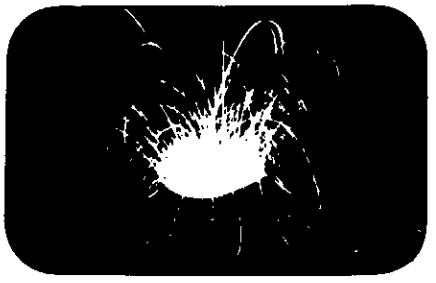
# Features



## Pyroclasts

## The Ocean Drilling Programme (ODP) and International Geoscience

Robin Riddihough
*Public Information Committee*
*Geological Association of Canada*

*The opinions expressed in this article are those of the author alone.*

The Ocean Drilling Ship JOIDES RESOLUTION sailed into St. John's harbour in late October at the end of eight weeks on Drilling Leg 105 in the Labrador Sea and Baffin Bay. On board were Co-Chief Scientist Shiri Srivastava from Atlantic Geoscience Centre and his colleagues. They had been conducting a program to determine a host of critically important pieces of information such as the age of the Labrador Sea, the circulation of Arctic-Atlantic water since the Cretaceous, the causes of glaciation, sediment depositional environments and other geological, paleontological, palynological and geophysical unknowns. These are questions that could only have been answered by drilling and in many cases only have been answered with the highly advanced, "state-of-the-art" technology available on this ship. The 7-storey laboratory stack built on the ship by the ODP program contains an assembly of geological and geophysical tools which would be the envy of any land research institute. These include a scanning electron microscope, a cryogenic magnetometer, a gamma-ray attenuation and porosity evaluator, sediment velocimeters and X-ray cameras, a gas chromatograph, an X-ray diffractometer and fluorescence machine, two VAX computers and much more.

On hand to welcome the ship was Minister of State for Mines, Robert Layton and a delegation of representatives from Government, industry and universities from Canada and the US. Assistant Deputy Minister from the Department of Energy, Mines and Resources (EMR), Bill Hutchison, a strong supporter of Canada's membership in ODP, afterward acted as Chairman at a private reception. Here the success of the Labrador Sea and Baffin Bay Leg was celebrated, along with Canada's membership in this prestigious and exciting venture. Prominent among representatives from industry was Chevron President, Gerry Henderson. In a press conference held aboard the vessel, he stressed the importance and value to both the scientific and industrial community of the results that are coming out of the program and of Canada's continuing membership.

The issues raised by the ODP and the funding that is ultimately coming out of the taxpayer's pocket are of considerable importance to the geoscience community. On the one hand, the fact that Minister Robert Layton *did* support the program when Canada's membership was in question and that an ODP Secretariat and Council has been set up and funded, are a cause for celebration. Somehow, somewhere there is sufficient belief in geoscience that Canada *is* a part of the project. The fact that we have succeeded where the UK and Australia have so far failed gives some optimism for a research environment which Leslie Millin, former Secretary of the Science Council of Canada, described as "the domain of people (scientists) who are not good at explaining themselves or their work" and a country "which has not had a science policy worthy of the name".

On the other hand, the drilling of holes in "Canadian" waters on the East Coast was of immediately perceptible and tangible value. The economic returns through local contractors, drilling technology and through a better understanding of the geology and history of the East Coast petroleum province can be well documented in terms of money in — value out. The drilling ship itself, registered as SEDCO/BP 471, was built in Halifax. Already publicity issued by EMR is talking about "Canadian" holes on the West Coast in 1989: on the Juan de Fuca Ridge, the Queen Charlotte Terrace and the continental margin of Vancouver Island. But why are these the only "Canadian" holes? In the first issue of the Canadian ODP Newsletter, Paul Robinson notes that of the proposals received by ODP to date, only three were from Canada. Germany and France have been responsible for 8 and 34 proposals, respectively, almost all of which were for drilling in areas which are nowhere near their 200-mile limits. New Zealand, which is not even a member of ODP, has generated eight drilling proposals. During the intervening four years between drilling in the Labrador Sea and possible drilling in the North Pacific, what is the true interest of the Canadian geoscience community in the ODP program going to be? Can it justify the expenditure of the $3.5 million US dollars per year that will be needed for membership, let alone the travel and research support necessary to ensure active participation?

In one of the few press articles ever to surface on the subject of the costs of ODP, the Calgary Herald of 8 October 1985 speculated that there were indeed problems with the continued funding of Canada's membership. Although verbal support had been given by a number of Government Departments for Canadian membership (presumably the cooperative aspect with the US was seen in some quarters as an important political bonus), EMR had been left to foot most of the bill. In the light of threatened cutbacks, continuing funding from this source was by no means assured. If this is true, then the support of the geoscience community is going to be critical in maintaining Canada's membership in ODP. Does such support exist? To what extent will Canada's membership (which ensures berths on each drilling Leg anywhere in the world and a place on each planning and advisory panel) be used?

The strong verbal support given the program by Gerry Henderson of Chevron at St. John's, raises the issue of whether in fact all of the funding should be coming out of the

public purse. In Britain, the Government was prepared to pay half the cost of membership if the oil industry had sufficient confidence and belief in the program to put up the other half. To this point, they have not done so. Ironically, on the same day as the JOIDES RESOLUTION was being fêted in St. John's harbour, Canada's Auditor General revealed the extent of tax concessions to the oil industry and a new round of exploration incentives were announced. The cost of a whole year's membership, co-operation and involvement in the ODP drilling program would probably represent less than 5% of the cost to industry of a single offshore well. It seems a little price to pay. Are the geoscientists in industry prepared to consider such an idea or is there in fact little more than verbal "motherhood" support for the ODP program in the industrial community?

Clearly the issue of support could become an important one. It is at the same time the old issue of Canadian involvement in international science. In geoscience at least, the traditional argument has been that a small community, faced with a massive land and offshore area, is thinly spread to keep track of Canadian geology and geophysics, let alone become heavily involved in international investigations. Although it may not be stated, presumably in the process of approving research grants and government programs, research, mapping and exploration within and around Canada is regarded as intrinsically more valuable to the national interest than investigations in South America, Australia or Antarctica. There are indeed large areas of geoscientific research in Canada that need fundamental attention, large areas that have not even been geologically mapped, large areas where there are no gravity data, no magnetic surveys, no heat flow, and so on. Alongside this must be set the problem that to do these surveys and carry out this research, we must maintain the quality and expertise of the scientists and scientific institutions in Canada. To do this, we have to be part of the international scene.

As the debate between protectionism and free trade proceeds, so, it seems to me, must the conflicts between national and international science be similarly examined. In terms of marine geoscience in Canada, can we afford *not* to be a member of the Ocean Drilling Program? The debate is now. It is Canadian geoscientists who stand to lose or gain.

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