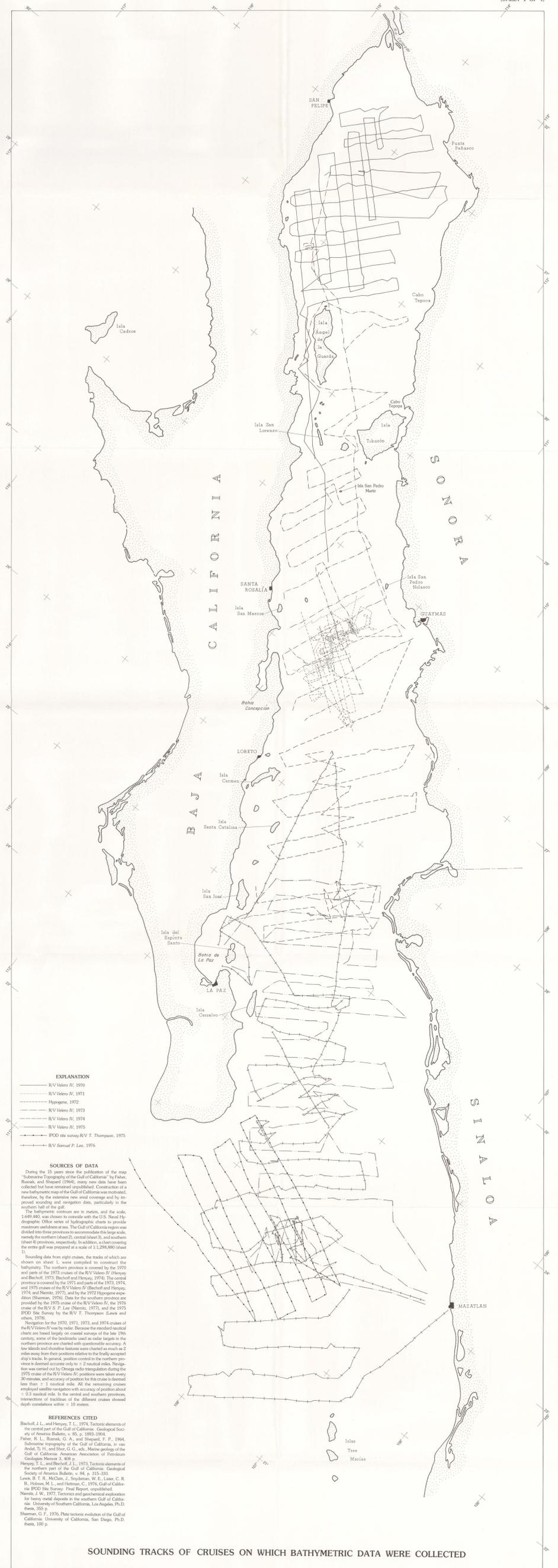


REGIONAL MAP



SOUNDING TRACKS OF CRUISES ON WHICH BATHYMETRIC DATA WERE COLLECTED

- EXPLANATION**
- R/V Velez IV, 1970
 - R/V Velez IV, 1971
 - Hypogem, 1972
 - R/V Velez IV, 1973
 - R/V Velez IV, 1974
 - R/V Velez IV, 1975
 - IPOD site survey-R/V F. Thompson, 1975
 - R/V Samuel P. Lee, 1976

SOURCES OF DATA

During the 15 years since the publication of the map "Submarine Topography of the Gulf of California" by Fisher, Ruzick, and Shepard (1964), many new data have been collected but have remained unpublished. Construction of a new bathymetric map of the Gulf of California was motivated, therefore, by the extensive new and complete and by improved sounding and navigation data, particularly in the southern half of the Gulf.

The bathymetric contours are in meters, and the scale, 1:600,000, was chosen to coincide with the U.S. Naval Hydrographic Office series of hydrographic charts to provide maximum usefulness. The Gulf of California region was divided into three provinces to accommodate this large scale, namely the northern (N), central (C), and southern (S) provinces, respectively. In addition, a chart covering the entire gulf was prepared at a scale of 1:2,250,000 (sheet 1).

Sounding data from eight cruises, the tracks of which are shown on sheet 1, were compiled to construct the bathymetry. The northern province is covered by the 1970 and parts of the 1973 cruises of the R/V Velez IV (Hansen and Bischoff, 1973; Bischoff and Hansen, 1974). The central province is covered by the 1971 and parts of the 1973, 1974, and 1975 cruises of the R/V Velez IV (Bischoff and Hansen, 1974; Bischoff and Hansen, 1975; and Hansen, 1977), and by the 1972 Hypogem expedition (Shuman, 1976). Data for the southern province are provided by the 1975 cruise of the R/V Velez IV, the 1975 IPOD site survey by the R/V F. Thompson (Hansen and Hansen, 1978).

Navigation for the 1970, 1971, 1973, and 1974 cruises of the R/V Velez IV was by radar. Because the standard nautical charts are based largely on coastal surveys of the late 19th century, some of the landmarks used as radar targets in the northern province are checked with quantitative accuracy. A few islands and shoreline features were checked as much as 2 miles away from their positions relative to the locally accepted chart. In general, position control in the northern province is deemed accurate only to ± 2 nautical miles. Navigation was carried out by Omega radio navigation during the 1973 cruise of the R/V Velez IV; positions were taken every 30 minutes, and accuracy of position for this cruise is deemed less than ± 1 nautical mile. All the remaining cruises employed landfall navigation with accuracy of position about ± 0.3 nautical mile. In the central and southern provinces, intersection of meridians of the different cruises showed depth correlations within ± 10 meters.

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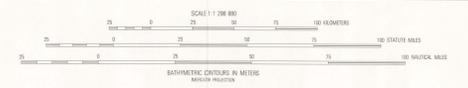
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BATHYMETRIC MAPS OF THE GULF OF CALIFORNIA

By
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