



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

NEWSLETTER

NO. 50

January, 1985

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

Councillors:

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

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

Australian Regional Councillor:
R.H. Mazzucchelli

European Regional Councillor:
B. Bolviken

Southern Africa Regional Councillor:
G.L. Coetzee

Brazilian Regional Councillor:
R.W. Lewis Jr.

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.

M. Elliott has relocated his geological consulting practice from Mount Isa to Townsville. His address is Elliott Exploration Co. Pty. Ltd., 45 Swales Street, Mundingburra, Townsville, Queensland, 4812, Australia.

Erick Weiland has left Control Data's Mineral Systems Division to pursue the integration and application of geochemistry and computers in mineral exploration as a private consultant. He will concentrate on the data acquisition, storage, analyses, and presentation requirements of exploration and mining, as well as the computerization of analytical services. He will work out of his Tucson, Arizona office at 412 North Medford Dr., (602) 296-5940.

Professor G.J.S. Govett has been appointed Dean of the Faculty of Applied Science, University of New South Wales, Australia. As a consequence, he will relinquish his position as Head of the School of Applied Geology at the University but will remain as Professor of Geology in the School and will continue to direct the research programme in exploration geochemistry.

N.G. Lavery has resigned from Exxon Minerals after seventeen years with the Company. Norm is starting a new minerals exploration group to capitalize on exploration opportunities in the northwest United States. A comprehensive Business Plan has been prepared, and is available to all interested parties. Norm's address is: 5545 Skyway Drive, Missoula, Montana 59801 U.S.A.

N.W. Radford has left GEOPEKO and has joined BP Minerals as geochemist. He can be contacted at this address c/o B.P. Minerals Australia, P.O. Box R1274, Perth W.A. 6001, Australia.

THE PRESIDENT'S MESSAGE -- Bob Garrett

The last few months have seen Council and its Committees active in several important areas. I would like to take the opportunity to bring you up to date on some of these activities.

Firstly, following on from my September Message and the topic of education and training. We have received ten nominations for distinguished lecturers, and at Council's next meeting our first distinguished lecturer will be selected. The result of Council's deliberations will be reported in the March Newsletter. I am very happy to report to you that Kay Fletcher of the University of British Columbia has agreed to chair the Association's Short Course Committee. The role of this Committee is a most important one; I perceive the task of training and education to be one where the Association can, and should, make a significant contribution in support of traditional educational institutions, other scientific societies, and international development agencies. I hope you will join me in wishing Kay every success with the new Committee, and hope you will be willing to help in this important work if called upon to do so.

Since I was first elected to the Executive of the Association in 1979 our membership has grown from 607 to over 1400. It was possible to run the Association very largely on the time contributed by Executive and Council members with the able assistance of Mrs. Ines Filicetti in Toronto. This is no longer the case. We have graduated from being a small Society to a medium sized one, and there is still great growth potential. In 1985 Council will evaluate a permanent office arrangement in Toronto, which will take over many of the routine membership and financial tasks. However, Mrs. Filicetti will still continue to handle much of the correspondence with members and matters related to the Journal.

By the time you read this Newsletter the New Year will be upon us. On behalf of the Council I send you our best wishes and hopes for success in your work in 1985.

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.

The bibliographies of the following new members will be included in the next Newsletter.

VOTING MEMBERS

Carlson E.H.
Gazzaz, M.A.
Pearton, T.N.
Tammerkand, R.A.

AFFILIATE MEMBERS

Ginet, C.B.
Lewis, M.W.
Llurio, M.R.
Midobaku, C.
Potter, S.C.
Reukl, R.J.
Risto, R.W.
Teller, C.M.
Tombale A.R.

STUDENT MEMBERS

Arauz, A.J.
Bayer, R.A.
Eppinger, R.G.III
Huston, D.
Konsevick, E.J.
Redecke, P.
Schalck, D.K.
Slavik, L.G.
Sharpe, C.I.
Shannon, J.R.

CALENDAR OF COMING EVENTS

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

February 6-7, 1985

U.S.G.S. Research on Mineral Resources Forum (see Newsletter)

February 24-28, 1985

AMERICAN INSTITUTE OF MINING, METALLURGICAL AND PETROLEUM ENGINEERS - ANNUAL MEETING (AIME, 345 East 47th Street, New York, NY 10017, U.S.A.)

March 1-3, 1985

NORTH AMERICAN INTERNATIONAL GLACIOLOGICAL SOCIETY BIENNIAL MEETING (S.J. Jones, National Research Council Canada, P.O. Box 12093, Stn. A., St. John's, Newfoundland, A1B 3T5, 709-772-5065)

March 10-14, 1985

Prospectors and Developers Convention, Toronto, Ontario, Canada (420-74 Victoria Street, Toronto, Ontario, Canada M5C 2A5)

March 20-21, 1985

PETROLEUM AND MINERALS REVIEW CONFERENCE, Canberra, Australia (E.E. Young, BMR, Dept. of Resources and Energy, P.O. Box 378, Canberra, ACT 2601, Australia)

March 24-27, 1985

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS ANNUAL CONVENTION, New Orleans, U.S.A. (G. Severson, The Louisiana Land and Exploration Co., P.O. Box 60350, New Orleans, LA 70160 U.S.A.)

March 24-30, 1985

Workshop on Geochemical Exploration in Tropical Rain Forests (Manaus, Brasil. (R.W. Lewis, Rua Aguaraiaba 86, Bonsucesso - Rio de Janeiro RJ CEP 21.061, Brasil)

April 9-12, 1985

METALLOGENY OF BASIC AND ULTRABASIC ROCKS, Edinburgh, Scotland (The Conference Office, IMM, 44 Portland Place, London W1N 4BR, U.K.)

April 14-17, 1985

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

April 15-19, 1985

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

April 21-25, 1985

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

April 25-26, 1985

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

April 28-May 1, 1985

Eleventh International Geochemical Exploration Symposium, Toronto, Canada.
(See Newsletter for further details.)

May 8-11, 1985

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

May 13-17, 1985

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

May 15-17, 1985

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

May 15-18, 1985

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

July 7-12, 1985

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

July 10-12, 1985

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

July 27-August 7, 1985

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

July 28-August 2, 1985

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

August 12-14, 1985

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

August 19-24, 1985

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

August 26-29, 1985

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

September 7-12, 1985

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

September 8-13, 1985

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

September 15-21, 1985

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

October 6-10, 1985

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

October 9-12, 1985

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

October 28-31, 1985

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

November, 1985

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

1986

July 7-11, 1986

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

August 11-15, 1986

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

FUTURE MEETINGSELEVENTH INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM
Toronto, Canada

April 28-May 2, 1985

Third Circular and Registration Material

The Symposium Organizing Committee invite all Association Members and their colleagues to the 11th International Geochemical Exploration Symposium. A technical program covering three and a half days will comprise volunteered papers presented in oral or poster sessions. Several two day workshops will be held immediately before the Symposium. Pre- and Post-Symposium Field Trips have been organized to laboratory facilities and the Canadian Centre for Remote Sensing in Toronto and to base-precious metal deposits in northern Ontario, New Brunswick and Nova Scotia. There has already been a keen interest in the field trips particularly those planned to gold deposits in northern Ontario. The Organizing Committee therefore strongly advise that members planning to attend the meeting complete the registration forms enclosed with the Newsletter and return them as soon as possible in order to avoid being disappointed in joining the field trip of their choice. For further information on the meeting and additional copies of the Third Circular and registration forms please contact:

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

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

March 10-14, 1985

53RD ANNUAL PROSPECTORS AND DEVELOPERS ASSOCIATION CONVENTION

This Convention will be held in the Royal York Hotel, Toronto, Canada from March 10 to 14th, 1985. The theme will be "Canadian Mine Making Today". Further details can be obtained from:

The Prospectors and Developers Association
Suite 420 - 74 Victoria Street
Toronto, Ontario
M5C 2A5
Phone 416-362-1969

ORGANICS AND ORE DEPOSITS

April 25-26, 1985

UPDATE

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

The Keynote Speaker will be Dr. William S. Fyle, University of Western Ontario. Other distinguished invited speakers participating in the three technical sessions will be Dr. W.E. Dean (Organic Processes and Methods), J.G. Hill (Organics in Precious Metal Deposits), Dr. R.W. Macqueen (Organics and Base Metals). Registration material can be obtained from:

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

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

The Saskatoon section of the CIM Geology Division will host a Symposium entitled "Gold in the Western Shield" from 9th to 10th September, 1985 at the Ramada Renaissance Hotel, Saskatoon, Saskatchewan, Canada. Topics will include geological settings and exploration signatures of gold deposits in the region, gold exploration techniques and theoretical aspects of gold deposit genesis. Field trips are planned to the Northwest Territories (Cullaton, Lupin, Salmita) deposits (September 7th and 8th) and the La Rouge gold belt (September 11th and 12th). Authors interested in submitting papers should contact:

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

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

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

METALLOGENY OF BASIC AND ULTRABASIC ROCKS, Edinburgh, April 9-12, 1985

This Symposium is an international conference organized by the British Geological Survey, the University of Edinburgh and the Open University in association with the Institution of Mining and Metallurgy, the Royal Society's British National Committee for the IGCP, the Applied Mineralogical Group of the Mineralogical Society and the Geological Society of London. The metallogenesis and associated with mineral deposits, ophiolites, layered intrusives and other igneous complexes, greenstone belts and modern ocean crust will be covered in the meeting. Original research and exploration papers including experimental isotopic and chemical studies and geochemical and geophysical explorations methods, are requested. Post Symposium field trips are planned to the Ballantrae and Unst Ophiolite complexes. All enquiries should be addressed to the Conference Office, The Institution of Mining and Metallurgy, 44 Portland Place, London W1N 4BR, England. (Phone 01-580-3802; telex 26.1410 IMM).

USGS RESEARCH ON MINERAL RESOURCES**FIRST ANNUAL V.E. McKelvey Forum - February 6-7, 1985**

The U.S. Geological Survey is sponsoring a public forum, entitled USGS Research on Mineral Resources - 1985, to be held at the Regency Inn in Denver on February 6-7, 1985. The program will include 19 oral presentations in three half-day sessions, 53 poster presentations, and a Wednesday luncheon at which Director Dallas L. Peck will speak on "Mineral Resources Research: Opportunities for Government-Industry Cooperation". The Branch of Analytical Chemistry and the Branch of Exploration Geochemistry will co-host an open house at their laboratories on Thursday afternoon. The McKelvey forum will present an overview of significant mineral resources research at the USGS. Topics include discussions of the role of organic matter in forming and prospecting for ore deposits, the accumulation of metals in sedimentary basins, the evolution of ore-forming hydrothermal fluids, and the concentration of sulfides and platinum-group elements in ultramafic complexes.

Further information on the forum is available from:

William R. Miller
U.S. Geological Survey, Mail Stop 912
Box 25046 Denver Federal Center
Denver, Colorado 80225
(303) 236-5558

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

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

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

L.G. Closs
Geology Department
Colorado School of Mines
Golden, Colorado 80401
U.S.A.
Telephone 303-273-3856

Special Programs and
Continuing Education
(SPACE) Office
Colorado School of Mines
Golden, Colorado, USA 80401
303-273-3321

ELECTION OF ORDINARY COUNCILLORS

Eleven nominations for Council have been made to fill 5 vacancies which will arise at the next Annual General Meeting in May, 1985. Ballots have been prepared and distributed to the Voting Membership. 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 April 1st, 1985. From there the ballots will be transferred, by the Secretary to the Auditor of the Association for counting. Results of the vote will be announced at the AGM after which the New Councillors will be announced.

NEW EXECUTIVE FOR THE ASSOCIATION

At a Council Meeting held on November 7th, 1984, members of the new executive were elected for the year 1985-86.

Ian Thomson of Placer Development Limited, Vancouver, has been elected to the position of President of the Association.

Glen Allcott of the United States Geological Survey, Reston, Virginia, has been elected to the post of the First Vice President.

Stan Hoffman of BP-Selco, 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 of Sulpetro Minerals, Toronto, has been re-elected to the post of Treasurer.

Note: R.G. Garrett will continue to serve Council during the 1985-87 term as Past President Councillor.

ANNUAL GENERAL MEETING 1985

The next Annual General Meeting of the Association will be held during the Association of Exploration Geochemists Regional Meeting, in Toronto, Canada. The meeting will be held at 4 p.m. on Tuesday, April 30th, 1985.

The Agenda for AGM is as follows:

1. Minutes of the 1984 Annual General Meeting
2. Matters Arising
3. President's Report
4. Secretary's Report
5. Treasurer's Report
6. Admissions Committee Report
7. Introduction of the 1985-86 Executive
8. Announcement of the Ordinary Councillors Elections
9. Any other Business
10. Adjournment

The President, R.G. Garrett will deliver his address immediately following the adjournment of the meeting.

FROM THE SECRETARY'S OFFICE - Ray Lett

There are several notices in this first Newsletter of 1985 to which I would like to draw members' attention. Last year I proposed including a regular Newsletter feature on microcomputer applications. Several members wrote to me supporting this idea and recently Eric Grunsky has kindly offered to start a computer software pool and has contributed several programs to form a nucleus for this pool. This software is available through the Association free with the exception of a small handling and postage charge. Further details on the software are given later in the Newsletter.

An agenda for the 1985 Annual General Meeting to be held during the 11th International Geochemical Exploration Symposium in Toronto, Canada is attached to this Newsletter. Brief biographies of Ordinary Councillor nominees for the 1985-87 team and a ballot form are also included. Please note the changed format for the ballot form and that you are asked to vote for five candidates, not six as stated in Newsletter 49. Please complete your ballot and return it as soon as possible. As usual the result of the Council election will be announced at the Annual General Meeting.

For those Canadian members who have still to pay annual dues and who may experience varying bank charges associated with cheques written in U.S. dollars, I would suggest payment by U.S. dollar money order rather than by cheque. If in doubt discuss the matter with your bank.

AEG COMMITTEE CHAIRMEN, 1984-85

Dr. S.J. Hoffman, Chm.,
Symposium Committee
BP Selco Ltd.
890 W. Pender St., Ste. 700
Vancouver, B.C. Canada V6C 1K5
Telephone 1-604-682-8345

Dr. W. K. Fletcher
Short Course Committee
Department of Geological Sciences
University of British Columbia
Vancouver, B.C. Canada V6T 1W5

Dr. I. Elliott
Publications Committee
Cominco Ltd.
7th Floor, 409 Granville Street
Vancouver, B.C., Canada V6C 1T8
Telephone 1-604-685-3072

Dr. L.P. James, Chm.,
Admissions Committee
Box 226
Golden, CO. USA 80402
Telephone 1-303-279-0493

Dr. S.E. Kesler, Chm.,
Student Prize Committee
University of Michigan
Ann Arbor, Mich., USA 48109
Telephone 1-313-763-5057

Dr. N.G. Lavery, Chm.,
Membership Renewal Committee, and Distinguished Lecturer Committee,
Exxon Minerals Co.,
2104 Reserve St.,
Missoula, Montana, USA 59806
Telephone 1-406-728-7118

It may be appropriate at this time to sincerely thank all of the individuals who have contributed material to the Newsletter or have provided services on a voluntary basis to the Association during 1984. In particular the work of Don Runnells who regularly compiles the Bibliography update is especially appreciated.

Finally, from Ines Filicetti and myself, successful and prosperous New Year.

LETTERS TO THE EDITOR

Sir:

This has been a very busy year for Park Geological Consultants. Our business is growing and we are continuing to work for more and more clients as word of our good work spreads. If you don't mind, I would like to use this forum to thank my many clients and friends.

Also, I would like to inform you of the addresses of a couple of our lost members

Geoffrey M. Evans
Director of Exploration
BP Minerals International Ltd.
Shakespeare No. 30 Iisos 8 y 9
Mexico, D.F.
C.P. 11590

John Lee Carroll
515 Madison Avenue
32nd Floor
New York, NY 10022

Are you aware of anyone who is doing detailed studies on jasperoids? Do you have any bibliographic references to the geochemistry of jasperoids? The relationship of jasperoids to ore deposits? The relationship of jasperoids to gold and precious metals? Etc?

Thank you for your help.

Gerald M. Park
Park Geological Consultants
8790 Blue Jay Lane
Salt Lake City, Utah, 84121, U.S.A.

COMPUTER SOFTWARE PROGRAM POOL

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

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

A nominal charge of \$6 (U.S.) per program is required for handling, copying and postage.

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

- For each program: Source listing with internal documentation
- The type of machine the program was written for
- A list of peripheral devices required
- User documentation

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

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

For further information, requests, submissions, contact:

Eric Grunsky
Ontario Geological Survey
911 - 77 Grenville Street
Toronto, Ontario, Canada
M5S 1B3
Telephone: 416-965-7046

The following programs are available now, contributed by
the Ontario Geological Survey

TERNARY PLOTTING PACKAGE

- Plots AFM, QAP, $AlO_{11/2} - FeO_{11/2} + TiO_2 + MgO$
(Jensen) or user defined variables and arithmetic expressions.
- Source: Fortran IV, Peripherals: HP 7220C plotter Uses
CALCOMP-like call routines
- Internal documentation, user guide, maintenance guide
- Uses overlays
- large program

BINARY PLOTTING PACKAGE

- Plots scatter diagrams with user defined variables and
arithmetic expressions
or predefined parameters (SiO_2 vs $Na_2O + K_2O$, SiO_2 vs
 K_2O/Na_2O , SiO_2 vs. K_2O , TiO_2 vs. Cr, $Mg/(Mg + Fe)$
vs. Cr, Zr vs. Cr.
- Machine: PDP 11/34, Peripheral: HP 7220 C plotter
- Source: Fortran IV
- Uses Calcomp-like call routines
- Internal Documentation, user guide, maintenance guide, large
program uses overlays

IRVBAR

Subroutine to calculate volcanic rock names, types using
classification scheme of Irvine Baragar (1971) (Canadian
Journal of Earth Sciences: Vol. 8, p. 523-546)

Machine: IBM 3033/370, PDP 11/34

Source: Fortran IV

Internal Documentation

JENSEN

Subroutine to calculate volcanic rock names and types using the classification scheme of Jensen (1976) (Ontario Division of Mines Miscellaneous Paper 66, 62 p.)

Machine: IBM 3033/370, PDP 11/34

Source: Fortran IV

Internal Documentation

JENBND:

Subroutine to Plot Boundary Curves on Jensen $AlO_{11/2} - FeO + FeO_{11/2} + TiO_2 + MgO$ Diagram

Machine: IBM 3033/370, PDP 11/34, HP 7220C plotter

Source: Fortran IV

Uses calcomp-like call routines for plotting

Internal Documentation

STRNET:

Program for plotting structural data on Equal-area projection
Planar data plotted as poles to the plane

Machine: PDP 11/34, HP 7230C plotter

Source: Fortran IV

Uses calcomp-like calls to plot routines

Internal Documentation, uses normal, maintenance guide.

SUMMARY REPORT ON 1984 ANNUAL MEETING

INTRODUCTION

The technical sessions and field trips of the March meeting in Reno were tailored to the needs of geologists exploring for precious and heavy metals, molybdenum, tungsten, barite, and geothermal energy. More than 60 papers were presented in plenary session and some 35 in poster session.

The meeting started on a Sunday afternoon with an elaborate champagne brunch and a commercial exhibition. Concurrently that evening in the same hall, the Supplier's Reception featured eight hosted bars and a generous selection of hors d'oeuvres. The meeting facilities were located in the MGM Grand Casino, Reno's largest and most luxurious hotel. The social program was highlighted by a lively dinner party at Virginia City on Monday evening.

AWARDS

The excellence of the technical program was widely acclaimed. At Reno the Association offered, for the first time, prizes in recognition of the most outstanding contributions.

Best Paper Award went to Colin Dunn for "Biogeochemistry as an aid to the Exploration for Precious Metals in Saskatchewan, Canada". He received a 5.65 oz. silver bar made from the production at the Coeur Mine in Idaho and donated by the Reno office of Coeur Explorations, Inc.

Second place, which was nearly a draw for first, went to Patricia Schnorr for "Micron Gold-Associated Jasperoid: Fluid Inclusion Chemistry and Geothermometry." It was a beautiful one-ounce .999 fine silver Sutro Commemorative Medallion struck by Johnson-Matthey Refining Inc. in Rochester, New York. This proof medallion was donated by United Mining Corporation of Virginia City, Nevada.

Third place was awarded to Gale Knutsen, author of "Geology of the Rain Disseminated Gold Deposit, Elko County, Nevada". Cyprus Northumberland Mining Company of Austin, Nevada, provided a one-quarter-ounce dore' button from the Chipmunk ore body.

James Rytuba received Honorable Mention for his paper "Arsenic Minerals as Indicators of Conditions of Gold Deposition in Carlin-Type Gold Deposits" which made the choice for third place difficult.

Best Poster Award went to Opal Adams for "Geology and Ore Deposits of the Thunder Mountain Mining District, Valley County, Idaho". As with the best paper, it was a 5.61 ounce silver bar from the Coeur Mine donated by the Reno office of Coeur Explorations, Inc.

Second place was given to Karr McCurdy for "Primary Dispersion of Trace Elements, Fluid Inclusion Zoning, and Alteration Zoning at the Pueblo Viejo Au-Ag Deposit, Dominican Republic". Again, in line with the best paper awards, second poster prize was the striking one-ounce silver Sutro Commemorative Medallion donated by United Mining Corporation of Virginia City, Nevada.

Two door prizes were also bestowed on participants. Lacana Mining Inc. contributed a 0.17 ounce gold assay button from the Relief Canyon Deposit of Pinson Mining Company, and Sunshine Mining Company donated a 10.0 ounce silver bar of .999 fineness from the Silver Peak operation. All the above prizes were on display with explanatory cards at the entrance of the main activity for each day.

FINANCES

As the books for the 1984 meeting are about to be closed, a detailed statement of income and expenses will be forthcoming. Nevertheless a few highlights might be appropriate here. The international offices of the Association received \$18,182 for 455 new memberships, \$5,684 for prepublication orders of the Proceedings Volume, and \$5,000 return of seed money. A modest balance will be retained for expenses connected with editing the Proceedings.

PUBLICATIONS

Three publications from the meeting are still available by writing C. E. Nichols at P. O. Box 9777, University Station, Reno, Nevada 89507; Abstracts (\$4), Field Trip Guidebook (\$30), and Short Course Notes (\$25). These prices include postage and handling. Please do not send unpaid purchase orders.

The Abstracts are organized by session:

- Volcanic-Hosted Precious Metal Deposits
- Applications of Biogeochemistry to Exploration for Precious Metals
- Theoretical Aspects of Gold-Silver Transport & Deposition
- Deposits in Porphyry Systems
- Advances in Analytical Geochemistry & Data Processing
- Sediment-hosted Precious Metal Deposits
- Geothermal Systems and Ore Deposits
- General Technical Session
- Massive Sulfide Deposits
- Applications of Hydrocarbons & Vapor Phase Geochemistry
- Primary Dispersion of Ore Deposits

The Field Trip Guidebook covers eleven tours including four 2-day trips and five 3-day trips. Among descriptions of numerous deposits is previously unpublished material like the articles on the Northumberland gold mine, the Taylor silver district, and the Pilot Mountain tungsten district. Titles of the field trips are: Sediment-hosted Gold Deposits, Sediment-

hosted Precious Metal Deposits, Precious Metal Districts in Southern and Western Nevada, Precious Metal Districts in West-Central Nevada, Western World Massive Sulfide Deposit, Porphyry Molybdenum Deposits, Sulphur Mining District, Bedded Barite Deposits, Skarn Deposits, Virginia City Mining District, and Gooseberry Mine (vein gold).

The Short Course Notes cover a two-day course on "Geochemical Exploration Program Design". It consisted of sections on design of a geochemical exploration program, establishing an optimum sampling strategy, the role of the sampler, the geochemical laboratory, an overview of data handling and methods of statistical evaluation, presentation of data, planning for the future, and case studies of geochemical exploration programs.

The prepublication offer of the Proceedings is no longer available from the Symposium Organizing Committee. This volume will be published as a regular issue of the Journal of Geochemical Exploration, and will be received by all Association members for calendar year 1985.

Chester E. Nichols
Symposium General Chairman

RECENT PAPERS ON EXPLORATION GEOCHEMISTRY

This list comprises titles that have appeared in major publications since the compilation presented in Newsletter 49. 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.

Baishan, Z., 1983. A method to distinguish ore-related anomalies from barren ones. Bull. Inst. Mineral Deposits 4(10):89-95.

Bjorklund, A.J. (Ed.), 1984. Geochemical Exploration 1983. Selected papers from the 10th International Geochemical Exploration Symposium-3rd Symposium on Methods of Geochemical Prospecting, held in Espoo, Finland, Aug. 29-Sept. 2, 1984. JGE 21(1-3):501 p.

Cameron, F.M. (Ed.), 1983. Uranium exploration in Athabasca Basin, Saskatchewan, Canada. Geol. Surv. Canada Paper 82-11, 310 p.

Chaohua, G., et al, 1984. Geochemistry of rare earth elements in the Makeng iron deposit. Mineral Deposits 3(1):9-16.

Conradsen, K., and Harpoth, O., 1984. Use of Landsat multispectral scanner data for detection and reconnaissance mapping of iron oxide staining in mineral exploration, central east Greenland. EG 79(6):1229-1244.

Davy, R., and Mazzucchelli, R.H. (Eds.), 1984. Geochemical Exploration in Arid and Deeply Weathered Terrains. Proceedings of the regional meeting of the Australian branch of the Association of Exploration Geochemists, held in Perth, Western Australia, May, 1983. JGE 22(1-3):368 p.

Hoeve, J., 1984. Host rock alteration and its application as an ore guide at the Midwest Lake uranium deposit, northern Saskatoon, Saskatchewan. CIM BULL 77(868):63-76.

Khoroshilov, V.L., Flitsian, E.S., Ermolaev, N.P., and Chinenov, V.A., 1984. Redistribution of precious metals in the epigenetic transformation of black shales. Geol. Rudnykh Mestorozhdenii 26(1):52-60.

McCannon, R.B., Botbol, J.M., Sinding-Larsen, R., and Bowen, R.W., 1984. The new characteristic analysis (NCHARAN) program (a method for integrating geologic, geochemical and geophysical data in mineral exploration and regional resource appraisal). USGS BULL B 1621, 27 p.

Milton, N.M., 1982. Use of in situ reflectance spectra of native plant species for interpreting airborne multispectral scanner data in the East Tintic mining district, Utah, in Morris-Jones, D.R. (Ed.), Proceedings of the International Symposium on Remote Sensing of Environment, V. II, "Remote Sensing for Exploration Geology." Environ. Res. Inst. Mich., Ann Arbor, p. 713-715.

Natapov, L.M., et al, 1984. Systems analysis in forecasting and prospecting for tin mineralization. Intern. Geol. Rev. 26(3):289-297.

Ochsenkuhn, K.M., and Ochsenkuhn-Petropoulou, M., 1984. Investigations of representative chemical data of trace elements of the third bauxite horizon of central Greece. Mineral Wealth 30:69ff.

Parduhn, N.L., and Watterson, J.R., 1984. Preliminary studies of Bacillus cereus distribution near a gold vein and a disseminated gold deposit. USGS OFR 84-0509, 8 p.

Portinov, A.M., and Stepanov, I.I., 1984. Mercury as an indicator of the gold-silver ore mineralization. Geol. Rudnykh Mestorozhdenii 26(1):79-82.

Raines, G.L., and Gabell, A.R., 1982. Spectral reflectance properties of pseudo-gossan and massive-sulfide gossan, in Morris-Jones, D.R. (Ed.), Proceedings of the International Symposium on Remote Sensing of Environment, V. II, "Remote Sensing for Exploration Geology." Environ. Res. Inst. Mich., Ann Arbor, p. 25-27.

Rao, K.S.P., and Raju, S.V., 1984. Geochemical analyses of termite mounds as a prospecting tool for tin deposits in Bastar, MP--a preliminary study. Proc. Ind. Acad. Sci. (Earth Planet. Sci.) 93(2):141-148.

Rapp, J.B., 1984. Computer program for geochemical correlation studies. USGS OFR 84-0415, 27 p.

Reznikov, A.N., and Yaroshenko, A.A., 1984. Geochemical regularities of oil deposits degradation in katagenesis zone. Izvestiia Akademii Nauk SSSR, Seriya Geol. 2:112ff.

Watts, K.C., Hassemer, J.R., and Siems, D.F., 1984. Geochemical halos in the Silver City mining region and adjacent areas, Grant County, New Mexico. USGS BULL B 1534, 85 p.

Yegorov, L.S., 1984. Rare-earth element and fluorine contents of apatite as reflecting formation conditions, alteration and potential mineralization for rocks of the foscortite-carbonatite group in ijolite-carbonatite complexes. Geochem. Intern. 21(1):93-106.

ANNUAL GENERAL MEETING

The Association of Exploration Geochemists

will hold their

Annual General Meeting

at 4pm

on

Tuesday, April 30, 1985

in the

Metro Toronto Conference Center

Auditorium

in

Toronto, Canada



THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

President:

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

ELECTION OF ORDINARY COUNCILLORS

Vice Presidents:

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

Eleven Voting Members of the Association have been nominated for Ordinary Councillors for 1985-1987. Six incumbent Ordinary Councillors will retire at the upcoming Annual General Meeting in April 1985. Consequently, members are asked to cast five votes by marking the appropriate five boxes on the ballot form opposite the candidates for whom you wish to vote.

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

Any Balloting List will be deemed invalid if the number of names marked is more than five.

Secretary:

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

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

Treasurer:

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

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 and sign the envelope. The signature on the Ballot Mailing Envelope will enable the Secretary to confirm member's eligibility to vote.

Councillors:

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

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

Australian Regional Councillor:
R.H. Mazzucchelli

European Regional Councillor:
B. Bolviken

Southern Africa Regional Councillor:
G.L. Coetzee

Brazilian Regional Councillor:
R.W. Lewis Jr.

→ R.K. Glanzman. Geochemist, Chevron Minerals, Denver Co. M.Sc. Colorado School of Mines. Four years' experience with U.S. Bureau of Mines. Twenty years with U.S.G.S. Member since 1979.

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. Ordinary Councillor 1983-85.

→ J.M. McNeal. Geologist, Branch of Exploration Geochemistry, USGS, Reston, VA. Ph.D., Penn State University. Three years assistant Professor, Delphi University. Nine years' experience USGS. Admissions Committee, 1982. Member since 1982.

L.B. Bloom. Geochemist, Getty Mines, Toronto. M.Sc., Queen's University, 1980. Member of 9th I.G.E.S., Saskatoon (1982) and 11th I.G.E.S., Toronto (1984) Planning Committees.

B.W. Smee. Exploration Supervisor, Aberford Resources Ltd., Calgary. Ph.D. University of New Brunswick, 1982. Fifteen years' industrial and government experience. Member of Geochemical Exploration, 1974 Symposium Committee. Member since 1971.

W.R. Miller. Geologist, Branch of Exploration Geochemistry, USGS, Denver. Ph.D., University of Wyoming. Eleven years' domestic and foreign experience USGS. Member since 1981.

→ 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. Ordinary Councillor 1983-1985.

D.R. Gladwell. Staff Geochemist, Barringer Research Ltd., Toronto. Ph.D., Imperial College, London, 1981. Member of 11th IGES, Toronto 1985 Organizing Committee. Member since 1982.

→ M. Mason. Supervisor Geochemical Services, American Copper and Nickel Co. Inc., Wheatridge, Colorado. Ph.D., Imperial College, London. Twelve years' experience with Inco. Member since 1975. Ordinary Councillor 1983-1985.

E.F. Weiland. Consulting Geochemist. B.S. (1973), M.S. (1978) - Colorado School of Mines. Industrial experience of 14 years. Chairman of Joint AEG/AIME Session, Atlanta 1981. AEG/AIME Liaison and Member Book Publishing Committee AIME. AEG member since 1978.

→ J.P.G. Saheurs. Senior Geochemist, Bondar-Clegg and Co. Ltd., Ottawa. Ph.D., University of Berne, Switzerland, 1974. Sixteen years' industrial, field and laboratory experience. Member since 1976.