

## THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

#### President:

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#### Vice Presidents:

J.H. McCarthy
U.S. Geological Survey
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Geology Department
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#### Secretary:

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#### Treasurer:

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## NEWSLETTER NO. 39

APRIL 1982

## 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.

A.D. Buerger has resigned from CRA Exploration to take up a position as Senior Geochemist with Anaconda Australia in Perth.

I. Devereux advises that his geochemical equipment company, ROCKLABS has moved, to a larger factory. New address is, 187 Morrin Road, Auckland 6, New Zealand, and new telephone number is 574-698. His new postal address is P.O.Box 18-142, Auckland 6, New Zealand and the telex number is NZ 60550.

L. Lopez recently left Peñoles as Division Manager of Exploration for Mexico's North Zone, in order to become a consultant. He also established a small Mining Company in association with a California group of investors (Minera Staleon), and contracted some mining concessions where a 70 tpd floatation plant was installed and is now in full production of base and precious metals concentrates in Chihuahua State, Northern Mexico.

P.G. Moeskops, Exploration Manager of International Energy Resources Limited has recently been appointed General Manager. He also remains Alternate Director for the Company's principal shareholder, who is permanently domiciled in the U.S.A.

P.M. Vanderspuy has relinquished his position as Exploration Manager in Australia for Teck Explorations Limited and has been appointed Managing Director of Canyon Resources Pty. Ltd., Honeywell Centre, Walker Street, North Sydeny, 2060, Australia. Mailing address, Box 442, North Sydney, 2060, Australia.

## A MESSAGE FROM THE PRESIDENT - K.A. LOVSTROM

The first <u>Bibliography</u> of exploration geochemistry, covering the period 1965 to 1971, was published by the Association in 1972 as Special Volume No. 1. In 1976, Special Volume No. 5 was published to cover the period 1972-1975 with bibliographic supplements in 1977 and 1978. At the present time Special Volume No.11, Exploration Geochemistry Bibliography to January, 1981 is at press. This volume is a comprehensive compilation of the available literature on exploration geochemistry to 1981. We anticipate this hardbound volume to be ready for the Saskatoon meeting. The Association would like to express its sincere thanks to Herb Hawkes and his Bibliography Committee for their dedicated efforts in compiling this monumental volume.

In 1981, the Association applied for affiliation to the <u>International Union of Geochemical Sciences</u>. I am pleased to announce the decision of the IUGS Executive Committee, at its XXIVth session in Bonn to approve our affiliation to IUGS. Affiliation should strengthen our stature as an International Association and provide additional services to our growing International membership.

In the June, 1981 Newsletter I introduced four Committees established for 1981-1982 to pursue admissions, new membership, a student prize and future symposia. During the past year these committees have been actively involved with numerous projects. The New Membership Committee, Howie McCarthy Chairman, are in the final stages of putting together a proposal to council offering a student membership at a reduced rate. Lloyd James, Admissions Committee, reports a better than average year for applications to membership. To date, 28 members, 25 affiliates and 21 student applications have been approved. The Symposia Committee, chaired by Graham Closs, are compiling a symposium organization experience manual to serve as a guide for AEG Symposium organizing committees. Future Symposia plans include a regional symposium in Altanta, Georgia, 1983, a regional meeting in Perth, Australia, 1983 and the 10th IGES in Helsinki, Finland. The 11th IGES is scheduled for North America in 1985 with Vancouver and Denver as possible sites. Steve Kesler, Chairman of the <u>Student Prize Committee</u>, is preparing to present to council a proposal for a student prize to be presented annually to recognize outstanding contributions to exploration geochemistry.

I'm looking forward to meeting everyone in Saskatoon.

#### ADMISSIONS COMMITTEE REPORT

The following persons have been accepted for Membership in the Association by Council. The Association is pleased to welcome the new members.

#### **VOTING MEMBERS**

Bandeira de Mello, C.S. Geochemist at Petromisa S/A Fed.Comp., Rio de Janerio, Brasil.

Bichard, H.T. Exploration Manager for MTD Management Services Ltd., Salisbury, Zimbabwe.

Bloom L.B. Geochemist with Getty Mines, Saskatoon, Canada.

Chork, C.Y. (transfer) University Lecturer, School of Applied Geology, University of N.S.W., Kensington, NSW, Australia.

Davy, R. Geochemist with The Geological Survey of New South Wales, Adelaide, NSW. Australia.

Demetriades, A. (transfer) Geologist-exploration geochemist with the Institute of Geology and Mineral Exploration, Athens, Greece.

El-Raghy, S.A. Exploration geologist with ASARCO, Bullcreek, W.A., Australia.

Galanos, D.A.M. (transfer) Sr. geologist, Institute of Geology and Mineral Exploration,
Dept. of Energy Resources, Athens, Greece.

Gareau, M.B. Project Geologist, Placer Development Ltd., Vancouver, Canada.

Heape, J.M.T. Senior geologist, The Shell Co. of Australia, Orange, NSW., Australia.

Light, T.D. Geologist with the U.S. Geological Survey, Boulder, Co., USA.

Lindsay, R.M. Senior exploration geologist, Phelps Dodge Mining Ltd., Barberton, South Africa.

Mayes, D. District geologist with Union Carbide Exploration, Richmond, B.C., Canada.

Nash, J.T. Geologist with the U.S. Geological Survey, Denver, Co., U.S.A.

Robertson, D. (transfer) Exploration geologist/geochemist with Sulpetro Minerals Ltd., Toronto, Ont. Canada.

Rutherford, N.F. Supervising geologist/Electrolytic Zinc Co., Beaconsfield, NSW., Australia.

Staltari, G. Geophysicist-geologist with Geophysical Exploration Consultants Pty. Ltd., Camberwell, Vic. Australia.

Vadis, M.K. Supervisor, geoscience section of the Minnesota Dept. of Natural Resources, Hibbings, Minnesota, USA

<b>AFFIL</b>	_IATE	<b>MEMBERS</b>
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Burney, J.H. Petroleum geologist, Gaffney, Cline & Associates Inc.,

Dallas, Texas, USA.

Dickson, B.L. Employment involves development of techniques for uranium

exploration. Division of Mineral Physics, CSIRO, Australia.

Geochemist party chief, Anaconda Copper Co., Denver, Co., USA.

Fenton, J.O. Senior Geologist, Kennco Exploration, (Canada) Ltd.,

Toronto, Ont. Canada.

Leroy, T.M. Associated Expert in geology at the Project de Recherches

Minieres of the U.N.' in Burundi. Hasselt, Belgium.

Little, R. Lecturer in Earth Sciences, North Staffs Polytechnic, Stoke on

Trent, England.

McDermott, D.W. (transfer) Exploration geochemist with the Louisiana Land and

Exploration, New Orleans, La., U.S.A.

McKenzie, D.A. Geologist with the Geological Survey of Victoria, East

Melbourne, Vic., Australia.

Oates, C.J. Exploration geochemist, Western Mining Corp. Ltd., Kalgoorlie,

W.A. Australia.

Salminen, R.K. Geochemist with the Geological Survey of Finland,

Kuopio, Finland.

Telford, J.M. Exploration geologist, Getty Oil Company, Knoxville, Tn., USA.

#### STUDENT MEMBERS

Stanley, C.R.

Al-Ajely, K.O. Postgraduate student at U.C.W. Aberystwyth, Wales, U.K.

Allen M.E. Student at Queen's University, Kingston, Ont. Canada.

Allen M. S. Student at Queen's University, Kingston, Ont. Canada.

Arrykul, S. Post graduate student at the School of Applied Geology,

University of NSW, Kensington, NSW, Australia.

Beusekom, G.V. Student in geochemistry, Utrecht, The Netherlands.

Booth, G.W. Graduate student, University of Toronto, Toronto, Ont. Canada.

De Silva, G.V. Graduate student at the School of Applied Geology, University

of NSW, Kensington, NSW, Australia.

Dobos, V.J. Student at the University of NSW, Australia.

Goerold W.T. Student at Pennsylvania State University, University Park, Pa.

USA.

#### STUDENT MEMBERS (con't.)

Goodz, M.D. Student at the Carleton University, Ottawa, Ont. Canada.

Martin, E.J. Research student, at Abteilung fuer Angegandte Lagerstattenlehre,

Aachen, West Germany.

Ogunrinde, O.A. Research student at the University of Ibadan. Ibadan, Nigeria.

Olesen, B.L. Student at the Technical University of Denmark, Lyngby, Denmark.

Onuonga, I.O. Graduate student at Carleton University, Ottawa, Ont. Canada.

Saxby, D.W. Graduate student at the University of British Columiba,

Vancouver, B.C., Canada.

Stemmler, M.O. Student at the University of Idaho, Moscow, Idaho, USA.

Villones, Ray, I. Post graduate student at the School of Applied Geology,

University of NSW, Kensington, NSW., Australia.

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#### ANNUAL GENERAL MEETING

The next Annual Genral Meeting of the Association will be held in conjunction with the 9th I.G.E.S. in Saskatoon. The meeting will be held immediately after the last technical session on Thursday, May 13, 1982. The Agenda is as follows;

- 1. Minutes of the 1981 Annual General Meeting.
- 2. Matters Arising.
- 3. Nomination of Scrutineers for the Ordinary Councillor ballot.
- 4. President's Report.
- 5. Secretary's Report.
- 6. Treasurer's Report and Appointment of Auditors.
- 7. Admission Committee Report.
- 8. Introduction of the 1982-83 Executive.
- 9. Announcement of Ordinary Councillor Elections.
- 10. Any Other Business.
- 11. Adjournment.

The President, K.A. Lovstrom, will deliver his address immediately following the adjournment of the meeting.

## GOLD '81, VANCOUVER 1981

Distribution of Gold'81, free to all Members who have paid their 1982 dues, began in March. If you have not yet received a copy, and have not yet sent in your 1982 dues to the Rexdale office, you can remedy the situation by simply paying your dues!

The office is receiving enquiries as to the procedure to buy further copies. The price to Members is Can \$18.00 (or U.S. \$ equivalent); you should state on your order that you are an AEG member and enclose your cheque or money order, and a self addressed mailing label. The order, funds and label should be sent to:

Gold '81 c/o Cordilleran Section GAC P.O.Box 398, Station A, Vancouver, B.C. V6C 2N2 CANADA

### HANDBOOK OF GEOCHEMICAL EXPLORATION - VOL.1

The final order that was sent to Elsevier in January was for 138 copies of the book ordered by 126 Members. As a result of this response, Elsevier has expressed a willingness to offer Volumes 2 and 3, which will appear almost simultaneously later this year, to Members at a discount.

The two new Volumes, on Statistical and Data Analysis, and Rock Geochemistry, will be offered to members in a similar fashion as was volume 1. An announcement will be made in the Newsletter as soon as the Secretary has made the arrangements with Elsevier.

North American Members who ordered Volume 1 have recently received their copies, if yours has not arrived yet it should do so soon.

## FUTURE MEETINGS

## 9th INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM

## May 12-14, 1982 Saskatoon

Final preparations for the meeting are in hand and the Orgnizing Committee are looking forward to welcoming everyone in Saskatoon.

The meeting seems likely to become a victim of the austerity cuts prevalent in North America, and elsewhere in the world. Pre-registration is down from many of our previous International Symposia, however, we expect a number of late registrants. If the meeting is smaller than usual, the quality will still be up to the level of previous Symposia. For those who can attend it promises to be an excellent meeting.

#### GOLD '82 - May 24-28, 1982, Salisbury

This symposium is being organized by the Geological Society of Zimbabwe, with the support of the Geology, Metallurgy and Mining Subs-Committee of the Scientific Council of Zimbabwe.

The five sections cover the distribution of gold in crustal rocks, its transport, mineral deposit types and gold exploration. The program includes both preand post-symposium field excursions. Copies of the first circular are available from:

The Organizing Secretary, Gold'82 Institute of Mining Research P.O.Box MP 167 Mount Pleasant, Salisbury Zimbabwe

### PROSPECTING IN AREAS OF GLACIATED TERRAIN, 1982- August 23-27,1982, St. John's

The fifth symposium on prospecting in areas of glaciated terrain is being held at St. John's, Newfoundland, the first occasion the meeting has been held outside of Europe. The event is being sponsored by the Geology Division of the Canadian Institute of Mines and Metallurgy at the invitation of the IMM, London.

Two days of technical papers on geophysical, geochemical and geological exploration techniques in areas of past or present glaciated are planned. The remaining days will be taken up with field trips in the St. John's and Deer Lake areas. The visit to Deer Lake in Central Newfoundland will include visits to some of the base metal deposits of the region.

For additional information and the first notice write to:

Peter H. Davenport Newfoundland Dept. of Mines and Energy, P.O.Box 4750 St. John's, Newfoundland, Canada AlC 5T7

## 8TH INTERNATIONAL SYMPOSIUM ON MACHINE PROCESSING OF REMOTELY SENSED DATA

## July 7-9, 1982, W. Lafayette

We have received notice of this meeting. Although the special emphasis is on crop inventory and monitoring the general symposium themes include sessions on earth resources in a braoder context. For more information contact:

Mr. D.B. Morrison
Purdue Univeristy/LARS
1220 Potter Drive
West Lafayette, Indiana, 47906-1399,
U.S.A.

#### 1982 ANNUAL MEETING - THE GEOLOGICAL SOCIETY OF AMERICA AND ASSOCIATED SOCIETIES

#### October 18-21, 1982, New Orleans

We have been notified of the 1982 Annual Meeting of the GSA. Of particular interest to our Members may be the sessions organized by the Society of Economic Geologists. For futher information contact:

Meetings Department P.O.Box 9140 Boulder, Colorado, 80301 U.S.A.

#### GEOCHEMICAL EXPLORATION IN ARID AND DEEPLY WEATHERED ENVIRONMENTS - May 23-26, 1983

#### Perth, W.A. Australia

This Regional Meeting is the first for Australia, and the first formal Association "gathering" since the 6th IGES was held in conjunction with the International Geological Congress in Sydney in August, 1976.

For full details see the first circular on page 17 of this newsletter.

# 10Th INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM August 29,-September 1,1983, Espoo/Helsinki

A copy of the first circular for the 10th IGES, to be held in conjunction with the 3rd Symposium on Methods of Geochemical Prospecting, is enclosed.

August 1983 is not all that far away, and if the 10th IGES/3rd SMGP is up to the usual standard of the Associations meetings it will be one well worth planning for.

## SHORT COURSES AND WORKSHOPS

#### GEOCHEMICAL EXPLORATION FOR URANIUM, BASE AND PRECIOUS METALS May 3-7,1982

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

This program now in its 22st year, is an introductory course on the fundamentals of modern geochemical exploration techniques, ideally suited for geologists, chemists, and other interested in trace element geochemistry as related to mineral exploration.

For further information please write to:

Office of Continuing Education Colorado School of Mines, Golden, Colorado, 80401, USA (303 + 279-0300, ext.2321)

#### GROUND WATER MONITORING

The U.S. National Well Water Association will conduct two seminars on practical ground water monitoring techniques for the mining industry.

Denver, Colorado (July 21-23,1982)

Denver Airport Hilton Inn and Conference Center I-70 at Peoria Street Entrance \$400.00 per person

Columbus, Ohio (July 29-30, 1982)

Fawcett Center for Tomorrow
The Ohio State University, 2400 Olentangy River Road
\$300.00 per person

Each seminar will feature experts in the field of coal hydrology and ground water monitoring. Topics will include:

Design and Construction of Monitoring Wells in Mining Areas
Monitoring in Fractured and Carbonate Rock
Sampling Techniques for Saturated and Unsaturated Zones
Methods for Prediction of Acid Leachate Production and Movement
Use of On-site Equipment to Install Monitoring Wells

To obtain additional information, or to register for either seminar, contact:

David Nielsen,

NWWA Director of Research Phone (614) 846-9355.

## GEOCHEMICAL EXPLORATION IN DEEPLY WEATHERED TERRAIN - June 15-18, 1982, Perth, Australia

This four day short course/workshop will cater for geochemists and geologists who wish to be trained in, or become familiar, with CSIRO geochemical approaches to minerals exploration.

Topics will include: Processes involved in the development of secondary haloes, multi-element path finder geochemistry in laterite terrain, water as a prospecting medium, the volatiles He and Hg, Pb isotopes in exploration, and mathematical treatment of multi-element data.

Inquiries and requests for the first circular should be sent to the course convenor,

Dr. R.E. Smith,
CSIRO
Div. of Mineralogy,
P.O.Box Wembley,
W.A. 6014,
AUSTRALIA

### FROM THE SECRETARY'S OFFICE - Bob Garrett

The close of the Association year brings many tasks, including a head count. The full details will be in the Secretary's Report to the AGM, but we have had a net gain of Members and our total is now over 700. So far almost 600 have paid their 1982 dues, and if our historic percentage of losses persists only about half of the 115 active 1981 members, who have not yet paid their dues, will pay their 1982 dues.

What can I say to the late payers? You know the benefits of Association Membership, to which has been added for 1982 the free distribution of Gold'81. The distribution policy for the new Bibliography has yet to be finalized, but you may rest assured that Association membership will provide by for the cheapest way to obtain a copy. Being an exploration geochemist, and interested in anomalies and outliers, I would like nothing better than to see my predictions, based on our past performance, proved wrong. Let 1982 be an anomalous year, confound the mathematical prediction, why don't all of you who have not yet paid your dues continue to be active in the Association in 1982?

You will find enclosed with the Newsletter a copy of the 1982 Membership List. As pointed out in the last Newsletter the only change in format from the 1980 list is that the year of joining and the memberhip class have been added to aid Members, and prospective members, in finding Honorary and Voting members who would act as referees.

This is the last time that I will be writing a Newsletter. I have enjoyed my three year term as Secretary. The best parts of the job have been those that have enabled me to meet the Members and discuss the Association and Exploration Geochemistry. My parting request to you is that you support and help Ray Lett, our new Secretary, who takes over at the AGM in Saskatoon. This Newsletter is your best avenue to communication with each other, it is here for your use as well as a way for Council to communicate with the Members.

I look forward to seeing as many of you as possbile in Saskatoon.

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BOOK REVIEW - J.A. Coope

The Discoverers

## A 50 Year History of the Prospectors and Developers Association

The Prospectors and Developers Association is celebrating its golden anniversary in 1982. At the annual Convention, held in the Royal York Hotel in Toronto in March, the Association published an impressive, well illustrated, 317 page volume called "The Discoverers" to mark its 50-year history.

The general scope of the book covers the history of the Association, stories of some fo the more notable mining camps in Canada, and brief biographies of a number of the more prominent personalities involved in the P.D.A. and the exploration industry over the past 50 years.

Over much of its history the P.D.A. did not keep very meaningful records. The many contributors to the book have, however, done a very creditable job of researching old records, old newspaper files and retelling some of the remarkable stories that led to discoveries and the establishment of mines and mining communities all across Canada. The excitement of Blind River, Highland Valley, Red Lake, Ahtabasca, Labrador Trough, Thompson, Yellowknife, Lynn Lake, Bathurst-Newcastle, Beaverlodge and many other camps is all there together with some history of bush flying and airborne geophysics and accounts of the exploits, determination and imagination of a long list of personalities, prospectors and mine-finders with familiar names like Cryderman, Jowsey, LaBine, Springer, Mosher, Byrne, Rankin, MacMillan, Lindsley, Parres, Watts, Aho, Derry, Holyk, Keevil, Hirshhorn, Knight, Mills, and White.

Its an impressive record of Canadian achievement that will generate pride and satisfaction in all who follow and benefit from the contributions of these stalwart predecessors. Essential non-technical reading for those of us who visit and study the famous and important deposits in Canadian mining camps and a bargain at Canadian \$19.95 (plus mailing and handling costs of \$1.55).

Copies of the "Discovereres" are available from-

Prospectors and Developers Association Suite 219 - 159 Bay Street, Toronto, Ontario M5J 1J7 CANADA

## EMPLOYMENT OPPORTUNITY

#### Senior Geochemist

Successful West Coast Company in geochemical exploration consulting, through proprietary gaseous emission technology, seeks a senior geochemist with experience in oil and gas exploration to manage the expansion of their business in the petroleum industry.

The position requires advanced education in geochemistry plus project management and field exploration experience. Oil and gas industry background is very desirable.

For immediate confidential consideration please submit resume and salary history to:

Richard Volberg Volberg and Comanpy Consultants P.O.Box 326 Orinda, California 94563 U.S.A.

#### **BIBLIOGRAPHY**

#### RECENT PAPERS ON EXPLORATION GEOCHEMISTRY

This list comprises titles that have appeared in major publications since the compilation present in Newsletter No. 38. Journals routinely covered and abbreviations used are as follows: Economic Geology (EG); Geochimica et Cosmochimica Acta (GCA); The USGS Professional Paper (USGS PROF. P); 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. Compiled by L. Graham Closs, Colorado School of Mines, Member AEG Bibliography Committee.

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Australian Regional Meeting

# GEOCHEMICAL EXPLORATION IN ARID AND DEEPLY WEATHERED ENVIRONMENTS

PERTH, WESTERN AUSTRALIA, MAY 23-26, 1983

The Association is holding its first Regional Meeting in Australia at the University of Western Australia from 23-26th May, 1983. The Meeting is principally concerned with all aspects of geochemical exploration in arid and deeply weathered terrains, including:

regional and detailed surveys; exploration using stream sediments, soils, weathered bedrock, ironstones, groundwaters, vapours and gases; isotope geochemistry; supergene oxidation and gossan geochemistry; weathering and dispersion studies; future trends in exploration geochemistry.

There will also be a session on primary dispersion.

Field excursions relevant to the theme will be held in conjunction with the Meeting.

Intending contributors are requested to submit titles (for advance planning) as soon as possible and extended abstracts of about 750 words no later than November 30th, 1982. For further information, write to:-

Organizing Committee,
AEG Regional Meeting 1983,
c/o Western Mining Corporation Limited,
P.O. Box 91,
Belmont, Western Australia 6104,
Australia.

## ANNUAL GENERAL MEETING

The Association of Exploration Geochemists will hold their

Annual General Meeting

following the last technical paper of the day

at the second se

9th International Geochemical Exploration Symposium

in the

Centennial Auditorium, Saskatoon, Saskatchewan

at

4:30 pm, Thursday May 13, 1982

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