

10cct03_xyzi_all.txt

Metadata:

- [Identification Information](#)
 - [Data Quality Information](#)
 - [Spatial Data Organization Information](#)
 - [Spatial Reference Information](#)
 - [Entity and Attribute Information](#)
 - [Distribution Information](#)
 - [Metadata Reference Information](#)
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Identification_Information:

Citation:

Citation_Information:

Originator:

U.S. Geological Survey - St. Petersburg Coastal and Marine Science Center

Title:

10cct03_xyzi_all.txt: this is the 50-m interpolated grid of x,y,z values with the respective amplitude intensity value extracted from the side scan sonar file 10cct01_ss_1m.tif. The result is a text file of x,y,z,i.

Geospatial_Data_Presentation_Form: txt

Publication_Information:

Publication_Place: St. Petersburg, FL

Publisher:

U.S. Geological Survey - St. Petersburg Coastal and Marine Science Center

Publication_Date: 20111001

Series_Information:

Series_Name: USGS Data Series Publication

Issue_Identification: DS671

Originator: Nancy T. DeWitt

Originator: James G. Flocks

Originator: William R. Pfeiffer

Originator: James N. Gibson

Originator: Dana S. Wiese

Online_Linkage: <<http://pubs.usgs.gov/ds/671>>

Description:

Abstract:

In April of 2010, the U.S. Geological Survey (USGS) conducted a geophysical survey from the east end of West Ship Island, MSiss., extending to the middle of Dauphin Island, Ala. This survey had a dual purpose: (1) to interlink previously conducted nearshore geophysical surveys (shoreline to ~2 kilometers, km) with those of offshore surveys (~2 km to ~9 km) in the area and (2) to extend the geophysical survey to include a portion of the Dauphin Island nearshore zone. The efforts were part of the USGS Gulf of Mexico Science Coordination partnership with the U.S. Army Corps of Engineers (USACE) to assist the Mississippi Coastal Improvements Program (MsCIP) and the Northern Gulf of Mexico (NGOM) Ecosystem Change and Hazards Susceptibility Project by mapping the shallow geological stratigraphic framework of the Mississippi Barrier Island Complex.

Purpose:

This report serves as an archive of the processed multibeam bathymetry and side scan

sonar (SSS) data. Data products herein include gridded and interpolated digital depth surfaces, seabed surface backscatter imagery, and x,y,z data products for both multibeam bathymetry and side scan sonar imagery. Additional files include trackline maps, navigation files, Geographical Information System (GIS) files, Field Activity Collection System (FACS) logs, and formal Federal Geographic Data Committee (FGDC) metadata. Scanned images of the handwritten FACS logs and digital FACS logs are also provided as PDF files. Refer to the Acronyms page for expansion of acronyms and abbreviations used in this report or hold the cursor over an acronym for a pop-up explanation.

Supplemental_Information:

These geophysical surveys will provide the data necessary for scientists to define, interpret, and provide baseline bathymetry and seafloor habitat for this area and to aid scientists in predicting future geomorphological changes of the islands with respect to climate change, storm impact, and sea-level rise. Furthermore, these data will provide information for barrier island restoration, particularly in Camille Cut, and provide protection for the historical Fort Massachusetts. For more information refer to <http://ngom.usgs.gov/gomsc/mscip/index.html>.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 20100417

Ending_Date: unknown

Beginning_Time: 20100428

Ending_Time: unknown

Currentness_Reference: data collection interval

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None planned

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -88.865328

East_Bounding_Coordinate: -88.176509

North_Bounding_Coordinate: 30.246283

South_Bounding_Coordinate: 30.153961

Keywords:

Theme:

Theme_Keyword_Thesaurus: ISO 19115 Topic Category

Theme_Keyword: oceans

Theme_Keyword: elevation

Theme_Keyword: location

Theme:

Theme_Keyword_Thesaurus: General

Theme_Keyword: trackline

Theme_Keyword: bathymetry

Theme_Keyword: USGS

Theme_Keyword: multibeam

Theme_Keyword: RESON

Theme_Keyword: Seabat 8125

Theme_Keyword: Applanix POS MV

Theme_Keyword: Trimble DSM 212

Theme_Keyword: CORS

Theme_Keyword:

U.S. Geological Survey (USGS), St. Petersburg Coastal and Marine Science Center

Theme_Keyword: U.S. Army Corps of Engineers (USACE) Mobile Alabama District

Theme_Keyword: Gulf Islands National Seashore (GUIS)

Place:

Place_Keyword_Thesaurus: GNIS

Place_Keyword: Mississippi

Place_Keyword: West Ship Island

Place_Keyword: Horn Island

Place_Keyword: Petit Bois Pass

Place_Keyword: Dauphin Island

Stratum:

Stratum_Keyword_Thesaurus: General

Stratum_Keyword: Water

Temporal:

Temporal_Keyword_Thesaurus: General

Temporal_Keyword: March 2010

Access_Constraints:

The U. S. Geological Survey requests that it be referenced as the originator of this dataset in any future products or research derived from these data.

Use_Constraints: These data are not to be used for navigation

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Nancy T. DeWitt

Contact_Organization:

U.S. Geological Survey - St. Petersburg Coastal and Marine Science Center

Contact_Position: Geologist

Contact_Address:

Address_Type: mailing and physical address

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City: St. Petersburg

State_or_Province: FL

Postal_Code: 33701

Country: USA

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Contact_Electronic_Mail_Address: ndewitt@usgs.gov

Native_Data_Set_Environment:

Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcMap 9.3.1.3000; 10oct03_xyzi_all.txt; 0.724 MB

Data_Set_Credit:

Nancy T. DeWitt, James G. Flocks, William R. Pfeiffer, James N. Gibson, Dana Wiese

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report:

The accuracy of the data is determined during data collection. This dataset is from a single cruise and therefore internally consistent. Methods are employed to maintain data collection consistency aboard various platforms. During mobilization, each piece of equipment (swath and sonar) is isolated to obtain internal and external offset measurements with respect to the survey platform. All the critical measurements are recorded manually and digitally and entered into their respective programs for calibration. Once calibration is complete and calibration status is considered acceptable, then survey operations commence. HYPACK, Inc., HYPISWEEP version 10 was used for the multibeam data acquisition, system calibration, and data post-processing. A patch test was performed at the beginning of the survey to calibrate the SEABAT 8125 and included latency, roll, pitch, and yaw. This involved collecting

multibeam data along lines over a sloping surface for the latency, pitch, and yaw tests and over a flat surface for the roll test. The resulting offsets from the patch test were applied to the hardware configuration file prior to survey data acquisition. The Applanix POS MV is not a gyro and therefore did not need calibration. The RESON SeaBat 8125 multibeam transducer head was mounted on a retractable strut-arm that is lowered between the catamaran hulls. Offsets between the sonar head and the DGPS antennas were measured and entered into the respective program. DGPS is always implemented for navigational accuracy. During data acquisition, the differentially corrected positions supplied through the Trimble DSM 212 interface were recorded in the WGS84 datum. Ship heading and motion (roll, pitch, heave) were measured by the Applanix POS MV motion unit. Sound velocity was recorded at the multibeam sonar head. Additional sound velocity casts were conducted at the start and finish of each survey day and as needed throughout the survey. All multibeam bathymetry data were collected using the RESON SeaBat 8125. All side scan sonar data were collected using the Klein 3900 system.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Differential navigation was acquired using a local National Geodetic Survey (NGS) Continuously Operating Reference Station (CORS) beacon that broadcasts carrier phase and code range measurements that are captured in real-time using the Applanix Position and Orientation System for Marine Navigation (POS MV). The multibeam bathymetry and side scan sonar data were collected simultaneously using HYSWEEP version 10 and SonarPro version 11.3, respectively. The multibeam bathymetry and the side scan sonar data were collected with separate instruments but utilized the same navigation string from the Applanix POS MV. Unless noted, all DGPS data are referenced to WGS84.

Quantitative_Horizontal_Positional_Accuracy_Assessment:

Horizontal_Positional_Accuracy_Value: 10

Horizontal_Positional_Accuracy_Explanation: centimeters

Lineage:

Process_Step:

Process_Description:

This file is the extracted amplitude intensity values from the side scan sonar file 10cct03_ss_1m.tif using the x,y,z data points from file rm10cct03_mb_50m.tif. This was done using ArcMap version 9.3.1 extraction by sample tool. The resultant dbf file was exported as a table using XTools Pro version 6.

Process_Date: 2010

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Nancy T. DeWitt

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U.S. Geological Survey St. Petersburg Coastal and Marine
Science Center

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Address_Type: mailing and physical address

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City: St. Petersburg

State_or_Province: FL

Postal_Code: 33701

Country: USA

Contact_Voice_Telephone: (727) 803-8747 x3058

Contact_Electronic_Mail_Address: ndewitt@usgs.gov

Completeness_Report:

This is a complete processed multibeam bathymetry (x,y,z) with respective amplitude intensity values (i) in text format. These data provide a continuous and complete surface; however, there may in some cases be data missing and inconsistent with reported tracklines. This is directly due to the exclusion of poor data or instrument failures.

Logical_Consistency_Report:

This dataset was completed on the same research vessel platform.

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: String

Point_and_Vector_Object_Count: 44

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Planar:

Planar_Coordinate_Information:

Planar_Coordinate_Encoding_Method: row and column

Coordinate_Representation:

Abscissa_Resolution: 50.000000

Ordinate_Resolution: 50.000000

Planar_Distance_Units: meters

Grid_Coordinate_System:

Grid_Coordinate_System_Name: Universal Transverse Mercator

Universal_Transverse_Mercator:

UTM_Zone_Number: 16

Transverse_Mercator:

Scale_Factor_at_Central_Meridian: 0.999600

Longitude_of_Central_Meridian: -87.000000

Latitude_of_Projection_Origin: 0.000000

False_Easting: 500000.000000

False_Northing: 0.000000

Geodetic_Model:

Horizontal_Datum_Name: D_WGS_1984

Ellipsoid_Name: WGS_1984

Semi-major_Axis: 6378137.000000

Denominator_of_Flattening_Ratio: 298.25722356300003

Vertical_Coordinate_System_Definition:

Depth_System_Definition:

Depth_Datum_Name: Mean lower low water

Depth_Resolution: 0.01

Depth_Distance_Units: meters

Depth_Encoding_Method: Explicit depth coordinate included with horizontal coordinates

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Detail_Citation: 10cct03_xyzi.txt

Entity_and_Attribute_Overview:

This is a text file of x,y,z,i in which x and y are location, z is water depth in meters, and i is amplitude intensity value from side scan sonar. The text file was created in ArcMap version 9.3.1.

Detailed_Description:

Entity_Type:

Entity_Type_Label: 10cct03_xyzi_all.txt

Entity_Type_Definition_Source: text editor, WordPad Version 5.1

Entity_Type_Definition:

text file that is the result of marrying file 10cct03_mb_50m.tif with 10cct03_ss_1m.tif and exporting the results of x,y,z,i in text format.

Attribute:

Attribute_Label: x

Attribute_Definition: WGS84 UTM 16N

Attribute_Definition_Source: World Geodetic System of 1984

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 320534.08

Range_Domain_Maximum: 386669.96

Attribute:

Attribute_Label: y

Attribute_Definition: WGS84 UTM 16N

Attribute_Definition_Source: World Geodetic System of 1984

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 3338490.76

Range_Domain_Maximum: 3346637.45

Attribute:

Attribute_Label: z

Attribute_Definition: Mean Low or Lower Water

Attribute_Definition_Source: water level datum

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: -14.23

Range_Domain_Maximum: -2.45

Attribute_Units_of_Measure: meters

Attribute_Measurement_Resolution: 0.01

Attribute:

Attribute_Label: i

Attribute_Definition: amplitude intensity

Attribute_Definition_Source: Klein L3900 side scan towfish

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 252

Attribute_Units_of_Measure: meters

Attribute_Measurement_Resolution: 1

Distribution_Information:

Distributor:

Contact_Information:

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Contact_Person: Jim Flocks

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U.S. Geological Survey St. Petersburg Coastal and Marine Science
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Contact_Position: Geologist

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Address: 600 4th Street South

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State_or_Province: FL

Postal_Code: 33701

Country: USA

Resource_Description: Downloadable Data

Distribution_Liability:

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Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Transfer_Size: 0.724

Format_Name: text

File-Decompression_Technique: no compression applied

Digital_Transfer_Option:

Offline_Option:

Offline_Media: DVD

Recording_Format: CDR/DVD

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name: <<http://pubs.usgs.gov/ds/671>>

Fees: none

Technical_Prerequisites: none

Available_Time_Period:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 20111001

Time_of_Day: unknown

Custom_Order_Process: none

Metadata_Reference_Information:

Metadata_Date: 20111001

Metadata_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Nancy T. DeWitt

Contact_Organization:

U.S. Geological Survey St. Petersburg Coastal and Marine Science

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Contact_Position: Geologist

Contact_Address:

Address_Type: mailing and physical address

Address: 600 4th Street South

City: St. Petersburg

State_or_Province: FL

Postal_Code: 33701

Country: USA

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Contact_Electronic_Mail_Address: ndewitt@usgs.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata_Security_Information:

Metadata_Security_Classification: Unclassified

Metadata_Security_Classification_System: none

Metadata_Security_Handling_Description: none

Metadata_Access_Constraints:

The U.S. Geological Survey requests that it be referenced as the originator of this dataset in any future products or research derived from these data.

Metadata_Use_Constraints:

The U.S. Geological Survey requests that it be referenced as the originator of this dataset in any future products or research derived from these data.

Metadata_Extensions:

Online_Linkage: unknown

Profile_Name: unknown