

## Secretary's Report May 1983

### Membership

Membership of the Geological Association as of April 14, 1983 is:

	December '82 year end	April 14, 1983
Honorary Fellows	5	5
Life Fellows	5	5
Retired Fellows	71	71
Fellows	1,855	1,750
Associates	<u>957</u>	<u>888</u>
	2,893	2,719
Corporate Members	70	59
	2,963	2,778

P.J. Rogers	M.F. Taner
T.P. Rollerson	R.S. Taylor
P.K. Sarkar	R.L. Thomas
G.W.G. Sivertz	D.J. Toogood
L.B. Smith	W.R. VanSchmus
E.R. Solonyka	L.B. Whelan
J. Stoch	J.A. Wilson
C.C. Storey	J.R. Wilson
H.D. Strain	M.V.H. Wilson
M.L.T. Stuart	P.J. Wynne
L.D. Swanson	C. Xenophonos
J.P.M. Syvitski	

The geographic distribution of membership (Fellows, Associates and Corporates) is:

Newfoundland	86	85
Nova Scotia	98	96
New Brunswick	50	49
Prince Edward Island	1	1
Quebec	281	271
Ontario	1,023	947
Manitoba	65	61
Saskatchewan	94	88
Alberta	418	385
British Columbia	480	465
NWT and Yukon	22	19
United States	208	189
Australia/New Zealand	32	28
South and Central America	12	10
Africa and Asia	24	23
Europe	69	62

The 22 members elected since April 21, 1982 are as follows:

### Fellows:

J.H. Adams	M.J. Downes	P.A. Kallock	W.K. Mysyk
J. Arengi	L.K. Eccles	S. Kalogeropoulos	G.M. Narbonne
V. Austria	B.B. Ellwood	D.J. Kennedy	L.J. Nelson
T.J. Barrett	J.H.M. Farstad	J.C. Krygsveid	B.E. Nesbitt
D.K. Bingham	F. Felder	T.K. Kyser	L.D. Nicoll
S.J. Birneaum	G.W. Felderhof	R.E.J. Leech	Z. Nikic
J. Blenkinsop	J.P. Franzen	C.P. Lewis	E.G. Nisbet
B.J. Bluck	M. Gauthier	J.F. Lewry	B.H. O'Brien
D.V. Braun	F.W. Gittings	N.A. Kytile	D.B. Obolowicz
B.W. Cameron	A.H. Green	A.J. MacDonald	P.E. Olson
R. Capdevila	K.W. Guy	C.C. MacDonald	E. Ostensoe
R.J. Caven	M.C. Hansen	Z.B. Madon	Z.E. Peterman
G.R. Cavey	J.R. Harper	W.C. Mahaney	A.Y. Po
R.S. Chapman	J.C. Harrison	C.C. Mathewson	A.J. Reed
L.D. J. Christiansen	W.E. Holmstead	G.A. Medford	G.M. Reeves
A.D. Clendenan	R.J. Horodyski	L.D. Meinert	G.A. Reilly
S.H. Cordell	F.M. Isenor	M.J. Miles	J.A. Renaud
G. Demille	K.A. Jensen	J.W. Morton	G.K. Richardson
J. Dixon	R.S. Jorgenson	R.L. Morton	R.J.H. Richardson
			D.J. Alldrick
			A. Andrew
			S.M. Askin
			M.P. Attanayake
			M.V. Bardoux
			B. Beauchamp
			G.W. Bennis
			J. Berger
			L. Bernier
			L.M. Bernstein
			P.T. Bobrowsky
			D.W. Broughton
			L.A. Bursey
			S.D. Burtch
			W.B. Burton
			R.M. Bustin
			J.K. Cambon
			G.H. Cameron
			K.J. Cameron
			M. Champagne
			P.L. Churcher
			M.S. Cohen
			D.M. Conroy
			J.F. Couture
			N. Del Bel Belluz
			D.R. Demoe
			C. Dion
			A.P. Drost
			L. Dupuis-Hebert
			K. Fadaie
			R.C. Ford
			D.B. Forster
			D.A. Franzi
			Q. Gall
			N.J. Gardner
			P.A. Garneau
			J.F. Gartner
			S. Genest
			P. Geoffroy
			J.S. Getsinger
			J.M. Gillespie-Wood
			M.D. Goodz
			D.P. Gower
			D.B. Griffin
			M. Hadzis
			T.A. Harms
			D.W. Haywick
			G.F. Heidgerken
			R.H. Heise
			F.H. Henk, Jr.
			S.B.L. Hill
			B.R. Horsfield
			B.D. Howell
			T.N.J. Hughes
			D.R. Issler
			V.A. Jackson
			E.E. Jensen
			J.L. Joe
			R.J. Johnston
			R.M. Junnila
			C.M. Kari
			E.M. Kuley
			P.J. Laffeur
			L.A. Landefeld
			K. Lauziere
			L.A. Lemon
			R.J. Lepak
			A. Levesque
			W.P. Lickley
			A. Lincoln
			E.G. Lorek
			A.R. Lotimer
			J.C. Lukosius-Sanders
			A.A. Lyle
			J.R. MacGillivray
			M.A. Maier
			G.B. Mandryk
			P.M. Manojlovic
			J.F. Marier
			M.B. McClenaghan
			D.A. Medwedeff
			C. Moreton
			A.J.M. Mowat
			M.U. Mueller

**Associates: (Cont'd.)**

- |                  |                   |
|------------------|-------------------|
| S. Nawarathe     | R.N. Robinson     |
| F.A. Noone       | G.M. Rodgers      |
| M. Olivier       | S.T. Ruminsky     |
| L.R. Ollenberger | J.M. Seguin       |
| G.J. Orton       | R. Sereda         |
| R. Ouellet       | K.R. Shannon      |
| G. Parent        | D.A. Smith        |
| G.A.S. Park      | M.M. Somerwil     |
| D.A. Perkins     | G. St. Jean       |
| E. Piacenza      | A. Stanta         |
| C. Picard        | D.A. Thomas       |
| M. Piche         | C. Tillotson      |
| P. Pilote        | E.D.D. Titley     |
| L. Plante        | G. Tourigny       |
| P.A. Ramsay      | B.A. VanDerPluijm |
| J.F. Reader      | A. Walsh          |
| M.L. Richardson  | K.J. Weichelt     |
| F. Robert        | P.F. Wonderley    |
| R.B. Robichaud   | R.M. Worona       |

**Transfer From Associate To Fellow:**

- |                 |                          |
|-----------------|--------------------------|
| T.J. Adamson    | M.R. Patterson           |
| D.J. Aldrick    | I. Poyntz                |
| C.L. Baker      | D.J. Robinson            |
| P.A. Batson     | D.M. Rudkin              |
| R.J. Beaty      | A.A. Seaman              |
| M.D. Billings   | G.L. Tanton              |
| T.C. Birkett    | E.H. Van Hees            |
| A.R. Breakey    | P.I. Wallace             |
| T. Bruland      | P.H. Watson              |
| W.R. Bulmer     |                          |
| W.D. Burston    | An additional 69 appli-  |
| J.W. Cant       | cations for membership   |
| G.A. Cohoon     | are presently being      |
| M.T. Corkery    | processed by the Sec-    |
| A. Crowe        | retary's office. Adjust- |
| R.G. Cuddy      | ments in the total       |
| J. Cyr          | membership resulted      |
| A. D'Aragon     | from the following:      |
| P.A. Dadson     |                          |
| G.I. Davidson   | Resigned . . . . . 36    |
| E.J. Debicki    | Deceased . . . . . 10    |
| R.M. Easton     |                          |
| B.E. Eley       |                          |
| G.M. Endlicher  |                          |
| W.D. Fitzgerald |                          |
| M.B. Gareau     |                          |
| B.V. Hall       |                          |
| E.T. Harvey     |                          |
| D.W. Healing    |                          |
| R.N. Hiscott    |                          |
| B.W. Kotila     |                          |
| J.H. Kruzick    |                          |
| J.H. Lake       |                          |
| R.N. Lambe      |                          |
| J. Lebuis       |                          |
| H. Lohse        |                          |
| R.B. MacDonald  |                          |
| B.A. MacLean    |                          |
| D.E. Myres      |                          |
| A.W. Panko      |                          |

**Resigned:**

- |                |                 |
|----------------|-----------------|
| B.E. Aaquist   | C.F. Klappa     |
| A.E. Buller    | P. Korzeniowski |
| F. Canavan     | D.W. Krause     |
| H.W. Cummings  | E.J. Lalonde    |
| J.A. Dolph     | J.J. Lefebvre   |
| T.J. Donaghy   | C.J. LeGallis   |
| F.R. Donaldson | D. Lessard      |
| R. Farley      | P. Maurice      |
| T.A. Goodwin   | R.C. McMurphy   |
| G.R. Guillet   | P. Moynnd       |
| D. Hackbarth   | W.S. Newman     |
| G.J.R. Hannah  | J.M. Plecash    |
| R.G. Helie     | P.I. Reeves     |
| G. Hodgson     | S.L. Sargent    |
| J.H. Hodgson   | R.N. Thomas     |
| C.E. Johnson   | P.J. Walls      |
| M. Jost        | B.E. Weir       |
| J.W. Kerr      | P.W. Zimmer     |

**Deceased**

The Council of the Geological Association records, with regret, the names of the following deceased members:

- |              |               |
|--------------|---------------|
| G.H. Burgess | R.H. MacNeill |
| A.C. Freeze  | T.S. Smith    |
| A.T. Griffis | G.G. Suffel   |
| E.D. Kindle  | J.E. Thomson  |
| T.A. Link    |               |
| G.W. Mannard |               |

**Logan Medal**

The Logan Medal for 1983 was awarded to Dr. John Wheeler of the Geological Survey of Canada, Ottawa. The citation read at the GAC Luncheon on Wednesday, May 11th, 1983 stated: John Wheeler has provided outstanding scientific leadership in the elucidation of the tectonic evolution of the Canadian Cordillera and its mineral resources, and in the description and analysis of the regional geology and mineral resources of the whole of Canada. John Wheeler was an outstanding Chief Geologist to the Geological Survey of Canada.

He was personally involved in the systematic mapping of the bedrock geology of 60,000 square kilometres of the Canadian Cordillera. This mapping provided the first systematic description and interpretation of the geological framework and resource potential of much of that region. He also undertook a series of tectonic syntheses, largely in collaboration with Hugh Gabrielse, which outlined most of the Cordilleran tectonic elements and traced their evolution. In addition, he outlined the late glacial history of parts of the region, illustrating it with novel maps.

J.O. Wheeler has not been content simply with the description and mapping of an assigned area. On the contrary, he has been concerned with the origin and nature of depositional sequences and of geologi-

cal structures and their bearing on regional relationships and the tectonic evolution of the Cordillera. His work in identifying and demonstrating the tectonic evolution of the Whitehorse Trough has been confirmed and extended southeast by his colleagues. This work was the first of its kind in the northern Cordillera and set the pattern for subsequent tectonic analysis and understanding of the region.

His work in elucidating the structure of much of southeastern B.C. provided a major basis for establishing the geometry and anatomy of the "core zone" of the southern part of the Columbian Orogen. Thus it provided a firm basis for more detailed studies later, many of which were suggested by Wheeler. These have confirmed the nature of the major elements and have greatly improved our understanding of the detailed geometry and sequence of deformation.

During his work in the Cordillera, he showed wide-ranging interests. For example, his approach to understanding and displaying ice-flow and deglaciation patterns in the southern Yukon has been emulated by several Cordilleran colleagues. Novel ways of depicting the geometric and spatial relationships of mineral deposits to structural features have been presented in the Lardeau map-area with Peter Read.

His leadership has been recognized by the requests for service on numerous Canadian and North American geological committees, and on Advisory Committees to Universities. Recognition has included Fellowship in the Royal Society of Canada, Presidency of the GAC and of the Canadian Geoscience Council. In spite of managerial duties as Chief Geologist to the GSC, he has over the last years become a leading authority on the geology of Canada as a whole, and was appointed by the Canadian Geoscience Council to lead Canada in the DNAG volumes on the Geology of North America, and also to see to the production of a new edition of Geology and Economic Minerals of Canada. Indeed, as his great-grandfather John Macoun died at the age of 88 in Sidney, B.C., still on the payroll of the Survey, we look to several editions of EG-1 from J.O.'s pen.

**Past Presidents' Medal**

The Past Presidents' Medal of the Geological Association of Canada, first awarded in 1974, acknowledges significant recent accomplishments in the earth sciences.

Andrew D. Miall, the tenth winner of the award, was presented with the medal in particular recognition of his signal contributions to the field of clastic sedimentology. He has advanced the understanding of its processes at every scale, from micro- to plate tectonic. His contributions are prolific, and have won him international stature. His

work has appeal not only to sedimentologists and stratigraphers, but to economic geologists dealing with placer deposits and coal and uranium occurrences.

While the Past Presidents' Medal primarily acknowledges a single accomplishment, it would be amiss not to mention Dr. Miall's other interests and activities. He is not only an able research scientist but also a talented educator, organizer, contributor and editor. Well-regarded by his peers, he is frequently called on as a short course instructor. He has a remarkable ability to synthesize and distill great volumes of information into a cohesive, enlightening and brief presentation. He takes an active role in all of his professional associations, which include the Canadian Society of Petroleum Geologists and the International Association of Sedimentologists as well as the Geological Association of Canada. He edited (in record time) GAC Special Paper No. 23, "Sedimentation and tectonics in alluvial basins". Last fall he assumed the editorship of *Geoscience Canada*.

Andrew Miall is a graduate of the Universities of London, England, and Ottawa. Since obtaining his doctorate in 1969, he has worked in the petroleum industry out of Calgary, in the Arctic Islands, Northern Yukon, Mackenzie Valley and Alberta. Between 1972 and 1979 he worked for the Geological Survey of Canada's Institute of Sedimentary and Petroleum Geology. In 1979 he joined the staff of the University of Toronto as associate professor.

His particular research interests include the geology of the Canadian Arctic Islands, especially depositional environments, paleogeography and sedimentary tectonics of Proterozoic and Phanerozoic clastic sedimentary units; the sedimentology of fluvial and deltaic rocks and their relationship to local and regional tectonics; and the sedimentology of ancient glacial deposits. Currently he is studying the Huronian in northern Ontario, coal in Alberta and the Permian in northern New Mexico.

Dr. Miall has shown himself to be a professional geologist of outstanding proven ability and continuing promise. He is worthy of the 1983 Past Presidents' Medal.

#### **Duncan R. Derry Medal**

The 1983 Duncan R. Derry Medal winner, Dr. R.W. Hutchinson of the Department of Geology, University of Western Ontario, was born in London, Ontario. He obtained his B.Sc. in Geology from the University of Western Ontario in 1950. His M.Sc. and Ph.D. degrees were awarded to him by the University of Wisconsin.

During these university years, he worked in Canada for the GSC and several mining companies. In addition, several months were spent on a special project in East Africa.

His post-graduate work involved ore microscopy studies and this interest led to an early development of expertise in the economic geology, mineralogy and petrology of pegmatite deposits.

From 1954-1964 Dick Hutchinson worked for the American Metal Climax group in Canada and the U.S.A. His knowledge of pegmatites was well utilized, but it was in these years that his opportunities and interests broadened. Influenced by developing ideas and his own field observations on the geological environment of massive base metal sulphides, he became a frequent contributor to the scientific discussion on these types of deposits. His contributions increased following his appointment as Associate Professor (1964) and Professor (1969) in Mineral Deposits Geology at the University of Western Ontario.

He and his students championed the exhalative concept for the genesis of volcanogenic massive sulphide deposits. The evidence, the debates, the arguments, stimulated the economic geology community and brought international attention and recognition.

There were also important, graphic papers on metallogeny. Presentations on the Archean metallogenic model (which won the CIM Barlow Medal in 1971) and the possible metallogenic relationships between massive sulphide and porphyry copper deposits, plus other contributions, portray, with almost outrageous clarity, the complex relationships of mineralization in the volcanic environment.

Other subjects, such as the effects of metamorphism, evaporite deposits, the Sudbury structure and gold, have also commanded his attention. The paper on the 'Evidence of the exhalative origin of Tasmanian Tin Deposits' won him a second Barlow Medal from the C.I.M. in 1979.

His contributions to the mineral deposit literature exceed 70 and the list is growing.

He served as Associate Editor of the *Canadian Journal of Earth Sciences* from 1975 to 1978. He has completed a term as Distinguished Lecturer of the C.I.M. More recently, he edited the very popular GAC Special Volume 25 on Precambrian Sulphide Deposits—the H.S. Robinson Volume.

Dick Hutchinson's reputation is global. Within the last 15 years he has presented invited lectures in Canada, the United States, Brazil, Columbia, England, Yugoslavia, Spain, Portugal, West Germany, Italy, Australia, Philippines, Malaysia, Upper Volta, South Africa and Zimbabwe. He has

consulted for the United Nations in Kenya and the Philippines and for a major corporation in Brazil.

In 1983, he took office as the president of the Society of Economic Geologists and later this year he will end his long and memorable association with the University of Western Ontario to take up the first appointment to the Charles E. Fogarty Chair of Economic Geology at the Colorado School of Mines.

Ladies and Gentlemen, this year's Duncan R. Derry Medal winner is a great teacher, a gifted speaker and an enthusiast. His inspired students populate successful exploration companies and mineral deposit research institutions around the world.

He has added significantly to our knowledge and understanding of diverse types of important mineral deposits and has improved our efficiency in mineral discovery.

A most worthy recipient and a gentleman of distinction—Dr. R.W. (Dick) Hutchinson.

#### **Finances**

The audited financial statement prepared by Doane Raymond, the Association's auditors, was sent to all Fellows in April 1983. Income to the Association increased from Members dues, investments and foreign exchange, and monies from the 1982 Annual Meeting in Winnipeg. Corporate membership in the Association and donations to GAC were down slightly over 1981. The balance of income to the Association rose by approximately 5% between 1981 and 1982 to \$193,006., in holding with Council's aims at keeping increases to a minimum (Fig. 1).

The cost of Members services rose by 8% between 1981 and 1982 with the largest increases being due to postage (up by 112%), printing and stationery charges (up by 43%) and secretarial costs (up by 16%). The last two categories, however, represent increased work loads within the Association, largely due to the preparation of the bi-annual Membership booklet which goes out to all GAC members. GAC expenses averaged for 1981/1982 are shown in Figure 2.

Overall, surplus income to the Association rose by \$35,606 between 1981 and 1982 largely as a result of conversion of US to Canadian funds, coupled with income derived from the Annual Meeting. The members' equity surplus rose from \$60,636. to \$96,242. I should point out to members (as I have done in the past) that the finances of the Association are cyclical, depending largely upon the state of preparation of the major publications (Special Papers) of GAC. We were fortunate in having a number of publications released in 1982 while still retaining an excellent sales

record for *Facies Models*. It is likely that this sales level, and hence monies accruing to the Association, will remain high until the latter part of 1983, when again revenues will proportionally start to decrease. The Equity Surplus for 1972-1982 is shown in Figure 3. Because of the reasonably sound surplus it is anticipated that membership dues will remain at the 1983 level for the 1984 membership year.

In 1983 the Association will also incur a number of unusual expenses with the move of the headquarters from Waterloo to St. John's, Newfoundland. This move will be accompanied by a complete staff and office change and a drastic revision to the operations of the Association. Executive and Council are attempting to provide the Association with a completely new (bilingual) Constitution, to incorporate the Association as a charitable non-profit organisation, and to re-structure the internal operation of GAC. It is certain that the Association will have to bear some unusual costs during these changes. Hopefully moves being made by Executive and Council will counter some, if not all of these costs, and the new structure of the Association will be financially beneficial to all members.

**Committee Activities**

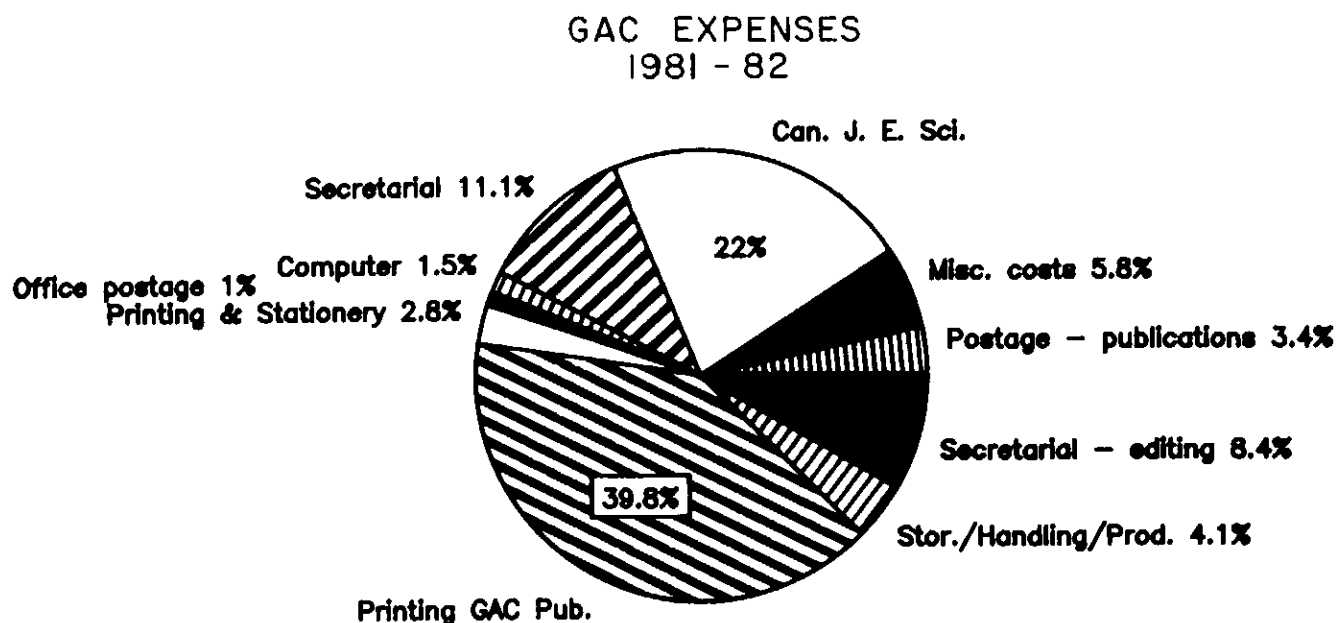
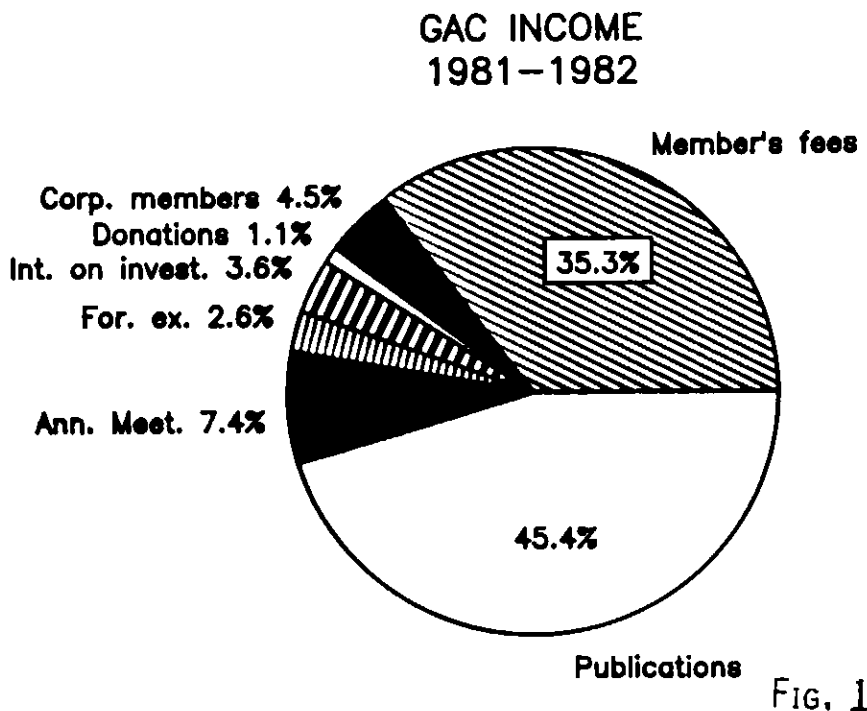
The Executive and Council of the Association met in Council Meetings held on May 19, 1982 in Winnipeg, Manitoba; October 5, 1982 in London, Ontario; February 18th and 19th in Victoria, British Columbia and May

10, 1983 in Victoria, British Columbia. In addition, Executive Conference Calls were conducted on November 2, 1982; December 9, 1982; January 20, 1983; March 29, 1983 and April 12, 1983.

The **Publications Committee** (formerly the Editorial Committee), under the chairmanship of John W. Kramers of the Alberta Geological Survey, met three times during

the year in association with the Council meetings. The success of the Association's publication program is due to the volunteer efforts of the committee members, all of whom put in many hours of editorial duties.

*Geoscience Canada* has appeared at regular quarterly intervals throughout the year. Bob McNutt of the Department of Geology, McMaster University, under whose



1981-1982 Total Expenses Combined (\$298,461.)

FIG. 2

capable editorship *Geoscience Canada* has been entrusted since January 1979, stepped down as editor in the Fall of this year. The Association owes him a debt of gratitude for the fine job that he has done. Bob is succeeded by Andrew Miall of the Department of Geology at the University of Toronto. Along with the switch of *Geoscience Canada* office from McMaster University to the University of Toronto, Naomi Frankel has succeeded Maureen Czerneda as managing editor of *Geoscience Canada*. Maureen has been managing editor since Gerard Middleton started *Geoscience Canada*, and she deserves our thanks for her efforts to make *Geoscience Canada* what it is today.

The first of a *Geoscience Canada Reprint Series*, *Facies Models*, which was first published in August, 1979, was reprinted for the fifth time during December, 1982. It is well-established as the most popular publication of the Association to date and well over 15,000 copies have now been printed. The other series in *Geoscience Canada*, *Ore Deposit Models*, *Pleistocene Dating Methods*, and *Diagenesis*, are all coming along well. The *Pleistocene Dating Methods Series* has now been completed and plans are underway for a second *Geoscience Canada Reprint Series* on that topic.

The Association Newsletter, *Geolog*, continued to thrive in the last year. Graham Williams, who had been the editor since 1976, stepped down this year. The Association extends appreciation to Graham for the fine job that he has done, and for making such a success of the Association Newsletter. Graham is succeeded by Godfrey Nowland of the Geological Survey of Canada in Ottawa.

GAC Special Paper 23, *Sedimentation and Tectonics in Alluvial Basins*, edited by A.D. Miall, arrived from the printers during February 1982. Special Paper 24, *Major Structural Zones and Faults of the Northern Appalachians*, edited by P. St. Julien and J. Beland, appeared by the end of June. Special Paper 25, *Precambrian Sulphide Deposits*, the H.S. Robinson Memorial Volume, edited by R.W. Hutchinson, C.D. Spence and J.M. Franklin was finished and received from the printers in December of 1982. All three of these Special Papers are a tribute to the work that geoscientists in Canada are doing. Special Paper 26, *Quaternary History of the Agassiz Region*, edited by J.T. Teller and L. Clayton is currently at the printers and should be published early this summer. Other Special Papers in the planning stages and approved in principle by GAC Council include: *Evolution of Archean Supracrustal Sequences*, edited by L.D. Ayres; and *Jurassic-Cretaceous Biochronology and Biogeography of North America*, edited by

G.E.G. Westerman. The first of the above Special Papers in progress came from a symposium at the Winnipeg Annual Meeting and the second from the Third North American Paleontological Convention which was held in Montreal in August, 1982. Further Special Papers are in the early planning stages. A graph illustrating the value of GAC publications sold between 1972 and 1982 is given in Figure 4.

The principal medium for the publication of original research papers by members of the Association continues to be the NRC-sponsored *Canadian Journal of Earth Sci-*

*ences*. Almost all associate editors come from the ranks of the Association. Glen Caldwell, long associated with the GAC publications program, took over from M.E. Evans as editor of *CJES* during 1982. Glen will continue to strive for excellence in the papers published, and the Publications Committee looks forward to a continuation of the close liaison that GAC has had with *CJES* over the past years. The publications Committee and GAC Council wish to record their indebtedness to various agencies for the support that they have received towards the GAC publication program in the

GAC EQUITY SURPLUS  
1972-1982



FIG. 3

GAC PUBLICATION SALES  
1972-1982

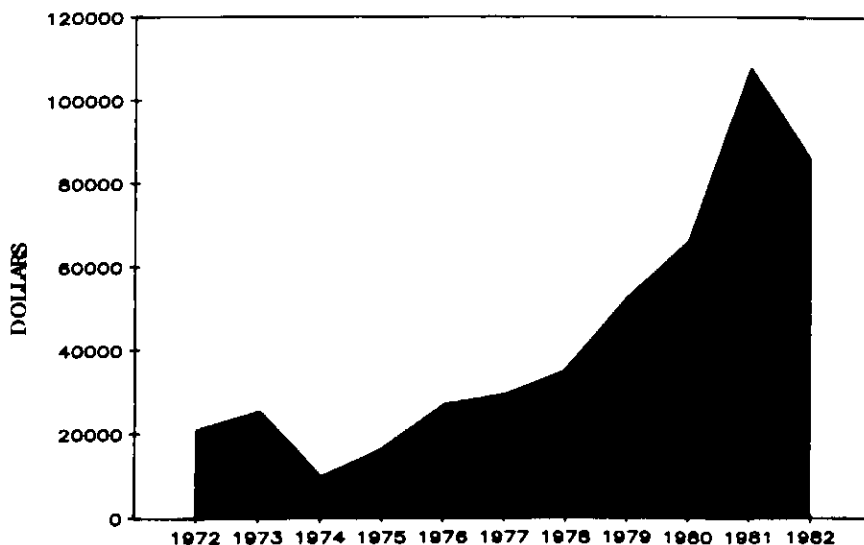


FIG. 4

past year. These agencies include the Natural Sciences and Engineering Research Council of Canada, the Geological Survey of Canada, and the Canadian Geological Foundation. In addition, various universities and government agencies across Canada have continued to provide support leading to cost reductions in most of the Association's publications.

The **Finance Committee**, chaired by P.L. Gordy, has been examining in some detail all aspects of the financial operation of the Association. Although the Members' Equity Surplus, as seen earlier in the Report on Finances, has increased substantially over the past two years, the Finance Committee believes that this surplus is needed to cushion any unexpected short-falls which the Association may meet. Such unknown factors include the costs of the Association's move from the offices at Waterloo to new headquarters at St. John's, Newfoundland. Although the Finance Committee believes that this matter has been quite satisfactorily investigated, there are other variables, such as postage costs, which lie completely outside the control of the Association. Postage costs are becoming a substantial item of expenditure and these, coupled with increases in storage, handling and secretarial costs, stretch the real financial resources of the Association. In the last Secretary's Report, (*Geoscience Canada v. 9, (3), p. 175*) it was stated that the Incorporation of GAC could have considerable financial implications to the Association. All Fellows of the Association will have received the proposed Revised Constitution of the Geological Association and built into this document is the provision to allow charitable donations to the Association. We hope that such provision will allow members to donate to GAC on a tax-deductible basis and this should help considerably in fulfilling the objectives of the Association.

The **Membership Committee**, chaired by J.H. Remick and including J.D. Aitken, A.T. Avison, A.F. King (substituting for J.G. Malpas who is on sabbatical leave) and V.F. Hollister, reviewed some 227 membership applications during the year. 222 members were elected with 49 transfers. 69 applications are currently being processed. Applications for membership in the Association were received from Cyprus, France, Greece, Scotland and the United States. Membership in the Association now stands at 2,778 and the total number of each category of membership is given at the beginning of the Secretary's Report and in Figure 5.

Response was good to a letter by the Association's President, H.C. Morris, which was sent with the 1983 dues form asking for donations from members. Although this is not yet a tax deductible item, 336 members (202 Fellows, 124 Associates, and 10

Retired) contributed \$3,133.50 in donations ranging from \$1.00 to \$25.00. In 1982 515 members (306 Fellows, 205 Associates and 4 Retired) contributed \$3,995.50. It is hoped that additional members may contribute to GAC with their 1984 dues payments.

The 1983 dues form also included a section on Employment Affiliation. The response by some 2,781 GAC members gives the following Employment Affiliation breakdown shown in Table I and Figure 6.

A new Membership Booklet, revised to April 20, 1982, was distributed to the membership at the end of June 1982. This is

the fourth in the series of Membership Booklets for the Association and includes for the first time the telephone numbers of members who responded to the request for such information.

Various ways of attracting new members for GAC were considered. One was activated in mid-February 1983 when one faculty member in the Geology or Earth Sciences Department of each Canadian University was asked to look after recruitment in that university for new GAC members. This is expected to increase the number of student applicants each year.

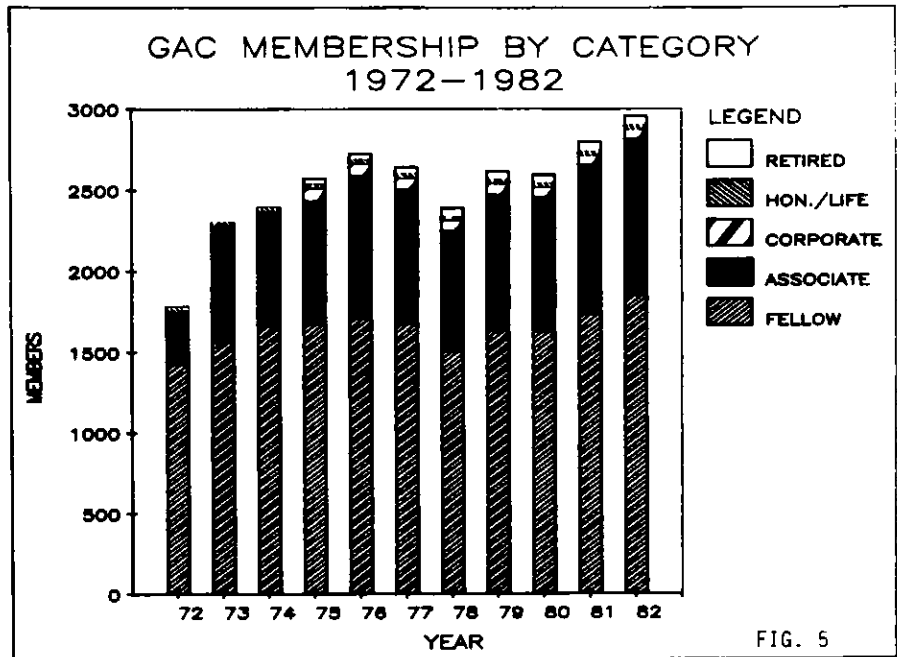


FIG. 5

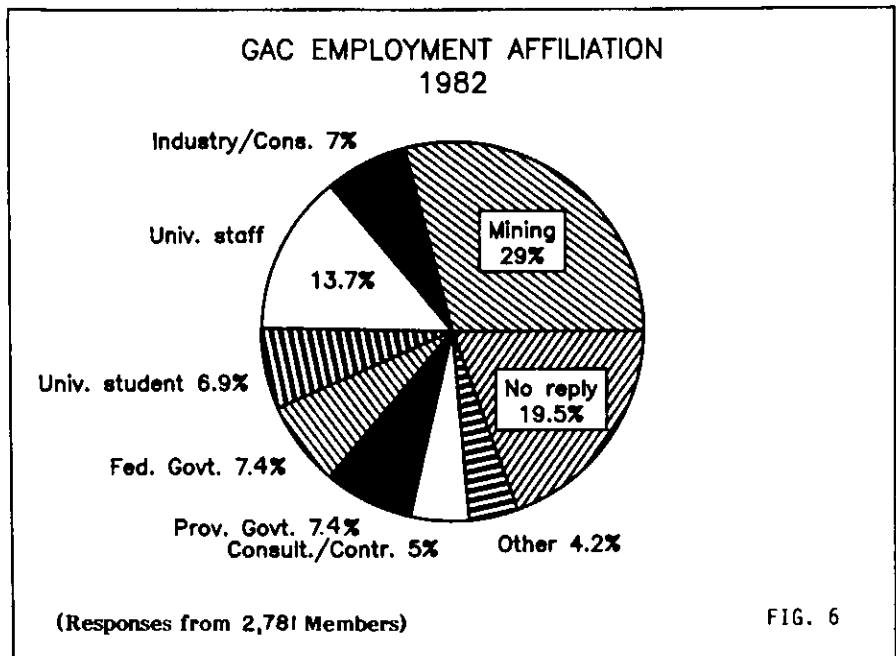


FIG. 6

**Table 1** *Employment Affiliation*

A	Mining	836	29%
B	Industry/Consultant	202	7%
C	University/Staff	404	13.7%
D	University/Student	183	6.9%
E	Federal Government	219	7.4%
F	Provincial Gov't.	219	7.4%
G	Consultant/Contract	151	5%
H	Other	128	4.2%
	No Reply	439	19.5%
		2,781	100%

Transfer forms were mailed to Associate members eligible for transfer to Fellow status last summer, but to date not many of these forms have been returned to Waterloo.

The **Program Committee**, chaired by R.S. Harrison, has continued to organize tours made by the Past President's Medallists of GAC. The GAC-sponsored lecture tour by Dr. Noel James, 1982 recipient of the Association's Past-President's Medal, was postponed until early 1984 because of previous commitments by Dr. James. Consequently, the Program committee anticipates lecture tours by both the 1982 and 1983 Past President's Medal recipients during the 1983-84 year. During the past year the Committee has been extensively involved with both facilitating the planning of future Annual Meetings and evaluating various aspects of the Annual Meeting Program.

The **Special Projects Committee**, chaired by D.J.W. Piper, has examined a number of requests from GAC Council. These include investigations of methods of increasing membership and a feasibility study for GAC student prizes. A number of recommendations have been made by the Committee, some of which have been acted upon and others which are still under consideration by Council. A series of suggestions have been made by Piper to streamline the organization of the Special Projects Committee, especially in view of the enlargement of the GAC Council under the rules of the new Constitution.

The **Robinson Committee**, chaired by P.M. Kavanagh, supported the GAC Special Paper which will be entitled "Evolution of Archean Supracrustal Sequences", and has provided a grant in aid of the publication and provided further support for GAC Special Paper 25, (The Howard Street Robinson Memorial Volume) entitled 'Precambrian Sulphide Deposits'. The Committee also supported the travel expenses of the keynote speaker at the GAC Newfoundland Section's 1982 Annual Meeting, the theme of which was "Sediments and Stratabound Economic Minerals with specific reference to Atlantic Canada". The Committee has continued to fund the Ore Deposits Models Series in *Geoscience Canada* and the pro-

posed Monograph Symposium on Ore Deposits Geology. The Monograph Series on Ore Deposits Geology will be an up-to-date synthesis of major economic geology deposits. The Robinson Committee is continuing to support the establishment of a Robinson Visiting Lecturer, to be arranged for alternate years between the Mineral Deposits and Precambrian Divisions.

#### Sections and Affiliated Societies

The **Newfoundland Section**, with a current membership of 180, remains active and is attempting to involve geologists from the off-shore petroleum exploration program. The Section enjoyed a successful (and dry) Logan Day which was celebrated early on September 12th. The Annual Fall Field Trip took place on October 1st to 3rd, 1982, and was held in southwestern Newfoundland, based out of Stephenville. It was attended by 50 people and was considered to be both a geological and social success, despite inclement weather. The excursion was directed toward the geological evolution of southwestern Newfoundland.

The Section has established a Winterfest Day—a mid-winter excuse for socializing—and a successful meeting with 85 participants was held on February 5th, 1983. The Spring Meeting of the Section was held April 7th and 8th, with "Evolution of the Ancient Continental Margin of Western Newfoundland" as its theme. Over 30 papers were presented with keynote addresses from a number of prominent geologists from across Canada. The Annual Dinner speaker was Dr. M. Keen of the Atlantic Geoscience Centre.

The Newfoundland Section continues to publish *Mélange* twice a year, together with the *Newfoundland Journal of Geological Education*. Plans are being finalized for the initiation of an annual award for a significant published contribution to the direct geological understanding of the province of Newfoundland and Labrador. This award is named in honour of the late Dr. A.K. Snelgrove, a native Newfoundland geologist. As well, there is a continued support of the Geological Association of Canada Newfoundland Section Scholarship, awarded to a third-year geoscience student at Memorial. Further report on the activities of the

Newfoundland Section may be found in *Geolog*, v. 11(3) and V.12(1).

The **Atlantic Geoscience Society** began the year with a biennial Colloquium on Current Research in the Atlantic Region. The Meeting was held in Amherst, Nova Scotia and was attended by over 100 geologists. Twenty-eight papers were presented with 11 additional poster sessions. The Abstracts from this Meeting were published in *Maritime Sediments and Atlantic Geology*, v. 18(1), pp. 41-58, April 1982. The Annual Banquet speaker was Dr. Ray Price, the Director General of the Geological Survey of Canada.

The Society held seven meetings in the Halifax-Dartmouth area during 1982, and lectures included the "Evaporites of Atlantic Canada"; the "Petrology of the Kellys Mountain Gneiss"; "the 1982 Miramichi Earthquakes"; "Surficial Geology and Engineering Implications in the Beaufort Sea"; "Fossil Trees and Sedimentation rates at Joggins, N.S."; "New Zealand Geology" and short presentations and slide shows.

The Atlantic Geoscience Society is actively examining a proposal to become affiliated with CSPG in addition to its traditional liaison with the Geological Association of Canada. The Society also has close liaison with other bodies, such as the N.E. Section of the GSA, and AGS helped to sponsor the Atlantic Universities Geological Conference at Mount Allison in October.

Society members were largely responsible for running the EdGEO Workshop for pre-university geoscience teachers, which was held at the Bedford Institute in November and was sponsored primarily by the Geoscience Council of Canada.

The Society is proposing to commence work on the production of a Geological Highway Map of New Brunswick (modelled on the successful AGS map of Nova Scotia which was released during the Halifax Meeting).

The **Toronto Discussion Group** has had a successful year, hosting fifteen meetings. Gold Deposits in a variety of different geological occurrences have been described from places as far afield as the Minas Gerais Gold Field of Brazil to Montana, Nova Scotia, the Superior Province and Australia. By way of diversion, there also were lectures given on Saskatchewan uranium deposits, Yukon Pb-Zn-Ba and coal, Nova Scotian tin deposits and massive sulphide deposits from the Northwest Territories.

The **Winnipeg Section** seems to have survived hosting the extremely successful 1982 GAC/MAC Annual Meeting and has gone on to run an active program. This includes a variety of lectures, and field trips to the Red Lake Gold Camp and Quaternary excursions in southern Manitoba. Fur-

ther reports on the activities of the Winnipeg Section are included in *Geolog* v.11(4).

The **Edmonton Geological Society** held a series of regular luncheon meetings throughout the year. Topics of discussion included "Alberta phosphates"; "Oil sands in Brazil and Madagascar"; "Sedimentation of Baffin Island"; "New coal operations west of Edmonton"; two lectures on mineral deposits in Australia, and "Cretaceous estuarine sedimentation in the Drumheller Region". J. Buchanan gave a lecture on "Compressed natural gases and auto fuel". The meetings were attended by 30-40 members on a regular basis and the total membership of the Edmonton Geological Society is approximately 100.

The **Cordilleran Section** of the Geological Association of Canada is completing an active program for 1982. During the year, 14 speakers lectured to well-attended meetings (ranging from 75-230 geologists). The Cordilleran Section participated in the Calgary Workshop on Models of Gold Deposits, which had over 200 attendees. The workshop was considered to be extremely successful by all who attended, even though it was held in mid-February.

The Cordilleran Section of the GSA and the GAC plan a meeting in Vancouver in 1985. Arrangements for this meeting are being made by the Geology Department at the University of British Columbia.

The Annual Symposium of the Cordilleran Section was not held in 1983 because of the Victoria Annual Meeting.

**Divisions**

The respective Divisions of the Geological Association continue to be well represented; the membership of each is illustrated in Figure 7.

The **Canadian Geophysical Union** (CGU) was founded in 1973 to provide a forum for Canadian geophysicists. The forum had previously resided in the Associate Committee on Geodesy and Geophysics of the National Research Council and its numerous sub-committees. The Union was formed as a joint division of the Geological Association of Canada and the Canadian Association of Physicists. Members of the Canadian Institute of Surveyors are also eligible for CGU membership.

The CGU's major activity is its annual meeting, held sometimes alone, sometimes with a related society (e.g., Canadian Exploration Geophysics Society: KEGS), or sometimes with one of its parent societies. The three-day 1982 meeting was in conjunction with KEGS at York University (Downsview, Ontario) and was attended by 153 registrants. Speakers at the opening plenary session addressed the following topics: geoscience and hydrocarbons in the Canadian offshore; mining geophysics: recent advances and current orientations; the

Canadian long baseline array: a new geophysical research tool; the Miramichi, New Brunswick earthquake sequence of January 1982; and "something for all ages": geochronology from (geomagnetic) poles to Ethiopians. Seventy-eight papers were presented in sessions on the Precambrian lithosphere, mathematical geophysics, continental margins, methods and case histories in mining geophysics, paleo- and rock-magnetism, general geophysics, geochronology, geophysical contributions to the disposal of toxic waste in the Earth's crust, and gravity and geodynamics.

The Union's 1983 meeting took place in Victoria, with the Geological and Mineralogical Associations of Canada. Plans are in progress for a joint congress in 1984 with the Canadian Meteorological and Oceanographic Society in Halifax.

In 1982, the CGU awarded its J. Tuzo Wilson Medal to Professor J.A. Jacobs, for his outstanding contributions to Canadian geophysics. Also in 1982, the CGU began the publication of a thrice-yearly newsletter; editors are R.M. Farquhar, H.C. Halls and P. Vanicek.

The **Mineral Deposits Division** scheduled a stimulating series of events in the past year for the benefit of its membership. MDD, in joint sponsorship with the Calgary Mineral Exploration Group, arranged for Professors Fyfe, Hutchinson and Kerrich of U.W.O. to conduct a *Workshop on Models of Gold Deposits* at the University of Calgary. This three-day Workshop, held in mid-February, reviewed the geological settings and the origin of important types of gold deposits in the broader context of metallogenic evolution. Basic aspects and

problems of gold geochemistry, its mobilization, transport and deposition were discussed, with emphasis on hydrothermal systems.

There was a gratifying response to the planned field excursion to mineral deposit districts in Mexico, February 25th to March 6th, 1983. Ken Dawson and Ian Paterson arranged the 10-day event, which included visits to the Pachuca, Taxco, Fresnillo, Real de Angeles and Guanajuato Mining Camps. Over 40 people participated in this field trip.

Dave McRitchie has been working with the Winnipeg CIM Annual Meeting Committee to arrange a session on "Gold in Central Canada". The response was very good and a number of papers were accepted for the program. The joint MDD session was a major highlight for the mineral deposits geologists attending the CIM Annual Meeting, April 17-20th, 1983.

Popular mineral deposit sessions were scheduled for the GAC/MAC Annual Meeting at Victoria, B.C., May 11-13th, 1983.

These included important presentations on 'Tin and Tungsten Deposits of the Canadian Cordillera' and a special session on 'Gold Deposits of the Canadian Cordillera'.

Later in the year, the MDD, The CIM and DIAND will be sponsoring a symposium on the "Economic Geology of the Canadian Cordillera", to be held in Whitehorse, December 5-7, 1983. The program will include papers on a variety of commodities and mineral deposit types and the proceedings will be included in a future CIM Special Volume.

In addition to these group activities, the MDD has advanced preparations for a proposed series of *Field and Reference Man-*

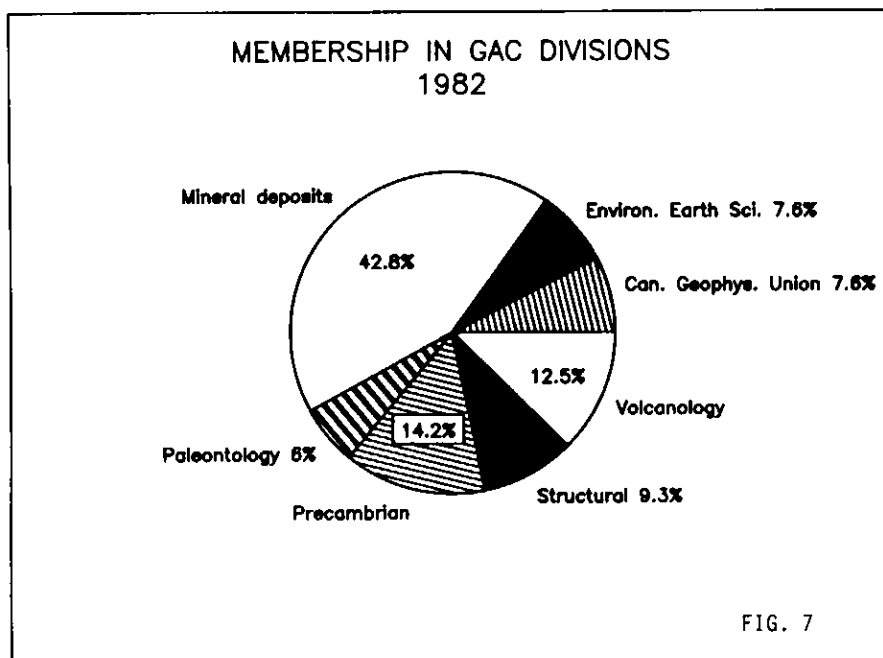


FIG. 7



uals covering the mining camps of Canada. The intent is to produce a library of quality Manuals which will contain descriptions of the geology of the camps and individual ore deposits, stop-by-stop field guides, records of exploration and production histories, notes on significant case-histories and comprehensive bibliographies. Further details are included in the *Gangue*.

The GAC/MAC 1984 Organizing Committee has accepted the MDD-proposed Special Session topic on "The Role of Organisms and Organic Matter in Ore Deposition". The Committee has also indicated that it will welcome papers on "Gold and Iron Formations" and "Ore Deposits in High Grade Metamorphic Terrains" to be included in scheduled General Sessions on Mineral Deposits. These topics were also suggested by the MDD.

MDD has been giving thought to ways of increasing the economic geology/minerals deposit content of the *Canadian Journal of Earth Sciences* and suggestions and proposals will be conveyed to Editor Glen Caldwell.

John MacDonald received an excellent response to his article and questionnaire in the last *Gangue* requesting feedback on proposed MDD Short Courses. Several very interesting Short Course topics have been suggested and further announcements will be made in the *Gangue*.

The Canadian Geoscience Council has named a task force to examine "Research in Exploration for Mineral Deposits". The CGC initiative has stemmed from Jim Franklin's November 1981 workshop on "Future Directions of Mineral Deposit Research in Canada" and Don Sangster's earlier proposal on a Mineral Deposits Research Centre. Mineral deposits research is an important concern of the MDD and a presentation will be made to the CGC Task Force. The MDD Committee preparing this presentation will also constitute an ongoing group that will monitor the progress and the direction of research on mineral deposits.

Current activities of the **Volcanology Division** focused on the joint GAC/MAC/CGU meeting for Victoria in May, 1983. The Division organized and sponsored the session on Volcanology and field trips to the Early Tertiary volcanic outliers of south-central British Columbia, Mt. St. Helens volcano and Hawaii.

Matters under discussion include plans for the special session on Dykes, Sills and Related Subvolcanic Phenomena for London '84 and Rift Volcanism for Fredericton '85. Details relating to future field trips and a proposal for a separate field trip to the Trans-Mexican Volcanic Belt are also being examined.

There was a brief review of ongoing volcanology-related projects at the May meeting and an unveiling of the Geothermal

Potential Map of British Columbia.

The **Structural Geology Division** of GAC, with a membership of approximately 150, has had a successful year. During 1982, the Structural Division has assisted in hosting two meetings and has evaluated papers and theses for its annual prizes.

The 2nd annual workshop of the *Canadian Tectonics Group* was held in Gravenhurst, Ontario on the 23rd and 24th of October, 1982 and was organized by Fried Schwardtner and Pierre Robin of the University of Toronto. An excellent selection of short talks and well-illustrated poster displays dealt with most aspects of structural geology and tectonics, from esoteric petrofabric studies to regional syntheses of tectonic evolution from the Grenville Province, the Cordillera and the Arctic Archipelago. Abstracts will be published in the *Journal of Structural Geology* later this year. Tony Davidson, Precambrian Division, GSC, and Fried led an informative field trip through western parts of the Grenville Province.

The 9th Annual Cordilleran Workshop, organized by Hugh Greenwood, was held at the University of British Columbia on the 5th and 6th of February, 1983. The complex and heterogeneous nature of the Cordillera was reflected in the diversity of topics and locations discussed, from the thrust belt to the mosaic of suspect and allochthonous terranes of the western Cordillera.

The division held its annual meeting together with the GAC/MAC Annual Meeting in Victoria on May 12th and many members participated in several field trips as well as in the R.J.W. Douglas Memorial Symposium (A comparison of the Cordillera with other orogens). Annual prizes for the best paper and best graduate thesis dealing with structure and/or tectonics were awarded at the GAC luncheon during the annual meeting on May 11th, as follows: Best thesis: Janet E. King (M.Sc.), Queen's University; honourable mentions: Tekla A. Harms (M.Sc.), Queen's University; Randall R. Parrish (Ph.D.), University of British Columbia. Best paper: S.K. Hanmer, Geological Survey of Canada; honourable mentions: R.L. Brown and D.C. Murphy, Carleton University, and M.E. McMechan and R.A. Price, Geological Survey of Canada.

Later in the year, the Canadian Tectonics Group will be holding its 3rd annual workshop in Jasper on the 21st to 23rd of October, 1983, organized by Henry Charlesworth and Wilhelm Langenberg of the University of Alberta and the Alberta Research Council. Computer applications to structural studies will be examined as well as the real structures of the Rockies.

Membership of the **Paleontology Division** has now reached over 100. The Division Newsletter is being sent to all paleontologists across Canada to keep them informed of recent research activities

in publications by members in Canadian Universities and other research institutions. The newsletter also carries notifications and reports of meetings, conferences, field trips and Division business. Members of the Division, as representatives of GAC, have been actively involved in the establishment of *Palaeontographica Canadiana*, a new monograph series which is sponsored jointly by GAC and CSPG. The first volume entitled "Silicified Silurian odontopleurid trilobites from the MacKenzie Mountains" will be issued later this year. Further reports of the activities of the Paleontology Division are reported in *Geolog* V. 11(3) and V. 11(4).

### Publications

The sale of publications from April 20, 1982 to April 4, 1983 and stocks on hand are given below.

	Copies Sold	Copies on Hand
<b>Proceedings</b>		
Vol. 21	1	163
22	1	123
23	1	131
24 I	1	30
24 II	—	—
25	1	244
<b>Special Papers</b>		
#8	143	532
#9	1	109
#12	112	534
#13	95	470
#15	39	103
#16	84	604
#17	24	243
#18	15	668
#19	61	383
#20	286	755
#21	141	864
#22	191	1,102
#23	384	1,348
#24	553	971
#25	467	2,181
<b>Geoscience Canada</b>		
Vol. 1 #1	3	196
#2	3	4
#3	2	348
#4	2	152
Vol. 2 #2	4	70
#4	5	213
Vol. 3 #2	2	311
#3	2	151
#4	3	250

	Copies Sold	Copies on Hand
Vol. 4 #1	2	391
#2	2	136
#3	2	305
#4	2	479
Vol. 5 #1	3	866
#2	3	163
#3	3	790
#4	3	334
Vol. 6 #1	2	757
#2	3	833
#3	2	477
#4	5	183
Vol. 7 #1	—	—
#2	4	21
#3	—	—
#4	5	74
Vol. 8 #1	71	252
#2	11	185
#3	22	227
#4	91	269
Vol. 9 #1	3,475	100
#2	3,600	14
#3	3,555	161
#4	3,620	275
Vol. 10 #1	3,620	720
<b>Facies Models</b>		
	1,855	2,069
<b>Program &amp; Abstracts</b>		
Vol. #1	2	70
#2	6	204
#3	3	407
#4	20	20
#5	14	42
#6	49	—
#7	—	—
<b>Information Circulars</b>		
#1	15	200
#2	7	924
#3	13	144
<b>Guidebooks</b>		
1967	15	218
1970 #5	—	—
#6	—	—

The following list of Fellows attended the Annual Business Meeting, held at the University of Victoria, Victoria, British Columbia on Thursday, May 12, 1983.

- |                   |                     |
|-------------------|---------------------|
| N.J. Allman       | V.F. Hollister      |
| L.D. Ayres        | G. Johns            |
| R.A. Baragar      | A.F. King           |
| C.R. Barnes       | S.A. Kissin         |
| S. Barr           | J.W. Kramers        |
| T.J. Bottrill     | R.H. McNutt         |
| L.J. Cabri        | A.V. Morgan         |
| W.G.E. Caldwell   | H.C. Morris         |
| D.M. Carmichel    | A.J. Naldrett       |
| R.A. Charlesworth | E.R.W. Neale        |
| T. Clark          | G.S. Nowlan         |
| J.A. Coope        | D.J.W. Piper        |
| D.R. Derry        | R.H. Ridler         |
| J.A. Donaldson    | D.A. St-Onge        |
| M. Duke           | J.S. Stephenson     |
| G.E.P. Eastwood   | L.S. Stephenson     |
| W.A. Gibbins      | A. Sutherland Brown |
| P.L. Gordy        | P. Von Bitter       |
| R.S. Harrison     | P. Williams         |
| H. Hofmann        |                     |

**Some Last Comments**

I have extremely mixed feelings in finishing this Secretary's Report for the Association. My stewardship of GAC has now come to an official close, and the corridors of the Earth Sciences Department at Waterloo are echoing to the ghosts of GAC past. For 16 years the Association has rumbled like a small volcano, confined to a one-room operation, as membership passed the 1000, 2000, and (albeit briefly at the end of last year) the 3000 mark. More important, the Waterloo operation has seen the Association move from what was perceived as a mineral-orientated group of geologists, to a truly multi-disciplinary national body. We have progressed from hand-processed labelling to a computer guided operation which can give us listings of all members, and any breakdowns thereof, in less than five minutes. Most of all, GAC means something to a tremendous range of geologists across Canada.

The personal and social contacts that the members of the Association have, touch us in our every day lives, from fellow faculty to colleagues in government and industry, to the students who will follow in our footsteps. In this respect I have to say that my tenure as Secretary-Treasurer of GAC has been a period which I shall never forget. Some aspects would, perhaps, best be forgotten—near diasters that involved complicated manoeuvring to correct things that were not quite 'right'; long hours chasing down data or details needed for Council—but all mellowing in the years that have passed. The people who make up GAC are the most rewarding aspects of my term of office. I have, over the last eight years, seen a succession of Councillors and

Presidents go by. Members of the Association, we are very well served by the different Executive, Council, Section and Division representatives that cover the hierarchy of GAC. Most of you are aware that GAC runs relatively smoothly, but perhaps many of you are unaware of the tremendous amount of personal time and effort contributed by these individuals and their respective employers. I too owe each of them, and particularly the Presidents, Executives and Councils between 1975 and 1983, my sincere thanks. Ladies and Gentlemen, I am proud and honoured to have served with you—perhaps we may relive some of our joint experiences in future years.

A last few personal comments. The Geological Association of Canada is again at an important point in its development. With the new Constitution and an enlarged Council, with a new headquarters staff, and most important, a new financial structure, it can, and will, go on to greater things. I look forward with anticipation to a modernized and re-vitalized Association and give my best wishes to John Malpas, my successor at St. John's. May he also experience the good things that this position offers.

Finally, as always, I close this report with comments addressed to two people who have so ably assisted me, and Chris Barnes before me, at Waterloo. To Heather Sokoloskie, once Heather Nyland, and to Nancy Riley, my most sincere thanks for your service to the Association. For those last minute requests for things that should have been done yesterday, for the hours spent over computers, hot xerox machines, and hand-calculators, for the slogging at GAC affairs—stuffing envelopes, manipulating displays, packing books; all 2,777 members should join me in saying one last time, "thank-you for a job well done".

Respectfully submitted  
 Alan V. Morgan  
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 University of Waterloo  
 Waterloo, Ontario N2L 3G1