

ORGANIZATION AND TRAINING OF THE PROFESSIONAL AND TECHNICAL PERSONNEL OF THE CANADIAN HYDROGRAPHIC SERVICE

The Canadian Hydrographic Service is responsible for procuring and publishing hydrographic navigational data covering the coastal, estuarial and inland navigable waters of Canada. Nautical publications include the standard Canadian navigation charts, charts for special purposes, volumes of Coast Pilots and Sailing Directions, Water Level Bulletins pertaining to the fluctuations of the St. Lawrence-Great Lakes Waterway, and the official tidal and current prediction tables.

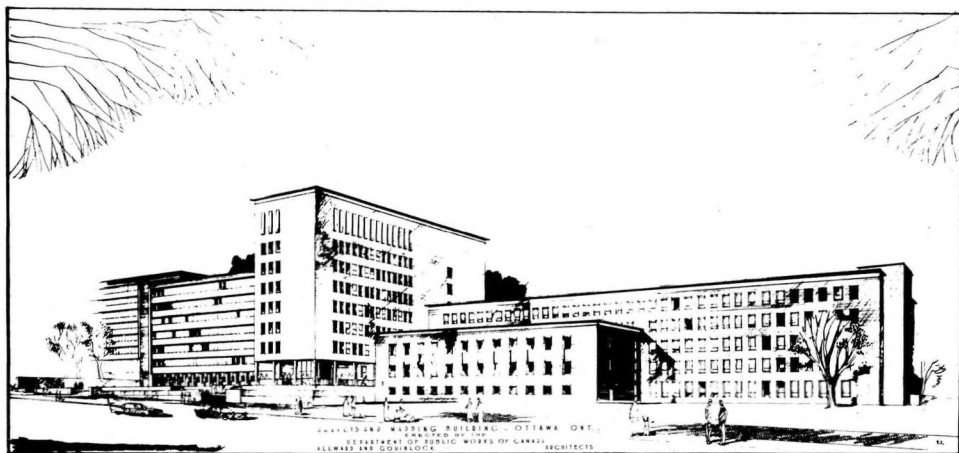


FIG. 1. — New Surveys and Mapping Building will house the Canadian Hydrographic Service when completed in 1960.

The Canadian Hydrographic Service, which is part of the Surveys and Mapping Branch of the Department of Mines and Technical Surveys, has its headquarters at Ottawa, which office is also the clearing centre for general navigational information. The District Office, at Halifax, N.S., serves as a base for many of the Atlantic Coast and Eastern Arctic survey staff and other personnel. The District Office at Victoria, B.C., supervises the charting and tidal operations on the Pacific Coast, and serves as the principal distributing centre for nautical publications pertaining to that seaboard.

Recruitment is the responsibility of the Civil Service Commission which,

in Canada, is the official personnel agency for civilian federal departments. Vacancies are advertised by that agency and candidates with acceptable qualifications are listed and appointed in order of their standing. Training of new employees is, in the main, given on the job.



FIG. 2. — Instruction in the use of Tellurometer and Theodolite is part of a training programme in modern surveying methods.

In addition to the administrative staff and the technical advisor on ship's construction, the Service is divided into two main functions :

- Hydrography;
- Charts and Sailing Directions.

Professional personnel are employed in the Hydrography and in the Charts and Sailing Directions Sections, and as senior officers in the Tides and Water Levels, the Chart Construction and the Sailing Directions Units. The remainder of the personnel in these latter Units are classed as Technical Officers and Technicians.

The requirements for hydrographers and other professional personnel, excluding oceanographers, are :

Graduation from a university of recognized standing in pure or applied science, or

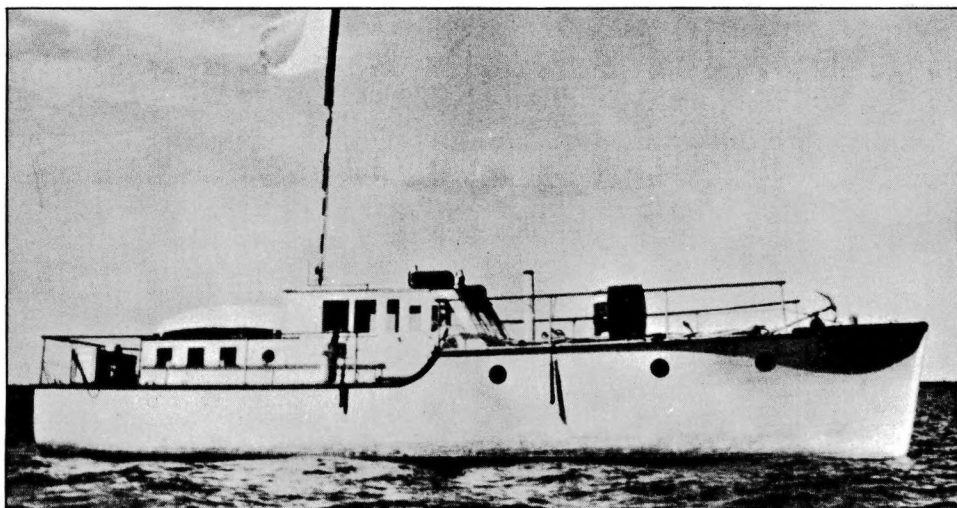


FIG. 3. — Canadian Government Launch *Rae*. A typical 46-foot launch used for inshore and inland waters, here seen on Great Slave Lake.

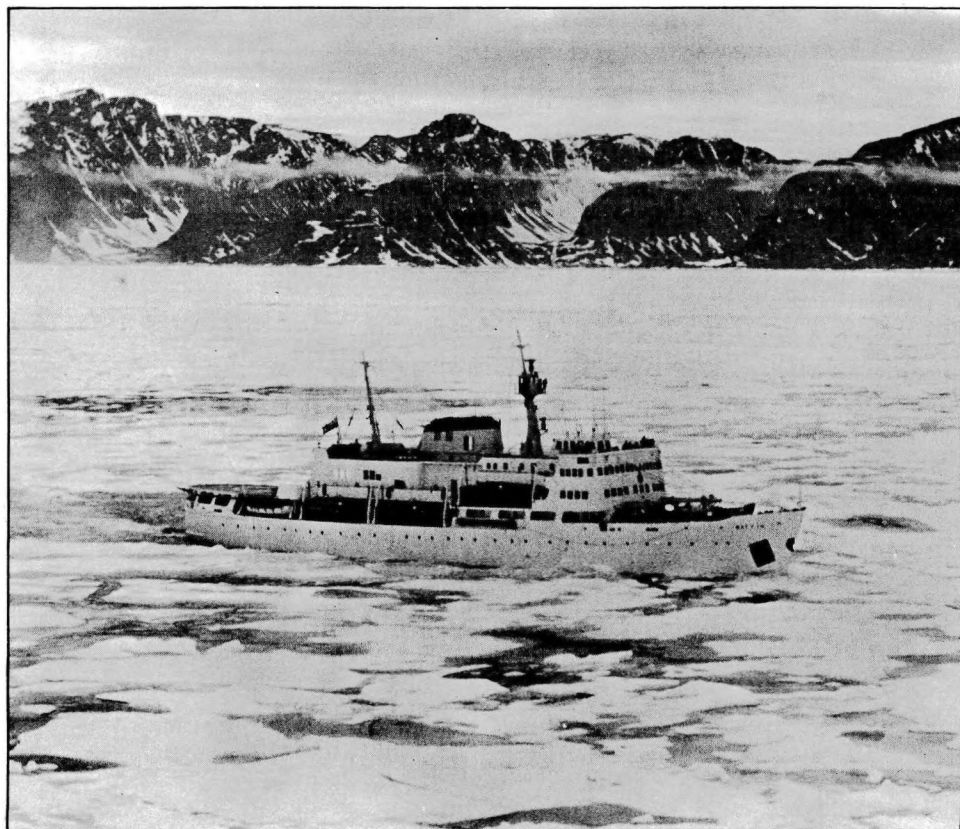


FIG. 4. — Meeting the challenge of the North is the newest edition to the Hydrographic fleet, the C. G. S. *Baffin*. The ship is equipped with the most modern navigational and hydrographic instruments.

A Master's or First Mate's Certificate of competency for foreign-going vessels, or
 Several years of experience in hydrographic work at a responsible level.



FIG. 5. — Helicopters on the C.G.S. *Baffin* are used for rapid transportation of men and equipment from ship to shore.

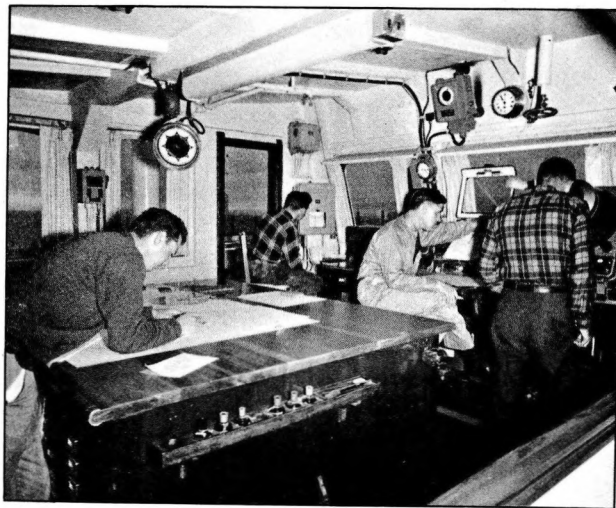
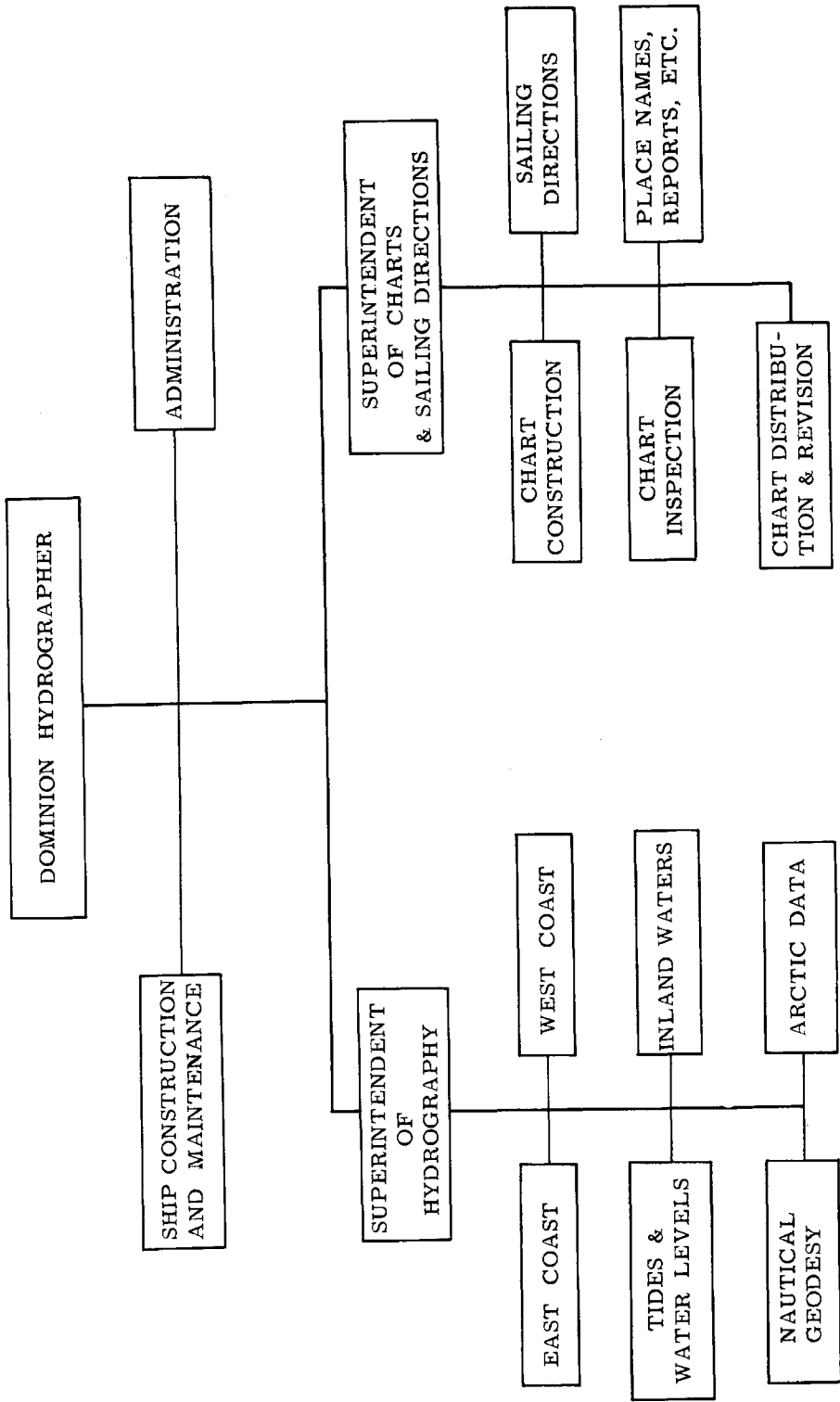


FIG. 6. — The plotting room of the C.G.S. *Baffin* showing the gyro repeater, echo sounder, Decca plotter and radar.

Junior officers are given on-the-job training in the various aspects of the work. In addition, the hydrographers are given a comprehensive course of instruction and practical field training in :

- (a) the mathematical principles involved in computation and adjustment of data as related to geodetic positioning;
- (b) methods of plotting source material to field sheets;
- (c) the principles, methods and techniques of recording and evaluating tidal data;
- (d) the principles underlying the operation of hydrographic instruments and equipment.

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FUNCTIONAL CHART



Further training in the work is acquired by actual experience with operational field parties under the direction of senior hydrographers.

The minimum entrance requirements for draughtsmen and compilers in the Chart Construction Unit is graduation from high school. When personnel are recruited for chart construction work, at the entrance level, the employee works first under close supervision, in the draughting group, becoming familiar with the technical aspects of chart making. Those who show a good sense of judgment and ability for compiling chart material may be transferred to the compilation group. Here again, under supervision, skill and experience are acquired by working on chart construction and the employee gradually progresses towards more complex duties requiring limited supervision.

The attached functional chart gives a diagrammatic picture of the organization of the Service as a whole.