

NOAA COASTAL MAPPING PROGRAM PROJECT COMPLETION REPORT

PROJECT AK0209

CASTLE CAPE AND KUIUKTA BAY SOUTHWEST ALASKA

Introduction

Coastal Mapping Program (CMP) Project AK0209 provides coastal zone mapping data of the Castle Bay to Kuiukta Bay located in the Southwest Alaska Peninsula. Specific features compiled are Castle Cape, Ross Cove, Devil's Bay, Seal Bay, Sweater Bay, Fishhook Bay, Foot Bay, Windy Bay, Portage Bay, and Kuiukta Bay. 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 Program (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 May and August 1997.

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 the Applications Branch of the Remote Sensing Division (RSD) in January 2003. The image files were imported into Socet Set, version.4.4.1, using the Data-Thru-Way, version 4.4.1 software. The importing process also converted the stored 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. The analytical aerotriangulation procedures were completed from 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 several 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 the Applications Branch of RSD in April 2003. 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 provides for 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.

Final Review

Final office review operations were conducted interactively as the compilation phase was in progress, and independently upon initial completion of feature extraction. The process included review of aerotriangulation results, review of the identification and attribution of cartographic features based on image analysis and criteria defined in C-COAST, and review of client specific support products; such as the Chart Maintenance Print 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.

A copy of NOAA nautical chart 16566, Chignik and Kujulik Bays, 1:77,477 scale, 8/3/1996, 8th edition, was used for the chart comparison and for the Chart Maintenance Print.

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 GC-10527 file contents, attached to PCR

Remote Sensing Division Electronic Data Library

- Project Data Base
- Digital copy of DCFF GC-10527 in ESRI shapefile format
- Digital copy of the PCR in Adobe Acrobat PDF format

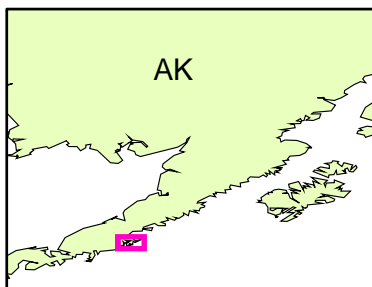
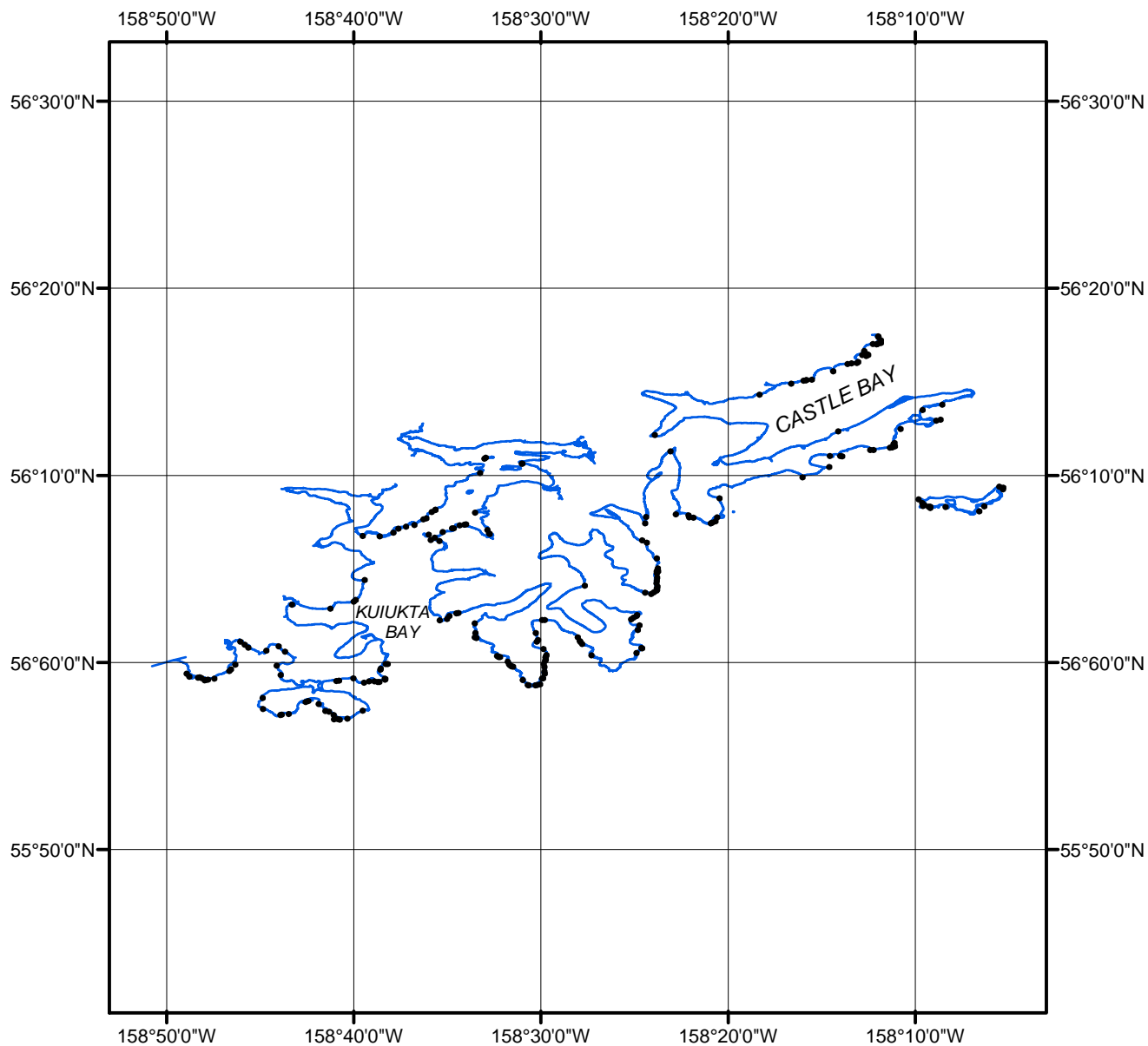
NOAA Shoreline Data Explorer

- DCFF for GC-10527
- Metadata file for GC-10527
- Digital copy of the PCR in Adobe Acrobat PDF format

End of Report

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SOUTHWEST ALASKA



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