

# THE ASSOCIATION OF EXPLORATION GEOCHEMISTS



April 30th, 1971.

**President:**

J. A. Hansuld,  
Amax Exploration Inc.,  
7 King St. E.  
Toronto 1, Ont.

APRIL NEWSLETTER

**Vice Presidents:**

F. C. Canney  
United States Geological Survey,  
Federal Centre,  
Denver, Colo 80225

J. L. Walker  
Barringer Research Ltd.  
304 Carlingview Drive  
Rexdale,  
Toronto, Ont.

**Secretary:**

Ian Nichol,  
Dept. of Geological Sciences  
Queen's University  
Kingston, Ont.

**Treasurer:**

C. F. Gleeson,  
C. F. Gleeson & Associates  
764 Belfast Rd.  
Ottawa 8, Ont.

**Councillors:**

H. Bloom  
R. W. Boyle  
E. M. Cameron  
J. A. Coope (ex-officio)  
I. L. Elliott  
R. L. Erickson  
H. E. Hawkes  
R. F. Horsnail  
H. W. Lakin  
J. H. McCarthy

Our Association is now slightly over a year old and on this, its first anniversary, I, as your new President, would like to thank all of the members for their interest and support in launching the Association. As might be expected, the first year's activities were mainly concerned with organizational matters and, in particular, the establishment of a firm membership base. As of this date, we have received over 300 applications for membership of which 290 have been approved. An up-to-date membership list in booklet form, subdivided on a geographic base for easy reference, is in preparation and will be enclosed in the next newsletter. In the meantime a list of new members admitted since publication of the last list is enclosed for reference. Our membership includes representation from over 15 countries so we have indeed a truly international organization. It is indeed gratifying to see such enthusiasm especially of such broad geographic coverage.

Under the energetic leadership of Dr. Alan Coope, the founding President, the new Association immediately embarked on a very ambitious program for a "just born" organization. An official Association seal was adopted, plans were immediately finalised for the 4th International Geochemical Symposium to be held in London, England, in April of 1972 under the auspices of the AEG, and a number of working Committees were established as reported in President Coope's newsletter dated February 1, 1971. Several of these Committees have already made considerable progress while others suffered from inaction and as of this month have been reconstituted as well as two new committees (Publications and Constitution) established.

To date, our Executive and Councillors have been confined to those in North America for the obvious reasons of convenience and communication. However, there is provision in the constitution for the appointment of correspondents and election of Regional Councillors outside of North America. At its March 8 meeting, the Council determined that a correspondent should be appointed to represent any region of 15 or more members and that a Regional Councillor be elected in any region of 25 or more members. Accordingly the Secretary was instructed to invite correspondents to represent Australia (D. Sampey), The United Kingdom and Ireland (O.W. Nicholls) and for Europe (G.H.W. Friedrich). These correspondents will be responsible for stimulating and co-ordinating Association activities in the

respective areas. Hopefully, before too long, Regional Councillors will be elected in these areas and that other geographic units will qualify for correspondents.

During the first year three Council meetings were held - in Toronto on July 18, in St. Louis on October 25 and in Toronto on March 8. The annual meeting was held in Toronto on March 10, at which time President Coope summarised the Association's activities; a copy of his address is enclosed. At the annual meeting, the new Council was elected, Councillors and Executive for this year are listed on Association's letterhead. The newly elected Council has already held two meetings - in Toronto on March 10 immediately following the annual meeting, and in Denver on April 7. At the Denver meeting, the Council approved the appointment of R.F. Horsnail as the new Chairman of the Admissions Committee and authorized him to formulate his own Committee to process applications for admission. Regarding the new Membership Committee, as provided for in the constitution, the consensus of Council opinion is that it is premature to formulate such a Committee and at this stage of development, all members should seek and encourage new members to join the Association. Enclosed is a list of the various Committees that have been established, the names of the appointed Chairmen and, where available, a brief summary of their status and plans. I am sure you will find these committee reports most interesting, particularly the plans to publish an up-to-date bibliography early next year and the progress of the Publications Committee in establishing our own Journal of Exploration Geochemistry.

The Proceedings of the Third International Symposium on Geochemical Exploration held in Toronto in 1970 are now available as Special Volume No. 11 of the Canadian Institute of Mining. Copies at a cost of \$15 may be obtained from The Canadian Institute of Mining & Metallurgy, 906-1117 Ste. Catherine St. W., Montreal 110, Quebec, Canada. Members of the Association will have received the first notice regarding the fourth symposium to be held in London, April 17-20th, 1972. Field visits to areas of interesting case histories in the U.K. and Ireland should form a unique feature of the meeting. Preliminary enquires regarding charter flight have indicated that providing enough interest is shown return fares from San Francisco and Denver to London \$251.00, and from Toronto to London \$217.00. You are asked to indicate your interest in one of these flights by completing the enclosed questionnaire.

Now that the initial enthusiasm of founding and launching a new scientific group is over, we, the members, must settle down to the job of building the Association into a sound, viable organization in keeping with the constitution objectives. In my view, the progress and plans discussed by the Council and reported to you by Dr. Coope in his newsletter and Presidential address, are considerable. I hope we can continue and expand on this record, and as your new President, my personal goals for the coming year are two-fold - firstly, to involve as many members as possible in Association activities, secondly, to keep the membership as large informed of all progress and developments of the Association. Regarding membership involvement, I have asked all Committee Chairmen to select members on as wide a geographic and affiliation (industry, government, university) base as possible. It is impossible for all Chairmen to be familiar with the interests of all members and it may well be that some members are overlooked who could and would provide a valuable contribution. The more members participating in Committee activities the better. On behalf of all Committee Chairmen, I invited and urge you to serve on any Committee of interest. Please feel free to write to me or to the Committee

Chairman to indicate your interest. Because of our newness and international scope, communications are vital for the continuance and progress of the Association. Until such time as the Association has its own publication (which I hope will be within a year) I propose the distribution of periodic newsletters summarizing Association activities and reporting on the progress and plans of the various Committees. This newsletter is the first of such a series with other planned for July, October and January. If any of you wish to use this newsletter to disseminate or communicate with the membership at large, we invite you to do so.

We have laid the foundation for a very successful and worthwhile professional organization and have already established ourselves in the scientific community. The objectives and plans of the Committees for this year are, in my view, most commendable and ambitious. With the continued support and enthusiasm of the membership, I am confident the Association can move forward. I look forward to a most productive year.

JOHN A. HANSULD.

Analysis

Chairman H.W. Lakin

Members:

A questionnaire amendable to computer input is being prepared to solicit information on analytical requirements in terms of types and numbers as a basis for study of efficiency and suitability of various methods used in geochemical exploration. The answers to these questions should form a picture of present trends in sampling and analytical methodology. It is planned to prepare a set of standard samples for distribution to interested laboratories.

Bibliography

Chairman: H.E. Hawkes

Members:	F.C. Canney (USA)	C.F. Gleeson (Canada)
	P.R. Donovan (Australia)	P. Lowenstein (UK)
	G.H. Friedrich (Western Europe)	L.V. Tauson (USSR)

Your Bibliography Committee plans to prepare a new and more complete bibliography and index to be distributed to the membership early in 1972. The coverage will be from 1965 to about December 1, 1971, and will include Russian and Eastern European articles as well as Western. It is planned that the indexing system will be the same except that it will be keyed to author's names rather than to code numbers. A special section on review articles and new books will be included. Any suggestions for improvements over the last bibliography will be most welcome. Particularly, we would appreciate contributions or citations missed last time or that you are afraid we will miss this time; send them to H.E. Hawkes, 6120 Santa Valera, Tucson, AZ 85718, U.S.A.

Case History:

Chairman R.L. Erickson.

Members:

After consideration it has been decided that the field practices and case history committee. The aims of this committee will be to solicit case histories especially from Industry for publication in a special volume or incorporation in early numbers of an AEG publication. A questionnaire is under preparation for circulation with the next newsletter.

Computer Applications

Chairman I. Nichol

Members: J.W. Aucott (England) A.T. Meisch (U.S.A.)  
P.M. Bradshaw (Canada) D.A. Pretorius (SA)  
R.G. Garrett (Canada) A.W. Rose (U.S.A.)  
R.F. Horsnail (Canada) A. Uythoven (U.S.A.)

The computer applications committee was constituted to review and report on the use of computers in the processing and interpretation of geochemical data. The committee is constituted of members from government, industry and university organizations throughout the world. A questionnaire was drawn up and circulated to various organizations, members of the Association and registrants of the Third Geochemical Exploration Symposium in Toronto. The closing date for receipt of completed forms is April 26th, after which time the results will be collated in the form of a report.

Constitution

Chairman J.A. Coope

Members: W.F. Bondar (Canada) R.F. Horsnail (Canada)  
R.H. Carpenter (U.S.A.)  
(others still to be added)

The purpose of this Constitution Committee will be to critically review the present constitution, suggest changes to and solicit comments from the general membership, and formulate recommended amendments to the constitution. Please submit suggestions as soon as possible to Dr. J.A. Coope, Newmont Mining Corporation of Canada Limited, Suite 1610, 25 King Street West, Toronto, Ontario, Canada.

The Committee will report to the Association President and Council. Any recommendations made to Council will be supported by the votes of the majority of Committee members who enter their votes by certain deadline dates to be specified. Each Committee member, including myself, will have one vote. Tied votes will be reported to Council as such and further action will be at the discretion of the President and the Council.

As most of you will know, the present constitution was drawn up by myself following discussion and correspondence with F.C. Canney and J.L. Walker. The final draft contained minor changes suggested by a lawyer. I believe that several changes in the constitution's present form can be justified, although I will be prepared to explain and defend certain clauses which I consider to be important.

Our task is an important one and an onerous one. I urge you to consider all matters very carefully before reaching a decision.

Education and Research

Chairman: H. Bloom

Members: D.R. Clews (Canada) P. Donovan (Australasia)  
R.W. Boyle (Canada) G.H. Frederich (Germany)  
R.L. Erickson (USA) R. Nichols (England)  
B. Bolviken (Scandinavia) J.S. Webb (England)  
F. Cachau-Herreillat (France)

The following summarizes the distribution and collation of questionnaires surveying the type and scope of geochemical work being done by various industry and university organizations. A total of 148 replies (88 from industry and 60 from universities) were received of which 85% are from the USA, Canada and Australia. The accompanying tables itemize the main items and a few comments follow.

The vast scope of geochemical exploration activities throughout the world is brought home by this survey. Many millions of dollars are being expended by industry along with an equally impressive numbers of samples being collected. This effort requires that industry takes a hard look at the future and begins to invest some of these funds in university supported research. Increasingly difficult exploration problems will require bright, young men to tackle them.

The carry-over of industries' large-scale geochemical activity is beginning to be felt on the campuses of many universities, particularly those in Canada, to a lesser extent in the United States and even less in Australia. That this is only a temporary state must be realized. These questionnaires reveal that many companies now indicate that they will not only offer to sponsor graduate research but the overwhelming majority of them indicate a future need for university trained geochemists in their companies.

If then, the universities will expand their teaching philosophy to include a greater appreciation of industries' problems, then the sound growth of geochemical exploration will be assured. Bright, young university graduates will be attracted toward a career in exploration geochemistry.

A more detailed compilation and analysis of the survey was reported in a paper presented by Professor Bloom at the AIME Annual Meeting in New York last February. A copy of this paper can be obtained by writing directly to Professor H. Bloom, Department of Geology, Colorado School of Mines, Golden, Colorado 80401, U.S.A.

**TABLE I - Industry**

	*(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Australia	44	44	27	18% 14 companies \$2,000,000	27	14 companies 600,000	11 own 29 Comm.	$\frac{16}{29}$	$\frac{16}{24}$	$\frac{32}{9}$	<u>Yes</u> <u>No</u>
Canada	24	23	18	12% 8 companies \$1,200,000	20	16 companies 400,000	8 own 10 Comm.	$\frac{11}{16}$	$\frac{11}{13}$	$\frac{24}{2}$	<u>Yes</u> <u>No</u>
United States	20	12	12	12% 5 companies \$600,000	14	5 companies 38,000	4 own 15 Comm.	$\frac{4}{12}$	$\frac{5}{9}$	$\frac{12}{4}$	<u>Yes</u> <u>No</u>
	88										

\*(0) Number of replies received.

- (1) Does your organization use geochemical prospecting in mineral exploration?
- (2) If yes, what is the frequency of use of this exploration tool?
- (3) What percentage of your annual exploration budget is allocated to geochemical prospecting?
- (4) Is sample collection, etc., done by your own staff?
- (5) How many samples are collected by your organization per year?
- (6) Is analytical work done by your own staff or by commercial laboratory?
- (7) Does your organization engage in geochemical prospecting research?
- (8) Would you be willing to sponsor graduate-student research at a university?
- (9) Does your organization anticipate a future need for university trained exploration geochemists?

**TABLE II - University**

	*(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Australia	7	$\frac{5}{2}$	$\frac{0}{7}$	7	$\frac{6}{1}$	$\frac{1}{6}$	$\frac{5}{2}$	3	<u>Yes</u> <u>No</u>
Canada	18	12	$\frac{1}{17}$	$\frac{17}{1}$	$\frac{13}{4}$	$\frac{6}{10}$	$\frac{14}{2}$	$\frac{4}{8}$	<u>Yes</u> <u>No</u>
United States	45	20	$\frac{0}{45}$	17	27	12	30	17	<u>Yes</u> <u>No</u>
	60								

\*(0) Replies received.

- (1) Do you offer any courses in geochemical exploration?
- (2) Do you offer a degree in Geochemical Exploration?
- (3) Are research topics that involve applied geochemistry acceptable in graduate program as thesis material?
- (4) Are any members of your teaching staff engaged in geochemical exploration research or consulting activity?
- (5) Does department receive financial support from oil or mining companies for research in geochemical prospecting?
- (6) Do any of your students find work in geochemical prospecting programs with companies during the summer?
- (7) Do you anticipate an increase in course offerings in applied geochemistry during the next 5 years?

Publication

Chairman: E.M. Cameron

Members:

At the request of the then president, Dr. J.A. Coope, E.M. Cameron undertook to investigate the feasibility of the AEG sponsoring a "Journal of Exploration Geochemistry".

At present papers concerned with geochemical exploration are carried in a wide range of journals. No single publication fills the role of a journal of geochemical exploration, although many papers are carried by Economic Geology in North America and by the Transactions of the Institution of Mining Metallurgy in the U.K. Government publications play an important role in the dissemination of geochemical exploration data.

The bibliography of geochemical prospecting prepared by Dr. H.E. Hawkes provides a means of gauging the rate of publication on geochemical exploration in the English language. In the 4½ years to December, 1969, 5200 pages were published excluding contributions to the two international symposia and long papers only partly concerned with geochemical exploration. Of 142 papers or contributions published in Canadian, U.K. or U.S. journals comprised 5 pages or less. This emphasized the very considerable importance in a practical science like exploration geochemistry of short papers, notes and discussions published rapidly.

The first International Geochemical Exploration Symposium held in Ottawa in 1966 resulted in 37 papers or abstracts being published amounting to 282 pages. The third, held last year in Toronto, produced 113 papers totalling over 600 pages.

On the basis of the above data it was concluded that the field of exploration geochemistry could very readily support an international journal published initially in four issues per year with approximately 100 pages per issue.

An analysis of the present volume of publication in exploration geochemistry and its geographic distribution was presented to a number of international publishing houses. They were requested to submit proposals to the AEG regarding the publication of a journal. A number of proposals were received. Further discussion has been had with the publishing houses and it is presently anticipated that a formal agreement between a publishing house and the AEG will be reached shortly. It should be possible for the first issue to be published by the summer of 1972.



At the suggestion of Dr. Hansuld, a publications committee is presently being formed to guide the further progress of the journal and deal with other publication matters. This committee will be widely representative, both in terms of geographic distribution and field of interest.

At this time, some of the most important considerations in determining the character of the journal are:

1. That it be international in character.
2. That its editorial policy be determined by a board largely composed of members of AEG.
3. That it provide the medium for the rapid publication of short technical communications, letters, and news of the association, as well as scientific papers.

These initial considerations may be very readily modified or supplemented at this stage by further considerations of the committee or the membership at large. The opinion of all interested members of the association is solicited. To this end the enclosed short questionnaire has been prepared in order to allow the opinion of the membership guide the committee. Of particular importance is the question of including a subscription to the journal with the annual membership fee of the association. By placing a bulk order with the publishers, the association may pass on a substantial discount to members. On the basis of the first estimated of the publishing houses, the cost of the journal to members should not exceed \$20. Please complete and return the questionnaire as soon as possible so we may move ahead in firming up an agreement. Your co-operation is appreciated.