



Base from U. S. Geological Survey topographic maps Anchorage 1:1, 1942; Seward 1:1, 1942; and Cordova 1:1, 1942. Scale 1:162,000. Soundings adjusted to air photos.

**INTERIM BATHYMETRY OF COLUMBIA BAY AND APPROACHES, ALASKA**

By  
AUSTIN POST  
1978

SCALE 1:20,000  
SOUNDING IS APPROXIMATE LOWER WATER SOUNDING IN FEET

**Introduction**  
This bathymetric plot was compiled principally from data collected during the spring and summer of 1977 by the U. S. Geological Survey 24-Cruiser as a part of a larger project to predict iceberg discharge of Columbia Glacier. Very little bathymetry was available in the area prior to this study. These provisional data on water depths were compiled in the course of extending the triangulation net from making daily iceberg frequency surveys, and running sounding profiles.

**Acknowledgments**  
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**How the data were compiled**  
During the season four different depth recorders were used in the following order: (1) Raytheon DG 733, 100 kHz, reading to 600 fms; (2) Ross SL 600C, 105 kHz, reading to 300 fms; (3) Ross RD 57, 27.2 kHz, reading to 100 fms; and, in conjunction with the latter on selected lines, (4) a Minigarator subbottom profiler.

None of the above instruments was bar-checked in water depths greater than 100 fms, and considerable spread was obtained by the different recorders at extreme depths. The DG 733 and the SL 600C gave readings approximately 10 percent greater than those obtained with the RD 57 and the Minigarator. At the latter instruments had both recently been calibrated, their data is assumed to be the more accurate. Soundings obtained by the different systems were not adjusted, and listed to be the more accurate. Their comparisons to approximate mean lower low tide recorders in Columbia Bay indicated these data to be accurate within about 3 feet of measured tide.

**Isobaths**  
Especially during summer and fall months, quantities of glacier ice in the area discharge from Columbia Glacier. Depending on the state of discharge, which fluctuates greatly from day to day and with tidal currents and wind conditions, dangerous icebergs are as encountered with ice in the waters shown on this chart. Iceberg frequency is greatest in Columbia Bay and in the waters north of Glacier Island, which, on occasions, are encountered with ice to render the area inaccessible to shipping. Less frequently, dangerous bergs drift into Prince William Sound west of Glacier Island. Navigators are advised to use special caution in this area, as some low-floating "growlers" are largely submerged and particularly hard to identify.

**References**  
\*Use of brand names or model numbers in this report does not imply endorsement by the U. S. Geological Survey.