

D00249

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service

DESCRIPTIVE REPORT

Type of Survey: Navigable Area

Registry Number: D00249

LOCALITY

State(s): California

General Locality: Channel Islands National Marine Sanctuary

Sub-locality: Santa Cruz Basin

2018

CHIEF OF PARTY
Benjamin K. Evans, CDR/NOAA

LIBRARY & ARCHIVES

Date:

HYDROGRAPHIC TITLE SHEET

D00249

INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State(s): **California**

General Locality: **Channel Islands National Marine Sanctuary**

Sub-Locality: **Santa Cruz Basin**

Scale: **100000**

Dates of Survey: **09/12/2018 to 10/11/2018**

Instructions Dated: **08/20/2018**

Project Number: **OPR-L397-RA-18**

Field Unit: **NOAA Ship Rainier**

Chief of Party: **Benjamin K. Evans, CDR/NOAA**

Soundings by: **Kongsberg Maritime EM 710 (MBES)**

Imagery by: **Multibeam Acoustic Backscatter ()**

Verification by: **Pacific Hydrographic Branch**

Soundings Acquired in: **meters at Mean Lower Low Water**

Remarks:

In addition to providing data for crucial nautical chart updates, this survey will also generate backscatter data, which will be used in habitat mapping and substrate analysis. Both multibeam echo sounder and backscatter data will not only serve to enhance marine navigational safety, but will also be used by sanctuary managers, planners, and researchers, aiding them in the conservation of this most precious resource. All separates are filed with the hydrographic data. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via <http://www.ncei.noaa.gov/>.

DESCRIPTIVE REPORT MEMO


February 04, 2019

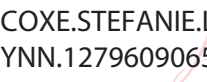
MEMORANDUM FOR: CDR Olivia A. Hauser, NOAA
Chief, Pacific Hydrographic Branch

THROUGH: CDR Benjamin K. Evans, NOAA
Commanding Officer, NOAA Ship *Rainier*

FROM: ENS Stefanie L. Coxe, NOAA
Sheet Manager, NOAA Ship *Rainier*

SUBJECT: Submission of Survey D00249


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Survey D00249 is part of OPR-L397-RA-18. The survey was requested in response to recent seismic activity approximately seven nautical miles south of Santa Cruz Island in the Santa Cruz Basin. Geologists and tsunami modelers from the US Geological Survey are interested in using the multibeam data to investigate seafloor disturbances, as submarine landslides in this region are capable of generating tsunamis.

The NOAA Ship *Rainier* collected and processed data to produce a variable-resolution bathymetric surface for the Pacific Hydrographic Branch. Submitted surfaces were generated using the recommended parameters for "Ranges" style variable resolution bathymetric grids as specified in HSSD 2018. Raw backscatter data was acquired as .all files logged during MBES operations and subsequently processed by personnel aboard *Rainier*. The .GSF files created during processing and one backscatter mosaic per vessel per frequency has been delivered with this report. Backscatter processing procedures utilized followed those detailed in the DAPR.

Soundings were acquired referenced to the ellipsoid and transformed to Mean Lower Low Water (MLLW) using the VDatum separation file, OPR_L397_RA_18_lgECpoly_xyNAD83-MLLW_geoid12b.csar, provided by NOAA's Hydrographic Surveys Division.

All survey systems and methods utilized during this survey are described in the DAPR. No holidays were identified in the VR surface. Crosslines were not acquired on D00249 because the priority for this survey was to maximize overall MBES coverage.

Data were examined for fliers using QC Tools 2 v2.7.4. After data cleaning, Detect Fliers listed 65 potential fliers. Data were investigated by the hydrographer in CARIS Subset Editor and fliers were found to be on the edge of coverage.

Data from D00249 was compared with charted soundings and the hydrographer has determined that the survey does not contain any findings significant to navigation. Survey contours follow the general trends of

the charted depth curves. Surveyed soundings generally agreed well with charted depths, however one area showed survey soundings to be up to 133.5 meters deeper than charted depths in the area.

Survey D00249 is intended as an earthquake reconnaissance survey. The data were reviewed and no DTONs were identified in this survey. This survey does meet charting specifications and the hydrographer recommends that data be retained for archival purposes and inclusion in the National Bathymetric Source database.

Metadata for Survey D00249	
Project	OPR-L397-RA-18
Survey	D00249
State	California
Locality	Channel Islands National Marine Sanctuary
Sub-Locality	Santa Cruz Basin
Scale of Survey	1:100000
Sonars Used	Kongsberg Maritime EM 710 (MBES)
Horizontal Datum	North American Datum 1983
Vertical Datum	Mean Lower Low Water (MLLW)
Vertical Datum Correction	VDatum
Projection	NAD83 Projected UTM Zone 10N
Field Unit	NOAA Ship <i>Rainier</i>
Survey Dates	09/12/2018 - 10/11/2018
Chief of Party	Benjamin K. Evans, CDR/NOAA
Submission Date	02/04/2019

APPROVAL PAGE

D00249

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NCEI for archive

- Descriptive Report
- Collection of Bathymetric Attributed Grids (BAGs)
- Collection of backscatter mosaics
- Processed survey data and records
- GeoPDF of survey products

The survey evaluation and verification has been conducted according current OCS Specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: _____

Commander Olivia Hauser, NOAA
Chief, Pacific Hydrographic Branch