



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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NEWSLETTER NO. 44

JUNE 1983

PERSONAL COLUMN

Information on Association Members is received from around the world. To keep your fellow members informed of your latest moves send a brief summary to the Rexdale office.

Ivor L. Elliott has resigned from Falconbridge and has joined Cominco as their Chief Geochemist based in Vancouver, British Columbia.

With regret we record the death of A.A. Rubio of Rio de Janeiro, Brasil in June 1982. Dr. Rubio was a member of the Association since 1971. He will be sincerely missed by his friends and colleagues.

Arthur Y. Smith wishes to announce that he has been appointed to the position of Geologist, with the Division of Nuclear Fuel Cycle, International Atomic Energy Agency in Vienna, Austria. He will be dealing with the technical aspects of I.A.E.A. Technical Cooperation projects in uranium exploration. Mr. Smith has been an I.A.E.A. expert in Uranium Geochemical Exploration since 1971, having served in Greece, Peru, Pakistan, Chile, Nuie and Sri Lanka. His address in Vienna will be, c/o International Atomic Energy Agency, Wagramerstrasse 5, P.O.Box 200, A-1400, Vienna, Austria.

R.E. "Dutch" Van Tassell has joined Dickenson Mines Limited at Toronto, Ontario as Vice President of Exploration.

AUSTRALIAN REGIONAL MEETING

PERTH, WESTERN AUSTRALIA - May 23-25, 1983

A REPORT

Nearly 150 geochemists, geologists and chemists from all parts of Australia and a few from overseas, registered for a programme covering a wide range of topics relating to the meeting theme of "Geochemical Exploration in Arid and Deeply Weathered Environments". A total of 31 technical papers were presented including five on "The Geochemistry and Genesis of Ore Deposits Associated with Weathering" which was the topic for a joint session with the specialists group in Economic Geology of the Geological Society of Australia. A list of authors and titles of papers presented follows this report.

The technical and social programme ran remarkably smoothly and it was generally considered that the quality of presentations was well above average. Mike Thornber took the prize for the most spectacular presentation by generating nickel-copper and copper-zinc gossans at the lectern from beakers of brightly coloured solutions. Alan Mann displayed exceptional gallantry and versatility by standing in for a missing speaker with a hurried prepared but excellent paper on the field analysis of heavy metals by portable digital voltammetry, with only a coffee break to regroup his thoughts and present his major offering on the mobility of gold and silver in the supergene zone, Roger Watters averted what could nearly have become CSIRO dominance of the meeting by interrogating all and sundry on their evidence for suggesting that clay minerals were important in geochemical dispersion. And as a lasting reminder of his contribution to the spirit of the meeting he distributed numerous T-shirts which proclaimed that "OLD GEOCHEMISTS NEVER DIE, THEY SIMPLY CROSS THE THRESHOLD".

A lively meeting of some 30 AEG members and numerous observers discussed a variety of matters of current interest over liquid refreshments after the close of technical sessions on Tuesday 24 May. Topics discussed included the status of education in exploration geochemistry in Australia, suggested applications for funds accrued by the AEG from successful conferences etc. the exorbitant cost to non-members of special issues of the Journal of Geochemical Exploration, and a proposal for an AEG session at the forthcoming 7th Geological Convention in Sydney. Cecil Begley reported on progress of preliminary planning for an AEG Regional Meeting in South Africa in either 1986 or 1988.

Some 50 members and associates attended the Meeting Dinner which was held in elegant surroundings at the Waterfront Restaurant and was voted a most convivial affair, as was the farewell function held at the University Guild Dining Hall at the conclusion of Wednesday's technical sessions.

Thursday morning saw Richard Young herding ten participants onto a charter plane for the Golden Grove excursion, capably organised by Ray Smith. All apparently went well and daybreak on Friday saw some of the survivors back at Perth Airport to form part of a group of 30 who participated in Bryan Smith's Eastern Goldfields excursion. This included underground visits to the nickel sulphide deposits at Kambalda and gold deposits at Kalgoorlie, inspections of open pit developments for gold at Norseman, Kalgoorlie and Sand King, copper-zinc at Teutonic Bore, lateritic nickel at Siberia, and a visit to WMC's analytical

laboratory at Kalgoorlie. Apart from minor bus troubles, no one was lost in the outback and it was voted an excellent tour, Bryan being awarded the inaugural "Fearless Leader Cup" in recognition of his sterling efforts. Esso Minerals, Western Mining Corporation, Central Norseman Gold Corporation, Kalgoorlie Mining Associates and Seltrust Mining Corporation are to be thanked for their contributions to the success of the field excursions.

All in all, the Australian Regional Meeting was a most rewarding and enjoyable occasion. although numbers were below initial estimates, the attendance was considered excellent given the present depressed condition of the mining industry. The comments of all those that did attend were most favourable and it was felt that the overall results can only enhance the standing of the AEG and geochemical exploration in Australia.

Keynote Address R.H. Mazzuchelli, Geochemical exploration in arid and deeply weathered environments.

G.R. Carr Primary mineralogical and chemical variation about the Lady Loretta Zn-Pb-Ag deposits, northwest Queensland.

M.R. Thornber and J.E. Wildman, The mechanisms of forming iron-base metal gossan minerals.

J.C. van Moort and C.G. Swenson, The gossan at Broken Hill.

E.H. Nickel The mineralogy and geochemistry of the weathering profile of the Teutonic Bore Cu-Pb-Zn-Ag sulphide deposit.

G.F. Taylor Gossan profiles developed above stratabound sulphide mineralization.

R.L. Andrew The geochemistry of selected base metal gossans, Southern Africa.

B. Murrell The landscape inventory approach - common sense in geochemical sampling.

B.L. Farrell Use of heavy mineral concentrates in soils in geochemical surveys in deeply weathered arid environments.

R.E. Smith, N.A. Campbell and R. Litchfield, Multivariate statistical techniques applied to pisolithic laterite geochemistry at the Golden Grove massive sulphide district, Western Australia.

G.F. Taylor and J.R. Wilmhurst, Dispersion about the Elura Pb-Zn-Ag orebody, western New South Wales.

C.S. Rugless and G.J.S. Govett, Application of rock geochemical methods to exploration for Pinnacles-type mineralization, Broken Hill, NSW.

A.W. Mann Field analysis of heavy metals.

A.W. Mann and J.G. Webster, Mobility of gold and silver in the supergene zone.

- B.H. Smith and R. Keele, Some observations on the geochemistry of gold in weathered zone at Norseman, W.A.
- I.G. Robertson, P.T. McMicken and J.I. Stewart, the Telfer Gold Deposit.
- B.H. Smith Lateritic cobalt deposits of the Eastern Goldfields.
- S.B. Sadleir, T.W. Parker and I.M. Brown, A review of West Australian bauxite deposits.
- R.C. Morris Genesis of supergene iron ores from banded iron formation - a logical progression to different ore types.
- A.L. Meakins Geology and genesis of the Argyle alluvial diamond deposits, Kimberley Region, Western Australia.
- G.R. Carr, J.R. Wilmshurst and W.R. Ryall, Mercury as a pathfinder in exploration geochemistry - case history study.
- C.R.M. Butt and M.J. Cole, Helium emanometry under Australian conditions - preliminary results.
- S.J. Appleyard, Uranium in groundwater near Uaroo, Western Australia: distribution and relevance to mineralization.
- B.L. Dickson, R.L. Meakins and A.M. Giblin, Radium isotopic measurements in the search for uranium in palaeodrainage channels, channels.
- A.M. Giblin and B.L. Dickson, Hydrogeochemical interpretations of apparent anomalies in base metals and radium in groundwater near Lake Maurice in the Great Victoria Desert.
- A.A. Snelling A soil geochemical orientation survey for uranium at Koongarra, Northern Territory.
- M.B.M. Hochman, Thermaluminescences as a tool in mineral exploration.
- R. Beeson The application of separate size fractions in stream sediment surveys in arid and semi-arid terrain.
- C.A.J. Towsey and D.J. Patterson, Tin exploration at Mount Isa - a case history.
- T.W. Robbins and L.M. Chenoweth, Geochemical investigations associated with the Wilga and Currawong massive sulphide deposits - Victoria.
- B.L. Gulson Evaluation of lead isotopes in soils in exploration for concealed base metal mineralization.

A limited number of copies of the Abstract Volume and Goldfields Excursion Guide are available for purchase from the Secretary of the Organising Committee (P.O.Box 91, Belmont, Western Australia 6104) for A\$5 each. Please add \$1 postage within Australia and \$3 for each volume for overseas destinations.

ADMISSIONS COMMITTEE REPORT

Names of the following candidates have been recommended to membership by the Admissions Committee and have been approved by Council. According to the Association's by-laws the names of the candidates are to be published for consideration by the membership. If you wish to comment on any candidate, please do so in writing to the Secretary within 60 days.

VOTING MEMBERS

Bergstrom, J.O.	Exploration geochemist, Geological Survey of Sweden, Lulea, Sweden.
Chu, I.H.	Geologist, Director General of the Geological Survey of Malaysia, Kuala Krai, Malaysia.
Koch, G.S.	Professor of Geology, University of Georgia, Athen, Georgia, U.S.A.
Leanard, B.F.	Geologist, U.S. Geological Survey, Denver, Colorado, U.S.A.
Murrell, B.	Senior geologist (Research), C.R.A. Exploration, Fyshwick, Australia.
Peuraniemi, V.J.	Exploration geochemist with Rautaruukkioy in Suomi, Finland.
Scott, S.A.	Research geologist, Agip Canada Ltd., Calgary, Alberta, Canada.
Selinus, O.C.	Geochemist at the Geological Survey of Sweden, Uppsala, Sweden.
Silva, F.	Researcher, Department of Geology, University de Coimbra, Coimbra, Portugal.
Steenfelt, A.	Geologist/geochemist, Geological Survey of Greenland, Charlottenlund, Denmark.
Whitfield, G.B.	Consulting geologist, self-employed, Kalgoorlie, W.A., Australia.
Wills, K.J.A.	Senior Exploration Geologist, Penarroya (Australia) Pty. Ltd., Sydney, N.S.W., Australia.

AFFILIATE MEMBERS

Ashton, L.W.	Staff geochemist, Anaconda Minerals Co., Reno, Nevada, U.S.A.
Atwood, G.W.	Senior geologist, NL Baroid/Industries, Elko, Nevada, U.S.A.
Chaudry, M.A.	Research associate, University of Technology, Delft, The Netherlands.
Eggo, A.J.	Exploration geologist, CRA Exploration Pty. Ltd., Karratha, W.A. Australia.
Fenne, F. K. (transfer)	Mine geologist, Cyprus Mines Corp., Challis, Idaho, U.S.A.

AFFILIATE MEMBERS (con't)

Hoehn, A. (transfer) Scientific assistant, GKSS Research Center, Geesthacht, Federal Republic of Germany.

Lassen, R. Senior field technician, Amselco Exploration, Spokane, Washington, U.S.A.

McKay, G.J. Exploration geologist, PNC Exploration Pty. Ltd., Sydney, N.S.W., Australia.

Molokwu, H.T. (transfer) Geologist, Ministry of Mines & Power, Nigerian Government, Benin City, Nigeria.

Moshy, C.M.A. Exploration geologist/geochemist, Ministry of Minerals, Dodoma, Tanzania.

Nascimento, J.W. (transfer) Professor of Geological Sciences, University Federale of Sergipe, Sergipe, Brasil.

Robles, L.O. Geochemist with Compania General de Sondeos, Madrid, Spain.

Seibel, G. Geologist, Cripple Creek Mines, Cripple Creek, Colorado, U.S.A.

STUDENT MEMBERS

Geer, K.A. Graduate student. Colorado School of Mines, Golden, Colorado, U.S.A.

Germann, O.A. Graduate student of the Technical University of Aachen, Aachen, West Germany.

Hostetter, H.C. Graduate student at UNR Mackay School of Mines, Reno, Nevada, U.S.A.

Khan, A.R. Graduate student at Colorado School of Mines, Golden, Colorado, U.S.A.

Lippoldt, K.A. Graduate student at the University of Colorado, Boulder, Colorado, U.S.A.

Richardson, S.V. Graduate student, University of Michigan, Ann Arbor, Michigan, U.S.A.

Richey, S.R. Graduate student at the Colorado School of Mines, Golden, Colorado.

Stanley, C.R. (transfer) Graduate student at the University of British Columbia, Vancouver, British Columbia, Canada.

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FUTURE MEETINGS**REGIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM, Reno, Nevada, March, 1984**

A regional Geochemical Exploration Symposium will be held at Reno, Nevada during March 1984, with the theme "Ore Deposits of the North American Cordillera". Further details of this meeting are given in the circular enclosed with this newsletter.

11TH INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM, Toronto, CanadaApril 28th - May 1st, 1985

The 11th International Geochemical Exploration Symposium will be held in Toronto, Canada, from April 28th to May 1st, 1985. Although this symposium is almost two years in the future, planning must start now in order for the meeting to be successful. An organizing committee has been established under the co-chairmanship of Bob Garrett and Bill Coker. If there are any members in the Toronto and Ottawa areas interested in lending their assistance to the organization of the Symposium would they please contact either,

Dr. W.B. Coker
Kidd Creek Mines Ltd.,
357 Bay St., Ste. 300,
Toronto, Ont. M5H 2T7

or

Dr. R.G. Garrett
Geological Survey of Canada
601 Booth St.,
Ottawa, Ont. K1A 0E8

FROM THE SECRETARIE'S OFFICE - R.E. LETT

There has been an encouraging response from members to Laurie Curtis' letter and Bill Coker's articles published in Newsletter 43. I have included the letter received from A.L. Lawrence on the topic of translating relevant Russian literature and following the suggestion I have also included a list of 14 papers covering geochemical topics available in North America, but presently untranslated. Further comments on these titles would be extremely welcome.

Still on the subject of response from members the Association's office received over 250 orders for volumes 2 and over 260 orders for volume 3 and about 120 orders for volume 1 of the Handbook of Geochemistry. Several members have written to ask when they might expect to receive the Handbook volumes ordered. The bulk order was placed with Elsevier only in May and the volumes should be mailed to those members who placed the orders during August. Incidentally a number of members have commented that insufficient notice was given to place orders for the Handbooks. In fact we were flexible in our interpretation of the March 31st deadline and allowed several orders received after this date. If there is sufficient continued interest in the Handbook we will try to offer the same bulk order arrangement in 1984 providing that the publishers are agreeable.

Members frequently write expressing concern about missing or overdue Journal issues. To assist members in determining which Journal issues they should have received for a particular subscription year I will include a short summary of the issue publication month in this and all future Newsletters. Members should note that Elsevier are behind schedule in publishing the Journal. In fact Volumes 18 (for 1982) are appearing in 1983. Consequently new members who joined the association late in 1982 and who paid 1983 subscription will not receive volume 18, but will receive Vol.19 later this year.

Journal Issues Status

<u>Vol.</u>	<u>Issues</u>	<u>Publication Month</u>	<u>Subscription Year</u>
18	1	February 1983	1982
18	2	April 1983	1982
18	3	Unknown	1982
19	1	"	1983

TRANSLATION OF RUSSIAN EXPLORATION LITERATURE-- A Comment

Dear Sirs

The letter by Laurie Curtis in newsletter 43 is obviously of considerable significance to the informed reader. It is of course almost impossible for anyone to express an immediate interest in a selection of 60 or so relevant papers without even the titles, let alone a brief review of the contents. To what category are the majority of the papers likely to be relevant? Are there any papers relevant of prospecting in arid conditions - to analytical techniques - to geochemistry of glacial regions etc?

The concept is exciting and perhaps could well be handled directly by the Association for the benefit of members and other interested parties, particularly if the list of papers is expanded to include other Russian literature of specific interest to the geochemical community. I would concur that a list be published of the proposed translations with a very brief summary, such that members can indicate their preference, possibly under three headings:

1. Yes, would like a copy at any price,
2. Yes, would like a copy if price is low by public demand,
3. No, am not interested in this paper.

There could well be sufficient concensus of the category two responses to justify a special edition of the journal that would appeal to a wide readership.

At the very least, the order of magnitude of cost could fairly rapidly be determined and the responding members be informed and asked whether they are still interested.

A further spin-off could well be an indication to the Association of the type of paper that has the most interest to the members who are sufficiently interested in scientific publication to respond to the initial letter.

Yours faithfully

A.L. Lawrence,
Phelps Dodge Mining Ltd.,
P.O.Box 31085
Braamfontein 2017,
Transvaal
Republic of South Africa

RUSSIAN PUBLICATIONS ON MODERN ACHIEVEMENTS

Geochemistry and Geochemical Prospecting recommended for translation, (GSC Library accession in 1982)

1. Ovchinnikov, L.N. Methodic aspects of the study of rare metal ore deposits (edit. by L.N. Ovchinnikov) Paper collection, Moscow, Nauka Press, 1981 (UOT Library.)
2. Velikova F.I. Geochemistry of cobalt. Sissemation in the Earth's crust, forms of occurrence and types of concentration, Baku, Nauka Press, 1966.
3. Kruglikov, N.M. Theoretical and experimental research on the mechanisms of hydrocarbon migration, (Collection of papers) edit. by N.M. Kruglikov, Leningrad, VNIGRI, 1980.
4. Plyushchev, E.V. Methods for studying hydrothermal metamomatic formations, (Collection of papers), Leningrad, Nedra Press, 1981.
5. Chekvaidez, V.B. Ore-surrounded metasomatites of pyrite-polymetallic deposits and their prospecting value, Moscow Nedra Press, 1981.
6. Shcherbakov, J.U.G. Geochemical methods of prospecting for deep-seated ore deposits, Edit. by IU. Shcherbakov, Novosibirsk, Nauka Press, 1980.
7. Glazunov, O.M. Geochemistry and ore-bearing of gabbroids and hyperbasites, Novosibirsk, Nauka Press, 1981.
8. Makarov, K.K. Paleozoic and Pre-paleozoic organic geochemistry of the Siberian Platform and estimation of oil and gas potential, edit. by K.K. Makarov et al. Leningrad, Nedra Press, 1981.
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10. Ovchinnikov, L.N. Complex deposits of chalcophilic rare elements, edit. by L.N. Ovchinnikov, Moscow, Nedra Press, 1982.
11. Naumenko, V.V. Factor influencing ores of gold-polimetallic and mercury deposits of the Soviet Carpathians, Kiev, Naukova Dumka Press, 1978.
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13. Dudenko, L.N. Geochemical structures of endogenous systems, Leningrad, Nedra Press, 1981.
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EXPLORATION AT THE CROSSRAODS - A comment

The Editor
The Newsletter

Dear Sir:

I refer to an article in Newsletter No. 43
by William B. Coker entitled A CRITICAL EXAMINATION OF
THE KEY ELEMENTS OF EXPLORATION - ARE THEY AT A CROSSROADS?

While sympathizing with many of the author's points, a statement on page 16 distrubs me. To quote, "No geology student planning to work in mineral exploration in Canada should be allowed to graduate without taking basic courses in applied geochemistry and Quaternary geology."

By extension, should that not also apply to the various types of desert, the variations in soils developed in tropical rain forest? Therefore, without that expertise should Canadian students be permitted to work in the Sonoran and Australian deserts, the Amazon rain forests? Except at book distance it will be difficult to obtain that pre-graduate information in Canada. Yet we know that many students trained in Canada do work in these specialized geochemical terrains. Does Mr. Coker recommend they be sent home?

Sincerely,

James R. Hillebrand
Apartado 29
Puerto de Mazarron
Murcia, Spain

Open Letter to the AEG Membership

Everyone is aware of the regional and international symposia sponsored by the AEG. Most of the AEG membership also recognizes that publications of symposia volumes are slow in coming. This is a consequence of many factors, including late submittals by authors or poorly written or documented papers.

Symposia committees also have a difficult time finding qualified and willing reviewers. It is in the interest of AEG members that publication of symposium papers proceed as rapidly as possible, certainly within six to nine months of the symposium date. With this objective in mind, I am requesting that members of the association who believe they are qualified to review papers complete the attached form. Potential reviewers will be placed in a directory available to symposium committees on request.

Time is short, as the first task of the reviewers will be the Helsinki symposium. The volume of papers for that program is large, and many reviewers are needed. It is to your ultimate benefit that rapid publication be possible, and I request that you give very serious consideration to participating in this program. Address all communications to:

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BIBLIOGRAPHY

This list comprises titles that have appeared in major publications since the compilation presented in Newsletter 43. Journals routinely covered and abbreviations used are Journal of Geochemical Exploration (JGE), Economic Geology (EG), Geochimica et Cosmochimica Acta (GCA), the USGS Professional Papers (USGS PROF P), Circular (USGS CIR) and Open File Report (USGS OFR), Bulletin of the Canadian Institute of Mining and Metallurgy (CIM BULL), Transactions of Institution of Mining and Metallurgy, Section B: Applied Earth Sciences (TRANS IMM). Publications less frequently cited are identified in full. Compiled by Donald D. Runnels and Sandra L. Jones, Department of Geological Sciences, University of Colorado.

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THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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Minutes of the Annual General Meeting of the
Association of Exploration Geochemists held in the
Walton Room of the Atlanta Hilton Hotel
on March 10, 1983

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P.O. Box 49330, Bentall Stn.
Vancouver, British Columbia V7X 1P1
Canada

Councillors:
1982-83
R.C. Armstrong
L.A. Clark
E.H.W. Hornbrook
R.G. Jackson
A.W. Rose
D.D. Runnels

1982-84
G.H. Allcott
W.D. Goodfellow
S.J. Hoffman
S.E. Kesler
N.G. Lavery
K.A. Lovstrom

Australian Regional Councillor:
R.H. Mazzucchelli

European Regional Councillor:
B. Bölviken

Southern African Regional Councillor:
G.L. Coetzee

Brazilian Regional Councillor:
R.J.P. Brim

The meeting was called to order at 12:55 p.m. by the President, J.H. McCarthy Jr. Thirty-one persons were present, seventeen of these were Members, and the meeting was determined to be quorate. The President stated that the Agenda had been published in the December 1982, No. 42, issue of the Newsletter.

1. Minutes of the 1982 Annual General Meeting

The President apologised for the Secretary, R.E. Lett, who was unable to attend the meeting. He noted that the minutes of the 1982 AGM and annual reports had been published in the June 1982, No. 40, issue of the Newsletter. The President asked if there was any discussion of the minutes, there being none he entertained a motion of acceptance. It was moved (L.G. Closs) and seconded (K.A. Lovstrom) that the minutes be accepted. Passed unanimously.

2. Appointment Scrutineers

The President asked for the nomination of scrutineers by the membership for the balloting of Ordinary Councillors for the 1983-85 term. E.F. Weiland, R.K. Glanzman and C.E. Nichols were nominated (K.A. Lovstrom, P.K. Teobald and A.W. Rose respectively), in order to provide a fourth scrutineer E.V. Post offered his services. There being no further nominations the President declared the nominations closed. The 267 sealed ballots brought from the Toronto office were delivered to the scrutineers.

3. President's Report

The President, J.H. McCarthy Jr., delivered his report. A copy is attached.

4. Secretary's Report

The Secretary's report was delivered in his absence by R.G. Garrett. A copy is attached.

5. Treasurer's Report

The President asked R.G. Jackson to deliver the Treasurer's report in the absence of I. Thomson, who was unable to attend. A copy is attached.

6. Report of the Admissions Committee

The Admissions Committee Report was presented by L.G. Closs, a member of the Committee, in the absence of its Chairman, L.P. James. A copy is attached.

7. Introduction of 1983-84 Executive

The President introduced the new Executive to the Members present:

President	L.G. Closs
V. President	R.G. Garrett
V. President	I. Thomson
Secretary	R.E. Lett
Treasurer	R.G. Jackson

8. Transfer of Meeting

President J.H. McCarthy Jr. transferred the meeting to the President-elect L.G. Closs.

9. Address of the Outgoing President

President Closs called upon the Outgoing President, J.H. McCarthy Jr. to deliver his address to the membership. The address, entitled 'Trends in Exploration Geochemistry' is to be published in a forthcoming issue of the Journal of Geochemical Exploration. At the close of the address the President thanked, J.H. McCarthy Jr. on behalf of the Association.

10. Any Other Business

There was no business raised from the membership present. One past member announced that he would be becoming active again in the Association.

11. Recess and Reconvention

As the scrutineers were still counting the ballots the President called for a brief recess at 1:53 p.m. The scrutineers completed their task and the meeting was reconvened at 2:02 p.m.

12. Announcement of 1983-85 Ordinary Councillors

The scrutineers reported to the meeting that they had counted the ballots, of the 267 ballots 2 were found to have been spoiled. On the basis of 265 valid ballots the following Members were elected as Ordinary Councillors for the 1983-85 term.

W.B. Coker
B. Hitchon
A.A. Levinson

D.D. Runnels
A.E. Soregaroli

The Outgoing President, J.H. McCarthy Jr., also serves as an Ordinary Councillor for the 1983-85 term.

Following the scrutineers report the President asked for a motion for the destruction of ballots. It was so moved (P.K. Theobald) and seconded (R.K. Glanzman), passed unanimously.

13. Adjournment

The motion of adjournment for the 1983 Annual General Meeting was made by E.F. Weiland, and seconded by M.A. Chaffee, at 2:05 p.m. Passed unanimously. The President declared the meeting closed and thanked those Members present for attending.

Secretary: R.E. Lett
R.E. Lett

President: L. Graham Closs
L.G. Closs

Distribution: Newsletter
All Councillors
J.G.E. Editors

PRESIDENT'S REPORTANNUAL GENERAL MEETING

It has been an interesting and rewarding experience to serve as your President during the year. The Association membership continues to grow. At our last annual general meeting in Saskatchewan, the Secretary reported that we had 720 members. The Secretary's report for this year will note that we have 865 members at present and 38 new applicants. This will shortly bring the membership to about 900. Subscriptions to the JGE continue to increase. It has attained worldwide stature as an important publication in our field.

Sales of books published by the Association continue at a good pace. We are now beginning to receive orders for books as a result of the advertising brochure mailed by Ed Post to about 1800 libraries and other institutions throughout the world.

AEG-sponsored symposia and meetings continue to provide the personal exchange that is such a valuable part of any organization. Eric Weiland is to be commended for putting together, at this meeting, a timely overview of current practice in geochemical exploration.

Ray Smith and his colleagues in Australia are addressing an important aspect of geochemical exploration in the AEG-sponsored meeting to be held at Perth in May of this year. The topic is geochemical exploration in arid and deeply weathered environments.

Arrangements for the 10th International Geochemical Exploration Symposium to be held in Helsinki, Finland, in late summer of this year, have been well cooordinated by Alf Bjorklund. This meeting is being held jointly with the International Association of Geochemistry and Cosmochemistry and as such provides an excellent opportunity to meet with Soviet and Eastern European geochemists.

Chet Nichols, Larry Larson, and Ken Lovstrom have concluded plans for a mini-sympsoium to be held in Reno, Nevada, in the Spring of 1984.

In other activities during the year the Council approved the awarding of a student prize to student authors of outstanding papers in the Journal. Thanks to Steve Kessler and his committee for completing this work.

I have asked Norm Lavery to present to the Council a proposal for implementing an AEG-sponsored distinguished lecture series. He will submit his report at the next Council Meeting.

The most active committee has been the publications committee under the chairmanship of Art Rose. Art and his committee have spent a great deal of time examining all aspects of our publications. Our contract with Elsevier for publications of the Journal expires at the end of 1984. The publications committee report in the last newsletter is a measure of the serious consideration that Journal publication is being given.

My greatest satisfaction in serving as your President has been to get to know many of you better. I would single out Graham Closs, Ray Lett, and Art Rose for their substantial contributions to the Association during the year. But each of the members of Council and the executive can be singled out for dedicated service to the Association. I urge each of you to join us, in participating in Association affairs, through work on committees or contributions to the newsletter or on Council. We have a good organization that serves a real need in the Geochemical Exploration community, and it is your participation that has made it so.

J. H. McCarthy Jr.
J.H. McCarthy Jr.

ANNUAL REPORT BY THE SECRETARY, 1982-83

Despite the detrimental effects of the current recession on many sectors of the economy and in particular on the oil and mining industries, I am happy to report a continued growth in the Association's membership during 1982 which surpassed the previous year by a spectacular 12.4% increase (Table 1). At the end of 1982 total Membership was 856 representing 56 countries and comprised four Honorary Members, 528 Voting Members, 195 Affiliate Members, 64 Student Members, 27 Corporate Members and 38 applicants under review by the Membership Committee (see Table 2). Unhappily, membership was reduced during the year by the death of two members, Dr. A.T. Griffis and Dr. R.L. Gresens, and also by the resignation of an additional six individuals. North American Membership (520) still dominates the Association, followed by Australia (101), Europe, Central and South America, and African. Undoubtedly the growth of the Association can be attributed to the energetic work of Members in recruiting new membership, the continued high quality of papers published in the Journal of Geochemical Exploration, largely through the dedicated work of the Editor, Eion Cameron and his associates, and thirdly the popularity of International Symposia sponsored by the Association.

One highlight of the year was the publication and distribution to all Members of the Exploration Geochemistry Bibliography 1982 by H.E. Hawkes. Sales of addition copies of the Bibliography, Proceedings of the 1981 Vancouver Precious Minerals Symposium an other Special Publications through the Association's Rexdale Office continue to be brisk. The sales have been undoubtedly stimulated by an energetic Special Publication advertising campaign through such journals as Economic Geology and Geotimes organized by the Publications Committee under the leadership of Art Rose. In addition to this activity the Publication Committee has also had the responsibility of reviewing the question of the pending Journal of Geochemical Exploration publishing contact with Elsevier Scientific. Due to continued interest in the Handbook of Exploration Series, Elsevier Scientific have agreed to make available Volume 1, Analytical Mthods (by W.K. Fletcher) with the new volume 2, Statistics and Data Analysis (by R.J. Howarth) and volume 3, Rock Geochemistry (by G.S. Govett) at generous discount rates to Members. Distribution of the volumes to Members who take advantage of the discount offer will be arranged early this summer.

Dr. Raymond Brim, who has very able served as Brazilian Regional Councillor since 1981 will be resigning his post in March and Council was very pleased to accept the nomination of Dr. Richard W. Lewis as Regional Councillor for Brasil during the 1983-85 term. Dr. Lewis will join an extremely active group of Regional Councillors who maintain the high profile of the Association in Europe, Australian and South Africa. In particular I am certain that Members look forward to the 10th International Geochemical Exploration Symposium, in Helsinki late this year and will appreciate the work of Dr. Bolviken, the European Regional Councillor and Dr. Alf Bjorklund, chairman in organizing the meeting. In 1981 the Association became an affiliate of the International Union of Geological Sciences and strengthened this link during 1982 by submitting a detailed report on the Association's current activities to the Executive Committee of the I.U.G.S.

TABLE 1

Association of Exploration Geochemists
Six Year Membership Revue, 1977-82

	Gain*	Loss	% Wastage	Net Gain	Total	% Growth
1977	77	39	51	38	557	7.3
1978	78	53	68	25	582	4.5
1979	62	37	60	25	607	4.3
1980	101	51	50	50	657	8.2
1981	100	35	35	65	723	9.9
1982	169	36	21	133	856	12.4

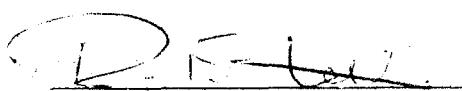
* Gain includes new members who paid dues for the first time and old members who became active again after one or more years of non-payment of dues.

TABLE 2Association of Exploration Geochemists 1982 Membership By Country

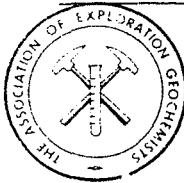
<u>Country</u>	<u>No.of Members</u>	<u>Country</u>	<u>No.of Members</u>
Algeria	1	Netherlands	7
Australia	101	New Zealand	1
Austria	6	Nigeria	9
Belgium	3	Norway	4
Brazil	35	Panama	1
Cameroon	1	Papua-New Guinea	3
Canada	216	Peru	1
Chile	3	Philippines	2
Colombia	1	Poland	1
Cyprus	1	Portugal	1
Czechoslovakia	1	Rep. of Mozambique	1
Denmark	5	Rep. of South Africa	21
Ecuador	1	Saudi Arabia	5
Egypt	1	South Korea	1
Fed. Rep.of Germany	19	Spain	2
Finland	5	Sweden	6
France	8	Switzerland	2
Greece	3	Taiwan	1
India	3	Tanzania	2
Indonesia	3	Turkey	1
Iraq	1	United Kingdom	20
Ireland	4	United States	304
Italy	2	Upper Volta	1
Japan	5	Venezuela	2
Kenya	2	Yugoslavia	1
Lebanon	1	Zaire	1
Malaysia	5	Zambia	3
Mexico	8	Zimbabwe	6

The conference telephone link, initiated early in 1982, to reduce Councillors travel costs, was employed for three Council Meetings during the year. This arrangement has proved very successful and at the last meeting held in December enabled Councillors in five cities in Canada and the United States to exchange views. My predecessor, Bob Garrett, made a plea in last year's report for Members to send in their views, comments or complaints for publications in the Newsletter. At least once, during the year I have re-emphasized this plea and although some members have responded, I am certain that the number of contributions could be far greater in view of our steadily increasing Membership. Remember, the objectives of the Newsletter is to provide NEWS and also a FORUM for you to air your views and ideas.

Finally I would like to thank the many individuals who have contributed to the publication of the Newsletter and smooth running of the Association, including Don Runnels who recently undertook to update the Bibliography, Bob Garrett who presently continues with the vital task of maintaining and updating the membership lists and especially to Ines Filicetti who very ably manages the Association's Toronto Office. In closing I have greatly enjoyed serving you as Secretary during this year and look forward to continuing in the Office through 1983-84,



R.E. Lett



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

P.O. Box 523, (Metropolitan Toronto), Rexdale, Ontario, M9W 5L4 Canada

REPORT FROM THE TREASURER, February 25, 1983

President:

J.H. McCarthy (Jr.)
U.S. Geological Survey
Federal Center, MS 912
Denver, Colorado 80225
U.S.A.

Vice Presidents:

L.G. Closs
Geology Department
Colorado School of Mines
Golden, Colorado 80401
U.S.A.

R.G. Garrett
Geological Survey of Canada
601 Booth Street
Ottawa, Ontario K1A 0E8
Canada

Secretary

R.E. Lett
Association of Exploration Geochemists
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S.E. Kessler
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K.A. Lovstrom
P.K. Theobald

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R.H. Mazzucchelli

European Regional Councillor:
B. Bolviken

Southern Africa Regional Councillor:
G.L. Coetzee

Brazilian Regional Councillor:
R.J.P. Brim

In common with many individuals and other organizations your association will remember 1982 as a year of ups and downs. The treasurer is nevertheless pleased to report that 1982 was marked by some very successful ventures and that at year-end, the financial position of the Association was one of stability and strength.

It was a great pleasure to see the Bibliography of Exploration Geochemistry published and distributed free to all members. The finished book is the product of a considerable personal effort by Herb Hawkes with some recent assistance from Graham Closs and the bibliography committee. In many ways this represents not only the highlight of the year but also a major landmark in the history of the Association of Exploration Geochemists.

Other significant ventures in 1982 include publication and distribution of an updated membership list and the provision of "seed funds" to the organization of future meetings in Finland and Australia. Two additional items require specific comment.

- a) As a service to our members we worked with Elsevier to provide copies of "Analytical Methods in Geochemical Prospecting" by W.K. Fletcher at a much reduced rate. The treasurer acted as agent in this relationship and remittances from the membership were forwarded to Elsevier early in 1982. We are currently providing the same service in respect of Volumes 2 and 3 in the Handbooks of Exploration Geochemistry series.
- b) Your executive is seeking to obtain legal status in the United States as a non-profit organization. This would permit use of preferred rates for mailing publications etc. and other benefits that could substantially reduce the cost of some of our activities. As part of this effort financial summaries and other relevant documents were prepared by accountants for submission in the United States.

Revenues to the association were augmented by donations from the organizers of the Gold '81 Symposium and the 1982 Saskatoon International Geochemical Symposium. In addition to these, the association enjoyed a significant extraordinary revenue from interest on term deposits with the Canadian Imperial Bank of Commerce. These revenues reflect the remarkably high interest rates that prevailed through much of 1982. As such they must be regarded as truly extraordinary since interest rates have now returned to more realistic rates. In effect these extraordinary revenues have helped protect our resource funds against the ravages of inflation.



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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After dues, the second continuing source of revenue comes from sales of AEG publications. These continue at a remarkably constant rate. Currently the Bibliography is enjoying strong sales but requests continue to be received for special volume 4 (A.J. Sinclair) and the Denver Symposium volume. We are now selling copies of the proceedings of Gold '81 at a steady rate. However, all these books must eventually saturate their market and/or become dated, so long term sales cannot be expected.

The principle expenditures remain publication of the Journal (for which costs to individual members have not changed in several years), the Newsletter and running the Association. In respect of the latter, we remain indebted to Ms. Filicetti for her continuing service to the Association as permanent secretary of the Rexdale office. Expenses for production and distribution of the Newsletter remain a concern for Council. Costs are still rising, principally for postage, due to repeated increases in Canadian postal rates. It is interesting to note that when I assumed the Treasury, costs for the Newsletter were divided in a ratio of approximately 4:3 printing: postage. We now see that the ratio has shifted to almost 3:4 printing:postage, with further postal rate increases expected. Efforts continue to limit these costs without prejudicing service to our members. Tax free status in the United States could have a major effect on this area.

It is perhaps reasonable to explain again how the Association utilizes its financial resources. If extraordinary income from interest and donations are excluded and attention is confined to the annual membership dues of \$42.50, expenditures may be accounted for as follows:

- i) Running the Association (Office, Newsletter, etc.) \$22.75
- ii) Publication of the Journal of Geochemical Exploration (after application of royalty from Elsevier) \$19.50
- iii) Surpluses for extraordinary expenditures \$ 0.25

The Association has a sound financial base and receives some interest which may also be applied to extraordinary items. With this in mind, Council has appointed a Financial Advisory Committee to investigate ways of applying these funds for the maximum benefit of the membership.



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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Canada

In conclusion, I must acknowledge that this will be my last report as treasurer. I am handing over the position to Robert Jackson. It is most satisfying to be able to leave with the Association in a sound financial position. The Association is, however, the product of its membership. It is your Association and will continue to be so. A particular pleasure for me has been the extensive contact that I have had with individuals all over the world. This shared interest is our real strength and will ensure the future of the Association. So - please pay your dues on time!

Ian Thomson

Secretary:

R.E. Lett
Association of Exploration Geochemists
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THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

FEBRUARY 18, 1983

Report of cash transactions conducted through the Association's bank accounts in Toronto during the period January 1, 1982 to December 1, 1982 and statement of the Association's financial assets and liabilities on December 31, 1982.

The data for this summary have been compiled from the Association's records, bank statements, cancelled cheques and correspondence held by the Treasurer. The bank balances have been verified from the monthly statements provided by Canadian Imperial Bank of Commerce.

ASSOCIATION OF EXPLORATION GEOCHEMISTSBALANCE SHEETU.S. DOLLAR ACCOUNTAT DECEMBER 31, 1982ASSETSCURRENT

Cash at Bank	\$30,831.67
Term Deposits	59,064.39
	<hr/>
	\$89,896.06

LIABILITIES***See Note**

Surplus - December 31, 1981	88,378.78
Add: Operating Surplus -	
December 31, 1982	1,517.28
	<hr/>
	\$89,896.06

***Note:** Statements prepared via cash accounting method

ASSOCIATION OF EXPLORATION GEOCHEMISTSSTATEMENT OF REVENUE AND EXPENDITUREU.S. DOLLAR ACCOUNTYEAR ENDED DECEMBER 31, 1982REVENUE

Dues	\$33,817.13
A.E.G. Publications	3,547.95
Fletcher Volume	980.00
Postage and Freight	11.00
Donations	1,585.00
	<hr/>
	\$39,941.08

EXPENDITURE

Bank Charges	.50
Administrative Expenses	665.41
Insurance	141.00
Advertising	565.00
Journal Publication	29,337.15
Bibliography, Publication	12,780.05
Fletcher Volume	4,165.00
	<hr/>
	\$47,654.11

EXCESS OF REVENUE OVER EXPENDITURE (7,713.03)

Add: Extraordinary Item. Interest on Deposits	9,230.31
	<hr/>

<u>Operating Surplus</u>	\$1,517.28
	<hr/>

ASSOCIATION OF EXPLORATION GEOCHEMISTSBALANCE SHEETCANADIAN DOLLAR ACCOUNTAT DECEMBER 31, 1982ASSETSCURRENT

Cash at Bank	\$3,664.21
Petty Cash Fund	100.00
Term Deposits	15,000.00
	<hr/>
	\$18,764.21

LIABILITIES***See note**

Surplus - December 31, 1981	21,461.96
Add Operating Surplus -	
December 31, 1982	(2,697.75)
	<hr/>
	\$18,764.21

***Note: Statement presented via cash accounting method**

ASSOCIATION OF EXPLORATION GEOCHEMISTSSTATEMENT OF REVENUE AND EXPENDITURECANADIAN DOLLAR ACCOUNTYEAR ENDED DECEMBER 31, 1982REVENUE

Dues	\$8,002.44
A.E.G. Publications	384.32
Advertising	40.00
Fletcher Volume	72.24
Donations	7,600.00
	<hr/>
	\$16,099.00

EXPENDITURE

Association Fees	307.13
Bank Charges	1.50
Newsletter - Printing	2,730.31
Newsletter - Distribution	4,073.61
Office Supplies and Expenses	837.14
Postage and Freight	1,072.38
Printing	231.23
Seed Money re Conventions	2,670.70
Wages and Costs	5,688.85
Membership List Printing	1,865.49
Accountant Fees	1,252.75
	<hr/>
	\$20,731.09

EXCESS OF REVENUE OVER EXPENDITURE (4,632.09)

Add Extraordinary Item, Interest on Term Deposits 1,934.34

OPERATING SURPLUS (2,697.75)



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

P.O. Box 523, (Metropolitan Toronto), Rexdale, Ontario, M9W 5L4 Canada

March 2, 1983

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Annual Report of the Symposium Committee 1982-1983

The committee focused on three activities: 1) 1983 meetings, 2) scheduling of International and Regional Symposia and 3) preparation of a Guideline Manual for running AEG Symposia.

A. 1983 Meetings

1. Joint AEG-AIME Meeting

A joint AEG-AIME session is scheduled for the morning of 3/10/83 in conjunction with the AIME-AGM in Atlanta, Georgia. Six review papers are to be presented. Messeurs Callahan, Closs, Horsnail, Lovstrom, and Weiland represented AEG and/or AIME in organizing this meeting.

2. Perth Meeting

AEG members in Australia have organized a regional meeting to be held in Perth on May 23-25, 1983. The theme is "Geochemical Exploration in Arid and Deeply Weathered Environments." Dr. R.E. Smith (CSIRO) has served as a contact between the Symposium committee and the local organizing committee. The second circular has been distributed and all appears in order. Plans are to publish the proceedings in the Journal of Geochemical Exploration in 1984.

3. Helsinki Meeting

The 10th International Geochemical Exploration Symposia will be held in Helsinki, Finland in August/September. The meeting is being coordinated most ably by Dr. Alf Bjorklund. The second circular has been mailed and all is on schedule. This meeting marks a milestone for AEG. The meeting is being held jointly as the 10th IGES and the 3rd Symposium of the International Association of Geochemistry and Cosmochemistry (IAGC). This is the first opportunity to test our new IAGC affiliation. The meeting with Soviet-bloc geochemists is an exciting event for all associated with AEG.

B. Scheduling of Future Meetings

1. 1984

Through the efforts of Ken Lovstrom, Larry Larsen and Chet Nichols, plans are shaping up nicely for a mini symposium to be held in Reno, Nevada during the Spring of 1984. Dates and theme have not yet been decided. Due to the limited number of AEG members in Nevada and California, the meeting will be run in conjunction with the Continuing Education Office at the University of Nevada at Reno. Costs will be shared. Chet Nichols is heading up the organizing committee in Reno.

2. 1985

Informal discussion with members in Ottawa and Toronto indicate that a proposal will be forthcoming to Council requesting that the 11th International Geochemical Exploration Symposia (IGES) be held in Toronto in 1985. No further details are available at this time.

3. 1986

Informal discussions with Stan Hoffman and Ian Thomson indicate strong interest in hosting a regional symposium in Vancouver in 1986. No further details are available at this time.

4. 1987

A formal proposal has been submitted by Dr. Dorival Correia Bruni on behalf of the Comissao Tecnico-Cientifica de Geoquimica of the Sociedade Brasileira de Geologia to host the 12th IGES in Rio de Janeiro, Brazil in May of 1987. Proposed themes are:

- (1) Regional Geochemical Prospecting-Recapitulation and Evaluation
- (2) Followup geochemistry in problematic environments and settings
- (3) Geochemical prospecting for hydrocarbons
- (4) Current advances in analytical, data management and display, and interpretation techniques

Field trips are also proposed. Council should address this proposal at its next meeting.

C. Guideline Manual for Running AEG Symposia

The first draft of a compilation of experience gained in organizing and running AEG Symposia was circulated to past, present, and future organizers, in addition to committee members. Their comments have been incorporated into a second draft of this guideline (attached). This is an ongoing process.

D. Future Activities of the Committee

1. Meetings

Firm dates and commitments for hosting meetings from 1984 through 1987 should be established.

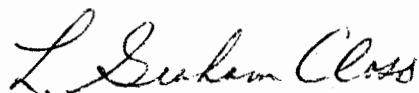
2. Symposia Guidebook

It is recommended that the following information should be obtained and policies established in the upcoming year:

- (1) Collect and compile budget information on previous symposia
- (2) Obtain summary reports from the Organizing Committees of the Saskatoon, Perth, and Helsinki meetings on their experiences
- (3) Establish guidelines for publishing of the proceedings of Symposia. It is suggested that, where possible, the papers should be published in our Journal so the entire membership can benefit.
- (4) Establish a policy for AEG financing of symposia. based on our experience with the Saskatoon meeting, a clear statement of AEG and local committee financial obligations and responsibilities is clearly needed for future meetings. This would address the issue of return of "profit/loss" to AEG.

3. 1983-1984 Symposium Committee

Stan Hoffman has agreed to chair this committee next year. He will select committee members after the AGM in Atlanta on March 10, 1983.



L. Graham Closs, Chairman
Symposium Committee

LGC:ms



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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A.W. Rose
D.D. Runnels

Annual Report of the Admissions Committee 1982-83

Eight-seventeen applications were processed by the committee during the past year. This includes eight applications for changes in membership class. Thirty-five applications were for full membership Voting Status, forty-seven for Affiliate and five for Student Membership.

The number of applications last year increased significantly from the sixty-three applications reviewed in the previous year. The Saskatoon meeting and the free distribution of Hawkes Bibliography and the Gold '81 volume contributed significantly. The small number of student members admitted is of concern, however, with the new reduced Student rate, I feel that this will turn around significantly. The long-term picture is one of continuing growth, however, support of the entire membership is required to secure this predication.

L. Graham Closs

L. Graham Closs, Acting Chairman
Admissions Committee

LGC:ms

1982-84
G.H. Allcott
W.K. Fletcher
S.J. Hoffman
S.E. Kesler
N.G. Lavery
K.A. Lovstrom
P.K. Theobald

Australian Regional Councillor:
R.H. Mazzucchelli

European Regional Councillor:
B. Bolviken

Southern Africa Regional Councillor:
G.L. Coetzee

Braslian Regional Councillor:
R.J.P. Brim