## Background

Canada owes much of its development to its waterways and oceans. The rivers and lakes were the highways of yesterday and are still the nation's lifelines of transportation. Canada's coastlines are bordered by three oceans whose waters and seafloor hold vast wealth. The Atlantic continental shelf has the world's richest fishing grounds. Huge reservoirs of oil and gas lie in the seabeds of the Canadian zones of both the Atlantic and Arctic oceans.

For more than 100 years, Canadians have developed their capabilities to explore and exploit their marine and freshwater resources. In a variety of frequently hostile environments, challenged by immense distances and an often difficult climate, innovative solutions to unique problems were essential.

In doing it the hard way, Canada has built an oceanic manufacturing and services industry of considerable size, diversity and experience. Equipment has to meet high standards of reliability. It must work in the —40°C temperatures of the long polar nights. Supplied by air to many field operations, instrumentation and products are necessarily strong, portable and compact.

Development of new technologies has been matched by the creation of multidisciplinary oceanic capabilities to provide services for the marine, offshore and coastal sectors. The longestablished marine sciences expertise has, since the early 1970s, been expanded into the full range of products and services required to supply the offshore exploration, development and production markets.

The ocean industries grew quickly: between 1970 and 1986 total yearly sales rose from a few million to \$500 million; approximatley 60 per cent or \$300 million were exports. As a result, Canada has become a world leader in the international oceanic sector.

## **Canadian Exporters**

This directory describes more than 133 large and small Canadian firms with first-rate services and superior products available to private and public sector customers outside Canada. They are listed in alphabetical order, with an index of companies by product or service.

## Manufacturers

Canadian manufacturers set the world standard for advanced communications – voice or data, underwater or over long distances. Their oceanographic systems are designed to operate unattended for long periods, capture data and transmit information in real-time. They have

developed space-suit-like diving gear capable of deeper dives with enhanced mobility. Incorporating advanced robotics. their submersibles and remotely operated vehicles (ROVs) are used worldwide by exploration companies, scientists, power and pipeline firms alike. Canadian radar and sonar for navigation, remote sensing, or geophysical applications, is available for use aboard ships, aircraft or satellites, as are the latest solid state navigation and positioning systems. In addition, more than 80 of the firms listed offer research and development, either on contact or through a joint venture; many of these have well-equipped laboratories and test facilities.