



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

P.O. BOX 523, (METROPOLITAN TORONTO), REXDALE, ONTARIO, M9W 5L4 CANADA

NEWSLETTER

NO. 25

JUNE 1978

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1978-80
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L.D. James
K.A. Lovstrom
T.W. Meyer
J.H. McCarthy
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Sifillan

European Regional Councillor
G.H.W. Friedrich

This is the first Newsletter to be issued in the 1978-1979 Association year.

Personal Column

In the next Newsletter, for the first time, a regular personal column containing information on members of the Association is planned. Any member who would like to insert a personal note concerning either themselves or a fellow member, please write to the Association's head office in Rexdale. This will be included in the next Newsletter.

MEETINGS

7th INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM, April 1978

The Symposium was held in Golden, Colorado from April 16th to 20th at the Green Centre of the Colorado School of Mines. Approximately 550 persons attended this conference which was extremely successful. For the first time, poster sessions were used in conjunction with general sessions. Authors of the poster sessions were in attendance and available for discussion during the day and in the evening at the Holiday Inn. At these evening sessions, wine and cheese was kindly provided by the commercial laboratories in the Denver area. This provided a most congenial common meeting place and our heartfelt thanks goes out to these companies.

Some 38 technical papers were presented at the regular session. The entire proceedings of the conference will be published by the Association as a special volume which, hopefully, will be ready before the end of the year.

The conference was most efficiently run and the Association is extremely grateful to Paul Theobald, Chairman of the organization committee, and to his entire staff, some of whom devoted a great deal of their time and effort to making the meeting a success. A list of 61 individuals who helped in the execution of this Symposium were acknowledged at the front of the program. To all these people, the Association owes a debt of gratitude.

INSTRUCTIONAL PROGRAM OF INTEREST RECENTLY HELD

IAEA INTERREGIONAL TRAINING COURSE IN URANIUM GEOCHEMICAL PROSPECTING METHODS

The second Interregional Training Course in Uranium Geochemical Prospecting Methods was held in Skofja Loka, Yugoslavia from September 5 to 30, 1977 (the first was held in Austria in 1975, AEG Newsletter No. 17). The four weeks course was organized by the International Atomic Energy Agency in cooperation with the Geological Survey of Ljubljana. Twenty-four participants from 16 countries came for the Course. Various geochemical methods used in uranium exploration were introduced through lectures, practical field works, demonstration and informal discussions.

Lectures on the geology and mineral deposits of Slovenia were given by M. Drovenik, K. Grad, and E. Lukacs of Yugoslavia. Mr. Berce also of Yugoslavia exposed the participants to a mathematical approach in the determination and evaluation of geochemical anomaly. The global picture of the Uranium Reserves and Demand and of the Uranium Deposits were the subjects of J. Cameron (IAEA, Vienna) lectures. P. Barrette of IAEA, Vienna talked on Instrumentation used in Uranium Exploration. The principal lectures on the Geochemical Exploration Principles and the application in the search for Uranium Deposits were shared by A. Grimbert of France and I. Nichol of Canada.

After the lecture sessions in the first week, the following two weeks were spent on practical field work. Reconnaissance or Low Density Observation survey was first conducted over an area of about 350 sq km through stream water and sediment sampling. A smaller area was then selected for Detailed or High Density sampling where soil sampling, determination of Rn in soil-gas, scintillemeter as well as gamma-ray spectrometer surveys were conducted (due to lack of time Intermediate Density or Follow Up survey had to be short circuited). O. Suschny of the IAEA Seibersdorf laboratory provided a series of lectures on Uranium Analysis and B.P. Cross also of IAEA Vienna instructed the participants on the use of computer data processing during the last week of the Course. Finally the participants were asked to discuss and evaluate the results of their own survey.

The four weeks gathering exemplified hardwork, friendship and world cooperation in the truest sense. The enthusiasm of the 24 participants, the leadership provided by the instructors, namely Ashlyn Armour-Brown (IAEA/UNDP Project, Greece), Paulo M. Barretto (IAEA, Vienna), Mohamad Tauchid (IAEA Project, Philippines) and Jamis Tomsic (Geological Survey of Ljubljana, Yugoslavia), and the lovely Skofja Loka setting contributed to the successful project.

Contributed by: Mohamad Tauchid, IAEA Expert, c/o UNDP Office, P.O.Box 1864, Manila, Philippines.

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FUTURE GEOCHEMICAL SYMPOSIUMS AND THEME MEETINGS

8th INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM (April 10-15, 1978) Hannover, Germany

Planning for the next Symposium to be held at Hannover, West Germany, is well in hand. The first circular for this meeting is attached. Anyone who would like further information on this Symposium should write to Dr. H. Gundlach, Organizing Committee, 8th International Geochemical Exploration Symposium, Federal Institut of Geoscience and Natural Resources, P.O. BOX 510153, D-3000, Hannover, West Germany.

1979 BASIN AND RANGE THEME MEETING

This will be a limited attendance symposium, concerned specifically with geochemical exploration in the Basin and Range Province of the southwestern United States. This meeting will be held in Tucson, Arizona on April 9th-10th, 1979. A first announcement and a call for papers is attached to this Newsletter.

1979 URANIUM THEME MEETING

There will be a one day symposium on geochemical exploration for uranium to be held on November 4, 1979 in San Diego, California, in conjunction with the 1979 Annual GSA meeting.

This symposium will be a series of invited papers intended to give an over-view on geochemistry specifically within the United States. Details of the program will be announced in the next Newsletter. People interested in further information should contact the Chairman of the Organizing Committee, Dr. R.H. Carpenter, Department of Geology, University of Georgia, Athens, Georgia, 30602.

1982 INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM

The 1982 symposium will be held in North America although its location has yet to be determined by Council. Any group interested in hosting this meeting should write to the Association office.

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FROM THE SECRETARY'S OFFICENew Officers and Councillors of the Association

New officers of the Association were announced in the 24th Newsletter dated February 1978. The names and addresses of these officers appears on the front page of this Newsletter. At the annual general meeting, seven new councillors were elected by a count of the posted ballots sent out prior to the annual general meeting. Following is a list of the new councillors elected.

For the term 1978-1979 - W.B. Coker

For the term 1978-1980 - R.G. Garrett
 - L.D. James,
 - K.A. Lovstrom
 - T.W. Meyer
 - J.H. McCarthy
 - I. Thomson

Regional Councillor for Spanish Latin America

The Association has received a nomination for Dr. Geoff Aucott

Embajada Britanica
 Casilla 314
 Quito, Ecuador

to be regional councillor for Spanish America. Under by-law 40 (III) of the

Association, any four voting members resident in a region may nominate a member also resident in that area for election as a regional councillor by delivering to the Secretary, no later than the first day of November (1978) the nomination in writing together with a written consent of the nominee to accept office if elected.

Any members of the Association resident in this area who would care to make alternate nominations should write, enclosing supporting documentation, to the Secretary of the Association.

Other Regional Councillors

The Association regards regional councillors as very important to active growth of the Association and good communication with members outside North America. Any group who would care to nominate a regional councillor in their area are urged to write to the Secretary of the Association.

Exploration Geochemistry Representative - AUSTRALIA

The A.E.G. in Australia was pleased to respond to an approach by the Director of the Bureau of Mineral Resources to nominate a representative for a sub-committee covering exploration geochemistry and applied exploration techniques to work under the Australian/USSR Agreement on Scientific and Technical Co-operation. Dr. R. H. Mazzuchelli of Western Mining Corporation, Perth, W.A. has accepted the position.

PUBLICATIONS

1977 Supplement to the Bibliography of Exploration Geochemistry by H.E. Hawkes

This supplement is an up-date of the 1972-1975 bibliography that appeared in special Volume No. 5 of the Association. The 1977 supplement was printed in time for sale at the Golden meeting. Copies are also available from the Association office in Rexdale at a price of \$2.00 to members and students and \$4.00 to non-members. Please note that pre-payment is required and payment should be in US dollars or equivalent.

Beus and Grigorian Volume

The publishers of the Russian translation with technical edition by A.A. Levinson have made a special offer to all members of the Association giving a \$10.00 discount on this volume. A special order form for this volume is attached.

MEMBERSHIP CERTIFICATES

To-date, the number of members requesting AEG membership certificates is still under the economic of 40. When the limit has been attained, a decision will be made on the printing of the certificates.

NEWSLETTER ADVERTISING

Again, we mention that advertising space is available in the Newsletter. The rates are set at \$10.00 per issue of the Newsletter for a business card-size advertisement. This is considered a very reasonable price for those wishing to reach the geochemical market. Inquiries should be directed to the permanent office of the Association.

1979 MEMBERSHIP DUES ----- First Call

Attention is directed to the 1979 dues notice included in this Newsletter. This is the first call for the 1979 dues. Subscriptions are due January 1, 1979. Failure to pay prior to this date results in a termination of your subscription as well as the exclusion of your name from the mailing list. Elsevier mailing list for the Journal of Geochemical Exploration are also revised in January of each year. Please note that the 1979 dues have not been increased however, in fairness to all our international members payment must be made in US dollars or equivalent.

COMPLAINTS OF NON-RECEIPT OF JOURNAL ISSUES

Please make complaints of non-receipt of a journal issue as soon as possible. Elsevier will replace copies lost in the mails, without charge, if the complaint is made within a few months. Complaints of the non-receipt of a number of consecutive journal issues or complete subscriptions should also be made as soon as possible, if they are to be replaced by Elsevier.

Please submit your own complaint directly and in writing to the AEG Rexdale Office.

BIBLIOGRAPHYRECENT PAPERS ON EXPLORATION GEOCHEMISTRY

This list comprises titles that have appeared in major publications since the compilation presented in Newsletter No. 24. Journals routinely covered and abbreviations used are as follows: Economic Geology (EG); Geochimica et Cosmochimica Acta (GCA); The USGS Journal of Research (USGS JR), Professional Papers (USGS Prof Paper), Bulletins (USGS Bull), Circular (USGS CIR) and Open File Report (USGS OFR); Geological Survey of Canada Papers (GSC Paper) and Open File Report (GSC OFR); Bulletin of the Canadian Institute of Mining and Metallurgy (CIM Bull); Transactions of Institute of Mining and Metallurgy, Section B: Applied Earth Sciences, (Trans IMM). Publications less frequently cited are identified in full.

Agterberg, F.P. and Divi, S.R. 1978. A statistical model for the distribution of copper, lead, and zinc in the Canadian Appalachian region. EG 73 (2) 230-245.

Anon. 1977. Geochemical survey of the western energy regions, 4th annual progress report, July 1977. USGS OFR 77-872. 232 p.

Ashley, R.P. and Keith, W.J. 1978. Geochemical exploration for gold deposits at Goldfield, Nevada. USGS OFR 78-228. 8 p.

Ballantyne, S.B. et.al. 1978. Some orientation surveys for uranium mineralization in parts of the Atlin area, British Columbia. GSC Paper 78-1A. 467-471.

Barr, D.A. 1978. Chappelle gold-silver deposit, British Columbia. C.I.M. Bull. Feb. 66-79.

- Closs, L.G. and Sado, E.V. 1978. Geochemistry of soils and glacial sediments near gold mineralization in the Beardmore-Geraldton area, District of Thunder Bay; Ontario Geological Survey OFR 5241, 162 p., 18 tables, and 36 figs.
- Felmlee, J.K. and Cardigan, R.A. 1978. Determination of uranium in source rocks by using radium in Crystal Springs, Great Salt Lake area, Utah. USGS OFR 78-102. 35 p. 8 figs.
- Goldhaber, M.B. and Reynolds, R.L. 1977. Geochemical and mineralogical studies of a south Texas roll-front uranium deposits. USGS OFR 77-821. 37 p.
- Graff, P.J. and Houston, R.S. 1978. Radioactive conglomerate in Proterozoic (Precambrian X) metasedimentary rocks of the Sierra Madre, Wyoming. USGS OFR 77-830. 8 p. 1 fig.
- Haffty, J. et.al. 1977. A manual on fire assaying and determination of the noble metals in geological materials. USGS Bull. 1445. 58 p.
- Hausen, D.M. 1978. Quantitative measurements of wallrock alteration in the exploration of buried mineral deposits. Paper presented at the 1978 A.I.M.E. Annual Mtg., Denver, Colorado. Preprint 78-I-19. 26 p.
- Hummel, C.L. 1978. Map showing locations of exploration geochemical survey areas on Seward Peninsula, Alaska. USGS OFR 77-796-D. 28 p. 1 pl., scale 1:1,000,000 (1 inch = about 16 miles).
- Jambor, J.L. and Delabio, R.N. 1978. Distribution of hydrothermal clay minerals in Valley Copper porphyry deposits, Highland Valley, British Columbia. GSC Paper 77-9. 21 p.
- Koplus, A.V. et.al. 1977. Endogenic geochemical halos of concealed fluorspar mineralization of Kazakhstan (as in the Taskaynar-Yuzhnyy deposit). International Geology Review 19 (12). 1441-1447.
- Krylova, L. Ya. 1978. Exploration significance of iodine distribution in the bedrock and weathering crust of the Maykain deposit. International Geology Review 20(3). 357-361.
- Kwong, Y.T.J. and Crocket, J.H. 1978. Background and anomalous gold in rocks of an Archean greenstone assemblage, Kakagi Lake area, Northwestern Ontario. EG 73(1) 50-63.
- Lister, B. 1977. Second inter-laboratory survey of the accuracy of ore analysis. Trans IMM 86. B133-B148.
- Masters, C.D. 1978. Comments on classification of uranium resources. USGS OFR 78-76. 7 p. 1 fig.
- Nash, J.T. 1977. Uranium in Precambrian granitic rocks of the St. Francois Mountains, southeastern Missouri, with comments on uranium resource potential. USGS OFR 77-787. 30 p.

- Neuerberg, G.J. 1978. The architecture of the porphyry-metal system as a prospecting stratagem in the southern Rocky Mountains. USGS OFR 78-130. 33 p. 13 figs.
- O'Leary, R.M. et.al. 1978. Spectrographic and chemical analyses of geochemical samples from Talkeetna quadrangle, Alaska. USGS OFR 78-143. 141 p. 1 pl.
- Pierson, C.T. and Green, M.W. 1977. Factors controlling localization of uranium deposits in the Dakota Sandstone, Gallup and Ambrosia Lake mining district, McKinley Cty., New Mexico. USGS OFR 77-766. 62 p.
- Rajamani, V. and Naldrett, A.J. 1978. Partitioning of Fe, Co, Ni, and Cu between sulfide liquid and basaltic melts and the composition of Ni-Cu sulfide deposits. EG 73(1) 82-93.
- Silberman, M.L. et.al. 1978. Geochemical anomalies and isotopic ages in the Willow Creek mining district, southwestern Takleetna Mts., Alaska. USGS OFR 78-233.
- Sims, J.D. 1978. Mercury analysis of sediments from cores in Clear Lake, Lake County, California. USGS OFR 78-116. 8 p. 3 figs.
- Theobald, P.K. and Barton, H.N. 1978. Basic data for the geochemical evaluation of National Petroleum Reserve, Alaska. USGS OFR 78-70-D. 102 p.
- Theodore, T.G. and Blake, D.W. 1978. Geology and geochemistry of the West Ore Body and associated skarns, Copper Canyon porphyry copper deposits, Lander Cty., Nevada. USGS Prof. Paper 798C. 85 p.

ADMISSIONS COMMITTEE REPORT

New Members

The following individuals have been accepted for membership in the Association by the Council on April 16th, 1978. The Association is pleased to welcome the new members.

Voting Members

- | | |
|-------------------|--|
| Al-Bassam, K.S. | Head of Geochemistry Dept./Geological Survey of Iraq; Baghdad, Iraq. |
| Bamford, R.W. | Geochemist. Salt Lake City, U.S.A. |
| Barbier, J. | Geochemist/B.R.G.M., Orleans, France. |
| Christensen, S.M. | Geochemist/Geologisches Landesamt Schleswig-Holstein, West Germany. |

New Members (con'd)

- Coelha da Rocha, M.M. Supervising Geochemist/EXMINESA; Madrid, Spain.
- Gorichon, A.G. Geologist/BRGM, Nantes, France.
- Lopez, L. Regional Manager of Exploration/Servicios Industriales Penoles,S.C., Cortez de Monroy, Mexico.
- Macambira, E.B. Geologist/CPRM; Belem-Para-Brasil.
- Mersereau, T.G. Regional Geologist/Conwest Expl.Ltd.; Bathurst, N.B., Canada.
- Perkins, E.W. Exploration geologist/Asarco Inc.;Knoxville, Tenn., U.S.A.
- Schroll, E. Head Geochemical Institute (RVFA); Vienna, Austria.
- Seccombe, P.K. Lecturer in Geology/University of Newcastle, NSW., Australia
- Wahl, J.L. Consulting Geologist/W.G. Wahl Ltd.,Toronto, Canada.
- Wilhelm, E. Geochemist/BRGM; Orleans, France.

Affiliate Members

- Cook J.R. Geoscientist/Bendix Field Engineering Corp., Grand Junction, USA.
- Garber R.J. Geologist. Calgary, Alberta, Canada.
- Han, T-H. Geologist/Korea Tungsten Mining Corp. Ltd.; Korea.
- Kandare, S. Chemist-Geochemist/UNDP in Cameron, Africa.
- McConnell, J.W. Geochemist/Newfoundland Department of Mines and Energy; St.John's, Newfoundland, Canada.
- Wilkinson, R.I. Geologist/Johannesburg Consolidated Investment; Republic of south South Africa.
- Young, R.A. Geologist-Geochemist/Western Mining Corp.; Kalgoorlie, W.A. Australia.

Student Member

- Johnson, S.A. The Association wishes to apologize to Stephen A. Johnson, for omitting his name from this list in Newsletter No. 23.
Student/ Colorado School of Mines, Golden, Co. U.S.A.

EMPLOYMENT OPPORTUNITIESMinistry of Natural Resources, Ontario

GEOCHEMIST (\$22,700-\$27,800)

With the Ministry of Natural Resources, Ontario Geological Survey, Geophysics/Geochemistry Section, you will supervise and carry out geochemical surveys and prepare reports on the distribution, migration and concentration of chemical elements in rocks, soils, glacial deposits, waters, vegetation, etc. You will provide planning input on the usefulness of accepted or innovative geochemical exploration methods as they apply to the distribution and genesis of mineral deposits.

Qualifications: An M.Sc. preferably a Ph.D. from a recognized university in applied geochemistry, and auxiliary training in Glacial and Quaternary Geology, Statistical Analysis, Computer Sciences, Petrology, and Ore Deposits Geology; several years field experience preferable; administrative and supervisory ability; familiarity with geology of the province and with current developments in the field of mineral exploration. Other requirements include excellent communication skills and a willingness to work irregular hours, and to travel.

Please send resumes by July 14th, 1978 to:

Personnel Branch, File NR, Ministry of Natural Resources,
Whitney Block, Queens Park, Toronto, Ontario M7A 1W3 CANADA

Urangesellschaft Canada Limited

Applied Geochemist

A geochemist is required for Urangesellschaft Canada Limited for various projects in Canada with possible additional overseas consulting assignments. Activities would involve field supervision of all geochemical aspects in the Canadian projects, various field and lab research, computation of data and data interpretation.

Position could entail involvement in metallurgical aspects of advanced projects.

Background in economic geology and mineral exploration, preferably some background in uranium would be an asset.

Salary commensurates with education and experience.

Please apply to:

Urangesellschaft Canada Limited
2 Bloor Street East
Ste. 3100
Toronto, Ontario, Canada
Attn. Dr. G. Bundrock

SPECIAL PUBLICATIONS

AEG SPECIAL VOLUME NO. 1: H.E. Hawkes, 1972, Exploration Geochemistry Bibliography, January 1965 to December 1971. 118 pages.

Price \$7.50 (\$US)

Available from: The AEG Office,
P.O.BOX 523, Rexdale, Ontario M9W 5L4 CANADA

AEG SPECIAL VOLUME NO. 2: I.L. Elliott and W.K. Fletcher (eds.) 1975. Geochemical Exploration 1974. Proceedings of the Fifth International Geochemical Exploration Symposium, Vancouver, B.C. 720 pages.

Price Canada \$62.50/DFL 150.00

Available from: Elsevier Scientific Publishing Co., P.O.BOX 211, Jan van Galenstraat 335, Amsterdam, The Netherlands.

AEG SPECIAL Volume No. 3: I.M.D. Bradshaw (Ed. and Compiler), 1975. Conceptual models in Exploration Geochemistry. The Canadian Cordillera & Canadian Shield. (Reprinted from the Journal of Geochemical Exploration, V.4 No.1) 216 pages.

Price Canada \$16.25/Dfl 39.00

Available from: Elsevier Scientific Publishing Co., P.O.BOX 211, Jan van Galenstraat 335, Amsterdam, The Netherlands.

AEG SPECIAL VOLUME NO. 4: A.J. Sinclair, 1976, Applications and Probability Graphs in Mineral Exploration. 95 pages.

Price (\$US)\$8.00 non-members and \$6.00 AEG members and students.

Available from: The AEG Office,
P.O.BOX 523, Rexdale, Ontario. M9W 5L4, CANADA

AEG SPECIAL VOLUME NO. 5: H.E. Hawkes, July, 1976, Exploration Geochemistry Bibliography, January 1972 to December 1975. 195 pages.

Price \$10.00 (\$US)

Available From: The AEG Office,
P.O.BOX 523, Rexdale, Ontario. M9W 5L4, CANADA

1977 Supplement to the Bibliography of Exploration Geochemistry: H.E. Hawkes,

This is an up-date of the 1972-75 Bibliography (AEG Vol.5) to June 1, 1977. 63 pages.

Price (\$US) \$4.00 to non-members and \$2.00 to AEG members and students.

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