

EXPLORE

Newsletter for the Association of Exploration Geochemists

NUMBER 77

SEPTEMBER 1992

PRESIDENT'S MESSAGE



This issue of **EXPLORE** contains proposed revisions to the AEG By-law. Every ten years the Association reviews the By-law to determine if changes need to be made to reflect the current direction of the Association. This task has been capably performed by the Chairman of the By-law Committee, Donald D. Runnells, and members of the committee: Maurice A. Chaffee, J. Alan Coope, and Robert G. Garrett. I wish to thank the committee for their efforts in

this endeavor.

As a member you are requested to review the recommended changes and prepare to vote on the revisions. A ballot will be distributed to Voting Members later in the year for approval of the revised By-law.

Every other year the Association conducts its Student Paper Competition. In an effort to increase interest in this activity, the Student Paper Competition Committee has gained approval for the Association to offer a substantial prize to the student who wins the competition. Details of the contest are given in the announcement included in this **EXPLORE**. If you know of a suitable candidate, please make a recommendation to the committee before December 31st of this year.

In addition, the Association is requesting nominations for the Gold Medal and the Past Presidents' Medal. The Gold Medal is awarded for outstanding scientific achievement in exploration geochemistry. The Past Presidents' Medal is awarded to a member of the Association for dedicated service to the Association. Guidelines for these Medals were published in last April's **EXPLORE** (Number 75, Page 11). Nominations must be received by the Chairman of the Awards Committee (W.K. Fletcher, Department of Geological Sciences, University of British Columbia, Vancouver, British Columbia, V6T 2B4, CANADA) on or before December 1st of this year.

Jeffrey A. Jaacks
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PROPOSED AEG BY-LAW REVISIONS

Introductory Remarks

Just over two years ago, Council approved the formation of a committee to review the By-law No.1 of the Association and present recommendations for updating and other improvements which would be in the best interests of the membership and facilitate the objectives and purpose of the Association.

Donald D. Runnells was named chairman of the By-laws Review Committee. Other members were Maurice A. Chaffee, J. Alan Coope and Robert G. Garrett. Suggestions for changes were solicited from all members of Council and from several other Voting Members in different parts of the world.

As recorded in the Preamble to the By-law, the Association of Exploration Geochemists is incorporated under the Canada Corporations Act. This incorporation was granted and the By-law No. 1 enacted and passed in April 1977. Amendments to the By-law were approved in April 1979 and in September 1983.

During the recent examination, seven drafts of the By-law were prepared prior to the submission of a recommended, revised document to Council on June 12th, 1992. The recommendations of the committee were accepted and Council directed that the recommended changes be prepared for examination by the Voting Membership.

The obvious vehicle for this distribution is **EXPLORE** and membership's careful attention is directed to the presentation in the following pages of this issue.

A composite of the existing and recommended, revised By-law No. 1 is presented. Please note the following:

- Language that is crossed through by the broken horizontal line represents sections included in the existing By-law, but omitted or replaced in the recommended, revised version.
- Language that is not underlined or crossed through, represents sections included in the existing By-law that are retained in the recommended, revised version.
- Language that is underlined represents new language in the recommended, revised version. This new language is either an updated revision of existing sections of the By-law or entirely new clauses.

The recommended, revised version of By-law No. 1 is a combination of (b) and (c) as defined above. In order to facilitate the reading and understanding of the recommended, revised version of the By-law, it is suggested that the language defined in (b) and (c) above be highlighted using a quick reference marker.

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Information for Contributors to EXPLORE

Scope This Newsletter endeavors to become a forum for recent advances in exploration geochemistry and a key informational source. In addition to contributions on exploration geochemistry, we encourage material on multidisciplinary applications, environmental geochemistry, and analytical technology. Of particular interest are extended abstracts on new concepts for guides to ore, model improvements, exploration tools, unconventional case histories, and descriptions of recently discovered or developed deposits.

Format Manuscripts should be double-spaced and include camera-ready illustrations where possible. Meeting reports may have photographs, for example. Text is preferred on paper and 5¼- or 3½-inch IBM-compatible computer diskettes with ASCII (DOS) format that can go directly to typesetting. Please use the metric system in technical material.

Length Extended abstracts may be up to approximately 1000 words or two newsletter pages including figures and tables.

Quality Submittals are copy-edited as necessary without re-examination by authors, who are asked to assure smooth writing style and accuracy of statement by thorough peer review. Contributions may be edited for clarity or space.

All contributions should be submitted to:

EXPLORE

c/o USGS

Box 25046, M5973, Denver Federal Center

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USA



Information for Advertisers

EXPLORE is the newsletter of the Association of Exploration Geochemists (AEG). Distribution is quarterly to the membership consisting of 1200 geologists, geophysicists, and geochemists. Additionally, 100 copies are sent to geoscience libraries. Complimentary copies are mailed to selected addresses from the rosters of other geoscience organizations, and additional copies are distributed at key geoscience symposia. Approximately 20% of each issue is sent overseas.

EXPLORE is the most widely read newsletter in the world pertaining to exploration geochemistry. Geochemical laboratories, drilling, survey and sample collection, specialty geochemical services, consultants, environmental, field supply, and computer and geoscience data services are just a few of the areas available for advertisers. International as well as North American vendors will find markets through EXPLORE.

The EXPLORE newsletter is produced on a volunteer basis by the AEG membership and is a non-profit newsletter. The advertising rates are the lowest feasible with a break-even objective. Color is charged on a cost plus 10% basis. A discount of 20% is given to advertisers for an annual commitment (four issues). All advertising must be camera-ready PMT or negative. Business card advertising is available for consultants only*. Color separation and typesetting services are available through our publisher, Network Graphics, Inc.

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EXPLORE

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OCTOBER 1992

Editor: Owen P. Lavin (303) 837-5820

Associate Editors: Sherman P. Marsh (303) 236-5521

J. Stevens Zuker (303) 988-9677

Assistant Editors:

L. Graham Closs (303) 273-3856

Steve Cone (303) 232-8371

Gwendy E. M. Hall (613) 992-6425

Lloyd D. James (303) 741-5199

Paul J. Lechler (702) 784-6691

Anne M. Leibold (303) 295-1101

Richard Meeuwig (702) 784-6691

Fredrick P. Schwarz (702) 826-3000

Frederic R. Siegel (202) 994-6194

FAX (303) 236-3200, ATTN: Sherman Marsh, USGS

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Proposed AEG By-Law Revisions

Continued from Page 1

Amendments to the By-law must be approved by two-thirds of the votes cast by more than 10 % of the Voting Membership, (see Article Thirteen of the existing By-law).

Voting Members will receive a ballot paper from the Secretary of the Association at least two months prior to the next Annual General Meeting of the Association (Denver Colorado, April 19th, 1993) and will be asked to cast their ballots for or against adoption of the recommended, revised version of the By-law as presented in this issue of EXPLORE.

The ballot papers (which will be mailed out early in 1993) should be completed and returned to the Secretary to arrive at the Association's Vancouver office before April 9th 1993. Consequently, Voting Members are asked to read and retain this issue of EXPLORE pending the opportunity to vote on the recommended, revised version of the By-law when ballot papers are distributed in early 1993.

The Association's legal advisors have indicated that the recommended, revised version of the By-law should meet with the approval of the Minister of Consumer and Corporate Affairs when passed by the Voting Membership.

J. Alan Coope

Recommended, Revised AEG By-law

PROPOSED AMENDMENTS: JUNE 27, 1992

BY-LAW NO. 1

A By-law relating generally to the affairs of
THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

PREAMBLE

PURPOSE. The purposes for which the Association of Exploration Geochemists is constituted are: to form a united and representative group of persons specializing in the field of exploration geochemistry; to advance the science of geochemistry, especially as it relates to exploration and associated research; to foster the common scientific interests of exploration geochemists; to facilitate the acquisition of professional knowledge and information relevant to exploration geochemistry and to promote the interchange thereof among its members; to encourage research and development of geochemical exploration methods; to advance the status of the profession of exploration geochemistry; and to promote and maintain high standards of training and ethics among its members.

LEGAL STATUS. In Canada the Association is incorporated under the Canada Corporations Act, R.S.C. 1964-1965, Chapter 52, Section 2, comprising a body corporate and politic, without share capital, for the purposes of carrying on, without pecuniary gain to its members, objectives, to which the legislative authority of the Parliament of Canada extends, of a scientific and professional character.

Continued on Page 15

NOTES FROM THE EDITOR

This rather thick issue of **EXPLORE** features the proposed revised By-law of the Association of Exploration Geochemists. The proposed By-law is published in **EXPLORE** because every AEG member should have the opportunity to see the proposed revisions before they can be voted upon by the voting membership. Please take the time to read the By-law so that you can make an informed decision when voting papers are sent to Voting Members early in 1993. If you are not a Voting Member, consider becoming one. The application process is simple and the Association always benefits from the active participation of its members.

Deadlines for the future issues of **EXPLORE**

Publication Date	Issue No.	Final date for submissions
January 1993	78	November 30, 1992
April 1993	79	February 28, 1993
July 1993	80	May 30, 1992



AEG COUNCIL SUMMARY

Once again it is time to bring you up to date on the activities of your Council. The last few issues of **EXPLORE** have been devoted to technical papers and with this issue focussing on the new By-law for the Association, I will bring you up to date on Council's actions on this and other matters of importance.

Actions of October 30, 1991

1. Council approved the applications of four Voting, 12 Affiliate, and one Student Members.
2. Council approved a budget of US\$ 8000 for publicity in 1992.

Actions of January 8, 1992

1. Council approved the election of Agnete Steinfeld to the position of Regional Councillor for the northern countries of Europe.
2. Council approved the election of David Garnett to the position of Regional Councillor for Australia.
3. Council approved the applications of three members to be upgraded from Affiliate to Voting Members.

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4. Council decided to send extra back issues of the Journal of Geochemical Exploration to selected individuals in developing countries.

Actions of February 24, 1992

1. Council elected Gwendy E.M. Hall to the position of Second Vice President.
2. Council approved applications of one Voting, ten Affiliate, and one Student Members.
3. Council approved a project to construct an inclusive bibliography on computer diskette and a plan to publish an AEG "25th Anniversary" Bibliography.

Actions of April 22, 1992

1. Council approved applications of one Voting, 19 Affiliate, and five Student Members.
2. Council approved the guidelines for the awarding of medals by the Association (see **EXPLORE** Number 75).

Actions of June 12, 1992

1. Council approved applications of 32 Affiliate Members.
2. Because of the difficulty with world-wide mailing, Council is suggesting to Elsevier (the publisher of the Journal of Geochemical Exploration) that request time for missing issues be extended from six months to one year.
3. Council approved new rules for the Student Paper Prize with a cash prize of \$500, a two year membership in the AEG and sponsorship to an AEG meeting to present the winning paper (see advertisement in this issue of **EXPLORE**).

Sherman P. Marsh
Secretary of the AEG



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CALL FOR NOMINATIONS

Gold Medal and Past Presidents' Medal

The Association of Exploration Geochemists has recently inaugurated* two medals:

- 1) The GOLD MEDAL is to be awarded to a person for outstanding scientific achievement in exploration geochemistry, and
- 2) The PAST PRESIDENTS' MEDAL, to be awarded to a member of the Association of Exploration Geochemists for dedicated service to the Association.

The Awards Committee is now seeking nominations for the award of these medals in 1993. Acceptable nominations shall be signed by a minimum of four Voting Members of the Association in good standing and shall include the following:

- (a) A letter of nomination (to be signed by a minimum of four Voting Members);
- (b) A resume or curriculum vitae of the nominee;
- (c) An itemized list of the outstanding scientific achievements (Gold Medal) or the dedicated service to the Association (Past Presidents' Medal) of the nominee;
- (d) Other pertinent documentation relevant to the achievements and/or qualifications of the nominee may include endorsements from other individuals whether or not Voting Members of the Association.

Since members of the Awards Committee may not have personal knowledge of a nominee, the completeness and quality of the nominations will be critical in evaluation and selection.

Nominations should be sent to: W.K. Fletcher, Chairman Awards Committee, Department of Geological Sciences, University of British Columbia, Vancouver, B.C., Canada, V6T 1Z4, TEL: 604-822-2392, FAX: 604-822-6088.

The deadline for receiving nominations is December 1, 1992.

*See New AEG Medals (EXPLORE Number 75, April 1992) for the history of the Medals and the Guidelines for their award.

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Nomination of Ordinary Councillors

"A duly qualified Voting Member may be nominated for election as an Ordinary Councillor either by a resolution of the Council or by six (6) Voting Members where such a nomination is received by the Secretary before November 1" (Article 4.04, By-law 1, 1979). Nomination most commonly involves a dialogue between Council delegate and members willing to serve on Council. If approved by Council, names of nominees are entered onto a ballot which is then distributed to Voting Members. Less commonly, Voting Members may themselves seek nomination under the second option of Article 4.04 which involved seeking support from six (6) other Voting Members. Council invites Voting Members who may wish to serve as Councillors during the 1993-1995 term to contact either:

Ray Lett, Election Chairman or Sherman P. Marsh, Secretary	U.S. Geological Survey
BC Ministry of Energy, Mines, and Petroleum Resources	Denver Federal Center
553 Superior Street	MS 973
Victoria, BC V8V 1X4	Denver, CO 80225
CANADA	USA
TEL: (604) 356-2134	TEL: (303) 235-5521
FAX: (604) 356-8153	FAX: (303) 236-3200

OR to complete the nomination form below and return it to the Secretary **NO LATER THAN NOVEMBER 1, 1992.**

NOTICE OF NOMINATION for ORDINARY COUNCILLOR of THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

We the undersigned, wish to nominate

who by his/her signature below has agreed to stand for election for Ordinary Councillor of The Association of Exploration Geochemists. This nomination is made in accordance with Article 4.04 of By-law 1, 1979, with the term commencing immediately after the 1993 Annual General Meeting.

Name (print) _____ Date _____

Address _____

Signature _____

Name (print) _____ Date _____

Address _____

Signature _____

Name (print) _____ Date _____

Address _____

Signature _____

Name (print) _____ Date _____

Address _____

Signature _____

Name (print) _____ Date _____

Address _____

Signature _____

Name (print) _____ Date _____

Address _____

Signature _____

I, _____, am a Voting Member of The Association of Exploration Geochemists and, if I am elected, agree to serve as an Ordinary Councillor and to attend meetings of Council.

HANDBOOK OF EXPLORATION GEOCHEMISTRY

Volume 4 Now Published

After almost a decade since publication of Volume 3 in the Handbook of Exploration Geochemistry Series (Rock Geochemistry in Mineral Exploration by G.J.S. Govett), it is enormously pleasing to report that Volume 4 is now available. This is *Regolith Exploration Geochemistry in Tropical and Sub-tropical Terrains*, edited by C.R.M. Butt and H. Zeegers. A companion volume, *Regolith Exploration Geochemistry in Arctic and Temperate Terrain*, is close to publication (I have written the Foreword!).

The term "regolith" is used in recognition of the fact that modern exploration geochemical practices commonly embrace all overburden material over bedrock and is not restricted to the soil profile.

The Tropical and Sub-tropical Terrains volume has been eagerly awaited by those working in the lower latitudes - essentially between 35°N and 35°S. Successful interpretation of geochemical patterns in the regolith in humid and arid tropical areas demands a thorough understanding of the complexities of the development of the regolith. Drs. Butt and Zeegers have taken full cognizance of this by devoting the first seven chapters of their book to a thorough description and discussion of the chemical and physical processes of weathering, geomorphological development, and geochemical dispersion. Data from many research and case studies are used to demonstrate applications using gossans as well as more traditional regolith in a wide range of environments, including: savannas, rain forests, semi-arid and arid terrains, dissected terrains, and tropical mountains. There is a separate chapter describing specific techniques for diamonds, gold and uranium in tropically weathered terrains, and the use of heavy minerals in laterite terrains. In all cases, the geochemical response is linked to processes within the context of the genesis of the evolution of landforms and the regolith.

The common theme of all volumes in the Handbook Series is ore-finding. A common objective is to present material in a format that is useful to the practicing field exploration geologist and not just the specialist exploration geochemist. This volume admirably conforms to the theme and meets the objective. In addition Volume 4 should also be of use and interest to economic geologists, soil scientists, geomorphologists and environmental geochemists.

The Handbook of Exploration Geochemistry Series is alive and well notwithstanding the apparent long gestation period of individual volumes. Whereas I demur at forecasting when subsequent volumes may appear, I have in fact, read and offered comment on virtually complete manuscripts for two other volumes: 1) Drainage Geochemistry, and 2) Vapour and Volatile Geochemistry.

To fill in your time while awaiting publication of later volumes, I recommend that you read Volume 4 - 607 pages of well written and illustrated information on exploration geochemistry.

G.J.S. Govett
Dean, Faculty of Applied Science
The University of New South Wales
New South Wales
Australia



GEOQUIMICA APLICADA

The Organization of American States have published a Spanish-Language book on Exploration Geochemistry written by Dr. Fred Siegal. The publication is number 35 of the Chemistry Monograph Series, is 170 pages long and costs approximately \$US6.00. This timely and much-needed publication should be of interest to anyone performing geochemical surveys and training in Spanish-speaking countries. It can be ordered from:

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or from the Office of the Organization of American States in the member country of your organization. Anyone experiencing difficulty ordering the book should contact the author: Dr. Fred Siegal, Department of Geology, George Washington University, Washington, D.C., 20006, USA



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MEMORIAM

Malcolm Mason

Dr. Malcolm Mason of Westminster, Colorado, died on April 21, 1992. He was 47.

Malcolm graduated in 1966 from Kings College, University of London with a BSc. degree in Geology. In 1967 he obtained his MSc. degree in Mineral Exploration and Diploma of Imperial College (DIC) in Mining Geology-Mineral Exploration from Imperial College of Science and Technology, University of London. In 1975 he received his PhD. degree in Geochemistry from Bedford College, University of London.

Malcolm had served successively as Exploration Geologist, Geochemist and Director of Geochemical Services for 20 years with the INCO organization. The early part of his career was spent exploring in a number of countries. Malcolm was a major participant in numerous discoveries including: the Uitkomst Cu-Ni-Pt occurrence in the Western Transvaal in the early 70's and the Chapada Mara Rosa copper occurrence in Goias State, Brazil in the mid 70's. In recent years he had been based in Denver, from where he participated in both domestic and foreign programs. He was recognized professionally for his international experience and perspective on the application of geochemistry to mineral exploration.

Malcolm was a member of numerous professional societies, including the Institute of Mining and Metallurgy and the Association of Exploration Geochemists. He served the AEG as Councillor in 1984-85 and 1986-88. His wise council at a time of rapid change for the AEG will long be remembered by those participating in the affairs of the Association at that time.

Malcolm was also an avid golfer and took great pride in gardening. He is survived by his wife Shirley, her children Mike and Tammy, and granddaughter Lindsay in the United States; and a sister Anne Kendal, niece Fiona and nephew David in England. The Association expresses its sincere condolences to his family.



AUSTRALIAN SPECIALIST GROUP

In February 1992, a course entitled "Practical Application of Multi Element Geochemistry" was held at Curtin University in Perth. Following that successful and well-attended course, the potential benefits of a body that could address the use of geochemistry within the Australian geological industry were apparent. A committee was established with the objective of determining the level of interest in forming a Specialist Group in Exploration Geochemistry within the Geological Society of Australia (GSA). The committee has been surprised at the level of support — over 50 applications have been received and more are arriving on a daily basis.

Anyone interested in learning more about this Group should contact Peter Ward, Geological Society of Australia (GSA, WA Branch) c/o Australian Assay Laboratories, 17 Halley Road, Balcatta WA 6024, TEL: (09) 344-6511, FAX: (09) 344-8312.



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DENVER DISCUSSION GROUP

The Denver area Geochemical Exploration Discussion Group has finalized its program for its third season (1992-93).

October 20, 1992

Ron Klusman, Colorado School of Mines
Biogeochemistry in Petroleum Exploration

November 17, 1992

Bob Clark, U.S.G.S.
Detection of Subtle Geochemical Dispersion Processes
by Enzyme Leaching

December 15, 1992

Dorian (Dusty) Nicol, Dunn-Behre Dolbear Inc.
Environmental vs. Exploration Geochemistry

January 19, 1993

Steve Tedesco, Atoka Exploration
The Use of Iodine and Soil Gas Technology to Detect Petroleum
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deposits)

February 16, 1993

Lloyd James, Consultant Geochemist
Geochemical Exploration in Arid Terrain

March 16, 1993

David Grimes and Walter Ficklin, U.S.G.S.
Geochemical Investigations of Groundwater and Alluvium
Around Disseminated Gold Deposits Along the Getchell Trend,
Northern Nevada

Discussion Group meetings start at 4:30 p.m. on the third
Tuesday of each month in Room 201 of Berthoud Hall at the
Colorado School of Mines. For more information, contact J.
Alan Coope by Phone/FAX (303) 470-6289.



TECHNICAL NOTES

CAD: A Standard Tool

Nowadays when visiting mining operations and mineral exploration offices in North America one is often struck with the level of automation of the tasks performed by the draftsman, geologist and mine engineer. Not so long ago massive teams of drafting technicians under the supervision of numerous geological and mining professionals were necessary for manually handling large amounts of information and performing the fundamental tasks of geological interpretation, reserve estimation and mine design.

At the heart of this automation trend, our industry has seen the emergence of a powerful graphic driven tool: computer assisted design or CAD. Success stories on the implementation of CAD approaches are told at mine sites and exploration offices and this is supplemented by an increasing number of case histories either published or presented at technical meetings.

From 2D To 3D

Amongst CAD software packages available in the marketplace, AutoCAD™ has been favored by many exploration and mining organizations. Early versions of AutoCAD™ were limited to the creation and management of drawings i.e. two-dimensional representations of data. Subsequent releases of AutoCAD™ incorporated three-dimensional capabilities, in particular the ability to program and tailor the process of three-dimensional modelling as it pertains to specific orebodies or unique needs of an organization. These three-dimensional features allowed a rapid expansion of AutoCAD's™ use for

reserve modelling and mine planning and as a result many mining organizations recognize that AutoCAD™ is the fulcrum for automating their geological and mining departments.

Training Needs

The accelerated pace at which CAD technology is introduced in our industry has hindered concurrent skills development and upgrading for many technicians and professionals. Some organizations believe that the mere purchase of CAD software will automate manual tasks overnight. Management of other organizations realize the need for a gradual and well thought out CAD training and implementation program but either do not have experienced CAD users on board, or are unable to obtain assistance from the vendor or other external CAD experts. Capabilities and price of CAD technology have become non-issues. The real issue for a mining organization is the human resources and time investment required to adequately train and improve the skills of its CAD users.

Data Standards and Users Groups

Several recent initiatives have been undertaken by industry members to provide a more effective use of CAD technology. These initiatives include the publication of a comprehensive series of standard symbols by the Northeastern AutoCAD User's Group and endorsed by the Canadian Institute of Mining, Metallurgy and Petroleum. Last March the first meeting of the Mineral Industry AutoCAD Users Group (MIAUG) was held in Toronto. The primary objective of the users' group is to advance the use of CAD in mining and exploration.

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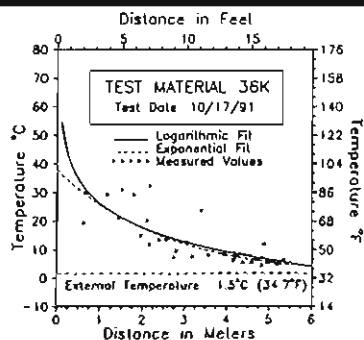
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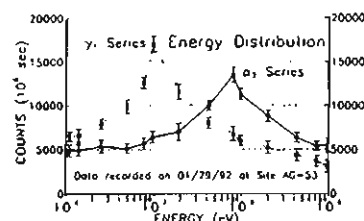
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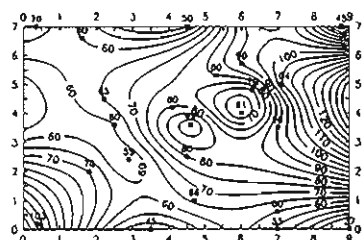
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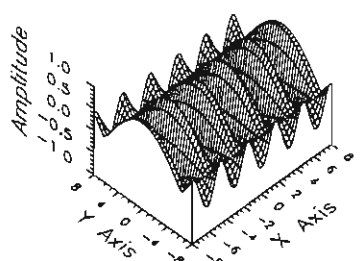
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Technical Notes

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A paramount consideration related to the use of CAD throughout industry is a standardized format for CAD file exchange. Most CAD users would agree that formats such as DFX are not sufficient for data interchange. In Australia, mining companies have funded through AMIRA (Australian Mineral Industry Research Association) a research project to develop and promulgate data interchange standards. Initially this Australian standard project will not embrace CAD-type data but may do so in the future. In Canada authors of this article are involved in launching a similar standard project. The industry's quest for standards could benefit from efforts to develop standards in other industries. For example the US petroleum industry plans to produce CAD standards for information transfer, data structure and symbols.

Also of importance is the integration of CAD technologies with Geographic Information Systems (GIS). The latter technology which allows management and complex manipulations of a wide range of information types is being adopted by mines ministries in most of the leading mineral producing provinces of Canada. Compatibility of CAD and GIS technologies within industry and government will be essential for improving access to Canada's wealth of mineral resource data.

CAME'92

Under the theme "CAD: From Mapping To Mining" and sponsored by six geoscientific and mining societies (including the AEG), Computer Applications in Mineral Exploration (CAME) together with the Prospectors and Developers Association of Canada (PDAC) held a two-day meeting on March 28 and 29, 1992, as a pre-convention activity to the 60th Annual PDAC Convention in Toronto. The first day of CAME'92 was devoted to technical presentations including overviews of CAD technology in exploration, mining and other industries as well as case histories on its application presented by Inco, Noranda and Placer Dome. The use of CAD/GIS within provincial mines ministries was also discussed. The second day focused on training needs and featured a hands-on training session. A meeting of all interested parties on the issue of data interchange standards also took place during the PDAC Convention.

The table of contents for the CAME'92 Seminar manual is provided below. This manual can be purchased from the AEG at a cost of US\$ 35 for members and US\$ 40 for non-members. This includes surface postage and handling, for airmail add US\$ 7. See page 23 of this issue for ordering address.

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NEW MEMBERS

To All Voting Members:

Pursuant to Article Two of the Association's By-Law No.1, names of the following candidates, who have been recommended for membership by the Admissions Committee, are submitted for your consideration. If you have any comments, favorable or unfavorable, on any candidate, you should send them in writing to the Secretary within 60 days of this notice. If no objections are received by that date, these candidates will be declared elected to membership. Please address comments to Sherman P. Marsh, Secretary AEG, U.S. Geological Survey, Mail Stop 973, Box 25046, Federal Center, Denver, Colorado 80225, U.S.A.

Editors note: Council has decided that all new applicants will receive the journal and newsletter upon application for membership. The process of application to the Toronto office, recommendation by the Admissions Committee, review by the council, and publication of applicant's names in the newsletter remains unchanged.

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RECENT PAPERS

Exploration Geochemistry

This list comprises titles that have appeared in major publications since the compilation in EXPLORE Number 76. 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, Department of Geology and Geological Engineering, Colorado School of Mines, Golden, CO 80401, Chairman AEG Bibliography Committee. Please send new references to Dr. Closs, not to EXPLORE.

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SEG MEETING

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Some twenty years ago as NASA readied the first ERTS satellite for deployment, the Australian government was asked to recommend four or five areas in Australia for imagery. After much discussion, predictably the Australian geologic community selected Mt. Isa, two areas in the Yilgarn and one in the Adelaide fold belt. NASA launched ERTS-1 and within one year Australian geologists had access to imagery covering the entire continent — several times over.

The point of this anecdote is that geologic information has become a deluge. Exploration geologists routinely analyze all field samples for at least 30 elements by low-cost techniques. With modern methods, these data can be assembled, manipulated and interpreted in heretofore unprecedented fashion. The challenge is not to become overwhelmed by the data gathering activity, but to effectively and efficiently integrate data with concepts and technology, and facilitate mineral discovery, environmentally sound development and economic growth. The main objective of the SEG-93 conference is to focus on this challenge.

This will be the first industry-oriented international conference organized and sponsored by the Society of Economic Geologists and its collaborators. Of the 139 papers submitted, half the authors are from outside the U.S.; 30% from outside North America. The pledged generous financial support from

corporate sponsors will ensure success of the meeting.

The Conference will focus not on specific areas, commodities or ore genesis but on the effective integration of disciplines and technologies in exploration practice. The 100 oral and poster presentations will address the conference theme through examples and case histories. Sessions on generative exploration and discovery of blind or buried ore targets are featured. A special one-day poster session will demonstrate several Geographic Information System (GIS) applications in the practical integration of exploration data. The conference breaks new ground by addressing environmental consequences of exploration and mining and presenting remediation options. A special session and a 4-day workshop will feature environment related topics. Three forums will investigate significant exploration issues and prominent keynote speakers have agreed to provide experienced insights into the conference theme.

The program also will include extraordinary training opportunities, including workshops, short courses and field trips designed to provide instruction not commonly available. Short courses will cover: (i) GIS technology in mineral deposit modeling and resource assessment; (ii) the fundamentals of ore reserve estimation; (iii) building realistic geologic interpretations from geophysical data using a personal computer; and (iv) the fundamentals of geochemical exploration for base and precious metals. Field trips are planned to the world class Henderson Mo mine, and the historic and still active Leadville Pb-Zn-Ag district. A tour of Nevada's Carlin trend will feature an exciting blend of geology, geochemistry, and geophysics. A five-day underground mine course will provide training in detailed mapping of structure, alteration and mineralization. A workshop on becoming a better independent consultant will be presented by experts on law, accounting, taxes, insurance, banking and travel.

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SEG Meeting

Continued from Page 13

The concurrent Exploration Technology Trade Fair will exhibit state-of-art technology and equipment.

Advance registration for field trips and short courses is now being accepted — details are in the last SEG Newsletter and Conference Second Circular. Interested participants should reserve space by calling Gary Sidder, soon, at the U.S.G.S. (TEL: (303) 236-5607; FAX: 303-236-5603). For more information and to receive registration materials write to: SEG Conference 93, P.O. Box 571, Golden, CO 80402 U.S.A. or FAX: (303-279-3118).

Richard L. Nielsen
Conference General Chairman



CALENDAR OF EVENTS

International, National and Regional Meetings of Interest to Colleagues Working in Exploration and Other Areas of Applied Geochemistry.

■ Oct. 12-16, '92 **Energy, Environment and Technological Innovation**, int'l mtg., Rome, by Universidad Central de Venezuela and Università di Roma (Secretaria CPA, Comisión de Promoción Académica, Facultad de Ingeniería, Universidad Central de Venezuela, Edif. Decanato, Caracas, 1050, Venezuela; TEL: 58-2-6627538; FAX: 58-2-6627327)

■ Oct. 19-21, '92 **Bio-leaching Minerals and Mineral Land Reclamation**, mtg. and workshop, Sacramento, CA (Yung Sam

Kim, Nevada Institute of Technology, Box 8894, Campus Station, Reno, NV 89507 USA; TEL: (702) 673-4466)

■ Oct. 25-30, '92 **In-situ Minerals Recovery**, mtg., Santa Barbara, CA (Engineering Foundation, 345 E. 47th St., New York, NY 10017 USA; TEL: (212) 705-7835; FAX: (212) 705-7441)

■ Oct. 26-29, '92 **Geological Society of America**, ann. mtg., Cincinnati, OH (Vanessa George, GSA, Box 9140, Boulder, CO 80301 USA; TEL: (303) 447-2020)

■ Nov. 23-25, '92 **Women Geoscientists** in national planning and development, mtg., New Delhi/Dehradun, India, by Association of Geoscientists for International Development and Indian Geological Congress (O.P. Varma, IGC, Dept. of Earth Sciences, University of Roorkee, Toorkee-247 667, India)

■ Nov. 29-Dec. 2, '92 **Tectonic Framework and Energy Resources of the Western Margin of the Pacific Basin**, Kuala Lumpur, Malaysia (The Symposium Secretary, c/o Geological Society of Malaya, Dept. of Geology, University of Malaya, 59100 Kuala Lumpur, Malaysia; TEL: 603-757-7036; FAX: 603-756-3900).

■ Dec. 1-4, '92 **Northwest Mining Assoc.**, Spokane, WA (Bill Mote, Executive Director, Northwest Mining Assn., N. 10 Post St., Suite 414, Spokane, WA 99201 USA; TEL: (313) 994-1200, ext. 3234; FAX: (313) 994-5123).

■ Feb. 8-11, '93 **Geologic Remote Sensing**, mtg., Pasadena, CA (Nancy J. Wallman, ERIM, Box 134001, Ann Arbor, MI, 48113-4001 USA; TEL: (313) 994-1200, ext. 3234; FAX: (313) 994-5123)

■ Mar. 16-18, '93 **Biennial Finnish Symposium "Geochemistry 93"**, with status of geochemical mapping and interpretation, data availability, and exploration case studies, Abo, Finland, by Finnish Society of Mining; a change in the mining law gives full rights for exploration and mining to foreign companies which are invited to send representatives to this symposium (Dr. Alf Björklund, Department of Geology, Abo Akademi University, SF-20500 Abo, Finland, FAX: +358 21 654818)

■ Apr. 13-16, '93 **The Environmental Geochemistry of Mineral Deposits**, short course and seminar, Denver, CO (G.S. Plumlee, U.S. Geological Survey, MS 973, Federal Center, Denver, CO 80225 USA; TEL: (303) 236-9224)

■ Apr. 17-20, '93 **Integrated Methods in Exploration & Discovery**, Conference, by the Society of Economic Geologists, Association of Exploration Gechemists, Society of Exploration Geophysics, and others, Denver, CO (J. Alan Coope, SEG Conference '93, Box 571, Golden, CO 80402 USA; TEL/FAX: (303) 470-6289)

■ May 4-7, '93 **Geofluids '93**, International Conference on Fluid Evolution, Migration and Interactions in Rocks, Torquay, England (Sally Cornford, IGI Ltd, Hallsannery, Bideford, Devon, EX39 5HE, England; TEL: 44 (0)237 471749; FAX: 44 (0)237 421700)

■ May 17-19, '93 **GAC-MAC**, ann. mtg., Edmonton, Alberta (J. W. Kramers, Alberta Geological Survey, Box 8330, Station F, Edmonton, AB, T6H 5X2, CANADA; TEL: (403) 438-7644; FAX: (403) 438-3364)

■ June '93 **Intl. Precious Metals Institute**, Newport, Rhode Island (IPMI, 4905 Tilghman St., Suite 160, Allentown, PA 18104, TEL: (215) 395-5855).

■ Aug. 1-3, '93 **Geochemistry of the Earth Surface**. Third International Symposium on Geochemistry at Weathering and Diagenesis of Sediments, University Park, PA (Dr. Lee R. Kump, Secretary General, GWDS-3, Department of Geosciences, The Pennsylvania State University, 210 Deike Building, University Park, PA 16802 USA; TEL: (814) 863-1274; FAX: (814) 865-3191)

■ Sept. 1-3, '93 **International Symposium on Mineralization Related to Mafic and Ultramafic Rocks** (IAGOD, Symposium Secretary/D. Ohenstetter, CRSCM, La rue de la Férrollerre, 45071 Orléans, Cedex 2, France; TEL: 33-38-51-54-01, FAX: 33-38-63-64-88).

Continued on Page 15

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Calendar of Events

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■ Sept. 3-5, '93 16th International Geochemical Exploration Symposium, and Sept. 1-2, '93 5th Chinese Exploration Geochemistry Symposium, Beijing, CHINA (Dr. Xie Xuejing, Honorary Director, Institute of Geophysical & Geochemical Exploration, Langfang, Hebei 102849, CHINA; TELEX: 22531 MGMRC CN; FAX: 86-1-4210628; and, Dr. Lin Cunshan, Deputy Director, Institute of Geophysical and Geochemical Exploration, Langfang, Hebei 102849, CHINA; TELEX: 26296 LFPBL CN; FAX: 86-0316-212868)

■ Sept. 25 - Oct. 1, '93 International Association of Volcanology and Chemistry of the Earth's Interior, mtg., Canberra, AUSTRALIA (IAVCEI ACTS, GPO Box 2200, Canberra ACT 2601, AUSTRALIA, TEL: (61) 6-257-3299; FAX: (61) 6-257-3256)

■ Oct. 25-28, '93 Geological Society of America, ann. mtg., Boston, MA (Vanessa George, GSA, Box 9140, Boulder, CO 80301 USA; TEL: (303) 447-2020)

■ Summer, '94 Geoanalysis '94, UK (Doug Miles or Peter Simpson, British Geological Survey, Keyworth Nottingham NG12 5GG, UK; TEL: 44-36-602-3100; FAX: 44-602-36-3200)

■ Aug. 28-Sept. 3, '94 European Association of Geochemistry Meeting and 4th Goldschmidt Conference, Edinburgh (Dr. B. Harte, Department of Geology and Geophysics, Grant Institute, University of Edinburgh, West Mains Road, Edinburgh, EH9 3JW UK)

■ Sept., '94 Joint International Symposium on Exploration Geochemistry, Irkutsk: a tribute to Academician L.V. Tauson (Pavel Koval, Vinogradov Institute of Geochemistry, P.O.B. 701, 664033 Irkutsk, Russia; TELEX: 133 163 Taiga SU)

Please check this calendar before scheduling a meeting to avoid overlap problems. Let this column know of your events.

Fred Siegel
The George Washington University
Department of Geology
Washington, DC 20052
USA
TEL: (202) 994-6194
FAX: (202) 994-0458



Proposed Amendments

Continued from Page 2

The Association of Exploration Geochemists is a non-profit educational and trade organization under Section 5.01 (c) (6) of the Internal Revenue Code of the United States. No portion of the assets shall be used to the benefit of any member or individual.

Contents of Article ARTICLES

ONE	INTERPRETATION
TWO	MEMBERSHIP
THREE	AFFAIRS OF THE ASSOCIATION
FOUR	COUNCILLORS
FIVE	OFFICERS
SIX	PROTECTION OF COUNCILLORS AND OFFICERS
SEVEN	COMMITTEES AND CORRESPONDENTS
SEVEN	COMMITTEES
EIGHT	ASSOCIATED SOCIETIES
EIGHT	ASSOCIATED SOCIETIES AND ORGANIZATIONS
NINE	MEETINGS OF MEMBERS
TEN	NOTICES

ELEVEN
ELEVEN
TWELVE

TRANSITIONAL
FINANCIAL
AMENDMENT

BE IT ENACTED as a By-law of the Association as follows:

ARTICLE ONE INTERPRETATION

1.01 DEFINITION. In this By-law and all other by-laws and special resolutions of the Association, unless the context otherwise requires:

"Act" means The Canada Corporations Act, R.S.C. 1959, Chapter 52, as amended from time to time or any Act which may hereafter be substituted therefore;

"Act" means the Canada Corporations Act, R.S.C. 1964-1965, Chapter 52, Section 2, as amended from time to time, or any act which may hereafter be substituted therefore.

"Association" means the corporation incorporated under the Act by letters patent and named THE ASSOCIATION OF EXPLORATION GEOCHEMISTS.

"By-law" means this By-law and all other by-laws of the Association from time to time in force and effect;

"letters patent" means the letters patent incorporating the Association dated February 1, 1977, as from time to time amended and supplemented by supplementary letters patent;

"meeting of members" includes an Annual Meeting of members and a Special Meeting of members;

"meeting of members" includes the Annual General Meeting of members and any Special Meetings of members;

words importing the singular number include the plural and vice versa; words importing the masculine gender include the feminine and neuter genders; and words importing persons include individuals, corporations, partnerships, trusts and unincorporated organizations.

unincorporated organizations;
the words "member" and "membership" include collectively the specific categories of Fellow, Member, Student Member, Honorary Member, and Corporate Member.

ARTICLE TWO MEMBERSHIP

2.01 MEMBERS. The members of the Association shall be the applicants for incorporation of the Association and such eligible candidates for election as may hereafter be admitted to membership in accordance with the By-laws of the Association from time to time in force and effect. A membership is not transferable.

2.01 MEMBERS. The members of the Association shall be the members existing on the registration of this By-Law and such eligible candidates for election as may hereafter be admitted to membership in accordance with the By-law of the Association. A membership is not transferable.

Continued on Page 16

Shea Clark Smith

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Proposed Amendments

Continued from Page 15

2.02 CLASSES OF MEMBERS. The Association shall consist of:

- (i) ~~Voting Members, and also~~
- (a) ~~Fellows, holding voting privileges in the affairs of the Association, and also~~
- (ii) ~~Honorary Members, Affiliate Members,~~
- (b) ~~Members, Honorary Members, Student Members and Corporate Members,~~ all without voting privileges in the affairs of the ~~collectively referred to as Non-voting members.~~ Association and collectively referred to as Non-voting members.

The former Voting Members and Affiliate Members of the Association under the previous By-law shall, respectively, become Fellows and Members of the Association under this amended By-law.

2.03 APPLICATION FOR MEMBERSHIP. The application of candidates

2.03 APPLICATION FOR MEMBERSHIP. The application of a candidate

~~for Voting, Affiliate, Student or Corporate for Fellow, Member, Student or Corporate membership must be accompanied by such dues as are prescribed by the Council and by such information as is required on forms prescribed by the Council obtainable from the Secretary of the Association.~~

~~prescribed by the Council from time to time and by such information as is required on forms prescribed by the Council and a declaration signed by the candidate that he has read and agrees to honour and abide by the Code of Ethics of the Association if and when elected to membership.~~

~~The application form of candidates for Voting Membership~~

~~Normally, the application form of a candidate for Fellow~~

~~must be signed by at least three Voting Members.~~

~~must be signed by three Fellows. However, for applicants from countries where there are fewer than ten resident Fellows of the Association, the required forms may be signed by at least four professional colleagues, supervisors, or university teachers who are able and willing to serve as meaningful referees for the applicant. Applicants from such countries must meet the same additional requirements for qualification as Fellow as are required for all other applicants.~~

~~A candidate seeking election to membership in the~~

~~A candidate seeking election as Fellow in the Association will be responsible for distributing referee report forms, supplied with the application form, to the persons supporting his application.~~

~~Fellows of the Association or professional colleagues who are supporting his application.~~

~~The application form of a candidate for Affiliate~~

~~The application form of a candidate for membership as a Member must be signed by the candidate who states that must be signed by the candidate and must include a declaration signed by the candidate that he is actively engaged in scientific or technological work related to geochemical exploration at the time of his application and for at least two years prior thereto.~~

~~The application form of candidates for Student Membership must be signed by a Professor of his University, or the Principal of his School of Mines or by one Voting Member.~~

~~The application form of a candidate for membership as a Student Member must be co-signed by a professor of the candidate's university, or the principal or head of the candidate's school of mines, or by one Fellow.~~

~~A candidate seeking election to membership in the Association will be responsible for distributing referee report forms, supplied with the application form, to the persons supporting his application.~~

~~Completed application forms shall be forwarded to the Secretary. The persons supporting the candidate shall forward the completed referee report forms directly to the Secretary.~~

~~Completed application forms shall be forwarded to the Association head office. The persons supporting the candidate shall forward the completed referee report forms to the Association head office.~~

2.04 ELECTION AND TRANSFER OF MEMBERS. The transfer or election

2.04 ELECTION OF MEMBERS. The election of candidates for membership in the Association in any class shall be by Council as hereinafter provided. The names, shall be by Council as hereinafter provided. The name, addresses and position of all eligible candidates for address, and position of each eligible candidate for Voting, Affiliate, Student or Corporate membership in the Fellow, Member, Student, or Corporate Membership in the Association shall be submitted to Council by the Admissions Committee together with its recommendations. The Council will review the candidates for membership at the next will review the candidates for all classes of membership at the Council Meeting or by correspondence and if no objection to Council Meeting next following the submission by the Admissions Committee or by correspondence, and if no objection to any candidate's membership is raised, the Chairman of the Council Meeting or the President will instruct the Secretary to prepare a list of names, addresses, and positions of the candidates for inclusion in the next Newsletter or other candidates, by category of membership, for inclusion in the next issue of the Association newsletter or other specified publication to be forwarded to all members of the Association.

If, after a minimum of 60 days have elapsed following the submission of a candidate's information to the the submission of candidate information to the membership, no signed letters of objection from a member are membership, no signed letters of objection from any member of the Association are received by the Secretary objecting to his admission, the received by the Secretary objecting to any candidate's admission, the candidate will be deemed elected subject to the payment of candidate will be deemed elected subject to the receipt by the Association of payment of required dues.

~~An Honorary Member shall be elected by the unanimous vote of Councillors of the Association.~~

~~If an objection is raised to any candidate's Membership, either by a Councillor or by another member, Council will decide the matter by a majority vote.~~

~~An Honorary Member shall be elected by the unanimous vote of all Councillors of the Association.~~

2.05 TIME OF ELECTION. Members, Affiliate Members, Student Members,

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Proposed Amendments

Continued from Page 16

2.05 TIME OF ELECTION. Fellows, Members, Student Members, and Corporate Members elected prior to October 1st in any year shall pay full annual subscription for that calendar year and shall pay the full annual dues for that calendar year and shall be entitled to receive upon request all publications of the Association for the year. Those elected subsequent to the Association for that year. Those elected subsequent to September 30th shall pay no annual subscription for the September 30th shall pay no annual dues for the balance of the calendar year, nor shall they be entitled to any publication of the Association for that year.

2.06 VOTING MEMBERS. The first Voting Members shall be the applicants for incorporation of the Association. Additional Voting Members may be elected from eligible candidates for Voting Membership. To be eligible for

2.06 FELLOWS. To be eligible for election as a Voting Member, a candidate shall; election as a Fellow, a candidate shall:

- (i) possess a degree in pure or applied science from a recognized University or School of Mining;
- (a) possess a Bachelor's or equivalent degree in pure or applied science from an educational institution recognized by the Council;
- (ii) have completed a period of training and professional experience
- (b) have completed a period of training and professional experience of at least six years duration in pure or applied science which shall include at least two years in applying, developing, researching, or teaching geochemical exploration methods;
- (iii) be actively practicing his profession at the time of his application; and;

- (c) be actively practicing exploration geochemistry at the time of his application;
- (iv) otherwise satisfy the Council that he is a fit and
- (d) satisfy the Council that he is a fit and proper person to become a Voting Member.

Up to three years of post-Bachelor's training at a university can be applied toward the six-year requirement in (b) of this Section.

2.07 ADVANCEMENT TO FELLOW FROM MEMBER. Any member in good standing, including an Honorary Member, can be nominated as a Fellow by an established Fellow of the Association by completing the Nominating Sponsor's Form. The Nominating Sponsor shall identify at least two other Fellows who also agree to sponsor the nomination.

It is the responsibility of the sponsors and nominee to document the basis for the nomination for advancement to Fellow so that the Admissions Committee can evaluate the nomination and prepare a recommendation to the Council. A nominee for Fellow shall meet all requirements for Fellow as set forth in Section 2.06 above.

2.07 HONORARY MEMBERS. To be eligible for election as an

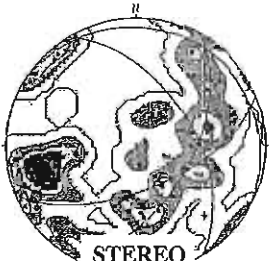
2.08 HONORARY MEMBERS. To be eligible for election as an Honorary Member, a person shall have made a distinguished contribution to exploration geochemistry that warrants exceptional recognition. A Voting Member who is elected an exceptional recognition. A Fellow who is elected an Honorary Member shall retain all the rights and privileges of a Voting Member of a Fellow and shall have the title of Honorary Member.

An Honorary Member who qualifies as a Fellow may be advanced to the status of Fellow by the means set forth in Section 2.06 and 2.07 and shall then have full voting privileges.

2.08 AFFILIATE MEMBERS. To be eligible for election as an

2.09 MEMBERS. To be eligible for election as a Affiliate Member, a candidate shall:

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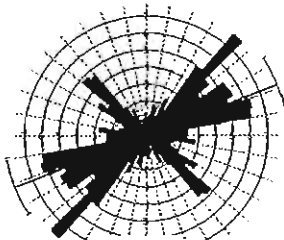
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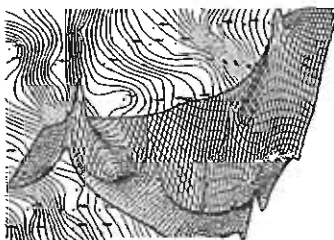
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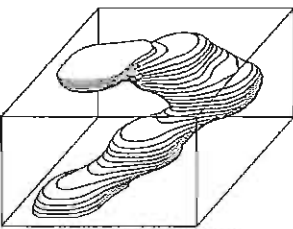
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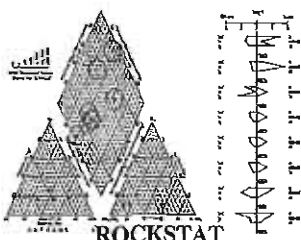
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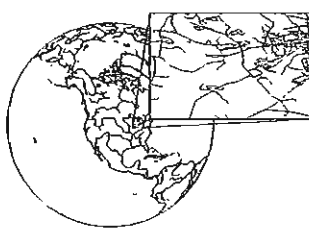
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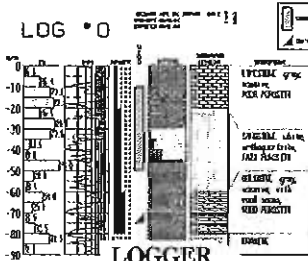


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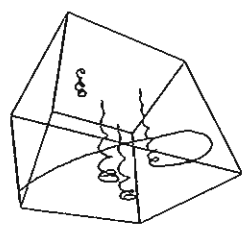


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Proposed Amendments

Continued from Page 17

Member, a candidate shall:

- (i) ~~be actively engaged in scientific or technological~~
- (a) ~~be actively engaged in~~
~~work in geochemical exploration at the time of his~~
~~geochemical exploration at the time of his~~
~~application and for at least two years prior~~
~~thereto; and~~
- (ii) ~~otherwise satisfy the Council that he is a fit and~~
- (b) ~~satisfy the Council that he is a fit and~~
~~proper person to become an Affiliate Member;~~
~~proper person to become a Member.~~

~~2.09 STUDENT MEMBERS. To be eligible for election as a Student~~

~~2.10 STUDENT MEMBERS. To be eligible for election as a Student~~
~~Member, a candidate must be taking an~~
Member, a candidate must:

- (a) ~~be taking an~~
~~approved course of instruction or training in a field of~~
~~pure or applied science at a recognized institution; be~~
~~pure or applied science at a recognized institution;~~
~~interested in the application of this science to geochemical~~
~~exploration problems and otherwise satisfy the Council that~~
- (b) ~~satisfy the Council that~~
~~he is a fit and proper person to become a Student Member;~~
~~he is a fit and proper person to become a Student Member.~~

~~2.10 CORPORATE MEMBERS. To be eligible for election as a~~

~~2.11 CORPORATE MEMBERS. To be eligible for election as a~~
Corporate Member, a candidate shall:

- (i) ~~be a corporation, partnership or association engaged in or~~
~~providing services to those engaged in exploration for natural~~
~~resources;~~
- (ii) ~~either provide services and facilities for exploration geochemistry~~
~~or employ exploration geochemistry in its exploration programs;~~
- (iii) ~~be desirous of maintaining a high standard of excellence in the~~
~~use of exploration geochemistry;~~
- (iv) ~~be actively pursuing its activities or providing services to those~~
~~engaged in exploration for natural resources at the time of its~~
~~application;~~
- (v) ~~satisfy Council that it has an active interest in supporting the~~
~~objects and purposes of the Association; and;~~
- (a) ~~be a corporation, partnership, or association;~~
- (b) ~~satisfy Council that it has an active interest in supporting the~~
~~objectives and purposes of the Association;~~
- (vi) ~~otherwise satisfy the Council that it is a fit and proper person~~
~~to become a Corporate Member.~~
- (c) ~~satisfy the Council that it is a fit and proper person to become~~
~~a Corporate Member.~~

~~2.11 USE OF TITLES. Affiliate and Student Members shall not~~

~~2.12 USE OF TITLES. Only Fellows and Honorary Members shall be~~
~~permitted to~~
~~designate themselves as members of the Association on any~~
~~letterhead or in any professional notice. If a Voting,~~
~~letterhead, business card, or professional notice. If a Fellow or~~
~~Honorary or Corporate Member shall have occasion to~~
~~Honorary Member shall have occasion to~~
~~designate himself as a member of the Association on any~~
~~letterhead or in any professional notice, he shall state the~~
~~letterhead, business card, or professional notice, he shall state the~~
~~class of membership he holds and may do so by the use of an abbreviated~~
~~title as follows:~~

Voting Member	M.A.E.G.
Fellow	FAEG
Honorary Member	Hon. MAEG
Corporate Member	C.M.A.E.G.

~~2.12 STANDARD OF CONDUCT. All members of the~~

~~2.13 STANDARD OF CONDUCT. All members of the~~
Association shall be guided by the highest standards of ethics, personal
honour, and professional conduct as exemplified by the Code
of Ethics of the Association (Schedule "A" hereto). Each
of Ethics of the Association (Schedule A of this By-law). Each
candidate for admission to the Association shall undertake to adhere to
the Code of Ethics of the Association as amended from time to time.

~~2.13 TERM OF MEMBERSHIP. All members shall serve as~~

~~2.14 TERM OF MEMBERSHIP. All members shall serve as~~
members of the Association until their death or until their membership
is terminated in accordance with sections 2.15, 2.16, 2.17, or 2.18
is terminated in accordance with sections 2.16, 2.17, 2.18, or 2.19
of this By-law.

~~2.14 CERTIFICATES OF MEMBERSHIP. Any certificate of membership~~

~~2.15 CERTIFICATES OF MEMBERSHIP. The Association may elect to~~
issue certificates of membership. Any certificate of membership
issued by the Association remains the property of the
Association. A certificate of membership held by a member
Association and may be recalled at any time. A certificate of membership
held by a member shall be returned to the Secretary of the Association
by the member upon the termination of his membership period.

~~2.15 DUES. The dues for membership in the Association shall be~~

~~2.16 DUES. The dues for membership in the Association shall be~~
~~fixed from time to time by the Council. Annual dues shall~~
~~set from time to time by the Council. Annual dues shall pertain to a~~
~~calendar year and shall be payable in advance~~
~~on January 1st of each calendar year. A notice shall be~~
~~before January 1st of each calendar year. A notice shall be~~
~~mailed to each member of the Association before that date stating the~~
~~amount of annual dues.~~

A member who is in arrears in payment of dues shall not be entitled
to exercise the rights and privileges of membership in the Association,
and Council shall be entitled to terminate the membership of any member
if the dues payable by such member, or any portion thereof, remains
outstanding for the period of time that may be fixed by Council.
outstanding for the period of time of one year or a lesser period as fixed
from time to time by the Council.

Honorary Members shall not be required to pay dues and
shall receive any publications of the Association free of
shall receive the publications of the Association free of charge.

~~2.16 TERMINATION OF MEMBERSHIP. The membership of any~~

~~2.17 TERMINATION OF MEMBERSHIP. Membership~~
~~member may be terminated by resolution passed by at least three~~
~~quarters of the votes cast at a Meeting of the Councilors at which at~~
~~least 10 Councilors are present for cause (including conduct unbecoming~~
~~of a member which subjects the Association or other members to~~
~~criticism or adverse publicity, or failure to comply with the letters~~
~~patent, Code of Ethics or By-laws of the Association) provided that~~

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The Association of Exploration Geochemists (AEG)



is pleased to announce the

1992 AEG Student Paper Competition

XRAL

cosponsored by
X-Ray Assay Laboratories
a Division of SGS Supervision Services

The Association of Exploration Geochemists will hold its ninth annual Student Paper Competition this year. Papers eligible for the competition must address an aspect of exploration geochemistry and represent research performed as a student. The student must be the principal author as attested to by an accompanying letter from the chairman of the student author's committee, and be published in any refereed scientific journal within 5 years of the student's graduation with his last graduate-level degree. A nomination may be made by anyone familiar with the work of the student. Nominations must be accompanied by three copies of the paper. The deadline for receipt of the nominations is December 31, 1992.

Win \$500

and receive a travel allowance to an AEG sponsored meeting

The prize will consist of a US \$500 cash prize donated by X-Ray Assay Laboratories, a Division of SGS Supervision Services, a two-year membership in the Association of Exploration Geochemists with receipt of the **Journal of Geochemical Exploration** and **EXPLORE**, and up to US \$500 for expenses to attend an AEG sponsored meeting. A photograph and curriculum vitae of the author and an abstract of the prize-winning paper will be published in **EXPLORE** as soon as possible after the announcement of the award.

Mail to: Dr. Jeffrey A. Jaacks,
Chairman, Student Paper Competition
c/o Westmont Gold, Inc.
390 Union Blvd., Suite 580
Lakewood, Colorado, USA, 80228
Phone: (303) 988-9677
FAX: (303) 988-9689

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may be terminated for cause (including conduct unbecoming of a member that subjects the Association or other members to criticism or adverse publicity, or failure to comply with the letters patent, Code of Ethics, or By-law of the Association) by at least three-quarters of the votes cast at a meeting of the Councillors at which at least ten Councillors are present, provided that written notice of such proposed action and the reasons ~~therefore are delivered to the member at least fifteen days before the Council Meeting at which the action is to be taken and that the member is invited to attend the Meeting~~ therefore are sent by certified or registered mail to the member at his address as recorded in the books of the Association at least 30 days before the meeting at which the motion is to be made and that the member is entitled to be present and to be heard at the meeting, either in person or by telephone, ~~to show cause why he should not be expelled from the~~ to give reason why his membership should not be terminated. ~~Association. Any member receiving such a notice shall be~~ Any member receiving such a notice shall be entitled to be represented by counsel at the meeting ~~referred to in the notice.~~ referred to in the notice. The Chairman of the meeting shall establish such rules for the conduct of the Council Meeting as he in good faith deems necessary or expedient.

~~2.17 TERMINATION OF STUDENT MEMBERSHIP. Any~~

2.18 TERMINATION OF STUDENT MEMBERSHIP. Any Student Member of the Association who has not, within a period of six years from the date of his admission, applied for and obtained transfer to another class of membership shall, at the discretion of Council and after due notice has been given to him by the Secretary, cease to be a Student Member.

A Student Member may be elected either as a Member or as a Fellow. In order to be elected as a Member, a Student Member must meet the criteria and conditions of Section 2.09. In order to be elected as a Fellow, the Student Member must meet the criteria and conditions of Section 2.06.

~~2.18 RESIGNATIONS. Any member may resign from the~~

2.19 RESIGNATIONS. Any member may resign from the Association by delivering a written resignation to the Secretary of the Association.

2.19 MEMBERSHIP OF MEMBERS OF THE PRIOR ASSOCIATION. ~~Notwithstanding anything herein contained the members of the unincorporated Association of Exploration Geochemists (the prior Association) of which this Association is the successor will automatically be granted membership in the Association by resolution of the Councillors or the members passed at a Meeting held within six months after the incorporation of the Association. Any such resolution shall specify the class of membership and any restriction on the term thereof to be imposed on any person who is being provided with membership in the Association pursuant to this Section 2.19.~~

2.20 ANNUAL DUES OF MEMBERS OF THE PRIOR ASSOCIATION. Any member of the Prior Association who becomes a member of the Association shall be given credit by the Association for any annual dues paid by such member to the Prior Association for a calendar year in which he became a member of the Association.

2.21 ASSETS AND LIABILITIES OF THE PRIOR ASSOCIATION. The Association, through the Council, is hereby authorized and directed to accept the transfer to it of all assets of the Prior Association and to assume all the liabilities of the Prior Association.

ARTICLE THREE AFFAIRS OF THE ASSOCIATION

3.01 HEAD OFFICE. Until changed in accordance with the Act, the head office of the Association shall be in the Borough of Etobicoke in the Municipality of Metropolitan Toronto in the Province of Ontario.

head office of the Association shall be in Vancouver, in the province of British Columbia, Canada.

3.02 CORPORATE SEAL. The Corporate Seal of the Association shall be in the form impressed hereon, or in such other form as the Council may from time to time determine.

(Note: The Corporate Seal will be drafted into the revised By-law near this position.)

3.03 FINANCIAL YEAR. Unless otherwise ordered by the Council, the financial year of the Association shall end on the last day of December in each year.

3.04 EXECUTION OF INSTRUMENTS. Deeds, transfers, assignments, contracts, obligations, certificates, and other instruments may be signed on behalf of the Association by any two Councillors appointed by resolution of Council. In Councillors appointed by two-thirds vote of the Councillors present at a properly constituted meeting. In addition, the Council may from time to time by resolution direct the manner in which the person or persons by whom any particular instruments or class of instruments may or shall be signed. Any person authorized to sign an instrument on behalf of the Association may affix the corporate seal thereto.

3.05 BANKING ARRANGEMENTS. The banking business of the Association shall be transacted with such banks, trust companies, or other firms or corporations as may from time to time be designated by or under the authority of the Council. Such banking business or any part thereof shall be transacted under such agreement, instructions, and delegations of powers as the Council may from time to time prescribe or authorize.

3.06 BORROWING POWERS. The Council may from time to time, in such amounts and on such terms as it deems expedient:

- (a) ~~Borrow money upon the credit of the Association;~~ borrow money upon the credit of the Association;
- (b) limit or increase the amount to be borrowed;
- (c) issue debentures or other securities of the Association;
- (d) sell or pledge such debentures or other securities for such sums and at such prices as may be deemed expedient;
- (e) ~~mortgage, hypothecate charge, or pledge all or any~~ mortgage, hypothecate, charge, or pledge all or any of the real and personal property, undertaking, and rights of the Association to secure any such debentures or other securities or any money borrowed or any other liability of the Association.

3.07 SCHOLARSHIPS AND PRIZES. The Council may from time to time,

3.07 AWARDS. The Council may from time to time, in such amounts and in such a manner as it deems proper and appropriate:

- (a) ~~Award scholarships, bursaries, prizes and/or medals~~ award scholarships, bursaries, prizes, medals, and/or certificates to a person or persons who, in the opinion of a majority of Councillors are deserving of such awards;
- (b) ~~Sponsor distinguished lecturers to advance the~~ sponsor distinguished lecturers to advance the profession of exploration geochemistry;
- (c) ~~Accept or receive donations to finance lectures,~~ accept or receive donations to finance lectures, scholarships, bursaries, prizes, and medals that may be awarded by the Council or other activities of the Association.

ARTICLE FOUR COUNCILLORS

4.01 COUNCIL. Subject to the provisions of Section 11.01, the affairs of the Association shall be managed by its board of directors to be known as its Council. Until changed in

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~~4.01 COUNCIL. The affairs of the Association shall be managed by its board of directors, to be known as its Council. Until changed in accordance with the Act, the number of Councillors, including the Officers of the Association, the Ordinary including the Officers of the Association, Ordinary Councillors, and Councillors and Past President Councillors, shall be 17. In Past-President (ex-officio) Councillors, shall be 17. In addition, not more than 10 Regional Councillors may be elected to Council. The quorum for the transaction of members of Council at any one time. The quorum for the transaction of business at any Meeting of the Council except as specified business at any meeting of the Council, except as specified in Section 2.16 of this By-law shall be 5 Councillors; in Section 2.17 of this By-law, shall be 5 Councillors. Notwithstanding vacancies, the remaining Councillors may exercise all the powers of the Council so long as a quorum of the Council remains in office.~~

~~4.02 QUALIFICATION. All Councillors shall be Voting Members of~~

4.02 QUALIFICATION. All Councillors shall be Fellows of the Association.

~~4.03 ORDINARY COUNCILLORS TERM. Ordinary Councillors shall be~~

4.03 TERM OF ORDINARY COUNCILLORS. Ordinary Councillors shall be elected by the Voting Members of the Association. The elected by the Fellows of the Association. The period of office of each Ordinary Councillor shall be two years and half the total number of Ordinary Councillors, or years. The term in office shall begin on the date of the Annual General Meeting in the calendar year of election. Half the total number of Ordinary Councillors, or such larger number as may be required to constitute a full complement of Ordinary Councillors, shall be elected each year. In the event that more than five Ordinary Councillors are elected because of vacancies resulting from the removal or vacation of appointment by, or the election to the or vacation of appointment, or from the election to the position of an Officer of the Association of an Ordinary Councillor in good standing, the elected Ordinary Councillors receiving the smaller number of votes will serve Councillors receiving successively smaller number of votes will serve to fill these vacancies. Ordinary Councillors shall be eligible for re-election if qualified. No person shall hold office as an Ordinary Councillor for a continuous period of more than four years.

~~4.04 NOMINATION OF ORDINARY COUNCILLORS. A duly qualified Voting~~

4.04 NOMINATION OF ORDINARY COUNCILLORS. A duly qualified Fellow

Member may be nominated for election as an Ordinary may be nominated for election as an Ordinary Councillor either by:

- (a) a resolution of the Council;
- (b) any six Voting Members where such nomination is
- (b) by written nomination from any six Fellows, where such nomination is received by the Secretary before November 1 immediately preceding such election together with the written undertaking of such member to serve as the written agreement of such member to serve as an Ordinary Councillor and attend meetings of Council if elected.

The Council shall ensure that at least two candidates shall be nominated in excess of the number of Ordinary Councillors to be elected.

4.05 ELECTION OF ORDINARY COUNCILLORS. The Council shall issue

to the Voting Members, at least two calendar months before the date of the Annual Meeting of members, the list of to the Fellows, during January of each year, a list of members nominated for election as Ordinary Councillors in

Fellows nominated for election as Ordinary Councillors in accordance with 4.04 above, which shall be regarded as the balloting list.

~~Each Voting Member wishing to vote shall return a properly marked ballot to the Secretary, to be received by the Secretary no later than 10 days before the date of the Annual Meeting of members.~~

Each Fellow wishing to vote shall return a properly marked ballot to the Secretary, to be received by the Secretary at least three weeks prior to the Annual General Meeting. Any ballot shall be deemed invalid if not completed in accordance with instructions included in the ballot.

The Secretary shall transfer the sealed ballots received to the auditor of the Association, or to disinterested persons appointed by the auditor, hereafter referred to as Ballot Scrutineers, for opening and counting. The auditor shall provide the Secretary with the result of the balloting, which shall be reported at the next Annual General Meeting and in the first available issue of the Association newsletter.

The candidates elected shall be those who receive the highest number of letter ballots returned to the Secretary by the prescribed date.

The results of the balloting shall be reported to the Annual Meeting. In the event that candidates receive an equal number of votes, the names of the candidates shall be submitted to the Chairman of the Annual Meeting, who shall determine by his casting vote, or Annual General Meeting, who shall determine by his tie-breaking vote, or votes, which of the candidates shall be elected.

4.06 PAST-PRESIDENT COUNCILLORS. The President of the Association shall become a Past-President Councillor having Association shall become a Past-President (ex-officio) Councillor having the privileges of an Ordinary Councillor after the expiry having the privileges of an Ordinary Councillor. This term starts after the expiry of his term as President until the beginning of the second Annual Meeting thereafter. of his term as President and continues for no more than two years.

4.07 REGIONAL COUNCILLORS. Regional Councillors shall have the privileges of Ordinary Councillors, and shall be residents of the regions which they are elected to represent, and shall promote the interests of the Association in that region. No Regional Councillor shall be elected to represent any region in Canada or the United States. The period of office of a Regional Councillor shall be two years and he shall be eligible for re-election if qualified. eligible for re-election.

4.08 NOMINATION OF REGIONAL COUNCILLORS. The Council shall decide which regions shall be represented by Regional Councillors and shall notify the Voting Members of its Councillors and shall notify the general membership by means of decision before May 1 in each year. A duly qualified Voting an announcement in the Association newsletter or other specified publication. Fellows in the regions to be represented shall be individually notified before May 1 in each year in which election is to occur. A Fellow in good standing Member may be nominated for election as a Regional may be nominated for election as the Regional Councillor to represent a region chosen by the Council in Councillor to represent a region chosen by the Council in the manner above provided either by:

- (a) a resolution of the Council;
- (b) any four Voting Members who reside in the region to
- (b) a written nomination by any four Fellows who reside in the region which the Regional Councillor is nominated to represent where such nomination is received by the represent. Such nomination must be received by the Secretary before November 1 immediately preceding such election together with the written undertaking of such member to serve as a Regional Councillor. of such member agreeing to serve as a Regional Councillor if elected.

4.09 ELECTION OF REGIONAL COUNCILLORS. If only one nomination is made for the election of any one Regional Councillor, the member nominated, if duly qualified, shall be declared to be

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~~elected at the following Annual Meeting;~~
elected at the following Annual General Meeting.

If, in the case of a particular area, more than one nomination is made for the election of a Regional Councillor, the Council shall prepare and issue a

~~voting paper to each Voting Member whose registered address~~
voting ballot to each Fellow whose address in the records of the Association

~~is in the area concerned. The voting paper shall be~~
is in the area concerned. The voting ballot shall be
~~dispatched with the balloting list referred to in By-law~~
dispatched with the balloting list referred to in Section
~~4.06, and shall be returnable with the balloting list. The~~
4.05, and shall be returnable with the balloting list. The
~~voting papers shall be examined by the Scrutineers appointed~~
voting ballots shall be examined by the Ballot Scrutineers appointed
~~under By-law 4.06 who shall declare the result of their~~
under Section 4.05 who shall provide the Secretary with the result of
~~the balloting, which will be reported at the next Annual~~
the balloting, which will be reported at the next Annual
~~scrutiny to the Annual Meeting. The candidate elected shall~~
General Meeting after the election. The candidate elected shall
be the one who receives the highest number of votes, and in the event
of an equality of votes, the Chairman of the
~~Annual Meeting shall determine by his casting vote which~~
Annual General Meeting shall determine by his tie-breaking vote which
candidate shall be elected.

4.10 TERMINATION OF REGIONS REPRESENTED BY REGIONAL COUNCILLORS. The Council may, by resolution, terminate any Region designated by it, which termination shall take effect at the
~~next Annual Meeting;~~
next Annual General Meeting.

4.11 VACATION OF APPOINTMENT. The position of Councillor shall be automatically vacated:

- (a) if a Councillor shall resign his office by delivering a written resignation to the Secretary of the Association;
- (b) if he is found to be a lunatic or becomes of unsound mind;
- ~~(c) if, for any reason, he ceases to be a Voting Member;~~
- ~~(c) if, for any reason, he ceases to be a Fellow;~~
- ~~(d) on death; or~~
- ~~(d) on death;~~
- ~~(e) if a Regional Councillor ceases to be a resident in the particular area he was elected to represent.~~
- (e) if a Regional Councillor ceases to be a resident in the particular area he was elected to represent.

4.12 REMOVAL OF COUNCILLORS. The members may, by a resolution
~~passed by at least three-quarters of the members at a~~
passed by at least three-quarters of the Fellows present and voting at
~~meeting of members called for that purpose, remove any~~
an Annual General Meeting or Special Meeting called for that purpose,
remove any Councillor before the expiration of his term and may, by a
majority of the votes cast at the meeting, elect any duly
~~qualified Voting Member in his stead for the remainder of this term.~~
qualified Fellow in his stead for the remainder of his term.

4.13 VACANCIES. Vacancies on the Council may be filled for the
~~remainder of its term either by the Council if the remaining~~
remainder of the terms of the positions vacated, either by the Council
if the remaining
~~Councillors constitute a quorum or by the members at the~~
Councillors constitute a quorum or by the Fellows at the
~~Annual Meeting of members or at a general meeting of members~~
Annual General Meeting or at a Special Meeting of members
called for that purpose. If the number of Councillors is
increased, a vacancy or vacancies on the Council to the number of the
authorized increase shall thereby be deemed to have occurred which
~~may be filled in the manner above provided.~~
increased beyond the number specified in Section 4.01, the vacancy or
vacancies on the Council thereby created shall be filled in the manner
above provided.

In the absence of a quorum of Councillors, the remaining Councillors

shall forthwith call a general meeting of the members to fill the vacancies, and, in default or if there are no remaining Councillors, the meeting may be
~~called by any Voting Member.~~
called by any Fellow.

4.14 CALLING OF MEETINGS. Meetings of the Council shall be held from time to time, but at least three times per year, at the call of the President or a majority of Councillors. Notice of the time and place of every meeting so called shall be given to each Councillor not less than 48 hours (excluding

~~Saturdays, Sundays) before the time when the meeting is to~~
Saturdays and Sundays) before the time when the meeting is to be held, save that no notice of a meeting shall be necessary if all the Councillors are present or if those absent waive notice of or otherwise signify their consent to such meeting being held.

If a quorum is not present at a Council Meeting called under the provision of this By-law, the meeting will be adjourned for a period of not less than one week. Notice of such adjourned meeting shall be issued to all Councillors,
~~and the business for which the Meeting was adjourned may be dealt~~
with only by Councillors present at the adjourned Meeting;
and the Councillors present at the adjourned meeting shall be deemed to be a quorum.

4.15 FIRST MEETING OF NEW COUNCIL. Providing a quorum of Councillors be present, each newly elected Council shall, without notice, hold its first meeting immediately following
~~the Annual Meeting of members.~~
the Annual General Meeting of members.

4.16 VOTES TO GOVERN. At all meetings of the Council every question shall be decided by a majority of the votes cast on the question, and in case of an equality of votes the Chairman of the meeting shall be entitled to a second or
~~casting vote.~~
tie-breaking vote.

4.17 CHAIRMAN. The President or, in his absence, the most senior Vice-President in attendance shall be Chairman of any meeting of Councillors, and, if no such Officer be present, the Councillors present shall choose one of their number to be Chairman.

4.18 REMUNERATION AND EXPENSES. ~~The Councillors shall serve~~

4.18 REMUNERATION AND EXPENSES. The Councillors and Officers shall serve
~~as such without remuneration and no Councillor shall directly~~
as such without remuneration and no Councillor or Officer shall directly or indirectly receive any profit from his position as such,
~~provided that a Councillor may be paid for reasonable~~
except that a Councillor or Officer may be paid for reasonable expenses incurred by him in the performance of his duties as may from time to time be approved by Council.

4.19 CODE OF ETHICS. The Code of Ethics of the Association
~~(Schedule "A" hereto) may from time to time be amended by~~
(Schedule A of this By-law) may from time to time be amended by the Council. Upon such amendment, the Secretary shall forthwith send each of the members a copy thereof.

4.20 ANNUAL REPORT. ~~The Council shall present an Annual Report on the affairs of the Association to the Annual Meeting of members, together with an audited statement of accounts of the Association.~~

4.20 ANNUAL REPORT. The Council shall prepare an Annual Report on the affairs of the Association for the Annual General Meeting of members. The Report shall include written reports from the Officers, Regional Councillors, Committee Chairmen, and an audited statement of accounts of the Association.

ARTICLE FIVE OFFICERS

5.01 APPOINTMENT OF OFFICERS. From time to time the Council shall appoint from among the Councillors or those who have been Coun-

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cillors thereof, a President, a First Vice-President, a Second Vice-President, a Secretary, and a Treasurer.

The Council may appoint such other Officers from among the members of the Association as the Council may determine from time to time. The offices of the Secretary and the Treasurer may be combined at the discretion of Council.

Eligible nominees for such appointments may be standing Councillors, past-Councillors, or past-officers. If more than one such nomination is obtained for a position, appointment shall be determined by a majority vote of Council. If only one nomination is obtained, that person will be deemed to have been appointed to the position at issue.

~~5.02A. PRESIDENT. The President shall be~~

5.02 PRESIDENT. The President shall be the chief executive officer of the Association and, subject to the authority of the Council, shall have the general supervision of the affairs of the Association, and he shall have such other powers and duties as the Council may prescribe. The term in office shall normally begin on the date of the Annual General Meeting in the calendar year of election. The President shall not hold office for a period of more than 16 months, except as provided in Section 7.08, and may not be appointed President following the end of his term of office for a further three-year period.
until at least three years have elapsed since the termination of any prior term in such position.

The President shall present the Annual Report of Council on the affairs of the Association to the Annual General Meeting of members.

~~5.02 The Vice-Presidents of the Association shall not hold~~

5.03 VICE-PRESIDENTS. The persons appointed as Vice-Presidents of the Association shall hold office for a period of not more than 32 months, except as provided in Section 7.08. One Vice-President shall be appointed before each Annual Meeting of members and the Vice-President who has held office for the longer period shall be referred to as the First Vice-President. The Vice-President who has held office for the shorter period shall be referred to as the Second Vice-President.

~~5.03 FIRST VICE-PRESIDENT. The First Vice-President shall~~

5.04 FIRST VICE-PRESIDENT. The First Vice-President shall perform the duties and exercise the powers of the President during his absence or disability. The First Vice-President shall have such other powers and duties as the Council or the President may prescribe.

~~5.04 SECOND VICE-PRESIDENT. The Second Vice-President shall~~

5.05 SECOND VICE-PRESIDENT. The Second Vice-President shall perform duties and exercise the powers of the President during the absence or disability of the President and the First Vice-President.

Unless otherwise changed by Council, in alternate years the newly elected Second Vice-President shall assume the responsibility of Regional Councillor Liaison Officer, to hold that position for two years.

The Second Vice-President shall have such other powers and duties as the Council or the President may prescribe.

~~5.05 Before each Annual Meeting of members, the Secretary and~~

5.06 SECRETARY AND TREASURER. Before each Annual General Meeting of members, the Secretary and Treasurer shall be appointed. The period of office of the Secretary and

the Treasurer shall not exceed 16 months except as provided in Section 7.08, and each retiring appointee shall be eligible for reappointment. Treasurer shall be appointed until the next Annual General Meeting, and each retiring appointee shall be eligible for reappointment.

~~5.06 SECRETARY. The Secretary shall attend and be the secretary~~

5.07 SECRETARY. The Secretary shall attend and be the secretary of all meetings of Council and members and shall enter, or cause to be entered in books kept for that purpose, minutes of all proceedings thereat; he shall supervise the publication of such papers or articles as Council may direct; he shall give or cause to be given, as and when instructed, all notices to members and Councillors; he shall be the custodian of the stamp or mechanical device generally used for affixing the corporate seal of the Association and of all books, papers, records, documents, and other instruments belonging to the Association except where some other officer or agent has been appointed for that purpose; he shall submit an annual report to the Council, and he shall perform such other duties as the Council or the President may prescribe.

~~5.07 TREASURER. The Treasurer shall keep or arrange for the~~

5.08 TREASURER. The Treasurer shall keep or arrange for the keeping of full and accurate books of account in which shall be recorded all receipts and disbursements of the Association, and under direction of the Council shall control the deposit of money, the safekeeping of securities and the disbursements of the funds of the Association; he shall from time to time as requested by the President or Council submit a written report to meetings of Council or shall prepare a written report on the financial status of the Association for inclusion in the report of Council to the Annual General Meeting, and shall, from time to time, as requested by the President or Council, submit additional written reports to Council or to meetings of members on his transactions as Treasurer and of the financial position of the Association, and he shall perform such other duties as the Council or the President may prescribe.

~~5.08 DUTIES OF OTHER OFFICERS. The duties of all other officers~~

5.09 DUTIES OF OTHER OFFICERS. The duties of all other officers of the Association shall be such as the terms of their engagement call for or as the Council or the President may prescribe. Any of the powers and duties of an officer to whom an assistant has been appointed may be exercised and performed by such assistant unless the Council or the President otherwise directs.

~~5.09 VARIATION OF DUTIES. From time to time the Council may~~

5.10 VARIATION OF DUTIES. From time to time the Council may vary, add to, or limit the powers and duties of any officer.

~~5.10 AGENTS AND ATTORNEYS. The Council shall have power~~

5.11 AGENTS AND ATTORNEYS. The Council shall have power from time to time to appoint agents or attorneys for the Association in or out of Canada with such powers of management or otherwise as may be thought fit. Council may delegate much powers of management to appointees as it may deem appropriate.

5.11 Council may remove at its pleasure any officer of the Association. Councillors and officers of the Association shall be paid such remuneration, if any, as the Council may from time to time determine. Any remuneration so payable to a Councillor who is also an officer or an employee of the Association or who is counsel or solicitor to the Association or otherwise serves it in a professional capacity shall, unless Council shall otherwise determine, be in addition to his salary as such officer or employee or to his professional fees, as the case may be.

5.12 REMOVAL OF OFFICERS. Council may remove, by at least three-quarters of the votes cast at a meeting of Councillors, at which at least ten Councillors are present, any officer of the Association.

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ARTICLE SIX PROTECTION OF COUNCILLORS AND OFFICERS

6.01 LIMITATION OF LIABILITY. No Councillor or officer of the Association shall be liable for the acts, receipts, neglects or defaults of any other Councillor or officer or employee, or for joining in any receipt or other act for conformity, or for any loss, damage, or expense happening to the Association ~~through the insufficiency or deficiency of title to any property acquired by order of the Council for or on behalf of the Association, or for the insufficiency or deficiency of any security in or upon which any of the monies of the Association shall be invested, or for any loss or damage arising from the bankruptcy, insolvency or tortious act of any person with whom any of the monies, securities or effects of the Association shall be deposited, or for any loss occasioned by any error of judgment or oversight on his part, or for any other loss, damage or misfortune whatever which shall happen in the execution of the duties of his office or in relation thereto unless the same shall happen through his own willful neglect or default.~~ unless the same shall happen through his own gross negligence or willful misconduct.

6.02 INDEMNITY. Every Councillor or officer of the Association, and every other person who has undertaken or is about to undertake any liability on behalf of the Association and his heirs, executors and administrators, and estate and effects, respectively, shall from time to time and at all times be indemnified and saved harmless out of the funds of the Association from and against:

- (a) ~~All costs, charges and expenses whatsoever which he~~
(a) all costs, charges, and expenses whatsoever which he sustains or incurs in or about any action, suit or proceedings that is brought, commenced or prosecuted against him for or in respect of any act, deed, matter or thing whatsoever made, done or permitted by him in or about the execution of the duties of his office, and
- (b) ~~All other costs, charges and expenses which he~~
(b) all other costs, charges and expenses which he sustains or incurs in or about or in relation to the affairs of the Association; except such costs, charges or expenses as are occasioned by his own willful neglect or default.
gross negligence or willful misconduct.

ARTICLE SEVEN COMMITTEES AND CORRESPONDENTS COMMITTEES

7.01 APPOINTMENT OF COMMITTEES. Subject to any restrictions that may be imposed from time to time by Council, the President may appoint committees from time to time for such purposes as he may deem necessary to further the objectives and purposes of the Association.

7.02 CHAIRMAN. The Chairman of each committee shall be named by the President or, at the wish of the President, by the members of each committee. Each Chairman shall prepare a report of the activities of his committee to be presented to ~~the Council at least two weeks before the Annual Meeting of the Council at least two weeks before the Annual General Meeting.~~ members. The Chairmen shall make such other reports to the The Chairman of each committee shall also make such other reports as President as he may from time to time request. the President or Council may from time to time request.

7.03 ADMISSIONS COMMITTEE. The President shall appoint an Admissions Committee that shall review the application of every candidate for membership in the Association. ~~The Admissions Committee shall consist of three Voting Members.~~ Admissions Committee shall consist of three Fellows, at least one of whom is a Councillor. The Chairman of the Admissions Committee shall be selected by the President from among the membership of the Admissions Committee of the previous year.

7.04 NEW MEMBERSHIP COMMITTEE. The President shall appoint

a New Membership Committee which shall disseminate information ~~concerning the objects and purposes of the Association to~~ concerning the objectives and purposes of the Association in order to increase its membership. ~~The New Membership committee shall increase the Association's membership. The New Membership Committee shall~~

~~consist of no more than four people, all of whom are Voting~~ consist of no more than four Fellows.

~~Members. The Chairman of the New Membership Committee shall~~ The Chairman of the New Membership Committee shall be named by the President.

7.05 BY-LAWS REVIEW. At an interval not to exceed ten years from the last review of the By-law, the President shall appoint a committee to review the By-law and to make recommendations to Council for necessary and appropriate changes.

7.05 MEMBER'S COMMITTEES. The Voting Members at an Annual

7.06 MEMBERS' COMMITTEE. The Fellows at an Annual General Meeting of the Association may appoint a committee to scrutinize all financial records of the Association and report their findings at a time or place specified by the meeting.

7.06 TERM. ~~The term of each committee shall expire at the close~~

7.07 TERM. The term of each committee shall expire at the close ~~of the Annual Meeting following its appointment unless~~ of the Annual General Meeting following its appointment unless ~~otherwise specified therein.~~ otherwise specified by the President or the Council.

The title and membership of all committees shall be set out in writing in the Minutes of the Annual General Meeting.

7.07 CORRESPONDENTS. ~~The President shall have the power to appoint Correspondents who shall be Voting Members resident outside Canada and the United States of America and to define their responsibilities.~~

7.08 PROVISION FOR OVER-HOLDING OF OFFICE. In the event, for any reason, the offices of President, First Vice-President, Second Vice-President, Secretary, or Treasurer of the Association, or any of them, are not filled at the Annual ~~Meeting of the Association the person holding any such~~ General Meeting of the Association, the person holding any such office for the previous year shall continue to hold the same until his successor is elected.

7.09 Council may remove at its pleasure any member of any

7.09 REMOVAL OF COMMITTEE MEMBERS. Council, by majority vote, may remove at its discretion any member of any committee. ~~Members of any committee shall be paid such remuneration, if any, as the Council may from time to time determine.~~

ARTICLE EIGHT ASSOCIATED SOCIETIES ASSOCIATED SOCIETIES AND ORGANIZATIONS

8.01 APPOINTMENT. ~~The council may from time to time approve a group of members of the Association and other persons independently organized, a club at a University or School of Mining or in a society or a local discussion group as an Associated Society of the Association for the purpose of cooperation in advancing the understanding of mineral exploration and furthering the objects and purposes of the Association.~~

8.01 ADJUNCT ORGANIZATIONS. The Association may establish adjunct organizations on such terms and conditions as the Council may from time to time determine.

8.02 PARTICIPATION. ~~Members of associated societies may attend~~

8.02 PARTICIPATION. Members of adjunct organizations may attend meetings of the members of the Association and may otherwise

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all meetings of the Association and may otherwise participate in activities of the Association in such ways as may be approved by the Council;

may be approved by the Council, but shall not have the right to vote unless authorized by Council for specific matters of mutual interest.

8.03 AFFILIATED AND ASSOCIATED SOCIETIES. The Association may also interact closely with other organizations and societies by means of affiliations or associations to foster cooperative activities, such as joint meetings, for the benefit of the membership of the Association.

ARTICLE NINE MEETINGS OF MEMBERS

9.01 ANNUAL MEETING. The Annual Meeting of the members shall be

9.01 ANNUAL GENERAL MEETING. The Annual General Meeting of the members shall be

held at such time and on such day in each year as the held at such time and on such day in the first four months of each calendar year as the Council or the President may from time to time determine for the purpose of receiving reports and statements; electing Councillors; appointing the auditors and fixing or authorizing the Council to fix their remuneration, and for the transaction of such other business as may properly be brought before the meeting.

9.02 SPECIAL MEETINGS. The Council shall have power to call a Special Meeting of members at any time. The Council shall, on the requisition of at least five percent of the Fellows of the Association, proceed duly to call a Special Meeting of the members within 60 days of the receipt by the Secretary of such requisition. The requisition shall state the general nature of the business to be transacted at the Meeting and nature of the business to be transacted at the Special Meeting and shall be signed by the requisitionists and deposited at the head office of the Association and may consist of several documents in like form, each signed by one or more requisitionists.

9.03 NOTICE OF MEETING. Notice of the time and place of each

9.03 NOTICE OF SPECIAL OR ANNUAL GENERAL MEETINGS. Notice of the time and place of each Meeting of members shall be given in the manner hereinafter provided not less than 30 days before the day on which the Meeting is to be held to each member of the Association.

At least 30 days of notice of the time and place of each Special or Annual General Meeting of members shall be given to each member of the Association in the manner hereinafter provided.

The auditors of the Association are entitled to receive all notices and other communications relating to any Meeting of notices and other communications relating to any Special or Annual General Meeting of members that any member is entitled to receive.

9.04 CHAIRMAN. The President or, in his absence a Vice-President, shall be the Chairman of any Meeting of members. If no President, shall be the Chairman of any Special or Annual General Meeting of members. If no such Officer be present within fifteen minutes from the time fixed for holding the meeting, the persons present and entitled to vote shall choose one of their members to be Chairman.

9.05 RIGHT TO VOTE. At each Meeting of Members, only Voting

9.05 RIGHT TO VOTE. At each Special or Annual General Meeting of the membership, only Fellows

Members present or represented by proxy shall be entitled to present or represented by proxy shall be entitled to vote and each Voting Member shall be entitled to one vote. vote and each Fellow shall be entitled to one vote.

9.06 QUORUM. A quorum for the transaction of business at any Meeting of members shall be 15 persons present in person and Special or Annual General Meeting of members shall be 15 Fellows each entitled to vote thereat. If a quorum is not present

present in person or by proxy. If a quorum is not present thereat, the President may, by stating the time and place of such Meeting to the members assembled thereat, call a second within thirty minutes following the time established for the meeting, the President may, by stating to the members then assembled, call the time and place of a subsequent

Meeting of members to be held at least 7 days and not more meeting of members to be held at least 7 days but not more than 60 days thereafter. Any meeting so called by the President shall be duly called and it shall not be necessary to provide any further notice of the meeting to the members and auditors of the Association. The quorum of any meeting so called by the president shall be two members. so called by the President shall be two Fellows.

9.07 PROXIES. At any Meeting of members a proxy duly and

9.07 PROXIES. At any Special or Annual General Meeting a proxy-holder duly and

sufficiently appointed by a member shall be entitled to sufficiently appointed by a Fellow shall be entitled to exercise, subject to any restrictions expressed in the instrument appointing him, the same voting rights that the member appointing him would be entitled to exercise if

present at the meeting. A proxy need not be a Voting Member. present at the meeting. A proxy-holder need not be a member of the Association.

An instrument appointing a proxy shall be in An instrument appointing a proxy-holder shall be in writing and executed by or on behalf of the appointer.

9.08 DEPOSIT OF PROXIES. The Council may by resolution fix a time not exceeding 48 hours, excluding Saturdays and time not exceeding 48 hours, excluding Saturdays holidays, preceding any meeting or adjourned Meeting of and Sundays, preceding any Special or Annual General Meeting or adjourned such meeting of members before which time a proxy to be used at that meeting must be deposited with the Association or an agent thereof, and any period of time so fixed shall be specified in the notice calling the meeting or in the information circular or explanatory memorandum relating thereto. If no such time for the deposit of a proxy is fixed by the Council, a proxy shall be acted on only if prior to the time of voting it is deposited with the Secretary of the Association or of the Meeting or as may be directed in the Association or the secretary of the meeting or as may be directed in the notice calling the meeting.

9.09 SHOW OF HANDS. Any question at a Meeting of members shall

9.09 SHOW OF HANDS. Any question at a Special or Annual General Meeting of members shall be decided by a show of hands unless, either before or after a show of hands has been taken, a secret ballot thereon be required by the Chairman or be demanded by any member present or represented by proxy and entitled to vote.

9.10 CASTING VOTE. In case of an equality of votes at any Meeting

9.10 TIE-BREAKING VOTE. In case of an equality of votes at any Special or Annual General Meeting of members either upon a show of hands or upon a secret ballot the of members, either upon a show of hands or upon a secret ballot, the Chairman of the Meeting shall be entitled to a second or casting vote. Chairman of the meeting shall be entitled to a second or tie-breaking vote.

ARTICLE TEN NOTICES

10.01 METHOD OF GIVING NOTICES. Any notice (which term in this Article 10 includes any communication or document) to be given (which in this Article 10 includes sent, delivered or served) pursuant to the Act, the letters patent, the By-law or otherwise to a member, Councillor, or auditor, shall be sufficiently given if delivered personally to the person to whom it is to be given or if delivered to his last address as recorded

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in the books of the Association or if mailed by prepaid ordinary or air mail addressed to him at his said address or if sent at his said address by any means of wire or wireless or any other form of recorded communication. The Secretary may change the address on the books of the Association of any member, Councillor, Officer, or auditor in accordance with any information believed by him to be reliable. A notice so delivered shall be deemed to have been given when it is delivered personally or at the address aforesaid; a notice so mailed shall be deemed to have been given when deposited in a post office or public letter box; and a notice sent by seven days following the date when the notice is deposited in a post office or public letter box; a notice sent by means of wire or wireless or any other form of transmitted or recorded communication shall be deemed to have been given when delivered to the appropriate communication company or agency or its representative for dispatch on the next business day following the transmission.

10.02 COMPUTATION OF TIME. In computing the date when notice must be given under any provision requiring a specified number of days' notice of any meeting or other event, the date of giving the notice shall be excluded and the date of the meeting or other event shall be included.

10.03 OMISSIONS AND ERRORS. The accidental omission to give any notice to any member, Councillor or auditor, or the non-receipt of any notice by any member, Councillor or auditor, or any error in any notice not affecting the substance thereof shall not invalidate any action taken at any meeting held pursuant to such notice or otherwise founded thereon.

10.04 WAIVER OF NOTICE. Any member (or his duly appointed proxy or representative), Councillor, or auditor may waive any notice required to be given to him under any provision of the Act, the letters patent, the By-laws or otherwise and of the Act, the letters patent, the By-law, or otherwise and such waiver, whether given before or after the meeting or other event of which notice is required to be given, shall cure any default in giving such notice.

ARTICLE ELEVEN FINANCIAL

11.01 FINANCIAL YEAR. ~~Until otherwise ordered by the Council, the financial year of the Association shall end on the last day of December in each year.~~

11.02 AUDITORS. ~~The Members shall at each Annual Meeting~~

11.01 AUDITORS. The Fellows shall at each Annual General Meeting appoint an auditor to audit the accounts of the Association, to hold office until the next Annual Meeting, provided that to hold office until the next Annual General Meeting. ~~the Council may fill any casual vacancy in the office of~~ The Council may fill any casual vacancy in the office of auditor. The remuneration of the auditor shall be fixed by the Council.

ARTICLE TWELVE TRANSITIONAL

12.02 FIRST MEETING OF COUNCILLORS. ~~The first meeting of the council may be held without notice by the three first directors named in the application of the Association for letters patent, at which time the Council may elect the members, the Councillors (including Regional Councillors) and the Officers of the Association; and transact such other business as may properly come before the Council.~~

12.02 DESIGNATED REGIONS. Regions designated by the Prior Association are hereby designated as Regions for the purpose of Section 4.08.

ARTICLE THIRTEEN ARTICLE TWELVE AMENDMENT

~~13.01 Amendment. This By-law may not be amended or repealed,~~

12.01 AMENDMENT. This By-law may not be amended or repealed, nor any new By-law enacted, unless such amendment, repeal, or enactment is proposed by the Council or by no fewer than ~~twenty Voting Members. Upon receipt of such a proposal, the~~ five percent of the Fellows. Upon receipt of such a proposal, the Secretary shall send notice of the proposed action containing particulars thereof, and a ballot paper, to each ~~Voting Member at least four calendar months before the~~ Fellow at least two calendar months before the ~~proposed action is to be considered at a general meeting.~~ proposed action is to be considered at the Annual General Meeting or at a Special Meeting.

~~Each Voting Member wishing to vote shall return a properly~~ Each Fellow wishing to vote shall return a properly marked ballot paper to the Secretary, to be received by the Secretary no later than 10 days before the date of the

~~General Meeting called to consider the proposed action. The~~ Annual General Meeting or Special Meeting called to consider the proposed action. The Secretary shall transfer the sealed ballot papers received to the auditor of the Association, or to disinterested persons appointed by the auditor, for opening and counting. No such amendment, repeal, or enactment shall be effective unless the number of sealed ballots returned to the Secretary by the prescribed date exceeds 10% of the number of Voting Members, or the quorum for the Annual Meeting of Fellows, or the quorum for the Annual General Meeting or Special Meeting of

~~Members (15), whichever is the greater number, and is~~ Fellows (15), whichever is the greater number, and is confirmed by at least two-thirds of the votes cast. The result of the balloting shall be reported to the General Meeting. result of the balloting shall be reported at the Special or Annual General Meeting. Furthermore, no such amendment repeal or enactment shall be effective unless filed with and approved by the Minister of Consumer and Corporate Affairs in Canada.

~~ENACTED AND PASSED by the Directors this 21st day of April, 1977.~~ THIS BY-LAW NO. 1 ENACTED AND PASSED by the Directors this 21st day of April, 1977.

J. Alan Coope, President
John L. Walker, Secretary

AS AMENDED AND PASSED at the Annual General Meeting on the 9th day of April, 1979.

Peter M. D. Bradshaw, President
R. C. Armstrong, Secretary

AS AMENDED AND PASSED at an Extraordinary Meeting of the Association on the 1st day of September, 1983.

L. Graham Closs, President
Ray E. Lett, Secretary

AS AMENDED AND PASSED at the Annual General Meeting of the Association on the _____ day of _____, 1993.

Graham F. Taylor, President
Sherman P. Marsh, Secretary

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Technical Notes

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Unless the fine aggregates are broken up, by brushing or wet screening, it appears that the more the sample is pulverized the coarser it gets! In fact, as it gets finer, it forms more aggregates which do not break down by mechanical shaking with a Rotap machine alone. Hand shaking may be even worse.

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Ian Devereux

Manager

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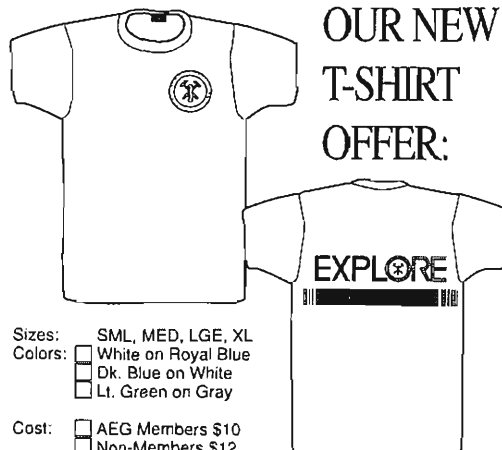
(Course sponsored by the Society for Mining, Metallurgy, and Exploration: Phoenix, Arizona, 22-23 February, 1992)

AEG members may now obtain from the Vancouver address these short course notes, comprising over 200 pages of text, tables, and figures. The section of geobotanical exploration includes 21 full color plates illustrating the plants and features of significance in arid terrains. The discussion of biogeochemical methods is a guide to the procedures and precautions that need to be employed in desert environments, and also includes information and examples from the forested regions of North America. A comprehensive resume of analytical methods in biogeochemical exploration is given. One case history from Nevada is described in detail, and abstracts to a number of others are included.

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~~SCHEDULE "A"~~ SCHEDULE A

CODE OF ETHICS OF THE ASSOCIATION OF EXPLORATION GEOCHEMISTS

General Principles

1. Each member of The Association of Exploration Geochemists ~~shall be guided by the highest standards of ethics, personal~~ shall conduct his affairs in accordance with the highest standards of ethics, personal honour, scientific integrity, and professional conduct. The word "member" as used throughout this Code of Ethics shall refer to members of any class of membership in The Association of Exploration Geochemists.
2. Each member shall be held to a duty of honesty, integrity, loyalty, fairness, impartiality, candor, fidelity to trust, and inviolability of confidence.

Duties of Members to the Public

3. A member shall avoid and discourage sensational, exaggerated, and unwarranted statement with regard to professional matters that might induce participation in unsound enterprises.
4. A member shall not knowingly permit the publication of ~~reports or maps he has prepared for any unsound or~~ reports or maps he has prepared for any unsound, ~~illegitimate undertaking, or illegal undertaking.~~
5. A member shall not give a professional opinion, make a report, or give legal testimony without being as thoroughly informed as might reasonably be expected given the purpose for which the opinion, report, or testimony is desired. In giving or making such an opinion, report, or testimony, a member shall disclose the extent to which such opinion, report or testimony is based upon incomplete knowledge or information.
6. A member may publish dignified business, professional, or announcement cards, but shall not advertise his work or accomplishments in a self-laudatory or unduly conspicuous manner.
7. A member shall not issue a false statement or false information even though directed to do so by an employer or client.
8. ~~No Student Member may use his membership in the Association~~
8. ~~No member may use his membership in the Association to promote his commercial interests.~~
8. ~~No member may use his membership in the Association to promote his commercial interests, except that Fellows and Honorary Members may list their category of membership on stationery, business cards, and professional notices in accord with Section 2.12.~~
9. A member shall protect, to the fullest extent possible, the interest

of his employers or clients so far as is consistent with the public welfare and his professional obligations and ethics.

10. A member who finds that his obligations to his employer or client conflict with his professional obligations or ethics shall either remove such conflict of duties or withdraw his professional services from such employer or client.
11. It is the duty of a member who has any interest, whether direct or indirect, which may conflict with the interests of an employer or client to disclose the existence of the interest to such employer or client.
12. A member shall not use, whether directly or indirectly, any confidential information of an employer or client which is in any way competitive, adverse, or detrimental to the interest of such employer or client.
13. A member retained by one client shall not accept, without that client's written consent, an engagement by another client if the interests of the two clients in any way conflict.
14. A member who has obtained any secret information during the course of his work for any employer or client shall not seek to make a personal profit from such information unless permission in writing to do so is granted by such employer or client, or until it is clear that the use of such information by the member shall not prejudice the employer or client in any way.
15. A member shall not divulge information given to him in confidence.
16. A member shall engage, or advise his employer or client to engage, and cooperate with other experts and specialists whenever the employer's or client's interests would be best served by engaging and cooperating with such experts and specialists.
17. A member shall not accept a concealed fee or secret commission for referring a client or employer to a specialist or for recommending geochemical services other than his own.

Duties of Members to Each Other

18. A member shall not falsely or maliciously attempt to injure the reputation or business of another member.
19. A member shall not state as his own knowledge or belief information which he has obtained from another member and shall freely attribute other members as the source of such knowledge or belief.
20. A member shall endeavor to cooperate with other exploration geochemists in the study and dissemination of exploration geochemistry.

Duties of Members to the Association

21. A member shall endeavor to ensure that candidates for membership are fit and proper persons to be elected members.
22. It shall be the duty of every member not only to uphold the standards of this Code of Ethics in precept and by example, but also, where necessary, to encourage by counsel and advice to other members, their adherence to such standards.

✂

Technical Notes

Continued from Page 8

Surprise! Surprise!

Do you screen/sieve sample powders? Do you test your ring mill performance from time to time? How do you do this?

A common procedure is to take a known weight of sample, say 10 or 50 grams and screen it using a single screen or a stack of screens on a shaking machine or shake it by hand. Is that what you do? If so, you may be surprised to know that the answers you get may be of no value at all! Some actual results using crushed granite as the test material are shown in Table 1. Two hundred fifty gram samples were processed in a ring mill.

Table 1. Results of pulverization test; with and without brushing through the 150 mesh sieve.

Time pulverised (in minutes)	% not passing no brush	% not passing after brush
1.5	10.7	5.9
2.0	12.0	3.4
2.5	13.6	0.8
3.0	17.6	0.4
4.0	22.4	0.2

Continued on Page 29

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Vancouver, British Columbia,
V6C 2T7
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Exploration Editor
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Geochemistry Subdivision
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P.O. BOX 9777, UNIVERSITY STATION
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350 Christie, Suite 200
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MS 973 Denver Federal Center
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USA TEL: (303) 344-6444

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480 West Hastings Street
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Vancouver, BC, V6A 1P6
Canada TEL: (604) 684-4444

Program Manager
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3451 West Pender Street
Vancouver, BC, V6C 2T1
Canada TEL: (604) 684-4444

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