

Update on geophysical survey progress from Geoscience Australia and the Geological Surveys of Western Australia, South Australia, Northern Territory, Queensland, New South Wales, Victoria and Tasmania (information current on 12 July 2017)

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
Murloocoppie	GSSA	GA	MAGSPEC Airborne Surveys	11 Feb 2017	109 560	200 m 60 m EW	19 540	25 May 2017	Contract executed by GA 12 Jan 2017. Field data were delivered to GA in Jun 2017.	183: Aug 2016 p. 34	TBA
Warrina	GSSA	GA	MAGSPEC Airborne Surveys	11 Feb 2017	135 628	200 m 60 m EW	24 140	25 May 2017	Contract executed by GA 12 Jan 2017. Field data were delivered to GA in Jun 2017.	183: Aug 2016 p. 34	TBA
Andamooka	GSSA	GA	Sander Geophysics	23 Feb 2017	81 396	200 m 60 m EW	14 560	The survey flying was completed on 6 Jun 2017	Contract executed by GA 17 Jan 2017. Field data were delivered to GA in Jun 2017.	183: Aug 2016 p. 34	TBA
Barton	GSSA	GA	Thomson Aviation	22 Jan 2017	111 758	200 m 60 m EW	20 560	11 May 2017	Contract executed by GA 12 Jan 2017. Field data were delivered to GA in Jun 2017.	183: Aug 2016 p. 34	TBA
Fowler	GSSA	GA	Thomson Aviation	18 Feb 2017	95 009	200 m 60 m EW	17 360	2 Jun 2017	Contract executed by GA 12 Jan 2017. Field data were delivered to GA in Jun 2017.	183: Aug 2016 p. 34	TBA
Torrens	GSSA	GA	Sander Geophysics	4 Mar 2017	79 990	200 m 60 m EW	14 800	15 Jun 2017	Contract executed by GA 17 Jan 2017. Field data were delivered to GA in Jun 2017.	183: Aug 2016 p. 34	TBA
Coonabarabran	GSNSW	GA	UTS Geophysics	17 May 2017	50 827	250 m 60 m EW	11 000	TBA	Contract executed by GA 12 Jan 2017. The survey is 44% complete to 10 Jul 2017.	184: Oct 2016 p. 23	The survey mobilised on 10 May 2017
Tasmanian Tiers	MRT	GA	TBA	TBA	Up to an estimated 66 000	200 m 60 m NS or EW	11 000	TBA	TBA	TBA	National Collaborative Framework Agreement between GA and MRT was expected to be executed in Apr 2017. The survey has been deferred to occur between Oct 2017 and Mar 2018
Isa Region	GSQ	GA	GPX	3 Jul 2017	Estimated 120 000	100 m 50 m EW	11 000	TBA	TBA	188: Jun 2017 p. 21	TBA

TBA, to be advised.

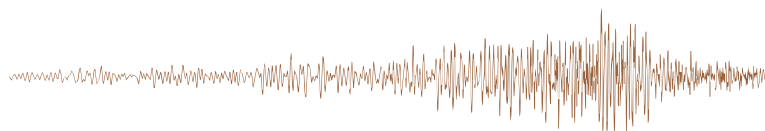


Table 2. Gravity surveys

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
Stavelly	GSV	GA	Atlas Geophysics	3 Dec 2016	Approx. 3465	200 m station interval along 14 traverses	200 m station spacing on 14 individual traverses	5 Jan 2017	23 Feb 2017	The proposed survey covers parts of the Horsham, Hamilton, Ballarat and Colac Standard 1:250 000 map sheets. The survey is to collect gravity stations spaced 200 m apart on 14 separate road traverses.	17 Jun 2017
Coompana – PACE area	GSSA	GA	Atlas Geophysics	30 Jan 2017	13 801	Regular grid of 2, 1 and 0.5 km	20 000	4 Mar 2017	21 Mar 2017	183: Aug 2016 p. 34	26 Jun 2017
Tanami-Kimberley	GSWA	GA	Thomson Aviation	16 Jun 2017	Up to 50 000	2500 m line spacing	110 000	TBA	TBA	187: Apr 2017 p. 22	TBA
Kidson Sub-basin	GSWA	GA	CGG Aviation (Australia)	14 Jul 2017	Up to 70 000	2500 m line spacing	155 000	TBA	TBA	The proposed survey area covers the Anketell, Joanna Spring, Dummer, Paterson Range, Sahara, Percival, Helena, Rudall, Tabletop, Ural, Wilson, Runton, Morris and Ryan 1:250 k standard map sheet areas	TBA
South Nicholson	GA	GA	Atlas Geophysics	30 Jul 2017	2724	4 km spacing	43 330	TBA	TBA	The proposed survey area covers parts of the Mount Drummond, Ranken and Avon Downs standard 1:250 k map sheet areas	TBA

TBA, to be advised.

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
Musgraves – PACE Area	GSSA	GA	CGG Aviation	18 Aug 2016	8489	2 km; E–W lines	16 371	The survey completed flying on 17 Sep 2016	Expected on 24 Nov 2016	179: Dec 2015 p. 23	Released on the GA website on 19 Apr 2017
Musgraves – CSIRO Area	GSSA	GA	SkyTEM Australia	15 Sep 2016	7182	2 km; E–W lines	14 320	The survey completed flying on 13 Oct 2016	Expected early Dec 2016	179: Dec 2015 p. 23	Preliminary final data were supplied to GA in Jan 2017. Data to be released on the GA website in Sep 2017.
Isa Region	GSQ	GA	Geotech Airborne	8 Aug 2016	15 692	2 km; E–W	33 200	The survey completed flying on 4 Nov 2016	TBA	182: Jun 2016 p. 23	TBA
AusAEM (Year 1)	GA	GA	CGG	TBA	<50 000	20 km with areas of infill	TBA	TBA	TBA	186: Feb 2017 p. 18	TBA
Ord-Keep River	GA	GA	SkyTEM Australia	May 2017	6146	Variable	TBA	TBA	TBA	TBA	TBA
Surat-Galilee Basins QLD	GA	GA	SkyTEM Australia	14 Jul 2017	4477	Variable	Traverses	TBA	TBA	188: Jun 2017 p. 21	TBA
Stuart Corridor, NT	GA	GA	SkyTEM Australia	Jun 2017	8626	Variable	Traverses	TBA	TBA	188: Jun 2017 p. 22	TBA

TBA, to be advised.

In other news, the 2016 ASEG conference Airborne Gravity Workshop videos are now available from GA's

website <http://www.ga.gov.au/scientific-topics/disciplines/geophysics/gravity>. GA would like to acknowledge and thank the

ASEG, as well as the organisers of the conference workshop and, particularly, the speakers.

Geological Survey of South Australia: Gawler Craton Airborne Survey

Data acquisition of the first six regions of the Gawler Craton Airborne Survey was completed in mid-June. The completed regions represent approximately 600 000 line kilometres out of a total of 1 800 000 line kilometres of new magnetic, radiometric and digital elevation data and a survey area totalling 324 000 km².

This new data will surpass the current patchwork of historical surveys and provide a single, uniform dataset that will be fundamental in reinterpreting the geological structure of the Gawler Craton (see Figure 1).

The second phase of the survey is scheduled to begin in August 2017. The survey, being undertaken by the Government of South Australia in partnership with Geoscience Australia is a key programme within the Plan for Accelerating Exploration (PACE) Copper initiative, part of South Australia's Copper Strategy.

The geophysical data is being captured by fixed-wing aircraft flying approximately 60 m above the ground along flight lines spaced 200 m apart. Approximately 25 000 land parcels are covered by the survey and a key element in coordinating landholder and community information for this very large programme has been a dedicated web page with near-real-time survey flight plans and other general information about the survey. Subscribers to email updates are informed of project milestones and are provided with the necessary tools to find further information or contact the contractors flying in their area. These additions to the programme acknowledge the public value of the work being carried out. Further information can be found at minerals.statedevelopment.sa.gov.au/gcas.

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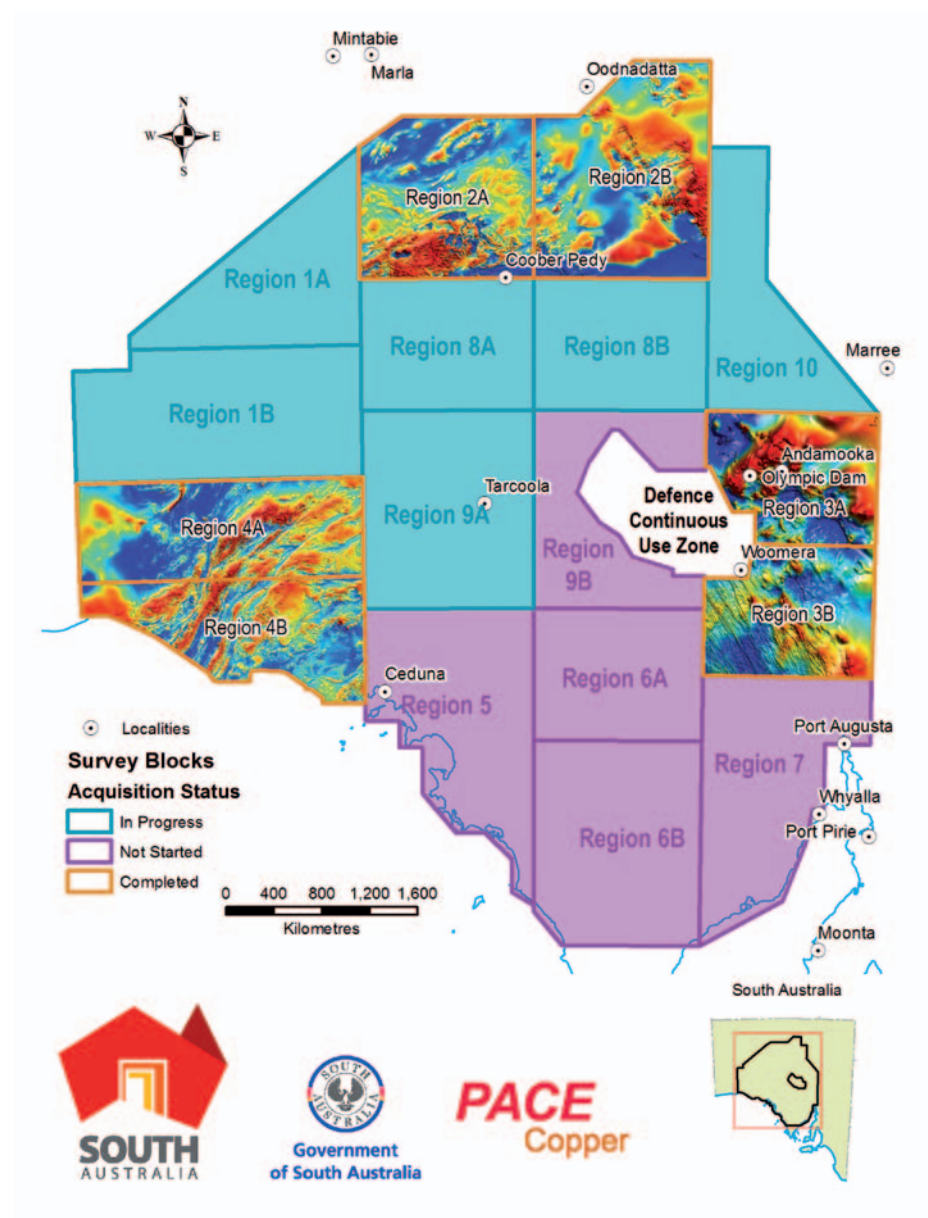


Figure 1. Map showing preliminary total magnetic intensity over the completed portions of the PACE Copper Gawler Craton Airborne Survey. Areas shown in blue are scheduled to commence in August, 2017. Areas shown in mauve are scheduled to commence acquisition early in 2018.

Geological Survey of Victoria: Science in the Surveys 2017 presentations now available



Rapt audience for Science in the Surveys 2017.

The Geological Survey of Victoria (GSV) recently hosted Science in the Surveys 2017 on behalf of Australia Minerals – a collaboration of Australia’s federal, state and territory government geoscience agencies. The theme was ‘Impediments to exploration success: solutions and implementation strategies’. The bi-annual, one-day conference was attended by over 150 delegates from across government, industry, and research both from Australia and abroad.

Presentations and posters were delivered by senior representatives from each of the geoscience agencies, as well as CSIRO, AMIRA International (the UNCOVER initiative), and Deep Exploration Technologies CRC (DET CRC). Topics covered included updates on pre-competitive geoscience programmes, minerals exploration incentive schemes and initiatives across the country. The state, territory and national geoscience agencies presented new research, data and mineral exploration opportunities. Copies of the government presentations are available online at <http://australiaminerals.gov.au/conferences>.

Highlights included:

A keynote presentation from Dan Wood AO on ‘Future Exploration – How we will need to explore’ (Society of Economic Geologists’ 2017 Thayer Lindsley Visiting Lecturer);

Astronomer, professional astrophysicist and passionate science communicator Dr Alan Duffy on ‘Dark Matter Detection – Parallels with resource exploration’ (Research Fellow and Associate Professor at Swinburne University of Technology); and

Professor Peter Betts on ‘The value of regional geophysical data in terrane scale assessments’ (Associate Dean Graduate Research at Monash University).

Attendees were able to directly engage with senior government geoscientists whilst perusing a large poster display in the foyer of the Melbourne venue. The greatly coveted door prize – a high-grade mineralised sample from the Fosterville Gold Mine, kindly gifted to the event by Kirkland Lake Gold Ltd – was won by a lucky Monash University student.

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Mineralised hand specimen from the Fosterville underground gold operation.