

PRESIDENT'S MESSAGE

1999 AGM Presidential Address Annual General Meeting, Vancouver, BC, April 13, 1999



Erick Weiland

Welcome to the 19th IGES and the Annual General Meeting of the Association of Exploration Geochemists. It is wonderful to see everyone that has been able to join us this afternoon and throughout this week. My best wishes go out to those who are unable to attend this meeting and hope that you will be able to make it to future AEG-sponsored symposia and meetings. It is exciting to be here and participate in this symposium and to honor those members that will receive AEG awards and recognition this week.

Since becoming President in January, I have had an opportunity to review the purpose of AEG as stated in our by-laws. When one evaluates the activities of the AEG with respect to our stated purpose, it becomes very clear that we are doing a great job of fulfilling our charter. There are improvements to be made and lots of work to do, but all-in-all the organization is healthy. Through the Journal and **EXPLORE** we "advance the science of geochemistry, foster common scientific interests, facilitate the acquisition of professional knowledge and information, promote the interchange of ideas, encourage research and development of exploration methods". These publications provide the foundation of our contribution to the geochemical community. AEG is also very much involved with other activities which "promote and maintain high standards of training and ethics among members, and advance the status of the profession of exploration geochemistry" through our membership and involvement in the Canadian and Australian Geoscience Councils. Additionally, the symposia and short-courses that AEG sponsor or co-sponsor contribute significantly to our stated purpose. Plus the symposia provide a chance to meet face-to-face with each other in an enriching environment. The Distinguished Lecture series provides a wonderful forum to bring new ideas to the profession. This is truly a professional association having a positive influence throughout the geochemistry community and the world.

By now you should all be aware that we are about to embark on a major change of course. This will be the last symposium volume to be published in the Journal of Exploration Geochemistry under the guidance and official auspices of the AEG. Starting next year, a new journal will be our official voice: **GEOCHEMISTRY: Exploration • Environment • Analysis**. This transition will require extra effort on everyone's part to make it smooth and effective. However, it provides AEG with an excellent opportunity to have more say in the growth, distribution, and direction of the Journal than would have been possible through Elsevier. One of the more exciting aspects of

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AGENDA

- Annual General Meeting**
Vancouver, BC — 5:00pm, Tuesday April 13th, 1999
Held in conjunction with the 19th IGES
- I. Call to Order. Establishment of Quorum.
 - II. Introduction of Executive.
 - III. Establishment of Agenda.
 - IV. December 16, 1998 AGM Minutes
 - V. Business Manager Report - B. Arseneault
 - VI. Reports of Executive/Council
 - Past President's Report - P. Simpson
 - President's Report - E. Weiland
 - Secretary's Report - D. Smith
 - Treasurer's Report - G. Hall
 - Regional Councilor Report - P. Taufen
 - VII. Editor - Journal of Geochemical Exploration - G. Hall
 - VIII. New Journal: **GEOCHEMISTRY:**
Exploration • Environment • Analysis - G. Hall
 - IX. Newsletter - T. Nash and S. Marsh
 - X. Committee Reports
 - Admissions and Applications - L. James
 - Bibliography - G. Closs
 - By-Laws Revision - D. Garnett
 - Distinguished Lecturer - D. Garnett
 - Environmental - D. Glanzman
 - Geoscience Councils
 - Canada - B. McClenaghan
 - Australia - G. Murphy
 - Medal Awards - P. Simpson
 - New Membership Committee - S. C. Smith
 - Publicity - B. McClenaghan
 - Short Course - C. Dunn
 - Student Paper Competition - I. Robertson
 - Symposium Committee - F. Siegel
 - 19th IGES (1999) Vancouver
 - Reno Meeting 2000
 - 20th IGES (2001) Chile
 - 21st IGES (2003) Ireland
 - XI. Introduce 1999 Councilors - E. Weiland
 - XII. Motion to Destroy Ballots
 - XIII. Appointment of Auditors for 1999
 - XIV. Other Business

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Information for Contributors to EXPLORE

Scope

This Newsletter endeavors to become a forum for recent advances in exploration geochemistry and a key informational source. In addition to contributions on exploration geochemistry, we encourage material on multidisciplinary applications, environmental geochemistry, and analytical technology. Of particular interest are extended abstracts on new concepts for guides to ore, model improvements, exploration tools, unconventional case histories, and descriptions of recently discovered or developed deposits.

Format

Manuscripts should be double-spaced and include camera-ready illustrations where possible. Meeting reports may have photographs, for example. Text can be sent as an attached document by email to tnash@helios.cr.usgs.gov; Word97 format or WordPerfect formats are preferred. Please use the metric system in technical material.

Length

Extended abstracts may be up to approximately 1000 words or two newsletter pages including figures and tables.

Quality

Submittals are copy-edited as necessary without re-examination by authors, who are asked to assure smooth writing style and accuracy of statement by thorough peer review. Contributions may be edited for clarity or space.

All contributions should be submitted to:

EXPLORE

c/o J.T. Nash, Box 25046, MS973, Denver Federal Center
Denver, CO 80225, USA

Information for Advertisers

EXPLORE is the newsletter of the Association of Exploration Geochemists (AEG). Distribution is quarterly to the membership consisting of 1200 geologists, geophysicists, and geochemists. Additionally, 100 copies are sent to geoscience libraries. Complimentary copies are often mailed to selected addresses from the rosters of other geoscience organizations, and additional copies are distributed at key geoscience symposia. Approximately 20% of each issue is sent overseas.

EXPLORE is the most widely read newsletter in the world pertaining to exploration geochemistry. Geochemical laboratories, drilling, survey and sample collection, specialty geochemical services, consultants, environmental, field supply, and computer and geoscience data services are just a few of the areas available for advertisers. International as well as North American vendors will find markets through **EXPLORE**.

The **EXPLORE** newsletter is produced on a volunteer basis by the AEG membership and is a non-profit newsletter. The advertising rates are the lowest feasible with a break-even objective. Color is charged on a cost plus 10% basis. A discount of 15% is given to advertisers for an annual commitment (four issues). All advertising must be camera-ready PMT, negative or file on disk. Business card advertising is available for consultants only*. Color separation and typesetting services are available through our publisher, Vivian Heggie, Heggie Enterprises.

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PAST-PRESIDENT'S REPORT

The past year lacked the added benefit and stimulation created by major meetings. The opportunity was therefore taken to consider, plan and consolidate activities, priorities and objectives for the future wellbeing of the AEG. In particular, extensive discussions were held concerning AEG's publication arrangements for the Journal of Geochemical Exploration. AEG has decided to terminate its publication contract with Elsevier at the end of 1999 and to begin a new journal with a new title in 2000, which has already been announced in **EXPLORE**. We are negotiating with a new not-for-profit Learned Society publisher to undertake this and we hope to announce shortly the results of this selection process.

The membership will benefit from the development of a new journal in which the AEG will hold benefits of copyright combined with greatly reduced charges to library subscribers. This important change combined with the increasing interest in environmental aspects of geochemical exploration will help to ensure that the AEG publications will continue to be found in libraries throughout the world and to become increasingly accessible through electronic publication in the future.

This year was a turning point for the AEG in other very important ways with the retirement of Eion Cameron as Editor in Chief after a lifetime's work on behalf of the JGE, and, likewise, Sherman Marsh has retired as Secretary after many years of service to the AEG. Both will be missed for their unique contributions to the AEG.

Particular thanks are due to the officers of the AEG, members of Council, the Regional Councilors, Committee members, and the business staff for their encouragement and able support during the previous year.

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President's Message

Continued from page 1

the new Journal will be its availability in electronic format. Additionally, the Journal will now cost libraries and institutions much less than the amount charged by Elsevier (and beyond the control of AEG). I ask that every member help the Editorial Board in this transition period. The Editorial Board, both for JGE and for GEEA, will be very busy and can use a hand in obtaining and reviewing papers. Please assist by letting your colleagues know that this transition will occur at the end of this year (papers submitted in 1999 will be directed to JGE and papers submitted in 2000 will be directed to GEEA). Additionally, for those of you who are near a library, talk to the person responsible for journal selection and ordering and let them know of these changes and, if necessary, help them to convince their board to subscribe to GEEA.

As you can see from the agenda, AEG has a number of committees. Only two of these are standing committees: Admissions and New Membership. Admissions continues to run well under the guidance of Lloyd James. The New Membership committee was inactive and I have appointed a new Chairman, Shea Clark Smith to oversee and re-vitalize this committee. Through the next year the remaining committees will be evaluated to ensure that they continue fulfill their mandates. Part of that review is the presence of the reports from each committee chairman on last years activity published in **EXPLORE** prior to this meeting. If any members have questions or suggestions I suggest that they contact the committee chairman or myself so we can better serve AEG.

One additional item of major significance is the revision (yes, once again) of the by-laws. Several inconsistencies arose out of the last revision which are now being synchronized. Additionally, some further thought has been given to other aspects of the by-laws (e.g. Regional Councilors, etc.). When you are sent the revised draft for approval, please read it carefully. This is YOUR association, make sure that the by-laws reflect the type and form of association you want to have. Please note the provisions in article 12.01 regarding the procedures that will be used to complete this revision. If you have suggestions that need to be evaluated prior to finalization of this revision, please do not hesitate to contact me or David Garnett with the information.

I am glad to be representing you, the members, in a time when communications are easier and much faster than in the past. With the fax machine, Internet and the availability of email in most portions of the world and to most professionals, lack of the means for timely communications is no longer the constraint it had been previously. Members and non-members alike can now access our Web page (which has been recently updated by Beth McClenaghan. Important information can be found on the web site — visit it often. Please feel free to email, phone, fax, or send a letter to myself or a Council member with your ideas and suggestions. As your representatives, we will bring the suggestions before the full Council so that consideration may be given to your ideas and thus ensure that your voice is heard. Thank You!

Erick Weiland President 1999

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1998 ANNUAL GENERAL MEETING

Minutes of the 1998 Annual General Meeting of the Association of Exploration Geochemists, held by telephone conference on December 16, 1998

- I. **Call to order** President Peter Simpson called the meeting to order at 3:05 PM MST. Fourteen AEG Fellows were present and one proxy had been received. The total of fifteen met the minimum for a quorum.
- II. **Minutes of 1997 AGM** Minutes from the 1997 AGM were not available. It was generally agreed that, if possible, the 1997 minutes will be published in **EXPLORE** along with the minutes from the 1998 AGM at a later date. Both sets of minutes will be presented for discussion and approval at the 1999 AGM to be held in conjunction with the 19th International Geochemical Exploration Symposium in Vancouver during April 1999.
- III. **President's Report** President Peter Simpson reported on the activities of the AEG over the past twelve months. There were no international meetings within the past year, but much planning and preparation for the future development of the AEG have taken place. In particular, discussions were held concerning AEG's publication arrangements for the Journal of Geochemical Exploration. This year, AEG agreed to terminate its publication contract with Elsevier at the end of 1999 and to begin a new journal with a new title, which has already been announced in **EXPLORE**, in 2000. We are still in the process of selecting a publisher to do this and we hope to announce in the next few months the results of this selection process. The President then thanked the other officers of the AEG, members of Council, the Regional Councilors, Committee members, and the business staff for able support during his tenure.
- IV. **Secretary's Report** Secretary David Smith recognized the contributions of his predecessor, Sherman Marsh, for a decade of service to the AEG as Secretary. The AEG Council held five regularly scheduled meetings during the course of the year and held one extraordinary meeting. The subject that took up most of these meetings was that of the publication contract with Elsevier and the efforts to establish a new journal. New Councilors were brought on in January and Paul Taufen was selected as the new Second Vice President. Preparations were completed for the 19th International Geochemical Exploration Symposium to be held in Vancouver in April 1999. Discussions are well underway for the 20th IGES, which will likely be held in Chile or Argentina in 2001, and preliminary discussions have been held regarding holding the 21st IGES in Ireland in 2003. Other upcoming meetings to be co-sponsored by AEG include 1) Geology and Ore Deposits 2000, sponsored by the Geological Society of Nevada, which will be held in May 2000; and 2) the 5th International Symposium on Environmental Geochemistry to be held in Cape Town,

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Annual General Meeting Minutes

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South Africa in 2000. Gwendy Hall is the AEG Distinguished Lecturer for 1998-1999.

- V. Treasurer's Report and Business Manager's Report** Betty Arseneault reported that the total paid membership for 1998 was 999. She had just done the membership renewal drive for 1999. A total of 981 letters were mailed to individual members who had valid memberships for 1998. Another 150 letters were sent to individuals who had not renewed for 1998 but who were members in 1997. Eighteen letters were sent to existing corporate members. AEG's current account balances are: CIBC Canadian \$2,700; CIBC US \$5,200; Canada Trust Canadian account \$1,450. Approximately US\$5,000 will be required to reconcile book order accounts with Elsevier. The Green Line Investment Account is US \$377,036.28.

A brief discussion ensued regarding placing an announcement in **EXPLORE** advising members that if they need back issues of JGE or special books from Elsevier they would likely get a better price by ordering from the AEG Business Office before the publication contract with Elsevier expires at the end of 1999. Those attending the AGM were unanimous in their feeling that this information would be beneficial to the membership and should be placed in **EXPLORE**.

- VI. Introduction of the 1999 executive** At this time, President Simpson turned the meeting over to the 1999 AEG President, Erick Weiland. President Weiland noted that election of Councilors for 1999 was ongoing and would be reported as soon as ballots are received and counted. He also reported that he had heard from all except one of the current Regional Councilors. All of these are willing to continue in their position with the exception of Chris Oates in Chile. Paul Taufen, as First Vice President, will take over coordination duties with the Regional Councilors.

- VII. Appointment of auditors** It was moved (C. Smith) and seconded (A. Coope) that McKay, Duff & Company of Ottawa be approved as auditors for 1998. The motion was passed unanimously.

A discussion ensued regarding publishing the auditors' report in **EXPLORE** upon approval by Council. It was agreed that the 1997 report would be published in the January issue of **EXPLORE**. It was also agreed that AEG should try to have the

auditors finalize, if possible, the 1998 report by the next AGM in Vancouver, April 1999.

- VIII. Other business** A. A. Coope suggested that the President's Report, Secretary's Report, Treasurer's Report, and Business Manager's report from the Annual General Meeting should be published in **EXPLORE**.

- B. A discussion was held regarding future discussions with potential publishers of AEG's new journal.
- C. A discussion was held regarding logistics for nominations for the AEG Gold Medal.

- IX. Adjournment** It was moved (M. Chaffee) and seconded (D. Smith) that the meeting be adjourned. The President asked for a vote and the motion passed unanimously. The meeting was adjourned at 3:40 PM MST.

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AEG SECRETARY'S REPORT

This past year saw Sherman Marsh, the AEG's Secretary for the better part of the last decade, decide it was time to devote more time to his golf game and less time to documenting the activities of the AEG. The Association will be hard-pressed to find another member willing to take on the myriad of responsibilities that Sherman assumed over the years. We owe him a tremendous debt of gratitude for his untiring service.

The AEG Council held regular meetings by telephone conference in February, April, July, September, and November of 1998 and in January of 1999. One extraordinary council meeting was held, also by telephone conference, in March 1998. The publications contract and establishing a new journal were the subjects that took up the majority of time at each of these meetings.

The 1998 Annual General Meeting was held for the first time by telephone conference in December. It was remarkable in that only one member who was not an officer or a member of Council participated in the meeting. The minutes of this meeting are published elsewhere in this issue of **EXPLORE**.

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Member discounts on Elsevier Publications

Members should contact the AEG business office for the purchase of geochemistry books and back issues of Journal of Geochemical Exploration, published by Elsevier. Member discounts listed in **EXPLORE** will continue through 1999.

Secretary's Report *Continued from Page 4*

Voice-recognition software was purchased this past year in an attempt to reduce the amount of time needed to produce the minutes of each Council meeting.

David B. Smith

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AEG TREASURER'S REPORT

The auditor's report of the AEG's finances in 1998 will not be available until the Spring of 1999. We work on the calendar year but our accounts with our publisher, Elsevier Science, are not finalised until May of the following year. Therefore, I have summarised here the main figures from the last report pertaining to the year 1997. Our auditors are the Chartered Accountants - McCay, Duff & Co., based in Ottawa. The details of their report are available from me or the AEG office; I would be happy to send them to any AEG member upon request. The categories in the report (e.g. office expenses, workshops, publications, dues) are broken out in much more detail in the office files which are kept by Al Arseneault, Betty's husband. Hitherto, it has not always been straightforward to assign these detailed categories to those generalised by the auditors. This situation is being improved so that those not familiar with the day-to-day operation of the office will be able to read the auditor's report with sufficient clarity.

Summary of AEG finances for 1997 (in US\$)

Revenues (dues, symposia, interest÷nds, royalties.)	\$172,060
Expenditures (office, salaries, publications, newsletter)	\$ 93,474
Net revenue	\$ 78,586
Balance at beginning of the year	\$271,504
Balance at the end of 1997 (liabilities taken into account)	\$350,090

As of Dec 31, 1998, the amounts in the various accounts are as follows:

Greenline Investment, US	\$376,457.19
CIBC, US	\$ 635.82
CI BC, Cdn	\$ 872.72
Canada Trust, Cdn	\$ 705.43

Thus, the financial position of the AEG is healthy, a situation which is comforting as we head into 2000, a time of change in our publishing house and in the journal. Thanks are due to Al and Betty Arseneault in the AEG office, to McCay, Duff & Co, and to our wise overseer of investments, Eion Cameron.

Gwendy E.M. Hall

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BUSINESS MANAGER'S REPORT

Our membership-base remained strong in 1998 with a total of 1,005 memberships processed. This is slightly down compared to 1,096 for 1997. This total comprises 320 Fellows (voting members), 647 Members (affiliate), 17 Corporate, 15 Student, 4 Explore only and 2 Honorary memberships. Membership renewals for 1999 are keeping pace with last year with the present total of 614 as of February 24, 1999.

Business dealings seemed to improve substantially with Elsevier Sciences during 1998, with a noticeable reduction in the number of membership complaints about non-delivery of journals and book orders. In prior years, we experienced ongoing difficulties with Elsevier with respect to address changes and adding new members to their mailing list. Costs and availability of book orders also were not always transparent. Of late, I have received a number of complaints regarding soiled or damaged journals being delivered. I would appreciate hearing from any member who has had difficulty in getting his/her journals.

I managed to do some house-cleaning by getting rid of 22 boxes of archived AEG membership files and records which had been collected from office moves in Toronto and Vancouver to Nepean. Thanks to Gwendy Hall and Beth McClenaghan for locating some storage space at the Geological Survey of Canada.

There were no significant equipment purchases made during 1998 but we have purchased a new computer in 1999. We will also be upgrading our accounting and word-processing software, and converting the membership database from Alpha 4 to Microsoft Access. All of this is being done in preparation for Y2K.

Recently, we completed an analysis of our membership database as it existed from 1997 to the present. We used a sampling of 1138 members, comprising 340 Fellows (voting members), 751 Members (affiliate), 22 Corporate, 18 Student, 5 Explore and 2 Honorary memberships. In particular, we studied the membership in terms of employment, fields of interest and specialties, as reported in the membership data forms submitted with their dues renewals.

The numbers in brackets beside the employment codes represent the breakdown from a reported sampling of 703 members. Beside each interest or specialty code, the first number in brackets represents the total number of members who selected this as an interest or specialty. The second number represents the total members who ranked this as their first interest or specialty.

Employment	
Government	(110)
Consultant	(198)
University	(84)
Industry	(284)
Retired	(27)

Interests

1. Drainage (streams and lakes)	(530, 286)
2. Soils	(612, 142)
3. Lithogeochemistry	(595, 177)
4. Biogeochemistry	(216, 19)
5. Gas Geochemistry	(132, 12)
6. Heavy minerals	(381, 37)
7. Statistical methods	(427, 28)
8. Analytical instrumentation	(143, 17)

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Business Manager's Report

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9. Analytical procedures	(262, 23)
10. Pollution	(202, 31)
11. Theoretical	(85, 4)
12. Other	(36, 11)

Specialties

1. Mineral Exploration	(767, 686)
2. Analytical	(309, 43)
3. Environmental	(356, 51)
4. Computer	(295, 13)
5. Agricultural	(40, 1)
6. Terrain (Quaternary)	(121, 7)
7. Petroleum	(39, 8)
8. Groundwater	(139, 4)
9. Other	(24, 2)

We plan to use this information to gain a better understanding of our membership with the overall objective of improving communication and maximizing service to the members.

I look forward to another year of serving the membership to the best of my ability and invite each of you to contact me if I can be of any assistance.

Betty Arseneault

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REGIONAL COUNCILORS REPORT

To begin the Regional Councilors report, I would first like to review who is currently serving as regional councilor. The individuals are listed here:

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I would like to thank the regional councilors for their efforts in representing the AEG membership around the world. These individuals volunteer their time to help make the AEG effective, and the membership is invited to contact regional councilors regarding concerns, events, or items of interest in geochemistry.

As First Vice President, Paul Taufen has assumed a coordinator role for the AEG regional councilors. The first step in this role was to contact the regional councilors, and request some feedback on activities in geochemistry within each region, and some input regarding how the AEG can be more effective in each area.

A number responses from regional councilors are summarised in this note.

From Scandinavia, Clemens Reimann reported that most geochemists are now working in environmental geochemistry, and few are active in minerals exploration, with possible exception in Finland. The isolated focus on exploration geochemistry by the Association is considered unfortunate in view of the larger numbers of geochemists now working on environmental issues in Scandinavia, and it is believed that our association needs to stress environmental geochemistry more to remain relevant to members there. It was suggested to have yearly reports submitted for distribution by regional councilors that would allow local geochemists to stay in step with what is

happening in their area, and offer information to other geochemists around the globe.

From Southern Africa, Charles Okujeni reports that more geochemists are working in consulting firms or alone as universities and research institutes are becoming less active. Communication in this region is fundamental to bringing geochemists into closer contact. Only 4 of the 30+ AEG members in the region have e-mail addresses, and the association is now contacting the Southern Africa membership to encourage better e-mail contact. Professor Okujeni is planning a series of workshops in geochemistry beginning in June of this year to call attention to the role the AEG can play in the mining and environmental industries in Southern Africa.

The three councilors from Australia, Leigh Bettenay, Mark Elliott, and Nigel Radford have been very active. Among others productive activities, they have aided several Australian geochemists in submitting technical notes to EXPLORE. They currently are on the planning committee for a seminar to be held May 11 in Perth: *Exploration Geochemistry for the New Millennium*. Plans are being finalised at this time; for more information contact these councilors.

Chris Johnson from the U.K. and Ireland returned recently from a regional mapping program in Morocco. Chris stressed the role of regional councilors in providing a point of contact for information regarding the AEG, while canvassing technical papers and providing local arrangements for visiting AEG distinguished lecturers.

Boudewijn de Smeth from the Netherlands stressed the necessity for government agencies and industry to recognize the importance of geochemistry in resolving environmental issues. Some of the traditional centers of exploration geochemistry expertise at Dutch universities and the Biliton Research Geochemistry laboratory are less active today, as problem solving in the environmental arena is of increased demand compared to pure minerals exploration.

Difficulties in telecommunications were a major impediment for Tawsaporn Nuchangong and Guangsheng Yan. Unfortunately this limited their activities as Council was unable to provide them with timely information required to assist in the various decision making processes over the course of the year.

We are losing Chris Oates as the Regional Councilor for South America as he is returning to England. Thank you, Chris, for all your efforts on behalf of the AEG in this region. Your active participation has been much appreciated. Fortunately, Alvaro Puig Goody has stepped up to the plate and agreed to stand for nomination to the position by Council. This is an especially important time for a willing and active Regional Councilor for this region as the 20th IGES (2001) will be held in Santiago Chile.

I would like to thank the regional councilors for their thoughtful comments. My impression from the responses is that some opportunities to make our association more effective have been identified. We can work to improve communication, and aim to integrate better in the environmental disciplines.

Paul Taufen

Geoscience Technology Group
Western Mining Corporation
Australia (moving Spring 1999)
email: Paul.Taufen@wmc.com.au



JGE EDITOR'S REPORT

In April of 1998, the JGE editorial office was moved from its long-time location at Ottawa University to Nepean, coinciding with the transfer of editorial leadership from Eion Cameron to Gwendy Hall and of editorial assistant from Anne Brown to Marcia Scrimgeour. The AEG is indebted to Eion and Anne for their many years of selfless dedication to producing a journal of such high quality as the JGE. Thanks also to Ottawa University for their generosity over the years, in allowing us space, access to the fax and mail system, help on computer problems, and the congenial atmosphere amongst staff and students. The new fully equipped office is actually in Marcia's house, which is located a stone's throw from the AEG office, facilitating easy exchange of information. Aiding Gwendy in fulfilling Eion Cameron's previous role are four co-editors: Charles Butt of CSIRO in Australia; K. Fletcher of the Univ of British Columbia in Canada; Peter Simpson of the British Geological Survey (emeritus) in England; and John Farmer of the Univ of Edinburgh in Scotland.

As members will have read in the various Presidents' reports in **EXPLORE**, Council's attention has been focused this past year on the journal, almost to the exclusion of other AEG matters. Our contract with Elsevier Science ends Dec 31, 1999 and will not be renewed owing to differences in policy, perspective and goals of the two organisations. As Elsevier owns the

title, we have selected a new one **GEOCHEMISTRY • Exploration • Environment • Analysis** to describe the scope of the new AEG journal. Elsevier has made it clear that they will continue to publish in 2000, without the AEG, under the old title and a new editorial regime. The new AEG journal will be published by a non-profit society which will allow us much more freedom, for example to reduce drastically the ludicrously high current institutional subscription price. The final volume of the JGE under the AEG will be 67, dedicated to the Proceedings of the 19th IGES to be held in Vancouver in April. It will actually appear early in 2000, though it will be part of the 1999 subscription year. The penultimate volume will comprise Proceedings of the 18th IGES held previously in Jerusalem. The current volume, 65, contains regular papers.

We will update the membership frequently, via our website (aeg.org) and **EXPLORE**, as our plans with the new publisher become firm.

Gwendy E.M. Hall

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NEWSLETTER EDITORS' REPORT

In 1998 four issues of **EXPLORE** were published, each comprising 24 to 28 pages. A highlight for the year was number 100 which contained outstanding color maps and graphics. This color spread was possible for the third time through the support of Geosoft Inc. of Toronto who paid an extra 50 percent of the customary fee to cover the costs of production in color. This color issue, as well as the other traditional ones, benefited from the skills of our graphics and production editor, Vivian Heggie. Advertising remains an important source of funding for **EXPLORE**, covering approximately 80 percent of our costs.

The editorial staff in Denver is looking for a few energetic and creative associates to expand the scope of **EXPLORE**. We continue to call for more technical report submittals, and regional associate editors in Australia, Europe, Western Canada, or elsewhere may have more success rounding up interesting news and technical notes than we can. With Sherm's redirection to activities beyond geochemistry, we are looking for a replacement editor as well; in this world of telecommunications, the new editor need not be down the hall. Essential skills: effective use of telephone, friendly persuasion, and/or arm strength.

Sherman Marsh

J. Thomas Nash

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ADMISSIONS COMMITTEE REPORT

We have received and reviewed forty-nine applications for membership (8 Fellows, 38 Members, and 3 Students) during 1998. This is a significant decrease in total applications from the previous year although the number of applications for voting status is the same. This is a common occurrence in the years between the International Geochemical Exploration Symposia. Hopefully, this year will see an upturn.

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BIBLIOGRAPHY COMMITTEE REPORT

Bibliography Reviews were supplied for each of four issues of Explore in 1998. There is an increase in local symposium workshop proceedings volumes that would be of interest to all. AEG members and other readers of Explore are encouraged to bring these and other publications of interest to the attention of the Bibliography Committee for inclusion in future compilations. Direct submittals to Graham Closs (Chairman) at lcloss@mines.edu.

Plans for 1999 include continuation of Bibliography Review contributions to Explore and making these available on the AEG Web site. Contributions are always welcome.

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BYLAWS COMMITTEE REPORT

Section 7.05 of the by-laws requires that they should be reviewed at an interval not to exceed ten years from the last review. Although it is only six years since the last review a number of anomalies exist, particularly now that the new President and Council take up their positions at the start of each new calendar year. The By-laws Committee (David Garnett, Sherman Marsh and Dick Glanzman) is in the process of reviewing possible changes and expects to make recommendations to Council in the near future.

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DISTINGUISHED LECTURE SERIES

The aim of the Distinguished Lecture Series is to promote interest in exploration geochemistry to as wide an audience as possible. Since the inception of the series the AEG has been fortunate in being able to call upon the services of members with international profiles who have delivered consistently high quality lectures to a variety of audiences in many parts of the world. Charles Butt and Ray Smith made an outstanding contribution in 1996-97 and Gwendy Hall has now taken up the challenge. She has already completed a highly successful tour of Australia, delivering lectures in Perth, Melbourne, Newcastle and Sydney on 'Selective leaching - a tool in identifying an element's provenance' and 'Cost effective protocols for the collection, filtration and preservation of water samples collected in hydrogeochemical surveys'. Other such presentations were made in 1998 in Kingston, Canada (Spectroscopy Society of Canada) and Denver, USA (Cypress Amax). Venues planned for 1999 include Europe, South Africa and Scandinavia.

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ENVIRONMENTAL COMMITTEE

There has been little activity from the Environmental Committee following the Vail meeting in 1998, which was a major effort. A short course was presented on exploration geochemical sampling to serve both exploration and environmental purposes. Our AEG members have made significant contributions to the Association with recent issues of the journal specifically devoted to excellent papers on geochemistry useful for both exploration and environmental work. It is anticipated that this will continue since many of our members now work in both arenas. The committee will be more active this year; John Fortescue and Linda Bliss (PTI) have volunteered to join the Environmental Committee.

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Exploration Geochemistry for the New Millenium

A seminar featuring sessions on Geo-analysis, New Techniques, Interpretation and evaluation, and Case histories will be held in Perth, Australia, on May 11, 1999. Several keynote speakers will present invited papers. The seminar is co-sponsored by AEG in collaboration with several Australian societies. For further information, contact AEG Regional Councilor Leigh Bettanay (lfbettenay@compuserve.com) or the coordinator Graham Jeffress (Tel: 08-9424-3500; email: gjeffress@auroagold.com.au).

AUSTRALIAN GEOSCIENCE COUNCIL

The AGC, formed in 1981, represents eight major Australian geoscientific societies (Association of Exploration Geochemists; Aust. Inst. of Mining & Metallurgy; Aust. Geoscience Information Assn.; Aust Society of Exploration Geophysicists; Geol. Soc. of Aust.; Inst. of Aust. Geographers; and, Petroleum Exploration Soc. Aust.), and 18 other associate earth science organisations, representing about 7000 members of the Aust. Geoscience profession.

The AGC is a member of FASTS (Federation of Australian Scientific and Technological Societies) which aims to have a significant influence in the formulation of science and technology policy in Aust., and represents over 50,000 scientists. FASTS has two geoscientists on the council.

The role of the AGC has been recognised as the peak body for the geoscientific professions by the Australian Research Council, the Dept of Education, Training and Youth Affairs, and FASTS.

Mission: The AGC aims to provide a forum in which representatives of geoscientific societies and organisations cooperate to encourage the development of the earth sciences on behalf of the Australian community, in recognition of the vital contribution that the application of geoscience makes to our quality of life and economic prosperity. The objectives are to:

- Provide expert apolitical advice to government on matters involving earth sciences and their application

- Promote development of sound scientific policies for effective earth science education and research
- Provide the public with greater appreciation of the economic, environmental and cultural values of earth sciences.

Current and recent activities include:

- Established a National Geoscience Education Taskforce to address geoscience needs in the tertiary sector, and identify opportunities for the AGC in promoting geoscience education.
- Issued a set of position statements on a range of issues relevant to the understanding and perception of the role of geoscience in the community.
- Initiate a survey of geoscience members in the AGC to generate an up-to-date picture of the geoscience community in Australia.
- Provided a detailed response to the Minerals Council of Australia's 1998 National Tertiary Education Taskforce discussion paper "Back from the Brink - Reshaping Minerals Tertiary Education"
- Made a detailed submission and response to the Federal Gov't's. Marine Science and technology draft plan.
- Lodged a submission on climate change issues with the Ambassador for the Environment for the 1997 Summit.
- Established an AGC Web Site for information dissemination at <http://www.agso.com.au/agc>

Other items to note is that membership subscriptions have risen from Aus\$1.40 to \$1.80 per Aust-resident member of the AEG. The council moves to a different state every two years (Adelaide to Brisbane in 1998) to ensure fresh participation and new representatives, while keeping costs to a minimum.

Outstanding issues needing attention include; a) Current levels of tertiary education funding in the sciences b) Adequate Geosciences profile in FASTS c) Establishing a database for the proposed census, and its design.

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Manager Geochemistry & TIS - Australia

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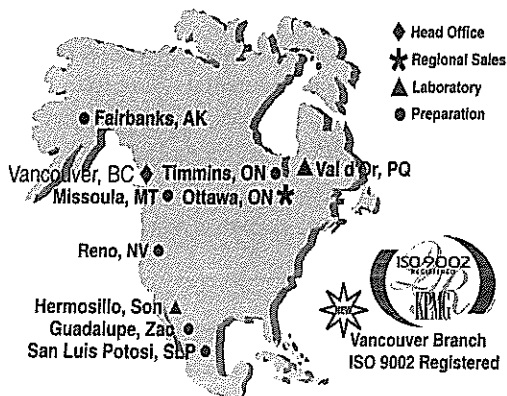
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CANADIAN GEOSCIENCE COUNCIL

The Association of Exploration Geochemists is one of 12 member societies of the Canadian Geoscience Council (CGC). The CGC serves the national and regional interests of all Canadians and serves the specialized disciplines of earth science practiced by some 14,000 scientists in Canada. The Council represents these scientists by means of its membership of delegates from the national scientific and technical societies in the earth sciences, scientists from industry, from the universities, and from government agencies concerned with the geoscience of the natural environment of Canada and of its mineral, energy, and water resources. The Canadian Geoscience Council:

- Advises the general public on matters of significance to Canada and to the world that involve geoscience and geoscientists

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Canadian Geoscience Council

Continued from Page 10

- Provides expert advice to governments at the federal and provincial level
- Promotes scientific awareness and education in Canada and encourages talented young Canadians to consider careers in the earth sciences
- Organizes Canada participation in non-governmental global cooperative programs in the earth sciences
- Provides an accountability and reporting centre for major cooperative geoscience projects in Canada and for Canadian contributions to similar international projects.

Canadian Geoscience Council (CGC) held their first meeting of 1999 on January 23rd on Ottawa, Ontario. AEG president Erick Weiland attended the meeting along with AEG rep Beth McClenaghan. Two major issues were discussed at the meeting. First, the CGC was asked to review a draft report prepared by the Geological Survey of Canada on its Earth Science Sector (ESS) Science and Technology (S&T) Capacity For The Next Decade. All member societies of the CGC, including the AEG, were asked to provide feedback on the future roles of both the GSC and the ESS of Natural Resources Canada. The AEG review committee, lead by Steve Amor, completed its report by March 1, 1999 and it will be posted on the AEG web site. The second major item of business was a discussion on the future direction of the Canadian Geoscience Council, including new sources of funding, narrowing its focus to issues concerned with the "science of geoscience" and,

broadening its support to include five new sectors, Minerals, Energy, Government, Academic, Environmental/ Geotechnology, in addition to the existing Learned Society sector. The CGC wants feedback on its restructuring plans and input as to what issues the AEG think are important to be raised at Mines Ministers Meetings and elsewhere. Details about past and upcoming CGC meetings as well as current CGC issues are provided on the CGC web site at: <http://sciborg.uwaterloo.ca/earth/cgc/>.

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MEDALS AWARD COMMITTEE

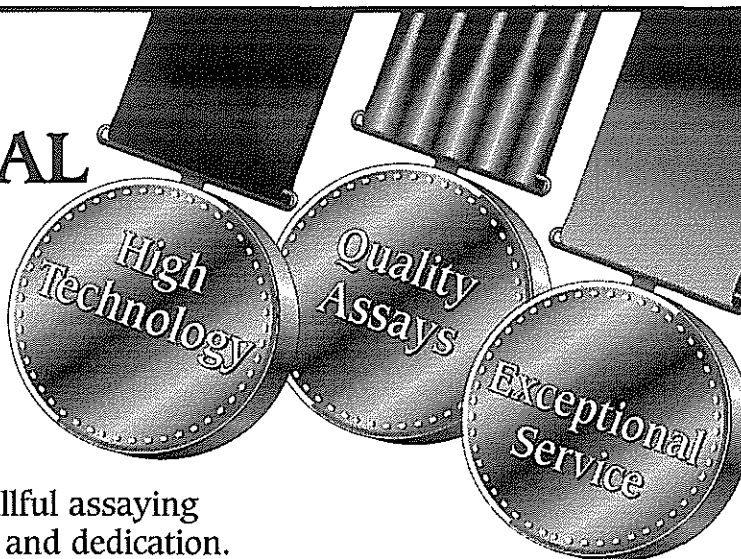
The AEG Gold Medal is awarded to Robert W. Boyle in recognition of his lifetime of outstanding achievement in exploration geochemistry, during which, through his leadership and productivity, he played a key role in developing the science in Canada, advancing our knowledge of precious metals, applying geochemistry to mineral exploration and to environ-

Continued on Page 12

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PUBLICITY COMMITTEE

The new AEG web site is now up and running at www.aeg.org. New material is being added to the web site monthly. Recent suggestions from AEG members for additions to the web site include: 1) regular updates on matters/issues discussed at AEG council meetings and 2) "People News" section to inform others of who has a new job, who has moved, etc... Links from the AEG web site to web sites of regular advertisers in **EXPLORE** will be added in March. We are currently investigating ways to add web access to the AEG membership directory for AEG members only, in a read only format.

The 1999 version of the AEG Information Poster that summarizes AEG activities was sent to Councilors and Regional Councilors in the USA, United Kingdom, Brazil, The Netherlands, and South Africa. The posters are to be put up at scientific meetings and other functions to advertise the AEG.

AEG Special Volume No. 12, Writing Geochemical Reports, published by the AEG in 1986 and is now available free of charge on the AEG web site. Lynda Bloom has coordinated an international team of geochemists to update the existing publication in areas of analytical methods, quality control and data plotting. The updated volume will be dedicated to the memory of Stan Hoffman, who spearheaded the initial special volume. The majority of rewriting and communication will be done by email and the entire project will be completed with minimal costs to the AEG. The new version of the special volume will be available digitally on the AEG web page and will be for sale in booklet form from the AEG Business Office. This rewrite is very timely since professional registration of geoscientists is proceeding across Canada and the Toronto Stock Exchange is asking for improved reporting standards from the mineral industry.

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AEG SHORT COURSE COMMITTEE

In November of 1998 Erick Weiland asked me if I would resume my past role as AEG Short Course Committee Chairman. I agreed to do so, and I have subsequently asked Vlad Sopuck (Cameco Corp., Saskatoon) if he would serve as a committee member. Vlad has agreed, and at this time the two of us constitute the Short Course Committee.

Status

Over the past couple of months I have contacted a number of people who might be prepared to present short courses on behalf of the AEG. This effort was prompted by a request to Erick Weiland from Charles Okujeni (South Africa) for possible short courses that could be offered at two upcoming meetings in Cape Town:

- * Geological Society of South Africa (June 28 - July 2, 1999)
- * International Symposium on Environmental Geochemistry (April 24-28, 2000)

The courses that we have offered to South Africa so far are:

- * Introduction to exploration geochemistry - including soils, drainage sediments and basic statistics - K. Fletcher (UBC)
- * Analytical techniques (including hydrogeochemistry) - Gwendy Hall (GSC)
- * Regolith Geochemistry and Weathering - Melvyn Lintern (CSIRO)
- * Calcrete and Laterite Geochemistry - Matthias Cornelius (CSIRO)
- * Giant Porphyry-related Metal Deposits: A Global Perspective - Felix Mutschler (Emeritus Professor, Eastern Washington University)
- * Alkaline rock-related Precious Metal Deposits - Felix Mutschler (Emeritus Professor, Eastern Washington University)
- * Organic Media in Exploration and Environmental Studies - (Colin Dunn, Emeritus Scientist, GSC)

This suite of courses is currently offered for future meetings and can be moulded to local requirements - probably some of the courses being organized by Steve Cook for the 19th IGES Vancouver could also be offered.

19th IGES - Vancouver (April 1999)

The 19th IGES Committee has scheduled four short courses (organized by Steve Cook) to be held in Vancouver on the weekend prior to the Symposium:

- * Drift Prospecting in Glaciated Terrain
- * Geoanalysis with Emphasis on Selective Extractions
- * Diamond Exploration Methods and Case Studies
- * Quality Control in Mineral Exploration

Geological Society of South Africa - Cape Town (June/July 1999)

From the slate of courses offered above (see 'Status') Charles Okujeni has requested two 2-day courses that we have agreed to put on:

- * Geochemistry of Regolith, Laterite and Calcrete (Mel Lintern and Matt Cornelius)
 - * Biogeochemistry Applied to Exploration and Environmental Studies, and Recent Developments in the Analysis of Organic and Other Surficial Materials (Colin Dunn and Gwendy Hall)
- It is anticipated that more courses will be requested by the South Africans for the April 2000 meeting in Cape Town.

Funding

Council needs to address a funding policy - even if the policy is just that charges should be in accord with local norms. For the South African meeting the local organizers usually charge US\$100/day. We have agreed that delegates be charged this amount and that any shortfall will be made up by the AEG, whereas any profit will be divided equally between the GSA and AEG. Course presenters will receive payment for their basic travel/hotel/per diem costs and receive no honorarium.

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STUDENT PAPER PRIZE COMMITTEE

The Student Paper Prize is awarded every two years and we have now just completed the process of adjudicating the 1998 Prize. In fact, while writing the first draft of this report, the adjudicators' conclusions are coming in. The result will be announced in Vancouver at the IGES dinner.

During the 18th IGES, we held a brief lunchtime meeting in Jerusalem with David Garnett and K. Fletcher to map out some much-needed changes and clarifications to the rules. These changes reflected our inclusion of environmental geochemistry as it may be used in exploration geochemistry. The clarifications were to remove terminological confusions as to who could be nominated and the relationships between the degree course and the time of publication. The new, clearer, rules were given to Council for approval, finalised and are now readily available for the first time on the AEG WEB site, together with some guidelines and entry information. This will be upgraded as necessary.

Previous experience has shown that, despite advertisements being placed strategically in related magazines, waiting for entries to flood in will just not work. Again, an aggressive approach was used with a flood of form letters to students and academics, pestering with email etc. The result was not as good as 1996, but we had five entries from four entrants. Any suggestions as to where additional advertisements can be placed at nil cost would be most welcome.

XRAL have continued their sponsorship, my thanks to

them, and I hope they will continue. Many thanks to my committee of adjudicators, namely Fred Siegel, Owen Lavin and Richard Davy. Also thanks to Allison Britt, Eric Grunsky and Beth McClenaghan for WEB assistance and to Dave Garnett, K. Fletcher and Council for comments on the new rules.

Ian D.M. Robertson

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SYMPOSIUM COMMITTEE

International Geochemical Exploration Symposia during the 1990s have had a broad geographic distribution from Reno, 1991 to China, 1993, to Australia, 1995, to Jerusalem, 1997 and this year, 1999 we are in Vancouver for the end of the millenium. The meeting for 2001, the first in the new millenium, will be in Santiago, Chile but will encompass much of South America and the active ongoing exploration programs on the continent. Peter Rogers will discuss the plans for the 2001 meeting at the present IGES. The 2003 meeting is expected to take place in Ireland,

Continued on Page 16



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Deadlines for the Next Four Issues of EXPLORE

Contributors's deadlines for the next four issues of
EXPLORE are as follows:

Issue	Publication date	Contributor's Deadline
104	July 1999	May 31, 1999
105	October 1999	August 31, 1999
106	January 2000	November 30, 1999
107	April 2000	February 28, 2000

Shea Clark Smith
MEG

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14	★ PROBPLOT, An Interactive Computer Program to Fit Mixtures of Normal (or Log Normal) Distributions with Maximum Likelihood Optimization Procedures (C.R. Stanley).			
	On 3.5" diskette; requires 1 mb hard disk space	US \$30.00	US \$55.00	_____
4+14	★ Combination offer	US \$35.00	US \$60.00	_____
7	Geochemical Exploration 1977 Proceedings of the Denver Geochemical Symposium (ed. J.R. Waterson and P.K. Theobald)	US \$20.00	US \$40.00	_____
10	Gold-81, Precious Metals in the Northern Cordillera (ed. A.A. Levinson)	US \$ 7.50	US \$18.00	_____
11	Exploration Geochemistry Bibliography to January 1981 (compiled by H.E. Hawkes)	US \$10.00	US \$20.00	_____
11.1	Exploration Geochemistry Bibliography Supplement 1 to October 1984 (compiled by H.E. Hawkes)	US \$10.00	US \$17.00	_____
11.2	Exploration Geochemistry Bibliography Supplement 2 to October 1987 (compiled by H.E. Hawkes)	US \$10.00	US \$17.00	_____
—	Digital bibliography - entire AEG bibliography through 1994. A *.dbf file on 3.5" diskette (requires 14 mb hard disk space)	US \$10.00	US \$20.00	_____
12	Writing Geochemical Reports (S.J. Hoffman)	US \$ 5.00	US \$ 7.00	_____
—	Geochemical Exploration 1980 - Hannover (ed. A.W. Rose and H. Gundlach). Hard cover edit.	US \$35.00	US \$50.00	_____
—	GEOEXPO/86, Proceedings of an exploration symposium focussing on Cordilleran environments held in Vancouver May 12-14, 1986 (ed. I.L. Elliot and B.W. Smea)	US \$25.00	US \$25.00	_____
—	Reviews in Economic Geology Volume 3. Exploration Geochemistry; Design and Interpretation of Soil Surveys (ed. W.K. Fletcher). This volume was co-sponsored by the SEG.	US \$20.00	US \$25.00	_____
—	1992 AEG Membership Listing and Directory of Exploration Geochemical and Environmental Services	US \$10.00	US \$20.00	_____
—	Epithermal Gold Mineralization of the Circum-Pacific; Geology, Geochemistry, Origin and Exploration, Volumes 1 and 2.	US \$160.00	US \$246.00	_____
—	Soils of the World. Colour wall chart. 95 cm x 135 cm in size. Published by Elsevier.	US \$22.00	US \$28.00	_____
SPECIAL 1.	Practical Problems in Exploration Geochemistry, 1987. (A.A. Levinson, P.M.D. Bradshaw and I. Thomson) 269 pp.	US \$35.00	US \$80.00	_____
—	17th IGES Extended Abstracts from "Exploring the Tropics", 15-19 May, 1995, Townsville Australia (for airmail add \$20)	US \$50.00	US \$65.00	_____
—	A Global Geochemical Database for Environmental and Resource Management, Recommendations for International Geochemical Mapping, Final Report of IGCP Project 259. (A.G. Darnley A. Bjorkland, B. Bolviken, N. Gustavsson, P.V. Koval, J.A. Plant, A. Steinfeld, M. Tauchid and Xie Xuejing; with contributions by R. Garrett, and G.E.M Hall).	US \$20.00	US \$20.00	_____
—	Geochemistry in Mineral Exploration (second edition, published 1979) (A.W. Rose, H.E. Hawkes, and J.S. Webb) - airmail US\$10.00/International \$20.00 additional	US \$60.00	US \$80.00	_____
—	Journal of Geochemical Exploration in Subscription Years 1994 and earlier, whole year or part	US \$70.00	N/A	_____
NOTE: Members may order back issues or volumes for the usual membership fee. The member may elect to receive all issues of that subscription year or just the issue/volume desired (the price is the same). The 1995 subscription year will be "back issued" six months after completion (ca. Oct., 1995).				
Notes for Short Courses on Biogeochemical Exploration. Each book comprises 200-250 pages of text, figures, tables, and photos. The content of each is similar, except different aspects are emphasized. All prices quoted are for surface mailing; if airmail is desired please add (US)\$15.00				
—	Biogeochemical Exploration, Simplified - with emphasis on arid terrains (C.E. Dunn, J.A. Erdman, G.E.M. Hall, and S.C. Smith)	US \$50.00	US \$50.00	_____
—	Note: this text includes geobotanical aspects in some detail			
—	Applied Biogeochemical Prospecting in Forested Terrain (C.E. Dunn, G.E.M. Hall, and Scagel)	US \$50.00	US \$50.00	_____
—	Note: this text includes a 42 page discourse on plants			
—	Applied Biogeochemistry in Mineral Exploration and Environmental Studies (C.E. Dunn, G.E.M. Hall, R. Scagel, D. Cohen, P. Catt, and M. Lintern)	US \$55.00	US \$55.00	_____
Note: This text is an expansion of the volume 'Applied Biogeochemical Prospecting in Forested Terrain' and includes several case histories from Australia. In Australia the volume can be obtained from Dr. David Cohen, Dept. Geology, Univ. New South Wales, Sydney, AUSTRALIA, for Aus\$60.00.				
Do you need a receipt? Include self-addressed envelope and US \$ 2.00, otherwise your cancelled check or bank card statement is your receipt.				
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Symposium Committee *Continued from Page 14*

spearheaded by the Irish Association of Geologists and with the assistance of Universities, the Geological Survey of Ireland and Exploration/Exploitation/Environmentally Responsible mining companies. The IGES for 2005 is not yet spoken for but can be expected back in North America...Canada, US, Mexico pending proposals from North America or other areas with strong exploration and exploitation activity and infrastructure and political stability to support an international meeting (e.g., Southern Africa, Federation of Independent States).

During interim years, the AEG continues to be a sponsor and its member contributors to meetings such as the SME meeting held earlier this year in Denver, or that in Salt Lake City during March, 2000, as well as Geology and Ore Deposits 2000: The Great Basin and Beyond, in Reno (May, 2000). I hope that the AEG members will have strong representation at exploration geochemistry and mine development and operational environmental geochemistry sessions at the 31st International Geological Congress in Brazil during August, 2000. The AEG support and member contributions to the International Symposia on Environmental Geochemistry is growing with each symposium with the next one being during April, 2000, in Cape Town, South Africa.

We look forward to the publication of papers from the year 2000 meetings in the new journal GEOCHEMISTRY: Exploration, Environment, Analysis. And the papers from the 2001 IGES meeting should make up an outstanding volume of the new journal.

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SYMPOSIUM REPORT

Aeolian Dust: Implications for Australian Mineral Exploration and Environmental Management

The impetus for this symposium, sponsored by the Cooperative Research Centre for Landscape Evolution and Mineral Exploration (CRC LEME) and held at the Australian National University (ANU) in Canberra on 25-26 November, 1998, arose out of the strong interest in aeolian material by a number of geologists, geographers, geomorphologists, geochemists and soil scientists within CRC LEME. In particular, many important problems in mineral exploration and environmental management require detailed understanding of aeolian materials and their interactions with other regolith materials.

Professor Bob Wasson from the ANU in his keynote address reminded the 50 delegates that with forty percent of Australia's land mass affected by dunes, these represent a major source of potential dust. Over the past 500,000 years it is estimated that millions of tonnes of dust have been removed from these different areas and transported elsewhere in Australia and beyond by the action of wind, having major implications to a range of environmental and mineral exploration issues.



Conference-convenor Richard Greene (CRC LEME/ANU, nearest camera) discusses the aeolian material in the profile over granite at Sutton, 18 km NE of Canberra.

Accordingly the symposium was structured into sessions under the following themes: Nature of Aeolian Dust, Environmental Implications of Aeolian Dust Accessions, Role of Aeolian Dust in Soil-Landscape Processes, and Implications of Aeolian Dust for Mineral Exploration. Each section started with an overview of the key issues of that theme, followed by several papers that develop the theme.

Ray Evans from the Australian Geological Survey Organisation (AGSO) discussed how aeolian accessions containing salts have caused major environmental problems of salinity in the Boorowa Catchment of NSW (100 km north-west of Canberra). Maurice Melis (consultant hydrogeologist) demonstrated how aeolian material is often reworked by colluvial processes at Dicks Creek (30 km north of Canberra and the site of one of the field visits). In the area of mineral exploration, Keith Scott (CRC LEME/CSIRO) suggested that the aeolian component in soils is often not recognised during geochemical surveys and explained how aeolian materials once they are deposited in the soil-landscape can make exploration difficult by reducing the magnitude of any gold or base metal anomaly. This feature was also emphasised by David Garnett (Becquerel Laboratories) by reference to case studies in the Kalahari Desert of southern Africa. Bruce Dickson (CSIRO) offered some encouragement in recognising the presence of aeolian material using gamma-ray surveys. Malcolm Sheard (South Aust Dept Primary Industries) indicated that the calcrete used in gold exploration programmes on the Gawler Craton of South Australia is in fact aeolian.

Other papers indicated how modern analytical techniques could be used to resolve questions about the nature and origin of the dust. For example, an ion microprobe could be used to date the zircons in the dust (Robyn Gatehouse, CRC LEME/ANU). John Leys (NSW Dept of Land and Water Conservation) reported on the use of high resolution measurement of the dust threshold velocity using a piezo-electric crystal sensor. Paul

Continued on Page 17

Aeolian Dust *Continued from Page 16*

Hesse (Macquarie University) and Brad Pillans (CRC LEME/ANU) considered the magnetic properties of dust in Alaska and southern Australia, respectively.

Besides the more formal oral and poster presentations, the symposium included a field trip to local aeolian deposits in the Canberra-Yass Region to illustrate important aspects of the conference themes. The field trip provided the opportunity for the advocates of the various disciplines represented to debate the origin of complex soil profiles and to appreciate that even one's own discipline/ technique did not provide a complete understanding of every profile. The conference dinner was held on the way back from the field trip at an Australian country pub to ensure that vigorous discussion continued.

The symposium concluded with an open forum which (i) linked the nature, distribution and admixing of aeolian material in the regolith to their role in mineral exploration and environmental management, and (ii) developed future areas of research and collaboration. Specifically delegates recognised the need for diagnostic criteria for the identification of aeolian dust (e.g. quartz content, Ti/Zr, oxygen isotopic ratios) and considered whether features like the proportion of silt to clay, colour and carbonate content might be influenced by source materials. Thus the influence of local material on more regional sources must be recognised. There is also more understanding of the permeability of dust mantles because of their influence on the movement of water and hence effects on geochemical dispersion, soil salinization etc.

Copies of the book of abstracts (23 papers) and the field guide represent a valuable source of reference material for people involved in all areas of teaching and research related to aeolian dust. Copies of these two publications can be obtained from Judy.Papps@anu.edu.au for a total cost of \$A30. Selected papers are expected to be printed in full in a special issue of the Australian Journal of Soil Research during 1999.

Keith Scott
CRC LEME,
CSIRO Exploration and Mining,
PO Box 136, North Ryde, N S W 1670
e-mail: k.scott@dem.csiro.au



CALENDAR OF EVENTS

International, national, and regional meetings of interest to colleagues working in exploration, environmental and other areas of applied geochemistry.

■ April 8-10, 1999, GSA Rocky Mountain Section Meeting, Quality Inn Pocatello Park Hotel, Pocatello, Idaho.
INFORMATION: Paul Link, Dept. of Geology, Idaho State University, 785 South 8th Ave., Pocatello, ID 83209-8072, 208 236-3846, linkpaul@isu.edu.

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CSIRO EXPLORATION AND MINING PO Box 136 North Ryde NSW 1670 Australia

WANTED: Research Scientist/Groundwater Geochemist Ore Deposits Processes Group Aus\$51K - \$69K pa plus Superannuation

CSIRO Exploration and Mining wishes to appoint a research scientist in the Ore Deposit Processes Group to contribute to a research project focused on the applications of groundwater geochemistry to mineral exploration. The research will involve collaboration with industry, other government agencies and academic partners.

The successful applicant will have had experience within the mineral exploration industry and have a PhD in Geology or Chemistry, or equivalent experience. The successful applicant will be involved in the application of existing, and development of new, field, laboratory and interpretation techniques.

For this, expertise in statistical interpretations of multivariate data sets and solution chemical reaction modeling of water-rock interactions is essential. The applicant should also be familiar with and be able to critically appraise modern procedures for analysing major and trace elements in natural waters, and be able to validate machine derived detection limits, precision and calibrations. Experience in the application of isotope geochemistry will be required. This position is for an indefinite period.

As a first step you should obtain a recruitment kit, including full Position Description and Selection Criteria from Joanne Kelly email: j.kelly@syd.dem.csiro.au or phone 61 2 9490 8856. For further queries regarding the role contact Angela Giblin by email at a.giblin@syd.dem.csiro.au or phone 61 2 9490 8736, fax 61 2 9490 8855. Applications quoting reference number PG/111/1/49 and prepared following the guidelines in our recruitment kit must be received by 30 April, 1999.

Calendar of Events

Continued from Page 17

■ April 11-16, 1999, 19th International Geochemical Exploration Symposium, Vancouver, Canada. INFORMATION: Venue West Conference Services Ltd., #645-375 Water Street, Vancouver, BC, Canada V6B5C6, TEL. 604-681-5226, FAX 604-681-2503, email: congress@venuewest.com.

■ April 22-23, 1999, GSA North-Central Section Meeting, Chancellor Hotel and Conference Center, Champaign-Urbana, Illinois. INFORMATION: C. Pius Wiebel, Illinois State Geological Survey, 615 Peabody Dr., Champaign, IL 61820, (217) 333-5108, wiebel@isgs.uiuc.edu.

■ May 26-28, 1999, Geological Association of Canada-Mineralogical Association of Canada Joint Annual Meeting, Sudbury, Ontario, Canada. INFORMATION: Dr. P. Copper, Dept. of Earth Sciences, Laurentian University, Sudbury, Ontario P3E 2C6, TEL. 705-675-1151 (ext. 2267), FAX: 705-675-4898, e-mail: gacmac99@nickel.laurentian.ca.

■ May 31, June 4, 1999, AGU Spring Meeting, Boston, MA. INFORMATION: AGU Meeting Department, 2000 Florida Ave., NW, Washington, DC 20009, TEL: 202-462-6900. FAX: 202-328-0566. E-mail: meetings@kosmos.agu.org.

■ June 2-4, 1999, GSA Cordilleran Section Meeting, University of California, Berkeley, California. INFORMATION: George Brimhall, Dept. of Geology & Geophysics, University of California, Berkeley, CA 94720-4767, (510) 642-5868, brimhall@socrates.berkeley.edu.

■ June 26-July 1, 1999, Clay Minerals Society 36th Annual Meeting, Purdue University, West Lafayette, Indiana. INFORMATION: Patricia Jo Eberl, Clay Minerals Society, P.O. Box 4416, Boulder, CO 80306, (303) 444-6405, fax 303-444-2260, peberl@clays.org.

■ June 26-28, 1999, Geological Society of South Africa, Cape Town, South Africa: Two short courses sponsored by AEG, on Regolith Geochemistry (Calcretes and Laterites), June 26, and on Biogeochemical Methods, June 27-28: Information contact Prof. Charles Okujeni, University of the Western Cape, Tel: +27-21-9592638; e-mail: cokujeni@uwc.ac.za.

■ July 7-10, 1999, Geocongress '98, University of Pretoria, South Africa. INFORMATION: P.O. Box 798, Pretoria, 0001 South Africa, fax: 012-841-1221, e-mail: eaucamp@geoscience.org.za.

■ July 11-15, 1999, Biogeochemistry of trace elements, International conference, Vienna, Austria. E-mail: icobte@edvl.boku.ac.at.

■ August 22-25, 1999, Society for Geology Applied to Mineral Deposits 5th Biennial Conference, London, UK. INFORMATION: Dr. Chris J. Stanley, Associate Keeper of Mineralogy, Department of Mineralogy, Natural History Museum, Cromwell Rd., London, SW7 5BD, UK, Tel 44-171-938-9361. E-mail: cjs@nhm.ac.uk.

■ October, 25-28, 1999, Annual Meeting of the Geological Society of America, Denver, Colo. INFORMATION: TEL 1-800-472-1988, meetings@geosociety.org.

■ December 13-17, 1999. AGU Fall Meeting, San Francisco,

Continued on Page 19



GEOLOGY AND ORE DEPOSITS 2000: The Great Basin and Beyond

A Geological Society of Nevada Symposium

May 15-18, 2000, Reno/Sparks, Nevada, USA

Co-sponsored by:



Nevada Bureau of Mines and Geology



The Association of Exploration Geochemists



Society of Economic Geologists



U.S. Geological Survey

For more information: 702/323-3500, fax 702/323-3599 e-mail gsnsymp@nbgm.unr.edu <http://www.seismo.unr.edu/GSN>

Calendar of Events *Continued from Page 18*

CA. INFORMATION: AGU Meeting Department, 2000 Florida Ave., NW, Washington, DC 20009, TEL: 202-462-6900. FAX: 202-328-0566. E-mail: meetings@kosmos.agu.org.

■ March 6-9, 2000, Annual meeting of Society for Mining, Metallurgy, and Exploration (SME), Salt Lake City, Utah. INFORMATION: Shaffer Parkway, P. O. Box 625002, Littleton, Colo., 80162-5002, 303-973-9550. E-mail: smenet@aol.com.

■ April 24-28, 2000, 5th International Symposium on Environmental Geochemistry, Cape Town, South Africa. INFORMATION: SISEG, Department of Geological Sciences, University of Cape Town, Private Bag, Rondebosch, 7701, South Africa, FAX 27-21-650-3783. Email: Sisege@geology.uct.ac.za.

■ May 15-18, 2000, Geology and ore deposits 2000: The Great Basin and beyond, Reno/Sparks, Nevada, USA. INFORMATION: Geological Society of Nevada. 702-323-3500, ax 702-323-3599, e-mail: gsnsymp@nbgm.unr.edu.

■ May 21-24, 2000, ICARD 2000, 5th International Conference on Acid Rock Drainage, Denver, Colo. INFORMATION: SME, PO Box 625002, Littleton, Colo. 80162-5002. E-mail: davis@smenet.org.

■ May 31, June 3, 2000, AGU Spring Meeting, San Francisco, CA. INFORMATION: AGU Meeting Department, 2000 Florida Ave., NW, Washington, DC 20009, TEL: 202-462-6900. FAX: 202-328-0566. E-mail: meetings@kosmos.agu.org.

■ August 6-17, 2000, 31st International Geological Congress, Rio de Janeiro, Brazil. INFORMATION: Secretariat Bureau, Casa Brazil 2000, Av. Pasteur, 404 Urca, Rio de Janeiro-RJ-Brazil, CEP 22.290-240, phone 55 21 295 5847, fax: 55 21 295 8094. E-mail: 31igc@31igc.org, http: www.31igc.org.

■ September 3-8, 2000, Goldschmidt 2000. Oxford, UK. INFORMATION: P. Beattie, Cambridge Publications, Publications House, PO Box 27, Cambridge, UK CB1 4GL. TEL: 44-1223-333438, FAX: 44-1223-333438, E-mail: gold2000@campublic.co.uk.

■ November 13-16, 2000, Annual Meeting of the Geological Society of America, Reno, Nev. INFORMATION: TEL 1-800-472-1988, E-mail: meetings@geosociety.org.

■ December 14 - 19, 2000, Pacificchem 2000, Honolulu. INFORMATION: Congress Secretariat, c/o American Chemical Society, 1155 16th St. N.W., Washington, D.C. 20036, fax: 202-872-6128. E-mail: pacificchem@acs.org.

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ASSOCIATION OF EXPLORATION GEOCHEMISTS

SPECIAL BOOKS OFFER 1999

Author/Title	Non-Member Price	Member Price
Augustithis, S.S. Atlas of of Metamorphic-Metasomatic Textures and Processes	254.00	152.40
Bardossy, G. and Aleva, G.J.J. Lateritic Bauxites	242.00	145.20
Butt, C.R.M. and Zeegers H. Regolith Exploration Geochemistry in Tropical and Subtropical Terrains	267.00	160.20
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**Gulson, B.L. Lead Isotopes in Mineral Exploration	out of print	
Hale, M. And Plant, J.A. Drainage Geochemistry	274.50	164.70
Hedenquist, J.W., White, N.C. and Siddely, G. Epithermal Gold Mineralization of the Circum-Pacific: Geology, Geochemistry, Origin and Exploration	393.00	235.80
Howarth, R.J. Statistics and Data Analysis in Geochemical Prospecting	219.50	131.70
Kauranne, L.K., Salminen, R. And Eriksson, K. Regolith Exploration Geochemistry in Arctic and Temperate Terrains	208.00	124.80
Laznicka, P. Breccias and Coarse Fragmentites	288.50	173.10
Mysen, B.O. Structure and Properties of Silicate Melts	146.50	87.90
Naqvi, S.M. Precambrian Continental Crust and its Economic Resources	196.50	117.90

** This title will only be reprinted if there is a minimum number of requests

Calendar of Events

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■ December 15-19, 2000. AGU Fall Meeting, San Francisco, CA. INFORMATION: AGU Meeting Department, 2000 Florida Ave., NW, Washington, DC 20009, TEL: 202-462-6900. FAX: 202-328-0566. E-mail: meetings@kosmos.agu.org.

Please check this calendar before scheduling a meeting to avoid overlap problems. Let this column know of your events.

Virginia T. McLemore

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Socorro, NM 87801 USA

TEL: 505-835-5521

FAX: 505-835-6333

e-mail: ginger@gis.nmt.edu



NEW MEMBERS

To All Voting Members:

Pursuant to Article Two of the Association's By-Law No.1, names of the following candidates, who have been recommended for membership by the Admissions Committee, are submitted for your consideration. If you have any comments, favorable or unfavorable, on any candidate, you should send them in writing to the Secretary within 60 days of this notice. If no objections are received by that date, these candidates will be declared elected to membership. Please address comments to David Smith, Secretary AEG, c/o US Geological Survey, Box 25046, MS 973, Denver, CO 80225.

Editors note: Council has decided that all new applicants will receive the journal and newsletter upon application for membership. The process of application to the Nepean office, recommendation by the Admissions Committee, review by the Council, and publication of applicant's names in the newsletter remains unchanged.

MEMBERS

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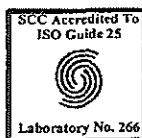
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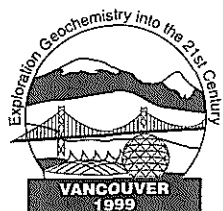
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Association of Exploration Geochemists

19th International Geochemical Exploration Symposium



April 10-16, 1999 • Hotel Vancouver • Vancouver, British Columbia, Canada

Location and Venue

Vancouver is a vibrant city located on Canada's Pacific West Coast. The city reflects both the natural grandeur of its surroundings and the character of its friendly residents. Vancouver is clean, safe and hospitable and we look forward to hosting you in our beautiful city. The Symposium will take place in the historic and newly renovated Hotel Vancouver located in the heart of Vancouver and within walking distance to all amenities.

Technical Sessions

Technical Sessions will be held on April 12-13, 15-16. The sessions will include the following topics.

- Exploration for Buried Deposits
- Advances in Drainage Geochemistry
- Exploration in Tropical Terrain
- Exploration in Glaciated Terrain
- Lithogeochemistry in Exploration
- Data Presentation and Interpretation
- Environmental Geochemistry applied to Mining

Short Courses

Short courses will take place April 10th-11th before the symposium

- Drift prospecting in Glaciated Terrain
- Geoanalysis with emphasis on Selective Extractions
- New advances in Diamond exploration
- Quality Control in Mineral Exploration

Field Trips

Field trips will take place after the meeting, starting April 17th.

- Applied Geochemical Methods
- Environmental Geochemistry
- Geochemical Exploration Techniques for Buried deposits

Trade Show

An Exhibition of Geochemical Exploration services and products from around the world will be held in areas adjoining the technical sessions and will take place on April 12 - 13 and on April 15 - 16.

Accompanying Persons Program

A full program of tours to local places of interest, including Victoria and Whistler will be arranged.

Tour and Social Programs

A welcoming reception is planned for Sunday, April 11th. A symposium dinner will be held on Thursday April 15th. The mid Symposium break on Wednesday April 14th will give delegates and guests the opportunity of enjoying the many attractions and spectacular scenery of the Vancouver area.

Further Information

Secretariat IGES
Venue West Conference Services Ltd.
Tel: (604) 681-5226 Fax: (604) 681-2503
Email: congress@venuewest.com
AEG website: <http://www.aeg.org>



AEG APPLICATION FOR NON-VOTING MEMBERSHIP*

to the Association of Exploration Geochemists

Please complete the section relevant to the class of membership sought and supply your address on this form.

Mail the completed application, together with annual dues, to the address below.

MEMBER

I _____ wish to apply for election as a Member of the Association of Exploration Geochemists. I am presently employed by:

_____ as a _____
(employer) (employment title)

I am actively engaged in scientific or technological work related to geochemical exploration and have been so for the past two years. Upon receipt of the Code of Ethics of the Association I will read them and, in the event of being elected a Member, agree to honour and abide by them. Witness my hand this _____ day of _____ 19____.

(Signature of applicant)

STUDENT MEMBER

I _____ wish to apply for election as a Student Member of the Association of Exploration Geochemists. I am presently engaged as a full-time student at _____, where I am taking a course in pure or applied science. Upon receipt of the Code of Ethics of the Association and in the event of being elected a Student Member agree to honour and abide by them. Witness my hand this _____ day of _____ 19____.

(Signature of applicant)

Student status must be verified by a Professor of your institution or a Fellow of the Association of Exploration Geochemists. I certify that the applicant is a full-time student at this institution.

(Signature)

(Printed Name and Title)

NAME AND ADDRESS

(to be completed by all applicants)

Name: _____
Address: _____

Telephone: _____
bus: _____
fax: _____
home: _____
email: _____

Annual Dues

All applications must be accompanied by annual dues. Select one or two below:

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Please note: Your completed form should be mailed to the Business Office of the Association and will be acknowledged upon receipt. The Admissions Committee reviews all applications and submits recommendations to Council, who will review these recommendations at the next Council Meeting or by correspondence. If no objection is raised the names, addresses and positions of candidates will be listed in the next issue of the Association Newsletter. If after a minimum of 60 days have elapsed following submission of candidate information to the membership no signed letters objecting to candidates admission are received by the Secretary of the Association from any Member, the Candidate shall be deemed elected, subject to the receipt by the Association of payment of required dues. Send completed application, together with annual dues to:

Association of Exploration Geochemists, P.O. Box 26099, 72 Robertson Road, Nepean, Ontario, CANADA K2H 9R0
TEL: (613) 828-0199, FAX: (613) 828-9288, email: aeg@synapse.net

*Application for voting membership requires the sponsorship of three voting members. Request a voting member application from the Association office.

THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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Medals Awards Committee

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mental issues in Canada and around the globe, establishing exploration geochemistry at the Geological Survey of Canada, and training young geochemists.

The Past President's Medal for Dedicated Service to the AEG is awarded to John A. Hansuld who was one of the small group who developed the concept of a society that would promote the development of geochemical exploration and bring together professionals serving this field. He was a member of the organizing committee of the second International Geochemical Exploration Symposium, held in Denver in 1968. On the founding of the Association he served as Vice President and as Chair, Admissions Committee. In the second year of the Association's history he was President. He took the leadership position in establishing the Newsletter and the Journal of Geochemical Exploration where in 1973 he joined the editorial board as Business Editor. John has continued as a member of the editorial board to this date, always providing wise counsel to the editor.

Both medals will be presented at the 19th International Geochemical Exploration Symposium Vancouver, British Columbia, Canada, April 15th, 1999.

Peter Simpson

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Keyworth, Notts, NG12, 5GG, UK
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NEW MEMBERSHIP COMMITTEE

The New Membership Committee was recently reinstated by President Erick Weiland to "disseminate information concerning the objectives and purposes of the Association in order to increase the Association's membership". It had not been active for several years, and at this time has only been active three months. Nevertheless, the Committee has begun several programs to increase membership. Our goal for 1999 is 150 new memberships (a 15% increase). The Committee currently comprises:

Shea Clark Smith, Chair, Councilor, N. America
Stanley Mark Elliot, Regional Councilor, Australia
Germano Melo, Jr., S. America
Todd Wakefield, Councilor, N. America

EXPLORE will be an important vehicle for increased membership. We will place several announcements encouraging Members-to-Find-Members with appropriate incentives and acknowledgement. We are also making more visible the Special Membership Assistance Program where generous donations are made available for those who need financial assistance in becoming and maintaining membership. This announcement has also been placed on the AEG Website.

The Committee is currently reviewing current and past Membership Rosters to identify lost members. We hope to find these members using the Internet and a Friend-Find-a-Friend campaign. Our affiliation with other professional organizations may help us locate some of these past members. Our objective is to keep costs low and do first what can be done internally.

The AEG's future lies in the students enrolled in geochemistry, geology and environmental geochemistry curricula around the world. One of our long-term programs is to identify those colleges and universities that contribute to these professional areas and provide them with early exposure to the benefits of AEG membership. We want to involve department professors as point distribution centers for free copies of **EXPLORE** and organizing Campus Reports for inclusion in **EXPLORE**. This would increase AEG exposure and enthusiasm on campus and perhaps increase opportunities for our Distinguished Lecture Series.

Another objective is to increase the number of benefits to membership. One that is often overlooked is a discount for members to AEG sponsored symposia. Our own symposia should always include a tiered registration fee schedule where AEG members are paying 10% to 20% less than non-members. This will encourage membership, and particularly student membership. The AEG should always negotiate a fee reduction for symposia with which we are affiliated, but not necessarily organizing. For the 19th IGES in Vancouver, we will be encouraging new membership by offering one of the AEG Special Publications (a \$10 to \$20 value).

The Committee will be working hard on these programs through 1999 and expect to see a significant increase in AEG membership by year end. We welcome any and all ideas the general membership would like us to consider.

Shea Clark Smith

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