



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

NEWSLETTER NO. 42

President:

J.H. McCarthy Jr.
U.S. Geological Survey
Federal Centre, MS 912
Denver, Colorado 80225
U.S.A.

Vice Presidents:

L.G. Closs
Geology Department
Colorado School of Mines
Golden, Colorado 80401
U.S.A.

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

DECEMBER 1982

PERSONAL COLUMN

Secretary:

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

Treasurer:

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

Councillors:

1982-83
R.C. Armstrong
L.A. Clark
E.H.W. Hornbrook
R.G. Jackson
A.W. Rose
D.D. Runnels

1982-84

G.H. Allcott
W.D. Goodfellow
S.J. Hoffman
S.E. Kesler
N.G. Lavery
K.A. Lovstrom

Australian Regional Councillor:

R.H. Mazzucchelli

European Regional Councillor:

B. Bölviken

Southern African Regional Councillor:

G.L. Coetzee

Brazilian Regional Councillor:

R.J.P. Brim

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.

With regret we record the death of R.L. Gresens of the University of Washington, Seattle, Washington, U.S.A. on July 17th, 1982 while engaged on field work. Dr. Gresens had been a member of the Association since 1980. He will be sincerely missed by friends and colleagues.

P.J. Goossens would like to announce that he has completed his contract with the United Nations as Chief Technical Adviser in India and is presently Research Associate in charge of Economic Geology Section of the Department of Geology and Mineralogy, Royal Museum of Central Africa, Teivursen, Belgium.

With regret we record the death of A.T. Griffis in June 1982. Dr. Griffis, an Association Member since 1971, was a founding partner of the International Consulting group, Watts, Griffis and McQuat Limited. He will be sincerely missed by his many friends in both the Association and the Canadian Mining Industry.

A MESSAGE FROM THE PRESIDENT - J.H. McCarthy (Jr.)

One of our members obtained a copy of our mailing list for the stated purpose of advertising a symposium to our membership. This list has been wrongfully used to mail information about candidates for the AEG Council and about publication of the Journal of Geochemical Exploration. Thus it was obtained under false pretenses and is a clear violation of trust.

The proper vehicle for distributing information to the AEG membership is through the newsletter. Every past and present officer of the AEG has urged members to contribute to the Newsletter. I regret that those responsible for the above-mentioned mailing did not use the Newsletter to bring information to the members.

Some of the information contained in the memorandum is inaccurate and pertinent information is lacking. For example the AEG payed Elsevier \$19.06 for each membership subscription in 1981, not \$32.50 as stated. The difference between the \$32.50 and the actual price payed to Elsevier for the Journal is retained by the AEG. Approximately half of your membership dues are used to run the Association. (In 1981 that cost was \$20.15 per Member). Professor A.W. Rose, Chairman of the Publications Committee, has provided a summary in this Newsletter of the work of the Committee on the problem of Journal publication. As you can see from that summary, there are a great many issues that need to be considered in evaluating publication of the Journal.

Publication of the Journal is perhaps the most important contribution that our Association makes to its members and to the worldwide geochemical exploration community. We all want to continue publishing a quality Journal and make it available to the widest possible readership. How this can best be accomplished will require careful thought and informed judgement. There are good arguments both for continuing our relationship with Elsevier and for publishing the Journal ourselves. I wish to assure the membership that all aspects of these arguments are being professionally and fairly examined. But I also wish to point out that costs are not the only consideration.

The AEG has grown and even flourished because of the dedication and fair-minded conduct of all who have served. Those elected to Council and the Executive have always done their best to serve the Association and the members. There have been differences of opinion but the affairs of the Association have always been conducted in a spirit of mutual trust and respect. I hope we will continue with this policy.

* * * * *

PUBLICATIONS COMMITTEE REPORT - A.W. Rose

In view of the present debate concerning Journal publication a report from the Publications Committee is included as a separate feature in this Newsletter.

ADMISSIONS COMMITTEE REPORT

Names of the following candidates have been recommended for membership by the Admissions Committee and have been approved by Council. According to the Association 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

Gladwell, D.R.	Staff geochemist, Barringer Magenta Ltd., Toronto, Ontario, Canada.
Harrison, S.J.	Chief geochemist, Amax Exploration, Perth, Australia.
Ikramuddin, M.	Associate Professor, Eastern Washington University, Cheney, Washington, USA.
McHugh, J.B.	Research chemist, U.S. Geological Survey, Denver, Colorado, USA.
McNeal, J.M.	Geologist, U.S. Geological Survey, Denver, Colorado, USA.
Pereira, N.M.	Geochemist, Empresas Nucleares Brasileiras S.A., Rio de Janeiro, Brasil.

AFFILIATE MEMBERS

Basco, D.M.	Consulting geologist, Vancouver, B.C. Canada.
Eichorn, M.G.	Chief geochemist, Associated Mineral and Agricultural Chemical Laboratory, Brisbane, Australia.
Fournier, R.E.	Base and Precious Metals explorationist, Lakewood, Colorado, USA.
Giudice, P.M.	Exploration geologist, Freeport Exploration Co., Lakewood, Colorado, USA.
Laravie, J.A.	Exploration geologist, U.S. Steel Corp., Salt Lake City, Utah, USA.
Lenters, M.H.	Exploration geologist, Esso Minerals Canada, Calgary, Alberta, Canada.
Nisbet, P.C.	Exploration geochemist, Savercool Mining Co., Sequim, Washington, USA.
O'Toole, W.L.	Consulting geologist, Spokane, Washington, USA.
Ovens, G.D.	Senior geologist, Gulf Minerals Canada Ltd., Saskatoon, Saskatchewan, Canada.

Affiliate Members (con'd)

- Pennell, C.J. Geologist, Australian Development Ltd., Tennant Creek, Australia.
- Petrie, J.A. Geologist, Gulf Minerals Ltd., Saskatoon, Saskatchewan, Canada.
- Roberts, A.F. Consulting Engineer, self-employed, Vancouver, B.C. Canada.
- Soemantri, I.S. Geologist in Mining and geological consultant with P.T. Mincon-(A.C.A. Howe Pty.Ltd.Branch), Jakarta, Indonesia.

STUDENT MEMBERS

- Almeda, R.L. Graduate student at Akita University, Akita City, Japan.
- Davis, A.O. Graduate student at University of Colorado, Boulder, Colorado, USA.
- Knoper, M.W. Graduate student at Eastern Washington University, Cheney, Washington, USA.

FUTURE MEETINGSUPDATE - AUSTRALIAN REGIONAL MEETING PERTH, WESTERN AUSTRALIA

May 23-26, 1983

Geochemical Exploration in Arid and Deeply Weathered Environment

Planning for this meeting is well in hand and the indications to date are that response will be good. A circular and call for papers was widely circulated in July and offers of papers are coming in at a satisfactory rate. The closing date for receipt of extended abstracts is 30 November 1982.

The scope of the meeting has been extended by the arrangement of a Joint Session with the Specialists Group in Economic Geology of the Geological Society of Australia on the topic "Geochemistry and Genesis of Ore Deposits associated with Weathering". Two field excursions and a varied programme of social events for registrants and accompanying members have been planned. For further details please contact,

Mr. R.A. Young
Secretary, Organising Committee
AEG Regional Meeting
P.O.Box 91
Belmont, W.A. 6104 AUSTRALIA

GEOCHEMICAL EXPLORATION FOR PRECIOUS METALS, BASE METALS, AND URANIUM

May 9-13, 1983

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

The program, now in its 23rd year, is an introductory course on the fundamentals of modern geochemical exploration techniques, ideally suited for geologists, chemists, and others interested in trace element geochemistry, as related to mineral exploration. For information concerning the program, contact

L.G. Closs
Geology Department
Colorado School of Mines
Golden, Colorado, 80401
U.S.A.

or

Special Programs &
Continuing Education (SPACE)
Office
Colorado School of Mines,

Tel: 303 273-3856

Tel: 303 273-3321

1983 PITTSBURGH CONFERENCE AND EXPOSITION ON ANALYTICAL CHEMISTRYAND APPLIED SPECTROSCOPY March 7-12, 1983

The 1983 Pittsburgh Conference on Analytical Chemistry will be held in the Atlantic City Convention Hall, Atlantic City, New Jersey from March 7 to 12, 1983.

Further details on the conference, sponsored by the Society for Analytical Chemists of Pittsburgh and the Spectroscopy Society of Pittsburgh can be obtained from

The Pittsburgh Conference
437 Donald Road
Pittsburgh, Pa. 15235
USA

FIFTY FIRST ANNUAL CONVENTION OF THE PROSPECTORS AND DEVELOPERSASSOCIATION March 6-9, 1983

The 51st Annual Convention for the Prospectors and Developers Association will be held in the Royal York Hotel, Toronto, Canada, from March 6-9th, 1983. The theme for this convention will be "Exploration at the Crossroads". Further information may be obtained from,

Ms. Greta Firth
Prospectors and Developers Association
159 Bay St., Ste. 219
Toronto, Ontario M5J 1J7

INTERNATIONAL WORKSHOP ON GEOCHEMICAL EXPLORATION IN RAIN FORESTS, 1983

The Association of Geoscientists for International Development (AGID) have proposed a joint Association of Exploration Geochemists-AGID- International Union of Geological Sciences workshop on Geochemical Exploration in Rain Forests to be held in late 1983. Aims of this workshop would be to provide a forum for the exchange of ideas among geochemists working in the humid tropics, to identify and document the major research needs, to propose specific research projects and to identify interested scientists and organizations. Optimum attendance by invitation only will be limited to 30 and location will be decided by the Association. Further details will be given in the next Newsletter.

EXPLORATION AND EVALUATION TECHNIQUES FOR GOLD DEPOSITS, Jan.24-28, 1983

The Department of Geological Sciences, McGill University, in association with the Mineral Exploration Research Institute, offers a one-week professional development seminar from January 24 to 28, 1983. Special problems of exploration including geological and geochemical methods as well as sampling, assaying and evaluation will be discussed.

For further details contact,

G.R. Webber
Program Director
McGill University
Tel: 514 392-5837

or

S.M. Jackson
Program Secretary
McGill University
Tel: 514 392-5841

JOINT AIME - SME - AEG MEETING, Atlanta, Georgia, March 6-10th, 1983

E.F. Weiland and G.L. Closs will chair the technical session "Geochemistry Applied to Today's Exploration" at 8:30 a.m. on Thursday, March 10th, 1983. The following papers will be given.

Analytical Opportunities/Evaluation and Selection: G.L. Closs.
Partial Dissolution Techniques in Geochemical Exploration: T.T. Chao.
Analytical Data Reliability: R.K. Glanzman and M. Mason.
Current Techniques in the Presentation of Geochemical Data: R.G. Garrett.
Current Technology in Stream Sediment Geochemistry: P.K. Theobald.
Paper Title to be Announced. J.H. McCarthy.

ELECTION OF ORDINARY COUNCILLORS

Twelve nominations for Council have been made to fill 5 vacancies which will arise at the next Annual General Meeting in March, 1983. Ballots have been prepared and distributed to the Voting Membership. Results of the vote will be tabulated at the AGM after which the New Councillors will be announced. It is important that Voting Members cast their ballots as soon as received. The Ballots must be returned to the Association permanent office in Rexdale (Toronto) by March 4th, 1983, from there the ballots will be transferred to Atlanta for the AGM on March 10th, 1983.

REGIONAL COUNCILLORS

Regional Councillors, like Ordinary Councillors, hold office for two year periods.

Richard Mazzuchelli, Australian Regional Councillor, Louis Coetzee, Southern Africa Regional Councillor and B. Bolviken, European Regional Councillor will continue to serve the Association through the 1983-85 term.

Raymond Brim will be resigning as Brazilian Regional Councillor in March and Council is pleased to accept the nomination and following a Council meeting held on December 14th, 1982 to appoint Dr. Richard W. Lewis as Regional Councillor for Brasil for the term 1983-85.

NEW EXECUTIVE FOR THE ASSOCIATION

At a Council Meeting held on December 14th, 1982, members of the new executive were elected for the year 1983-84.

L. Graham Closs of the Geology Department, Colorado School of Mines, has been elected to the position of President of the Association.

Bob Garrett of the Geological Survey of Canada, Ottawa, has been elected to the post of First Vice President.

Ian Thomson of Placer Development Limited, Vancouver has been elected to the post of Second Vice President.

Ray Lett of Barringer Magenta, Toronto has been re-elected to the post of Secretary.

R.G. Jackson Sulpetro Minerals, Toronto has been elected to the post of Treasurer.

Note J.H. McCarthy Jr. will continue to serve Council during the 1983-85 term as Past President Councillor.

ANNUAL GENERAL MEETING 1983

The next Annual General Meeting of the Association will be held in conjunction with the 112th AIME Annual Meeting in Atlanta, Georgia. The meeting will be held at noon on Thursday, March 10th, 1983.

The Agenda for AGM is as follows,

1. Minutes of the 1982 Annual General Meeting.
2. Matters Arising.
3. Nominations of Scrutineers for Ordinary Councillor ballot.
4. President's Report.
5. Secretary's Report.
6. Treasurer's Report.
7. Admission's Committee Report.
8. Introduction of the 1983-84 Executive.
9. Announcement of the Ordinary Councillors Elections.
10. Any other business.
11. Adjournment.

The President, J.H. McCarthy, Jr. will deliver his address immediately following the adjournment of the meeting.

++++++
++++

FROM THE SECRETARY'S OFFICE - Ray Lett

The Annual General Meeting is perhaps the most important event of the Association's business year because it not only serves to introduce the new President and other Officers to Members but also to summarize the Association's activities and financial status. This year the AGM will be held on March 10th at the combined AEG-AIME Symposium in Atlanta, Georgia and a notice giving further details is attached to this Newsletter. I would ask those members who are attending the symposium to try and be present at the AGM and support your Association.

My plea for contributions to the Newsletter has been answered and I am happy to be able to include a letter received from Roger Watters of Cairns, Australia. Many thanks for your contribution, Roger and your 42 foot pool will be ever in my thoughts during the long Canadian winter ahead.

On a less cheerful note, I reported the tragic death of Randy Gresens in a light plane accident near Wanatchee, Washington. This accident also took the lives of his wife, Mimi and friend, Bates McKnee. Members may wish to remember Randy by contributions to the Gresens Education Fund,

established to support his three daughters' education or the Gresens-McKnee Memorial Lectureship in the Pacific Northwest Geology. Cheques may be made out to either one of these entities or to Julian D. Barksdale, c/o Department of Geological Sciences, AJ-20, University of Washington, Seattle, Washington, 98195, USA.

Inadvertantly in the last Newsletter I merged the Short Course/Workshop, Geochemical Exploration in Deeply Weathered Terrain offered by the Division of Mineralogy CSIRO Institute of Energy and Earth Resources from March 1st to 4th, 1983 with the Association of Exploration Geochemists first Australian Regional Meeting, Geochemical Exploration in Arid and Deeply Weathered Environments to be held in Perth, Western Australia, May 23-26, 1983. These meetings are separate and a second notice of the Perth Symposium is included with this Newsletter.

A LETTER FROM AUSTRALIA

From R.A. Watters, Contract Geologist, Consultant Geochemist,
636 Bruce Highway, Woree, Cairns, 4870, Queensland, Australia.

To The Secretary, Association of Exploration Geochemists.

Dear Ray:

In response to your appeal to the membership to contribute something, firstly I want to advertise the fact that I am alive and well and living in Australia's answer to Hawaii. While the boom has passed (again!) and the resources are still largely awaiting discovery, all is not gloom and doom, no! As a result of a little extra time on my hands, my golf score is down to my age (for 9 holes that is) and my beer consumption is about the same number, (13 oz. bottles per week). No anomalies there, no matter how you rearrange the data.

On a more serious note, the shortsightedness of some of the local companies here astounds me. Sure, there's a glut of some commodities, no demand for others at all, but wiping out whole exploration arms is surely not, in the long term, an economy.

One company I have heard about, (no names, no pack drill) has several million dollars worth of data in their files and have sacked EVERYBODY. When they want to start up again in two or three years time, there will be no continuity, no one will know where anything but the coffee jug is, and they'll have to start from scratch. Perhaps this is why old consultants never die, they just go on boring. Perhaps we help preserve a little continuity (and sanity?) simply because data just naturally seem to fall off trucks and wait for an opportune time to be revealed. Everybody knows a look is as good as a photocopy to a blind geochemist, to paraphrase a hitherto good aphorism.

I sometimes wonder if the employees shouldn't be given the option of working for reduced salaries, running the shebang themselves just to stay alive, rather than to make profits and dividends, until such time as there is a more bullish market. But then, if you add just one letter to "bullish", what have you got?

I hope this lightens your day. I'm going for a dip in my 42 foot pool.

BIBLIOGRAPHYRECENT PAPERS ON EXPLORATION GEOCHEMISTRY

This list comprises titles that have appeared in major publications since the compilations presented in Newsletters No. 40 and 41. Journals routinely covered and abbreviations used are: Journal of Exploration Geochemistry (JEG); Economic Geology (EG); Geochimica et Cosmochimica Acta (GCA); the USGS Professional Papers (USGS PROF P); Circular (USGS CIR); and Open File Report (USGS OFR); Bulletin of the Canadian Institute of Mining and Metallurgy (CIM BULL); Transactions of Institution of Mining and Metallurgy, Section B: Applied Earth Sciences (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.

Ames, L.L., McGarrah, J.E., Walker, B.A., and Salter, P.F. 1982. Sorption of uranium and cesium by Hanford basalts and associated secondary smectite. Chem. Geol. 35(3/4), 205ff.

Antipin, V.S., Kovalenko, V.I., Kuznetsova, A.I., and Persikova, L.A. 1981. Distribution coefficients for tin and tungsten in ore-bearing acid igneous rocks. Geochem. Intern. 18(1): 92-106.

Barrett, T.J. and Friedrichsen, H., 1982. Elemental and isotopic compositions of some metalliferous and pelagic sediments from the Galapagos mounds areas, DSDP Leg 70. Chem. Geol. 36(3/4): 275-298.

Barringer, A.R. 1981. Airborne geochemical reconnaissance methods for oil and gas exploration, in Gottlieb, B.M. (Ed.). Unconventional Methods in Exploration for Petroleum and Natural Gas II. SMU Press, Dallas: 219-239.

Benjamin, M.M., and Felmy, A. 1982. Trace metal exchange between ferromanganese nodules and artificial seawater. Marine Mining 3(1/2): 151-184.

Boyle, R.W. 1982. Geochemical methods for the discovery of blind mineral deposits, Part 1. CIM BULL 75(844): 123-142.

Brooks, R.R., Chatterjee, A.K., Smith, P.K., Ryan, D.E., Zhang, H.F. 1982. The distribution of gold in rocks and minerals of the Meguma Group of Nova Scotia, Canada. Chem. Geol. 35(1/2): 87-128.

Brooks, R.R., Holzbecher, J., Robertson, D.J., and Ryan, D.E., 1982. Biogeochemical prospecting for uranium in Nova Scotia. JEG 16(3): 189-195.

Campbell, I.H., Coad, P., Franklin, J.M., Gorton, M.P., Scott, S.D., Sowa, J., and Thurston, P.C. 1982. Rare earth elements in volcanic rocks associated with Cu-Zn massive sulphide mineralization: A preliminary report. Can. J. Earth Sci. 19(3): 619ff.

Card, J.W., and Bell, K. 1982. Collection of radon decay products--a uranium exploration technique. JEG 17(1): 63-76.

Chivas, A.R. 1981. Geochemical evidence for magmatic fluids in porphyry copper mineralization--Part I. Mafic silicates from the Koloula Igneous complex. Contr. Mineral. Petrol. 78(4): 389-403.

Dakshini, K.M., Roonwal, G.S., Gupta, S.K. 1982. Heavy metal accumulation by Veronica cinerea(L.) Less. (Asteraceae). JEG 16(3), 235-238.

Duchscherer, W.D., Jr. 1981. Carbonates and isotope ratios from surface rocks: A geochemical guide to underlying petroleum accumulations, in Gottlieb, B.M. (Ed.). Unconventional Methods in Exploration for Petroleum and Natural Gas II. SMU Press, Dallas: 201-218.

Filipek, L.H., Chao, T.T., and Theobald, P.K., Jr. 1982. Comparison of hot hydroxylamine hydrochloride and oxalic acid leaching of stream sediment and coated rock samples as anomaly enhancement techniques. JEG 17(1): 35-47.

Goodfellow, W.D. 1982. Regional stream sediment and water geochemistry of the Nahanni map area (NTS 105I), Yukon and Northwest Territories (National Geochemical Reconnaissance Map NGR 51-1981). GSC OFR 868.

Gorelov, D.A. 1982. Quantitative characteristics of geologic anomalies in assessing ore capacity. Intern. Geol. Rev. 24(4): 457-465.

Gorgoni, C., Martinelli, G., and Sighinolfi, G.P. 1982. Radon distribution in groundwater of the Po sedimentary basin (Italy). Chem. Geol. 35(3/4): 297-310.

Grassia, A. 1982. "Discovery" sampling in geological research. J. Intern. Assn. for Math. Geol. 14(4): 321-330.

Grigor'yev, N.A., Bushlyakov, I.N., Pokrovskiy, P.V., Rapoport, M.S., and Chistyakov, N.Y. 1981. The beryllium distribution around hydrothermal rare-metal-tungsten shows. Geochem. Intern. 18(2): 41-47.

Haynes, S.J., and Mostaghel, M.A. 1982. Present-day precipitation of lead and zinc from groundwaters. *Mineralium Deposita* 17(2): 213-228.

Hendry, D.A.F., Chivas, A.R., Reed, S.J.B., and Long, J.V.P. 1981. Geochemical evidence for magmatic fluids in porphyry copper mineralization--Part II. Ion-probe analysis of Cu contents of mafic minerals, Koloula igneous complex. *Contr. Mineral. Petrol.* 78(4): 404ff.

Horvitz, L. 1981. Hydrocarbon geochemical prospecting after forty years, in Gottlieb, B.M. (Ed.). *Unconventional Methods in Exploration for Petroleum and Natural Gas II*. SMU Press, Dallas: 83-95.

Ivoflov, A.S., Anisimov, N.I., Barankevich, V.G., Khrumchenko, S.I. 1982. Peculiar characters of composition of native gold from the conglomerates. *Geol. Geophys.* 266(2): 125ff.

Jorstad, K., Salbu, B., Roaldset, E. 1982. Vertical distribution of trace elements in fresh water, saline water and sediments from Lake Rorholthfjorden, Norway. *Chem. Geol.* 36(3/4): 325-348.

Kronfeld, J., Zafrir, H. 1982. The possibility of using desert palms in hydrologic reconnaissance prospecting for uranium. *JEG* 16(3): 183-187.

Lavrent'ev, Y.G., Kuzenetsova, A.I., Nesterenko, G.V., Malikov, Y. I. 1982. The electron probe microanalysis of native gold. *Geol. Geophys.* 266(2): 83-124.

Levinson, A.A. (Ed.). 1982. *Precious Metals in the Northern Cordillera. The Association of Exploration Geochemists and the Cordilleran Section of the Geological Association of Canada*, P.O. Box 398, Station A, Vancouver, British Columbia V6C 2N2, Canada.

Majumder, T., Chakraborty, K.L., Bhattacharyya, A. 1982. Geochemistry of banded iron formation of Orissa, India. *Mineralium Deposita* 17(1): 107-118.

Matheis, G., Pearson, M.J., 1982. Mineralogy and geochemical dispersion in lateritic soil profiles of northern Nigeria. *Chem. Geol.* 35(1/2): 129-148.

McCorkell, R.H., Brameld, M.P. 1982. The distribution of radon and other radioactive decay products of uranium from a uranium deposit into overlying burden. *CIM BULL* 75(843): 125-130.

- Miller, W.R., Ficklin, W.H., and Learned, R.E. 1982. Hydrogeochemical prospecting for porphyry copper deposits in the tropical-marine climate of Puerto Rico. JEG 16(3): 217-233.
- Nowlan, G.A. 1982. Guidelines for finding concretionary Mn-Fe oxides in streams. JEG 17(1): 77-79.
- Oreshkin, V.N., and Gurvich, Y.G. 1981. Cadmium in suspension and the water at the mouths of certain rivers flowing into the Arctic Ocean and the Black Sea. Geochem. Intern. 18(1): 86-91.
- Philp, R.P. 1982. Surface geochemical methods used for oil and gas prospecting--a review. JEG 17(1): 1-34.
- Plimer, I.R., and deCarvalho, D. 1982. The geochemistry of hydrothermal alteration at the Salgadinho copper deposit, Portugal. Mineralium Deposita. 17(2): 193-211.
- Roberts, A.A. 1981. Helium emanometry in exploring for hydrocarbons: Part II, in Gottlieb, B.M. (Ed.). Unconventional Methods in Exploration for Petroleum and Natural Gas II. SMU Press, Dallas: 126-149.
- Roberts, F.I. 1982. Trace element chemistry of pyrite: A useful guide to the occurrence of sulfide base metal mineralization. JEG 17(1): 49-62.
- Rose, A.W. 1982. Mineral adequacy, exploration success, and mineral policy in the United States. JEG 16(3): 163-182.
- Rosenblum, S. 1981. Anomaly-ratio concept in geochemical exploration. AIME Trans. 270: 1987ff.
- Rozinov, M.I., and Kolesnikov, D.I. 1982. Mineralogical-geochemical indicators of ore in rhyolites of the okhotsk-chukotka belt. Intern. Geol. Rev. 24(3): 345-353.
- Ryzenko, B.N., Mel'nikova, G.L., Shvarov, Y.V. 1981. Computer modeling of formation of the chemical composition of natural solutions during interaction in the water-rock system. Geochem. Intern. 18(2): 94-108.
- Sakharova, M., Batrakova, Y.A., and Ryakhovskaya, S.K. 1981. The effects of pH on the deposition of gold and silver from aqueous solution. Geochem. Intern. 18(2): 28-34.
- Samama, J.C. 1982. La pyritisation des fronts d'oxydo-reduction des gites d'uranium: Signification geochemique et caracterisation texturale. Mineralium Deposita 17(2): 295-306.

Sheremet, Y.M., Avtushko, M.I., and Gormasheva, G.S. 1981. Ore-bearing criteria for metasomatic granitoids. *Geochem. Intern.* 18(2): 48-58.

Silichev, M.K., Belozertseva, N.V. 1981. Zoning in the distribution of impurities in quartz, arsenopyrite and galena from a gold-ore deposit. *Geochem. Intern.* 18(2): 35-40.

Smith, R.E. (Ed.). 1982. *Geochemical Exploration in Deeply Weathered Terrain.* (Discussion papers from short course/workshop, June, 1982, Perth, Western Australia.) Commonwealth Scientific and Industrial Research Organization (CSIRO), Division of Mineralogy, P.O. Wembley, W.A. 6014, Australia.

Soliman, M.M. 1982. Geochemical prospecting for Cu in Hamash area, southeastern desert, Egypt. *Geol. Mag.* 119(3): 319-323.

Sotnikov, V.I., Kastykin, Y.P., and Nikitina, Y.I. 1981. Distributions of chlorine and fluorine in the minerals of intrusive and postmagmatic rock bodies of molybdenum shows in the Stanovoy Range. *Geochem. Intern.* 18(2): 18-27.

Spevak, Y.A. 1982. Mechanism and scale of gas emigration during mesocatagenesis. *Intern. Geol. Rev.* 24(4): 389-394.

Starinsky, A., Katz, A., and Kolodny, Y. 1982. The incorporation of uranium into diagenetic phosphorite. *GCA* 46(8): 1365-1374.

Suda, C.E., Brookins, D.G., and Della Valle, R.S. 1982. Uranium and other trace element geochemistry of the Hopi Buttes volcanic province, Northeastern Arizona. *EG* 77(5): 1210-1220.

Takeo, S., Minami, A., and Kakitani, S. 1981. Heavy metal concentration to clay minerals in aqueous solutions(1)--Suspension pH and metal contents of sericite. *Min. Geol.* 31b(170), 443-456.

Thompson, C.K. 1981. The airborne gas sensor and its role in exploration reconnaissance, in Gottlieb, B.M. (Ed.). *Unconventional Methods in Exploration for Petroleum and Natural Gas II.* SMU Press, Dallas: 240-248.

Trudick, L. 1981. Geochemical prospecting for fluorospar in Southern Illinois--Results of chemical analysis of A-horizon soils above a deep-seated manto and vein complex. *AIME Trans.* 270: 1907ff.

Valenchon, F. 1982. The use of correspondence analysis in geochemistry. *J. Int. Assn. for Math. Geol.* 14(4): 331-342.

Vratkovskaya, S.V., Pogrebnjak, Y.F., and Tolochko, V.V. 1982. Water streams for dispersion of zinc, lead, copper and silver on the area of Eravninsky ore node. Geol. Geophys. 265(1): 96-100.

Weart, R.C., and Heimberg, G. 1981. Exploration radiometrics: Postsurvey drilling results, in Gottlieb, B.M. (Ed.). Unconventional Methods in Exploration for Petroleum and Natural Gas II. SMU Press, Dallas: 116-123.

Zielinski, R.A. 1982. The mobility of uranium and other elements during alteration of rhyolite ash to montomorillonite: A case study in the Troublesome Formation, Colorado, U.S.A. Chem. Geol. 35(3/4): 185-204.

Zielinski, R.A. 1982. Uraniferous opal, Virgin Valley, Nevada: Conditions of formation and implications for uranium exploration. JEG 16 (3): 197-216.

A NOTE FROM THE PRESIDENT J.H. McCarthy, Jr.

I would like to give special thanks to one of our members who has made substantial contributions in time and effort to the Association, Ed Post, President of Skyline Labs, has for several years stored and mailed AEG publications. He has recently entered into his company computer names and addresses of almost 2,000 institutions including libraries around the world, geoscience departments in North America and State Geological Surveys. Mailing labels prepared from this list will be used to send information on AEG publications to these institutions. Thanks Ed. Best wishes to each of you for a good new year.

ANNUAL GENERAL MEETING

The Association of Exploration Geochemists

will hold their

Annual General Meeting

following a noon luncheon

to be held

on

Thursday March 10th, 1983

in the

Walton Room

of the

Atlanta Hilton

112 AIME Annual Meeting

in

Atlanta, Georgia

Publications Committee Progress Report

The publications of the Association are one of our main justifications for existence, and the Journal of Geochemical Exploration is the major publication. Several members, primarily A. A. Levinson, have recently suggested important changes in the Journal. The purpose of this report is to inform members on this question. The committee has not yet made any recommendations, so this report is necessarily tentative.

Shortly after the Association was formed, E. Cameron and J. A. Hansuld, presently Editor and Business Manager, respectively, accepted the task of starting a journal for the new Association, which at that time had no money to support publication. Inquiries and visits with many major publishers were unsuccessful until Elsevier was approached. The result was a four-year publication contract between AEG and Elsevier. A third contract with a five-year term will expire the end of 1984 and requires negotiations for a new contract in mid-1983.

A key feature of the present contract is that Elsevier owns the Journal and as a result assumes all financial risk. The AEG has responsibility, through the Editor appointed jointly by AEG and Elsevier, for handling manuscripts through the technical review and editing stage, and in return, receives a low-subscription rate for members and a royalty based on total receipts of the Journal. Elsevier has all remaining responsibilities, including copy editing, typesetting, printing, mailing, and marketing of non-member subscriptions.

The nominal price of the Journal to members has been \$32.50/yr. since 1976, but this is decreased by the royalty. Since 1978, when the number of subscriptions qualified for the 6% royalty, the actual payments by the

Association have been in the range of \$18-21/yr., not \$32.50. Present royalty is 7% of total receipts, including special issues.

Publication of the Journal at much lower cost has been suggested by Dr. Levinson. He obtained a quotation from Lancaster Press, printer for more than 50 journals, including Economic Geology and Geochimica et Cosmochimica Acta, indicating a cost of about \$45,000/yr. for copy editing, typesetting, printing, binding, and mailing, to produce a journal essentially like the present JGE. He suggests expenses and overhead of an additional 33% or \$60,000 as total cost (before profit) of producing the Journal. By comparison, present receipts are estimated at about \$120,000 from 750 non-members at about \$160, and \$14,000 from 700 members at \$20.

We obviously have no information on Elsevier's actual costs, and it is possible that the above estimates are somewhat in error. However, even if the figures were sizably increased, it appears that the Journal is or should be quite profitable, largely because of non-member subscriptions.

The major question is what course the AEG should take in the future. Three general alternatives appear possible:

1. AEG might attempt to buy the Journal from Elsevier. If the Journal is actually as profitable as suggested above, the price would probably be several hundred thousand dollars. If so, AEG would have to borrow most of the money and would need to continue to charge the present or higher subscription rates for 3-6 years to pay off this amount. Present indications are that Elsevier is not interested in selling.

2. AEG could start a new journal. Dr. Levinson suggests that annual subscription rates might be free to members and \$75/non-member. However, preliminary discussions with Elsevier indicate they would probably attempt

to continue publication of the present journal, so AEG would have to compete with them. They would have the advantage of the high-price, non-member subscriptions, and they could certainly survive for a time, but would have to struggle to obtain enough good manuscripts. The new AEG journal might initially have only member subscriptions; if so, costs would be about \$35/yr. for member subscriptions. Additional dues of \$22 to run AEG would lead to total dues of about \$57/yr. A hundred higher-price outside subscriptions would reduce costs to about \$20/member. The AEG would have some added responsibility and work (more supervision of printer, more editing responsibility, copyright handling, collection and subscription lists for non-members, back-issue storage and sales, advertising), as well as the major task of selling a new journal to non-member subscribers in competition with JGE. It took Elsevier three years to reach 600 non-members when JGE was started.

3. Negotiate a new contract with Elsevier for continuing with JGE. From the preceding figures, it appears that we should be able to do at least as well for the members as the present contract. An important question is how concerned AEG should be about prices to non-members.

Another question is, do we want to disturb the present high-quality Journal, built up by considerable efforts of the Editor, Editorial Board, and Business Manager?

To help evaluate the possibilities and the financial aspects, the Committee is planning to hire an outside consultant knowledgeable in journal publishing.

As you can see, some major questions face the AEG in the coming year. I would welcome comments and suggestions to help the Publications Committee and Council in these matters.

Arthur W. Rose, Chairman
Publications Committee
(322 Deike Building, University Park, PA
16802)

J.H. Wahl. Senior Geochemist, Kerr Addison Mines, Toronto. Ph.D. University of New Brunswick, 1973. Member of the 1976 Appalachian Regional Symposium Organizing Committee and Member since 1978.

W.B. Coker. Senior Staff Geochemist, Kidd Creek Mines, Toronto. Ph.D. Queen's University, 1974. Nine years industrial and government experience. Member since 1971 and Ordinary Councillor 1978-81.

B. Hitchon. Research Fellow, Alberta Research Council, Alberta. Ph.D. Manchester University. Associated Editor of the Journal of Geochemical Exploration since 1978. Vice President International Association of Geochemistry and Cosmochemistry. Member since 1975.

W.C. Riese. Project-Geochemist Anaconda Minerals, Denver. M.Sc. University of New Mexico, 1973. Twelve years industrial experience. Member since 1976.

C.E. Dunn. Research Geologist, Saskatchewan Department of Mines, Regina. Ph.D. University of London, 1971. Member of the 9th I.G.E.S. Saskatoon, 1982 Committee. Member since 1979.

V.J. Sopuck. Consultant Geochemist, Saskatchewan Mining and Development Corporation, Saskatoon. Ph.D. Queen's University, 1971. Chairman of the 9th I.G.E.S., Saskatoon, 1982. Six years experience in government and industry. Member since 1979.

A.E. Soregaroli. Vice President Mineral Exploration, Westmin Resources, Vancouver. Ph.D. University of British Columbia, 1968. Fifteen years industrial and university experience. C.I.M.M. District 6, Vice President. Member since 1976.

R.W. Klusman. Professor, Colorado School of Mines, Golden, Colorado. Ph.D. University of Indiana, 1969. Fifteen years university and government experience with particular emphasis on vapour geochemistry. Member since 1981.

D.G. Brookins. Professor, University of New Mexico, Albuquerque. Ph.D. Mass. Inst. Technology, 1963. Twenty years industrial, government and university experience. Co-editor of "Uranium". Member since 1980.

D.D. Runnels. Associate Professor, University of Colorado, Boulder, Colorado. Ph.D. Harvard University, 1964. Ordinary Councillor since 1981 and currently newsletter bibliography supplement compiler. Member since 1970.

A.A. Levinson. Professor, University of Calgary, Alberta. Ph.D. University of Michigan, 1952. Author "Introduction to Exploration Geochemistry". Exec. Editor Geochimica et Cosmochimica Acta, 1967-1970. Ordinary Councillor 1975-1977 and Member since 1970.

S.L. Bolivar. Staff Geochemist, Los Alamos Scientific Laboratory, Los Alamos, New Mexico. Ph.D. University of New Mexico, 1977. Member since 1982.



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

President:

J.H. McCarthy Jr.
U.S. Geological Survey
Federal Centre, MS 912
Denver, Colorado 80225
U.S.A.

Vice Presidents:

L.G. Closs
Geology Department
Colorado School of Mines
Golden, Colorado 80401
U.S.A.

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

Secretary:

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

Treasurer:

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

Councillors:

1982-83
R.C. Armstrong
L.A. Clark
E.H.W. Hornbrook
R.G. Jackson
A.W. Rose
D.D. Runnels

1982-84

G.H. Allcott
W.D. Goodfellow
S.J. Hoffman
S.E. Kesler
N.G. Lavery
K.A. Lovstrom

Australian Regional Councillor:
R.H. Mazzucchelli

European Regional Councillor:
B. Bølviken

Southern African Regional Councillor:
G.L. Coetzee

Brazilian Regional Councillor:
R.J.P. Brim

ELECTION OF ORDINARY COUNCILLORS

Twelve Voting Members of the Association have been nominated for Ordinary Councillors for 1983-85. Six incumbent Ordinary Councillors will retire at the upcoming Annual General Meeting in March 1983. Consequently, Members are asked to cast five votes by erasing seven names of candidates you do not wish to vote for from the Balloting List. The persons whose names are not erased from the Balloting List will each receive one vote in the Balloting.

Any Balloting List will be deemed invalid if the number of names not erased therefrom shall be more than five.

Limited information on each candidate is included on the reverse page.

Voting Members should not sign or otherwise identify themselves on the Balloting List. Place the completed Ballot in the small envelope marked "AEG Ordinary Councillor Ballot" and seal. Place this envelope in the large envelope bearing the permanent address of the Association, seal, stamp and mail to arrive in Rexdale not later than March 4th, 1983.