

**Geological Society of Australia – WA Division  
2011 Annual General Meeting**



*The Irish Club, 61 Townshend Rd, Subiaco  
6.00pm, Wednesday 6 April 2011*

**AGENDA**

- Apologies:
- Minutes of the 2010 AGM
- Chairman's Annual Report 2010-2011
- Treasurer's Annual Report 2010-2011
- WAG Report 2010-2011
- Subcommittee Annual Reports 2010-2011
  - Awards
  - Geological Heritage
- Election of new office bearers for April 2011 to April 2013
- New Members:
  - Kyle Hodges
  - Chris Clark
  - Fiona Mothersole
  - Michael Adams
  - Grace Carmichael
  - Melissa Edwards
- Other Business:
  - Annual Dinner on April 15<sup>th</sup>.
  - Upcoming talks: 4th May: Steve Reddy (Curtin) Olivine microstructure, supra-subduction zone deformation, and implications for mantle flow and seismic anisotropy
  -
- Seminar:

**No arc-accretion tectonics in Yilgarn Craton**

*MJ van Kronendonk*

*Geological Survey of Western Australia*

*[martin.vankranendonk@dmp.wa.gov.au](mailto:martin.vankranendonk@dmp.wa.gov.au)*

***Abstract***

For at least the past ten years, evidence has been gathering that tectonic processes on Paleo-

to Neoproterozoic Earth were at least as diverse as on Paleoproterozoic to Recent Earth. This includes crust formation by arc-accretion tectonics associated with plate subduction, as well as by melting above mantle plumes to form thick volcanic plateaux. However, in addition to these uniformitarian processes, Archean granite–greenstone upper crust was affected by vertical tectonics, or partial convective overturn, arising from warmer mantle temperatures, raised geotherms, and high concentrations of heat-producing elements in granites that resulted in warm, soft lithosphere.

The Yilgarn Craton of Western Australia is widely interpreted as the product of uniformitarian arc-accretion tectonics, at the expense of alternative models that propose crust formation/modification as a result of mantle plume impingement at the base of older crust. Arc-accretion models focus on the presence of crustal-scale shear zones that bound blocks with geochemically distinct felsic volcanism, but these models ignore several features that suggest the involvement of non-uniformitarian processes during crust formation. These include:

- eruption of plume-derived komatiites and associated basalts across what are proposed as accreted terranes, *before* the time of proposed arc magmatism and subsequent terrane accretion
- contemporaneity of mafic through felsic volcanic and granitic events between the foreland of the proposed orogen and the ‘accreted terranes’, *before* the proposed terrane accretion
- similar-aged, older crust beneath all of the proposed accreted terranes, as well as the foreland
- a crustal source for the dominant, high-Ca type granites that were emplaced contemporaneously across the whole craton, both *before and after* the proposed accretion period
- early extensional deformation in both the foreland and ‘accreted terranes’ at c. 2675 Ma, *well before* the proposed period of terrane accretion and collision (2665–2655 Ma)
- lack of indicators of large-scale tectonic thickening across terrane boundaries
- generally low-grade, contact-style metamorphism across the whole craton
- formation of dome-and-keel geometry of granites and greenstones contemporaneously across the whole of the craton, through partial convective overturn.

In this paper, I present a summary of geological data from across the whole of the Yilgarn Craton, including new results from the Murchison Domain. The data show that the Murchison Domain experienced significant crustal growth over the same period, and with many of the same lithogeochemical components, as rocks in the Eastern Goldfields Superterrane, and thus cannot represent a tectonic foreland as proposed in arc-accretion models. This, together with the geological features listed above, suggest that Yilgarn Craton did not form through arc-accretion processes.

Rather, a model is presented whereby Neoproterozoic development of the Yilgarn Craton involved a progressive series of events related to the emplacement of a long-lived mantle plume beneath older lithosphere. This model suggests that Yilgarn Craton evolved through the following stages.

1. Plume-related volcanism and associated brittle- to-ductile extension commenced in the western Yilgarn Craton at 2820 Ma and rolled eastwards over time, resulting in widespread extension and thinning of the lithosphere to create an extended ribbon-terrain, heavily underplated by basaltic magmas, by 2675 Ma. In this model, the so-called terranes and domains of the craton are re-interpreted here as extension-related horsts and grabens. The

change in felsic volcanic geochemistry from sodic (TTD) to calc-alkaline across domain boundaries is interpreted to reflect local melting of underplated basalt, and fractionation of mafic magma chambers, respectively. The presence of intermediate volcanics (andesites) and syn-volcanic mafic granites are interpreted to result from mixing of synchronous mantle-derived (komatiitic and basaltic) and crust-derived (dacitic and rhyolitic) melts, as seen locally in field exposures.

2. Conductive heat from the upwelling plume and from intra- and underplated mafic magmas caused widespread partial melting of the lower to middle crust, resulting in magma mixing and mingling, pan-cratonic emplacement of voluminous felsic to intermediate melts into the upper crust (high- Ca and mafic granites), and melt depletion of the lower crust.

3. Partial melting of the mid-crust facilitated sinking of dense, newly erupted greenstones and buoyant rise of granite domes through partial convective overturn, which uniquely explains the low average metamorphic grade of the craton, its subhorizontal — but folded — isotherms, and the presence of generally high geotherms across the craton (associated with large volumes of granitic melt).

4. Metamorphic transformation of the melt-depleted underplate to eclogite resulted in its delamination from the base of the crust. Delamination caused a renewed influx of mantle heat and fluids to the base of the crust, generating syenites and lamproites, and introducing highly reduced fluids into the crust along pre-existing structures, enriching and forming gold deposits. Delamination was accompanied first by crustal downwarping and formation of late sedimentary basins, followed by rebound, uplift and compression. Delamination and associated refertilisation of the sub-continental mantle lithosphere may also account for the lack of diamonds in the Yilgarn.

### **Biography**

Martin was born and trained in Canada, receiving his PhD in 1992 from Queens University in Kingston, Ontario. After working at the Geological Survey of Canada from 1992-1994, Martin moved to Australia in 1994 as an ARC post-doctoral fellow at the University of Newcastle, working on the Pilbara. He joined the Geological Survey of Western Australia in 1997, and is now their Specialist in Precambrian Geoscience. His main interests are Archean tectonics and the geological setting of early life on Earth, and he is widely published in these fields. Martin is also Chairman of the Precambrian Subcommittee of the International Commission on Stratigraphy, an associate editor of the journals *Precambrian Research* and *Episodes*, associate member of the Australian Centre for Astrobiology, Honorary Research Fellow at the University of Western Australia, and Core member of the International Precambrian Research Centre of China. He has appeared on numerous television and radio documentaries on early Earth, and has been involved in educational outreach programs for school children and the general public.

## Chairman's Report 2010–11

Chris Yeats

### Geological Society of Australia — Western Australian Division

Having taken on the role in April of 2007, I am pleased to present what I fervently hope will be my final annual report, at least for some years, as Chair of the Western Australian Division of the Geological Society of Australia (GSA). Typically, the Divisional Chair, as well as other office bearers, serves a two year term. However, at the 2009 Annual General Meeting (AGM), with no other member willing to nominate for the role, I agreed to seek another two year term as Chair and was re-elected. At the time of writing, less than 3 weeks before the 2011 AGM, we again have no confirmed nominee for the role of Chair and are also struggling to find a Vice-Chair, Secretary, Treasurer, and Education Subcommittee Chair, as well as sufficient Committee members to consistently form a quorum for meetings. Although we added a number of new Committee members this year (see Table 1), attrition still outstrips supply, and with a number of experienced members, including myself, looking to step down over the coming 12 months, we desperately need new members now, to ensure a degree of continuity.

I'm fully aware that many of us lead very busy lives, but, as I've said in my previous three annual reports, serving as a Committee member or office bearer of the Society is not a particularly onerous or time-consuming task, and one that can be very rewarding. It certainly gives the opportunity to participate in the running of the Division and, increasingly, as you'll read below, a voice in the overall direction of the Society. If you're reading this prior to the AGM and wondering if you can and should contribute, please do! My contact details are on the Divisional website and in each issue of WAG and I'm more than happy to talk over the roles and responsibilities of the Committee with any interested party.

After four years as GSA (WA) Chair, I can look back, I think, with some satisfaction on the achievements of the Division and its Committee in that period. November 2007 saw the long overdue erection and unveiling of a memorial to one of Western Australia's true geological pioneers, HWB Talbot, at Nannup Cemetery. In July 2008, the Australian Earth Science Convention was held in Perth, co-hosted by the GSA and the Australasian Institute of Geoscientists, and attracted more than 800 registrants.

At the start of 2009, we relocated our monthly meetings (and Committee meetings) to their current location at the Irish Club in Subiaco, with the dual aims of providing a venue that was more accessible to our membership and one which allowed pre- and post-meeting socialisation. I believe the change of venue has been quite successful, with overall attendance, while fluctuating from month to month, generally better than that for the last few years at UWA. On a somewhat less positive note, in late 2009, after a number of years of negotiation, the proposed merger between GSA and AIG was cancelled, at the request of AIG, without the proposition being put to the membership of either organization.

In January 2010, in the face of rising printing and distribution costs and declining advertising revenue, the Division's newsletter, the *West Australian Geologist* (WAG), moved to online publication. This move allowed us to retain a high-quality, magazine-format newsletter, reduced the cost and environmental impact of publication and, for the first time, allowed us to provide a full-colour publication to our members.

Our April 2010 AGM was an eventful one for me, with what I believed to be a fairly innocuous comment in my report around the GSA's published position statement and recommendations on greenhouse gas emissions and climate change, provoking an impassioned and lengthy debate, leading to a motion to GSA Council "*...that the National Executive conduct an online poll of all members asking whether they agree or disagree with each of the statements and recommendations contained within the GSA Position Statement on Greenhouse Gas Emissions and Climate Change and respond in line with the feedback so received, up to and including a retraction of the position statement.*" This motion passed Council in July 2010 and the statement was subsequently withdrawn from the GSA Website by the incoming President Brad Pillans, pending such consultation.

A poll of members was conducted in late 2010 that asked the very fundamental question: should the GSA have a position statement on climate change? Over three-quarters of the respondents to the poll answered in the affirmative. As a result of this feedback, the National Executive will be seeking input from all Divisions, and therefore all members, over the coming months to provide guidance for the content of the position statement. Keep your eyes on WAG, TAG, and your email for opportunities to comment.

The 2010–12 National Executive has also been asked by GSA Council to develop new guidelines for the operation of GSA nationally. This initiative arose directly out of the groundwork for the failed merger with AIG, which revealed that the Society and some Divisions (including WA) were not operating legally. Additionally, the furor around the climate change statement last year highlighted the

potential pitfalls of executive authority of the Society resting with a non-representative, non-elected body. I am a member of the National Executive subcommittee formed to progress this activity and, as with the climate change issue, we will be approaching Divisions in the coming months to provide input to and comment on any proposed changes.

The Committee has worked hard to maintain a varied program of monthly meetings over the past 12 months (Table 2), with talks by a mix of speakers from academia, government, and industry covering a diverse range of topics including the sex life of fossils (admit it – you were curious), the geology of Timor and Antarctica (not in one talk), climate change (well attended!), and of course mineral and energy resources. Details of the talks, including abstracts, are available on our Divisional Website, which has an archive of talk abstracts stretching back to August 2004. I would like to thank all this year's speakers for their efforts and time, and for the enthusiasm that all brought to their topics.

The 2010 Annual Dinner and Awards Presentation was held on Friday April 16th at the Old Brewery on the Swan River and was attended by more than 80 people, including the winners of three of the four Divisional Awards. The winner of the Talbot Medal, Aaron Benincasa, was overseas carrying out fieldwork for his PhD. The venue was excellent, but unfortunately, we could not secure it on any suitable dates this year, so the 2011 Dinner will be held at the Bluewater Grill in Applecross, another wonderful location, on Friday 15th April. Once again the Division is presenting all four awards this year (Table 3). Kate Duff of Willetton SHS and Kyle Hodge are the 2010 winners of the WACE Prize and GSA Medal, respectively. After spirited discussion of three excellent theses, Mark Collins was adjudged winner of the Talbot Prize, for his thesis entitled "*Stratigraphic reconstruction of a thrust stack succession in the Lacao region, Timor Leste*". I also am pleased to announce that Dr Stephen John Barnes, Senior Principal Research Scientist, CSIRO, will be awarded the 2011 Gibb Maitland Medal for his outstanding contribution to our understanding of the geology of the nickel sulfide deposits and their komatiite host rocks in Western Australia. Further details of Steve's achievements are summarized in the Awards Sub-committee report. I look forward to a large turnout to help Steve and the other awardees celebrate on April 15th.

The Division once again supported the annual GSA–AIG Christmas Cruise along the Swan River, held in early December, which was also sponsored by Southern Geoscience Consultants and attended by a large number of WA geoscientists.

On the financial front, the Division recorded an apparent operating loss of \$4,810 for 2010. However, a large portion of this loss was due to the late payment by the National GSA office of approximately half of the Division's capitation for the year. The remainder was received in early 2011 and, if

factored in, brings the 2010 loss to a mere \$148, effectively representing a balanced budget. Once again our most significant expenses were subsidies to members for the Annual Dinner and Christmas Cruise, which totaled \$3,902; and donations to support student societies, attendance at conferences, prizes, and the Division's continued financial support of Earth Sciences WA, which totaled \$5,050. The Division is therefore clearly spending the bulk of its funds supporting members and promoting geoscience education in the community, which should please us all. With the move to online publication and continued advertising revenue, WAG returned a profit of in excess of \$1,500 for the Division in 2010, compared to a significant loss in 2009.

In my four year term as GSA (WA) Divisional Chair, I have seen the resources 'superboom' end, the GFC bite, and a resurgent minerals and energy sector in WA (don't mention the 'B-word') once again leading to dire warnings of skills shortages in our State. I also believe that we're beginning to see signs of a rebirth for our Society. The climate change debate, although divisive, has re-engaged our members in the operation of the GSA more fully than any issue that I can recall in my time as a member, and this is momentum that should be built upon. Much closer to home, I've also seen my two daughters approximately double in age during my time as Chair — the older girl collects rocks and they can both spell 'geological'.

As I conclude this report, I would like to sincerely thank my fellow Committee members for their hard work over the past twelve months and indeed over the past four years. In particular I'd like to thank Catherine Spaggiari and Katy Evans, who each did two years hard time in the vital role of Divisional Secretary. Both brought insight, energy and very strong opinions to the role. If I could persuade Cath and Katy (and I often couldn't), then I knew the rest of the Committee would be a pushover. Thank you both for keeping things moving in approximately the right direction.

It's been a privilege to serve as Western Australian Divisional Chair of the GSA and an experience I would recommend to all members. In closing, I once again urge all members to take the opportunity provided by the Society and take a role in its future, by joining the Divisional Committee — whatever your age, gender, or specific area of expertise, we need someone just like you.

Table 1. DIVISIONAL COMMITTEES

Position	2009–10	2010–11
Chair	Chris Yeats (CSIRO)	Chris Yeats (CSIRO)
Vice Chair	Nick Timms (Curtin)	Nick Timms (Curtin)
Secretary	Katy Evans (Curtin)	Katy Evans (Curtin)
Treasurer	Katy Evans (Curtin)	Katy Evans (Curtin)

WAG Editor(s)	Janet Muhling (UWA)	Stephen White (GSWA) Janet Muhling (UWA)
WAG Business Manager Committee	Peter Haines (GSWA) Craig Buchan (Task Geoscience) Chris Kirkland (GSWA) Erin Gray (Curtin) Catherine Spaggiari (GSWA) Alyssa Josephs (Curtin Student) Lachlan Nally (UWA Student) Stephen White (GSWA) <sup>†</sup>	Chris Kirkland (GSWA) Paul Askins (Consultant) Roger Bateman (Consultant) John Doepel (Consultant) Peter Haines (GSWA) Alyssa Josephs (Curtin Student) Matthew Sulcs (UWA Student) Stephanie Martin (UWA Student)

<sup>†</sup>Joined as WAG Editor during the year

Sub-Committee Convenors:

Awards	Charles Butt (CSIRO)	Charles Butt (CSIRO)
Education and Vocation	Dianne Tompkins (ESWA)	Leah Moore (ESWA)
Geological Heritage	Margaret Brocx (Consultant)	Margaret Brocx (Consultant)
Stratigraphic Nomenclature	Roger Hocking (GSWA)	Roger Hocking (GSWA)

Table 2. MONTHLY MEETINGS, MAY 2010 – APRIL 2011

---

**2010**

5 May	Michael Glinsky	Geology and physics working together
2 June	Guillaume Duclaux	A geologic overview of the Mawson Continent
30 June	Chris Kirkland	Hf isotopes as a tool for understanding crustal evolution and mineralization events
4 August	Courtney Gregory	Targeted, in situ U–Pb geochronology of accessory minerals associated with IOCG deposits: Hillside Project, Yorke Peninsula
1 September	Jon Hronsky	Towards a unified model for magmatic hydrothermal gold metallogeny, with implications for orogenic gold
6 October	Kate Trinajstić	Caught in the act — sex and the fossil record
3 November	Aaron Benincasa	The geology of Mount Mundo Perdido, Timor Leste
3 December	<b>Joint AIG-GSA Christmas Cruise</b>	

**2011**

2 February	Roger Bateman	Structures and mineralizations of the Timmins–Porcupine gold camp,
------------	---------------	--

		compared with the Golden Mile, at 20 seconds per million ounces
2 March	Brad Pillans	Climate change — a view from the Quaternary
6 April	<b>Annual General Meeting</b>	
	Martin Van Kronendonk	No arc-accretion tectonics in Yilgarn Craton development

Table 3. DIVISIONAL AWARDS 2011

<b>Award</b>	<b>2011 Recipient</b>	<b>Basis for the award</b>
Gibb Maitland Medal	Stephen Barnes	Substantial contributions to geoscience in Western Australia, with particular consideration given to contributions that relate to the occurrence or discovery of mineral resources
Talbot Prize	Mark Collins	Best Honours thesis at The University of Western Australia with a significant fieldwork component
GSA Medal	Kyle Hodges	Best undergraduate results in the final year of the BSc (Applied Geology) degree at Curtin University of Technology
WACE Prize	Kate Duff	Best aggregate score in the Earth and Environmental Science WA Certificate of Education

## **GIBB MAITLAND MEDAL, 2011**

The Awards Sub-committee (Charles Butt, Nick Archibald and Bryan Smith) is pleased to recommend that the 2011 Gibb Maitland Medal be awarded to Dr. Stephen Barnes, Senior Principal Research Scientist and Group Leader Geology and Geochemistry, CSIRO Division of Earth Science and Resource Engineering (nominator: Dr Jon Hronsky).

However, although the Sub-committee is very satisfied that the quality of the medallists remains exceptionally high, there is a concern that the numbers of nominations is falling. The Sub-committee will meet later in the year to consider measures for encouraging nominations in order to maintain the quality and prestige of the Award.

The suggested citation is as follows:

Dr Stephen John Barnes is awarded the 2011 Gibb Maitland medal for his outstanding contribution to our understanding of the geology of the nickel sulfide deposits and their komatiite host rocks in Western Australia. He is the leading researcher in Australia in these fields, and in the geology of platinum, chromium and vanadium ore deposits. His fundamental research has been applied broadly by industry and is an outstanding example of the successful combination internationally recognised peer-reviewed academic research with continuous application to practical industry problems. Dr Barnes was a member of the CSIRO Group that applied the principles of physical volcanology as deduced from modern basalt flows to the study of komatiite lava fields. Subsequently, his research has built a very extensive database on the occurrence and geochemistry of komatiites and nickel sulfide deposits, contributed firm evidence for the hypothesis of thermal erosion by komatiitic flows, and investigated the formation and mineral chemistry of chrome spinel (chromite) and promoted its application as an indicator mineral for nickel exploration. He has also developed a method for nickel sulfide exploration based on ratios of critical indicator elements. Dr Barnes' influence and global reputation are demonstrated by an impressive publication record and total citations, multiple invitations to contribute papers to journals, books and conferences, and collaboration with research groups and industry in Canada, Russia, China and Brazil, as well as Australia. Dr Stephen Barnes has been one of the leading players in Western Australian mineral exploration geology for over 20 years and is a worthy recipient of the 2011 Gibb Maitland Medal.

## **West Australian Geologist (WAG) Editors' Report for 2010–11**

**Janet Muhling (JM) and Stephen White (SW)**

The West Australian Geologist (WAG) has now been published as a principally online newsletter for approximately 18 months. The newsletter continues in a format much like that of previous years, but is distributed by being posted on the Western Australian Division and GSA national websites as a PDF file, without the labour and cost that a print run previously entailed. Society members are notified by email when a new issue of WAG is available to be read online or downloaded. There is provision to print a limited number of copies and send by snail-mail to those Society members who are unable to receive WAG electronically, but so far, with the exception of one member noted at the March 2011 committee meeting, there have been few or no requests for this. We infer, therefore, that by and large the online-only mode of publication is working satisfactorily.

The editorial tasks are divided, with one of us (JM) acting as the focal point to whom correspondents and contributors can send their articles, and the other (SW) compiling material in Adobe™ InDesign® template and generating a PDF. This allows flexibility if one of us is on leave or is otherwise unable to work on an issue.

WAG continues to focus on news and articles related to Earth science in Western Australia. These have ranged from articles on historical exploration and mining, through reports on recent research, to discussions of policy and practice related to minerals exploration. Regular contributors John Glover (geohistorical) and John Bunting (Jabberocky) advised that they would like to take a break from writing regularly for WAG. Our sincere thanks to them for their contributions over the years, which have helped shape the broad appeal of the newsletter. As partial compensation, we have sought to include a research or science-focused article in as many issues as possible, and are following up a lead to have a regular contribution from CSIRO outlining recent work and forth-coming publications at that institution. These pieces should be appearing from June/July 2011 onwards. We're also pleased

to feature regular or semi-regular articles from Victor Dent on seismology and earthquake activity.

There is now less need for financial sponsorship in the form of advertising, although WAG still welcomes this form of support and sponsorship. Advertising and sponsorship are discussed in more depth in the WAG business manager's report. While Data Directions and Snowden decided to not continue to advertise, we welcome Digirock as a new full-year advertiser and sponsor.

From time to time we have tried to encourage readers to write in with their views or reactions to published articles, but the response has been poor. Potentially controversial editorials and a directed article on practices of rehabilitating drill sites have elicited no direct feedback, and the reason for this is unclear. Greater reader contribution seems desirable, even if it means increasing the number of pages. WAG retains a moderately flexible format in both overall length and page layout.

Most issues are plagued by late submission of articles or reports from the majority of contributors. This resulted in the December/January issue being published later than we would normally wish (mitigated only by there being no talk for that month), and on other occasions has meant a last-minute scramble to have WAG ready before the monthly meeting and talk. The deadline for submitting articles for the next issue is included in each issue, and we should endeavour in 2011–12 to obtain material in a more timely fashion. Other work commitments are ordinarily high priority for both of us and it's possible that, in future, we may have to defer or reject articles that are received too late for comfortable inclusion.

At this stage, both of us are available to continue during 2011–12, although anyone interested in helping to steer WAG over the next 12 months (or beyond!) is welcome to nominate for a position as WAG editor. For more information, contact either of the current editors (see latest WAG for details).

## WEST AUSTRALIAN GEOLOGIST (WAG) BUSINESS REPORT 2010

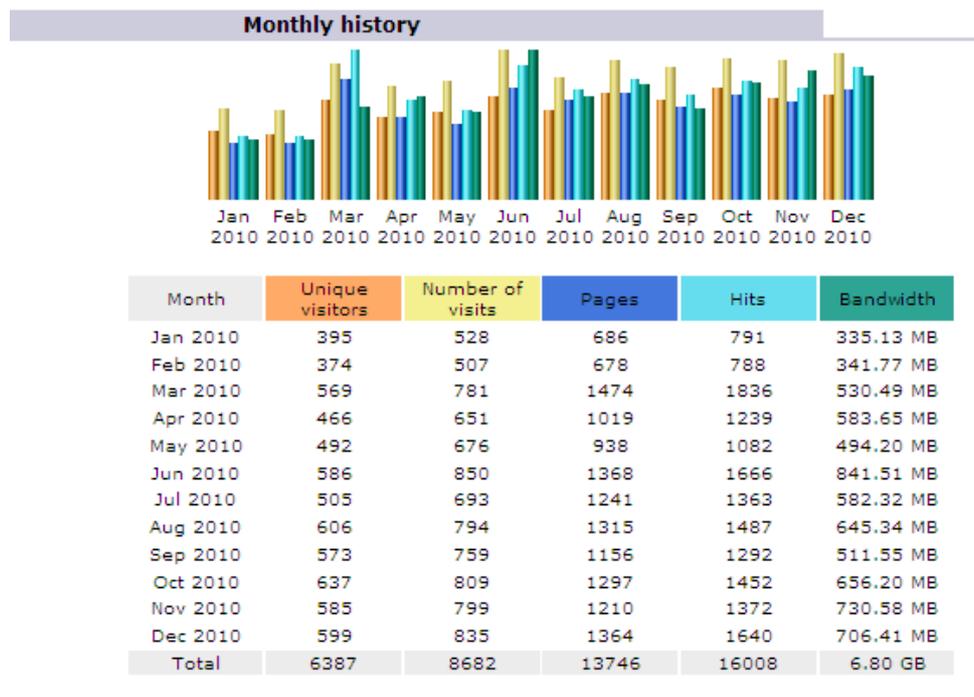
The West Australian Geologist (WAG) is the bi-monthly newsletter of the Western Australian Division of the Geological Society of Australia.

### PUBLISHING AND CONTENT

During 2010 the six issues of WAG have run between 13 and 22 pages, and have continued to provide a good balance between information on upcoming meetings, articles and advertising. Acquiring good and relevant articles remains one of the more difficult parts of the Editor's job, and I urge all members to keep an eye open for possible contributors/contributions. During 2010 WAG has been distributed as an online-only magazine to defray printing costs and to make communication more rapid. Current and previous editions of WAG back to June 2005 are available from <http://www.wa.gsa.org.au/WAG.html>

### WEBSITE ACCESS

In the 2010 year there were 8682 visits to the society's website, including 13746 pages downloaded. June saw the greatest use of the website with over 840 mb downloaded by nearly 600 unique visitors.



### ADVERTISING

Companies and organizations that sponsored issues of the WAG during 2010 include Geological Survey of Western Australia, Data Directions, Cross country charters and Snowden; most sponsors also advertised with us throughout the year.

### FINANCIAL SUMMARY

The information below is based on income and expenditure for the year to 31 Dec 2010.

- WAG income from advertising and sponsorship 2010: \$2,365

WAG has had difficulty in attracting clients for advertising in 2010. The WAG offers a great opportunity to advertise products and services to geologists and related disciplines within Western Australia. I would encourage the members of the society to consider advertising in WAG or promoting it to other potential clients for adverts.

Finally, I'd like to thank again all of our 2010 sponsors and advertisers for their support and Janet Muhling and Stephen White for a very professional editing job, and all members who have provided content for WAG during 2010.

**Chris Kirkland**  
**WAG Business Manager 2010**  
**Geological Society of Australia – Western Australia Division**

## **GEOLOGICAL SOCIETY OF AUSTRALIA (WA DIVISION) TREASURER'S ANNUAL REPORT FOR 2010**

A preliminary Balance Sheet and Profit and Loss Statement for the 2010 calendar year have been prepared. Our 2010 financial records are currently in the auditing process, but final audited statements were not received in time for the AGM. I wish to thank Jocelyn Thomson for her accounting skills throughout the year. Balance sheets are attached to this report.

I will highlight the following points from the statements:

- As of 31 December 2010 the WA Division had total equity of \$75,230, this amount being divided between investments with JB Were and our working cheque account.
- Interest paid to our investments and working account totaled \$1,922. Note that with falling interest rates, this figure is less than that for 2009.
- Membership dues (capitation) received from Head Office amounted to \$4,393. This is about half of what we had in 2009, but was incomplete. Additional funds were received in 2011.
- The printing and postage cost of the West Australian Geologist (WAG) totaled \$605, a big decrease from last year's \$6,972. The decrease is due to the shift to an online WAG. WAG advertising brought the magazine into profit with advertising income totaling \$2,150.
- Accounting fees (\$850) include the annual audit.
- Two events were subsidized to members. These were the Annual Dinner and the Annual Christmas Cruise jointly held with AIG. Such subsidies totaled \$3,902.
- During 2010 the Division made significant donations to university student associations, sponsored students to attend the AESC and the 5IAS conference, and donated prizes to the winners of the TEE Prize, GSA Medal, and Talbot Medal, and to ESWA (Earth Sciences WA). Such donations totaled \$5,050.
- The net financial result for the WA Division at the end of 2010 was a loss rounded to \$4,810. However, the additional capitation in 2011 received brings this figure to a small loss of \$146.

At the end of 2010 the Division's overall budget remains healthy, and it is always important to remember that making a surplus is not the main function of the Society. We are looking forward to another successful year during 2011.

**Katy Evans**

**Treasurer**

**Geological Society of Australia – Western Australia Division**

# Geological Society Australia WA Division

PO Box 6014  
East Perth 6892  
West Australia

## Balance Sheet

As of December 2010

24/02/2011  
6:47:10 AM

---

Assets		
Current Assets		
Cash On Hand		
Commonwealth Bank	\$7,466.66	
Total Cash On Hand	<u>\$7,466.66</u>	
J B Were Investment Notes	\$56,059.83	
J B Were Cash Trust	\$7,165.40	
Publications in Stock	\$2,365.00	
Cash on Hand	\$64.00	
Aust Post Biz Account	\$46.00	
Total Current Assets	<u>\$73,166.89</u>	
Total Assets		<u>\$73,166.89</u>
Liabilities		
Current Liabilities		
GST Liabilities		
GST Collected	\$14,449.51	
GST Paid	<u>-\$16,512.96</u>	
Total GST Liabilities	<u>-\$2,063.45</u>	
Total Current Liabilities		<u>-\$2,063.45</u>
Total Liabilities		<u>-\$2,063.45</u>
Net Assets		<u>\$75,230.34</u>
Equity		
Retained Earnings	\$26,755.21	
Current Year Earnings	-\$4,809.86	
Historical Balancing	\$53,284.99	
Total Equity		<u>\$75,230.34</u>

# Geological Society Australia WA Division

PO Box 6014  
East Perth 6892  
West Australia

## Profit & Loss Statement

1/01/2010 through 31/12/2010

24/02/2011  
6:47:49 AM

---

Income		
Capitation		\$4,392.50
INTEREST		
Interest Com Bank	\$0.35	
J B Were Invest Notes Interest	\$1,688.21	
J B Were Cash Trust Interest	\$233.22	
WAG		\$2,150.00
FUNCTIONS		
Annual Dinner	\$5,836.31	
Total Income		<u>\$14,300.59</u>
Cost of Sales		
Gross Profit		<u>\$14,300.59</u>
Expenses		
Accounting Fees		\$850.00
Bank Charges		\$42.00
FUNCTIONS		
Annual Dinner	\$9,451.81	
Xmas Cruise	\$754.07	
Miscellaneous Functions	\$286.09	
DONATIONS/SPONSORSHIP		
Student Prize	\$900.00	
Earth Science WA	\$2,000.00	
Donations Student Bodies	\$300.00	
Student Sponsorship	\$1,850.00	
Miscellaneous		\$1,681.83
Postage		\$190.91
Stationery and Printing		\$198.74
WAG		\$605.00
Total Expenses		<u>\$19,110.45</u>
Operating Profit		<u>-\$4,809.86</u>
Other Income		
Other Expenses		
Net Profit / (Loss)		<u>-\$4,809.86</u>

## Geological Society of Australia – WA Division 2011 Annual General Meeting



*The Irish Club, 61 Townshend Rd, Subiaco  
6.00pm, Wednesday 6 April 2011*

**MINUTES 2011:** Meeting opened at 18.00 by the Chair, Chris Yeats (CY).

- Apologies: Margaret Brocx, Peter Haines, Doug Allen, Catherine Spaggiari, Paul Askins, Katy Evans, Roger Hocking, Nick Timms, Tim Ivanic
- Minutes of the 2010 AGM were made available on the Division website at <http://wa.gsa.org.au/> and on the night – there were no objections and the minutes were approved.
- Chairman’s Annual Report 2010-2011 – all reports were tabled at the meeting and are attached to these minutes. They are also available in the April/May WAG, and on the Division website. CY gave a summary of the main points of the chairman’s report.
- Treasurers Report 2010-2011 – CY gave a summary of the main points
  - Total Reserves of \$75,230 at Dec 31, 2010.
  - Loss of \$4,810 for year due to late Capitation payment.
    - Underlying loss of \$146.
    - Final figures subject to audit
- WAG Report 2010-2011 - CY gave a summary of the main points
  - Successful change to electronic format despite very minor adverse reaction, resulting in substantial saving of cost and preservation of the unarguably best divisional circular.
  - Falling advertisement subscriptions, but made a \$1,545 profit.
  - Vote of thanks to Janet Muhling and Stephen White for their efforts.
- Subcommittee Annual Reports 2010-2011 - CY gave a summary of the main points of each of the following:
  - Awards
  - Geological Heritage
- Committee Members
  - CY discussed election of executive positions, and proceeded to present persons nominated to fill the four positions, seeking additional nominations for each position. In all cases no additional nominations were presented and the nominated person was named into the position as follows:
    - Chair: Katy Evans

- Vice Chair: Chris Yeats (on the basis of a maximum 1 year further service)
  - Treasurer: Stephen Wyche
  - Secretary: Marcus Willson
- CY showed a table (below) of the current committee; which includes a number of new members. The UWA student representative is yet to be named and Melanie Ashley is remaining as Curtin student representative only until a suitable replacement can be found. CY invited more people to join the committee.

Committee	Stephen White (GSWA) – WAG Editor	John Doepel
	Roger Bateman (WAG co-editor)	Douglas Allan
	Chris Kirkland– WAG Business Manager	Bruce Groenewald
	Peter Haines – Website Manager	Paul Askins
	Melanie Ashley (Curtin student rep)	Nick Timms
	Tim Ivanic	

Sub-Committee Convenors:		
Awards	Charles Butt (CSIRO)	
Education and Vocation	Joanne Watkins (ESWA)	
Geological Heritage	Margaret Brocx (Consultant)	
Stratigraphic Nomenclature	Roger Hocking (GSWA)	

- New Members:
  - Kyle Hodges, Chris Clark, Fiona Mothersole, Michael Adams, Grace Carmichael and Melissa Edwards were accepted as new members.
- Other Business:
  - Annual Dinner on April 15<sup>th</sup> – CY showed the details for the dinner and awards presentation; 3-course meal and drinks for \$100 pp at the Blue Water Grill.
  - Upcoming talks: Steve Reddy (Curtin)- Olivine microstructure, supra-subduction zone deformation, and implications for mantle flow and seismic anisotropy
- Meeting closed at 18.25, followed by the seminar.
- Seminar:

### **No-arc-accretion tectonics in Yilgarn Craton**

*MJ Van Kranendonk*

*Geological Survey of Western Australia*  
*Martin.vankranendonk@dmp.wa.gov.au*