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GEOLOGICAL SURVEY
COMMISSION GÉOLOGIQUE



FROM THE DIRECTOR

For a long time there has been a need for a means of communication within the Geological Survey. We are now a very large organization grouped into seven divisions of which two and one-third are outside Ottawa (Halifax, Calgary, and Vancouver). In fact we are the most decentralized unit in this department. Our size, our specializations, and our physical separation emphasize the need for finding some way of staying in touch with one another and learning what is going on in the Branch as a whole. This is what GEOGRAM is designed to do. The first issue is something of an experiment. I hope very much, however, that it will grow in usefulness and interest, and will provide a means for management and staff to talk to each other and for communication to improve between units and disciplines. We shall attempt to publish about every two months, and it will be made available to all members of the Geological Survey. It should be an informal, informative, internal newsletter, produced by the Survey for the Survey. Messages or policy statements made by Dr. Wheeler or myself, will be in both languages. Other items will be printed in the language in which they are submitted. If you have anything that is newsworthy or that you wish others to hear about, pass it on to your divisional rapporteur whose name you will find elsewhere in this issue. We need your support and your interests to make this newsletter a success.

This first number comes at a time when there are many signs of the fast approaching field season and the realization that the next two months will be busy ones. It also marks the time when we, in Headquarters, are emerging from the heavy winter load imposed by Program Forecast and Research Scientist Appraisal. This year in Program Forecast the Branch took the opportunity to emphasize to the Deputy Minister and Treasury Board our areas of concern for future work. We decided to emphasize particularly the need to develop our data base management systems, and to strengthen support services, both technical and clerical. Our proposals were well received by the Deputy, but it would be idle to assume that our wants will all be granted by Treasury Board. Already there are signs that Government spending will come under closer scrutiny than ever, and further growth in our own capacity to carry out our programs may be severely restricted. Nevertheless, whatever the future, I feel that we have an enormous capacity for carrying out our primary responsibility, — to describe the geology of Canada and to make it known so that our land may be better used, and resource policy founded on good information. Let us hear about what you are doing so that we develop a stronger feeling as members of one of the most effective and important of the Federal Government's scientific organizations.

NOTES DU DIRECTEUR

La nécessité d'un moyen de communication à l'intérieur de la Commission géologique existe depuis longtemps. Nous constituons maintenant un très vaste organisme qui regroupe sept divisions dont 2 1/3 sont situées à l'extérieur d'Ottawa (Halifax, Calgary et Vancouver). Nous sommes même le service le plus décentralisé de ce ministère. L'importance de notre effectif, nos spécialisations et les distances qui séparent nos divisions rendent plus impérieux le besoin de trouver un moyen de liaison qui nous permettrait de savoir ce qui se passe dans l'ensemble de la Direction. Tel est le but de GEOGRAM. Le premier numéro est en quelque sorte une expérience; j'espère bien, cependant, que son utilité ainsi que l'intérêt qu'il suscitera pourront croître avec le temps et qu'il permettra à la gestion et aux employés de dialoguer tout en améliorant la communication entre les services et les disciplines. Nous nous efforcerons de publier GEOGRAM à tous les deux mois et il sera distribué à tous les membres de la Commission géologique. Ce sera un bulletin interne informatif et sans prétention qui sera publié par la Commission et pour la Commission. Les messages et les prises de position qui seront rédigés par M. Wheeler ou moi-même seront imprimés dans les deux langues officielles. Les autres articles seront publiés dans la langue dans laquelle ils auront été présentés. Chaque division aura un agent de liaison à qui vous pourrez remettre les nouvelles ou communications que vous voudrez faire publier. Vous trouverez son nom indiqué ailleurs dans ce numéro. Nous pouvons prendre les arrangements pour publier ce bulletin, mais son succès dépend en fin de compte de votre intérêt et de votre appui.

Le premier numéro nous arrive au moment où déjà plusieurs signes nous témoignent le retour prochain de la saison des travaux sur le terrain avec un aperçu que les deux mois à venir seront très occupés. C'est également le moment où nous, de l'administration centrale, terminons un dur hiver en raison de l'appréciation des chercheurs scientifiques et des prévisions du programme. Dans le cadre de ces prévisions, la Commission a saisi cette année l'occasion de faire valoir au sous-ministre et au Conseil du Trésor les domaines où nous comptons intervenir à l'avenir. Nous avons décidé d'insister particulièrement sur la nécessité d'élaborer nos systèmes de gestion de données de base de renforcer nos services de soutien, tant dans les bureaux que dans les services techniques. Le sous-ministre a bien accueilli nos propositions, mais il serait futile de penser que le Conseil du Trésor accèdera à toutes nos demandes. Déjà, certains signes laissent présager que les dépenses de l'Etat seront surveillées plus que jamais et il est bien possible que notre capacité d'ajouter à nos programmes soit considérablement restreinte. Cependant, quoi que l'avenir nous réserve, je crois que nous sommes pleinement en mesure de nous acquitter de notre principale responsabilité, à savoir décrire et faire connaître la géologie du Canada pour que nos terres soient mieux utilisées et que notre politique des ressources soit fondée sur des renseignements valables. Faites nous part de ce que vous faites afin que nous prenions mieux conscience de notre appartenance à l'un des organismes scientifiques fédéraux les plus importants et les plus efficaces.

STAFF NEWS

DIRECTOR'S OFFICE

Lyse Blouin left in February as secretary to the Director and in her position we welcome Lark Hodgins who previously was secretary to Dr. Fortier at headquarters.

A new activity in the G. S. C. is currently being undertaken through the Director's office by the Data Systems Group. The staff comprises W. W. Hutchison, transferred from the Vancouver office last year to set up the group, Gwynneth Martin, Systems Development Officer who recently joined us from the E. M. R. Computing Science Centre, D. D. Picklyk, Mineral Deposits Systems Geologist, a Ph. D. graduate from Queen's who completed a 2-year postdoctoral research project with G. S. C. in December to join G. S. C. T. Scaga and T. M. Gordon, seconded from R. E. G.

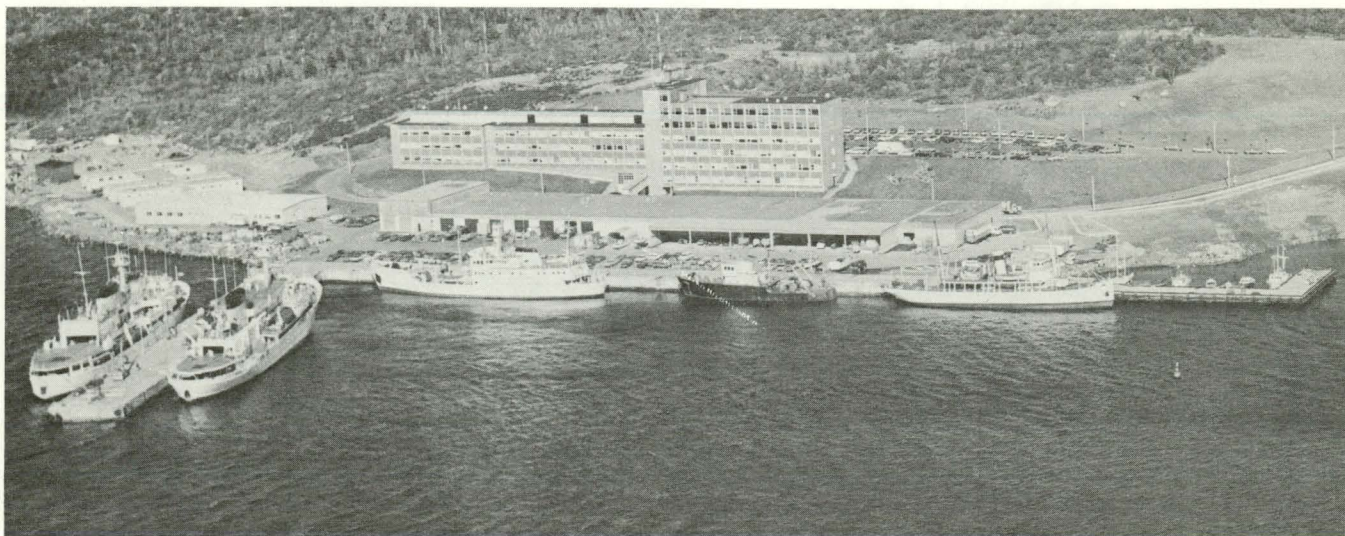
A. G. C.

L. P. (Pat) Purcell joined AGC in September, 1974, as Head, Eastern Petroleum Geology Subdivision. Pat graduated from University of Alberta in 1953 and joined Imperial Oil Limited as a petroleum geologist. After 20 years with Imperial, Pat joined Hamilton Brothers Canadian Gas Co. as a staff geologist in 1973. In 1974, he joined ISPG (Institute of Sedimentary Petroleum Geology) in Calgary and later transferred to EPG in Nova Scotia. Pat has come home to the "land where my father was born and raised".

R. H. (Dick) Fillon has recently been hired as a research scientist with Regional Reconnaissance Sub-division. Dick came from Woods Hole Oceanographic Institution where he had been a postdoctoral fellow. He is working on the surficial geology of the Labrador Shelf.

R. K. H. (Robin) Falconer and C. L. (Carl) Amos have recently joined AGC as Postdoctoral Fellows. Robin Falconer, who is working with the Regional Reconnaissance group, hails from New Zealand where he graduated from Victoria University of Wellington. His thesis dealt with Geophysical Studies in the South-west Pacific. Robin is conducting geophysical research in Baffin Bay and Nares Strait. Since his arrival, he has taken a look at our current shipboard data processing procedures and has made some good suggestions for improvement. Carl Amos has recently joined the Environmental Marine Geology group at AGC after obtaining his doctoral degree from the Royal School of Mines, London. (His thesis dealt with inter-tidal flat sedimentation of the Wash, East England.) Carl will be examining the sediment budget in Minas Basin with a view to estimating the inflow, dispersal, and redistribution of sediment there.

C. B. (Bernie) Crilly and F. (Fred) Ewing have recently joined AGC as technicians. Bernie Crilly will be working in the Palynology lab of the Eastern Petroleum Geology group. Prior to coming to EPG, Bernie worked for Atlantic Analytical Services where he was responsible for soil and limestone analysis, air and water tests, and gas chromatography. Fred Ewing has transferred from our sister lab, the Atlantic Oceanographic Laboratory (AOL), to the Regional Reconnaissance group of GAC. He comes as replacement for his brother who was lost to AOL. Fred, who has a lot of experience at sea, will be responsible for equipment such as the bottom grabs and rock corers.



Atlantic Geoscience Centre, Dartmouth

C. L. A. S.

Mrs. J. E. Clemmer took over as Division Secretary in January 1975, after a period of six months spent on French Language Training. Prior to this, Mrs. Clemmer was with the Department of Environment. Ms. Maryann Petre, who has been Acting Division Secretary since December 1973, is taking on new duties as Technical and Administrative Assistant to the Division Chief.

Mr. J. Falardeau is Acting Financial Comptroller in the absence of John Azar on French Language Training. Mr. Falardeau, who was Chief of E. M. R. Financial Services Division until his retirement in 1972, was fortunately free on a part-time basis, between his post-retirement assignments as Financial Adviser to the President of the Republic of Central Africa for the International Monetary Fund, and as Financial Adviser to the Minister of Finance of Malaysia in Kuala Lumpur.

Mr. Raymond Laniel joined C. L. A. S. Division in February as a Chemical Analysis Technician in our Spectrographic Laboratory. His previous employment was with the Quebec Department of Fish and Game as a Wildlife Technician.

Mr. W. Anderson achieved a GSC first on his appointment to the Secretarial Services unit on the second floor. He has re-entered the work force after retiring from 25 years in the Communications Branch of the Department of National Defence.

Another addition to Secretarial Services is Mrs. K. Wiskemann, who is returning to work after a number of years at home.

G. I. P.

Susan McKinley left in January after a good many years service in key punching; we welcome Gisèle Sabourin as Susan's replacement. Win Robertson left as Division Secretary on transfer to the Energy Board and Lorna Nadon joined us in her place.

Doreen Sutherland was away all winter on French language training, and has now returned, fully qualified. During her absence we had assistance from Ruth Sharrett who is still with us and also from Sudershan Sehgal, whose brightly coloured saris gave an exotic touch to the enquiry desk in the Library. Louis Vincent is on language training and we hope he will return in April.

Angelica Koops transferred from Secretarial Services as editorial assistant to Leona Mahoney.

I. S. P. G.

During 1974, the Institute of Sedimentary and Petroleum Geology, Calgary, attracted a number of new geologists.

Early in the year, T. G. (Trevor) Powell joined us from the Bureau of Mineral Resources in Canberra, Australia. Trevor studied in the United Kingdom and is heading the geochemistry program at I. S. P. G. His own interests and work lie in the geochemistry of hydrocarbons.

D. G. (Dave) Wilson came to us from Canadian Superior Ltd. of Calgary in February and is working on subsurface and surface Mesozoic sediments of the Sverdrup Basin, Arctic Islands.

Just prior to the 1974 field season, Dr. R. I. (Bob) Thompson arrived from the British Columbia Department of Mines, where he had spent two years working on various mineral properties, including lead-zinc deposits at Robb Lake, northeastern British Columbia. Bob will be doing structural research in the northern Rocky Mountains of British Columbia. He received his Ph. D. from Queen's University in 1972.

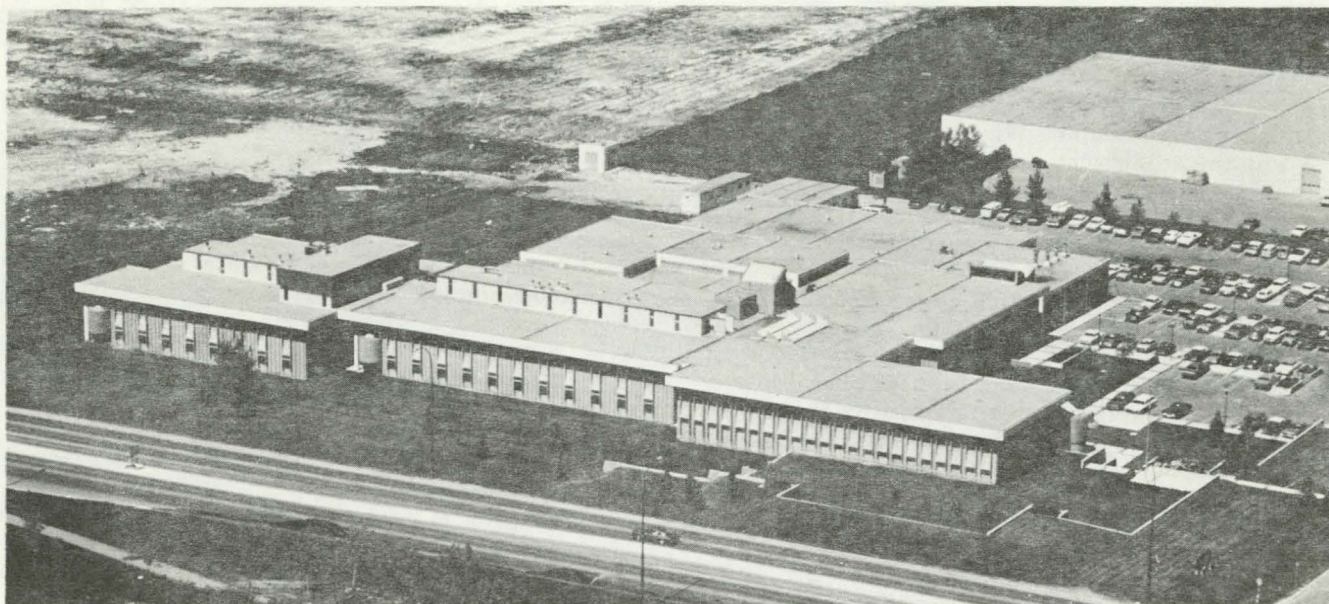
D. W. (Dave) Morrow received his Ph. D. from the University of Texas in 1973 and joined the I. S. P. G. staff in July of 1974. He was previously employed with Mobil Oil Ltd. in Calgary. Dave will be doing stratigraphical and sedimentological research in the southern Mackenzie Mountains.

Dr. Ulrich Mayr, who received his Ph. D. in 1967 from the University of Ottawa, joined the I. S. P. G. staff in July 1974 after working with J. C. Sproule and Associates of Calgary. Ulrich will be studying the carbonate rocks of the eastern Arctic Islands in collaboration with Hans Trettin.

Dr. G. E. (Gerry) Reinson came to the I. S. P. G. in November, 1974 from Amoco Canada Petroleum Company Ltd. Gerry, a clastic sedimentologist, will join Bill Kerr's Operation Boothia studies in the Arctic Islands. He received his Ph. D. degree from the Australian National University in 1973.

In August, Dr. J. H. (John) Wall joined us following a long and distinguished career with the Research Council of Alberta where he was acting head of the Geological Division. John will be continuing his micropaleontological studies of Mesozoic microfaunas.

Tony Jenkins will be transferring from the Atlantic Geoscience Centre to the I. S. P. G. in the early spring and will undertake palynological studies of Paleozoic rocks, primarily in eastern Canada.



I. S. P. G. , Calgary

The Evaluation of Potential Petroleum Resources program was strengthened recently by the addition of two experienced petroleum geologists, Dr. Joe N. Van Elsberg, who comes from Mobil Oil of Canada Limited, will team up with geophysicist Ron Walker in evaluation studies of mainland Northwest Territories. Dr. Norman E. Haimila, formerly with Atlantic Richfield Corporation, Calgary, will form a team with a geophysics recruit doing similar work in the Arctic Islands.

R. E. G.

A. (Art) Soregaroli, a native of Iowa, U.S.A., completed his undergraduate studies at Iowa State University and University of Idaho. Moving to Vancouver in 1962, he commenced graduate studies at U. B. C., obtaining his Ph. D. in 1968. From 1963-1972 he was employed by Noranda Exploration, and when he left the company in 1972 he was Chief Geologist of Western Canada. From 1972-1974 he was an Assistant Professor with the Department of Geological Sciences at U. B. C. In 1974 he joined Regional and Economic Subdivision, as geologist responsible for molybdenum and porphyry copper deposits.

K. M. (Ken) Dawson, a native of British Columbia completed his undergraduate studies at U. B. C., and obtained his Ph. D. from Queen's and U. B. C. in 1972. From 1972-1974, he was Senior Exploration Geologist

with Placer Mexicana, engaged in exploration for porphyry copper and gold deposits. Joining the Cordilleran Subdivision of the Survey in 1973, he transferred to Economic Geology Subdivision in Ottawa in September, 1974. His main studies will be of the metallogeny of the northern Cordillera.

J. H. (Jamie) Bourne is a Montrealer, and carried out his undergraduate studies at McGill. He completed his Ph. D. requirements at Queen's University in December, and was recently hired as a research scientist with Precambrian Subdivision. He spent several of the past field seasons as party chief with Quebec Department of Natural Resources, and his new role with the Survey will be carrying out a regional synthesis of the geology of Grenville Province as well as mapping areas of the eastern Grenville.

F. M. (Fred) Vokes was born in Scarborough, Yorkshire, and completed his undergraduate studies at Leeds, England. From 1950-1953 he carried out studies of the Zambian copper belt, following which he joined the Geological Survey of Norway. He obtained his Ph. D. from the University of Oslo in 1957, and immediately came to Canada for a year and a half to study molybdenum deposits. Returning to Norway, he taught at the University of Oslo until 1966 with the exception of a stint in Cyprus with the U. N. Development Project. In 1966 he was appointed to the Chair of Ore Geology at Trondheim University where he remained until January, 1975 at which time he came to Canada and joined Economic Geology Subdivision of the Survey. He will be carrying out specialized studies related to lead-zinc mineralization.

Vladimir Ruzicka, born in Czechoslovakia, and a naturalized Canadian since September, 1974, received his undergraduate and graduate training at Charles University in Prague, from which he also received his Doctor of Natural Sciences in 1952. From 1949 to 1958 he worked as mining and exploration geologist with the Czechoslovakian Uranium Industry, and from 1958 to 1968 was Chief Geologist and President of the Uranium Resources Commission. During the period 1965-1968 he completed post-graduate studies at the University of Ordzhonikidze in Moscow, specializing in Economic and Uranium Geology at the Institute of Geological Exploration.

Vlad came to Canada in 1968, and studied under a NRC postdoctorate fellowship with the G. S. C. until 1970. He then joined David S. Robertson and Associates as a consulting geologist in Canada, the United States, Brazil and Australia. In October, 1974, he joined Economic Geology Subdivision of the G. S. C. and is now a member of the Uranium Resource Appraisal Group of E. M. R.

D. C. (Chris) Findlay is no stranger to many members of the G. S. C., having first joined the establishment in 1961. After obtaining a B. Sc. and M. Sc. from McGill, he continued graduate studies at Queen's where he received a Ph. D. in 1963. During the period 1966-1969 he was appointed Resident Geologist, Whitehorse. Early in 1970, he resigned from the Survey to form his own geological consulting company, and obtained widespread exploration and evaluation experience in British Columbia, Yukon, Northwest Territories, Ontario and Quebec. He re-joined the Survey in 1974 and is employed by Economic Geology Subdivision as Mineral Resource Liaison Officer and N. R. E. P. Co-ordinator.

B. V. (Bruce) Sanford has recently returned to Ottawa to carry out new assignments. He will be the co-ordinator of regional and detailed studies of the evaporite basins of Canada, evaluating salt deposits for purposes of storage and/or disposal of wastes. He will also provide assistance and advice on environmental and urban planning matters related to the Paleozoic rocks of the St. Lawrence Lowlands.

R. G. G.

So far this year only two people have been added to the Division. Both of them have gone to the Radiation Methods Section. There have also been two transfers within the Division.

Yves Blanchard joined the Division in March. Yves, who formerly worked for CRC (Communications Research Centre), has filled the vacancy in Radiation Methods created when Jacques Parker moved to Geochemistry. He graduated from Algonquin College,

in Electronics. At present he is working on improving the Radiation Methods Section's laboratory gamma-ray spectrometry equipment, and finding out how the Skyvan electronics work. Yves hasn't quite fully switched all his activities to the GSC. He still plays hockey in the R.A. League for CRC, but only until his option is up. Next year GSC should gain a player.

The Uranium Reconnaissance Program has resulted in the addition of one other person to the Radiation Methods Section. John Carson has joined the section as geophysicist working on contract gamma-ray spectrometry surveys. He spent the two and one half years immediately prior to joining the Division teaching exploration geophysical methods to geological technicians and technologists at Sir Sandford Fleming College, one of Ontario's Community Colleges. At present he spends most of his time assembling contract specifications for airborne gamma-ray spectrometry surveys for URP, and writing contributions to GEOGRAM. These activities leave little time for his hobby, tasting wine. Hopefully things will improve in the future.

T. S.

B. D. (Brian) Bornhold joined the Division in January after completing time as postdoctorate Fellow with the University of Toronto. Brian is a Quaternary Marine Geologist in our Marine and Coastal Section, and has been assigned to the study of Quaternary marine deposits in the Arctic Islands region.

F. M. (Fern) Morin joined the permanent staff of our Urban Projects Unit in February after several years as a term-casual. Fern's current work is a prototype study of the urban geology of the Hamilton area as part of the Division's program for the development of applications of geology for the planning and development of urban centres.

A. N. (Tony) Boydell resigned in January to accept a position with Surficial Geology and Soils Division, Government of British Columbia. One of Tony's main interests was in the application of ERTS imagery to terrain mapping; and so thus, he was in constant contact with C. C. R. S. Tony's work in this area is being continued by John A. Netterville of our Regional Projects Section.

D. E. (Ted) Lawrence transferred to D. I. N. A. in January. One of Ted's main duties was the supervision of the Division's sedimentology laboratories. He is replaced in this capacity by Wilfred E. Podolak of our Sedimentology and Mineral Tracing Section.

J. A. (Alan) Heginbottom was seconded to the Northern Policy and Programming Branch of D. I. N. A. in February for approximately two years. Alan's initial duties for approximately nine months will be with Dr. Fyles' Mackenzie Valley Pipeline Inquiry Appraisal Team. His other duties will be directed toward Mackenzie Highway projects and related programs of the Branch.

B. C. (Barry) McDonald began his Career Assignment Program training in September 1973. It is not customary for the trainee to return to his "homeground"

on his first assignment. However, Dr. McDonald's first assignment was to the Terrain Sciences Division and he was given the following appointments and responsibilities:

1. Acting Head, Geotechnical Subdivision.
2. E. M. R. Co-ordinator, Northern Pipelines.
3. E. M. R. Co-ordinator, Beaufort Sea Task Force.
4. Senior Representative from Geological Survey to Mackenzie Highway, Environmental Working Group.
5. Chairman, Departmental Committee on Environmental Matters.

OF GENERAL INTEREST

Baffin Bay: A future rubbish dump?

A Geological Survey of Canada project to determine whether the sediments at 2000 m water depth in Baffin Bay will support a load of trash cans? Not yet, but a possibility within the next decade. Surely just another esoteric, pure science project and who cares anyway? We all might if the trash was very toxic chemicals or even highly active radioactive waste. Why would such trash be dumped in Baffin Bay? Because Baffin Bay has some structural, legal, oceanographic, and social properties which make it potentially attractive as a dump site. But why go all the way to Baffin Bay to dump trash? Because there may be no better place to put it!

At present there is no dumping of dangerous waste in Baffin Bay but that could change. Already some countries have explored the possibilities of using the oceans as "dumps". In the next 20 years alone Canada's nuclear powered electricity generating capacity may increase 100 fold; a valuable increase but one which brings with it problems of highly radioactive waste products. The volume of radioactive waste will not be large (possibly a few thousand 40-gallon containers in 20 years) but each container would be highly active and would have to be stored for at least 500 years. In addition to radioactive waste our society is producing increasing amounts of chemical waste products that are too toxic to be casually disposed of. Sites suitable for permanent storage of dangerous waste can probably be found on land but it is possible that society will object vigorously to such storage, especially when the quantities increase. We will ask for disposal rather than storage, and disposal well away from ourselves. Disposal at sea will then be attractive even if it is unwise. Most nations at present oppose waste disposal at sea but governments and societies are usually pragmatic rather than idealistic and the "out of sight out of mind" aspect of ocean disposal cannot be ignored. Canada may be able to find acceptable land disposal sites but smaller countries,

for example Denmark with a population density 50 times that of Canada, may find it very difficult to find suitable sites. Even if Canada doesn't need to dump at sea other nations may have to.

But why the interest in Baffin Bay rather than in any ocean? One reason is that the bay is essentially a deep (2200 m) closed basin isolated from other oceans. Over 80 000 sq. km of the centre of the bay is deeper than 2000 m but the deepest outlet (Davis Strait) is only 700 m. There is very little mixing of the deep water so any accidental leakage from a dumped container would take a long time to get into shallow waters of the bay or out of the bay. Baffin Bay, therefore, might be considered a "safe" dump site.

Another reason for special interest is Baffin Bay arises from the third United Nations law of the Sea Conference held in Caracas in 1974 and continued in Geneva in March 1975. One outcome of the conference may be that maritime countries will have jurisdiction over the water column and seabed resources within 200 miles of their coasts, while beyond that control will be vested in an international authority. Baffin Bay would not be an international zone as all of it would be within the 200-mile zones of Canada and Denmark (Greenland). The international authority could issue, and be able to enforce, a ban on waste disposal either in the international zone or in other areas which would affect that zone. The effective isolation of the depths of Baffin Bay from international areas could then make the bay one of the few available dumping sites. Canada and Denmark would be the controlling authorities for dumping there.

If dumping in Baffin Bay was proposed detailed knowledge of the area would be necessary for evaluating the proposal. Physical oceanographic data would be vital but data on the properties of the seafloor would also be important. It would be necessary to know for example:

1. How far a container of certain shape and mass would sink into the sediment?
2. What would be the effect on the 5kW of concentrated heat from each radioactive waste container?

3. Would the earthquakes which occur there cause local liquifaction of the sediment?
4. What disturbances would a turbidity current produce?
5. How could containers be monitored?
6. Could they be accurately placed on the seafloor?

There are lots of questions which GSC could be asked to answer.

Dumping trash in Baffin Bay is probably unwise but it may become expedient so don't be surprised if in ten years there is a Survey report on "trash can load bearing strength of deep-water sediment".

R. K. H. Falconer, A. G. C.

Terrain Sciences Division Meets External Demands

The Terrain Sciences program is meeting a steadily increasing number and variety of external information needs for terrain analysis. The Division responds to these demands because it affords an opportunity to provide a service, and because extra funds and manpower permit an acceleration of on-going activities. Many of these demands are related to resource development, both in the north and in the south. They are aimed partly at provision of basic geoscientific information to be used in the formulation and application of land-use policies.

Some of the programs that Terrain Sciences are participating in are the following:

Environmental-Social Program, Northern Pipelines — This is an interdepartmental program (EMR, DOE, DINA) designed to provide government with sufficient information to assess applications to DINA for the rights-of-way for major pipelines north of 60°. The Mackenzie Valley portion of this program was formally initiated in 1971 and formally ends on 31 March 1975. A similar program, to prepare for an application to construct a gas pipeline south from the Arctic Islands, is beginning on 1 April 1975 and will likely continue for 2 to 3 years.

Mackenzie Highway — DINA is co-ordinating the construction of a highway from Fort Simpson north to Inuvik. The project was accelerated in 1972 and could continue for many years. Geological Survey personnel are involved in the mile-by-mile assessment of alignments and engineering designs in order to ensure that a minimum of terrain and highway disturbance will result from construction practices. A program of monitoring the longer-term effects of terrain on highway, and vice versa, is underway and will continue for 4 more years. Funds for this are being provided to Geological Survey from DINA.

Beaufort Sea Project — The GSC is participating in a series of "baseline" studies on the Beaufort Sea shelf prior to DINA's considering applications from industry to drill offshore there by 1976. The studies include coastal dynamics, bottom scour by ice, distribution and nature of sub-sea permafrost, and sediment dispersal. The studies are being funded jointly by industry, DOE, and EMR.

Other programs that the Division is involved in now and that will be of continuing interest are the nuclear waste storage program of AECL, the oil-sands project in Alaska, and problems associated with strip-mining of coal.

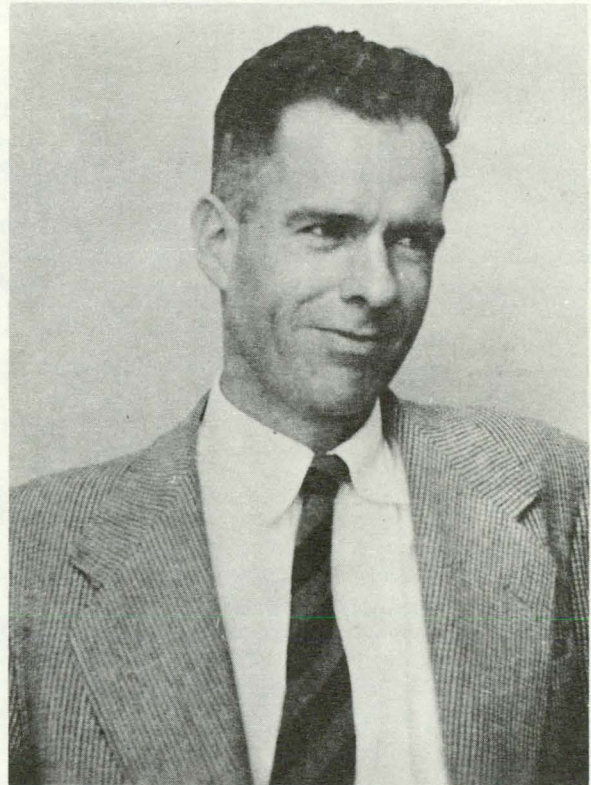
Coal Resources

The first evaluation of coal resources of southern Saskatchewan, resulting from the Joint Federal-Provincial Exploration Program, has been completed by I. S. P. G. staff members and submitted to Energy Sector. It is estimated that there are 5.67 billion tons of lignite coal contained in seams 5 feet or more thick and within 150 feet of the surface. A more detailed seam-by-seam evaluation is now underway.



Dr. Helen Belyea

After 31 years with GSC, Helen Belyea retired in December 1974. This Saint John, New Brunswick GeoGal graduated from Dalhousie and Northwestern and was in the Navy during the war. Helen became a GSC'er in 1945, and in 1950 followed Horace Greely's dictum, "going West" to help open the Calgary Office (ISPG - remember?). Study of Devonian rocks of Western Canada has occupied Helen's attention ever since - and still is - when she isn't skiing, riding or being active in CSPG and other geological activities. All of Helen's colleagues from "Loyalists" to "Stampeders" wish her well in her newest geological role.



"Life of Leisure?"

Dr. E.P. (Eric) Henderson certainly earned this style of life. After 23 years of dedicated service Eric retired in December 1974 from the Geological Survey. Dr. Henderson's "leisure" is tempered by his continued activity in geological studies. (All our best wishes go with him in these and his other endeavours.)



Dr. Alice E. Wilson, O.B.E.
1881-1964

WHY NOT!

This being International Women's Year, the National Museum of Canada is preparing an exhibit portraying Canadian Women in Science. The earth scientists so honoured are none other than GSC's Alice Wilson and Helen Belyea and Royal Ontario Museum's Madeleine Fritz. Some GSC claim to Madeleine could also be

made because in 1920 she and Alice combined to form the first all-girl GSC field party, working on Lake Winnipeg.

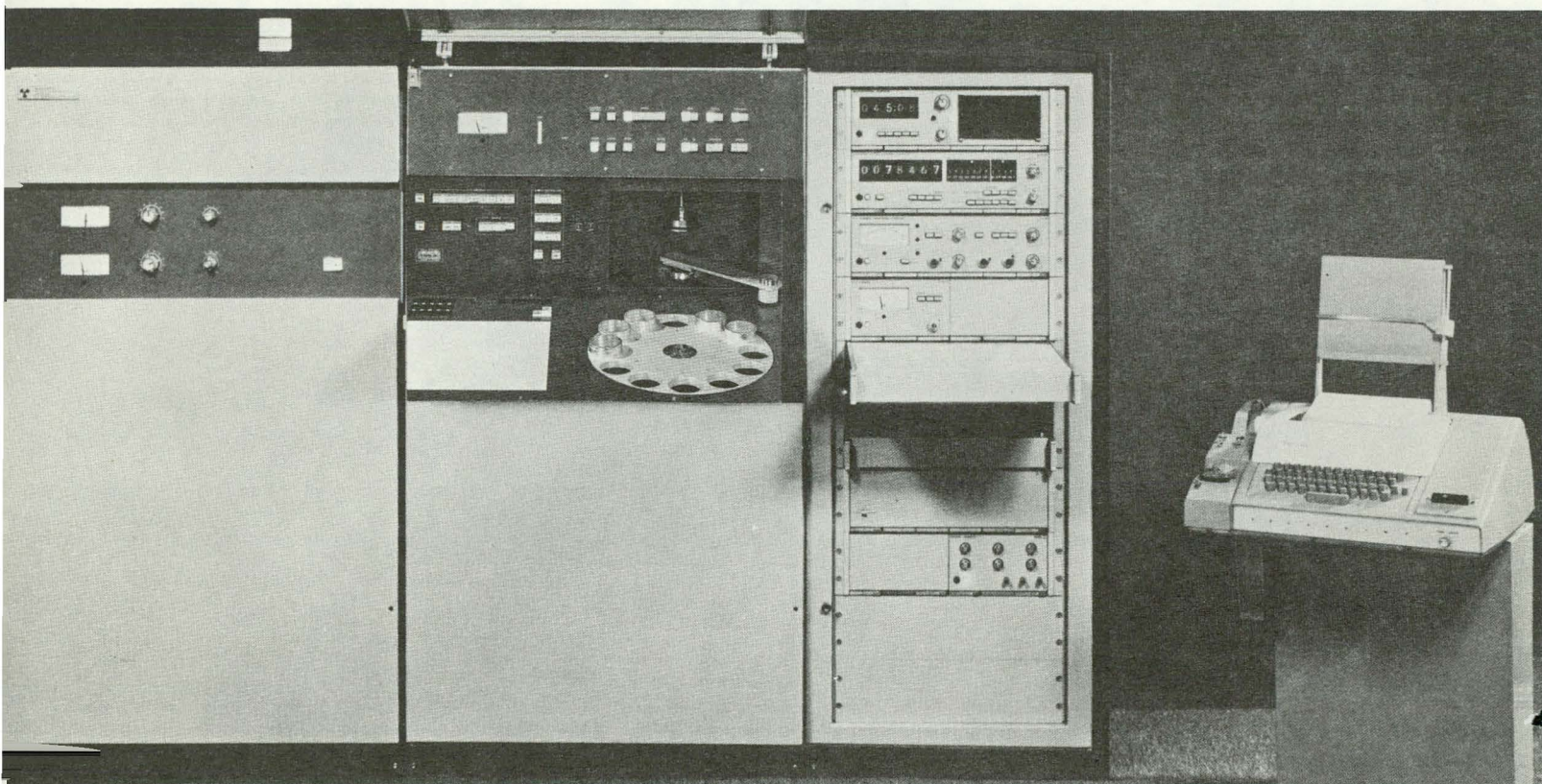
Firsts are nothing to these three — Canadian first ladies of GSA, FRSC, MBE — you name it! Despite the frustrations of yesteryear, the GSC is proud of its GeoGals

POSTERS

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GSC Earth Science Education program has recently come up with three more bilingual posters to accompany "Meteorites". "Minerals", "Gemstones" and "Fossils" are the newcomers to what is hoped will become a pictorial series on earth science. "Rocks" is next on the list. Also, a pamphlet series on popular geology topics is in the offing. "Glacial Landforms", "Volcanoes", "Geological Time" and "Off-shore Geology" are some of the topics being considered by various staff members. Willing workers are required for both series. Why not have Geology and GSC in the classroom, not just in the library?

GSC Research Evaluation Committee met on February 24 to distribute \$403 000 in support of extramural research in earth science. One hundred and twenty-four applications requesting a total of 1.4 million dollars were received, of which fifty-eight were recommended, and subsequently approved at the March 10th meeting of the Departmental Grants Review Committee. Research supported is mainly undertaken in Earth Science Departments of universities across Canada.



AUTOMATIC HARDWARE-PROGRAMMED XRF SPECTROMETER (AHP)

Since July 1974 the staff of the Analytical Chemistry Section of CLAS have been using an automatic XRF spectrometer that can sequentially measure characteristic intensities for up to 72 channels. Representatives of the manufacturer have expressed interest in arranging publication of an article describing the

Survey's use of X-ray spectrometry in rock and mineral analysis and we expect that Gerry Lachance and Jean-Louis Bouvier, both of whom have used these analytical techniques for many years, will provide much of the information needed by the writers of the article.

MEETINGS AND VISITS

Cordilleran Section, GAC, held in symposium on Intrusive Rocks and Related Mineralization of the Canadian Cordillera in Vancouver, February 7 and 8. As usual, GSC personnel were prominent in organization and scientific participation at this annual meeting. More than 650 registrants enthusiastically received the presentations that reviewed principles and processes of mineralization and problems of ultramafic and mafic, plutonic, granite and alkalic, and intrusive rocks. So much was presented that participants left the symposium juggling more facts than they could accomodate to fit or modify their conceptual models. (Maybe the festivities helped out a bit too?).

Lubomir Janse of AGC is sedimentologist on Leg 41 of Deep Sea Drilling Project abroad D/V Glomar Challenger. From Abidjan, Ivory Coast, the cruise will end at Malaga, Spain on April 8. The objective is reported to be an investigation of the earliest evolution of the North Atlantic, but what a way to evade a Nova Scotia winter!

C. T. Schafer and other AGC micropaleontologists are preparing for the 500 scientists expected to attend Benthonics '75 in Halifax, August 24-28. This First International Symposium on Benthonic Foraminifers will summarize, examine and identify all techniques for the study of these small beasts.

The Atlantic Geoscience Society (AGS), founded in 1972 to increase communication between geoscientists in the Atlantic Provinces, is now an affiliate of the Geological Association of Canada. Regular meetings are held during the winter months and the current membership of 155 are kept informed of geohappenings by an AGS newsletter. Presidents Rupert MacNeill, Mike Keen and now Nick Rast have done much to make AGS the success it is today. The next AGS colloquium is planned for Acadia University, January 23 and 24, 1976. Anyone interested in this or other AGS activities should contact G. L. Williams, Bedford Institute.

Nice Canada

A GSC-Carleton and Ottawa U. seminar series exploring the greater mysteries of gneisses is presently taking place in Ottawa. Everyone interested is embroiled in discussions and debates about all aspects of gneisses from whether they constitute an ambiguous term and should be mapped at all to their geometrical relations. (Sounds like the boys are having a tuff time.)

The fourth annual Superior Geotraverse Workshop on Western Superior Province met at U. of Toronto on February 24 and 25. Co-ordinated by A. M. Goodwin, data on all aspects of Archean geology of the area were presented by contributions from university, provincial and GSC geologists. W. Fahrig, R. Skinner, R. Ridler, D. Sangster, I. Ermanovics, D. Bridgewater and R. Herd represented GSC and may be contacted for further information.

Mike Hughes of Atlantic Geoscience Centre (AGC) is in Kiel, West Germany, overseeing final tests of a gyro solid-state amplifier for C. S. S. Hudson and inspecting repairs of two gyro platforms for MV Minna. At Hamburg he will study geophysical measurement techniques of the German Hydrographic Institute.

Turkish Delight!

D. C. McGregor recently spent three weeks in Ankara under auspices of the U. N. as palynological laboratory consultant with the Turkish Petroleum Corporation (TPAO). Recent petroleum exploration in Cretaceous and Tertiary basins throughout Turkey extends from the Mediterranean and Black Sea coasts to southeastern Turkey near the Syrian border at the northwest end of the Persian Gulf sedimentary basin. The palynology laboratory of TPAO will be completed by October and, under the direction of Parisa Gönülden, will comprise 2 or 3 palynologists and a technician. Twelve palynologists at universities and the Mines and Metallurgical Institute (MTA) are presently active in Turkey and it is anticipated that TPAO will enter into co-operative agreements with these institutions. Six-month UN overseas fellowships for palynological experts in training and operational techniques are recommended to bring these facilities to their full potential.



Headquarters - Ottawa

RAPORTEURS

A. G. C. :	<i>Mike Latremouille</i>	R. E. G. :	<i>Rolly Ridler</i>
C. L. A. S. :	<i>Nita Metz</i>	R. G. G. :	<i>John Carson</i>
	<i>Maryann Petre</i>	T. S. :	<i>Helen Dumych</i>
G. I. P. :	<i>Peter Griffin</i>	Vancouver:	<i>H. Gabrielse</i>
I. S. P. G. :	<i>E. J. W. Irish</i>		

NEWS CO-ORDINATOR — *Mary LaHam*