

W00578

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

DESCRIPTIVE REPORT

Type of Survey: Navigable Area

Registry Number: W00578

LOCALITY

State(s): Mississippi

General Locality: Mississippi River Delta

Sub-locality: Approaches to Southwest Pass

2021

CHIEF OF PARTY
Wayne E. Baldwin

LIBRARY & ARCHIVES

Date:

HYDROGRAPHIC TITLE SHEET

W00578

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): **Mississippi**

General Locality: **Mississippi River Delta**

Sub-Locality: **Approaches to Southwest Pass**

Scale: **40000**

Dates of Survey: **05/21/2017 to 05/26/2017**

Instructions Dated: **10/27/2021**

Project Number: **ESD-PHB-21**

Field Unit: **US Geological Survey**

Chief of Party: **Wayne E. Baldwin**

Soundings by: **Teledyne RESON SeaBat T20-P (MBES)**

Imagery by: **N/A**

Verification by: **Pacific Hydrographic Branch**

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

Remarks:

Any revisions to the Descriptive Report (DR) applied during office processing are shown in red italic text. The DR is maintained as a field unit product, therefore all information and recommendations within this report are considered preliminary unless otherwise noted. The final disposition of survey data is represented in the NOAA nautical chart products. All pertinent records for this survey are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via <https://www.ncei.noaa.gov/>. Products created during office processing were generated in NAD83 UTM 16N, MLLW. All references to other horizontal or vertical datums in this report are applicable to the processed hydrographic data provided by the field unit.

DESCRIPTIVE REPORT MEMO

October 27, 2021

MEMORANDUM FOR: Pacific Hydrographic Branch

FROM: Report prepared by PHB on behalf of field unit
Wayne E. Baldwin
Geologist, U.S. Geological Survey

SUBJECT: Submission of Survey W00578

High resolution bathymetric, sea-floor backscatter, and seismic-reflection data were collected offshore of southeastern Louisiana aboard the research vessel Point Sur on May 19-26, 2017, in an effort to characterize mudflow hazards on the Mississippi River Delta front. As the initial field program of a research cooperative between the U.S. Geological Survey, the Bureau of Ocean Energy Management, and other Federal and academic partners, the primary objective of this cruise was to assess the suitability of sea-floor mapping and shallow subsurface imaging tools in the challenging environmental conditions found across delta fronts (for example, variably distributed water column stratification and widespread biogenic gas in the shallow subsurface). Approximately 675 kilometers (km) of multibeam bathymetry and backscatter data, 420 km of towed chirp data, and 550 km of multichannel seismic data were collected. Varied mudflow (gully, lobe), prodelta morphologies, and structural features were imaged in selected survey areas from Pass a Loutre to Southwest Pass.

A 10m gridded surface referenced to MLLW was produced from this survey.

All soundings were reduced to Mean Lower Low Water using VDatum. The horizontal datum for this project is North American Datum of 1983 (NAD 83). The projection used for this project is Universal Transverse Mercator (UTM) Zone 16.

All survey systems and methods utilized during this survey were as described in the provided metadata file W00578_metadata.xml.

All data were reviewed for DTONs and none were identified in this survey.

U.S. Geological Survey acquired the data outlined in this report. Data are available at <https://www.sciencebase.gov/catalog/item/5a8c4bcbe4b00f54eb44044c>. Additional documentation from the data provider may be attached to this report.

This survey has good overall bathymetric agreement with modern overlapping surveys from 2015 and 2016, within about 0.5m. The deeper portions, about 50m and deeper, overlap with historic surveys (1940s) where bathymetric comparisons show much larger disagreements of around 5m differences.

This survey does meet charting specifications and is adequate to supersede prior data. Given the modern capabilities and good agreement with authoritative contemporary surveys, the bathymetry from W00578 should supersede existing data for all relevant extents.

APPROVAL PAGE

W00578

The survey data meet or exceed the current requirements of the Office of Coast Survey hydrographic data review process and may be used to update NOAA products. The following survey products will be archived at the National Centers for Environmental Information:

- Descriptive Report
- Collection of Bathymetric Attributed Grids (BAGs)
- Geospatial PDF of survey products

Approved: _____

Peter Holmberg
Acting Chief, Pacific Hydrographic Branch