, the Association of Mining and Exploration Companies, and the Australian Petroleum Production and Exploration Association to identify priority geoscience projects that will have the greatest contribution to maximising exploration success.

The Mount Isa Geophysics Initiative (\$9 million) will include major seismic and

crustal conductivity (magnetotelluric) surveys in the Cloncurry, Julia Creek and Dajarra-Boulia areas. These surveys will run from 2014–15 to 2015–16, and are aimed at reducing exploration risk by improving understanding of both regional sub-surface geology and cover thickness and character. This investment in new data and understanding should stimulate further greenfields exploration in one of the most prospective regions of the world.

The Geochemical Data Extraction initiative (\$3 million) will run for the duration of the programme. It will focus on extracting invaluable geochemical data locked in DNRM's company report archive and in providing easy searchable access to this data for industry, government and the public. This will promote the attractiveness of exploration potential in Queensland through the provision of comprehensive geochemical coverage of the State's mineralised regions.

The Collaborative Drilling Grants Initiative (\$3 million) will extend the popular and successful Collaborative Drilling Initiative of DNRM's Greenfields 2020 Programme. Two additional rounds of drilling grants will now be offered in 2014–15 and 2015–16. The programme promotes exploration success by co-funding the drilling costs of innovative exploration programmes.

The Future Resources Programme also allocates \$5 million toward extension of the Department's Core Library capacity. The Department's core libraries store and

preserve economically and scientifically valuable core and other samples acquired from company and government exploration, and ensure this resource of materials is not lost to the State and the exploration industry. The Brisbane core library is now approaching capacity and options for future sample storage now need to be considered.

The Cape York Mineral Resource Assessment Initiative (\$1 million) will follow up on anomalous results, particularly for rare earths and uranium, revealed by an earlier national geochemical survey. The new initiative will re-evaluate the Cape's mineral potential in light of the new stream sediment data and renewed support from the indigenous communities toward potential mining. Geological mapping and sampling to re-evaluate the strategic mineral potential of the region will be the major focus of this initiative, which is scheduled for 2014–15 and 2015–16.

The Seismic Section Scanning Initiative (\$1.5 million) is aimed at preserving the data contained within the rapidly decaying archive of hard-copy format company seismic sections held by DNRM by converting them to digital form. Scanning these seismic sections is scheduled for 2013–14. The initiative will not only preserve the data, but will also enable it to be more easily accessed and delivered to industry. The data contained in these sections represent an invaluable record of Queensland's subsurface basins that would be cost-prohibitive to replace if lost.

Case studies rolling in but more are needed

The reader is invited to revisit the call for case studies in Preview Issue 163, p. 20. –Ed.

The Teacher Earth Science Education Programme (TESEP) sent out a call early this year for standalone Case Studies to complement the excellent *Exploring Earth and Environmental Science* textbook produced in Western Australia for the senior Earth and Environmental Science (EES) course. The case studies, to be produced in collaboration with Earth Science Western Australia (ESWA), will consist of approximately 2–6 pages, including an overview of relevant research, clear easy-to-read diagrams, uncluttered maps and relevant activities written for easy comprehension by senior high school students.

Many Earth Scientists in industry and academia heeded the call and the first drafts of many case studies are already in and under review. It is anticipated this first wave of submissions will be reviewed, redrafted and be ready for publication by October 2013, with many others not far behind.

TESEP Executive Officer, Greg McNamara, said:

The initial response to our industry wide call for Case Study proposals was excellent and many of the areas that we need to address – under the chapter headings of the text book – are at least partially covered in the material we have received or have been promised. However, there is no real limit to the number of Case Studies we can publish on-line and there are also some areas of the textbook content that are either in need of contributions or some additional ones to provide a good spread of material for teachers and students to choose from.

TESEP is keen to receive more case study proposals and urge all readers to consider their special areas of knowledge and expertise and contact Greg McNamara, the TESEP Executive Officer and Case Study programme coordinator, to discuss their ideas:

Criteria for case studies

Each case study should:

- focus on one aspect of Earth Science

relevant to an ESWA-EES textbook chapter (available from the ESWA website: <http://www.earthsciencewa.com.au> and the TESEP website <http://tesep.org.au/casestudies.html>);

- connect with at least one learning objective of the senior EES national curriculum (available in supporting documents from the TESEP website: http://tesep.org.au/casestudy_author_info.html);
- be self contained, easy to read and easy to comprehend;
- be no longer than 6–8 typeset pages of text, diagrams and tables;
- contain one or more relevant, easy to implement, student activity;
- list sources and references;
- be free of copyright restrictions;
- be bundled with at least one relevant student activity.

For more information and examples

Please visit the TESEP Case Study website and download the Case Study

proposal form or contact Greg McNamara directly:

Website: <http://tesep.org.au/casestudies.html>;

Email: eo@tesep.org.au;

Tel: 0412 211 797.

In other news

TESEP continues to provide Professional Development training for science teachers and will be present at the Conference of the Australian Science Teachers Association (CONASTA) in Melbourne this July where TESEP, Geoscience Australia, ANU Seismometers in Schools programme and the Geological Society of Australia are collaborating in a joint display and promotion. To find out more about the programme or to become a TESEP partner visit the TESEP website <http://tesep.org.au> or meet with us at our display under the Geoscience Education banner at CONASTA, LaTrobe University campus, 7–10 July 2013.

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