

# THE VICTORIAN GEOLOGIST

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February 2015

THE GEOLOGICAL SOCIETY OF AUSTRALIA

Victoria Division

General Meeting

**Thursday 26th February at 6:15 p.m.**

## **Three decades of mineral exploration technology research – my top 5 (or 6)**

**Dr Graham Carr**

**President of the Geological Society of Australia**

**Fritz Loewe Theatre, School of Earth Sciences, University of Melbourne**

Talk will be preceded by drinks from 5:30 pm in the 4th floor tearoom, cost \$2

It is not easy to quantify, but the national expenditure on mineral exploration research over the past 30 years by industry, by universities and by state and federal agencies must easily exceed a billion dollars. Even harder to quantify is the outcome of this research in terms of discoveries and impact on the national economies – particularly Australia. There are many better placed to estimate such numbers so I will focus on what I believe to be the research that has had the most influence on the science, the technology and the practice of mineral exploration.

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**SPEAKER BIO****Dr Graham Carr**

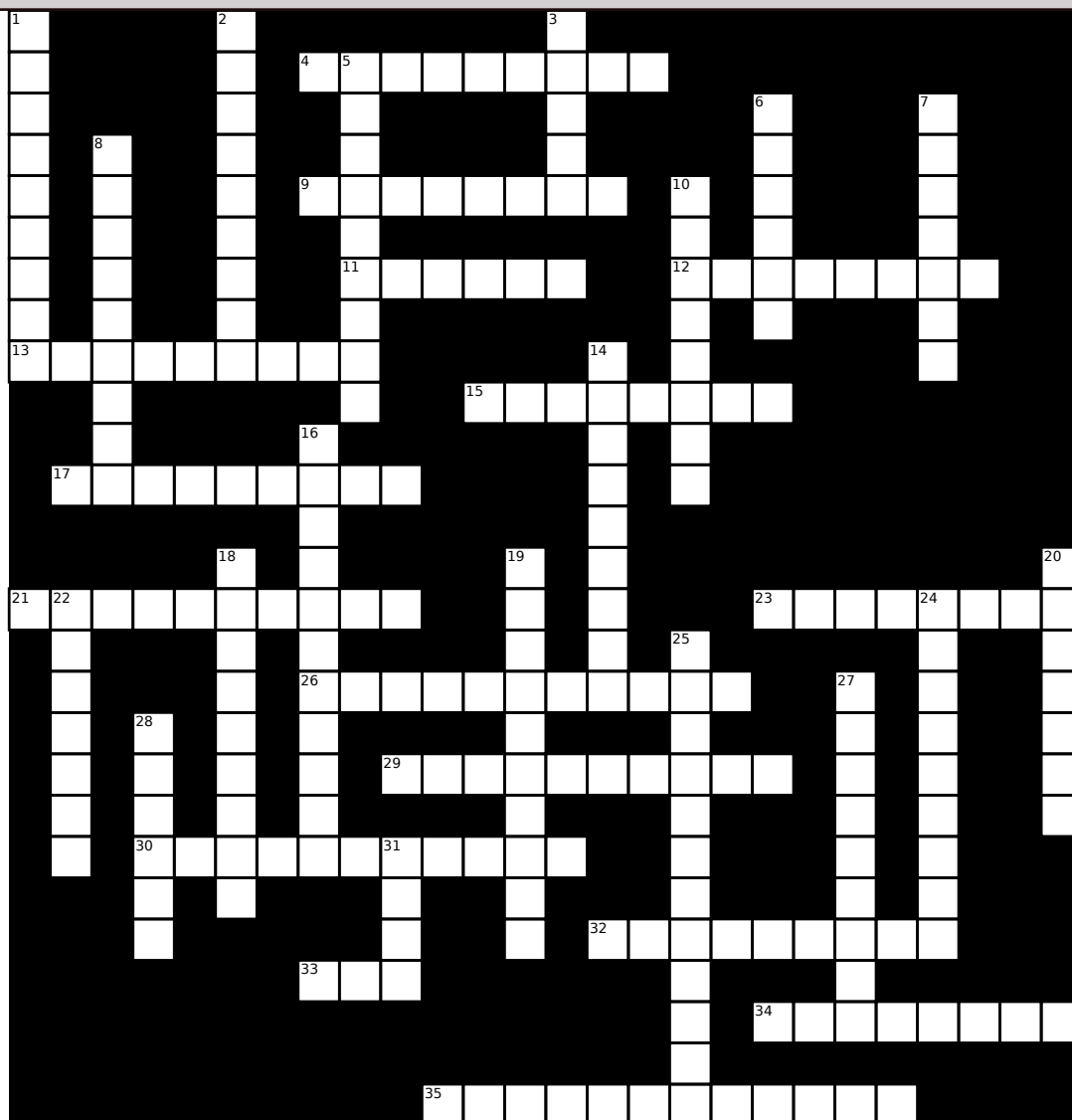
Graham Carr was elected President of the Geological Society of Australia in July 2014. Earlier that month he had retired from CSIRO after 35 years as a researcher and research manager. He suspects he is at the older end of spectrum of GSA presidents – but is not going to check.

Throughout his career he has been privileged to work closely with a host of colleagues in industry, in CSIRO, in geological surveys, in AMIRA and in universities. As a geologist and geochemist his career has been dedicated to developing new geochemical technologies in mineral exploration – particularly the use of Pb isotopes in discriminating geochemical anomalies. He has lead numerous AMIRA and CSIRO projects and consultancies, most particularly SIROTOPE.

As a research manager he was involved with the whole spectrum of research in mineral exploration in CSIRO – among them 6 CRC's and other major research initiatives such as AUSCOPE and UNCOVER. Before his retirement he was Chief Scientist of the Division of Earth Science and Resource Engineering. He remains a CSIRO Honorary Fellow and has aspirations to continue his Pb isotope research as well as maintaining a modest consultancy.

It is an expectation of GSA presidents that they speak at each of the State Divisions, usually towards the end of their tenure. Graham has decided, in his words, to inflict himself earlier rather than later, particularly to develop a dialogue with members around some of the challenges that the society currently faces.

## CROSSWORD

**Across**

4. Li pyroxene
9. Describes grains in some sedimentary rocks
11. Coarser than a pebble, finer than a boulder
12. The 'middle' era
13. Either side moving apart
15. Roughly 416-359 Ma
17. Well-known Lachlan Fold Belt batholith
21. Known for its cruciform shape
23. Yttrium phosphate
26. A Na, Mg amphibole
29. A characteristic used to define the shape of a clast
30. One of the eons
32. Might be called a 'dirty' granite
33. Smaller than silt
34. Might be described as ceratitic
35. Describes forams with clumped particles

**Down**

1. Orthorhombic, biaxial form of SiO<sub>2</sub>
2. Benambran, Tabberabberan and Bindian are...
3. Some fossils have these
5. Earliest epoch of the Cenozoic
6. A foliated metamorphic rock
7. One of most abundant elements in zircon
8. Strontium sulphate
10. Cryptocrystalline iron oxide and hydroxide
14. Another form of a mineral
16. Fe<sup>3+</sup> rich version of ferro-pargasite
18. Latest epoch of the Permian
19. Cold period in the neoproterozoic
20. A sense of movement
22. Uranium-\_\_\_\_\_-lead
24. Mg-rich actinolite
25. Rims of K-feldspar on crystals of plagioclase
27. An element named after part of the UK
28. \_\_\_\_ junction
31. A grain surrounded by many layers

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**STUDENT FUNDING OPPORTUNITIES****Geological Society of Australia (Victoria Division) Student Research Scholarships**

The scholarship is valued at up to \$500 for travel within Australia and \$700 for travel outside of Australia. The number of and value of the scholarships awarded each year is made at the discretion of the GSA(Vic) committee.

Funding will not be granted retrospectively and applicants are asked to submit forms no later than 6 weeks prior to their trip to give the committee time to consider the application.

**Eligibility**

Applicants must be members of the GSA and enrolled in a full-time degree at a Victorian Tertiary institution and undertaking research in Geology. The scholarship will be awarded to assist with conference travel for honours and postgraduate students, who are presenting (either poster or talk) at the conference.

Honours and postgraduate students that receive this scholarship will be required to submit a report for publication in 'The Victorian Geologist' newsletter following to their trip. A presentation may also be requested by the committee, which will consist of a short 10-15 minute presentation prior to the monthly seminar.

Students who have previously received a GSAV research scholarship are not eligible. Scholarships and bursaries from other sources are acceptable.

Applications forms can be scanned and emailed to: [secretary@vic.gsa.org.au](mailto:secretary@vic.gsa.org.au)

or mailed to:

Geology Research Scholarships Victoria  
Geological Society of Australia (Victoria Division)  
GPO Box 2355  
Melbourne VIC 3001

More information can be found by contacting Barbara Wagstaff ([wagstaff@unimelb.edu.au](mailto:wagstaff@unimelb.edu.au))

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**Something interesting to share? Want to see your name in print?**

Don't be bashful, contribute to the GSA(V) monthly newsletter!

If there are any events, happenings, news, or views that would be of interest to the membership, please send your details and information to Kieran Iles at [kiles@student.unimelb.edu.au](mailto:kiles@student.unimelb.edu.au)

**We'd be glad to hear from you**

## FORTHCOMING SEMINARS AND EVENTS

to be presented at  
GSA (Victoria Division) meetings

Note: unless otherwise indicated, all 2014 talks will be held in the Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

February 26th:

**Monthly Meeting:** Graham Carr

Three decades of mineral exploration technology research – my top 5 (or 6)

March 26th:

**Monthly Meeting:** Speaker TBA

April 30th:

**Monthly Meeting:** Julie Boyce

The Newer Volcanics of Victoria

Later this year (watch this space!):

**Monthly Meeting:** Helen Green

Dating Aboriginal Rock Art

Please welcome our newest members



Visit the GSAV on [www.gsavic.org](http://www.gsavic.org) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
• Renewing your GSA membership is easy - it can now be done online. •

### CONSIDER CONTRIBUTING TO TAG!

It is member contributions which make TAG a member magazine – please keep the contributions coming and assist with informing all of the membership (not just your Division) about your activities.

Please send your news to: [tag@gsa.org.au](mailto:tag@gsa.org.au)



### GSA (VICTORIA DIVISION) COMMITTEE

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#### Newsletter deadline:

First Friday of the month except Dec & Jan  
[kiles@student.unimelb.edu.au](mailto:kiles@student.unimelb.edu.au)

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