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News

Conference update

Technical program

The Technical Program committee, led by Michael Asten, has reviewed over 300 submissions and is extremely pleased to announce the preliminary program for ASEG-PESA 2013. Thank you to the reviewers who assisted with this massive task. The program runs over three full days with up to six concurrent sessions. The program is supported by more than 20 internationally recognised invited speakers who will speak on a variety of topics including:

- Unconventionals
- Seismic acquisition case histories
- Seismic processing
- CSEM
- Microseismic
- EM innovations
- Minerals exploration strategy
- Land seismic
- Seismic acquisition technologies
- Advanced seismic interpretation
- Minerals case histories
- Reservoir characterisation
- Seismic anisotropy
- Geophysics in hydrology
- Advances in data visualisation
- Minerals – potential fields – constrained geological inversion
- Seismic velocities and applications
- Environmental and engineering
- 4D monitoring

The preliminary program is now available (http://www.aseg-pesa2013.com.au/program) and covers a wide range of geophysical topics with plenty of well-known presenters and a pleasing number of new authors. In addition to the standard oral paper format, the program includes in-depth keynote sessions and a set of rapid-fire presentations intended to energise the late afternoon. Posters will also be on display, allowing you to peruse the subject matter at your convenience, with authors available during dedicated poster sessions at lunch.

Workshops

Review your own and your colleagues' training needs for 2013, whether it be seeking a new skill or extending current knowledge, and book one or more workshops at ASEG-PESA 2013. A wide variety of practical workshops are available canvassing topics such as GPR, MT and microseismic, and geohazards.

Please also make the most of this opportunity to hear SEG Distinguished Instructor for 2013, David Johnston, presenting the practical applications of time-lapse (4D) seismic technology.

Review the full list of workshops at www.aseg-pesa2013.com.au/workshops. For those already registered, additional workshops can still be selected by logging in at the website using your private access key.

Social program

In addition to the social functions included in your registration, we invite you to attend the conference dinner at the National Gallery of Victoria with the highly regarded Professor Geoffrey Blainey AC as dinner speaker. Book tickets for yourself and your guests when you register for the conference at www.aseg-pesa2013.com.au/registration.

Sponsorship and exhibition

The organising committee would like to thank our generous sponsors and exhibitors for supporting ASEG-PESA 2013. Sponsorship and exhibition opportunities are still available, so if you would like to be involved please contact Kirsty O'Brien on (02) 9265 0700 or email sponsorship@arinex.com.au.

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Update on UNCOVER – May 2013

This article follows previous updates on UNCOVER, the last of which was in Issue 162 of *Preview*.

Recapping: UNCOVER is an initiative of the Australian Academy of Sciences that sets out a new vision for exploration geoscience in Australia. UNCOVER grew out of earlier initiatives of the Academy, recognising that much of Australia's wealth is derived from mining ore bodies that were discovered decades ago. As those deposits are mined out, Australia faces a serious decline in its mineral sector, and therefore its economy, if new deposits are not found. Yet much of Australia remains underexplored because it lies under cover.

UNCOVER has identified four science themes that would help focus the effort to stimulate new exploration in areas under cover. These four science themes would be bound together by a network involving the exploration industry, service providers, researchers, and Federal and State/Territory government geoscience agencies:

- Characterising Australia's cover: new knowledge to confidently explore beneath the cover.
- Investigating Australia's lithospheric architecture: a whole-of-lithosphere architectural framework for mineral systems exploration.
- Resolving the 4D geodynamic and metallogenic evolution of Australia: understanding ore deposit origins for better prediction.
- Characterising and detecting the distal footprints of ore deposits: towards a toolkit for minerals exploration.
- Establishing a research network that encourages collaboration across sectors.

Until now, UNCOVER has been working in a development mode, with people from all sectors participating in a working group. They have now set up the process to shift UNCOVER to a more operational mode. In May, the first step was taken, with the Academy agreeing to a new management structure led by an Executive Committee. The Executive Committee will comprise representatives from the major stakeholders:

- The exploration industry
- Universities
- CSIRO
- The Geological Surveys
- The Geoscience Societies
- The Academy as the initiator of UNCOVER.

The Academy will announce the names of the people appointed to the UNCOVER Executive Committee on the UNCOVER website (http://www.science.org.au/policy/uncover.html) when appointments are complete.

The four science themes provide a skeleton of what has to be done. One of the next steps is to fill in the details of the four science themes. The strategy has two stages.

First, although the UNCOVER themes were defined by working groups of people from all sectors, a larger stakeholder group will be consulted. This will take two forms: a formal survey will be done by a consultant engaged for the purpose, who will target specific groups in all sectors, and members of the geoscience community can take part by filling in a questionnaire that will be posted soon on the Academy website.

Second, the results of the survey will be used to tease out the nature of discussions of the four science themes at the UNCOVER Conference later in the year.

The conference was originally planned for November 2013, but November is fairly booked up with conferences. The UNCOVER community considers the conference sufficiently important that it has decided to bring it forward to October rather than push it out to 2014.

Details of the Conference will be advertised widely, as well as on the UNCOVER website. In summary, it will be held at a residential venue near a capital city for easy access, and will take the form of a by-invitation workshop (people can submit a case to receive an invitation). Themes will be examined first by presentations to get attendees' thoughts focussed, and will be followed by structured and unstructured break-out and discussion sessions. Rapporteurs will be appointed to summarise the results of the conference, and the conference results will form the basis of a strategic approach to the first years of UNCOVER's operational life.

For more information, contact uncover@science.org.au or the author of this article.

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News

Update on Geophysical Survey Progress from the Geological Surveys of Western Australia, South Australia and WA Department of Water (information current at 8 May 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.

Entries for Mole Creek and Northwest Tasmania submitted by Dr Mark Duffett, Senior Geophysicist, Mineral Resources Tasmania, Department of Infrastructure Energy and Resources (DIER).

Table 1. Airborne magnetic and radiometric surveys (also see Figures 1 and 2)

Survey name	Client	Contractor	Start flying	Line (km)	Spacing AGL Dir	Area (km²)	End flying	Final data to GA	Locality diagram (*Preview*)	GADDS release
South Pilbara	GSWA	GPX	14 May 12	136 000	400 m 60 m N–S	42 500	100% complete @ 22 Jan 13	10 Apr 13	150 – Feb 11 p21	2 May 2013
Mt Barker (South West 4)	GSWA	GPX	24 Apr 11	120 000	200 m 50 m N–S	20 000	100% complete @ 27 Jan 13	10 Apr 13	150 – Feb 11 p22	24 April 2013
Marree	GSSA	UTS	29 Oct 12	130 473	400 m 80 m N–S	46 169	95.5% complete @ 3 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	TBA
Browse Basin	GA	TBA	TBA	184 547	800 m 80 m asl N–S	123 187	TBA	TBA	This issue	TBA
Mole Creek	MRT	Aerosystems	27 Apr 13	1900	200 m 80 m N–S	333	2 May 13	Jun 13 (expected)	This issue	TBA

TBA, to be advised.

Table 2. Gravity surveys (also see Figure 2)

Survey name	Client	Contractor	Start survey	No. of stations	Station spacing (km)	Area (km²)	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 closes on 30 May 2013
Woomera Prohibited Area	DMITRE	TBA	TBA	34 500	1 km/2 km regular grid	TBA	TBA	TBA	163 – Apr 13 p17	Quotation request closed on 4 March 2013
North Perth – Gingin Brook	WA Dept of Water	Atlas Geophysics	9 Apr 13	1230	1.5 km regular grid	TBA	40% complete @ 4 May 13	TBA	163 – Apr 13 p17	TBA
Northwest Tasmania	MRT	Atlas Geophysics	25 Jan 13	1200	0.5 km and 1 km along roads/tracks	3862	26 Feb 13	Apr 13 (expected)	This issue	TBA

TBA, to be advised.

Table 3. AEM surveys

Survey name	Client	Contractor	Start flying	Line (km)	Spacing AGL Dir	Area (km²)	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	40% complete @ 3 May 13	TBA	163 – Apr 13 p17	Esperance and Albany completed

TBA, to be advised.

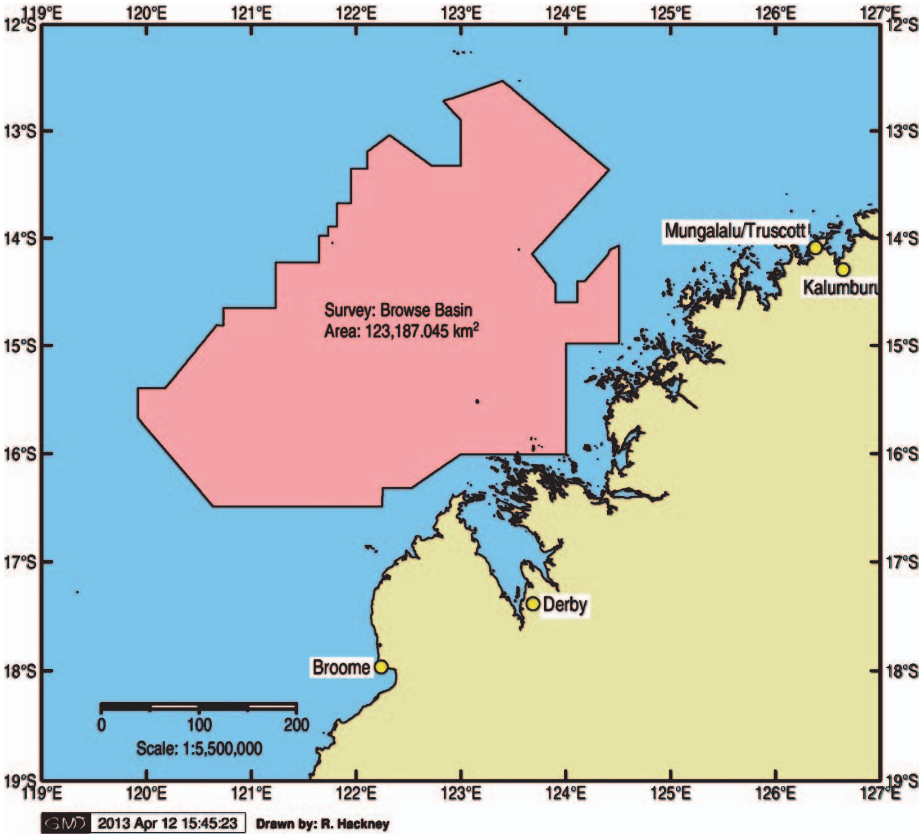

Fig. 1. *General locality diagram for the Browse Basin Survey Area (also see Table 1).*

Fig. 2. *General locality diagram for the Mole Creek magnetic and radiometric (red) and Northwest Tasmania gravity (green) survey areas (also see Tables 1 and 2 respectively).*

News from the surveys: SA – airborne EM data delivery via SARIG

Subsurface resistivity is a key component of many mineralisation models including unconformity-related uranium, palaeochannel-hosted uranium and nickel sulphides. Groundwater detection is a further application of this technique. Electromagnetic data complements more traditional magnetic and gravity data for a range of deposit styles, as well as enabling the search for other deposit styles, not detected by other techniques. This adds new dimensions to exploration targeting methodologies.

Surveys in the Cariewerloo Basin and Fowler Domain have been used to model uranium prospectivity and help define uranium and nickel targets. The Frome regional Airborne Electromagnetic (AEM) survey provided datasets that enabled the visualisation of subsurface conductivity contrasts that have driven new interpretations of palaeochannels and subsurface structures important for sandstone-hosted uranium targeting.

AEM surveys are now being delivered online, utilising SARIG (https://sarig.pir.sa.gov.au/Map) and are available via the visual search interface displayed in Figure 1. Figure 2 shows a map of currently available AEM survey data in South Australia. Data are available as ASCII ASEG-GDF2 format and ER Mapper grid files (.ers). For help with SARIG please contact DMITRE customer services on +61 8 8463 3000 or resources.customerservices@sa.gov.au.

Philip Heath, Tim Keeping, Gary Reed and Laszlo Katona
Geological Survey of South Australia

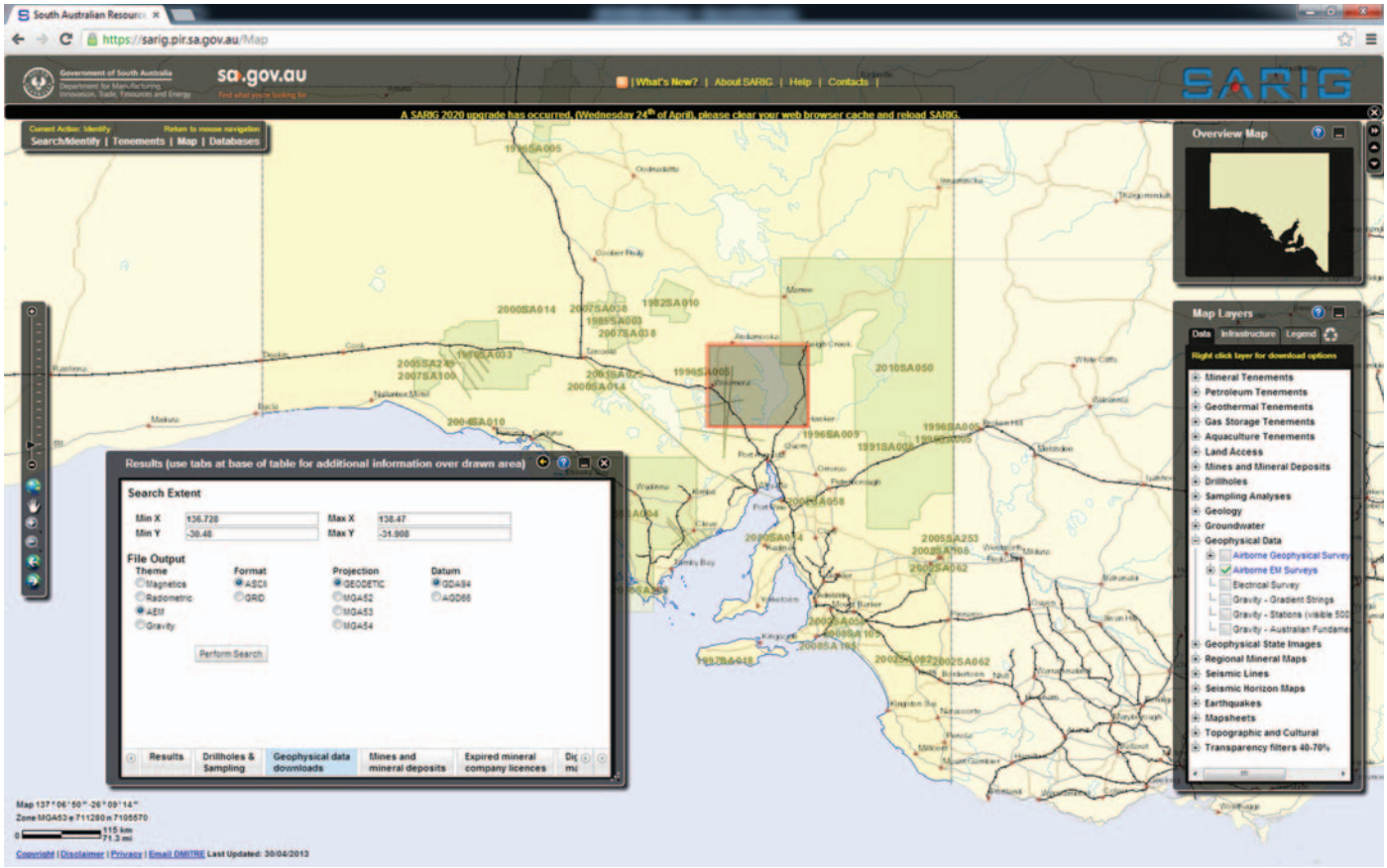

Fig. 1. *An example of a spatial search of AEM surveys in SARIG.*

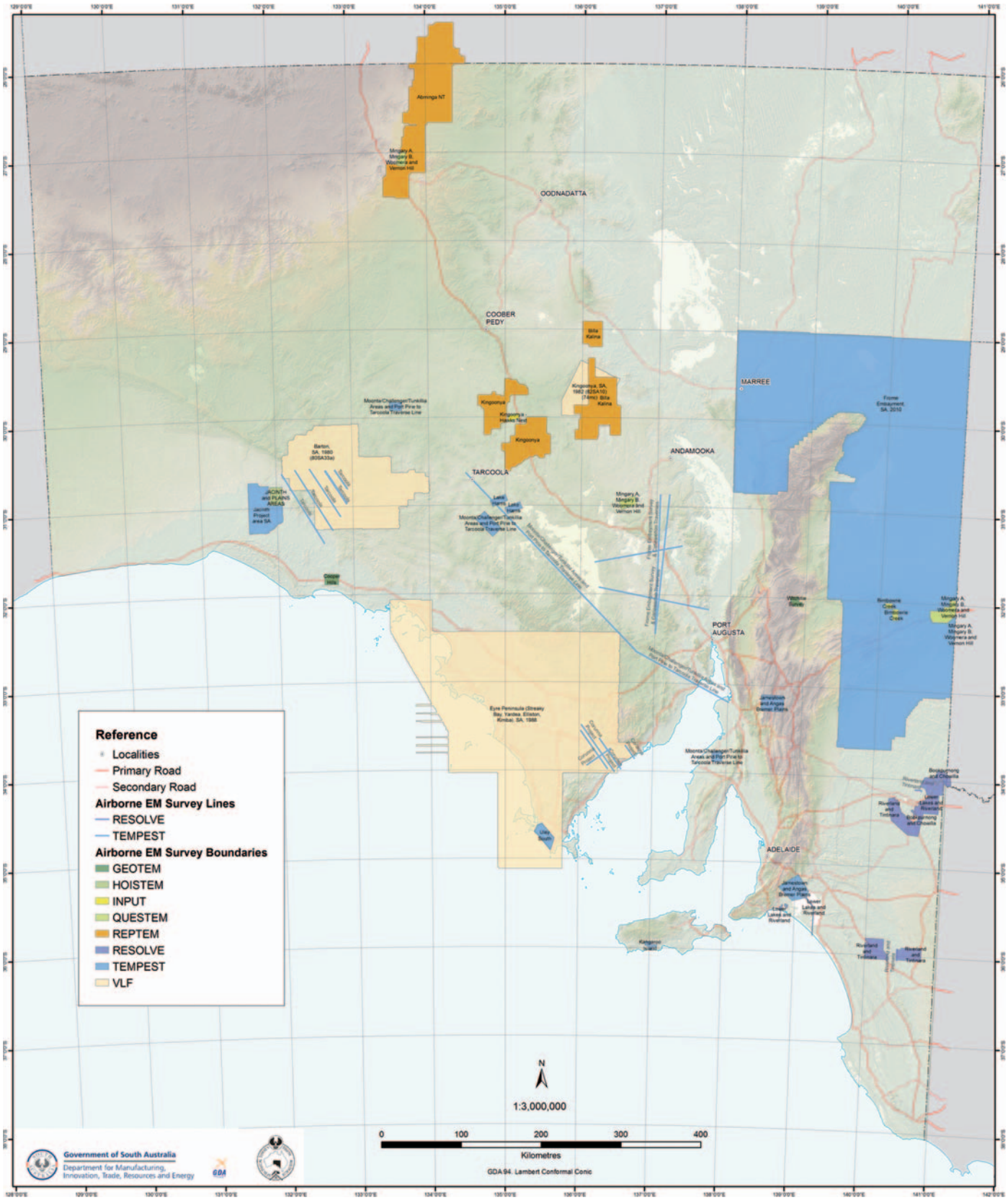

Fig. 2. *Map of Airborne EM surveys in South Australia, now being delivered via SARIG.*