U.S. Department of the Interior
U.S. Geological Survey

Prepared in cooperation with
Scripps Institution of Oceangraphy

Scientific Investigations Map 3324
Sheet 1 of 3

DISCUSSION

This colored shaded-relief bathymetry map was generated from multibeam-echosounder bathymetry data collected in 2013 by Scripps Institution of Oceanography and processed by U.S. Geological Survey, as well as from publicly available multibeam-bathymetry data acquired by various federal and local agencies, academic institutions, and private firms. Data sources (see fig. 1) and availability are as follows:

- Scripps Institution of Oceanography, survey MV–1316 (processed by U.S. Geological Survey; data available in this report).
- U.S. Geological Survey datasets: Los Angeles margin (available at http://pubs.usgs.gov/of/2002/0162/), San Diego margin (available at http://pubs.usgs.gov/of/2004/1221/), and Gulf of Santa Catalina (available at http://pubs.usgs.gov/of/2014/1094/).
- California Seafloor Mapping Program and California State University, Monterey Bay, Seafloor Mapping Lab datasets: Santa Catalina Island, H11879, H11880, H11881, La Jolla Canyon, San Elijo Lagoon, and Santa Margarita River (available at http://seafloor.otterlabs.org/csmp/csmp.html).
- Various datasets available from National Geophysical Data Center: CALF01RR, DRFT01RR, GLOR00MV, MCD0212, AT03149, WEST15MV, and NPAL (available at http://www.ngdc.noaa.gov/mgg/bathymetry/relief.html).
- San Diego Association of Governments/California Department of Fish and Wildlife datasets (available at ftp://ftp.dfg.ca.gov/R7_MR/BATHYMETRY/BAT_SCSR_SANDAG.zip).
- National Oceanic and Atmospheric Administration, Coastal Relief Model (available at http://www.ngdc.noaa.gov/).

Note that rippled or (in places) smooth linear features visible on map are data-collection or processing artifacts.

EXPLANATION

Depth (in meters) and illumination (bright areas are illuminated, facing false sun; dark areas are in shadow, facing away from false sun)

0 200 400 600 800 1000 1200 1400 1600 1800 2000

Direction of illumination from false sun—Position of false sun is at 300° azimuth, 45° above horizon [arrow included in explanation for illustration purposes only; not shown on map]

— 100 m — **Bathymetric contour (in meters)**—Contour intervals: 1–200 m water depth, 100 m; >200 m water depth, 200 m

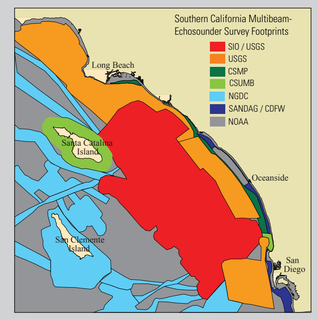

Figure 1. Map showing multibeam-echosounder surveys that collected bathymetry data used to make shaded-relief bathymetry map. Data sources: SIO/USGS, Scripps Institution of Oceanography (processed by U.S. Geological Survey); USGS, U.S. Geological Survey; CSMP, California Seafloor Mapping Program; CSUMB, California State University, Monterey Bay, Seafloor Mapping Lab; NGDC, NOAA National Geophysical Data Center; SANDAG/CDFW, San Diego Association of Governments/California Department of Fish and Wildlife. In areas where multibeam-echosounder bathymetry data is lacking (gray shading), shaded-relief bathymetry from NOAA's Coastal Relief Model is shown.

Onshore imagery modified from LANDSAT-8 satellite data (available from U.S. Geological Survey, Earth Explorer, at http://earthexplorer.usgs.gov/).

Universal Transverse Mercator projection, Zone 11N

NOT INTENDED FOR NAVIGATIONAL USE

APPROXIMATE MEAN DECLINATION, 2015

BATHYMETRIC CONTOUR INTERVAL 100-m intervals, 0 to 200m; 200-m intervals, 200 to 2000m

ONE MILE = 0.869 NAUTICAL MILES

MAP LOCATION

Shaded-relief bathymetry by Peter Dartnell, 2014.
Bathymetric contours by Peter Dartnell, 2014
GIS database and cartography by Peter Dartnell
Edited by Kate Jacques and Taryn Lindquist
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Colored Shaded-Relief Bathymetry, Acoustic Backscatter, and Selected Perspective Views of the Inner Continental Borderland, Southern California

By

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For sale by U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225, 1–888–ASK–USGS

Digital files available at http://dx.doi.org/10.3133/sim3324 or http://pubs.usgs.gov/sim/3324/

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