currently in use in the Canadian North are the caisson island which uses a circular ring of concrete or metal filled with sand or gravel; the synthetic, cloth-like material used to encase sand dredged up from the sea floor; and the sacrificial beach island, made by piling up a large amount of sand and silt.

Support technology

Canada also designs and manufactures support facilities for artificial islands, such as specially-designed topside and drilling packages that can fit onto restricted caisson islands. Canadian support technology for exploration and production includes heavy equipment designed to keep drilling rigs and ships safely, accurately and dependably positioned on location.

Survival Systems uses the most current rescue equipment and procedures in safety and survival training programs.

Oil and gas processing equipment made in Canada includes a full range of batteries, compressors, dehydrators, foundations, gauges, heaters and heat exchangers, pipe fabricators, process control systems, and treaters. This equipment is widely used in the North Sea and the Gulf of Mexico and in Southeast Asian markets.

Safety a major concern

Canada is also actively involved in offshore safety, and the firms specializing in this field offer a wide range of survival and emergency response training programs to offshore workers.

Recent improvements in Canadian offshore safety practices and standards include the establishment of a common traffic-monitoring centre in offshore areas where several operators are located. This centre is intended to trace the movements of support vessels and aircraft to be able to contact the closest rescue craft in an emergency. The mandatory use of common radio frequencies among operators will improve communication between all mobile offshore drilling units, support craft, and government search and rescue craft during emergencies.

Canadian participants at Offshore Europe '85

- Atlantic Canada Airborne Sensing Inc. of Amherst, Nova Scotia — Remote sensing and collection of airborne data for offshore exploration;
- Canflex Manufacturing Inc. of Coquitlam, British Columbia — Lifting and salvage balloons for oil containment and emergency flotation;
- John T. Hepburn, Limited of Toronto, Ontario — Deck and drill rig machinery including winches, windlasses and cranes;
- Huntec (70) Limited of Scarborough, Ontario — High resolution seismic sub-bottom profiling equipment for seabed surveys;
- International Submarine Engineering Limited of Port Moody, British Columbia — Remote-controlled underwater vehicles for the offshore petroleum market;
- J. Kobelt Manufacturing Company Limited of Richmond, British Columbia — Disc brakes and pneumatic and mechanical controls;
- Maloney Steel Limited of Calgary, Alberta — Complete range of oil and gas production and processing equipment;
- Morris International Trading Limited of Vancouver, British Columbia — Disc oil skimmers with various applications, including major oil spill cleanup;
- Nova Scotia Research Corp. of Dartmouth, Nova Scotia — Slip rings for umbilical winches and diver life-support systems;
- Survival Systems Limited of Dartmouth — Offshore safety and survival training and consulting services;
- Techwest, A Division of Fleet Aerospace Corporation of Vancouver — Motion compensation systems, including winches and cranes;
- T.P.S. Industries Inc. of Tillsonburg, Ontario — A.P.I. licensed oil well casing and tubing couplings; and
- Versatile Davie Inc. of Levis, Quebec — Drilling rigs, drilling ships, production platforms, and other equipment.

A new type of rescue apparatus, the Emergency Multi-Person Rescue Apparatus (EMPRA) basket, is now carried aboard all standby vessels. The EMPRA basket can be suspended below a helicopter to lift people from drilling units or from the water under certain sea conditions.

Several major safety research projects were carried out in 1984, including a study into the Canadian offshore industry's ability to conduct relief well operations and minimize the environmental impact of a blowout.

Further developments

New products under development include a device similar in concept to the "black box" used in an aircraft, which will provide a record of events over the four-hour period prior to an accident. This device will be waterproof and ice-resistant, and will operate even in the event of a power failure.

Another project involves the design of a new submersible compression chamber, or diving bell, that can be used by divers to reach the work site in any weather conditions.

Peace force contribution

An agreement for Canadian participation in the Multinational Force and Observers (MFO), was signed by Secretary of State for External Affairs Joe Clark and Peter Constable, director-general of the Sinai-based peacekeeping force, on June 28.

Under the agreement, Canada will participate in the MFO for a period of two years and will provide up to 140 personnel and nine *CH 135* helicopters. The Canadian contingent will assume responsibility for its mission on March 31, 1986 and will replace the Australian helicopter unit that will be withdrawing in April.

The MFO was established in 1981 to monitor security provisions of the 1979 Egypt-Israel Peace Treaty. Other participating countries include Britain, Colombia, Fiji, France, Italy, the Netherlands, New Zealand, Uruguay and the US.

Canada's decision to join the MFO was made at the request of Egypt and Israel and was based on a "firm commitment to assist in the search for peace and stability in the Middle East", said Mr. Clark. He added that the peace treaty between the two countries "is testimony that peace can be achieved in the region when the will exists on both sides", and that the Canadian government hopes "that ways will eventually be found to bring about negotiations among other parties leading toward comprehensive peace in the region".