

Floor Plan

Last year the Canadian Hydrographic Service published the eighteenth and final sheet of the General Bathymetric Chart of the Oceans.

The complete chart gives the depths and configurations of all the oceans' floor, and it is now the premier reference work for oceanographers.

The first such chart was produced with the active support of Prince Albert I of Monaco in 1903. A second was issued between 1912 and 1930 and a third in the late 1930s. A fourth edition was begun but only two sheets had appeared by 1961.

In 1974 the member nations of the International Hydrographic Organization of Monaco and the United Nations' affiliated group, the Intergovernmental Oceanographic Commission, agreed that a new issue was needed and Canada volunteered.

The new sheets are by far the most precise ever produced since the cartographers had the great advantage of working not only with the echo-sounding techniques that give a moving vessel a continuous reading of the ocean bottom, which had been developed in the 1930s, but also with computers and long-range electronic navigation equipment which can fix a ship's precise position at any given moment.

Sixteen of the sheets are on a scale of 1:10,000,000, the two polar ones, 1:6,000,000.

This means that one inch on the charts represents 150 miles in the first case and 100 miles in the second. Spliced together, as they are on the wall of the Hydrographic Service in Ottawa, they are slightly more than thirteen feet wide.

Joe Ploeg's Waves

Joe Ploeg and the Hydraulics Laboratory at the National Research Council have been studying episodic waves since 1976.

The waves occur most often on the sheer edge of a continental shelf when tides, winds and currents interact in a certain way. They are called episodic because they were first believed to be rare. They have proved, however, to be relatively common. They come in sequence and as one overtakes another they build up, perhaps to a crest of 100 feet that then breaks, destroying ships, breakwaters or whatever happens to be in its path.

Ploeg has created test waves in the lab by computer. His system can be used in designing wave-resistant breakwaters and buoys.

Insurance companies have designated certain areas of Norway and South Africa as susceptible to the waves and will not insure ships traveling in them.

One possibility awaiting further investigation is that ships lost in the Bermuda Triangle may have been hit by such waves.

Hudson Bay

Hudson Bay is rich in copper, silver, uranium, iron, nickel and zinc, but much of its riches are now—and perhaps always will be—beyond anyone's avarice.

The Bay is huge, 320,000 square miles, and inhospitable. It was squashed into shape 10,000 years ago when the area was covered by a mile-thick lid of ice. It is still covered most of the year,



Hudson Bay, off Churchill, Manitoba.