President's Message - Ian Thomson

How do you like the new format for the Newsletter? More than a year of thought and planning has now shown fruit in a full typeset version which should be easier to read as well as less expensive to produce and distribute to you. Like our friends in the International Association of Geochemistry and Cosmochemistry, who have also updated their newsletter, the change is a reflection of our continuing strength and maturity as a professional organization.

That strength is also seen in the firm support of our publishers, Elsevier, with whom we have concluded an agreement that will see the Journal of Geochemical Exploration increase in size to three volumes per year. This gain will permit publication of more papers and guarantee that proceedings of most, if not all, of our regional and international meetings will appear in the Journal. Most important to you is that there will be no increase in the annual cost of the Journal to members. We expect to be able to hold dues at the current rate for the foreseeable future.

We have other publication projects on hand and should be able to announce a new Special Volume and reprinting of a popular earlier volume in the very near future.

Communications and education are major objectives of the Association. As President, I am particularly pleased to see these latest improvements and wish to thank our Secretary and Treasurer and the Editor and Business Manager of the Journal for their efforts on behalf of us all.

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.

Alan Coope has been named Director of Geochemistry for Newmont with worldwide responsibilities. Alan is based in Toronto where he continues, for the time being, as Manager of Newmont Exploration of Canada's eastern exploration program. He writes to say that he is looking forward to renewing his contact with friends around the world.

Alfred T. Miesch has retired from the United States Geological Survey to establish a private consulting practice in statistical geochemistry and chemometrics. He may be contacted at:
P.O. Box 1103,
Grand Junction, Colorado
U.S.A. 81502
(Ph. (303) 241-4829)

Paul Matysek has been appointed geochemist to the British Columbia Ministry of Energy, Mines and Petroleum Resources. His responsibilities will include the design, implementation and interpretation of regional geochemical surveys undertaken by the Province. He can be contacted at:
The B.C. Ministry of Energy, Mines and Petroleum Resources,
Room 300, 756 Fort Street,
Victoria, B.C.
Canada V8W 3A3
(Ph. (604) 387-5068)
# New Members

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.

### Voting Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.W. Barker</td>
<td>District manager</td>
<td>AMAX Exploration, Denver, U.S.A.</td>
</tr>
<tr>
<td>J. Choiniere</td>
<td>Sr. exploration geochemist</td>
<td>MERQ, Quebec, Canada</td>
</tr>
<tr>
<td>J.S. Cone</td>
<td>President</td>
<td>Cone Chemical Inc., Lakewood, Co. U.S.A.</td>
</tr>
<tr>
<td>M. Fukuda</td>
<td>Geochemist</td>
<td>MINDECO, Tokyo, Japan</td>
</tr>
<tr>
<td>U.E. Kramar</td>
<td>Geochemist</td>
<td>Univ. Karlsruhe, Karlsruhe, West Germany</td>
</tr>
<tr>
<td>L.B. Lindqvist</td>
<td>System group mgr., computer section</td>
<td>Swedish Geological Co., Gammelstad</td>
</tr>
<tr>
<td>T.E. Lindholm</td>
<td>Geochemist</td>
<td>Swedish Geological Co., Lulea, Sweden</td>
</tr>
<tr>
<td>Luan Ji-Shen</td>
<td>Director, Geochem. Explor. Dept.</td>
<td>Research Inst. for Min. Resources, Sanlidian, Guilin, P.R. China</td>
</tr>
<tr>
<td>D.K. Jordt</td>
<td>Explorationist</td>
<td>Petrominex Inc., Dallas, TX., U.S.A.</td>
</tr>
<tr>
<td>P.F. Matysek</td>
<td>Geochemist</td>
<td>B.C. Ministry of Mines, Victoria, B.C. Canada</td>
</tr>
<tr>
<td>J.D. McCartney</td>
<td>Geologist</td>
<td>Cominco Ltd., Pine Point, N.W.T., Canada</td>
</tr>
</tbody>
</table>

### K. Nicholson
- Position: Lecturer
- Affiliation: Univ. of Papua, New Guinea
c/o Univ. of Glasgow, Scotland

### R.J. Van Enk (Trans.)
- Position: Consulting geologist and geochemist
- Affiliation: Dryden, Ontario, Canada

### Affiliate Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>W.K. Akhurst</td>
<td>Geologist</td>
<td>Vancouver, B.C., Canada</td>
</tr>
<tr>
<td>J.C. Harrop</td>
<td>Research Asst., Dept. Geol. Sciences</td>
<td>U.B.C., Vancouver, B.C., Canada</td>
</tr>
<tr>
<td>L.F. Hill</td>
<td>Mine owner</td>
<td>Dellwood, Minn., U.S.A.</td>
</tr>
<tr>
<td>M.N. Richards</td>
<td>Exploration department</td>
<td>C.R.A. Pty Ltd.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Karratha, Western Australia</td>
</tr>
<tr>
<td>S.J. Roth</td>
<td>Geologist</td>
<td>Freeport-McMoran Gold Co. Elko, Nevada, U.S.A.</td>
</tr>
<tr>
<td>H. Seck</td>
<td>Prof. of Mineralogy</td>
<td>Inst. fur Mineralogie</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ. of Koln, Koln, West Germany</td>
</tr>
</tbody>
</table>
RECENT PAPERS ON EXPLORATION GEOCHEMISTRY

This list comprises titles that have appeared in major publications since the compilation presented in Newsletter 54. 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 Geologic Sciences, University of Colorado, Boulder.


Krohn, M.D., 1985. Spectral properties (0.4 to 25 microns) of selected rocks associated with disseminated gold and silver deposits in Nevada and Idaho. USGS OFR 85-0576, 38 p.


Future Meetings

Geochemical Exploration for Precious and Base Metals, May 5-9, 1986
Second Notice

This short course is being given by L.G. Closs at Metals Hall, Green Center, Colorado School of Mines, Golden, Colorado, U.S.A.
The program, now in its 6th 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. The enrolment fee is U.S. $650 with a $50.00 registration deposit.
For information concerning the program, contact:
Special Programs and Continuing Education (SPACE) Office
Colorado School of Mines
Golden, Colorado, U.S.A 80401
303-273-3321

Prospecting in Areas of Glaciated Terrain
Kuopio, Finland, September 1-5, 1986

The seventh symposium in the series 'Prospecting in areas of glaciated terrain', organized by the Institution of Mining and Metallurgy and the Geological Survey of Finland, will be held at Hotel Rauhalahi, in Kuopio, Finland on September 1 and 2, 1986. In addition to the technical sessions, a post-symposium three-day excursion will take place on September 3rd-5th.
Papers presented in the symposium will deal mainly with geochemical exploration. In addition, there will be papers concerning glacial transport, various geophysical methods and other types of prospecting in glaciated terrain.
Excursions are planned to massive sulphide ores in Outokumpu and Pyháälä, an apatite mine in Siilinjärvi and talc and soapstone mining and industry in Polvijärvi and Juuka. Geochemical and geophysical prospecting techniques as well as the use of dogs in prospecting will also be demonstrated.
For further information, contact:
Conference Office
Institution of Mining and Metallurgy
44 Portland Place
London W1N 4BR
England
Dr. R. Salminen
Geological Survey of Finland
P.O. Box 237
70101 Kuopio
Finland

Short Course
Exploration Geochemistry:
Design and Interpretation of Soil Surveys - Quality Inn, San Antonio, Texas, November 6-9, 1986

The third Society of Economic Geologists short course will be held jointly with the Association of Exploration Geochemists from Thursday November 6 to Sunday November 9 at the Quality Inn, San Antonio, Texas, prior to the 1986 annual meeting of the Geological Society of America. The course is designed to update practising exploration geologists on design, implementation and interpretation of soil geochemical surveys including choice of appropriate analytical and statistical methods. Case studies will be used as worked examples to illustrate both the problems that can arise, and the benefits of a systematic approach to anomaly definition and rating based on sound understanding of geochemical processes in surficial media.
Instructors will be W.K. Fletcher, S. Hoffman, M.B. Mehrrens, A.J. Sinclair and I. Thomson. The registration fee of $375 includes all course fees, Volume 3 of Reviews in Economic Geology, lodging (based on double occupancy) for the nights of November 5 through 8, and lunches on the meeting days. The course is limited to 60 participants, with applications accepted on a first-come first-served basis. Deadline for registration is September 26, 1986. For information and registration forms contact: Lois Elms, Western Experience, 2369 Carriage Circle, Oceanside, CA 92056, 619-722-0027.
Regional Meeting of the Association of Exploration Geochemists - Exploration in the North American Cordillera, Vancouver, B.C., Canada May 12-14, 1986
Third Circular

The Association of Exploration Geochemists and the Cordillean Section of the Geological Association of Canada extend an invitation to attend the GEOEXPO/86 symposium on explorations in the North American Cordillera to be held in Vancouver, British Columbia, Canada from May 12-14, 1986. Details on registration, the technical program, short course, workshop sessions, field excursions and social events are described in the Third Circular which has been mailed to all Association Members. The Organizing Committee urge that those members proposing to attend the meeting complete and return the registration forms AS SOON AS POSSIBLE. Further information may be obtained from: GEOEXPO/86 P.O. Box 49330 Bentall Station Vancouver, B.C. V7X 1P1 Canada

International South European Symposium in Exploration Geochemistry - Athens, Greece, November 10-11, 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, on 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. Members who did not receive the second circular can obtain one through the AEG Rexdale Office.

Registration and a welcoming reception on November 9, 1986. For further 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

Calendar of other Geochemical Meetings

1986

July 7-11
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)

October
3rd Exploration Geochemistry Symposium, Guilin, China. (Prof. Xie Xuejing, Chairman, Organizing Committee, 3rd Chinese Exploration Geochemistry Symposium, Institute of Geophysical and Geochemical Exploration, Langfong, Hebei, 102801, The People's Republic of China.)

1987

April 23-26
12th International Geochemical Exploration Symposium - 4th Symposium on Methods of Geochemical Prospecting, Orlean La Source, France. (The Organizing Committee, 12 IGES - 4th SMGP, BRGM B.P. 6009, 45060 Orleans, Cedex, France, tel. 38 64.30.08)

Abstracts

The abstracts of unpublished technical notes, case histories and short papers are presented in this section of the Newsletter. If you would like a copy of the full paper or material, please contact the Author(s) directly. Please note: Abstracts must be no longer than 150 words.

The Uranium Decay Series in the Prospecting Environment: Production, Migration, Decay

The behavior of each radionuclide in the prospecting environment is controlled by its chemistry, its radioactive decay and its production from its precursor. Decay and production are defined by equations relating to the half-lives. Chemical behavior of the short lived nuclides is modified by their extremely low abundance (e.g. only about 200 tonnes of radon in the entire earth's crust). These processes, and applications to prospecting for uranium, are illustrated by a diagram with footnotes.

Robert H. Morse
298 Beech Avenue, Toronto, Ont. M4E 3J2 Tel. (416) 699-5760
Secretary's Notes

This Newsletter is a radical departure from the style with which you have been familiar over the years. As Ian Thomson remarked in the President's Message, the new format only evolved after much debate and hard work. Despite the change, many of the original features will continue and I would encourage you to continue to send in your contributions and comments.

You will see that there has been a response to the Abstracts feature which first appeared in the last Newsletter. However, I would ask you to limit contributions to 150 words so that we are able to print several abstracts within the limited space available. Interest continues in the computer software pool, and Eric Grunsky has informed me that he expects to transfer the existing programs to floppy disk in the near future.

Despite a decline from 1985, membership size is still healthy and presently stands at 1170. However, roughly 40 per cent of members have still to pay their 1986 dues. It is true that a recession still affects the mining sector and that some of the overseas members are experiencing currency problems. Also, some of you may not have received a 1986 Dues Renewal Notice with the September 1985 Newsletter. If you are experiencing problems with dues payment, please let me know and a possible solution may be suggested. Otherwise, I would ask you to remit outstanding dues as soon as possible.

A comment on Nominations form for the 1986-87 Distinguished Lecturer Series. As you are aware, Nomination forms accompanied Newsletter No. 54, which should have been distributed in early January 1986, giving adequate time for members to return their nominations by January 31st, 1986. Unfortunately, due to printing and distribution delays, many members did not receive the Nomination Form until February. I apologise for this delay to those members who wished to nominate a Distinguished Lecturer candidate.

Finally, for those of you able to attend GEOEXPO/86 in Vancouver, I look forward to meeting you at the Annual General Meeting.

Ray Lett

<table>
<thead>
<tr>
<th>Award Winners</th>
<th>Annual General Meeting, 1986</th>
<th>Please take note!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy of Athens, Greece, Award</td>
<td>The Annual General Meeting of the Association of Exploration Geochemists will be held at 17:15 hrs PDT, Tuesday May 13th, 1986 in the War Memorial Gymnasium, University of British Columbia, Vancouver, B.C., Canada.</td>
<td>Publication of Proceedings 11th IGES Toronto</td>
</tr>
<tr>
<td>Two papers on geobotanical-biogeochemical topics published in the Journal of Geochemical Exploration have been awarded first prize in a competition organized by the Academy of Athens, Greece. The papers are: Kelepertzis A.E. and I.Andrulakis. Geobotany-biogeochemistry for mineral exploration of sulphide deposits in northern Greece. Heavy metal accumulation by Rumex acetosella L. and Minuartia verna(L.) Hiern. J.Geochem.Explor. 18(1983):267-274 Kelepertzis A.E., Andrulakis I and R.D. Reeves. Rumex acetosella L. and Minuartia verna (L.) Hiern as geobotanical and biogeochemical indicators for ore deposits in northern Greece. J.Geochem.Explor. 23 (1985):203-212</td>
<td>The editor of these proceedings, Bob Garrett, had initially anticipated submission of edited manuscripts to Elsevier over the period of August to end of November, 1985. Publication of the special issue of the JGE would have followed approximately six months after receipt of the final manuscript, i.e. Summer, 1986. As of March 1986, editing is approximately seven months delayed. Thus the publication of the special issue is unlikely before early 1987.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The President, Ian Thomson, will deliver his address immediately following the AGM.</td>
<td></td>
</tr>
</tbody>
</table>

Page Five
Computer Software Pool

The following programs are available from the Association: TERNARY PLOTTING PACKAGE ($12.00), BINARY PLOTTING PACKAGE ($12.00), IRVBAR, JENSEN, JENBND and STRNET (all $6.00).

These programs will shortly be available on IBM compatible floppy disc and further details of this development and other software contributed to the pool will be given in the next Newsletter.

Additional contributions to the pool are encouraged in any programming language and for any computer. However, each contribution should include source listing with internal documentation, the type of machine, list of peripheral devices required and user documentation.

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.

Please note that all orders for software should be made to
The Association of Exploration Geochemists
P.O. Box 523
Rexdale, Ontario, Canada
M9W 5L4

For further information, requests, submissions, contact:
Eric Grunsky
Ontario Geological Survey
911-77 Grenville Street
Toronto, Ontario, Canada
M5S 1B3
416-965-7046

This is IRVBAR??!!??