

# **NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT**

## **PROJECT AK0402**

### **ORCA INLET EASTERN PRINCE WILLIAM SOUND, ALASKA**

#### **Introduction**

Coastal Mapping Program (CMP) Project AK0402 provides coastal zone mapping data of the area around Prince William Sound and Orca Bay. This data includes Red Head Point just east of Knowles Bay, which extends southeast to around the Eyak River area, including Port Gravina, Sheep Bay, Nelson Bay, and Orca Inlet. Included in this project shoreline mapping data are Hawkins, Hinchinbrook, Mummy, Channel, Observation, and Egg Islands. Also, included in this project are the towns of Orca and Cordova. The digital cartographic feature file may be used in support of the NOAA Nautical Charting Program (NCP) and coastal zone management activities.

#### **Project Design**

This project was designed per a request from the NOAA Hydrographic Surveys Division (HSD) for cartographic data in support of HSD operations. Based on an analysis of project requirements and results of a source data search, it was determined that CMP procedures for multiple source projects would apply for this project. Available source data deemed adequate for successful completion of this project included sources acquired in April 1998.

#### **Field Operations**

Routine CMP field operations did not apply for this project based on the origin of the project source data.

#### **Aerotriangulation**

The aerotriangulation task was accomplished by Western Air Map, Inc. personnel in late January 2005. The image files were imported into SOCET SET, version 5.0 using the DataThruWay, version 5.0 software. The importing process also converted the stored and compressed files to a recognized native SOCET SET format (NITF 2.0) and included supporting data extension files consisting of previously measured sensor model parameters. Aerotriangulation procedures were completed on a Digital Photogrammetric Workstation using the Multi-Sensor Triangulation (MST) Tool of SOCET SET. The interactive point measurement tool of MST was used to collect tie points and it was determined from running the simultaneous solve adjustment program that the average predicted horizontal circular error for all well defined points in this project area is 7 meters at the 95% confidence level.

## Compilation

Digital feature data compilation for this project was accomplished by Western Air Maps, Inc. personnel from early March through June 2005. The Feature Extraction Tool of SOCET SET was used during the digital cartographic feature data compilation phase of project completion. Feature attributes were established from the C-COAST specification file, which provided the definition and attribution scheme for the suite of cartographic features pertinent to the CMP. Cartographic features were compiled to meet a horizontal accuracy of 10 meters at the 95% confidence level. Tidal information was obtained from the NOS tide station at Cordova, Alaska, which has a tidal range between MLLW and MHW of 3.1 meters. The source imagery was acquired when the stage of tide was approximately 0.34 meters above MLLW.

## Final Review

Western Air Maps, Inc. personnel conducted a final review interactively in June and July 2005, and independently upon initial completion of feature extraction. The process included a review of the aerotriangulation results, a review of the identification and attribution of cartographic features based on image analysis and criteria defined in C-COAST, and a review of client specific support products such as the Chart Evaluation File (CEF) generated for NCP application. The entire suite of project products was evaluated for compliance to CMP requirements. The last step in the quality control process was the evaluation of the DCFF contents focusing on the integrity of topology once the DCFF was converted into shapefile format.

<u>CHART</u>	<u>SCALE</u>	<u>EDITION</u>	<u>DATE</u>
16700 Prince William Sound	1:200,000	29 <sup>th</sup>	July 2004
16708 Price William Sound- Port Fidalgo and Valdez Arm	1:79,291	26 <sup>th</sup>	October 2004
16709 Price William Sound- Eastern Entrance	1:80,000	22 <sup>nd</sup>	Jan 19,2002
16710 Price William Sound- Orca Bay and Inlet Channel Islands to Cordova	1:30,000	16 <sup>th</sup>	Dec 13,1997

## Project Products

The following specifies the location and identification of the products generated during the completion of this project:

### RSD Applications Branch Archive

- Textual (hard) copy of the Project Completion Report (PCR)
- Page size graphic plot of GC10570 file contents, attached to PCR

### Remote Sensing Division Electronic Data Library

- Project Data Base
- Digital copy of DCFF GC10570 in ESRI shapefile format
- Digital copy of CEF in ESRI shapefile format
- Digital copy of the PCR in Adobe Acrobat PDF format

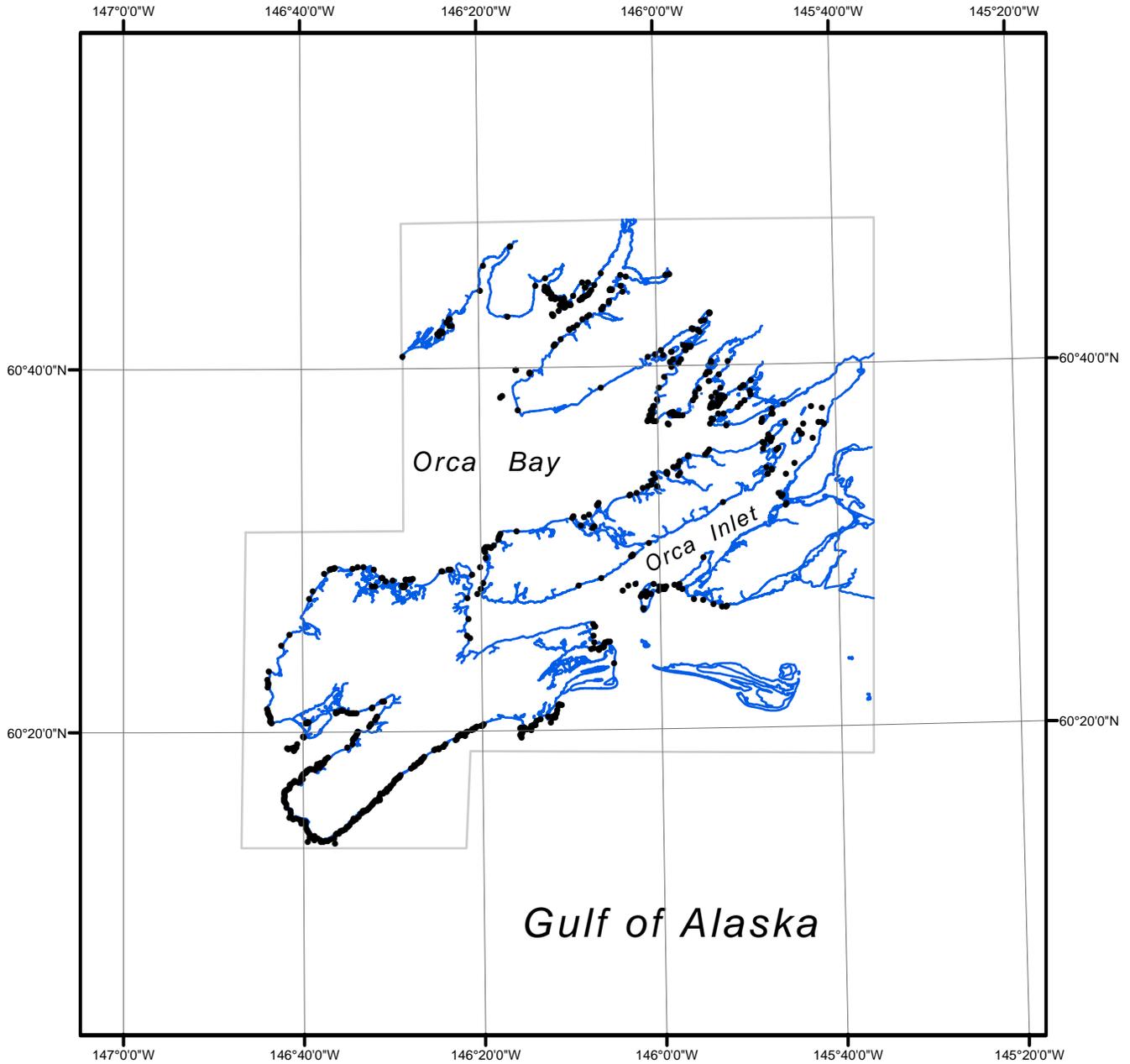
### NOAA Shoreline Data Explorer

- DCFF for GC10570
- Metadata file for GC10570
- Digital copy of the PCR in Adobe Acrobat PDF format

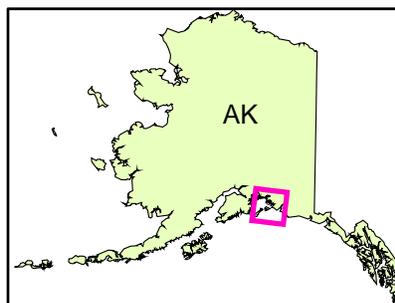
## End of Report

# ORCA INLET, EASTERN PRINCE WILLIAM SOUND

## ALASKA



Overview



AK0402

GC10570