



ALUMNI NEWSLETTER Number 5 (2002)

Message from the Head

Dear Alumni and Friends:

The strength of any organization is based on the talents and energy of its personnel. EOS is home to some of the best Earth scientists in the country, as you will see from our lists of distinguished awardees (pages 2 and 3). Faculty members and graduate students working on all aspects of the solid and environmental earth sciences have been lauded by national and international associations as well as being awarded major grants to study the Earth's structure, surface environment and resources. But what sets the past year apart, and perhaps makes it a pivotal year in the history of the Department, is the number of new faculty who have been recruited. Dominique Weis (isotope geochemistry), James Scoates (economic geology) and Philippe Tortell (carbon cycle) joined us at the beginning of 2002. Even newer appointments include Stuart Sutherland (instructor), Claudio DiBacco (biological oceanography: environmental influences on larval distribution), Evgeny Pakhomov (fisheries chair- ocean resources), Liz Hearn (geophysics; plate boundary interactions), Felix Herrmann (seismic wave propagation and applied geophysics), and Erik Eberhardt (geological engineering: slope and excavation stability). In addition we are competing for as many as three Canada Research Chairs. By the time I write next year's message, all the details will be known and we will include profiles of these new people and an outline of their research interests. Even though these researchers have diverse backgrounds, one feature that attracted many of them to EOS was the Pacific Centre for Isotopic and Geochemical Research. As I write, we are in the process of taking delivery and installing 5 new mass spectrometers that will make EOS a world leader in the application of stable and radiogenic isotopes to the study of earth processes. Towards the end of the year we plan to have a grand opening and I hope that many of you will be able to join us to see this facility and some of the other new research facilities we are developing (photograph on this page).

To foster excellence in teaching we have instituted Departmental awards to recognize and encourage outstanding instructors (p. 2). We continue to compete for awards at the Faculty level and this year was a first in that EOS received Killam awards for both undergraduate (Kurt Grimm) and graduate teaching (Lori Kennedy). Curriculum reform is ongoing and this year was the first time that all our new first year courses were offered. The impressive increase in first year enrolment is tabulated on p. 4 and we expect next year's enrolment to be well over a thousand, a doubling since curriculum reform began.



The EOS Beowulf cluster computer that services our Geophysical Disaster and Computational Fluid Dynamics Center (L: Paul Smith; R: Henryk Modzelewski; photo by Roland Stull)

When you think back to your days at EOS or its forerunner departments, you probably recall the help you received from our technicians, computer personnel and administrative staff. To recognize their invaluable contributions we have instituted the EATS award (Excellence in Administration and Technical Support) that appropriately includes a gift certificate for one of Vancouver's better restaurants. The inaugural award went to Bryon Cranston, our senior technician (p. 2).

You can catch up with news of friends and colleagues on p.12. We are always pleased to hear from our alumni whether it be in the form of news, suggestions or questions. Better still, come pay us a visit the next time you are in the Point Grey area.

Paul L. Smith, Professor and Head
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Table of Contents

Awards	2
New People	3
MDRU	4
Student Affairs	5
Visitors	6
Profiles	8
Obituaries	11
Alumni News	12

Awards & Honours to Faculty, Staff and Students

Phil Austin (Principal Investigator) and **Roland Stull** received funds to work on a new version of the Canadian global climate model for the investigation of cloud/climate feedback. Funds came from NSERC, the Canada Climate Research Network and the Canadian Foundation for Climate and Atmospheric Science.

Roger Beckie and **Les Smith**, with Michael Church of Geography and William Mohn of Microbiology & Immunology received a four year NSERC Strategic Grant for physical, chemical and microbial research on the hyporheic zone of the lower Fraser River. **Les Smith** and Laurie Neilson-Welch, a former student, won the Keefer Medal from the Canadian Society of Civil Engineers for the best paper of 2001 in hydrotechnical and environmental engineering. The paper, in the Canadian Geotechnical Journal, is entitled "Saline water intrusion adjacent to the Fraser River, Richmond, B.C."

Michael Bostock received funds from the U.S. Geological Survey to investigate intra-slab seismicity and seismic structure of the northern Cascadia subduction zone.

Garry Clarke was awarded a Canada Council Killam Research Fellowship to work on Ice-Climate Coupling. Garry will spend two years at the University of Cambridge to pursue his research. Garry was also one of two recipients of the Seligman Crystal, the highest honour given to a glaciologist by the International Glaciological Society.

The Geological Association of Canada awarded The Logan Medal, its highest award, to **Steve Calvert** for outstanding contributions to geoscientific knowledge. Steve was also elected a Fellow of the American Geophysical Union in recognition of his achievements in the field of sedimentary geochemistry.

K. Fletcher became the representative of the Association of Exploration Geochemists on the Canadian Geoscience Council.

Ingrid Hendy, post-doctoral fellow with Tom Pedersen, was first recipient of the Doris M. Curtis Award from the Geological Society of America. The award is made to a woman whose Ph.D. research has impacted the Geosciences in a major way. Ingrid's research at the University of California, Santa Barbara, focused on the climatic record in sediments of the Santa Barbara basin.

William Hsieh received the President's Prize from the Canadian Meteorological and Oceanographic Society for his contributions to global climate research. William has received a three-year grant from the Canadian Foundation for Climate and Atmospheric Sciences to develop better models of the equatorial Pacific for forecasting El Niño.

Doug Oldenburg received a Synergy Award from the BC Science Council to recognize his university-industry R&D partnership with INCO Exploration and Technical Services. Doug's research is leading to a way to more accurately determine the location of mineral deposits.

The Marine Geoscience Division of the Geological Association of Canada awarded the Michael J. Keen Medal for contributions to Canadian marine geoscience to **Tom Pedersen**. Tom was also appointed to the Scientific Advisory Group to advise the BC Ministry of Water, Land and Air Protection on the development of a new Aquaculture Waste-Control Regulation, and became a member of the NSERC Grant Selection Committee for Environmental Earth Sciences.

The Young Scientist's Medal of the Mineralogical Association of Canada was awarded to **James Scoates**. This is the third year in a row that our faculty have garnered this award: **Lee Groat** won it in 1999 and **Greg Dipple** in 2000.

Alastair Sinclair received a Distinguished Career Award from the Geological Association of Canada.

The Brazilian Society of Geophysics awarded the title of "Professor de Geofísica Estrangeiro" to **Tad Ulrych**.

Teaching Awards

Kurt Grimm was awarded a Faculty of Science Killam Award for Excellence in Undergraduate Teaching.

Lori Kennedy received the Killam Teaching Prize for the supervision of graduate students from the Faculty of Graduate Studies

The Department's graduating students of 2001 helped establish two EOS Undergraduate Instructor of the Year awards. The winners for 2001 were **Max Taylor** (Environmental Earth Sciences) and **Mary Lou Bevier** (Solid Earth Sciences). Max has a stellar record of teaching in biological oceanography and after 37 years at UBC his teaching evaluation scores are still amongst the highest in the Department. He is particularly successful with large service courses, helping to promote EOS across campus. Mary Lou, through her excellent teaching, has persuaded many a student to join EOS. She has been one of our best teachers at geology field schools, has been involved in educational outreach to First Nations students, and recently received an honorable mention in the Killam competition for excellence in undergraduate teaching.

Awards for Service

The EOS award for Excellence in Administration and Technical Support recognizes service to the Department. The winner for 2000-01 was **Bryon Cranston**, one of the Department's technical wizards with a reputation for getting things done. At UBC since 1967, Bryon has been quick to address problems that arise in a department spread amongst

five buildings that are in varying states of decay. He has poured energy into logistically supporting field trips and field schools. Many of the Department's social and sporting activities thrive because of Bryon's organizational skills and enthusiastic support.

Awards to Present and Former Graduate Students

Steve Piercey and **Peir Pufahl** were awarded NSERC Post Doctoral Fellowships.

Matthew Davie won an Outstanding Student Paper Award for his presentation at the 2001 Fall Meeting of the American Geophysical Union. His paper was presented in the Biogeosciences Section and was entitled "Constraints on Microbial Production of Methane from Physical Models of Hydrate Formation."

NSERC Post Graduate Scholarships went to **Kathi Dilworth**, **Trisha Bellchamber**, **Sean Fleming**, **Tawnya Peterson**, and **Martin Stewart**.

University Graduate Fellowships went to **Stephan De Wekker** (Killam Renewal), **Sean Fleming** (Li Tse Fong Award), **Tim Creyts**, **Markus Kienast**, **Stephanie Kienast**, **Nicolas Lhomme**, **Tawnya Peterson**, **Rob Campbell**, **Nicholas Austin**, **Julie Granger** and **Scott McDougall**.

One of two Tertiary M.C. Hughes Memorial Prizes was awarded to **Adam H. Monahan** by the Canadian Meteorological And Oceanographic Society for outstanding contributions to climate research through his doctoral thesis on "Nonlinear principal component analysis of climate data" and for publication of numerous first-author papers on climate variability. Adam completed his Ph.D. in EOS in 2000, supervised by William Hsieh. Adam, son of UBC alumnus **David Monahan**, is Assistant Professor in the School of Earth & Ocean Sciences at the University of Victoria.

Jennifer McKay and **Craig Nichol** each received an outstanding student-paper award at the AGU Fall Meeting in San Francisco. Jennifer's paper is "The Paleooceanography of the Western Canadian Continental Margin" and Craig's paper is "A Transient Tracer Test in Unsaturated Mine Waste Rock."

Kathy Laurus Feliks received the Association of Exploration Geochemists Student Paper Prize at the International Geochemical Exploration Symposium Meeting in Santiago, Chile. The prize for her paper "Gold distribution in glacial sediments and soils at Boston Property, Nunavut, Canada", published in 1999.

Joshua Hacker won a 2000/2001 UBC Graduate Teaching Assistant teaching Award.

Scott McDougall was awarded a Walter C. Koerner Fellowship.

The Society for Organic Petrology awarded a Student Research Grant to **Sharleen Ramos** for her research on how organic matter affects gas resources in fractured shale.

Adrian Marchetti received the award for best paper in the Marine Environmental Quality section at the 10th International PICES (North Pacific Marine Science Organization) meeting held in Victoria in October, 2001. Adrian's paper was entitled "Evidence of Toxin Production by the Oceanic Diatom Pseudo-nitzschia during Fe Stimulated Growth in an HNLC Region."

Tawnya Peterson received the George L. Pickard Scholarship in Oceanography

Markus Kienast won a GSA student research grant for his work on the geochemical record of monsoonal climate change as recorded in South China Sea sediments.

At the 7th International Conference on Paleooceanography in Sapporo, Japan, **Markus Kienast** and **Eric Galbraith** won Best Student Poster awards for outstanding research work and an excellent standard of presentation. Their poster titles were: "High resolution sea surface temperature estimates from the tropical South China Sea: A comparison of alkenone(UK37), foraminiferal transfer function, and Mg/Ca SST estimates" (Kienast et al); "Frustrule-bound nitrogen isotopes in Quaternary diatom-rich horizons from the Gulf of Alaska" (Eric Galbraith et al).

New People In EOS

Besides incoming faculty mentioned in the Head's Letter above, the Department welcomed others in 2001. New Adjunct Professors are **Dr. Mark Holzer** of Langara College, formerly at the Canadian Centre for Climate Modelling and Analysis, who models climate, particularly transport characteristics, and **Dr. Murray Journeay**, a Research Scientist at the Geological Survey of Canada. Murray specializes in the deformation of convergent plate margins and the application of digital technology to field mapping.

Dr. Laxminarayana (Laxmi) Chikatamarla, is a post-doctoral fellow with Marc Bustin working on acid gas sorption by coal. Laxmi is on study leave from the Planning Commission, Government of India, New Delhi.

Dr. Maristela (Maris) Bagatin Silva is a post-doctoral fellow with Marc Bustin working on effects of oxidation on the chemical functionalities of coal, their relation to gas adsorption/absorption phenomena, and reflectance suppression of coal and its relation to hydrogen-enriched vitrinite.

Dr. Pascale Loret is a post-doctoral fellow with Curtis Suttle working on *Heterosigma akashiwo* and the reconstruction of harmful algal blooms using molecular markers in sediments.

Honorary Research Associates with Maya Kopylova are **Barbara Scott Smith**, (Ph.D., Edinburgh University 1977, President, Scott-Smith Petrology) **Felix V. Kaminsky** (Ph.D. 1969, Institute of Geology, Mineralogy and Geochemistry of Ore Deposits at the USSR Academy of Sciences, Moscow) and **Tom McCandless** (Ph.D. University of Arizona, 1994).

Awards to Undergraduate Students

For the 2001 winter session, 54 undergraduates in EOS and Geological Engineering received departmental scholarships and awards.

Undergraduate students **Jennifer Cowles** (Third Year Geological Engineering) and **John Tyne** (Third Year Honours Geology) were each awarded a scholarship from Placer Dome Inc.

The B.C. Geophysical Society awarded scholarships to three UBC students: - **Andrew McNeil** (Hiekki Limion Scholarship Award) **Karen Weitemeyer** (KEGS Foundation Scholarship) and **Josh Montcrieff**(KEGS Foundation Scholarship)

Geological Association Of Canada student prizes went to **Kathryn McRae** , **Andrew McNeill** and **Anjali Nayar**.

Mineral Deposits Research Unit

(Dick Tosdal, Director)
 Research projects in Alaska, Yukon, British Columbia, Nevada, Mexico, Perú, and Argentina are in progress. A new project in central Perú and in Mexico on ore formation in magmatic and volcanic environments will provide new opportunities for graduate students and post-doctoral fellows. The Sheahan- MDRU Library is being established. Opportunities for collaborative research with the mining industry continue to present themselves, despite downturn in the metal prices, diminished exploration budgets, and mergers. Individual projects are summarized below.

Intrusive Gold (Shane Ebert, Coordinator): At the close of 2001, a study of gold deposits and regional geology of Yukon-Alaska is beginning the final year. **Kathi Dilworth** (MSc candidate) is working on the auriferous quartz veins in the Pogo area. **Nancy MacDonald** is nearing completion of her M.Sc. thesis project on the Longline property in the Yukon. **Carlin Reconstruction (Ken Hickey, Coordinator):** The primary aim is to reconstruct the late Middle Eocene paleogeography of the Carlin-Elko area in NE Nevada. **Simon Haynes** (M.Sc candidate) is undertaking research on Eocene sedimentary sequences and basin development in the Carlin-Elko area. **Andean Metallogeny (Dick Tosdal, Coordinator):** **Diego Charchaflíé** (MSc candidate) will establish the volcanogenic framework for Veladero, Argentina, to upgrade the geologic knowledge of the eastern part of the El Indio belt. **Cari Deyell** (Ph.D. candidate) working on alunite geochemistry in high-sulfidation epithermal deposits in the El Indio belt successfully defended her Ph.D. thesis in November

2001. *Evaluation of Metal Mobility from Concealed Deposits:* A pilot study, directed by **W.K. Fletcher**, used lead isotopes to evaluate efficiency of selective extractions in glaciated permafrost terrain at the Pb-Zn Swim deposit, in conjunction with Jeff Bond of the Yukon Geology Program. *Global Volcanic Massive Sulfide Deposits:* **Lawrence Winter** and **Steve Piercey** presented abstracts at the GAC-MAC meeting in St. Johns. **Steve Piercey** completed his Ph.D. thesis on the Finlayson Lake district in the southern Yukon and has joined the faculty of Laurentian University as an assistant professor. *Sheahan- MDRU Library:* Through much effort by everybody at UBC and by Patricia Sheahan, we have transferred the library of Konsult International to MDRU. The library is being established in the MDRU Resource Centre under the direction of **Brigitte Petrie**. Members of the library will be able to access the best information available for an exploration geologist in diamonds and metals. Members will be able to query the database, examine the literature, make lists of references on a specific subject and secure copies of the references. MDRU will continue to add to the collection and provide a service to the diamond industry using the successful template established by Patricia Sheahan.

ENROLLMENT

Undergraduate Enrolment in EOS courses (August 30, 2002; 2001 figures in parentheses)

1st year:	859	(543)
2nd year:	203	(210)
3rd year:	704	(782)
4th year:	412	(355)
Service Courses:	738	(642)
TOTAL:	2916	(2532)

Undergraduate Students in EOS (2001-2002) with numbers for previous year in parenthesis

	ATSC	EOSC	GEOL	GEOP	OCGY	TOTAL
BSc	27(24)	22	52 (81)	10 (14)	24 (25)	135 (144)
BASc			70 (78)			70 (78)
TOTAL	27 (24)	22	122 (159)	10 (14)	24 (25)	205 (222)

Graduate Students in EOS (2001-2002) with numbers for previous year in parenthesis

	ATSC	GEOL	GEOP	OCGY	TOTAL
MSc	6(7)	29 (25)	12 (10)	12 (13)	59 (55)
MASc/ MEng		8 (16)			8 (16)
PhD	14 (10)	13 (15)	10 (19)	14 (15)	51 (59)
TOTAL	20 (17)	50 (56)	22 (29)	26 (28)	118 (130)

Student Activities

Teaching Science to Downtown Eastsiders

(From **Charly Bank** and **Rina Freed**, Co-coordinators for Science 101 in 2001)

During the summer of 2001, UBC offered Science 101, a non-credit, no-fee, first-year course, to residents of the downtown eastside. The course exemplifies UBC's commitment to the community as outlined in TREK 2000, and is the only science course of this kind in North America. More than twenty students came twice a week to the Point Grey campus to learn about science, despite the transit strike. Professors and graduate students from the Faculty of Science volunteered their time to teach a wide variety of topics, ranging from astronomy, botany, and computer science to zoology. Classes were held Tuesdays and Thursdays from 6:30 to 9pm. Students were given assignments and were asked to write a literature-review. Personnel from Earth and Ocean Science were prominent in the success of Science 101: **Tara Ivanochko**, a recent oceanography PhD, initiated the course, modelling it after the Humanities 101 program; this year's offering would not have happened without the insistence of **Rina Freed** and **Douw Steyn**; nine of the 27 evening classes and one of the three field trips offered this summer were taught by EOS people (**Mike Healey**, **Kurt Grimm**, **Phil Hammer**, **Dave Hildes**, **Trish Bellchamber**, **Rina Freed** and **Charly Bank**); **Karen Weitemeyer**, an undergraduate in geophysics, was one of 6 tutors; **Lara Fletcher** was instrumental in setting up the program. Classes met in EOS 121, next to the M.Y. Williams museum, and EOS provided logistical support (use of phone, fax, and photocopy machines, office space, storage space, and the coffee machine we borrowed twice a week from the grad lounge). It was a wonderful experience for students and instructors alike.

Student Physical Oceanography Retreat (StuPOR)

Trish Bellchamber and **Ramzi Mirshak** attended the Student Physical Oceanography Retreat (StuPOR) at Friday Harbour Laboratories Feb 8-11th. The retreat consisted of talks and social sessions in a relaxed format that proved ideal for generating discussions about research. Both EOS delegates returned with potential collaborations and new ideas. StuPOR was attended by students from the Universities of Victoria, Alberta, Washington, Oregon State University, Stanford University and UBC.

Georox Club (Jennifer Cowles, President)

The academic year started with Back from the Bush Party, held jointly with the Dawson Club. Everyone had a great time at the Georox Christmas party before cramming for December exams began. In January several members joined a busload of Dawson Club members in a memorable trip to the WUIGC conference in Edmonton, where students met peers and industry members, made presentations and enjoyed social

events. In engineering-week, many attended the Engineer's ball: the ball model was of a series of retaining walls. The grad class of 2002 donated upwards of \$600 to provide a printer/fax machine and recreational equipment for new and returning geological engineers to enjoy.

Geological Association of Canada Student Chapter (Fionnula Devine)

A GAC Student Chapter, in its first year of existence at UBC, worked on increasing awareness in the student body of GAC activities and geoscience in Canada.

Rock Dogs (Fionnula Devine)

The EOS Women's hockey team, the Rock Dogs, faced a tough playoff series this spring, defending its four-term consecutive Women's Division 1 title. The excellent coaching of Scott Heffernan and Steve Israel developed the team into both and offensive and defensive power, ready to challenge the Forestry rivals. The team is continuing the department tradition of playing tough hockey but having a great time doing it.

Graduate Theses Completed in 2001 supervised by EOS Faculty

(name of supervisor in brackets)

Ph.D.

Deyell, Cari: Alunite and High Sulfidation Gold-Silver-Copper Mineralization in the El Indio-Pascua Belt, Chile-Argentina (L. Groat/J. Thompson)

Hacker, Joshua: Numerical Weather Prediction Error Over the North Pacific and Western North America: An Investigation with Short-range Ensemble Techniques (R. Stull)

Ianson, Debby: A Carbon and Nitrogen Flux Model in a Coastal Upwelling Region (S. Allen/K. Orians)

Jarvis, Kevin: The Application of Seismic Techniques to Hydrogeological Investigations (R. Knight)

Jeffery, Christopher: Statistical Models of Cloud-Turbulence Interactions (P. Austin)

Kovanen, Dori: Late Glacial Ice Margin Fluctuations (12.5-10.0¹⁴C KYR BP) in the Fraser Lowland and Adjacent Nooksack Valley, Southwestern British Columbia, Canada and Northwestern Washington, U.S.A. (G. Clarke)

Piercey, Stephen: Petrology and Tectonic Setting of Felsic and Mafic Volcanic and Intrusive Rocks in the Finlayson Lake Volcanic-hosted Massive Sulphide (VHMS) District, Yukon, Canada: A Record of Mid-Paleozoic Arc and Back-arc Magmatism and Metallogeny (J. Mortensen)

Pufahl, Peir: The Sedimentology and Geochemistry of Phosphatic and Associated Strata in Jordan: Implications for Phosphogenesis and the Formation of Economic Phosphorite (K. Grimm)

Tang, Youmin: ENSO Simulation and Prediction Using Hybrid Coupled Models with Data Assimilation (W. Hsieh)

Timothy, David: Primary Production and the Settling Flux in Two Fjords of British Columbia, Canada (S. Calvert)

Trad, Daniel: Implementations and Applications of the Sparse Radon Transform (T. Ulrych)

Wüst, Raphael: Holocene Evolution of the Intermontane Tasek Bera Peat Deposit, Peninsular Malaysia: Controls on Composition and Accumulation of a Tropical Freshwater Peat Deposit (R.M. Bustin)

Zudman, Yuval: Strategies for Implementing Neural Networks in Ocean and Atmosphere Studies (W. Hsieh)

M.A.Sc.

Bellehumeur, Tracy: Mechanisms and Spatial Variability of Rainfall Infiltration on the Claude Waste Rock Pile (L. Smith).

M.Sc.

Bianchin, Mario: A Field Investigation into the Fate and Transport of Naphthalene in a Tidally Forced Anaerobic Aquifer (R. Beckie)

Chastain, Emily: Geochemistry of Stream Sediments and Surficial Deposits at Pascua-Lama High Sulfidation Epithermal Gold Deposit, Chile-Argentina (K. Fletcher)

***Haggerty, Dana:** An Evaluation of Fish Habitat in Burrard Inlet, British Columbia (M. Healey)

Harris, Shannon: Size-fractionated Chlorophyll and Primary Productivity and Nutrient Distributions Off the West Coast of Vancouver Island (P. Harrison)

Israel, Steve: Structural and Stratigraphic Relationships Within the Tchaikazan River Area, Southwestern British Columbia: Implications for the Tectonic Evolution of the Southern Coast Belt (L. Kennedy)

Ivanochko, Tara: Productivity Influences on Oxygenation of the Santa Barbara Basin, California, During the Late Quaternary (T. Pedersen)

Jourabchi, Parisa: A Theoretical Model of NMR Surface Relaxation in Porous Media (R. Knight)

McConaghy, Katharine: Alteration and Infiltration: Documenting Controls on Skarn Formation at Mineral Hill, Sechelt, Southwestern British Columbia (G. Dipple)

Mirshak, Ramzi: Spin-up Over Steep Topography and the Effects of a Submarine Canyon (S. Allen)

Patterson, Keith: Structural Controls on Mineralization and Constraints on Fluid Evolution at the Sacrificio Cu (Zn-Pb-Ag-Au) Skarn, Durango, Mexico (S. Rowins)

Petersen, Nathan: Provenance of Jurassic Sedimentary Rocks of Quesnellia: Implications for Paleogeography (P. Smith)

Roeger, Claudia: Verification of Numerical Weather Prediction and Avalanche Forecasting (R. Stull/I. McClung)

Shragge, Jeffrey: Teleseismic Imaging: Field Study in Southern Alberta and Numerical Simulations of Inverse Scattering (M. Bostock/R. Ellis)

***Tai, Vera:** Characterization of Viruses Causing Lysis of a Toxic Bloom-forming Alga, *Heterosigma akashiwo* (C. Suttle)

Trotter, Christina: Predicting the Surface Area to Volume Ratio of Pores in Iron Rich Sediments From Nuclear Magnetic Resonance Data (R. Knight)

* Thesis Program External to EOSC

Visitors to the Department during 2001

Dr. **Lawrence Radke**, a Visiting Scientist from the National Center for Atmospheric Research (NCAR), came to work with Roland Stull and Terry Clark on the FIRESTORM Project (forest fire remote sensing and numerical prediction) as part of the UBC Geophysical Disaster Computational Fluid Dynamics Centre.

Dr. **Terry Clark** (U.S. National Center for Atmospheric Research) worked with Roland Stull on the FIRESTORM Project (forest fire remote sensing and numerical prediction)

Dr. **Sue McGeary**, Associate Professor, Department of Geology, University of Delaware in Newark, Delaware, worked with the seismology group (Ron Clowes) and the rock physics group (Rosemary Knight and Traci Bryar).

Professor **Jiarun Yin** (China University of Geosciences, Beijing) visited Paul Smith to work on the Jurassic biostratigraphy of Guangdong and Tibet with a view to better understanding Tethyan-Pacific dispersal and recovery from the late Triassic mass extinction.

Professor **David J. Mossman** (Department of Geography, Mount Allison University, New Brunswick) visited Lee Groat while on sabbatical leave.

KEEP IN TOUCH

Enjoy keeping up with friends and classmates in the Alumni News section? Why not return the favour - drop us a line. Please fill in your correct address below even if the Newsletter was correctly addressed - it helps us maintain our records, or email us at **alumni-contact@eos.ubc.ca**. Also visit the Earth & Ocean Sciences website at **www.eos.ubac.ca**. Please do not provide any information that you would not want published in the next Alumni Newsletter.

PLEASE PRINT

Name: _____

UBC Degree: _____ Graduation Date: _____

Address: _____

Telephone: _____ Fax: _____

Email Address: _____

Has the above changed since last year? Yes No

What's new with you?

- | | | |
|------------------------------------|---------------------------------|--|
| <input type="radio"/> Married? | <input type="radio"/> New job? | <input type="radio"/> Back in school? |
| <input type="radio"/> Take a trip? | <input type="radio"/> Promoted? | <input type="radio"/> See a classmate? |
| <input type="radio"/> Retired? | <input type="radio"/> New Baby? | <input type="radio"/> Other? |

Thanks for your response

UBC Dept. of Earth & Ocean Sciences Alumni Contact 6339 Stores Rd., Vancouver, B.C. Canada V6T 1Z4

Dr. **Juan Carlos Perez** (Associate Professor, University of La Laguna Canary Islands) came to work with Phil Austin on stratocumulus clouds

Dr. **Kunino Tada** (Laboratory of Biological and Chemical Oceanography, Kagawa University, Japan) visited Paul Harrison to work on the influence of nutrient limitations on chemical composition of phytoplankton.

SPOTLIGHT

Robert Ellis (Professor Emeritus; Former Head, Geophysics And Astronomy, first Head, Earth and Ocean Sciences)

After 37 years at UBC, Bob Ellis retired in 2001. Here's a brief autobiographical sketch.



I grew up in Meaford, Ontario, a small town on the south shore of Georgian Bay, where I received a narrow perspective on education: holders of university degrees in the town comprised physicians, high school teachers, a lawyer, a dentist and some of the clergy. I registered at the University of Western Ontario where the only choice in first year science was calculus or geology. I proceeded into mathematics and physics choosing the math option. The physics labs were deadly. My career direction was determined in third year when, at the start of a lecture in classical mechanics, Bob Uffen (who later held positions as Chair of the Defence Research Board and Chief Science Advisor to the Cabinet) announced that a Calgary-based oil company was seeking summer students. I had already decided that a career as an actuary, the one obvious choice other than high school teaching for a holder of a B.Sc. in mathematics, was not for me.

Following an M.Sc. in operations research as applied to mining prospecting and a year as an instructor in mathematics, both at UWO, I proceeded to a Ph.D. in magnetotellurics at the University of Alberta. (Along the way, I took one reading course in geology (a qualification to be the head of a department in which geologists are the largest group?). Competing my degree in the mid-60s during a period of rapid expansion of North American universities, I immediately came to UBC as an Assistant Professor in the Department of Geophysics with a spouse and 1 and 7/9 children in tow. The departmental head was an elderly 45 and the rest of us were in the 28-37 year old bracket; it was an exciting time!

At that time, progress in magnetotellurics, based on a classical 1953 paper by Cagniard, was quiescent. However, funds were being poured into seismology in order that detection of underground nuclear tests could be placed on a firm basis. With encouragement and technical assistance from Don Russell and with funding from the US Air Force and the Canadian Defence Research Board, I turned to research into refraction and earthquake seismology, where I continue to work today. After Ron Clowes arrived at UBC in 1970 we carried out many large collaborative refraction programs - my CV shows Ron as co-author on a quarter of my publications. A number of these were onshore-offshore experiments in which Ron took primary responsibility for the marine component and I for the land portion. I avoided the marine geoscience in part due to my aversion to sea sickness.

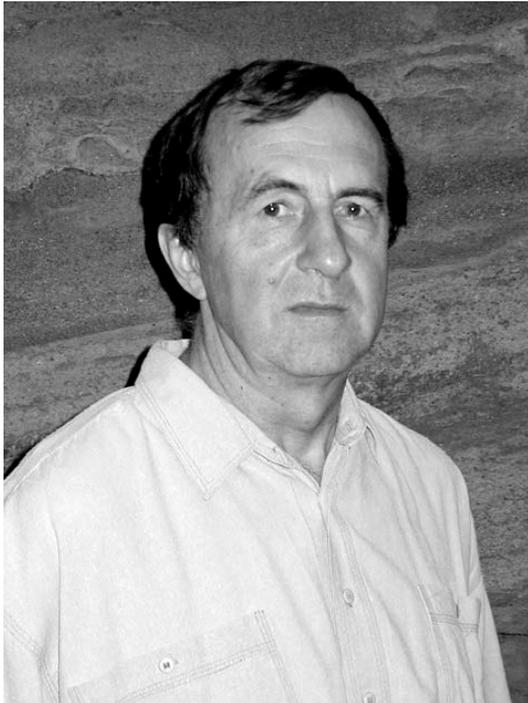
In the spring of 1974, Don Russell had a phone call from the Canadian International Development Agency, seeking someone to set up a program in applied geophysics at a university in northern Nigeria. He asked if I knew of anyone who would be interested in an assignment in sub-Saharan Africa: I spent the next two years at Ahmadu Bello University. On my arrival I found that the curriculum was fixed for the next two years and the faculty wanted someone to set up the teaching labs for them, a job that they did not want to do themselves, and to extract more money and equipment from Canada. Though an unwise move scientifically and in many ways frustrating, this venture was a great personal experience. I was working in a Moslem area, trying to make things function both at work and at home when the electricity and water supplies were uncertain, supplies from Europe arrived 6-12 months late, and I had to decipher the interpersonal signals of a very different culture.

Scientifically, the last two decades have been exciting as earth scientists have gained substantial understanding of the evolution of the continental crust and uppermost mantle. In Canada, funds for seismologists to be major players in these developments have been available through Lithoprobe, a seismological precursor COCRUST and the GSC's Frontier Geoscience Program. In 1989, I became Head of the Department of Geophysics and Astronomy and in 1996 of the new Department of Earth and Ocean Sciences, the former significantly reducing my research time and the latter reducing it to near zero. The budgetary squeeze of the 1990s made it not the most exciting time to be the head of a science department, particularly earth science. However, I feel better going into retirement as the first head of EOS rather than the last head of Geophysics and Astronomy. My administrative leave in 2001 has been a breath of fresh air. After eleven years as an administrator, my technical skills were at a low level. It has been great fun upgrading these skills by again doing hands-on science, interacting with students on a daily basis and having time to attend seminars. It has been a super 37 years at UBC!

Current outside activities include badminton and cycling - Wendy and I cycled the south island of New Zealand in

January, 2001 and we have trips planned in North Carolina and Italy.

Oldrich Hungr (Associate Professor and Outgoing Director, Geological Engineering)



I was born in Prague, Czechoslovakia in 1947, at the leading edge of the Baby Boom. As a teenager I did a lot of biking, skiing, kayaking and mountain climbing, sports which I still pursue today. Due to the unfortunate necessity of having to find a way to make a living, I enrolled in the Czech Technical University to study Civil Engineering. This was in the late sixties and life was good in Czechoslovakia. Apart from the hindrance caused by the presence of the Iron Curtain, we had a lot of scope to lead full, interesting lives. As undergraduate students, my friends and I thought of ourselves as budding scientists and intellectuals. I met my future wife, Klema, as a rope partner in a mountaineering school in the High Tatra mountains.

When I was in the second year, our friendly communist neighbours invaded the country in order to put a stop to our dangerous free thinking. Klema and I were travelling in Austria at the time of the invasion, but we returned home as we had no inclination to emigrate. Over the next year, however, you could see gradual change, as totalitarianism set in. As students we held protests and demonstrations, but it was of no use. By the spring of 1969, Czechoslovakia was a changed country, and not for the better.

Klema and I managed to get a visa to go climbing in the Bavarian Alps. As soon as we crossed the border, there was a physical feeling of relief, like being let out of a cell. We sent back our climbing equipment, which belonged to the university and applied for a Canadian visas at the consulate in Stuttgart. One interesting condition of getting a permit to

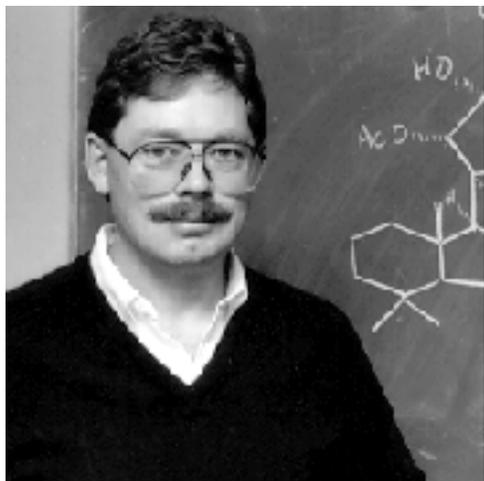
travel abroad at that time was that the Czechoslovak state did not provide any foreign currency and the CS crown was not exchangeable. So, here I was in Munich with a grand total of 5 DM in my pocket. I ordered a beer at a pub, thereby instantly reducing my net worth by 50% (not counting clothes). But we both soon found jobs and worked in Germany until our Canadian visa were ready. We borrowed money from a refugee agency and flew off to Canada in November, 1969.

In Ottawa we landed excellent jobs, wiping cars at a car wash. Klema is still upset that her pay was only \$1 per hour, while mine was \$1.20. There were no pay equity rules then. After a couple of weeks of English classes I obtained the position of a busboy in the "l'Opéra" restaurant at the National Arts Centre. Next September, I was admitted into the third year of the Civil Engineering Program at U. of Ottawa. Klema got a secretarial job with the Federal Government, and later enrolled in Arts at Carleton. I finished my Bachelors degree in 1972, still working part-time as a busboy. In the fourth year I took an elective course in Rock Mechanics, thinking it might be useful for climbing. The course was taught by the late D.F. Coates, then Director of CANMET. He was an incredible teacher and I became hooked on geotechnical engineering. I did my Masters with Coates in 1973 and then got a job with a consulting firm in Ottawa. After two years we moved to Toronto, where Klema did a second Bachelors degree in Fine Arts (dance) and I worked for the Trow Group and sang with the York U. choir.

In 1977, in the midst of an economic boom, I decided I wanted to go back to the university. I was attracted to the world-famous geotechnical research group at the University of Alberta, led by N.R. Morgenstern. Klema reluctantly followed me to the Wild West. By the time I finished my Ph.D. in 1981, we had two sons, no money and I was a specialist in landslide hazards. We went to Vancouver, I joined Thurber Engineering Ltd and worked for them for 16 years. During this time we had a daughter, Clara, renovated two houses and started a software company (with a slope stability program also called CLARA). Although I was quite busy with these things, I still refused to give up the old notion of being a scientist and an intellectual. So I kept quite active in research and publishing. Thanks to this, the whole family had a chance to spend three months in Japan and later in France. In 1996, the newly formed EOS was looking for a geological engineer. I applied and the rest is history.

Today, we live in a moderately immodest house in West Van and three of us (Pierre, Nikolai and I) commute to UBC, mostly by bike. The first four years at UBC has been extremely enjoyable, but not easy, as I had a lot of retooling to do. I wish to thank my colleagues at EOS for being a great working community.

Ray Andersen (Professor, EOS and Chemistry)



A research team of eighteen people (visiting scientists, research associates, post doctoral fellows, grad students, and technicians) jostle each other in the well used laboratories of Professor Ray Andersen, in EOS Bioscience and the Chemistry Department. Ray's research involves exploring the oceans for organisms, bringing them back to the lab, extracting organic compounds of interest from them, determining the chemical composition and structure of the compounds, and testing them for possible use as drugs. A Fellow of the Royal Society of Canada, Ray has been at UBC since 1977. Here's a brief autobiography:

I was born in Drumheller, Alberta because it was the closest civilization to where my parents lived. At the time, Drumheller was famous for being a rough-and-tumble coal-mining town with a hockey team full of Tie Domi clones. My father ran a 'farm supply' business in a rural community called Dalum that was about 30 miles from Drumheller. Dalum was started by a group of Danish immigrant homesteaders in the 1920s. Both of my parents were born in Denmark and immigrated to North America when they were very young. My father came to Alberta via Montana when he was 12 years old after his own father had died very young. Since he was the oldest boy in a large family, my father assumed the role of male parent. He and his mother moved to Dalum to be close to other Danes and because the Alberta Government was giving away land to settlers. I have pictures of my father as a boy using a one-way plow pulled by a single horse to break virgin prairie soil in preparation to farm it. Danish customs were vigorously preserved in Dalum so I grew up with a strong sense of my Danish heritage.

My early formal education took place in a one-room school that served grades one to ten. My real education took place in my father's business, where even as a youngster I got to participate in all sorts of interesting jobs and listen to the local farmers debate politics and life. Based on his own experience, my father assumed I had reached adulthood by age 12 and had me driving a fuel truck that delivered gasoline and diesel fuel to the local farmers and assembling the new farm machinery that was sold in his business. I think I was assigned the fuel truck job because my father found out that I had taken to

smoking the cigarettes that he sold in his store and he correctly realized that smoking and pumping large amounts of gasoline were basically incompatible. Either I would have to give up smoking or die young in a grand explosion. The farm machinery assembly was great fun. Things like baling machines, post-hole diggers, swathers, etc. would come as big crates of seemingly random parts that had to be assembled into working machines. The instructions, having been written for engineers, were totally useless to me. Therefore, I had to figure out how the machine was supposed to work and try to put it together so that I didn't have too many parts left over at the end.

By the time I got to high school, I knew that the farm supply business was too much work for me so I decided I would escape Dalum by getting an education and hopefully a cushy high-paying job (a UBC Professor??). I went to a two-room high school in a dust bowl town called Hussar whose main claim to fame was that it sat on the shores of Dead Horse Lake, a slight depression in the treeless flat prairie that seldom contained water but nevertheless smelled like its name. Most of my classmates aspired to be farmers: I took all of my high school physics and math by correspondence because no one else could see the sense of taking these courses and, like UBC, Hussar High couldn't justify teaching classes with an enrollment of one. I managed to graduate and was accepted at the University of Alberta in Edmonton, probably by filling a quota for prairie hicks. In Edmonton, I came under the influence of a wonderful chemistry Department that set me on my professional career. My last winter in Edmonton was the coldest in recorded history to that point and this convinced me to apply to graduate schools only in California.

I wound up going to UC Berkeley in 1969, where I studied chemical physics and worked on a project dealing with chemical lasers that seems to have been the inspiration for Ronald Reagan's 'Starwars Defense' system. Oddly enough, Reagan, who was Governor of California at the time, actually signed my M.Sc. degree. Berkeley in 1969 was a pretty wild place for a naïve prairie boy. This was the height of the free speech, people's park, antiwar, drugs, and free love years in the Bay Area. My assigned dormitory roommate was working his way through college as the local drug dealer so I quickly learned about the risks and rewards of the drug industry, which may have had an influence on my current research. I eventually left Berkeley because the antiwar demonstrations were so disruptive that it was impossible to concentrate on my studies.

Not wanting to leave California, I moved south to Scripps where I embarked on a Ph.D. in marine natural products chemistry. Here I knew I had found paradise. My Ph.D. studies took me SCUBA diving in many remote areas of the Sea of Cortez and when I didn't feel like working in the lab, I could bodysurf on one of the best surfing beaches in the world. Eventually I had to graduate and leave Scripps. From there I moved to Boston where I did a PDF in the chemistry Department at MIT. Major culture shock, but eventually I

adjusted and even grew to really like Boston. From Boston I made my way to UBC where I have been ever since.

Many good things have happened to me at UBC. The best was that I met my wife Lynn courtesy of the registrar's office, who had scheduled her psychology class and my chemistry class back to back in Chemistry 250. Lynn is a professor of clinical psychology at UBC and I think she saw me as a challenging long-term research project with an 'n' of one. Twenty great years of seven day a week free psychotherapy has kept me very happy and somewhat sane.

Obituaries

Raymond Victor Best (1915-2001)

Ray Best died Monday 21 May 2001 of double pneumonia. The companion of his last years, his elder brother Alan, passed away from the same illness on the same day. Ray had been battling Parkinson's disease for many years. Ray and Alan lived together for many years in the old Best house on Salt Spring Island. Ray was the fifth son of Victor Charles and Winifred Best, from England, who settled on Galiano Island in 1913 on land bordering Sturdies Bay Road, opposite the present lumber yard. Ray was born during his father's absence in the cavalry during World War I. His mother nurtured the five boys, sawed wood for the fire, ploughed the fields on the family farm, played the organ in a little makeshift church on the waterfront in Whaler Bay with baby Ray on her lap, and shovelled snow off the farmhouse roof after a blizzard dumped five feet of snow on it in 1916. The family moved to Salt Spring Island in June 1920, and farmed 15 acres at the base of Ganges Hill. The boys went as boarders to Shawnigan Lake School on Vancouver Island.

Ray went to England in 1935. In 1936, after studying for a year at the University of London, he enlisted in the Royal Air Force, served two years in Iraq, then re-enlisted and did wartime service in Egypt and as a bomber pilot over Europe, during which time he was awarded the Distinguished Flying Cross. After the war, Ray was one of the thousands of ex servicemen and women who went through UBC. He graduated as a geological engineer and took his masters degree in paleontology at UBC. While at UBC he married Jane Ellerton. Ray and Jane had three sons, Robert Peter and Alan.

Ray's doctoral thesis at Princeton University was on Cambrian trilobites. Ray's most notable piece of scientific work was to show that the Hardy-Weinberg equilibrium law of genetics was applicable to tubercle development in the Silurian trilobite *Encrinurus*. This means that development was controlled by one gene with two allelic forms. After a brief time at McMaster University, Ray joined the Department of Geology at UBC in 1960 to succeed Vladimir Okulich as paleontologist.

From Hugh Greenwood, who joined the Department in 1967: I remember passing the door to Ray's lab/office and being hailed thus, "Hugh- come in at once for a cup of tea!!" I would

veer sharply and be offered a porcelain cup that had seen better days, but which had never seen a better brew. The brew was notably enhanced with a liberal dollop of the best rum, and there then ensued an extended tea break sparked with endless amusing anecdotes about geology, field work, desert flying during the war, and the hopeless efforts of some students and ex-students to express themselves in writing.

On writing, Ray was one of the two best editors of the written word in the Department, and could detect mental sloth in the writing of any geologist, whether paleontologist or petrologist. His advice was both "valued and feared." News of Ray's departure will spark memories in hundreds of UBC alumni who took the geological field school at Oliver while he was Director. Ray had a legendary ability to remember jokes, songs, ditties, poetry and stories of all kinds, and to recite them in a seemingly endless sequence to dazzled faculty and students at the Oliver Hotel during the course of the several beer-ups that were an after-hours feature of field school in those days. Some of the stories concerned Alan's adventures collecting for the Vancouver zoo, but many concerned Ray's experiences during his years in the RAF, later in Canada, when he was seconded to the RCAF, and still others concerned his interaction with nature. His encounters with rattlesnakes and other life forms of air, land and sea were worth hearing, and he had a treasure trove of information for anyone interested in natural history.

From Bill Barnes "I spent a day with Ray exploring "The Hole" on the northeast side of White Lake basin not far east of the radio astronomy observatory. He wanted to show me rattlesnakes, and we saw 23 that day, but over half were small ones that had hatched that spring. Ray wanted to collect a large rattler for Alan to display at the Stanley Park Zoo, and late in the day we heard one rattling beneath a large flat rock that had been mostly excavated underneath by wind and water. The rock was perhaps 1.5 metres across and Ray asked me to dangle my rock hammer under the north side while he looked under the south side. When the snake struck my hammer he reached in and grabbed it by the tail, jerking it out rapidly and then held the head down with a stick. I got a large heavy canvas sample bag from my pack and Ray fed the snake in head first while I kept the bag closed except for a small opening. When it was in, I tied the bag closed and carried it back to the vehicle in my pack. It was angry at first but soon settled down in the dark pack and finally got displayed at the zoo."

Ray was an expert on the fauna of the Gulf Islands. At low tide, he could lift rocks from the rip rap at Long Harbour on Salt Spring to reveal terebratulid brachiopods. He also knew all the best fossil localities on the Gulf Islands. Ray was an effective hunter of deer on Salt Spring, and regularly contributed and carved a haunch of venison at the UBC Geological Christmas party until he retired. An excellent fisherman, Ray knew where to get abalone and all kinds of other sea life. During one Salt Spring Island Field School, staff and students occupied St. Mary Lake resort. While the instructors were out with the students, Ray was out in his

dingy in the shallow marine areas he knew so well. He would prepare a dinner of huge butter clams or crab legs. Ray speared the crabs with his trident, tore off their legs and tossed the bodies back in to feed more crabs. No-one complained, as the dinners were delicious.

Ray approached driving a car and taking off in an aircraft in a very similar manner. From Bill Barnes: "During my first field school at UBC in 1969, when it was run by Ray, he tried (and succeeded) to impress me by abruptly turning off the road from Oliver to Field School while driving the Yellow Peril and bouncing through a field at perhaps 50 km/h. Ray always took corners on the inside regardless of which lane of the road he was in. We once came very close to having a head-on collision this way on the White Lake road just north of Field School."

Ray's approach to directing field-school was distinctly military. His method of waking students in the morning was to run beside a dormitory hut armed with a piece of wood, which he would run along the corrugated siding, while bellowing "Rise and Shine". Female students were commanded to sleep in a cubicle in the Shell hut, with Ray as Director occupying an adjacent cubicle. Their main complaint was that he snored loudly.

Ray retired in 1981 and moved to the family property just south of Ganges on Fulford Road, Salt Spring Island, living initially with his father and after his death with his brothers Alan and Norman. Ray's last few years were a trial for him, as he had always been vigorous and athletic. For such a man, Parkinson's was especially cruel. Ray is survived by Jane, his brother Norman and his sons Robert and Alan.

Joe Nagel

Joe J. Nagel, former Curator of the M Y Williams Museum, died in an automobile accident on the fourth of December, 2001.

Joe came to UBC in the early 1970s from California, likely because he had met his wife-to-be, Sharon Beech, while visiting BC. Joe's masters thesis was on the geology of the Shulaps Complex, a vast outcropping of old oceanic crust in the Shulaps Mountains.

Joe's rare combination of artistic and organizational talent and his love of mineral specimens came to the fore when he became Curator of the M.Y. Williams Museum after Jim Height left in 1974. A pioneer in the use of computer databases in management of collections, Joe added to and indexed the existing material, reorganizing it into a first-class mineral collection that is now on loan to and used extensively by the Pacific Mineral Museum in downtown Vancouver.

He created Friends of the M.Y. Williams Museum, with a lecture series, and opened a shop in the museum where mineral and fossil specimens were for sale. Joe organized successful exhibits of minerals from abroad, such as Harvard Gold, at the M.Y. Williams Museum. After leaving UBC in

1994, Joe formed his own company and worked with Sharon in their bookstore in Surrey, the Copper Beech. Joe was an unusually effective promoter of the Earth Sciences and a mean piano player, and will be missed by many friends. He is survived by Sharon and his mother Henny.

Aaro E. Aho Foundation: Request for Feedback

In 1977, the Dr. Aaro E. Aho Foundation was established to honour the memory of an outstanding geologist and mine-finder who graduated from U.B.C. in 1949. Since 1978, the Foundation has awarded Gold Medals and cash awards to outstanding graduating students in both Geological Sciences and Geological Engineering. In the early years of the Foundation, awards were made to students in graduate studies and in recent years scholarships have been granted to undergraduate students transferring from regional colleges or other universities. The Foundation is interested in documenting the careers of recipients of its awards and scholarships. Those receiving this newsletter are requested to provide any relevant information to R.E. Gordon Davis, 555 Newton Wynd, Vancouver, B.C., V6T 1H6 (gdavis@silverstandard.com)

Alumni Feedback

Carman Ridland B.A.Sc. Geol. Eng.

1936 Retired in Los Vegas, Nevada, 23 years ago. Spent a week in Vancouver last July and was disappointed in not finding any of my classmates or former associates. Also disappointed in the weather. It was cold and rained most of the time.

Griff Lloyd BA Hons. Geology 1951 Retired in 1995 from Borcom Associates, but still keep busy. Spent three field seasons (1995-96-97) in Laos P.D.R. as supervisory consultant on a new coal mine development. Then two field seasons (1998-99) of very interesting geological field exploration in Madagascar. Currently am V.P. Exploration for an oil company based in Bangkok, Thailand. My 18 grandkids help to push me along!

Wilfred Gordon Holland BA Geol 1952

I retired after 40 years in the oil patch. Recently travelled to China and Tibet. W. Smith, Ron Johnson, Ed Khose, all fellow grads from '52 who are Geological Engineers, meet for lunch three times a year.

Dr. Trevor Lewis B.A.Sc M.Sc. Geop 1963, 1965

In 1998, I left the GSC after 34 years and started Sidney Geophysical Consultants Ltd. Over the last 3 years our main clients have been hydrocarbon exploration companies. We specialise in geothermics.

Karl Ricker M.Sc. Geol 1968

Forty-five days of volunteer work on international ski and snowboard events, including the construction of the jumps used at the World Championship Freestyle events at Whistler in January, 2001. The biggest challenge was the World Cup Downhill/Super Giant Slalom event at Lake Louise where we, 25 volunteer "Whistler Weasel Workers" (a legitimate group!), arrived to find mountain sheep still grazing on the

barren upper one third of the course. Seven days later it was skiable and the sheep were fenced off the course.

Ken Dawson B.Sc. Geol Ph.D. Geol 1964 1972

Since retirement in 1996 from the GSC after 22 years of Cordilleran metallogeny, I have worked as both an exploration consultant and a junior mining entrepreneur. My wife Sandra, as a partner in Terra Geological Consultants, has accompanied me on several trips to Latin America. We enjoy boating, camping and fly-fishing, plus grand-parenthood.

LeoFox B.Sc.(Hon) Geophysics 1972

I always read the newsletter with interest. From the latest issue I see two of the good old guys, Ray Best and Robert Delavault, have passed away, and that my thesis prof (Tad Ulrych) has retired, which proves that time marches on. I graduated in the first year of the B.Sc.(Hon) in Geophysics, then worked from 1972 to 1975 as a computer programmer for Hugh Greenwood, Al Sinclair, and the Geology Dept in general. I computerized the "P" collection of rock and mineral samples. Ed Montgomery, then head techie, showed me how to use a diamond saw to cut samples, and how to polish them. During 1973-1975 we developed the MINDEP data base, which grew from the "MacDonald File" which had been started as a card file by MacDonald Consultants. Alec MacDonald had moved on to running Texada Lime and wanted to pass on the file to a new owner. We used one of the first intelligent terminals (a DATAPOINT 2200) to build the MINDEP data files and download them to the mainframe computer in the engineering building. I meet Al Sinclair in Toronto at the PDAC Convention, and he told me the MINDEP project eventually became the basis of the provincial govt's e-file of mineral deposits. From 1975-1977 I worked for the Ministry of Petroleum and Mineral Resources in Saudi Arabia. The oil boom was in full swing, with people, money, and goods flooding into the country. On arrival I counted 165 ships anchored in Jeddah harbour, awaiting their turn at the three(!) berths. During 1977-1978 I travelled around the world, with a working stop in Kuwait. From 1978 I have been in Toronto, since 1982 with Phoenix Geophysics (www.phoenix-geophysics.com) of which I have been president since 1987. We manufacture geophysical instrumentation and export worldwide. Neither Canada nor BC is much of a market for us, and I rarely get back to Vancouver these days. Anybody from the good old days can contact me at mail@phoenix-geophysics.com.

Robert J. Morris B.Sc. Geol 1973

Proud grandfather of twin girls.

Greg Small B.A.Sc Geol Eng. 1978

Currently with Shell Philippines Exploration B.V. as Chief Petroleum Engineer developing the Malampaya Deepwater Gas to Power project.

Mike Reed B.Sc. Geology B.A.Sc. Mech. 1986 1990 My wife, Sheri and I and our 2 boys, Cameron (7), Duncan (3 1/2) are newly arrived in Calgary (company move). I'm working as an engineer with Trans Mountain Pipe Line. Haven't seen a classmate for quite awhile but do speak with Marc Leit (B.A.Sc. 1990) from time to time.

Nancy Berranger B.Sc. Geol 1988

I moved back to Quebec at the end of 1999, from British Columbia. I am now a partner in a small hydrogeological firm, Nova Aqua Expert Inc., specializing in environmental consulting and drinking water research for municipalities, industry and bottling water companies. Regards to Les Smith for lighting the hydrogeological fire! Congratulations on your appointment.

Tammy Kobliuk B.A.Sc Geol. Eng. 1991

After leaving UBC I did not actually stay in the engineering world for very long. I returned to school to do GIS at BCIT approximately 7 years ago. I worked for TimberWest in the Queen Charlotte Islands and RGI in Vancouver. I then moved to Alberta (land of no PST) to run the GIS department at the Foothills Model Forest in Hinton for two years. From there I hopped over to the Provincial Government in Edmonton for a short contract stint with the Provincial Forest Fire Centre and am now in a permanent position as a Spatial Resource Analyst with the Forest Management Branch of Alberta Sustainable Resource Development. Anybody who would like to contact me can do so through e-mail to: Tammy.Koblium@gov.ab.ca spent most of my time managing trees and animals, as opposed to rocks and minerals and am quite happy programming my heart out in ArcInfo (who would have thought?) and playing around in unix. I do miss the engineering geology world, but at least am still in resource management.

John Ridley B.Sc. Hons Ocg/Bio 1992 I have drifted far from the fold since graduating. Now a practicing Family Physician in Ottawa, Ontario. Often think back fondly on the work and challenges during my time with Al Lewis and Tom Pedersen. Continue to stay in touch with many from the associated departments including Al Martin, and many from GeoRox: Bill Burton, Steve Hedberg, Brian Cutts, Grant Bonin and others. Soon to return to Vancouver? Maybe.

David A. Bailey M.Sc. Ocg 1993 I was married to Laurilyn Witherup in September of last year. Hard to believe it is nearly our first anniversary already. I then went on to defend my Ph.D. thesis at the University of Colorado at Boulder in the Program in Atmospheric and Oceanic Sciences in November. I have nearly come full circle now that I am in Seattle. I'm working as a postdoctoral research associate with Peter Rhines here in oceanography. I am working on climate change and variability in the North Atlantic and Arctic Oceans.

Tamara Aven (formerly Fraser) B.Sc. Geol 1998 I was married in August 1999; working full time; just bought a house! And I have a one year old black lab puppy named Maggie.

Christina Chan Ph.D. Geophysics 1999 Now teaching at University of Houston after a Post-doc and teaching in Ohio.

Death Notice:

David Mclean Fletcher B.A.Sc. Geol. Eng. 1956
Passed away on May 10, 2001

Acknowledgments

Many thanks to **Dick Chase** and **Carol Leven** who compiled and organized this newsletter.