

COLIN DUNN – HONOUR ROLL CITATION

WAR & PEACE

In 1940 Colin's pregnant mother was evacuated from Tooting Bec in South London because of the Blitz, to the little country village of Haddenham in Buckinghamshire. When the time arrived to deliver, the nearest maternity ward was a Stately Home one mile west of Amersham called Shardeloes, that had been requisitioned for use as a maternity hospital. Colin was born 20th February, 1941 though not in the Stately Home itself, but in the stable next door 'as there was no room in the Inn'. Thereafter, he with his mother and sister moved back and forth to their home in Tooting as wartime conditions allowed.

EDUCATION FOR THE REAL WORLD

In his early years Colin attended the Sellincourt Road London County Council Primary School and then Tooting Bec Grammar School until the age of eighteen when he started work at the Westminster Bank in central London. After a few months he moved on to an office job with Walter Potter Ltd., an engineering firm in North Acton, London which mostly made parts for commercial aircraft. He worked there for four years while studying for business qualifications including law, accountancy and economics under the Chartered Institute of Corporate Secretaries, qualifying in Intermediate Law, Business Administration, Economics and Accountancy (1963); Advanced, Pt I Business Administration, Economics, Law and Accountancy (1964) and Advanced, Pt II Corporate Law, Economics and Accountancy (1965).

GEOLOGICAL INSPIRATION

Colin had become interested in geology while on school holidays during the summer in Guernsey, climbing over the granites in some of the bays and being intrigued by the 'pink minerals' in the rock. Then in A-level Geography discussions of the core and mantle, and the different classes of rock added to his interest which was eventually revived as an antidote to the monotony of office work.

GEOLOGY REVISITED

Colin started taking night classes for A-level Geology and Chemistry. Then with those qualifications, at the age of 24 he applied to Kingston Polytechnic to take a B.Sc., Geology degree (with Chemistry and Geography as ancillaries) and was accepted as an external Mature Student taking a London University degree. His particular interests included igneous petrology, mineralogy and geochemistry, a class given by Geoff Parslow, who was later for a while one of his Ph.D., supervisors. Finally, in 1972 Colin emerged with a Ph.D., in Geology and Geochemistry from London University. His Ph.D., thesis was titled "*Trace Element Geochemistry of Kimmeridgian Sediments in Dorset, North-west France and North Spain*". The thesis identified sediment geochemistry changes on the macro-scale throughout the period of deposition in the Kimmeridgian basin, thought to be related to cyclical climate change.

MARRIAGE & EMIGRATION

Two months after that and only recently married, he came to Regina to take up a position as Research geologist with the Saskatchewan Geological Survey, where he had an office at the Subsurface Laboratory from 1972 to 1985, first as Research Scientist Stratigrapher/Sedimentologist for Hydrocarbons then from 1978 as Head of Geochemistry.

SASKATCHEWAN BIOGEOCHEMISTRY PROJECTS ARE BORN

In 1979, the Saskatchewan Geological Survey and Geological Survey of Canada had a meeting in Regina to discuss a research program involving all known methods to look for uranium in the Athabasca Group. Colin was a member of the committee. The 'Athabasca Test Area' was decided upon and the committee went through the whole gamut of possible geological, geophysical and geochemical methods. The meeting was just wrapping up and people were standing to leave, when Colin piped up "what about trying biogeochemistry?" The GSC group stopped and said – OK, who could do that? As the only other candidate, an M.Sc., student at the University of Regina was unavailable, Colin volunteered and three months later got the opportunity to go to McClean Lake – just a couple of weeks after the initial discovery of 27% U at the unconformity some 150 m beneath the surface. The first small orientation survey disclosed significant U enrichments (more than 2 order of magnitude above background) in black spruce twig from trees growing in the still undisturbed ground above the zone of mineralization. This significant discovery was sufficient for Saskatchewan Survey management (Les Beck and Jim Christopher) to encourage further studies. Three years later he had collected enough data to outline what is now known as the Wollaston Uranium Biogeochemical Anomaly – 10,000 sq. km with U concentrations in spruce twigs >10 times background - the world's largest biogeochemical anomaly by far. This initial success prompted him to concentrate on the numerous unknown aspects of the science. Other studies included spruce top sampling for nickel and platinum over the Rottenstone Mine, and alder twig sampling over gold deposits in the La Ronge Belt and Glennie Domains. Fifty years later, Colin says he is still learning!

OTHER ROLES & DUTIES

While working for the Survey Colin was also, from 1974 to 1976, a Sessional Lecturer at the University of Regina and in 1975, was President of the Saskatchewan Geological Society, having previously been Secretary/Treasurer, then Vice President.

In later life Colin has been Chairman and Canadian representative on the International Atomic Energy Agency/Nuclear Energy Agency Working Group on Uranium Biogeochemistry (1979 - 1982); member and Fellow and Councillor in the Association of Exploration Geochemists (1986-1992) and has even been called as an expert witness in forensic biogeochemistry for a court case (2003).

ON TO OTTAWA

Colin left the Saskatchewan Survey in 1985 to join the Geochemistry Subdivision of the Geological Survey of Canada as Research Scientist and Head of Geochemical Research Section. From 1988 to 1993 he headed the implementation and co-ordination of GSC programs on Environmental Geochemistry. During this time he was also Federal Geoscience program coordinator for Federal-Provincial Mineral Development Agreement (1991-1996).

THE ROADS TO MOROCCO – AND RIO

During his time with the GSC Colin took part in two scientific expeditions sponsored by the National Geographic Society: to Morocco in 1993 and to Brazil, Paraguay and Argentina in 1996. In the year of his retirement in 1998 he was Project Leader of the Canadian International Development Agency (CIDA) Canada/Brazil project for the biogeochemical study of mercury and gold in vegetation around Garimpeiro gold workings at Creporizão, Pará, Brazil.

RENAISSANCE IN RETIREMENT

Since retiring Colin has been President of Colin Dunn Consulting Inc.; until 2011 he was also Emeritus Scientist at the Geological Survey of Canada, Sidney, BC, and is now affiliated as a volunteer.

As a consultant, Colin has completed assignments for numerous major companies, including Anglo American plc., AngloGold Ashanti, Areva, Barrick Gold Corp., B2 Gold Ltd., BHP-Billiton World Exploration, Cameco Corp., Falconbridge Ltd., Goldcorp, Great Western Minerals, MMG Ltd., New Gold Ltd., Newmont Ltd., Noranda Ltd., OceanaGold Ltd., Placer Dome Inc., Tanami Gold, and URS Corp.

Also, many junior exploration companies, Provincial Surveys (British Columbia, Alberta, Saskatchewan, Manitoba, NWT and Yukon); Australian research organizations, the United States and New Zealand geological surveys, and the universities of New South Wales, Adelaide, Massey (New Zealand) and South Carolina have also benefitted from his work and advice.

In 2008 and 2009 he led the field component of a Canadian Mining Industry Research Organization (CAMIRO) multi-media geochemical sampling research program to look for uranium in Saskatchewan, the results of which were reported as *Multi-Media Techniques for Direct Detection of Covered Unconformity Uranium Deposits, Athabasca Basin*.

A LIBRARY OF PUBLICATIONS

In his long career in geology, Colin has published over 250 papers, book chapters, and articles covering a wide range of topics, and more than 100 confidential reports for private companies. The majority of the topics have been related to geochemical methods of exploration (notably for gold, PGEs, base metals, REE, kimberlites, uranium and hydrocarbons). Results have been presented as research papers, lectures and courses at conferences, institutions and in company offices in dozens of countries on six continents. In 2007 his book *Biogeochemistry in Mineral Exploration* was published by Elsevier as No.9 in the series *Exploration and Environmental Geochemistry*.

HONOURS & AWARDS

In 1990 he received the Consolidated Goldfields of South Africa Medal from the Institute of Mining and Metallurgy in London for a research paper on biogeochemical methods of exploration. In 2014 he received the Gold Medal from the International Association of Applied Geochemists for “*Outstanding Scientific Achievement in the field of Applied Geochemistry*”. This is the top accolade in applied geochemistry, worldwide.

HEARTH & HOME

Colin lives in Victoria, British Columbia with Sara, his wife of 48 years; they have a son Kas, now 46, who studied in Ottawa for qualifications as a sound engineer and now teaches part-time at Brown College, Toronto, and runs an on-line hobby supply business; and daughter Nina, now 44, who moved to Vancouver Island in 2004 and has worked there for the past 15 years as

Executive Secretary to the director at the Geological Survey of Canada (so *almost* a geologist).
Nina has a 14 year old daughter, Ella, and 12 year old son, Aidan; and Kas has a 6 year old son,
Winston.