

**Project:** OSD-AHB-09 **Registry #:** W00228 **Territory:**  
Commonwealth of Northern Mariana Islands **Locality:**  
Northern Mariana Islands **Sublocality:** Swains Island  
**Surveyed by:** NOAA R/V *AHI*

The data for this project were collected in support of NOAA's Coral Reef Conservation Program goals to map all shallow (0-30m) coral reefs in US Pacific waters and priority moderate (> 30m) depth areas by 2009. The primary use of the data is to provide bathymetric and backscatter data for previously unmapped areas; in support of ecosystem management requirements for benthic habitat mapping and location of Essential Fish Habitat; and to study the geologic features of the area. It has been determined through the Survey Acceptance Review Process that this data is of suitable quality for nautical chart update purposes.

Data were collected aboard the R/V *AHI* (Acoustic Habitat Investigator), a 25' survey launch owned and operated by the NOAA Pacific Islands Fisheries Science Center in Honolulu, HI. The R/V *AHI*'s survey sensors include a 240 kHz RESON 8101-ER sonar providing bathymetry and imagery data, a TSS/Applanix POS/MV Model 320 which measures position, velocity, attitude and heading, and a Seabird SBE 19 CTD used to measure sound velocity profiles.

Reson 8101ER multibeam Data were collected from 21 August-13 September, 2003, aboard NOAA Survey Launch *AHI* at Guam, Northeastern Island during survey cruise *AHI-0307b*. These multibeam data were collected using SAIC ISS-2000 software in the Generic Sensor Format and processed using SABER editing software. Sound velocity corrections from a Seabird SBE19 CTD sensor and motion corrections from a POS-MV vertical reference were applied to the data in real time. Predicted tides were applied to the data in real time.

Horizontal accuracy is 20m (no differential GPS correctors applied), vertical accuracy is depth dependent (~1% of water depth), WGS84 datum. Depths mapped range from 10 -300 m. The *AHI* was deployed from the NOAA Ship *Hi'ialakai* and surveyed independently during ship operations in other locations in American Samoa.

For further information regarding survey operations and data processing please see inclusions proceeding the Evaluation Report.