

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

## **PROJECT AK0307**

### **RUDYERD BAY, BEHM CANAL SOUTHEAST, ALASKA**

#### **Introduction**

Coastal Mapping Program (CMP) Project AK0307 provides coastal zone mapping data of Rudyerd Bay and portions of the Behm Canal. Rudyerd Bay is located in the eastern half of Behm Canal near Clarence Strait, Southeast Alaska. 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. A coastal mapping change analysis was performed between the 1984 TP series maps (TP01272, TP01273) and May 2003 source imagery. This change analysis would determine that if significant changes had occurred in the project area, then new collected cartographic data from 2003 sources would be required. It was determined that the 1984 shoreline data was adequate with no significant changes found in the 2003 source imagery. However, it was found that MLLW data was not collected in the 1984 survey and was added using the later 2003 source imagery.

#### **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 a member of Applications Branch of the Remote Sensing Division (RSD) in December 2003. The image files were imported into SOCET SET, version 4.4.1, using the DataThruWay, 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 7.5 meters at the 95% confidence level.

## **Compilation**

Digital feature data compilation for this project was accomplished by a member of the Applications Branch of RSD in January 2004. 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 by a member of the Applications Branch of RSD, and independently upon initial completion of feature extraction. The process included review of the 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 17424, Eastern Part of Behm Canal, 1:80,000 scale, 10/13/1990, 6th 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 GC10557 file contents, attached to PCR

### **Remote Sensing Division Electronic Data Library**

- Project Data Base
- Digital copy of DCFF GC10557 in ESRI shapefile format
- Digital copy of the PCR in Adobe Acrobat PDF format

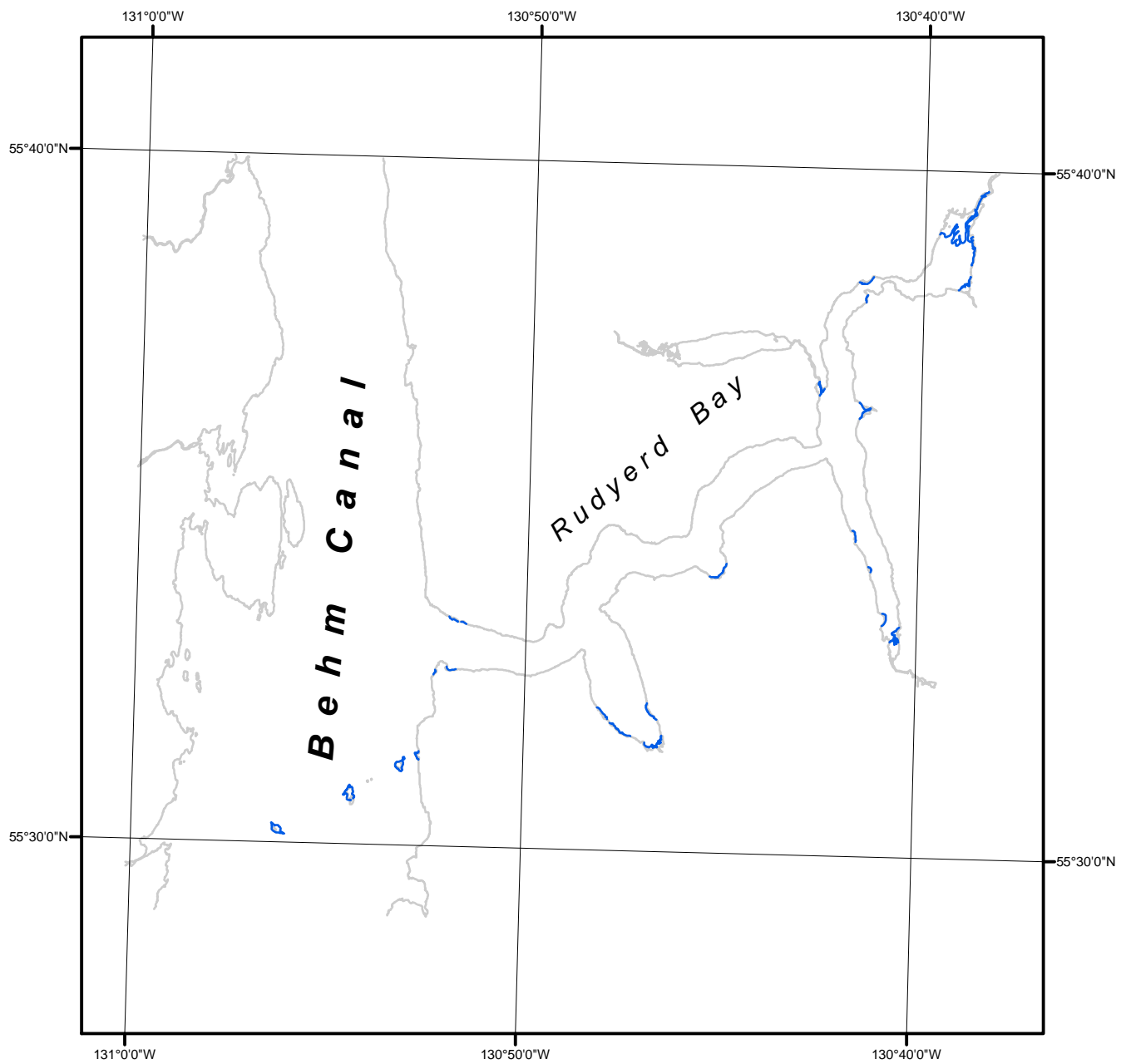
### **NOAA Shoreline Data Explorer**

- DCFF for GC10557
- Metadata file for GC10557
- Digital copy of the PCR in Adobe Acrobat PDF format

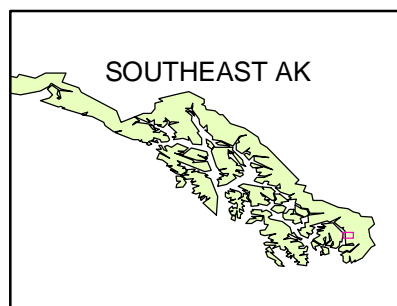
## **End of Report**

# RUDYERD BAY, BEHM CANAL

## SOUTHEAST, ALASKA



Overview



AK0307

GC10557