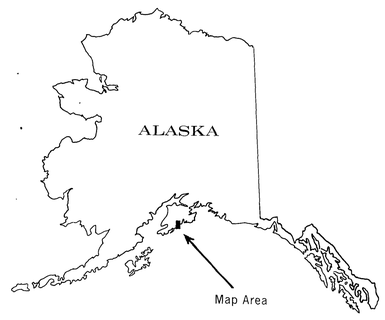
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PRELIMINARY BATHYMETRY NORTH PART

OPEN FILE REPORT 80-424
SHEET 1 OF 4



Setting

McCarty Fiord is a rarely visited inlet on the Gulf of Alaska coast in the Kenai Mountains, Alaska. The fiord was entirely filled with McCarty Glacier as late as 1860; since then the glacier has experienced a 15-mi (24-km) retreat exposing a deep, narrow inlet of remarkable beauty.

Bathymetry

In June 1978, the 40-ft U.S. Geological Survey Research Vessel Growler, investigating the dynamics of iceberg discharge from drastically retreating calving glaciers, obtained the bathymetry shown on this sheet and that north of the terminal moraine shown on sheet 2. Soundings were adjusted to approximate lower low water from plots made from predicted tides at nearby stations published by the National Ocean Survey, National Oceanic and Atmospheric Administration (NOAA). A Ross 400B* depth recorder obtained records aboard the vessel; positions were obtained with a Decca 110 navigation radar equipped with a precision measuring device. In the shoal area near McCarty Glacier, soundings were obtained with a Ross SL 600C depth recorder mounted aboard an outboard-powered dory; these lines were run visually between identifiable points on shore. Both plotting methods are imprecise, and the positions of soundings are approximate. Soundings were obtained only in the areas shown, and dangerous, undetected shoals and rocks may exist. Neither of the bays situated east and west just north of the terminal moraine (sheet 2) was investigated, and on the east side, kelp was noted which is evidence of a rocky bottom at shallow depth. Vessels crossing the terminal moraine should use extreme caution and give the low land to both east and west a wide berth due to shoals resulting from subsidence of former spits caused by the 1964 Alaskan earthquake.

*The use of brand names or model numbers in this report does not imply endorsement bythe U.S. Geological Survey.

Explanation

330 Soundings in feet.

- Rocks awash, dangerous to navigation
- Sunken rocks, dangerous to navigation
- Outwash or delta above high tide
- Shoal area, undifferentiated mud, sand, gravel, or rock below high tide
- Triangulation station
- Anchorage

Base enlarged from Seldovia C-1 and D-1 1:63,360 quadrangles. Shorelines were adjusted from 1977 and 1978 air photography to show present approximate mean high water, and reflect changes in the coastline due to the 1964 Alaskan earthquake. Glaciers are sketched and contoured to show approximate 1978 conditions. Compiled at U.S. Geological Survey, Project Office - Glaciology, Tacoma, Wash.

PRELIMINARY BATHYMETRY OF MC CARTY FIORD AND NEOGLACIAL CHANGES OF MC CARTY GLACIER, ALASKA

SCALE 1:20 000

1 .5 0 1 2 3 MILES

1 5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 100 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET-DATUM IS MEAN LOWER LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 8 FEET

MAP NOT FOR USE IN NAVIGATION

By
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1980