



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

President:

A.W. Rose
Dept. of Geosciences
Pennsylvania State University
University Park, Pennsylvania 16802
U.S.A.

NEWSLETTER

NO. 32

Vice Presidents:

G.R. Webber
Dept. of Geology
McGill University
Montreal, Quebec H3C 3G1
Canada

JULY 1980

K.A. Lovstrom
AMAX Exploration Inc.
P.O. Box C, Belmar Sta.
Denver, Colorado 80226
U.S.A.

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 Association office.

Secretary:

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

Larry B. Bramlett has joined Anaconda in Denver, Colorado, USA, as a Project Geochemist.

Treasurer:

I. Thomson
Ontario Geological Survey
77 Grenville Street
Toronto, Ontario M5S 1B3
Canada

A.D. Buerger has resigned from Tsumeb Corporation Limited and has accepted a position with G.R.A. Exploration Pty. Limited in Mount Isa, Australia.

Councillors:

1980-81
R.C. Armstrong
P.M.D. Bradshaw
R.H. Carpenter
L.G. Closs
W.B. Coker
E.H.W. Hornbrook

Donald W. Foss has recently been appointed President of Blue Ridge Analytical Laboratory, Inc. P.O.Box 7545, Charlottesville, Virginia 22906, USA. Mr. Foss was formerly Vice-President with North American Exploration, Inc.,

Mohamad Tauchid has joined the International Atomic Energy Agency Division of Nuclear Power & Reactors, P.O.Box 100, A 1400 Vienna, Austria. Mr. Tauchid was formerly with the UNDP in Bogota, Colombia.

1980-82

G.H. Allcott
L.A. Clark
W.K. Fletcher
S.J. Hoffman
S.E. Kesler
P.K. Theobald

EDITORIAL

The AEG celebrated its 10th birthday at Hannover with an active program and a membership of 588. The Association's remarkable growth and development since 1970 fully justify the efforts of those who organized the Association. At Hannover, our 10th birthday was marked by a special award to J. Alan Coope for his unique efforts in spearheading the initial organization, serving as our first president, and aiding in many later activities. To Alan and the many others who have contributed their time and ability, our sincere thanks.

Australian Regional Councillor:
J.F. Gillfillan

European Regional Councillor:
G.H.W. Friedrich

Southern Africa Regional Councillor:
G.L. Coetzee

The major focus of the AEG continues to be on service to members, plus attraction of new members to share in the benefits and costs of the Association. We are a relative small society and could operate at a much lower cost per member if we were larger. Additional members this year are especially important because, as explained on a later page, an increase of 80 subscriptions to the Journal of Geochemical Exploration will raise AEG royalties from Elsevier from 6% to 7% and gain us several thousand dollars, thereby postponing the day when an increase in dues will be necessary.

To promote additional members, I ask each AEG member to approach at least one prospective member this year and explain to him or her the benefits of AEG membership. The major benefit is the journal, now 600 pages per year and coming to members for less than \$20.00. In the next year or so, the journal will contain the proceeding of the 1980 Symposium in Hannover and an issue of papers on geochemical exploration for uranium, plus normal contributed papers. Non-member purchase of any one of these issues as a separate volume would pay for several years membership. In 1982 a new bibliography volume compiled by the Bibliography Committee under Herb Hawkes will summarize within one cover all previous bibliographies of exploration geochemistry plus references from the gap in the early sixties. Members benefit from special rates at Association Symposia (Precious Metals, Vancouver, 1981; 9th International Symposium, Saskatoon, 1982) and on publications of the association. The Newsletter reports current activities in the Association and geochemical exploration around the world. The Association represents the interests of geochemical exploration in several national advisory committees.

To make application for membership easy, we include with this newsletter an application form and instructions. Voting, affiliate, student and corporate memberships allow for a wide variety of backgrounds and interests. Please pass along the membership form to a colleague with an enthusiastic report on our activities and value.

The Hannover Symposium was a resounding success, thanks to the superhuman efforts of Heinz Gundlach. About 80 papers were presented covering topics from analysis to zircons. I particularly enjoyed the field trips to the Kupferschiefer and Rammelsberg, two of many offered. A delegation from the Peoples Republic of China reported on their research and surveys over a 25-year period. Many others from all parts of the world conveyed their activities, with few serious language problems, a remarkable feat from my viewpoint of struggling to even read other languages. I look forward to our next symposium outside North America, Helsinki in 1983, with anticipation.

Art Rose, President

ADMISSIONS COMMITTEE REPORT

The following persons have been accepted for Membership in the Association by Council. The Association is pleased to welcome the new members.

VOTING MEMBERS

Andrew, R.L.	Senior Geologist, CRA Exploration Pty Ltd., Belmont, Australia.
Beck, F.M.	President, F.M. Beck Inc. Yarmouth, Maine, USA.
Church, S.E.	Exploration Geochemist with the US Geological Survey, Denver, Colorado, USA.
Dyson, C. V.	Geologist, Chevron Standard Ltd., Vancouver, B.C. Canada.

Voting Members (con't)

- Erdman, J.A. Botanist, U.S. Geological Survey, Federal Center, Denver, Colorado, USA.
- Hylands, J.J. Senior Geologist, Placer Development Ltd., Vancouver, B.C. Canada.
- Leach, D.L. Research geologist, US Geological Survey, Denver, Colorado, USA.
- Reeves, J.R. Geologist, Placer Amex, Inc. Spokane, Washinton, USA.
- Smith, A.C.S. Senior Hydrogeochemical Engineer, Johannesburg, Republic of South Africa.
- Watmuff, I.G. Geochemist, B.H.P. Sydney, Australia.

AFFILIATE MEMBERS

- Aydinian, G.A. District geologist for Exxon Co. Andrews, Texas, USA.
- Barnett, J.C. Exploration geologist, B.C.M.C. Spokane, Washington, USA.
- Brimhall, W.H. Professor of Geology, Brigham Young University, Provo, Utah, USA.
- Cavanaugh, P.C. Geologist with Burlington Northern, Billings, Montana, USA
- Chamberlain, A. K. Exploration geologist, Marathon Oil Co., Casper, Wyoming, USA.
- Gresens, R.L. University Professor, geological sciences, University of Washington, Seattle, Wa. USA.
- Haenni, R.P. Exploration geologist, Marathon Resources, Denver, Colorado USA.
- Higgins, A.K. Geologist, Geological Survey of Greenland, Copenhagen, Denmark.
- Prevot, J-C. Geologist.
- Richards, G.L. Analytical Chemist/Geochemist, Laboratory Manager, Hobbs, New Mexico, USA.
- Rozelle, J.W. Geologist/geochemist with Golder Associates, Golden, Co. USA.
- Russell, D.W. Geology teacher at a post secondary college, Tasmania, Australia.
- Saager, R. University Professor, Mineralog. Petrograph. Institut. University Koln, Koln, West Germany.
- Sitaramayya, S. Reader in geology, Hyderabad, India.
- Taylor, Marsha, W. Geologist, Mobil Oil Corp. Littleton, Colorado, USA.
- Toye, D. Chief assayer, Acme Analytical Labs Ltd., owner & operator Vancouver, B.C. Canada.

STUDENT MEMBERS

- Hohn, A. Student at Johannes Gutenberg University, Mainz, W. Germany.
- Madeisky, H.E. Student at the University of Ottawa, Ottawa, Ont. Canada.
- McDermott, D.I. Graduate student at Stanford University, Stanford, Calif. USA.
- Nicholson, K. Research student at the University of Strathclyde, Glasgow, Scotland.
- Smith, L.B. Student at the Colorado School of Mines, Lakewood, Colorado, USA.
- Smith, R.C. Student at the University of Arizona, Tucson, Arizona, USA.

=====
 =====
 =====

FUTURE MEETINGSPRECIOUS METALS IN GEOCHEMICAL EXPLORATION - NORTHERN CORDILLERA

April 13-15, 1981, Vancouver

The 1981 Mini-Symposium is shaping up into a major regional meeting, being held jointly with the Cordilleran Division of the Geological Association of Canada. The first announcement was mailed with the March Newsletter with a call for papers. Please note the change in dates since publication of the first announcements. The meeting is now scheduled for April 13-15. The second announcement is scheduled for the September Newsletter. Should you require more information immediately, or wish to offer a paper, write to:

Precious Metals, Regional Symposium
 Association of Exploration Geochemists,
 Ste. 102, 1550 Alberni Street,
 Vancouver, B.C. Canada
 V6G 1A5

9th INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM, May 12-14, 1982, Saskatoon

Plans for the next I.G.E.S. are well in hand and the first announcement was distributed in Hannover, and with the March Newsletter. The major theme will be geochemical exploration for energy sources, however, general sessions will cover topics of current interest to geochemists working in non energy related fields. In addition to the technical sessions unique opportunities will be available for field trips to a variety of classic localities. For additional information write to:

Dr. V.J. Sopuck
 Organizing Committee, 9th IGES
 P.O.Box 432, Sub.P.O. 6
 Saskatoon, Saskatchewan, Canada
 S7N 0W0

10th INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM, September 1983, Helsinki

The Council received, and accepted, an offer from the Directors of the Scandinavian Geological Surveys to host the 10th IGES. The actual meeting will be held in Helsinki, Finland, but the field trips will cover all of Scandinavia. On the occasion of the 10th IGES our meetings switch from even to odd numbered years, this the September timing, necessary to allow for the field trips to northern latitudes, places the meeting conveniently between the 9th and 11th Symposium.

The Helsinki Organizing Committee is being led by Drs. Kauranne and Björklund, and in addition to general sessions on current topics of broad interest special theme sessions are planned on glacial drift and Archean rocks. The Committee proposes to have a first announcement ready for distribution in spring 1981.

1st BRASILIAN GEOCHEMICAL EXPLORATION SYMPOSIUM, October 19-25, 1980, Camboriu

The Technical and Scientific Commission for Geochemistry of the Brazilian Geological Society is organizing this Symposium to focus on aspects of geochemical exploration in Brasil. The meeting will be a part of 31st Congress of the Brazilian Geological Society being held at Camboriu, Santa Catarina, in southern Brasil. For further information write to:

Dr. D. C. Bruni
Comissao Tecnico-Cientifica de Geoquimica
CPRM - SECQUI/SA
Rua Barros Falcao, 21
Caixa Postal 4019
40.000 Salvador, BA
BRASIL

INTERNATIONAL AMAZON EXPLORATION SYMPOSIUM, November 1980, Puerto Ayacucho

This Symposium focusses on the ore deposits of the Amazon basin and geochemical and geophysical exploration methods appropriate to their search in tropical lateritic environments. The meeting is being organized by the Ministerio de Energia y Minas, Venezuela, and the Consejo Consultivo de Directores de Servicios Geologicos de Latinoamerica. For further information write to;

Dr. A. Bellizzia
Director General, Direccion de Geologia
Ministerio de Energia y Minas
Torre Norte - Piso 19,
Centro Simon Bolivar,
Caracas, Venezuela

SYMPOSIUM ON NEW MINERAL RAW MATERIALS, June 9-11, 1981, Karlovy Vary

The Czechoslovakian Geological Survey announces a symposium which will cover such topical problems as:

- known mineral raw materials and their resources developed in a non-traditional way;
- the potential use of rocks and minerals sofar not included into the category of industrially useful minerals; and
- mineral resources prognoses and theoretic considerations on new mineral raw materials.

English will be the official language of the Symposium, for further information write to:

Geological Survey
Organization Committee, NEMIRAM
Malastranske nam. 19,
118 21 Praha 1
Czechoslovakia

4th INTERNATIONAL CONFERENCE ON BASEMENT TECTONICS April 10-14, 1981, Oslo

This European meeting covers a broad spectrum of topics including remote sensing, integrated regional studies and hydrocarbon and mineral resource exploration. Although it clashes with the Vancouver regional symposium and 1981 AGM some members may be able to attend an Oslo meeting. The meeting is being sponsored by the Geological Survey of Norway, the Norwegian Petroleum Society, and the USGS and NASA in the U.S.A. For further information contact:

Dr. Roy H. Gabrielsen
Dept. of Geology
University of Oslo
P.O. Box 1047, Blindern
Oslo 3, Norway

or

Prof. Don L. Baars
Dept. of Geology
Fort Lewis College,
Durango, Colorado 81301
U.S.A.

BERGBAU 81 June 11-17, 1981, Dusseldorf

Bergbau 81 will be the world's largest international mining exhibition, for additional information for visitors or potential exhibitors write to:

German-American Chamber of Commerce
666 Fifth Ave.,
New York, N.Y. 10019
U.S.A.

or

Contractors International Co.,
5465 Queen Mary Road, Ste. 480
Montreal, P.Q. Canada
H3X 1V5

MINERAL WASTE SYMPOSIUM October 20-21, 1980, Chicago

The symposium will highlight new developments in mineral waste utilization and waste reclamation. Topics to be covered include mining and mineral waste processing, industrial waste recovery, use of urban solid wastes, and scrap metal recovery; for further information please contact:

Sy Bortz,
ITT Research Institute,
10 West 35th Street
Chicago, Illinois, (312)567-4400
U.S.A.

or

Roger DeCesare,
Bureau of Mines,
Washington, D.C. (202)634-1144
U.S.A.

CARTOGRAPHIC INFORMATION SOCIETY, October 2-4, 1980, Milwaukee,

This is an organizational meeting of a new professional association, The Cartographic Information Society, For more information please contact,

Christine Reinhard,
143 Science Hall,
University of Wisconsin
Madison, Wisconsin 53706, USA. (608) 262-3065

REGIONAL REPORTS

Our Australian Regional Councillor, J. Gilfillan, has forwarded to the Newsletter a report on the AXAA Fourth National School and Conference on X-Ray Analysis held at A.N.U. in Canberra last February. The report, prepared by L.N. Wall of Carpentaria Exploration Co. Pty.Ltd., gives an insight into the fields currently of research interest in the X-ray field.

"This conference was well attended with approximately 200 people participating in the various sessions. The 'schools' sessions provided a review of techniques, theory and instrumentation and were of value to both the full time x-ray analysts and the user of x-ray determined data. Both the 'schools' and plenary sessions were divided into parallel sessions individually concerned with X-Ray Fluorescence, X-Ray Diffraction and Surface Analyses.

The keynote lecture was presented by Mr. L.S. Birks of the U.S. Naval Research Laboratories, Washington, who developed the theme of the complementary application of X.R.F. and X.R.D. The former being to determine elemental concentrations, whereas X.R.D. is used for compound or phase identification. He also suggested that in X.R.F. the main areas of current interest are instrumentation, sample preparation and data interpretation. Instrumentation has developed to the point where 20-30 elements can be determined simultaneously and further developments will probably lead to thermo-electric cooling systems to replace liquid nitrogen cryostats. The U.S. Naval Research Laboratories have produced a computer programme to convert measured x-ray intensities into concentrations. This programme, NRL XRF combines empirical coefficients and fundamental parameters.

The use of subsidiary fluorescence lines to determine the nature of element species present was also discussed.

The relative advantages of the fundamental parameters and empirical coefficients approaches to reducing X.R.F. intensity measurements to concentrations were actively debated, and a useful paper by John Lucas Tooth demonstrated a procedure to combine both approaches by systematic recalibrations.

A wide range of papers was presented on applications, which ranged from geo-chemistry to biology and medicine, and a new instrumentation. Several papers dealt with the applications of computers to X-Ray Analysis, particularly in the area of instrument operating control.

A well attended forum on computing techniques was held during one afternoon. Much discussion again revolved around instrument control and some delegates expressed concern that they were not able to adjust automated instruments to their satisfaction and that they had to rely on the instrument electronics to indicate goniometer positions, etc. These criticisms mainly emanated from the research area, commercial users doing large volumes of analyses seemed to welcome automation.

The area of transmission of results from the laboratory to the user is one of some confusion. An initiative is required to standardise machine compatible media, such as floppy discs, and data formatting to facilitate transmission of large volume of data from the laboratory to the user.

The conference was a very full programme of interesting and useful papers for which the organisers and contributors are to be congratulated."

FROM THE SECRETARY'S OFFICE

The new Association year started at the Annual General Meeting in Hannover. One major item at the AGM is the presentation of Annual Reports by the President, Secretary, Treasurer and Admissions Committee. These reports are reproduced on pages 16-26.

The President in his editorial spoke of the success of the 8th I.G.E.S. in Hannover and the work done by Heinz Gundlach and his committee. Some brief statistics demonstrate the success, there were some 600 attendees from 60 countries. It was I think, one of the most international of all the Symposia and gave those lucky enough to attend a wonderful opportunity to meet with fellow workers from around the world. The breadth of the attendance will be the envy of many an Organizing Committee, congratulations Hannover.

The Membership List was circulated with the last Newsletter, and now the corrections are coming in. Firstly, I apologize to those members where information was in error, it has been a major task to get a central file established which we can use for many aspects of Association business. This coming year the Dues Notices will contain the information on the file, and your assistance in making sure that all is correct will be much appreciated. Anyone who has not received his copy of the 1980 Membership List may obtain his free copy by writing to the Rexdale office.

The Journal Back Issue offer recieved limited response and most of the requests have been filled. However we still have a few unlucky members. If anyone has a spare copy of the following issues in good condition which they would be willing to sell, or part with, to another member I would be grateful if they let me know:-
Vol. 1 (1), Vol.3 (1), Vol.3 (4) and Vol. 11 (1).

There have always been discussions over the costs of running the Association and providing the Journal to members. Aspects of this are touched upon in various Annual Reports and the current Editorial. The Business Editor of our Journal, John Hansuld, has prepared a report on the contribution which the Journal makes to us, which to say the least is enlightening, and may be surprising to many. (see pages 9,10)

MEMBERSHIP LIST UPDATE

Our apologies to members incorrectly recorded or absent in the 1980 Membership List. Corrections are below,

E.M.C. Fonseca
Laboratoire de Geochemie, U.C.L.
3, Place Louis Paateur,
1348 Louvain la Neuve,
Belgium

Dr. Fonseca was not recorded
on our list.

A. Hulbert Lee
Lee Geo-Indicators Ltd.,
Box 68
Stittsville, Ont. Canada KOA 3G0

Mr. Lee is incorrectly listed under L.A. Hulbert
in our list.

R.H. Olson
Industrial Minerals Evaluations
14618 W. 6th Ave., Ste. 202
Golden, Colorado 80401 USA

Please correct the spelling of Mr. Olson's name
in our list he is incorrectly listed as Olsen.

JOURNAL FINANCIAL CONTRIBUTION

Over the years there has been much discussions, and at times considerable criticism, about our Journal, mostly with regard to its cost and the resultant impact on the Association's dues. This lack of understanding of the Journal's contribution to the Association's financial picture was emphasized recently when Council was seriously considering the necessity of raising the Association's dues. The fact is the net cost of the Journal per AEG member has decreased, except for the sharp increase in 1976 at the time of our first contract renewal when both the price and size (400 to 800 pages) was doubled. This decrease is mainly due to the steady increase in royalties accruing to the Association. Royalties are calculated on the basis of total revenues and as non-AEG subscribers pay a price several times that of an AEG subscriber the bulk of the royalties are generated by non-AEG-subscriptions; Subscriptions which are obtained solely by Elsevier and at no cost or effort by the Association. In the eight year history of the Journal the number of subscribers has increased nearly 4 times, whilst AEG subscriptions have yet to double.

In 1980, because of the royalty credit less than \$20.00 of the \$42.50 annual dues is going to the Journal; the rest (over \$22.50) is to pay for the administration and operation of the Association, nearly half of which is the Newsletter. It is the cost of running the Association, not the Journal that is increasing !

Looking ahead the royalties should grow substantially over the next few years under the revised royalty schedule in the new agreement which comes into effect this year. Another 80 total subscriptions by year end are virtually assured, which will bring the total to 1400, at which time the royalty rate increases from 6% to 7%, representing a 20% jump in revenues; this will reduce the net cost of the Journal to \$17.50 or less than what we paid in the first four years of the contract !!

All things considered I feel the Journal's success is indeed incredible; in these times of high inflation its almost an Alice in Wonderland story. In this regard note that all costs in the table are in actual dollars, if inflation is factored in the decrease in real dollars would be even more dramatic (viz. \$25.00 in 1972 represents around \$75.00 in 1980).

Rather than a financial 'burden' to the Association, the Journal is its main contributor. This is due largely to the efforts of Elsevier, who in 1972 were the only publishing house prepared to accept the risk of publishing a first class international Journal for a fledgling organization with no financial reserves. Elsevier, and those who contributed to the Journal, especially our Editor Eion Cameron, are to be highly congratulated. Hopefully a study of the table will help all members understand and recognize the contribution that the Journal has been and is making to the financial stability of the Association. Assuming continued growth in subscriptions, the future for the Journal and Association looks very bright indeed.

J.A. Hansuld, Business Editor

JOURNAL OF GEOCHEMICAL EXPLORATION

Year	Subscriptions			Price to AEG Memb.	Discount	Royalties		Net Cost to AEG Member
	AEG	Non	Total			%	\$US per Member	
1. 72	376	200	576	25.00	3.75			21.25
73	403	435	838	25.00	5.00	3	nil	20.00
74	432	616	1048	25.00	5.00	3	729 1.66	18.34
75	430	732	1162	25.00	5.00	3	958 2.23	17.77
2. 76	461	723	1184	50.00	17.50	3	1880 4.08	28.42
77	494	706	1200	50.00	17.50	3	2426 4.91	27.09
78	558	718	1276	50.00	17.50	6	6457 11.57	20.93
79	577	743	1320	50.00	17.50	6	7440 12.89	19.61
3. 80*			1400	32.50	none	7	9000 15.00	17.50

x size doubled

- Notes:
1. Original 4 yr. contract: \$25 per member less discount based on AEG subscriptions. Royalties (based on total receipts) payable to the AEG once total subscription exceed 1000.
 2. First renewal for a 4 yr. term; both price and size doubled, but a flat 35% discount (i.e. \$17.50) to AEG subscribers and the same schedule as in the original contract.
 3. Second renewal for a 5 yr. term, with a fixed base cost of \$32.50 to the Association independent of AEG subscriptions (i.e. no minimum) and a graduated (6% base increasing 1% per each additional 100 total subscribers over 1300 up to maximum of 10%) royalty schedule.
- * 1980 estimate of royalties based on a total subscription of 1400.

TRANSLATION AVAILABLE

The U.S. Geological Survey, Department of the Interior, and the National Science Foundation have arranged for the translation into English and the publication of Dr. A.L. Kovalevskii's book "Biogeochemical Exploration for Mineral Deposits," originally published in Russian. Cloth bound copies of the translation, consisting of 136 pages including 38 figures and 33 tables are available, while the supply lasts, from Sales Desk, National Technical Information Service, 5285 Port Royal Road, Springfield, Va. 22161 Order by title and number (TT 76-52029), price \$10.00. When the printed copies are sold, it will be available in microfiche only.

BIBLIOGRAPHYRECENT PAPERS ON EXPLORATION GEOCHEMISTRY

This list comprises titles that have appeared in major publications since the compilation present in Newsletter No. 31. Journals routinely covered and abbreviations used are as follows: Economic Geology (EG); Geochimica et Cosmochimica Acta (GCA); The USGS Journal of Research (USGS JR); Circular (USGS CIR); and Open File Report (USGS OFR); Geological Survey of Canada Papers (GSC Paper) and Open File Report (GSC OFR); Bulletin of the Canadian Institute of Mining and Metallurgy (CIM Bull); Transactions of Institute of Mining and Metallurgy, Section B: Applied Earth Sciences, (Trans IMM). Publications less frequently cited are identified in full. Compiled by L. Graham Closs, Colorado School of Mines, Member AEG Bibliography Committee.

- Anon. 1980. Regional lake sediment and water geochemical reconnaissance data, Ontario Rainy Lake-Quetico Area, A joint GSC/Ontario Geological Survey Project. NTS 52 B and C. GSC OFR 675 and 676.
- Antipin, V.S. et al. 1980. Partition coefficients of lead and zinc in acid rocks (as in ongonites) and their geochemical significance. Intern. Geol. Rev. 22(4): 413-425.
- Bavinton, O.A. and Taylor, S.R. 1980. Rare earth element geochemistry of Archean metasedimentary rocks from Kambalda, Western Australia. GCA 44(5): 639-648.
- Berger, B.R. 1980. Geochemical exploration studies in the Dillon, Montana-Idaho, 1° by 2° quadrangle: Applications of exploration geochemistry in regional resource studies. USGS OFR 80-141.
- Brenner, I.B. et al. 1980. A new approach to the determination of the major and minor constituents in silicate and phosphate rocks. Chem. Geol. 28(3/4): 321-330.
- Butler, J.C. 1979. Numerical consequences of changing the units in which chemical analyses of igneous rocks are analyzed. Lithos. 12(1): 33-40.
- Callahan, J.E. 1980. Heavy minerals in stream sediments from Churchill Falls, Labrador - an aid in bedrock mapping. Can. J. Earth Sci. 17(2): 244-253.

- Callahan, J. and Closs, L.G. 1980. Advances in Exploration Geochemistry. Mining Engineering. 32(5): 514
- Cameron, E.M. and Garrels, R.M. 1980. Geochemical composition of some Precambrian shales from the Canadian Shield. Chem. Geol. 28(3/4): 181-198.
- Chaffee, M.A. et al. 1980. Geochemical analyses of samples of rock, stream-sediment, and panned heavy-mineral concentrate, Hoover Wilderness and adjacent areas, California. USGS OFR 80-79 41 p.
- Chaffee, M.A. et al. 1980. Chemical analyses of samples of rocks and stream sediment, and panned heavy-mineral concentrate, southern part of the Walker River Indian Reservation, Mineral County, Nevada. USGS OFR 80-365. 17 p.
- Chibisov, N.P. and Shibanov, V.M. 1978. Pore solutions of bottom sediments of the shelf in connection with marine geochemical prospecting. Geochm. Intern. 15(5): 98-100.
- Coker, W.B. and Shilts, W.W. 1979. Lacustrine geochemistry around the north shore of Lake Superior: Implications for evaluation of the effects of acid precipitation. GSC Paper 79-1C: 1-15.
- Curtis, S.M. et al. Silver, copper, lead, and zinc stream sediment anomalies in Misheguk Mountain quadrangle, Alaska. USGS OFR 80-315.
- Davies, J.F. and Whitehead, R.E.S. 1980. Further immobile element data from altered volcanic rocks, Timmins mining area, Ontario. Can. J. Earth Sci. 17(3): 419-423.
- De Vos, W. and Viaene, W. 1980. Geochemical study of soils and metallogenetic implications at Hiendelaencina, Guadalajara, Spain. Mineralium Deposita. 15(1): 87-100.
- Doering, W. and Friedman, I. 1980. Survey of helium in natural well waters and springs in southwest Montana and vicinity. USGS OFR 80-181. 43 p.
- Dumler, F.L. 1980. Geochemical zonation and origin of stratiform lead-zinc mineralization in the Akzhal-Aksoran metallogenic zone (Central Kazakhstan). Intern. Geol. Rev. 22(2): 240-248.
- Fortescue, J.A.C. et al. 1980. Regional geochemical mapping for earth science and environmental studies. CIM Bull. 73(817): 64-72.
- Garrett, R.G. and Goss, T.I. 1980. UANOVA: A FORTRAN IV program for unbalanced nested analysis of variance. Computers and Geosciences 6(1): 35-60.
- Gleeson, C.F. and Boyle, R.W. 1980. The Litho-geochemistry of the Keno Hill District, Yukon Territory. GSC Paper 77-31. 19 p.
- Gobeil, A. 1980. Etude litho-geochimique des roches volcaniques dans la region de la mine Lemoine, district de Chibougamau, Quebec. CIM Bull. 73(817): 86-95.

- Gott, G.B. and Cathrall, J.B. 1980. General distribution of Sb, Ag, As, S, Ba, Hg, Cu, Pb., Mn, Ni, B, Zn, Cd, and Cd/Zn, Pb/Zn, and Cu/Pb in rocks and soils of the Coeur D' Alene district, Idaho and Montana. USGS MI-1093B to J.
- Gott, G.B. and Cathrall, J.B. 1980. The sum of enrichments in rocks above the district median values for Cu, Sb, Ag, S; Sb, Ag and Mn; and Sb and Ag in the Coeur D' Alene district, Idaho and Montana. USGS MI-1093J.
- Gramenitskig, Ye. N. 1980. Experience gained in the use of petrochemical methods to investigate metasomatic rocks. Intern. Geol. Rev. 22(1): 121-124.
- Hafftg, J. et al. 1980. Determination of iridium and ruthenium in geological samples by fire assay and emission spectrography in USGS Prof. Paper 1129. G1-G4.
- Henrie, T.A. 1980. Gearing up to control trace elements during mineral processing. Mining Congress Journal 66(4): 18-20.
- Hoffman, J.D. et al. 1980. Chemical variability of a meta-volcanic rock unit in the Tracy Arm-Fords Terror Wilderness study area, Alaska, and the definition of background values for geochemical purposes. in USGS Prof. Paper 1129: D1-D8.
- Hohn, M.E. and Friberg, L.M. 1979. A generalized principal component model in petrology. Lithos. 12(4): 317-324.
- Holmquist, R.C. and Knoblock, K.R. 1980. A cartographic look at constraints to mineral exploration and development. Mining Congress Journal: 66(2): 55-62.
- Hood, P.J. 1980. Mineral exploration trends and developments in 1979. Canadian Mining J. 101(1): 20-63.
- Hutton, J.T. et al. 1980. An accurate XRF method for the analysis of geochemical exploration samples for major and trace elements using one glass disc. Chem. Geol. 29(1/2): 1-12.
- Ismailov, M.I. and Ergashev, S.E. 1980. Possibility of using the hydrogeochemical indicator (pH) of subsurface waters in earthquake forecasting. Intern. Geol. Rev. 22(1): 96-98.
- Johnson, B.R. et al. 1980. Efficient stream-sediment sampling design: An experiment at Tracy Arm, Alaska. in USGS Prof. Paper 1129: E-1-E9.
- Kaback, D.S. and Runnells, D.D. 1980. Geochemistry of molybdenum in some stream sediments and waters. GCA 44(3): 447-456.
- Kovalevskii, A.L. 1979. Biogeochemical Exploration for Mineral Deposits. Amerind Pub. Co., New Delhi 136 p. (Translated from the 1974 Russian Edition, Nedra Pub., Moscow, for the U.S. Dept. of the Interior, pursuant by an agreement with the National Science Foundation). Available from the U.S. Dept. of Commerce, National Technical Information Service, Springfield, Virginia 22161.

- Lecomte, P. and Sondag, F. 1980. Regional geochemical reconnaissance in the Belgian Ardennes: Secondary dispersion patterns in stream sediments. *Mineralium Deposita*. 15(1): 47-60.
- Lett, R.E.W. and Fletcher, W.K. 1980. Syngentic sulphide minerals in a copper-rich bog. *Mineralium Deposita*. 15(1): 61-68.
- Lewis, A.D. and Smewing, J.D. 1980. The Montgenevre ophiolite. (Hautes Alps, France): metamorphism and trace-element geochemistry of the volcanic sequence. *Chem. Geol.* 28(3/4): 291-306.
- Loudon, T.V. 1979. *Computer Methods in Geology*. Academic Press 269 p.
- Meier, A.L. 1980. A technique for the decomposition and dissolution of rocks and the determination of lithium, calcium, and magnesium using atomic-absorption spectroscopy. in USGS Prof. Paper 1129. 11-15.
- Meineke, D.G. et al. 1979. Organic-rich lake sediment exploration geochemistry pilot survey of Southern Crow Wing and Morrison Counties, Central Minnesota. Map 152 Minnesota Department of Natural Resources.
- Morgan, J.D. Jr. 1980. Minerals availability - the mineral position of the United States. *Mining Congress Journal*. 66(2): 49-54.
- Mosier, E.L. et al. 1980. Spectrographic and chemical analyses of whole-rock and insoluble-residue samples, Rolla 1^o by 2^o quadrangle. Drill holes 61-64. USGS OFR 80-394 to 397.
- Motooka, J.M. et al. 1980. Analyses of the heavy-mineral fractions of drainage sediments, Richfield 1^o by 2^o quadrangle, Utah. USGS OFR 79-1699. 216 p.
- Page, N.J. and Carlson, R.R. 1980. Review of platinum-group metal geochemistry and the major occurrences in the world. USGS OFR 80-90. 23 p.
- Rollinson, H.R. and Windley, B.F. 1980. Selective elemental depletion during metamorphism of Archean granulites, Scourie, NW Scotland. *Contrib. Min. and Petrol.* 72(3): 257-263.
- Siems, D.F. et al. 1980. Chemical analyses of stream deposits in the West Pioneer Mountains, Beaverhead County, Montana. USGS OFR 80-309. 26 p.
- Tessier, A. et al. 1980. Trace metal speciation in the Yamaska and St. Francois Rivers, (Quebec). *Can. J. Earth Sci.* 17(1): 90-105.
- Vadis, M.K. and Meineke, D.G. 1979. Chemical analysis of samples from McComber Mine, St. Louis County, Minnesota. Map 151. Minnesota Department of Natural Resources.
- Veillette, J.J. and Nixon, F.M. 1980. Portable drilling equipment for shallow permafrost sampling. GSC Paper 79-21. 36 p.

- Viets, J.G. et al. 1980. Spectrographic and chemical analyses of whole-rock and insoluble residue samples, Rolla 1^o by 2^o quadrangle, Missouri. Drill holes 57-60. USGS OFR 79-1559.
- Wallace, A.B. 1980. Geochemistry of polymetallic veins and associated wall rock alteration, Pyramid District, Washoe County, Nevada. Mining Engineering 32(3): 314-
- Watts, K.C. et al. 1980. Map showing anomalous tungsten and gold distribution in stream sediments concentrates, Hillsboro and San Lorenzo quadrangles exclusive of the Black Range Primitive Area, Sierra and Grant Counties, New Mexico. USGS MF-900I.
- Willey, J.D. and Fitzgerald, R.A. 1980. Trace metal geochemistry in sediments from the Miramichi estuary, New Brunswick. Can. J. Earth Sci. 17(2): 254-27

=====

EMPLOYMENT OPPORTUNITY

GEOCHEMIST

Minerals Exploration

Appropriate degrees to minimum M.A. level in geology and geochemistry; 5-10 years experience in metals and uranium exploration. Position requires planning, executing and supervising data collection and interpretation. Opportunity to originate a departmental geochemical program with growth potential.

Location - Denver base with field projects in eastern and western U.S. and overseas.

Salary negotiable depending on experience.

Applications to: Exploration Department
GULF MINERAL RESOURCES CO.
1720 S. Bellaire St.
Denver, CO 80222



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

President:

P.K. Theobald
U.S. Geological Survey
Branch of Exploration Research
5946 MacIntyre Street
Golden, Colorado 80401
U.S.A.

Annual Report by the President, 1979-80

This has been a year of consolidation for the Association. Largely through the efforts of our Secretary and Treasurer, we all have access to our By-Laws in a published form, the membership list is nearly consolidated in a form to allow ready access for managerial and planning use, and our financial situation is sorted out showing our strengths and weaknesses. The composite product allows me to state that the Association is presently in a strong position, but that this strength has potential for long range fragility. Our strength is in our membership. As long as there is a strong membership, both the Association and the profession will remain strong.

Vice-Presidents:

A.W. Rose
Dept. of Geosciences
Pennsylvania State University
University Park, Pennsylvania 16802
U.S.A.

G.R. Webber
Dept. of Geology
McGill University
Montreal, Quebec H3C 3G1
Canada

Secretary:

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

It has been an active year for the Association in the presentation and preparation for symposia. The Basin and Range Symposium in Tucson, neatly coupled with the field trip of the Society of Economic Geologists, was a success, as was the Uranium Symposium in San Diego, held in conjunction with the annual meeting of the Geological Society of America. The biennial symposium in Hannover, jointly sponsored with two of our sister societies, promises to be outstanding. In preparation are a theme meeting on precious metals of the Cordillera to be held in Vancouver in 1981, and the Ninth Biennial Symposium in Saskatoon for 1982. Initial invitations have been received for the Tenth Biennial Symposium, 1983, from the Scandinavian countries and for the Eleventh, 1985, from Brazil. In addition, regional meetings have been discussed for South Africa and Toronto.

Treasurer:

I. Thomson
Ontario Geological Survey
77 Grenville Street
Toronto, Ontario M5S 1B3
Canada

Councillors:

1979-80
W.K. Fletcher
R.F. Horsnail
L.D. James
K.A. Lovstrom
T.W. Meyer
J.H. McCarthy

Exchanges with other societies with active programs in applied geochemistry have been involved in nearly all of the planning for these meetings. It is time to consider more active coordination among the various societies in order to achieve the optimum quality of the programs and to minimize conflict. Initial discussions have begun among the Councillors to examine our alternatives.

1979-81
R.C. Armstrong
P.M.D. Bradshaw
R.H. Carpenter
L.G. Closs
W.B. Coker
E.H.W. Hornbrook

Australian Regional Councillor:
J.F. Gilfillan

European Regional Councillor:
G.H.W. Friedrich

Southern Africa Regional Councillor:
G.L. Coetzee

Association publications had their ups and downs during the year. On the positive side, the able management of Eion Cameron and John Hansuld allowed the Journal to continue effectively. In an experimental venture, the proceedings of the Seventh Symposium were published by the Association itself; the first finished product appeared a year ago. The investment on the part of the Association has now repaid itself, so the experiment may be considered a success. Only through the extreme committment of both time and energy on the part of John Watterson and Ed Post was the venture possible. It is their feeling as well as my own that publication of a volume as complex as this should be left to the professionals whenever possible.

The latest supplement to the bibliography was available at the Tucson meeting. Council has authorized the bibliography committee, under Herb Hawkes, to proceed with a compilation that will put all of the supplements in a single volume. We hope the new bibliography will be available in Saskatoon.

In retrospect, it has been a satisfying year for me, due to the diligent support of the outstanding executive and council members. To them and to the many others who have contributed to a successful year, my heartfelt thanks.

President

Paul Theobald

Paul Theobald



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

President:

P.K. Theobald
U.S. Geological Survey
Branch of Exploration Research
5946 MacIntyre Street
Golden, Colorado 80401
U.S.A.

Annual Report by the Secretary, 1979-80

This year marks the tenth anniversary of the Association, we have come a long way from our beginnings in Toronto when we had 150 members, who were mostly from North America. Now as our tenth year closes, our third under legal incorporation, we have 588 members drawn from 59 countries. Over the last few years our growth has steadied to about 10% per annum. Now our major task is to keep our current membership and continue to grow at least at the historical rate.

Vice-Presidents:

A.W. Rose
Dept. of Geosciences
Pennsylvania State University
University Park, Pennsylvania 16802
U.S.A.

G.R. Webber
Dept. of Geology
McGill University
Montreal, Quebec H3C 3G1
Canada

Secretary:

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

Our 1979 membership was predominantly made up of 444 Voting Members; in addition we had 3 Honorary, 74 Affiliate, 51 Student and 16 Corporate Members. Geographically we are still strongest in North America with 336 members, Europe follows with 76 members and Australia with 62. Brazil has a fast growing membership, 27 members in 1979, and it has been Council's decision that the Association should seek a Regional Councillor for that country.

Treasurer:

I. Thomson
Ontario Geological Survey
77 Grenville Street
Toronto, Ontario M5S 1B3
Canada

The Association is active at the national level in several parts of the world where members sit on committees concerned with geoscience in general or geochemistry. In Brazil, the President, Dorival C. Bruni, and Secretary, Jose E. Oliveira, of the newly formed Technical-Scientific Geochemical Committee of the Brazilian Geological Society are both Association members. In Australia, Richard Mazzucheli serves on an advisory committee to the Bureau of Mineral Resources; whilst in the U.S.A. Art Rose speaks for exploration geochemistry on the National Committee for Geochemistry, and in Canada Lloyd Clark represents the Association on the Canadian Geoscience Council.

Councillors:

1979-80
W.K. Fletcher
R.F. Horsnail
L.D. James
K.A. Lovstrom
T.W. Meyer
J.H. McCarthy

1979-81
R.C. Armstrong
P.M.D. Bradshaw
R.H. Carpenter
L.G. Closs
W.B. Coker
E.H.W. Hornbrook

Australian Regional Councillor:
J.F. Gilfillan

European Regional Councillor:
G.H.W. Friedrich

Southern Africa Regional Councillor:
G.L. Coetzee

The routine business of the Association has been carried out between the Association's permanent office in Toronto and Ottawa. This is the first year where this geographical split has occurred since incorporation, and affairs have proceeded in an orderly fashion. A number of non-recurring tasks have been undertaken in 1979. The amended By-Laws were prepared and printed in the autumn, and distributed to members with the December Newsletter. The major task of putting the Association's membership file up on a computer has been completed; the membership list has been prepared from the file,

printed and mailed with the March Newsletter. During the coming summer all past members, now inactive, will be entered on the file and we will be trying to persuade these persons to become active again in the Association. Lastly, Elsevier was approached on the matter of back issues of the Journal; their response was a discount offer which a number of members have taken up. Final arrangements will be completed in Amsterdam immediately after the Hannover meeting.

The Association is its members, we gain our strength and reputation from the quality and success of our meetings and the Journal; and some of our internal cohesion through the Newsletter. The Newsletter is a particular concern of the Secretary. The future of the Newsletter is currently under review, not for any technical reason, but for the cost of circulation, in particular the cost of mailing. I have hoped, and still do hope, to prepare four Newsletters a year. In my opinion the Newsletter serves a useful purpose in binding members together with news of each other, the Association, meetings and the very useful Bibliography update. We could reduce the number of issues to two or three per year, but this would only result in a partial saving since certain mailings to members, i.e. dues notices, notice of meetings etc. have to be made. Currently all general business mailings are combined with a Newsletter. As the Treasurer points out in his report we are the victims of inflation, in Canada the cost of postage has almost tripled since 1970! I would like to take this opportunity to ask two things of the membership. Firstly, contribute items to the Newsletter. Other members are interested in what is going on in geochemistry elsewhere around the world. Secondly, please let the Secretary and Council know how you would like to see the Newsletter in the future. If you would like to air your views on this and other matters to do with the Association and exploration geochemistry the Newsletter is your forum.

Lastly, I would like to thank on behalf of the Association all those who have helped the Secretary's office over the last year in both Toronto and Ottawa. Ines Filicetti does an excellent job handling membership, publication and other matters in Toronto. In Ottawa several members of the Geological Survey of Canada helped in a variety of ways. In particular I would like to thank Zita LeBlanc for preparing the By-Laws on a word processor so that we could go directly to printing with a professional looking product.



Robert G. Garrett
Secretary.



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

Annual Report by the Treasurer, 1979-80

President:

P.K. Theobald
U.S. Geological Survey
Branch of Exploration Research
5946 MacIntyre Street
Golden, Colorado 80401
U.S.A.

Vice-Presidents:

A.W. Rose
Dept. of Geosciences
Pennsylvania State University
University Park, Pennsylvania 16802
U.S.A.

G.R. Webber
Dept. of Geology
McGill University
Montreal, Quebec H3C 3G1
Canada

Secretary:

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

Treasurer:

I. Thomson
Ontario Geological Survey
77 Grenville Street
Toronto, Ontario M5S 1B3
Canada

Councillors:

1979-80
W.K. Fletcher
R.F. Horsnail
L.D. James
K.A. Lovstrom
T.W. Meyer
J.H. McCarthy

1979-81
R.C. Armstrong
P.M.D. Bradshaw
R.H. Carpenter
L.G. Closs
W.B. Coker
E.H.W. Hornbrook

Australian Regional Councillor:
J.F. Gilfillan

European Regional Councillor:
G.H.W. Friedrich

Southern Africa Regional Councillor:
G.L. Coetzee

The financial position of the Association may be described as firm and stable. Regrettably we cannot regard it as strong. The 1979 financial transactions are presented in the accompanying statements and consolidated summary where full details are provided for the U.S. and Canadian dollar accounts in Toronto. Examination of these records suggests that the Association is some \$12,000.00 better off at the end of 1979 than at the beginning of the year. These figures are, however, misleading because:

a) Included in these statements are revenues from sales of the Denver Symposium Volume. This represents extraordinary income and must be applied against earlier expenses for printing and publication.

b) Our call for subscriptions in the fall of 1979 was very successful and the monies on hand as of December 31, 1979, include many 1980 subscriptions.

c) Full details of movements in the Golden, Colorado account are not included since they are still to be verified. However, it is important to note that monies in this account declined from U.S. \$18551.19 in February 1979 to U.S. \$14567.19 in October despite the infusion of U.S. \$6543.64 as proceeds from the Tucson mini-symposium. Expenses incurred by the Golden account arise from printing and publication of the Denver Symposium Volume.

In summary therefore the Association maintained its financial position through 1979. We have yet to show a clear profit from publication of the Denver Symposium Volume and, unless a strong sales drive is maintained, it will be some time before we fully capitalise on this venture.

Our basic position is best illustrated by the budget for 1980. In this I have identified our regular sources of income and our ordinary expenditures. In addition we must anticipate some extraordinary expenses this year for printing membership lists for distribution to members and seed financing for future symposia in North America.

The budget reveals the fragile nature of our Association finances. We have finally fallen prey to inflation and your Council will have to face this problem in the near future.

I would like to remind you that we have been fortunate for many years in having a hidden income that supported your dues in financing the affairs of the association. The basic dues have remained U.S. \$10.00 since 1970, all additions and increases in membership fees have gone to the publication of the Journal of Geochemical Exploration. This Journal is, however, also a major source of income in the form of royalties from Elsevier from additional sales and advertising. These royalties have increased steadily over a number of years and in 1978 amounted to some U.S. \$6000.00 or U.S. \$11.50 per member. Taking into account long term inflation we have held our own since the U.S. \$21.50 per member now available to the treasurer is roughly equivalent to U.S. \$12.00 in 1970.

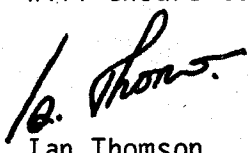
However while income from both membership and royalties has grown steadily our operating costs have increased and inflation has also moved relentlessly upwards. We now face the prospect of a small deficit on the operations budget for the first time and the possibility that we will have to draw on our reserves. These reserves have been hard won, as proceeds from workshops, symposia and from surpluses on operations in earlier years. These funds are our strength for the future and should not be eroded carelessly.

How do we reconcile our position? We must either increase revenue or reduce costs. Revenues could be increased if membership were to increase, this would also affect royalties significantly if we can acquire another 80-100 subscriptions. Alternatively Membership dues could be raised, but your Council does not contemplate any increase at this time.

Reducing our operating costs could be effected most readily by abandoning the newsletter or cutting back to two issues per year. (The 1980 budget assumes 4 issues). At present the newsletter costs approximately \$2.00 per member, per issue or \$4400 per year. Costs for this are rising rapidly, particularly postage and shipping. Personally, I would argue strongly that the newsletter should stay in its present form. It is a unique and personal form of communication and dissemination of information (the bibliography for example) that is exclusively for the members.

Please note that I have made no mention of our permanent secretary, Mrs. Filicetti. Her role is crucial to the functioning of the Association and it is the collective opinion of Council that she is worth much more than the salary we pay her.

In conclusion, I wish to report that your Association is financially secure but is now faced, as are so many individuals and organisations, with the problems of living on a fixed income in times of inflation. Nevertheless, it is our objective to maintain our existing level of service to you, the member, and hold the subscription rates at the current levels. We believe this is possible with good management and with increased royalties from Elsevier which will ensure continued health of our finances.



Ian Thomson
Treasurer.

Association of Exploration Geochemists

Toronto: Canadian Dollar Account

1979 Financial Statement

INCOME

Dues		4915.30
*Publications	a	383.19
	b	690.10
Advertising		55.00
Transfer from U.S. Account		2325.00

Total: \$8368.59EXPENDITURE

Secretary (Salary, benefits)	3970.85
Office (Stationery etc)	377.37
Printing (Newsletter etc)	2897.80
Postage and Shipping (Newsletter etc)	1856.09
Corporate Registration	60.00
Membership (C.G.C)	188.20
Royalties (A. Sinclair)	2247.00
Advertising	116.00
Misc.	17.50

Total: \$11730.81

Balance (Deficit) \$(3362.22)

*Publications a AEG Publication
b Denver Symposium Volume

I. A. Thomas
Toronto, 18th April 1980

Association of Exploration Geochemists

Toronto: U.S. Dollar Account

1979 Financial Statement

INCOME

Dues	25180.00
*Publication a	949.05
b	5538.50
Royalties (Elsevier)	6313.75
Interest on Deposits	325.97
Meetings (San Diego)	600.00
Misc.	1.14

Total \$38908.41

EXPENDITURE

Journal Publication	20471.28
Transfer to Can. \$ Account	2000.00
Shipping	42.95
Printing	33.13
Meetings (San Diego)	624.67
Advertising	114.97
Misc.	50.50

Total \$23337.50

Balance \$15570.91

*Publications a AEG Publication
 b Denver Symposium Volume

Handwritten signature and date:
 Toronto 18th April 1980

Association of Exploration Geochemists

1979 Consolidated Statement¹

	<u>Toronto Can \$</u>	<u>Toronto US \$</u>
1979 Income	8368.59	38908.41
1979 Expenditure	11730.81	23337.50
	<hr/>	<hr/>
Balance (Deficit)	(3362.22)	15570.91

Liabilities as of Dec 31 1979.

(i) Secretary	302.24	
(ii) Postage & Shipping	100.75	
(iii) Journal (Elsevier)		1353.00
	<hr/>	<hr/>
	403.99	1353.00

<u>Summary:</u>	<u>Toronto Can \$</u>	<u>Toronto US \$</u>
*Balance Jan 1, 1979	4662.22	18289.29
1979 Account	(3362.22)	15570.91
Liabilities, Dec. 31, 1979	(403.99)	(1353.00)
*Balance Dec 31, 1979	<hr/> \$1300.00	<hr/> \$33860.20

¹Not included, First National Bank in Golden, Golden, Colorado, account where Balance at year end was US\$14567.19

*As cash on deposit at the Canadian Imperial Bank of Commerce, Rexdale, Toronto, Canada.

La Man
Toronto 18th March 1980

Association of Exploration Geochemists

1980 Budget¹INCOME

Dues	25500.00
Royalties (Elsevier)	7440.00
² Publications	1000.00
Interest	350.00

Total \$34290.00

EXPENDITURE(a) Ordinary

Secretary	4400.00
Office	300.00
³ Printing (Newsletter)	2250.00
³ Postage and Shipping	2500.00
Journal (Elsevier)	19500.00
Corporate	400.00

(b) Extraordinary

Print Membership lists	1000.00
Seed Money Sask	3000.00
" Money Van.	1000.00

Total \$34350.00

Balance (Deficit) \$(60.00)

1. Based on 600 members world wide
2. Excluding sales of Denver Symposium Volume
3. Assuming 4 copies of the Newsletter in 1980

K. Shaw
Toronto
Feb 7 1980.



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

President:

P.K. Theobald
U.S. Geological Survey
Branch of Exploration Research
5946 MacIntyre Street
Golden, Colorado 80401
U.S.A.

Annual Report of the Admissions Committee

Vice-Presidents:

A.W. Rose
Dept. of Geosciences
Pennsylvania State University
University Park, Pennsylvania 16802
U.S.A.

G.R. Webber
Dept. of Geology
McGill University
Montreal, Quebec H3C 3G1
Canada

Fifty-nine applications were processed by the committee during the past year. This includes one application for reinstatement and one for change of membership status. Twenty-three of the applications were for Full, eighteen for Affiliate and eighteen for Student membership. As in previous years applications continue to be received from countries around the world, enhancing the international character of the Association.

Secretary:

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

The number of applications processed was slightly (8%) less than last year. This is the second year of declining applications although the decline this year is considerably less than last. Hopefully next year will see a reversal of the trend.

Treasurer:

I. Thomson
Ontario Geological Survey
77 Grenville Street
Toronto, Ontario M5S 1B3
Canada

L. D. James.
L.D. James, Chairman
L.P. James, and
J.L. Walker

Councillors:

1979-80
W.K. Fletcher
R.F. Horsnail
L.D. James
K.A. Lovstrom
T.W. Meyer
J.H. McCarthy

1979-81
R.C. Armstrong
P.M.D. Bradshaw
R.H. Carpenter
L.G. Closs
W.B. Coker
E.H.W. Hornbrook

Australian Regional Councillor:
J.F. Gilfillan

European Regional Councillor:
G.H.W. Friedrich

Southern Africa Regional Councillor:
G.L. Coetzee