

Arctic expert leads icy voyage

When the Arctic sun shines upon an iceberg, there is nothing more beautiful than that huge chunk of glacial ice, glistening blue and aquamarine.

But such celestial beauty makes the iceberg no less menacing, says Ottawa's Captain Tom Pullen, ice adviser for the first commercial passenger vessel to attempt navigation of the Northwest Passage waterway between the Atlantic and Pacific Oceans.

Pullen, 66, is regarded as one of the world's foremost Arctic navigators. The 2 500-tonne *Lindblad Explorer* cruise ship left St. John's, Newfoundland, in August, for an estimated 44-day voyage to Yokohama, Japan.

"There's nothing more visually spectacular than an iceberg," the retired Canadian navy man said before setting out.

"The menace comes if you get too close to the berg and it decides to roll over."

Although Pullen spoke light-heartedly about the voyage, he knows well "the element of uncertainty, the element of risk", confronting the 98 passengers who have signed up for the trip.

The passengers from ten countries have been guaranteed a 40 per cent refund if the vessel is forced to turn back, says Lars Wikander, president of Salen Lindblad Cruising, which owns the vessel.

There are five Canadian passengers on the voyage in addition to Pullen and Graham Rowley, a 71-year-old Carleton University

research professor and former archeologist specializing in the North.

Pullen, the winner of this year's Massey Medal, presented since 1959 by the Royal Geographical Society, has journeyed through the Passage twice before. His first voyage through was in 1969 aboard the US supertanker *Manhattan*.

This time he is interpreting ice charts distributed regularly by Environment Canada, advising Nilsson on the ice conditions throughout the 7 600-nautical-mile journey. The vessel is also equipped with several radar sets for ice detection.

The fresh-water icebergs from Ellesmere Island and the west coast of Greenland now are melting as they drift south.

Bergy bits (fragments of icebergs) can be "cottage size", while the drifting floes themselves can be more than 100 metres high. There are about 50 000 circulating in Baffin Bay alone. The size of an iceberg can be deceiving because only one-ninth of it may be above water.

Pullen must ensure the *Lindblad* doesn't blunder into one of them, or get trapped in ice as many vessels have before. Most of the icebergs are in Baffin Bay and the Davis Strait. They diminish as one moves westward, Pullen said.

The most treacherous area for the vessel is in the vicinity of the Franklin and James Ross Straits just west of the Boothia Peninsula in the Arctic Islands. If the *Lindblad* succeeds, it will be only the thirty-fourth ship in history to complete the voyage.

Aid, oil and gas report

Petro-Canada International Assistance Corporation (PCIAC) recently issued a report on its second year of activity. Since it became operational, PCIAC has undertaken aid projects in 15 oil-importing developing countries, with budgets totalling over \$100 million in the 1982-1985 period.

The PCIAC concept, first announced in 1980, is a unique new initiative in aid terms as well as in international oil and gas exploration. The idea is to use Canadian government funds to finance exploration activities in developing countries which are heavily burdened by the high costs of imported oil, using Canadian technology and equipment.

Short lead-times for equipment such as drill-rigs and seismic vessels, and tight schedules for crews and specialized personnel in the petroleum industry, make it difficult to operate an effective aid program from outside the industry. PCIAC, a fully-owned subsidiary of Petro-Canada, has access to the parent corporation's resources and personnel on a non-profit basis, with costs being recovered from Canadian aid funds voted each year by Parliament. Petro-Canada serves as PCIAC's executing agent for operations abroad, and does all contracting with Canadian industry.

For a variety of political or economic reasons, exploration activity has been at a low level in the developing countries, compared to the geological potential of these areas. The international community has recognized this problem as critical. The World Bank, for instance, devotes more than \$1 billion a year to petroleum projects. The Canadian oil and gas industry, with a proven technological record, can provide badly needed expertise and equipment to assist these countries in their efforts to find indigenous sources of oil and gas, including the training of their personnel.

Projects are underway in a broad cross-section of countries, including Barbados, Haiti, Jamaica and the Windward Islands in the Caribbean, Senegal, Gambia, Ghana, Morocco and Tanzania in Africa, and Thailand, Sri Lanka and the Philippines in Asia. New projects are being studied in other Latin American, African and Asian countries.

The aid budget for these projects has more than tripled, from \$20 million in 1982 to \$70 million in 1984. These funds are used to provide a wide range of Canadian goods and services, often introducing competent Canadian companies to new areas of activity in the Third World, and providing a basis for further commercial opportunities in these countries.



Map shows route cruise ship will take.