United States
Department of the Interior
Geological Survey

MULTICHANNEL SEISMIC-REFLECTION PROFILES COLLECTED IN 1979 IN THE EASTERN PACIFIC OCEAN OFF THE CALIFORNIA COAST SOUTH OF PT. CONCEPTION

by

DENNIS M. MANN and JAMES K. CROUCH

U.S. Geological Survey
OPEN FILE REPORT
83-593

MULTICHANNEL SEISMIC-REFLECTION PROFILES COLLECTED IN 1979 IN THE EASTERN PACIFIC OCEAN OFF THE CALIFORNIA COAST SOUTH OF PT. CONCEPTION

by

DENNIS M. MANN and JAMES K. CROUCH

During the fall of 1979 the U.S. Geological Survey (USGS) collected approximately 1104 km. of 24 channel seismic-reflection data across the continental margin in the eastern Pacific Ocean off the California coast south of Point Conception (fig.1). The profiles were collected on the USGS Research Vessel S.P. Lee using a sound source of five airguns totalling 1326 in^3. The recording system consisted of a 24-group streamer, 2400 meters long and a GUS (Global Universal Science) model 4200 digital recording instrument. Records were sampled at a 2-millisecond rate and later processed at a 4-millisecond rate. Navigational control for the survey was by satellite fixes augmented by Loran C. (Rho-Rho) and doppler-sonar bottom-track navigation.

The seismic reflection records vary from 8 to 12 seconds in length depending on water depth and geologic structure. The data have been edited, stacked, deconvoluted, filtered, and graphically displayed on an electrostatic plot. All processing was carried out at the USGS Marine Geology Processing Center in Menlo Park, California. Plate 1 is a trackline chart showing shotpoint navigation. Note that the signal-noise ratio of lines 907 to 909 is poor due to heavy seas encountered during that part of the cruise.

The data are available in 3 formats:

1. Electrostatically plotted profiles which were deconvolved and filtered after stacking. Copies of the profiles may be purchased through:

   National Geophysical and Solar Terrestrial Data Center
   National Oceanic and Atmospheric Administration
   Boulder, Colorado 80302

2. Digital magnetic stack tapes. Copies of the stack tapes and a description of the tape format can be obtained at the requesters expense by contacting:

   Data Curator
   Pacific Branch of Marine Geology
   U.S. Geological Survey
   345 Middlefield Rd.
   Menlo Park, California 94025

3. Digital magnetic demultiplexed tapes. Copies of the demultiplexed tapes and a description of the tape format can be obtained at the requesters expense by contacting the above address.

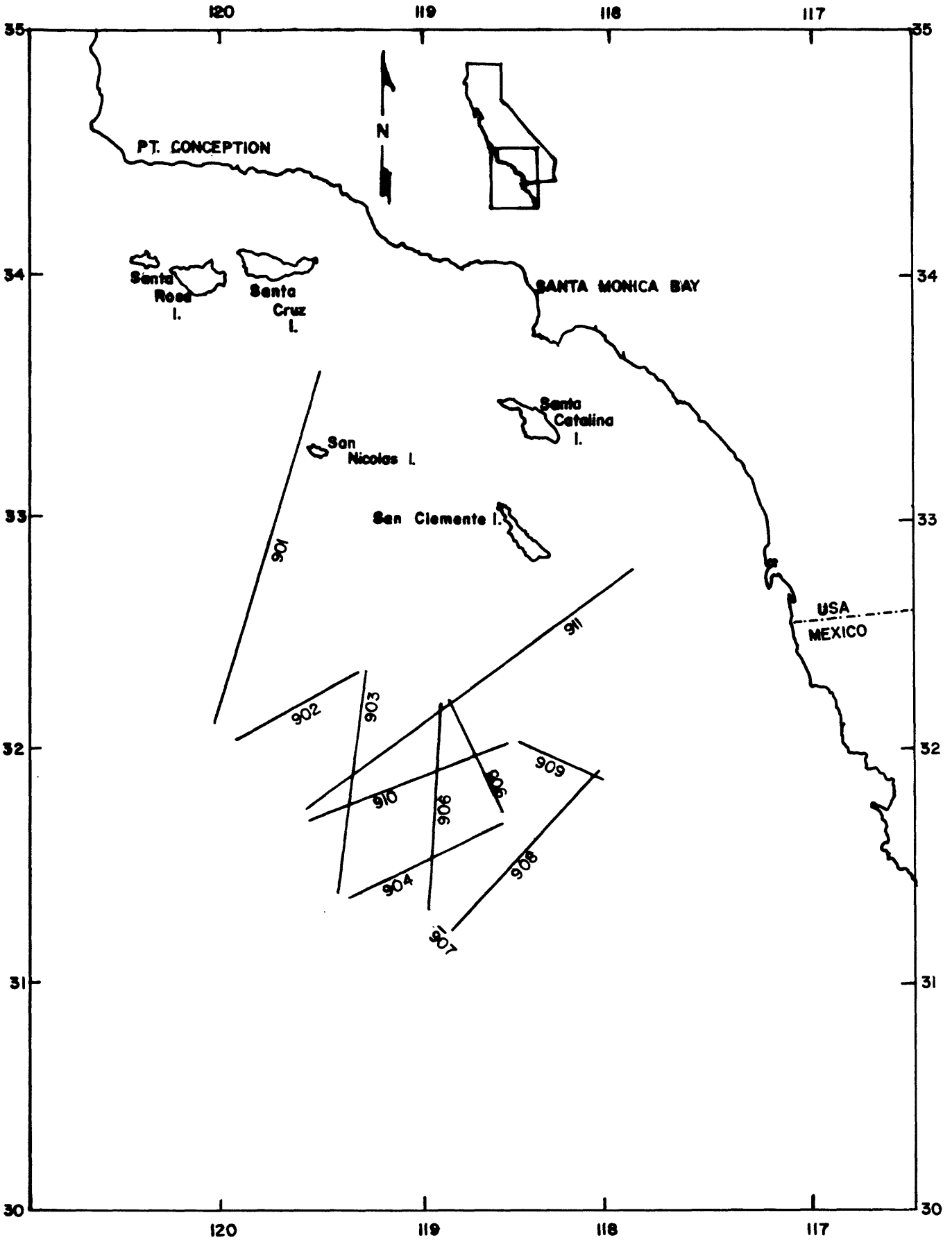

FIGURE 1. AREA OF STUDY. PLATE 1 SHOWS DETAILED LOCATION OF TRACKLINES AND SHOTPOINTS