Willi Dansgaard will be sorely missed by the researchers at the Centre of Ice and Climate; but he lives on in our research. He leaves behind three children and 6 grand children. (Jørgen Peder Steffensen, Centre for Ice and Climate, Niels Bohr Institute, University of Copenhagen, Denmark)

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John Bryan Heaney, who died in November 2010 aged 79, was an outstanding field surveyor who made a major contribution to the mapping of South Georgia and created the first accurate map of Gough Island.

Born in Burma on 26 February 1931, Heaney was the eldest child of Brigadier G. F. ('Tim') Heaney, the last British Surveyor-General of India. His early years in the sub-continent fostered an adventurous spirit and a deep love of the outdoors, especially among mountains. It also trained the young Heaney to climb, ski, swim and camp: and made him at home among diverse cultures.

Given his parentage, it was perhaps natural that John Heaney should be chosen for training as a surveyor during his national service in the Army in 1949-1951. This training in turn opened the way to his first expedition - for when his army instructor had to decline an invitation to join Duncan Carse's first South Georgia survey he suggested Heaney in his place. The party duly arrived at King Edward Point on 1 November 1951 in the Salvesen vessel Southern Opal and were based in the vacant gaol! From Grytviken they explored the mountain spine of the island, discovering the break between the Allardyce and Salvesen ranges west of Royal Bay. The general structure of the island became clear and nearly 40% of it was mapped by Heaney and his fellow surveyor Gordon Smillie before the party left in April 1952. Working particularly closely with the late Kevin Walton (who became a lifelong friend), Heaney covered the southern part of the area, including the glacier that now bears his name.

After South Georgia, John Heaney went to Christ's College, Cambridge, in October 1952 to read Mechanical Sciences. He also applied for a job as an engineer with Shell Petroleum. But before joining the world of work he wanted to lead his own expedition and this brought him to the Scott Polar Research Institute where his obvious competence, enthusiasm and determination impressed Dr Brian Roberts. Heaney had been planning to take a party to Edge Øya in Svarlbard, but Roberts thought otherwise. Perhaps it was his part-time role as Head of the Polar Regions section in the Foreign Office that made him sensitive to the need to know more about Gough Island, a British possession 230 miles south southeast of Tristan da Cunha in the middle of the South Atlantic. He told John Heaney that it was 'a plum for an Expedition', and Heaney threw himself into organising the Gough Island Scientific Survey, aided by the fact that he had passed the examinations for his degree and secured his place with Shell by the start of his final year.

Heaney's plan was straightforward. He recruited a team of scientists who could, between them, document all the major features of the island. He himself would do the mapping assisted by Robert Chambers, a skilled Cambridge mountaineer. Botany was the preserve of the sole Oxford representative, Nigel Wace, who had been at school with Heaney in Kashmir. Michael Swales, an experienced ornithologist was to cover the birds and seals, Martin Holdgate, the senior scientist in the party, to collect invertebrate animals, Roger LeMaitre to deal with the rocks and Philip Mullock to act as radio operator and assistant weather man. Thanks to the good offices of Brian Roberts' friend Allan Crawford, Port Meteorological Officer in Cape Town, the South African Weather Bureau agreed to second Johannes van der Merwe as senior meteorologist. The budding world of television showed interest and although David Attenborough reluctantly declined a place because Heaney was in no position to pay a salary, a contract with a television company allowed James Hall to be recruited to film the expedition and the island's wildlife. Supported by the Scott Polar Research Institute and the Royal Geographical Society, the Gough Island Scientific Survey secured the equipment, transport and funding it needed and left for the South Atlantic in August 1955.

But they left without the expedition's leader! Heaney had been diagnosed with tuberculosis by the Shell doctors in the course of a routine medical check, and while he responded well to treatment they would not give him the all clear. Chambers took over as leader and surveyor, and encouraged the party to make the best of six weeks on Tristan da Cunha, but he in turn was incapacitated with a slipped disc during the landing on Gough Island on 13 November 1955 and had to be evacuated. The baton passed to Holdgate, who had no training or experience as a surveyor. The map, a key aim of the expedition, was in jeopardy. And even though Heaney's health was clearly improving, he had just married his fiancée, Catherine Haller, and seemed out of the picture. But the new Mrs Heaney was made of stern stuff. 'You'd better go and sort them out!' she said. Accompanied by two young Tristan islanders, Harold Green and Ernest Repetto, both skilled boatmen, Heaney arrived on Gough Island on 4 February 1956. He took over the mapping, working with Holdgate (who had already made extensive collections of invertebrate animals). The result was a detailed plan of the island, whose geographical position was adjusted several kilometres as a result of star sights. The map was published by the Royal Geographical Society on a scale of 1: 40,000 in 1957.

The Gough Island Scientific Survey was in many ways a model of how a well-planned private expedition could achieve valuable scientific results with modest resources. Numerous publications flowed from it, and several of its members subsequently followed academic careers for which their work on Gough provided a foundation. It even ended in financial surplus, thanks to selling its hut and remaining stores to the South African Weather Bureau which has kept the weather station running, albeit at a different site, to this day. And this financial surplus, augmented by profits from film and book contracts, allowed the expedition to create a Gough Island Fund at the Royal Geographical Society. All this is testimony to John Heaney's vision and skill in planning and in choosing a party that worked well together and achieved results. The Gough Island Scientific Survey put the island on the world's scientific map, and also drew new attention to the other Tristan da Cunha islands. Gough and Inaccessible Islands are now World Heritage sites, recognised as probably the most important seabird islands in the southern temperate zone. Heaney had reason to be proud of his contributions to our knowledge of the subantarctic and southern temperate region.

When the Gough Island expedition left in the South African frigate *Transvaal* on 13 May 1956, John Heaney's exploring days in the far south came to an end (though he revisited South Georgia as a tourist in 2003 and in 2006 he went back to Tristan and circumnavigated Gough, in company with five other surviving members of the Gough Island Scientific Survey). In Shell, Heaney had a distinguished career that took him to Pakistan, Venezuela, the Middle East, Brunei and Nigeria. After Shell came years divided between fruit farming in Essex and a new career in the oil industry as the creator and chief executive of Saxon Oil. Retirement finally came in 2002, and his last years were sadly impaired by Alzheimer's disease, but to the end he enjoyed the outdoors, walking daily on Southampton Common and contributing to its amenities by collecting litter. It was while thus engaged that he died suddenly on 3 November 2010. He is survived by his wife, Catherine, their son and daughter, and five grandchildren.

Martin Holdgate