THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

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

NEWSLETTER

NO. 34

JANUARY 1981

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 Association office.

With regret we record the death of E.J. Hooke, of Calgary, Alberta, Canada, on September 17, 1980. Mr. Hooke had been a member of the Association since 1970, he will be sincerely missed by friends and colleagues.

A.A. Burgoyne has been recently appointed Vice-President, Exploration for Bethlehem Copper Corporation and he is now based in Vancouver, B.C.

Sam Chork has joined the staff of the School of Applied Geology, University of New South Wales, Sydney, Australia. Dr. Chork was formerly Senior Geologist/Geochemist with the Nova Scotia Department of Mines and Energy, Halifax, Canada.

R.A. Watters has moves to Cairns, Queensland, in Australia where he has an active consultancy in tropical Queensland and Indonesia.

R. Wilkinson is now with Westfield Minerals Limited, Deer Lake, Newfoundland, Canada, formerly Newbury Berks, England.

EDITORIAL --- President Arthur Rose

My last editorial suggested a program of college education in exploration geochemistry. Several comments expressing general agreement were received, but a letter from Larry James of Moritz Mining Co., Colorado, suggests a slightly divergent theme, namely that more of an applied orientation is needed for at least some exploration geochemists. Excerpts from Larry's letter follow:

"... Second, I agree that there is no substitute for a solid background in chemistry, physics, geology, for anyone in our profession. However, the "average" student may simply be unable to see the future through a 2-3 year advanced college math program. Clearly, blended in with theory should be a recommendation for a bit of work-study/practical experience/summer job outside the school.... It mainly aids the student in deciding what he/she really wants.

"My impression of geochemical exploration, as practised by the big companies, is that it tends to involve a lot more dirty routine work (sampling, supervising sampling) than perhaps does the average geological mapping project. Sampling and geophysical crews both often suffer from a lack of someone worrying about the science behind the costly project. The true scientists, in both government and industry, tend to be off on the sidelines somewhere. My suspicion is that an overly strong emphasis on P-chem, higher math, theoretical nuclear physics, etc. in pre-MS level programs scares away the exact type of person that could best fill the intermediate level jobs. Some examples as to why I'd shift the emphasis slightly:

The advanced degree-holder headed toward research or teaching needs to be highly conversant with theory... The intermediate industry person of whom I'm speaking also needs to be conversant with day-to-day problems. I recently sent my mill superintendent, who has a high school education, to a local seminar on "practical lubrication for field foremen". He, and many others, came away disheartened. Theory was abundant, but there was little or no mention of the practical problems, which must be solved whether or not the theory is known....

"This week I hired a yound geologist, after two months of advertising and interviewing. The work is to be 1/3 travel to exploration projects, 1/3 geo-engineering around mine and mill, and 1/3 permits and environmental problems. I finally found a good fellow, B.S. _____ College, with 1.5 years experience. No one from the "better rated" schools of the west half of the country seriously applied ..... This concerns me: does an overabundance of theory and a lack of admission that the graduates out there are not just doing theory scare away the kind of person described above ?

"I'm not sure what the answer is. Not pablum courses in "minerals exploration", but perhaps rigorous applied courses: "design, simulate the conduct of and explain the resultant disasters..." Orbital theory taught as part of an AA or spectrograph lab ? At least orbital theory taught by someone who likes to teach and who can present "live" problems and samples based on it.

"I feel that the employer must share in the education of the student. But I feel the student must come out of school with some appreciation of the employer's needs; namely that production must not stop, for the tax man doth never stop! This comes from exposure, but also from schooling that points the student toward practical problems, as well as mathematical solutions. To me, high school electronic theory has proven more useful than graduate differential equations.

"Thank you for the opportunity to comment. I see mainly a problem, not a solution".

Larry's points are well taken. Clearly, as mentioned in my previous editorial not all exploration geochemists are or should have identical backgrounds. I still believe that a program approximating that in the previous editorial is desirable for most exploration geochemists, but a component left out was short-term jobs in summer (or other seasons) for both students and professors. The resulting industry experience gives much better perspective and motivation to the student, and perhaps will bring the professor at least partly back down to earth. Industry should recognize, if it does not, that temporary jobs and consulting arrangements can have long-term benefits in education beyond the immediate project results.

Finally, on a different topic, have you snared your new member yet ? See the June Newsletter if you have forgotten.

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LETTERS TO THE EDITOR

Art Rose's Editorial in the last Newsletter has resulted in two letter being sent directly to the Newsletter. One from Evaldo Kothny of Orinda, California is reproduced in full below. The other was from Roger Watters of Cairns, Australia, the relevant part is reproduced here;

> "Geochemistry does not possess the 'black box' syndrome of geophysics. This is both its strength and its weakness. Its strength insofar as there is a feeling of pragmatism about the discipline, and its weakness because almost every geologist believes he can conduct a geochemical programme. This is definietely not the case. If one had a geophysical programme to execute, one would call in a geophysicist. I put it to the profession that the same rule should apply to geochemistry.
>
> My definition of any exploration geochemist is one who has a degree in geology and chemistry; laboratory experience, preferably in a geological milieu; postgraduate studies in geochemistry; and a decade or more of geological and geochemical field experience. Only then does the geochemist begin to understand his craft.
>
> Considerable geochemical work in Australia may be discounted as having missed the correct sampling medium. Frequently, there has been no orientation study to ascertain which fraction of a sediment or soil should be taken, where it should be collected or whether other media such as water or vegetation should be sampled. Often, no account has been taken of how the elements were to be analysed or what preparation was to be used."

It seems all too common that as geochemistry does not involve the exactiness of physics and the mystery of mathematics, and all graduates have done at least one norm calculation and have contemplated a few phase diagrams, that most geologists feel equipped to tangle with exploration geochemistry. One shudders to remember

how some 20 years ago when the old "quick test kits" were in common use how much effort was wasted in following up "anomalies" identified by geologists and others totally unaware of the nature of hydromorphic and clastic dispersion trains. We have progressed over these 20 years, but sometimes one wonders just how far.

"Comment to president Rose's editorial about educational programs.

The four pathways describing the end product is very well observed. However, depending on the route considered, the end product may lack or be deficient in one or another subject. My observation is that geological nitty gritty in geochemist's work is adversely absent to the great consternation of geologists. The same observation can be advanced for the chemical common sense which is absent in some geologists work. A certain degree of elasticity is needed and the middle-of-the-road is not always the center.

Point 1: Basic Geochemistry. This is really cosmochemistry. Aqueous geochemistry should be joined with physical chemistry No. 6.

Point 2: Geology. Should be split into:
a) Mineralogy and crystollagraphy
b) Petrography and petrology
c) Geology proper.

Point 3: Economic Geology. Fuel and geothermal energy. Should include No.11 exploration basics.

Point 4: Chemistry. Should include inorganic chemistry, basic organic chemistry and basic biochemistry, to understand natural fuel formation and weathering processes. Should be split into:
a) inorganic
b) organic
c) biochemistry
d) qualitative and e) quantitative analytical chemistry, old fashioned style to understand chemical affinity and reactivity.

Point 5: Instrumental chemical analysis. Should be called "Instrumental Analysis" and joined with geophysical instruments. A large important preliminary section about sample preparation should be included.

Point 6: Physical chemistry should include solution physics and chemistry with emphasis on natural aqueous geochemistry and eH-pH diagrams. Includes p-T relationships, reaction shifts and high pressure chemistry.

Point 7: Physics, OK.

Point 8: Mathematics, OK, though details not absolutely necessary for the application should be dropped.

Point 9: Statistics with more practical application and less emphasis on theory.

Point 10: Computer programming, could be joined with statistics missing points:

Point 11: Exploration, Soil Gas, geophysical and geochemical mapping. Drilling and coring. Interpretation of haloes Tridimensional plots and calculation of reserves.

Point 12: World geography with especial emphasis on the North American continent (rivers, ranges, vegetation, climate, economic geography, etnography, endemic diseases, etc.).

Point 13: Field trips and thesis works.

The points should be placed in order of importance and correlation as follows:
12,8,7,4a,1,9,4b,4c,6,2a,4d,2b,4e,5,2c,3,11,10,13,

I fully agree that basics are very important but should not be overemphasized. Notice that I purposedly added field trips, preferably one each semester to familiarize the students with the expected environment. I consider world geography of great importance so that the individual knows with a certain degree of confidence what kind of landscape and environment he is going to meet (including culture, food customs, politics, etc.).

The Association could recommend guidelines for a more rounded education and contact prospective employers for obtaining more specific background requirements. However, it would be foolish to just adhere strictly to employers requirements alone as this generates a biased and one-sided set of guidelines and neglects the individual preparedness for coping with a number of events in the field. "

submitted by, Dr. E.L. Kothny
20 Rheem Blvd,
Orinda, Calif. 94563

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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.

TRANSFERS TO VOTING MEMBERSHIP

Andrade, R. S.de	Chief of Geochemistry Section-Sureg-GO. with CPRM, Goiania, Goias, Brasil.
Araujo, E.S.	Geochemist with CPRM, Setor Sul, Goiania, Goias, Brasil.
Brito, P.C.R.	Geochemist with CPRM, Salvador, Bahia, Brasil.
De Oliveira, J.E.	Geologist/geochemist with CPRM, Salvador, Bahia, Brasil.
Godoi, H. De.O	Geochemist,with CPRM, Goiania, Goias, Brasil.
Oliveira, C.C.	Geochemist,with CPRM-Sureg-GO. Goiania, Goias, Brasil.
Perieira, L.C.B.	Geochemist, with CPRM, Rio de Janerio, Brasil.

VOTING MEMBERSHIP

Ajayi, T.R.	Lecturer, University of Ife, Ile-Ife, Nigeria.
Brookins, D.G.	Professor of Geology, The University of New Mexico, Albuquerque, N.M., USA.
Lins, C.A.C.	Chief geochemist with CPRM, Madalena, Recife, Brasil.
Teixeira, L.R.	Geochemist with CPRM, Matatu, Salvador, Brasil.
de Walque, L.	Research Assistant with Fonds National Belge de la Recherche Scientifique (FNRS) Louvain-La-Neuve, Belgium.

TRANSFER TO AFFILIATE MEMBERSHIP

Benedict, F.C.	Exploration geologist, Texasgulf Western, Inc., Sparks, Nevada, USA.
Andrade, N.V.	Uranium exploration geologist, Eldorado Nuclear Ltd., Saskatoon, Saskatchewan, Canada.
Craig, R.R.	Project geologist, Dresser Inc. Minerals Div., Elko, Nevada.USA.
Gwinner, D.	Exploration Geologist with Mobil Energy Minerals, Lakewood, Co.USA.
James, E.D.	Geological technician, c/o Chevron Resources, San Francisco, USA.
Lankford, S.	Exploration geologist with Getty Oil Co., Bakersfield, Calif. USA.

STUDENT MEMBERSHIP

Tole, M.P.	Graduate student, Pennsylvania State University, University Park, Pennsylvania, USA.

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FUTURE MEETINGS

PRECIOUS METALS IN GEOCHEMICAL EXPLORATION - Northern Cordillera

April 13-15, 1981, Vancouver, B.C.

Arrangements for the meeting are in place and papers have been selected to give a sequence of geochemical and geological presentations. Thus, although the meeting is being co-sponsored by the Association and the Cordilleran Section of the Geological Association of Canada it will be run as an integrated whole.

A registration form was distributed with the notice of the AGM, note that if you register before March 15th it will save you money and help the Organizing Committee. Another good reason for attending the Symposium is the Association's AGM at 4 pm on April 14th, the Notice of Meeting is on the last page of this Newsletter.

9TH INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM - May 12-14, 1982, Saskatoon

The second circular for the 9th I.G.E.S. is enclosed with this Newsletter. Please note the 'Call for Papers' and the deadline of November 30th. To date the Organizing Committee has had over 100 respondents to the first circular and several offers for papers and posters.

10th INTERNATIONAL GEOCHEMICAL EXPLORATION SYMPOSIUM -September 4-9, 1983, Helsinki

Plans for the 10th I.G.E.S. are already underway. The Organizing Committee contains members of all the Scandinavian Surveys, Dr. J. Bergstrom (Sweden), Dr. A. Bjorklund (Finland), B. Bolviken (Norway) and A. Steenfelt (Denmark-Greenland), and is chaired by Alf Bjorklund.

Three topics have been selected for the meeting:

1. Exploration by means of till geochemistry, and
2. Exploration by means of bedrock geochemistry, and
3. Geochemistry in reconnaissance surveys (< one sample per 10 km^2)

In addition to these a broad range of general topics will be presented.

Seven or eight field trips will be organized both the pre- and post-symposium period. Field excursion leaders have been selected and plans are being made for excursions in Finland, Sweden, Norway and Greenland.

The first circular will be mailed out this summer.

INTERNATIONAL ASSOCIATION OF GEOCHEMISTRY AND COSMOCHEMISTRY SYMPOSIUM ON EXPLORATION GEOCHEMISTRY October 1-8, 1981, Irkutsk

The IAGC working group on exploration geochemistry is holding an international symposium and field excursion in the Baikal region this coming October in Irkutsk, U.S.S.R. Three special topics have been selected for discussion:

1. Geochemical exploration in Pre-cambrian terraines,
2. Computer assisted management and analysis of data, and
3. Hydrogeochemical methods of exploration.

Any members wishing to obtain further information on the symposium should write to:

Professor L.V. Tauson
Director, Vinogrador Institute of Geochemistry,
P.O.Box 701
664033 Irkutsk, U.S.S.R.

SYMPOSIUM REPORT, The 8th I.G.E.S.

Heinz Gundlach has circulated to all attendees of last April's Hannover Symposium this report and is reproduced here for the benefit of all members.

"With the 8th International Geochemical Exploration Symposium, from 10th - 15th April, 1980, this meeting was held for the second time in Europe and for the first time ever in a country where English is not the mother tongue. This took place on the 10th anniversary of the "Association of Exploration Chemists", the organizers of these symposia. In Hannover, the "GDMB Gesellschaft Deutscher Metallhütten-und Bergleute" (Association of German Mining and Metallurgical Engineers) and the "Deutsche Mineralogische Gesellschaft" (German Mineralogical Association) were co-organizers of this important meeting, which with more than 400 geochemists from over 45 different countries was the hitherto most international symposium of its kind. The host country itself provided only just a quarter of the symposium participants. The inability to attend of nominated participants from the Soviet Union and Iran was greatly regretted.

The symposium was preceded by excursions to the Rheinisches Schiefergebirge and to Hessen, where visits were paid to the deposits of Meggen, Ramsbeck, Dreislar and to the "Fortuna" iron ore mine. Current prospecting sites and exposures of ore deposits were visited, e.g. Kupferschiefer (copper shale). The symposium proper was formally opened by Dr. Stahl on behalf of the host, the Bundesanstalt für Geowissenschaften und Rohstoffe, in the City Hall, Hannover. This was followed Prof. Dr. Pestel, the Minister for Science and Arts in Lower Saxony, who linked over 1000 years of mining at the Rammelsberg near Goslar with presentday prospecting in Lower Saxony, that with base metal ores in the Harz Mountains, iron ore in the Harz Foreland and oil and natural gas in the North German Plain, is one of the richer Federal States in terms of natural resources. Prof. Pestel also dealt with environmental problems for whose control the same methods can be applied as are used in geochemical exploration. The parliamentary Secretary of State, E. Stahl, then spoke on behalf of the Federal Ministry of Research and Technology about the importance of prospecting for guaranteeing supplies of natural resources for the Federal Republic of Germany. The opening meeting ended with welcoming addresses from Prof. Dr. Sauer on behalf of the State Geological Surveys, the Chairman of the three organizing bodies and the Obergürgermeister (Mayor) of Hannover, H. Schmalstieg.

The scientific part of the symposium began with three plenary papers. Prof. Govett of Australia spoke first about prospecting for "massive sulphide ores" in Canada. Xie Xuejing of Beijing followed with a paper concerning the development of geochemical exploration in China since its beginning about 30 years ago on up to the present day, a paper that attracted great interest. As an introduction to European problems and at the same time to areas selected for two symposium excursions, Prof. Kostov of Sofia, Bulgaria, spoke about "Geochemical Provinces in Southeast Europe".

The discussion papers which followed were concerned with "Regional Geochemical Exploration" in Europe and Asia and on the following day in America and Africa. Contributions followed which dealt with "Local Geochemical Exploration" on deposits of copper, lead, zinc, tin, tungsten and molybdenum in areas with ultramafitites and sedimentary rocks and further, specifically concerned with prospecting in (industrial or anthropogenic) contaminated areas. "Geochemical Exploration for Hydorcarbons" was a special theme. Papers on the mehodology of geochemical exploration were then presented, dealing especially with chemical analytical methods in exploration and the statistical methods for the evaluation of exploration results. It would be going too far to detail individually a total of over 80 papers presented. Attention is drawn to the proceedings published in 1981 (as an issue of the "Journal of Geochemical Exploration") for more detailed information.

A large "Poster Presentation" provided a chance to portray "Case Histories" for example, and with it an opportunity for discussion. The poster session was especially welcomed by those participants whose linguistic abilities were insufficient to enable them to present an English paper and who were not equal to a discussion in English. The result was a series of lively discussions in many languages, around the various poster presentations. New developments in apparatus were also presented within the scope of the poster session. Further, the poster presentation was also linked with a well attended book display.

The series of scientific papers and discussions was interrupted by an excursion day. The excursions led to deposits and prospecting areas situated nearby: into the Harz Mountains to the Rammelsberg ore deposits, to the Bad Grund vein deposit and to the baryte veins and the copper shale of the Southern Harz, further, to the oil sands at Wietze and the oil shales near Braunschweig. In addition, there was a geological excursion to the Harz and also a tourist trip. The subsequent meeting of all participants in the excursions at the Grauhof near Goslar can be considered the social highlight of the symposium, the success of which was due in no small way to the Oberharzer Bergsänger from Clausthal, who were given enthusiastic ovation.

To conclude the symposium 4 large excursions took place: one into the Black Forest to fluorite, baryte and uranium deposits, another into the Bohemian Erzgebirge and to Prague, with two excursions into the Alps, one to the Montan University at Leoben and to exploration work on alpine mineralization and hydrocarbons in the Vienna basin, and the other to alpine metalliferous ore deposits e.g. Bleiberg and Mies (Mezica) in Austria and Jugoslavia.

It is still a little early for an assessment of the symposium. New and important developments have taken place, especially in the fields of chemical analytical and also in statistical evaluation methods which are relevant to prospecting. Some of the broader connections presented in the regional papers concerning metallogenesis and tectonics will have a stimulating effect, as will experience gained in local geochemical exploration on individual deposits. Mention should also be made of a further aspect which is of particular significance to this meeting. The large number of foreign participants permitted the establishment of contacts which will continue for a long time and through these, a door will be opened to the worldwide community of prospecting geochemists for the many who up till now, have been working more or less in isolation. Equal representation from East and West played an important role. If one overlooks the regrettable non-appearance of participants from the Soviet Union, a number of East European countries were on the whole, well represented, the German Democratic Republic, Czechoslovakia, Bulgaria and Yugoslavia as was China. Geochemists from the Third World countires came in great numbers: Asian representatives included amongst others, Afghanistan, Indonesia, Malaysia, India, Nepal, Saudi Arabia and Sri Lanka: African representation included Egypt, Ethiopia, Algeria, Libya, Nigeria and Tunisia; from South America came Bolivia, Brasil, Columbia, Peru and Venezuela. The mixed attendance from Western Industrial countries, East European countries and those of the Third World during discussions after papers and particularly during excursions, led to mutual acquaintanceship, to learning from each other and to an exchange of methods and experience. The organizers hope that in some cases this will help to reduce the great difference in knowledge for the benefit of all. A fruitful continuation of initial contracts in the future would be an achievement for the symposium that should not be underestimated. In this context many participants, from countries of the Third World in particular, have expressed their thanks to the organizers of the symposium. May the next symposium which takes place outside North America in a non-english speaking country, it is in fact Finland in the autumn of 1983, be blessed with the same success.

WORKSHOP

MINERAL EXPLORATION USING THE U.S. DEPT. OF ENERGY HYDROGEOCHEMICAL AND STREAM SEDIMENT RECONNAISSANCE DATA

A two day short course is to be held at the University of Nevada, Reno, on March 23rd and 24th, 1981. The course is being given by G.S. Koch Jr. and R.H. Carpenter of the University of Georgia and R.J. Howarth of Imperial College, London. The course fee is US $300 and inquiries should be directed to:

Kathy McDermott
Continuing Education Dept.,
University of Nevada
Reno, Nevada 89557, USA (702 + 784-4046)

GEOCHEMICAL EXPLORATION FOR URANIUM, BASE AND PRECIOUS METALS May 25-29, 1981

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 21st year, is an itroductory 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 further information please write to:

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

CALL FOR PAPERS - AIME

The 1981 fall meeting fo the AIME will be held in Denver, Colorado from November 18 - 20th. The exploration geochemistry session is scheduled for the morning of Thursday, November 19th. The session will focus on geochemical exploration techniques for "strategic minerals" with the main emphasis on Sn, W, Co, and Mo.

Please submit titles by February 15, 1981 to:

John Callahan
Department of Geology,
Appalachian State Univeristy
Boone, North Carolina 28608, U.S.A. (704 + 262-3049)

NOMINATIONS FOR COUNCIL

Nominations for Council have been made to fill 5 vacancies which will arise at the next Annual General Meeting in April 1981. 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's permanent office in Rexdale (Toronto) by Arpil 1, 1981, from there they will be trasferred to Vancouver for the AGM on April 14th, 1981.

REGIONAL COUNCILLORS

Regional Councillors, like Ordinary Councillors, hold their office for two year periods. Two of our Regional Councillors are resigning at the next AGM. Additionally Council was desirous that Brasil, with a growing membership of over 30, be represented.

Firstly, Gunter Freidrich of the Technical Univeristy in Aachen, is in midterm and so continues to represent European members on Council in 1981-82.

Secondly, Jock Gilfillan will be resigning as Regional Councillor in April. He was chairman of the Organizing Committee for the 1976, 6th IGES in Sydney, and has served the Association as Australian Regional Councillor since that time. Following meetings in Australia the membership nominated R.H. Mazzuchelli of Western Mining, Perth for the office of Regional Councillor. Council was most pleased to appoint Richard Mazzuchelli as Australian Regional Councillor for the period 1981-83.

Thirdly, Louis Coetzee, who has served the Association as Regional Councillor for Southern Africa for the 1979-81 term has generously consented to continue as Southern Africa's Councillor for the 1981-83 period.

Lastly, but not least, is our new Region, Brasil. Following the First Brasilian Exploration Geochemistry Sympsoium, held last October in Camboriu, where discussions were held on coordinating AEG activity in Brasil, nominations were received for R.J.P. Brim of the Departmento Nacional da Producao Mineral in Brasilia. Council was most pleased to appoint Raymundo Brim as Regional Councillor for Brasil for the term 1981-83.

Council wishes to thank all members in the Regions for their participation in the nomination procedures. Active participation is the first essential to a flourishing Association.

NEW EXECUTIVE FOR THE ASSOCIATION

At a Council Meeting held on December 11, 1980, members of the new Executive were elected for the year 1981-82.

Ken A. Lovstrom of AMAX Exploration, Denver, has been elected to the position of President of the Association.

J. Howie McCarthy of the Branch of Exploration Research, U.S. Geological Survey, Denver, has been elected to the post of First Vice-President.

L. Graham Closs of the Geology Department, Colorado School of Mines has been elected Second Vice-President of the Association.

Ian Thomson of the Ontario Geological Survey, Toronto, has been re-elected to the post of Treasurer.

Bob Garrett of the Geological Survey of Canada, Ottawa, has been re-elected to the post of Secretary.

ANNUAL GENERAL MEETING 1981

The next Annual General Meeting of the Association will be held in conjunction with the Vancouver Symposium. The meeting will be held immediately after the last technical session on Tuesday, April 14, 1981. The Agenda for the AGM is as follows:

1. Minutes of the 1980 Annual General Meeting.
2. Matters arising.
3. Nomination of Scrutineers for Ordinary Councillor ballot.
4. President's Report.
5. Secretary's Report.
6. Treasurer's Report and appointment of Auditors.
7. Admission's Committee Report.
8. Introduction of the 1981-82 Executive.
9. Announcement of Ordinary Councillor Elections.
10. Any Other Business
11. Adjournment.

The President, A.W. Rose, will deliver his address immediately following the adjournment of the meeting.

FROM THE SECRETARY'S OFFICE - Bob Garrett

The new year is upon us and the 1981 dues are coming in to the Toronto office, dues have been received for about half our members and the mail brings more each day. Thank-you, all of you, who have sent in your dues. If you haven't already got around to sending your 1981 dues in please do so as soon as possible so as to ensure that you continue to receive the Journal and Newsletter etc.

Two brief points. Some members have remitted $42.50 Canadian. Voting and Affiliate Members dues are $42.50 U.S., you will be receiving a letter requesting the balance to make up your dues payment to the equivalent of US $42.50. Secondly, some student Members have not formally transferred to Affiliate class, you will be receiving an application form to apply for transfer (see the By-Laws sections 2.09 and 2.17).

The notice of the A.G.M., to be held in Vancouver, and the ballots for the Ordinary Councillor election have been mailed. Exercise your right to vote, and forward your completed ballot to the Rexdale office as soon as possible.

Please heed the President's request for new members, a review of the list shows 628 paid up members for 1980. We are growing again, keep the effort up, and thank you all those who have got us new members.

Finally, best wishes to all from Ines Filicetti and myself. May you have a successful 1981.

JOURNAL NEWS - Eion Cameron

By error the special issue, Vol.13, Nos 2/3, "Geochemical Exploration for Uranium", showed R.H. Carpenter as the sole editor. It should have been indicated that the editors were: R.H. Carpenter, D.H. Dahlem, A.W. Rose and D.D. Runnells. The Journal expresses its apologies to all of these gentelmen. This issue was published later than expected because figures for one of the papers required redrafting.

The first issue of Vol.14 (1980), and for the 1980 subscription year, will be mailed to members in January.

A large number of pages, approximately 600, are required to publish the proceedings of our biennial symposia. This means that pages from both the 1980 and 1981 years of our contract with Elsevier will be used for the Proceedings of the Hannover 8th I.G.E.S. that will be published in 1981. Thanks to the efforts of a group of editorial volunteers comprising Peter Donovan, Herb Hawkes, Brian Hitchon, Bob Garrett, and led by Art Rose, all manuscripts submitted by Hannover authors have been reviewed and returned to the authors. Approximately threequarters of the manuscripts to be published have been revised by the authors and are now in the hands of the Publishers.

EMPLOYMENT OPPORTUNITY

Barringer Magenta has a position vacant for a geologist/geochemist.

The successful applicant would be expected to supervise field programs including interpretation of data and final reporting. He or she would also provide support for research and development programs. Applicants should have a minimum of two years mineral exploration experience. A higher degree is preferable.

Apply in writing to Dr. R.E. Lett
Barringer Magenta Limited
304 Carlingview Drive
Rexdale, Ontario
M9W 5G2

EMPLOYMENT OPPORTUNITY

SENIOR GEOCHEMIST

THE COMPANY

Gulf Minerals Canada Limited is a broad-based, fast growing Company with exploration and mining interests in Canada. It is part of the Gulf Oil family of Companies.

THE CHALLENGE

- The senior geochemist will provide expertise of vital importance in interpreting exploration programs.
- Reflecting the scope of this opportunity, he/she will actively participate, with a team of scientist, in the resolution of exploration problems.

THE PERSON

The successful person will possess:

- Advanced degrees in chemistry and geology.
- A minimum of 10 years relevant experience.

For a rewarding career improvement, send your resume in complete confidence to:

Human Resources
Gulf Minerals Canada Limited
Ste. 1400
110 Yonge Street
Toronto, Ontario
M5C 1T4

BIBLIOGRAPHY

RECENT PAPERS ON EXPLORATION GEOCHEMISTRY

This list comprises titles that have appeared in major publications since the compilation presented in Newsletter No. 33. Journals routinely covered and abbreviations used are as follows: Economic Geology (EG); Geochimica et Cosmochimica Acta (GCA); the USGS 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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ANNUAL GENERAL MEETING

The Association of Exploration Geochemists

will hold their

Annual General Meeting

following the last technical paper of the day at the

Precious Metals in Geochemical Exploration - Northern Cordillera

Symposium

in the

Conference Hall

of the

Hyatt Regency Hotel

Vancouver, B.C.

at

4 p.m. Tuesday, April 14, 1981