

THE ASSOCIATION OF EXPLORATION GEOCHEMISTS



January 15th, 1972.

President:

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

NEWSLETTER #5

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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. Horsnall
H. W. Lakin
J. H. McCarthy

The Association will soon be celebrating its second anniversary. Since its founding meeting in April, 1970, considerable progress has been made and the Association is rapidly establishing itself as an internationally recognized scientific body. The past year has seen the initiation and significant development of many worthwhile projects, the fruits of which will be realized in 1972; these include the publication of the enclosed bibliography, the April Symposium in London, the publication of the first issues of our own Journal and the distribution of standard samples.

Although it is over three months before the annual meeting, which is scheduled to be held during the London Symposium, we the membership must already begin considering various matters that will be discussed and voted on at the meeting affecting the future of the Association.

Enclosed is your ballot for selecting the incoming Council and a list of proposed constitutional changes.

Concerning the election of Councillors, I would like to make a few personal comments for your consideration. To date, Councillors and Officers have all been residents of North America; the reasons for this I think are obvious. The Association was founded here and the bulk of our membership resides in the United States and Canada. As a new organization the localization of the administration has been, in my view, a real asset in contributing to the functioning and progress of the Association. Nevertheless, some may feel that this localization in what may be viewed from a distance as several select groups, is not in keeping with the international scope of the organization. However, it should be remembered that it was a close-knit group which spear-headed the founding of the Association and that several localized groups have provided much of the direction and stimulus in the Association's activities. As a result of these activities, the Association is becoming internationally known and the membership is expanding, especially in areas outside North America. It is perhaps time to give serious consideration to broadening the representation in Council to better reflect the international character of the Association it serves. In

short, we need some new blood which offers broader geographical coverage and a better mix of industry, university and government. The constitution makes no restriction on the geographical residence of ordinary Councillors; all voting members are eligible. It does dictate however, that the Executive be elected by and from within the Council; therefore the following year's Executive will come from those who you elect to the next Council. I urge all of you to consider these points in marking your ballot.

The proposed constitutional changes are aimed at making the constitution a more workable and streamlined document. The Constitution Committee, under the energetic leadership of Alan Coope, has given considerable thought, time and effort in proposing these changes. These proposals will be tabled for discussion and ratification by the membership at the annual meeting; please review them and carefully note the instructions on how they are to be adopted into the constitution.

Also enclosed is your personal copy of the bibliography on geochemical exploration literature covering the period 1965-1971. This volume, prepared by our Bibliography Committee under the able chairmanship of Herb Hawkes, is the Association's first official publication. The membership is indeed fortunate and grateful to Dr. Hawkes and his Committee for this "first".

By mid-year the first issue of the Association's official publication - "The Journal of Geochemical Exploration" - will be printed. Its appearance will mark an historical milestone in the development of our organization. The Publications Committee and especially its chairman, Eion Cameron, are to be commended for arranging and finalizing the agreement with Elsevier Publishing Company.

The Symposium in London this April is the first such Symposium held outside North America and the first organized under the auspices of the Association. The previous three Symposia were organized by various localized groups in Canada and the United States, all of whom are now active in the Association. The fact that the first symposium sponsored by the Association is being held outside North America, clearly demonstrates the desire of the Association's administration to promote the international character of the organization. General information on the Symposium is included with this newsletter. The Second Circular is currently being prepared by the IMM in London and will be mailed to all AEG members and those who responded to the first circular.

Regarding group flights to the Symposium from North America* progress has been delayed because of the uncertainty of fares related to recent IATA discussions on new fare structures. As plans stand at the moment a flight leaving Los Angeles on April 15th calling at Denver en route to London and returning by the same route from London on April 30th is being arranged by J.H. McCarthy (U.S.G.S., Federal Center, Denver, Colorado 80225, U.S.A.). The round trip fare is \$249.00. Anyone interested in joining this flight is asked to contact Howie McCarthy. R.B. Band, (Falconbridge Nickel Mines Ltd., 1314 West 71st Ave., Vancouver 14, B.C.) is collating information on persons interested in travelling from Western Canada and you are asked to contact Ray Band direct. Arrangements for a group flight from Toronto and

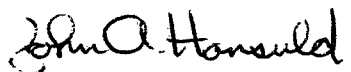
Montreal are being made by M.B. Mehrtens, (Rio Tinto Canadian Exploration Ltd., 120 Adelaide St. W., Toronto 1). Details on the latter flight plans are enclosed for your information.

In addition to the significant accomplishments of the Bibliography, Constitution and Publications Committees as referred to above, special mention should be given to the Analysis Committee under the leadership of Herb Lakin in preparing much needed bulk standards for geochemical analyses. Progress reports are included from the Analysis, Case History, Publications and Research and Education Committees.

As the last of the planned newsletters, I would like to take this opportunity to thank the many who helped in one way or another. All of the Committees made significant contributions, most of which have been summarized and reported on in previous newsletters and to which are added several updated attached reports. Without the co-operation of the Committee Chariman there would have been little to write about. A special vote of thanks is due to Ian Nichol, our Secretary, for keeping the affairs of the Association in order and moving. I wish also to give an expression of appreciation to the many Councillors who attended the various meetings and assisted in running the Association. My thanks to all members who participated in the Association activities. Hopefully, many more members will become active in the months ahead.

I look forward to seeing many of you at the London Symposium.
Best wishes for a prosperous new year.

Sincerely,



JOHN A. HANSULD.

Applications for Membership

Applications from the following persons have been approved by the Admissions Committee and Council as below.

Members:

J.T. Botbol, U.S.G.S., Denver, Colorado 80225, U.S.A.

A.Z. Gedeon, U.N.D.P., Georgetown, Guyana.

Associate Members:

D.W. Atchison, Haileybury School of Mines, Haileybury, Ont., Canada.

S.P. Marsh, U.S.G.S., Denver, Colorado 80225, U.S.A.

Kuo-Liang Pan, U.S.G.S., Denver, Colorado 80225, U.S.A.

R.V. Schultz, Carpentaria Expln. Co. P/L, Madang, Territories of Papua
and New Guinea.

Student Members:

R.C. Armstrong, Dept. of Geological Sciences, Queen's University, Kingston,
Ontario, Canada.

L.W. Kelly, I.T.C., Delft, Holland.

COMMITTEE REPORTS

Analysis Committee: - Chairman - H.W. Lakin

Members - H. Bloom, U.S.A.
I.L. Elliott, Canada
A. Kvalheim, Norway
R.H. Mazzucchelli, Australia
M. Thompson, England.

We have received replies to our questionnaire from 143 laboratories -- 128 of these laboratories expressed an interest in cooperating in our study of 6 reference samples.

These samples are currently being prepared, bottled, and analyzed. They should be ready to mail by the end of February 1972.

Dr. Beus and Dr. Tauson of the USSR are cooperating with the committee, and hopefully many laboratories in the USSR will join in our cooperative study.

The attached tables summarize the types of laboratories, personnel, and number of samples being analyzed in the areas we have canvassed.

Summary of Information Gained from the Questionnaire of the Committee on Geochemical Analyses:

Country	No. of professional employed	No. of non-professional employed	No. of samples analyzed	No. of labs reporting	No. of labs participating on reference samples
Australia and New Zealand	57	134	1,430,065	22	21
Canada	93	163	801,306	33	32
Europe	74	92	474,121	20	18
Japan	78	39	62,290	13	5
Mexico, Central America and South America	78	73	163,400	13	13
South Africa	9	23	277,000	3	3
Southeast Asia	1	4	16,956	3	3
United States	163	138	604,482	36	33
Total	553	666	3,829,620	143	128

Summary of Types of Laboratories Responding to Questionnaire:

Country	Mining or oil company	Expl. subsidiary of mining or oil company	Govt.	Univ. or Tech. Inst.	Custom Lab	Consultants	Other	Total
Australia and New Zealand	6	7	5	1	3	2	1	25
Canada	3	7	6	6	10	4	2	38
Europe	4	5	5	4	2	3	1	24
Japan	9	2	2	3	1	1	1	19
Mexico, Central America, and So. America	2	-	9	1	1	1	-	14
South Africa	1	1	1	-	-	-	-	3
Southeast Asia	-	-	1	-	1	1	-	3
United States	2	7	6	4	11	8	3	41
Total	27	29	35	19	29	20	8	167 *

* Many laboratories are listed in more than one category--actual number is 143.

Case Histories:		Chairman - R.L. Erickson	
		Members - F. Canney, U.S.A.	
		H. McCarthy, U.S.A.	
		J. Walker, Canadian.	
<p>As of December 28, thirty-five respondents to the Case History questionnaire have indicated their intention to submit a Case History manuscript for publication in our new Journal. The submittal dates range from early 1972 to the end of 1973. Thus it would appear that we have a good supply of papers and will be able to plan on a regular flow of quality articles to the Journal. Further, the coverage is world-wide. Positive responses have been received from Canada, Turkey, Australia, Zambia, Malaysia, England, Italy, Mexico, and the United States.</p>			
<p>Copies of the suggested format and manuscript style for guidance have been mailed to each respondent.</p>			
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Publications Committee: - Chairman - E.M. Cameron

Members - B. Bolviken (Norway) M. Dall'Aglio (Italy)
P.R. Donovan (Australia) F.R. Siegel (U.S.A.)
D.D. Runnells (U.S.A.)

Preparation for publication of the journal of the Association are running well on schedule. Sufficient papers of good quality have been offered to ensure meeting the editorial deadlines required by Elsevier, who have assured distribution of the first issue by July. Papers that will be published in the first issue are:

Brundin, N.H. and Nairis, B. (Sweden)

Alternative sample types in regional geochemical prospecting.

Dall'Aglio, M. and Tonani, F. (Italy)

Hydrogeochemical exploration for sulphide ore bodies by correlation between sulphate and other constituents.

Govett, G.J.S. (Canada)

Interpretation of a rock geochemical exploration survey in Cyprus statistical and graphical techniques.

Mazzucchelli, R.H. (Australia)

Secondary geochemical dispersion patterns associated with the nickel sulphide deposits at Kambalda, Western Australia.

McCarthy, J.H., Jr., (United States)

Volatile components in air as a guide to ore deposits—a review.

Perhac, R.M., and Whelan, C.J. (United States)

Comparison of water, suspended solid and bottom sediment analyses for geochemical prospecting in a northeast Tennessee zinc district.

Welte, D. (W. Germany)

Petroleum exploration and organic geochemistry.

Wennervirta, H., and Papunen, H. (Finland)

Lithochemistry of heavy metals, Orijärvi region, southwest Finland.

Renegotiation of the Association's agreement with Elsevier was necessitated by international monetary developments. However, this agreement was at last finalized at the beginning of the New Year.

With the creation of the journal, the principal purpose of this committee is completed. The committee will therefore be disbanded. The editorial duties of the journal will be handled by an editorial board, the formation of which has been delayed until the agreement with Elsevier was finalized. Details on the submission of articles, reviews, letters and news to the journal will be contained in the first issue. Until then, any present member of the Publications Committee will be glad to provide information.

Research and Education: - Chairman - H. Bloom

Members: D.R. Clews (Canada) P. Donovan (Australia)
 R.W. Boyle (Canada) G.H. Frederich (Germany)
 R.L. Erickson (U.S.A.) O.W. Nicolls (England)
 B. Bolviken (Scandinavia) J.S. Webb (England)
 F. Cachau-Herreillat (France)

Scandanavia

Norway: Survey Conducted by Bjørn Bølviken

Geological Survey: Staff of three geochemists, one analyst and about nine technicians. They have complete analytical facilities and work with all types of samples. Research is conducted into the classifications of background vs. anomalous data; environmental factors and their influence stream sediments. Budget runs at about \$100,000.

Industry: Of the twelve operating companies, five make frequent use of geochemical prospecting and average about 10% of their exploration budget. Three alone average about \$37,000 each. Sampling: approximately 18,000 samples of all kinds are used by nine companies. Eight companies have their own laboratories while five also use commercial labs.

Research: differentiation between anomalies caused by black schists vs. those by sulfides; nickel dispersion; bog, stream sediments, etc. While five companies would sponsor graduate students' research, four anticipate future need for university trained geochemists. Geochemical prospecting is increasingly used as follow up to airborne geophysics.

University: Two universities offer courses, but do not regard it as a major field. One, however, (Trondheim) expects to establish a faculty position in Applied Geochemistry. Geochemical topics form part of theses concerned with ore geology. Both staff and students find summer employment with exploration program.

Finland: Survey Conducted By H. Wennervirta

Industry: Five companies replied to the effect that they use geochemical prospecting; their budget averages about 6% of the total exploration budget. They report that about \$10,000 each is expended. About 31,000 samples of all types were collected by three companies. Most analytical work is done with A.A., XRF, and Spec. in that order, by their own staff rather than commercial laboratories. Research topics include nickel, iron ore halos, carbonatites. Two companies would sponsor graduate student research and three anticipate a need for university-trained geochemists.

University: Three of the five universities replying offer courses and at least two of these will accept a geochemical thesis toward a doctorate degree. Others permit theses with geochemical emphasis for use toward a master's degree. Faculty members as well as students at these schools work with companies during the summer months. All five expect to either introduce additional courses or make a beginning.

Denmark: Survey Conducted By F. Kalsbeek

Little is reported as going on there except perhaps at the University of Aarhus. Here, course work is given and specialization in geochemical exploration is encouraged. Students and staff are involved in summer activities.

Sweden: Survey Conducted By C.A. Nilsson

Geological Survey: About five geologists-geochemists are on the permanent staff, and during the field season between 40 and 50 university students and others may be employed. Handle all kinds of sampling problems. Budget runs around \$200,000. Research: regional prospecting using stream sediments, mud, and water; primary halos of sulfide ores; biogeochemical case studies; heavy mineral prospecting methods.

Industry: Of the three companies replying, two account for the bulk of the activity. Budget averages about 10% of their total. Together they have handled about 21,000 samples. Their own laboratories are mostly used for this work and interestingly, emission spectrography is used almost exclusively. Research: regional prospecting methods; primary dispersion halos of sulfide ores. Principal use is found in following up airborne geophysics.

Netherlands: Survey Conducted By S. Dijkstra

University: Both at Delft and Utrecht is course work in exploration geochemistry well along. Closely associated with the university at Delft is the International Institute for Aerial Surveys and Earth Sciences (ITC) where several courses in geochemical exploration are given by Delft professors.

Only one mining company is indicated to be operational in this field and they spend approximately 20% of their budget with emphasis on Sn and Ni exploration.

West Germany: Survey Conducted By G. Frederich

University: At only five of the 26 universities replying are courses in exploration geochemistry found, and no special degree is offered. However, theses on this subject are acceptable at Aachen. Two report receiving financial assistance from industry and most have students who are employed during the summer. At both Aachen and Munchen are additional courses planned.

Geological Survey: Of the eight state geological surveys, five indicate small scale activity. Work is going on with such elements as U, F, B, as well as base metals.

Industry: Of the eighteen mining companies sent questionnaires, 11 replied. Of these, seven mining companies are involved with U, F, B, and base metal exploration not only at home, but overseas as well. Out of a total of about 50,000 samples of all types collected, one company alone accounts for 34,000 of these. University laboratories appear to be involved with the chemical analyses. Six companies indicate a willingness to sponsor graduate-student research.

Japan: Survey Conducted By M. Shiikawa

University: Akita University is reported to be very active in supporting

geochemical exploration research and graduate theses programs.

Industry: Returns from eight companies indicate that about 2% of their exploration budget is used for geochemical activities. Five companies indicate they analyze a total of about 22,000 samples. Most analytical work is carried on in the company's laboratories rather than outside. There seems to be little interest on the part of the companies to sponsor graduate student research, yet six companies anticipate a future need for such trained people.

Fourth International Geochemical Exploration Symposium

The Institution of Mining and Metallurgy in London will be circulating the Second Circular to all members of the Association and respondents to the first circular. The distribution of the second circular has been held up due to delays beyond their control in finalizing arrangements for the field visits. The IMM have supplied the following information on arrangements to allow members to plan ahead.

Following the end of the formal meeting on April 20th, the next day will be set aside for visits to various geochemical laboratories in the London area.

Field visits to (a) Cornwall and Devon (b) Scotland, (c) Ireland and (d) Germany are planned. The field trips to Cornwall and Devon, Scotland and Ireland run from the 21st or 22nd of April to the 28th of April while the trip to Germany runs from the 26th April to the 30th April. If persons wish to attend the first part of the United Kingdom or Irish field trips and then continue on to the trip to Germany arrangements will be made to get them back to London in time for the departure to Germany. The details of the various trips are as follows:-

1. Cornwall and Devon - The party will travel by rail from London to Newquay, Cornwall on Saturday, 22nd April. Sunday, 23rd April will be free for sight-seeing. During Monday, 24th and Tuesday, 25th visits will be made to the operating tin mines in Cornwall, including the recently opened Wheal Jane mine. On Wednesday, 26th there will be a geological-mining tour of the county, including a visit to the operations of the English China Clay Company. On Thursday, 27th the party will travel from Newquay to Exeter by way of Dartmoor where geochemical demonstrations will be given by officers of the Institute of Geological Sciences. On Friday, 28th return Exeter to London.
2. Scotland - On the evening of Friday, 21st April the party will travel by overnight sleeper from London to Inverness. Saturday, 22nd, Sunday, 23rd and Monday, 24th will be devoted to tours of the geological features of West Sutherland and the Inverness area with geochemical demonstrations. The first two nights will be spent at Dornoch and the third at Inverness. On Tuesday, 25th the party will travel by coach from Inverness to Inverary on Loch Fyne. On Wednesday, 26th visits will be made to the sulphide occurrences in the area, and the party will arrive in Edinburgh in the evening. Thursday will be a free day in Edinburgh, and on Friday, 28th the party will return by day train to London.
3. Ireland - The party will travel by air London to Shannon airport on Saturday, 22nd April and then by coach to Limerick. Sunday will be a free day there. On Monday, 24th excursions will be made from Limerick to places of geological interest, including the Gortdrum operation. On Tuesday, 25th party will visit the Tynagh operations and others in the neighbourhood, and go on to Dublin. On Wednesday, 26th and Thursday, 27th visits will be made from Dublin to the operations at Keele, Navan and Avoca, returning to London by air on Friday, 28th.
4. Germany - Details of the field visit to Germany are not available but

will be included in the second circular. It is planned the party will fly to Cologne on April 26th. The itinerary will include visits to, (a) Bensberg to visit the underground workings and geological environment of the district (b) Meggen mine, Sauerland and (c) Goslar and Dreisler where geochemical work has been done. The party will return to London April 30th in time for the charter flights to North America. The field visit to Germany is limited to a maximum of 30 persons.

Costs

The costs quoted cover all travel on the tours, economy class by air, first class by rail, and dinner, bed and breakfast at hotels, also packed lunches on excursions. It is assumed that participants will share rooms with two beds in hotels. A supplement for single rooms is shown.

Cornwall and Devon £70: U.S. \$179
Single Room supplement: £7: U.S. \$18

Scotland £95: U.S. \$242
Single Room supplement: £9: U.S. \$23

Ireland £120: U.S. \$301
Single Room supplement: £9: U.S. \$23

Germany £125: U.S. \$319
Single Room supplement: £13: U.S. \$33

For persons partaking of the first part of the field visits to the U.K. or Ireland and following on to Germany the total cost would be reduced by saving on accomodation.

Papers for Presentation

- ALLAN et al**
Low sample density limnic geochemistry - A new technique for reconnaissance geochemical exploration within the Canadian Shield.
- BANERJEE & GEDEON**
Problems of mineral exploration in the white sand covered Precambrian Shield of Guyana, South America.
- BARRINGER & BRADSHAW**
Developments in airborne geochemical prospecting.
- BOLVIKEN et al**
In situ measurements of pH, Eh, and self potentials in diamond drill holes.
- BOLVIKEN & SINDING-LARSEN**
Sample error and other criteria of consequence for the interpretation of stream sediment data.
- BOWIE et al**
Uranium distribution studies by the Lexan plastic fission track registration method and the application to geochemical exploration.
- DALL'AGLIO**
Hydrogeochemical exploration for sulphide ore bodies by means of the study of correlation between sulphate and other constituents.
- DASS et al**
Endogenic haloes of the native silver deposits, Cobalt, Ontario, Canada.
- DAVENPORT & NICHOL**
Bedrock sampling as a guide to determining areas of base-metal potential in Archean greenstone belts.
- DUBOV**
To the theory of anomalies classification and inverse problems solutions by geochemical explorations.
- ELYNSON**
The gaseous survey for the prospecting and exploration of the sulphide ore deposits.
- EREMEEV et al**
Application of helium surveying in structural mapping and ore deposit forecasting.
- FRIEDRICH et al**
Flameless atomic absorption and ion-sensitive electrodes as analytical tools in copper exploration.
- GARRETT**
A regional geochemical study of Cretaceous acidic rocks in the Northern Canadian Cordillera as a tool for broad mineral reconnaissance.
- GOTT & BOTBOL**
Zoning of major and minor metals in the Coeur d'Alene.
- GOVETT**
Differential secondary dispersion in transported soils and post-mineralization rocks: an electrochemical interpretation.
- HAUSEN et al**
Application of sulphur and nickel analyses to geochemical prospecting.
- HESP & RIGBY**
Cluster-analysis of rocks in the New England igneous complex, New South Wales, Australia.
- HOLMES & TOOMS**
Dispersion from a submarine exhalative orebody.
- HOWARTH**
The pattern recognition problem in applied geochemistry.
- HUBERT & LAKIN**
Atomic absorption determination of thallium and indium in geologic materials.
- JONASSON**
Snow - a sampling medium in geochemical prospecting.

- KESLER & VAN LOON**
Analysis of water extractable chloride in rocks using a selective ion electrode.
- KUNZENDORF**
Non-destructive determination of metals in rocks by radioisotope x-ray fluorescence instrumentation.
- LEAKE & AUCOTT**
Geochemical mapping and prospecting using rapid automatic X R F analysis of panned concentrates.
- LEARNED & BOISSEN**
Gold - a useful pathfinder element for porphyry copper exploration in Puerto Rico.
- LOWENSTEIN & HOWARTH**
Automated colour-mapping of three component systems and its application to regional geochemical reconnaissance.
- MEHRTENS et al**
Some aspects of geochemical dispersion from base metal mineralization within glaciated terrain in Norway, North Wales and the central interior of British Columbia, Canada.
- MEYER & LEEN**
A microwave-induced argon plasma emission system for geochemical trace analysis.
- MICHIE et al**
Detection of concealed mineralization in Northern Scotland.
- NICROL & LARSSON**
A comparison of multivariate techniques in the interpretation of geochemical data.
- OBIAL & JAMES**
The use of cluster analysis in geochemical prospecting with particular reference to Southern Derbyshire.
- OVCHINNIKOV et al**
Gaseous geochemical methods of structural mapping and search for ore deposits.
- PLANT & COLEMAN**
The application of neutron activation analysis to the evaluation of placer gold concentrations.
- PLUGER et al**
The determination of total - and cx-fluoride in soils and stream sediments with a ion-sensitive fluoride electrode.
- RAZGONOV**
On the geochemical zoning of copper-nickel mineralization and its endogenous haloes - using as an example the ore deposits of the Norilsk Group.
- ROBBINS**
A Zeeman spectrometer for the measurement of atmospheric mercury vapour.
- SMITH & WEBBER**
The nature of mercury anomalies at the New Calumet Mines area, Quebec, Canada.
- TAUSON & KOZLOV**
On the consequence of distribution functions and ratios of trace element concentrations at estimating the potential orebearing of granitoids.
- WATLING et al**
Identification of trace mercury compounds in rocks as a guide to sulphide mineralization at Keel, Eire.
- WOLLENBERG**
Fission track radiography of uranium and thorium in radioactive minerals.

Flight Arrangements to London from Eastern Canada

An Affinity Group Flight serving Eastern Canada may be organized to accommodate the Symposium and field trip schedule and would be available to the membership of the A.E.G. and I.M.M. (and their families). The probable cost will be \$226 return from Montreal and \$272 return from Toronto. The flight will depart for London on April 16th and return to Canada on April 30th.

The details are as follows:

April 16th, Sunday: A.C. Flight 836 (DC 8 stretched)
 Depart Toronto 8:50 A.M.
 Depart Montreal 10:40 A.M.
 Arrive London 9:55 P.M.

April 30th, Sunday: B.O.A.C. Flight 609 (Boeing 747)
 Depart London 2:00 P.M.
 Arrive Montreal 3:45 P.M.
 Arrive Toronto 5:35 P.M.

Your attention is directed to the following conditions:

1. In order to qualify for the air fares quoted above, the group travelling Toronto-Montreal and return must comprise not less than 15 persons and Montreal-London and return not less than 40 persons. If we fail to obtain the necessary support the affinity group flight will have to be cancelled, at which time any payments will be refunded.

2. A deposit of \$100 per person should be received by the flight coordinator not later than February 11th, 1972. The balance is payable not later than March 8th, 1972 in order that full payment can be made to Air Canada at least 30 days before flight departure. A full refund is guaranteed should you have to cancel for reasons of health or accident.

3. Children up to and including age 11 years are half price and infants (to 2 years) 10% of full fare.

You are asked to complete and mail the attached form.

* Cheques should be payable to The London Symposium Flight Account.