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This ship, the JOIDES RESOLUTION (also known as SEDCO/BP 471) was built in Halifax, Nova Scotia, in 1978, and is among the top worldwide dynamically positioned drillships. It will be used in the International Ocean Drilling Program which Canada has joined (see article inside). The ship, with a displacement of 16 596 long tons, has a crew of 52 and can accommodate up to 50 scientists.

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an informal branch newsletter

Energy, Mines and Resources Canada
Énergie, Mines et Ressources Canada
Canada

FROM THE CO-ORDINATOR, GEOLOGY OF CANADA - 6th EDITION

Work is well underway on the new edition of the Geology of Canada. In fact, manuscripts of two of the volumes (Quaternary and Atlantic Margin) are to be submitted shortly. The organization and content of the 6th edition differs in many ways, however, from previous editions prepared entirely by staff of the GSC.

This edition is a multivolume work comprising six regional volumes and three national, topical ones. It involves more than 230 authors and contributors, of which nearly half are from at least 60 institutions outside the Survey. The nine volumes of the 6th edition, in addition to being the Geological Survey's periodic review of the geology of Canada, are also Canada's contribution to the Geological Society of America's Centennial Project — The Decade of North American Geology (DNAG) — which culminates in 1988, the centennial year. This project, which will result in at least 27 volumes, will be the first comprehensive synthesis of the geology of North America. Canada has the special additional responsibility of incorporating the geology of Greenland into the relevant volumes. This is being done with co-operation of the Geological Survey of Greenland.

Thematic maps of North America at 1:5 million scale are being prepared to display the geology, tectonics, magnetic anomalies, gravity, seismicity, geothermal anomalies, crustal stress, and neotectonics. Canadian maps at 1:5 million are being prepared of surficial materials and of mineral deposits. The regional volumes will include various additional larger scale maps to display physiographic subdivisions, metamorphic facies, times of deformation, plutonic rocks, and tectonic assemblages.

The volumes will be about 400 pages long, quarto size, between hard covers with provision for up to 10 pocket items such as maps, structure sections, and correlation charts. The front cover will carry an appropriate photograph or engraving. The text will include numerous half-tone plates and a few in colour. By judicious use of two colours — black and red — for the text and line drawings we hope to produce informative, readable and attractive volumes without being extravagant.

Outlines of the content of the regional and Quaternary volumes appeared in the GSA DNAG Special Publication 1 "Perspectives in Regional Geological Synthesis". From this exciting volume it is clear that one of the major differences with the last edition of the Geology of Canada, published in 1970, is that the geological evolution of Canada is now being presented within a plate tectonic framework. Moreover, the subsidiary concept of "terrane tectonics", in which large fragments of orogens are believed to have originated elsewhere before being accreted to the continent, has further reshaped the way in which the Canadian geology is now interpreted.

The last edition was largely descriptive, recording the geology at the time of the near completion of the reconnaissance mapping of Canada. The new edition, however, will reflect our increased knowledge in light of completion of the geological reconnaissance, substantial revision mapping, increased geophysical coverage, notably availability of extensive regional magnetic anomaly and gravity maps, and of an improved understanding of geological relationships previously poorly known. Much of this improvement results from many advances over the last 20 years such as: better dating of geological formations from a variety of recently applied micropaleontological, palynological and radiometric methods; new information from paleomagnetic studies and from the provinciality of faunas indicating large horizontal displacements; geobarometric, geothermometric and fission track techniques that reveal significant vertical movements; as well as numerous stratigraphic studies that yield new insights into the geological and tectonic environments of deposition. Accordingly, this edition will include an expanded treatment of the processes by which rocks and unconsolidated sediments were deposited and emplaced. Considerable attention will also be paid to the interpretation of geophysical and geochemical data and to the linking of mineral and fossil fuel deposits with the treatment of the regional geology.

A few highlights in the volumes that we can look forward to are given below in the order in which the volumes will appear (volume leaders in brackets).

Quaternary of Canada (R.J. Fulton)
New insights have been obtained into the probable limits of the last glaciation. The volume will provide the first major regional synthesis of the Quaternary record in the Northern Plains, Arctic Islands and the Canadian Shield in Quebec and Labrador. Chapters are devoted to Quaternary paleoenvironments, processes and terrain geochemistry and a section deals with Quaternary geology and man.

Atlantic Margin: Canada (M.J. Keen and G.L. Williams)
Barely four pages were devoted to this region in the last edition. Since then considerable petroleum exploration has taken place and now it is possible to provide a synthesis of the offshore basins revealing new insights into Mesozoic and later paleo-oceanography, depositional processes, crustal geodynamic modelling, and oil and gas distribution.

Appalachian Orogen in Canada and Greenland (H. Williams)
A comprehensive and integrated synthesis of the orogen features the late Proterozoic and early Paleozoic rifting of the North American continent and opening of the Iapetus Ocean, followed by the successive outward accretion of suspect terranes associated with the major periods of orogeny. The volume will be accompanied by an array of thematic maps.

This document was produced by scanning the original publication.

Ce document est le produit d'une numérisation par balayage de la publication originale.

Innuitian Orogen and Arctic Platform
(H.P. Trettin)
This volume will highlight the record of an amalgamated terrane, now forming northern Ellesmere Island, that accreted to North America in the mid-Paleozoic at the time of latest Silurian to mid-Devonian deformation. The Late Devonian - Early Mississippian Ellesmerian Orogeny was but the last gasp of the event and affected only the miogeocline.

Cordilleran Orogen (H. Gabrielse and C.J. Yorath)
The Cordillera, as the home of "terrane tectonics", will feature the record of accretion. Emphasis will also be placed on a critical review of the Proterozoic and Paleozoic rifted and passive margins noting the connections of the former with the Coppermine area of the Canadian Shield. The important role of Mesozoic and Cenozoic dextral transcurrent faulting will also be highlighted.

Sedimentary Cover of the Craton: Canada
(D.F. Stott and J.D. Aitken)
New insights into the Devonian history distinguish subsiding basins which received sediment from those that were starved or lay between constructional features such as reefs. The volume will note that the pre-separation histories of the rift episodes of the western continental passive margin are too long when compared with the modern Atlantic margin.

Precambrian Shield: Canada and Greenland
(P.F. Hoffman, K.D. Card and A. Davidson)
A dramatically different history of the Shield that emphasizes the mobility of its constituent terranes will be presented. It will reveal the fragmentation of the Archean cratons in the Early Proterozoic, their reassembly between 1.8 and 1.9 Ga accompanied by convergent tectonism of the intervening Lower Proterozoic successions, and finally will illustrate the imbrication and crustal thickening at about 1.1 Ga resulting from the collision of the Grenville Province. The volume will be accompanied by geological and tectonic maps of the Shield prepared with the aid of the new regional magnetic anomaly compilation maps produced by the Geological Survey of Canada.

Mineral Resources of Canada (R.I. Thorpe)
Following an introduction to the Canadian mineral economy and classification of mineral deposit types, this volume will present descriptions of major deposits and many mining districts, most particularly of the Precambrian Shield. This will be followed by a section on the metallogeny of Canadian mineral deposits by region and in time and space. A final chapter will identify and discuss areas of high mineral potential.

Geology of Canada: Summary (J.O. Wheeler)
Drawing on the preceding volumes, a summary of the geology of Canada will highlight the main aspects of the geological evolution and the linkages in time and space between geological provinces. It will relate the geological framework and history of the distribution of resources and the development of the present landscape. Hopefully it will serve as a basis for a layman's text on the geology of Canada.

We are fortunate to have an abundance of talent involved, including highly regarded expert and generalist external reviewers, and leadership by proven synthesizers. Accordingly, I have every confidence that the new Geology of Canada series will be the best yet and will result in readable, informative and well integrated syntheses of which the geological community in Canada will be proud.

J.O. Wheeler

Geological Survey party in winter camp, head of Peribonka River, 1884.

Équipe de la Commission géologique au camp d'hiver, à la source de la rivière Péribonca. 1884.

STAFF NEWS

INSTITUTE OF SEDIMENTARY AND PETROLEUM GEOLOGY

Librarian Bob Morgan assumed his duties at the library in December 1984. Bob served as librarian for the departments of Agriculture and Parks before joining the ISPG.

On 7 June 1985, Joanna MacGillivray became the Assistant Scientific Editor at ISPG. Jo received her degree in Geology from Dalhousie University. Since then, she has spent three years working as a research assistant, two years as the editor for the Nova Scotia Department of Mines and Energy, and the past three years in Calgary doing contract editing for ISPG and other companies.

Lynn Machan-Gorham, Editorial Assistant, commenced maternity leave in March 1985. Elspeth Snow of the Regional Geology Subdivision was seconded to replace her during this five month period.

In March 1985, storesman Blair Davies resigned from his STS-03 position to accept employment with a Calgary-based company. Danielle Beauregard returned to her word processor in December 1984 following an absence of 15 months. Denise Gonier resigned from her term accounting position in May 1985.

Dave Gibson has recently been designated Acting Head of the Coal Geology Subdivision.

Recently Barry Richards was promoted to Research Scientist 2. Barry received his doctorate in geology from the University of Kansas in 1983. His thesis explored the uppermost Devonian and lower Carboniferous stratigraphy, sedimentology, and processes of diagenesis in southwestern District of Mackenzie and southeastern Yukon. He is currently engaged in studies on Carboniferous depositional environments, stratigraphy, and tectonism. Barry is also researching the taxonomy, biostratigraphy, paleoecology, and paleogeographical distribution of fossil crabs of Eocene and Oligocene age found in the western coastal regions of the U.S.A. and Canada.

Petroleum Resources geophysicist Randell Stephenson graduated with a doctoral degree in geology from Dalhousie University in 1981. After two years as a Post Doctoral Fellow at the Research School of Earth Science at the Australian National University, studying the state of stress on the Australian lithosphere, Randell joined the ISPG in November 1983. This ISPG research scientist continues to investigate mechanical and thermal structures of the continental crust in relation to the evolution of sedimentary basins.

Jim Aitken was promoted in April 1985 to a Research Scientist 4 position. Allan Higgins became Head of the Paleontology Subdivision in October of 1984 and Dave McNeil assumed Higgins' former position as Head of the Micropaleontology Section in November 1984. Grant Smith was appointed Head of the Resource Evaluation Section of the Coal Geology Subdivision, replacing Dave Hughes, who is currently devoting his energies to research on resource evaluation methodologies.

In December 1984, Leon Price ended a 35 year career as a Survey geologist. Leon joined the public service as a geologist in June 1949, after graduating from the University of Manitoba with a B.Sc. Working with industry and provincial governments, he undertook numerous studies of Canadian potash deposits, some of which have appeared as GSC open file reports in recent months. Leon was honoured for his many years of service during a retirement luncheon held just before Christmas 1984. He was presented with a Skill saw, which he will put to good use building a house in B.C. He currently resides in Barriere, B.C. with his family.

Milt Fuglem, a scientist in the Petroleum Geology Subdivision, retired in June 1985 after 18 years with the Public Service. This included military service during the Second World War and several years with the Department of Indian and Northern Affairs before transferring to ISPG in 1978. He became a leading authority on well-log correlation in Western Canada, and his services as a consultant are already being requested — so much for taking it easy! Milt has been a keen member of the ISPG Hockey League for several years and earned the nickname "the Hammer", thanks to his great body checks! Milt was honoured at a luncheon and at a retirement tea in the ISPG boardroom where he was presented with a watch, a congratulatory letter on his retirement signed by Prime Minister Mulroney, and a special award from the ISPG Hockey League — his trusty hockey stick complete with tape, mounted on a plaque with the words "THE HAMMER" inscribed.

Lynn Machan-Gorham and Elspeth Snow

GEOLOGICAL INFORMATION DIVISION

John Glynn joined the Data Systems Section in April as a Systems Consultant. His first major project is to investigate automated cartography. John has a B.Sc. and an M.Sc. in mathematics from Carleton University. Before joining the GSC, he was employed by the National Hydrology Research Institute of Environment Canada, where he served as a system analyst.

Art King is now a member of the Quality Control Unit, having been the successful candidate in a competition to fill the vacancy created by the retirement of Guy Lavigne last year.

Louis Renaud was the successful candidate for the Sub-unit Supervisor competition to fill the vacancy in 'B' Unit.

John Kempt, our Chief Photographer, retired in June after 29 years of service with the Branch.

PRECAMBRIAN GEOLOGY DIVISION

Allan Martineau has jointed the Geochronology Laboratory as a chemical technologist in Rb-Sr and Sm-Nd analysis. Prior to coming to GSC, Allan worked for four years in CANMET's research laboratories at Bells Corners.

After spending a year with the Division, Dennis Woods (on leave from Queen's University) left to participate in the National Science Foundation-funded Project EMSLAB, "Electromagnetic Sounding of the Lithosphere and Asthenosphere Beneath" the Juan de Fuca Ridge. He will be based in Seattle from July to December, after which time he will return to teaching at Queen's for one more term.

In April, Shin-ichi Yoshikura arrived from Japan to begin a six-month visit to the Division. Dr. Yoshikura is associate professor at Kochi University on the island of Shikoku. He studied at Shiga and Osaka City universities and specializes in the petrology of high-grade metamorphic rocks and of siliceous volcanic and plutonic rocks in the Kurosegawa tectonic zone of Kyushu, Shikoku and Honshu islands. He is particularly interested in examining granitic and felsic volcanic rocks of the Superior Province in the Abitibi belt and around Wawa, Ontario.

Shin-ichi Yoshikura

ECONOMIC GEOLOGY AND MINERALOGY DIVISION

François Robert joined the Regional Metallogeny Section of the division in January 1985. François completed his Ph.D. thesis, a detailed structural and petrological investigation of the Sigma Mine at Val D'Or, Quebec, at École Polytechnique. This resulted in an excellent definition of the geological controls of this important deposit. He spent one year at the University of Michigan as a post-doctorate fellow, studying the composition of fluid inclusions at Sigma. Since joining us, he has become a very active member of EG&M's gold working group, and recently organized a field excursion for group members to northern Quebec and Ontario. He has initiated a project to investigate the metallogeny of Eastern Canada, and is beginning his work in the Val D'Or and central Grenville Province areas this summer.

François Robert

Dogan (doe-han) Paktunc has recently joined us as a Visiting Fellow for a year or more. He will be studying the St. Stephen intrusion and nickel deposits in New Brunswick. Dogan did his undergraduate and master's degrees in his native Turkey where he also worked in mineral exploration. After coming to Canada in 1979, he completed a doctoral study at University of Ottawa on ultramafic rocks of the Thompson Belt in Manitoba. In addition he has published on Turkish chromite deposits and on the geothermobarometry of the northwestern Superior Province. With his interests in mafic igneous rocks, related ore deposits, and microcomputers and a cheerful grin, he should find himself right at home in the division.

Steve Adcock joined GSC as a Visiting Fellow in June 1985, to work on a collaborative project with École Polytechnique, Montreal, for the continued development of FACT (Facility for the Analysis of Chemical Thermodynamics), and its interactive system for application to a variety of geological and geochemical problems.

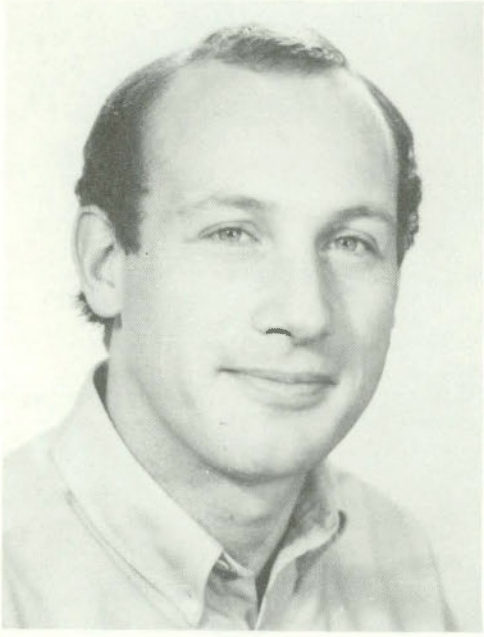
The FACT system is an on-line bilingual computing facility for thermodynamic calculations developed by C.W. Bale and A.D. Pelton, École Polytechnique, and W.T. Thomson, Royal Military College, specifically for chemical engineers and metallurgists. Distributed by NRC since early 1984 on their SDI system and currently available throughout North America via the DATAPAC network, it has been highly acclaimed for its "user-friendly" operating procedures, capabilities, efficiency and economy by a rapidly expanding clientele.

Steve's Visiting Fellowship term is sponsored jointly by EGM, Precambrian and RGG divisions. He will undertake expansion of the FACT data base to include substances and thermodynamic parameters of geological interest and introduce the algorithms and graphical representations specifically desired by geoscientists.

Dave Garson

TERRAIN SCIENCES DIVISION

Scott Dallimore joined the Geomorphic Processes and Engineering Geology Section in February to conduct studies of the geological/geotechnical conditions of the Beaufort Sea coastal zone, as part of the Northern Oil and Gas Action Program. Scott obtained a B.Sc. in geological engineering from Queen's University and has recently completed a Masters program in permafrost studies at Carleton University. Prior to his studies at Carleton, Scott was an engineering geologist with Thurber Consultants working on projects in northern and western Canada. He also spent 6 months in France acting as the project manager for a Canada-France research project studying pipelines and permafrost.



Scott Dallimore

Terrain Sciences Division said farewell to one employee and welcomed another to the Division Administration Office. Phyllis McLeish decided to take an early retirement effective March 22 after some $6\frac{1}{2}$ years with the Division. Her duties were assumed, effective June 3, by Barbara Sherman formerly with the Energy Sector of the Department. Good luck and good golfing to Phyllis and welcome to Barbara.

Pam Midgley, a "Mud Engineer", left the Drift Chemistry and Mineralogy Laboratory in February to pursue a career in personnel management. We wish Pam all the best in her new pursuit.

Sharon Smith comes to the Sedimentology and Mineral Tracing Section from Precambrian Geology Division to work on various administrative and geological aspects of Mineral Development Agreements in Eastern Quebec and the Maritimes. In the past she has worked for the GSC and AECL in District of Keewatin and southern Manitoba while completing a B.Sc. Honours in geology at Carleton University.

RESOURCE GEOPHYSICS AND GEOCHEMISTRY DIVISION

Barbara Ellis has also come to RGG from Geoterrex as a data inspector for Mineral Development Agreement aeromagnetic surveys. Barb has a B.A. (Honours) in Geography from the University of Ottawa, after spending two years at the University of Warsaw in Poland. She is an avid skier, tennis, squash and volleyball player — a great addition to the Regional Geophysics group and to the GSC volleyball league.

Barb Ellis

Sharon Smith

Rolf Schmitt joined the Resource Geochemistry Subdivision as a Mineral Agreement Survey geochemist for the duration of the Federal-Provincial Agreements. His initial assignments will include supervision of expanded regional lake and/or stream sediment sampling surveys. Additional responsibilities include orientation and detailed follow-up geochemical surveys such as the present study of gold distribution in lake sediments in central Saskatchewan.

Rolf obtained his B.Sc. in geology from the University of British Columbia in 1977 and is presently completing an M.Sc. in Resource Management, also from UBC.

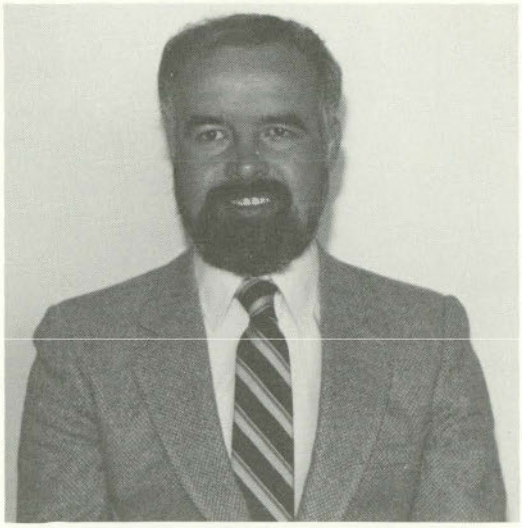
Rolf's past employment has included several years with Kidd Creek Mines (then Texasgulf Inc.) as an exploration geologist involved with porphyry copper, massive sulphide, epithermal gold-silver, and molybdenum-tungsten deposits in the Cordillera, and several years as a land-use geologist with the B.C. Ministry of Mines involved with regional mineral resource appraisals and regional geochemical surveys.

Rolf Schmitt

Good luck for the aeromagnetic surveys group of RGG — just when the Federal-Provincial Mineral Agreements was about to overload their aircraft, the geophysical industry in Ottawa suffered a number of employee layoffs, providing a pool of top notch aeromag experts. Joining the Regional Geophysics Subdivision are:

Donald Sarazin, an ex-Canadian Air Force and longtime airborne geophysical expert, joins Ed Ready at City Centre, coming from Terra Surveys-Geoterrex Ltd. Don will be compiling the mountains of data and flight lines from the contract surveys for MDA projects. Reputed to be the "best damn point-picker in the business" this native son from 'up the valley' will be a welcome addition to the group at City Centre.

Peter Stone not to be outdone by his colleagues at Geoterrex also joined the RGG aeromag contract section this March as a data inspector for the Mineral Development Agreement projects. After doing 16 years of hard labour at Geoterrex, Peter is relieved to finally get at least equal billing (and equal pay) with his two outstanding friends joining him at the GSC.



Peter Stone

Barbara Elliott has been brought on staff of the Resource Geochemistry Subdivision Mineral Development Agreements team to carry out data management work as a computer scientists. A mathematics graduate from Waterloo University, Barbara is no stranger to RGG, having worked with the Radiometrics Surveys group from 1971 to 1977. Since then Barbara has been busy raising a daughter and son who are now at school, allowing her to pursue her career (taming the CYBER) once again. Welcome back to RGG Barb!

Donald Sarazin

Robert Shives first worked for the Survey as a summer student in 1977, while attending Carleton University. After receiving a B.Sc. in geology in 1979, Rob ventured west to the Athabasca uranium camps and, later, to the gold belts of Saskatchewan, Manitoba and Ontario. He has returned to RGG to work primarily on the analysis of airborne gamma-ray spectrometric data under the Canada-New Brunswick Mineral Development Agreement.

George Palacky joined the Resource Geophysics Subdivision in March 1985 as a Research Scientist who will assess the feasibility of systematic airborne resistivity surveys in Canada and establish sites for testing electromagnetic (EM) instruments.

A native of Bohemia, he obtained a Ph.D. in geophysics at the University of Toronto in 1972. He has been active in EM research since his student days and is well known for his contributions to quantitative interpretation of INPUT airborne EM data. In Brazil, where he spent five years (1974-78), he did pioneering work on the effect of tropical weathering on resistivity and EM measurements. Results of his investigations in Brazil and West Africa encouraged him to promote the use of airborne EM systems in geological mapping. Before joining GSC he was Chief Geophysicist of Billiton International Metals (metals subsidiary of Royal Dutch/Shell) in the Hague. During his career with Billiton and other companies he participated in mineral exploration programs in various parts of the world.

From 1980 to 1984 George was Associate Editor of Geophysical Prospecting (for Electrical Methods) and presently is Associate Editor of Geophysics (for International Scientific Advances).

George Palacky

Robert William Boyle completed the first part of his career on May 31st, when he retired from the GSC after 38 years of productive service. Many of us are familiar with Bob's work over the last few years, highlighted by major publications on the geology and geochemistry of gold and silver deposits. However, we know less about his early work at the GSC and the prior events that shaped his career.

Bob was born on a farm near Wallaceburg, Ontario, in 1920. After attending school there he was bitten by the prospecting bug and spent two summers in Northern Ontario, no doubt hoping to find an Eldorado. However, this was a time of fast moving events in the world and in the fall of 1939 he volunteered to join the Royal Canadian Artillery. Soon afterwards he was shipped to England with his regiment to defend that country against the Axis powers. He served with distinction overseas and culminated his service by taking part in the liberation of Holland. For this the people of Holland confered the freedom of the country on Bob.

On returning to Canada, Bob enrolled at the University of Toronto, obtaining a Bachelor of Applied Science degree in 1949, an M.Sc. in 1950 and a PhD in 1953. The latter period included a return to Europe under different circumstances for finishing and polishing at the Sorbonne. The summers from 1948 to 1952 were spent in the NWT with GSC field parties and it was on the Yellowknife gold deposits that he carried out his doctoral studies. He joined the permanent staff of the GSC in 1952 and soon found out that the organization was not entirely sympathetic to those that requested more than a hammer, canoe and tent. The $10 for chemicals to be used for field tests was parted with reluctantly. Unfortunately, the results of this experiment were negative, but with characteristic persistence he tried again in the Yukon during the following summer. Here the results met with great success and marked one of the pioneer applications of geochemical methods to mineral exploration in northern terrane. Since then neither Bob nor the GSC has ceased to advance the use of geochemistry in the study of, and exploration of, mineral deposits. In 1957 the Geochemistry Section was organized under his leadership and it rapidly became one of the world's centres of excellence in applied geochemistry. In 1967 he turned the job of Chief Geochemist over to Eion Cameron and "returned to the bench", which in reality he had never left.

His professional record includes 130 publications, many of them major works, and election, in 1957, to fellowship of the Royal Society of Canada. He was a two-time winner of the Barlow Medal of the CIM, a winner of the Miller Medal of the Royal Society and the Public Service of Canada Merit Award. He organized the first International Geochemical Exploration Symposium in Ottawa in 1966, which led to the founding of the Association of Exploration Geochemists, that now has its membership in 80 countries. In addition he has served on the executive of many societies and has been in demand all over the world as a consultant and lecturer.

R.W. Boyle

Beside all of these formal activities, Bob liked nothing more than sitting around a camp fire with a group of students "educating" them in science, religion, politics, sex, war and finance, in no particular order and with no topic less well addressed than the others. Over the years Bob has been vitally interested in the success of his students and staff, whom he has treated with respect and a complete absence of bureaucratic formality. He is never dull, often controversial, invariably argumentative, religously conservative, and, above all, soundly innovative and inventive. Always keenly appreciative of a pretty face and a good party, Booth Street will be a little paler with Bob's absence. In particular, the Geochemistry group that he founded and its coffee club will be less lively and interesting.

For Bob, retirement will be more in name than deed. Although he swears that he will spend "a month or two" in the garden, he is updating his gold and silver monographs. Currently a vice-president of the International Association on the Genesis of Ore Deposits (IAGOD), Bob will become president after the 1986 meeting and a co-planner of the 1990 IAGOD meeting in Ottawa. We wish Bob and his wife Marguerite as fulfilling a retirement as was his formal career at the GSC.

Chris Durham
Ian Jonasson
Eion Cameron

# of GENERAL INTEREST

DON NORRIS RECEIVES R.J.W. DOUGLAS MEDAL

The Canadian Society of Petroleum Geologists presented Don Norris with the prestigious R.J.W. Douglas Memorial Medal on 20 February 1985. Don has devoted many years of study to the painstaking preparation of geological maps of Yukon and Albertan structures. He has also served as Head of the Coal Geology Subdivision until recently. At present, Don is dedicating his time to the completion of maps and reports on the Cordillera.

DON STOTT RECEIVES CSPG SPECIAL SERVICE AND TRACKS AWARDS

The second ISPG scientist to be honoured by the CSPG, Don Stott, was presented with the Society's Special Service Award (a framed print of an Arctic gyrfalcon by artist Robert Bateman) at the 1984 annual meeting in Calgary. This award was given in recognition of Don's contributions as Vice-President (1977) and President (1978) of the CSPG and as General Chairman of the Society's conference on the Mesozoic, a geological convention that brought together 1200 earth scientists in Calgary in 1983 to exchange research about middle North American Mesozoic geology. For his contributions as co-editor of the proceedings of that conference, a volume entitled "The Mesozoic of Middle North Amerca", Don was also presented with the Tracks Award at a January luncheon meeting of the CSPG.

RAY PRICE AWARDED THE GACs LOGAN MEDAL

The Geological Association of Canada's Logan Medal is awarded in recognition of outstanding contributions to the earth sciences in Canada. In 1985 the award was made to Ray Price at the Association's Annual Meeting in Fredericton in May.

The citation that accompanied the award noted that the recipient "has made a deep and lasting mark on Canadian geology and has served the Canadian earth-science community in diverse ways with laudable distinction". It was pointed out that although the name of Ray Price is immediately linked to the regional geology of the southern Canadian Rocky Mountains this "should not obscure a long-standing and more specific concern for the fabric of deformed rocks and the mechanics of thrust faulting, nor an equally long-standing concern for the tectonic evolution of the backbone of North America". Ray's appreciation of the value of geological maps in conveying information was commented on as well as his extensive publication record and his role as teacher not only in the classroom but also in the field. Ray Price joins a distinguished company — the Logan Medallists — not a few of whom have close associations with the organization founded by the geologist for whom the medal is named.

CANADA JOINS INTERNATIONAL OCEAN DRILLING PROGRAM

Canada recently agreed to join the international ocean drilling program and both DFO and DEMR resources will support the membership. Because BIO geologists will be involved in the program later this year, Mike Keen of AGC recently visited the ship which will carry the program at sea; it is the JOIDES RESOLUTION, also known as SEDCO/BP 471.

The drillship is 470 feet long and 70 feet wide, with a derrick rising 200 feet above the water-line. The ship is maintained over a specific location with a dynamic positioning system which is computer-controlled and is powered by 12 thrusters and two main shafts. The vessel can drill in water depths up to 27 000 feet, and can deploy up to 30 000 feet of drilling string. She carries the world's largest heave compensator to keep the drill string stable relative to the sea floor.

The scientific research centre is a laboratory complex seven decks high. It is better-found than most university, or indeed government, shore-based laboratories. The laboratories provide facilities for on-board studies of cores: core-receiving; physical properties; paleomagnetism; core splitting; photo station; paleontology preparation; paleontology; scanning electron microscopy; thin section; petrology; X-ray; computers, with terminals scattered round the laboratories, connected centrally to two VAX-780s; electronic shop; photo darkroom; photo finishing room; refrigerated core-storage; cold storage; second-look storage; down-hole measurements; and under-way geophysical measurements.

The vessel has many special capabilities, of which two will serve as examples:

> Re-entry: Deep holes often require several changes of drill bits, and scientists may want to return to a hole after it has been drilled. A re-entry cone can be set on the sea floor and the drill-string guided back into the hole with passive reflectors and active scanning sonar.
>
> Chemistry laboratory: This laboratory illustrates the way the labs are equipped. Gas samples are analyzed in a gas chromatograph. Sediment samples from cores are dried by freeze drying and weighed in a gimballed table balance; they are then run through a CHN analyzer, and a "rock eval" for hydrocarbons. Pore waters are extracted by squeezing and analyzed with an ion chromatograph and with titrators. Carbonate analyses are made with carbonate bombs or with a coulometer.

The present international members of the program are: USA, France, Federal Republic of Germany, Canada, Japan (from October 1985). The UK is not a member but may join in the next few months. The European Science Foundation has the funds for half a membership, but no partner with whom to dance. Discussions continue with Australia and there is a possibility that discussions will be held with the USSR.

WORKSHOP ON GLACIAL SEDIMENTATION AND LANDFORM GENESIS, TERRAIN SCIENCES DIVISION

A workshop on Glacial Sedimentation and Landform Genesis was held by Terrain Sciences Division, April 10 and 11, 1985, as an in-house training program. The workshop consisted of a series of four presentations by J. Shaw, Queen's University, and seven supplementary presentations by staff of Terrain Sciences Division.

Shaw, as an invited guest lecturer covered:

1. Glaciology, glacial erosion, and glacial transport: several glaciological features significant to sedimentology were emphasized (thermal regime, glacier flow, debris entrainment, abrasion, and the role of meltwater).

2. Glacial deposits, glaciogenic mass movement deposits and aqueous deposits (including lodgment tills, melt-out till, debris flow deposits, and fan deposits).

3. Glacial sediment/landform assemblages: landform and sediment studies were combined and related to distinctive subenvironments of the glacial landscape. Other topics included a possible meltwater origin of drumlins; other sediment/landform assemblages, for example hummocky moraine; and the association of till plains, eskers, and ribbed (rogen) moraine.

The lectures emphasized the approach of trying to answer two questions:

(1) What are the properties that we observe in glacial sediments?
(2) What are the processes that might produce glacial deposits and landforms?

This type of analysis may seem to be straightforward enough but the workshop produced an amazing diversity of opinions on the precise utility of this approach. This diversity of opinion however, helped focus on the important issue of putting site specific sedimentological studies within a regional context to achieve the most effective results.

For example, the workshop drew attention to a dilemma of ice ages. Where are the deposits that relate to wastage and meltwater discharge of the ice sheets? One must assess the details of the sediment record in the context of regional studies and a regional interpretation to properly answer this question. A specific example might consider: are sediments within terminal moraines related to large drainage events?

The workshop on glacial sediments was the first in a series of workshops on the sedimentology of Quaternary deposits. Other workshops to follow, if possible, at four to five month intervals include: littoral environments (B. McCann), fluvial environments (M. Church), glaciomarine and glaciolacustrine environments (R. Gilbert), and glaciofluvial environments (B. Rust).

D.R. Sharpe

KARAKORUM GEOLOGY

The field season got off to an early start on April 30 with the departure of Paul Hoffman, Marc St-Onge and Rein Tirrul to join a British expedition to the Karakorum range of northern Pakistan. The purpose of the expedition is to traverse the crystalline core of the India-Asia collision zone, which has a relief of 4000 m and includes the world's second highest mountain, K2. Paul and Marc returned to Ottawa in late May, while Rein stayed on for further work. We hope to have a full report from survivors in the next issue of GEOGRAM.

PRECAMBRIAN HIGH

During the winter, John Percival organized, along with Terry Gordon, the Friday afternoon "Precambrian High" lecture series and also served as Secretary of the Logan Club (chaired by Bob Grasty of RGG). Bob Hildebrand will be running next season's "Precambrian High".

Thomas Frisch

Jean-Louis Bouvier, senior technician in the Analytical Chemistry Section, Economic Geology and Mineralogy Division, receiving a Suggestion Award from the Director General, R.A. Price. The award was for modifying a transfer pipette for use with hydrofluoric acid.

Jean François Dallaire of Laval University died August 27 as a result of burns he received in a tragic helicopter accident that took place near Ivujivik, New Quebec. He was 24 years old and employed as a student assistant on one of our field parties. His death cuts short a career of exceptional promise for he was a person who was rich in talent and charged with energy. Given a normal life span one might have expected a very abundant return from Jean François in contributions to the science and to society. He was an ideal student assistant: as a geologist he was an exceptionally keen observer and had a quick analytical mind; as a field worker he had the prowess of an athlete — which he was — and an immense stock of practical knowledge; and as a companion he was warm, generous, and urbain. He had a marvellous talent for making friends. It is characteristic that our principal ambassador to the villages of Akulivik and Ivujivik during the respective periods that we were camped close to these settlements was Jean François and through him we obtained much help from the local people.

It is with great sympathy for his parents, M. and Mme Louis Dallaire, and brother and sister, of Charlesbourg, Québec that we acknowledge the loss of this extraordinary young geologist. He was by his nature so full of life that it is hard to believe that he could be deprived of it.

W.R.A. Baragar
4 September 1985

C'est avec le coeur serré que nous avons appris le décès de M. Jean-François Dallaire lors d'un accident d'hélicoptère survenu près d'Ivujivik au Nouveau-Québec. Ce jeune homme était âgé de 24 ans et membre, comme étudiant géologue, d'une équipe de travaux de terrain. Sa mort met fin abruptement à une éventuelle carrière qui s'avérait, pour lui, probablement exceptionnelle, étant donné sa riche personnalité et son énergie débordante. Il est malheureux que la mort l'ait fauché aussi jeune, il avait le potentiel d'apporter une contribution marquée à la science et à la société. Il était un adjoint hors de pair sur le terrain; comme étudiant géologue, il était doué d'un sens de l'observation aigu doublé d'aptitude physique véritablement athlétique et avait un sens pratique très développé; aussi d'un naturel poli et généreux, il fut, de ce fait, un compagnon de terrain attachant. Ces qualités dominantes qui émanaient de sa personnalité furent qu'il fût notre principal ambassadeur auprès des villages d'Akulivik et d'Ivujivik lorsque nous étions installés en campement près d'eux. Grâce à son intervention, nous avons pu obtenir une collaboration appréciée de ces gens.

Nous offrons, dans ces circonstances pénibles, nos plus vives condoléances à ses parents, monsieur et madame Dallaire, à son frère et à sa soeur, tous résidants de Charlesbourg près de Québec. Il était jeune, plein de vie, prometteur, dès lors, il est difficile d'accepter qu'il pût disparaître d'une façon aussi soudaine — Dieu seul connaît notre destin.

W.R.A. Baragar
le 4 septembre 1985

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.

Editor / *W.C. Morgan*

Editorial Advisors /

R.G. Blackadar *M.J. Copeland*
P.J. Griffin *D.A. Busby*

Layout / *S. Fowler*

Word Processing / *J. Caron*

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