



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

NEWSLETTER

NO. 48

President:

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

Vice Presidents:

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

G.H. Allcott
United States Geological Survey
National Centre, M.S. 913
Reston, Virginia 22092
U.S.A.

Secretary:

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

Treasurer:

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

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A.E. Soragaroli

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June, 1984

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.

With regret we record the death of D. R. Clews on May 25th, 1984, in Toronto Canada. (See obituary page 2)

K. Fletcher has now left Malaysia and returned to the Geology Department, University of British Columbia, Vancouver, British Columbia V6T 2B4, Canada.

T. A. Salzer has assumed control of a major exploration project at Freeport's copper mine in Indonesia. He can be contacted at this address: Freeport Indonesia Inc., P.O. Box 51777, New Orleans, LA 70151, USA.

A MESSAGE FROM THE PRESIDENT - Robert G. Garrett

With the new Association year, Council and the Executive have an opportunity to assess the state of the body corporate and set priorities. We have the good fortune to come into office at a time when the Association is continuing its long-term pattern of growth, is gaining respect internationally, and, in these days of financial uncertainty, is still able to undertake projects of benefit to our members.

One major concern of Council is the cost of the Newsletter, at the moment, printing and mailing the Newsletter quarterly consumes some 27% of the Toronto office budget. The Publications Committee, under the Chairmanship of Ivor Elliott, has been asked to look into alternate procedures of printing

and distribution. With the growing membership, 1,364 copies of this issue will be distributed around the world, our old methods are now not as efficient as they could be. With the new contract for the Journal in effect with our publishers, Elsevier in Amsterdam, we know what impact the Journal will have on our finances over the next 5 years. In fact, the growing membership and circulation of the Journal provide an increased royalty to the Association. Dues have now been the same, at US \$42.50, since 1976, when the Journal went to six issues a year. Our ability to keep dues constant in future years will depend on our Journal royalties and improving efficiency in our office operation, and within the office the Newsletter is a major cost item.

This year the Association is instituting its Student's Prize, and making a detailed study of a Distinguished Lecturer series. The committees responsible for these activities are chaired by Steve Kesler and Norm Lavery respectively. Should you be called on to help in any way, on these or other committees, I would hope that could respond positively. The Association is run very largely on a volunteer basis by people who believe in its objectives and exploration geochemistry, and there is always work to be done.

Although 1987 seems a long way off, Council is already considering the venue of the 12th IGES. This has to be completed over the summer in time for a decision in August or September. As there is news on this, and other matters of importance in Council and to the members, I shall use the Newsletter to keep everyone informed. For those of you for whom the coming months are the field season, I wish you every success and a productive season.

OBITUARY - Dr. D. Richard Clews

On May 25th, Dr. Richard Clews, one of the pioneers of exploration geochemistry, a founding Member of the Association of Exploration Geochemists and a leading figure in the Canadian mining industry, died in Toronto, Canada at the age of 62. Dr. Clews gained a B.Sc. in Mining Geology at the University of Cape Town and a Ph.D. in Exploration Geochemistry at Imperial College, London. In 1962 Dr. Clews joined Dr. A. R. Barringer to form Barringer Research Ltd. As Executive Vice President, he was instrumental in establishing the company's minerals exploration division. In the late 1960's, Dr. Clews applied the then innovative approach of relating the distribution of mineral deposits with plate tectonic features to the design of large scale exploration programs. Using these concepts he initiated major exploration programs in Fiji and the western Canadian Shield.

Dr. Clews was an internationally recognized authority on geochemical exploration techniques and in 1964 was invited to Moscow by the Academy of Sciences of the U.S.S.R. to present papers to an international symposium on geochemical prospecting held under the United Nations auspices.

Dr. Clews was keenly interested in the application of new and unconventional exploration methods and in partnership with Dr. Barringer stimulated development of methods for detecting volatiles such as mercury, iodine, sulphur dioxide and hydrocarbons and the development of the airborne SURTRACE and AIRTRACE geochemical systems. In 1978, Dr. Clews was instrumental in forming Barringer Magenta Ltd., the analytical and contract field services division of the Barringer Group of Companies and served as President until shortly before his death.

In addition to membership in the Association of Exploration Geochemists, Dr. Clews was also a Member of the Institution of Mining and Metallurgy, the Geochemical Society, the Geological Association of Canada and the Institute of Mining, Metallurgical and Petroleum Engineers. He authored or co-authored over twenty publications and patents covering a wide range of geochemical and mineral exploration topics.

Dr. Clews was largely responsible for the development of Royex Sturgex Mining in 1974 and served as Company Chairman until his death which occurred on the eve of the amalgamation of Royex Sturgex with Cullaton Lake Gold Mines.

Dr. Clews was an unusual person in that he combined a keen mind in his own technical field of geochemistry as well as an excellent grasp of all aspects of the art and science of exploration. On top of this he became an excellent businessman who played a key role in helping to build Barringer Research almost from its inception.

To those many members of the mining community, the Association and especially his past and present Barringer colleagues, Dr. Clews was also a very stimulating and dynamic person whom we will all sincerely miss.

R. E. Lett

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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.

Due to the large number of applications received as a result of the Reno Symposium, only the names and membership classes of individuals reviewed by the Membership Committee have been listed. Any member wishing to have further information on these individuals should contact the secretary.

ABRAMS, Mark, J.A.	S	FADDIES, Thomas, B.	A
AJOULLAH, M.D.S.	S	FEDDER, Robert, Paul	A
AMBUN, Unya, A.	S	FIELDER, Anne, M.	A
ANDERSON, John E.	A	FINN, Dale, R.	S
ANDERSON, Susan J.	A	FLAMMANG, Julie, T.	A
ANSTED, John P.	A	FLINT, David, C.	S
ANTRIM, Don R.	A	FOSTER, Joseph, M.	S
ATKINSON, R.D.	A	FORSGREN, Frank	S
		FRISNEGGER, David, A.	S
BAILEY, Mark, H.	A		
BARNARD, Fred	A	GAARD, David, R.	A
BARRON, James N.	A	GANDER, Malcolm, M.	A
BENTSON, Martin, R.	A	GILES, David, L.	A
BENVENUTO, Gary L.	A	GINTAUTAS, Peter, A.	A
BEETLES, Keith, H.	A	GRABHER, David, E.	A
BRADFISH, Larry J.	A	GRAHAM, William, F.	A
BREADKLEY, Alan R.	A	GRANT, John, Nigel	A
BRITTEN, Ronald M.	A		
BRUFF, Steven R.	A	HAMMITT, Jay, W.	A
BRYANT, Michael, A.	A	HARBAUGH, Dwight, W.	A
		HARDIE, Byron, S.	A
CAMPBELL, Terry L.	A	HASLER, Richard, W.	A
CARDWELL, Gordon, J.	A	HAWLEY, Katharine, T.	A
CASACELI, Robert, J.	A	HAYBA, Daniel, O.	A
CHAMPIGNY, Normand	A	HEFNER, Melody, Lynn	S
CHARLTON, Douglas, W.	A	HEHN, Paul, V.	A
CHIPP, Edward, R.	A	HENKLE, Jr. W.R.	A
COFER, R.S.	A	HERRON, Calvin, R.	A
COOPER, James, J.	A/V	HOLBEK, Peter, M.	A
COOLBAUGH, Kimberlee, S	A	HOLSO, Siegfried	A
COOK, Robert B.	A	HOUSEMAN, Michel, D.	A
COUSINS, Noel, B.	A	HSU, Liang-Chi	A
CRECRAFT, Harrison, R.	A	HUBER, Gary, C.	A
CRIST, Elliott, M.	A	HUNTSINPILLER, Amy	A
CUFFNEY, Robert, G.	A		
		JENNINGS, David, S.	A
DAVIS, Nicholas, F.	A	JENNINGS, Terry, L.	A
DERENNE, Paul	A	JOHNSON, Edwin, L.	A
DILTS, Roger, D.	S	JOHNSON, Kathleen, M.	A
DIMMELL, Peter, M	A	JOHNSTON, William, P.	A
DINER, Yehuda	A	JONES, R.B.	A
DIXON, Richard, L.	A	JONES, Richard, D.	A
DOLENCE, Jerry, D.	A	KANBERGS, Karl	A
DONALD, Peter, G.	A		
DREIER, John, E.	A	KIDD, Benny, F.	A
DUERR, Herb	A	KILBREATH, Steven, P.	A
DUBYK, William, S.	A	KLATT, Harold, R.	A
DURGIN, Dana, C.	A	KLEIN, Ira, E.	A
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		KNOX, Richard, D.	A
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ERAST, Robert, P.	A		

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 PLAHUTA, Joseph, T. A
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 ROSS, James, J. A
 ROUGE, George, E. A

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 SCHNORR, Patricia S
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 SEWELL, Charles, R. A
 SHAVER, Stephen, A. S
 SIDDELEY, Gordon A
 SINTAY, George, W. A
 SIRIUNAS, John, M. A
 SMART, George, W. A
 SMITH, G.E. A
 STEWART, Peter, B. A

 TINGLEY, Icyl, C. S
 TODD, David, I. A
 TORAK, John, M. A
 TULLY, John, T. A
 TWITCHELL, Clin, L. A
 VAN NIEUWENHUSYSE, Rick A

 WAIBEL, Al A
 WALKER, Richard, R. A
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 WELCH, Carl, M. A
 WELLER, Daniel, R. A
 WESTJOHN, David, B. A
 WHITE, J.F. A
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 WILLOUGHBY, Neil, O. A
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 WITTMAN, Gregory, P. A
 WOOD, Douglas, R. A
 WOLVERSON, Nancy, J. S
 WREDE, Duade, J. A

FUTURE MEETINGSGEOCHEMICAL EXPLORATION FOR GOLD MINERALIZATION - SYDNEY, AUSTRALIAAugust 22 - 31, 1984

As reported in Newsletter No. 47, the AEG in Australia is jointly organizing a session on the theme "Geochemical Exploration for Gold Mineralization" as part of the Seventh Australian Geological Convention to be held in Sydney. Further details may be obtained from Professor G. J. S. Govett, Head of the School of Applied Geology, University of Applied Geology, University of New South Wales, (P.O. Box 1, Kensington, NSW 2033.)

THE GEOLOGY AND GENESIS OF MINERAL DEPOSITS IN IRELAND - DUBLIN, IRELANDSeptember 14 - 16, 1984

The Irish Association for Economic Geology will host a conference on the Geology and Genesis of Mineral Deposits in Ireland. The object of the Conference and the Volume which will be distributed to all delegates in early 1985 is to document the economic geology and genesis of Irish Mineral deposits. Technical sessions will focus on Carbonate-hosted base-metal and barite deposits, volcanic associated base-metal deposits, granite associated deposits, vein-hosted deposits and base-metal mineralization in the Dalradian metamorphic terrain. Field trips have been arranged to Navan, Avoca and the Leinster Granite and to Silver Mines. All conference enquiries should be made to:

John Ashton
Secretary I.A.E.G.
Tara Mines Geology Department
Knockumber, Navan, Co. Meath, Ireland
Phone (046) 21927 ext. 274
Telex E124568 TARA EI.

WORKSHOP ON GEOCHEMICAL EXPLORATION IN TROPICAL RAIN FORESTS - MANAUS, BRAZILMarch 24 - 30, 1985

The AEG, AGID, IUGS and the Commissao Tecnico - Cientifica de Geoquimica of the Sociedade Brasileira de Geologia (SGB) are jointly sponsoring a workshop of geochemical exploration in regions of tropical rain forest. The objective is to provide the opportunity for bringing the participants up to date on the state-of-the-art in geochemical techniques in tropical humid regions through presentation of papers, round-table discussions and evaluation of current methods, research, experience and ideas. Both plenary lectures and round-table discussion groups are planning to develop the following themes:

- I. Residual trace-element dispersion in soils
- II. Regional trace-element dispersion in stream sediments
- III. Sampling techniques including use of special media such as humus
- IV. Analytical techniques with emphasis on controlled extractions

The official language of our oral communication will be English and Portuguese. Included in the programs will be a post-workshop excursion to a deeply weathered carbonatite in the western Amazona. The number of participants in the workshop will be limited and preference will be given to applicants currently or recently engaged in research or exploration projects in tropical rain forest areas. A first circular has been circulated and members who have not as yet received the circular should write as soon as possible to:

Richard W. Lewis Jr.
Geoquimica Ltda.
Rua Aguaraiaba, 86
Bonsucesso - Rio de Janeiro
RJ. - Brazil
Phone 021/280-7038

COMPUTERS IN EXPLORATION WORKSHOP - VANCOUVER, CANADA

November 15, 1984

The Cordillere Section and Mineral Deposits Division of the Geological Association of Canada is sponsoring a workshop on computers in exploration to be held on November 15th, 1984 at the Holiday Inn, Harbourside, Vancouver, British Columbia. The purpose of the workshop will be to inform management and exploration personnel on the role of computers in exploration. Topics will include geochemistry, geophysics, the use of field microcomputers, mining and CDD, information data and practical use of computers in a company. There will also be exhibition booths for "hands-on" demonstrations and information concerning hardware, software and computer services. A directory listing commercial computer facilities and systems, and exploring mining company hardware will be available. Registrations (before November 1st) will be \$15.00 to GAC members and \$20.00 to non GAC members. Further details are available from:

Bruce W. Downing

Telephone: (604) 682-6291

11TH INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM - TORONTO, CANADA

April 28 - May 2, 1985

Update

Planning for this Symposium is progressing smoothly and organizing Committee are finalizing arrangements for the technical sessions and field trips. If you have received the second circular and are interested in attending the Symposium please return the circular to the Association's office as soon as possible.

CALENDAR OF COMING EVENTS

To assist Members in completing their plans for attending various future exploration symposia and meetings, a calendar of coming events will appear as a regular feature in the Newsletter.

August 4 - 14, 1984

27th INTERNATIONAL GEOLOGICAL CONGRESS, Moscow, U.S.S.R. (N.A. Bogdanov, General Secretary, Organizing Committee of the 27th IGC Starmonetny per, 22, Moscow 109180, U.S.S.R.)

August 10 - 13, 1984

Society of Economic Paleontologists and Mineralogists First Annual Mid-year Meeting, San Jose, California (E. J. Moore, U.S. Geo. Survey, 345 Middlefield Road, Menlo Park, California 94025 U.S.A.)

August 22 - 31, 1984

GEOCHEMICAL EXPLORATION FOR GOLD MINERALIZATION, Sydney, Australia (See Newsletter for further details).

August 27 - 31, 1984

WATER MOVEMENT IN HEAVY CLAY SOILS (Meeting), Wageningen, Netherlands. (Dr. W. G. Sombroek, 1555, International Soil Museum, 9 Duivendaal, POB 353, 6700 A. J. Wageningen, The Netherlands).

September 10 - 14, 1984

TITANIUM (5th International Conference), Munich, F.R.G. (Deutsche Gesellschaft fur Metallkunde E.V., Adenaureallee 21, D-6370 Oberursel 1, F.R.G.)

September 14 - 16, 1984

THE GEOLOGY AND GENESIS OF MINERAL DEPOSITS IN IRELAND, Irish Association for Economic Geology Conference, Trinity College, Dublin. (See Newsletter for further details.)

September 10 - 14, 1984

HYDROCHEMICAL BALANCES OF FRESH WATER SYSTEMS (International Symposium), Stockholm/Uppsala, Sweden. Sponsored by Swedish Natural Science Research Council, Unesco, and IAHS, (International Symposium on Hydrochemical Balances of Fresh Water Systems, C/o Stockholm Convention Bureau, Joakobs Torg 3, 5-111 52 Stockholm, Sweden.)

October 1 - 5, 1984

REMOTE SENSING OF ENVIRONMENT (18th International Symposium), Paris, France. (Environmental Research Institute of Michigan, P.O. Box 8618, Ann Arbor, MI 48107, U.S.A.)

November 5 - 8, 1984

GEOLOGICAL SOCIETY OF AMERICA (Annual Meeting), Reno, Nevada, U.S.A.
(S. S. Beggs, Geological Society of America, P.O. Box 9140, 3300 Penrose
Place, Boulder, CO 80301 U.S.A.)

November 15, 1984

Workshop of Computer Applications, Holiday Inn Harbourside, Vancouver,
British Columbia, Canada (B. W. Downing 604-682-6291).

November 19 - 23, 1984

12th WORLD MINING CONGRESS, New Delhi, India (Organizing Committee Institute
of Engineers, 8 Gokhale Road, Calcutta 700 020, India).

December 2 - 6, 1984

SOCIETY OF EXPLORATION GEOPHYSICISTS (54th Annual Meeting, Atlanta, Georgia,
U.S.A. (3 Hyden, SEG, Box 3098, Tulsa, OK 74101, U.S.A.).

March 24 - 30, 1985

Workshop on Geochemical Exploration in Tropical Rain Forests. (Manaus,
Brazil. (See Newsletter for further details.)

April 1985

PROSPECTING IN AREAS OF DESERT TERRAIN (Conference), Rabat, Morocco.
(Conference Office, IMM, 44 Portland Place, London W1N 4BR, U.K.)

April 21 - 25, 1985

CANADIAN INSTITUTION OF MINING AND METALLURGY, 87th Annual Meeting,
Vancouver, Canada.

April 28 - May 1, 1985

11th INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM, Toronto, Canada.

July 28 - August 2, 1985

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

September 8 - 13, 1985

HYDROGEOLOGY IN THE SERVICE OF MAN

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.)

1985

October 14 - 17, 1985

GEOLOGICAL SOCIETY OF AMERICA (Annual Meeting), Boston Mass. U.S.A.
 (S. S. Beggs, G.S.A., P.O. Box 9140, 330 Penrose Place, Boulder CO 80301 USA)

FROM THE SECRETARY'S OFFICE - Ray Lett

One of the factors which appeared to play a role in the success of the recent Reno Symposium was the widespread distribution of information circulars over the months preceding the meeting. We hope to make the 11th International Geochemical Exploration Symposium in Toronto next year equally successful and in order to do this, considerable publicity will be needed. If any members, especially overseas, would like additional copies of the second circular to distribute to local exploration/mining groups or institutions, please let me know and I will arrange for them to be forwarded.

Another result of the Reno Symposium has been the significant increase in membership largely due to those delegates who joined the Association as Affiliates during the meeting. I would encourage those of you who joined as Affiliates and who are interested in transferring to full Voting Membership Status to write to me and I will send the necessary application forms.

Although it is comparatively early in the Association's year, Council Nomination forms for the 1985 - 86 term will be distributed with the next Newsletter. Please give some thought to individuals whom you would like to nominate for Common Councillor.

Finally, I would urge you to continue to send contributions to the Newsletter on any topic you think would be of interest to Members such as ideas for new AEG special publications, micro computer applications, information on members, ideas for new regular sections in the Newsletter. Remember, the Newsletter is your forum for ideas. Help to support it.

JOURNAL OF GEOCHEMICAL EXPLORATION - CURRENT STATUS OF ISSUES

<u>VOL.</u>	<u>ISSUES</u>	<u>PUBLICATION MONTH</u>	<u>SUBSCRIPTION YEAR</u>
19	1 - 3	December 1983	1983
20	1	February 1984	1984
20	2	April 1984	1984

Only members who were paid up for 1983 will have received the above 1984 Journal issues. New members who paid their dues in 1984 and new members who joined through the Reno Symposium may have received the 1984 copies of the Journal, if not, they will receive them soon.

JOURNAL OF GEOCHEMICAL EXPLORATION - PURCHASE OF BACK VOLUMES - CORRECTION

Association Members can order back volumes of the Journal at the member subscription price of U.S. \$32.50 per two volumes from Elsevier Science Publishers together covering one publication year, not U.S. \$32.50 per volume as stated in Newsletter No. 47.

STUDENT PRIZE

The Association of Exploration Geochemists will hold its first annual Student Paper Competition in 1984. Papers eligible for the competition must have been published in a scientific journal in 1983, and less than five years since graduation of the student author. Multiple authors are allowed, although the student must be senior author. Deadline for receipt of nominations is November 1, 1984. The award will be announced in January, 1985 and the prize will consist of a two-year membership at the appropriate level in the Association of Exploration Geochemists and receipt of all publications. Please send nominations, including three copies of the paper and the current address of the nominee to: S. E. Kesler, Department of Geological Sciences, University of Michigan, Ann Arbor, MI 48109-1063.

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BIBLIOGRAPHYRECENT PAPERS ON EXPLORATION GEOCHEMISTRY

This list comprises titles that have appeared in major publications since the compilation presented in Newsletter 47. Journals routinely covered and abbreviations used are Bulletin of the Canadian Institute of Mining and Metallurgy (CIM BULL), Economic Geology (EG), Geochimica et Cosmochimica Acta (GCA), Journal of Geochemical Exploration (JGE), the USGS Bulletin (USGS BULL), Circular (USGS CIR), Open File Report (USGS OFR) and Professional Papers (USGS PROF P), Transactions of Institution of Mining and Metallurgy, Section B: Applied Earth Science (TRANS IMM). Publications less frequently cited are identified in full. Compiled by Donald D. Runnells and Sandra L. Jones, Department of Geological Sciences, University of Colorado, Boulder.

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