



The Queensland Geologist

Bi-monthly Newsletter of the Queensland Division of the Geological Society of Australia Inc.
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IMPORTANT DATES:

Tuesday 7 March – GSAQ Meeting

Speaker: Dr John Warren
Topic: The role of evaporites in forming base metal deposits: What about the Proterozoic of Australia?
Where: The Theodore Club, 333 Adelaide Street, BRISBANE
Time: 5:30 for 6pm; finger food and cash bar
Cost: \$6 Members, \$8 Non-member, Students, \$2. Cash bar

Synopsis: Evaporites in the subsurface are important foci for fluid flow. As halite-rich beds dissolve they create dense plumes of chloride-rich brines that can leach adjacent strata of metals. Leached anhydrite beds can supply H₂S through both bacterial sulfate reduction at lower temperatures (<110°C) and through thermochemical sulfate reduction at higher temperatures (>140°C). Thick salt beds flow into salt allochthons that in turn focus the flow of metalliferous fluids and so generate metal sulfide-rich brine pools on the seafloor, such as the Atlantis Deeps beneath the Red Sea. Subsurface evaporite dissolution of both bedded and halokinetic salt also created the Rot Faule diagenetic zone. Such evaporite created redox interfaces focused metal precipitation in the world's largest Cu deposit in the Kupferschiefer style ores of NW Europe and numerous Pb-Zn accumulations around the world. Salt caught up in compressional terranes also focuses fluid flow and is responsible for enrichment zones in the African Copper Belt. Some of the criteria gleaned from the examination of various evaporite-related base metal deposits around the world can also be used to better understand controls on base metal accumulations in the Proterozoic of Australia.

Dr Warren is a currently a Professor in the Department of Petroleum Geoscience at the University of Brunei Darussalam (UBD). He specialises in rock matrix characterization in evaporitic/carbonate sequences and has conducted and supervised applied and pure research in modern and ancient evaporitic sediments of Australia, Canada, Mexico, the Middle East, the North Sea, South-east Asia and the United States. As well as writing two books on evaporites and being in the process of completing a third, he has contributed chapters on economic aspects of evaporite sedimentology to a number of books and has published more than 50 papers on evaporites and dolomites in internationally recognised journals. He is on the editorial panel of the Journal of Petroleum Geology and has served on the editorial panel of the Journal of Salt Lake Research. In 2003, he was a keynote speaker at the IAS meeting in Brazil. He has worked as a consultant dealing with evaporite-related problems in hydrocarbon and metals exploration for numerous companies and institutions throughout the world.

2-7 July 2006: The Australian Earth Sciences Convention 2006 (ASEG, in collaboration with GSA; ASEG's 18th International Conference and Exhibition, and GSA's 18th Australian Geological Convention)

Where: Melbourne

Early bird registration deadline 28 February 2006

To register go to www.earth2006.org.au

Email: earth2006@meetingplanners.com.au

27 August-1 September 2006: 16th Annual V.M. Goldschmidt Conference

Where: Exhibition and Convention Centre, Melbourne

Website: www.goldsschmidt2006.org



THE INTERNATIONALLY RENOWNED

INFORMAL WEEKLY GET-TOGETHER FOR EXPLORERS AND MINERS

Where UNION JACK'S ALE HOUSE - English, Irish, Scottish & Welsh Pub - 127 Charlotte St, Brisbane CBD

Time: 5.30pm Every Wednesday evening if your work/spouse/budget/health allows

 W O R D S
From the Committee



The GSAQ Committee held its first meeting for the year and our speakers' programme, if it comes to fruition, looks exciting. Please show your support by attending as many of these meetings as you are able to. However, again many of our members have heavy work commitments and we would welcome extra members on the committee to share the load. A nomination form for positions on the committee is included with this newsletter. We would welcome, in particular, younger members to learn about the workings of the Society and to eventually take on greater responsibilities. The future of the Queensland Division and the Society in general depends on it. In six years time, Brisbane hosts the International Geological Congress, by which time many of the current committee will have retired. It will also be Queensland's turn again to host the Federal GSA Executive. It would be unfortunate not to have an enthusiastic and viable local Division at that time.

Sadly, we have to report another death, that of Dr Rod Hammond, who will be known to anyone who spent time at JCU in the late 1980s. Rod was a character who left an indelible impression on anyone who knew him. Being cut-down in the middle of a successful career is a double tragedy. Histoplasmosis (which some of you might know as 'bat lung disease') is quite common, but fortunately not usually fatal. Nevertheless it is another risk to be aware of when exploring old adits (or caves).

New Members

Thomas Ian Bradbury	Ordinary Member
Michael B Mills	Ordinary Member
Bruce Kenneth Mutton	Ordinary Member
Kenneth Edwin Spring	Ordinary Member
Gustav Nortje	Student Member

Wild Rivers

Do you know about the Wild Rivers proposal?

There has been a notice of intent by the Queensland Government to declare six rivers in Qld as “Wild Rivers”, one of which is the Gregory River catchment in north-west Queensland that covers a vast area around Century. This area is regarded as a world-class zinc belt with considerable potential for yet more resources. The other area of most concern to the mining and exploration industry is the Settlement Creek Wild Rivers area, which includes all of the Westmoreland uranium deposits and is close to the Walford Creek base metal deposit.

If the declaration goes ahead, it would effectively ban all in-stream mining and limit activities within 1km of major streams and within 300m of other watercourses (and watercourses could include even small gullies). It would effectively mean that all mining would be banned except on ridge-tops provided they are more than 300m from a watercourse. Exploration would be limited to hand-sampling (if anyone was bothered to explore). If this had been in place 20 years ago, Century Mine would not have been discovered let alone developed and if it goes ahead there is little chance that another will ever be discovered in the area.

A moratorium on any new EPMs or renewals in these areas came into effect on 12 December 2005.

Nineteen rivers are to be declared before the next election – this will effectively sterilise large parts of the State to exploration and mining.

Further information is on the Department of Natural Resources Mines & Water website at:

<http://www.nrm.qld.gov.au/wildrivers/index.html>.

The exact outlines of the current Wild Rivers areas are now shown on the Administrative Layer on the Department’s Interactive Resource and Tenure maps (IRTM)

http://www.nrm.qld.gov.au/science/geoscience/tenure_maps.html

To see an alternative viewpoint and where the other 13 proposed Wild Rivers are (not to mention how well organised the environmental movement is on this issue), visit the Wilderness Society’s website.

<http://www.wilderness.org.au/campaigns/wildrivers>

The deadline for submissions about the proposal has been extended to 24 April 2006.

GIA’s Gems & Gemology Offers Free Online Archive of 1934–1980 Issues

The Gemological Institute of America (GIA) has announced that its award-winning scientific journal, *Gems & Gemology*, is now offering its entire archive of 1934–1980 back issues free through its website at www.gia.edu.

Even during its early years as a small black-and-white publication, *Gems & Gemology* was a forum for groundbreaking gemological research. The journal featured seminal articles on identification techniques, new gem localities, and synthetics and imitations. Regular contributors included some of the world’s most influential gemologists, such as Basil W. Anderson, Edward J. Gübelin, and Robert Webster, as well as GIA’s own Richard T. Liddicoat and G. Robert Crowningshield.

To obtain free, unlimited electronic access to *Gems & Gemology*’s entire archive of 1934–1980 back issues, go to www.gia.edu/gemsandgemology and click on the “Issues 1934–1980” button. PDF files of all 192 issues are provided, exactly as they appeared on the printed page.

The “Issues 1934–1980” page also contains a useful guide to the first 35 years of G&G: searchable subject and author indexes for every issue through 1968 (the final 12 years are still in preparation). These indexes were compiled as a gift to gemology by a pair of distinguished academics, Dr. Richard V. Dietrich of Central Michigan University and the late Dr. Alfred A. Levinson of the University of Calgary.

To order *Gems & Gemology*, go to www.gia.edu/gemsandgemology or contact Circulation Coordinator Debbie Ortiz toll-free at 800-421-7250, ext. 7142. Outside the U.S. and Canada, call 760-603-4000, ext. 7142.

Obituary - Dr Rodney Hammond

It is with regret that we have to report the recent death in Mexico of Dr Rodney Hammond as a result of complications related to histoplasmosis, which he is suspected to have contracted from entering old mine workings in Sinaloa, Mexico.

A Victorian by birth (Horsham), Rod was educated at All Souls', a boarding school in Charters Towers, and later received a first-class honours degree in geology from Monash University (1982) and a PhD in structural geology from James Cook University (1986). His PhD was on regional mylonites and melange zones in north Queensland, particularly in the Hodgkinson, Broken River and Cape River Provinces. He collaborated with GSQ geologists working in these provinces at the time and had a major influence on the tectonic models that they developed. After completing his PhD he worked for CSIRO, undertaking a structural synthesis of the Bowen Basin, where he postulated the existence of a series of major transfer faults.

His subsequent career was varied. Rod held positions as a Chief Geologist, a Senior Research Scientist at CSIRO (for a second time), an Honorary Research Fellow at UWA, and served on the Industry Advisory Panel of the Australian Geodynamics Co-operative Research Centre. He was the foundation manager of Fractal Graphics, and thereafter was Manager Exploration - USA (for the North group) based in Denver. Rod had also been a Consulting Structural Geologist both privately and internally for the North group based in Melbourne. He later became Exploration Manager South America for Xstrata Copper based in Mendoza, Argentina (following on from Regional Manager - South America for MIM Exploration). He also worked for such companies as Equinox Resources and Eagle Mining. Most recently he was Exploration Manager (Mexico) for Geoinformatics Exploration Ltd (formed in 2002 by the merging of his former employer, Fractal Graphics, and St Andrew Goldfields Ltd of Canada).

His work included regional strategy development and geological framework and targeting programs in terranes as diverse as the Bowen Basin, the Yilgarn Block, the Bergslagen in Sweden; La Pampa in Argentina and the Andean Cordillera, business development activity, as well as a direct involvement in discoveries (e.g. Nimary, Dalgaranga) and projects up to pre-feasibility stage (e.g. Northmet in Minnesota).

At the time of his death he had left Geoinformatics (mid-2005) and was working in Mexico as a consultant, where he lived with his wife (Ofelia) and their two sons (Paul and Patricio). He also had two adult sons from his first marriage.

In spite of his peripatetic career, Rod remained affiliated with the Queensland Division of the GSA. He is remembered with affection by his JCU and GSQ colleagues for his enthusiasm on the outcrop, his willingness to share ideas and his good company around the campfire.

Call for nominations for the GSAQ Dorothy Hill and N.C. Stevens medals

The Dorothy Hill medal is awarded for contributions to the advance of geological knowledge in Queensland through publication of original research. The N.C. Stevens medal recognizes contributions to the geological community and/or promotion of public awareness of Earth Sciences in Queensland.

A written justification that will form the basis for a citation must accompany each nomination and should be forwarded to our secretary. Nominations for the Dorothy Hill Medal should preferably include a comprehensive list of publications by the nominee. Nominations will remain current for a period of five years.

Details of the guidelines are available on the Queensland Division's website at (<http://www.queensland.gsa.org.au>). Nominations will need to be received by mid April for consideration at the April committee meeting in time for the awards night in May.

Call for Nominations for GSAQ Committee

Included with this newsletter, you should have received a nomination form for the GSAQ Committee. Alternatively obtain a copy from our website <http://qld.gsa.org.au>. Election of a new committee will be held at the AGM in April. Please nominate yourself or someone else for a position on the committee or pass it on to someone who you think might like to contribute to the Division. We would particularly welcome younger members and also members from industry.



Geological Society of Australia Inc, Queensland Division

NOMINATION FORM EXECUTIVE COMMITTEE AND REGIONAL REPRESENTATIVES

Nominations for Executive Committee for 2006/2007 are now being accepted.

I,(full name)
agree to accept nomination for the position of (please circle one):

Executive Committee

- Chair
- Vice-Chair
- Honorary Secretary
- Honorary Treasurer
- Membership Secretary
- Newsletter Editor
- Committee Member (no limit to numbers)

Regional Representatives

- Central Queensland
- Northern Queensland
- Northwestern Queensland

Nominated by:

Seconded by:

Signed: Date:

Please **mail or fax** your nominations today.

Paul Blake
Honorary Secretary
C/- Geological Survey of Queensland
Block A, 80 Meiers Rd
Indooroopilly QLD 4068
Fax (07) 3362 9332
Ph. (07) 3362 9363

Further expressions of interest can be sent via e-mail to: paul.blake@nrm.qld.gov.au

QUEENSLAND COMMITTEE 2005-2006

<i>Position</i>	<i>Phone</i>	<i>Fax</i>	<i>E-mail</i>
Chairman			
A/Prof. Sue Golding	3365 1159	3365 1277	s.golding@earth.uq.edu.au
Vice-Chairman			
vacant			
Secretary and Webmaster			
Mr Paul Blake	3362 9332	3362 9343	paul.blake@nrm.qld.gov.au
Treasurer, Membership Secretary & Video Library			
Mr Friedrich von Gnielinski	3362 9362	3362 9343	friedrich.vongnielinski@nrm.qld.gov.au
Committee Members			
Mr Ian Withnall	3362 9363	3362 9343	ian.withnall@optusnet.com.au
Dr Gregg Webb	3864 2804		ge.webb@qut.edu.au
Dr Laurie Hutton	3362 9347	3362 9343	laurie.hutton@nrm.qld.gov.au
Ms Zoe Kyriasis	3896 9387	3362 9343	zoe.kyriasis@nrm.qld.gov.au
Mr Matthew Ng			MatthewN@qm.qld.gov.au
Mr Colin Laing	3202 7064		acmlaing@powerup.com.au
Mr Warwick Willmott	3379 6485		willmott@powerup.com.au
Mr Patrick Creenaune			creenaunep@newcrest.com.au
Central Queensland Regional Representative			
Mr Kyle Waye			Kyle.J.Waye@mainroads.qld.gov.au
North Queensland Regional Representative			
Aldo Van Heeswijck			aldo.vanheeswijck@jcu.edu.au
Northwest Queensland Regional Representative			
vacant			
Newsletter Editor			
Mr Ian Withnall	3362 9363	3362 9343	ian.withnall@nrm.qld.gov.au
Education Subcommittee			
Mr Matthew Ng			s350788@student.uq.edu.au
Awards Convenor			
Dr Laurie Hutton	3362 9347	3362 9343	laurie.hutton@nrm.qld.gov.au
GSA Publications			
Mr Warwick Willmott	3379 6485		willmott@powerup.com.au

General correspondence should be addressed to our secretary:

Mr Paul Blake, GPO Box 1820, Brisbane Qld 4001.

For subscription and address changes please contact the GSA's main office:

Sue Fletcher, Business Manager, GSA, 706 Thakral House, 301 George St, Sydney, NSW 2000.

PHONE: (02) 92902194

FAX: (02) 92902198

Email: sue@gsa.org.au

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Our newsletter is circulated to about 500 members across Queensland, as well as being posted on our web page. It represents an ideal opportunity to advertise your company and services.

Size	width x height	1 issue	12 months (5 issues)
Full page	17.2 x 24.1 cm	\$120	\$300
Half page	17.2 x 11.9 cm or 8.4 x 24.1 cm	\$75	\$375
Quarter Page	17.2 x 5.8 cm or 8.4 x 11.9 cm	\$40	\$200
Business card	8.4 x 5.8 cm	\$20	\$100
Pamphlets and Flyers (as inserts)		~ \$100	