



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

President:

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

NEWSLETTER NO. 51

Vice Presidents:

I. Thomson
Placer Development Ltd.
P.O. Box 49330, Bentall Stn.
Vancouver, British Columbia V7X 1P1
Canada

April 1985

PERSONAL COLUMN

Information on Association Members is received from around the world. To keep your fellow members informed of your latest moves, send a brief summary to the Rexdale office and please indicate that this information is intended for the Newsletter.

Secretary:

R.E. Lett
Association of Exploration Geochemists
P.O. Box 523
Rexdale, Ontario M9W 5L4
Canada

John Milne Albuquerque Forman has resigned from Nuclebras - Empress Nucleares Brasileiras S.A. (the Brazilian Government Company in charge of the Brazilian Nuclear Program) where he was, for ten years, the Director in charge of Mineral exploration, mining and research and development for the nuclear fuel cycle. At present is a private consultant involved in mineral exploration, mining projects and economic studies. Current address is Fivefor Ltda., Rua Santa Luzia, 799 Grupo 504 - Rio de Janeiro - 20030 - Brasil.

Treasurer:

R.G. Jackson
359 Broadway Avenue
Toronto, Ontario M4P 1X1
Canada

Harold Bloom of the Colorado School of Mines began to teach his industry-orientated short course in Geochemical Exploration in 1961. Over 500 students from many countries came to Golden, Colorado during this twenty-four year period. He announces his retirement from the course at this time and informs us that Dr. L. Graham Closs has taken over. He sends greetings to the many friends he made during these exciting years. His present address is 4551 Gulf Shore Blvd. North, Apt. 501, Naples, Florida, 33940, U.S.A.

Councillors:

1984-85
W.B. Coker
B. Hitchon
M. Mason
J.H. McCarthy Jr.
D.D. Runnells
A.E. Soregaroli

1984-86
L.G. Closs
I.L. Elliott
C.F. Gleason
W.D. Goodfellow
N.G. Lavery
C.E. Nichols

THE PRESIDENT'S MESSAGE - - - Bob Garrett

As the end of the Association's year approaches various projects come to fruition. As you will read elsewhere in the Newsletter, the Association has awarded its first Student Prize, and we selected our first Distinguished Lecturer. The Student Prize was awarded to Paul Matysek for his paper presented at

Australian Regional Councillor:
R.H. Mazzucchelli

European Regional Councillor:
B. Bolviken

Southern Africa Regional Councillor:
G.L. Coetzee

Brazilian Regional Councillor:
R.W. Lewis Jr.

the 9th IGES in Saskatoon, and published in the Journal in 1983. Council hopes that the Prize will encourage students to write up their research, present it at our meetings, and follow through to publication. Ian Nichol, of Queen's University, Kingston, becomes the Association's first Distinguished Lecturer. His lecture series will begin late this year, and be restricted to North America. The Distinguished Lecturer Series is an experiment for the Association, and as you can guess with today's travel costs a fairly expensive one. However, Council believes it to be an effective way of interesting Universities and their students in our science. Following an evaluation of this first series Council will decide on further action, which we hope will continue the series in North America, and see it spread to other regions where the Association is active.

It gives me great pleasure to tell you that by the time you read this that those of you who have paid their 1985 dues will have a copy of the new Supplement to the Bibliography in the mail. Again, the Association owes a deep debt of gratitude to Herb Hawkes for his enormous effort in compiling a further 1800 citations. It is also appropriate that we thank Malcolm Mason of Denver, one of the many unsung workers of the Association, who has ensured that publication through the Colorado School of Mines Press has gone smoothly.

With the upcoming Toronto IGES and Annual General Meeting this is my last opportunity to write to you as President. As you will read in the Annual Reports to be presented at the AGM a theme of this year has been education and professional development, some projects have reached a stage of completion, others are only just getting underway. These include the joint IAGC projects on Geochemical Signatures of Major Mineral Deposit Types and the Multilingual Thesaurus, led respectively by Gerry Govett and Jeff Aucott; and the Short Course project led by Kay Fletcher. None of these will completely succeed without the help of you, the members. I wish to thank all of you, and in particular Council, for the assistance you have given me and the Association during my term as your President. I trust we will all continue to support the new President, Ian Thomson, and our Association in the year to come, so that the Association may continue to hold its premier international position in Exploration Geochemistry.

I am looking forward to meeting as many of you personally as I can in Toronto at the 11th IGES and wish those of you able to attend an enjoyable meeting.

ADMISSIONS COMMITTEE REPORT

Names of the following candidates have been recommended by the Admissions Committee and have been approved by Council. According to the Association's by-laws the names of candidates are to be published for consideration by the membership. If you wish to comment on any candidate, please do so in writing to the secretary within 60 days. (Note: Several of the candidates were previously announced in the last Newsletter and their biographies are given here).

VOTING MEMBERS

- Carlson, E. H. Associate Professor of Geology, Kent State University, Kent, Ohio, U.S.A.
- Gazzaz, M.A. (Transfer) Vice Dean, F.E.S.King Abdulaziz University, Jeddah, Saudi Arabia
- King, H.D. Geologist, U.S.G.S., Golden, Colorado, U.S.A.
- Pearton, T.N. Senior exploration geologist, Anglovaal Ltd., Barberton, South Africa
- Tammekand, R.H. Consulting geochemist, Palminex S.A., Mexico City, Mexico

AFFILIATE MEMBERS

- Allen, M.E. (Transfer) Geochemist, W.G.M. Consultants, Arvada, Colorado, U.S.A.
- Benjamin, P.J. Geologist, J.F. Gilfillan & Associates, Parkes, N.S.W., Australia
- Dunkhase, J.A.(Transfer) Geologist - geochemist, Earth Search Inc., Golden, Colorado, U.S.A.
- Ginet, C.B. Project geochemist, Sveriges Geologiska, Lulea, Sweden
- Keller, C.M. Exploration geologist, Uranerz Exploration & Mining Ltd., Saskatoon, Saskatchewan, Canada
- Llurio, M.R. Minerals Exploration Geologist, Tucson, Arizona U.S.A.
- Lewis, M.W. Senior assistant geologist, Kerr Addison Mines, Oakville, Ontario, Canada
- Martz, A.M. Geologic consultant, Getty Mining Co., Salt Lake City, Utah, U.S.A.
- Midobatu, C. Geochemist for Solomon Islands, Geological Surveys, Honiara, Solomon Islands.
- Pazlar, K. Senior Geologist, Geomines Ltd., Montreal, Quebec, Canada
- Potter, S.C. Exploration Manager for Kennecott Corp. Salt Lake City, Utah, U.S.A.

Reeve, J.D. Branch Manager, analytical geochemist/assayer,
Bondar-Clegg & Co. Ltd., Whitehorse, Yukon, Canada

Reukl, R.J. Exploration geologist, Burlington, Ontario, Canada

Risto, R.W. Geologist in Mineral exploration, H.E.Neal & Assoc.
Ltd., Toronto, Ontario, Canada

Sergiades, A.O. Exploration Advisor, Esso Minerals Canada, Toronto,
Ontario, Canada

Stein, H.L.(Transfer) Exploration geologist, Mapco Minerals Corp.,
Golden, Colorado, U.S.A.

Tombale, A.R. (Transfer) Economic Geologist, Botswana Geological Survey,
Lobatse, Botswana

Vanenk, R.J. Exploration geologist/geochemist (consulting) and
partner in Norontex Exploration, Dryden, Ontario,
Canada

Vogt, A.H. Exploration geologist, St.Joe Exploration, Dunean,
B.C., Canada

STUDENT MEMBERS

Arauz, A.J. Graduate student at Colorado School of Mines,
Golden, Colorado, U.S.A.

Baxter, R.W. Student at the University of New South Wales,
Kensington, N.S.W., Australia

Bayer, R.A. Student, R.W.T.H., Aachen, West Germany

Brake, S.S. Student, Colorado School of Mines, Golden, Colorado,
U.S.A.

Eppinger, R.G. III Graduate student, Colorado School of Mines, Golden,
Colorado, U.S.A.

Goodman, J.C. Student, Colorado School of Mines, Golden, Colorado,
U.S.A.

Gregory, R.G. Post graduate research student, The University of
Exeter, Exeter, England

Huston, D.L. Graduate student, University of Tasmania, Hobart,
Tasmania, Australia

Jones, S.L.	Graduate student, University of Colorado, Boulder, Colorado, U.S.A.
Konsevick, E.J.	Graduate student, Rutgers University, Englewood, New Jersey, U.S.A.
La Franchi, S.E.	Graduate student, University of Idaho, Moscow, Idaho, U.S.A.
Oliver, A.A.	Student University of New South Wales, Kensington, N.S.W., Australia
Reoecke, P.	Student, Rheinisch - Westfolische Technische Hochschule, Aachen, West Germany
Schalck, D.K.	Student, University of Idaho, Moscow, Idaho, U.S.A.
Shannon, J.R.	Graduate student, Colorado School of Mines, Golden, Colorado, U.S.A.
Sharpe, C.I.	Student, The University of Melbourne, Melbourne, Australia
Slavik, L.G.	Student, University of Nevada, Reno, Nevada, U.S.A.

CALENDAR OF COMING EVENTS

The following calendar of forthcoming Symposia and Meetings on Topics directly or indirectly related to exploration geochemistry has been compiled to aid members in planning for these events. If you are aware of any meetings not listed in the Calendar please write the Association's office with information.

April 9 - 12, 1985

METALOGY OF BASIC AND ULTRABASIC ROCKS, Edinburgh, Scotland
(The Conference Office, IMM, 44 Portland Place, London WIN 4BR, U.K.)

April 14 - 17, 1985

PROSPECTING IN AREAS OF DESERT TERRAIN (Conference), Rabat, Morocco.
(Conference Office, IMM, 44 Portland Place, London WIN 4B4, U.K.)

April 15 - 19, 1985

SECOND INTERNATIONAL SYMPOSIUM ON ANALYTICAL CHEMISTRY IN THE
EXPLORATION MINING AND PROCESSING OF MATERIALS, Pretoria, S.
Africa. (The Symposium Secretariat, S-328, CSIR, Box 395,
Pretoria 0001, South Africa, Phone (012) 86-9211 X 4412)

April 21 - 25, 1985

CANADIAN INSTITUTION OF MINING AND METALLURGY, 87th Annual meeting, Vancouver, Canada. (G.W. Poling, Chairman, Mining and Mineral Processing Dept., University of British Columbia, Vancouver, B.C., Canada V6T 1W5 - Phone 604-228-2540)

April 25 - 26, 1985

ORGANICS AND ORE DEPOSITS, Denver, Colorado, U.S.A.
(See Newsletter for further details)

April 28 - May 1, 1985

ELEVENTH INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM, Toronto, Canada. (See Newsletter for further details)

May 8 - 11, 1985

CORDILLERAN SECTION, GEOLOGICAL SOCIETY OF AMERICA MEETING, Vancouver, B.C. (W.H. Matthews, Dept. of Geological Sciences, University of British Columbia, Vancouver, B.C., Canada V6T 1W5. Phone 604-228-2449.)

May 13 - 17, 1985

TUNGSTEN, 3rd INTERNATIONAL SYMPOSIUM, Madrid, Spain (M.R.P. Maby, Primary Tungsten Association, 280 Earls Court Road, London, SW5 9AS, U.K.)

May 15 - 17, 1985

TURBIDITE-HOSTED GOLD DEPOSITS, International Symposium, Fredericton, New Brunswick, Canada. (S.J. Haynes, N.S. Dept. of Mines, P.O. Box 1087, 1690 Hollis Street, Halifax, Nova Scotia, Canada, B3J 2X1)

May 15 - 18, 1985

GEOLOGICAL ASSOCIATION OF CANADA, MINERALOGICAL ASSOCIATION OF CANADA Joint Annual Meeting. (Dept. of Geology, University of New Brunswick, P.O. Box 4400, Fredericton, N.B. Canada E3B 5A3, (506) 453-4803)

June 3 - 7th, 1985

GROUNDWATER AND MINERAL EXPLORATION (GAME) 85 National Waterwell and Drilling Association of Australia Conference. Hyatt Central Plaza Hotel, Bangkok, Thailand. (Conference Manager GAME '85 P.O. Box 142, Chatswood NSW 2067 Australia)

July 7 - 12, 1985

AUSTRALASIAN INSTITUTE OF MINING AND METALLURGY, Annual Conference, Queensland, Australia (Aus IMM, P.O.Box 310, Carlton South, Victoria 3053, Australia)

July 10 - 12, 1985

FIRST CONFERENCE OF THE GEOLOGICAL SOCIETY OF TRINIDAD AND TOBAGO (W. Ali, c/o Geological Department, Trinmar Ltd., Point Fortin, Trinidad, West Indies)

July 27 - August 7, 1985

FOURTH INTERNATIONAL PLATINUM SYMPOSIUM, Stillwater, Mont., Toronto, Canada, Sudbury, Canada. (A.J.Nordrett, 4th IPS, Department of Geology, University of Toronto, Toronto, Ontario Canada, M5S 1A1)

July 28 - August 2, 1985

8th INTERNATIONAL CLAY CONFERENCE, Denver, Colorado. Sponsored by AIPEA (Dr. A.J.Herbillion, Groupe de Physico-Chimie Minerale et do Catalyse, Univ. Catholique de Louvain, Place Croix du Sud 1, B-1348, Louvain-La-Neuve, Belgium)

August 12 - 14, 1985

HYDROTHERMAL REACTIONS, 2nd International Symposium on Hydrothermal Reactions, University Park, Penn. U.S.A. (The Pennsylvania State University, Keller Conference Centre, University Park, PA 16802 U.S.A.)

August 19 - 24, 1985

CHILEAN GEOLOGICAL CONGRESS (4th) Antofagasta, Chili (4th Chilean Geological Congress, Dept. of Geosciences, Universidad del Norte, Casilla Box 1280, Antofagasta, Chili)

August 25 - 30, 1985

Workshop on Geochemical Exploration in Tropical Rain Forest.
(see page 23 of this newsletter for details)

August 26 - 29, 1985

GLACIER MAPPING AND SURVEYING SYMPOSIUM, Reykjavik, Iceland. (Mrs. R. Richardson, Secretary General, Glaciological Society, Lensfield Road, Cambridge CB2 1ER, U.K.)

September 7 - 12, 1985

GOLD IN THE WESTERN SHIELD. (See Newsletter for further details)

September 8 - 13, 1985

HYDROGEOLOGY IN THE SERVICE OF MAN (J.Day, Maclean Bld. Crownash Giffard, OX10 8BB U.K.)

September 15 - 21, 1985

FIRST INTERNATIONAL CONFERENCE ON GEOMORPHOLOGY; Geomorphology. Resources, Environment and the Developing World (British Geomorphology and Research Group, University of Manchester, Manchester, England, M13 9PL, U.K.)

September 16 - 19, 1985

DEUTSCHE MINERALOGISCHE GESELLSCHAFT (DMG), GESELLSCHAFT DEUTSCHER METALLHUTTEN-UND BERGLEUTE (GDMB), SOCIETY FOR GEOLOGY APPLIED TO MINERAL DEPOSITS (SGA) JOINT MEETING. Aachen, Germany. (Professor G. Friedrich, Chairman DMG-GDMB-SGA Joint Meeting 1985, Institute of Mineralogy and Ore Deposits, Technical University Aachen Wullnerstrabe 2, D-5100 Aachen, F.R.Germany)

October 6 - 10, 1985

SOCIETY OF EXPLORATION GEOPHYSICISTS (5th Annual Meeting, Washington, D.C., U.S.A. Convention Assistant, SEG, P.O. Box 3098, Tulsa, OK. 74101 U.S.A.)

October 9 - 12, 1985

6th LATIN AMERICAN GEOLOGICAL CONGRESS, Bogota, Colombia (Executive Committee, 6th LAGC, Diagonal 53, No.34-53, Bogota, D.E.Colombia)

October 28 - 31, 1985

GEOLOGICAL SOCIETY OF AMERICA (Annual Meeting), Orlando, Fla., U.S.A. (S.S.Beggs, GSA, P.O.Box 9140, 330 Penrose Place, Boulder, CO. 80301, U.S.A.)

November, 1985

PETROLEUM GEOCHEMISTRY AND EXPLORATION IN AFRO-ASIAN REGION, Dehradun, India (Kuldeep Chandra, KDM Institute of Petroleum Exploration, Oil and Natural Gas Commission, 9, Kaulagash Road, Dehradun - 248195, India)

1966

January 14 - 15, 1986

COMPUTER APPLICATION IN MINERAL EXPLORATION (CAME '86) Toronto, Canada. (See Newsletter for further details)

May 12 - 14, 1986

REGIONAL MEETING OF THE ASSOCIATION OF EXPLORATION GEOCHEMISTS - EXPLORATION IN THE NORTH AMERICAN CORDILLERA. Vancouver, British Columbia, Canada. (See Newsletter for further details)

July 7 - 11, 1986

REGIONAL MEETING OF THE ASSOCIATION OF EXPLORATION GEOCHEMISTS - GEOLOGICAL SOCIETY OF SOUTH AFRICA GEOCONGRESS. (The Symposium Secretariat, S. 339, CSIR, P.O.Box 395, Pretoria, Republic of South Africa 0001)

August 11 - 15, 1986

FOURTH INTERNATIONAL KIMBERLITE CONFERENCE, PERTH, WESTERN AUSTRALIA. (J.D. Lewis - Secretary, 4th IKC, Geological Survey of Australia, Mineral House, 66 Adelaide Terrace, Perth, W.A. 6000)

November 10 - 11, 1986

INTERNATIONAL SOUTH EUROPEAN SYMPOSIUM IN EXPLORATION GEO-CHEMISTRY, Athens, Greece. (See Newsletter for further details)

FUTURE MEETINGS

ELEVENTH INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM
Toronto, Canada

April 28 - May 2, 1985

FINAL UPDATE

Almost 250 delegates have pre-registered for the Symposium and the Organizing Committee are receiving a large number of enquiries from individuals interested in attending the meeting. Although the field trips and workshops are being rapidly filled a number of places are still available. If you have not registered and propose to attend the Symposium please do so AS SOON AS POSSIBLE. Make certain non-members in your organization or community are fully aware of the meeting. For further information and additional copies of the Third Circular and registration forms please contact as soon as possible

Dr. W. B. Coker, Co-Chairman
The Organizing Committee
11th International Geochemical
Exploration Symposium
P.O.Box 523 (Metro Toronto)
Rexdale, Ontario, Canada.
M9W 5L4

Telephone: 416-860-6543
Telex: 06-218617

REGIONAL MEETING OF THE ASSOCIATION OF EXPLORATION GEOCHEMISTS -
EXPLORATION IN THE NORTH AMERICAN CORDILLERA, Vancouver, B.C.
Canada. May 12 - 14, 1986

First Circular

The Organizing Committee invite all Association members and non-members to a Regional Meeting entitled Exploration in the North American Cordillera, to be held on the campus of the University of British Columbia, Vancouver, B.C., Canada. Further details are given in the enclosed First Circular.

ORGANICS AND ORE DEPOSITS

April 25 - 26, 1985

UPDATE

The Denver Region Exploration Geologists Society announces its 1985 Symposium on Organics and Ore Deposits to be held from April 25th to April 26th at the Regency Inn, Denver, CO. This Symposium examines the nature, occurrence and interaction of organic matter and organisms with metallic mineralization with an emphasis on exploration, precious metals and ore genesis.

The Keynote Speaker will be Dr. William S. Fyle, University of Western Ontario. Other distinguished invited speakers participating in the three technical sessions will be Dr. W. E. Dean (Organic Processes and Methods), J.G.Hill (Organics in Precious Metal Deposits), Dr. R. W. Macqueen (Organics and Base Metals). Pre-registration for DREGS members is \$85, for non-members \$95 (by April 10th). Onsite registrations for DREGS members is \$95, for non-members \$105. Non-member registration fees include 1985 membership in the DREGS. All registrants will receive a copy of the Symposium Proceeding approximately six months later.

Registration material can be obtained from:

Denver Region Exploration Geologists Society
5025 Ward Road, Suite 508
West Ridge, Colorado 80033
U.S.A.

GOLD IN THE WESTERN SHIELD - September 7 - 12, 1985

The Saskatoon section of the CIM Geology Division will host a Symposium entitled "Gold in the Western Shield" from 9th to 10th September, 1985 at the Ramada Renaissance Hotel, Saskatoon, Saskatchewan, Canada. Topics will include geological settings and exploration signatures of gold deposits in the region, gold exploration techniques and theoretical aspects of gold

deposit genesis. Field trips are planned to the Northwest Territories (Cullaton, Lupin, Salmite) deposits (September 7th and 8th) and the La Rouge gold belt (September 11th and 12th). Authors interested in submitting papers should contact:

Lloyd A. Clark
 Technical Chairman
 c/o SMDC
 122 - 3rd Ave. North
 Saskatoon, Saskatchewan S7K 2H6
 Phone: 306-664-6843

To receive future mailings regarding the Symposium and excursions, contact:

Brian Larrivee
 c/o Claude Resources Inc.
 P.O.Box 7380
 Saskatoon, Sask. S7K 4E4
 Phone: 306-665-7505

COURSES

GEOCHEMICAL EXPLORATION FOR PRECIOUS AND BASE METALS, May 13-17, 1985

This short course is being given by H. Bloom, L.G.Closs and I.Nichol at Metals Hall, Green Center, Colorado School of Mines, Golden, Colorado, U.S.A.

The program, now in its 25th year, is an introductory course on the fundamentals of modern geochemical exploration techniques, ideally suited for geologists, chemists, and others interested in the application of geochemistry to mineral exploration. For information concerning the program, contact:

L. C. Closs	OR	Special Programs and
Geology Department		Continuing Education
Colorado School of Mines		(SPACE) Office
Golden, Colorado 80401		Colorado School of Mines
U.S.A.		Golden, Colorado, 80401, U.S.A.
Telephone 303-273-3856		Telephone 303-273-3321

INTERNATIONAL SOUTH EUROPEAN SYMPOSIUM IN EXPLORATION GEOCHEMISTRY Athens, Greece, November 10 - 11th, 1986

The Institute of Geology and Mineral Exploration (Greece) and the Association of Exploration Geochemists is sponsoring the International South European Symposium in Exploration Geochemistry. This Symposium will be held in Athens (Greece) from November 10 - 11, 1986. The program includes two days of technical sessions (general and special sessions, poster presentations and exhibitions), field trips and program for guests and spouses.

Registration and welcoming reception on 9 November, 1986.

For information and registration forms write to:

Organizing Committee
International South European Symposium in Exploration Geochemistry
Institute of Geology and Mineral Exploration
70 Messoghion Street
115 27 Athens, Greece

Telex: 021 6357 IGME GR.

COMPUTER APPLICATIONS IN MINERAL EXPLORATION

CAME '86 - BYTING THE ROCKS

The sponsoring societies of Computer Applications in Mineral Exploration invite your participation in the second CAME Conference and Exhibition to be held on January 14th and 15th, 1986, at the Sheraton Centre, Toronto.

The objectives of CAME '86 are the same as those of the very successful 1984 conference - to familiarize everyone involved in the mineral exploration industry with all the various computer services and facilities that are available to them. This second conference and exhibition is intended to bring the user up to date with developments in this rapidly changing area, and one with increasing influence in all aspects of exploration.

The exhibition will present displays and hands on demonstrations, as well as special classroom style sessions in oversize booths. The formal PRESENTATIONS will be given in the immediately adjacent theatre. These will emphasize practical experience gained by users of currently available systems, as well as recent developments by service organizations and manufacturers. The EXPANDED ABSTRACTS of the presentations will be published in a special volume to be included in the registration fee. Some of the areas in which presentations, poster-displays and exhibits are invited include:

- bibliographical and reference data bases
- data gathering and interpretation in the field
- integration of analytical results with field data
- statistical interpretation, geostatistics
- processing of remotely sensed data
- financial and risk analysis
- ore reserve compilations, ore deposit models
- mineral deposit files
- drill core logging and presentation
- graphical data presentation, mapping, 3-D models
- claims and property maintenance
- data integration through digital image analysis
- artificial intelligence and expert systems
- preliminary mine layout for feasibility studies

A special accommodation discount will be available at the Sheraton Centre. Further information on CAME '86 will be distributed in the newsletters and journals of the sponsoring societies. Potential speakers are invited to submit an outline of their presentation for consideration by the Program Committee, as soon as possible. Final expanded abstracts (1000 to 2000 words) will be required by October 31st, 1985. Further information can be obtained from:

PROGRAM

Grant Troop
Ontario Geological Survey
77 Grenville Street
Toronto, Ontario
M5S 1B3

EXHIBITION

Dave Jones
MPH Consulting Limited
Suite 2406
120 Adelaide St. W
Toronto, Ontario
M5H 1T1

REGISTRATION

Terence Bottrill
Bottrill Geological Services
192 Weldon Avenue
Oakville, Ontario
L6K 2H8

FROM THE SECRETARY'S OFFICE (Ray Lett)

Final preparations for the 11th IGES in Toronto are now in progress and there is every indication that the meeting will be very successful. There is still a relatively small number of member registrants compared to our overall membership size and I would urge those of you who may still be undecided about attending the meeting to send in your registration AS SOON AS POSSIBLE. Your support is essential for the success of this and future Association sponsored meetings. Next year will be an even more active one when the Association sponsors regional meetings in Toronto, and in Vancouver, Canada; Athens, Greece and South Africa. 1986 will also see the Association's Distinguished Lecturer series established (see announcement in this Newsletter). Other items of interest in this Newsletter include an announcement of the Student Prize Winner, Paul Matysek, (congratulations Paul) and publication of the 1985 membership list.

A computer software program pool was established in the last Newsletter and I am pleased to report that we have already received a number of orders for program software. Finally, I would encourage all of you attending the 11th IGES to also attend the Annual General Meeting and lend your support to your Association.

LETTERS TO THE EDITOR

Sir:

As a thesis student, I am working on a geochemical problem that deals with the field verification of altered groundwater in an Eocene sand aquifer.

Specifically, the groundwater is changed from an acidic oxidized, calcium-bicarbonate water to a basic, reduced sodium-bicarbonate. This process is controlled primarily by calcium dissolution and cation exchange.

Any information you can supply regarding similar investigations would be very beneficial to my literature search.

Trey Rushing
Department of Geology
Stephen F. Austin State University
P.O. Box 13011 SFA Station
Nacogdoches, Texas 75962
Phone (409) 569-3701

ASSOCIATION OF EXPLORATION GEOCHEMISTS DISTINGUISHED LECTURER

The Association is pleased to announce the election of Dr. Ian Nichol as Distinguished Lecturer for 1985-86. The Distinguished Lecturer series will initially be directed towards schools which offer graduate programs in Ore Deposits Geology. Further, the 1985-86 Series will include three schools in the eastern United States and three schools in Eastern Canada. Topics of Ian Nichol's lectures and seminars will include:

- . Geochemical Exploration - A Multi-Faceted Activity
- . Computer Data-Processing - A Help or Hindrance
- . Geochemical Explorations for Gold Deposits

Schools at which the lectures will be given will be announced in future Newsletters. We would like to offer our congratulations to Ian Nichol in becoming the Association's first Distinguished Lecturer, and at the same time express thanks to Norm Lavery, Chairman of the Distinguished Lecturer Series Committee for his efforts in establishing the Series.

ASSOCIATION OF EXPLORATION GEOCHEMISTS - STUDENT PRIZE AWARD

The Association is pleased to announce that the 1985 Student Prize has been awarded to Paul Matysek for his paper entitled "Statistical evaluation of the significance of categorical field parameters in the interpretation of regional geochemical anomalies" presented at the 9th International Geochemical Exploration Symposium. The Prize will be free membership in the Association for one year. Paul Matysek gained a B.Sc. at the University of Toronto in 1976 and is presently completing a M.Sc. at the University of British Columbia. We would like to express our congratulations to Paul for his paper which is based on his graduate thesis project. In addition we would encourage further nominations for future student Prize awards which should be sent to D.S. Kesler, Chairman of the Student Prize Committee, Department of Geology and Mineralogy, University of Michigan, Ann Arbor, Michigan 48109, U.S.A.

COMPUTER SOFTWARE PROGRAM POOL

The Association of Exploration Geochemists has formed a computer program software pool for geochemical and geological applications. This allows association members to share existing software and avoid duplicating the work of writing programs that others have already done. In order to make this pool a success, we would like to get contributions from members. If each member can submit one program then we can be well on our way to establishing a sizable pool.

Initially, a list of programs with a brief description of each new program will be published with each newsletter. A catalogue of all programs will be maintained by the AEG and will be made available on request.

Contributions can be in any programming language and for any computer; however, we would like to have the following rules observed.

For each program:

Source listing with internal documentation

The type of machine the program was written for

A list of peripheral devices required

User documentation

Observing these rules will assist any user in obtaining maximum benefits and assist in troubleshooting.

The Association of Exploration Geochemists or anyone else affiliated with the authorship or distributing of the computer programs assumes no responsibility for any problems or errors that arise from the use of any of the programs. All users assume use of the programs entirely at their own risk.

We sincerely regret initial delays in filling orders for software received as a result of the announcement in Newsletter No. 50. We also regret the necessity of increasing the price of certain programs to cover copying and international postage costs. The new prices are listed below. All orders received before April 1st, 1985 will be filled at the old price of U.S. \$6.00.

Programs Currently Available (contributed by the Ontario Geological Survey).

TERNARY PLOTTING PACKAGE	\$12.00
BINARY PLOTTING PACKAGE	12.00
IRVBAR	6.00
JENSEN	6.00
JENBND	6.00
STRNET	6.00

Please note that all orders for software should be made to

The Association of Exploration Geochemists
P.O.Box 523
Rexdale, Ontario
M9W 5L4

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SUPPLEMENT TO THE AEG BIBLIOGRAPHY - - Herb Hawkes

Following are some statistics on the citations listed in the new Supplement to the Exploration Geochemistry Bibliography. Among other things, these figures seem to show that the rate of publication has been levelling off, that the publications of the Association have achieved a dominant place in the field, and that the bulk of the literature is published in English-speaking countries.

Citations by source:

<u>Source</u>	<u>No. of Citations</u>	<u>Percent of total</u>
United States	502	27.0%
AEG publications	382	20.6
Canada	223	12.0
Russian translations	87	4.7
United Kingdom	55	3.0
Australia	53	2.8
Czechoslovakia	43	2.3
France	35	1.9
United Nations	33	1.8
Germany	33	1.8
Others	450	24.1
Total	1866	100.0%

Citations by year of Publication (cumulative)

Decade	Years within decade										Totals
	0	1	2	3	4	5	6	7	8	9	
1890s	0	0	0	0	1	0	0	1	0	0	2
1920s	0	0	1	1	0	0	0	4	0	2	8
1930s	0	0	0	0	0	3	6	6	7	10	32
1940s	5	10	5	5	2	4	7	8	13	18	78
1950s	27	32	21	20	26	47	58	76	104	93	504
1960s	38	84	86	106	88	119	143	205	179	263	1311
1970s	247	359	407	514	415	492	545	483	393	542	4397
1980s	517	393	414	416	127	(incomplete)					1867
Total											8199

Citations by publishers:

<u>Publisher</u>	<u>No. of Citations</u>	<u>Percent of total Supplement</u>	<u>Percent of total 1982 Bib.</u>
ALL AEG publications IGES volumes (232) JGE (99) Symposium vols (51)	382	20.5%	13.1%
U.S. Geol. Survey*	104	5.5	12.3
Russian translations	87	4.7	5.2
Theses	79	4.2	4.7
Economic Geology	57	3.1	4.6
CIM Bulletin	56	3.0	1.7
US Dept. Energy*	52	2.8	1.9
AIME publications	39	2.1	2.5
GSA Abst	39	2.1	2.8
Geol. Survey Canada	38	2.0	4.4
All others	<u>933</u>	<u>50.0</u>	
Total	1866	100.0%	

URANIUM BIOGEOCHEMISTRYAEA PUBLICATION

The International Atomic Energy Agency has recently published a Technical Document entitled "Uranium Biogeochemistry: A Bibliography and Report on the State of the Art". The report was prepared by C.E. Dunn (Canada), J. Ek (Sweden), and J. Byman (Sweden) as an activity of the Project on Biogeochemical Exploration for Uranium of the Joint NEA/IAEA Group of Experts in R & D in Uranium Exploration Techniques.

The report, IAEA TECDOC - 327, reviews briefly the literature on biogeochemical exploration of uranium and presents an extensive bibliography of world literature on the subject. It would be of interest to exploration geochemists, contemplating the use of biogeochemical methods for uranium, and students of the natural radiation environment.

Single copies may be obtained, free of charge, by writing to:

Arthur Y. Smith
Division of Nuclear Fuel Cycle
International Atomic Energy Agency (AEA)
Wagramerstrasse 5, P.O.Box 100
A-1400 Vienna, Austria

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INTERNATIONAL WORKSHOP ON GEOCHEMICAL
EXPLORATION IN TROPICAL RAIN FORESTS

Circular 2

DATE, TIME, LOCATION

The International Workshop on Geochemical Exploration in Tropical Rain Forests will be held in Manaus, Brazil, on August 25-30, 1985.

TECHNICAL PROGRAM

The workshop program consists of 2 sessions per day. Each session will include a key-speaker and several back-up speakers. The oral presentations will be followed by discussions periods in which it is expected that everyone will participate. The basic methodology for this workshop is to provide participants with the opportunity of an up-dating on current methods, research, experiences and ideas. The topics scheduled for presentation include:

TOPICS

- I. Geochemical Exploration for Petroleum
 - Principals and general concepts
 - Specific techniques
- II. Trace-Elements in Soils
 - Stone-line geochemistry
 - Laterites: chemistry of formation and trace-elements content
 - Gold in soils, distribution and significance
 - Trace-elements in soils
- III. Trace-Elements in sediments
 - Seasonal variations
 - Regional dispersion patterns
 - Role of Fe and Mn oxides
- IV. Special Techniques
 - Biogeochemical methods
 - Specific methodologies for Au, Ba, etc.
- V. Analytical techniques
 - Partial extractions
 - General

FIELD TRIP

Included in the program is a pre-workshop field trip to the Au-Fe-Mn-Cu deposits of Carajás in Pará. The excursion is planned for August 22 to 24, 1985. Those participating should meet in Belém the night of August 21.

LANGUAGE

The official languages for oral communication will be English and Portuguese. (Translation facilities are planned).

The contributing papers should be in English preferably. Portuguese, Spanish or French will be accepted but should be accompanied by an English abstract.

ABSTRACT

The abstracts in English should be received at the address for correspondence before May 1st, 1985. The abstract should be typed in single-spaced on one side of white paper (22x33cm) not exceeding more than 200 words.

PAPER

The complete text of the paper should be sent before June 1st, 1985. The text should be typed on an IBM typewriter with an Elite 12 sphere using single-spacing. The illustrations, maps, figures and references should be inserted in the text following the system used by the Journal of Geochemical Exploration. The text should be limited to a maximum of 10 pages.

PROCEEDINGS

The papers submitted to the workshop will be considered by the organizing committee to be included in the proceedings of the event. The authors will be notified about the acceptance of his paper for oral presentation and/or inclusion in the proceedings by July 15, 1985. The proceedings are expected to be available by the end of 1985.

GENERAL INFORMATION

- Registration
The registration fee for the workshop is US\$150.00, which includes the inaugural cocktail, a final barbecue and a copy of the proceedings.
- Accomodations
The accomodations during the workshop will be at the Tropical Hotel in Manaus. The provisional prices are listed below.

ROOMS (Breakfast included)

Single US\$61.00 + 10% service charge
Double US\$68.00 + 10% service charge

MEALS

1 meal plan US\$10.00/day + 10% serv. charge
2 meals plan US\$19.00/day + 10% serv. charge

- Extra Programs

Special events, Amazon cruises, or tours can be arranged during or after the workshop upon request.

FIELD TRIP

The price of the excursion to the Au-Fe-Mn-Cu deposits of Carajás including air transportation Belém-Carajás-Belém, two nights in Belém with meals, as well as transportation, meals and lodging in Carajás is:

Price per person US\$350.00

ADDRESS FOR CORRESPONDENCE

The completed registration form and all inquires should be addressed to:

THE ORGANIZING COMMITTEE FOR INTERNATIONAL
WORKSHOP ON GEOCHEMICAL EXPLORATION IN
TROPICAL RAIN FORESTS
Rua Aguaraiaba, 86 - Bonsucesso
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