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an informal branch newsletter
un bulletin interne d'information

FROM THE CHIEF GEOLOGIST

In a few months the Government of Canada is expected to pass into law legislation to be known as the "Access to Information Act and the "Privacy Act". As specifically stated in the Access to Information Act "The purpose of this Act is to extend the present laws of Canada to provide a right of access to information and records under control of a Government institution in accordance with the principles that Government information should be available to the public, that necessary exceptions to the right of access should be limited and specific and that decisions on the disclosure of Government information should be reviewed independently of Government." Further, this Act "is intended to complement and not replace existing procedures for access to Government information and is not intended to limit in any way access to the type of Government information that is normally available to the general public."

In their statement of the purpose of the Act the legislators have stated, in simple terms, some of the fundamental concepts that underlie a democratic society. Therefore, once the Access to Information Act is promulgated by Parliament it may well be viewed by many as a legislative milestone.

Although relatively straightforward in its intent and content, both the Access to Information Act and the Privacy Act will have a major impact upon those institutions of Government, including the Geological Survey of Canada, which are custodians of Government records. In fact, even before the Act has been passed into law the impact of this impending legislation is already being felt. During the past year the Administrative Policy Branch of Treasury Board has been busily engaged in transforming the provisions of the Access to Information Act into a complete revision of Chapter 410 of the Treasury Board Administrative Policy Manual. Early in 1983 a Departmental Advisory Committee on Access to Information and Privacy was established under the Chairmanship of Arnold Keehner with membership on the Committee drawn from each of the major Sectors of the Department. The Earth Sciences Sector is represented on this Committee by John Scott (Director, Terrain Sciences Division). A major task of this Advisory Committee has been to review draft documents prepared by Treasury Board and to make recommendations to senior management of the Department with respect to policies and procedures that the Department will employ in responding to requests under Access to Information and Privacy Acts.

The Advisory Committee is assisted in its work on the development of procedures by a Departmental Working Group composed of Sector representatives who have direct responsibility for records management. Yvon Claude (Branch Administrative Officer, GSC) is the Earth Sciences Sector representative. Reference is made in the purpose of the Act noted above to "records under the control of a Government institution". It is therefore instructive to note what the Act has to say about the meaning of the term "record". According to the Act a record "includes any correspondence, memorandum, book, plan, map, drawing, diagram, pictorial or graphic work, photograph, film, microform, sound recording, videotape, machine readable record, and any other documentary material, regardless of physical form or characteristics, and any copy thereof". Therefore, it is evident that the intent of the Act is to include under the definition of "record" essentially all of the material that we use in the conduct of our daily work. It should also be evident that management of these "records" will have to be in a manner that will ensure their availability to meet the requirements of the Act. Ensuring such management and availability will be a major undertaking and responsibility of the Geological Survey.

While the intent of the Act is to significantly increase the accessibility of Government records to the public, the Act also makes provision for exemption of certain kinds of information from accessibility under the Act. For example, information obtained in confidence, federal-provincial affairs, international affairs in defence, law enforcement and investigations, security and economic interests shall or may, depending upon circumstances, be exempt from access. The Act also provides for exemption of "scientific or technical information obtained through research by an officer or employee of a Government institution, the disclosure of which could reasonably be expected to deprive the officer or employee of priority of publication". In this case,



Fly-past. The space shuttle "Enterprise" and the GSC Skyvan; Ottawa, June 1983.
Survól de la navette spatiale "Enterprise" et du "Skyvan" de la CGC, à Ottawa, en juin 1983.

Canada

however, it must be demonstrated that refusal to disclose such information would cause "injury" to the holder of such information.

The Act also requires each Department to publish, and to revise on an annual basis, a description of all classes of records under the control of the Department. Such information must be provided in sufficient detail to facilitate the exercise of the right of access under the Act. Further, Departments are required to provide, on an annual basis, a report to the Access to Information Commissioner and to Parliament on actions taken with respect to requests submitted to the Department under the Act. Therefore, these and other provisions of the Act place heavy responsibilities on Departments to ensure that their records are properly managed.

The impact of the requirements of the Access to Information Act on the Survey, in terms of actual requests for information, cannot be accurately forecast. However, the impact with respect to improvement in records management within the Branch is both certain and immediate. A records management team, under the direction of Denise Barton, from the Administration Sector of the Department has already begun work within the Branch to assist us in an inventory of Branch records and in developing improved procedures for the management of our records. Since Branch records are held centrally in Branch Registry, by Divisions in Ottawa, Dartmouth, Calgary, Vancouver, and Patricia Bay and, in many instances, by individual scientists, the task of taking stock of our record holdings and effecting improvements in records management without major disruption of operations will be a challenging one.

The Branch has a long history of serving the public through the publication of results of our research in both a formal and informal manner. Although the provisions of the Act do not require us to depart significantly from previous practices with respect to provision of information to the public they do require us to focus our immediate attention upon our system of records management. After a preliminary assessment of Branch record holdings undertaken about two years ago in anticipation of promulgation of the Act, it became evident that the Branch itself could benefit significantly from improvements in its records management system. Such benefits would be in the form of improved curation of and access to unpublished scientific data and reference materials as well as the development of guidelines for retention or disposal of records materials held by the Geological Survey. In short, the Branch could benefit from a thorough spring cleaning!

The records improvement team will be visiting all Divisions of the Geological Survey and are already at work in some Divisions in Ottawa. Although Divisional Secretaries will be the initial point of contact, the team members will have to talk to people at all levels within the Survey. The Branch is developing guidelines to assist the team in assessing records held by scientists and unit heads are monitoring the process. The outcome is important to all of us, as well as to the public whom we serve. I am depending on you to support this Branch endeavour and to assist the members of the team.

MESSAGE DU GÉOLOGUE EN CHEF

On s'attend à ce que d'ici quelques mois le gouvernement fédéral adopte la "Loi sur l'accès à l'information" et la "Loi sur la protection des renseignements personnels". La Loi sur l'accès à l'information décrit explicitement sa raison d'être: "La présente loi a pour objet d'élargir l'accès aux documents de l'administration fédérale en consacrant le principe du droit du public à leur communication, les exceptions indispensables à ce droit étant précises et limitées et les décisions quant à la communication étant susceptibles de recours indépendants du pouvoir exécutif." De plus, la présente loi: "...a pour objet de compléter les modalités d'accès aux documents de l'administration fédérale; elle ne vise pas à restreindre l'accès aux renseignements que les institutions fédérales mettent normalement à la disposition du grand public."

Dans leur exposé de l'objet de la Loi, les législateurs ont repris, en termes simples, certains des principes fondamentaux qui sous-tendent toute société démocratique. C'est pourquoi il se pourrait bien que bon nombre de personnes perçoivent la promulgation de la Loi sur l'accès à l'information par le Parlement comme un événement marquant de l'évolution législative canadienne.

Quoique leur objet et leur teneur soient relativement simples, ces deux lois auront des effets considérables sur les organismes fédéraux, dont la Commission géologique du Canada, qui assurent la garde de documents de l'administration publique. En fait, leur portée se fait déjà ressentir avant même leur promulgation, qui est toutefois imminente. L'année dernière, la Direction de la politique administrative du Conseil du Trésor s'est affairée à réviser intégralement le chapitre 410 du Manuel de la politique administrative du Conseil du Trésor en fonction des dispositions de la Loi sur l'accès à l'information. Au début de 1983 fut créé au Ministère le Comité consultatif chargé de l'accès à

l'information et de la protection des renseignements personnels, sous la présidence de M. Arnold Keehner. Les membres de ce comité proviennent de chacun des principaux secteurs du Ministère, et c'est M. John Scott, directeur de la Division de la science des terrains, qui y représente le Secteur des sciences de la Terre. Une des principales tâches de ce comité consultatif a consisté à passer en revue les ébauches de documents préparés par le Conseil du Trésor et à formuler des recommandations à l'intention de la haute direction du Ministère en matière des politiques et pratiques que le Ministère appliquera pour répondre aux demandes qui lui seront adressées sous les régimes de la Loi sur l'accès à l'information et de la Loi sur la protection des renseignements personnels. Un Groupe de travail ministériel, composé de représentants sectoriels chargés directement de la gestion des documents, aide le Comité consultatif à élaborer les marches à suivre. Le Secteur des sciences de la Terre y est représenté par M. Yvon Claude, agent d'administration en chef de la Commission géologique du Canada.

Comme la Loi sur l'accès à l'information porte sur les "documents de l'administration fédérale", il importe de savoir ce que la Loi entend par "documents", en l'occurrence: "Tous les éléments d'information quels que soient leur forme et leurs propriétés, notamment correspondance, note, livre, plan, carte, dessin, diagramme, illustration ou graphique, photographie, film, micro-formule, enregistrement sonore, magnétoscopique ou informatisé, ou toute reproduction de ces éléments d'information." De toute évidence, la définition que la Loi donne au mot "document" englobe essentiellement tout medium porteur d'information que nous utilisons dans l'exercice de nos fonctions journalières. Il va sans dire également que la gestion des "documents" devra être assurée d'une façon qui permettra de les consulter conformément aux exigences de la Loi, ce qui constituera à la fois une entreprise et une responsabilité de premier ordre pour la Commission géologique du Canada.

La Loi vise à augmenter considérablement l'accès du public aux documents de l'administration fédérale, mais prévoit certaines exceptions. Par exemple, les renseignements obtenus à titre confidentiel et ceux dont la divulgation porterait atteinte à la conduite d'affaires fédérales-provinciales ou d'affaires internationales en matière de défense, à l'application de la loi, à la conduite d'enquêtes, à la sécurité et à des intérêts de nature économique, seraient ou pourraient être inaccessibles, selon les circonstances. Exception est également faite "des

renseignements techniques ou scientifiques obtenus grâce à des recherches par un cadre ou employé d'une institution fédérale et dont la divulgation risquerait vraisemblablement de priver cette personne de sa priorité de publication". Néanmoins, il serait nécessaire, dans ce cas, de prouver que la divulgation de tels renseignements porterait atteinte à cette personne.

En vertu de la Loi, chaque ministère doit publier, et mettre à jour chaque année, une description de toutes les catégories de documents qui relèvent de lui. De tels renseignements doivent être suffisamment détaillés pour faciliter l'exercice du droit d'accès à l'information en vertu de la Loi. En outre, les ministères doivent fournir chaque année, au Commissaire à l'information et au Parlement, un rapport sur les mesures qui ont été prises pour donner suite aux demandes présentées au Ministère aux termes de la Loi. Il va donc sans dire que de telles dispositions législatives confient une responsabilité aux ministères qui doivent ainsi veiller à ce que la gestion de leurs documents soit des plus efficaces.

Il est impossible de prévoir avec précision les effets que les prescriptions de la Loi sur l'accès à l'information auront sur la Commission géologique du Canada, en ce qui concerne les demandes de renseignements proprement dites.

Toutefois, ils se font ressentir d'une façon certaine et immédiate en ce qui concerne l'amélioration de la gestion des documents. En effet, un groupe chargé de la gestion des documents a déjà commencé, sous la direction de Mlle Denise Barton, du Secteur de l'administration du Ministère, à aider la Direction à répertorier ses documents et à mettre au point des pratiques améliorées de gestion des documents. Mener à bien cette entreprise sans perturber les activités du personnel constituera un véritable défi, car les documents de la Direction se trouvent répartis entre le Service central de classement de la Direction, les divisions d'Ottawa, de Dartmouth, de Calgary, de Vancouver et de Patricia Bay, et un certain nombre de scientifiques.

Depuis fort longtemps, la Direction sert le public en diffusant les résultats de ses recherches sous forme de publications à caractère officiel ou autre. Quoique la Loi ne nous oblige pas à modifier considérablement nos modes d'information du public, elle exige que nous accordions immédiatement toute l'attention voulue à notre système de gestion de documents. L'évaluation préliminaire des dépôts de documents de la Direction, entreprise il y a deux ans environ en prévision de la promulgation de la Loi, a révélé que la Direction elle-même aurait considérablement avantage

à voir son système de gestion de documents amélioré. Il serait ainsi possible d'améliorer la tenue des documents scientifiques non publiés et des documents de consultation, de faciliter l'accès à ces sources de renseignements et d'élaborer des lignes directrices relatives à la conservation ou l'élimination des documents de la Commission géologique du Canada. Bref, un grand ménage du printemps serait avantageux pour la Direction.

L'équipe chargée d'améliorer la gestion des documents visitera toutes les divisions de la Commission géologique et est déjà à l'oeuvre dans certaines divisions de la région d'Ottawa. Bien que les secrétaires divisionnaires feront office d'agents de liaison au départ, les membres de l'équipe auront néanmoins à communiquer avec des fonctionnaires de tous les niveaux au sein de la Commission. La Direction procède actuellement à l'élaboration de lignes directrices destinées à aider ladite équipe à évaluer les documents que les scientifiques ont en main, sous la surveillance des chefs d'unités. Le résultat de cette enquête présente un intérêt pour nous tous, ainsi que pour la clientèle que nous desservons. Je compte sur vous pour appuyer les efforts de la Direction et collaborer avec les membres de l'équipe.

JAMES FENWICK HENDERSON 1905-1983

J.F. Henderson, a former geologist with the Geological Survey of Canada, died in Ottawa on June 14, 1983. He was a dedicated public servant and geologist who made significant contributions to our knowledge of the geology of the northwestern Precambrian Shield and as Secretary of the National Advisory Committee on Research in the Geological Sciences to the earth science community in Canada.

James Fenwick Henderson was born in Kingston, Ontario on 12 October 1905. His early education was completed in Kingston and then he attended the Royal Military College in Kingston and Queen's University graduating in 1929 with a B.Sc. in mining and metallurgy. After receiving a M.Sc. from Queen's in 1930 he continued graduate work at the University of Wisconsin and received a Ph.D. in geology and mining in 1933.

Fen Henderson joined the Geological Survey of Canada in 1935 and remained with the organization until he retired in 1971. His first work was in Quebec in the Ville-Marie and Guillet (Mud) Lake map areas just east of Lac Timiskaming. In 1936, he began work in the Northwest Territories and in that year led a large party that mapped most of two four-mile map sheets south of Great Slave Lake.

In 1937-39 the Beaulieu River four mile map-area was completed along with two one-mile map-areas in the Gordon Lake area within the Beaulieu River area. In 1940 mapping (four mile) of the Mackay Lake area northeast of Yellowknife was completed. These few years of work together with the work of A.W. Joliffe provided the geological framework that guided much of the early prospecting for gold that led to the discovery of four mines in the Yellowknife area and many gold showings, some of which are being explored currently. From this work flowed a number of papers on regional structure and metamorphism and on the structural controls of gold veins and other mineral deposits in the region.

Between 1942 and 1944, Dr. Henderson mapped in the foothills to provide the basic geological framework for oil, gas and coal exploration. In 1945 he returned to the Northwest Territories where, with Dr. I.C. Brown he began detailed mapping of the Yellowknife volcanic belt. The excellent detailed maps that resulted from this study formed the basis for gold exploration in the belt and are still used today as the base for all work in the belt. Papers were produced on volcanic processes and regional structure. Dr. Henderson was a thoughtful geologist and a precise careful mapper who maintained broad interests in geology. His contributions

to our knowledge of the geology of the northwestern Shield and to early mineral exploration in the region were very important.

In 1949, Dr. Henderson was appointed Secretary (the first) of the National Advisory Committee on Research in the Geological Sciences and continued as such until his retirement. He established procedures for this committee and effectively guided its efforts in supporting geological research in Canada. During this period of his career he also advised the Director of the GSC on diverse matters and handled many assignments to assist in the management of the GSC.

Dr. Henderson's contributions to the earth sciences were recognized by his appointment as a Fellow to the Royal Society of Canada. He received the Barlow Medal of the CIM in 1951 and was a fellow of the Geological Society of America and of the Geological Association of Canada and a Member of the Canadian Institute of Mining and Metallurgy.

Those of us fortunate enough to have known Fen Henderson will remember him as a wise, thoughtful kind man, who was generous with his time and advice. His quiet, subtle sense of humour, his modesty and strong social concern were admirable qualities. He was a colleague who made the GSC a good place to be.

EDWARD DARWIN KINDLE 1906-1982

E.D. Kindle, an officer of the Geological Survey from 1934 to his retirement in 1971, died in Ottawa on 28 April, 1982. His father, E.M. Kindle was the Survey's Chief Paleontologist from 1912 to 1940.

Ed Kindle attended Glebe Collegiate in Ottawa, Queen's University, Kingston and the University of Wisconsin where he obtained his Ph.D. in 1933. After a few months as manager of a Kirkland Lake gold mine he joined the GSC and in 1935 began field work in British Columbia. During World War II Dr. Kindle was part of the GSC's Strategic Metals Group and in 1942 mapped and examined the Tibbitt Lake scheelite occurrences.

Following the War he resumed mapping in BC and the Yukon but in the mid-1950s carried out mapping in New Brunswick including the geology of the Fundy National Park. Following this, Ed Kindle began the study of the metallogeny of copper in northern Canada, a study that occupied him until his retirement in 1971.

E.D. Kindle was a meticulous geologist who when he retired left nothing undone, but who, when he died after a lengthy illness, left many friends. This note is based on a fuller tribute by Dr. R.W. Boyle prepared for the Royal Society of Canada.

HANS FREBOLD 1889-1983

Dr. Hans Frebald, who had been associated with the Geological Survey for 33 years, died in Ottawa on 2 June 1983, ending a long and highly productive scientific career.

Hans Wilhelm Ludwig August Hermann Frebald was born in Hannover, Germany, on 31 July 1889. He was educated at universities in Marburg, Tübingen and Göttingen. One of his professors, for whom he had great respect and affection, was the famous tectonic synthesist Hans Stille. In 1931 Dr. Frebald became a Professor at the University of Greifswald, Germany. Around 1933 he moved to Copenhagen with his family. He lived there until 1950, doing extensive work on Upper Paleozoic stratigraphy and paleontology of the Arctic regions, particularly Spitsbergen and East Greenland. On two occasions he went on Arctic Expeditions. In 1930 he led a Norwegian Expedition to Spitsbergen and in 1931 he took part in one of Lauge Koch's East Greenland expeditions. He became recognized as a leading authority on the geology of the Arctic. Besides writing numerous detailed geological and paleontological reports he wrote some important syntheses. In 1935 he published a book on the geology of Spitsbergen and the adjacent islands. By about 1940 he had

completed a book on the Geology of the Arctic, which was to have been published in Germany. This book actually reached the stage of page proof, and Dr. Frebald had a few copies. Regrettably, as a result of war-time turmoil, the book was never published.

In 1950 Dr. Frebald was engaged by the Geological Survey and moved from Copenhagen to Ottawa. Here he specialized on the Jurassic. He did extensive field work in Alberta and British Columbia and also studied and described collections made in the Arctic Islands. For several years he was in charge of the Paleontology unit of the Geological Survey, in succession to Dr. F.H. McLearn. He was highly productive, being the author of a Memoir on the Jurassic Fernie Group and 12 Bulletins describing and interpreting Jurassic faunas from the Arctic, British Columbia and Alberta. In 1955 his contributions to Canadian geology were recognized by election to Fellowship in the Royal Society of Canada. Official retirement from the Geological Survey came in 1968 but he remained a familiar and respected figure at 601 Booth Street until 1982, because he continued to work on Jurassic faunas and problems until a few months before he died.

E.T. Tozer

Staff News

DIRECTOR GENERAL'S OFFICE

Administrative Services

In the Word Processing Centre we would like to extend a welcome to Murielle Pelletier who has been offered a position as a Word Processing Operator. Murielle comes to us from the Public Service Commission. Welcome back to Susan Gagnon who has returned to the Centre from maternity leave.

We also welcome Gino Monteforte who has been offered the position of Records Classifier in the Branch Records Office. Gino comes to us from the Foreign Investment Review Agency. Congratulations to Randy Robinson who is the new Supervisor in the Branch Records Office.

Building Maintenance and Vehicle Services section welcomes Michel Bradley who has been hired to work on the Computerized Inventory System. Michel replaces Claude Lacroix who was successful in winning a competition with the Geological Information Division. We bid farewell to Rhéal Constantineau from the Shipping and Receiving Unit of the Procurement, Chemicals and Stationary Stores.

Accounts Office

The Accounts Office welcomes Heather Forbes as the new Financial Planning Officer. Heather comes to us from the RCMP. Angela Eastham is away on French Language Training and Jeff Stapledon, Branch Financial Comptroller has successfully completed his language training. "Bonne Chance" to Angie and "Félicitation" à Jeff.

ATLANTIC GEOSCIENCE CENTRE, DARTMOUTH

P.A. Hacquebard retired from AGC (GSC/EMR) on April 9, 1983, full of glory and honours, as King of Coal in Nova Scotia. An article elsewhere in this issue describes Peter's contributions to the GSC and to the study of the coal geology.

R.T. (Dick) Haworth left AGC on April 14, 1983 to become Head of the Geophysics Division of the Institute of Geological Sciences in the United Kingdom. He made many outstanding contributions to the Geological Survey of Canada and Bedford Institute of Oceanography and will be sorely missed. He joined EMR's Marine Sciences Branch October 1, 1968 under B.D. Loncarevic. His research work has been devoted to

perceptive applications of geophysics at sea and in the Canadian Appalachians to geological problems, and he is well known internationally for this. He has contributed to many "practical" national problems, of which one recent example is his advice on the Georges Bank Maritime Boundary Dispute. He was an excellent research scientist and more recently an excellent manager of the Regional Reconnaissance Subdivision of the Atlantic Geoscience Centre. His colleagues hope he will return home to AGC someday!

Frances J.E. Wagner retired in March after a long and fruitful career with the Survey that started in 1949. During her first three month term position, she worked as a Technical Officer assisting in the preparation of reports on Pleistocene fossil assemblages collected from various localities throughout Canada. Not to be surpassed by her male contemporaries at the Survey, Frances went on to complete her B.A. and M.A. at the University of Toronto and subsequently earned a Ph.D. at Stanford (1952) where she studied under Professor Myra Keen.

Frances transferred to the Marine Geology Section, Bedford Institute of Oceanography in the summer of 1967

where she initiated a broad-based research program in malacology that extended from the Arctic to the Caribbean and from modern to Pleistocene marine deposits.

Dr. Wagner will be remembered most by colleagues for her numerous and well-documented service consultations on mollusc taxonomy for a long list of GSC Quaternary geologists. She recently completed the first phase of a fine collection of mollusc index specimens with an accompanying catalogue.

Dr. Wagner is probably among the first of a continuously-growing cadre of women geologists at AGC that are making substantial contributions to our understanding of marine geological processes and paleoecological relationships peculiar to the Canadian scene. Her on-going interests include designing and building houses, and populating North American homes with petite and well-mannered Shetland sheep dogs. Her colleagues in the Paleocology Section of EMG wish Dr. Wagner every success in her new undertakings and hope that in the future she will still find the time to participate in related research projects at AGC.

CENTRAL LABORATORIES AND TECHNICAL SERVICES DIVISION

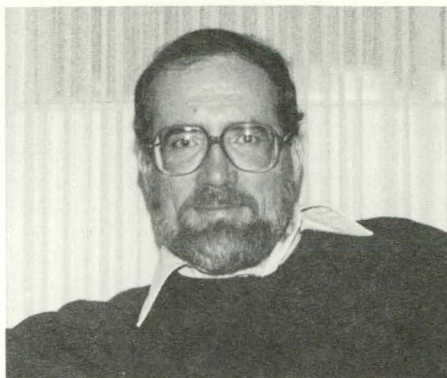
Richard Faulkner and Paul McManus joined the staff of the Analytical Chemistry Section on January 17, 1983. Richard is presently assigned to work in the X-ray Fluorescence laboratory while Paul is assigned to the optical emission spectrographic laboratory.

Mr. Wang Mo-hui, a graduate of Sichuan Teachers' College, arrived in Ottawa at the end of May for a one to two year assignment in the laboratories of the Analytical Chemistry Section. Mr. Wang was engaged in the chemical analysis of rocks and minerals in the laboratories of the Geology Ministry of China from 1964 to 1973. Since then he has been teaching chemical analysis of rocks and minerals at Chengdu Geology College. He is primarily interested in chemical and X-ray fluorescence techniques.

Denis Rioux joined the staff of the Analytical Chemistry Section on March 29th and is currently assigned to the X-ray laboratory.

Richard Herd, has joined the Mineralogy Section as Curator, National Collections of Rocks, Minerals and Meteorites. Richard replaces Hal Steacy who retired from the Curator's position last year after 37 years of government service.

Richard brings to the Curator's job a wealth of experience, some gained while he worked as a Research Scientist in the Precambrian Geology Division, engaged in regional mapping and petrological studies. His specialization is the



Richard Herd

mineralogy and petrology of high grade metamorphic rocks, and he did his Ph.D. thesis on sapphirine and kornerupine rocks from West Greenland. He was responsible for the Nouveau Québec portion of the Metamorphic Map of the Canadian Shield (1475A), and worked on projects in Manitoba and Newfoundland. Last year, he was awarded a NATO grant, jointly with Brian Windley (University of Leicester, England) and Dietrich Ackermann (University of Kiel, Germany) to work on sapphirine-bearing and related rocks.

Richard became interested in mineralogy at an early age, and had taught himself mineral identification prior to university training. After graduate research on the rocks from Greenland, at Imperial College, London, and the University of Leicester, he joined the teaching staff at Carleton University from 1972-74. He was awarded an NRC postdoctoral fellowship at the GSC in 1974, joining the GSC permanently in 1977.

The National Collections consist of the Reference Series of the National Mineral Collections, the Regional and Representative Rock Collections, and the National Meteorite Collection. Richard's main task since assuming the Curator's job in February has been to initiate major work on the rock collections, advising on the use of space both at the Reference Collection Facility at Tunney's Pasture, and at 601 Booth. His attention to detail will be tried, along with his patience, as he undertakes all aspects of the very important job of curating the rock and mineral collections.

GEOLOGICAL INFORMATION DIVISION

Phyllis Charlesworth joined the GSC in April as Head of the Data Systems Group which provides advice and guidance to all parts of the Branch in the development and application of data systems software and in the acquisition of EDP Hardware. After completing her B.Sc. in Mathematics and Physics, she remained at the University of Toronto to



Phyllis Charlesworth

do graduate work in experimental nuclear physics under E.A. Litherland, obtaining a Ph.D. in 1974. She moved to Ottawa and worked for a year at the University of Ottawa applying scientific data processing techniques to solid state physics. Since joining the government, Phyllis has held related data processing positions at Statistics Canada, Customs and Excise, Taxation, and in the Energy Sector of EMR. During this period she was involved with the development of data acquisition and validity systems, database systems, systems performance, hardware acquisition, and various forms of computer modelling. She is looking forward to assisting Branch personnel to find solutions to their data processing problems.

Wally Stafford who joined the GSC's Photographic Section in 1947 as a term employee opted for early retirement at the beginning of July.

Library News

Karen Yates, a graduate of the Faculty of Library Science, University of Toronto has joined the cataloguing section (term appointment).

Robin Nagy, a recent graduate of the School of Library and Information Science at the University of Western Ontario, is looking after Interlibrary loans, freeing Doug Tedford to act as Reference and Circulation Librarian while Rosemary Swan is on French language training.

Lori Mercer joined the library as photocopy clerk to replace Gary Connors who accepted a term appointment as Acquisitions clerk.

Irene Yee, Debbie Martin, Dianne Finnerty and Pam Strachan resigned.

Wendy Stark is now on Maternity leave and begins language training in September.

Sam Alexander has returned to his position as Head of Technical Services after completing his French language training.

Cartography Section

Mary Raddatz retired on January 6, 1983 after 25 years of service with the Survey. Her knowledge and cartographic skills as demonstrated in publications such as 'Reading the Rocks' will be difficult to replace. We wish her many years of happy retirement on the farm at Eganville.

To fill the void left by Mary's departure, we were pleased to welcome John Narraway on February 21, who came to us from the Geoscience Mapping Unit, Fisheries and Oceans, where he was involved in various cartographic special projects.

Earl Maahs and Vern Foster left in January 1982 to attend language training courses. They have since returned to assume their duties as cartographic supervisors. Bienvenue et félicitations.

Frank Williams was the successful candidate for the DD 7 Supervisor competition to fill the vacancy in unit 'A'.

Jean-Paul Corriveau assumed Frank's vacated position as a sub-unit supervisor transferring to unit 'C'. Paul St-Amour transferred from Terrain Sciences Division in early summer.

March 1, 1983 saw J.G. "Mick" Roberts step down as Superintendent of Cartography after eight years with the Survey. Until his official retirement date of March 1, 1984, he will be assisting and advising the Division Director in various projects and investigations. Since "Mick's" departure, the unit has been administered by a triumvirate of Ed Dumbrell, John Bill, and Frank Williams, and will continue in this manner until such time as a successor is chosen.

INSTITUTE OF SEDIMENTARY AND PETROLEUM GEOLOGY, CALGARY

Since his graduation from the University of Calgary in 1975 with a B.Sc. in geology, Michael Dawson has worked as a coal explorationist with Hudson's Bay Oil and Gas (for 3 years) and as a consultant on coal geology in both Canada and Australia (also for a period of three years). Before joining the coal research group at ISPG in January of this year, this native Calgarian was Chief Coal Geologist at the Calgary office of Home Oil Company. Michael is currently involved in the evaluation of the coalfields of the Alberta plains, and in the development of computer mapping and geological modelling of western Canadian coal resources.

Resource evaluation geologist Grant Smith also began researching the management of coal resources in January. Following his graduation from McGill University (B.Sc.) in 1969, Grant became interested in the planning of efficient resource exploitation. Since that time he has been employed in the evaluation of resources and techniques by various mining companies. These jobs have taken him from his home town of Montreal to Schefferville, Quebec (Iron Ore Company of Canada), to Cassiar, B.C. (Cassiar Asbestos Corporation), to Coal Valley, Alberta (Luscar Sterco Ltd.), and, most recently, to Calgary and Grande Cache (McIntyre Mines Limited). Since 1977, when he became Senior Geologist and Chief Engineer for Luscar Sterco, at Coal Valley, his focus has been on the commercial recovery of thermal and coking coal resources. Grant is active in several scientific associations, including: Association of Professional Geologists, Geophysicists and Engineers of Alberta; the Canadian Institute of Mining and Metallurgy; and the Geological Association of Canada. He is currently a member of the Divisional Programs Committee of the CIM Coal Division, and has also served on the Technical Committee of the Canadian Carbonization Research Association.

ISPG's Library announces the arrival of Reference Librarian Flora Fritz. Before emigrating to Canada from Scotland in 1974, this Aberdeen native received her B.Sc. in biochemistry from the University of St. Andrews, and became a research assistant, in plant physiology and the mineral metabolism of plants, at the Macaulay Institute for Soil Research in Aberdeen. Once in Canada, Flora pursued biochemical research at the University of British Columbia for five years before becoming interested in a career in information science. From 1979 to 1981, Flora attended the University of Western Ontario, where she obtained a Master of Library Sciences degree. In August 1981, she became a reference librarian in the Environment-Science-Technology Library at the University of Calgary, where her subject responsibilities were physics, computer science, and nursing. One physicist, appreciative of her online search capabilities, staked a major claim to Flora's time, and they are now happily married.

A.C. Higgins joined the Paleontology Subdivision in early May as a Research Scientist, and will be studying Upper Paleozoic conodonts of western and northern Canada. Alan is no stranger to ISPG, as he visited the Institute for five months in 1981. He obtained his B.Sc. and Ph.D. degrees from the University of Sheffield, England, in 1958 and 1962 respectively. From 1961 to 1964 Alan was a Research Fellow for NATO and

has been a lecturer and senior lecturer at the University of Sheffield from 1964 to 1983. He has wide experience in administration and micropaleontology, and has done field work in many parts of Europe, Greenland and North America.

Charles Churchill was born and grew up in Halifax and moved to Algonquin College in Ottawa at age 18. In 1980, he left the heat and humidity of Ottawa to bask in the warm chinooks of Calgary. Once in Calgary, "Chuck" undertook several interesting, but low-paying, chemical research projects at the University of Calgary, worked in a uranium extraction plant, and performed various part-time jobs in chemical quality control. He is currently a technician in the Organic Geochemistry Lab, supervised by Marg Northcott.

Anita Foo has replaced Heather Logan as secretary for the Petroleum Resource Assessment Secretariat. Originally from Malaysia, Anita went to England to study nursing for five and a half years and came to Canada in 1976. In Canada, she worked as a graduate nurse in nursing homes and hospitals for a while. In 1977, she moved from Calgary to Edmonton and took a secretarial science course. Then, in 1979, she moved to Regina, and obtained a post as secretary with the Saskatchewan Provincial Mediation Board and Saskatchewan Health. Anita very wisely moved back to Calgary in 1981 and joined the staff of the Canadian Citizenship Court, Secretary of State. On March 14, 1983, she transferred from the Court to ISPG.

Daniel Li emigrated to Canada from Hong Kong in 1977, spent two years at the Southern Alberta Institute of Technology, where he obtained his diploma in Business Administration (with an accounting major), and in October of 1981, became a term employee at the Institute. He is currently an accounts clerk in the Accounts and Finance section. Shelley Wilson transferred in January to the Department of Consumer and Corporate Affairs from the ISPG Accounts and Finance section.

Deanna Boyce became secretary to the Regional and Paleontological subdivisions in November 1982, just in time to help those subdivisions prepare for ISPG's first Open House. This Albertan originally hails from High River "where all nice and well meaning people come from; and not all of us are klutzes". Deanna was a secretary in the Air Traffic Service Branch of Transport Canada (Calgary International Airport) and in the Calgary RCMP office before assuming her duties at the ISPG. Deanna's trademark is a perfume called "Lauren".

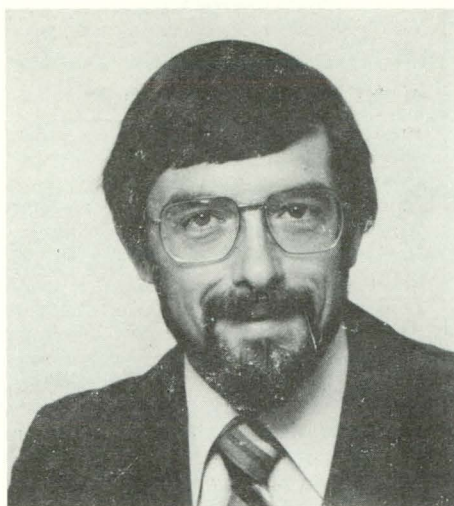
Don Copithorne, one of those rare native Calgarians, took the job of storeman in the Core and Sample Repository in February.

Doug Stewart left ISPG on March 31st, after 18 months as a geological map compiler for the Regional Geology Subdivision. Doug worked on Arctic Islands geology, including data collected by J.W. Kerr, and has compiled a report and geological maps covering Somerset Island and part of Boothia Peninsula. Doug has chosen to leave the cool, dry, serenity of ISPG to take a three year contract with the New Guinea Geological Survey. It's a jungle out there Doug.

Pat Michael, was a lab technician at ISPG for over seven years, the last three of which he spent as the Institute's Scanning Electron Microscope technician. Pat is a graduate of the chemical technology program at SAIT, but left the research environment of a particle analyst to attend beekeeper's school in the Peace River country this January, in preparation for a new career as an apiarist.

PRECAMBRIAN GEOLOGY DIVISION

We welcome Jim Jackson, who arrived from Australia in late April to begin a year's visit, on exchange with Al Miller (Economic Geology Division). Originally from the U.K. but now apparently fluent in "Strine", Jim (B.Sc., University College, London; M.Sc., James Cook University, Townsville, Queensland) is a



Jim Jackson

senior research scientist with the Continental Geology Division of the Bureau of Mineral Resources in Canberra. A sedimentologist, he has been involved for the past five years with Middle Proterozoic shallow-water sediments of the McArthur Basin in the Northern Territory. This summer Jim will be working with Paul Hoffman in the Wopmay Orogen and with Tony LeCheminant and Subhas Tella in the Baker Lake area.

Of General Interest



R.W. Boyle

R.W. Boyle, special projects officer with RGG, is this year's winner of the Barlow Memorial Medal, which is presented for the best paper published in the Canadian Mining and Metallurgy Bulletin in 1982. The award was presented to Bob for his paper entitled "Geochemical Methods for the discovery of Blind Mineral Deposits" that was published in two parts in the August and September 1982 issues of the CIM Bulletin.

DONALD STOTT HONOURED

On May 31st, Donald Stott, Research Geologist and former Director of ISPG, received the Willet G. Miller Medal from the Royal Society of Canada at its annual meeting in Vancouver. This award has recognized significant research in the earth sciences since 1941, when Royal Society members and friends of distinguished hard rock geologist, Willet G. Miller (1867-1925), subscribed funds for it. The medal is awarded every two years (if there is a suitable candidate) for outstanding research in the earth sciences. Don Stott joins the distinguished company of several other GSC geologists who have been Miller Award recipients: F.H. McLearn (1947), C.H. Stockwell (1953), R.J.W. Douglas (1965), J.A. Jeletzky (1969), R.W. Boyle (1971), R. Thorsteinsson (1973), and E.T. Tozer (1979).

Dr. Stott has long been recognized internationally as a leading authority on the geology of the Cretaceous and Jurassic systems of western Canada. He has written several benchmark papers on the deposition of Rocky Mountain sediments and continues to research the evolution of these resource-rich

RESOURCE GEOPHYSICS AND GEOCHEMISTRY DIVISION

Dr. André Larochelle, Assistant Division Director died on June 8 following a long illness. Andy made many contributions to his science, perhaps one of the greatest, but for many years little recognized, being a part he and Larry Morley played in formulating the reversals-and-lineations study of the ocean basins. A fuller tribute will be published in the next issue of GEOGRAM.

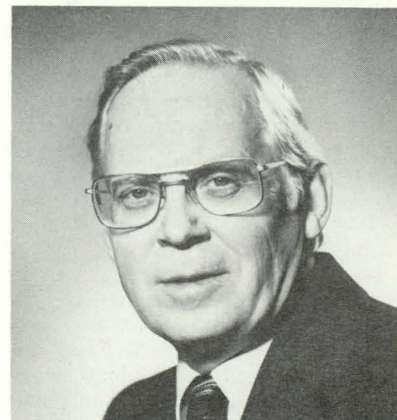
Nora Goodman, who has been Division Director's secretary for 17 years retired recently. Nora has been with the Division for 18 years. Her friends and colleagues in the Survey presented Nora with a new typewriter on her retirement.

TERRAIN SCIENCES DIVISION

Janis Dale joined the Paleocology and Geochronology Section in April as a term Physical Scientist. Janis received her M.Sc. from McMaster University with a major in coastal geomorphology; her thesis dealt with physical and biological zonation of subarctic tidal flats at Frobisher Bay, southeast Baffin Island. Welcome Janis.

We wish to welcome Tracy Gerrard who joined the Division in June as our new draftsman. Tracy is replacing Paul St-Amour who moved to Cartographic Unit A on the 4th Floor.

In recognition of his stature in the geoscience community and his active participation in the work of scientific societies, Denis St-Onge is serving as Vice-President of the Geological Association of Canada for the current year.



D.F. Stott

deposits. A distinguished career in geology has characterized this year's winner of the award, from his early days at the University of Manitoba (where he received his M.Sc. in 1954) and Princeton University (where he was granted his doctorate in 1958) to his current investigations of the geology of the Rocky Mountain Foothills.

PRECAMBRIAN HIGH REPORT

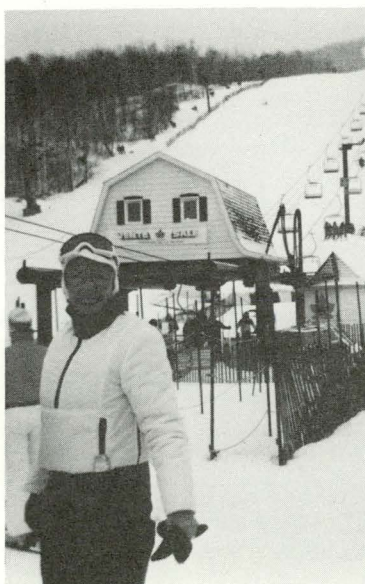
Precambrian High, that sporadic informal series of talks, progress reports, short courses, and reruns or premières of papers presented elsewhere ended another successful season of presentations of interest to workers in, on, or over the Canadian Shield. In between Pierre Lefort of Rennes University (France) talking about geological and geophysical correlations across the Atlantic Ocean and Robert Newton of the University of Chicago (U.S.A.) speculating on the origin of granulites, a stimulating range of subjects was covered. Peter McGrath, on secondment from RGG Division, raised the Precambrian Geology Division's collective consciousness with respect to aeromagnetic methods and problems of interpretation. Simon Hanmer presented a six lecture short course on Structural Geology to an audience that consistently overflowed into the hall outside room 301, 588 Booth. A closed circuit TV hookup or a larger room were considered. After Christmas, Subhas Tella brought us up to date on his work in the Deep Rose Lake Map Area, District of Keewatin (still more shear zones) and Rein Tirrul continued on the structural theme with two lectures on strike-slip fault systems using clay-cake models and his work in Iran and District of Mackenzie as examples. Stu Roscoe (Economic Geology Division) followed with tales of the Booth River ultramafic complex and several (?) slides of an unusual inukshuk. February had a distinctly salty orientation with Jack Henderson doing a structural analysis of some gold deposits in Nova Scotia and Bruce Ryan and G.A.G. Nunn of the Mineral Development Division, Newfoundland Department of Mines and Energy described their work in the Precambrian of Labrador. Lawson Dickson of the same organization discussed an Acadian granite in Newfoundland and related ore deposits. A second excellent short course, this one on Geochronology, took up six Fridays in March and April with Otto van Breeman, Randy Parrish and Chris Roddick presenting an educational mélange of basic principles, case histories, and the latest methods. To accommodate the larger than normal crowd that the course generated, a game of musical rooms was played with the Geochronology series taking place in Alice Wilson Hall, 223-588 Booth and Camsell Hall.

Upon his retirement after three years as the man behind the screen for Precambrian High, Peter Thompson would like to thank the hard working speakers and enthusiastic audiences for maintaining the high in Precambrian High and making the series a success. John Percival and Terry Gordon will be overseeing things next year.

MONT TREMBLANT SKI TRIPS

In a winter characterized by appalling ski conditions, the GSC diehard downhillers enjoyed two day-trips to Mont Tremblant. After a week of rain, February 4th was cold, resulting in ice ball-bearings under foot. This was a challenge which everyone met without resorting to the ministrations of the ski patrol. March 18th brought sunny spring conditions. Unfortunately there was not enough snow left in the woods for Heddy Rimsaite and Jean White to enjoy the cross-country trails but on the hills, the rest of us were up to our knees in glorious spring snow.

With any luck, 1984 will be the year of the big snow!



GEOMATHEMATICAL AND STATISTICAL SERVICES, ECONOMIC GEOLOGY DIVISION

A number of in-house consulting services can be performed by members of the Geomathematics Section in the Economic Geology Division. Specific topics on which consultation is provided include:

- (1) fitting of frequency distribution models;
- (2) trend-surface analysis;
- (3) multivariate statistics applied to geological data;
- (4) image analysis of photomicrographs and map patterns;
- (5) geostatistical contouring techniques, including "Kriging";

- (6) statistical analysis of directional features;
- (7) quantitative stratigraphic correlation;
- (8) cluster analysis;
- (9) computer simulation of geological processes; and
- (10) geostatistical crustal abundance models.

The consultants are Frits Agterberg (Head, Geomathematics Section), Graeme Bonham-Carter, Chang-Jo Chung and Andrea Fabbri. In a number of data topic areas, Geomathematics staff would like to do collaborative work with other G.S.C. staff. Interested persons can contact the office of the Economic Geology Division or Frits Agterberg directly.

BRIAN NORFORD, CHANCELLOR, UNIVERSITY OF CALGARY

Brian Norford, ISPG paleontologist, is very concerned to maintain the quality of education scholarship, and teaching at the University of Calgary. An active and internationally known scientist, he is currently channelling some of his energy into carrying out his responsibilities as Chancellor of the University. Brian was nominated to that position in November, 1982. To the role of Chancellor, Norford brings a wealth of administrative and scientific expertise. Since he joined the ISPG in 1960, this researcher has served as the Head of the Western Paleontology Section (from 1967-1972) and Head of the Paleontology Subdivision (1972-1977 and 1980-1981). A member of numerous societies and professional associations, Brian has contributed much of his expertise and time to the advancement of research generally, and that of paleontology in particular. He has served on various committees of the CSPG, GAC, and educational institutions

such as Memorial University of Newfoundland and the University of Calgary. He has also been a contributing editor to publications such as *Canadian Journal of Earth Sciences* and *Paleontographica Canadiana*.

A Senator of the University of Calgary for the past 8 years, Norford has contributed experience and advice to staff and students alike on a variety of issues. He has come to appreciate the importance of relating curriculum planning to the needs of the Province of Alberta. Universities have three distinct mandates, according to the Chancellor: to provide educational opportunities to the students, which will allow them to develop maximally; to provide a research base, which will foster an enhanced quality of life through technological and theoretical developments; and to provide service to the community in technical and human ways. A prime example of the latter concern was recently illustrated by university administrators and professors when they focused their

attention on special needs of handicapped students by going a mile in their shoes. Norford was one of several university people to personally experience the difficulties of negotiating the campus in a wheel chair. Such problems are as much human as technical.

Norford considers the Senate to be the lifeline between the university and the community it serves. He points out that Alberta's university senates are unique, unlike those of all other provinces. What makes them special is their composition. The University of Calgary Senate, for example, is composed of 16 academic staff and student representatives, and 46 members of the public who are interested in the university educational system, and have some particular expertise to offer it. Community involvement, therefore, is direct and extensive, and the University of Calgary communicates with a broad range of lay volunteers and individuals, who add their particular perspectives to educational, technical and social questions. Such an environment of interchange makes the role of Chancellor a demanding and fast paced one. In fact, Brian is looking forward to the post-graduation period in June, so that he will have some time to pause and to reflect on the direction of education at the University of Calgary.



Brian Norford joins the ranks of the handicapped after only a few months as Chancellor of the University of Calgary. In attempting to follow a middle course, Brian steers to the right and left at the same time, but the laws of mechanics prove stronger than the theories of philosophy; although Confucius did say, "Man who attempt to circle in opposite directions at same time could disappear twice". (Photo by Ken Bendiksen, by permission of Alumni Affairs, Univ. of Calgary).

DID YOU KNOW THAT....

Elevator fronts on the second to seventh floors of the GSC, 601 Booth Street, wall panels, and drinking fountain niches are made from Laredo-Chiaro, a cream-coloured marble containing many veinlets filled with white calcite. This stone is quarried in Italy. The elevator lobby, part of Logan Hall, and solid piers or columns are faced with a marble breccia from Italy called the Breche Levant. This stone is composed of white, grey, light and dark brown fragments varying in size from 60 mm to 5 cm in diameter. The floors of Logan Hall are Terazzo.

The highly decorative serpentine breccia used on elevator fronts and in the four columns in the centre of Logan Hall is called Monte Verde and is quarried in Vermont. It is mottled green with shades of light and dark green interspersed with veinlets and small blobs of quartz.

A pink crystalline limestone or marble from Tennessee, called Endsley Pink, is used for floors in the elevator lobby, and for stair treads. It is also used as drinking fountain floor slabs. This rock is mainly a pink, medium grained marble with faint bands of white, pink, and grey running through it.

Black marble base boards are made from Vermont bioclastic limestone.

PETER HACQUEBARD:
retired but not retiring

"Peter Hacquebard is retiring?" "Why?", I asked in incredulous amazement, "I thought only old people retired". But time marches on and Peter has reached that exalted plateau where he qualified as a senior citizen. What could Peter's friends organize that would do justice to such a fine career?

We immediately called a meeting of the best brains in the Atlantic Geoscience Centre, all by strange coincidence from the Eastern Petroleum Geology Subdivision, to decide the manner of our testimonial. There were numerous suggestions, but it was finally agreed that a luncheon would be the best compromise. The selection of presents was a problem. Several ideas, such as a new yacht, were rejected, primarily because of the difficulty of presentation (not to mention a restricted budget). The consensus of opinion was that we should provide a few surprises, with only one present in a serious vein. So our plans were set accordingly.

The great day arrived on Wednesday, April 30, when more than 50 people gathered at the Brightwood Golf and Country Club in Dartmouth. The guest of honour and his wife, Jeanne, had been informed that the event was Dutch treat, a fitting idea for such distinguished natives of Holland.

The festivities started during the luncheon with Peter's old (not that old) friend, Sedley Barss, serving as master of ceremonies. First on the program was a song to the refrain of "Take this job and shove(l) it", but appropriately modified to reflect Peter's career. Sedley then put on a sterling performance in providing the review "This is your life, Peter Hacquebard". According to Sedley (and I have no reason to doubt his word), Peter first arrived in Canada in 1946. During the war Peter had completed his geological studies, worked for the Netherlands Survey, and then served with the Allied forces as an interpreter. After marrying Jeanne, he realized the need for money so obtained a position with Shell Oil. In its wisdom, Shell sent Peter to Canada where he mapped the Athabaska tar sands and became friendly with Bertie MacKay of the GSC. The Survey then had a burning desire to obtain a coal petrologist, so Peter was the ideal candidate.

In the late forties, red tape was at a minimum so Peter very rapidly found himself living in Sydney, Nova Scotia. There, he set up a coal petrology section and hired several famous GSC personnel including Sedley, Alex Cameron, Roger Donaldson, Terry Birmingham, and Lew King. Peter and his co-workers made some significant advances in their studies of coals from the Sydney



coalfield and adjacent areas. Key investigations were carried out on coal macerals and rank, and seam correlation. The group also unravelled some of the biostratigraphic complexities in pioneering work on Carboniferous palynomorphs.

After ten years of growth and expansion, the Coal Petrology Group moved to Ottawa, where the maceral and rank studies were extended to coals from other areas in Canada. There was also an increasing awareness of the value of vitrinite reflectance data to maturation studies of sediments, and hence potential source rocks for oil and gas.

In 1973 Peter moved again, this time to the Institute of Sedimentary and Petroleum Geology in Calgary. There he continued his studies on the maturation of sediments as determined from vitrinite reflectance analyses of coals.

One of Peter's loves has always been sailing. While in Sydney he sailed the Bras D'Or Lakes on Dahinda I. During his sojourn in Ottawa, he acquired Dahinda II and then became the proud owner of Dahinda III. Most weekends and vacations were spent cruising on the Ottawa River and other equally exotic places. Naturally when Peter was transferred to Calgary, the sailboat went too.

Sailing in Calgary is not the easiest sport in the world. Possibly because of this plus a lifetime interest in Maritime coal, Peter moved to Bedford Institute in 1975. This was a logical move since the shock waves caused by OPEC's control of oil price had spurred renewed interest in home-grown coal. Nova Scotia was urgently trying to accelerate development of its existing coal reserves while discovering new ones. The most promising area in the Sydney Basin seemed to be offshore. The decision was made to obtain a drillship and drill several test holes. Peter served as consultant, providing prognoses of proposed sites and through Sedley's help (palynologically), interpreting the sub-surface geology from the cores obtained during drilling.

The success of the offshore program is reflected in the development of the Dunkin Mine. This mine, which will extend for several miles offshore, will supply thermal coal for several generating plants in Nova Scotia. Coal is once more an important contributor to the province's economy, thanks in part to Peter Hacquebard.

Throughout his dialogue, Sedley interspersed amusing anecdotes. One sticks in my mind. Sedley, Peter and Herb Zorychta were doing field work in southern Alberta one summer. During a

quiet spell they decided to pay a visit to Eureka, Montana. According to Sedley, he could then say to his friends, "Eureka, I've found it". At the border they were asked for identification by the U.S. customs officer. He asked each to give his name. Peter replied, "Hacquebard". "How do you spell it?", the officer asked. Peter complied and without further comment the man turned to Herb. "What's your name?" the officer said. Herb replied "Zorychta". "How do you spell it?" When Herb had finished, the man then turned to Sedley. "What's your surname?" "Barss", Sedley replied. Then came the stock question, "How do you spell it?". Sedley replied, "B A R S S". "Gosh, that's a funny name", the officer said, "where did you get it?". Which goes to prove that it's safer not to cross international boundaries with Peter Hacquebard.

Following the soliloquy came the presentations, all of a serious nature. Gary Grant, after a moving speech (I moved about 100 metres away) gave Peter the latest Newfoundland toy, a rubber glove filled with stuffing. Before Peter could recover, Art Jackson presented him with the latest in do-it-yourself ships compass. This versatile gadget had been manufactured in-house and came with an unconditional guarantee to never work. Then, to ensure conformity with regulations, Graham Williams presented the final appraisal of Research Scientist 4, Peter Hacquebard. Fortunately for Peter, this information can be deleted from the records after five years, if he has an unblemished record.

CLIMATIC ISSUES AND EMR

Over the past winter we have seen a number of newspaper and magazine articles on climate. They concern such questions as the effect of increasing levels of atmospheric carbon dioxide, arctic haze, the possible climatic implications of the El Chichon volcano, and the cause of the abnormal 1982-83 winter. These represent a few examples of the more popular issues. There are others, such as future climate in areas of stored nuclear waste, that are equally important, but not as visible. Climatic change impacts nearly all aspects of our life, and thus there would be tangible benefits if we could predict future climate.

The climatic "engine" is extremely complex and probably contains an important random component. Nevertheless there is general consensus among paleoclimatologists and climatologists alike that one of the important driving forces of long term climatic change is insolation change resulting from earth-orbit perturbations. The later are predictable; hence to some degree so too is future climate. But the

A highlight of the luncheon was the presentation by Gary Grant of a photograph album. This contained photographs of the Subdivision's loyal staff in various poses. The rules of censorship forbid me to discuss any of the captions, but the photographs did provide an unforgettable image of life in the GSC. There was even a picture of Sedley and Peter taken when they worked in Sydney (I didn't realize still photography was that old).

To remind Peter that he was still a geologist, Mike Avery gave him a 10" by 14" colour print of *Cirratiradites solaris*, one of the first spores described by Peter, in collaboration with Sedley. Then came the finale. Mike Keen presented Peter with a beautiful ship's chronometer to be installed on Dahinda IV, the latest in the famous pedigree.

Peter was truly impressed. In his thank you speech he briefly reviewed his career and his enduring love of coal (he didn't mention coke). He recounted several amusing anecdotes and thanked everyone for giving him such a memorable retirement. But the best news, as he announced, was that he would still be working for the Survey on a part-time basis. We all applauded. An older geologist, when he is Peter Hacquebard, does not fade away. He simply reaches the mature phase of a very productive cycle.

M.J. Keen

effect of the orbital forcing function is modulated to various degrees by geography, atmospheric turbidity (volcanism), various feed-back loops and phenomena, such as ice sheets, that have a significant response-time lag. So we are far from being able to predict climate in a manner that would be economically beneficial.

Nevertheless, such a level of prediction may eventually be realized. There are two basic approaches to the problem. The orbital forcing mechanism illustrates the analogue approach which is the one used by earth scientists and biologists who deal with fossils. For example it has long been suspected that orbital changes could be influential in driving long term climate change, but it was not until the results of such changes were recognized in the climatic signal stored by fossils in deep-sea sediments that a cause-effect relationship was established.

The other approach to climate prediction is based on computer simulations derived with the use "General Circulation Models" (GCM's). Its practitioners are climatologists, meteorologists, and

atmospheric physicists. Several types of GCM's have been used for climate modelling, with varying degrees of performance. A Canadian GCM, developed by Atmospheric Environment Service (Downsview, Ontario), is soon to be implemented on a newly acquired computer.

There is an obvious need to blend these two approaches to climate prediction. For example, one might (as has been done in the U.S.) run a GCM simulation using Pleistocene boundary conditions as specified by the proxy climate data derived from geological and paleo-ecological research. Doing so would allow estimates of synoptic conditions for time periods when climate was closer to the norm of the past 10 000 years than it is today.

To blend the two approaches to climate prediction requires a large measure of co-operation between scientists whose paths seldom cross. A move in this direction was taken in April 1983 when several EMR scientists met with meteorologists and climatologists from Atmospheric Environment Service (AES). This meeting, which had the format of a workshop, involved approximately 20 short presentations followed by discussion. It was chaired by John Fyles. Fred Roots and others sat in, and Roots offered some perceptive wrap-up observations on the content and future of such efforts.

The workshop was organized by Henri Rothschild (Office of Energy Planning) and myself. Rothschild's staff provided an amiable and constructive atmosphere and used a "carrot" of free pizza, beer, coffee, and donuts to keep the participants closeted and interacting for an entire day. EMR participants were chosen to represent a cross-section of the type of climate proxy data generated within the Department. Since documents associated with the Canadian Climate program give the impression that EMR is not a major player in the climatic field, an objective of the meeting was to demonstrate the breadth and depth of our interest. Remarks after the meeting show that our efforts were a success, even to the point of acquainting some of the EMR scientists with the activities of their Departmental colleagues.

Other than this, the workshop generated no consensus and solved no particular scientific problem. But it did open communication between the "modellers" and proxy-climate specialists. An invitation was extended to begin a more active contact and to provide paleo-climatic information that will be used in GCM simulation on the AES computer. This is an extremely attractive offer and should be considered seriously. To that end several of the EMR participants have begun to discuss just how we might accumulate the required data for such a

simulation. The problem is that the proxy climate data generated by many EMR scientists are not collated and are highly dispersed. Thus several EMR participants discussed the possibility of conducting an experiment in which we would try to bring together and interpret all EMR proxy data relating to a chosen time interval (probably about 2000 years in length). Such an experiment would fit nicely with the proxy data objectives of the Canadian Climate program and should help us to understand the magnitude of the proxy climate data base at EMR. Once this is done, we should be in a better position to start a modelling experiment with AES.

The April meeting was purposely kept small in order to promote discussion and interaction. Thus it did not include all those who have an active interest in paleoclimatic matters. I urge anyone who wants to become involved in subsequent meetings and in any co-operative ventures to contact me. *John Matthews, Terrain Sciences Division.*

KIDS, KIDS, KIDS!

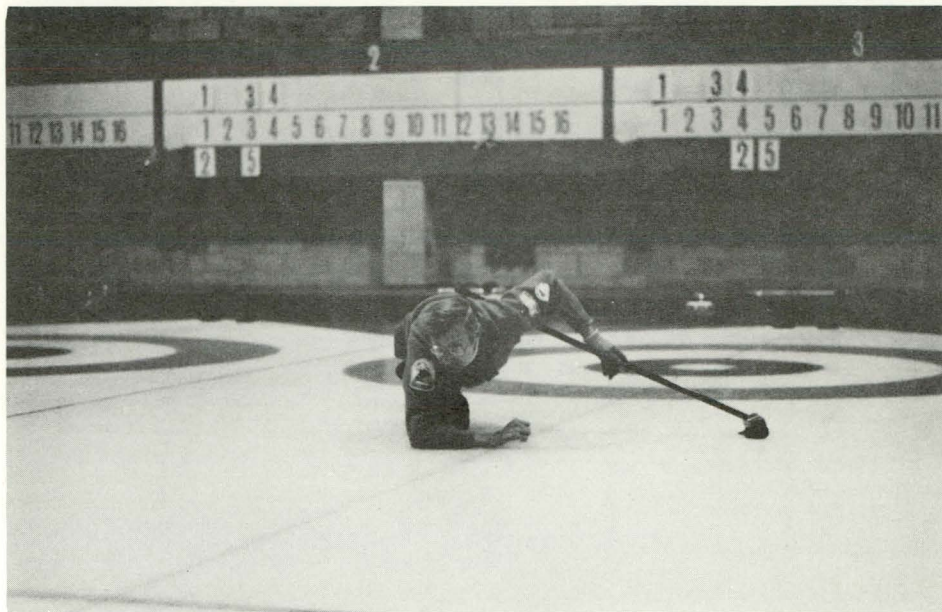
Paul McManus, who works in the "Spectrographic Laboratory" in Ottawa, has decided to try raising goats. At the present time he has Josephine and Genevieve plus three kids.

Having bought a farmhouse and several acres of land Paul is attempting to satisfy his dairy needs by raising goats. At the present time Josephine and Genevieve give about four litres of milk a day. He hopes to increase the herd to six. Six goats should provide him with enough milk to make butter, cheese, cottage cheese, yogurt and ice cream.

The goat in North America is considered to be the poor man's cow. However in many parts of the world the goat provides food and clothing. It is an extremely hardy animal not prone to the common cattle diseases. The goat will eat almost anything and can survive under harsh weather conditions. When the kids are born they have teeth and are running around immediately after birth.

Paul finds the females have friendly dispositions and are very clean; however, the Billygoats like many males are irritable and smelly and best kept at a distance.

The goats are a big hit with the neighbourhood children and the family dog takes a very paternal approach to the new born kids. Paul's wife Lucia has suggested that if the goats are a success they should get some sheep so when they're not milking goats they could be knitting sweaters.



"Skip Ralph Thorpe demonstrates his 3-point follow-through in a close game".

FRIDAY FUN CURLING LEAGUE

The GSC Mixed (or Friday Fun) Curling League recently completed its tenth season of operation. The group was organized and shepherded through its first six years by its youngest member, Ralph Thorpe (if only his February 29th birthdays are counted). The first one and one-half years were at the Curl-O-Drome in Lansdowne Park, but the league moved to Nepean Sportsplex when it opened in January 1975. From the start, the group has consisted of six rinks and many novice curlers have come

to enjoy the game and camaraderie, particularly that associated with frequent social gatherings after the rock-throwing contests. We have introduced the game to visitors and transplants from United States, England, Wales, Sweden, Norway, Portugal, India and the People's Republic of China, as well as to several native Canadians. Charter members listed on draws for the first year still curling at the end of the tenth year are Terry and Chris Durham, Roger Eckstrand, Ann and Bill Shilts and Helen and Ralph Thorpe.



LOOKING BACK ON AN OPEN HOUSE

It has been some time since the ISPG held its first Open House. The following interview by L. Machan-Gorham, with Open House organizer, John Brindle, explains what was gained from the experience.

L.M-G.: Describe the event itself and how the idea for an Open House evolved.

Brindle: The ISPG opened its doors to the public on the days of November 23 and 24, 1982. From our guest book record we can say that we were hosts to about 500 people, 400 of whom were from industry and consulting firms. As visitors entered the building they were given handouts and directed to the Board Room display, which described the work of the ISPG and how it fits in the EMR organization. Our Director, Walter Nassichuk, also gave general introductory talks to groups as they gathered there. He described ISPG's role within the GSC and in earth sciences in western Canada. He also talked about the Institute's research facilities.

It had become apparent to myself and several other staff members, from conversations with industry people, that many working geologists here in Calgary did not know that the ISPG existed. It became more and more obvious that we would need to increase our visibility here in order to bring our work to the attention of a greater number of people. The Open House was to provide the vehicle we needed to communicate our presence and functions here in Alberta.

Support for the idea came from our Director and, in a very practical way, from Communications EMR – and a lot of very good advice from their staff I might add. For example, Norm Avery and Tony Goodson were especially helpful. Tony developed the basic concepts for the Board Room and Foyer exhibits. The ISPG Cartographic and Photographic units, directed by the skilled eyes and hands of people like Lachie MacLachan and Bryan Rutley, produced much of the display material, and individual geologists spent weeks designing and developing their own displays.

L.M-G.: What kinds of information were available to the public?

Brindle: In fact, there were 63 displays, some of which were multiproject displays, covering all activities of the ISPG. In addition to wall displays, the public could visit the labs and talk to technicians about their work. Jean Dougherty and John Utting gave a number of guided tours to the various facilities. As well, publications of Survey scientists were displayed throughout the building.

L.M-G.: What kinds of projects were emphasized?

Brindle: Past and ongoing programs were emphasized. There was some slant toward what good research could mean to industry, but that almost came naturally of itself, because so much of what we do – for example our work in paleontology, petroleum and coal geology – is significant for industry geologists.

L.M-G.: How did you reach your audience and what kind of audience did you get?

Brindle: Announcements were placed in various scientific journals, society newsletters, and industry magazines – any source we felt would reach and attract the working geologist. As I stated before, of the 500 people who came out, 400 were industry people and consultants – a very good turnout in terms of the audience we did, in fact, want to attract.

L.M-G.: What kind of image of the ISPG do you think these people went away with?

Brindle: I think that many downtown geologists had the image of mission-oriented science. What the Open House served to do was to show the usefulness of the scientific effort, that is, how the basic science is fed upward through very applied projects, like oil, gas, and coal occurrences for example.

L.M-G.: Would you say that, through the vehicle of an Open House event, the ISPG has gone from lacking visibility to projecting a fairly honest account of its role and work within the GSC?

Brindle: Yes, I would. I think that if people did have an image previously of ivory tower researchers sitting at their microscopes, in a long, low building in northwest Calgary, that the Open House corrected this. Many senior executives and consultants had very positive things to say about it. In the 70 questionnaires that came back surveying the response of guests, only two contained unfavourable comments, and one of those was a complaint that there was simply too much information to take in.

L.M-G.: How is the ISPG perceived to be fitting into the changing political and economic environment?

Brindle: In a whole range of ways. First of all, we have better liaison with the provinces than we ever had before. We have it on two levels, between the ISPG and the provinces directly, and at the individual science research level. There is more of a liaison with industry than ever before.

L.M-G.: What, in your opinion, did the Open House achieve?

Brindle: It certainly opened up lines of communication, both internally and externally. Many scientists responded very well to the interest shown by outside geologists. Many finished up hoarse at the end of each of the two days. Crowds would gather in pockets around displays and discussions were anything but superficial. A spinoff result of creating this geological environment of display materials is that, months after the event, staff and visitors still gather around displays of interest and discuss the geology represented there. The Open House has served as a stimulus to all of us. Even



ISPG staff and visitors listening with rapt attention to an introductory talk in the board room at Open House 82.

with our faltering first attempt (even so, 400 people from industry came out), we demonstrated to visitors that the ISPG's work is of value to them. That is even more interesting when we consider that those 400 people represent a high percentage of those who even heard about the event.

L.M-G.: Now that you have the attention of industry geologists, how do you plan to maintain their interest in ISPG?

Brindle: Because such an information exchange is perceived by working geologists in Calgary as both useful and important, we should plan to stage open houses at least once every three years. Visiting geologists reiterated that they want us to communicate about our research as significant milestones are reached. I think that once every three years would assure continued interest in our research. Of course, much can be improved on in terms of the presentation. For example, in future, instead of having a display in the Board Room of what we do in general, next time I would put that somewhere else.

We should use the Board Room for very short talks, say on 20 topical subjects over the two day period. A published schedule would then be made available to visitors. Anything to increase dialogue would be useful, because feedback from guests indicated that this kind of presentation was lacking in the format we did use.

L.M-G.: I understand from our Publications officer, Dale Cormier, that sales of our publications went up 20 per cent in the months following the Open House. Do you think that downtown geologists are more aware of ISPG's research because of this open house event?

Brindle: The Open House meant a great deal of work and time for a lot of people, but statistics like that show that if our lines of communication are opened up we can expect more awareness and interest from industry geologists and students in our research and publications.

Who are these people? They work in Ottawa. They work just south of Logan Hall. They are the EPISODES SECRETARIAT. Under the direction of A.R. Berger they are responsible for the production and marketing of EPISODES,

the quarterly newsmagazine of the International Union of Geological Sciences, and of other IUGS publications. About half the cost of operating the secretariat is covered by the GSC as part of its contribution to international geoscience.



Left to right: Jean Jenness, Jeanne Spencer, Pat Revell, Tony Berger (editor), Barbara Collis.

LOGAN MEDAL AWARDED TO J.O. WHEELER

Dr. J.O. Wheeler of the Geological Survey of Canada was awarded the Logan Medal of the Geological Association of Canada on May 13 in Victoria, B.C. This medal is the highest award of the GAC, for outstanding contributions to geosciences in Canada. Dr. Wheeler is well known as an outstanding Cordilleran geologist, and served the GSC as Chief Geologist between 1973 and 1979. His family has a remarkable record of public service; best known perhaps are: John Macoun, J.O.'s great-grandfather, Head of the GSC's Biological Division 1910-1913; A.O. Wheeler, J.O.'s grandfather, Dominion Commissioner of the Great Divide Survey, and one of the founders of the Alpine Club of Canada; and Sir E.O. Wheeler, J.O.'s father, Surveyor-General of India.

The Geological Wives' Association is offering this year an award of \$200 to a son or daughter of an employee of the Geological Survey of Canada, who is preparing to enter university or college in September for the first year. Application forms will be available after May 1st at Survey offices in Ottawa, Calgary, Vancouver and Dartmouth. They must be completed and in the mail by September 1st addressed to the Chairman of the Awards Committee, Mrs. R. Price, 1 Inuvik Cr., Kanata, Ontario, K2L 1O1.

A POLITE WAY OF SAYING "NO THANKS"

From a Chinese publisher rejecting a manuscript from a British author, "We have read your manuscript with boundless delight. If we were to publish your paper it would be impossible for us to publish any work of a lower standard. And as it is unthinkable that, in the next thousand years, we shall see its equal, we are, to our regret, compelled to return your divine composition, and beg you a thousand times to overlook our short sight and timidity". (World Development via Episodes).

ARCTIC RIVER NAMED IN HONOUR OF EMR EMPLOYEE

The Secretariat for Geographic Names announced in February that a north-flowing river close to Cape Clarence, Somerset Island, has been named Halpern River honoring the late Sid Halpern for many years a valued employee of TFSS (The Equipment Depot). Sid was an integral part of the work of most field officers whose unfailing good humour, valued advice and continuing interest in the work of the GSC and other EMR branches will be long remembered.

CONGRATULATIONS

The 1983 National Technical Publications and Graphic Arts Competition, sponsored by the Society for Technical Communication, Eastern Ontario Chapter, bestowed awards for 18 categories of publications. We are proud that several authors from EMR won awards for their articles. Those from GSC are:

Periodical articles

Where the river meets the sea (studies of the Fraser Delta) by John J. Clague and John L. Luternauer (Terrain Sciences Division and Cordilleran Geology Division)

Les satellites à la rescousse de la cartographie by Robert Bélanger (Terrain Sciences Division)

Offshore Eastern Canada by C. Keen (Atlantic Geoscience Centre)

Publication Graphics:

Routes travelled by early expeditions in the Canadian Arctic by R.L. Christie and M. Toy (ISPG and GEOS).

All these articles appeared in the EMR publication GEOS. Congratulations.

Guess Who!



For the answer see page 16.

The GSC-Ottawa Golf Tournament, as has been tradition, was held on one of the nicest afternoons this spring. With a sunny high of 20°C and a light breeze to keep the black flies and mosquitoes away, 60 "golfers" enjoyed themselves on the somewhat water logged Manderley Golf Course. Some managed a little more practice on the course than others, for instance S. Burke who received the "most honest golfer" prize with a tournament high of 169. Other trophy winners were: Ken Ford for low gross (80); Michel Sigouin for low net (69); Jocelyn Watson low gross for ladies (135); and Bernie Mainville who received the Gerry Charlebois Trophy as the 2nd lowest net (71). Once again all the participants were most appreciative of the efforts of organizing committee of Marcel St. Pierre, Richard Potvin, Norm Grenier and Jocelyn Watson and to Louise Thompson, Irv Salter and Wilf Lacroix who contributed their time.



Left to right: Michel Sigouin, Bernie Mainville, Carmen Gougeon (alias Miss Whiff), and Ken Ford.

Tricycle Gang

After a month of working out of separate field camps, scientists from Terrain Sciences Division involved in the Quaternary mapping of western Victoria Island gathered in Holman to compare notes and share helicopter logistics. The TS Tricycle Gang includes (from left to right): Doug Hodgson, Mark Nixon, Bob Kovacs (engineer), Sylvia Edlund, Dave Sharpe, Jan Bednarski, Jean-Serge Vincent, and Roger Frost (helicopter pilot).



GEOTIMES ADVISORY COMMITTEE VISITS GSC

Last spring the Geotimes- Earth Science Advisory Committee, which was meeting in Ottawa, visited GID's Editorial Office and the Word Processing Centre for a first hand look at the GSC publication production facilities.

Left to Right: Maureen Dickson Czerneda, GAC; Rex Buchanan, Kansas Geological Survey; Lisa Rossbacher, Whittier College California; Jack Green, USGS; Wendell Cochrane, Goetimes; and Vera Lafferty (Chairperson), Earth Sciences Sector, EMR.

ANSWER: John Fyles working in British Columbia in the early forties.

Many thanks to those who contributed to this issue of **Geogram**.

Material for the next issue of **Geogram** should be sent via your Division Office to GID

Les articles pour la prochaine parution de **Geogram** devront-êtré dirigés au secrétariat de votre division et de là acheminés à la Division de l'information géologique.

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