support of other surveys in the high Arctic. The John A. Macdonald has been chartered to Dome Petroleum Co. Ltd. to provide icebreaker assistance to the company's drilling fleet in the Beaufort Sea.

Pilotage is mandatory in certain Canadian waters. The coast guard establishes national standards and maintains liaison with the Atlantic, Laurentian, Great Lakes and Pacific Pilotage Authorities, which administer the provisions of the Canada Pilotage Act and related regulations.

The coast guard is responsible for the marine element of search and rescue operations in Canada, working closely with national defence staff to ensure that the most suitable equipment reaches the scene promptly. A fleet of offshore and inshore cutters, launches, lifeboats and inflatable rescue boats is assigned solely to search and rescue work. All other coast guard vessels have a secondary search and rescue role as required.

To increase the effectiveness of search and rescue, especially for pleasure craft, the government formed the Canadian marine rescue auxiliary, organized on a regional basis, with the coast guard providing co-ordination to ensure a standard approach across the country. Experienced volunteers of the auxiliary groups perform and undertake public education programs to promote boating safety.

Other duties include marine accident investigation and responding to marine oil pollution incidents. Coast guard specialized pollution cleanup equipment valued at \$15 million is located at St. John's, Nfld.

## **Civil** aviation

## Administration and policy

Administration. Civil aviation in Canada is under the jurisdiction of the federal government and is administered under the authority of the Aeronautics Act and the National Transportation Act. The first part of the Aeronautics Act deals with the technical side of civil aviation, including matters of aircraft registration, licensing of personnel, establishing and maintaining airports and facilities for air navigation, air traffic control, accident investigation and the safe operation of aircraft; it is administered by the Canadian Air Transportation Administration. The second part deals with the economic aspects of commercial air services and gives the Canadian Transport Commission certain regulatory functions in commercial air services.

Federal civil aviation policy. Canada has two main line carriers, Air Canada and Canadian Pacific. Five regional carriers provide regular route operations into the North and operate local or regional routes to supplement the domestic operations of Air Canada and CP Air. Since 1969, there have been precise guidelines for the areas in which each of the five regional carriers would be permitted to supplement, or authorized to replace, main line operations.

The relative roles of Air Canada and CP Air in the domestic sphere, as defined in the transcontinental policy of 1967, were based on a formula giving Air Canada preeminence in transcontinental services, on the assumption that the carrier might from time to time be called on to perform special services not necessarily in its commercial best interests. In 1973 the government's international policy assigned specific areas and countries to Air Canada and CP Air which they would serve under bilateral agreements. This division was aimed at assisting the airlines in long-range planning for both passenger and cargo services. In 1979, however, the government removed all restrictions on CP Air's share of domestic air services, leaving the airline to decide on routes and destinations in which to become involved.

As of March 31, 1979, there were 21,651 aircraft registered in Canada, with 57,124 licensed pilots and 7,124 other licensed personnel. The vast majority of these aircraft are in the general aviation class and are used to train pilots, in ambulance services, for crop spraying and stock herding, and in such industries as fishing and trapping, forestry, construction, manufacturing and communications. Many are also used as third level or local carriers, offering charter and some scheduled regular services.

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