

Editor's desk



This issue of *Preview* features the second part of Roger Henderson's article on the state of exploration geophysics in Australia prior to the IGES, 1928–30. Part One prompted a number of readers to start a conversation with Roger about the history of exploration geophysics, and new information is being brought to light. Roger shares the outcome of one of these conversations in a *Letter to the Editor*.

This issue also features a consideration of the impact of sampling on precision by Stefan Elieff. This piece was prompted by recent airborne gravity surveying in WA. Not only GSWA but Geoscience Australia and most of the other state surveys are pouring money into airborne geophysical data acquisition, and the

results would be astonishing to pioneers of exploration geophysics operating in Australia less than 100 years ago. Our cover features an AEM survey over the Musgraves funded by GSSA. The palaeochannels in this vast, largely unexplored area have been revealed with astonishing clarity.

As always, our regular commentators do not disappoint. David Denham (*Canberra observed*) shares some good news about the recovery of minerals and petroleum exploration and the support being offered by the Federal Government to Junior Explorers (did someone say 'flow-through shares'?). Michael Asten (*Education matters*) highlights networking opportunities for students and reminds all students completing their theses in 2017 to send a summary of their work to *Preview* for publication in the December issue. Mike Hatch (*Environmental geophysics*) had some good feedback on his article about drones in the last issue, and convinced one of his correspondents, Andrew Foley, to share his story about using drones to acquire high resolution magnetic data over Lake Lefroy in WA. Terry Harvey (*Mineral geophysics*) has taken time out from his wanderings in deepest darkest Africa to remind us about

the dangers of lies, dammed lies and colour stretches, and Mick Micenko (*Seismic window*) takes a good hard look at faults.

The results of the 2017 ASEG Membership survey also appear in this issue. The ASEG has over 1000 Members and more than 400 completed the survey – a response rate of around 40%. FedEx included a number of specific questions about *Preview*. It would seem that most respondents (312 or 78%) are pretty happy with *Preview* as it is; however, some respondents (77 or 19%) felt that some improvements could be made. Well, there is always room for improvement, and we are carefully reviewing all suggestions. Most of these relate to improving our coverage of news, particularly company news. So, if you have your finger on the pulse of companies in the minerals and/or energy sectors, and are willing to report to *Preview* readers on a regular or semi-regular basis, I would like to hear from you! I would also like to hear from the Member who suggested a comic strip – we have the space if you have the talent!

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Letter to the Editor

Dear Lisa

In my article in the last issue of *Preview* (189, pp. 42–49) I considered what might be the earliest applied geophysics survey in Australia. I quoted Thyer, who suggested it might have been by Dodwell with his magnetometer measurements in the Musgrave Ranges in 1915.

However, Doug Morrison, whom I should always consult beforehand in future (!), has made me aware of a relatively recent paper (Vernon, 2010) that describes surveys for mineralisation in parts of Australia from as early as 1903. These used an instrument called 'Electric Ore-Finder', which was invented by Leo Daft and Alfred Williams in England in 1900 and from its description appears to be the equipotential method (perhaps first ever use of this method).

According to Vernon, the 'Electric Ore-Finder' was brought to Kalgoorlie in August 1903 by Ernest Lidgley, an Australian mining geologist, and used on various parts of the goldfield before being

taken in 1904 to Ballarat, Vic., Cobarr, NSW (where the rights to use it in Australia were acquired by Cobarr Corporation) and later Kapunda and Moonta in SA.

While I have not verified this claim, if true it would certainly be the earliest survey known to me. Unfortunately Vernon says that no documentation of survey results has been found from any of the surveys. Should this then be regarded as the first in Australia even if there are no results available?

It is intriguing that Thyer, and any of the other authors of Australian geophysics history known to me – such as Day or Doyle, did not refer to the use of 'Electric Ore-Finder' in Australia. Was it because it never achieved any success, at least any that was worth documenting? Or were the results kept confidential to the users? Certainly Vernon reports that the last known survey in Australia in 1907 in Moonta, SA 'was apparently a failure, as no identified veins were proved underground'. A strong possibility

is that by using AC input, and not DC input as preferred by Conrad Schlumberger, Daft and Williams' results were affected by coupling.

Incidentally, Doug Morrison claims from his studies of Dodwell's exploits (see Morrison, 2005) that he had planned, at least, to observe more than just regional magnetics in the Musgrave Ranges.

Regards

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References

- Morrison, D., 2005, George Dodwell and some geophysical co-operation: *Preview*, **117**, 17–20.
- Vernon, R. W., 2010, Alfred Williams and Leo Daft. Pioneers in geophysical prospection for minerals: *Proceedings of the International Commission on the History of Geological Sciences (INHIGEO) Annual Conference*, Madrid, Spain, July 2010.