



International Association of Geochemistry and Cosmochemistry NEWSLETTER

President

George Wetherill
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Carnegie Institution of Washington
5241 Broad Branch Road, N.W.
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U.S.A.

No. 7

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Message from the President

Ten years ago I attended the first I.A.G.C. Symposium on the Origin and Distribution of the Elements. This was an important event in my life. It was my first scientific meeting outside of North America, my first visit to Paris, and for the first time I met many European scientists who previously had been for me only names in the literature. But its importance went beyond springtime in Paris and the camaraderie of colleagues. Stellar spectroscopists and nuclear physicists working on theories of the formation of the elements came together and listened to those who studied major elements, trace elements, and their isotopes, in meteorites and rocks from the earth. The spirit of the symposium was well expressed by Prof. T. W. F. Barth's remark at the close of the symposium: "Here at this symposium in Paris, a whole spectrum of sciences has been united."

In spite of the recent emphasis on multidisciplinary work, it is more difficult to reproduce this atmosphere today. Hardly a week goes by that there is not some specialized international symposium. There are many more scientists and journals. Our laboratories are more complex, and expensive, and it takes a lot of time to keep them running and almost as much time is spent getting the money that makes this possible. In this changed world what is the role of an international association like ours?

I feel that more than ever we need to strengthen the growth of an international community of geochemists and cosmochemists who will listen to and respect one another, and who will continue to remind one another and their colleagues in other disciplines that the subject of our science extends from the center of the earth to whatever boundaries the universe may have, and that we all have something to teach one another. We need to generate a spirit which will prove contagious to young people in our countries, and to the older ones who sit on national and international committees, who plan projects such as the International Geophysical Year and its successors. It should not be necessary to explain at length to other earth scientists why geochemists can make a contribution to an international geodynamics project.

How is this to be done? During the three years of my office I shall spend much time discussing this with as many of you as possible and seeking the answer. In some ways it seems an impossible task. It is hard enough for our minds with their quite finite limitations to grasp our science in its entirety, without the added problems of language barriers, distance, and political and cultural differences. But we must try. The council must meet next year, rather than wait for the International Geological Congress in 1980, at which it leaves office. We must answer one another's letters, even though the distance between us reduces the embarrassment of confronting one another after having failed to do so. We will need more money, but we must also make the Association a worthy recipient of limited funds. To do this, I will need your help, and I will be asking you for it individually during the coming months.

George W. Wetherill
President

The 1977 General Assembly of IAGC was held following two meetings of the Council.

MINUTES OF THE IAGC GENERAL ASSEMBLY

held at UNESCO Headquarters, Paris, May 13, 1977.

Council Members Present:

V. V. Shcherbina, Vice President, USSR
Earl Ingerson, Past President, USA (Acting Chairman)
Juan Goni, France
Zdenek Pacal, Czechoslovakia
E. Lal, India

In addition to the foregoing, approximately 50 other representatives of corporate members and individual geochemists were present.

Vice President Shcherbina asked Past President Ingerson to Chair the Council meetings and the General Assembly.

Dr. Ingerson noted that the principal actions by the General Assembly were to ratify the actions of the Council and to elect new officers and Council members (list distributed to delegates present) for the period until the next General Assembly scheduled in conjunction with the International Geological Congress in Paris in 1980.

Dr. Ingerson stated that the Associate Treasurer's Report of funds received from European Socialist countries (Kcs 12,468.50 Czechoslovakia crowns, deposited in a Czechoslovak bank) would be published in the IAGC Newsletter. He noted that these funds might be used to help defray publication expenses and distribution of the Newsletter to national representatives in East European countries.

Consideration of Resolutions from Sydney - Dr. Ingerson noted that the resolutions concerning improved operational procedures that were adopted at the informal meetings of geochemists held in Sydney August 19 and 23, 1976, in lieu of the scheduled IAGC Council and General Assembly meetings (published in Newsletter No. 6, February, 1977) were considered and acted on by Council. A list of the ten resolutions and the Council's responses follows these minutes.

Categories of Appropriate Expenses - Dr. Ingerson noted that Council is to approve the kinds (but not amounts) of expenses that are appropriate for payment by the Treasurer. The amounts should be specified by a Budget Committee. The Council's vote to provide part of

Dr. Eric Underwood's travel expenses from Perth as Chairman of the Working Group on Geochemistry and Health, to the Symposium on Geochemistry and Health in London, March 1978, was ratified; to ratify strong recommendations of the Council to accept expenses of a quarterly or semi-annual Newsletter by an Editor with no other IAGC responsibility. The Editor of the Newsletter should be under the general supervision of the Secretary to insure timely publication. Newsletter No. 7 is to have information on the IAGC Working Groups; Dr. Ingerson has information on three Working Groups and hopes to receive it for the others shortly.

Dr. Aswarthanyana restated a comment he made at Sydney, that the Indian National Science Academy could be the adhering member of IAGC, previously held by the Geochemical Society, but the IAGC Treasurer must make a formal request for the change to take place and no such request has been made. Dr. Ingerson said that such a change must come from the country involved.

Dr. Wetherill suggested that it would be wise to know the specifics of the publication arrangements with Capt. Maxwell of Pergamon Press. Dr. Ingerson noted that the new journal, Organic Geochemistry, is edited by Dr. Irving Breger along with several associate editors. It plans to increase from 4 issues per year to 12 per year as the number of manuscripts warrants. The initial price to members is \$12.50 per year, but is expected to increase as the number of issues increases. Increases will be by negotiation between IAGC and Pergamon Press. The first issue is in press and expected shortly.

Dr. Ingerson noted that the first issue of Geostandards Newsletter, being published by the Centre de Recherches Petrographiques et Geochemiques at Nancy, France, is available for subscription by libraries and individual members of the Association. IAGC will cosponsor and help edit this journal.

Dr. Ingerson reported that Dr. Ahrens is negotiating with Pergamon Press toward dividing Physics and Chemistry of the Earth into Physics of the Earth and Geochemical Reviews, the latter of which is to be an IAGC journal. Price information is not yet available.

Dr. Webb expressed concern over the proliferation of journals and the financial risk in the arrangement with Pergamon Press and wanted to insure that the Association loses nothing. It was noted that Geostandards Newsletter is being paid for by the group at Nancy, Pergamon is taking care of Geochemical Reviews.

Ratification of Actions by Council - On motion, the actions of the Council were approved with the understanding that the expenses of journals are not included. The motion was carried without opposition.

Appreciation for Financial Support - UNESCO has contributed \$52,500 to IAGC mostly for the holding of symposia. The National Science Foundation has contributed \$4,000 and the U.S. Geological Survey \$6,500. Detailed reports on the various symposia, the countries represented, where the funds originated and their use, are available from Dr. Ingerson. He noted the appropriateness of an expression of appreciation to UNESCO and particularly to the Earth Sciences Division, the Ecological Sciences Division, the Water Sciences Division, and the Division of Oceanography which provided active support; also to NSF and the U.S.G.S.

He reported that UNESCO representatives attended one of the recent Council meetings to explain their position with respect to supporting symposia and conferences that fall within the UNESCO program. Their budget is fixed two years in advance, so there appears to be little likelihood of further UNESCO support during the next two years, and then proposed symposia must be in line with the UNESCO's program that has been approved by the member states. He reported receiving a series of UNESCO documents, which outline interests of the Organization. Members planning symposia are therefore urged to write to the Secretary to determine whether UNESCO has an appropriate program that would benefit from cooperation with IAGC.

Election of Officers and Council - For the period between now and 1980, the scheduled date of the next IAGC General Assembly to be held in conjunction with the International Geological Congress in 1980 in Paris, the Nominating Committee (E. Ingerson, Chairman; H. L. Barnes, J. Goni, J. F. Lovering, V. V. Scherbina) compiled all suggestions made by corporate and individual members and rank-ordered nominees for each office. This list of nominees was then sent to Secretary Keil for mail balloting by Council Members. The resulting slate of nominees was transmitted to Dr. Ingerson by Dr. Keil's letter of April 26, 1977, and the following slate was presented:

I.A.G.C. OFFICERS 1977-1980

President

George Wetherill
Director
Department of Terrestrial Magnetism
Carnegie Institution of Washington
5241 Broad Branch Road, N.W.
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Vice-Presidents

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Secretary

G. M. Anderson
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Treasurer

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P. O. Box 136
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AUSTRALIA

Past President

L. H. Ahrens
University of Cape Town
Department of Geochemistry
Private Bag, Rondebosch
Cape, SOUTH AFRICA

I.A.G.C. COUNCIL MEMBERS 1977-1980

Gyorgy Bardossy
Hungarian Academy of Sciences
Lab for Geochemical Research
Magyr Tudomanyos Akademia
Budapest V
Roosevelt-ter, 9
HUNGARY

D. S. Coombs
Geology Department
University of Otago
Dunedin
NEW ZEALAND

A. Erlank
Department of Geochemistry
University of Cape Town
Private Bag, Rondebosch, Cape
SOUTH AFRICA

Martin Frey*
Mineralogisch-Petrographisches Institut
Sahlstrasse 6
CH-3012 Bern
SWITZERLAND

William S. Fyfe
Chairman
Department of Geology
University of Western Ontario
London, Ontario, N6A 5B7
CANADA

Knut S. Heier
Mineralogisk-Geologisk Museum
Sars Gate I
Oslo 5
NORWAY

Ikuo Kushiro
Japan Geological Institute
Faculty of Science
University of Tokyo
Tokyo
JAPAN

I. D. Ryabchikov
Institute of Geology of Ore Deposits
USSR Academy of Sciences
Moscow
USSR

* Dr. Frey has not yet confirmed his
willingness to serve as councillor.

On motion, the slate was approved by acclamation and without
opposition.

Minutes of the 1972 meeting of the General Assembly in Montreal
were not available.

There being no other business, Dr. Ingerson declared the General
Assebmlly adjourned at 5:47 p.m. to reconvene at the time of the Interna-
tional Geological Congress in Paris in 1980.

CONSIDERATION OF THE RECOMMENDATIONS MADE AT THE
INFORMAL MEETING IN SYDNEY IN AUGUST, 1976.

No formal meetings of the IAGC were held in conjunction with the 25th International Geological Congress in Sydney, Australia, but an informal meeting of national representatives and other interested geochemists was held on August 23, 1976. At this meeting, a resolution outlining ten suggestions for improvement in the IAGC was approved for dissemination to IAGC corporate (national) members and other national representatives, and ultimately to the IAGC Council. Mr. William L. Petrie, Executive Secretary of the U.S. National Committee for Geochemistry, acted as the disseminator of this document.

In addition to expressing a general dissatisfaction with the effectiveness of IAGC, the following ten suggestions were made. These suggestions were discussed by Council and a summary of the discussion or action taken follows each point.

1. *A current copy of the Charter and Bylaws should be provided to each adhering National Committee.*

The Statutes (rather than Charter and Bylaws) were distributed originally to the Council and to Corporate Members and have since been republished in Newsletter No. 6, February 1977.

2. *The Nominating Committee, by letter to each National Committee, should request suggestions for officers for IAGC.*

Council recommended that the Nominating Committee request suggestions for officers and councillors by letter to each National Committee. It was voted to reconstitute the Statutes Committee and refer this proposed change to it.

3. *A current roster of officers and committees of the IAGC should be sent to each National Committee soon after election.*

It was agreed that current rosters of the officers, council, working groups, and committees should be sent to each corporate member soon after election, and that the importance of broad dissemination of this information (perhaps by Newsletter) is to be noted to the new Council.

4. *An annual financial statement must be provided to each National Committee by the Treasurer.*

It was recommended that the Statutes be modified to provide for annual reports by the Treasurer [and any "Associate Treasurer" with sources, dates, and amounts of dues income] for each Corporate Member.

5. *A newsletter reporting on IAGC activities should be distributed at least annually to all members of IAGC. The Treasurer's report could be included in the newsletter.*

It has been intended that newsletters be distributed at least annually to all members, but personal problems of the Editor unfortunately prevented it. On motion, it was recommended to the new Statutes Committee that the Statutes be modified to make the newsletter the responsibility of the Secretary as a means of insuring timely distribution of the newsletter at least annually.

6. *Notice of symposia and other meetings that are sponsored by the IAGC should be sent to each National Committee as early as feasible, together with an indication of the means to be used to publicize the event. (The goal is to achieve complementary rather than duplicative promotion of the meeting.)*

It was agreed that by suggestion to the new Council, notice of symposia and other meetings should be sent to each Corporate Member together with plans for publicity so that complementary promotion might be effected.

7. *Formal notice of each meeting of the Council should be sent well in advance to each National Committee by the IAGC Secretary with a request for agenda items. Representation of National Committees at Council meetings should be at the option of each National Committee.*

It was agreed and already included in the Statutes (but not done) that formal notice of Council meetings should be sent to Corporate Members [and publicized in the Newsletter to individual members]. Representation of Corporate Members at meetings of the Council should be at the option of Corporate Members [in good standing].

8. *Meetings of the IAGC Council should be held routinely at each International Geological Congress. This schedule provides for maximum interaction between the IAGC and its adhering corporate members.*

It was agreed, and also already included in the Statutes, that the IAGC Council routinely hold meetings at each International Geological Congress to provide for maximum interaction between IAGC and its adhering Corporate Members.

9. *The IAGC should solicit representation from those countries not now having National Committees for Geochemistry.*

It was recommended that the Secretary solicit representation from those countries without Corporate Members. Dr. A. A. Beus has agreed to assist with a list of contacts.

10. *Ordinary or individual memberships in IAGC should be abandoned, and corporate membership fees should be increased.*

Dr. Ingerson referred to his memo of May 4, 1977, concerning membership in International Associations and Societies, etc.* Contrary to the recommendation from Sydney, on motion, the category of individual members was not abolished. It was suggested that a membership campaign be conducted to obtain many more interested individual members. Several Corporate Members expressed opposition to an increase in corporate dues and none was voted by the Council.

* This refers to a three-page memorandum from Dr. Ingerson to the IAGC Council. In it he summarized the membership policies of 19 international societies in the earth sciences, and pointed out that a large majority of these favor individual or individual plus corporate or national memberships. He discussed the reasons for this and recommended that IAGC retain individual memberships.

SECRETARY'S REPORT

At the moment there are fourteen corporate or national members of IAGC, but many countries which should be members are not. Correspondence with Government and Geological groups in these countries has been initiated to try to increase our membership.

There are also approximately 323 individual members, who pay \$3.00 per year. Many of these members are in arrears in their dues, but a period of amnesty has been declared for the purpose of getting this Newsletter out to as wide an audience as possible. Members in arrears are advised to send their dues to the new Treasurer (see page five) in order to continue to receive the Newsletter and to have a voice in the future affairs of the Association. The Newsletter is guaranteed to appear a minimum of twice a year.

Readers who would like to join may use the application form attached to this Newsletter.

TREASURER'S REPORT

The Treasurer's report in Newsletter No. 6 for the period July 1, 1975, to August 13, 1976, contained a misprint. The following report is for the period July 1, 1975, to June 30, 1976. A report for the period July 1, 1976, to June 30, 1977, is being prepared and will appear in the next Newsletter.

INTERNATIONAL ASSOCIATION OF GEOCHEMISTRY AND COSMOCHEMISTRY
FINANCIAL STATEMENT FROM 1st JULY 1975 to
30th JUNE 1976

Balance brought forward as shown on statement from 1/7/74 to 30/6/75		\$9,475.68 (Australian)
Income to 30th June, 1976	\$2,005.10	
Interest to 30th June, 1976	337.59	<u>2,342.69</u>
TOTAL INCOME:		<u>\$11,818.37</u>

EXPENDITURE

Bank Draft Dr. A. El Goresy Refund Chemical Geology Fees	13.58 (Australian)	
Bank Draft Prof. Aswathanayana - Towards Expenses of Directory of Geochemists (\$125.00 U.S.)	99.32	
Bank Draft Prof. L.H. Ahrens - Financial Support Symposium (R280).	258.05	
Secretarial Assistance Mrs. M. Germaine	100.00	
Postages I.A.G.C. Notices	96.25	
Xerox Copying Notices	25.00	
Secretarial Assistance Mrs. M. Germaine	200.00	
Bank Charges	<u>2.35</u>	
Total Expenditure	794.55	
BALANCE IN HAND AS OF 30th JUNE, 1976	\$11,023.82	
	<u>\$11,818.37</u>	<u>\$11,818.37</u>

UNESCO FUNDS

Balance of Monies in Hand re: Contract No. SC/RP 251-021	\$ 762.13
Money in Hand re: Contract No. SC/RP 600-444	<u>1,142.91</u>
TOTAL AMOUNT IN HAND:	\$1,905.04
BALANCE OF I.A.G.C. FUNDS	<u>3,582.96</u>
	<u>\$5,488.00</u>

The Associate Treasurer, Dr. Pacal reported income from the European Socialist countries and expenses as follows:

15 April, 1974, to 15 April, 1977:

Group	A	B	C	D	E	F
[Geochemists represented]	25	26-100	101-250	251-500	501-1000	>1000
Crowns (Kcs)	500	1000	2000	3000	4000	5000

IAGC Account in Zivnostenska Banka Kcs 11,193.00

Transfer from IAGC Account to Operating Fund Kcs 5,100.00

Expenses:

Mailing service, stamps	Kcs	372.50	
Telephone, Cables		1,170.40	
Lectures, papers		412.00	
Transport means		<u>1,869.60</u>	
			<u>3,824.50</u>
			1,275.50
			Balance, Kcs 12,468.50

COMMISSIONS AND WORKING GROUPS

The following commissions and working groups of IAGC exist, according to our records:

1. Working Group on Geochemical Exploration
Chairman: L. Tauson, USSR
2. Working Group on Geochemical Nomenclature and Documentation
Chairman: David F. Davidson, U.S.A.
3. Working Group on the Geochemistry of Sediments and Sedimentary Rocks
Chairman: Alexander B. Roniv, U.S.S.R.
4. Working Group on Geochemistry and Health
Chairman: Eric J. Underwood, Australia
5. Working Group on Isotope Geochemistry
Chairman: Mario Fornaseri, Italy
6. Commission on Extraterrestrial Chemistry
Chairman: Bernard Pagel, Great Britain
7. Commission on Organic Geochemistry
Chairman: Keith Kvenvolden, U.S.A.
8. Commission on Geochemistry of Natural Waters
Chairman: M. G. Valyashko, U.S.S.R.

Recent progress reports have been received from Dr. Tauson for the Working Group on Geochemical Prospecting, Dr. Underwood for the Working Group on Geochemistry and Health, Dr. Fornaseri and Dr. Aswathanarayana for the Working Group on Isotope Geochemistry, Dr. Valyashko for the Commission on Geochemistry of Natural Waters and Dr. Pagel for the Commission on Extraterrestrial Chemistry. Dr. Davidson reports that the Working Group on Geochemical Nomenclature and Documentation is inactive and should be discontinued. Dr. Underwood plans to hold a meeting of his group at the meeting on Environmental Geochemistry and Health to be held in London in March, 1978.

We urge members of those Groups and Commissions not yet heard from to establish contact with the new executive of the Association.

DIRECTORY OF ISOTOPE GEOCHEMISTS

The Working Group on Isotope Geochemistry, in conjunction with the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) has produced a World Directory of Isotope Geochemists. The Directory contains particulars of about 160 laboratories/groups in 23 countries. Copies are available for \$1.00 U.S. from

Prof. U. Aswathanarayana
Secretary, IAGC Working Group
on Isotope Geochemistry
University of Saugar
Saugar, M.P. 47003
INDIA

MEETINGS

Sept. 12-16, 1977 *Experimental trace-element geochemistry*, conference in Sedona, Ariz. (Michael J. Drake, Lunar & Planetary Laboratory, University of Arizona, Tucson, 85721) By Arizona State University and the University of Arizona. To evaluate experimental methods, review recent investigations, and outline important areas for future research.

Sept. 25/Oct. 11, 1977 *2d Intl kimberlite conference*, in the American Southwest. Technical sessions Oct. 3-7 near San Fe; field trips before and after. (Kimberlite Conference, Louis Elms, 745 Gilpin Drive, Boulder, Colo., 80303) (September '76)

Oct. 2-7, 1977 *Effects of urbanization & industrialization on the hydrological regime & on water quality*, symposium in Amsterdam. (A.I. Johnson, U.S. Geological Survey, Mail Stop 417, Reston, Va. 22092) (August '76)

Oct. 12-14, 1977 *Symposium on Lithium*, Corning, New York. For information contact: George Edwards, Corning Glass Works, Bldg. 52, 2nd floor, Corning, N.Y. 14830.

Oct. 16-26, 1977 *Saline lakes & natural brines*, seminar in Rehovot, Israel (Oct. 16-22) and field trips to the Dead Sea and the Red Sea. (J. Kushnir, Isotope Department, Weizmann Institute of Science, Rehovot, Israel) (May '77)

Oct. 27-30, 1977 *Ninth annual AAS Division of Planetary Sciences Meeting.* To be held in Boston, Massachusetts. Program Chairman Dr. Aviva Brecher, Dept. of Earth and Planetary Sciences, Massachusetts Institute of Technology 54-1114, Cambridge, Mass. 02139.

Oct. 31/Nov. 3, 1977 *Annual Meeting of the American Water Resources Assn.,* Tucson, Arizona. For information contact: D.C. Evans, Dept. of Hydrology and Water Resources, University of Arizona, Tucson, Ariz. 85721. The theme for the meeting is the assessment, management and politics of water. Tentative topics for the sessions include: national water assessment; water law; water and energy; water and industry; water-based recreation; quality control; desalination; conservation; water reuse; limnology; irrigation practices; hydrologic modelling; water planning; food-plain management; education and manpower; decision making; climatic change; world hunger and water development.

Nov. 3-4, 1977 *Conference on the Physics of Magmatic Processes,* sponsored by the Dept. of Geological and Geophysical Science of Princeton University and the Carnegie Geophysical Laboratory. Speakers have been invited. To commemorate the series of lectures delivered at Princeton by N.L. Bowen on which his classic volume "The Evolution of the Igneous Rocks" was based. W. H. O'Brien, Jr. The Princeton University Conference, 5 Ivy Lane, Princeton N.J. 08540.

Nov. 7-9, 1977 *Annual meetings of the Geological Society of America,* Seattle, Washington. For information: GSA Headquarters, 3300 Penrose Pl., Boulder, Colorado 80301. Other associated societies holding meetings at the GSA meeting: Paleontological Society, Society of Economic Geologists, Mineralogical Society of America, Geoscience Information Society, Geochemical Society, National Association of Geology Teachers, Society of Vertebrate Paleontology, and the Cushman Foundation.

Nov. 15-28, 1977 *Field Conference on Archean Geochemistry,* Hyderabad, India. For information contact: G.N. Hansen, Dept. of Earth and Space Sciences, State University of New York, Stony Brook, New York 11794.

Nov. 27/Dec. 3, 1977 *GSA Penrose Conference on Subaqueous Volcanic Rocks.* For information contact: R.V. Fisher, Dept. of Geological Sciences, University of California at Santa Barbara, Santa Barbara, California 98106. Sessions will be on three main topics: physical characteristics, and mechanisms of fragmentation and emplacement; morphology and origin of subaqueous lavas; geochemical interaction of water and effusive lavas and volcanoclastic materials and possible changes through time. Purpose is to identify problems related to the geology of subaqueous volcanic rocks and to survey the present state of knowledge of subaqueous volcanic processes.

Dec. 1-3, 1977 *Conference on Luna 24.* To discuss results of research on samples of Mare Crisium returned by the Soviet Union's Luna 24 spacecraft in August, 1976. To be held at the Lunar Science Institute, Houston, Texas. Convenor: Dr. James J. Papike, State University of New York, Stony Brook, N.Y.

Jan. 3-7, 1978 *Protostars and Planets.* A book and a conference are planned to define current problems regarding the origin of solar-type stars. Purpose is to compare and combine studies of star formation with those of solar-system origin. By invitation only. To be held in Tucson, Arizona. M. S. Mathews, Lunar Lab., University of Arizona, Tucson, Ariz. 85721.

Mar. 15-16 1978 *Environmental geochemistry & health symposium* in London. (John S. Webb, Department of Geology, Imperial College, Prince Consort Rd., Kensington 5111, London SW7, England)

March 13-17, 1978 *Western Pacific & magma genesis,* 2-part intl geodynamics conference, in Tokyo (13-17) and field trip (19-20) to volcanoes of the Izu-Hakone district and Oshima Island. (K. Kobayashi, Ocean Research Institute, 1-15-1, Minami-dai, Nakano-ku, Tokyo 164, Japan)

March 13-17, 1978 *Ninth Lunar and Planetary Science Conference.* The Lunar Science Institute, Houston, Texas.

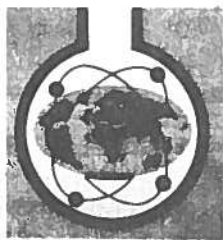
April 16-20, 1978 *Geochemical exploration symposium,* in Denver. (M.A. Chaffee, 7th International Geochemical Exploration Symposium, U.S. Geological Survey, 5496 McIntyre St., Golden, Colo. 80401)

May ?, 1978 *Hydrogeochemistry of mineralized waters,* symposium in Cieplice, Poland, by the Polish National Committee of the International Association of Hydrogeologists. (William M. Turner, Hydrotechnics, 2300 Candelaria Rd. NE, Albuquerque, 87107)

June 5-9, 1978 *Ground-water pollution by oil hydrocarbons,* symposium in Prague. (Stavebni geologie, n.p., Gorkeho n. 7, Praha 1, Czechoslovakia) By the Czechoslovak Committee of the International Association of Hydrogeologists.

Aug. 14-17, 1978 *41st Annual Meeting of the Meteoritical Society* is to be held this year at Laurentian University, Sudbury, Ontario. One or two field trips are planned. Hosted by Laurentian University and the Associate Committee on Meteorites of the National Research Council of Canada. Dr. M. Dence, Earth Physics Branch, Dept. of Energy, Mines and Resources, Ottawa, Ontario K1A 0Y3.

Aug. 20-26, 1978 *Fourth International Conference on Geochronology, Cosmochronology, and Isotope Geology.* Some of the topics under consideration for symposia are: "The Geologic Time Scale and Radioactive Decay Constants"; "Origin of the Nuclides"; and "Isotope Indicators in Earthquake Prediction". Field trips to Colorado, Yellowstone and California. Dr. Irving Friedman, U.S. Geological Survey, Federal Center, Box 25046, Denver, Colorado 80225.



International Association of Geochemistry and Cosmochemistry

Application for Membership
Questionnaire d'Admission
Anmeldungsformular

Date _____

Name _____
(Nom, Name)

Address _____
(Adresse, Anschrift)

Employment
Organization _____
(Employe[s] Organization) (Anstellung Organisation)

Address _____
(Adresse, Anschrift)

Title _____
(Titre, Titel)

Education
Degree(s) _____
(Diplômes universitaires, Akademische Grade)

Institution _____
(Institution, Erziehungsanstalt)

Major Fields of Interest _____
(Domaines d'intérêts, Interessengebiete)

Membership in the Association is open to individuals who are interested in any aspect of pure or applied geochemistry (Statutes of the Association, Section I.C.2). Dues are \$3.00 U.S. per annum. The application, together with \$3.00, or the equivalent, should be sent to the Treasurer:

Dr. R. Binns
CSIRO
Division of Mineralogy
P.O. Box 136
North Ryde, N.S.W. 2113
Australia

