

THE GANGUE

*The newsletter of the
Mineral Deposits Division
Geological Association of Canada
No. 23
Jan 1986*

CHAIRMAN'S REPORT:

MDD is once again involved in a large number of ambitious and aggressive projects designed to benefit its membership and mineral deposits geologists in general.

We are a sponsoring society for the (recent - Edit.) Computer Applications in Mineral Exploration meeting in Toronto, and the upcoming Copper Symposium in Ottawa and the Gold '86 meeting in Toronto next October. Various field trips are upcoming, and plans for the Portugal-Spain (April 1986) tours and the Brazil trip in the fall of 1986 are well advanced.

Several suggestions have been made regarding joint projects, field trips, short courses, symposia, etc. with other GAC Divisions, Sections or affiliated groups, and we would solicit input from the entire MDD membership on any ideas they might have in this regard.

Elsewhere in this, and previous, issues of The Gangue you will find notices of various field trips, symposia, short courses, etc. of interest to MDD members. We are circulating copies of The Gangue to all other Division and Section Chairmen to disseminate our activities and will likely include notices of some of their projects of interest to MDD members as well. Please contact any MDD director or Executive member with your ideas.

Robinson Guest Lecture:

Jeff Thurlow's speaking tour of Western Canada was a great success and we sincerely thank him and his employer, B.P.-Selco, for putting together an excellent presentation on the Geology and Exploration of the Buchans Ores.

Jeff will set out again this spring on another speaking odyssey in Eastern Canada. Most venues have been booked and no other locations can be incorporated.

Special thanks are due to Ron McMillan for the coordinating and organizing of Jeff's trips with the Robinson Fund Directors and the local sponsoring groups.

Publications:

During 1986, MDD has presented the GAC with a proposal to reprint all existing Ore Deposits Models articles previously published individually in Geoscience Canada into a single volume. GAC have accepted this as a viable project and will publish it under their own auspices. Three new model articles, not yet published in Geoscience Canada, will round out the reprint volume. These include: Archean Gold, Epithermal Vein Type Precious Metals in the Cordillera, and Disseminated Gold Deposits of the Southwest U.S.A.

New MDD Publications Venue - The Northern Miner Magazine:

As most MDD members know, lack of a suitable publications venue for informative, timely, and non-academic or research type articles has been a major problem for Canadian ore deposits geologists. Your Executive feels that we have at least partially solved this problem.

Beginning in January 1986, The Northern Miner will begin publishing a new monthly Technical Magazine that will have a similar format to the old Western Miner, but will be strictly involved with technical articles related to the mineral resource industry. The Northern Miner Magazine has agreed to accept one MDD refereed article per month, on any mineral deposit related topic, geology, mineralogy, exploration, geophysics, geochemistry, etc. etc. The articles can be descriptive, informative or interpretive and can focus on local or regional aspects of mineral deposits related phenomena.

The only stipulations imposed so far are that the articles be limited in length to about 3,000 words (about 15 double spaced typed pages). If longer ones are submitted, they may not be acceptable, but could be rewritten. A reasonable number of coloured diagrams or photos can be included, as well. (Remember that Charles Dickens wrote most of his works for publication a chapter at a time, and consider the possibility of serial articles - Edit.).

The Northern Miner editorial staff will have the right to reword, rewrite or restructure the article to fit the overall style of the magazine, but will not jeopardize technical content, and any significant changes will be discussed with the MDD editorial board set up to referee the articles. MDD will receive proper credit for the series which will be set up as a 'department' in the magazine.

Your Executive hopes to be able to negotiate an arrangement whereby a twice-yearly reprint magazine can be generated for distribution to MDD members. We will try to have the first set available for the May 1986 GAC Annual Meeting.

It is understood that this publishing venue is not designed to provide authors academic accreditation and the limited length and editorial prerogatives of the publisher may not be acceptable to everyone, but it is not designed to be a research oriented publication and it represents a first step wherein MDD now has an established venue to publish timely, informative articles in a publication with a monthly distribution of 15,000 copies. If MDD can make quality contributions, we may be able to eventually build this into something more substantial.

An editorial board has been established to coordinate with The Northern Miner Magazine staff and to solicit articles. Manuscripts must be press ready six weeks in advance of the month of publication,

i.e. for a March article, the manuscript must be ready January 15.

All MDD members are invited to contribute; this is your publication venue and it is up to all of us to make it work.

We still need regional representatives to serve on the editorial board, from the Prairie Provinces, Quebec, and the Atlantic Provinces. So far, the board is set up as follows:

Editor

William E. (Bill) Roscoe
Toronto-Dominion Centre
Royal Trust Tower
Suite 3313
Post Office Box 299
Toronto, Ontario
M5K 1K2
(416) 947-0907

Western Canada Rep.

Ken Dawson
Geol. Survey of Canada
100 West Pender St.
6th Floor
Vancouver, B.C.
V6B 1R8
(604) 666-0260

Other Members

Pat Sheahan
MDD Publications Chair-
person
Konsult International Inc.
44 Gemini Road
Willowdale, Ontario
M2K 2G6
(416) 223-7750

Terence J. Bottrill
Mineral Exploration Con-
sultant
192 Welson Avenue
Oakville, Ontario
L6K 2H8
(416) 842-2893

In addition, articles can be submitted to any MDD Director or member of the Executive. We need volunteers to help generate articles for the magazine, so if you feel you have something to offer, please contact us.

All the best to everyone on behalf of your Executive for a happy, healthy, peaceful, and successful 1986.

A. Lee Barker - Chairman

NOTES FROM THE EDITOR:

Welcome to 1986. May this be a bouyant, active and prosperous year for all of us in MDD. From the perspective of the mining industry, it's always been easy in these sorts of times to say "we're in the bottom of a cycle, and things have to turn up" or "there's nothing wrong that 20¢ on the price of copper (or zinc, or whatever) wouldn't cure." But is that the case? Are we really going to see an upturn in the classic sense? Are we going to see real (as opposed to simply inflationary) increases in prices? Or is the world moving into a whole new era with respect to its need, and willingness to pay, for metals? I don't profess to know the answers, but I am concerned about the questions. Anyone with thoughts one way or the other, and a desire to make these known, should send them along for publication. I certainly hope that my Doomsday scenario is not what we are going to see, but I'd like your views.

On another subject, I was very interested in Don Sangster's excellent article on research (as I was in the original articles). Along this line, my former colleague Richard Moore recently sent me an Editorial (Geology, January 1985) and several answering letters (Geology, December 1985). I commend them to your attention; the general thrust of the editorial had to do with "Geologic Inquiry" - and the apparent difficulty of our science in moving from the "look, collect data, and describe" method of investigation to what the Editor of Geology sees as real scientific inquiry - the formulation of the "paradigm" or broad view or hypothesis which can be tested. Reaction to the editorial was varied, from agreement to decidedly the opposite - it all makes interesting reading. I raise this because it meshes rather neatly with some of Don Sangster's questions about what constitutes research, and whether we should be concentrating on exploration or deposits research. I confess to a preference for

the former, but realize this is a biased position. I also wonder if exploration might not be regarded as the ultimate in research - formulate the paradigm ("there ought to be a deposit there"); examine the evidence (survey, drill); reach a conclusion (yes or no - distressingly often, no). A classic example of this would be the discovery of the great Olympic Dam Cu-U-Au deposit in South Australia, as described by Roy Woodall in Geoscience Canada (Vol. 11, No. 3). I look forward to your responses.

Giles Peatfield

NOMINATIONS FOR DUNCAN R. DERRY MEDAL - 1986

The MDD is actively soliciting nominations for what has become one of the most prestigious awards in economic geology - the Duncan R. Derry Medal of the MDD. Now is the time to forward suggestions and specifically nominations for your favourite candidates. For them to be considered for the 1986 award, their names should reach the Chairman of the Selection Committee by January 31. We realize that this is a very short time frame, but if you have a good candidate, try to get a nomination in to, or at least contact:

Chris Jennings
BP-Selco
Suite 1700-55 University Ave.
Toronto, Ontario
M5J 2H7

ACT THIS MINUTE!

To assist you in preparing your nomination we have reproduced below the guidelines for awarding the medal. Your nomination should include an introduction to the candidate, a summary of the candidate's accomplishments in economic geology, a curriculum vitae, and other information or attachments that you think will supplement and enhance the presentation.

The guidelines are:

1. The medal may be awarded annually to an outstanding economic geologist who has made major contributions to the science of economic geology in Canada. Nominees should preferably be members of the GAC, and preferably but not necessarily members of the Mineral Deposits Division (MDD). (This is not absolutely necessary, vide Mike Knuckey in 1985, but a non-member winner will be under enormous pressure to join!! Edit.)
2. Nominations for the medal are to be made by three members of the MDD, either jointly or by independent submissions. Nominations must be supported by relevant data, such as a curriculum vitae or a letter outlining the nominee's accomplishments, etc.
3. Candidates should be recognized for their skill and stature as professional economic geologists, and also by their public contributions to the science. It is acknowledged that publication is the prime but not the only method of spreading information in any discipline.
4. Unsuccessful nominees will be automatically submitted for review in the subsequent two years, and will then be dropped unless renominated.
5. Nominations for the medal may be submitted at any time, but to be considered for a particular year, they must be received by the Chairman of the Selection Committee no later than January 31. The Chairman of the Selection Committee is normally the Vice-Chairman of MDD.

LETTERS TO THE EDITOR:

The following communication is printed essentially as received, and we have not consulted with our solicitors (note editorial we) as to whether or not it is libellous, slanderous, or any other sort of -ous. If anyone is offended, please forgive us - or better still, write a rebuttal.

Editor

Dear Sir:

Having enjoyed Giles Peatfield's peculiar humour for the past fifteen years I never expected to see it in print; but there it is: in The Gangue, No. 22. This raises the issue of a new class of English, the first (I believe) to be introduced by a geologist. I therefore request your learned readers to support a case for this class to future editions of Fowler's, "Modern English Usage", Follett's "Modern American Usage", and any "Modern Canadian Usage" yet to appear.

peatfields. Editor of The Gangue, a publication of the Mineral Deposits Division of the Geological Association of Canada, who has given his name to a class of written language that involves quaint deliberate colloquialisms of a humorous nature, characteristic of the normal style of speech and peculiar humour of the writer. Peatfields may appear to be malaprops, but both malaprops and spoonerisms belong to the class of unintentional mistakes in language; peatfields belong to a new separate class of intentional changes of context involving replacement by a near-homonym, followed by a play on words. Here is a simple example:

"Run by the GSC Ultramafia (sic) this trip commences in Winnipeg. In spite of the somewhat sinister sound of the organizing committee, this should be a worthwhile excursion". Here, Ultramafia is used for scientists working on ultramafic rocks.

Editor's Note: We don't like to disappoint our writer, but as we remember it, the term Ultramafia was coined by Dr. Jefferson, not by us. We do, however, accept credit (?) for the sinister sound - note also the use of the appropriate alliteration.

At this low-level the peatfield is nothing new: Joyce's later work is replete with deliberate malprops; and simple punning is common in modern language. In a true peatfield the near-homonym is set to disguise the several different levels of humour. Consider this:

"Eric Craigie is heading" up the organizing committee and would be leased to answer requests for more information. His address is:
BP-Selco
Suite 1700-55 Univesity Avenue
Toronto

The apparent typographical error of leased for pleased is the near-homonym, suggesting that Eric Craigie will be leased by BP-Selco. At its lowest-level this merely implies that BP-Selco is charging to answer questions. However, BP is an oil company that trades in oil leases. Thus, one can infer that BP-Selco is putting out a message that it wishes to trade or lease Eric Craigie. If the reader realizes that BP recently lost its major oil leases, and production operations, during the Iranian revolution then the inference is advanced to, "BP-Selco has such a poor cash-flow position that it is actively selling-off its geologists". (To appreciate this, simply move the period from after information, to after leased). However, the truly sublime peatfield usually has a

hidden erotic connotation. The clue in the example is Univesity for University. Although, it is implied that the reader would have to be aware of the nature of University Avenue, Toronto, the deliberate misspelling draws the reader's attention to the fact that the location (downtown) must be combined with the preceding text. Here, there are several possibilities but the obvious, "Heading up", combined with leasing of Eric by an oil company leads one to consider whether BP-Selco is getting into body-rub parlours in a big way.

I understand from my faculty colleagues in the English Department that several conditions will have to be met in order to have peatfields accepted as a new class of language:

1. It must be defined. I have, above.
2. It must be proposed by an acceptable body of learning. I am led to understand that this newsletter may be regarded favourably by English Professors as the organ of an August body: this is still hanging.
3. It must be used consistently over an acceptable period of time.

It seems that this will only come if we can persuade Giles to become excited enough to grasp the issue firmly with both hands. Keep it up Giles. In order to assist us push the issue, may I suggest to the Executive of GAC that they offer an annual prize for the best peatfields published in either The Gangue or Geolog, to be awarded at the Annual Meeting.

Simon Haynes
Brock University

Personally, we didn't realize how funny we were!
Editor

ROBINSON GUEST LECTURER:

As noted in Lee's message, Jeff Thurlow's western trip was very successful. At his first lecture, in the Vancouver Engineers Club on Nov. 28, a total of 54 geologists (a record number for a Cordilleran Section lecture) heard Jeff's talk, and the question period lasted for some 45 minutes. Certainly, I found the lecture informative and stimulating, and join Bob Anderson of the Cordilleran Section in congratulating the Robinson Fund committee, and issue a plea that after such a good beginning the programme not be allowed to falter. Well done all!

CIRCUM-PACIFIC MAPS:

The enclosed flyer describes a set of maps compiled by the Circum-Pacific Map Project and available from AAPG, P.O. Box 979, Tulsa Oklahoma 74101, U.S.A. (918) 584-2555. They constitute "an integrated series of maps for earth scientists showing the relation of geology, tectonism, and geophysics to known energy and mineral resources. There are 8 series of maps at 1:10,000,000 scale and selected compilations of the entire Pacific Basin at 1:17,000,000 scale." I am sure that some or all of these maps would be of considerable interest to many MDD members.

ACKNOWLEDGEMENT:

The Gangue gratefully acknowledges assistance in preparation of Gangue 23 from MineQuest Exploration Associates Ltd., and in mailing by the Geology Graduate Students Association at U.B.C.

FEATURE ARTICLE:

The following article recently arrived from Don Sangster in Ottawa, and is presented as received. This is a very complex and perhaps contentious issue, and I would be most pleased to field comments on Don's article, for future copies of The Gangue.

Mineral Deposits Research in Canada: an Update

Some of the more faithful Gangue readers may remember three articles I wrote in 1980-81 as Chairman (and sole member) of the MDD Committee on Mineral Deposits Research. At the time, I was expressing my concerns about the state of mineral deposits research in Canada (Gangue, nos. 7, 8, and 9). In those articles I discussed the status of research as I saw it and invited comments from interested Gangue readers. Failing to receive any response, I concluded the series with four of my own recommendations as to possible courses of action MDD could take to significantly influence Canadian mineral deposits research. Regularly, since then, many friends and colleagues have inquired "What happened in the interval?" In response to this interest, and other expressions of encouragement, I offer the present update. My first reaction was to call this a "progress report" but decided to let readers decide whether what is reported below is progress or not.

After the Gangue articles, I prepared a document entitled "Proposal to create a Mineral Deposits Research Centre for Canada" and mailed it to over 50 representative companies in the mineral industry, university geology departments, and government geological surveys. A copy was sent to the Science Council of Canada. Following this phase in about mid-1981, the following events, related to the general subject of Canadian mineral deposits research, transpired and are listed below in approximate chronological order:

- I received a written offer of free land in Ottawa on which to build a Mineral Deposits Research Centre;
- the Canadian Geoscience Council convened a two-day workshop in Toronto, attended by 34 representatives from industry, government, and university, to discuss the topic of Canadian mineral deposits research. One of the conclusions of the group was that Canada should have not one but three mineral deposits research centres. The Report was published by the Geoscience Council.
- the Derry Laboratory of Sedimentary Geochemistry and Mineral Deposits was established as a graduate research unit of the Ottawa-Carleton Centre for Geoscience Studies with affiliate participation by the Geological Survey of Canada;
- the Canadian Geoscience Council, responding to a request from the Geological Survey of Canada, appointed an advisory committee to carry out an inquiry into the status of mineral deposits research in the Survey. Results of this investigation are due to be published shortly;
- the Canadian Geoscience Council commissioned its own committee to investigate "Research and development in mineral exploration in Canada". Questionnaires were distributed to industry, governments, and universities. Unfortunately (in my opinion), the committee was instructed to investigate mineral exploration research rather than mineral deposits research. The committee has yet to submit its report;
- the Mineral Exploration Research Institute (MERI) in Montreal, after a decade of emphasis on applied (exploration) research, officially altered

its mandate to include a much larger proportion of basic research in mineral deposits;

- the Geological Survey of Canada finally purchased its first heating/cooling stage for mineral deposits research; and
- a light stable isotope laboratory, intended primarily for use in mineral deposits research, was established as a joint facility by the University of Ottawa, Carleton University, and the Geological Survey of Canada.

Considering the relatively short time frame involved (less than four years), one can only be encouraged by the events listed above. Certainly, this reader cannot ever recall the Canadian Geoscience Council commissioning three inquiries into Canadian mineral deposits research!

It would be presumptuous, of course, to claim that three little articles in The Gangue resulted in all the above events. Perhaps the Gangue discussions merely served as a precipitant for concepts that many economic geology researchers already felt, albeit unconsciously, and the articles merely crystallized these into several courses of action. Certainly, there seemed to be a distinct element to the "domino effect" in the sequence of events over the past three years or so.

Encouraging as these events are we cannot, of course, be complacent regarding the general subject of Canadian mineral deposits research. Many things are still unchanged. We are, for example, still far too dependant on foreign research in the area of basic concepts and technology. Our researchers are excellent at applying someone else's new scheme, technique, or tools, but we still project the image of "hewers of wood and drawers of water" in this respect. As another example, the lion's share (50% or greater) of NSERC funding in mineral deposits research still goes, as it has for over a decade, to three or four university departments with the resultant emphasis on a small number of deposit-types and/or geographic areas. Another point: several government agencies, conducting in-house, basic research in several fields of science (e.g. physics, chemistry, agriculture, astronomy, etc) are accepted by the rest of the scientific community as national leaders in their field. Yet, any mention of strengthening in-house government research in mineral deposits elicits reactions, from both within and outside government, ranging from reluctance to outright alarm. Why?

In conclusion, the author wishes to thank those of you who expressed continuing interest in my efforts to draw attention to the status of mineral deposits research in this country. Things are improving but individuals and organizations must ensure that the momentum is maintained. To do nothing is to fall behind, to do a little will simply maintain the status quo, a real effort is required to move ahead.

D.F. Sangster

I would be very interested in any comments MDD members might have. It would be rude of me to print the names of those of you whom I think ought to respond, but I know you're out there, and if I don't get some copy, I'll be contacting you! Areas of Don's article which I think deserve response include the "hewers of wood and drawers of water" allegation, the comment regarding concentration of research at a small number of schools, and the differences between exploration research and deposits research.

Editor

UPCOMING FIELD TRIPS:

Spain/Portugal - April '86:

Ian Paterson advises that all is well with the planning of this trip, and the places are all filled, including a waiting list. See Gangue 21 and 22 for details of this trip. Ian - make sure that you railroad someone into preparing a trip report for The Gangue!

Late News: Ian tells me that if anyone has a very strong reason for wanting to attend, they should contact him as soon as possible. See Gangue 22 for his address and phone number.

Brazil - November '86:

Luca Riccio advises that "the GAC Mineral Deposits Division is organizing a field trip to Archean and Proterozoic terrains of Bahia and Minas Gerais States. Visits are planned to gold, iron, chromite, and copper deposits in greenstone belts, gold deposits in Proterozoic quartz pebble conglomerates, and carbonatites.

Estimated cost of the field trip is \$Cdn 2,600. This will include return air fare from Vancouver, ground transportation and accommodation in Brazil. Interested parties should contact Luca by mail at:

1440 Paisley Rd.
North Vancouver, B.C.
V7R 1C3
(604) 980-7352

All enquiries will be treated strictly on a first come first served basis. The number of participants will be limited to 35."

Ottawa '86:

The latest word from Charlie Jefferson on MDD related trips (see Gangue 22 for details) is that the final costs and number of spaces are:

<u>New #</u>	<u>Old #</u>	<u>Cost (\$C)</u>	<u>Places</u>	<u>Comments</u>
1	1	2,000	40	filling up well
2	2	230*	20*	
3	3	350*	20	may run twice
4	4	300	40	lots of room
5	5	400*	30	lots of room
12	6	2,200	20	full? but try
13	7	325*	40	NB May 21 - 25
14	8	425*	22	full? but try

*-change from Gangue 22.

New Zealand:

Don't forget that anyone interested in an economic geology oriented trip to New Zealand (see Gangue 22) should contact Prof. David Mossman at Mount Allison University.

Australia: ??

Anyone wishing (willing?) to work on organizing a trip for a small number of keen ore deposits geologists to visit several mines in Australia should contact me. My colleagues at Quest Exploration Associates in Brisbane are prepared to help in organizing a trip for a small number (6 or 7), and if someone is prepared to work at this end, I'm sure it can be arranged. One stipulation I have been given is that Australian mine geologists very

much appreciate presentations on deposits in other parts of the world, so anyone who went would be asked to try and take a talk with them. Please contact me if you are interested in the planning portion of such a trip.

NON-MDD FIELD TRIP:

Mineral Deposits Field Trip Across Southern B.C.:

The Department of Geological Sciences, The University of British Columbia will be running their third field trip on mineral deposits across southern British Columbia under the direction of Colin Godwin, and assisted by Tryg Hoy and Bill McMillan, BCMEMPR. The last trips have been extremely well received. Space may be limited. The trip in 1986 will be similar to the one in 1984 where in about 5,000 km of travel more than 25 deposits and showings were examined; regional geology was described by personnel of the BCMEMPR, and discussions of local geology were held on site, en route, and during some evenings. (And what went on on the other evenings? - Edit.)

Dates: Sat. Apr. 26 to Sat. May 10.

Cost: \$1,000 for accommodation, transport and field guide.

Transport: Two 15 passenger vans.

Number: Approximately 17 (includes 8 grad. students).

Visits Provisionally Planned: Beaverdell, Spar Lake, Sullivan, Lornex, Blackdome, and many more.

Please contact as soon as possible if you are interested in attending this field trip:

Colin Godwin
Department of Geological Sciences
The University of British Columbia
Vancouver, B.C.
V6T 2B4
(604) 228-2804, 228-2449, 421-4654

SHORT COURSES:

Structural Short Course - May-June '86:

Richard Moore advises that 28 people (as of Nov. 85) had applied for the 20 places available (see Gangue 22 for details). I am sure that this will be a very successful course, and wouldn't be surprised to see a call for repetition, perhaps on an annual basis.

Ore Microscopy - Univ. of Missouri - March '86:

Dick Hagni's perennially successful course on ore microscopy is being offered yet again. Dr. Hagni recently wrote to The Gangue, and parts of his letter are reproduced below:

"In the past I have sent information to you regarding my annual short course in "Applied Ore Microscopy" for inclusion in the Mineral Deposits Division newsletter." "I am now preparing to teach the course for the 16th time."

"The course will be taught March 24-28, 1986 and is an offering of the Department of Geology and Geophysics and the Mines and Metallurgy Continuing Education, University of Missouri-Rolla. The course consists of five days of lectures and laboratories and involves a wide variety of applications of the reflecting microscope to ores, exploration, beneficiation and other industrial problems. The course

director and teacher is Dr. Richard D. Hagni. Maximum enrollment is 13. Registration is \$785US. The course is directed at both geologists and metallurgists. Although the course is intended to introduce the ore microscope to those who have had no previous experience with reflected light, many experienced ore microscopists have come to the course and felt that they profited greatly from it. Participants can expand their knowledge of ore deposits through the study of the polished sections available in the course which were prepared from specimens collected from ore deposits which have an extensive international representation. A large number of suites dealing with precious metal deposits will be included. Further information on course content can be obtained from Richard D. Hagni, Department of Geology and Geophysics, University of Missouri-Rolla, Rolla, MO 65401, phone 314-341-4657. Information on registration can be obtained from Frank F. Haston, Mines and Metallurgy Continuing Education, UMR, Rolla, MO 65401, phone 314-341-4204."

GAC Cordilleran Section Short Courses:

For more information on these courses, please contact Bob Anderson at the GSC in Vancouver, at (604) 666-2693 or 666-0529 - address 100 West Pender St., Vancouver V6B 1R8.

Course #5 - Canadian Cordillera - What and How:

Otherwise known as "the Dirk and Bob Show", this one is back by popular demand. Drs Bob Thompson and Dirk Templeman-Kluit of the GSC will lead this course on Tuesday Jan. 28 (8:30 to 5:30) at the Sheraton-Landmark, Conference Centre - 1400 Robson St., Vancouver. The cost is:

	before Jan 24	Jan 25-28
members (Cord. Sec.)	\$17.00	\$27.00
student members	\$ 8.50	\$18.50
non-members	\$37.00	\$47.00

Lunch - \$15.00 (please register before Jan. 24)

The "Canadian Cordillera - What and How" is for newcomers and Cordilleran "old hands" alike who want a regional overview of Canadian Cordilleran geology presented within a framework of modern tectonic principles.

Topics covered in the first half are: the terrane concept; identification and classification of Cordilleran terranes; the question of paleolatitide; dynamics of passive margin formation; Cordilleran "rift" events and their bearing on evolution of the proto-Pacific margin. The second half outlines when and how the Canadian Cordillera was assembled. Topics discussed are: concept of "super" terranes; timing and nature of the main collisional events; dynamics of strike slip during convergence; structural style; problems with and alternatives to conventional interpretations; and new research initiatives.

Course #7 - Tectonic Principles, Evolution of Sedimentary Basins and Their Structural Styles:

Dr. John Odlow, the 1985-86 Charlie Ney Visiting Lecturer, who hails from Rice University, will lead this course on Friday Feb. 21 (8:30 to 5:30) at the Sheraton-Landmark, Conference Centre - 1400 Robson St., Vancouver. The cost is:

	before Feb 14	Feb 15-21
members (Cord. Sec.)	\$35.00	\$45.00
student members	\$17.50	\$27.50
non-members	\$55.00	\$65.00

Lunch - \$15.00 (please register before Feb. 14)

The course is a distillation of a 16 hour seminar Drs. Oldow and Bert Bally have given to several oil companies in the U.S. Special emphasis will be given to application of plate tectonic principles to Canadian Cordilleran infrastructure and basins. General topics include: General introduction; divergent boundaries and passive margins; convergent boundaries, fold and thrust belts and extensional basins; and transform boundaries.

Course #8 - Central Andean Tectonics, Magmatism and Metallogenesis:

Dr. Alan H. Clark of Queen's University at Kingston will lead this course on Friday Mar. 14 (1:00 to 5:30) at the Sheraton-Landmark, Conference Centre - 1400 Robson St., Vancouver. The cost is:

	before Mar 7	Mar 8-14
members (Cord. Sec.)	\$35.00	\$45.00
student members	\$17.50	\$27.50
non-members	\$55.00	\$65.00

Course #9 - Introduction to Quaternary Sediments and Environments as Applied to Mineral Exploration:

Drs Lionel Jackson and Bill Shilts of the GSC in Ottawa will lead this course on Friday Apr. 18 (8:30 to 5:30) at the Institute for Quaternary Research, Department of Geography, Simon Fraser University, Burnaby, B.C. The cost is:

	before Feb 14	Feb 14-Apr 18
members (Cord. Sec.)	\$38.00	\$48.00
student members	\$19.00	\$29.00
non-members	\$58.00	\$68.00

This includes a copy of the S.E.P.M book "Glacial Sedimentary Environments" which explains the early registration provision, in order that the volume may be available for the course.

Lunch - \$10.00 - please register by April 11.

In the search for drift-covered, blind mineral deposits, soil geochemistry and mineralized boulder tracing are widely used exploration tools, but their success depends on an understanding of glacial sediments. Course participants will learn to recognize glacial sediment types and depositional environments commonly found in the Cordillera as an aid to the interpretation of drift geochemistry, source of mineralized float and the results of shallow geophysical (e.g., resistivity and shallow seismic) surveys. Topics include:

- 1 Genesis and sedimentology of till, glacio-fluvial and glaciolacustrine deposits;
- 2 Use and interpretation of terrain inventory maps; and
- 3 Drift prospecting for precious metals.

I am sure this is only a small sampling of upcoming short courses. I would be pleased to publicize such courses, or field trips, etc. for any organization as long as the events are relevant for MDD members. If you have information on some pet course or trip, please get the information to me and I'll do my best to get it in the next issue. My address is:

MineQuest Exploration Associates Ltd.
201-311 Water Street
Vancouver, British Columbia
V6B 1B8
(604) 669-2251

SYMPOSIA; PAST, FUTURE AND POSSIBLE:

CAME '86:

By the time you read this, the rocks will have been well and truly bitten - I hope the meeting was as much of a success as CAME '84. Given the rapidly evolving state of computer technology and its growing acceptance in geology, I hope Terry Bottrill and crew are already working on CAME '88!

GeoExpo '86:

The Cordilleran Section of the GAC and the Association of Exploration Geochemists are co-sponsoring a meeting to be held May 12 to 14, 1986 at the University of British Columbia. The organizers have planned a very full slate of talks, poster sessions, workshops, short courses and super looking field trips. The emphasis will be on mineral deposits and exploration geochemistry in the North American Cordillera. Space limitations preclude a more detailed description of the meeting, but if you are interested, please contact:

GeoExpo/86
c/o Dave Jenkins
P.O. Box 49330
Bentall Station
Vancouver, British Columbia
V7X 1P1

I certainly plan to attend, and hope to see many of my friends and colleagues there too. Come and see us at EXPO '86!

Sediment Hosted Stratiform Copper Deposits:

This major international symposium, described in detail in *Gangue 22*, will precede Ottawa '86 - the Annual Meeting of GAC-MAC-CGU. Planning appears to be going very well, an impressive lineup of speakers is already firmed up, and recent projections are that the field trips will run successfully. Sponsorship and funding for this meeting are being shared by MDD, MAC (Mineralogical Association of Canada), GSC (funds for publication of proceedings), and NSERC, and full cooperation has been received from the GAC parent body and the Ottawa '86 organizing committee. I only wish I were able to attend.

More information is available from:

E. Craig Jowett
Earth and Planetary Sciences
Erindale College
University of Toronto
Mississauga, Ontario
L5L 1C6

Gold '86:

Unfortunately I don't have a recent expanded announcement for this meeting, to be held in Toronto Sept 29 to Oct 1, 1986 (Eric - please forward for the next *Gangue*!). Information on this international symposium on gold deposits and mineralization is available from:

Eric Craigie
BP-Selco
Suite 1700 - 55 University Ave.
Toronto, Ontario
M5J 2H7

Proposed Symposium:

Dr. Simon Haynes at Brock University has a proposal for a symposium entitled:

"Structural Regimes Associated with Ore Deposits"

"The purpose of this Symposium is to document the types of structures associated with ore deposition. Topics will range from the role of regional tectonic structures (e.g. extensional regimes, ductile shear zones, etc.), to smaller individual structures at the mine scale. Although the influence of post-ore deformational structures may have to be discussed, the principal objective of the Symposium is the consideration of the influence of pre- and syn-ore structures on ore deposition.

The date, place and sponsorship of this Symposium, and possible publication of the proceedings, depends on sufficient interest. Anyone wishing to contribute a paper or suggestions please contact:

Dr. Simon J. Haynes
Department of Geological Sciences
Brock University
St. Catharines, Ontario
L2S 3A1
(416) 688-5550, Ext. 3526

A PLEA FOR HELP:

Dr. Simon Haynes at Brock University recently wrote to *The Gangue* with a plea for help. His letter is as follows:

I am writing for help in setting up a series of annual student prizes and/or scholarships in Geology at Brock University. As Brock is a new and small University we do not have a large alumni nor strong industry support. In order to strengthen University-Industry relationships, one way of ensuring students that Industry does care about their academic achievements is to award an annual prize of about \$70 (or a book of equivalent value). All prizes will be named after the company or organization offering same. Your organization might also consider offering scholarships for our M.Sc. program. As you probably know little about the quality of our degree programs at Brock I should like to point out that the 1985 CIM gold medal for best student essay was won by Joan Morrison of our Department for her Honours B.Sc. Thesis.

On another tack I am soliciting speakers for a lecture series for 4th year and graduate students, for this and future years, on "Aspects of Applied Geology". The purpose of this series is an attempt to relate the needs of Industry to our academic program. If you are one of those who bewail the standards of today's undergraduates then this is your opportunity to come and tell students and faculty what we should be doing. We are also interested in "Exploration Philosophy and Technique", and "The Role of Management in Industry". What better way to spend a dreary winter day, come on down to the Niagara Peninsula, "don't delay, phone today": (416) 688-5550, Ext. 3530.

Simon's address is:

Dr. Simon J. Haynes
Department of Geological Sciences
Brock University
St. Catharines, Ontario
L2S 3A1

BOOK REVIEW:

The following book review, of a volume of considerable potential interest to many of us, was prepared by well known mineral deposits geologist J. Alan Coope:

DISCOVERIES OF EPITHERMAL PRECIOUS METAL DEPOSITS

Victor F. Hollister, Editor

Published by the Society of Mining Engineers of the American Institute of Mining, Metallurgical and Petroleum Engineers, Inc. New York 1985 169pp (plus 14 introductory pages). 28cm x 21.5cm.

Epithermal precious metal deposits have, for reasons of economics and through significant technological advancements, become a major target of mineral exploration and mineral development activity during the past several years. In North America this activity has been particularly intense in Nevada, some neighboring states and in the Canadian Cordillera. Globally activity has been focussed in many other countries around the Pacific Rim.

Of interest to exploration geologists, and other students of epithermal metal deposits, is this new volume which contains descriptions of ten (10) such deposits located in Nevada (Alligator Ridge, Borealis, Candelaria, Carlin, Cortez, Getchell, Gold Acres, Jerritt Canyon, Northumberland, Round Mountain), two (2) in British Columbia (Specogna (Cinola - Edit.) and the Lawyers (Toodogone - Edit.)) and one (1) in Ecuador (San Bartolome).

This publication marks the release of the first volume in an ongoing A.I.M.E. series on Case Histories of Mineral Discoveries.

The Editor's objective has been to bring together in a convenient, common reference, a description of the discovery case histories of selected epithermal precious metal deposits together with reprints of technical articles describing their characteristics and geological settings. The introductory sections of the book contain descriptions of two models of epithermal deposits, one in the volcanic rock environment and the other in the sedimentary rock environment.

The case histories have all been prepared within the past three years. The technical support papers date back as far as 1959, but most are much more recent and four, on Alligator Ridge, Getchell, Round Mountain and the Lawyers Property, were "in press" in other journals at the time this volume went to the printers. The chapter on deposit models, clearly the contribution of the Editor, gives more space to the volcanic rock model, despite the fact that the sedimentary rock model (otherwise referred to as the "Carlin-type" and/or "Replacement Ore" model) has, to this time, been the more productive economically. Since there is no common reference by the authors of the case histories to these deposit models, the Editor is presenting economic geologists with an invitation to critically evaluate the wide spectrum of data in the book in terms of the models that are presented.

In this context, it is a useful, practical and welcome book. Apart from being the most comprehensive reference to deposits of the Carlin-type, the publication will freshen the discussion on the origin and the significant exploration signatures of the deposits within this epithermal family. The outcome can only be progressive and productive.

Hopefully, the book will not be studied only by those whose current interests are directed towards the deposits specifically described or the geologic/geographic areas where they occur. Because of the comprehensive nature of many of the presentations, geologists whose interests focus on precious metal deposits and their environments in the Archean (for example), will gain instructive and relevant insights into the processes and the complex interactions within hydrothermal systems plus a review of the time and space considerations that are so important to a proper understanding.

There are one or two typos; (I sympathize - Edit.!) there is at least one map that does not have a scale; noted technological advances include improved geochemical methods, open pit-heap leaching technology but not carbon-in-pulp; a small number of the reproduced figures and their legends are below par and it will perhaps be odd to some (although not difficult to understand) that the McDermitt Hg-U-Li deposits apparently qualify under the book's title. The presentations on three deposits, - Northumberland, Borealis and San Bartolome are very brief, limited in comparison with other descriptions, although not necessarily uninformative.

The Editor does for us what many of us like and have to do - bring together ideas, conclusions, data and descriptions in a conscious effort to generate a better understanding and improve exploration capability. The book retails for US\$50.00. This is a formidable sum, but viewed in terms of utility, not expensive. The chances are that if you read any part of this book, you will read it all - probably several times. J. Alan Coope

The volume may be obtained, for US\$50.00, from:

Society of Mining Engineers of A.I.M.E.
Caller No. D.
Littleton, Co. 80127
U.S.A.

REQUESTS FROM THE EDITOR:

I have several requests for things which would help in putting together a more accurate and informative Gange. Firstly, if any contributors find that I have made an error in the published version of their contribution, would they please let me know so I can print a correction. This is especially important in the case of announcements, where for example dates or prices are quoted incorrectly. Secondly, if there are changes, again to things like dates or prices, or cancellations or rescheduling of events, contact me so I can bring the membership up to date. Thirdly, and this is critical, please try to get me news of Eastern events, past and planned. From my very parochial chair out here in "British California", Eastern means anything beyond the mountains - and if that provokes some response from the Prairies, it will have done just what I wanted. Perhaps we should consider railroading a number of regional reporters - any volunteers?

OTTAWA '86:

Don't forget the joint Annual Meeting of GAC-MAC-CGU, to be held at Carleton University in Ottawa, May 19-21, 1986. This is the meeting of the year.

PUBLICATIONS:

Northern Miner Magazine:

Lee Barker has described this new publication in his message, and I agree that it sounds like a very good idea. It is, however, up to all MDD members to help make it fly, so dust off those manuscripts and drawings and submit your papers!

CIM Geology Division Quarterly Publication:

Nick Carter tells me that plans are well in hand for publication of a Quarterly Journal by the Geology Division of CIM - in fact, the first issue is reported to be "in press". The journal is designed to be a refereed forum for papers on economic geology, somewhere between (in philosophy, not quality) the Northern Miner Magazine and Economic Geology or CJES. As such, I think it will be very welcome, and wish the CIM every success.

Comments on the Above:

With two new fora for publishing ore deposits papers, I don't want to hear any more moaning about "no-one will publish my paper on the Moosepasture Mines Property."! As many of you know, I have held for some time a strong belief that there is a real necessity for good descriptive papers on ore deposits, on mineralized areas, or on exploration programs. These are the basic building blocks from which more comprehensive studies are built. I would be very glad to hear, and publish, other peoples' comments on this topic - "keep those cards and letters coming in, folks"!

International Liaison Group on Gold Mineralization:

A very interesting and informative newsletter came across my desk recently, published by the International Liaison Group on Gold Mineralization. This first issue (Oct. 1985) contained an Editorial, International Reports from Australia (D.I. Groves); Canada (NWT) - (W.A. Padgham & J.A. Brophy); New Zealand (R.W. Henley); Nigeria (M.E. Woakes); Norway (A. Bjorlykke); USA:Alaska (R.J. Goldfarb); and USA:Western (W.C. Bagby). These reports are replete with technical and topical information, and are well worth reading. Other features are a list of Recent Papers, Meeting Proceedings, Abstracts of Theses, listings of upcoming meetings, a list of National Contacts, and much more.

The following is from the General Information page of the newsletter, which describes the Group:

MEMBERSHIP Open to anyone with an interest in gold mineralization. Membership is free but interested companies and research organizations are invited to pay an annual corporate membership subscription of 20 pounds sterling to ensure the financial security of the Newsletter and to permit a general expansion of the services offered by the Newsletter and the Liaison Group. Bank drafts and money orders should be made payable to "ILGGM" and will be fully acknowledged. A full list of members and their interests will be circulated to all members each year.

NEWSLETTER The Newsletter will be published in April and October of each year. All items to be included in the Newsletter should reach the Editor before 15th March and 15 September respectively.

Editor: R.P. Foster
Department of Geology
University of Southampton
Southampton, SO9 5NH, U.K.

ADVERTISING Advertisements should be submitted as camera-ready typescript with final artwork, in either A4 or A5 format, before 15th March or 15th September to ensure inclusion in the subsequent Newsletter. Cost of a single, full-page (A5) insertion is 25 pounds with reduced charges available for multiple insertions. Bank drafts and money orders should be made payable to "ILGGM".

CORRESPONDENCE All queries, comments, and items for publication should be addressed to the Editor. Items of international news can be sent either directly to the Editor or to the appropriate National Contact (published list in the Newsletter - Edit.), both of whom will fully acknowledge the source of the information in the event of publication.

MDD PUBLICATION:

The first (we hope of many) of the Field Guide and Reference Manual Series is available for purchase. Entitled "Geology and Ore Deposits of the Highland Valley Camp", it is authored by well-known B.C. Government Geologist W.J. McMillan. This book, popularly known as "The Highland Valley Guidebook", is a must for serious students of Canadian ore deposits. The Highland Valley is very much in the news these days, with the recently announced combining of the Valley Copper (Cominco) and Lornex operations, to produce one of the world's largest single producers of copper concentrates. The projected size of the operation is said to be a total of 120,000 tonnes of ore a day to two mills. This guidebook reviews the history of exploration and the regional and local geology and mineralization of this world class porphyry copper camp.

The volume is available from:

Geological Association of Canada Publications
Business and Economic Services Ltd.
111 Peter Street, Suite 509
Toronto, Ontario
M5V 2H1

at a price of \$19.00 prepaid (including postage and handling). You may use either VISA or MASTERCARD by supplying Card #, Expiry Date and Signature.

JOINT MDD - CIM (GEOL. DIV.) PUBLICATION:

Gold and Copper-Zinc Metallogeny Hemlo - Manitouwadge - Winston Lake Ontario, Canada is the title of a recent compendium edited by R.H. McMillan and D.J. Robinson. This very timely publication deals with an extremely important mineralized district, and should be on all our bookshelves. Contents include property reports, field stop guides, and general review and introductory papers.

The volume is available from:

Geological Association of Canada Publications
Business and Economic Services Ltd.
111 Peter Street, Suite 509
Toronto, Ontario
M5V 2H1

at a price of \$25.00 prepaid (includes postage and handling) or \$20.00 plus postage and handling on quantities of 25 or more. As noted above, you may use plastic money.

NOTES FROM THE PAST:

In what I hope will become a regular column, I will be reprinting items of interest (to me, at least) from Ganques of years past. I plan to go back 20 issues, to jog our memories about what was topical in those times.

The Ganque 3 (Nov. 1979).

From the Chairman's Comments:

"The Division has inaugurated a new GAC Medal to recognize excellence and achievement in the field of economic geology. This will be called the Duncan R. Derry Medal in recognition of Duncan's outstanding contribution to Canadian Geology as a professional and as an active and pioneering member of GAC and other professional groups.

The medal will be awarded for the first time at the Halifax Annual General Meeting. May I urge all of you to pause and reflect on whom you would wish to see honoured as an outstanding Canadian Economic Geologist. When you have selected your hero please organize a nomination and send it to Steve Scott who is Chairman of the Selection Committee. More information on the medal and these procedures is given below."

Hugh Morris.

And elsewhere:

"Three hundred eighty two earth scientists gathered in Sydney, Australia between June 4 and June 8, 1979, in order to discuss various geological aspects of the newly recognized Proterozoic unconformity-related uranium deposits. The international symposium was sponsored jointly by the Bureau of Mineral Resources in co-operation with the International Atomic Energy Agency. The technical sessions were complemented by field excursions to the Pine Creek Geosyncline in Northern Territory."

Vlad Ruzicka

"A symposium of interest to geologists involved with Cordilleran stratiform shale-hosted base metal-barite deposits, the Penrose Conference on the Antler Orogeny, was held in Elko, Nevada, September 9-15, 1979. The Conference dealt with evidence for late Devonian-early Mississippian orogenic events in the classic area of the Antler Orogeny and possible correlative events the length of the Cordillera and in the Arctic.

In view of the recent discovery of significant stratiform base metal deposits in fine-grained clastic Upper Devonian rocks in Selwyn Basin and northern British Columbia (Tom, Jason, Driftpile, Cirque) exploration has been increased to the south, particularly in Idaho. The barite deposits which have been worked in the Elko area are identical in stratigraphic setting to those in the northern Cordillera. So far, however, significant related lead and zinc deposits have not been found. Interestingly, disseminated gold deposits (Carlin, Cortez) occur in intensely fractured shelf carbonate rocks just below the Roberts Mountain thrust."

Hugh Gabrielse

CORDILLERAN SECTION, GEOLOGICAL ASSOCIATION OF CANADA:

Secondary School Geological Education:

The Cordilleran Section is attempting to launch a program of volunteer speaking in Vancouver area secondary schools:

"To encourage the brightest and best students to pursue a career in the earth sciences, we need to start promoting the science to them at an early age. There is a real need for professional input into classroom geology and/or science courses. The Vancouver School Board (what Vancouver School Board? Edit.) and the B.C. Federation of Science Teachers encourage classroom talks given by professional scientists as an invaluable contribution to present curricula. We need your help as a volunteer speaker in such a guest speaker program!"

I print this article for two reasons. Firstly, if there are MDD members in the Vancouver area who are interested in the program, I am sure the Cordilleran Section are interested in you! Secondly, I am sure the organizers would be very pleased to receive any news of others' experiences with similar programs in other parts of the Country, or any material help which you or your organization might be prepared to give them. They are especially interested in mineral exploration geologists who can interpret something of their profession to the students, an important task in a mining province, which some of us at least still believe British Columbia to be. In any case, if you have any thoughts or offers of help, please contact:

Lee Pigage, Vice President
Cordilleran Section, GAC
P.O. Box 398, Station A.
Vancouver, British Columbia
V6C 2N2

LATE NEWS:

Latest word from Ottawa is that the Cu Symposium has a full program, with 70 papers or posters. Charlie Jefferson advises that it all looks very exciting, the field trips are well in hand, and that he looks forward to seeing many of you there.

UPCOMING MEETINGS:

Cordilleran Geology and Exploration Roundup:

Jan. 29-31 at the Hotel Vancouver, this is the combined B.C. & Yukon Chamber of Mines Annual Meeting and the Exploration Roundup, which has become so successful in recent years. Unless my memory fails, this is the meeting which introduced the concept of the "Core Shack", which seems to be gaining popularity at other meetings across the country. The Geological Survey of Canada will be there in force (including the Director General), as will the Geological Division of the British Columbia Ministry of Energy, Mines and Petroleum Resources and representatives of DIAND from Whitehorse and Yellowknife. A very full slate of talks, meetings, and displays is planned, topped off by the "Prospector's Ball" on January 31. If you are worried about the crowds at EXPO '86, come early and avoid the rush. This looks like a great EXPOsé, anyway. Information from:

Bill Plumb
B.C. & Yukon Chamber of Mines
840 West Hastings Street
Vancouver, British Columbia
V6C 1C8
(604) 681-5328

Gold Update '85 - '86:

A workshop devoted to recent advances in gold metallogenesis, 24 and 25 March, 1986, at the University of Southampton (U.K.), organized by the Department of Geology and the Continuing Education Committee, University of Southampton, in co-operation with the International Liaison Group in Gold Mineralization. "This is the first of what will be a series of gold workshops held at the Department of Geology, University of Southampton, and is intended to bring together exploration, mining, Government, and academic geologists and research students who have an interest in gold metallogenesis. A small number of keynote speakers will be invited to present a review of particular aspects of gold mineralization which fall within their respective areas of expertise and which are believed to be of particular relevance to mineral exploration. These presentations will be supported by contributions from staff and research students at Southampton, a number of whom are closely involved in studies of gold metallogenesis.

The intention is to provide a relatively informal forum, with plenty of opportunity for discussion, and is aimed primarily at geologists from the United Kingdom and Europe, many of whom are often unable to justify visits to the antipodes to learn of the latest developments in the world of gold. Nevertheless, geologists from all countries are most welcome to attend.

The cost of the workshop is being kept to an absolute minimum in the hope that a large number of geologists and, in particular, research students will be able to participate. A course booklet will be provided and a number of other publications will be available for purchase."

Invited speakers for this first workshop are:

Louise du Boulay - authoress of the widely read and respected GOLD reports published by GoldFields

Dr. A.C. (Sandy) Colvine - Section Chief of the Geological Survey of Ontario.

Dr. R.W. (Dick) Henley - DSIR, New Zealand - Internationally acknowledged authority on geothermal systems and hydrothermal processes.

The cost of the workshop is 60 pounds sterling, with the usual added items for parties, meals, etc. Notice of attendance was supposed to be in Southampton by January 24th, but I am sure that if you really want to attend, you will be welcome. For information, contact:

Dr. R.P. Foster
Department of Geology
University of Southampton
SOUTHAMPTON
SO9 5NH, U.K.

SEMINARS:

As I mentioned in the last Gangué, I would be more than happy to print times and topics for talks sponsored by University Departments or other Geoscience organizations. A few faithful ones send their announcements, and I apologize that in many cases these are out of date before I publish. However, I am sure there are many other events I don't hear about. I would certainly appreciate anyone prodding the publicity chairman of their favourite institution to send me news of what's happening in this vein. This refers especially to Easterners; I don't want the Gangué to appear as the Western newsletter, but if that's where I get the news from, there's not much I can do about it. As a guideline, I hope to settle on a publication schedule of late April, summer, early October, and early January (but don't hold your breath!).

McMaster University, Hamilton:

Tues, January 28, 1986
Dr. Ward Chesworth
Dept. of Land Resource Science
University of Guelph
"Podzolization"

3:30 p.m. (coffee) - Rm. S.S.C. - 303
4:00 p.m. (seminar) - Rm. S.S.C. - 102

MEG (Mineral Exploration Group) - Vancouver

Meetings on Wednesdays, Hotel Georgia, 12 noon.

Feb. 12: Brad Cooke - Cooke Geological Consultants Ltd
"Geology and gold mineralization at the CONGRESS Property of Levon Resources, Bridge River, B.C."

Feb. 26: Peter Tegart - S.E.R.E.M. Inc., Vancouver
"LAWYERS gold deposit, Toodoggone area, B.C."

Mar. 19: Jim Franklin - Geol. Surv. of Canada, Ottawa
"Massive sulphides on spreading ridges, implications for exploration and recent results from Juan de Fuca Ridge."
(co-sponsored by Cordilleran Section, GAC)

Mar. 26: Rick Bailes - Abermin, Vancouver
"Update on LARA property, a volcanic-associated massive sulphide deposit on Vancouver Island."

Apr. 9: Arne Birkeland - Energex Minerals Ltd., Vancouver
"Recent exploration results from the AL epithermal gold property, Toodoggone area, B.C."

Remember that there is no membership fee for the MEG, beyond the cost of the lunch. Once you have attended and been introduced at one meeting, you are a lifetime member!

FLYERS:

I welcome pre-folded flyers or publication ads for circulation, but should add a few words of caution. Firstly, I need about 825 copies; secondly, I normally give preference to GAC material, although there is an element of first come, first served; and thirdly, I appreciate a fair amount of notice. Please don't just send flyers regarding shortly upcoming meetings without contacting me first, as my publication schedule depends on many things, and flyers might not get away in time. If you want something sent out, please call me first. Also, if your flyer is the single item which puts us over the mailing weight, I will ask you if you are prepared to pay the additional mailing cost of about \$130. Finally, if I include flyers for other organizations with newsletters, they should be prepared to practice reciprocity (under the same guidelines, of course!)

